



**2014**  
**Project Achievement Award**

**Building Renovation**  
**\$11 - \$50 Million**

*Presented to*

San Bernardino Community College District

*for the*

San Bernardino Valley College  
Business Building Renovation  
San Bernardino Community College District  
San Bernardino, CA

*to recognize outstanding achievement  
in the practice of construction management*

# 2014

## San Bernardino Valley College Business Building



Domingo Camarano

Kitchell

1/1/2014

# General Information

***Project/Program Name and Location:***

San Bernardino Valley College Business Building  
701 South Mount Vernon Avenue  
San Bernardino, California 92410

***Constructed Value:*** \$11 M to \$50 M

***Project Type:*** Building Renovation

***Optional Awards Categories:*** Design Quality Award

***Project Completion Date:*** Construction completed April 2013  
Building dedicated August 2013

# Tab 1: Team Information

## ***Owner/Client:***

Scott Stark, Vice President of Administrative Services  
San Bernardino Community College District  
P: 909.384.8958  
E: [sstark@sbccd.cc.ca.us](mailto:sstark@sbccd.cc.ca.us)

## ***Construction Management Firm:***

Michael Villegas, Senior Project Manager  
Kitchell/BRj  
P: 909.863.8020  
E: [mvillegas@kitchell.com](mailto:mvillegas@kitchell.com)

## ***CM's Role:***

Program Manager – Kitchell served as the program manager for a series of expansion and improvement projects at the San Bernardino Community College District campuses. The projects were funded through Measure M Bond, which was passed by the voters in 2008. Among the projects funded by Measure M, Kitchell/BRj provided project and construction management services for the renovation and modernization of the San Bernardino Valley College Business Building.

## ***Architect/Engineer:***

Michael Stephens, Project Architect  
DLR Group  
P: 909.682.0470  
E: [mstephens@dlrgroup.com](mailto:mstephens@dlrgroup.com)

## ***Builder:***

Cesar Cruz, Project Manager  
Doug Wall Construction, Inc.  
P: 760.610.3169  
E: [cesarcruzdwc@aol.com](mailto:cesarcruzdwc@aol.com)

## ***Design-Builder:***

N/A

## ***Other Key Stakeholders:***

Bruce Baron, Chancellor  
San Bernardino Community College District  
P: 909.382.4000  
E: [bbaron@sbccd.cc.ca.us](mailto:bbaron@sbccd.cc.ca.us)

## ***Award Recipient(s):***

Domingo Camarano, Regional Executive  
Kitchell  
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E: [dcamarano@kitchell.com](mailto:dcamarano@kitchell.com)



*Rendering of renovated San Bernardino Valley College Business Building demonstrates glass walls used to maximize natural light.*

# Tab 2: Description

## ***Delivery Method:***

Kitchell/BRj served as the construction manager and owner's representative for this Hard Bid project.

## ***Project Type:***

Building Renovation – the Business Building was originally built in 1960. Renovation required taking the building down to its skeletal frame. The modernized building is now fully ADA compliant, meets California seismic and structural regulations, accommodates the district's needs for classroom and lecture spaces, boasts the latest A/V and Internet technology, and offers a professional conference center available to the local community.

## ***Market Sector:***

Education – the Business Building and Conference Center is located on the San Bernardino Valley College campus.

## ***Final Construction Cost:***

The project was completed within budget.

Total construction cost – \$9,929,430

Total project cost – \$16,045,727

## ***Schedule:***

Due to challenges with the installation of metal panels on the exterior of the building, the project was not delivered by the original June 2013 deadline. However, it was completed and operational by Aug. 15, 2013, in time for the start of the 2013-2014 school year.

## ***General Description:***

San Bernardino Community College District invested \$16 million for a complete overhaul of the aging Business Building on the campus of San Bernardino Valley College. Renovation of the 53-year-old building began in June 2012 and was completed in August 2013. When the two-story building was originally built, form most definitely followed function. Its concrete walls, floors and roof made it not only look outdated and dissimilar from the rest of the campus, but also difficult to integrate necessary IT upgrades as the college grew.

Renovation involved taking the building down to its skeletal frame. Glass walls replaced much of the solid concrete to make better use of natural light and connect the interior of the building with the outside environment. A metal cladding system was used to cover brick and concrete, and create a modern façade that complements the overall aesthetic of the campus. An entry canopy was added to redefine the entrance to building. Colors, materials and landscaping were all selected specifically to be contextual and consistent with the campus-wide improvements.

The new Business Building balances aesthetic with function. It has flexible classroom spaces to accommodate a variety of classes from economics to English to humanities. The 19 new classrooms and

lecture rooms are now fully compliant with ADA standards, can seat between 36 and 40 students, and feature updated audio visual and IT equipment. A teleconference space has been equipped with webcams to stream courses online. The building also has 13 faculty offices and 6 computer labs. Students studying computer science and network architecture will be able to gain hands-on learning in the first-of-its-kind Cisco Systems demonstration lab.

In addition, the college has a 2,700-square-foot professional conference facility that can be used by the school as well as the surrounding community. The space, which can be segmented into three smaller spaces of varying sizes, includes a catering kitchen and the latest audio/visual technology. The district hopes to use the conference center as a way to build relationships between local businesses and the college, and create networking opportunities for students.



*Renovation of the Business Building included building out a 2,700-square-foot conference center that is available for use by local businesses and organizations.*

***Optional Award Categories being submitted for (if any):***

This project has been submitted for a Design Quality Award. A narrative describing the design qualities that warrant recognition are included in Tab 5 of this award nomination.

# Tab 3: Overall Management

## *Overall Project Management Efforts:*

Kitchell was originally tasked with providing Program Management services for the San Bernardino Community College District's Measure M Bond program. The bond program was passed in 2008 and the district saw the available bond funds shrink by nearly half in the midst of the economic recession. The district turned to Kitchell for help with eliminating non-essential projects from the master plan. Kitchell successfully identified opportunities for the district to save money and even offset costs so that much needed improvements to the San Bernardino Valley College campus, such as the Business Building, were not jeopardized.

### *Project Team Roles and Responsibilities*

Senior Project Manager **Michael Villegas** acted as an extension of the district and college's staff to provide leadership and direction to project within the constraints of the scope. He was responsible for establishing the project schedule and budget. He also provided daily management control and problem-solving.

Program Manager **Diana Johnson** was accountable for reporting program information to the district. She also planned, directed and ensured the effective execution of project or construction management services for the entire program.

Project Engineer **Sweta Dedania** provided technical support related to scope, schedules and budgets to the project manager. Sweta also served as a liaison to maintain an effective and professional working relationships with the client, architects, engineers, contractors, suppliers, etc.

### *CM Responsibility*

Kitchell/BRj provided project and construction management services, including implementation plan development, architect and general contractor selection, master budget and schedule development, cash flow analysis, budget and schedule control, design management, and estimating.

### *Lines of Communication*

Accountability is especially critical for projects funded by taxpayer dollars. Kitchell/BRj maintained daily communication with all vendors working on site. The entire project team also met on a weekly basis, and Kitchell/BRj then provided weekly and monthly reports to the client. Daily reports encompassed activities performed, important events of the day, site visitors, materials received, crew size, weather data, and issues to resolve. Monthly reports included an executive summary, budget and schedule (actual vs. planned), narrative discussions of project progress, current issues, and a forecast of the upcoming activities. Kitchell/BRj also included logs detailing change orders, change order exposure, RFIs and other detailed information.

### *Approach to Conflict Resolution*

To minimize the potential for and/or impact of conflicts on the project, Kitchell/BRj regularly met with the general contractor and any sub-contractors to resolve issues in a professional manner. Having more than 60 years of construction experience and knowledge, Kitchell's



involvement was welcomed and helpful when resolving issues. All conflicts were resolved quickly, and as a result there were no claims during or after the project.

### *Breakdown of CM Staff*

During pre-design, Kitchell/BRj was focused on meeting the district's needs for classroom sizes and incorporating the type of technology needed to allow the college to offer web-based courses. Kitchell/BRj was proactive about documenting information throughout the construction phase for LEED Silver certification. During the final closeout of the project we also rolled up our sleeves cleaning and loading in furnishings to ensure the building was ready for the start of the school year.

### **Quality Management:**

Kitchell puts our Quality Assurance expertise, along with our 200-page copyrighted QA Policies and Procedures handbook, to work from the beginning of each project. For example, Kitchell deploys a rigorous process during the design phase that considers budget, time frame, location, climate, roofing materials and delivery strategies to determine if a project can be built as designed. We systematically scrutinize every detail from preconstruction to close out.

### **Cost Management:**

When public financing is at stake, it was imperative to accurately document and communicate the project's progress. Kitchell /BRj understood the district's need for accurate and timely reporting from the earliest stages all the way through to project completion. Our team estimated, validated and negotiated pricing of bulletins and change order requests on behalf of the owner. In addition, we developed rough orders of magnitude (ROM) for owner-requested changes for the district's review and decision making.

Kitchell/BRj made certain RFI's with cost impacts were submitted in a timely manner, in the format called for in the specifications, and with appropriate supporting documentation. We reviewed labor rates in accordance with prevailing wage laws, ensuring the mark-up on labor was consistent with contract specifications. We verified material pricing and equipment rates, and advised the district of what was an industry standard acceptable cost for the work outlined in change orders. Kitchell/BRj also required written "No Cost Impact" signatures from trade contractors on bulletins and RFI's that had no cost, so that the trades could not demand compensation at a later date after the issue was presumed to be closed.

In addition, Kitchell/BRj closely monitored the client's cash flow to ensure contractors, subcontractors and vendors were paid promptly. When the final shipment of metal panels used on the exterior of the building was delayed due to non-payment, for example, Kitchell/BRj worked with the district to expedite the appropriate payment to release the shipment.

### *Change Orders:*

Owner Added Scope	4.5%
Errors and/or Omissions	2.5%
Unforeseen Conditions	2%
<b>TOTAL CHANGE ORDERS</b>	<b>9%</b>

The lowest responsible bid received was approximately \$900,000 under the construction budget. This provided the district with additional monies for Owner Added Scope that was unanticipated in the original design. Kitchell/BRJ was rigorous in negotiation of project change orders and was able to minimize overall submitted change order proposal in excess of 10%. The following tables present all project change orders and identifies those related to changes in the building versus the site:

*Table 1: Total Project Change Orders*

TOTAL CONTRACT	TOTAL CHANGE ORDERS SUBMITTED	TOTAL CHANGE ORDERS NEGOTIATED	TOTAL PROJECT CHANGE ORDER (%)
\$10,009,159	\$1,646,373	\$759,159	8%

*Table 2: Project Change Orders – Site*

TOTAL UNFORESEEN CHANGE ORDERS	TOTAL E&O CHANGE ORDERS	TOTAL DISTRICT ADD/DELETE SCOPE CHANGE ORDERS	TOTAL AGENCY/ CODE REVISIONS CHANGE ORDERS	
\$16,599	\$6,307	\$62,872	\$6,181	
2%	1%	8%	1%	PERCENT AGAINST TOTAL CHANGE ORDER
0%	0%	1%	0.06%	PERCENT AGAINST THE TOTAL CONTRACT

*Table 3: Project Change Orders – Building*

TOTAL UNFORESEEN CHANGE ORDERS	TOTAL E&O CHANGE ORDERS	TOTAL DISTRICT ADD/DELETE SCOPE CHANGE ORDERS	TOTAL AGENCY/ CODE REVISIONS CHANGE ORDERS	TOTAL ADMIN CONTRACT/ DISTRICT ALLOWANCE	
\$139,004	\$192,656	\$309,129	\$28,467	-\$4,220	
18%	25%	41%	4%	-1%	PERCENT AGAINST TOTAL CHANGE ORDER
1%	2%	3%	0%	-0.04%	PERCENT AGAINST THE TOTAL CONTRACT

### **Schedule Management:**

Kitchell/BRj was responsible for setting and maintaining the project schedule. Several factors had to be considered for establishing the project schedule. First and foremost was how to facilitate a major construction project in a high traffic area of an active campus. Second was the timing for delivery of materials such as the metal exterior panels and the installation of audio visual equipment such as smartboards. Kitchell/BRj met with the entire project team each week to monitor schedule issues, make adjustments as needed, and report progress updates and changes to the client.

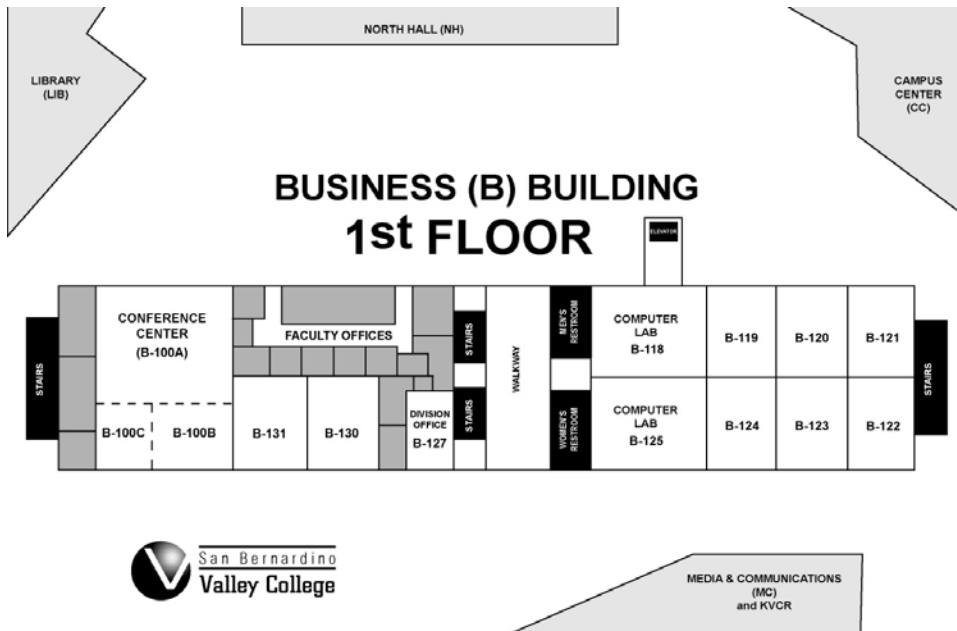
Kitchell/BRj allowed for certain contingencies within the overall project schedule. The team had internally set a deadline for delivery by late June. Delays during the installation of the metal panels caused them to miss their internal goal, but the project was delivered by mid-August as required by the client.

### **Complexity:**

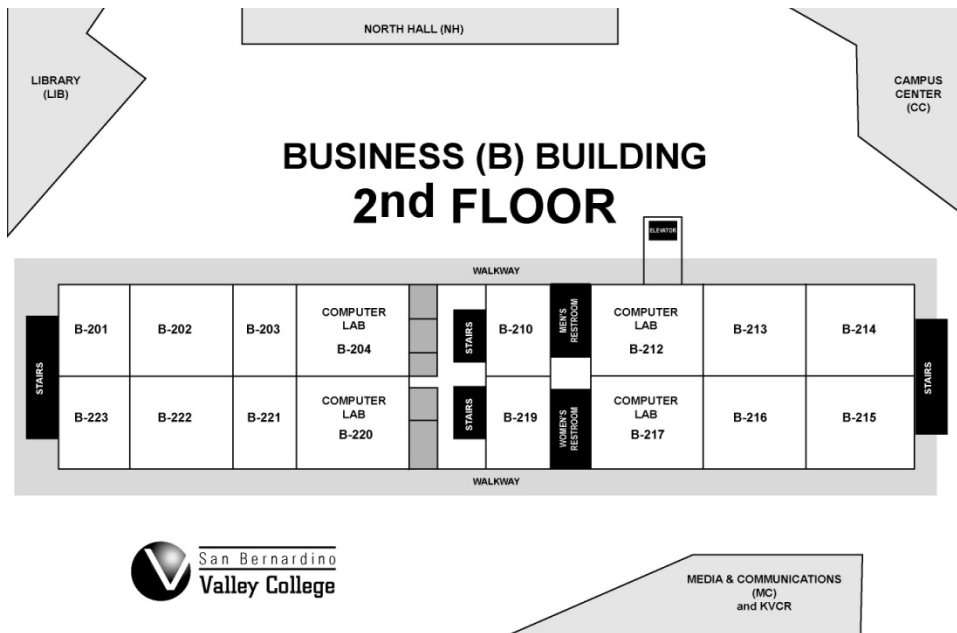
#### *Classroom Space*

The San Bernardino Valley College campus had not been updated since the 1970s, and the Business Building was virtually unchanged in its 53 years. Not only did the building need to be modernized, but the configuration of classroom and lecture spaces also had to be updated to

meet the school’s forecasted enrollment. Kitchell/BRj and DLR Group worked with the college’s leadership team to ensure the classroom sizes would fit within the renovated structure.



*Kitchell/BRj and DLR Group developed a solution for configuring the needed spaces – classrooms, labs, faculty offices – and add a new conference center within an existing structure.*



### *Antiquated Materials*

The existing structure was built in the 1970s using “waffle board” formwork. At that time this method of construction was widely accepted and used as a cost savings for building concrete buildings. The building’s original concrete may have saved the district money at the time but it presented a challenge for tying in new materials. The concrete was too thin and could not support bolting in the metal exterior panels.

### *Building Façade*

Each of the metal panels used on the exterior had to clip into a system and required a three-person crew one hour to install. The more than 400 panels were originally scheduled to be installed in about two weeks. Even with the general contractor and installer working seven days a week, however, that installation turned into a more than two month process to measure, cut and install each panel.

### ***Innovation and Creativity:***

#### *Framing Solution*

To address the issue of the overly thin waffle board concrete, Kitchell/BRj worked with the general contractor to create an innovative framing solution. Modern pneumatic drills and anchors were not permitted by the Division of State Architect, due to the fragility of the existing structure. The existing concrete thickness caused each metal stud framing member to be individually pre-drilled and anchored into the structure. Unfortunately, the inherit cost saving measures of strategically placed thickened concrete cross sections used 40 years ago became the nemesis of current construction methods.

In collaboration with the contractor, who self-performed the framing scope of work, we developed a framing system which “boxed in” each waffle depression, creating a new structurally sound uniform concrete structure depth. Since the contractor was able to self-perform the framing activities, we worked together to add an additional 16-man crew to construct the “boxed-in” structure concurrently with all other construction activities. This allowed the overall project schedule of framing activities to remain on schedule.

#### *On-site Fabrication*

The panel system was manufactured by an Arizona-based vendor that sent a representative to field measure the project several times. Despite this advance planning, the unique positioning of each panel required significant customization once the panels arrived. It became clear that the installation would take more than two or three weeks as originally scheduled. Kitchell/BRj considered several options and determined that on-site fabrication would be the fastest, most efficient approach to adaptation and installation. CRS Sheet Metal brought their entire system to the job site and had five crews working seven days a week to get the panels installed. The installation of the panels slowed the project but did not prevent Kitchell/BRj from delivering the Business Building on time.

#### *Sustainability*

The district had included sustainability as one of its priorities for all renovation and construction throughout the campus. Sustainable features of the building include low VOC materials, low-water-use bathrooms, and a Daylighting Control System that adjusts electrical light throughout the day based on available natural light. Existing landscaping has been replaced with drought tolerant, low-water-use native plants. The building has been submitted for LEED Silver certification.

### ***Customer Service:***

Because Kitchell serves as both the Program Manager and Construction Manager for the district, we were able to use our knowledge of the master plan and familiarity of the campus to the best advantage

for the client. We met with the client each week to communicate any schedule changes and provide progress updates. The college used social media and direct email to directly relay this information to students, faculty and staff.

When it came time to move into the newly renovated building, Kitchell/BRj and the contractor pitched in to provide extra manpower to load in desks, computers, smartboards, and furnishings. The move in process typically takes the college more than a month to complete, using the school's resources. The delays created by the complexities of the panel installation required compressing that move-in schedule to less than two weeks. Kitchell/BRj, the contractor and the school's custodial team also went through and cleaned the new building several times to ensure it was spotless for the dedication and first day of classes.

The district also wanted to showcase its new conference center during the dedication event. Kitchell/BRj staged a sample presentation in the new facility. We created a scavenger hunt to make the grand opening event more interactive and send guests searching through the building to locate webcams that can be used to stream classes online.



*It was "all hands on deck" to get the college moved into the new space in time for the start of the school year.*

### ***Customer Satisfaction:***

Kitchell/BRj was actively involved in helping the district host a grand opening event attended by nearly 300 people. The district acknowledged all of the project team members in remarks made at the event. We also received personal notes of thanks from Craig Petinak, Director Office of Marketing & Public Relations. Copies of these letters are included in Tab 6 of this nomination.

# Tab 4: Project Outcome

## **Schedule:**

Actual Design Start Date:	May 26, 2010
Actual Design Completion Date:	May 24, 2012
Original Planned Design Duration:	517 days
Actual Design Duration:	517 days
Design Phase Percent Project Growth:	0%

Actual Construction Start Date:	June 15, 2012
Actual Construction Completion Date:	August 9, 2013
Original Planned Construction Project Duration:	265 days
Final Actual Construction Duration:	419 days
Construction Phase Percent Project Growth:	12%

## **Changes in the Original Schedule:**

By working with the contractor to develop a solution for addressing the waffle board concrete panels, we were able to maintain the project schedule. We had originally set a project delivery date for mid-June to allow the college to manage the move-in process. However, installation of the exterior metal panels affected that original delivery date. We effectively minimized these delays by bringing the necessary equipment and manpower on site to accomplish the customization and installation. And, when construction was complete, our team jumped to the aid of the college, moving in furniture, installing smartboards and white boards, testing A/V equipment, and cleaning then cleaning again.

## **Cost:**

Schematic design estimate of construction cost	\$9,487,251
Design development estimate of construction cost	\$9,919,760
Construction document estimate of construction cost	\$10,196,852
Initial construction contract amount at award of initial GMP	\$9,250,000
Final construction contract amount inclusive of all change orders	\$10,098,321
Change orders (%)	9%*

\*Owner Added Scope - 4.5%; Errors and/or Omissions – 2.5%; Unforeseen Conditions – 2%

## **Claims Results:**

There were no claims on this project, and fewer than 300 RFIs.

## **Safety Results:**

There were no lost work time injuries reported on this project. The construction management team was inspecting the site on a daily basis to identify any possible hazards and potential safety concerns. Personal protective equipment and all appropriate actions were enforced, resulting in a safe and successful project.

**Total Hours Worked:**

Number of Recordables: 0

Total Recordable Incident Rate: 0

DART: 0

# Affirmation

Nomination is submitted by:

Domingo Camarano, Regional Executive

Kitchell

Wednesday, Nov. 13, 2013

P: 909.724.4119

E: [dcamarano@kitchell.com](mailto:dcamarano@kitchell.com)

In submitting this application, I affirm that to the best of my knowledge, the information that is provided in this nomination is accurate and correct.

Signature: \_\_\_\_\_

Print name: \_\_\_\_\_

Date: \_\_\_\_\_ Phone: \_\_\_\_\_



# Tab 5: Optional Awards

## Design Quality Award

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### ***Excellence in Permitting and Plan Checking***

*Describe your specific role in proactively identifying potential roadblocks and successfully coordinating all necessary approvals (including environmental, local municipal, local fire, state agencies, etc.). Describe your activities that contributed to expedited approvals.*

Because the scope called for renovating an existing building, the design had to address structural issues, such as the cast-in-place concrete walls, floors and ceilings. DLR Group proactively worked with DSA to minimize potential roadblocks to plan approval and present possible solutions to the concrete problem. Preliminary meetings at the schematic/design development phase provided a means to identify any issues that were of concern to DSA for discussion and further development. The entire design team participated in the “intake” meeting with DESA to make sure all of the required submittals were complete and review of the documents could proceed smoothly.

In addition, Kitchell established a process for a monthly meeting attended by the college’s executive leadership and architects working on other projects throughout the campus. The primary purpose of the meetings was for design teams to review progress and streamline client approvals. These meetings also allowed design teams to collaborate, share knowledge, communicate potential roadblocks to approvals, and discuss pending issues.

### ***Excellence in Construction Documentation***

*Describe key changes made to the original design due to constructability issues. Describe any actions you took to avoid or reduce documentation errors and omissions that otherwise might have resulted in changes to the original, as bid, construction schedule and cost.*

The existing concrete materials required modifying the way any components for the renovated building were anchored into the floors, walls and ceiling. The team had to develop a means of bridging between concrete joists to facilitate full height walls to address the college’s concerns about sound continuation within the concrete structure. The solution involved an ingenious use of simple building materials, running anchors through the joists but never in the bottoms or tops, creating a new plane to which all the walls could be attached.

The existing building also meant DLR Group had to work within fixed parameters and reconfigure the interior walls to accommodate the college’s needs. The design team had to create an appropriate number of classroom, lab, faculty office, and instructional support spaces, while making room for building a new conference center. The goal was to not reduce the number of units but make them more suitable for learning. DLR Group used a smart arrangement of space. For example, there was an area that was a logical choice for faculty offices, and there was a space that was the logical choice for the conference center. Working collaboratively with the college designers arrived at a space utilization plan that benefitted all of the curriculums.

The team also was limited with the number of openings that could be cut into the concrete for all of the cabling and lighting systems to ensure the building could meet the college's technology needs. Thus, DLR Group worked with the contractor and subcontractors to determine the best location and use for the limited number of routings that could be created. It required a significant amount of collaboration among all the trades to determine how, when, and where these openings could be shared.

### ***Expedited Submittal and RFC***

*Provide the total number of RFCs and submittals received from the Contractor. Report the average number of days from receipt to delivery of response for RFC's and submittal reviews (inclusive of your subconsultants' turn-around time for both). Describe any specific actions you took to expedite these processes.*

#### ***Requests for Information***

Recognizing that time is always of the essence, designers were proactive about responding to the 303 RFIs on this project. Most RFIs were answered the same day, and the average response time was less than three days. DLR Group also was diligent about following through with responses for any RFIs that could not be immediately addressed.

#### ***Submittals***

Most of the 147 project submittal reviews required less than one week for responses. Some deferred approvals submitted to DSA lagged on for as much as a month. Those factors are planned for and addressed in the project schedule.

The design phase of the project was started and completed according to schedule.

### ***Partnering Spirit***

*Describe your specific actions to develop and maintain a spirit of teamwork and mutual responsibility for achieving the Owner's goals for the project.*

DLR Group actively participated in the monthly campus-wide project meetings where information, progress updates, and agency approvals were discussed. Designers also collaborated with the contractor and construction management team, ensuring information flowed back and forth through weekly job site meetings.

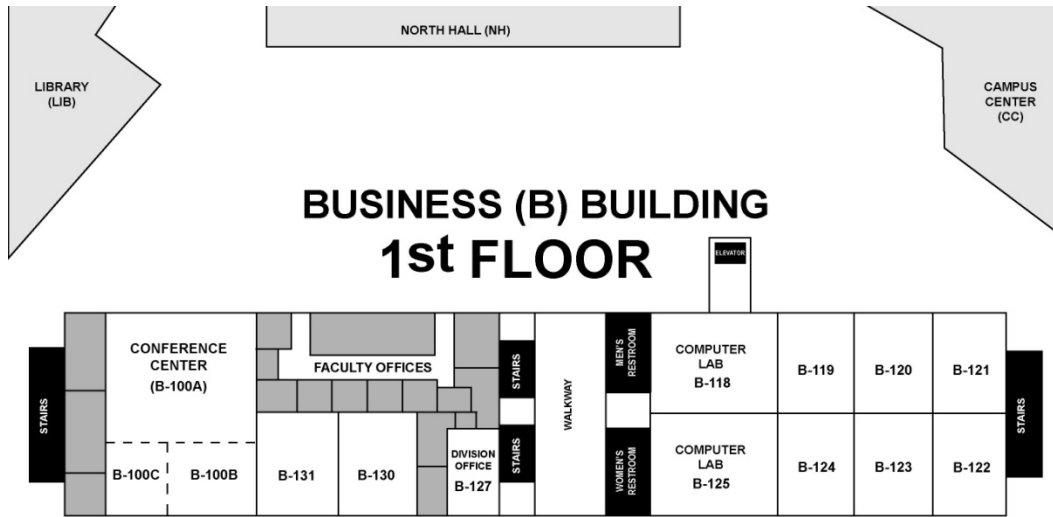
As with any retrofit, you will run in to unforeseen issues. With the Business Building, the process was pretty straightforward but the project itself was very complex. It's necessary for the architect to be involved with exploring alternative means for these types of situations. DLR Group was part of the solution for addressing the major structural issues with this project.

### ***Design Firm***

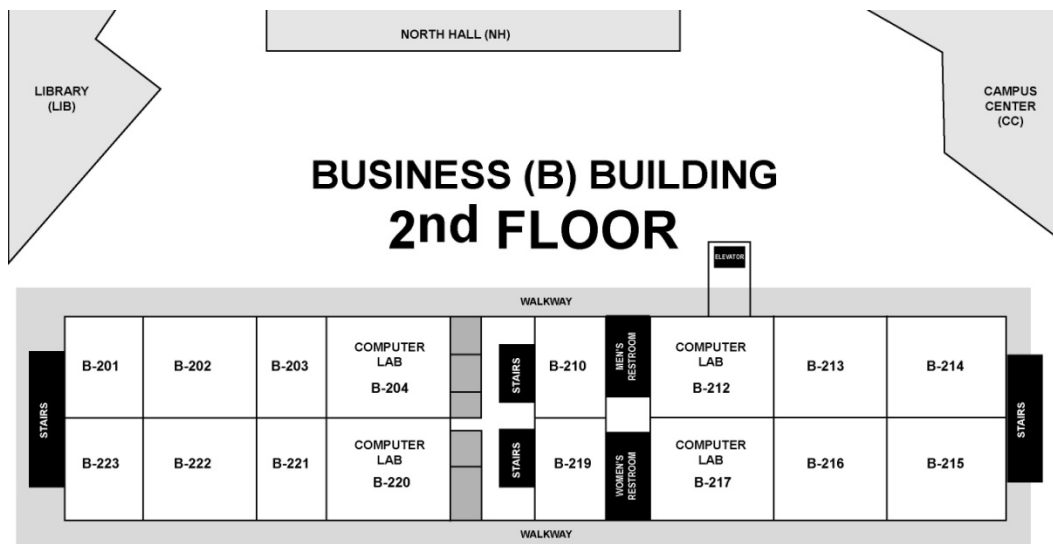
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# Tab 6: Appendix

[Client thank you letters]



*Kitchell/BRj and DLR Group developed a solution for configuring the needed spaces – classrooms, labs, faculty offices – and add a new conference center within an existing structure.*





*San Bernardino Valley College Business Building was originally built in the 1970s and was in dire need of improvements to accommodate current and projected curriculum.*





