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SANTA CRUZ DOWNTOWN LIBRARY RENOVATION COST ASSESSMENT
FINAL REPORT

November 22nd, 2019

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November 22nd, 2019

EXECUTIVE SUMMARY

On August 23rd, 2019, Jayson Architecture was engaged by the City of Santa Cruz to evaluate the feasibility of renovating the 42,000 square foot two story downtown branch library within a total project budget, inclusive of soft costs, of $27 million. To support this effort, we engaged a team of engineering sub-consultants with expertise directly relevant to the scope of the project. This team included BKF for civil engineering, BASE Design Inc. for structural engineering, Alter Consulting Engineers for mechanical and plumbing engineering, and RIJA Inc. for electrical engineering. In addition to our direct sub-consultant team, we also worked directly with Mack5 consultants, the cost estimator engaged directly by the City to evaluate our design approach.

Our first task was to establish the construction budget target, working backwards from the total project cost of $27 million. Working directly with Mack5, a Project Cost Model (see report section V) was created outlining all soft costs and contingencies required to complete the scope of work. An $18 million construction budget target was established based on this exercise, roughly equating to a total project budget with 33% soft costs, within the typical range for a public project of this scale.

Following the establishment of the $18 million construction budget target, our next task was to assess the condition of the existing facility and its underlying infrastructure. We began this process by reviewing available existing documentation of the building, including the original 1966 construction drawings, as well as the hazardous material report prepared for the City in 1999 by Fowler Associates. After reviewing the existing documentation, we spent a day at the project site with our engineering team methodically going through each space and area of the building and evaluating the condition of the facility. Our findings are detailed in sections I and III of this report. Our primary takeaway from the building assessment is that the aging facility has reached the end of its usable life. Mechanical and electrical systems are obsolete, materials and finishes are worn and damaged, access compliance issues are present throughout the building, and asbestos containing materials can be found in the walls, floors, and insulation. The structural system is seismically deficient at the perimeter one story sections of the building; however, the primary gravity load bearing structure was found to be adequate for future use. In addition, primary utility service connections for gas and electric service were also deemed to be adequate.

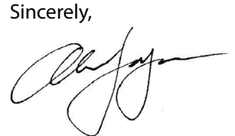
With the assessment complete, we turned to an evaluation of the Library's programmatic and space need considerations, evaluated through the lens of the $18 million construction budget target. Based on recent historical cost data provided by Mack5, we established a required cost per square foot range of $650-1,050 to renovate the facility. At approximately 42,000 square feet, even the low end of the cost per square foot range would result in a construction cost of over $27 million, leaving no room for the 33% anticipated soft costs. Based on this calculation, we determined that to meet the City's budget the building would have to be reduced in size. Our strategy for a reduction in square footage was determined by the findings of the facility assessment that the one-story sections of the building are seismically deficient. Based on this condition we recommend demolishing these sections of the building and reducing the square footage to an approximately 32,000 square feet two-story structure.

In addition to the reduction in square footage, our proposed design makes several key changes to the layout of the building. First, the main entrance has been relocated to the west side of the building, across from the City Hall, creating a better civic connection between the two properties. A secondary entrance is located on the east side of the building directly adjacent to a combined City parking lot. The removal of the one-story sections at the perimeter of the building provide the opportunity for floor to ceiling windows on the ground floor, increasing natural light and providing a more welcoming experience from the street. Inside the library, the staff and back of house space has been condensed to a more reasonable scale relative to the size of the building. The Children's area has been moved to the ground floor and increased in size, and a large community meeting room has been added in a location that would allow for convenient after hours use. Upstairs a reduced adult collection is located with other uses such as a teen area, technology, quiet reading, a life literacies center, as well as other uses.

Even with the reduction in square footage, the $18 million target construction budget is a challenge. Subsequently, we have presented a design approach with a base level project, and a series of alternates that provide increased functionality, program, and quality. The base, while achieving significant programmatic and layout improvements, is of low quality and excludes many building elements that would be typical of a modern library such as acoustic ceilings and quality finishes. In addition, the site work is limited to the bare minimum required to achieve the proposed design. The base design is within range of the budget at slightly over $18 million for construction costs. We have outlined 14 alternates with a combined construction cost of roughly $5 million, which include both functional and aesthetic improvements such as additional restroom facilities and landscaping. Even with these additional features, the building is only improved to a low-medium quality facility and will lack many of the amenities the public has come to expect in a modern library. The total cost of project with these alternates is approximately $34.3 million, making them unfeasible under the current budget. These costs are outlined in detail in section V of the report.

Jayson Architecture and our sub-consultant team have worked thoughtfully to deliver the best design approach available within the directives of the City to evaluate a $27 million renovation of the existing downtown library facility. While our proposed design does provide tangible improvements in comparison to the existing aging facility, the limitations of the budget severely constrain the potential scale and quality of the project. This report is intended to serve as the basis of future decision making by the Library Subcommittee and City Council about how to proceed with future improvements for the Downtown Branch Library.

Sincerely,



Abraham Jayson | Architect | LEED AP BD+C
Principal, Jayson Architecture

ASSESSMENT SUMMARY I.

ASSESSMENT SUMMARY

Architectural Assessment Summary

Jayson Architecture completed a thorough assessment of the existing library building. In general, the architectural elements of the building are not salvageable and are due for replacement.

The exterior of the building demonstrated deterioration typical for a 50-year-old building in relatively close proximity to the ocean. The roof is aged and shows signs of leaking and water damage and is overdue for re-roofing. The redwood facade is worn, and the windows do not meet current code mandated energy performance requirements. While the concrete block walls at the perimeter are in acceptable condition, they are opaque and block daylight, resulting in a dark interior. Inside the building, surface finishes, such as carpet, wood veneer, tile, and acoustic ceilings, among other finishes, are worn and well beyond their useful life. The two elevators are unreliable and are prone to unexpected maintenance issues.

As established in the testing report prepared for the City in 1999 by Fowler Associates, asbestos is prevalent throughout the building. Friable ACMs (Asbestos Containing Materials) are present in the sprayed-on fireproofing protecting the steel building structure, joint compound and skimcoat on all original sheetrock walls, linoleum flooring and adhesive through the building, and insulation on HVAC pipe fittings. Non-friable ACMs are present in various floor tile systems, interior and exterior wall panel finishes, and roof patching compound. The report did not test for lead and given the age of the building we recommend this testing be completed if the City elects to move forward with this project.

Our assessment also identified multiple code compliance deficiencies. The building is only partially sprinklered, primarily at the main entry lobby. Building code requires complete sprinkler coverage for a library facility, and the current condition is a potential life safety hazard. Additionally, while a complete CASp inspection was not performed as a part of our scope, it was apparent there are accessibility compliance issues in all areas of the library. These include an accessible path of travel to the main entry of the building, restroom fixture and accessory mounting heights, turning areas, reach ranges, and other obstacles. These types of issues are prevalent in facilities constructed before the Americans with Disabilities Act (ADA) was passed into law in 1990. If the facility is to remain unrenovated we recommend a full CASp compliance report be performed to identify the full scope of non-compliance and potential liability.

Based on this assessment, Jayson Architecture recommends replacing or updating most architectural features on this building, which are overwhelmingly beyond their useful life.

Civil Engineering Assessment Summary

BKF Engineers assessed the existing site and utilities, and made a number of determinations regarding the reuse of this existing location for a renovated facility.

The curb and sidewalk improvements completed in 1997 are showing signs of deterioration and are in need of repair. The deteriorating sidewalks and ramps do not comply with current accessibility standards, and therefore replacement is recommended. The stormwater system connecting the building to the sanitary sewer is adequate, however the on site bio-retention areas do not comply with current codes. In addition, the existing backflow preventers on sprinkler and domestic water lines are non-compliant and will need to be brought up to code as a part of any work done. Utility service sizing is generally adequate, and will be sufficient to serve a renovated building. Gas, Water & Electrical Service will not need to be updated as a part of this project.

BKF's assessment shows that while the utility services to the building are generally acceptable, there are a number of site improvements that need to be addressed in order to bring this building in line with current codes and standards.

Structural Assessment Summary

BASE Design Inc. evaluated the structure of the existing library through an on site visit and extensive review of the as built drawings. Their findings show that while the building has deficiencies, there are significant elements of the structural system that can be reused.

The greatest deficiency of the existing structure is the seismic system, which resists lateral forces in the event of an earthquake. The one-story sections of the building at the perimeter are seismically inadequate, and during an earthquake, could create forces which act on the two-story portion of the building, unbalancing it.

This two-story portion of the building also lacks lateral structure; however, the existing steel is adequate to support gravity loads. The existing footings are in good shape, and they are large enough to support the gravity loads of the existing building. While the building's seismic system will need to be updated, the gravity load bearing elements can be recommended for future use.

Mechanical/Plumbing Assessment Summary

Alter Consulting Engineers evaluated the mechanical and plumbing systems of the existing building through on-site assessment and thorough examination of the existing building plans. They found the mechanical and plumbing systems to be severely outdated and unable to fulfill their basic functions.

The existing primary mechanical system provides only heating – no cooling, which results in very hot temperatures during the summer months, potentially creating an unsafe environment and preventing the building from being occupied. These high temperatures can be so extreme they result in the need to close the library. Server equipment,

Barriers to wheelchair access at restroom entry

Deteriorating and water damaged ceilings

Aging and damaged floor tiles

Concrete block walls at 1-story section

Outdated and worn air handling system

Obsolete mechanical and plumbing distribution systems

Unreliable and non-compliant elevator

PVC roof overdue for replacement

which can only operate within a fixed temperature range, is cooled with a dedicated unit which serves a single zone and has no capacity for expansion. A similar dedicated unit cools the community meeting room. These units provide cooling to individual areas only and are completely inflexible for expansion.

The primary mechanical system is also extremely outdated, and uses obsolete pneumatic controls. The system is by a defunct manufacturer, and replacement parts are no longer available for numerous components, many of which are badly in need of repair. Dampers for outside air are well beyond their useful life, and prone to failure. Several rooftop exhaust fans are completely non-operational.

The plumbing systems, like the HVAC system, are operating past their expected useful service life, and are recommended to be replaced. Major areas of concern include a sprinkler system that only serves a portion of the building, plumbing fixtures which do not comply with current water conservation codes regarding flow rate, and outdated, energy inefficient water heaters.

The mechanical system is outdated and nearly impossible to repair, and the plumbing systems have reached the end of their useful life and are not up to current code. Full replacement of both systems is recommended.

Electrical Assessment Summary

RIJA Electrical Engineers, working as a consultant of Jayson Architecture, did a complete assessment of the existing building's electrical systems. As was found to be the case with the mechanical system, the existing electrical system is outdated and well beyond its useful life.

The electrical distribution equipment was manufactured by a company that has gone out of business, making replacement parts difficult to find. This distribution system is outdated and failing, and inadequate for support of upgraded systems. Lighting types are varied, inconsistent, and the controls are not compliant with current standards and codes.

Power service is adequate for future use, provided there are no additional loads on the system in the form of an electric mechanical system or photovoltaic panels. This service will be acceptable for the proposed renovation but would be unable to support potential sustainability driven upgrades in the future.

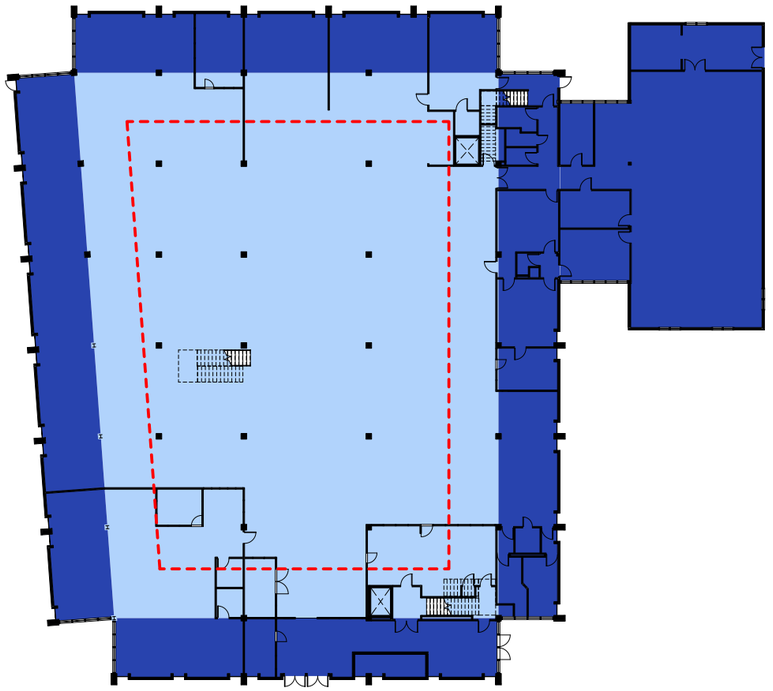
The existing building's distribution and lighting systems are beyond their useful life, and replacement is recommended. While the primary electrical service may be adequate for a simple renovation, it is not "future-proofed" and will not be sufficient to support either an electric mechanical system or photovoltaic panels.

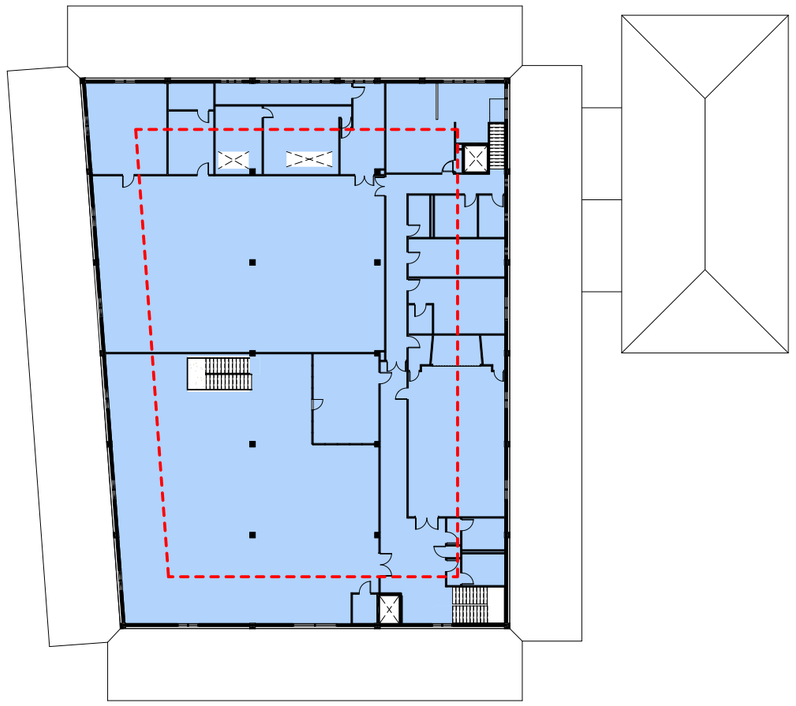
BUDGET

As outlined in the Executive Summary of this report and detailed in the Cost Model in Section V, Budget, we have established that a $27 million project budget results in an $18 million construction budget target. We explored three budget test fit scenarios. The first was a full renovation of the existing library, which was well beyond the available budget. The second was a new ground up facility limited to the available budget, which resulted in a 19,000 square foot building. The third was a 30,000 square foot renovation, which while still over the available budget was in range of our target. This third option is the only design approach explored in detail in this report.

Figure A provides a graphic illustration of this budget in relation to the existing 42,000 square foot library floor plan. The dark blue at the perimeter of the 1st floor plan indicates the one-story sections of the building we propose to demolish, approximately 10,000 square feet. The light blue area shown at the center of the 1st floor, and the entirety of the 2nd floor indicates the area of the library proposed to remain, approximately 32,000 square feet. The dashed red line indicates the footprint of a two-story 19,000 square foot building.

Figure A: Budget Diagram





PROPOSED DEMO: 11,930 SF

PROPOSED TO REMAIN: 30,380 SF

TOTAL AREA: 42,310 SF

BASIS OF DATA

- **$/SF (square foot) range based on recent historical data from mack5, with 2 years future escalation @ 5-6% /year**
- **Low $/SF: cheap finishes, materials, & products, salvage structure & main utility service connections if applicable**
- **High $/SF: high performance building with quality finishes, materials, & products**

42,000 SF RENOVATION

- **$650 - $1,050 /SF**
- **$27.3 MIL - $44.1 MIL**
- **$430 /SF @ $18 MIL**

BUDGET NOT VIABLE

19,000 SF NEW BUILDING

- **$950 - $1,200 /SF**
- **$18 MIL - $22.8 MIL**
- **$950 /SF @ $18 MIL**

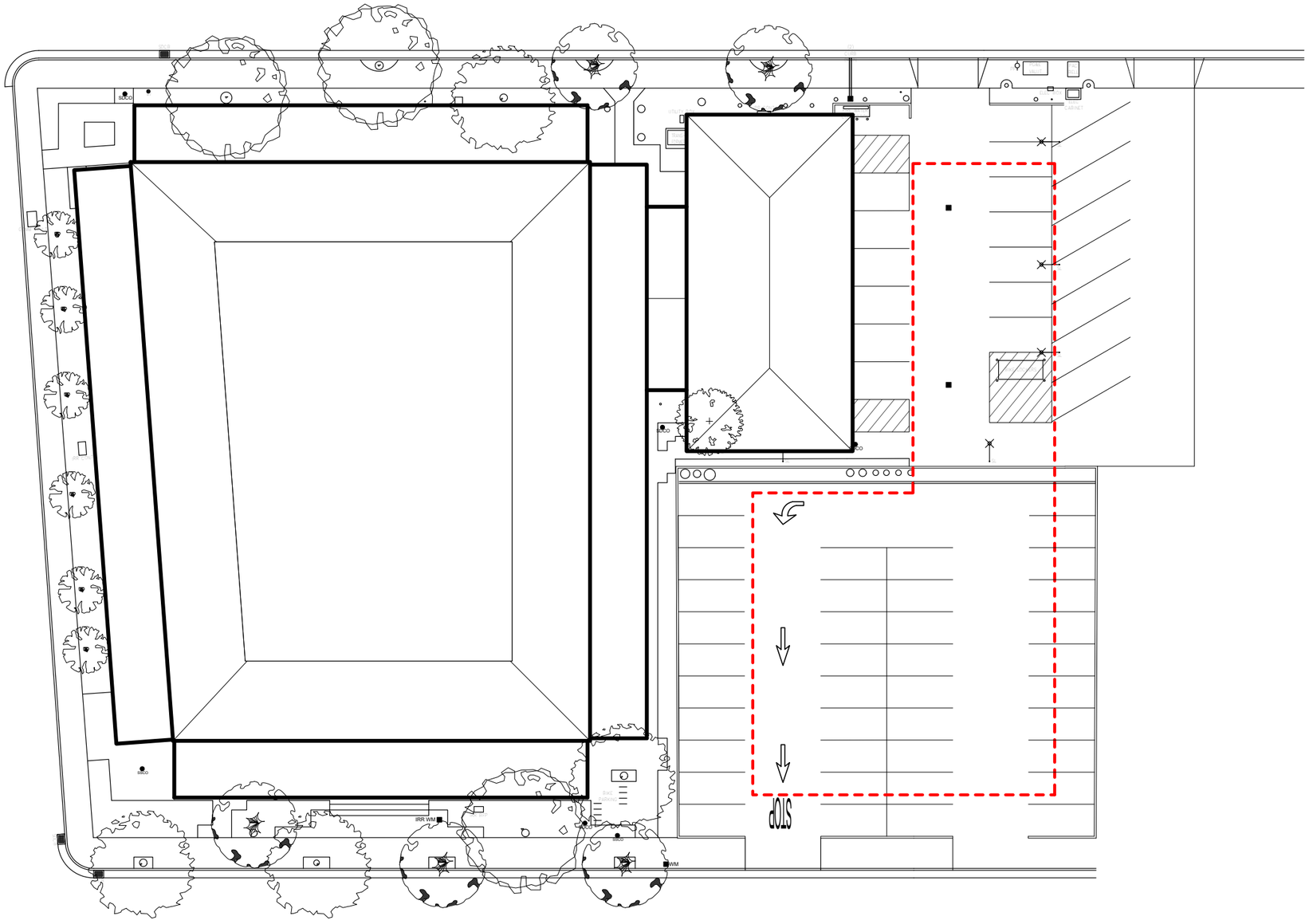
MUCH LESS PROGRAM

30,000 SF RENOVATION

- **$650 - $1,050 /SF**
- **$19.5 MIL - $31.5 MIL**
- **$600 /SF @ $18 MIL**

COMPROMISE OF $ VS. SF

Figure B: New Building



NEW CONSTRUCTION: 19,000 SF

NEW BUILDING

While not explored in any detail as a part of this report, we were asked by the City to demonstrate the 19,000 footprint of a new two-story library in diagrammatic form. Figure B illustrates this footprint over the existing City parking lots located to the east of the library. New construction in this location would allow the Library to continue to operate during construction, and demolition to occur after the Library had relocated to the completed new facility. While the spatial configuration of the parking lots are not ideal for a Library facility, the available site area is adequate to accommodate the footprint of a 19,000 square foot two-story building. This diagram represents the extent of the study Jayson Architecture prepared for the possibility of a new ground up Library. All other diagrams, drawings, analysis, and plans in this report are in relation to a 32,000 square foot renovation.

EXISTING PUBLIC & PRIVATE

In addition to square footage, an important metric of our analysis was the ratio of public to private space in the library. Figure C illustrates the distribution of public and private space in the existing building. Public space is show in light green, and private space that is inaccessible to the community is shown in dark green. The space allocation of the existing building is 65% public and 35% private. Compared to other recently construction Bay Area libraries, which typically have 80-85% of their square footage allocated to public use, the existing library is actually operating from the standpoint of the public more like a 33,000 square foot building than a 42,000 square foot building.

Figure C: Existing Public & Private

SIMILAR LIBRARY RATIOS:

Average Public to Private Ratio: 83% to 17%

EXISTING LIBRARY:	
PUBLIC:	27,394 SF (65%)
PRIVATE:	14,916 SF (35%)
TOTAL:	42,310 SF

LOS GATOS:	
PUBLIC:	23,740 SF (81%)
PRIVATE:	5,500 SF (19%)
TOTAL:	29,240 SF

HAYWARD:	
PUBLIC:	47,405 SF (82%)
PRIVATE:	10,612 SF (18%)
TOTAL:	58,017 SF

HALF MOON BAY:	
PUBLIC:	17,948 SF (85%)
PRIVATE:	3,184 SF (15%)
TOTAL:	21,132 SF

LIBRARY @ 17% PRIVATE	
PUBLIC:	27,394 SF (83%)
PRIVATE:	5,611 SF (17%)
TOTAL:	33,005 SF

CONCEPTUAL DESIGN II.

CONCEPTUAL DESIGN SUMMARY

Our conceptual design approach was based on an analysis of several factors. First, we evaluated the project site, including the relationship to the adjacent City Hall, the relative level of activity on each street, solar exposure, existing mature street trees, and parking. We also looked at the existing Library's program and space allocation, and then compared this to the Downtown Library Advisory Committee's (DLAC) program for a 47,000 square foot library prepared in 2017. These programs were also analyzed through the lens of other recently constructed Bay Area libraries. With this as a foundation for our design process, we engaged in a series of internal workshops with the City and the Library to determine the best way to allocate program within the reduced 32,000 square foot building. We identified two areas of the program that were to be increased from the existing program, the Children's Area and the Public Meeting Rooms. Other areas of the program were reduced from current levels, such as the Staff Area, and the Adult Collections.

Due to budgetary limitations, as described in the Assessment Summary Section I of the report, we have proposed the demolition of the one-story sections of the building. While regrettably reducing square footage, this removal does provide several opportunities. First, the elimination of these portions of the building frees up space on the site for several outdoor areas such as a Children's Garden, Community Patio, and Staff Patio. In addition, it allows for the merging of the two adjacent parking lots to the east. Lastly, this approach allows for the addition of large floor to ceiling windows on the ground floor, opening up the library to the community.

The form of the two-story structure is largely kept unchanged, however we have proposed new a cement plaster finish on the exterior, as well as new windows and entry canopies. Once inside the library, the layout is designed to maximize the available square footage. Spaces are arranged in efficient and economical ways, with large open spaces comprising a majority of both floors.

As described in detail in the Budget Section V, we have proposed a series of 14 alternates to keep the base project in line with the $18 million construction budget target. These alternates generally do not affect the core functionality of the library however, they do improve quality and usability significantly.

The specifics of the proposed conceptual design are outlined in detail in this section of the report.

SITE PLAN

As shown in Figure D, we are proposing several significant changes to the way the library interfaces with the site and surrounding neighborhood. The main entry has been relocated from the south elevation along Church Street to the west elevation along Center Street. This reinforces the civic connection between the library and the City Hall. In addition, a secondary entry has been located on the east side of the building, allowing direct access from the City parking lot, which has been consolidated into a single lot with additional capacity. In addition, new 90-degree parking has been added on both Locust and Church streets.

The removal of the single-story sections of the building provides an opportunity to create functional outdoor program spaces. To the west of the building is a new entry plaza, civic in scale and more befitting a public library than the current condensed entry steps at the existing building. To the north a small but useful enclosed patio is dedicated to staff use. Most significantly, to the east of the building there are two new outdoor public program spaces, a new Children's Garden and a new Community Patio. Both are enclosed by fences and dedicated to the adjacent program space within the building.

To the south and west of the building tiered landscape areas provide a buffer from the street, and a location for beautiful green space befitting of the natural environment of Santa Cruz. Existing mature site and street trees are supplemented by new trees carefully placed in relation to the redesigned exterior of the building.

1. MAIN ENTRY
2. SECONDARY ENTRY
3. CHILDREN'S GARDEN
4. COMMUNITY PATIO
5. STAFF PATIO
6. STREET PARKING
7. CLERESTORY
8. MECHANICAL
9. COMBINED PARKING LOTS

Figure D : Site Plan

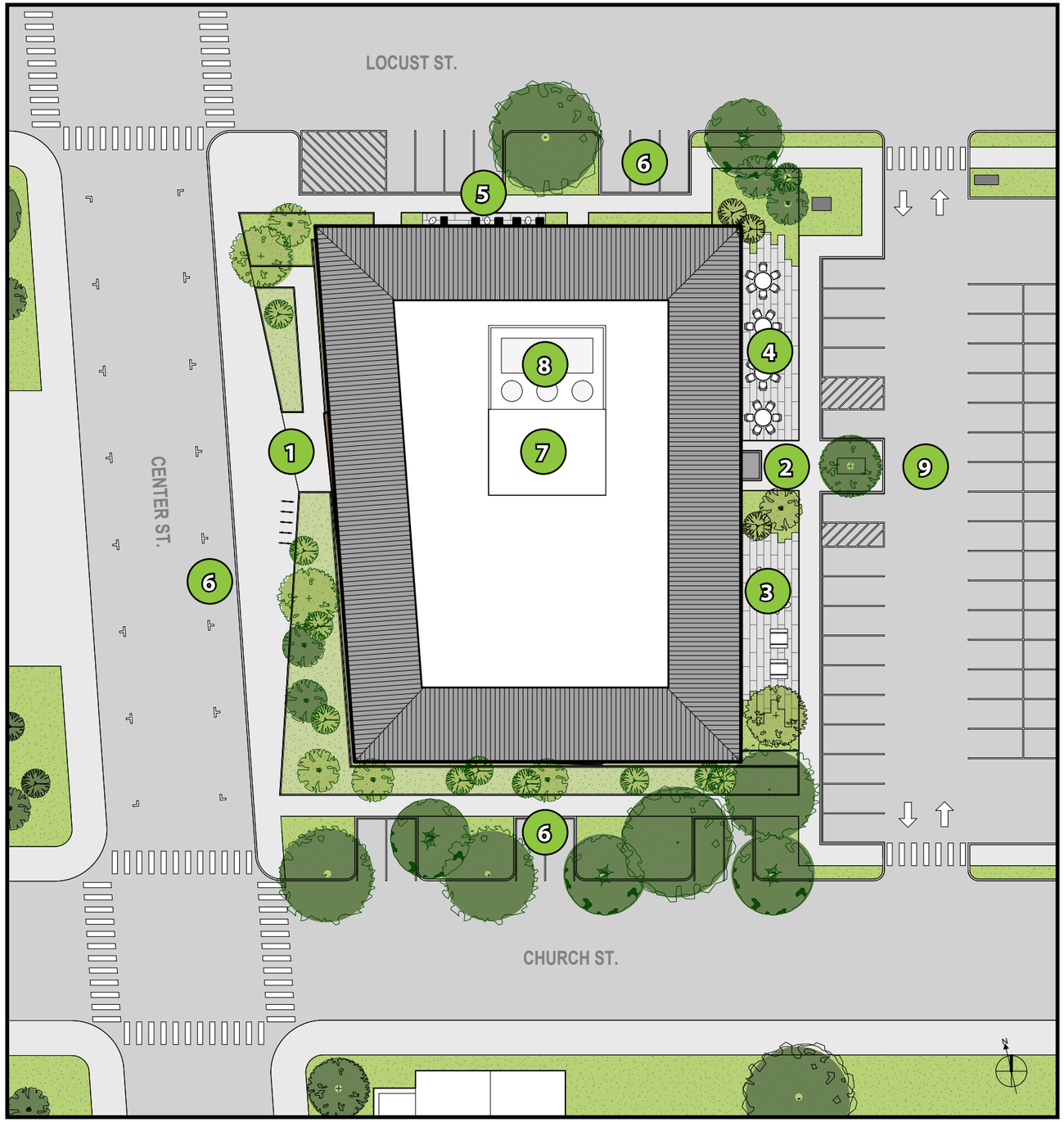


Figure E: Program Plan Level 1

1. LOBBY
2. CIRCULATION DESK
3. CHILDREN'S AREA
4. CHILDREN'S STORY TIME
5. COMMUNITY ROOM
6. COMMUNITY ROOM KITCHEN
7. STAFF
8. PUBLIC RESTROOM
9. ELEVATORS

PROGRAM PLAN LEVEL 1

The new first floor layout, shown in Figure E, is arranged around a new central lobby that bisects the middle of the building in an east-west direction. The main circulation desk has a direct line of sight to each entry, the main stair, the restrooms, and the Children's Area circulation desk. The Staff Area is located on the north-west side of the floor plan to allow for convenient flow from the book drops to the sorting and deliveries area, creating an efficient workflow for county wide distribution of library materials. The open staff area, while condensed from the current staff space, is comfortably laid out, and provides a break room, dedicated restroom, and direct access to the secondary stairs up to the 2nd floor.

A majority of the 1st floor is dedicated to an expanded Children's area. Floor to ceiling windows run along the south and west sides of the space, allowing for generous natural daylight. A Storytime room allows for acoustic separation from the rest of the Children's Area, and a dedicated outdoor garden serves to directly supplement the indoor program space.

At the northeast corner of the 1st floor is a large Community Meeting Room, capable of comfortably seating over 100 people. This room is supported by a dedicated kitchen and storage area. The kitchen allows for catered events, and the storage room supports flexible seating arrangements such as formal presentations or tables and chairs for workshops. A patio located directly outside the Community Room, when combined with an operable glass wall, doubles the size of the space available for large gatherings.

PROGRAM PLAN LEVEL 1

AFTER HOURS

One of the key benefits of the proposed layout is the ability to operate the Community Meeting Room completely autonomously from the rest of the library after hours. The dashed red line shown in Figure F indicates the extent of the area that can be used separately when the rest of the facility is closed. This area is located immediately adjacent to the secondary entrance, where large event groups are likely to enter from after parking in the City lot to the east of the library. A roll down gate located in the lobby can be closed, preventing the public from entering the rest of the library. The public restrooms remain open and accessible, directly off the area of the lobby still open to the public. The building code required two exits are provided, one through the parking lot entry, and one through the community patio.

The configuration provides maximum flexibility for a diverse range of after-hours programmatic activities including events such as author readings, community meetings, weddings, workshops, and other group activities.

1. AFTER HOURS ENTRY
2. COMMUNITY ROOM
3. COMMUNITY ROOM KITCHEN
4. PUBLIC RESTROOMS

Figure F: Program Plan Level 1 - After Hours

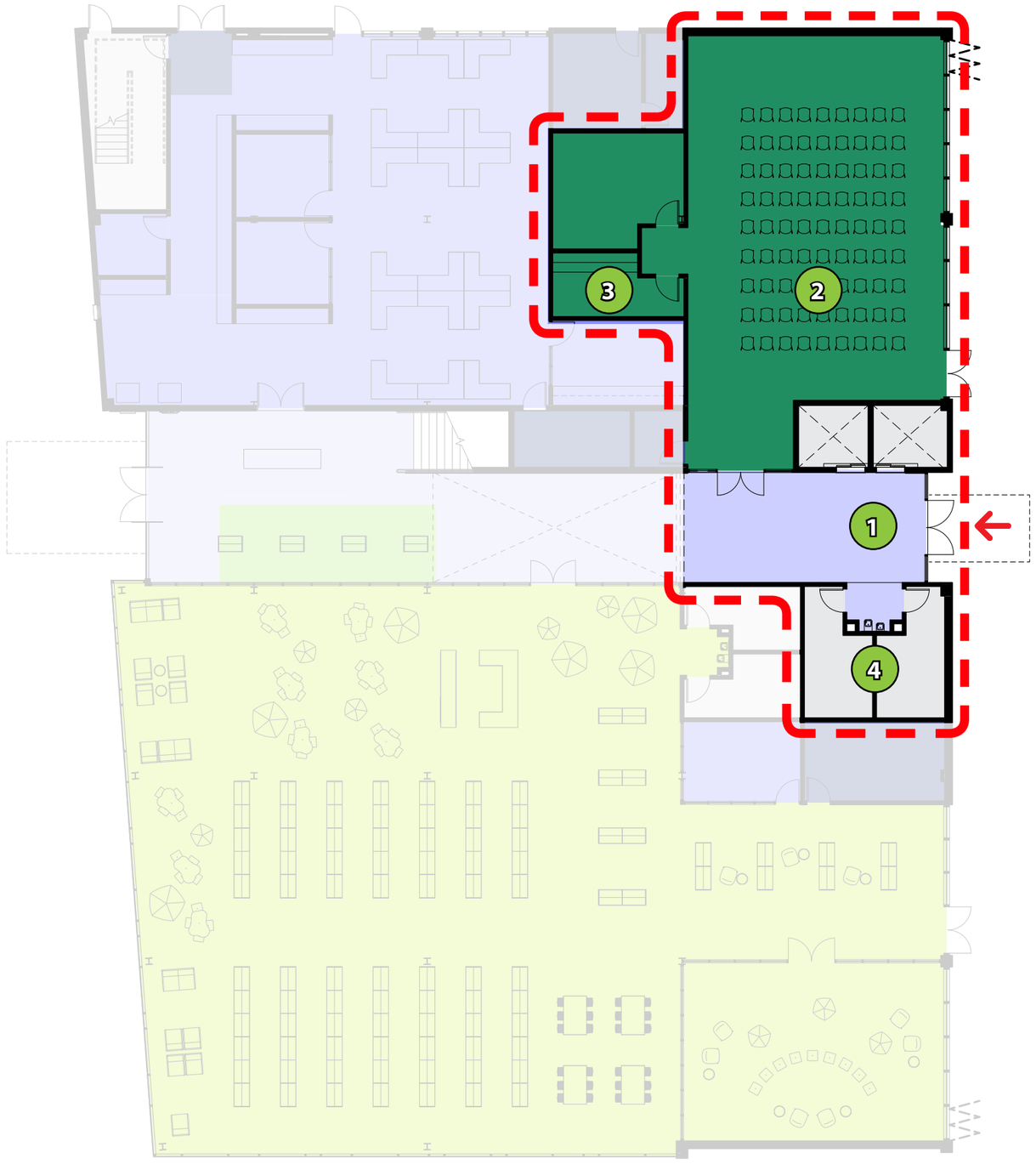


Figure G: Program Plan Level 2

1. MAIN STAIR
2. CIRCULATION DESK
3. PUBLIC COMPUTERS
4. ADULT COLLECTIONS
5. MEETING ROOM
6. TEENS
7. LIFE LITERACIES
8. QUIET READING
9. STAFF
10. PUBLIC RESTROOMS
11. ELEVATORS

PROGRAM PLAN LEVEL 2

The 2nd floor shown in Figure G is oriented around a double height opening at the main stair, located with a raised clerestory above bringing daylight into the center of the library. A long counter at the edge of the opening provides a perch for people to sit and work on homework or on laptops. A majority of this level is dedicated to adult collections. While the number of volumes will see some reduction from the current collection levels, all sections of the current collection will remain represented. Adjacent to the book collections, generous space is dedicated to comfortable seating to be utilized for either reading, socializing, or studying. A circulation desk is centrally located, allowing clear sightlines to the elevators, stair, restrooms, teen area, and secondary staff area. In addition to the Adult Collections and Teen Area, the 2nd floor also contains a new Life Literacies Center. The 2nd floor program is supported by a medium size meeting room, a technology room, and several small group study rooms.

DIAGRAM LEVEL 1

The proposed plans are laid out to create clear circulation paths through the library, and maximize daylight, views, and sightlines throughout the space. On the 1st floor, spaces are organized along a circulation spine which links the west and east entries. The main circulation desk is located along this path, with clear sightlines to both entries, the children's area, the staff space, and the public restrooms. This circulation spine bisects the atrium, which brings daylight down to the first floor through the new clerestory windows at the roof above.

Staff access to the building is located at the north, through a dedicated entry. The staff area directly connects with a new staff patio, located on the north side of the building. Directly adjacent to the staff area is the community room, which can be closed off to provide after-hours access. The community room has a dedicated patio which is accessed from inside the space. To the south of the circulation spine, the children's area has views to the outdoors created by a wall of windows at the south and west sides of the space. The children's area also opens to a dedicated outdoor area, the children's garden, at the east side of the building.

1. STAFF
2. STAFF PATIO
3. COMMUNITY ROOM/ AFTER HOURS
4. COMMUNITY PATIO
5. CHILDREN'S AREA
6. CHILDREN'S GARDEN
7. DAYLIGHTING FROM ABOVE
8. SIGHTLINES FROM DESK
9. VIEWS FROM CHILDREN'S AREA
10. CIRCULATION TO CITY HALL
11. CIRCULATION TO PARKING
12. STAFF CIRCULATION

Figure H: Diagram Level 1

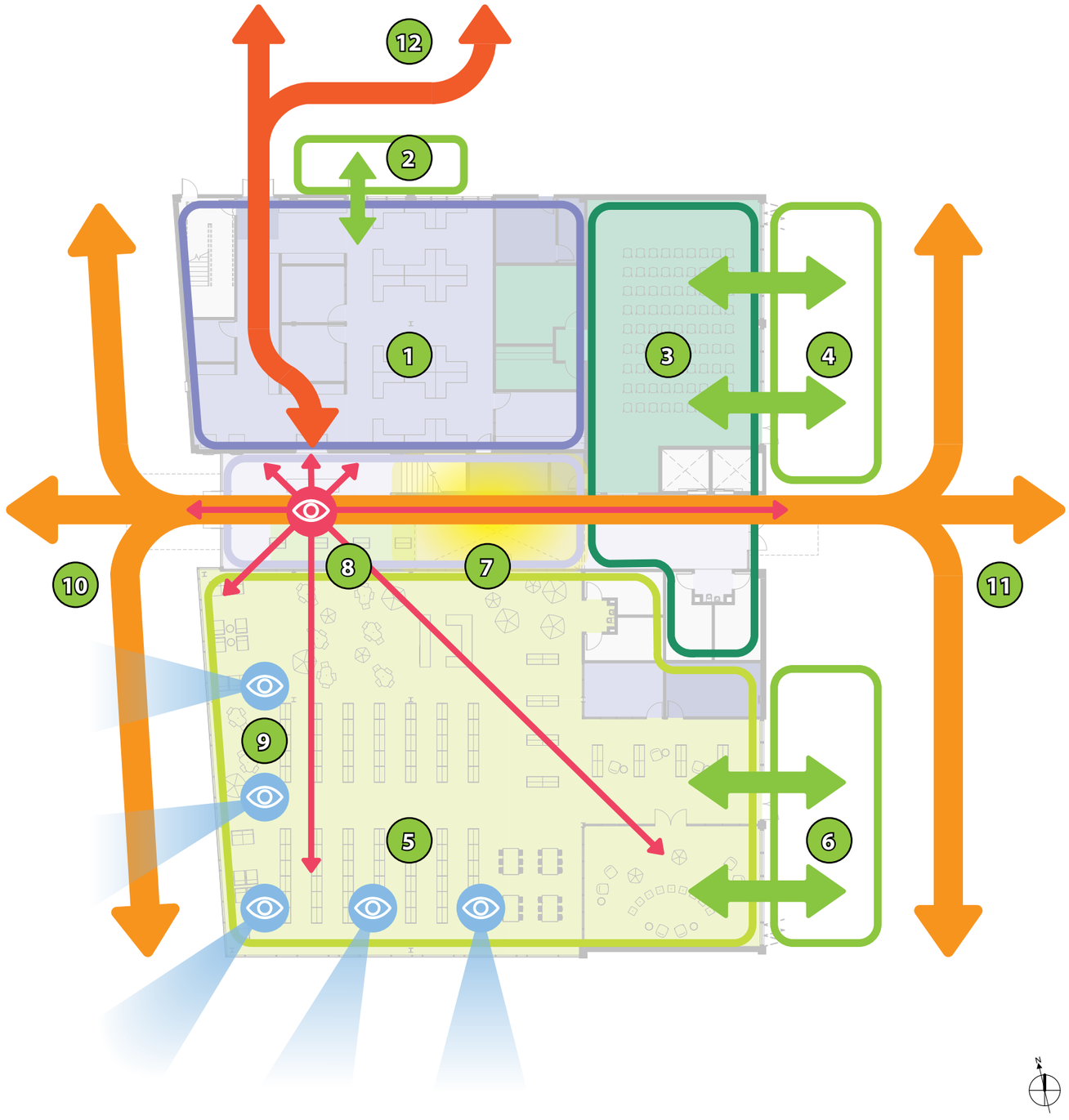
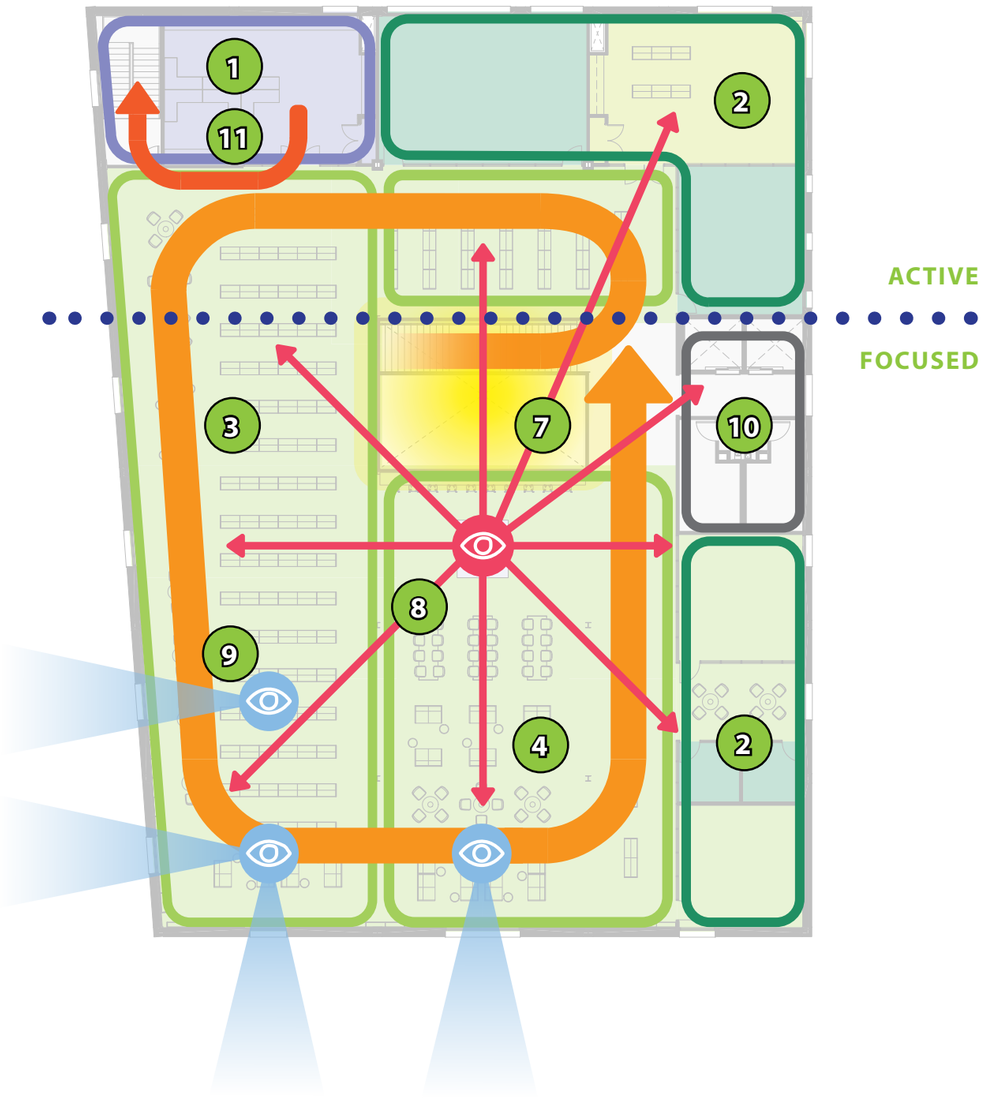


Figure I: Diagram Level 2



1 STAFF

2 SERVICES

3 COLLECTIONS

4 READING

5 SUPPORT

6 CIRCULATION PATH

7 DAYLIGHTING FROM ABOVE

8 SIGHTLINES FROM DESK

9 VIEWS FROM COLLECTIONS

10 PUBLIC RESTROOMS/ELEVATORS

11 STAFF CIRCULATION

DIAGRAM LEVEL 2

The 2nd floor is accessed by the main stair located in the center atrium. Clerestory windows are located above this atrium opening, bringing in daylight from above. Collections are centrally located, and seating at the southwest maximizes the views available through the existing windows. The 2nd floor staff desk is located just to the south of the atrium. From this circulation desk, a single staff member can supervise the entire floor, including collections, the teen space, the public computers, and the enclosed meeting rooms and library service spaces. A smaller staff office is located to the north, with a clear sightlines to the circulation desk, and access to a dedicated staff stair. Spaces are generally located with more active, dynamic spaces to the north, and more quiet, focused spaces to the south.

RENOVATION PUBLIC & PRIVATE

The proposed design was laid out with careful thought towards maximizing space available to the public, in contrast with the existing library's high percentage of private space demonstrated in Figure C in the Section I Assessment Summary. Figure J illustrates the ratio of the proposed renovation design, with public space shown in light green and private space shown in dark green. The proposed renovation is 87% public space, or approximately 26,000 square feet. This area is close to the amount of public space present in the existing building, approximately 27,000 square feet. This diagram demonstrates that from the perspective of the public the proposed renovation design will provide nearly equal programmatic square footage to the existing building, despite the overall reduction in square footage.

EXISTING LIBRARY:

PUBLIC:	**27,394 SF (65%)**
PRIVATE:	**14,916 SF (35%)**
TOTAL:	**42,310 SF**

RENOVATION:

PUBLIC:	**26,181 SF (87%)**
PRIVATE:	**4,049 SF (13%)**
TOTAL:	**30,230 SF**

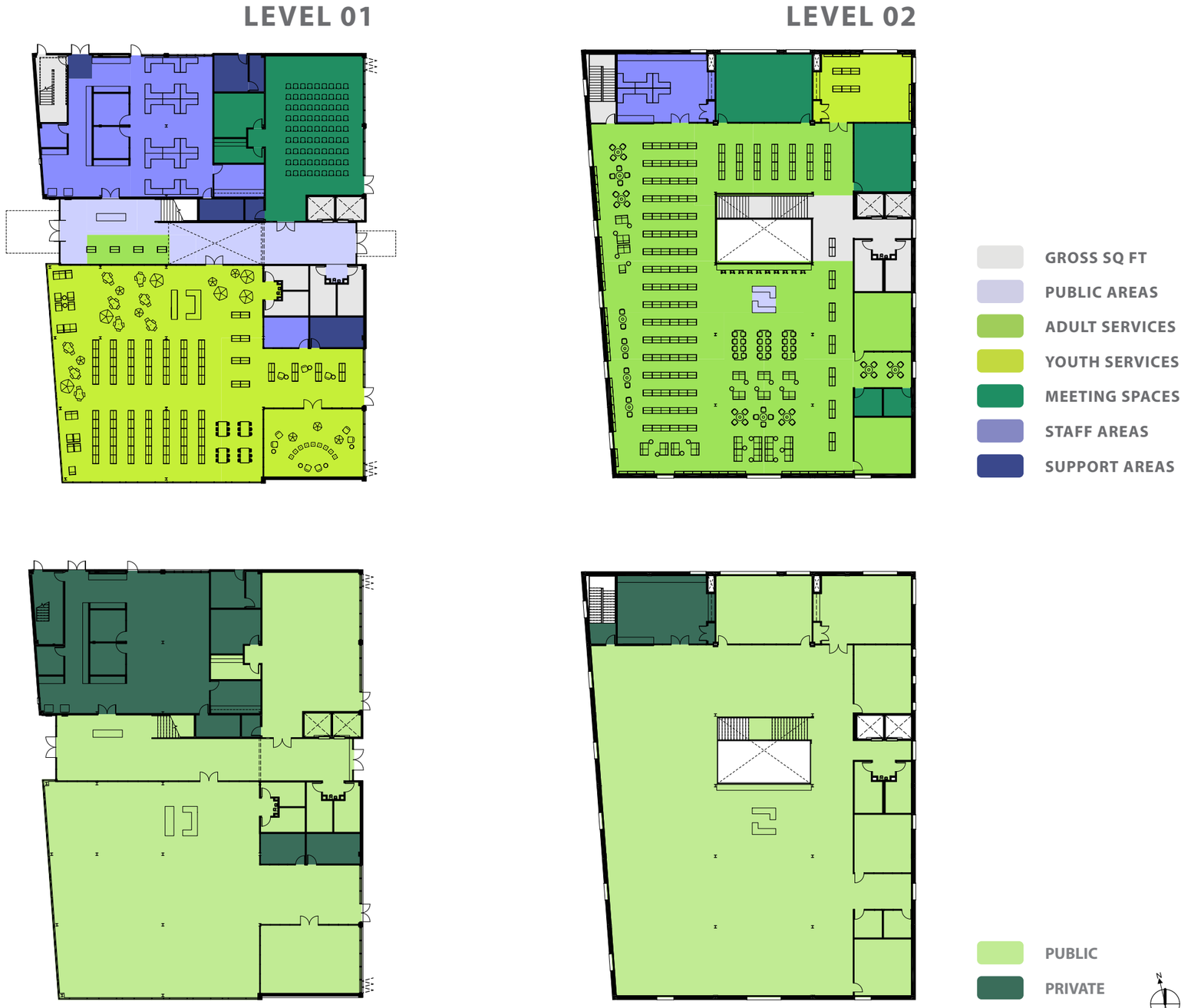


Figure J: Renovation Public & Private

COLLECTIONS: NUMBER OF VOLUMES

	EXISTING (42,000 SF)	DLAC PROGRAM (47,000 SF)	RENOVATION (30,000 SF)	Δ FROM EXISTING	Δ FROM PROGRAM
KIDS	26,300	±33,100	±31,200	4,900	(1,900)
TEENS	3,700	±4,700	±2,200	(1,500)	(2,500)
ADULTS	105,500	±152,600	±73,500	(32,000)	(79,100)
TOTALS:	135,500	±190,400	±106,900	(28,600)	(83,500)

Figure K : Number of Volumes

COLLECTIONS: RATIOS

	% of EXISTING	% of PROGRAM
KIDS RENOVATION	119%	94%
TEENS RENOVATION	59%	47%
ADULTS RENOVATION	70%	48%
TOTAL RENOVATION:	**79%**	**56%**

Figure L : Ratios

PROGRAM: SQUARE FOOTAGE

PROGRAM	EXISTING	RENOVATION	Δ FROM EXISTING
00 GROSS SQ FT	11,510 SF	3,190 SF	(8,320) SF
01 PUBLIC AREAS	1,600 SF	1,545 SF	(55) SF
02 ADULT SERVICES	16,000 SF	10,319 SF	(5,681) SF
03 YOUTH SERVICES	4,000 SF	7,530 SF	3,530 SF
04 MEETING SPACES	1,200 SF	3,496 SF	2,296 SF
05 STAFF AREAS	6,000 SF	3,542 SF	(2,458) SF
06 SUPPORT AREAS	2,000 SF	608 SF	(1,392) SF
TOTAL GROSS SQUARE FOOTAGE	42,310 SF	30,230 SF	(12,080) SF

Figure M : Square Footage

PROGRAM ANALYSIS

We analyzed the program using three metrics, total number of volumes, ratios of volumes, and square footage.

Per Figure K showing the number of volumes, and Figure L showing the ratio between the existing library and the proposed renovation design, the adult collection has been significantly reduced. The Children's collection, however, shows a significant increase in comparison to the existing building, and nearly reaches the collection levels outlined as the target in the 47,000 square foot program prepared by the Downtown Library Advisory Committee (DLAC).

As shown in Figure M, the square footage distribution of the proposed renovation design was compared to the allocation of programmatic spaces in the existing 42,000 square foot library. Due to the reduced overall building size, the proposed renovation significantly reduces the square footage of the Staff Area and Adult Services. Youth Services and Meeting Areas, however, are actually proposed to increase in size, allowing more robust programming and the ability to provide better service to the public.

These determinations regarding program were made in consultation with the Library staff, to allow for the best use of the 32,000 square foot proposed renovation design.

RENDERINGS
BASE DESIGN

View from City Hall

The west elevation highlights a number of improvements made to the existing building, site, and facade. Most notably, the removal of the one-story sections of the building at the perimeter of the library allow for floor to ceiling glass located at the Church & Center Street corner, which provides a much more welcoming appearance than the current closed off opaque facade of solid concrete masonry. A new plaza draws people into to the main entry, which is framed by a new canopy finished in natural wood. The building is painted white to reflect the City Hall across the street. While the improvements are significant and dramatic, the limited budget target in the base design does limit the inclusion of landscaping and new finishes, leaving the site and building feeling a little bare and underdeveloped.

1. MAIN ENTRY
2. ENTRY AWNING WITH WOOD
3. BOOK DROP
4. ENTRY PLAZA
5. MULCHED SITE
6. EXISTING HERITAGE TREES
7. FULL HEIGHT GLASS
8. GLASS AT CORNER
9. EXISTING WINDOWS
10. PAINTED CONCRETE

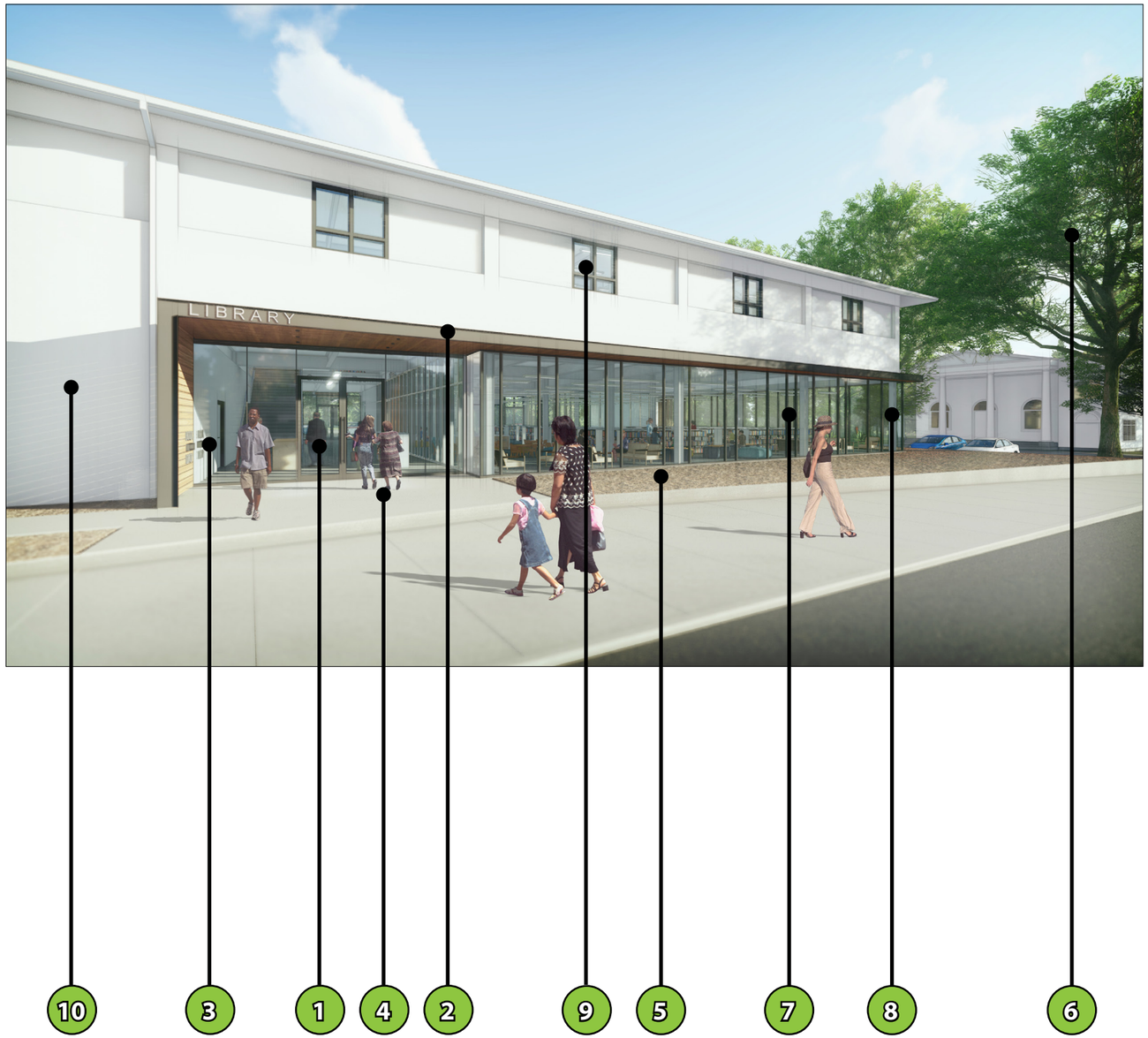


Figure N: Rendering - Base - View from City Hall

RENDERINGS ALTERNATE

View from City Hall

The west elevation is improved dramatically with the addition of the alternates, described in detail in Section V, Budget. The sloped concrete tile roof at the perimeter is replaced with a metal roof and new gutters, and the rainwater leaders are moved inside the walls of the building. A natural wood soffit brings some warmth to the underside of the roof. The painted concrete at the second-floor walls is replaced with new white cement plaster, creating a more refined facade with a unified finish on both stories of the exterior walls. The 2nd floor windows are replaced with new operable windows without intermediate mullions, allowing for more daylight, better air circulation, and better energy performance. In addition, site landscaping is added, including trees, ground cover, boulders, and patinaed metal retaining walls. While these alternates provide a real and noticeable improvement to the quality of the streetscape and urban environment, they still only bring the level of overall quality to a low-medium level when compared with other recently constructed libraries and civic projects in the greater Bay Area.

1. MAIN ENTRY
2. ENTRY AWNING WITH WOOD
3. BOOK DROP
4. ENTRY PLAZA
5. LANDSCAPED SITE
6. EXISTING HERITAGE TREES
7. PATINAED METAL PLANTER
8. BIKE RACKS
9. FULL HEIGHT GLASS
10. GLASS AT CORNER
11. NEW WINDOWS
12. CEMENT PLASTER FINISH
13. NEW ROOF WITH WOOD SOFFIT

Figure O: Rendering - Alternate - View from City Hall

RENDERINGS
BASE DESIGN

View from Entry Plaza

This view demonstrates the experience of approaching the main entry from the plaza. The entry canopy clearly frames the front door, and the book drop is identified by signage. Views into both the lobby and the Children's Area are apparent, providing a preview of the programs underway inside the library. The facade is welcoming, and modernized. Both the main stair and staff circulation desk are visible immediately inside the front door, and the improved spatial organization is immediately apparent.

1. MAIN ENTRY
2. ENTRY AWNING WITH WOOD
3. BOOK DROP
4. ENTRY PLAZA
5. MULCHED SITE
6. FULL HEIGHT GLASS
7. NEW WINDOW
8. EXISTING WINDOWS
9. PAINTED CONCRETE

Figure P: Rendering - Base - View from Entry Plaza

RENDERINGS ALTERNATE

View from Entry Plaza

The alternate for the main entry brings life to the arrival sequence. Bike racks provide a location for those who live close enough by to ride to the building to lock up their bicycles while at the library. Lush landscaping frames the base of the building and softens its relationship to the ground plane. The natural wood canopy at the 1st floor and the matching natural wood eave at the 2nd floor creates two distinct lines of warm materiality that draws the eye down to the entry. The smooth cement plaster facade creates a uniform appearance between 1st and 2nd floor, creating the sense of an entirely new building despite the fact that underneath the improvements the structure and outline of the original building remains. While these alternates provide a real and noticeable improvement to the quality of the plaza and entry, they still only bring the level of overall quality to a low-medium level when compared with other recently constructed libraries and civic projects in the greater Bay Area.

1. MAIN ENTRY
2. ENTRY AWNING WITH WOOD
3. BOOK DROP
4. ENTRY PLAZA
5. LANDSCAPED SITE
6. PATINAED METAL PLANTER
7. BIKE RACKS
8. FULL HEIGHT GLASS
9. GLASS AT CORNER
10. NEW WINDOWS
11. CEMENT PLASTER FINISH
12. NEW ROOF WITH WOOD SOFFIT

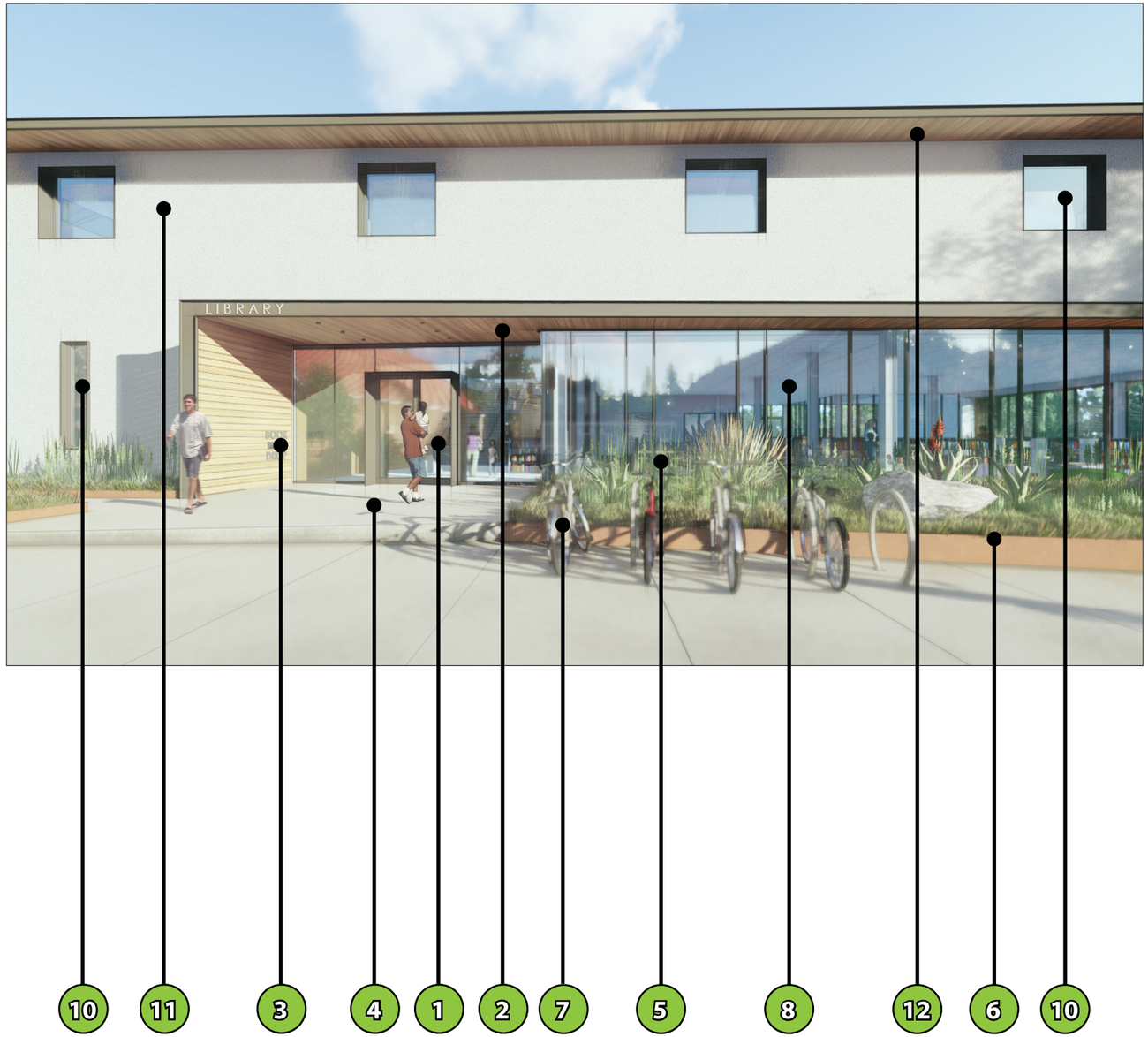


Figure Q: Rendering - Alternate - View from Entry Plaza

RENDERINGS
BASE DESIGN

View Inside Lobby

The lobby space is organized around a double height opening that connects the two floors with a main stair. Clear signage orients the public to the space, with entrances to the Community Meeting Room and Children's area clearly identified. The exterior can be seen both though the secondary entrance on the parking lot side of the building, as well as through the full height windows on the other side of the Children's Area, creating a connection to the outdoors with views of greenery and street activity. While the spatial improvements are well defined, the finishes are stripped down and basic. Walls are limited to painted gypsum wallboard, and there are no acoustic ceilings anywhere in the building. The structure and ductwork are exposed, creating an industrial look. Daylight is limited on the 2nd floor due to the small existing windows that remain.

1. MAIN STAIR
2. POLISHED EXISTING CONCRETE
3. EXPOSED STRUCTURE
4. PAINTED GYPSUM BOARD
5. AREA SIGNAGE
6. FULL HEIGHT GLASS

Figure R: Rendering - Base - View Inside Lobby

RENDERINGS ALTERNATE

View Inside Lobby

With the addition of the alternates on the interior of the library, significant improvements are visible. Natural wood wall paneling, and ceilings bring warmth and a soft touch to the interiors. The clerestory above the main stair and the new 2nd floor windows at the perimeter bring added daylight to the space. Large sculptural lights fixtures add a playful touch to the tall ceiling above the main stair. Importantly, acoustic ceilings have been added throughout, creating a more refined and finished appearance, and more critically mitigating sound impacts. A large and bold custom wall graphic has been added at the second floor for color. The overall level of finish is more in line with what the public has come to expect in a new civic building. While these alternates provide a real and noticeable improvement to the quality of lobby and interiors, they still only bring the level of overall quality to a low-medium level when compared with other recently constructed libraries and civic projects in the greater Bay Area.

1. MAIN STAIR
2. POLISHED EXISTING CONCRETE
3. WOOD PANEL CEILING
4. ACOUSTIC CEILING
5. WOOD PANEL WALL
6. FULL HEIGHT GLASS
7. VINYL WALL GRAPHIC
8. FEATURE LIGHTING
9. AREA SIGNAGE

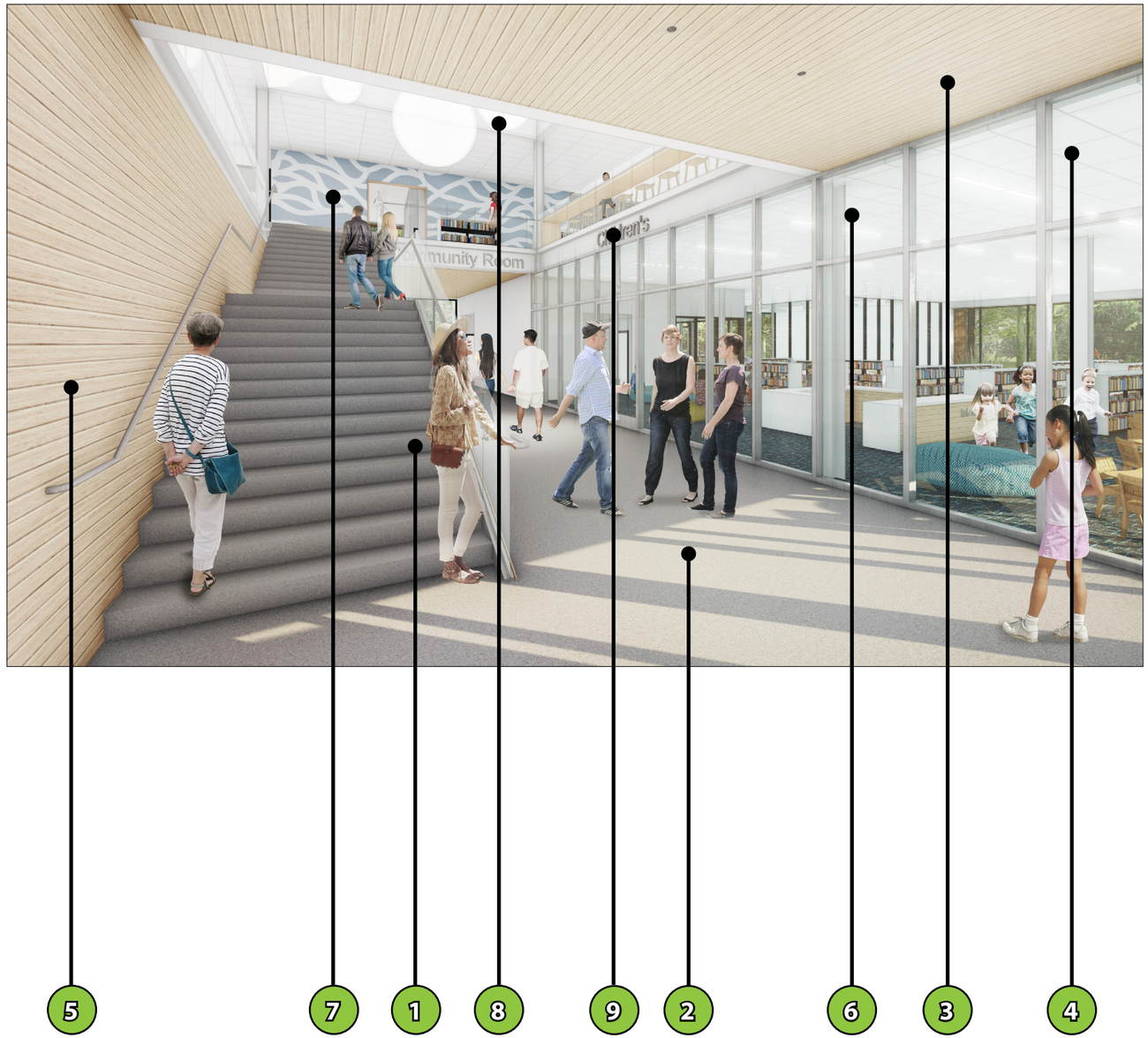


Figure S: Rendering - Alternate - View Inside Lobby


mmunity Room


LIBRARY

JAYSON
ARCHITECTURE

50 29th Street
San Francisco CA 94110
jaysonarch.com
415.317.0529

ENGINEERING NARRATIVES III.

SUB CONSULTANT TEAM

We have assembled a team of engineering subconsultants with deep expertise in the design of public buildings and libraries. Each member of the team has worked with Jayson Architecture on multiple projects throughout the Bay Area. They all have taken a design approach with an eye towards cost efficiency, while maintaining an appropriate level of robust quality and functionally to appropriately serve a heavily used civic facility for decades into the future.

BKF Engineers
255 Shoreline Drive, Suite 200
Redwood City, CA 94065
www.bkf.com
650.482.6300

BASE Design Inc.
582 Market Street, Suite 1402
San Francisco, CA 94104
www.basedesigninc.com
415.466.2997

Alter Consulting Engineers
1624 Franklin Street, Suite 1300
Oakland CA, 94612
www.alterengineers.com
510.876.2591

RIJA Inc.
1620 Montgomery Street, Suite 250
San Francisco, CA 94111
www.rijainc.com
415.730.7994

CIVIL ASSESSMENT

SUMMARY

The purpose of this report is to summarize the field conditions noted during BKF Engineer's site visit and outline site & utility improvements based on the proposed building renovation.

The report includes site descriptions of the existing street curb, sidewalk, walkway and parking lot conditions along with descriptions of the proposed site concrete improvements, anticipated grading scope of work and general requirements for ADA compliance.

As the existing two story library building was constructed in the 1960's, it is anticipated that domestic, fire and irrigation water utility improvements will be required for the renovation. Stormwater treatment measure will be incorporated in accordance with the County's stormwater management requirements and ensure that the post-development stormwater peak flow rate will be comparable to the pre-project conditions.

EXISTING CONDITIONS

Site Improvements

The site is currently developed with an existing two story building with surface parking lots and associated walkways and landscaping. The site is generally flat, and slopes gently from north to south at an approximately 1% slope.

Street curb and sidewalk improvements were completed in 1997. The main entry to the existing building is off Church Street with site stairs and walkways from the street sidewalk. Several site walkways appear to be out of conformance with current accessibility standards. Additionally, street curb ramps at the intersections of Church and Center Streets, and Center and Locust Streets do not meet current accessibility standards.

Utility Improvements

The site is currently served with existing storm drain, sanitary sewer, water, gas and electric services. The following are existing utilities found that serve the existing site:

- Storm drain laterals appear to pickup building roof drains are piped to existing 12 to 18-inch storm drain main lines in Center Street and Church Street.
- Runoff from surface parking lots are collected in inlets and are piped through the curb and into the gutter on Locust Street and Church Street.
- A sanitary sewer lateral with cleanout for the building is provided off the existing main in Church Street. The sanitary sewer lateral size is unknown and is assumed to be 6-inch.
- A water service and meter for combined domestic and fire water is provided off the existing 8-inch water main in Church Street. The domestic water backflow preventer is currently inside the building. There is no backflow preventer

Civil Figure 1: Library main entry on Church Street

Civil Figure 2: Sidewalk along Church Street

Civil Figure 3: Sidewalk along Center Street

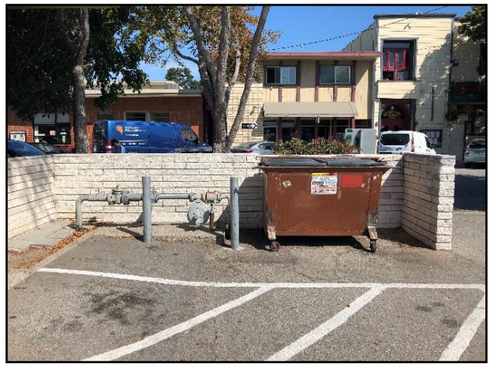
Civil Figure 4: Sidewalk along Locust Street

Civil Figure 5: Curb ramp on Church & Center Street

Civil Figure 6: Curb ramp on Locust & Center Street

Civil Figure 7: Building roof leader on Center Street

Civil Figure 8: Backflow preventer inside the building



Civil Figure 9: Gas meter on Locust Street

Civil Figure 10: PG&E transformer on Locust Street

on the fire water service which is tapped off the domestic water service prior to the domestic backflow preventer.

- A water service with meter and backflow preventer for irrigation is provided off the existing 8-inch water main in Church Street.
- Gas service and meter (PG&E) is provided off Locust Street.
- Electrical service and transformer (PG&E) is provided off Locust Street.

PROPOSED CONDITIONS

Site Improvements

Site grading design will focus on pedestrian and vehicular accessibility, safety, visual connections and ease of pedestrian circulation and connectivity while conforming to existing grades and conforms.

- Grading design for site accessibility will be in accordance with the requirements of the 2019 California Building Code (CBC). The pedestrian accessible path of travel will be provided at a longitudinal slope of less than 5% without the need for ramps and handrails to the extent practical, or at less than 8.33% with ramps and handrails.
- Grading is required for areas where sections of the existing building are to be removed, ensuring positive drainage away from the building.
- The elevation of the existing parking area is approximately 12-inches lower than the proposed parking area. Grading and repaving will be required connect the existing and the proposed parking areas.

Site hardscape improvements include but are not limited to new concrete sidewalk, curb & gutters, asphalt paving and parking areas along Church Street and Locust Street. The existing curb, gutter and sidewalk along Center Street to remain.

Earthwork

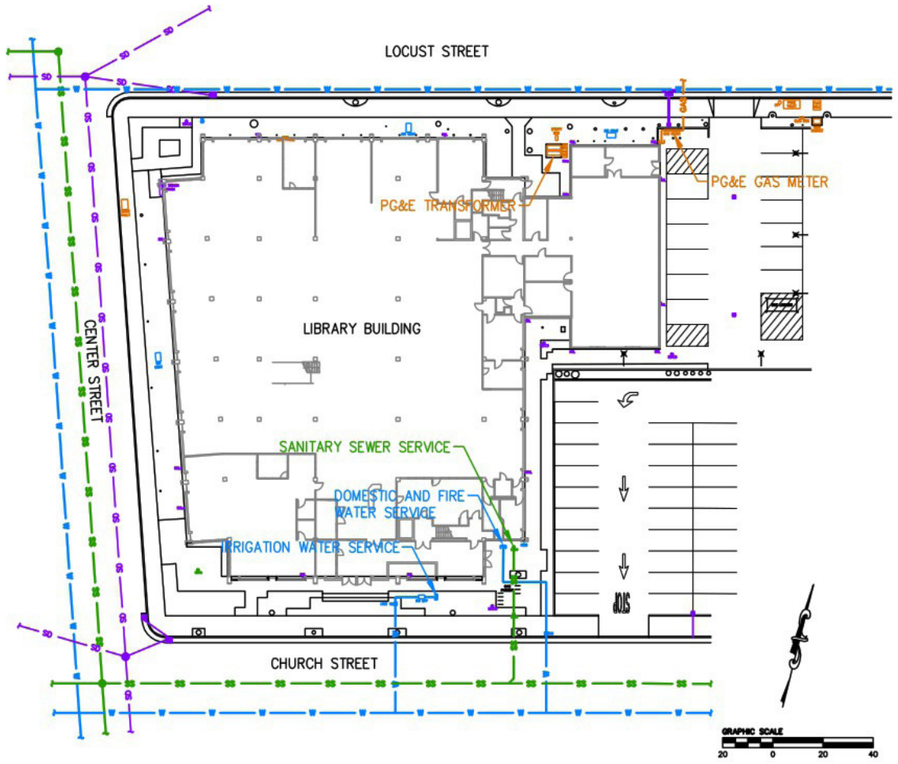
It is anticipated the project will generate minimal earthwork from cut and fill operations from site improvement excavations and proposed pavement sections.

- Fill will be required to backfill excavations where the existing building slab and foundation are to be removed.

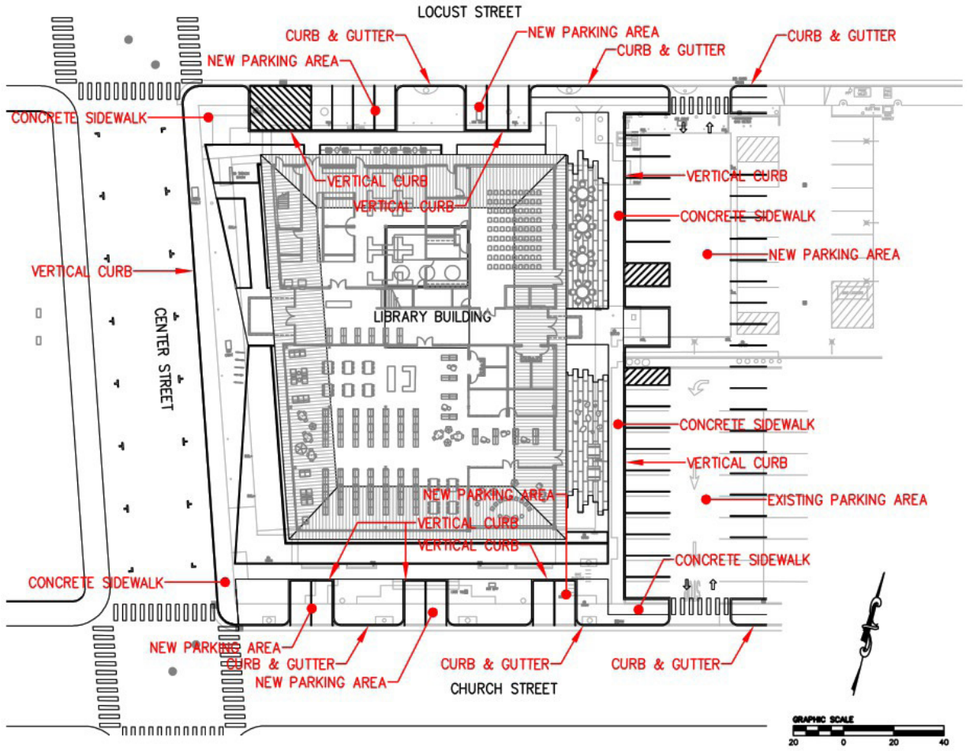
Utility Improvements

Utility services shall be maintained and operational with minimal interruption during construction. The following are utility improvements proposed for the project:

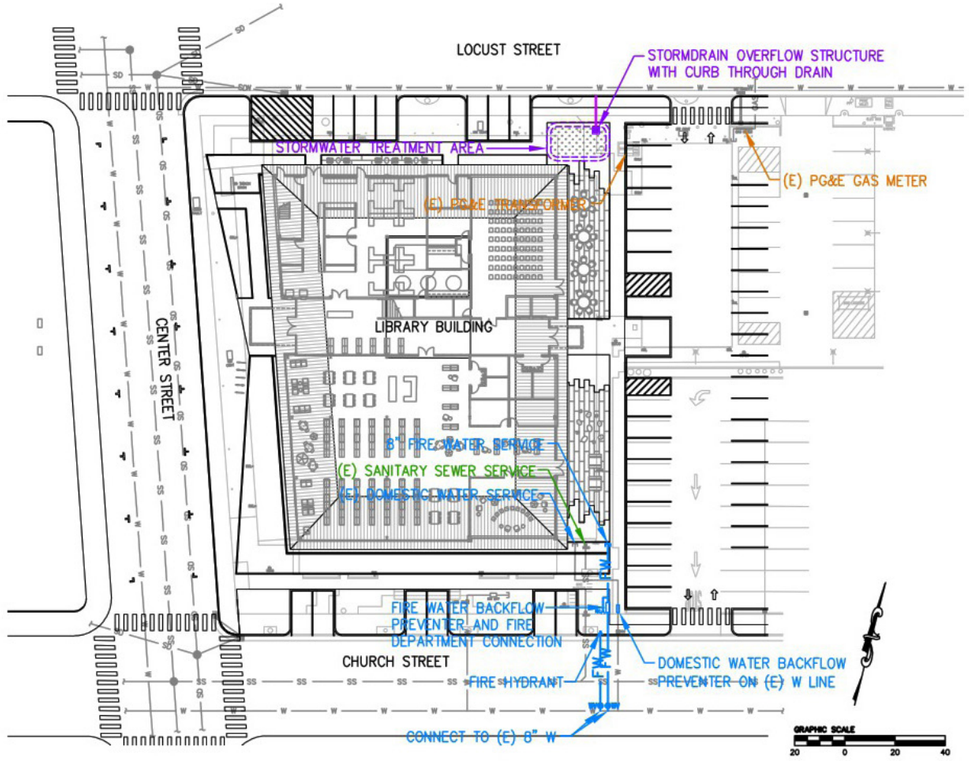
- Rainwater leaders from the building roof to be reconnected to the existing site underground storm drain system
- No new sanitary sewer service lateral connections are anticipated.
- A new domestic water reduced pressure backflow preventer to be installed on the existing water service lateral serving the existing building. The current backflow preventer is located inside the building.
- A new 8-inch dedicated fire water service lateral connection to be provided for the building, connected to the existing 8-inch water main in Church Street. A double check detector backflow preventer and fire department connection to be provided per the California Fire Code and City of Santa Cruz Fire Department standards.
- A new fire hydrant and fire service lateral connection to be provided, connected to the existing 8-inch water main in Church Street.
- Stormwater treatment measures such as bioretention areas, flow-through planters and vegetated areas to be incorporated to treat and store stormwater runoff generated from new impervious surfaces in accordance with the County's stormwater management requirements.
- It is anticipated the post-development stormwater peak flow rate will be comparable with the pre-project conditions. If required and to limit the impact to the downstream existing storm drainage system, stormwater detention measures in the form of oversized detention pipes or storage within bioretention areas will be provided to detain the increase in post-development 10-year stormwater peak runoff from the project area and release the peak flow through an orifice controlled outlet at a rate that is equal to the pre-project 10-year storm event flow level.



Civil Figure 11: Existing Conditions Plan



Civil Figure 12: : Proposed Site Conditions Plan



Civil Figure 13: Proposed Utility Conditions Plan

STRUCTURAL ASSESSMENT

SUMMARY

The purpose of this study is to conduct a renovation cost assessment study of the Santa Cruz Downtown Main Library. This report provides a description of the building and the structural features essential to this study, the detailed criteria and procedure employed, the computer model of the lateral force resisting system and the findings of this assessment.

The Main Library Building is a two-story, steel frame and concrete floor hybrid structure which was reportedly built 1966. The roof framing system consists of metal deck supported by steel wide flange beams and columns. The second floor consists of reinforced concrete one-way slab supported by steel wide flange beams/columns and reinforced concrete masonry walls. Steel columns and walls are founded on shallow foundations. Lateral resistance is provided by cast-in-place concrete walls at the second floor and reinforced concrete masonry walls at the first floor.

Proposed renovations will include demolition of the low roof extensions around the main library building and demolition of the library services building. By demolishing the low roof extension and perimeter shear walls, ground floor lateral force resisting system will be eliminated. A new lateral system will be introduced at the ground floor.

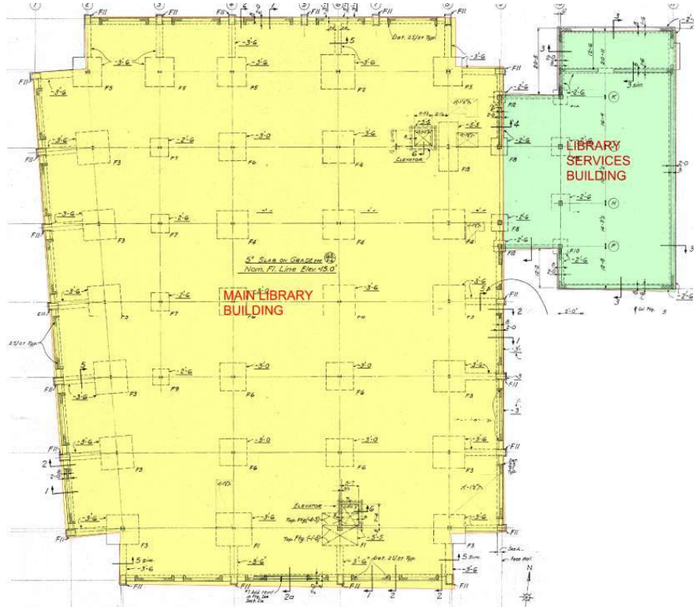
STRUCTURE / SEISMIC CHARACTERISTICS

According to the original construction documents, the Main Library Building was reportedly constructed in 1966. The building is a two-story, steel and concrete hybrid structure, approximately trapezoidal in plan. A one-story library services building, 36'-0" x 81'-0" rectangular in plan, located on the north-east end of the main library building. The library services building is connected to the Main Library Building. (Figure 1)

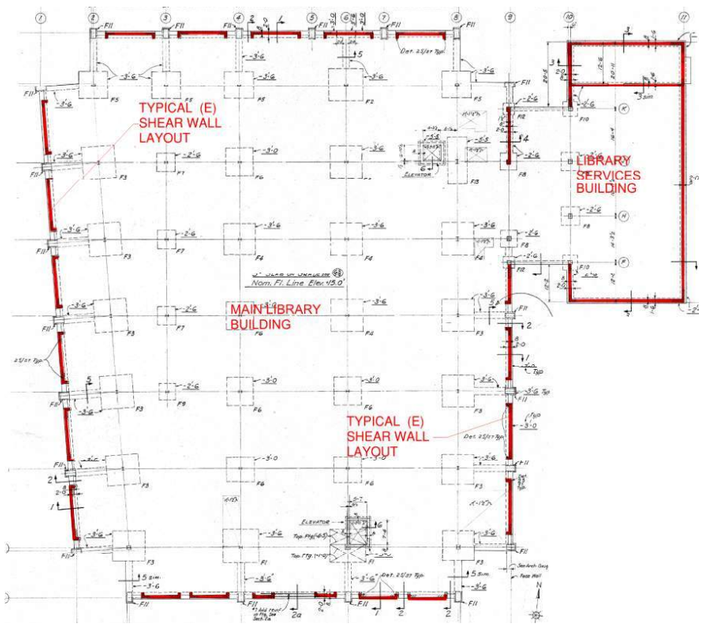
The roof framing consists of 3" x 18ga metal deck with 2 ½" vermiculite concrete over, spanning between 18" deep steel wide flange beams. The steel beams are supported by steel wide flange columns. The outside perimeter beams and columns are encased in reinforced concrete. (Figure 2)

The second-floor framing consists of 5 ½" reinforced concrete one-way slab supported by steel wide flange beams. The surrounding low roof area consists of 5 ½" reinforced concrete slab supported by concrete encased steel beams and reinforced concrete beams at the perimeter. The steel beams are supported by steel columns on the building interior. The perimeter concrete beams are supported by reinforced concrete columns.

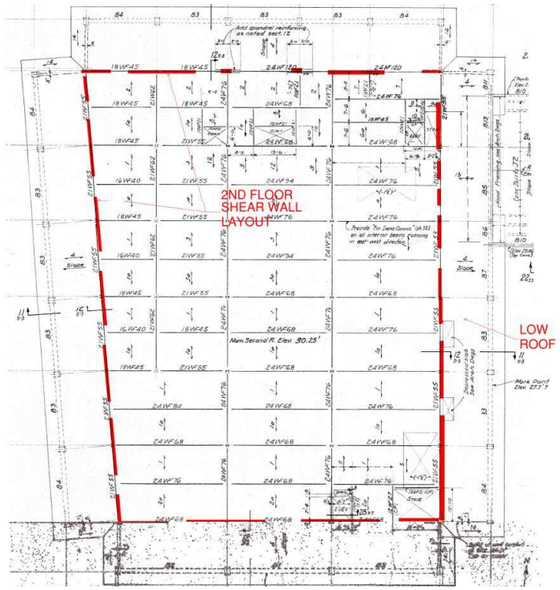
The foundation system is composed of typical 2'-0" wide "strip" footings at the concrete masonry walls and spread footings at the columns. Lateral forces would be resisted by concrete shear walls at the second floor and concrete masonry walls at the ground level.



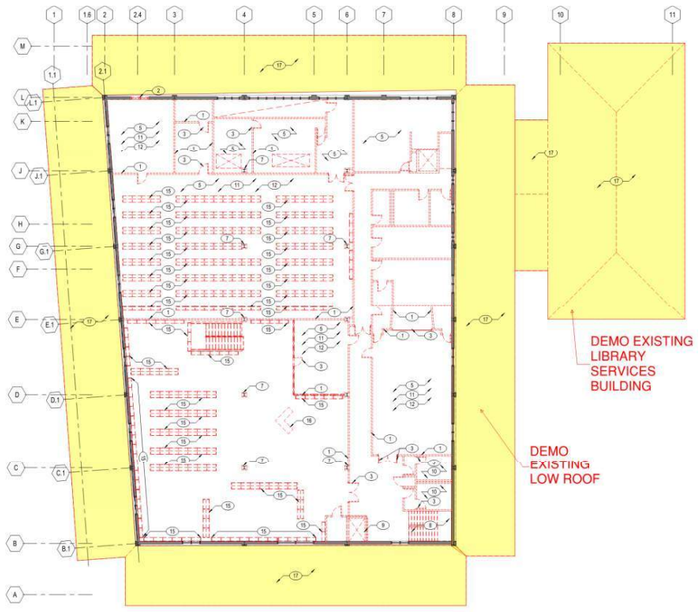
Structural Figure 1: Building Layout



Structural Figure 2: Ground Floor Shear Wall Layout



Structural Figure 3: Second Floor Shear Wall Layout



Structural Figure 4: Proposed Renovation- Demo Layout

The library services building roof consists of reinforced concrete pan joist ceiling slab with a wood framed roof above. The pan joist ceiling extends to the main library building. There is no seismic separation between the main library and library services building.

An ASCE31 Tier 1 screening and Tier 2 deficiency only seismic evaluation was conducted in 2014 by Fratessa Forbes Wong Structural Engineers. The building, overall, was found to be in good condition except for a few perimeter concrete beams at the low roof areas. These beams were found to be seismically deficient and were recommended to be strengthened.

SITE VISIT

BASE Design visited the site on September 4, 2019. The main purpose of the site visit was to evaluate the physical condition of the structure and to compare as built conditions with the original construction drawings. With the exception of a new interior stair, there are no significant differences identified in the main gravity and lateral system of the building. There is no documentation available for this interior stair. In general, the building was found to be in good condition.

PROPOSED RENOVATIONS

Proposed renovations will include demolition of the low roof extension around the main library building and demolition of the library services building. This will require reconfiguration of the main seismic resisting system at the ground floor. The existing low roof structure serves as the horizontal force transfer element of the seismic force resisting system of the building, delivering second floor lateral forces to the outside perimeter concrete masonry shear walls. By demolishing the low roof extension and perimeter shear walls, ground floor lateral force resisting system will be eliminated. A new lateral system will be required at the ground floor.

The second-floor level lateral forces are resisted by concrete shear walls. Several combinations of structural steel systems were investigated. These include: braced frames, buckling-restrained braced frames and concrete shear walls. Based upon prior experience and consensus of the design team, concrete shear wall system is preferred for both reasons of cost and system compatibility.

Based up on our preliminary analysis, 16” thick reinforced concrete shear wall will be required for the first-floor lateral system. The foundations for the new shear walls will be reinforced concrete grade beams. The foundation system will be re-evaluated after the conclusion of geotechnical studies at the site. The existing stair openings will be infilled with metal deck and concrete fill slab and new openings will be added for the relocated stair locations. New openings will be framed for the new elevator shaft opening and new HSS guiderail support posts will be installed. The elevator will require a new reinforced concrete pit.

There will be new roof top mechanical units. The existing roof framing will be strengthened to accommodate the new roof top units. There will be new roof top popup structure to accommodate the proposed clerestory windows. the proposed structure will be framed with steel HSS beams/columns and metal deck.

SUPPORT FOR FUTURE PHOTOVOLTAIC SYSTEM

The new seismic system can accommodate the additional weight of solar panels as designed. The roof framing can accommodate future solar panels without additional strengthening, provided that the solar panel and the rack assembly do not exceed 5psf. 5psf is a typical load for solar panels.

DESIGN CRITERIA

Governing Code: California Building Code (CBC), 2016 Edition.

Gravity Loads

Dead Loads

The following loads are estimates only:

Roof:	
Weight of Structure	30 psf
MEP	10 psf
Architectural + Misc.	10 psf
Typical Floor:	
Weight of Structure	70 psf
MEP	10 psf
Architectural + Misc.	10 psf

Applied Loads

Roof:	
Live Load	20 psf
Mech. Equip. Allowance	
(Actual equip. wt. + Live Load)	
Typical Floor:	
Live Load Corridors Above 1st Floor	80 psf
Live Load Reading Rooms	60 psf

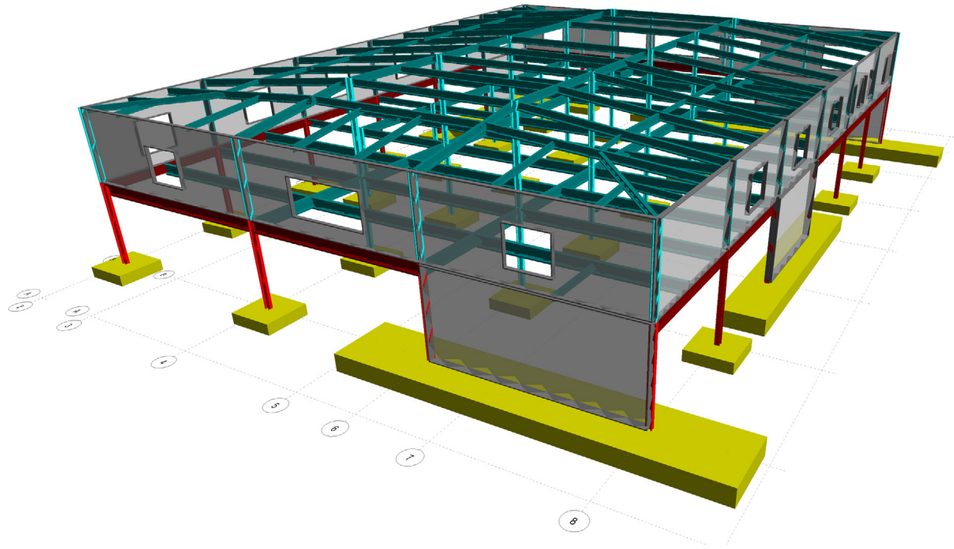
Lateral Loads

Seismic design criteria will be established per CBC, 2016 Edition. Lateral force procedure will be either the static or dynamic procedure as required by soil conditions.

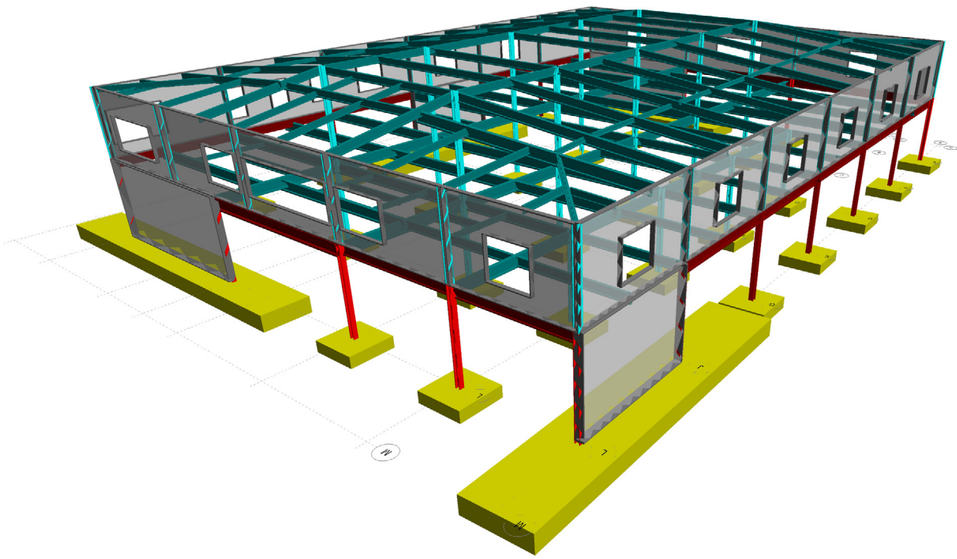
Wind loads Per CBC, 2016 Edition

Basic Wind Speed = 115mph

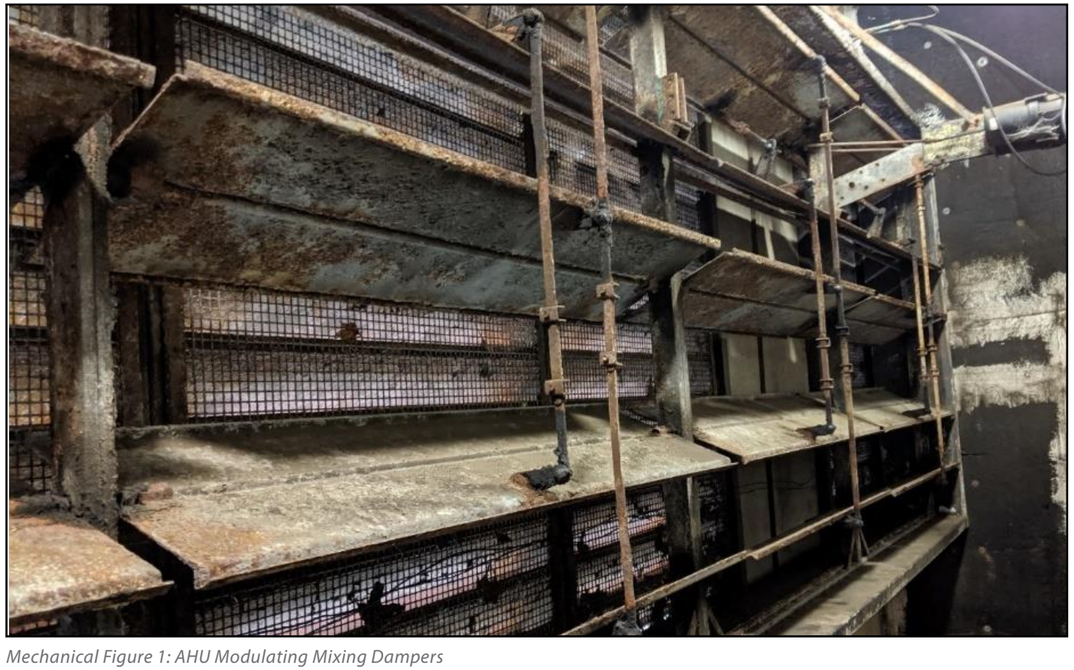
Exposure C



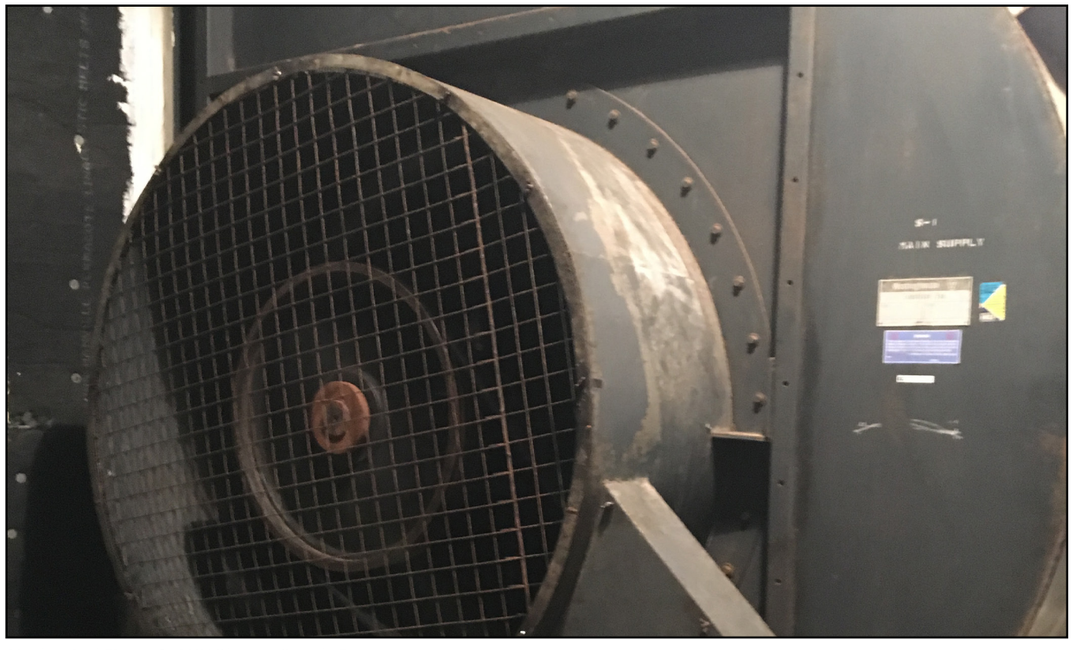
Structural Figure 5: 3D View Computer Model of Proposed Renovations



Structural Figure 6: 3D View Computer Model of Proposed Renovations



Mechanical Figure 1: AHU Modulating Mixing Dampers



Mechanical Figure 2: AHU Plenum Supply Fan

MECHANICAL/PLUMBING ASSESSMENT

SUMMARY

Alter Consulting Engineers completed a site walk and field survey for the renovation or replacement of the HVAC and plumbing systems serving the Santa Cruz Downtown Library.

The current HVAC system has a mix of original equipment from the 1960s construction date, as well as some replacement parts of varying age. Specifically, equipment such as the central fans, ductwork, piping, and pneumatic controls systems are operating far past their intended use. Nearly all other HVAC equipment is near or past it's expected useful life, meaning a replacement is recommended. AlterCE recommends a full replacement and modernization of the HVAC components and distribution system. The new recommended HVAC system is a variable air volume with reheat system, with digital controls. The existing HVAC system conditioning the server room, however, is a more recent install and should be reused if the building is to be renovated.

The plumbing systems, like the HVAC system, are operating past their expected useful service life, and are recommended to be replaced. Major items for replacement include water heaters, fire sprinkler system, and fixtures. It is recommended to reconfigure the system to use electric point of use water heating. If any existing hot water piping is used, it should be insulated.

PURPOSE

The following report has been prepared to summarize the field condition noted during AlterCE's site walk and to outline the general recommendation for the renovation or replacement of the HVAC system serving the downtown Santa Cruz library.

GENERAL ASSESSMENT

The building is a nearly 43,000 square feet existing library located in Santa Cruz California. The existing library was originally constructed in the 1960s.

The HVAC and plumbing systems appear to be regularly maintained. Motors, belts, pumps, and similar components have been periodically refurbished or replaced throughout the 50+ year of operation of the building. Components which are harder to replace, such as mixing valve dampers and fan bodies are original equipment. Heating is provided by a central air handling unit.

Note that most of the building has no active cooling. Building occupants have complained about lack of air movement and overheating of spaces. Occupants actively try to address these issues by opening perimeter windows. It was noted on the site walk that every perimeter window was opened.

In general, the existing HVAC system has far exceeded its anticipated useful life. Equipment has been well maintained or replaced, but most of the distribution system (supply fan, piping system, ducting systems) are original and will soon require replacement.

EXISTING HVAC AND PLUMBING SYSTEM OVERVIEW

Air is supplied into the building by a custom built-up air handling unit. This air handling unit is constructed of several field fabricated sections including modulating mixing damper section, pre and final filter section, and large capacity plenum supply/return fan section. Exhaust air is drawn from the building through a high capacity plenum exhaust fan, located in the room adjacent to the supply fan. There are no heating or cooling coils at the central air handling unit. Heating is provided at the zone level.

Air is ducted to each regularly occupied space. The ductwork distribution system has been designed to create independent temperature control zones. Unconditioned supply air is introduced to temperature control zones at a constant flowrate, there are no variable volume boxes. Each control zone has been provided with a dedicate duct mounted hydronic heat coils and associated wall mounted thermostat. The wall mounted thermostat is wired to a modulating hydronic control valve. The control valve varies the rate of heating hot water supplied to the duct mounted hydronic heating coils. The entire system is controlled with a pneumatic control system.

Heating hot water is generated by a central heating hot water system consisting of a primary-secondary distribution system and central boiler. The central boiler and primary/secondary distribution pumps are collocated in the libraries second floor mechanical room. The second-floor mechanical room also includes the building central gas-fired domestic water heater. The domestic water heater has been provided with a domestic hot water return pump and associated uninsulated piping system.

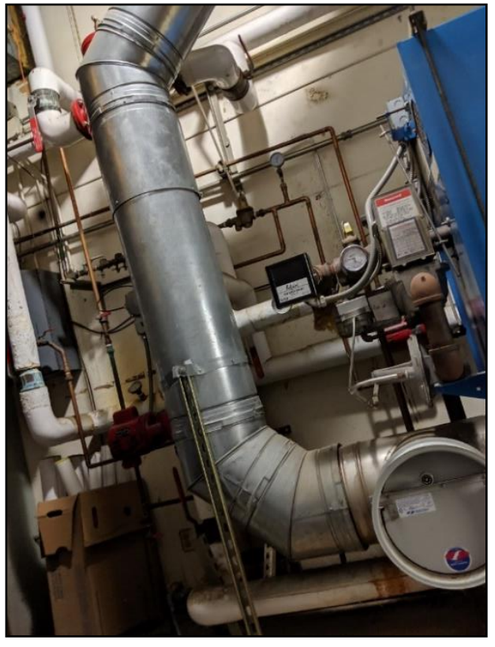
Central Air Handling Unit

The custom air handling unit (AHU) is field fabricated. The AHU occupies a dedicated custom air handling unit room. Many of the components of the room are original parts. This equipment has far exceeded the anticipated useful life of a custom air handling unit. Replacement is recommended.

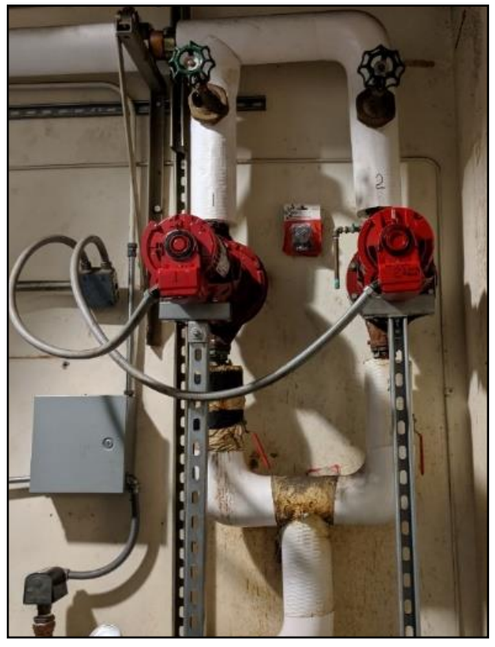
The modulating dampers associated with outdoor air and return air mixing are constructed of original parts. The components of these dampers have far exceeded their anticipated useful life. Prolonged exposure to corrosive coastal air has eroded much of the metallic material used to construct the dampers and actuators.

The AHU's high-volume plenum fans, used to supply and return air throughout the building, are original to when the building was first constructed. The supply and return fans are sized for 50,000 CFM. The motors associated with these plenum fans have been replaced at least once during the lifetime of the building. Due to the age of this equipment, some components can likely never be replaced if damaged or worn out. The supply and return fans associated with the AHU have far exceeded their anticipated useful life.

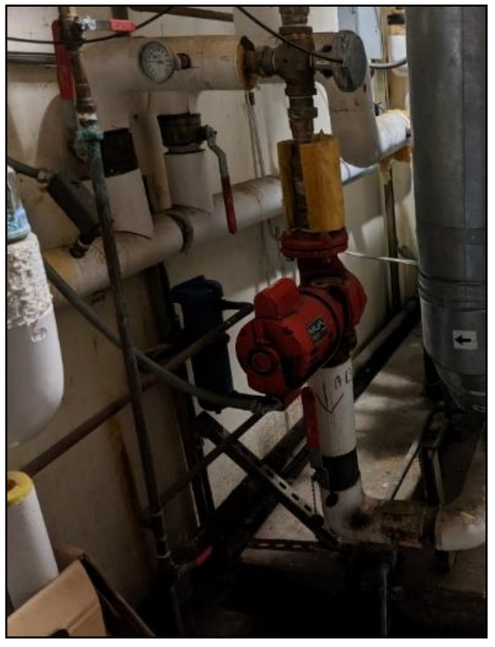
Mechanical Figure 3: Gas Fired Heating Hot Water Boiler



Mechanical Figure 5: Boiler Exhaust Flue



Mechanical Figure 4: Heating Hot Water Secondary Loop Pumps



Mechanical Figure 6: Heating Hot Water Primary Loop Pump

Mechanical Figure 7: Various HVAC Roof Equipment Types

Mechanical Figure 8: Building General Exhaust Fans

Heating Hot Water System

The buildings heating hot water system consists of a primary/secondary piping distribution system and a central gas fired water heater. The hydronic distribution system was originally installed in the 1960s when the building was first constructed. Pumps associated with the primary/secondary system have been maintained and periodically replaced. The gas fired boiler, which provides heat to the loops was most recently replaced in 1998. The gas fired boiler is a standard efficiency of 80%, includes a dedicated flue exhaust system, and outputs 1,614 kBTUs of heat.

Rooftop Equipment

The roof of the building has various HVAC equipment installed intermittently throughout the life of the building. Each piece of equipment is dedicated to a space in the building. In the event of a major interior renovation, all the existing roof equipment can likely be demolished because of their dedicated nature.

General exhaust fans have been provided on the roof to serve restrooms and exhaust driven spaces. Please note, not all of these fans are operating, some have been abandoned in place.

Relief hoods have been installed in numerous locations on the roof. These hoods provide an intentional path for make-up air required when exhaust fans run.

An air-cooled condensing unit has been installed on the roof and provides cold refrigerant to the building. This condensing unit serves a server room on the second floor of the library.

The building includes a large private conference room space. This conference room is served by a dedicated packaged unit located on the roof which supplies and returns air from the space. This packaged unit is located on the roof and includes a reversible heat pump. With the heat pump, the package unit can provide heating or cooling to the conference room. The package unit provides 41 kBTU of cooling, and 40 kBTU of heating.

The boiler flue terminates at the roof with a large weather cap.

Gas Meter

The building is served by a high capacity rotary gas meter rated for 3000 CFH. This gas meter is located above grade and outdoors.

Building Controls

The building has been automated by a pneumatic controls system. This system utilizes an air compressor and vacuum piping system to start and stop equipment. This style of control system was popular before the invention of digital controls. Pneumatic control systems have been phased out of buildings due to typical issues of reliability, noise, and functionality. Any major renovation of the building's HVAC system should include replacement of the pneumatic controls system with a digital controls system.

Recommendations

The existing HVAC system has far exceeded its anticipated useful life. Renovation or replacement of the HVAC system should be part of the owner's evaluation criteria for whether to renovate or replace the downtown library.

HVAC RENOVATION - RECOMMENDATIONS

If the owner elects to pursue a major renovation of the library the following HVAC system modifications are recommended:

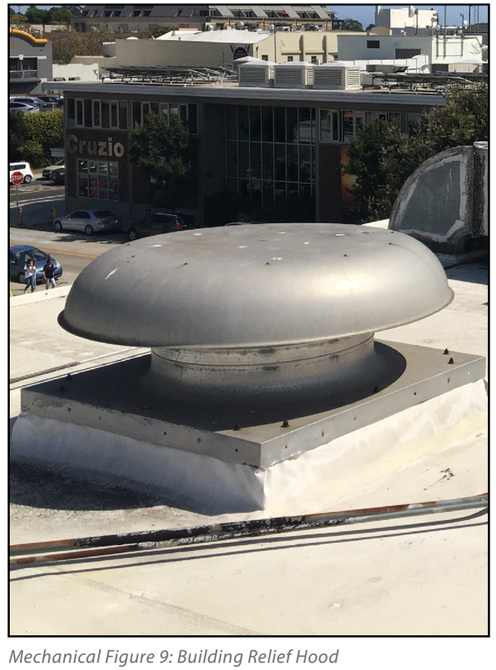
- Demo existing HVAC
- Provide new rooftop air handling unit
- Provide new rooftop boiler
- Provide zone level VAV boxes with reheat coils
- Provide digital controls system
- Reuse existing server equipment
- Demo and replace ductwork
- Demo and replace piping

Demo Existing Equipment

The existing HVAC equipment serving the building has far exceeded its useful life. Key components within the existing air handler, including the supply fans and mixing dampers will require full replacement within the next 5 years. Demo the existing supply and return air handling units, demo all components within built up air handling unit rooms, including supply/exhaust fans, pre/final filters, mixing dampers, air handling unit walls and equipment pads. Demo existing boiler, boiler flue, heating hot water primary, and heating hot water secondary pumps.

Provide New Rooftop Air Handling Unit

A common complaint by the building's users is that spaces are overheating. To address overheating, it is recommended that cooling be integrated into the buildings HVAC design during the next major renovation.



Mechanical Figure 9: Building Relief Hood

Mechanical Figure 10: Server Room Condensing Unit

Mechanical Figure 11: Conference Room Package Unit

Mechanical Figure 12: Boiler Flue and Intake

Mechanical Figure 13: Building Gas Meter

Mechanical Figure 14: Pneumatic Controls Air Compressor

Mechanical Figure 15: Pneumatic Thermostat

AlterCE recommends installing a new rooftop air handling unit. This air handling unit should be centrally located to reduce distribution ductwork with the building. The air handling unit should include a motorized mixing box, supply and return fans, DX cooling coil, AC unit, modulating gas furnace, and pre and final filters.

Size mixing box to allow for full air side economizer with enthalpy control.

Size supply and return fans to provide 42,000 CFM to the building. Provide minimum of qty.2 supply and minimum qty.2 return fans. Size each fan for 60% design peak flow rate.

Size DX and AC cooling to provide 150 tons of cooling capacity at the air handling unit. Provide an AC unit with the ability to stage down to 10% cooling capacity, with a minimum of 10 stages of cooling.

Size modulating gas furnace to provide 1,800 kBTUs of heating capacity at the air handling unit. Provide a furnace with the ability to stage down to 5% heating capacity, with a minimum of 10 stages of heating.

Size the pre/final filters for a maximum of 400 ft per minute velocity. Provide 4" deep V-Cell MERV 8 pre-filter and 12" deep V-Cell MERV 14 final filters. Provide ASHRAE Guideline 36 sequences to control operation of VAV packaged unit.

Provide New Rooftop Boiler

The existing gas fired boiler was installed in 1998 and is near the end of its anticipated useful life. During the next major renovation, the central boiler should be replaced. Replace the existing boiler with a 2,000 kBTU condensing gas boiler. Install the new boiler on the roof. Provide outdoor rated equipment, including hot water recirculating pump and hot water storage tank. Provide insulated aluminum weather jacketing around outdoor hot water equipment and piping.

Provide New Zone Level VAV Boxes with Reheat Coil

To condition the building, provide new zone level variable air volume (VAV) boxes with reheat coils. Provide a minimum of 8 VAV zones.

Each VAV box shall be sized to not exceed 40 dBa, and shall have the ability to turn down to 15% design flow rates.

Provide VAV boxes with integrated reheat coil. Reheat coils shall be sized to heat air from 55 degrees to 80 degrees. The air pressure drop across the reheat coil shall not exceed 0.3 inWC, the water pressure drop shall not exceed 15 psi.

Each VAV box shall be controlled to space temperature and measured CO2 concentration. Provide ASHRAE Guideline 36 sequences to control operation of VAV boxes.

Install Digital Controls System

The buildings existing pneumatic controls system is a major roadblock to implementing further energy efficiency measures. Energy efficiency measures that can be accessed with updated controls include:

- variable speed heating hot water pumps
- supply/exhaust fan variable speed operation,
- air side economizer
- heating hot water temp reset
- space temperature setback
- automatic fault detection
- remote monitoring
- global temperature setpoints

A new digital controls system should be installed during the next major renovation. This control system should monitor and control all HVAC equipment, communicating by BACnet.

Reuse Existing Server Room Equipment

The rooftop unit serving the existing server room appears to be in good working condition. It is recommended the existing server room rooftop and zone level equipment be reused to the extent possible. Provide new roof curb, and new distribution ductwork.

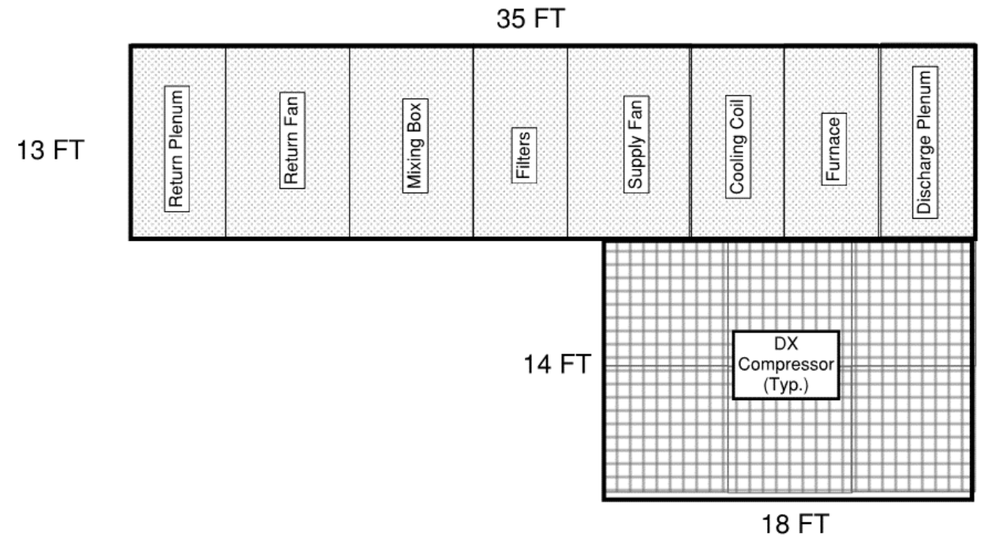
Demo and Replace Ductwork

The existing ductwork network has far exceeded its useful life. The ductwork network is likely experiencing leaks throughout the system. As part of a 15-year renovation it is recommended that the duct network be demoed and replaced.

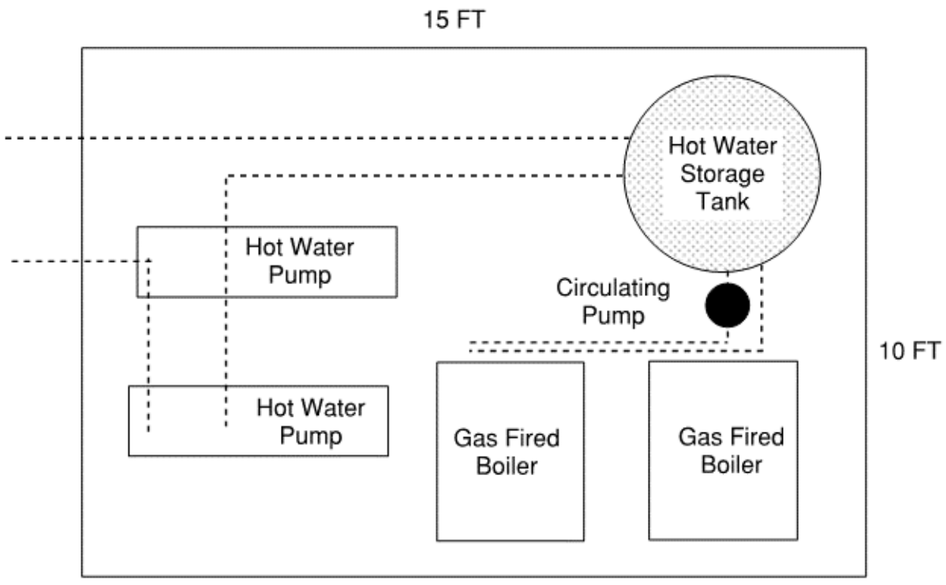
Provide new insulated ridged sheet metal distribution ductwork from the AHU discharge to new diffuser locations. Provide new VAV boxes with hydronic reheat coils to serve individual thermal control zones. For Ductwork installed in spaces without ceilings where ductwork is required to be insulated per the requirements of Title 24 (outdoors, in ceiling plenums, in zones not served by specific duct), provide internally insulated rectangular ductwork. Route ductwork in a straight and clean fashion. Where ductwork is not required to be insulated per the requirements of Title 24 (in zones served by specific duct), provide round ductwork. Route ductwork in a straight and clean fashion. For Ductwork installed in spaces with ceilings Where ductwork is required to be insulated, external insulation is acceptable. Where ductwork is not required to be insulated, rectangular ductwork is acceptable.

Demo and Replace Piping

The existing piping network has far exceeded its useful life. The piping network is likely experiencing pipe fouling resulting in excessive pump energy use. As part of a 15-year renovation it is recommended that the pipe network be demoed and replaced. Provide a new insulated copper piping network from the water heater to the new VAV hydronic reheat coils.



Mechanical Figure 16: Proposed Air-Handling Unit schematic



Mechanical Figure 17: Proposed hot water plant schematic

PLUMBING RENOVATION - RECOMMENDATIONS

If the owner elects to pursue a major renovation of the library, the following Plumbing system modifications are recommended:

- Demo existing plumbing equipment
- Provide new tank type domestic water heater
- Provide new tank-less electric resistance water heaters
- Demo and replace existing fire sprinkler system
- Provide new plumbing fixtures
- Provide plumbing utilizes to new fixtures
- Insulate domestic hot water piping

Demo Existing Equipment

The existing Plumbing equipment serving the building is not appropriate for reuse.

- Demo the existing domestic water heater and associated piping.
- Demo the existing exhaust flue.

Provide New Tank Type Domestic Water Heater

- Provide a new domestic water heater to serve core plumbing fixtures, including janitors mop sink, staff restroom, and break room sink. Provide a gas tank type water heater.
- Provide a 50-gal water heater, with 36 kBTU recovery rate. Locate the new tank type water heater in the janitor's closet.

Provide New Tank-less Electric Resistance Water Heater

- Provide a tank-less electric resistance water heater to serve plumbing fixtures more than 50 ft from the janitor's closet.
- Provide a 2kW tank-less water heater.
- Serve all domestic hot water fixtures within 10ft of the tank-less water heater with a single water heater.

Demo and Replace Existing Fire Sprinkler System

Due to the extent of the renovation, a new fire sprinkler system will be required.

Provide New Plumbing Fixtures

- Provide new low flow plumbing fixtures through out the building. Refer to the architect for finish specification.
- Provide 1.28 GPF water closets, 0.128 GPF Urinals, 0.5 GPM metered Lavatories, 1.5 GPM aerated sinks.
- Provide new floor drains as required in multi occupant restrooms and at fire sprinkler riser rooms.

Provide Plumbing Utilities to New Fixtures

- Locate existing sanitary sewer lines below slab.
- Route sanitary waste to existing sanitary sewer line, minimize chipping of concrete slab to extent possible.
- Provide new domestic hot water and domestic cold water to new plumbing fixtures.

Insulate Domestic Hot Water Piping

Domestic hot water supply and return piping shall be insulated per the requirements of Title 24 Part 6.

ELECTRICAL ASSESSMENT

SUMMARY

A site visit was performed September 4, 2019 during open hours to survey and evaluate the existing electrical systems for adequacy and feasibility of re-use and/or needs for system upgrades for the planned renovation to the building.

The existing service size is 800Amp, 208/120V, 3phase, 4wire. Given the planned renovation program area of 30,000 gsf, this existing service size is good for 9.6 watts/sqft. With this power density, an all-electric project will not be feasible. The manufacturer for the electrical distribution equipment is by Westinghouse. They are no longer in business, and finding replacement parts can be difficult. The electrical distribution equipment appears to be from the original construction. While equipment appears to be maintained, the equipment is beyond manufacturers recommended life. For the building renovation, we recommend complete replacement of the distribution system. The facility utilizes a variety of lamp types, we recommend standardizing lamp types or utilize LED lighting to limit stock of various lamp types.

EXISTING CONDITIONS

Utility Service

Existing electrical service is 800Amps, 208/120V, 3phase, 4wire served from an exterior pad mount transformer located within the property lines. Utility transformer asset tag number is T-78. Based on visual observation, we were not able to determine kVA rating of transformer.

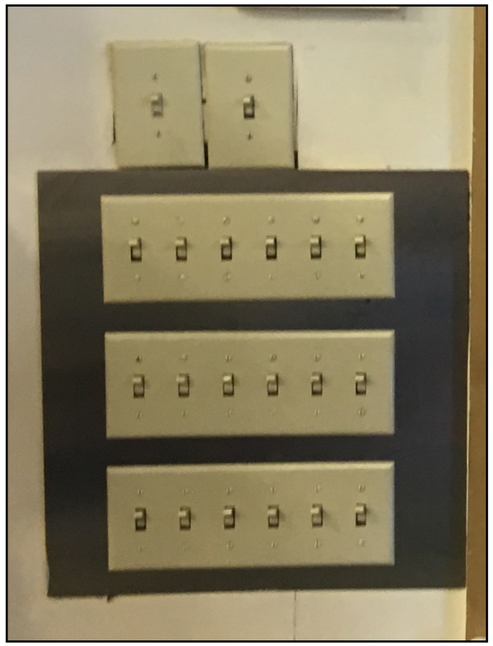
Building Distribution

The 800Amp switchboard is located indoors, and is fed from the utility transformer via underground conduits. Based on as-built documentation, it appears there are two sets of 3 ½"C with 4#500 kcmil. Based on conductor size, two sets of 500kcmil is adequate for 760Amps at 75degree C, or 860Amps at 90degree C. The condition of the conductor and it's insulation was not observed. The main switchboard serves various branch panels located throughout the building. Feeder breakers are as follows:

- Panel 1A-C – 40A/3P
- FA Panel – 15A/2P
- Range – XXA/XP
- Coffee Room Sub Panel – 100A/3P
- Elevator #1 – 100A/3P
- Elevator #2 – 80A/3P
- MCC – 175A/3P
- Panel 1A – 175A/3P
- Panel 1B – 175A/3P
- Panel 1C – 150A/3P
- Panel 2A – 175A/3P
- Panel 2B – 125A/3P
- Computer – 100A/3P
- TR1 – 100A/3P

Electrical Figure 1: Utility Transformer

Electrical Figure 2: Electrical Gear Manufacturer



Electrical Figure 3: Library Stack Lighting Controls

- Branch panels do not have physical space for additional circuit breakers to be added.
- Mechanical equipment located on the second floor are served from a motor control center. Based on discussion with facility operations personnel, it is difficult to source replacement parts for the motor control center.
- All building distribution equipment appears to be from original construction, and manufactured by Westinghouse, which is no longer in business.
- A newer Panel was added to the distribution system to serve the telecommunications room, complete with rack mounted UPS, servers, switches, etc.

Lighting and Lighting Control System

- Enclosed rooms such as offices and conference rooms are controlled via on-off toggle switches. A few rooms were retrofitted with occupancy sensors.
- Library stacks are manually controlled on-off via toggle switches. Library stacks are controlled via zones.
- Emergency lighting via bug eyes and combo exit sign bug eye fixtures.
- Lighting throughout is accomplished via fluorescent type fixtures. There is a mix of lamp types, F32T8, F28T5, FT55 biax, and F24T8

Fire Alarm System

- The existing fire alarm control panel is Silent Knight 5207, an area detection system with voice evacuation.
- System consists of manual pull stations, smoke detectors, heat detectors, flow switch, tamper switch and beam detectors at the second level. Notification devices consist of strobes and speaker/strobes.

Low Voltage Systems

- There is an existing intercom and PA system that is not used, and no longer functioning
- A new telecommunication room was added, with dedicated panel and HVAC system. All connectivity originates from this room
- Connectivity is via hard wire data drops and wifi

RECOMMENDATIONS

Utility Service

Due to budget constraints, the project will design for re-use of the existing service. The existing pad mount transformer shall remain, and all systems downstream shall be replaced complete. The underground service into the building shall be intercepted and extended to the new switchboard location. A concrete pull box shall be used to intercept and splice the existing underground feeder.

Building Distribution

A new 800Amp switchboard shall be provided indoor in a dedicated electrical room. The maximum size PV system that can be interconnected to an 800Amp switchboard on the load side is 45kW. The switchboard shall have feeder breakers as follows:

- Elevator
- Two 225Amp 1st Floor triple-split-bus panels to serve plug and lighting loads. The split-bus panels are used to comply with T24 disaggregation requirements
- Two 225Amp 2nd Floor triple-split-bus panels to serve plug and lighting loads. The split-bus panels are used to comply with T24 disaggregation requirements
- Dedicated panel, assume 100Amp for server room
- Dedicated 400Amp panel for HVAC

Branch circuits shall originate from respective panels at each floor. Circuit design will not exceed a maximum of 1,600 volt amperes per 20 ampere, 120 volt circuit for general areas. Branch circuit design for computer rooms, offices, and administration will not exceed a maximum of 720 volt amperes per 20 ampere, 120 volt circuit. Motors of 1/2 horsepower and larger will be served at 208 volt service, 3 phase, 3 wire + ground. Motors less than 1/2 horsepower will be served at 120 volt service, 1 phase, 2 wire + ground. Surge Protective Devices and Power Conditioners will be specified and installed on all electrical service equipment feeding computer, server, and sensitive electronic equipment loads. All multi-wire branch circuits will be installed with dedicated neutrals. Highly loaded, 20-amp, continuous electrical loads, such as circulation lighting and servers, will have increased wire sizes (i.e.: from #12 to #10) in order to reduce power loss in the wiring.

Separate wires in conduit will be provided for each of the following loads:
Elevators

- 208V, 3 phase, 3 wire + ground, 60 hertz.

Mechanical and Plumbing Systems

- 208V, 1 phase, 2 wire + ground, 60 hertz.
- 120V, 1 phase, 2 wire + ground, 60 hertz.

Lighting

- 120V, 1 phase, 2 wire + ground, 60 hertz. General Purpose Receptacles
- 120V, 1 phase, 2 wire + ground, 60 hertz. Computer Equipment Areas
- 120V, 1 phase, 2 wire + ground, 60 hertz. Head-ends for Signal Systems (i.e.: BMS, Security, Fire Alarm, Lighting Controls, etc.)
- 120V, 1 phase, 2 wire + ground, 60 hertz.

Combination power/data floor boxes, similar to Legrand Evolution 4-gang boxes shall be provided at the middle of each column grid. On-grade floor boxes at the first floor and poke through floor boxes at the second floor.

Lighting and Lighting Control System

An addressable lighting control system will have the ability for granular control and monitoring of each luminaire and associated lighting control device, load monitoring, and automatic demand response (ADR) capability. Addressable lighting controls will be Wattstopper DLM or similar.

The addressable lighting control system will be controlled via software based controls, residing on a dedicated head-end server, which allows integration with the building energy management system via BACnet protocol. The lighting control head-end will have capability of control and monitoring of any space excluding electrical and mechanical rooms in a cluster by area or zone and set schedules/presets. Each luminaire or group of luminaires will be controlled and monitored by individually addressable drivers and/or interface devices. Time schedules shall be defined in the BMS and shared with the lighting control system. The primary method of controlling interior luminaires while conserving energy in the building will be achieved through the use of occupancy sensors and manual override switches. These devices will be provided in offices, library stacks, support spaces, and storage rooms. Occupancy sensors will be set to "manual on/auto off" in offices and conference rooms; "auto on/auto off" for restrooms and support areas, "auto on/dim/auto off" for library stacks and public areas. Enclosed stairs will also include occupancy sensor controls to reduce the lighting within the stair (by a minimum of 50%) when it is not occupied. There will be no 24/7 emergency lighting. Emergency lighting will be controlled with other lights. Occupancy sensors that control stairs and emergency egress lighting will be bypassed to provide 100% illumination in the event of normal power failure. Additional photosensors will dim luminaires based on available daylighting.

Astronomical time clock controls, occupancy sensors, and/or photosensors will be provided for exterior, site, and landscape lighting applications via the lighting control system. Lighting will automatically turn on or off as appropriate throughout the course of the day. Photosensors will allow dimming based on scheduled times, occupancy sensor control overrides at night, and adjustment based on available daylight levels. Daylight harvesting will be designed and specified to reduce energy where natural daylight occurs in sufficient levels. Spaces, receiving sufficient, natural sunlight from glazing, will be equipped with a dimmable lighting system to automatically adjust the amount of electric light against available and constantly fluctuating daylight. This continuously dimming system consists of photocells, daylight dimming control modules, and dimmable 0-10VDC electronic drivers for each space.

Fire Alarm System

Provide a new, code compliant addressable Fire Alarm system with voice evacuation

Low Voltage Systems

One telecommunication room shall be required for the project. Horizontal backbone shall include cable tray within the telecommunication room and exposed locations. J-hooks shall be used above drop ceilings and accessible/concealed locations.

ELECTRICAL EQUIPMENT

Switchboard

Switchboards will be completely assembled, indoor, free standing, with copper bus bars, full neutral bus, and separate copper ground bus. All bus work will be braced to withstand 36KAIC amperes RMS symmetrical. Short circuit values shall be revisited in future design phase to determine actual ratings for all equipment. Protective devices will be provided with approved barrier between sections and extended load terminals. Protective devices will consist of circuit breakers. Circuit breaker selection will utilize molded case type; be rated for application in their intended enclosure; include solid state tripping with adjustable long time, instantaneous, short time, and ground fault. Additional spare branch feeder breakers will be provided for future and spare capacity. Switchboard will be Eaton Cutler Hammer, Square D, GE, Siemens, or approved equal

Panelboards

Panelboards shall have door-in-door construction with 42-poles, and copper bussing. Transient Voltage Surge Suppressors shall be used on all panelboards feeding all IT rooms (IDF, MDF, Site Cores, etc). For pricing purposes, 208/120V panelboard bus work will be braced to withstand 22kAIC amperes RMS symmetrical.
Proposed: Square D, Eaton Cutler Hammer, or approved

Conduit and Wiring

Conductors will be copper, THHN or THWN-2, with PVC insulation; galvanized rigid steel (GRS) conduit in exterior or exposed interior work up to eight feet above finished floor, and for work embedded in concrete; rigid nonmetallic conduit (PVC) for all underground exterior work; electrical metallic tubing (EMT) for interior concealed work or above eight feet exposed; flexible metal conduit (Greenfield) for interior work in short lengths or liquid tight flexible metal conduit (Sealtight) wherever moisture may be present for the connection of recessed luminaires, motors, separate building structures and any vibrating equipment. MC Cable shall be used in accessible, concealed locations such as above drop ceilings. Where exposed and/or visible, rigid metallic conduits shall be used.

Photovoltaic System

There are a few options for interconnecting a future photovoltaic system to the existing electrical service.

A Load Side Tap includes interconnecting the PV system after, or downstream of the main circuit breaker/meter. In doing so, the PV system size is limited to the existing electrical service which is 800Amp, 208/120 Volts, 3-phase, 4-wire. The maximum size interconnection breaker is 150Amps, which equates to a 43.2kW maximum PV array size. As a rough order of magnitude, we estimate this would offset approximately 10% to 20% of the Library's annual energy use.

The other option would be a Line Side Tap, where the interconnection is done ahead, or upstream of the main circuit breaker/meter. Based on experience, this type of connection is subject to AHJ and PG&E approval, but allows for a larger PV array interconnection. This configuration is typically done when the size of the PV array exceeds the maximum breaker size allowable on a Load Side Tap. In the event that AHJ and or PG&E does not allow a Line Side Tap, and the Library wishes to install a PV Array size that exceeds the limitations of a Load Side Tap, then a new electrical service, complete with new service entrance switchboard would be required.

Under the proposed renovation design we plan to re-use the existing PG&E electrical service transformer, and replace the existing switchboard with new. The new switchboard has physical space to add a maximum 150Amp PV interconnection breaker. Other than that, there is not any other electrical infrastructure planned to support a future PV array.

COST ESTIMATE DOCUMENTS IV.

COST ESTIMATE DOCUMENTS

To effectively evaluate the feasibility of the $27 million project budget, and subsequent $18 million construction cost target, the design team developed a set of conceptual design drawings. These drawings establish the scope, quantity, and level of quality of the construction required to achieve the renovation design. The extent of demolition and removal is clearly identified through a combination of graphic illustration and annotation. New work is identified by keynotes, which call out each item related to the scope of the project in detail. These drawings, in correlation with the engineering narrative, the original as-built drawings, and the Hazmat report, were provide to Mack5 for a comprehensive construction cost estimate, which is provided in Budget Section 5 of this report.

GENERAL NOTES

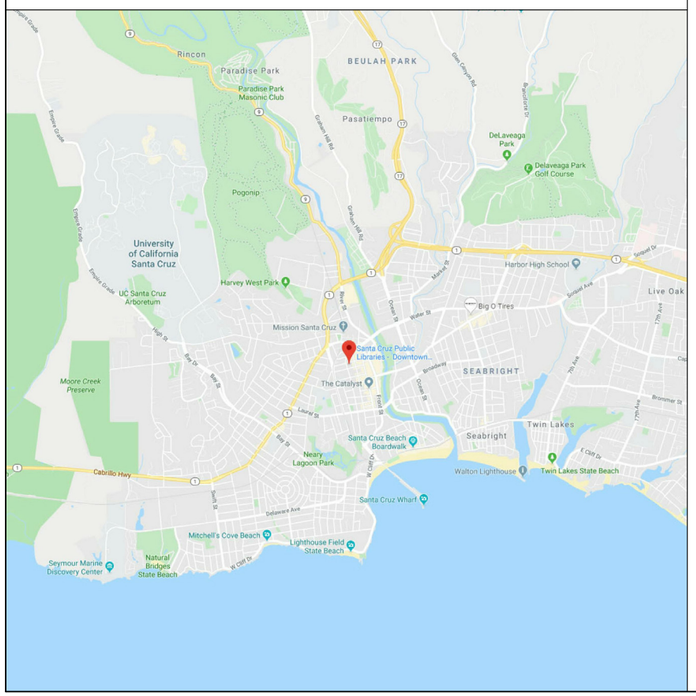
1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
2. ALL WORK SHALL MEET OR EXCEED THE MINIMUM STANDARDS OF THE 2016 CALIFORNIA BUILDING CODE AND ALL APPLICABLE CODES AND ORDINANCES.
3. INFORMATION CONTAINED WITHIN THESE DOCUMENTS SHALL NOT BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE APPLICABLE CODES.
4. CONTRACTOR SHALL EXAMINE THE DOCUMENTS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPENCIES WHICH MAY BE FOUND PRIOR TO THE START OF WORK.
5. CONTRACTOR SHALL REVIEW ALL DOCUMENTS TO COORDINATE w/ THE (E) BLDG CONDITIONS. ANY VARIATIONS AND DISCREPENCIES THAT ARISE IN THIS REVIEW ARE TO BE BROUGHT IMMEDIATELY TO THE ARCHITECT'S ATTENTION.
6. THE CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO VISIT AND INSPECT THE SITE PRIOR TO CONSTRUCTION OR ORDERING ANY MATERIALS.
7. ALL DETAILS, SCHEDULES, ADDENDA AND SPECIFICATIONS BOUND SEPARATELY ARE A PART OF THE CONTRACT DOCUMENTS.
8. ITEMS MARKED "NIC" ARE NOT IN CONTRACT. SUCH ITEMS ARE INCLUDED IN THE DOCUMENTS WHEN CONTRACTOR'S COORDINATION IS REQUIRED OR FOR CLARIFICATION OF PROJECT LIMITS.
9. DIMENSIONS:
   A. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM THE DRAWINGS.
   B. ALL DIMENSIONS ARE TO THE ROUGH OPENING, UON.
   C. ALL DIMENSIONS TO STUD WALLS ARE TO THE FACE OF STUD. UON.
   D. CEILING HEIGHT DIMENSIONS ARE FROM FINISHED FLOOR TO FINISHED FACE OF CEILING, UON.
   E. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY GENERAL CONTRACTOR AND ALL SUBCONTRACTORS PRIOR TO PROCEEDING WITH CONSTRUCTION.
   F. COORDINATE WITH EQUIPMENT CONTRACTORS FOR ROUGH-IN DIMENSIONS AND TEMPLATES.
   G. ALL DIMENSIONS NOTED "CLEAR" OR "CLR" MUST BE STRICTLY MAINTAINED. "CLEAR" MEANS DIMENSION FROM FACE OF FINISH TO FACE OF FINISH OR OBJECT.
   H. ALL DIMENSIONS NOTED "VERIFY" OR "VIF" ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY VARIANCE FROM THE REQUIRED DIMENSIONS MUST BE BROUGHT IMMEDIATELY TO THE ARCHITECT'S ATTENTION.
10. DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL CASES, UON.
11. WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING OR CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THE PROJECT.
12. ALL WORK IS UNDERSTOOD TO BE (N) UNLESS NOTED AS (E).
13. THE CONTRACTOR SHALL MEET w/ THE ARCHITECT PRIOR TO THE START OF DEMOLITION TO NOTE WHAT ITEMS, IF ANY, ARE TO BE SALVAGED OR REUSED.
14. THE DRAWINGS INDICATE THE GENERAL EXTENT OF (N) CONSTRUCTION NECESSARY FOR THE WORK, BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE. ALL DEMO AND (N) WORK NECESSARY FOR A FINISHED JOB, IN ACCORDANCE w/ THE INTENTIONS OF THE CONTRACT DOCUMENTS, IS INCLUDED REGARDLESS OF WHETHER SHOWN IN THE CONTRACT DOCUMENTS.
15. (E) BUILDING DOCUMENTATION IS BASED ON "AS-BUILT" DRAWINGS AND OBSERVATIONAL SITE INVESTIGATIONS. ACTUAL BUILT CONDITIONS MAY VARY. CONTRACTOR IS TO USE CAUTION IN DEMOLITION, AND IS TO NOTIFY ARCHITECT IMMEDIATELY IF ANY VARIATIONS OR DISCREPENCIES ARE UNCOVERED.
16. PROTECT ALL (E) BUILDING AND SITE CONDITIONS TO REMAIN, INCLUDING BUT NOT LIMITED TO WALLS, PAVING AND LANDSCAPING.

DESIGN-BUILD DEFERRED SUBMITTALS

THE DESIGN INTENT AND PERFORMANCE CRITERIA FOR THE FOLLOWING ITEMS IS SHOWN AND NOTED ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE DESIGN DOCUMENTATION, IF REQUIRED, FOR CITY APPROVAL PRIOR TO CONSTRUCTION. BIDS SHALL INCLUDE REQUIRED DESIGN, DOCUMENTATION AND INSTALLATION OF A COMPLETE OPERATING SYSTEM THAT SATISFIES THE SPECIFIED PERFORMANCE CRITERIA AND MEETS ALL APPLICABLE CODES.

1. FIRE ALARM SYSTEM
2. ALUMINUM STOREFRONT SYSTEMS

VICINITY MAP



PROJECT DESCRIPTION

- PARTIAL DEMOLITION AND RENOVATION OF EXISTING LIBRARY
- NO CHANGE IN USE

PROJECT DATA

BUILDING & PLANNING CODE DATA

- PLANNING CODE EDITION: 2017 SANTA CRUZ COUNTY CODE
- BUILDING CODE EDITION: 2016 CALIFORNIA BUILDING CODE
  2016 CALIFORNIA MECHANICAL CODE
  2016 CALIFORNIA ELECTRICAL CODE
  2016 CALIFORNIA PLUMBING CODE

- OCCUPANCY CLASS: A3
- BUILDING TYPE: TYPE III-B
- SQUARE FOOTAGE: 30,250 SF
- NUMBER OF STORIES: 2
- FULLY SPRINKLERED
- FULL FIRE ALARM SYSTEM

ALTERNATES

HIGH PRIORITY IMPROVEMENTS

1. BASE: SINGLE HYDRAULIC ELEVATOR
   a. ALTERNATE: TWO ELECTRIC REMOTE MACHINE ROOM ELEVATORS, AS SHOWN ON A2.11 & A2.12
2. BASE: ONE SINGLE OCCUPANCY RESTROOM AT STAFF, ONE SINGLE OCCUPANCY RESTROOM AT KIDS, AND TWO SINGLE OCCUPANCY RESTROOMS AT LEVEL 1 LOBBY
   a. ALTERNATE:
      a. ONE SINGLE OCCUPANCY RESTROOM AT STAFF, AS SHOWN ON A2.11
      b. TWO SINGLE OCCUPANCY RESTROOMS AT KIDS, AS SHOWN ON A2.11
      c. MENS & WOMEN'S MULTI-OCCUPANCY RESTROOMS AT LEVEL 1 LOBBY, AS SHOWN ON A2.11
3. BASE: PAINT (E) STRUCTURE,TYP, WITH LINEAR PENDANT LIGHTS
   a. ALTERNATE: T&G WESTERN RED CEDAR CEILING, PAINTED GYPSUM WALL BOARD AND 2X4 ACOUSTIC CEILING TILE AS INDICATED ON A2.41 AND A2.42, W/ RECESSED FIXTURES AS SHOWN
4. BASE: (E) CEMENT TILE ROOF AT SLOPED PERIMETER TO REMAIN
   a. ALTERNATE: PRE-FINISHED GALVANIZED STANDING SEAM ROOF WITH PRE-FINISHED GALVANIZED SHEET METAL FASCIA
   b. T&G WESTERN RED CEDAR ROOF SOFFIT
   c. NEW INTERNAL GUTTERS AND RAINWATER LEADERS
5. BASE: LEVEL GRADE SITE AND MULCH BETWEEN BUILDING AND PROPERTY LINE
   a. ALTERNATE:
      a. PLANTING, BOULDERS, TREES, AND COR-TEN RETAINING WALLS AND TERRACED GRADING
      b. EXTERIOR SITE LIGHTING
6. BASE: LEVEL GRADED MULCH AT STAFF PATIO, COMMUNITY ROOM PATIO, AND KIDS PATIO
   a. ALTERNATE:
      a. PERMEABLE PAVERS, LANDSCAPE & PLANTING
      b. WOOD SLAT FENCE AT PATIO PERIMETERS
7. BASE: (E) LEVEL 2 WINDOWS TO REMAIN, PAINT (E) CONCRETE EXTERIOR AT LEVEL 2
   a. ALTERNATE:
      a. NEW WINDOWS, WITH AWNING OPERATION: KAWNEER 451T OR SIM
      b. 8" LIGHTWEIGHT CONCRETE INFILL BETWEEN WINDOW OPENINGS AND COLUMNS AT LEVEL 2, SSD
      c. INCREASE FOOTING SIZE, SSD
      d. PAINTED CEMENT PLASTER OVER EXTERIOR CONCRETE AT LEVEL 2 WALLS
8. BASE: (E) ROOF TO REMAIN
   a. ALTERNATE: (N) CLERESTORY

BUILDING ALTERNATES

9. BASE: PAINTED GYPSUM WALL BOARD AT NORTH WALL OF LEVEL 1 LOBBY AND STAIR
   a. ALTERNATE: T&G WESTERN RED CEDAR WALL FINISH
10. BASE: PAINTED GYPSUM WALL BOARD AT 2ND FLOOR LOBBY
    a. ALTERNATE: VINYL WALL GRAPHIC
11. BASE: FIXED EXTERIOR STOREFRONT AT COMMUNITY ROOM & KIDS' STORYTIME
    a. ALTERNATE: OPERABLE STOREFRONT, NANAWALL OR SIM
12. BASE: NEW MANUAL WINDOW SHADES
    a. ALTERNATE: NEW MOTORIZED WINDOW SHADES

SITE ALTERNATES

13. BASE: (E) SIDEWALK, CURB, GUTTER AND STREET PARKING TO REMAIN
    a. ALTERNATE: (N) SIDEWALK, CURB, GUTTER AND STREET PARKING AS SHOWN ON A2.10
14. BASE: (E) PARKING LOTS TO REMAIN, LEVEL GRADE AND MULCH AT FOOTPBASE: SINGLE HYDRAULIC ELEVATOR
    a. ALTERNATE: TWO ELECTRIC REMOTE MACHINE ROOM ELEVATORS, AS SHOWN ON A2.11 & A2.12

CONTACT INFORMATION

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SHEET INDEX

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G0.01	SYMBOLS & ABBREVIATIONS

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A1.22	DEMO PLAN - LEVEL 2
A2.10	SITE PLAN
A2.11	FLOOR PLAN - LEVEL 1
A2.12	FLOOR PLAN - LEVEL 2
A2.31	REFLECTED CEILING PLAN - LEVEL 1
A2.32	REFLECTED CEILING PLAN - LEVEL 2
A2.41	REFLECTED CEILING PLAN - LEVEL 1 - ALTERNATE
A2.42	REFLECTED CEILING PLAN - LEVEL 2 - ALTERNATE
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*SEE ATTACHED STRUCTURAL NARRATIVE

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*SEE ATTACHED MECHANICAL NARRATIVE

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*SEE ATTACHED MECHANICAL NARRATIVE

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E2.01	LIGHTING 1
E2.02	LIGHTING 2
E3.01	POWER 1
E3.02	POWER 2

*SEE ATTACHED ELECTRICAL NARRATIVE

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OWNER

CITY OF SANTA CRUZ

PROJECT

SANTA CRUZ DOWNTOWN LIBRARY

224 CHURCH ST
SANTA CRUZ, CA 95060

DRAFT! NOT FOR CONSTRUCTION

CONCEPT DESIGN - COSTING SET

SHEET TITLE
SHEET INDEX & GENERAL NOTES

REVISIONS

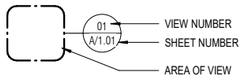
NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	
JOB NO.	

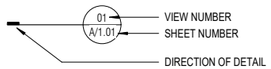
SHEET NUMBER
G0.00

SYMBOLS

CALLOUT



DETAIL SECTION



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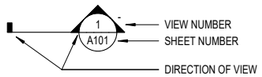
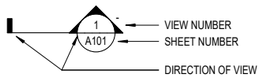
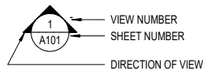


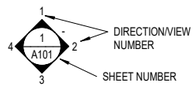
BUILDING SECTION



EXTERIOR ELEVATION

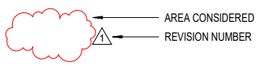


INTERIOR ELEVATION

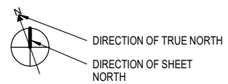


PROPERTY LINE

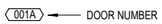
REVISION MARK



NORTH ARROW



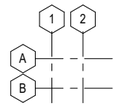
DOOR MARK



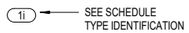
WORK POINT (PLAN)

DATUM LEVEL

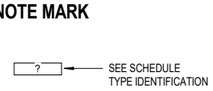
GRID LINES



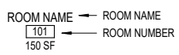
EQUIPMENT MARK



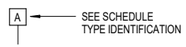
KEY NOTE MARK



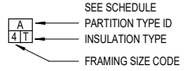
ROOM IDENTIFICATION



WALL TYPE (EXTERIOR)

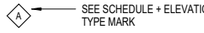


PARTITION TYPE



GENERIC TAG

WINDOW MARK



ABBREVIATIONS

ABBREVIATIONS	
ABBREV	MEANING
&	AND
(E)	EXISTING
(N)	NEW
@	AT
AB	ANCHOR BOLT
AC	ASPHALTIC CONCRETE
ACC	ACCESS
ACOUS	ACOUSTICAL
ACT	ACOUSTIC CEIILING TILE
AD	AREA DRAIN
ADDL	ADDITIONAL
ADJ	ADJACENT/ADJUSTABLE
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISHED FLOOR
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
AV	AUDIO VISUAL
BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BO	BOTTOM OF
BOT	BOTTOM
BUR	BUILT UP ROOF
CAB	CABINET
CB	CARRAIGE BOLT
CE	CIVIL ENGINEER
CEM	CEMENT/CEMENTITIOUS
CER	CERAMIC
CFMF	COLD FORMED METAL FRAMING
CI	CAST IRON
CJ	CONTROL JOINT
CLG	CEILING
CLKG	CAULKING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
CPT	CARPET
CSMT	CASEMENT
CTR	CENTER
CTSK	COUNTERSINK
D	DEPTH
DBL	DOUBLE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DF	DOUGLAS FIR/DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPOSAL
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWR	DRAWER
E	EAST
EA	EACH
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION/ELEVATOR
ENLG	ENLARGED
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET

ABBREVIATIONS	
ABBREV	MEANING
FIN	FINISH
FIN FLR	FINISH FLOOR
FIXT	FIXTURE
FLOUR	FLOURESCENT
FLR	FLOOR
FLRG	FLOORING
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FR	FIRE RESISTENT/FIRE RETARDENT
FRP	FIBERGLASS REINFORCED PANEL
FRT	FIRE RETARDENT TREATED
FSP	FIBERGLASS SANDWICH PANEL
FT	FOOT/FEET
FTG	FOOTING
FURN	FURNITURE
FX	FIXED
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPT
GI	GALVANIZED IRON
GL	GLASS/GLAZING
GLAM	GLUE LAMINATED
GR	GRADE
GSM	GALVANIZED SHEET METAL
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H	HIGH
HB	HOSE BIB
HC	HOLLOW CORE
HD	HEAD
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING VENTILATION& AIR CONDITIONING
ID	INSIDE DIAMETER
IF	INSIDE FACE
INC	INCANDESCENT
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JBOX	JUNCTION BOX
JST	JOIST
JT	JOINT
LAM	LAMINATE
LAV	LAVATORY
LB	LAG BOLT
LF	LINEAR FEET
LKR	LOCKER
LT	LIGHT
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
MTL	METAL
MUL	MULLION
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OCC	OCCUPANT
OD	OUTSIDE DIAMETER/OVERFLOW DRAIN
OF	OUTSIDE FACE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFD	OVERFLOW DRAIN
OFF	OFFICE
OP	OPERABLE
OPNG	OPENING
OPP	OPPOSITE
OPP HD	OPPOSITE HAND

ABBREVIATIONS	
ABBREV	MEANING
PA	PUBLIC ADDRESS
PARTN	PARTITION
PCP	PORTLAND CEMENT PLASTER
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTIC
PLY	PLYWOOD
PR	PAIR
PROJ	PROJECT/PROJECTOR
PT	POINT/PRESSURE TREATED
PTD	PAINTED
PVC	POLYVINYLCHLORIDE
QTY	QUANTITY
R	RISEER
RAD	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIDGERATOR
REG	REGISTER
REINF	REINFORCE/REINFORCING
REQD	REQUIRED
REQMTS	REQUIREMENTS
RES	RESILIENT
REV	REVISION
RM	ROOM
RO	ROUGH OPENING
RWL	RAIN WATER LEADER
S	SOUTH
SASF	SELF ADHERING SURFACE FLASHING
SASM	SELF ADHERING SURFACE MEMBRANE
SC	SOLID CORE
SCHED	SCHEDULE
SE	STRUCTURAL ENGINEER
SEC	SECTION
SED	SEE ELECTRICAL DRAWINGS
SF	SUPPLY FAN
SH	SINGLE HUNG
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SLD	SEE LANDSCAPE DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SOG	SLAB ON GRADE
SP	SPACE
SPA	SANDWICH PANEL ASSEMBLY
SPD	SEE PLUMBING DRAWINGS
SPEC	SPECIFICATION
SQ	SQUARE
SS	SOLID SURFACE
SSD	SEE STRUCTURAL DRAWINGS
SSGD	SEE SIGNAGE DRAWINGS
SSK	SERVICE SINK
SSTL	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRL	STRUCTURAL
STRUC	STRUCTURAL
SUSP	SUSPENDED
SYS	SYSTEM
T	TREAD
T&G	TOUNGE & GROOVE
TBD	TO BE DETERMINED
TEL	TELEPHONE
TEMP	TEMPERED
THK	THICK/THICKNESS
THRESH	THRESHOLD
TJI	TRUSS JOIST
TO	TOP OF
TOC	TOP OFF CONCRETE/CURB
TOP	TOP OFF PAVING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TS	TUBE STEEL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UR	URINAL
VCT	VINYL COMPOSITION TILE
VENT	VENTILATION
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST/WIDTH
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD

ABBREVIATIONS	
ABBREV	MEANING
WDO	WINDOW
WH	WATER HEATER
WIN	WINDOW
WO	WHERE OCCURS
WP	WORK POINT
WR	WATER RESISTENT
WT	WEIGHT

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SHEET TITLE
SYMBOLS & ABBREVIATIONS

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	12" = 1'-0"
JOB NO.	

SHEET NUMBER
G0.01

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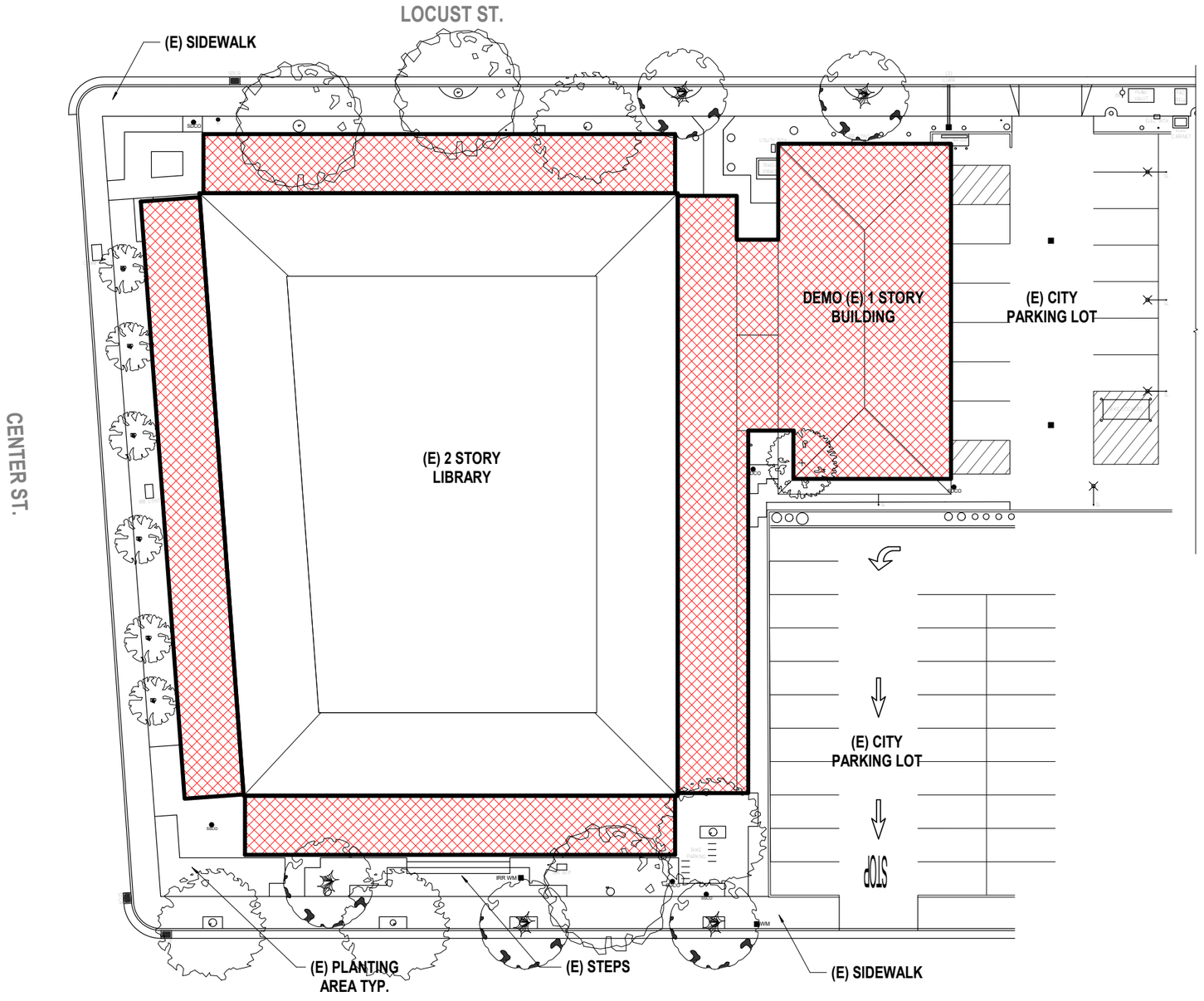

1 A1.00 01 - EXISTING SITE PLAN
1/16" = 1'-0"

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SHEET TITLE
EXISTING SITE PLAN

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	1/16" = 1'-0"
JOB NO.	

SHEET NUMBER
A1.00

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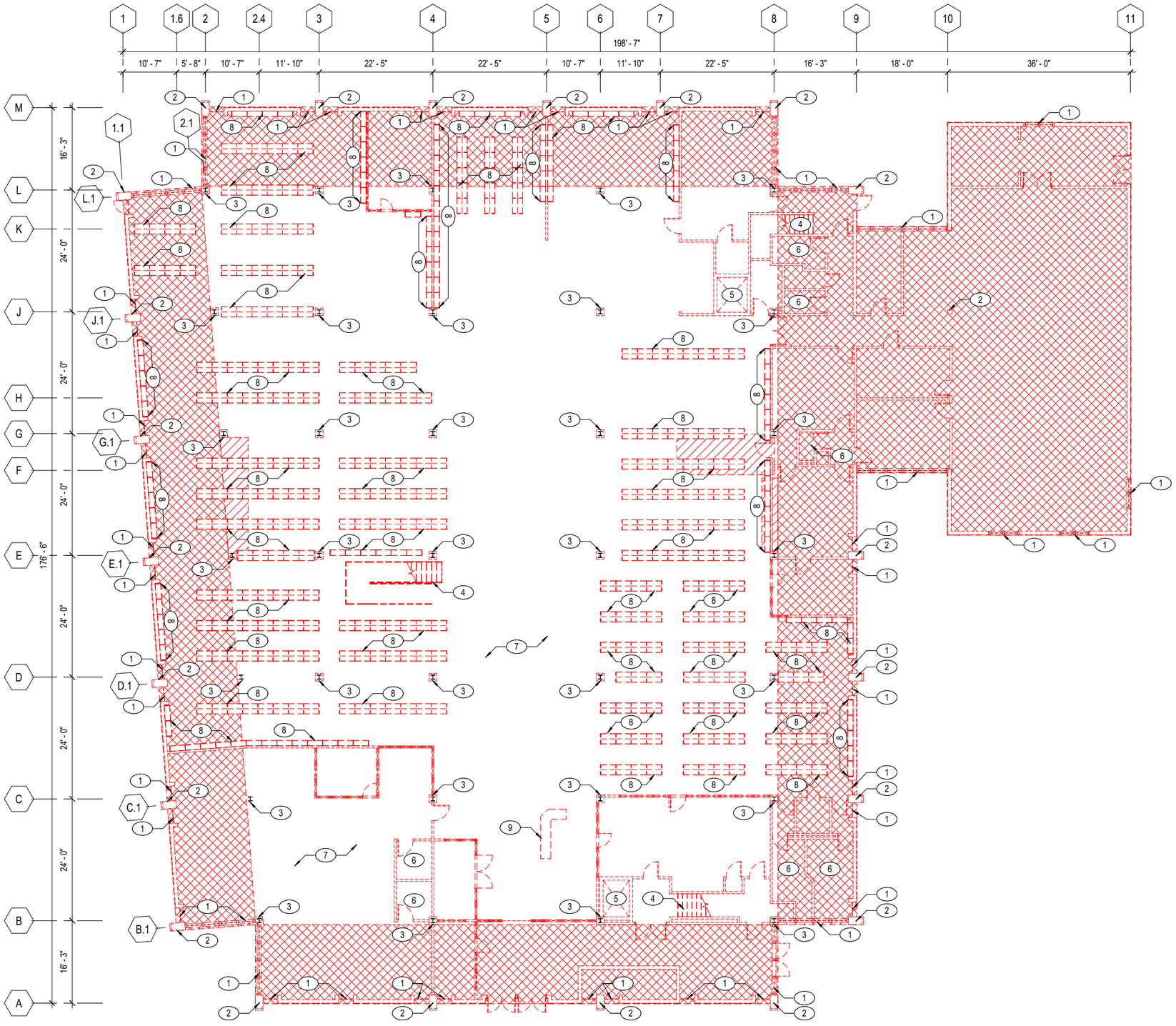

1 A1.21 01 - DEMOLITION PLAN - FIRST FLOOR
3/32" = 1'-0"

GENERAL NOTES

1. REFER TO HAZMAT REPORT FOR AREAS OF DEMOLITION CONTAINING ASBESTOS.
2. REMOVE ALL SPRAY-ON FIREPROOFING ON STEEL BEAMS & STRUCTURAL DECKING.
3. DEMO ALL DOORS & FRAMES.
4. REMOVE ALL (E) DUCTWORK, SMD
5. DEMO ALL FLOOR, CEILING, & WALL FINISHES.
6. DEMO ALL (E) LIGHT FIXTURES, WIRING, & ELECTRICAL EQUIPMENT, SED

KEY NOTES

1. DEMO (E) WINDOW
2. DEMO (E) CONC COLUMN
3. DEMO (E) COLUMN WRAP, STEEL COLUMN TO REMAIN
4. DEMO (E) STAIR
5. DEMO (E) ELEVATOR & SHAFT
6. DEMO (E) RESTROOM FIXTURES, FINISHES, & ACCESSORIES
7. DEMO (E) MECHANICAL EQUIPMENT, SMD
8. DEMO (E) STACKS
9. DEMO (E) CASEWORK
10. BASE: (E) WINDOW TO REMAIN; ALTERNATE: DEMO (E) WINDOW
11. ALTERNATE: DEMO (E) WOOD SIDING & FURRING
12. DEMO (E) ROOF STRUCTURE ABOVE
13. DEMO (E) INTERIOR FURRING & GWB OF EXTERIOR CONC WALL
14. DEMO (E) REDWOOD SIDING & FURRING
15. (E) COLUMN TO REMAIN

LEGEND

(E) WALL TO BE DEMOLISHED

(E) WALL TO REMAIN

DEMO (E) SINGLE-STORY SECTION OF BUILDING, INCLUDING ALL STRUCTURE, SYSTEMS, FIXTURES, & FINISHES.

DEMO (E) CONCRETE SLAB & FLOOR FINISHES

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SHEET TITLE
DEMO PLAN - LEVEL 1

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
JOB NO.	

SHEET NUMBER
A1.21

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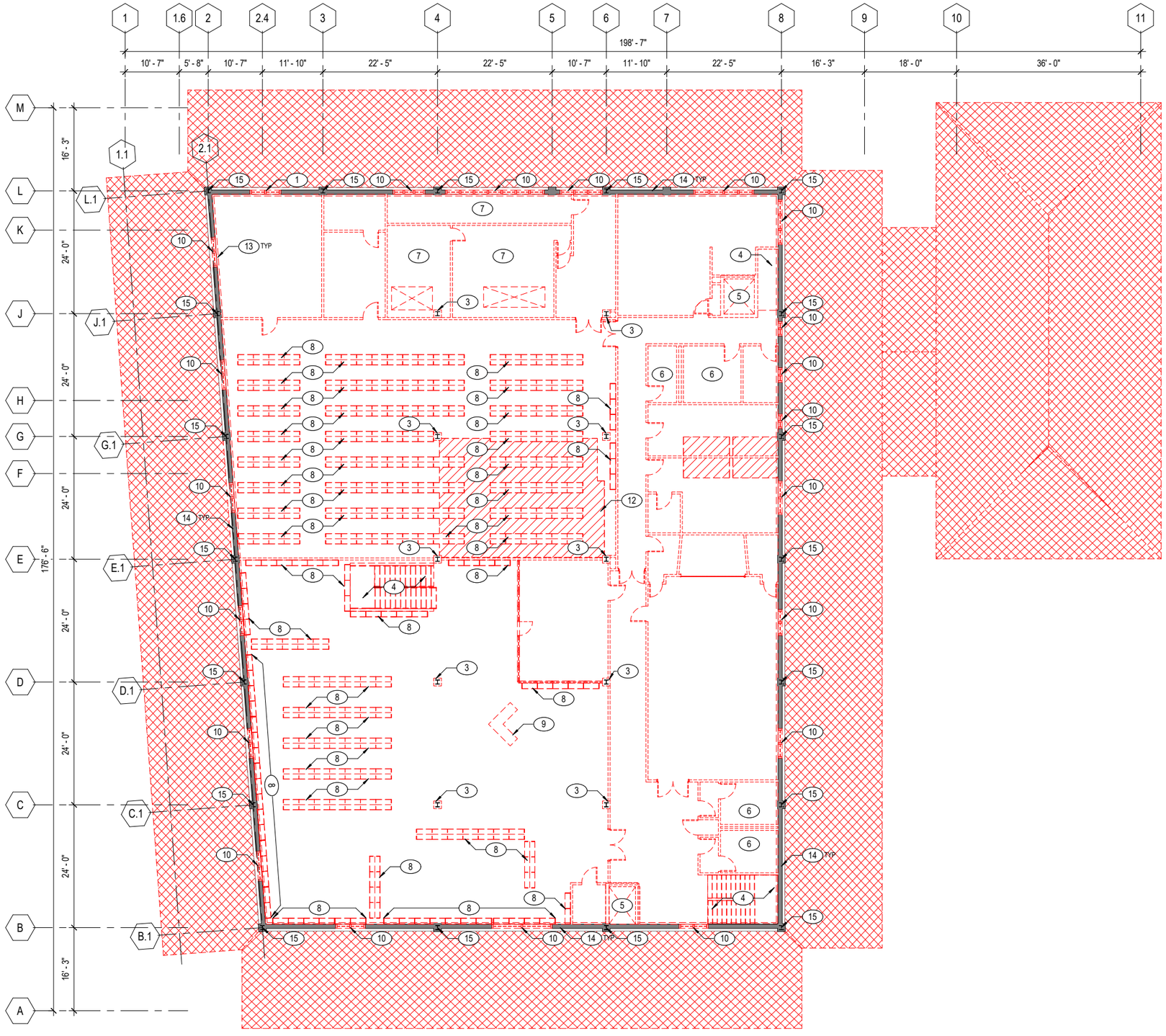

1 A1.22 02 - DEMOLITION PLAN - SECOND FLOOR
3/32" = 1'-0"

GENERAL NOTES

1. REFER TO HAZMAT REPORT FOR AREAS OF DEMOLITION CONTAINING ASBESTOS.
2. REMOVE ALL SPRAY-ON FIREPROOFING ON STEEL BEAMS & STRUCTURAL DECKING.
3. DEMO ALL DOORS & FRAMES.
4. REMOVE ALL (E) DUCTWORK, SMD
5. DEMO ALL FLOOR, CEILING, & WALL FINISHES.
6. DEMO ALL (E) LIGHT FIXTURES, WIRING, & ELECTRICAL EQUIPMENT, SED

KEY NOTES

1. DEMO (E) WINDOW
2. DEMO (E) CONC COLUMN
3. DEMO (E) COLUMN WRAP, STEEL COLUMN TO REMAIN
4. DEMO (E) STAIR
5. DEMO (E) ELEVATOR & SHAFT
6. DEMO (E) RESTROOM FIXTURES, FINISHES, & ACCESSORIES
7. DEMO (E) MECHANICAL EQUIPMENT, SMD
8. DEMO (E) STACKS
9. DEMO (E) CASEWORK
10. BASE: (E) WINDOW TO REMAIN; ALTERNATE: DEMO (E) WINDOW
11. ALTERNATE: DEMO (E) WOOD SIDING & FURRING
12. DEMO (E) ROOF STRUCTURE ABOVE
13. DEMO (E) INTERIOR FURRING & GWB OF EXTERIOR CONC WALL
14. DEMO (E) REDWOOD SIDING & FURRING
15. (E) COLUMN TO REMAIN

LEGEND

- (E) WALL TO BE DEMOLISHED
- (E) WALL TO REMAIN
- DEMO (E) SINGLE-STORY SECTION OF BUILDING, INCLUDING ALL STRUCTURE, SYSTEMS, FIXTURES, & FINISHES.
- DEMO (E) CONCRETE SLAB & FLOOR FINISHES

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SHEET TITLE
DEMO PLAN - LEVEL2

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
JOB NO.	

SHEET NUMBER
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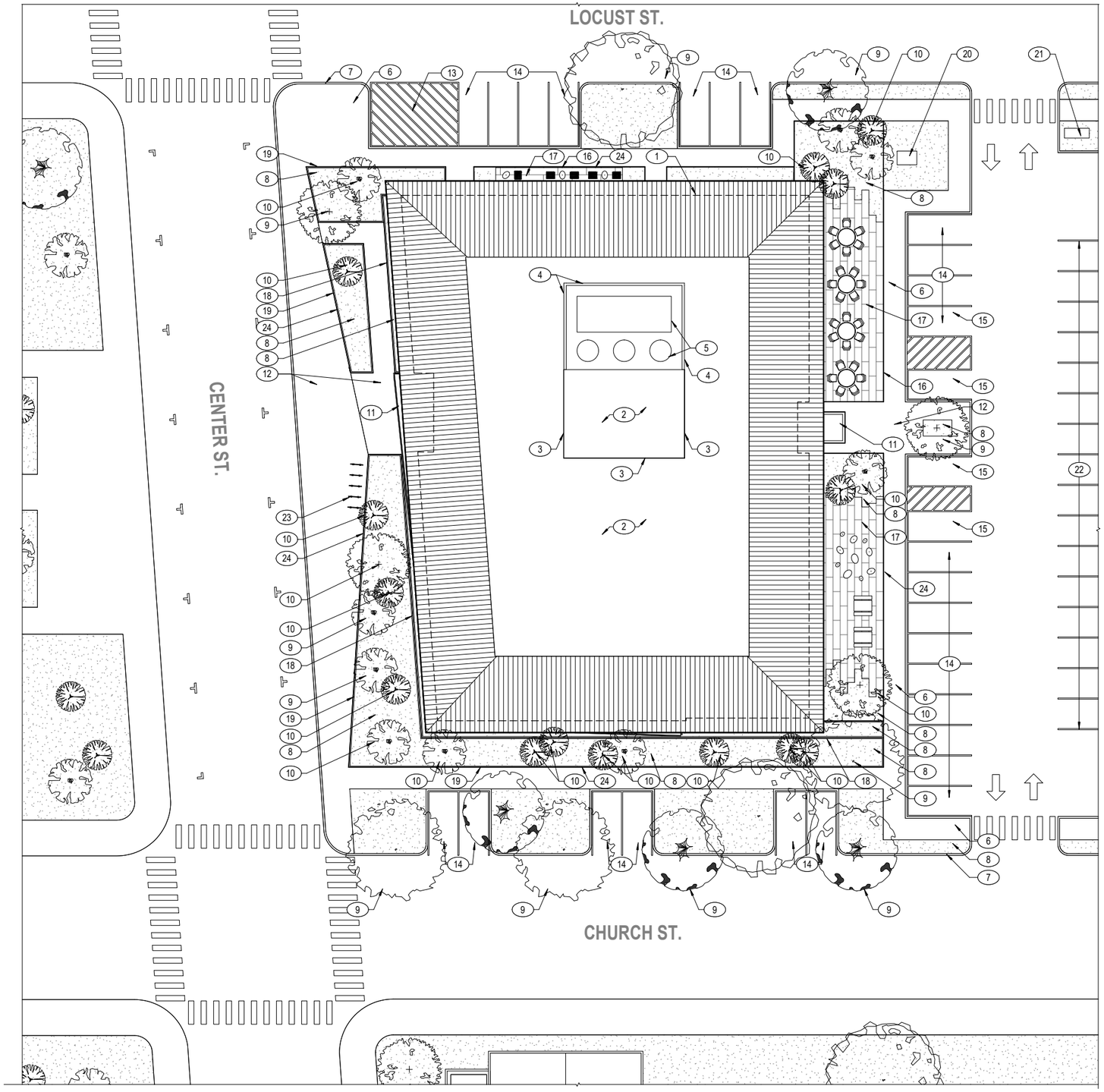

1 A2.10 01 - SCOPE SITE PLAN
1/16" = 1'-0"

KEY NOTES

1. BASE: (E) CLAY TILE ROOF TO REMAIN; ALTERNATE: (N) PRE-FINISHED GALV STANDING SEAM ROOF
2. (N) PVC ROOF OVER 1/2" MIN, 2" AVG RIGID INSULATION, SLOPE 1/4" PER FT
3. KAWNEER 451T ALUM STOREFRONT CLERESTORY WDW, 6'-0" TALL
4. MECHANICAL ENCLOSURE; 8'-0" TALL PRE-FINISHED GALV STANDING SEAM MTL PANELS
5. MECHANICAL EQUIPMENT, SMD
6. ALTERNATE: (N) CONC SIDEWALK, SCD
7. ALTERNATE: (N) CONC CURB, SCD
8. BASE: MULCH FILL; ALTERNATE: PLANTING AREA
9. (E) TREE
10. (N) TREE
11. ENTRY CANOPY
12. CONC PLAZA
13. LOADING / DELIVERIES
14. ALTERNATE: (N) PARKING
15. ACCESSIBLE PARKING
16. ALTERNATE: WOOD SLAT FENCE
17. ALTERNATE: PERMEABLE PAVERS
18. ALTERNATE: COR-TEN STEEL RETAINING WALL, 6" ABOVE GRADE
19. ALTERNATE: COR-TEN STEEL RETAINING WALL, 12"-18" ABOVE GRADE
20. (E) TRANSFORMER TO REMAIN, SED, SCD
21. (E) GAS METER TO REMAIN, SMD, SCD
22. RE-STRIPE (E) PARKING LOT
23. BIKE RACKS
24. WALL-MOUNTED RECESSED SITE LIGHTING @ 8'-0" O.C.

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SHEET TITLE
SITE PLAN

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
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A2.10

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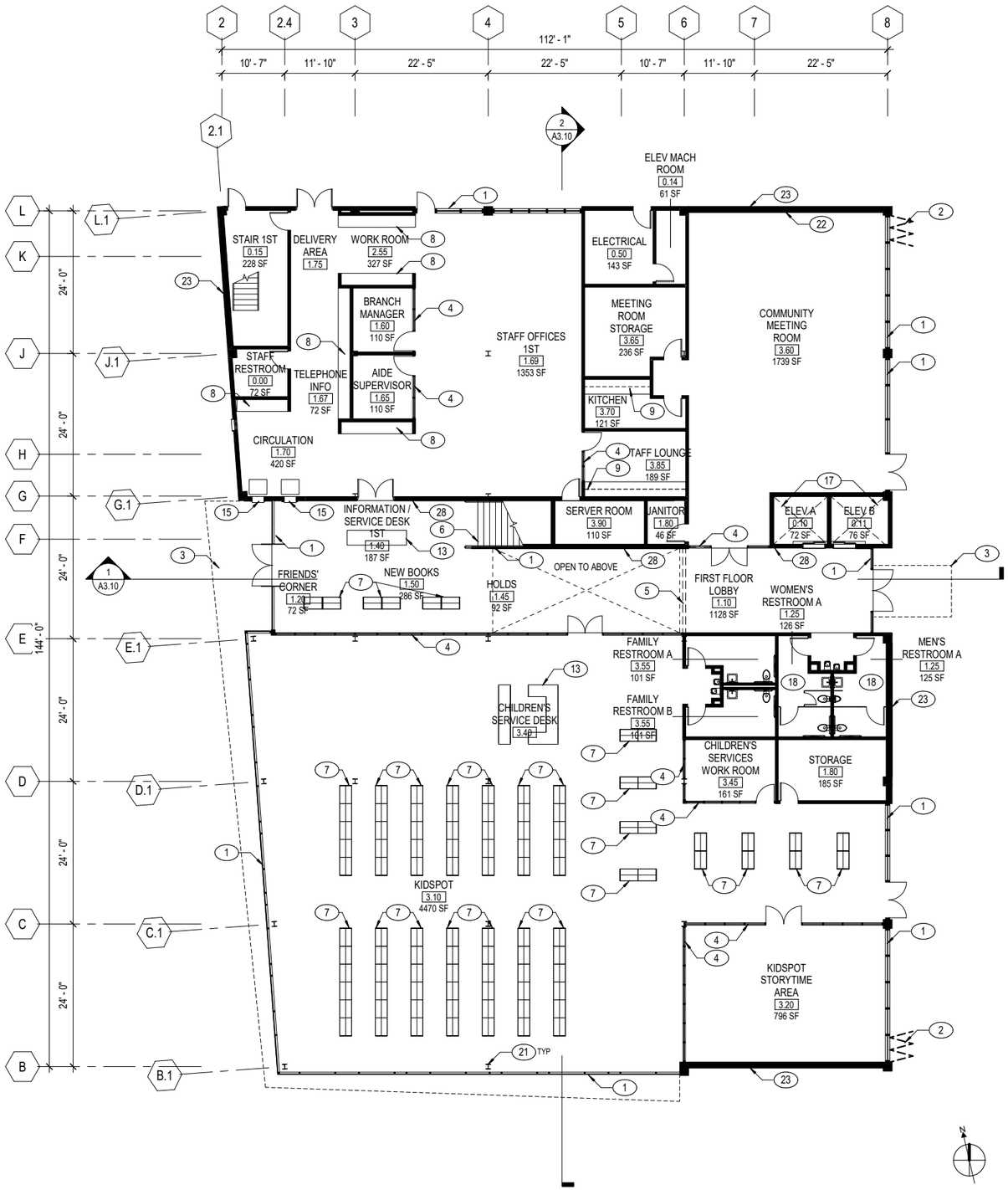

1 A2.11 SCOPE PLAN - LEVEL 01
3/32" = 1'-0"

GENERAL NOTES

1. ALL (E) EXTERIOR CONC WALLS TO REMAIN, PROVIDE MTL STUD FURRING W/ PTD GWB @ INTERIOR FACE
2. ALL WALLS & PARTITIONS TO BE PTD GWB ON MTL STUDS, UON

KEY NOTES

1. KAWNEER 451T ALUM STOREFRONT, 11'-6" TALL
2. BASE: KAWNEER 451T STOREFRONT; ALTERNATE: FLOOR-TO-CEILING NANAWALL OPERABLE EXTERIOR STOREFRONT
3. EXTERIOR CANOPY ABOVE
4. FLOOR-TO-CEILING INTERIOR ALUM FRAMED GLASS PARTITION
5. ROLL-DOWN GATE
6. MAIN STAIR, PRECAST CONC TREADS & RISERS
7. COLLECTION STACKS, 66" TALL CANTILEVER MTL W/ PTD WD END PANELS & CANOPIES
8. PLASTIC LAMINATE LOWER CABINETS W/ QUARTZ VENEER
9. PLASTIC LAMINATE UPPER & LOWER CABINETS W/ QUARTZ VENEER
10. WOOD VENEER UPPER & LOWER CABINETS W/ QUARTZ COUNTERTOP
11. BUILT-IN STORAGE CABINET
12. QUARTZ COUNTER ON STEEL SUPPORTS
13. CIRCULATION DESK W/ QUARTZ COUNTERTOP & WD VENEER LOWER CABINETS
14. STAFF LOCKERS / STORAGE
15. RETURNS BOOK DROP
16. GLASS GUARDRAIL W/ STAINLESS STL HANDRAIL
17. BASE: SINGLE HYDRAULIC ELEVATOR; ALTERNATE: TWO ELECTRIC REMOTE MACHINE ROOM ELEVATORS
18. BASE: SINGLE OCCUPANCY RESTROOMS; ALTERNATE: MULTI-OCCUPANCY RESTROOMS, AS SHOWN
19. KAWNEER 451T WDW W/ AWNING OPERATION, 6'-0" TALL
20. ALTERNATE: KAWNEER 451T WDW W/ AWNING OPERATION
21. PAINT (E) STL COLUMN
22. SCREEN, PROJECTOR, AV, SPEAKERS
23. (N) CONC WALL W/ PTD CEMENT PLASTER FINISH, SSD
24. (N) MTL STUD WALL W/ PTD CEMENT PLASTER FINISH
25. BASE: PAINT (E) CONC WALL; ALTERNATE: PTD CEMENT PLASTER OVER CONC
26. ALTERNATE: 8" SHOTCRETE BETWEEN WDW OPENING & COLUMN, 5'-6" TALL
27. ALTERNATE: VINYL WALL GRAPHIC
28. ALTERNATE: T&G WESTERN RED CEDAR SOFFIT WALL FINISH

WALL LEGEND

- EXISTING WALL
- NEW WALL

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SHEET TITLE
FLOOR PLAN - LEVEL 1

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
JOB NO.	

SHEET NUMBER
A2.11

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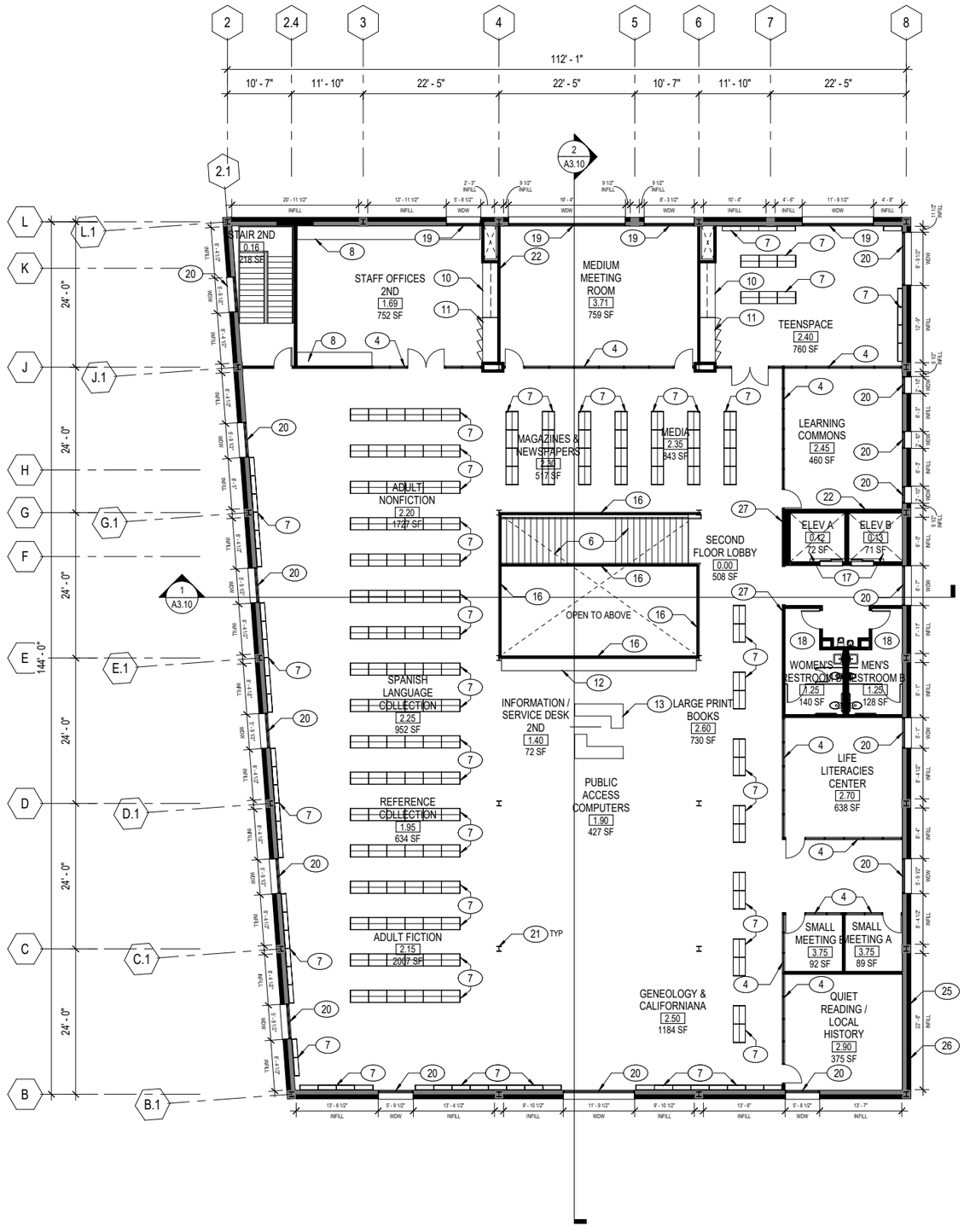

1 A2.12 SCOPE PLAN - LEVEL 02
3/32" = 1'-0"

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GENERAL NOTES

1. ALL (E) EXTERIOR CONC WALLS TO REMAIN, PROVIDE MTL STUD FURRING W/ PTD GWB @ INTERIOR FACE
2. ALL WALLS & PARTITIONS TO BE PTD GWB ON MTL STUDS, UON

KEY NOTES

1. KAWNEER 451T ALUM STOREFRONT, 11'-6" TALL
2. BASE: KAWNEER 451T STOREFRONT; ALTERNATE: FLOOR-TO-CEILING NANAWALL OPERABLE EXTERIOR STOREFRONT
3. EXTERIOR CANOPY ABOVE
4. FLOOR-TO-CEILING INTERIOR ALUM FRAMED GLASS PARTITION
5. ROLL-DOWN GATE
6. MAIN STAIR, PRECAST CONC TREADS & RISERS
7. COLLECTION STACKS, 66" TALL CANTILEVER MTL W/ PTD WD END PANELS & CANOPIES
8. PLASTIC LAMINATE LOWER CABINETS W/ QUARTZ VENEER
9. PLASTIC LAMINATE UPPER & LOWER CABINETS W/ QUARTZ VENEER
10. WOOD VENEER UPPER & LOWER CABINETS W/ QUARTZ COUNTERTOP
11. BUILT-IN STORAGE CABINET
12. QUARTZ COUNTER ON STEEL SUPPORTS
13. CIRCULATION DESK W/ QUARTZ COUNTERTOP & WD VENEER LOWER CABINETS
14. STAFF LOCKERS / STORAGE
15. RETURNS BOOK DROP
16. GLASS GUARDRAIL W/ STAINLESS STL HANDRAIL
17. BASE: SINGLE HYDRAULIC ELEVATOR; ALTERNATE: TWO ELECTRIC REMOTE MACHINE ROOM ELEVATORS
18. BASE: SINGLE OCCUPANCY RESTROOMS; ALTERNATE: MULTI-OCCUPANCY RESTROOMS, AS SHOWN
19. KAWNEER 451T WDW W/ AWNING OPERATION, 6'-0" TALL
20. ALTERNATE: KAWNEER 451T WDW W/ AWNING OPERATION
21. PAINT (E) STL COLUMN
22. SCREEN, PROJECTOR, AV, SPEAKERS
23. (N) CONC WALL W/ PTD CEMENT PLASTER FINISH, SSD
24. (N) MTL STUD WALL W/ PTD CEMENT PLASTER FINISH
25. BASE: PAINT (E) CONC WALL; ALTERNATE: PTD CEMENT PLASTER OVER CONC
26. ALTERNATE: 8" SHOTCRETE BETWEEN WDW OPENING & COLUMN, 5'-6" TALL
27. ALTERNATE: VINYL WALL GRAPHIC
28. ALTERNATE: T&G WESTERN RED CEDAR SOFFIT WALL FINISH

WALL LEGEND

EXISTING WALL

NEW WALL

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FLOOR PLAN - LEVEL 2

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
JOB NO.	

SHEET NUMBER
A2.12

1 A2.31 01 - LEVEL 1 - CEILING PLAN
3/32" = 1'-0"

GENERAL NOTES

1. ASSUME 4" X 48" RECESSED LINEAR LIGHTING FIXTURES @ 8'-0" O.C. IN ALL ACOUSTIC CEILING TILE
2. ASSUME RECESSED CAN LIGHTING @ 4'-0" O.C. IN ALL GWB CEILINGS & T&G WOOD CEILINGS

KEY NOTES

1. OPEN TO STRUCTURE; PAINT EXPOSED BEAMS, CONC DECK, MTL DECK, CONDUIT, & DUCTWORK
2. PTD DUCTWORK, SMD
3. 2X4 ACOUSTIC CEILING TILE, ARMSTRONG OPTIMA
4. PTD GWB CEILING
5. T&G WESTERN RED CEDAR ENTRY CANOPY W/ STL STRUCTURE & PVC ROOF
6. ALTERNATE: T&G WESTERN RED CEDAR SOFFIT OVER (E) EAVE, (N) SHEET MTL GUTTER & FASCIA
7. LARGE DECORATIVE PENDANT FIXTURES
8. LINEAR PENDANT LIGHT, TYP
9. RECESSED LINEAR LIGHT, TYP

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SHEET TITLE
REFLECTED CEILING PLAN - LEVEL 1

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
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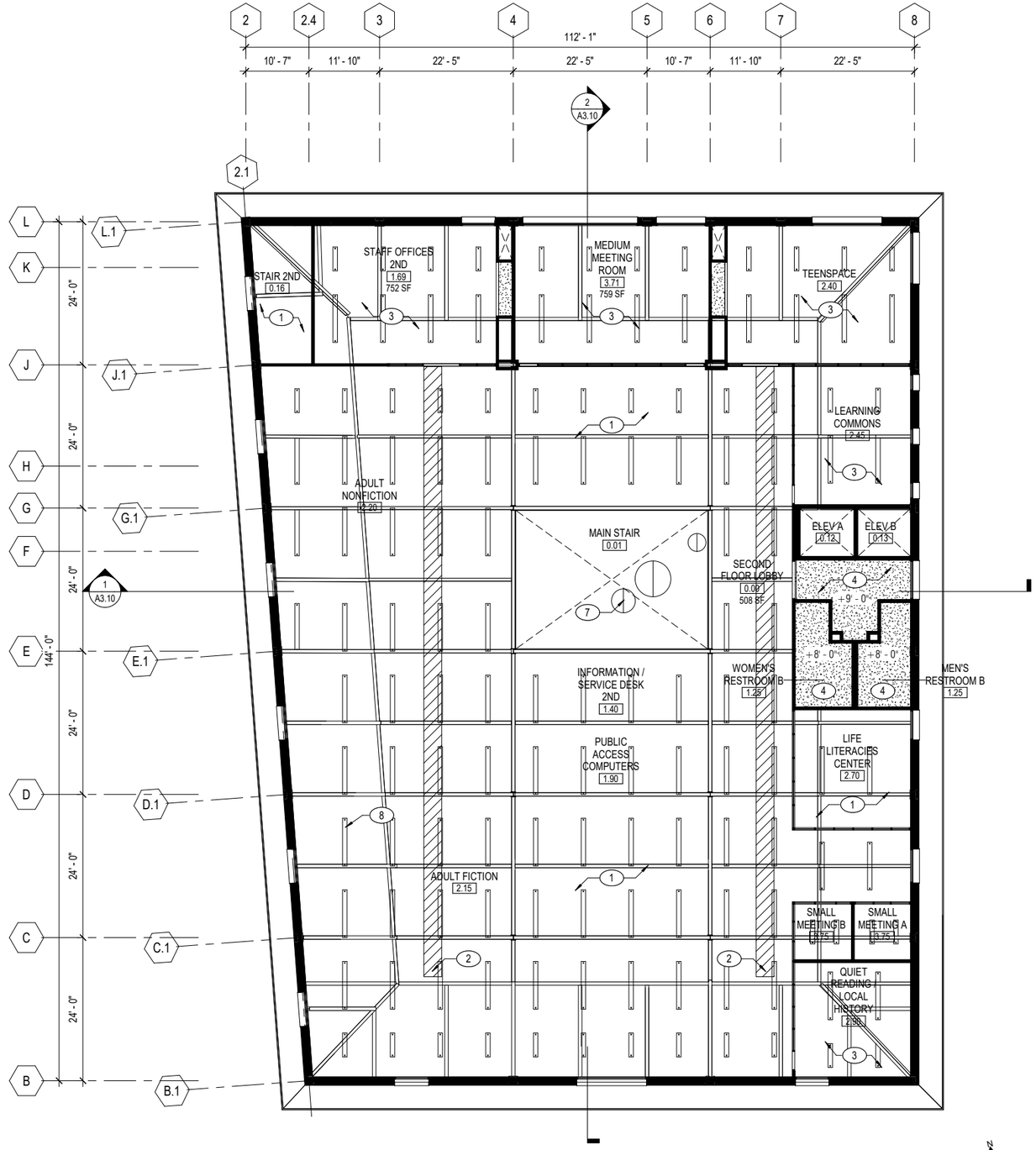

1 A2.32 02 - LEVEL 2 - CEILING PLAN
3/32" = 1'-0"

GENERAL NOTES

1. ASSUME 4" X 48" RECESSED LINEAR LIGHTING FIXTURES @ 8'-0" O.C. IN ALL ACOUSTIC CEILING TILE
2. ASSUME RECESSED CAN LIGHTING @ 4'-0" O.C. IN ALL GWB CEILINGS & T&G WOOD CEILINGS

KEY NOTES

1. OPEN TO STRUCTURE; PAINT EXPOSED BEAMS, CONC DECK, MTL DECK, CONDUIT, & DUCTWORK
2. PTD DUCTWORK, SMD
3. 2X4 ACOUSTIC CEILING TILE, ARMSTRONG OPTIMA
4. PTD GWB CEILING
5. T&G WESTERN RED CEDAR ENTRY CANOPY W/ STL STRUCTURE & PVC ROOF
6. ALTERNATE: T&G WESTERN RED CEDAR SOFFIT OVER (E) EAVE, (N) SHEET MTL GUTTER & FASCIA
7. LARGE DECORATIVE PENDANT FIXTURES
8. LINEAR PENDANT LIGHT, TYP
9. RECESSED LINEAR LIGHT, TYP

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SHEET TITLE
REFLECTED CEILING
PLAN - LEVEL 2

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
JOB NO.	

SHEET NUMBER
A2.32

2019-10-21 7:11:44 PM

1 A2.41 01 - LEVEL 1 - CEILING PLAN - ALTERNATE
3/32" = 1'-0"

GENERAL NOTES

1. ASSUME 4" X 48" RECESSED LINEAR LIGHTING FIXTURES @ 8'-0" O.C. IN ALL ACOUSTIC CEILING TILE
2. ASSUME RECESSED CAN LIGHTING @ 4'-0" O.C. IN ALL GWB CEILINGS & T&G WOOD CEILINGS

KEY NOTES

1. OPEN TO STRUCTURE; PAINT EXPOSED BEAMS, CONC DECK, MTL DECK, CONDUIT, & DUCTWORK
2. PTD DUCTWORK, SMD
3. 2X4 ACOUSTIC CEILING TILE, ARMSTRONG OPTIMA
4. PTD GWB CEILING
5. T&G WESTERN RED CEDAR ENTRY CANOPY W/ STL STRUCTURE & PVC ROOF
6. ALTERNATE: T&G WESTERN RED CEDAR SOFFIT OVER (E) EAVE, (N) SHEET MTL GUTTER & FASCIA
7. LARGE DECORATIVE PENDANT FIXTURES
8. LINEAR PENDANT LIGHT, TYP
9. RECESSED LINEAR LIGHT, TYP

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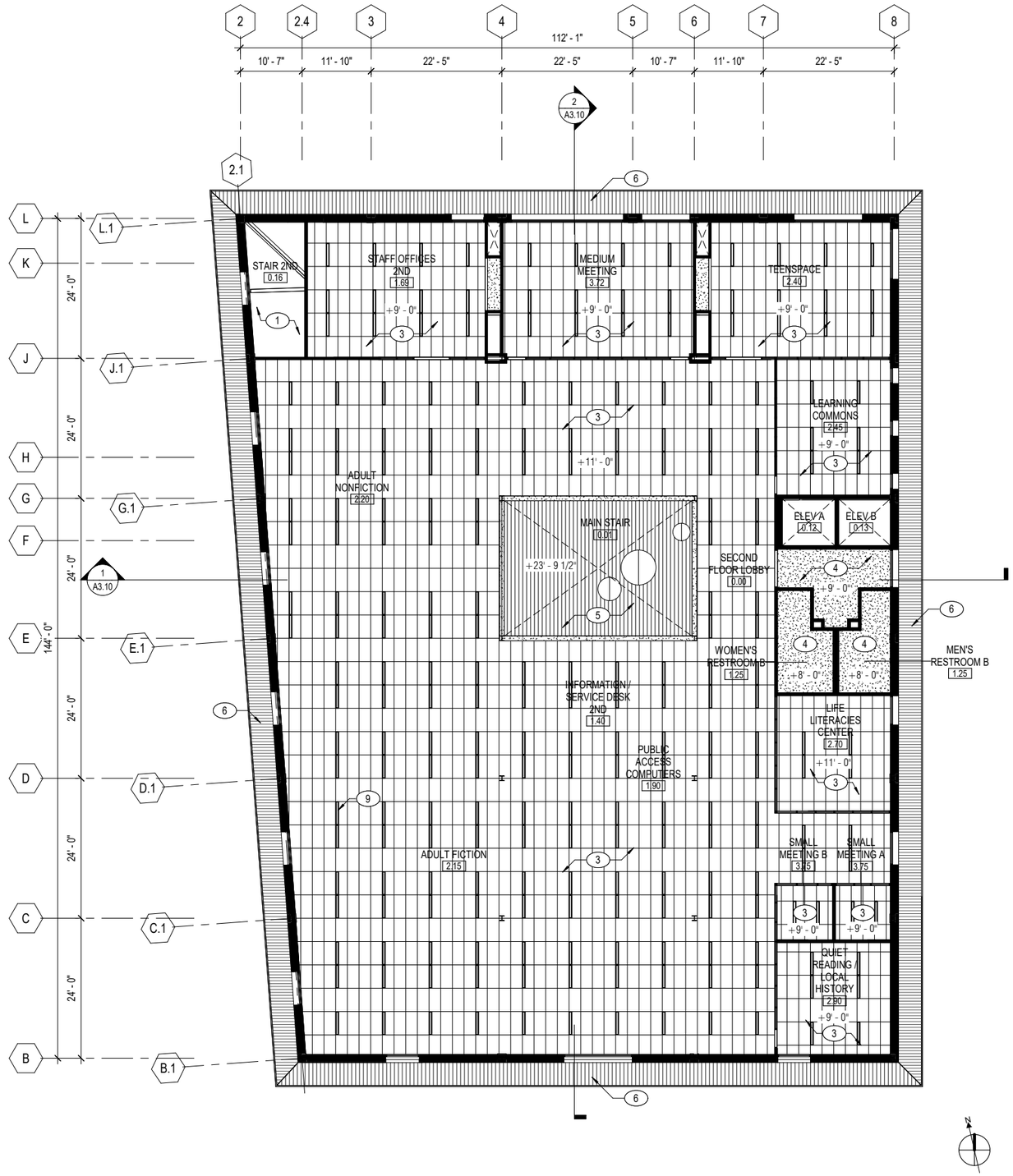

1 A2.42 02 - LEVEL 2 - CEILING PLAN - ALTERNATE
3/32" = 1'-0"

GENERAL NOTES

1. ASSUME 4" X 48" RECESSED LINEAR LIGHTING FIXTURES @ 8'-0" O.C. IN ALL ACOUSTIC CEILING TILE
2. ASSUME RECESSED CAN LIGHTING @ 4'-0" O.C. IN ALL GWB CEILINGS & T&G WOOD CEILINGS

KEY NOTES

1. OPEN TO STRUCTURE; PAINT EXPOSED BEAMS, CONC DECK, MTL DECK, CONDUIT, & DUCTWORK
2. PTD DUCTWORK, SMD
3. 2X4 ACOUSTIC CEILING TILE, ARMSTRONG OPTIMA
4. PTD GWB CEILING
5. T&G WESTERN RED CEDAR ENTRY CANOPY W/ STL STRUCTURE & PVC ROOF
6. ALTERNATE: T&G WESTERN RED CEDAR SOFFIT OVER (E) EAVE, (N) SHEET MTL GUTTER & FASCIA
7. LARGE DECORATIVE PENDANT FIXTURES
8. LINEAR PENDANT LIGHT, TYP
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REVISIONS

NO.	DATE	DESCRIPTION

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SCALE	As indicated
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SHEET NUMBER
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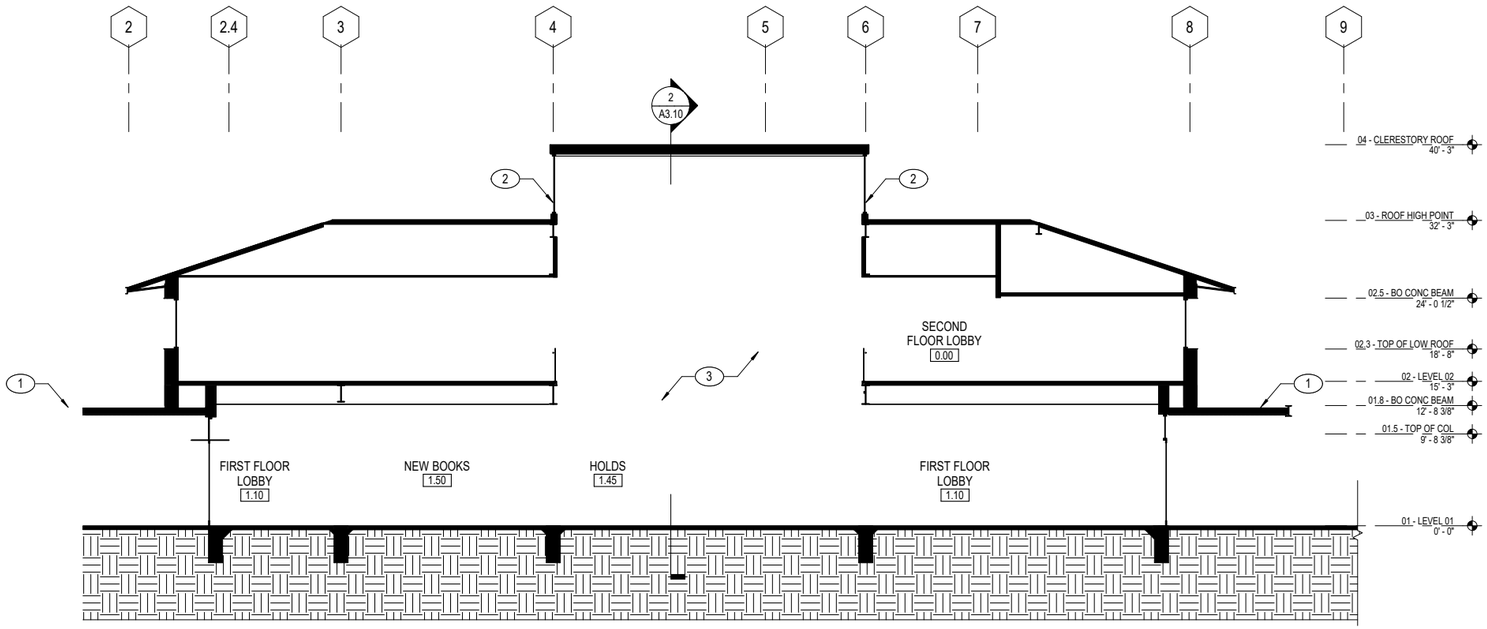
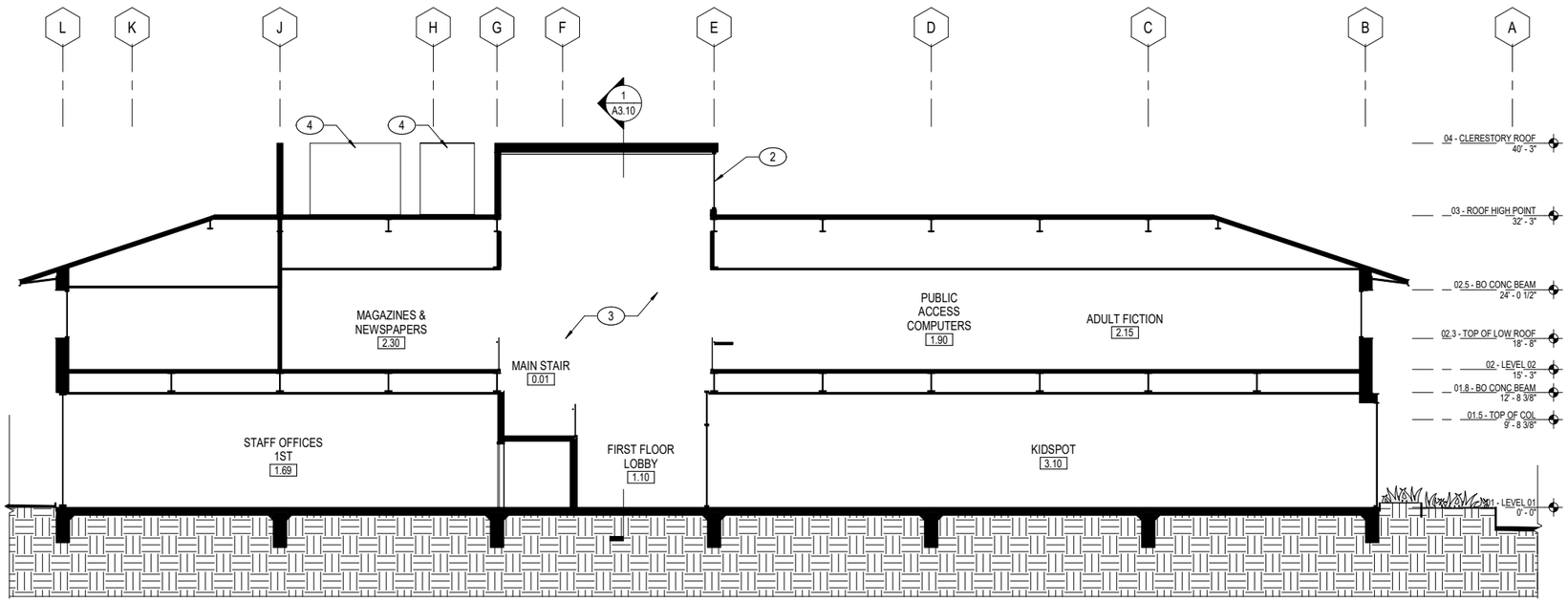


1 A3.10 BUILDING SECTION - ALTERNATE - EAST / WEST
1/8" = 1'-0"



2 A3.10 BUILDING SECTION - ALTERNATE - NORTH / SOUTH
1/8" = 1'-0"

KEY NOTES

1. ENTRY CANOPY
2. CLERESTORY GLAZING
3. TWO STORY OPENING
4. MECHANICAL ROOF TOP UNITS

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BUILDING SECTIONS

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
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A3.10

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ROOM FINISH SCHEDULE

#	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments	Area
0.00	SECOND FLOOR LOBBY	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	LVL 5 PTD GWB		508 SF
0.00	STAFF RESTROOM	TILE	TILE	48" TILE, LVL 4 GWB ABOVE	LVL 4 PTD GWB		72 SF
0.01	MAIN STAIR	PRECAST CONC	CLEAR 1X4 CEDAR	BASE: LVL 5 PTD GWB, ALT: T&G WESTERN RED CEDAR	BASE: OPEN TO STRUCTURE, ALT: T&G WESTERN RED CEDAR		242 SF
0.10	ELEV A	CARPET TILE	N/A	PLASTIC LAMINATE	STAINLESS STEEL		72 SF
0.11	ELEV B	CARPET TILE	N/A	PLASTIC LAMINATE	STAINLESS STEEL		76 SF
0.12	ELEV A	CARPET TILE	N/A	PLASTIC LAMINATE	STAINLESS STEEL		72 SF
0.13	ELEV B	CARPET TILE	N/A	PLASTIC LAMINATE	STAINLESS STEEL		71 SF
0.14	ELEV MACH ROOM	(E) CONC SLAB	RUBBER	LVL 3 PTD GWB	OPEN TO STRUCTURE		61 SF
0.15	STAIR 1ST	PRECAST CONC	RUBBER	LVL 3 PTD GWB	OPEN TO STRUCTURE		228 SF
0.16	STAIR 2ND	PRECAST CONC	RUBBER	LVL 3 PTD GWB	OPEN TO STRUCTURE		218 SF
0.50	ELECTRICAL	(E) CONC SLAB	RUBBER	LVL 3 PTD GWB	OPEN TO STRUCTURE		143 SF
1.10	FIRST FLOOR LOBBY	POLISH (E) CONC SLAB	CLEAR 1X4 CEDAR	BASE: LVL 5 PTD GWB, ALT: T&G WESTERN RED CEDAR	BASE: OPEN TO STRUCTURE, ALT: T&G WESTERN RED CEDAR		1128 SF
1.20	FRIENDS' CORNER	POLISH (E) CONC SLAB	CLEAR 1X4 CEDAR	BASE: LVL 5 PTD GWB, ALT: T&G WESTERN RED CEDAR	BASE: OPEN TO STRUCTURE, ALT: T&G WESTERN RED CEDAR		72 SF
1.25	MEN'S RESTROOM A	TILE	TILE	48" TILE, LVL 4 GWB ABOVE	LVL 4 PTD GWB		125 SF
1.25	MEN'S RESTROOM B	TILE	TILE	48" TILE, LVL 4 GWB ABOVE	LVL 4 PTD GWB		128 SF
1.25	WOMEN'S RESTROOM A	TILE	TILE	48" TILE, LVL 4 GWB ABOVE	LVL 4 PTD GWB		126 SF
1.25	WOMEN'S RESTROOM B	TILE	TILE	48" TILE, LVL 4 GWB ABOVE	LVL 4 PTD GWB		140 SF
1.40	INFORMATION / SERVICE DESK 1ST	CARPET TILE	PTD 1X4 WOOD	BASE: LVL 5 PTD GWB, ALT: T&G WESTERN RED CEDAR	BASE: OPEN TO STRUCTURE, ALT: T&G WESTERN RED CEDAR		187 SF
1.40	INFORMATION / SERVICE DESK 2ND	POLISH (E) CONC SLAB	CLEAR 1X4 CEDAR	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		72 SF
1.45	HOLDS	POLISH (E) CONC SLAB	CLEAR 1X4 CEDAR	BASE: LVL 5 PTD GWB, ALT: T&G WESTERN RED CEDAR	BASE: OPEN TO STRUCTURE, ALT: T&G WESTERN RED CEDAR		92 SF
1.50	NEW BOOKS	POLISH (E) CONC SLAB	CLEAR 1X4 CEDAR	BASE: LVL 5 PTD GWB, ALT: T&G WESTERN RED CEDAR	BASE: OPEN TO STRUCTURE, ALT: T&G WESTERN RED CEDAR		286 SF
1.60	BRANCH MANAGER	CARPET TILE	RUBBER	LVL 4 PTD GWB	ACOUSTIC CLG TILE		110 SF
1.65	AIDE SUPERVISOR	CARPET TILE	RUBBER	LVL 4 PTD GWB	ACOUSTIC CLG TILE		110 SF
1.67	TELEPHONE INFO	POLISH (E) CONC SLAB	RUBBER	LVL 4 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: LVL 4 PTD GWB		72 SF
1.69	STAFF OFFICES 1ST	CARPET TILE	RUBBER	LVL 4 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		1353 SF
1.69	STAFF OFFICES 2ND	CARPET TILE	RUBBER	LVL 4 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		752 SF
1.70	CIRCULATION	CARPET TILE	RUBBER	LVL 4 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		420 SF
1.75	DELIVERY AREA	POLISH (E) CONC SLAB	RUBBER	LVL 4 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: LVL 4 PTD GWB		64 SF
1.80	JANITOR	(E) CONC SLAB	RUBBER	LVL 3 PTD GWB	OPEN TO STRUCTURE		46 SF
1.80	STORAGE	(E) CONC SLAB	RUBBER	LVL 3 PTD GWB	OPEN TO STRUCTURE		185 SF
1.90	PUBLIC ACCESS COMPUTERS	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		427 SF
1.95	REFERENCE COLLECTION	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		634 SF
2.15	ADULT FICTION	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		2007 SF
2.20	ADULT NONFICTION	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		1727 SF
2.25	SPANISH LANGUAGE COLLECTION	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		952 SF
2.30	MAGAZINES & NEWSPAPERS	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		517 SF
2.35	MEDIA	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		843 SF
2.40	TEENSPACE	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		760 SF
2.45	LEARNING COMMONS	POLISH (E) CONC SLAB	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		460 SF
2.50	GENEOLOGY & CALIFORNIANA	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		1184 SF
2.55	WORK ROOM	POLISH (E) CONC SLAB	RUBBER	LVL 4 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: LVL 4 PTD GWB		327 SF
2.60	LARGE PRINT BOOKS	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		730 SF
2.70	LIFE LITERACIES CENTER	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		638 SF
2.90	QUIET READING / LOCAL HISTORY	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		375 SF
3.00	FAMILY SPACE	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		1396 SF
3.10	KIDSPOT	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		4470 SF
3.20	KIDSPOT STORYTIME AREA	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		796 SF
3.40	CHILDREN'S SERVICE DESK	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		110 SF
3.45	CHILDREN'S SERVICES WORK ROOM	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		161 SF
3.55	FAMILY RESTROOM A	TILE	TILE	48" TILE, LVL 4 GWB ABOVE	LVL 4 PTD GWB		101 SF
3.55	FAMILY RESTROOM B	TILE	TILE	48" TILE, LVL 4 GWB ABOVE	LVL 4 PTD GWB		101 SF
3.60	COMMUNITY MEETING ROOM	POLISH (E) CONC SLAB	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		1739 SF
3.65	MEETING ROOM STORAGE	(E) CONC SLAB	RUBBER	LVL 3 PTD GWB	OPEN TO STRUCTURE		236 SF
3.70	KITCHEN	(E) CONC SLAB	RUBBER	LVL 4 PTD GWB	LVL 4 PTD GWB		121 SF
3.71	MEDIUM MEETING ROOM	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		759 SF
3.75	SMALL MEETING A	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		89 SF
3.75	SMALL MEETING B	CARPET TILE	PTD 1X4 WOOD	LVL 5 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		92 SF
3.85	STAFF LOUNGE	POLISH (E) CONC SLAB	RUBBER	LVL 4 PTD GWB	BASE: OPEN TO STRUCTURE, ALT: ACOUSTIC CLG TILE		189 SF
3.90	SERVER ROOM	(E) CONC SLAB	RUBBER	LVL 3 PTD GWB	OPEN TO STRUCTURE		110 SF
Grand total: 59							29282 SF

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SHEET TITLE
ROOM FINISH SCHEDULE

REVISIONS

NO.	DATE	DESCRIPTION

DATE 10/21/2019
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A9.00

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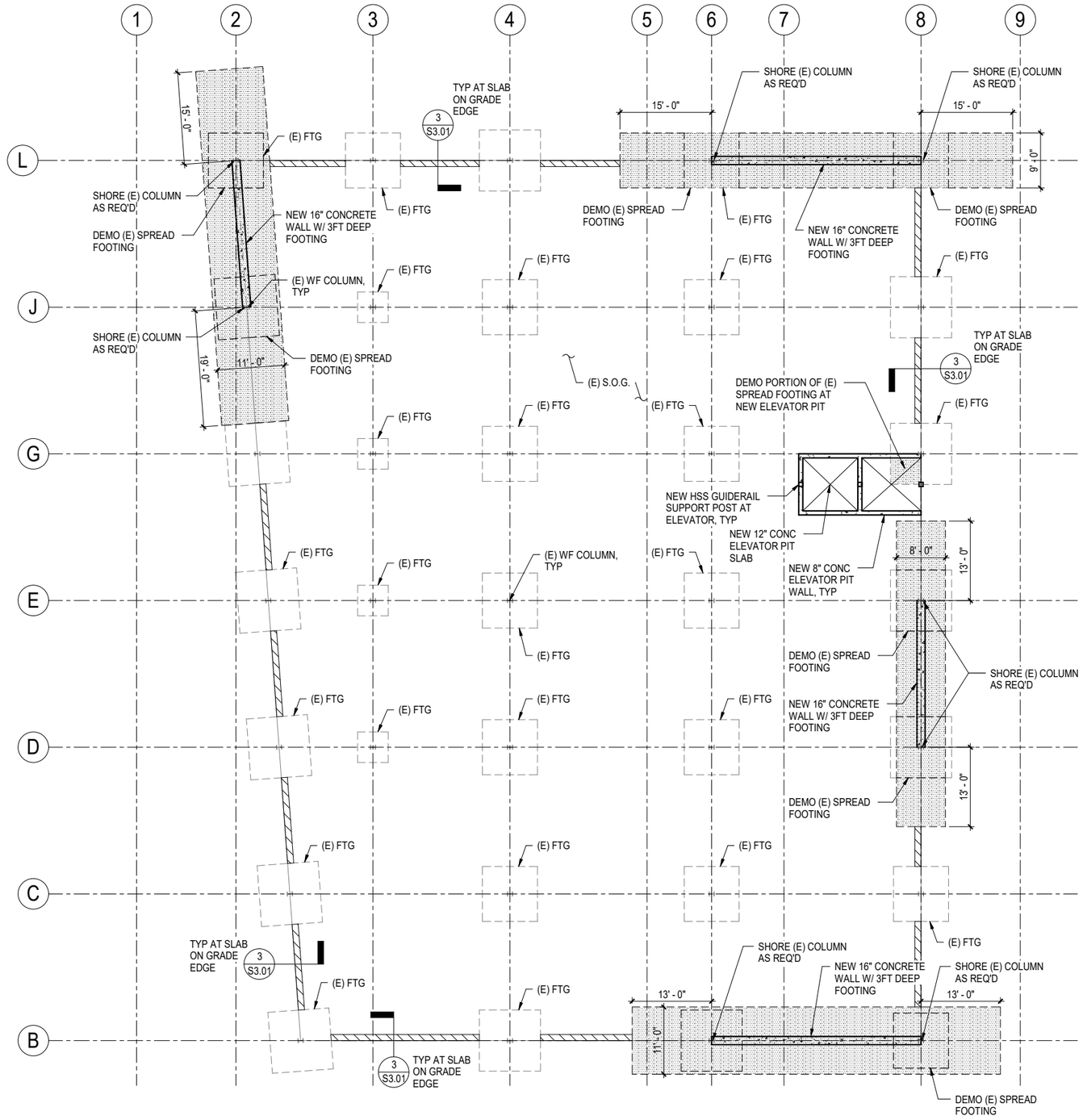

1 FOUNDATION PLAN

1" = 10'-0"

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NO. 5594
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE

FOUNDATION PLAN

REVISIONS

NO.	DATE	DESCRIPTION

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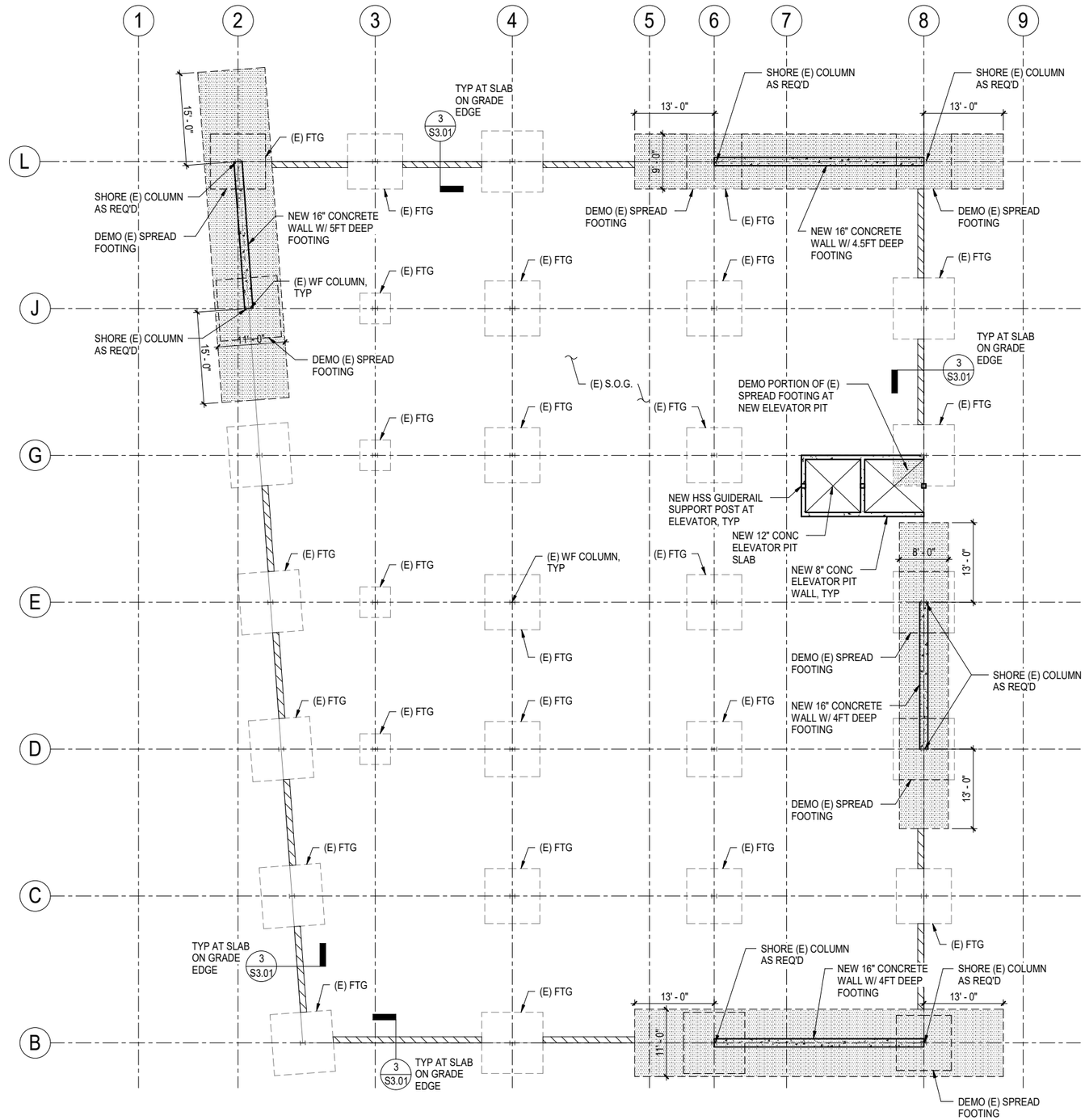
S2.01



1 FOUNDATION PLAN

1" = 10'-0"

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FOUNDATION PLAN - ALTERNATE

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DATE	10/21/2019
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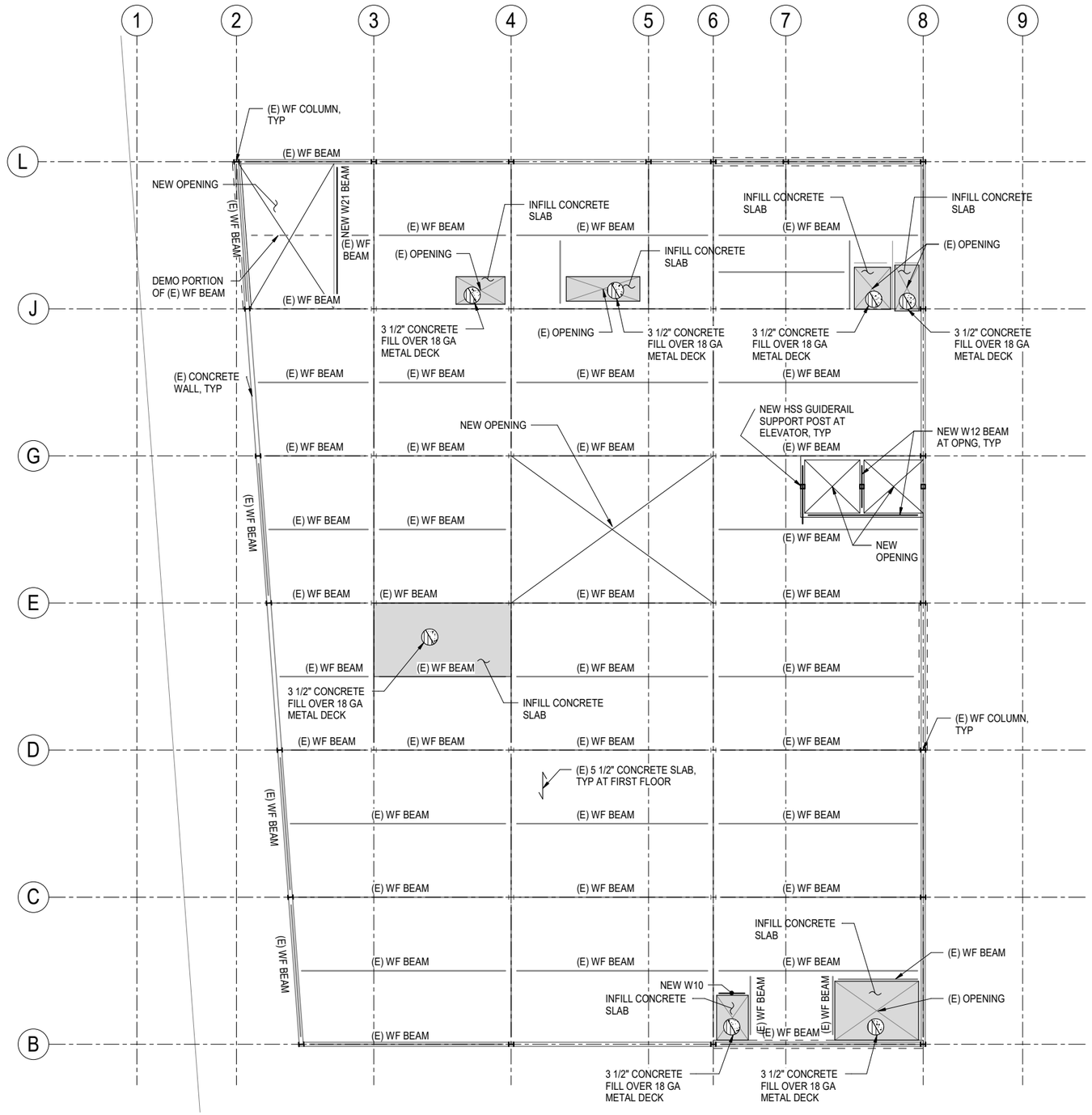
S2.02



1 LEVEL 02 FRAMING PLAN

1" = 10'-0"

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LEVEL 02 FRAMING PLAN

REVISIONS		
NO.	DATE	DESCRIPTION

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SCALE	1" = 10'-0"
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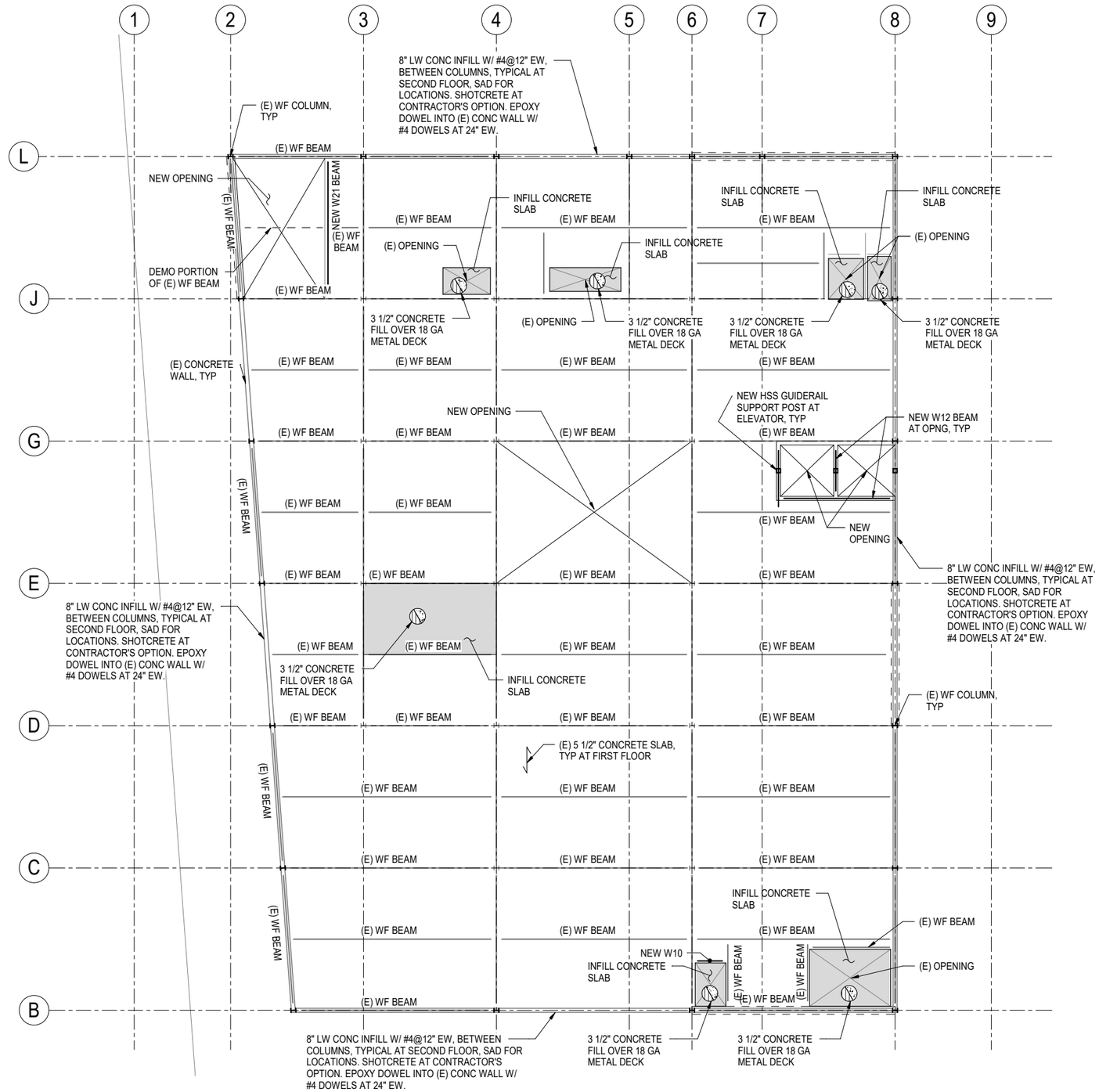
SHEET NUMBER

S2.03



1 LEVEL 02 FRAMING PLAN

1" = 10'-0"

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LEVEL 02 FRAMING PLAN - ALTERNATE

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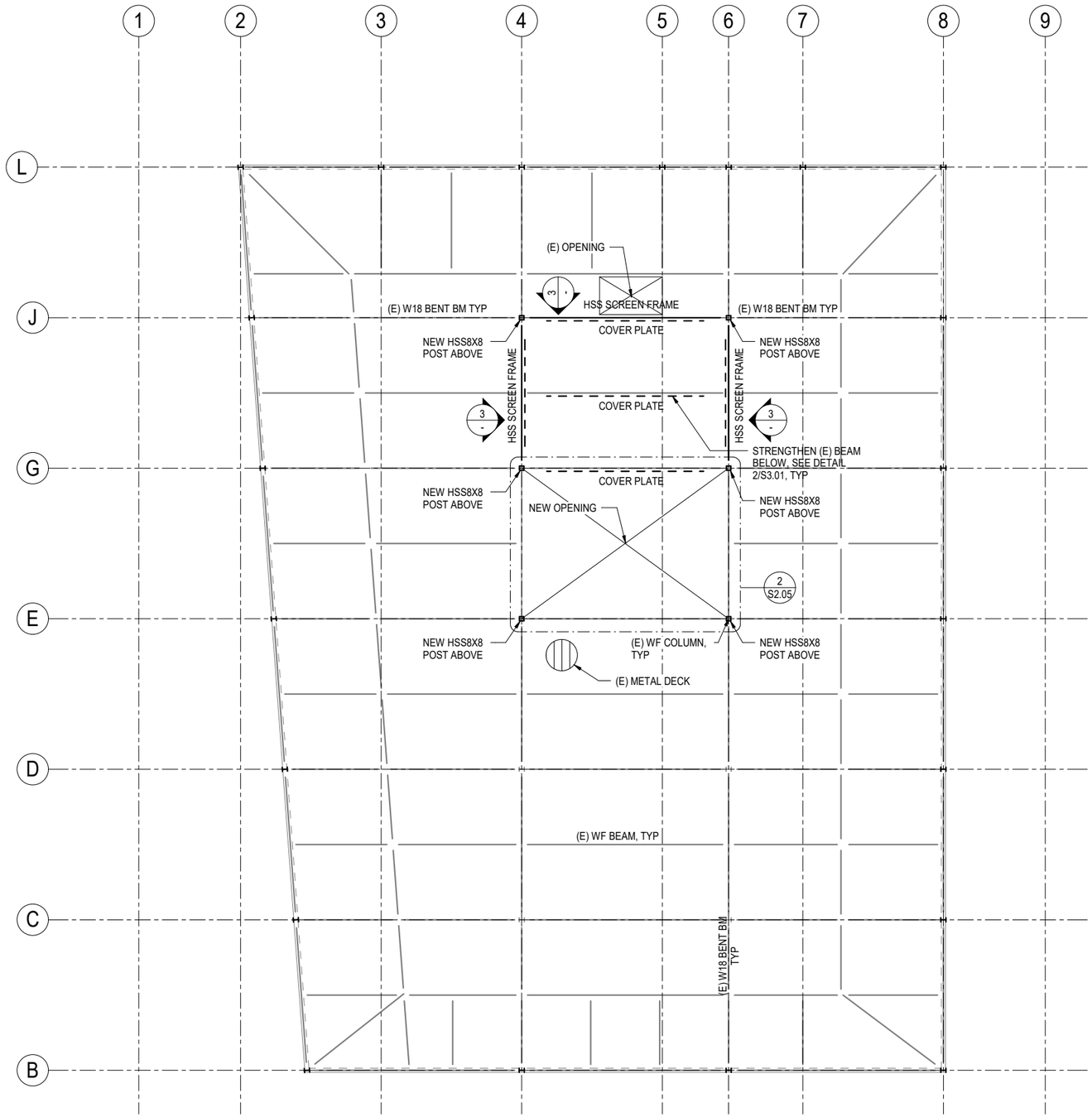
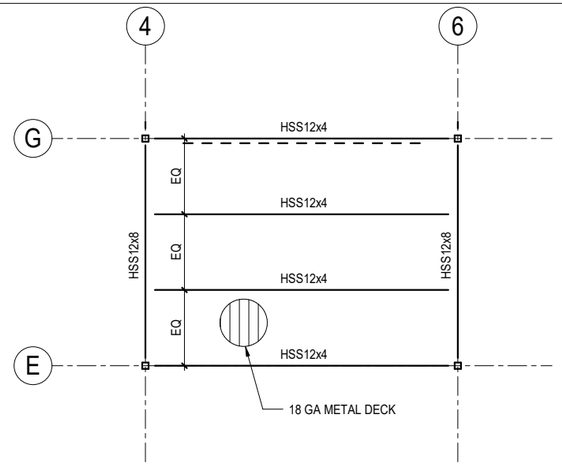
S2.04



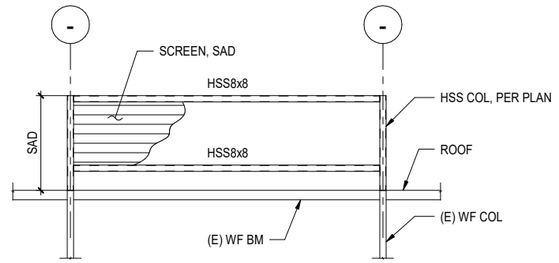
1 ROOF FRAMING PLAN

1" = 10'-0"



2 CLERESTORY FRAMING

NTS



3 MECHANICAL SCREEN SUPPORT FRAMING

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ROOF FRAMING PLAN

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S2.05

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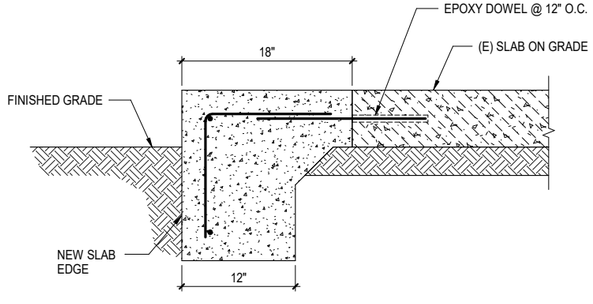
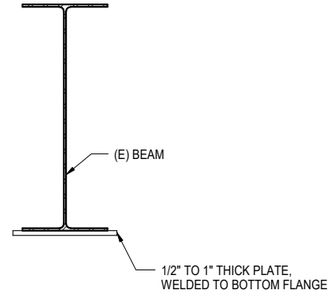
1 TYPICAL CONCRETE SHEAR WALL ELEVATION

1/2" = 1'-0"



3 NEW SLAB ON GRADE EDGE

NTS



2 TYPICAL BEAM STRENGHTHENING

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DETAILS

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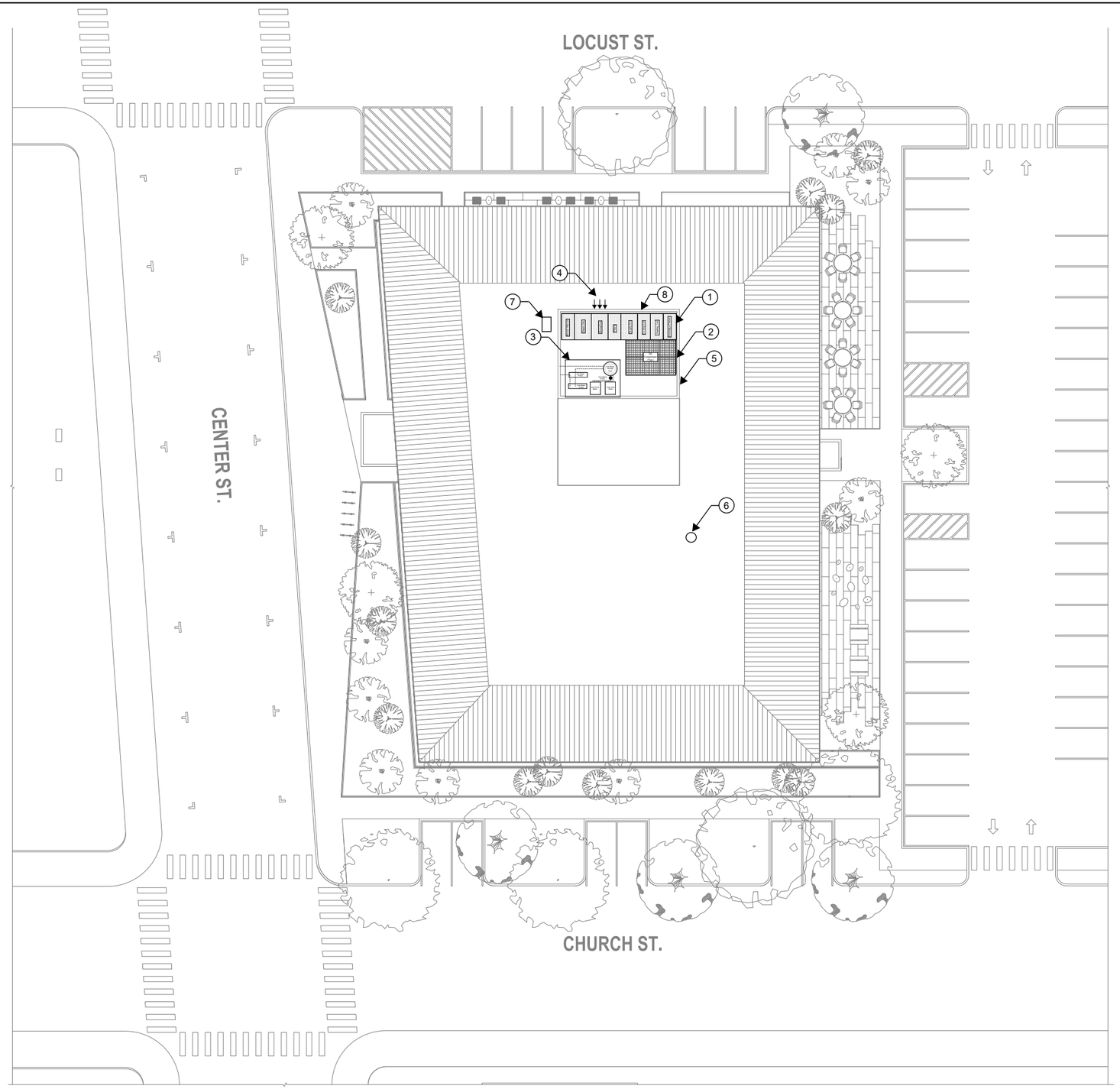

1 M2.10 01 - MECHANICAL SITE PLAN
1/16" = 1'-0"

KEY NOTES

1. PACKAGED AIR HANDLING UNIT. REFER TO NARRATIVE TO COMPONENT DESCRIPTION.
2. AIR HANDLING UNIT DX COOLING COMPRESSORS. REFER TO NARRATIVE FOR SIZE.
3. HEATING HOT WATER PLANT. ROUTE HOT WATER TO AHU HEATING COIL, AND BUILDING RETURN AIR RISER.
4. OUTDOOR AIR INTAKE
5. LOUVERED PARAPET SCREEN
6. GENERAL EXHAUST FAN (RESTROOMS AND KITCHEN)
7. REUSE EXISTING SERVER ROOM ROOFTOP CONDENSING UNIT
8. REMOVABLE PARAPET WALL, FOR EQUIPMENT ACCESS

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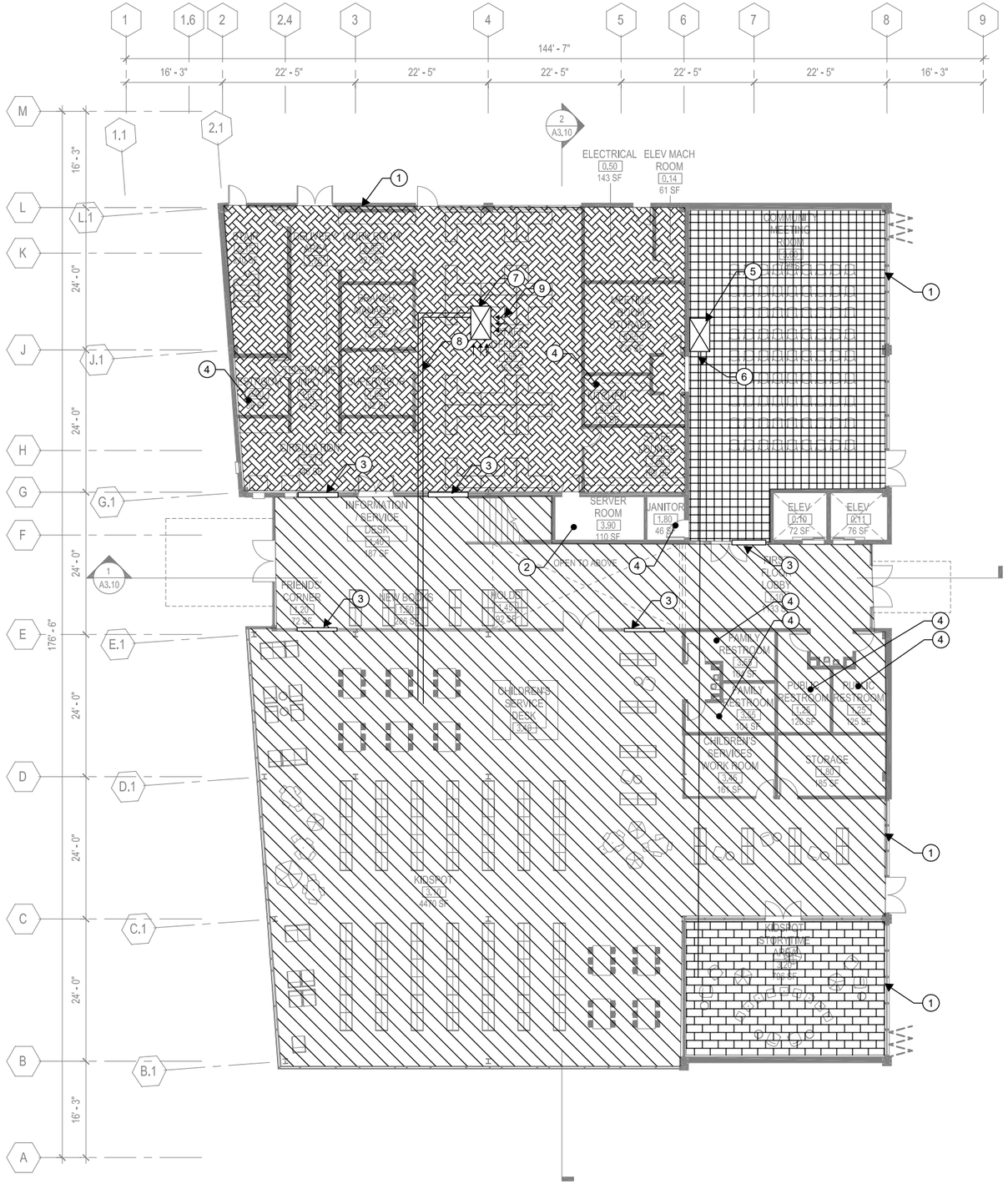

1 M2.11 SCOPE PLAN - LEVEL 01
3/32" = 1'-0"

KEY NOTES

1. HVAC CONTROL ZONE. PROVIDE VAV BOX WITH HYDRONIC REHEAT COIL. SIZE ZONE FOR 1.2 CFM PER SQUARE FEET. PROVIDE 2x2 DIFFUSERS AND GRILLES (MAX 500 CFM PER DIFFUSER)
2. SERVER ROOM. RE-USE EXISTING SERVER ROOM EQUIPMENT. ROUTE REFRIGERANT FROM EXISTING ROOFTOP SERVER AC TO SERVER EQUIPMENT
3. RETURN AIR TRANSFER OPENING, ABOVE CEILING
4. DUCTED EXHAUST ZONE. ROUTE DUCTED EXHAUST FROM ZONE TO COMMON ROOF EXHAUST FAN
5. 124"x36" SUPPLY AIR DUCT TO ROOF
6. 56"x36" SUPPLY AIR FLOOR MAIN. TO VAV BOXES.
7. 124"x36" RETURN AIR SHAFT WITH 2" HEATING HOT WATER SUPPLY AND RETURN PIPING
8. 2" HEATING HOT WATER SUPPLY AND RETURN FLOOR MAINS. TO VAV HYDRONIC REHEAT COILS
9. CENTRAL PLENUM RETURN. SIZE INLETS TO RETURN PLENUM NOT TO EXCEED 500 FEET PER MINUTE

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SHEET TITLE
MECHANICAL - LEVEL 1

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NO.	DATE	DESCRIPTION

DATE	10/21/2019
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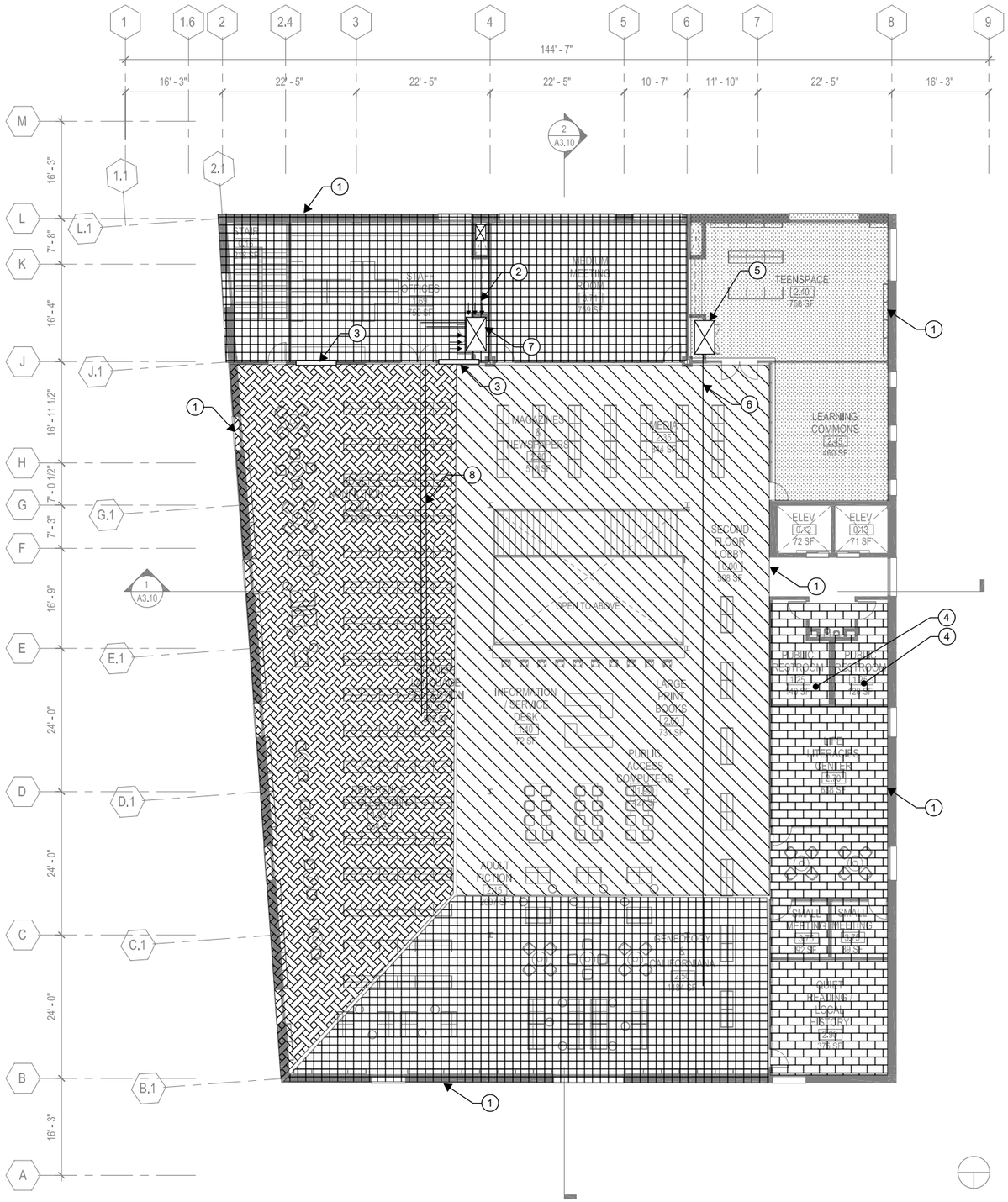
SHEET NUMBER
M2.11



KEY NOTES

1. HVAC CONTROL ZONE. PROVIDE VAV BOX WITH HYDRONIC REHEAT COIL. SIZE ZONE FOR 1.2 CFM PER SQUARE FEET. PROVIDE 2x2 DIFFUSERS AND GRILLES (MAX 500 CFM PER DIFFUSER).
2. CENTRAL PLENUM RETURN. SIZE INLETS TO RETURN PLENUM NOT TO EXCEED 500 FEET PER MINUTE.
3. RETURN AIR TRANSFER OPENING, ABOVE CEILING.
4. DUCTED EXHAUST ZONE. ROUTE DUCTED EXHAUST FROM ZONE TO COMMON ROOF EXHAUST FAN.
5. 124"x36" SUPPLY AIR DUCT TO ROOF.
6. 56"x36" SUPPLY AIR FLOOR MAIN. TO VAV BOXES.
7. 124"x36" RETURN AIR SHAFT WITH 3" HEATING HOT WATER SUPPLY AND RETURN PIPING.
8. 2" HEATING HOT WATER SUPPLY AND RETURN FLOOR MAINS. TO VAV HYDRONIC REHEAT COILS.

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CONCEPT DESIGN - COSTING SET

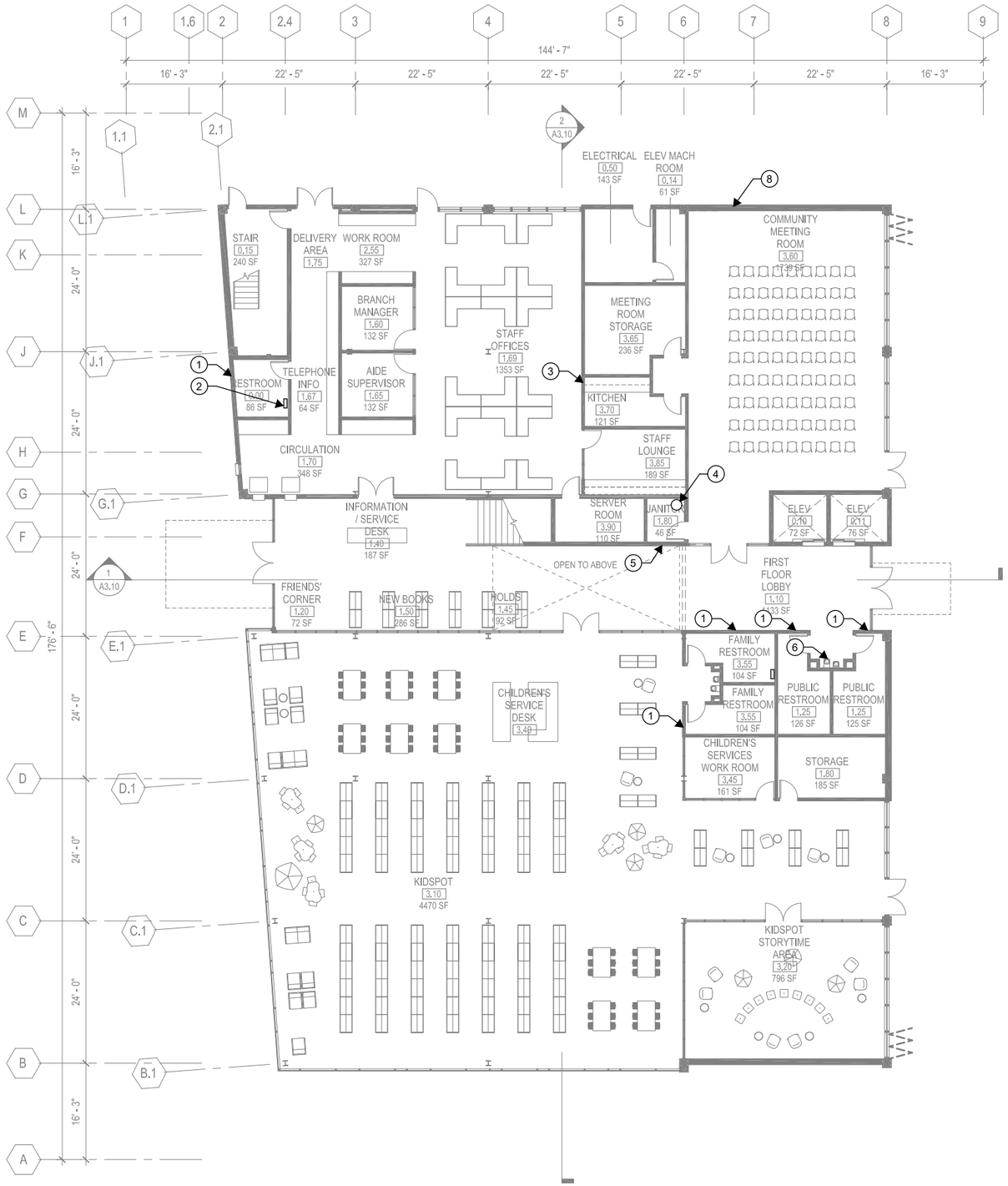
SHEET TITLE
MECHANICAL - LEVEL 2

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
JOB NO.	

SHEET NUMBER
M2.12



1 P2.11 SCOPE PLAN - LEVEL 01
3/32" = 1'-0"

KEY NOTES

1. ROUTE COLD WATER AND SANITARY SEWER PIPING TO NEW RESTROOM FIXTURES
2. PROVIDE POINT OF USE ELECTRIC RESISTANCE WATER HEATER
3. ROUTE COLD WATER AND SANITARY SEWER PIPING TO NEW KITCHEN FIXTURES
4. PROVIDE SUSPENDED 20 GALLON TANK TYPE ELECTRIC RESISTANCE WATER HEATER TO SERVE JANITOR CLOSET AND KITCHEN HOT WATER FIXTURES. ROUTE HOT WATER PIPING FROM TANK TO EACH FIXTURE.
5. ROUTE COLD WATER AND SANITARY SEWER PIPING TO NEW JANITOR CLOSET FIXTURES
6. ROUTE COLD WATER AND SANITARY SEWER PIPING TO NEW DRINKING FOUNTAIN
8. PROVIDE NEW FIRE SPRINKLER PROTECTION SYSTEM THROUGH OUT THE ENTIRE BUILDING.

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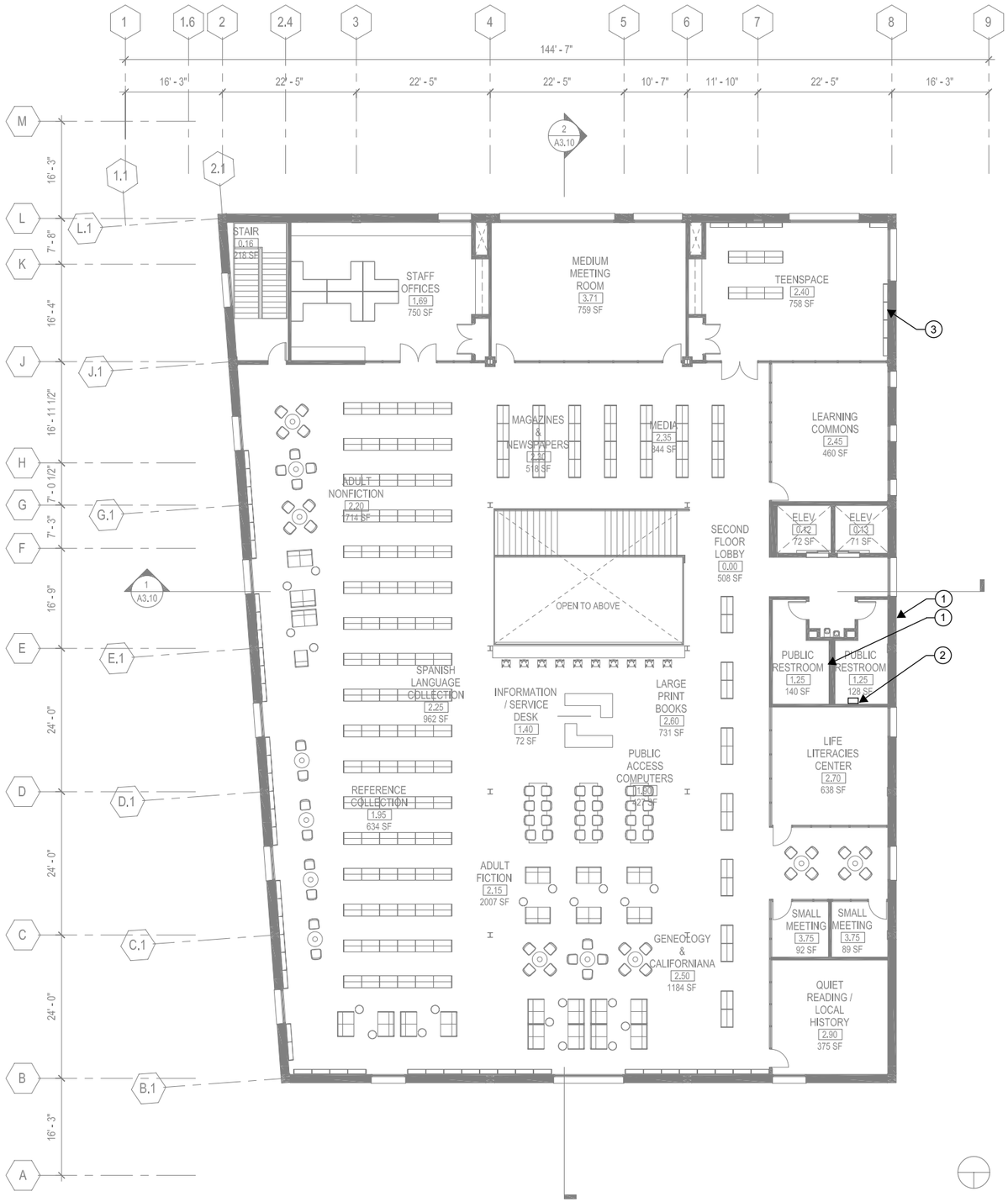
SHEET TITLE
PLUMBING - LEVEL 1

REVISIONS

NO.	DATE	DESCRIPTION

DATE	10/21/2019
SCALE	As indicated
JOB NO.	

SHEET NUMBER
P2.11



P

1/2.12 SCOPE PLAN - LEVEL 02
3/32" = 1'-0"

KEY NOTES

1. ROUTE COLD WATER AND SANITARY SEWER PIPING TO NEW RESTROOM FIXTURES
2. PROVIDE POINT OF USE ELECTRIC RESISTANCE WATER HEATER
3. PROVIDE NEW FIRE SPRINKLER SYSTEM THROUGH OUT THE ENTIRE BUILDING.

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CONCEPT DESIGN - COSTING SET

SHEET TITLE
PLUMBING - LEVEL 2

REVISIONS

NO.	DATE	DESCRIPTION

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SHEET NUMBER
P2.12

SYMBOL LIST (NOT ALL SYMBOLS USED)

LINE TYPES

- EXISTING EQUIPMENT/ RACEWAYS TO REMAIN, (E)
- EXISTING EQUIPMENT/ RACEWAYS TO BE REMOVED, (D)
- NEW EQUIPMENT / RACEWAYS

SINGLE LINE DIAGRAM

- TRANSFORMER
- CIRCUIT BREAKER
- DRAW OUT CIRCUIT BREAKER
- MEDIUM VOLTAGE VACUUM CIRCUIT BREAKER
- MOTOR STARTER WITH OVERCURRENT PROTECTION 3 POLE UNLESS OTHERWISE NOTED
- NON-FUSED DISCONNECT SWITCH, 30 AMP, 3P UNLESS NOTED OTHERWISE.
- FUSED DISCONNECT SWITCH, 3 POLE UNLESS NOTED OTHERWISE.
- CIRCUIT BREAKER ACCESORY, 'S' INDICATES SHUNT TRIP, 'G' INDICATES GROUND FAULT RELAY
- UTILITY METER WITH CT/PT
- KWH SUB METER WITH CT/PT
- MULTIPOINT KWH SUB METER IN SEPARATE ENCLOSURE, CT/PTS AS SHOWN

LIGHTING CONTROLS

- CEILING MOUNTED OCCUPANCY SENSOR
  - P = PASSIVE INFRARED
  - D = DUAL TECHNOLOGY
  - U = ULTRASONIC, 360 DEG RANGE
  - H = ULTRASONIC, HALLWAY PATTERN
- PHOTO ELECTRIC SWITCH
  - D = CONTINUOUS DIMMING PHOTOCELL
  - S = SWITCHED PHOTOCELL
- SWITCH
  - 2 = DOUBLE POLE SWITCH
  - 3 = THREE-WAY SWITCH
  - 4 = FOUR-WAY SWITCH
  - o THRU z (LOWERCASE) = LUMINAIRE CONTROL DESIGNATION
  - M = MANUAL MOTOR STARTER WITH THERMAL OVERLOAD
  - K = KEY OPERATED SWITCH
  - T = INTERVAL TIMER
  - W = WEATHER PROOF SWITCH
  - WL = WET LOCATION
  - V = LOW VOLTAGE SWITCH
  - D = DIMMING SWITCH
- WALL MOUNTED OCCUPANCY SENSOR
  - P = PASSIVE INFRARED
  - D = DUAL TECHNOLOGY WALL MOUNTED
- OCCUPANCY SENSOR/SWITCH (AUTO ON - AUTO OFF)
  - S = PASSIVE INFRARED WITH INTEGRAL "OFF" SWITCH
  - T = DUAL RELAY PASSIVE INFRARED WITH TWO INTEGRAL "OFF" SWITCHES
  - D = PASSIVE INFRARED WITH INTEGRAL DIMMER TO OFF.
- RESIDENTIAL VACANCY SENSOR (MANUAL ON - AUTO OFF)

LUMINAIRES

- RECESSED LUMINAIRE. SEE PLANS FOR DIMENSIONS.
- RECESSED DOWNLIGHT LUMINAIRE.
- SURFACE MOUNTED 2'X4' LUMINAIRE
- SURFACE OR PENDANT MOUNTED 1'X4' LUMINAIRE
- SURFACE OR PENDANT 1'X8' LUMINAIRE
- SURFACE OR PENDANT 6"X8' LUMINAIRE
- SURFACE OR PENDANT STRIP LUMINAIRE
- LINEAR WALL MOUNT LUMINAIRE
- WALL SCONCE
- AREA LUMINAIRE MOUNTED WITH POLE AND CONCRETE BASE
- BOLLARD OR POST TOP LUMINAIRE, SEE LUMINAIRE SCHEDULE
- FLOOD LIGHT
- FLUSH IN GRADE EXTERIOR LUMINAIRE
- SURFACE OR PENDANT DOWNLIGHT
- EMERGENCY LIGHTING, SEE DESCRIPTIONS ABOVE
- EMERGENCY LIGHTING WALL PACK
- LUMINAIRE NOMENCLATURE
  - 'A' = LUMINAIRE TYPE, SEE LUMINAIRE SCHEDULE
  - 1 = CIRCUIT NUMBER
  - a = LOWERCASE LETTER INDICATES MANUAL OR OCCUPANCY SWITCH LEG
  - zA. = INDICATES AUTOMATED DAYLIGHT CONTROL ZONE

DEVICES

FLOOR* WALL CEILING

- SIMPLEX OR SPECIAL RECEPTACLE TYPE, SEE PLANS FOR NEMA TYPE
- DUPLEX RECEPTACLE, 5-20R U.O.N.
- DOUBLE DUPLEX (QUAD) RECEPTACLE, 5-20R U.O.N.
- CONTROLLED DUPLEX RECEPTACLE, 5-20R U.O.N.
- CONTROLLED DOUBLE DUPLEX (QUAD) RECEPTACLE, 5-20R U.O.N.
- *PROVIDE COMBINED POWER/DATA FLOOR BOXES IF SHOWN ON PLANS PT = POKE THRU, FB = FLOOR BOX, PD = PEDESTAL

LTR

- A — ABOVE COUNTER OR AT DEFINED HEIGHT. REFER TO ARCHITECT
- G — GROUND FAULT CIRCUIT INTERRUPTER
- WP — WEATHERPROOF IN-USE COVER WITH GFI RECEPTACLE
- U — RECEPTACLE DEVICE WITH (2) USB PORTS
- S — SPLIT WIRED RECEPTACLE
- Z — DEDICATED CIRCUIT

A-1.

- DEVICE CIRCUITING NOMENCLATURE
  - A = PANEL NAME, IF SHOWN
  - 1. = CIRCUIT NUMBER

FLOOR* WALL CEILING

- 4-IN SQUARE JUNCTION BOX
- PULL BOX, SIZED PER CODE
- POWER AND DATA JUNCTION BOXES WITH WHIPS FOR FURNITURE CONNECTION. *PROVIDE POWER POLE WITH CEILING JUNCTION BOX

FLOOR* WALL** CEILING

- COMBINATION TELEPHONE / DATA OUTLET. PROVIDE 1-1/4"C STUBBED TO ACCESSIBLE CEILING SPACE. CABLING, TERMINATIONS AND JACKS BY OTHERS
  - *PROVIDE COMBINED POWER/DATA FLOOR BOXES IF SHOWN ON PLANS PT = POKE THRU, FB = FLOOR BOX, PD = PEDESTAL
  - ** A = ABOVE COUNTER OR AT DEFINED HEIGHT, REFER TO ARCHITECT
- AV OUTLET
- UL 924 EMERGENCY LIGHTING RELAY

EQUIPMENT

RECESSED SURFACE

- DISCONNECT SWITCH, 30 AMP MINIMUM UNLESS NOTED OTHERWISE.
- FUSED DISCONNECT SWITCH, 30 AMP MINIMUM UNLESS NOTED OTHERWISE.
- COMBINATION DISCONNECT SWITCH MOTOR STARTER
- MOTOR, 5 HP INDICATED.
- TRANSFORMER
- RELAY OR EQUIPMENT CABINET AS INDICATED ON PLANS.
- LIGHTING OR POWER PANEL BOARD.
- FREE STANDING SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD.
- FIRE TREATED PLYWOOD BACKBOARD 3/4"X96" HIGH X LENGTH AS INDICATED.

TAGS

- ELECTRICAL EQUIPMENT DESIGNATION DESIGNED "EQ01"
- SHEET NOTE ON SAME SHEET.
- MECHANICAL EQUIPMENT DESIGNATION "AC-1" INDICATED. A-1,3,5. INDICATES CIRCUIT NUMBER, F40-3 INDICATES FEEDER CODE IF NONE SHOWN REFER TO SINGLE LINE DIAGRAM FOR ELECTRICAL REQUIREMENTS
- EQUIPMENT NAME OR NUMBER
- DETAIL REFERENCE
- LIGHTING CONTROL SEQUENCE OF OPERATION TAG

ABBREVIATIONS

(E)	EXISTING
(D)	DEMOLISH
(R)	RELOCATE
(RL)	NEW LOCATION OF RELOCATED DEVICE
A	AMPERES, AMBER
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AVAILABLE INTERRUPTING CAPACITY
C	CONDUIT, CLOSE, CONTROL
CA	CABLE
CAT	CATEGORY
CU	COPPER
DIA	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DN	DOWN
DWG	DRAWING
EA	EACH
FF	FINISH FLOOR
FT	FOOT, FEET G,
GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
IG	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LV	LOW VOLTAGE
MCA	MINIMUM CIRCUIT AMPS
MISC	MISCELLANEOUS
MOCP	MAXIMUM OVERCURRENT PROTECTION
NEC	NATIONAL ELECTRIC CODE
NTS	NOT TO SCALE
PH	PHASE
QTY	QUANTITY
RM	ROOM
STD	STANDARD
TBD	TO BE DETERMINED
TGB	TELECOMMUNICATIONS GROUNDING BUS BAR
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
V	VOLTS, VOLTAGE
WP	WEATHERPROOF

GENERAL ELECTRICAL NOTES

A. SCHEDULE WORK IN EXISTING BUILDINGS WITH THE OWNER. MINIMIZE DISRUPTION OF NORMAL OPERATIONS.

B. VISIT THE SITE BEFORE SUBMITTING A BID TO OBSERVE EXISTING CONDITIONS.

C. DO NOT INSTALL ELECTRICAL BOXES IN RATED WALLS CLOSER THAN 2'-0" TO EACH OTHER. PROVIDE "PADDY" PADS OR EQUIVALENT ON EACH BOX INSTALLED.

D. PLANS DO NOT GENERALLY INDICATE WIRE COUNTS. FOR EACH 20 AMP, 120 VOLT OR 277 VOLT CIRCUIT, PROVIDE (1) #12 PHASE CONDUCTOR, (1) #12 NEUTRAL CONDUCTOR AND (1) #12 GROUNDING CONDUCTOR. WHERE MULTIPLE CIRCUITS ARE SHOWN, UP TO THREE SEPARATE AND DIFFERENTLY PHASED CIRCUITS (A, B AND C) PROVIDE DEDICATED NEUTRALS UNLESS OTHERWISE NOTED AND A SINGLE GROUNDING CONDUCTOR. WHERE DRAWINGS INDICATE WIRE SIZES/COUNTS, PROVIDE SUCH CIRCUIT, NEUTRAL AND GROUNDING CONDUCTORS FOR THE PORTION OF THE CIRCUIT WHERE SUCH CONDUCTORS SHARE A COMMON CONDUIT. GROUND WIRE INSULATION: GREEN. ALL WORK COMPLY WITH CEC 300.17.

E. IN ALL CASES AND FOR ALL SYSTEMS AND COMPONENTS, USE ONLY EQUIPMENT IN ACCORDANCE WITH ITS LISTING OR LABELING. [CEC 110.3(B)]

F. USE ONLY EQUIPMENT MARKED (LISTED/LABELED) AS SUITABLE FOR INSTALLATION AND WITH HIGHER TEMPERATURE RATED CONDUCTORS AT THE AMPACITY OF THE HIGHER RATED CONDUCTORS. REFER TO THE UL ELECTRICAL CONSTRUCTION MATERIAL DIRECTORY FOR CIRCUIT BREAKERS, SWITCHES, PANELBOARDS, SWITCHBOARDS, ETC. [CEC 110.14(C)]

G. PROVIDE SUFFICIENT ACCESS AND WORKING CLEARANCE ABOUT THE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(A).

H. PROVIDE ACCESS AND ENTRANCES TO AND EGRESS FROM WORKING SPACE ABOUT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(C).

I. INSTALL ONLY RECEPTACLE OUTLETS WITH GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION IN LOCATIONS SPECIFIED AS BATHROOMS, COMMERCIAL AND INSTITUTIONAL KITCHENS, ROOFTOPS AND OUTDOOR PUBLIC SPACES. SEE EXCEPTIONS. [CEC 210.8(B)]

J. PROVIDE OUTLET DEVICE(S) INSTALLED ON A BRANCH CIRCUIT WITH A RATING IN ACCORDANCE WITH CEC 210.21(B) (SEE EXCEPTIONS, AND REFER TO 210.21(B) TABLE(S)).

K. DO NOT INSTALL CONDUCTORS OTHER THAN SERVICE CONDUCTORS IN THE SAME SERVICE RACEWAY OR SERVICE CABLE WITH OTHER CONDUCTORS. SEE EXCEPTIONS. [CEC 230.7]

L. PROVIDE GROUND FAULT PROTECTION OF EQUIPMENT IN ACCORDANCE WITH CEC 230.95 AND 240.13 (SEE EXCEPTIONS).

M. FOR PVC CONDUIT, PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR RUN WITH THE FEEDER CONDUCTORS AND SIZE PER CEC TABLE 250.122.

N. FOR PERMANENTLY CONNECTED APPLIANCES RATED NOT OVER 300 VOLTAMPERES OR 1/8 HORSEPOWER, THE BRANCH-CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS. [CEC 422.31]

O. KEEP LIFE SAFETY BRANCH WIRING ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND SHALL NOT ENTER THE SAME RACEWAYS, BOXES, OR CABINETS WITH EACH OTHER OR OTHER WIRING. [CEC 517.41(D) (SEE EXCEPTIONS)]

CC. PROVIDE DESIGN BUILD FOR NEW FIRE ALARM SYSTEM. SUBMIT COMPLETE DRAWINGS TO THE FIRE MARSHALL FOR APPROVAL AND ASSUME FULL RESPONSIBILITY OF THE SYSTEM, DEVICE QUANTITY AND LOCATION, WIRING, PROGRAMMING AND CONTROL PANELS. COORDINATE FINAL DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

CODES & STANDARDS

1. 2019 CALIFORNIA BUILDING CODE
2. 2019 CALIFORNIA ELECTRICAL CODE
3. 2019 CALIFORNIA MECHANICAL CODE
4. 2019 CALIFORNIA PLUMBING CODE
5. 2019 CALIFORNIA ENERGY CODE (TITLE 24)
6. 2019 CALIFORNIA FIRE CODE
7. 2019 CALIFORNIA GREEN CODE

DRAWING INDEX

E0.01	ELECTRICAL COVER SHEET
E1.01	SITE PLAN - ELECTRICAL
E2.01	FIRST FLOOR PLAN - LIGHTING
E2.02	SECOND FLOOR PLAN - LIGHTING
E3.01	FIRST FLOOR PLAN - POWER & SIGNAL
E3.02	SECOND FLOOR PLAN - POWER & SIGNAL

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CONCEPT DESIGN - COSTING SET

SHEET TITLE
ELECTRICAL COVER SHEET

REVISIONS

NO.	DATE	DESCRIPTION
	10/18/19	FOR COST ESTIMATOR

DATE	10/21/2019
SCALE	AS NOTED
JOB NO.	

SHEET NUMBER
E0.01

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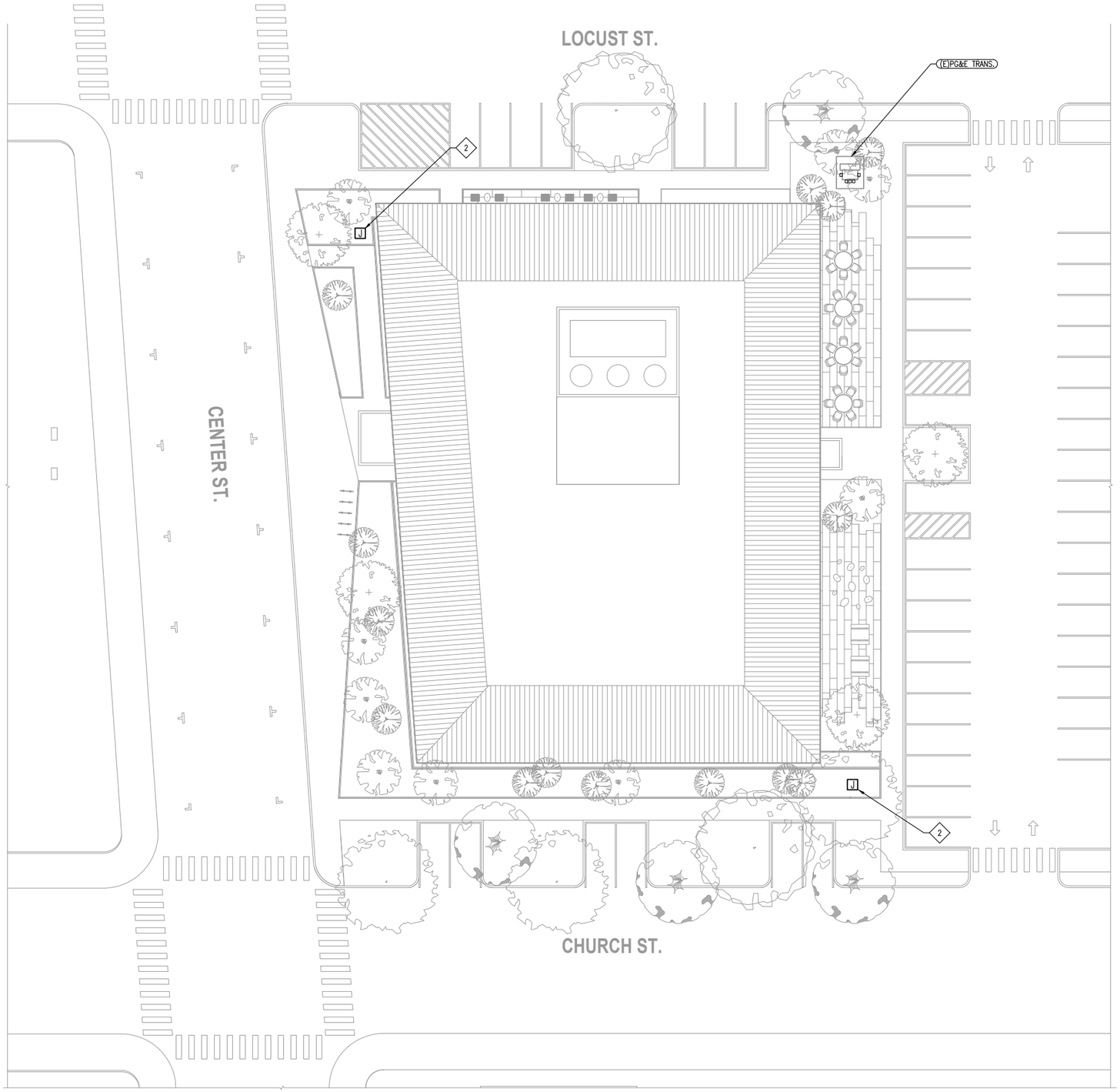

1 SITE PLAN - ELECTRICAL
SCALE: 1/16" = 1'-0"

GENERAL SHEET NOTES

A. INSTALLATION OF PG&E SERVICE CONDUITS, GROUNDING, ETC. SHALL BE VERIFIED AND COORDINATED WITH PG&E RULES, REGULATIONS, AND STANDARDS. THE PROPOSED PG&E SERVICE FEEDER ROUTING AND SIZE ARE SUBJECT TO PG&E ENGINEERING, REVIEW, AND APPROVAL. AT THE TIME OF ISSUANCE OF THESE DOCUMENTS, PG&E ENGINEERING HAS NOT BEEN COMPLETED. CONTRACTOR SHALL COORDINATE AND VERIFY REQUIREMENTS FOR THIS PROJECT WITH PG&E PRIOR TO COMMENCEMENT OF WORK.

B. EXISTING UNDERGROUND UTILITIES AND STRUCTURES ARE KNOWN TO EXIST ON THE PROJECT SITE. CONTRACTOR TO MAKE USE OF ALL CONSTRUCTION DOCUMENTS TO ASSIST IN LOCATING THE UNDERGROUND UTILITIES AND STRUCTURES. NO REPRESENTATION AS TO ACCURACY OR COMPLETENESS OF THE LOCATION OF THE UNDERGROUND UTILITIES OR STRUCTURE EXISTS.

C. CONTRACTOR TO EXERCISE PRECAUTIONARY MEANS INCLUDING HAND DIGGING OR VACUUM EXCAVATION TO PROTECT THE EXISTING UTILITIES AND STRUCTURES. WHERE EXACT LOCATIONS OF UTILITIES AND STRUCTURE CAN NOT BE DETERMINED, HAND OR VACUUM EXCAVATION MAY BE REQUIRED.

D. COORDINATE CONDUIT TRENCHING WITH OTHER DISCIPLINES TO AVOID CONFLICT. LOCATE PULL BOXES IN PLANTERS WHEREVER POSSIBLE. COORDINATE EXACT PULL BOX LOCATIONS WITH LANDSCAPING. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

E. PROVIDE TRAFFIC LID WHERE REQUIRED FOR PULL BOXES (CHRISTY BOXES). PULL BOX SIZES SHOWN FOR STRAIGHT PULL APPLICATION ONLY. SIZE PER CEC ARTICLE 314.

F. COORDINATE EXACT ROUTING OF UNDERGROUND INFRASTRUCTURE WITH CIVIL DRAWINGS. PROVIDE ADDITIONAL SPLICE/PULL BOXES AS REQUIRED IF CONDUIT BENDS EXCEED THREE 90 DEGREE BENDS (OR 270 DEGREES TOTAL).

SHEET NOTES ◇#

1. EXISTING PG&E TRANSFORMER TO REMAIN. SECONDARY SERVICE CONDUITS TO BE INTERCEPTED AND EXTENDED TO NEW SWITCHBOARD 'MSB'. COORDINATE SCOPE OF WORK WITH PG&E.
2. 120V POWER FOR IRRIGATION CONTROOLER
3.

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SHEET TITLE
SITE PLAN - ELECTRICAL

REVISIONS

NO.	DATE	DESCRIPTION
	10/18/19	FOR COST ESTIMATOR

DATE	10/21/2019
SCALE	AS NOTED
JOB NO.	

SHEET NUMBER
E1.01

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GENERAL SHEET NOTES

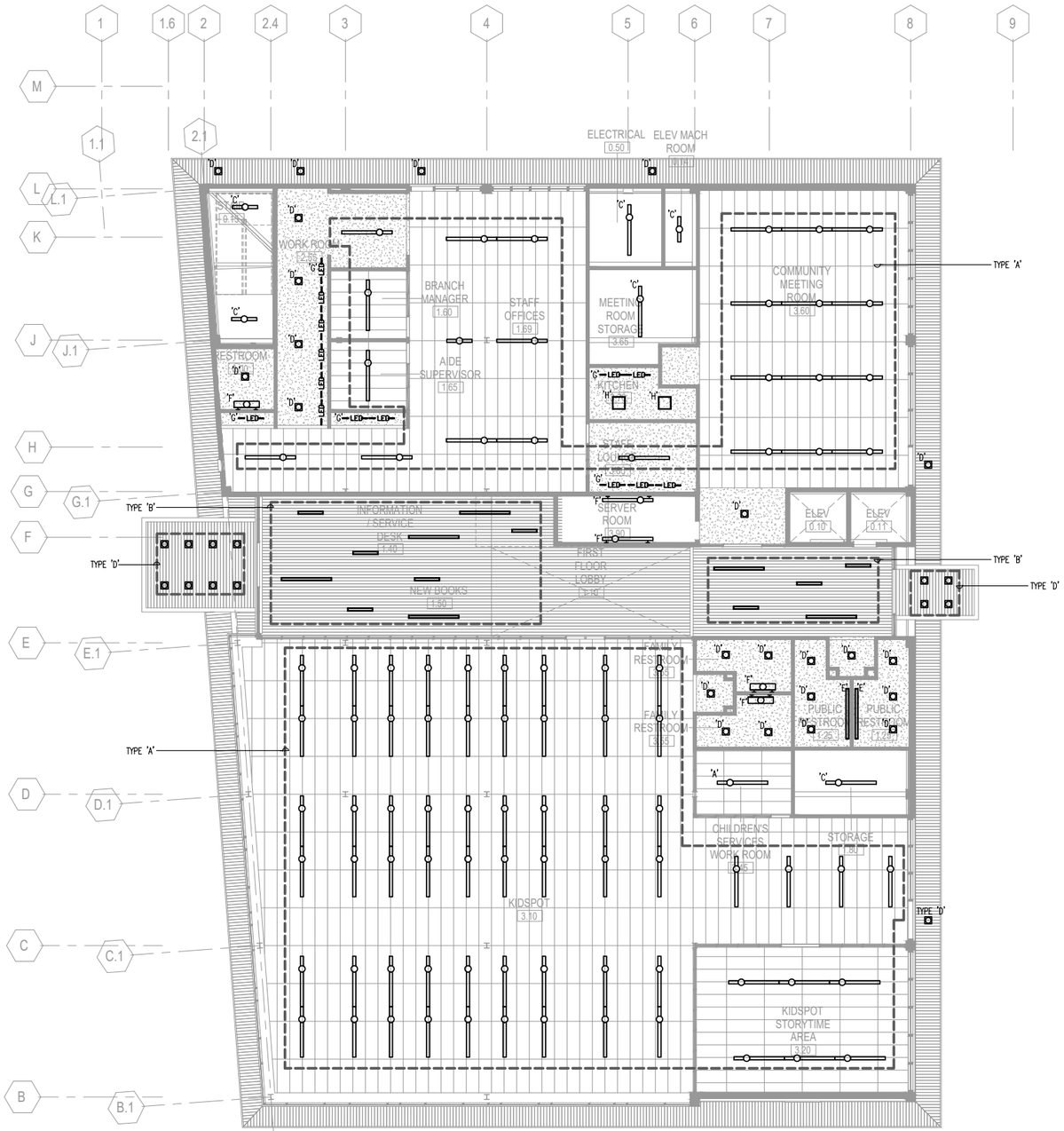
A. LIGHTING CONTROL BASIS OF DESIGN SHALL BE WATTSTOPPER DLM. PROVIDE A COMPLETE SYSTEM, INCLUDING RELAY DEVICES, CONTROLLERS, WIRING, SENSORS, WALLSTATIONS, LABOR TO INSTALL, AND APPURTENANCES TO MEET LIGHTING CONTROL SEQUENCE OF OPERATION.

B. CONCEAL CONDUITS AND RACEWAYS, COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN.

C. PROVIDE 3.0KW INVERTER, MEYERS ILLUMINATOR OR APPROVED, FOR STANDBY POWER TO EGRESS LIGHTING AND EXIT SIGNS FOR FIRST FLOOR.

D. LIGHTING BRANCH CIRCUIT CRITERIA SHALL BE 120V MAXIMUM 1000VA PER 20A CIRCUIT.

E. NEW AND EXISTING EXTERIOR LIGHTING SHALL BE CONTROLLED BY NEW WATTSTOPPER LP8 LIGHTING CONTROL PANEL WITH PHOTOCELL AND ASTRONOMICAL TIME CLOCK FUNCTION.



1 FIRST FLOOR PLAN - LIGHTING

SCALE: 3/32" = 1'-0"

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SHEET TITLE
FIRST FLOOR PLAN - LIGHTING

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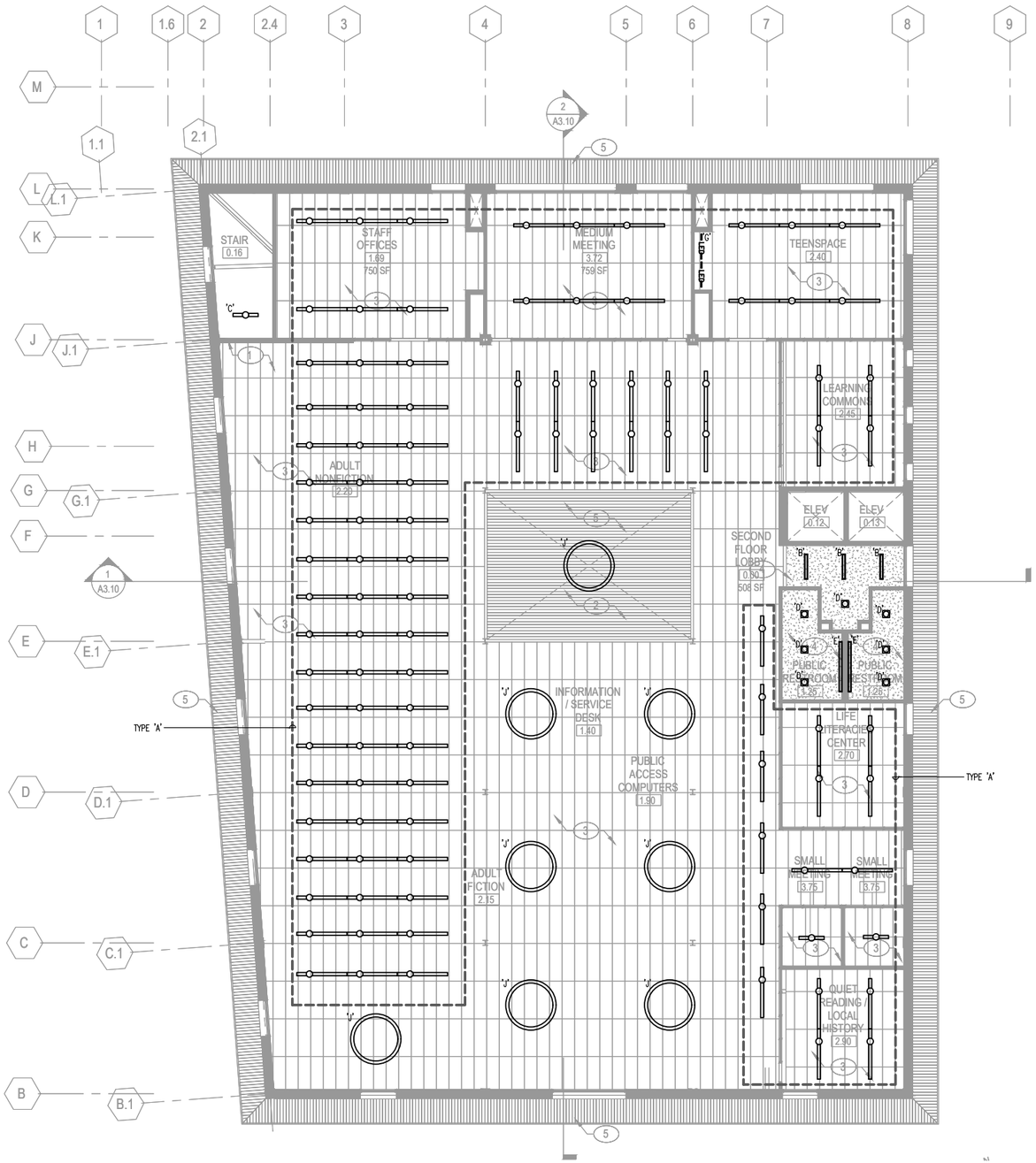

1 SECOND FLOOR PLAN - LIGHTING

SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

A. LIGHTING CONTROL BASIS OF DESIGN SHALL BE WATTSTOPPER DLM. PROVIDE A COMPLETE SYSTEM, INCLUDING RELAY DEVICES, CONTROLLERS, WIRING, SENSORS, WALLSTATIONS, LABOR TO INSTALL, AND APPURTENANCES TO MEET LIGHTING CONTROL SEQUENCE OF OPERATION.

B. CONCEAL CONDUITS AND RACEWAYS, COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN.

C. PROVIDE 3.0KW INVERTER, MEYERS ILLUMINATOR OR APPROVED, FOR STANDBY POWER TO EGRESS LIGHTING AND EXIT SIGNS FOR SECOND FLOOR

D. LIGHTING BRANCH CIRCUIT CRITERIA SHALL BE 120V MAXIMUM 1000VA PER 20A CIRCUIT.

E. NEW AND EXISTING EXTERIOR LIGHTING SHALL BE CONTROLLED BY NEW WATTSTOPPER LP8 LIGHTING CONTROL PANEL WITH PHOTOCELL AND ASTRONOMICAL TIME CLOCK FUNCTION.

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CONCEPT DESIGN - COSTING SET

SHEET TITLE
SECOND FLOOR PLAN - LIGHTING

REVISIONS

NO.	DATE	DESCRIPTION
	10/18/19	FOR COST ESTIMATOR

DATE	10/21/2019
SCALE	AS NOTED
JOB NO.	

SHEET NUMBER
E2.02

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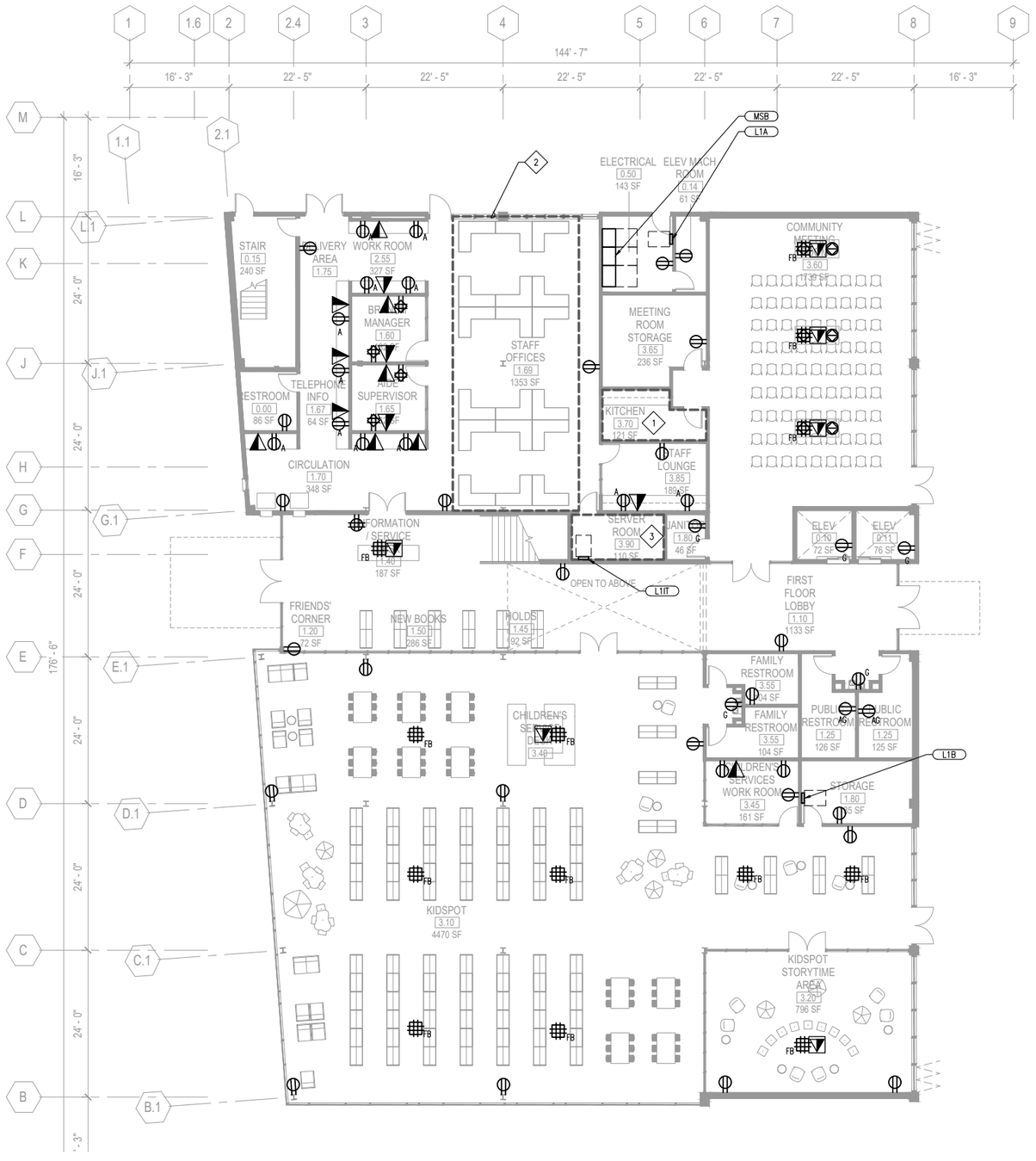

1 FIRST FLOOR PLAN - POWER & SIGNAL

SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

A. IN FINSIHED AND PUBLIC AREAS RUN ALL CONDUITS CONCEALED U.O.N. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT, REER TO ARCHITECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.

B. REFER TO SINGLE LINE DIAGRAMS, EQUIPMENT SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION.

C. PROVIDE 120V–24V TRANSFORMERS AS REQUIRED TO POWER VAV POWER SUPPLIES, BMS CONTROL PANELS, RESTROOM PLUMBING CONTROLS, ACCESS CONTROL SYSTEMS, AND FIRE SMOKE DAMPERS. PROVIDE CIRCUIT FROM NEAREST PANEL, U.O.N. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.

D. SIZE FUSES FOR ALL MECHANICAL EQUIPMENT PER APPROVED MANUFACTURERS SHOP DRAWINGS.

E. MAXIMUM 5 DUPLEX OUTLETS PER 20A BRANCH CIRCUIT, UNLESS OTHERWISE NOTED AS DEDICATED

SHEET NOTES

1. (3) DEDICATED CIRCUITS AND OUTLETS FOR REFRIGERATOR AND COUNTER TOP RECEPTACLES
2. (12) 20A CIRCUITS FOR ELECTRIFIED FURNITURE SYSTEM AND 1 DATA DROP PER WORKSTATION
3. 30 POLE PANEL, PROVIDE CONNECTIONS TO UPS SYSTEM AND (20) 20A CIRCUITS FOR IT EQUIPMENT

JAYSON ARCHITECTURE
50 29th Street
San Francisco CA 94110
jaysonarch.com
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RIJA
1620 MONTGOMERY ST. #250
SAN FRANCISCO, CA 94111
www.rijainc.com
RIJA Project #: 2019041

OWNER

CITY OF SANTA CRUZ

PROJECT

SANTA CRUZ MAIN LIBRARY
224 CHURCH ST
SANTA CRUZ, CA 95060

DRAFT! NOT FOR CONSTRUCTION

CONCEPT DESIGN - COSTING SET

SHEET TITLE
FIRST FLOOR PLAN - POWER & SIGNAL

REVISIONS

NO.	DATE	DESCRIPTION
	10/18/19	FOR COST ESTIMATOR

DATE	10/21/2019
SCALE	AS NOTED
JOB NO.	

SHEET NUMBER
E3.01

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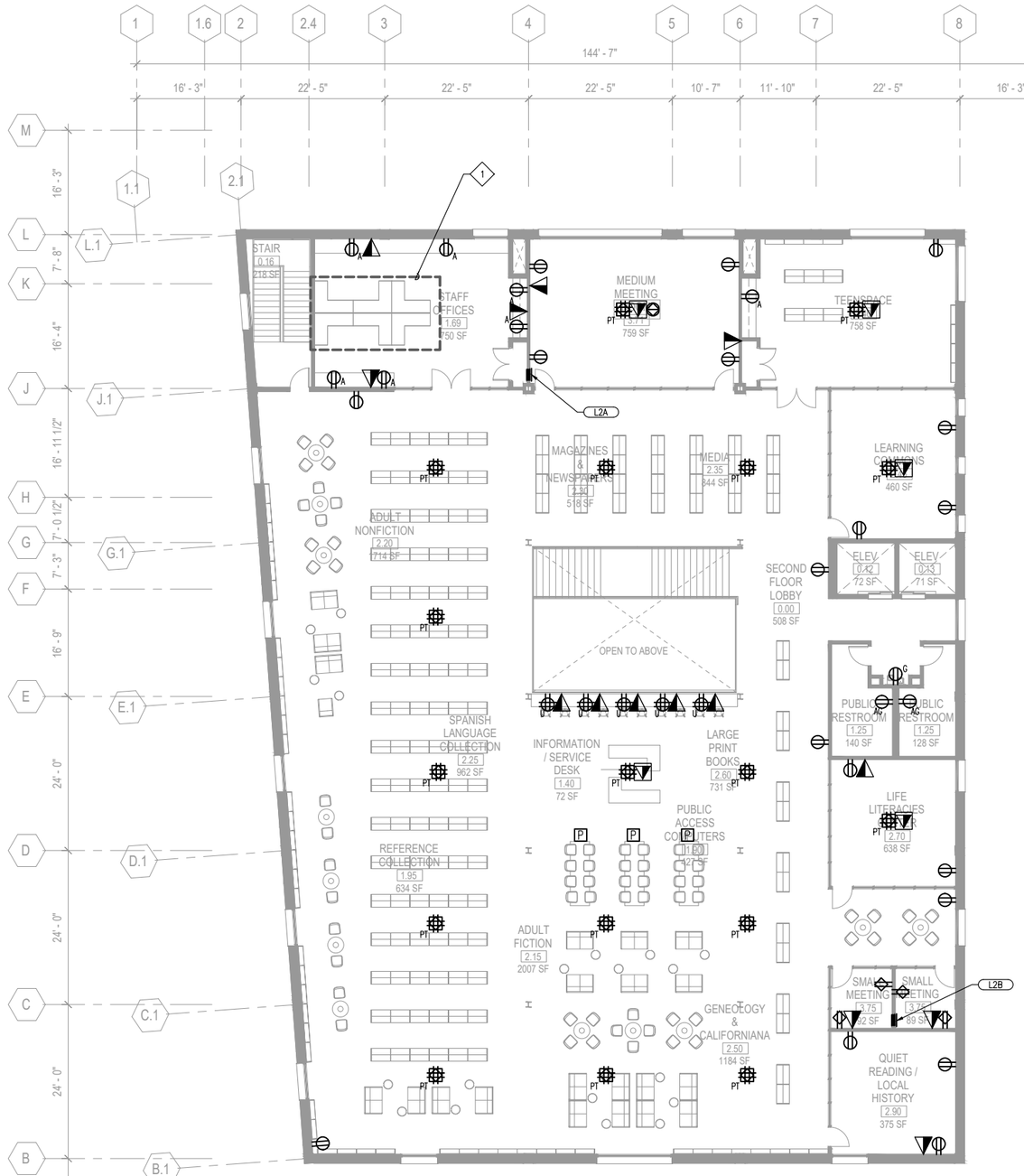

1 SECOND FLOOR PLAN - LIGHTING

SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

A. IN FINISHED AND PUBLIC AREAS RUN ALL CONDUITS CONCEALED U.O.N. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT, REER TO ARCHITECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.

B. REFER TO SINGLE LINE DIAGRAMS, EQUIPMENT SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION.

C. PROVIDE 120V–24V TRANSFORMERS AS REQUIRED TO POWER VAV POWER SUPPLIES, BMS CONTROL PANELS, RESTROOM PLUMBING CONTROLS, ACCESS CONTROL SYSTEMS, AND FIRE SMOKE DAMPERS. PROVIDE CIRCUIT FROM NEAREST PANEL, U.O.N. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.

D. SIZE FUSES FOR ALL MECHANICAL EQUIPMENT PER APPROVED MANUFACTURERS SHOP DRAWINGS.

E. MAXIMUM 5 DUPLEX OUTLETS PER 20A BRANCH CIRCUIT, UNLESS OTHERWISE NOTED AS DEDICATED

SHEET NOTES

1. (3) 20A CIRCUITS FOR ELECTRIFIED FURNITURE SYSTEM AND 1 DATA DROP PER WORKSTATION

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OWNER

CITY OF SANTA CRUZ

PROJECT

SANTA CRUZ MAIN LIBRARY
224 CHURCH ST
SANTA CRUZ, CA 95060

DRAFT! NOT FOR CONSTRUCTION

CONCEPT DESIGN - COSTING SET

SHEET TITLE
SECOND FLOOR PLAN - POWER & SIGNAL

REVISIONS

NO.	DATE	DESCRIPTION
	10/18/19	FOR COST ESTIMATOR

DATE	10/21/2019
SCALE	AS NOTED
JOB NO.	

SHEET NUMBER
E3.02

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BUDGET V.

BUDGET SUMMARY

Jayson Architecture worked in direct coordination with the City's cost estimator, Mack5, who prepared a project cost model and a construction cost estimate. The project cost model, working backwards from a $27 million project budget, established an $18 million target for construction costs once soft costs such as design, engineering, management, permit fees, furniture, contingencies, and other costs were taken into consideration.

The design team prepared a series of narratives and drawings establishing the scope and quality of the proposed renovation design (Sections III and IV of this report). Scope and quality were calibrated to the available budget, requiring a very restrained design approach. The design is divided into a base project, defined by bare minimum code compliance and functionality and an overall low level of quality, and alternates which each add layers of functionality, quality, and correspondingly, cost. The base project is estimated at $18,153,000, which is slightly over the target of $18,000,000 for construction cost, but within a reasonable range given the early stage of design development.

There are fourteen alternates, divided into three categories. While all the alternates are preferred by the City and Library, they are organized by priority. The inclusion of these alternates increases the quality and functionality of the proposed renovation, however still only to a low to medium level when compared to similar recently constructed main libraries in the Bay Area.

The first category of alternates (#1-8) are deemed as "High Priority" by both the City and Library. The construction cost of this group of alternates is $3,896,000. Alternate #1 will provide a 2nd elevator, useful for day to day operations and important as a backup in the event of repair or maintenance. Alternate #2 replaces single occupancy restrooms in the 1st and 2nd floor lobbies with multi-occupancy restrooms. The single occupancy restrooms, while adequate for code compliance, are problematic from a security and capacity standpoint. Alternate #3 replaces exposed structure with acoustic ceilings throughout the building. The acoustic challenges created by exposed ceilings are significant, and ceilings are considered standard for a contemporary library. Alternate #4 replaces the perimeter concrete tile roof with a new standing seam roof, gutters, and rainwater leaders. While the perimeter roof appears to be in minimally acceptable condition, this would be a prudent improvement from a long-term maintenance standpoint. Alternate # 5 replaces mulch around the perimeter of the building with landscaping and planting. Alternate #6 provides a patio for the Staff, a public patio for the Community Room, and garden for the Children's Area, each expanding programmatic capacity. Alternate #7 replaces the aging 2nd floor windows with new operable code compliant windows, and also provides a cement plaster finish at the 2nd floor exterior walls. Alternate #8, the last item in the "High Priority" category, will create a raised clerestory at the center of the building above the main stair, bringing light into what would otherwise be a dark 2nd floor due to the small existing window openings at the perimeter.

The second category of alternates (#9-12) are improvements to the building that would be considered typical for a new library facility. The construction cost of this group of alternates is $388,000. Alternate #9 provides a natural wood finish at the lobby walls, adding warmth and quality from the bare minimum gypsum wall board provided in the base design. Alternate #10 provides a large wall graphic, adding color to the interiors. Alternate #11 provides large sliding glass walls at the Community Room patio and Children's Area garden. These would be a valuable amenity on mild days and evenings and would allow for expandable program space. Alternate #12 provides motorized window shades in lieu of manual, which in a library of this size is a much more functional approach to daylight & glare management.

The last category of alternates (#13-14) are improvements to the site that address access compliance, pedestrian and automobile circulation, and parking. The construction cost of this group of alternates is $656,000. Alternate #13 replaces the existing curbs, gutters, sidewalks, and street parking. This alternate will correct access compliance issues at sidewalks that are a result of deterioration, and also will provide additional street parking. Alternate #14 combines the two city parking lots located to the east of the library, increasing the number of parking spaces and providing better traffic flow between Church and Locust Streets.

The total combined construction cost of the list of fourteen alternates is $4,941,000. Mack5 prepared an additional Cost Model including the alternates in the construction cost of the project. With soft costs factored in, the total project budget increases to $34,295,260 in this scenario.

COST MODEL
BASE PROJECT

November 13, 2019 | Santa Cruz Library Renovation

mack5

Cost Model Manager - Project Cost Report

SUMMARY	Estimated Budget 16-Sep-19	Anticipated Cost (AC) $ / GSF	Comments
Land Acquisition	$0	$0	Not Applicable
Entitlements	$50,000	$2	Allowance for Neg Dec.
Design, Planning and Management	$4,047,375	$135	Architect, Engineer, PM/CM, Owner direct consultants
Construction and Related Costs	$20,223,500	$674	Construction, Permit, Utilities, Inspections, Change Order Contingency
Telephone and Data Systems	$184,000	$6	
Furnishings, Fixtures and Equipment	$1,177,000	$39	
Audio Visual and Security	$335,500	$11	
Project Contingency	$1,000,000	$33	Lumpsum allowance
TOTAL PROJECTED PROJECT BUDGET	**$27,017,375**	**$901**	

* Scope not included:
- Owner costs such as legal, financing, internal staff costs etc
- Temporary facilities & build out
- Desk tops, lap tops, phones etc

November 13, 2019 | Santa Cruz Library Renovation

mack5

Cost Model Manager - Project Cost Report

DESIGN, PLANNING & MANAGEMENT	Estimated Budget 16-Sep-19	Anticipated Cost (AC) $ / GSF	Comments
Design Professionals			
Architect & Engineers	2,700,000	90.00	Allowance @ 15% of building & site development cost
Structural engineer		-	
Mechanical, Electrical, Plumbing		-	
Fire Life Safety		-	
Lighting Designer		-	
Hardware		-	
AV Design		-	
Civil Engineer		-	
Landscape		-	
Acoustical Engineer		-	
Elevator		-	
Security / Data/IT		-	
Food Service		-	
Waterproofing		-	
Spec writer		-	
FF&E		-	
Signage/Way Finding		-	
Cost Estimator		-	
Reimbursables Design Team	135,000	4.50	5% of A&E fees
Project / Construction Management	900,000	30.00	Allowance @ 5% of building and site development cost
Owner Direct Consultants			
Geotech	20,000	0.67	
Topo and Alta surveys	10,000	0.33	
Allow for Additional Services	282,375	9.41	Allowance @ 7.5% of above costs
Total - Design, Planning & Management	**4,047,375**	**$ 135**	

Cost Model Manager - Project Cost Report

CONSTRUCTION COSTS and RELATED COSTS	Estimated Budget 16-Sep-19	Anticipated Cost (AC) $ / GSF	Comments
Building & Site Development	18,000,000	600.00	Including demolition and abatement
Related Costs of Construction			
Hazmat abatement	0	-	Included in building and site development cost
Contractor Labor & Performance Bond	0	-	Included in building and site development cost
SWPPP	0	-	Not required
Fees and Permits		-	
City fees and permits	450,000	15.00	Allowance @ 2.5% of building and site development cost
Planning			Included above
Engineering			Included above
Building			Included above
Fire			Included above
Encroachment Permit		-	Included above
Sanitary Sewer	35,000	1.17	
Env. Health Plan Review / Approval	3,500	0.12	Allowance if needed
Utility Fees	250,000	8.33	Allowance for upgrades
Fire Service Upgrade	0	-	
Water Meter Upgrade	0	-	
Electrical Service Upgrade	0	-	
Cable/Telecommunications	0	-	
Insurance - Builder's Risk	0	-	Not included
Testing & Inspections	135,000	4.50	Allowance @ 0.75% of cost building and site development cost
Change Order Contingency	1,350,000	45.00	Allowance @ 7.5% of cost building and site development cost
Total - Construction Costs	**20,223,500**	**674**	

November 13, 2019 | Santa Cruz Library Renovation

Cost Model Manager - Project Cost Report

TELEPHONE and DATA SYSTEMS	Estimated Budget 16-Sep-19	Anticipated Cost (AC) $ / GSF	Comments
Cabling	0	-	Included in building and site development cost
Networks	50,000	1.67	Allowance
Desktop/laptop computers	0	-	Not included
Server	75,000	2.50	Allowance
Telecom, primary & ancillary systems	35,000	1.17	Allowance
Allow for Additional Scope	24,000	0.80	15% of above costs
Total - Telephone and Data Systems	**184,000**	**6**	

FURNISHINGS, FIXTURES & EQUIPMENT	Estimated Budget 16-Sep-19	Anticipated Cost (AC) $ / GSF	Comments
Furnishings	1,050,000	35.00	Allowance @ $35/sf
Owner Supplied Breakroom Equipment	20,000	0.67	Lumpsum allowance
Allow for Additional Scope	107,000	3.57	10% of above costs
Total - Furnishings, Fixtures and Equipment	**1,177,000**	**39**	

AUDIO VISUAL and SECURITY	Estimated Budget 16-Sep-19	Anticipated Cost (AC) $ / GSF	Comments
Public announcement system	30,000	1.00	
Audio Visual Systems	200,000	6.67	
Sound Equipment	0	-	
Assisted Listening Devices	0	-	
Security System - CCTV, Card Keys etc.	75,000	2.50	
Allow for Additional Scope	30,500	1.02	10% of above costs
Total - Audio Visual and Security	**335,500**	**11**	

COST MODEL
BASE + ALTERNATES

November 18, 2019 | Santa Cruz Library Renovation

mack5

Cost Model Manager - Project Cost Report (with alternates)

SUMMARY	Estimated Budget 18-Nov-19	Anticipated Cost (AC) $ / GSF	Comments
Land Acquisition	$0	$0	Not Applicable
Entitlements	$50,000	$2	Allowance for Neg Dec.
Design, Planning and Management	$5,183,655	$173	Architect, Engineer, PM/CM, Owner direct consultants
Construction and Related Costs	$25,865,105	$862	Construction, Permit, Utilities, Inspections, Change Order Contingency
Telephone and Data Systems	$184,000	$6	
Furnishings, Fixtures and Equipment	$1,177,000	$39	
Audio Visual and Security	$335,500	$11	
Project Contingency	$1,500,000	$50	Lumpsum allowance
TOTAL PROJECTED PROJECT BUDGET	**$34,295,260**	**$1,143**	

* Scope not included:
- Owner costs such as legal, financing, internal staff costs etc
- Temporary facilities & build out
- Desk tops, lap tops, phones etc

November 18, 2019 | Santa Cruz Library Renovation

mack5

Cost Model Manager - Project Cost Report (with alternates)

DESIGN, PLANNING & MANAGEMENT	Estimated Budget 18-Nov-19	Anticipated Cost (AC) $ / GSF	Comments
Design Professionals			
Architect & Engineers	3,464,100	115.47	Allowance @ 15% of Total Construction Cost
Structural engineer		-	
Mechanical, Electrical, Plumbing		-	
Fire Life Safety		-	
Lighting Designer		-	
Hardware		-	
AV Design		-	
Civil Engineer		-	
Landscape		-	
Acoustical Engineer		-	
Elevator		-	
Security / Data/IT		-	
Food Service		-	
Waterproofing		-	
Spec writer		-	
FF&E		-	
Signage/Way Finding		-	
Cost Estimator		-	
Reimbursables Design Team	173,205	5.77	5% of A&E fees
Project / Construction Management	1,154,700	38.49	Allowance @ 5% of Total Construction Cost
Owner Direct Consultants			
Geotech	20,000	0.67	
Topo and Alta surveys	10,000	0.33	
Allow for Additional Services	361,650	12.06	Allowance @ 7.5% of above costs
Total - Design, Planning & Management	**5,183,655**	**$ 173**	

Cost Model Manager - Project Cost Report (with alternates)

CONSTRUCTION COSTS and RELATED COSTS	Estimated Budget 18-Nov-19	Anticipated Cost (AC) $ / GSF	Comments
Building & Site Development	18,153,000	605.10	Including demolition and abatement, per mack5 estimate dated 11/13/19
Total cost of all alternates	4,941,000	164.70	per mack5 estimate dated 11/13/19
Total Construction Cost	23,094,000	769.80	
Related Costs of Construction			
Hazmat abatement	0	-	Included in building and site development cost
Contractor Labor & Performance Bond	0	-	Included in building and site development cost
SWPPP	0	-	Not required
Fees and Permits		-	
City fees and permits	577,350	19.25	Allowance @ 2.5% of building and site development cost
Planning			Included above
Engineering			Included above
Building			Included above
Fire			Included above
Encroachment Permit		-	Included above
Sanitary Sewer	35,000	1.17	
Env. Health Plan Review / Approval	3,500	0.12	Allowance if needed
Utility Fees	250,000	8.33	Allowance for upgrades
Fire Service Upgrade	0	-	
Water Meter Upgrade	0	-	
Electrical Service Upgrade	0	-	
Cable/Telecommunications	0	-	
Insurance - Builder's Risk	0	-	Not included
Testing & Inspections	173,205	5.77	Allowance @ 0.75% of cost building and site development cost
Change Order Contingency	1,732,050	57.74	Allowance @ 7.5% of cost building and site development cost
Total - Construction Costs	**25,865,105**	**1,632**	

November 18, 2019 | Santa Cruz Library Renovation | mack5

Cost Model Manager - Project Cost Report (with alternates)

TELEPHONE and DATA SYSTEMS	Estimated Budget 18-Nov-19	Anticipated Cost (AC) $ / GSF	Comments
Cabling	0	-	Included in building and site development cost
Networks	50,000	1.67	Allowance
Desktop/laptop computers	0	-	Not included
Server	75,000	2.50	Allowance
Telecom, primary & ancillary systems	35,000	1.17	Allowance
Allow for Additional Scope	24,000	0.80	15% of above costs
Total - Telephone and Data Systems	**184,000**	**6**	

FURNISHINGS, FIXTURES & EQUIPMENT	Estimated Budget 18-Nov-19	Anticipated Cost (AC) $ / GSF	Comments
Furnishings	1,050,000	35.00	Allowance @ $35/sf
Owner Supplied Breakroom Equipment	20,000	0.67	Lumpsum allowance
Allow for Additional Scope	107,000	3.57	10% of above costs
Total - Furnishings, Fixtures and Equipment	**1,177,000**	**39**	

AUDIO VISUAL and SECURITY	Estimated Budget 18-Nov-19	Anticipated Cost (AC) $ / GSF	Comments
Public announcement system	30,000	1.00	
Audio Visual Systems	200,000	6.67	
Sound Equipment	0	-	
Assisted Listening Devices	0	-	
Security System - CCTV, Card Keys etc.	75,000	2.50	
Allow for Additional Scope	30,500	1.02	10% of above costs
Total - Audio Visual and Security	**335,500**	**11**	

COST ESTIMATE

Conceptual Cost Estimate
for
Santa Cruz Downtown Library

November 13, 2019

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Emeryville, CA 94608
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Renovation Of Existing Library..... 8 - 23
Site Improvement..... 24 - 28
Alternates..... 29 - 37

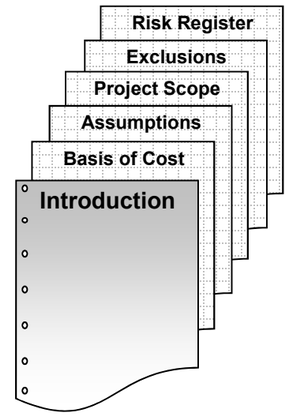
Conceptual Cost Estimate

Commentary
Santa Cruz Downtown Library

Introduction
Basis of Cost
Assumptions
Exclusions

November 13, 2019

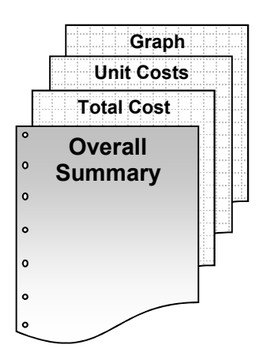
introduction



mack5 was requested to carry out a Conceptual Design Cost Estimate for the proposed renovation or existing Santa Cruz Downtown Library, located at 224 Church St., Santa Cruz, CA 95060.

The first part of the Report contains the basis of the report, the assumptions made, description of the project scope, and the exclusions to the costs which contain items that have potential to impact cost at some point in the future.

The Overall Summary section contains a Summary of Gross Floor Areas, an Overall Project Summary, and Component and Trade Cost Summaries with Graphs.



Each section contains Control Quantities, a Cost Summary and Graph, and a Detailed Breakdown of Costs.

project introduction

The main library building is a two-story, steel frame and concrete floor hybrid structure which as reportedly built in 1966. The roof framing consists of metal deck supported by steel WF beams and columns. The second floor consists of reinforced concrete one-way slab supported by steel WF beam/columns and reinforced concrete walls.

The proposed renovations will include demolition of the low roof extension around the main library building and demolition of the library services building. This will require reconfiguration of the main seismic resisting system at the ground floor

items used for cost estimate

architectural	Architectural drawings prepared by Jayson Architecture, dated 10/21/2019 G0.00, G0.01 A1.00, A1.21, A1.22, A2.10, A2.11, A2.12, A2.31, A2.32, A2.41, A2.42, A3.10, A9.00, A10.00, A10.01, A10.02
structural	Structural drawings prepared by BASE Design, dated 10/21/2019 S2.01, S2.03, S2.05, S3.01 Alternate S2.02, S2.04
mechanical	HVAC/Plumbing drawings prepared by Alter Consulting Engineers, dated 10/21/2019 M2.10, M2.11, M2.12 P2.11, P2.12
electrical	Electrical drawings prepared by RIJA, dated 10/21/2019 E0.01, E1.01, E2.01, E2.02, E3.01, E3.02
narrative	Narrative/Cost Assessment Study, dated 10/21/2019 Civil Engineer Narrative Structural Engineer Narrative Mechanical Engineer Narrative Electrical Engineer Narrative Luminaire Cut Sheets Hazmat report As-built drawings of original structure dated 07/20/1966

Commentary | Job #19646 | November 13, 2019

assumptions

(a) Construction will start in June, 2022

(b) A construction period of 24 months

(c) The general contract will be competitively bid by a minimum of five (5) qualified contractors

(d) The general contractor will have full access to the site during normal business hours

(e) There are no phasing requirements

(f) The contractor will be required to pay prevailing wages

exclusions

(a) Cost escalation beyond the midpoint of June, 2023

(b) Loose furniture and equipment except as specifically

(c) Compression of schedule, premium or shift work, and restrictions on the contractor's working hours

(d) Soft Cost such as testing and inspection fees, architectural design and construction management fees, assessments, taxes, finance, legal and development charges

(e) Scope change and post contract contingencies

(f) Temporary housing for displaced management and staff

(g) Moving and relocation cost

Conceptual Cost Estimate

Overall Summary
Santa Cruz Downtown Library

Gross Floor Areas
Overall Summary
Component Summary

November 13, 2019

Santa Cruz Downtown Library	*GFA*	*%*	*$/SF*	*$,000*
Renovation Of Existing Library	31,783	96%	$551.12	$17,516
Site Improvement	25,982	4%	$24.51	$637
TOTAL CONSTRUCTION & SITEWORK:	**31,783**	**100%**	**$571.16**	**$18,153**

ADD Alternates - High Priority Improvements:	*$,000*
1. Two-Electric Remote Machine Roomless Elevators (In Lieu of 1-Hydraulic Elevator) Base: Single Hydraulic Elevator Alternate: Two-Electric Remote Machine Room Elevators	$373
2. Add Restrooms Base: All restrooms are single occupancy. Alternate: Men's and women's restrooms on level 1 and 2 will become multi-occupancy, all others remain single occupancy.	$72
3. Add T&G Western Red Cedar Ceiling, painted gypsum board and 2x4 ACT Base: Paint (E) structure, typical with linear pendant lights Alternate: Acoustic ceiling tile and Western Cedar ceiling finishes w/ recessed fixture	$245
4. Add Pre-Finished Galvanised Standing Seam roof w/ Pre-Finished Galv Sheet Metal Fascia, Add T&G Western Cedar Roof Soffit & (N) Internal Gutters & Rainwater Base: (E) Cement Tile Roof at sloped perimeter to remain Alternate: Pre-finished galv. standing seam roof with pre-finished galv. sheet metal fascia, with new gutters and rainwater leaders, and new T&G red cedar roof soffit	$858
5. Add Planting, Boulders, Trees & Cor-Ten Retaining Walls and Terraced Grading Base: Level grade site and mulch between Alternate: Planting boulders, trees, and corten retaining walls and terraced grading + exterior lights	$446
6. Add Permeable Pavers, Landscape & Planting Base: Graded mulch at staff patio, community room patio and kids patio Alternate: Permeable pavers, landscape and planting + Wood slat fence at patio perimeters	$596
7. Add New Windows w/ Awning Operation At Level2 Window Base: (E) Level 2 windows to remain, paint (E) concrete exterior at level2 Alternate: (N) Windows with awning operation + 8" lightweight concrete infill between window openings and columns + increase footing size + painted cement plaster over exterior concrete	$1,015
8. Add New Clerestory Base: (E) Roof To Remain Alternate: (N) Clerestory	$291
Subtotal For Add Alternates - High Priority Improvements:	**$3,896**

Building ADD Alternates:	***$,000***
9. Add T&G Western Red Cedar Wall Finish Base: Painted gypboard at the north wall of Level 1 Lobby and Stair Alternate: T&G Western Cedar at this location	$92
10. Add Vinyl Wall graphic at 2nd Floor Lobby Base: Painted gypsum wall board at 2nd floor lobby Alternate: Vinyl wall graphic will cover the wall at the second floor lobby.	$8
11. Add Operable Storefront 'Nana' Wall Base: Kawneer 451T storefront Alternate: Floor to ceiling 'Nanawall' Operable exterior storefront	$221
12. Motorized Shades In Lieu Of Manual Base: New manual window shades Alternate: New motorized window shades	$67
Subtotal For Building Add Alternates:	**$388**

Site ADD Alternates:	***$,000***
13. Add New Sidewalk, Curb, Gutter and Street Parking (ref. A2.10) Base: (E) Sidewalk, curb, gutter and street parking to remain Alternate: (N) Sidewalk, curb, gutter and street parking	$435
14. Add New Combined Parking Lot (ref. A2.10) Base: (E) Parking Lots to remain Alternate: (N) Combined parking lot as shown on A2.10	$222
Subtotal For Site Add Alternates:	**$656**
TOTAL ADD ALTERNATES:	**$4,941**

Conceptual Cost Estimate

Santa Cruz Downtown Library

Control Quantities
Renovation Of Existing Library Summary
Detailed Cost Breakdown

November 13, 2019

Enclosed Areas		Height
Level 1	15,660	15.25
Level 2	14,700	17.00
Subtotal of Enclosed Area	30,360	
Covered Area		
Entry Canopy	760	
Roof Overhang	2,086	
Subtotal of Covered Area at half value	1,423	
Total of Gross Floor Area	31,783	

CONTROL QUANTITIES				Ratio to Gross Area
Number of stories (x1,000)		2	EA	0.063
Gross Area		31,783	SF	1.000
Enclosed Area		30,360	SF	0.955
Covered Area		2,846	SF	0.090
Footprint Area		15,660	SF	0.493
Volume		488,715	CF	15.377
Gross Wall Area		18,308	SF	0.576
Finished Wall Area	82%	14,998	SF	0.472
Windows or Glazing Area	18%	3,310	SF	0.104
Roof Area - Flat	45%	8,262	SF	0.260
Roof Area - Sloping	55%	10,072	SF	0.317
Roof Area - Total		18,334	SF	0.577
Roof Glazing Area		0	SF	0.000
Elevators (x10,000)		1	EA	0.315
Plumbing Fixtures (x1,000)		30	EA	0.944

CSI UniFormat Summary	***31,783 SF***	***%***	***$/SF***	***$,000***
Foundations		2%	$12.92	$411
Superstructure		3%	$16.86	$536
Enclosure		5%	$30.13	$957
Roofing		2%	$10.09	$321
Interior Construction		15%	$81.98	$2,606
Stairs		1%	$3.30	$105
Interior Finishes		3%	$18.12	$576
Conveying		1%	$5.19	$165
Plumbing		2%	$12.09	$384
Heating, Ventilation, & Air Conditioning		11%	$57.93	$1,841
Fire Protection		2%	$9.25	$294
Electrical		11%	$59.92	$1,904
Equipment		0%	$0.63	$20
Furnishings		1%	$2.94	$94
Selective Building Demolition		5%	$26.06	$828
Subtotal - Building Construction		*63%*	*$347.41*	*$11,042*
Bonds & Insurance	2.50%	2%	$8.69	$276
General Conditions/General Requirements	10.00%	6%	$35.61	$1,132
Contractor's Overhead & Profit	5.00%	4%	$19.59	$622
Subtotal		*75%*	*$411.29*	*$13,072*
Contingency for Design Development	12.00%	9%	$49.35	$1,569
Cost Escalation (to midpoint of construction)	19.64%	16%	$90.48	$2,876
TOTAL CONSTRUCTION BUDGET		***100%***	***$551.12***	***$17,516***

NOTE: Inclusions and Exclusions listed in the Commentary Section.

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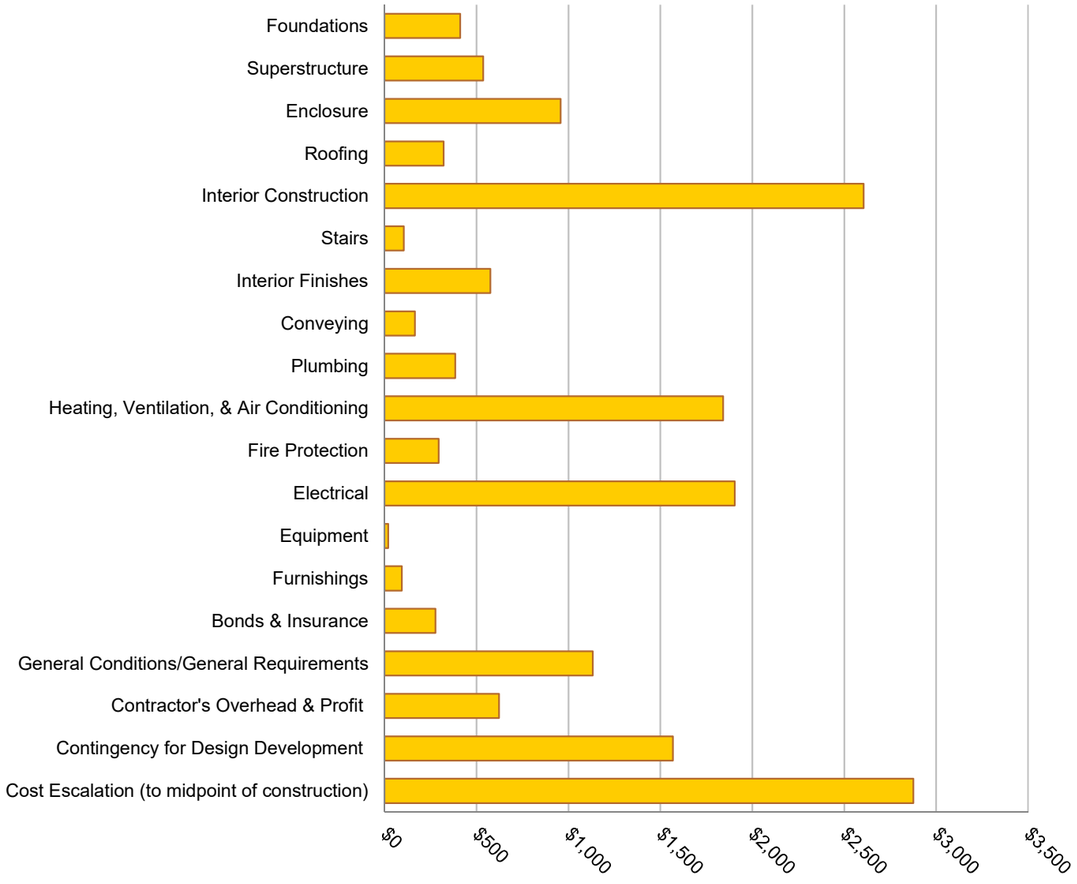
CSI UniFormat Summary



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FOUNDATIONS	Quantity	Unit	Rate	Total ($)
Standard Foundations				
Reinforced concrete wall footing				
Excavation and disposal	307	CY	$150.00	$46,050
Formwork, sides	1,630	SF	$20.00	$32,600
Reinforcement, allow 100pcy	26,700	LB	$3.00	$80,100
Concrete, 3000psi	267	CY	$500.00	$133,500
Slab On Grade				
Reinforced concrete slab edge 12"/18" wide x				
Excavation and disposal	32	CY	$150.00	$4,800
Formwork, sides	900	SF	$20.00	$18,000
Reinforcement, allow 100pcy	3,000	LB	$3.00	$9,000
Epoxy dowel at 12"o.c.	300	EA	$100.00	$30,000
Concrete, 3000psi	30	CY	$500.00	$15,000
Elevator Pit				
Reinforced concrete elevator pit slab, 12" thick	206	SF	$65.00	$13,390
Reinforced concrete elevator pit wall, 8" thick x 5'deep	295	SF	$70.00	$20,650
Waterproofing membrane	501	SF	$15.00	$7,515
Subtotal For Foundations:				**$410,605**

SUPERSTRUCTURE	Quantity	Unit	Rate	Total ($)
Reinforced Concrete Shearwall, 16" thick				
Formwork, sides	3,860	SF	$25.00	$96,500
Reinforcement, #6@ 8" o.c. each face vertical & #6 at 18" o.c. each face horizontal	14,720	LB	$3.00	$44,160
Concrete, 5000psi	92	CY	$400.00	$36,800
Elevator Wall (1-elevator only)				
Metal stud wall	1,770	SF	$35.00	$61,950
HSS guiderail support post	75	LF	$250.00	$18,625
Floor Construction				
Infill concrete slab; 3 1/2" thick concrete fill over 18ga metal deck	600	SF	$30.00	$18,000
W12 beam at elevator opening	40	LF	$300.00	$12,000
W10 at infill slab	6	LF	$300.00	$1,800

SUPERSTRUCTURE	Quantity	Unit	Rate	Total ($)
Clerestory Framing				
Structural framing, HSS12 x 4			*NIC, See Add Alternate*	
Structural framing, HSS12 x 8			*NIC, See Add Alternate*	
HSS Post			*NIC, See Add Alternate*	
18ga metal deck			*NIC, See Add Alternate*	
Roof Screen, 8' high				
HSS frame, HSS 8x8	230	LF	$300.00	$69,000
HSS Post	48	LF	$400.00	$19,200
Roof framing and plywood sheathing	840	SF	$50.00	$42,000
Miscellaneous				
Shore existing column	8	EA	$3,000.00	$24,000
Strengthen (E) WF beam; 1/2" to 1" thick plate welded to bottom flange	142	LF	$200.00	$28,400
Miscellaneous metal and support framing	31,783	GSF	$1.00	$31,783
Rough carpentry	31,783	GSF	$1.00	$31,783
			Subtotal For Superstructure:	**$536,001**

ENCLOSURE	Quantity	Unit	Rate	Total ($)
Wall Framing, Furring & Insulation				
Metal stud framing with water vapor membrane, plywood sheathing and rigid insulation	1,160	SF	$30.00	$34,800
Applied Exterior Finishes				
Cement plaster finish over concrete wall (concrete wall measured at structural section), painted	1,930	SF	$35.00	$67,550
Cement plaster finish, painted	1,160	SF	$35.00	$40,600
Paint to (E) concrete wall, level 2	9,029	SF	$3.50	$31,602
Interior Finish To Exterior Walls				
Gypsum board walls, painted	1,160	SF	$10.00	$11,600
Window, Glazing and Louvers				
Aluminum storefront system, 11'-6"tall	3,310	SF	$175.00	$579,250
Glazed window with awning operation	270	SF	$150.00	$40,500
Clerestory glazing			*NIC, See Add Alternate*	

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ENCLOSURE	Quantity	Unit	Rate	Total ($)
Exterior doors, frames, and hardware				
Main entry door, double leaf	4	PR	$10,000.00	$40,000
Double leaf at delivery area	1	PR	$5,000.00	$5,000
Single leaf door	3	EA	$3,000.00	$9,000
Fascias, bands, screens and trim				
Architectural bands, moldings and trim	18,308	GWA	$3.00	$54,924
Canopy/Soffits				
T&G western red cedar soffit over (E) eave			*NIC, See Add Alternate*	
Balustrades, parapets and roof screens				
Mechanical enclosure, including pre-finished galvanized standing seam metal panels	656	SF	$65.00	$42,640
			Subtotal For Enclosure:	**$957,466**

ROOFING	Quantity	Unit	Rate	Total ($)
Roofing				
Flat roof, (N) PVC roofing system over 2" avg rigid insulation	8,262	SF	$25.00	$206,550
Slope roof, (E) clay roof to remain			*NIC, See Add Alternate*	
Entry Canopy/Soffits				
Exterior canopy; including PVC roofing over plywood sheathing/structural framing, rigid insulation, water vapor membrane and T&G western red cedar soffit	760	SF	$150.00	$114,000
			Subtotal For Roofing:	**$320,550**

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INTERIOR CONSTRUCTION	Quantity	Unit	Rate	Total ($)
Interior Partition				
Standard non-rated partition; metal stud framing, insulation, gypboard on both sides	7,836	SF	$26.00	$203,745
Standard non-rated partition; metal stud framing, insulation, gypboard on one side	1,325	SF	$20.00	$26,502
Balustrades and Rails				
Glass guardrail with stainless steel handrail at second floor opening, assume 42" H	360	SF	$200.00	$72,000
Window Walls & Borrowed Lights				
Floor to ceiling aluminum framed glass partition, 12' 6" high	1,570	SF	$125.00	$196,250
Floor to ceiling aluminum framed glass partition, 11' high	2,090	SF	$125.00	$261,250
Floor to ceiling aluminum framed glass partition, 9' high	590	SF	$125.00	$73,750
Interior Doors, Frames & Door Hardware				
Single doors	15	EA	$2,800.00	$42,000
Single doors, with glass	12	EA	$3,000.00	$36,000
Double doors	1	PR	$5,000.00	$5,000
Double doors, with glass	5	PR	$6,000.00	$30,000
Roll down gate, 14' 6" W x 12' 6" H	1	EA	$30,000.00	$30,000
Allowance for specialty hardware	1	LS	$15,900.00	$15,900
Fittings				
Allowance for protective guards, barriers and bumpers	31,783	GSF	$0.50	$15,892
Prefabricated Compartments & Accessories				
Toilet accessories, single room	4	RM	$1,500.00	$6,000
Toilet accessories, single family room	2	RM	$1,750.00	$3,500
Toilet accessories, single staff room	1	RM	$1,500.00	$1,500
Shelving & Millwork				
Janitor shelf and mop rack	1	EA	$500.00	$500
Allowance for storage shelving, rooms 1.80 and 3.65	421	SF	$20.00	$8,420

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INTERIOR CONSTRUCTION	Quantity	Unit	Rate	Total ($)
Collection stacks, 66" tall with painted wood end panels and canopies				
5' 6" H x 3' L	558	EA	$2,400.00	$1,339,200
Cabinets & Countertops				
P-Lam lower cabinets with quartz veneer countertops, at telephone info and work room	112	LF	$500.00	$55,850
P-Lam upper and lower cabinets with quartz veneer countertops, at staff lounge and kitchen	28	LF	$800.00	$22,640
Wood veneer upper and lower cabinets with quartz countertops, at staff offices 2nd and teenspace	18	LF	$800.00	$14,400
Full height storage cabinet, at staff offices 2nd and teenspace	15	LF	$800.00	$12,000
Quartz countertop on steel supports, and 2nd floor railing	32	LF	$350.00	$11,200
Service and circulation desks; wood veneer lower cabinets with quartz countertops	64	LF	$500.00	$31,800
Chalkboards, insignia and graphics				
Shelving end panel ID - allow	106	EA	$300.00	$31,800
Door signage	33	EA	$200.00	$6,600
Directional and wayfinding signage	31,260	GSF	$1.50	$46,890
Chalkboards/tackboards allowance	1	LS	$5,000.00	$5,000
Subtotal For Interior Construction:				**$2,605,589**

STAIRS	Quantity	Unit	Rate	Total ($)
Stair Construction				
Main stair, precast concrete treads and risers, complete with finishes, handrail and glass guardrail	1	LS	$75,000.00	$75,000
Exit/egress stair	1	LS	$30,000.00	$30,000
Subtotal For Stairs:				**$105,000**

INTERIOR FINISHES	Quantity	Unit	Rate	Total ($)
Floor Finishes				
Tile	790	SF	$30.00	$23,700
Polish (E) concrete floors	4,500	SF	$15.00	$67,500
Carpet tile	22,400	SF	$9.00	$201,600
Existing concrete to remain				*NIC*
Testing for water vapor emission - allowance	1	LS	$5,000.00	$5,000
Bases				
Tile	334	SF	$30.00	$10,023
Rubber	2,615	LF	$5.00	$13,076
Wood, 1x4, painted			*NIC, changed to rubber base*	
Cedar, 1x4, clear			*NIC, See Add Alternate*	
Wall Finishes				
Tile, 48" high	1,336	SF	$30.00	$40,091
Paint	16,987	SF	$3.00	$50,961
Column Furring & Finish				
Clean and paint (E) exposed beams	3,001	SF	$5.00	$15,005
Ceiling Finishes				
Paint exposed ceiling	28,000	SF	$3.00	$84,000
Paint exposed ductwork	3,558	SF	$3.00	$10,674
Acoustic ceiling tile, 2' x 4', Armstrong Optima	210	SF	$10.00	$2,100
Painted gypboard	1,610	SF	$30.00	$48,300
Framed soffit with painted gypboard finish	109	SF	$35.00	$3,812
Subtotal For Interior Finishes:				**$575,841**

CONVEYING	Quantity	Unit	Rate	Total ($)
Elevators				
Hydraulic elevator, 2-stops	1	EA	$165,000.00	$165,000
Subtotal For Conveying:				**$165,000**

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PLUMBING	Quantity	Unit	Rate	Total ($)
Trade Demolition	31,783	GSF	$1.50	$47,675
Plumbing Fixtures	*30*	*Fx*		
Watercloset, wall, manual flush	7	EA	$2,400.00	$16,800
Urinal, wall, manual flush			*NIC, See Add Alternate*	
Lavatory	7	EA	$2,000.00	$14,000
Janitor sink	1	EA	$2,500.00	$2,500
Drinking fountain, hi-lo type	3	EA	$4,500.00	$13,500
Sink	2	EA	$1,800.00	$3,600
Drains (allowance)	10	EA	$1,000.00	$10,000
Service Water, Sanitary / Vent Distribution Systems:				
Service water with rough-in for fixture	30	EA	$3,000.00	$90,000
Waste & vent with rough-in for fixture	30	EA	$2,500.00	$75,000
General Piping;				
Natural Gas (rework existing)	31,783	GSF	$0.50	$15,892
Equipment	31,783	GSF	$1.50	$47,675
Plumbing Related Items	31,783	GSF	$1.50	$47,675
Subtotal For Plumbing:				**$384,315**

HEATING, VENTILATION, & AIR-CONDITIONING	Quantity	Unit	Rate	Total ($)
Trade Demolition	31,783	GSF	$2.50	$79,458
New Work:				
Boiler, Gas fired rooftop, 2000 mbh with associated equipment	1	LS	$85,000.00	$85,000
Rework existing Server Room HVAC	1	LS	$5,000.00	$5,000
Air Handling Unit, supply and return fans, DX cooling coil, AC unit, modulating gas furnace,	32,000	CFM	$15.00	$480,000
Zone Level VAV Boxes with Reheat Coil	31,783	GSF	$2.00	$63,566
Distribution Systems;				
Hydronic piping	31,783	GSF	$4.00	$127,132
Sheet Metal Ductwork / Insulation	31,783	GSF	$15.50	$492,637
Associated terminal, dampers	31,783	GSF	$2.00	$63,566
Accessories & specialties	31,783	GSF	$1.00	$31,783
General exhaust	31,783	GSF	$2.00	$63,566

HEATING, VENTILATION, & AIR-CONDITIONING	Quantity	Unit	Rate	Total ($)
Balance & Test	31,783	GSF	$1.50	$47,675
Control	31,783	GSF	$6.50	$206,590
HVAC Related Items	31,783	GSF	$3.00	$95,349
Subtotal For Heating, Ventilation, & Air-Conditioning:				**$1,841,320**

FIRE PROTECTION	Quantity	Unit	Rate	Total ($)
Trade Demolition	31,783	GSF	$0.75	$23,837
Automatic Wet Sprinkler Systems	31,783	GSF	$8.50	$270,156
Standpipes			*NIC, Not Required*	
Fire Pumps			*NIC, Not Required*	
Subtotal For Fire Protection:				**$293,993**

ELECTRICAL	Quantity	Unit	Rate	Total ($)
Lighting & Power				
Service & Distribution				
Main Switchboard MSB 800A MCB 208/120V	1	EA	$24,500.00	24,500.00
Housekeeping Pad	1	LS	$2,500.00	2,500.00
400A MCB 208/120V - HVAC Panel	1	EA	$8,000.00	8,000.00
225A MCB 208/120V Triple Split Bus Panel	4	EA	$4,520.00	18,080.00
100A MCB 208/120V Triple Split Bus Panel - IT Panel	1	EA	$3,700.00	3,700.00
Feeder, 400A - 4#600+1#3G in 4" EMT - allow	130	LF	$170.00	22,100.00
Feeder, 225A - 4#4/0+1#4G in 3" EMT - allow	305	LF	$100.00	30,500.00
Feeder, 100A - 4#1/0+1#6G in 2" EMT - allow	68	LF	$62.00	4,216.00
225A MCB 208/120V	4	EA	$4,200.00	16,800.00
100A MCB 208/120V	1	EA	$3,355.00	3,355.00
Feeder, 225A - 4#4/0+1#4G in 3" EMT	305	LF	$100.00	30,500.00
Feeder, 100A - 4#1/0+1#6G in 2" EMT	68	LF	$65.00	4,420.00
Grounding/Firesealing	1	LS	$4,500.00	4,500.00
Testing and Commissioning	1	LS	$10,000.00	10,000.00
Machine and Equipment Connections	31,783	GSF	$4.00	127,132.00

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ELECTRICAL	Quantity	Unit	Rate	Total ($)
Lighting & Branch Wiring				
A - 2"Wx2ft Linear D/I LED	1	EA	$2,520.00	$2,520
A - 2"Wx6ft Linear D/I LED	189	EA	$2,100.00	$396,900
B - 1.75"Wx3ft Continuous LED	8	EA	$885.00	$7,080
B - 1.75"W4ft Continuous LED	3	EA	$1,200.00	$3,600
B - 1.75"Wx6ft Linear LED	6	EA	$1,770.00	$10,620
C - 3ft Strip LED ceiling mtd	1	EA	$252.00	$252
C - 4ft Strip LED ceiling mtd	5	EA	$280.00	$1,400
C - 6ft Strip LED ceiling mtd	3	EA	$416.00	$1,248
D - 6" Rec LED Downlight 40deg beam angle	42	EA	$650.00	$27,300
E - 6ft linear Pendant Direct LED - Restroom	4	EA	$995.00	$3,980
F - 4ft linear Diffused LED wall mtd	3	EA	$610.00	$1,830
F - 6ft linear Diffused LED wall mtd	2	EA	$914.00	$1,828
G - U/C LED 3ft - LINEAR	6	EA	$563.00	$3,378
G - U/C LED 4ft - LINEAR	6	EA	$665.00	$3,990
H - 2x2 Low Gloss White LED - Kitchen	2	EA	$650.00	$1,300
J - 72"dia Direct or D/I Round Decorative	8	EA	$9,500.00	$76,000
Lighting Rough In Box	87	EA	$160.00	$13,920
Branch Circuit Wiring EMT - 3/4"	1,705	LF	$18.00	$30,690
Addressable Lighting Control including Daylight Harvesting, Occupancy Sensors, Manual Override Switches, Time Clock with Load Monitoring and Demand Response Capability	31,783	GSF	$5.50	174,806.50
Receptacle Outlets with Branch Wiring				
Duplex Receptacle with Plate, Box and Conn.	64	EA	$160.00	$10,240
Controlled Duplex Receptacle with Plate, Box and Conn.	4	EA	$185.00	$740
Duplex/USB Receptacle with Plate, Box and Conn. - U	5	EA	$200.00	$1,000
GFI Receptacle with Plate, Box and Conn.	10	EA	$175.00	$1,750
Quadplex Rec. with Plate, Box and Conn.	5	EA	$210.00	$1,050
FM Box Quadplex Receptacle Flush - FB	7	EA	$750.00	$5,250
FM Box Combo Quadplex/Data Flush - FB	3	EA	$860.00	$2,580
FM Box Combo Quadplex/Data/AV Flush - FB	3	EA	$860.00	$2,580
FM Box Quadplex Receptacle Poke Thru - PT	12	EA	$1,270.00	$15,240

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ELECTRICAL	Quantity	Unit	Rate	Total ($)
Receptacle Outlets with Branch Wiring				
FM Box Quadplex Receptacle/Data Poke Thru - PT	4	EA	$1,400.00	$5,600
FM Box Quadplex Receptacle/Data/AV Poke Thru - PT	1	EA	$1,400.00	$1,400
FM Box Power/Data Poke Thru- Furniture Connection with Whips	3	EA	$1,600.00	$4,800
Branch Circuit Wiring EMT - 3/4"	2,700	LF	$18.00	$48,600
Branch Circuit Wiring GRC - 1"	1,650	LF	$31.00	$51,150
Communications				
Server Room build-out including equipment rack, wire manager, cable ladder, patch panels/patch cables, backbone cabling, conduit riser/stubs	1	LS	$36,675.00	$36,675
Server Room grounding	1	LS	$1,500.00	$1,500
(2) Voice/Data outlet, wall	27	EA	$100.00	$2,700
(2) Voice/Data outlet, floor	10	EA	$140.00	$1,400
AV outlet, floor	3	EA	$212.00	$636
Voice/Data Rough-Ins - 2 Gang with Box, Ring & Conn	29	EA	$100.00	$2,900
Communications				
1" EMT with Pull String	350	LF	$14.00	$4,900
1" GRC with Pull String	500	LF	$18.00	$9,000
Voice/Data Rough-Ins - 2 Gang with Box, Ring & Conn	29	EA	$100.00	$2,900
J-Hooks Allowance	50	EA	$95.00	$4,750
Category 6, PVC Jacketed Cable - 4 Pair	13,720	LF	$1.75	$24,010
Intercom/Paging System	31,783	GSF	$1.50	47,674.50
AV System - Conduit Rough-ins/Power	31,783	GSF	$1.75	55,620.25
Book Detection System - Conduit Rough-Ins - allowance	31,783	GSF	$0.25	7,945.75
Alarm and Security				
Fire Alarm System - Addressable (Design-Build)	31,783	GSF	$6.00	190,698.00
Security - Card Access System - allowance	31,783	GSF	$2.50	79,457.50
CCTV System - allowance	31,783	GSF	$4.50	143,023.50

ELECTRICAL	Quantity	Unit	Rate	Total ($)
Other Electrical Systems				
Fees and Permits/Temp Power	31,783	GSF	$1.00	$31,783
Selective Trade Demolition - Electrical	31,783	GSF	$1.00	$31,783
Subtotal For Electrical:				**$1,904,282**

EQUIPMENT	Quantity	Unit	Rate	Total ($)
Library Equipment				
Book returns drop	2	EA	$10,000.00	$20,000
Special Use Equipments				
Staff lounge equipments; including microwave, refrigerator, coffee maker, garbage disposal				*NIC, Included in FF&E*
Kitchen equipments; including microwave, refrigerator, coffee maker, garbage disposal				*NIC, Included in FF&E*
Screen, projector, AV, speakers (at community meeting room, medium meeting room and learning commons)				*NIC, Included in FF&E*
Subtotal For Equipment:				**$20,000**

FURNISHINGS	Quantity	Unit	Rate	Total ($)
Light Control & Vision Equipment				
Window shades to exterior windows, manual	4,236	SF	$15.00	$63,540
Amenities & Convenience Items				
Fire extinguisher cabinets, allowance	1	LS	$5,000.00	$5,000
Entrance mats and frames, allowance	2	LS	$5,000.00	$10,000
Allowance for bike racks/storage	1	LS	$5,000.00	$5,000
Staff lockers	1	LS	$10,000.00	$10,000
Moveable Furnishings				
Conference/meeting tables and chairs				*NIC, OFOI*
Office tables and chairs				*NIC, OFOI*
Lounge chairs				*NIC, OFOI*
Subtotal For Furnishings:				**$93,540**

SELECTIVE BUILDING DEMOLITION	Quantity	Unit	Rate	Total ($)
Structural Demolition				
Demo & remove (E) spread footing	8	EA	$2,000.00	$16,000
Demo portion of (E) spread footing at new elevator pit	1	EA	$3,000.00	$3,000
Cut slab opening, level 2	1,350	SF	$10.00	$13,500
Demo portion of (E) WF beam	1	LS	$1,500.00	$1,500
Roof & Enclosure Demolition				
Demo and remove (E) library service building	4,800	SF	$15.00	$72,000
Demo and remove (E) low roof, exterior windows/enclosure, concrete columns, column wrap and slab - around the main library	6,880	SF	$15.00	$103,200
Demo and remove (E) flat roofing system	8,262	SF	$2.00	$16,524
Interior Demolition				
Demo (E) interior column, 1 ea	13	LF	$100.00	$1,250
Remove (E) column wrap; steel column to remain	3,001	SF	$10.00	$30,012
Demo (E) two-story stairs; including treads, risers, landings, and railings	3	EA	$2,000.00	$6,000
Demo (E) two-story elevator	2	EA	$5,000.00	$10,000
Demo (E) elevator shaft	1,707	SF	$3.00	$5,121
Demo (E) restroom fittings and accessories	11	RM	$200.00	$2,200
Demo (E) restroom fixtures			*Included In Plumbing Section*	
Demo (E) mechanical equipment			*Included In HVAC Section*	
Demo (E) library stacks	3,611	LF	$25.00	$90,273
Demo (E) casework/desks	25	LF	$25.00	$633
Demo (E) interior gypboard and furring of exterior wall			*Included in Roofing & Enclosure Demo*	
Demo (E) exterior redwood siding and furring			*Included in Roofing & Enclosure Demo*	
Demo (E) partitions and finishes	21,338	SF	$3.00	$64,015
Demo (E) interior window walls	2,196	SF	$20.00	$43,920
Demo (E) interior doors, single	63	EA	$150.00	$9,450
Demo (E) interior doors, double	9	PR	$250.00	$2,250
Demo (E) exterior doors, single			*Included in Exterior Demo*	
Demo (E) exterior doors, double			*Included in Exterior Demo*	
Demo (E) exterior concrete shear walls			*Included in Exterior Demo*	
Demo (E) floor finishes and bases	31,260	SF	$3.00	$93,780
Demo (E) ceiling finishes	16,646	SF	$2.00	$33,293
Hazmat Removal				
Allowance	42,040	GSF	$5.00	$210,200
Subtotal For Selective Building Demolition:				**$828,120**

Conceptual Cost Estimate

Site Improvement
Santa Cruz Downtown Library

Control Quantities
Site Improvement Summary
Detailed Cost Breakdown

November 13, 2019

Site Improvement Control Quantities

Job #19646
November 13, 2019

Enclosed Areas	
Vehicular Paving	6,690
Pedestrian Paving	10,327
Landscape Area	8,965
Subtotal of Enclosed Area	25,982

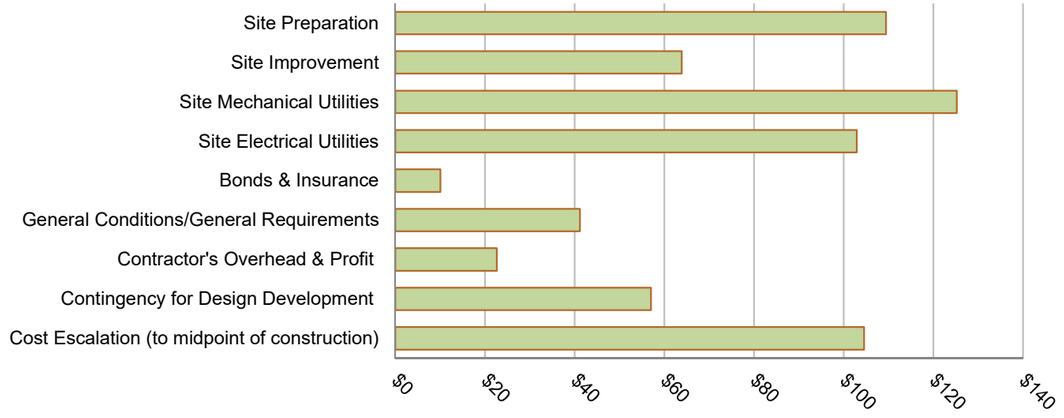
Site Improvement Summary

Job #19646
November 13, 2019

CSI UniFormat Summary	***25,982 SF***	***%***	***$/SF***	***$,000***
Site Preparation		17%	$4.21	$109
Site Improvement		10%	$2.46	$64
Site Mechanical Utilities		20%	$4.82	$125
Site Electrical Utilities		16%	$3.96	$103
Subtotal - Sitework		***63%***	***$15.45***	***$401***
Bonds & Insurance	2.50%	2%	$0.39	$10
General Conditions/General Requirements	10.00%	6%	$1.58	$41
Contractor's Overhead & Profit	5.00%	4%	$0.87	$23
Subtotal		***75%***	***$18.29***	***$475***
Contingency for Design Development	12.00%	9%	$2.19	$57
Cost Escalation (to midpoint of construction)	19.64%	16%	$4.02	$105
TOTAL CONSTRUCTION BUDGET		***100%***	***$24.51***	***$637***

NOTE: Inclusions and Exclusions listed in the Commentary Section.

CSI UniFormat Summary



SITE PREPARATION	Quantity	Unit	Rate	Total ($)
Site Protective Construction				
Erosion control	25,982	SF	$0.75	$19,487
Protect (E) trees	9	EA	$750.00	$6,750
Site Clearing & Grading				
Grading to areas where sections of the existing building are to be removed	25,982	SF	$2.00	$51,964
Imported backfill where the existing building slab and foundation are to be removed	250	CY	$125.00	$31,250
Subtotal For Site Preparation:				**$109,451**

SITE IMPROVEMENT	Quantity	Unit	Rate	Total ($)
Vehicular Paving				
Asphalt paving for loading/deliveries	460	SF	$10.00	$4,600
Asphalt paving for new parking			*NIC, See Add Alternate*	
Re-stripe existing parking lot	1,552	SF	$1.00	$1,552
Pedestrian Paving				
Concrete plaza	1,750	SF	$25.00	$43,750
Permeable pavers			*NIC, See Add Alternate*	
Reinforced concrete sidewalk			*NIC, See Add Alternate*	
Reinforced concrete curb			*NIC, See Add Alternate*	
Site Development				
Wood slat fence			*NIC, See Add Alternate*	
Bike rack	5	EA	$1,000.00	$5,000
Landscaping				
Mulch fill	8,965	SF	$1.00	$8,965
Trees, allow 24"~ 36" box			*NIC, See Add Alternate*	
Planting area			*NIC, See Add Alternate*	
Cor-ten steel retaining wall, 6" above grade			*NIC, See Add Alternate*	
Cor-ten steel retaining wall, 12-18" above grade			*NIC, See Add Alternate*	
Subtotal For Site Improvement:				**$63,867**

Site Improvement Detail | Job #19646 | November 13, 2019

SITE MECHANICAL UTILITIES	Quantity	Unit	Rate	Total ($)
Water Mains - Domestic Service				
A new domestic water reduced pressure backflow preventer to be installed on the existing water service lateral serving the existing building.	1	LS	$15,000.00	$15,000
Water Mains - Fire Service				
Fire main - PVC, 8"	80	LF	$90.00	$7,200
Fire main - PVC, 6"	40	LF	$75.00	$3,000
Connection to (E) water main w/ SOV	1	EA	$3,500.00	$3,500
Fire hydrant assembly	1	EA	$5,000.00	$5,000
Double detector check assembly	1	EA	$10,000.00	$10,000
Fire dept connection	1	EA	$1,500.00	$1,500
Sanitary Sewer				*NIC, Not Required*
Storm Drainage				
Rainwater leaders from the building roof to be reconnected to the existing site underground storm drain system	1	LS	$60,000.00	$60,000
Stormwater treatment	1	LS	$20,000.00	$20,000
Subtotal For Site Mechanical Utilities:				**$125,200**

SITE ELECTRICAL UTILITIES	Quantity	Unit	Rate	Total ($)
Site Utilities - Power				
Site U/G Feeder, 800A - (2) 4#500+1#1/0 G in 4" PVC Concrete Encased	75	LF	$320.00	$24,000
Intercept Existing Secondary Feeder with a Splice Concrete Pull Box	1	LS	$8,100.00	$8,100
Site Irrigation Controller Connection	2	EA	$3,500.00	$7,000
Site Communications and Security				
Telecom (empty) conduit concrete encased ductbank,(2)-4"C - allowance	100	LF	$150.00	$15,000
Site Lighting (50% In The Base, 50% Add Alternate)				
Wall mounted recessed site lighting at 8' o.c.	40	EA	$820.00	$32,800
Lighting Rough In Box	40	EA	$160.00	$6,400
PVC in trench	320	LF	$30.00	$9,600
Subtotal For Site Electrical Utilities:				**$102,900**

mack5

Conceptual Cost Estimate

Alternates

Santa Cruz Downtown Library

Alternates Cost Breakdown

November 13, 2019

mack5

Two-Electric Remote Machine Roomless Elevators (In Lieu of 1-Hydraulic Elevator)	Quantity	Unit	Rate	Total ($)
Alternate Description:				
Base: Single Hydraulic Elevator				
Alternate: Two-Electric Remote Machine Room Elevators				
DELETE:				
Hydraulic elevator, 2-stops	(1)	EA	$165,000.00	($165,000)
ADD:				
Electric remote MRL elevators	2	EA	$200,000.00	$400,000
Mark-up's per Overall Summary	58.64%			$137,802
Subtotal For Two-Electric Remote Machine Roomless Elevators (In Lieu Of 1-Hydraulic Elevator):				**$372,802**

Add Restrooms	Quantity	Unit	Rate	Total ($)
Alternate Description:				
Base: All restrooms are single occupancy.				
Alternate: Men's and women's restrooms on level 1 and 2 will become multi-occupancy, all others remain single occupancy.				
ADD:				
Prefabricated Compartments & Accessories				
Phenolic toilet partitions	2	EA	$1,350.00	$2,700
Phenolic toilet partitions, ADA	4	EA	$1,500.00	$6,000
Urinal partitions	2	EA	$500.00	$1,000
Toilet accessories, multi-room premium	4	RM	$1,000.00	$4,000
Plumbing Fixtures	*4*	*Fx*		
Watercloset, wall, manual flush	2	EA	$2,400.00	$4,800
Urinal, wall, manual flush	2	EA	$2,400.00	$4,800
Service Water, Sanitary / Vent Distribution Systems:				
Service water with rough-in for fixture	4	EA	$3,000.00	$12,000
Waste & vent with rough-in for fixture	4	EA	$2,500.00	$10,000
Mark-up's per Overall Summary	58.64%			$26,564
Subtotal For Add Restrooms:				**$71,864**

Add T&G Western Red Cedar Ceiling, painted	Quantity	Unit	Rate	Total ($)

Alternate Description:
Base: Paint (E) structure, typical with linear pendant lights
Alternate: Acoustic ceiling tile and Western Cedar ceiling finishes w/ recessed fixture

DELETE:				
Ceiling Finishes				
Paint exposed ceiling	(28,000)	SF	$3.00	($84,000)
Paint exposed ductwork	(3,558)	SF	$3.00	($10,674)
Lighting				
Pendant light fixtures 'type A'	(14,500)	SF	$27.55	($399,475)
ADD:				
Ceiling Finishes				
Acoustic ceiling tile, 2' x 4', Armstrong Optima	22,400	SF	$10.00	$224,000
Painted gypboard	509	SF	$30.00	$15,270
T&G western cedar	1,230	SF	$50.00	$61,500
Lighting				
Recessed light fixture	14,500	SF	$24.00	$348,000
Mark-up's per Overall Summary	58.64%			$90,669

Subtotal For Add T&G Western Red Cedar Ceiling, Painted Gypsum Board And 2X4 Act :	**$245,290**

Alternates | Job #19646 | November 13, 2019

Add Pre-Finished Galvanised Standing Seam roof w/ Pre-Finished Galv Sheet Metal Fascia, Add T&G Western Cedar Roof Soffit & (N) Internal Gutters & Rainwater Leaders	Quantity	Unit	Rate	Total ($)

Alternate Description:
Base: (E) Cement Tile Roof at sloped perimeter to remain
Alternate: Pre-finished galvanized standing seam roof with pre-finished galvanized sheet metal fascia, with new gutters and rainwater leaders, and new T&G red cedar roof soffit

ADD:				
Selective Demolition				
Demo and remove (E) clay tile roofing system	10,072	SF	$4.00	$40,288
Roofing				
Pre-finished galvanized standing seam roof	10,072	SF	$30.00	$302,160
Roofing Upstands & Sheetmetal				
Pre-finished galvanized sheet metal fascia	540	LF	$75.00	$40,500
Internal gutters	540	LF	$50.00	$27,000
Rainwater leaders - allow	260	LF	$50.00	$13,000
Miscellaneous flashing, caulking and sealants	10,072	SF	$1.50	$15,108
Canopy/Soffits				
T&G western red cedar soffit over (E) eave	2,050	SF	$50.00	$102,500
Mark-up's per Overall Summary	58.64%			$316,978

Subtotal For Add Pre-Finished Galvanised Standing Seam Roof W/ Pre-Finished Galv Sheet Metal Fascia, Add T&G Western Cedar Roof Soffit & (N) Internal	**$857,534**

Add Planting, Boulders, Trees & Cor-Ten Retaining Walls and Terraced Grading

Alternate Description:
Base: Level grade site and mulch between building and property line
Alternate: Planting boulders, trees, and corten retaining walls and terraced grading + exterior lights

	Quantity	Unit	Rate	Total ($)
ADD:				
Landscaping				
Boulders - allow	1	LS	$10,000.00	$10,000
Landscape planting and irrigation	4,965	SF	$20.00	$99,300
Trees, allow 24"~ 36" box	23	EA	$1,000.00	$23,000
Cor-ten steel retaining wall, 6" above grade	260	LF	$50.00	$13,000
Cor-ten steel retaining wall, 12-18" above grade	744	LF	$150.00	$111,600
Site Lighting				
Wall mounted recessed site lighting at 8' o.c., including wiring and PVC trench	20	EA	$1,220.00	$24,400
Mark-up's per Overall Summary	58.64%			$164,952

Subtotal For Add Planting, Boulders, Trees & Cor-Ten Retaining Walls And Terraced Grading: $446,252

Add Permeable Pavers, Landscape & Planting

Alternate Description:
Base: Graded mulch at staff patio, community room patio and kids patio
Alternate: Permeable pavers, landscape and planting + Wood slat fence at patio perimeters

	Quantity	Unit	Rate	Total ($)
ADD:				
Site Development				
Wood slat fence	312	LF	$750.00	$234,000
Landscaping				
Permeable pavers	2,500	SF	$35.00	$87,500
Landscape planting and irrigation	1,500	SF	$20.00	$30,000
Site Lighting				
Wall mounted recessed site lighting at 8' o.c., including wiring and PVC trench	20	EA	$1,220.00	$24,400
Mark-up's per Overall Summary	58.64%			$220,425

Subtotal For Add Permeable Pavers, Landscape & Planting: $596,325

Alternates | Job #19646 | November 13, 2019

Add New Windows w/ Awning Operation At Level2 Window

Alternate Description:
Base: (E) Level 2 windows to remain, paint (E) concrete exterior at level2
Alternate: (N) Windows with awning operation + 8" lightweight concrete infill between window openings and columns + increase footing size + painted cement plaster over exterior concrete

	Quantity	Unit	Rate	Total ($)
DELETE:				
Paint to (E) concrete wall, level 2	(9,029)	SF	$3.50	($31,602)
ADD:				
Structural Foundation				
Premium for 4' deep wall footing (in lieu of 3')	2,210	SF	$45.00	$99,450
Window, Glazing and Louvers				
Demo and remove (E) window	470	SF	$30.00	$14,100
Glazed window with awning operation	470	SF	$120.00	$56,400
Lightweight concrete infill; 8" LW concrete infill w/ #4 @12".o.c.,e.w., painted	5,300	SF	$35.00	$185,500
Cement plaster over exterior concrete, painted	9,029	SF	$35.00	$316,015
Mark-up's per Overall Summary	58.64%			$375,211

Subtotal For Add New Windows W/ Awning Operation At Level2 Window: $1,015,075

Add New Clerestory

Alternate Description:
Base: (E) Roof To Remain
Alternate: (N) Clerestory

	Quantity	Unit	Rate	Total ($)
ADD:				
Clerestory Framing				
Structural framing, HSS12 x 4	136	LF	$300.00	$40,800
Structural framing, HSS12 x 8	48	LF	$400.00	$19,200
HSS Post	24	LF	$400.00	$9,600
18ga metal deck	768	SF	$10.00	$7,680
Window, Glazing and Louvers				
Clerestory glazing	656	SF	$150.00	$98,400
Structural Demolition				
Cut roof opening	792	SF	$10.00	$7,920
Mark-up's per Overall Summary	58.64%			$107,662

Subtotal For Add New Clerestory: $291,262

Add T&G Western Red Cedar Wall Finish	Quantity	Unit	Rate	Total ($)

Alternate Description:
Base: Painted gypboard at the north wall of Level 1 Lobby and Stair
Alternate: T&G Western Cedar at this location

DELETE:				
Wall Finishes				
Paint	(1,092)	SF	$3.00	($3,276)
ADD:				
Wall Finishes				
T&G western cedar	1,092	SF	$50.00	$54,600
Cedar, 1x4, clear	258	LF	$25.00	$6,442
Mark-up's per Overall Summary	58.64%			$33,873
Subtotal For Add T&G Western Red Cedar Wall Finish:				**$91,639**

Add Vinyl Wall graphic at 2nd Floor Lobby	Quantity	Unit	Rate	Total ($)

Alternate Description:
Base: Painted gypsum wall board at 2nd floor lobby
Alternate: Vinyl wall graphic will cover the wall at the second floor lobby.

DELETE:				
Wall Finishes				
Paint	(315)	SF	$3.00	($944)
ADD:				
Wall Finishes				
Vinyl wall graphic	315	SF	$20.00	$6,292
Mark-up's per Overall Summary	58.64%			$3,136
Subtotal For Add Vinyl Wall Graphic At 2Nd Floor Lobby:				**$8,484**

Alternates | Job #19646 | November 13, 2019 | mack5

Add Operable Storefront 'Nana' Wall	Quantity	Unit	Rate	Total ($)

Alternate Description:
Base: Kawneer 451T storefront
Alternate: Floor to ceiling 'Nanawall' Operable exterior storefront

DELETE:				
Window, Glazing and Louvers				
Aluminum storefront system, 11'-6"tall	(506)	SF	$175.00	($88,550)
ADD:				
Window, Glazing and Louvers				
Nanawall' Operable exterior storefront	506	SF	$450.00	$227,700
Mark-up's per Overall Summary	58.64%			$81,597
Subtotal For Add Operable Storefront 'Nana' Wall:				**$220,747**

Motorized Shades In Lieu Of Manual	Quantity	Unit	Rate	Total ($)

Alternate Description:
Base: New manual window shades
Alternate: New motorized window shades

DELETE:				
Light Control & Vision Equipment				
Window shades to exterior windows, manual	(4,236)	SF	$15.00	($63,540)
ADD:				
Light Control & Vision Equipment				
Window shades to exterior windows, motorized	4,236	SF	$25.00	$105,900
Mark-up's per Overall Summary	58.64%			$24,840
Subtotal For Motorized Shades In Lieu Of Manual:				**$67,200**

Add New Sidewalk, Curb, Gutter and Street Parking (ref. A2.10)	Quantity	Unit	Rate	Total ($)
Alternate Description:				
Base: (E) Sidewalk, curb, gutter and street parking to remain				
Alternate: (N) Sidewalk, curb, gutter and street parking				
Vehicular Paving At Street Parking				
Asphalt paving for street parking	2,458	SF	$10.00	$24,580
Striping and pavement parking	2,458	SF	$1.00	$2,458
(N) Reinforced concrete curb	400	LF	$30.00	$12,000
Pedestrian Paving				
Permeable pavers	2,474	SF	$35.00	$86,590
Reinforced concrete sidewalk	6,463	SF	$20.00	$129,260
Reinforced concrete curb	635	LF	$30.00	$19,050
Mark-up's per Overall Summary	58.64%			$160,635
Subtotal For Add New Sidewalk, Curb, Gutter And Street Parking (Ref. A2.10):				**$434,573**

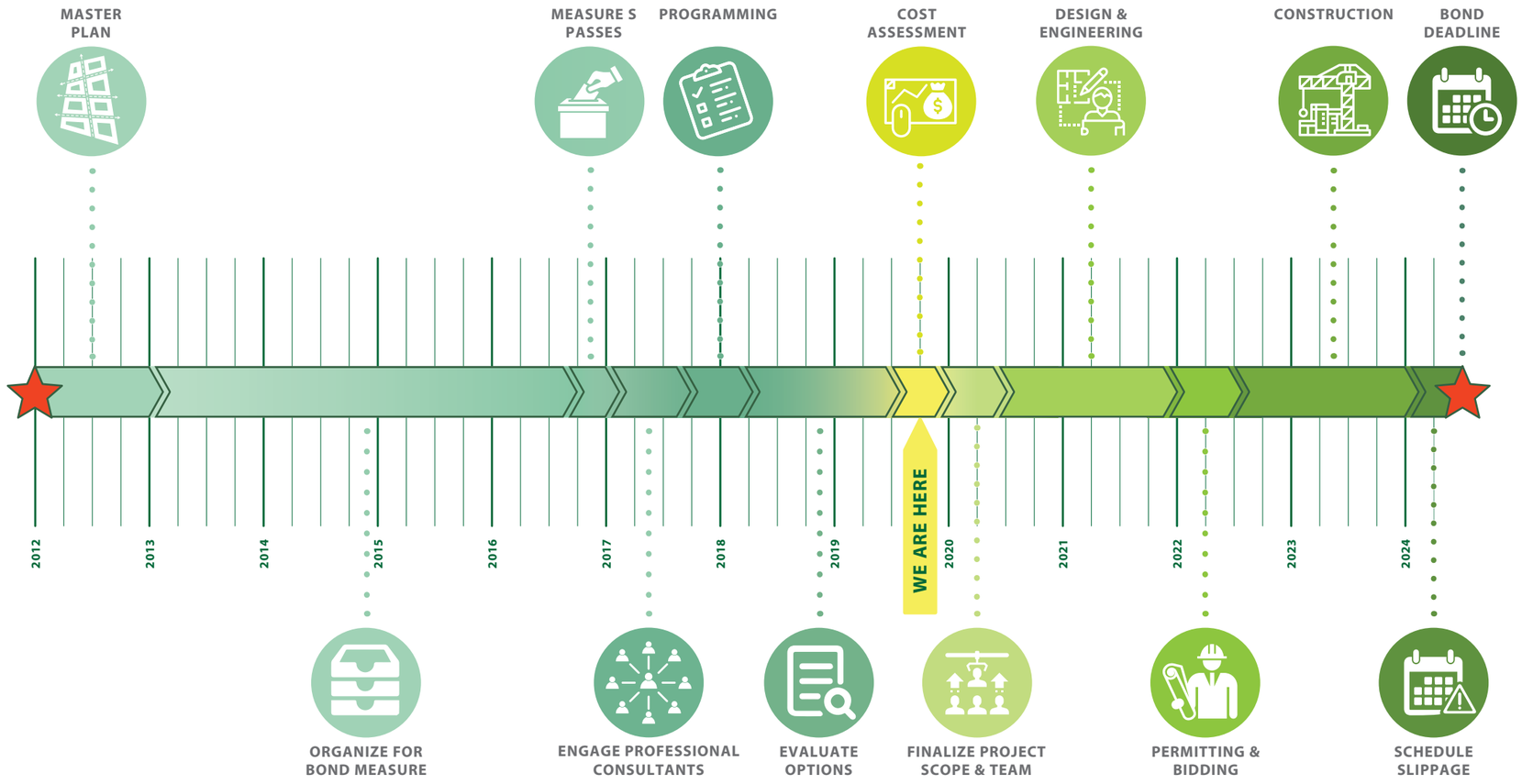
Add New Combined Parking Lot (ref. A2.10)	Quantity	Unit	Rate	Total ($)
Alternate Description:				
Base: (E) Parking Lots to remain				
Alternate: (N) Combined parking lot as shown on A2.10				
ADD:				
Site Demolition				
Demo and remove (E) CMU dividing wall	315	SF	$10.00	$3,150
Site Clearing & Grading				
Cut/fill to balance the site area, +/- 18" (no Off-haul)	9,984	SF	$2.00	$19,968
Vehicular Paving				
Asphalt paving for new parking	9,984	SF	$10.00	$99,840
Striping and pavement parking	9,984	SF	$1.00	$9,984
(N) Reinforced concrete curb	230	LF	$30.00	$6,900
Mark-up's per Overall Summary	58.64%			$82,002
Subtotal For Add New Combined Parking Lot (Ref. A2.10):				**$221,844**

SCHEDULE

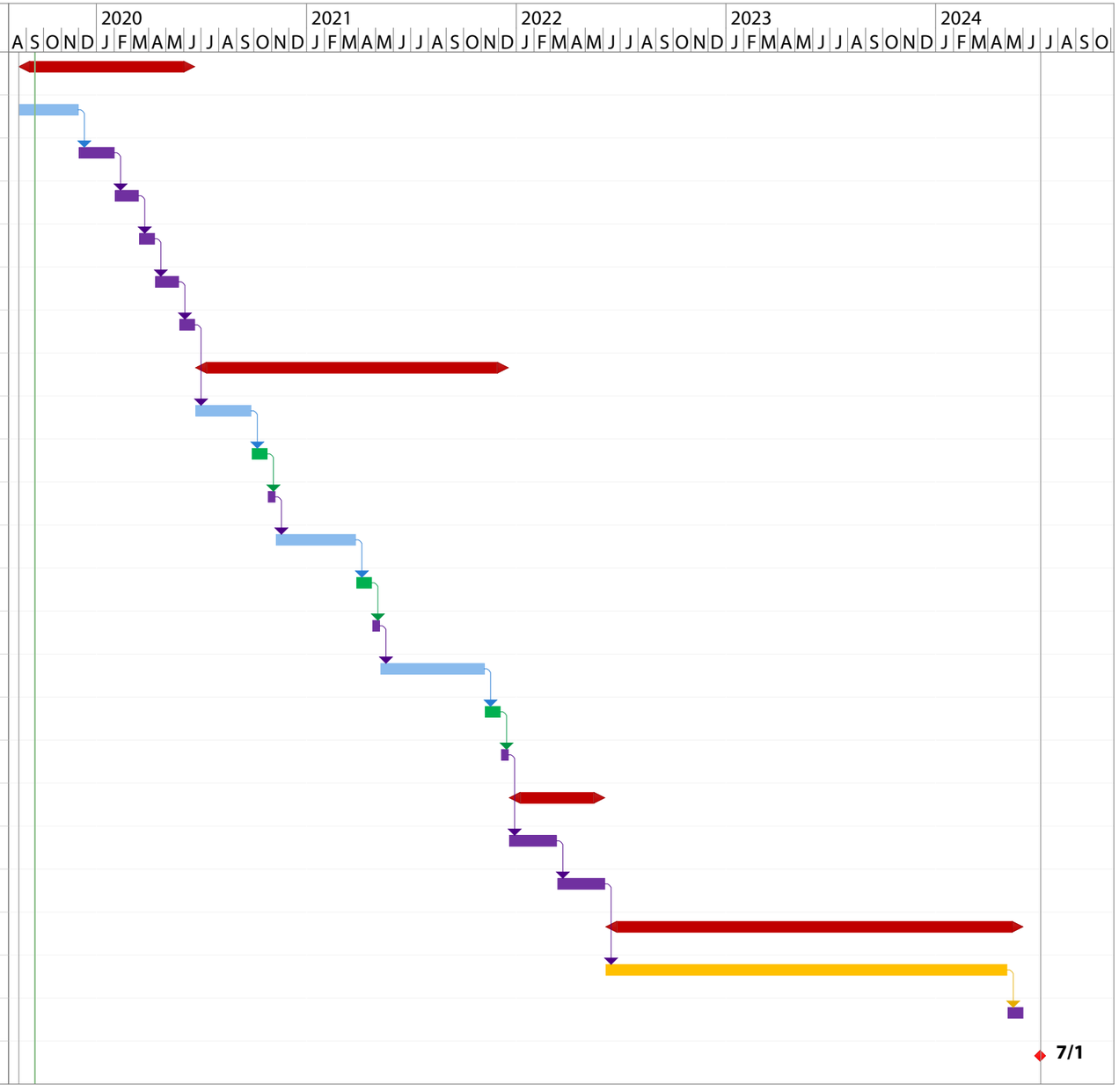
As a part of the assessment of the feasibility of a $27 million renovation of the existing library, Jayson Architecture evaluated the overall schedule for the project. Working backwards from the Measure S bond deadline in summer 2024, we established the key phases required to complete the project. We determined that the timeline is adequate for a project of this scale, however, does not allow for much flexibility or schedule delay.

In addition, establishing this schedule is critical to define the construction cost of the project, because the rate of cost escalation is established by the midpoint of construction. Mack5 has projected an annual escalation rate of approximately 5% per year, which means a nearly 20% rate of escalation is factored into the cost estimate based on the current schedule outlining a 3 year duration to reach the midpoint of construction. The cost of the escalation currently included in the construction estimate is approximately $3 million. Any further delay to the schedule would result in increased escalation of construction costs on the order of $1 million per year, increased projects soft costs of approximately $500,000 per year, and further cuts to the library and community's programmatic goals. The cost of delay is further compounded with each additional year added to the schedule.

We have provided the schedule in two formats, a simplified graphic timeline including work completed by the City to date, as well as a detailed Gantt chart format schedule showing the relationship of each phase of the project to the overall schedule between the date of this report and the bond deadline.



ID	Task Name	Duration	Start	Finish
1	**Concept, Budget, & Scope: 10 Months**			
2	Cost Assement Study	15 wks	Mon 8/19/19	Fri 11/29/19
3	City Council Review	9 wks	Mon 12/2/19	Fri 1/31/20
4	RFP Preparation	6 wks	Mon 2/3/20	Fri 3/13/20
5	RFP Posting	4 wks	Mon 3/16/20	Fri 4/10/20
6	Interviews and Proposal Evaluation	6 wks	Mon 4/13/20	Fri 5/22/20
7	City Council Award of Contract	4 wks	Mon 5/25/20	Fri 6/19/20
8	**Design & Engineering: 18 Months**			
9	Schematic Design	14 wks	Mon 6/22/20	Fri 9/25/20
10	Schematic Design Cost Estimate	4 wks	Mon 9/28/20	Fri 10/23/20
11	City Review	2 wks	Mon 10/26/20	Fri 11/6/20
12	Design Development	20 wks	Mon 11/9/20	Fri 3/26/21
13	Design Development Cost Estimate	4 wks	Mon 3/29/21	Fri 4/23/21
14	City Review	2 wks	Mon 4/26/21	Fri 5/7/21
15	Construction Documents	26 wks	Mon 5/10/21	Fri 11/5/21
16	Construction Documents Cost Estimate	4 wks	Mon 11/8/21	Fri 12/3/21
17	City Review	2 wks	Mon 12/6/21	Fri 12/17/21
18	**Pre-Construction: 6 Months**			
19	Permitting	12 wks	Mon 12/20/21	Fri 3/11/22
20	Bidding & Award of Contract	12 wks	Mon 3/14/22	Fri 6/3/22
21	**Construction: 24 Months**			
22	Construction	100 wks	Mon 6/6/22	Fri 5/3/24
23	Commissioning & Move In	4 wks	Mon 5/6/24	Fri 5/31/24
24	**Bond Deadline**	0 days	Mon 7/1/24	Mon 7/1/24



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