

Freudenthal Library Renovation



Trinidad, Colorado



PROGRAM PLAN

Prepared for:
TRINIDAD STATE JUNIOR COLLEGE

April 15, 2020



SMITHGROUP

ACKNOWLEDGMENTS

This report was prepared with the valued input from Trinidad State Junior College Administrators, Faculty, Staff and Students. We, the Planning Team, are indebted for the College’s vision and contributions.

TRINIDAD STATE JUNIOR COLLEGE

Administration

Dr. Rhonda Epper, President
Lynette Bates, Vice President of Academic Affairs
Lorrie Cappellucci, Vice President for Administrative Services
Kerry Gabrielson, Vice President for Student Services
James Kynor, Vice President, Valley Campus
Linda Perry, Executive Assistant to the President

Academics

David Barrack, Faculty
Evert Brown, Dean of Arts and Sciences
Keith Gipson, Dean of Career and
Technical Education
Lori Rae Hamilton, Director of Nursing
Loretta Martin, Museum Director
LiAnn Richardson, Faculty
Calvin Smith, Library Coordinator

Athletics

Mike Salbato, Director

Budget

Shannon Shiveley, Director

Information Technology

Ira Williamson, Computer Technician
Doug Bak, Director

Institutional Research & Assessment

Annette Lujan

Physical Plant

Al Malespini, Facilities Director

Student Services

David Hardman, Director of Student Life,
Recruiting & Outreach
Krystalee Moreno, Testing Center Director
Phyllis Walker, Director of Student Success
Center

TSJC Students

Katie Gerhard
Andie Ott
Niyem’e Smyer-Williams
Erminia Velarde

The Planning Team would also like to acknowledge Jay Jacobsen; Marti Hackett and Jeff Crosston with Trinidad Welcome Center; the City of Trinidad Public Works; Marilyn Leuszler of Space to Create; Wally Wallace, Economic Development Director of the City of Trinidad; Geoff Peterson, Executive Director for the Center for Community Innovation in Raton and board member of the Trinidad Creative District; Mickie Lewis-Gemici, Regional Director of Southern Colorado SBDC; Miles Hall, music producer and sound consultant; and Terry Zarsky and Jason Kowell, librarians with Pikes Peak Library District, and the staff of Library 21C, Colorado Springs for their time and resources.

PLANNING TEAM

THIRD PARTY REVIEW

Hall Architects

Angeline Aradanas-Hall, Principal Planner
Matthew Burnette
Charlè Gieck
Stephen Hall, Lead Auditor

SMITHGROUP

Steve Schonberger, Higher Education Strategist

Acknowledgments

I. Overview

A. Executive Summary	1
B. Description of Academic Programs, Support Services Programs	4
C. Relationship to the Facilities Master Plan	7

II. Justification

A. Existing Conditions	8
i. Current Program Enrollment	
ii. Assessment of Space Functionality	
iii. Current Space Utilization by Classroom Hours of Use and Percent Station Utilization	
iv. Facilities Condition Index	
v. Specific Health / Life Safety Deficiencies	
B. Changes and Projections	17
i. Enrollment Projections by Program or Department	
ii. New or Modified Academic Programs / Instructional Methodology	
iii. Changes to Class Sizes	
C. Total Space Requirements	19
i. Planned Program Space Utilization	
a. Number of Student Stations Required	
b. Room Area Needs by Function	
ii. Total ASF and GSF Needed	
D. Alternatives Analysis	22

III. Implementation and Design Criteria

A. Spatial Relationships – Conceptual Design	23
i. Diagrammatic Plans	
ii. Conceptual Floor Plans	
B. Site Improvements and Requirements	30
C. Design Requirements	31
i. New Utilities Required	
ii. Building Systems and Any Applicable Performance Criteria	
a. Planned Green Building Goals	
iii. Architectural Design Features	
D. Project Schedule, Cost Estimates, and Financial Analysis	37
i. Project Schedule	
ii. Cost Estimates	
iii. Financing Explanation	

IV. Appendices

A. Supporting Documents	
B. TSJC Classroom Utilization	
C. Room Data Sheets	
D. Third Party Review - The Third Party Review letter will be sent under separate cover.	

I. OVERVIEW

I.A. EXECUTIVE SUMMARY

This report documents the program plan phase for the renovation of the Samuel Freudenthal Memorial Library for Trinidad State Junior College (TSJC) located on the Trinidad campus in Trinidad, Colorado.

The purpose of this program plan is to identify the space required by the proposed project. This Capital Development Project will include the two-phase renovation of the three story building's existing 33,934 gross square feet (GSF). The first phase of the work will organize the building to include: three general purpose teaching classrooms and associated storage; office spaces to support TSJC's Student Success Center and Testing Center, sponsored by Student Services; TSJC's Library operations including offices and storage; moving out some Library collections temporarily to storage offsite; newly created study rooms including a transformative high bay study lounge; newly-created Business Incubator and Makerspace; newly created gallery lounge space; faculty offices; an office for Campus Security; a replacement Meeting Room; and, initially, the Louden-Henritze Archaeology Museum, its exhibit spaces and associated storage. The second phase work will entail moving out the Museum spaces to another campus site, and reassigning these spaces to Library operations. The project will also involve refreshing the 2,919 GSF central exterior courtyard, which will receive a small low profile vestibule structure for egress; a new tall metal and glass screen structure with signage at the front of the existing main entrance; and a set of exterior stairs for egress out of the northwest Study Lounge.

In the winter of 2020, the firms of Hall Architects and SmithGroup worked with TSJC administrators, faculty, staff, students and community stakeholders to understand the College's concerns with the functionality and condition of the 53 year-old building, as well as its assets. The College presented their vision of the programs they want to see housed in the building. From the conclusions of the past TSJC Facilities Master Plan reporting 20,000 assignable square feet (ASF) surplus of building and recommending the renovation of the Freudenthal Library, the College wanted to examine repurposing some of the building's large classrooms into collaborative spaces that can benefit Trinidad State's Business programs as well as the community. The College also stated their interest in creating more purposeful contemporary study spaces, particularly for TSJC student athletes; resident and non-resident students voiced their need for having study spaces be available into the evening hours. Safety was an on-going topic of discussion throughout the course of this Program Plan phase, as a matter of building usage, but also to highlight the building's interior layout and its physical limitations for effective sightlines. Aesthetic features and building identity were also reviewed. Improving the building's main entrance as a way of attracting campus residents and visitors was a priority.



View of the Samuel Freudenthal Library's main entrance.

Interviews with both TSJC's Library Coordinator and the Director of the Loudon-Henritze Museum of Archaeology helped to ascertain the desired qualities, such as a climate controlled environment for some of their respective specialized spaces involving the handling and care of rare materials. Interviews with the Testing Center Director helped to understand the specific space guidelines and requirements needed for an authorized testing facility.

To gain insights into applications to this project, Hall Architects additionally interviewed community economic development and industry leaders, the manager of a local arts cooperative, and visited with librarians of a metropolitan area public library district that operates makerspaces and business centers out of some of their facilities as outreach efforts to fledgling entrepreneurs.

Additionally, a space utilization analysis of the 19 general purpose classrooms on the Trinidad State campus was independently performed by SmithGroup to understand TSJC's classroom inventory and usage. The analysis concluded that there was a surplus of classrooms during the period of Fall 2019. On average, 43% of the student stations (seats) are occupied. This is lower than the typical utilization expectation for a community college of 30 hours per week with 65% of the stations occupied. The State's target classroom utilization is 68%. The current five large classrooms of the Freudenthal Library building, ranging in size between 636 ASF to 1,289 ASF (average 922 ASF), reported an even lower utilization rate Fall 2019, confirming that the amount of classroom space campus-wide should be reduced.



Throughout the course of more group discussions and individual interviews, revised schematic space scheme developments and associated cost evaluations, the team worked to achieve the College's desired goals. It was decided that three of the original classrooms would be retained, with attention paid to maintaining their relatively large footprints to accommodate current pedagogy and flexible teaching. Reassigning space for a new Makerspace and Business Incubator would allow Trinidad State to build on their certificate programs in entrepreneurship and marketing, while developing computer information systems curriculum with the technical emphasis. The College would like to further a current Strategic Plan goal of strengthening existing partnerships and developing new relationships, particularly with Trinidad Space to Create and the City of Trinidad as a Certified Colorado Creative District. The creation of space to display curated collections through this renovation project has the potential for outreach to not only the TSJC community and patrons interested in local history, particularly through TSJC's renowned

signature gunsmithing program and the Library's genealogy resources, but also to a larger audience invested in research and preserved history. In summary, a total of 20,190 ASF was identified for the Freudenthal Library Renovation project, broken down into 3,555 ASF for classroom space, 1,279 ASF in teaching laboratory space, 5,660 ASF in office space, 7,901 ASF in study space, 1,769 ASF in general use space, and 26 ASF in support space. The ratio of ASF to GSF resulted in a 62.17% efficiency rate, which improved upon the current efficiency rate of 58%. 62.17% is well within the State's range of the classroom/office building. The project also resulted in the building's GSF reduced to 32,473 GSF with planned floor modifications.

Total project construction costs for the Freudenthal Library Renovation project are estimated at approximately \$5,598,870 under Phase 1, and \$965,365 under Phase 2, with total anticipated project costs estimated at \$6,864,235 factoring in inflation from FY 2020 - 2021. (The building portion of the project is estimated at \$212/sf in 2020 dollars). TSJC anticipates the project costs to be funded with Capital Construction funds (\$6,864,235) over two fiscal years. TSJC plans to pursue LEED certification; the associated cost increase was factored into the construction and overall project budget cost. Projected construction completion after two phases is scheduled for late 2023.

The Freudenthal Library Renovation project has great potential to serve the College's mission, vision and core value of Students First. In this current climate of great economic uncertainty going into the Fall of 2020 as a result of the global COVID-19 pandemic, TSJC can position itself at the regional and state level, as an academic leader and resource for small business and a visible model for collaboration and ingenuity in the upcoming critical period of economic recovery, particularly with the Makerspace and Business Incubator. The timing is appropriate. Without the building improvements associated with this project, these great opportunities would be missed.

I.B. DESCRIPTION OF ACADEMIC PROGRAMS, SUPPORT SERVICES PROGRAMS

The following are Trinidad State Junior College's mission and vision statements, and core value:

Mission Statement

Enriching our diverse communities through quality educational experiences and lifelong learning.

Vision Statement

Educate for the future.

Core Value

Students First

Academic Programs

The following narratives describe the academic programs affected and served by the proposed Freudenthal Library Program Plan.

Two Year Degrees

Business

The Business programs are designed to help develop marketable skills that are responsive to a variety of workplace settings, and provide the competency, tools, and capabilities necessary to successfully contribute to today's evolving business environment. TSJC's transfer pathway helps their students achieve two goals: completing an associate's degree while also staying on track to earn a bachelor's degree at the student's transfer destination.

The degree offered within Business is the two-year Associate of Applied Science in Business Management. There is also a two-year Associate of Arts in Business Administration.

Certificate Programs

Accounting

The Accounting certificate is designed to prepare TSJC students for entry-level accounting positions in business and industry. The program further provides a concentration in accounting courses and may be completed in one year of full-time study.

Marketing-Graphic Design

This certificate option is designed to prepare students with the foundations of design and the technical skills needed to turn their designs into multimedia products used for professional marketing and media.

Entrepreneurship Operations

TSJC offers courses in Entrepreneurship Operations associated with the Business curriculum, which are designed to prepare the student to launch an entrepreneurial venture. Coursework covers the basics of marketing, principles of management, business plan development, the legal environment including business regulation, as well as finance to manage a small business.

Currently, TSJC's certificate program is being offered as a unique program in partnership with the Colorado Department of Corrections to a small, highly select group of model prisoners at the Trinidad Correctional Facility. The program has proven extremely successful since its first offering in 2016, having demonstrated 0% recidivism.

Support Service Programs

The following narratives describe the support service programs affected and served by the proposed Program Plan.

Samuel Freudenthal Library

The Freudenthal Library Building houses TSJC's campus' library operations, its circulating collection, catalogued materials, online resources, and specialized rare reading materials featuring Trinidad State's premier gunsmithing program and genealogical history. Additional archived works include original artwork and photography from renowned local and regional artists as well as vinyl and other older period media. Efforts to preserve these collections and works are ongoing by TSJC's Library Coordinator and staff. The majority of these operations are located on the northwest, center and the east wing of the Main Level.

Student Success Center

The TSJC Student Success Center occupies the Library's former Reference Room in the spacious Room 107 on the Main Level of the Freudenthal Building. The Center is supported by TriO funding, and operated by TSJC Student Services, which include Advisers, Tutors, and other Student Services program coordinators, in addition to TSJC students.

TRiO/SS/ATS TRiO Student Support Services/Project Success is a federally funded program that provides opportunities for academic development, assists students with basic college requirements, and serves to motivate students toward the successful completion of their postsecondary education. The goal of the program is to increase the college retention and graduation rates of its participants and help students make the transition from one level of higher education to the next. Services include: Academic Support / Advisement, Mentoring & Advising, Cultural Activities / Events, Financial Aid Advisement / Assistance, Tutoring in Many Subjects, Transfer Advisement, Career Advisement, Financial Literacy Training, Campus Tours to Four Year Colleges, & Various Academic Workshops.

Academic Advising

TSJC's academic advising mission is to help students stay on track to graduate. An emphasis is placed on stress management and building confidence while self-managing their intended degree or certificate path. Students are also advised on transfer to a four-year university. Students make appointments to meet with their program advisers at the Student Success Center.

Writing Center

The Writing Center provides TSJC students skills through individualized paper review and consultations with trained tutors. APA Style Workshops are scheduled throughout the semester, hosted by the Student Success Center.

Tutoring

TSJC students can also avail themselves to tutors on a variety of subjects at the Student Success Centers. One on one tutoring sessions are through appointments.

Study Hall

Trinidad State is a member college of the National Junior College Athletic Association, which adheres to the commitment of academics first for those students who participate in college athletics. TSJC's Study Hall is located at the Student Success Center. It is a program designed to promote group studies among student athletes, whose teams are assigned daily specific times during the course of the week day, and supervised by assistant coaches.

Testing Center

TSJC's Testing Center, located at the east wing of the Library's Main Level, is an authorized Pearson VUE testing facility. In addition to administering the CLEP, the GED and the ACCUPLACER for Trinidad State students, the Center hosts testing for students from in state and

out of state institutions, which include but not limited to Adams State University, Black Hills State University, Clovis Community College, Collin College, CSU-Fort Collins, CSU-Pueblo, Eastern New Mexico, Galveston College, Oregon State University, University of North Dakota, and Valencia College – Osceola Campus.

Math Lab

The Math Lab is offered in Room 308, one of the large classrooms on the west wing of the Upper Level. The Math Lab at TJSC offers both traditional lecture and self-paced, individualized instruction style formats for all levels of developmental math. Developmental math classes at TSJC were recently redesigned to allow students to develop their math skills and prepare for college level math classes in as little as one semester.

Extra assistance with developmental math courses can be obtained during open lab hours held in the Math Lab during non-class times. During open lab students can drop in for tutoring, take tests during longer, uninterrupted blocks of time, or make up missed classes.

Louden-Henritze Archaeology Museum

The Loudon-Henritze Museum is a special asset of the Freudenthal Library. The museum resides in the Lower Level of the building, featuring curated archaeology collections from historical digs among the Las Animas region, including early geological formations, plant & marine-animal fossils, a dinosaur track exhibit, and Native American pottery. The museum is also a repository site for the Army Corps of Engineers. Free to the public, the museum continually attracts visitors throughout the state as well as out of state, and is a featured stop for the local trolley service offered by the City of Trinidad's Welcome Center.

I.C. RELATIONSHIP TO THE FACILITIES MASTER PLAN

In December of 2012, Trinidad State Junior College revised and updated their 2008 Facilities Master Plan*, originally authored by Paulien and Associates, for both their Trinidad and Alamosa campuses. The updated findings for the Trinidad Campus identified the need for approximately 220,000 assignable square feet at its ten year horizon of 2022, which is a surplus of over 20,000 assignable feet (9%). The Plan recommended renovation projects over new academic buildings; one of the four campus projects was “GF CIP-2, Renovation of Berg Administration Building and Freudenthal Library”. More library space - additional study rooms and other learning resource spaces for use by students and faculty, and relocating classrooms to other campus locations were listed in the project description, validated by the planners’ space needs analysis.

Further noted in the Facilities Master Plan, the Library’s Facilities Condition Index (FCI) was reported at 66.32%, which was among the lower end of evaluated campus properties. This FCI is interpreted as “Remodel is Needed”. The 53 year-old building was cited to be “in fair condition with increasing maintenance attention” on infrastructure and deterioration of some of its significant exterior elements, such as its exterior windows and patio drainage issues, along with interior walls.

**“Trinidad State Junior College Facilities Master Plan, TSJC Staff, December 2012 (revised and updated)”.*

II. JUSTIFICATION

II.A. EXISTING CONDITIONS

i. Current Program Enrollment

As a prelude to the discussion of program enrollment, a brief introduction of Trinidad State Junior College (TSJC) and the Freudenthal Library is provided for reference.

Trinidad State Junior College – An Introduction

Established in 1925, Trinidad State was the first community college in Colorado. Today Trinidad State is one of thirteen community colleges within the Colorado Community College System (CCCS). The College, continually accredited by the Higher Learning Commission since 1962, currently offers over thirty combined associate degree programs, certificate programs, and guaranteed transfer associate degree programs. Trinidad State offers one online bachelor's program in Nursing.

Trinidad State Junior College serves an eight county service area from two full-service campuses:

Trinidad Campus in Trinidad, CO
The Valley Campus in Alamosa, CO

History of the Samuel Freudenthal Memorial Library, Trinidad Junior College

Prior to the construction of the Freudenthal Library building, named for Samuel L. Freudenthal, one of the major sponsors of Senate Bill 403, which led to the founding of Trinidad State Junior College,* Trinidad Junior College's campus library operations were housed in a one-story wood framed structure which previously functioned as part of a group of military barracks built during the 1940s war era. See photo below.

**Source: Trinidad State website.*



View of Trinidad Junior College campus along Park Street, Trinidad, CO Circa 1960. The first campus library structure is identified by the red arrow. The two one-story structures in the foreground at left are sitting on the site of the current Freudenthal Library building. Source: Loudon-Henritze Museum.

Construction of the current building, located at the south border of the main quad on TSJC's 17-acre campus was in 1966-1967. At the time Prospect Street divided the campus with two-way traffic. See the following photo; the street was later closed off to create open space for the campus grounds.



View of the west face of the Freudenthal Library along Prospect Street Fisher's Peak is seen to the right. Source: Louden-Henritze Museum.

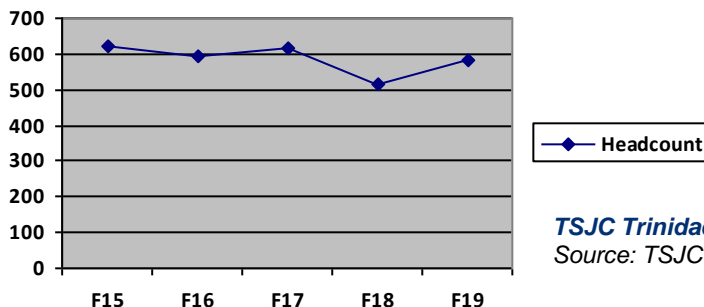
Total physical size of the building, distributed among the three stories is 33,934 gross square feet (GSF). The original Library operations occupied the entire Main Level, while the Upper Level was assigned to academic classrooms and faculty offices, and the Lower Level designed to house the extensive collection of archaeological materials uncovered in sites at eastern and western Las Animas County, cave excavations in Trinidad and the Purgatoire River, starting in the early 1940s. These findings were the legacy of then Trinidad Junior College's Archaeology Department faculty and the work of their student teams.* The Louden-Henritze Museum was dedicated to William Louden and his son Richard Louden, and Ruth Henritze, who were credited for archaeological discoveries and digs, including the Trinchera Cave.

**Source: Calvin B. Smith, TSJC Library Coordinator.*

The building was originally without a passenger elevator but was outfitted with one dumbwaiter in the area that is now the Boiler Room; the dumbwaiter has since been removed, and a second dumbwaiter added later in the area of the current library stacks, which is still present. The passenger elevator was added to the building in 1998. The fire sprinkler system was installed in two phases, with completion in 2002. The fire alarm system was upgraded in 2011.

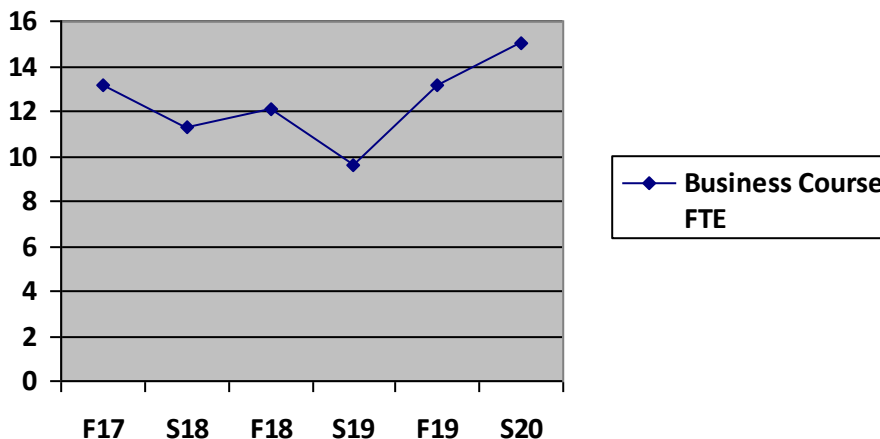
Current Program Enrollment

Enrollment figures for Trinidad Campus were collected for the past five Fall semesters from TSJC's Institutional Research Department. Overall campus enrollment has seen an overall slight decline over the past five years, marked with alternating years of decrease and increase as seen in this graph of Headcount:



TSJC Trinidad Headcount for past five Fall Semesters Source: TSJC IR department.

Sum of annual FTE generated was tracked for Business courses at the Trinidad Campus. Though time periods differ, Business follows the same type of trend as Campus enrollment.



TSJC Trinidad Campus Business Courses tracked for Fall and Spring semesters
 Sum of Annual FTE generated for Fall 2017 – Spring 2020. Source: TSJC IR department.

Other business-related programs were similarly tracked. Accounting followed a similar pattern, but has shown more of a decline recently.

ii. Assessment of Space Functionality

The current Freudenthal Library primarily houses the operations for TSJC’s Library, the Student Success Center, and the Loudon-Heinritz Museum of Archaeology. Current assignable space (ASF) can be broken down into the following space categories:

Classrooms and Service	4,722 ASF (24.4%)
Teaching Laboratory and Service	266 ASF (1.3%)
Office and Service	3,742 ASF (19.3%)
Study Areas	8,216 ASF (42.5%)
General Use	2,424 ASF (12.5%)
TOTAL ASF	19,370 ASF
TOTAL GSF	33,934 GSF (gross square footage)

The Library operations occupy the most space, followed by Classrooms and Service, then Office and Service, which are appropriate for this type of building, which can be classified as mostly a Classroom/Office Building with storage.

The Department of Higher Education (DHE) Building Efficiency Factors for new construction establishes guidelines for efficiency ratios. The ratio of the assignable square feet or “ASF to GSF is expressed as a percent and indicates the efficiency of the building.” *

**Department of Higher Education Space Utilization Planning Guidelines”, April 5, 2007.*

The DHE further established ranges for certain building types, for example:

Classroom/Office Building	58-68%
Instructional Shop Building	70-80%
Physical Plant Service Building	80-90%

The current Freudenthal Library is similar to the Classroom/Office Building. Its efficiency ratio (ASF/GSF) would be expressed as:

$19,370/33,394 = 58\%$, which appears to be at the low end of the DHE established range.

Section II.C. will continue the discussion of efficiency ratios in the Total Space Requirements narrative for the proposed Project.

ii. Current Space Utilization by Classroom Hours of Use and Percent Station Utilization

The TSJC Institutional Research Department provided general purpose classroom utilization information for Fall 2019 enrollment at the Trinidad campus site to SmithGroup for analysis.

Fall 2019 classroom utilization by student station occupancy = 43%

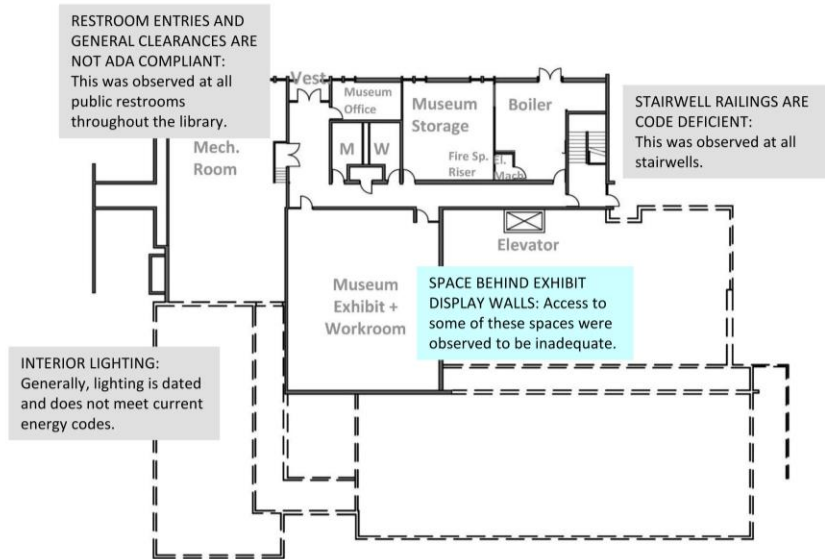
Classroom utilization among the 19 classrooms on the Trinidad Campus in Fall 2019 reported an average of 43%, well below the State’s target of 68% for a 30 hour week. Refer to the report by SmithGroup “Classroom Utilization Analysis – Detail for Fall 2019” in Appendix IV.B. for utilization broken down by classroom.

iv. Facilities Condition Index

According to TSJC’s current Building inventory list, the Library was last audited in 2004, with a Facility Condition Index (FCI) reported to be 76. However, the 2012 Facilities Master Plan reported that the FCI was determined to be 66.32 in 2008. Hall Architects is in the process of finalizing a new Facility Audit of the building based on observations made in February 2020, and the FCI is believed to be approximately 67. This places the building in the “Remodel is Needed” according to the criteria established by the Office of the State Architect. The primary areas of concern are the exterior windows, poor temperature control throughout facility, aging roofing, lack of ADA accessibility, drainage issues at courtyard, aging interior finishes, and asbestos mitigation concerns.

v. Specific Health / Life Safety Deficiencies

From accounts given at group meetings, videoconferences and individual interviews with TSJC administrators, the library coordinator, the museum director, the facilities director, faculty, staff, and students, and the College’s planning documents, a number of mostly interior building deficiencies have been observed at the Freudenthal Library, as noted on the following plans, photographs, with accompanying narratives:



EXISTING LOWER LEVEL: Concerns
8,052 GSF

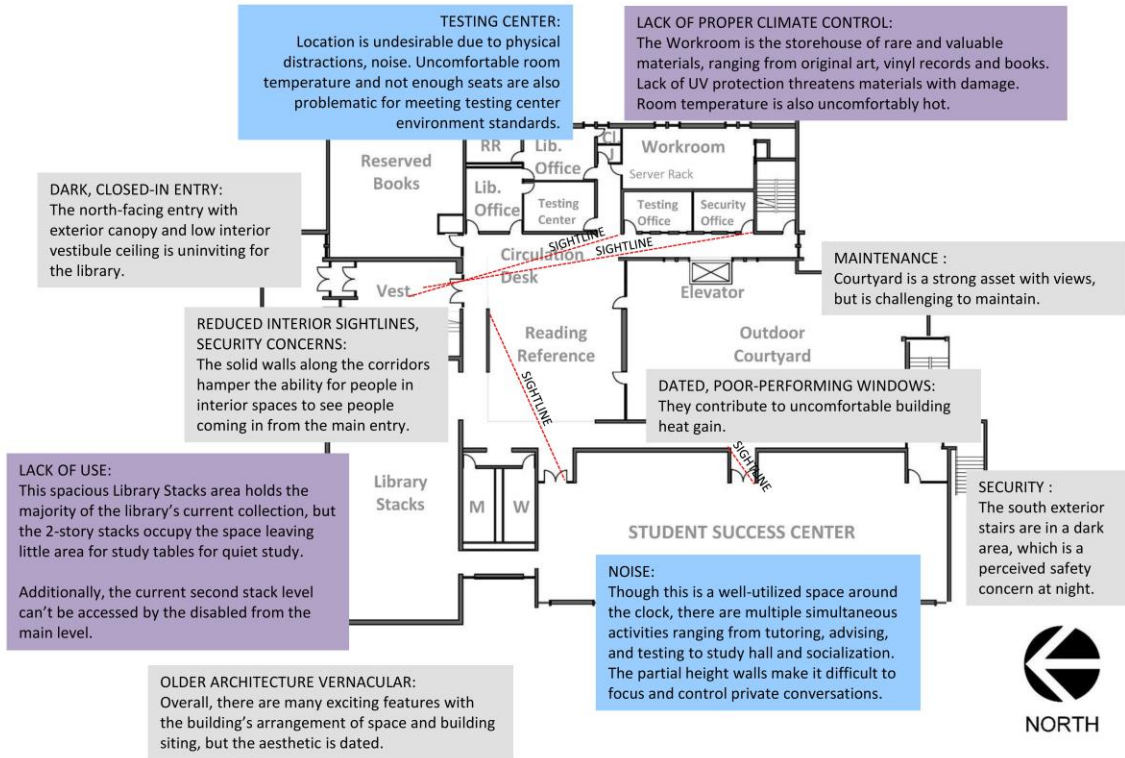
Source: Hall Architects

Lower Level concerns

The primary use of the Lower Level is the Museum, and it receives the public on a regular basis. Though the building’s ground level entrance and the Museum exhibit space meet general accessibility clearance requirements, the restrooms do not for entrance and clearance criteria. General lighting is also dated and not meeting current energy standards.



Non-accessibility code compliant restrooms, stairwell railings. Though some compliant features have been introduced, these non-compliant conditions are found throughout the building.



EXISTING MAIN LEVEL: Concerns
14,475 GSF

Source: Hall Architects

Security

The building's expansive interior brick massing creates dramatic, architecturally interesting walls but reduces interior sightlines, particularly for those in the Student Success Center, causing the inability to see people moving around the building, particularly those entering the building. With little to no visual monitoring of the entrance, visitors likewise are not able to locate immediate assistance when they enter the building. Building occupants have reported a feeling of fear both inside and outside the building with tall elements, such as the library stacks or the south exterior stairs perceived as hiding places. The building's elevator, installed after the construction of the original building, was reported as not being in an ideal visible location, and also as a hiding place for problematic behavior.

Building discomfort

The building's original windows are single pane. Their lack of energy performance lends to discomfort for building occupants over the course of a typical day, particularly with the courtyard's concrete and masonry surfaces acting as a heat sink and the south-facing glass conducting the heat. Extreme heat has been reported at the Main Level, affecting not only building occupants, but also sensitive archived materials at the Main Level. The Testing Center located in the East wing of the Main Level, reported uncomfortable conditions for a space that is required to meet climate controlled facility requirements. In contrast, the Lower Level has more comfortable, controlled room temperatures.



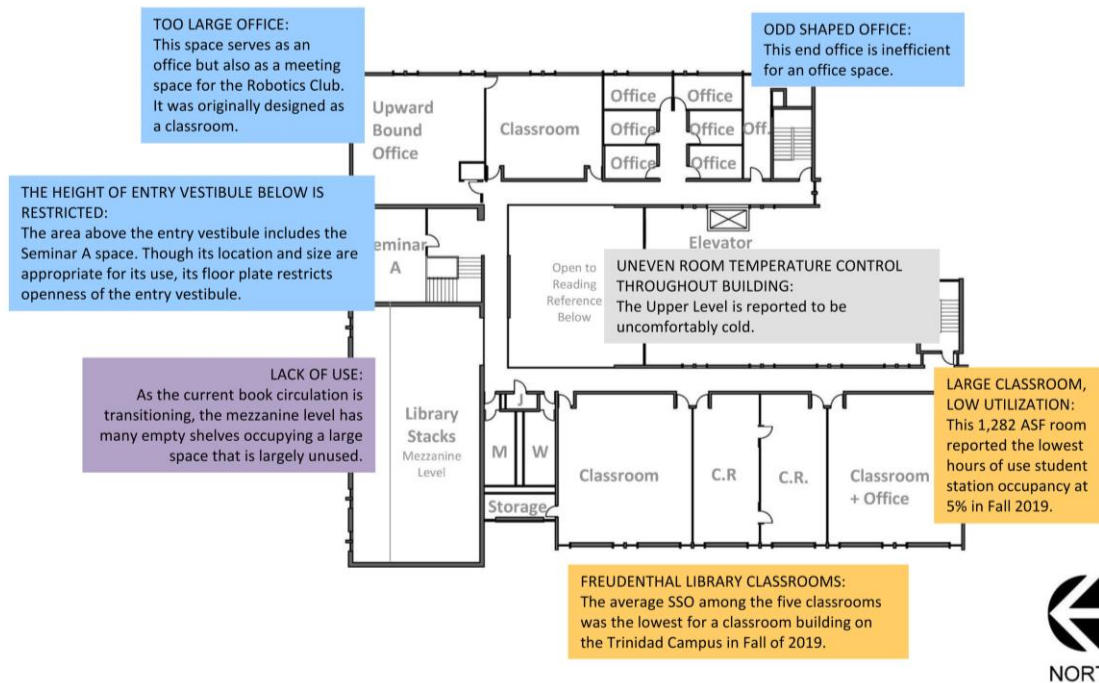
Vinyl media (left) and newspapers (right). Sensitive materials require proper climate control.

Noise at the Student Success Center

The former spacious Library Reference Room was repurposed for the Student Success Center offering student services, such as the Writing Lab, tutoring and academic advising. The Student Success Center also serves as the Study Hall for TSJC student athletes. The combination of these activities creates a highly charged social environment, which has led to noise and privacy issues, particularly with partitions that are not completely enclosed. There is lack of security for confidential information from an advising standpoint. For the occasional use of the Writing Lab area as overflow space for the Testing Center, noise from conversations present distractions for exam takers. Students who are desiring a more private study setting at the Student Success Center have few options, or they will avoid spending time in this area.



Half height partitions. Shown on the perimeter of these study tables and chairs, these partitions can't control unwanted distracting conversations and noises.



EXISTING UPPER LEVEL: Concerns
12,516 GSF

Source: Hall Architects

Inefficient use of space

The original Upper Level classrooms were designed with generous floor area; their size served a certain pedagogy at the time, but is clearly not efficiently used for Trinidad State’s current and desired low student to teacher ratio.

The lack of use of the 2nd story of the library stacks is concerning to building occupants. That level can only be accessed by stairs, but it is a very large, very visible space perceived as neglected. The footprint taken up by the stacks on the Main Level give little space for quiet study tables. See photos below.



Additional building discomfort

Upper Level occupants report the building temperature to be uncomfortably cold in contrast to the Main Level observations. Temperature controls continue to be monitored and reviewed.

II.B. CHANGES AND PROJECTIONS

i. Enrollment Projections by Program or Department

Program Projections

In this present uncertain economic period of the State's, the country's and the world's history with the current COVID-19 pandemic impacting project schedules and construction budgets, the College is proceeding cautiously with projecting enrollments, with a likely drop in Fall of 2020 but looking to rebound in 2021.

ii. Collaboration / Instructional Methodology

Trinidad State's 2018-2023 Strategic Plan* outlined five strategic properties. Two of those strategic priorities along with their goals are:

Strategic Priority III. Cultivating our Relationships

Trinidad State values collaboration and the synergy that results from positive relationships. We will strengthen existing partnerships and develop new relationships.

Goal A. Broaden and Strengthen Partnerships

Goal B. Reinforce Communication"

Strategic Priority IV. Enriching our Communities

Trinidad State provides academic and career programming, and a variety of community, athletic and cultural events. New ideas will be continually explored to best serve our communities.

Goal A. Assess Programming

Goal B. Expand Offerings"

**Source: Trinidad State Institutional 2018-2023 Strategic Plan*

The opportunities presented with this Program Plan recognize that TSJC's partnerships and collaborations run deep throughout institution history. The Makerspace and Business Incubator ideas are another example of putting Students and their Educations First and allowing them to create their own opportunities. The future relationships created with Space to Create and the City of Trinidad represent an exciting time for educational goal setting and goal achieving and modeling sustained partnerships.

Program Development

Trinidad State has a long history in program development and offerings of unique programs from Aquaculture to Gunsmithing. The development of the Computer Information Systems program and expanding on their Entrepreneurship Operations certificate program has great sustainable potential, providing the catalyst to job growth and supporting the local communities.

As a whole, new program opportunities are beneficial to all instructional programs within Trinidad State Junior College. Whether on site or in community workforce training environments, whether high students enrolled in concurrent enrollment or veteran workers strengthening job skills, new programs provides exposure to new technologies and making connections in respective industries less challenging.

The cumulative and desired effect of program growth will be the increase among students in related majors, professionals working to enhance career skills, and those changing careers altogether due to the current economy.

iii. Changes to Class Sizes

Class sizes remain low, on average 13 students to instructor. The College reported to the planners that small class sizes are desired, where they can keep students engaged. Where a large classroom is desired, a student count of 34 – 38 is ideal.

II.C. TOTAL SPACE REQUIREMENTS

i. Planned Program Space Utilization

SmithGroup provided analysis of current utilization for the Classroom spaces at the Trinidad Campus for Fall 2019 (refer to Section II.A.iii. and Appendix IV.B.) received from TSJC’s Institutional Research Department. The analysis concluded Classroom utilization is on average 43%, which is well under the state target guideline of 68% for 30 weekly hours for a rural campus. This information provided confirmation of excess space assigned to Classrooms on campus, and that Classrooms in the Freudenthal could be repurposed for other functions.

a. Number of Student Stations Required

In assigning the number of student stations, Leadership and faculty requested that classrooms be assigned as general purpose classrooms. Student seat counts are indicated on the table in Section II.C., entitled “Space Summary Needs” as well as pertinent building code occupant loads.

b. Room Area Needs by Function

The following table correlates the applicable standards from the 2010 Colorado Community College Space Utilization Criteria*, guidelines from the Council of Educational Facility Planners International**, and standards from Colorado Community College System CTE Administrator’s Handbook*** The Planners consulted these guidelines in confirming appropriate space size. In addition, the Planners reviewed a public library makerspace for guidance.

* “Space Utilization Guidelines for Master Planning”, CCCS, June, 2010.

** “Space Planning for Institutions of Higher Education”, Abramson and Burnap, © 2006, CEFPI.

***CCCS CTE Administrator’s Handbook, 2019/2020.

CCCS ROOM TYPE	CCCS or CEFPI SPACE UTILIZATION PLANNING CRITERIA <i>unless noted otherwise</i>	FREUDENTHAL BUILDING PROGRAM SIZE	FREUDENTHAL BUILDING ROOM NAMES	REMARKS
General Purpose Classrooms (3), 34 - 38 seats	20 ASF/ seat (CCCS), 25 SF/student (CCCS CTE Admin); 1,200 ASF (CCCS CTE)	981 - 984 ASF	General Purpose Classroom (Seating varies 30 - 49 seats)	= CCCS standards; capacities sized for various larger sections, growth. TSJC can option to maintain the existing 1200 ASF size for appropriateness with STEM class sections
Teaching Laboratories	ASF/ workstation (CCCS)	923 ASF	Makerspace	<CCCS.; PPLD Make I makerspace w/o 3D printer = 1,000 ASF (approx.); Planners recommend to limit size due to expense of operating equipment intensive spaces
Teaching Laboratories	See remarks	356 for 10 exam stations	Testing Center (Exam Room)	Planners consulted guidelines by Pearson Vue, authorizing TSJC as a test facility
Library Stacks	See remarks	1849 ASF (Current collection)	Collection	NOTE: Library Coordinator identified current volume counts; numbers are still TBD, collections in transition; consideration for some collections to be accommodated offsite.
Library Listening Room		67 ASF	Listening Room	See Appendix IV.A.ii. “Design Recommendations for a

JUSTIFICATION

				Library Listening Room"
Office – Faculty	140 - 180 ASF (CEFPI for 2 yr institution) = 140 x 6 FTEF = 840 ASF	125 ASF (7 offices) = 880 ASF	Faculty	<CEFPI is based on full-time individual faculty offices. The new office suite proposes an open office concept with 2 enclosed Solution Rooms (conference rooms) for privacy as required.
Office – Work Study	100-140 ASF (CEFPI)	25 ASF – 65 ASF	Work Study	<CEFPI
Office – Reception	100-140 ASF (CEFPI)	241 ASF	Reception	> CEFPI; The Testing Center Check-in reception is accounting for other functions (waiting, lockers etc.)
Office – Administration	140-180 ASF (CEFPI)	Ranges from 130 ASF – 165 ASF	Administration	Generally within Guidelines for Student Success Center Administrators
Conference Room, (General Use)	155 ASF /Faculty FTE (CEFPI)	398 ASF	Meeting Room	Faculty FTE was not obtained; New Meeting Room exceeds Seminar A, with ample room for 16 seats and side tables.
Student Lounge / Storage	3 ASF/FTE (CEFPI) 3x222.7 = 668 ASF	2159 ASF for Lounge	Student Lounge	> CEFPI The space is being planned as a multipurpose space: Study Hall and large assembly
Efficiency Ratio	63% median (Dept. of Higher Education)	62.17%	<= DHE, Planners used a Classroom/Office Building type. Ratio of renovated space is on target.	

ii. Total ASF Needed

On whole, the determination for the final ASF for the building follows the referenced space planning guidelines in the previous section. In consideration of making the classrooms, laboratories, office space, study areas, meeting room, and gallery lounge efficient to safely handle their respective functions as well as growth, balanced with budgetary needs and existing room sizes and load bearing walls, the planners have determined this ASF amount to be sufficient. Though the Office ASF is less than CEFPI, the private Solution Rooms provide an extension of office work space; 125 ASF is therefore sufficient. Though Work study stations are planned to be smaller compared to CEFPI standards, they represent very efficient size for the Student Success Center, as these students are not placed in a true office assigned to traditional office tasks.

The efficiency ratio was noted in the previous Guidelines table. At 62.17% efficiency, the planned Space Needs is on target with DHE’s guidelines for a Classroom/Office Building.

For the details of “Total ASF Needed”, refer to the table entitled “Space Summary Needs” on the following page.

Space Name	Program			Comments
	Quantity ¹	Unit ASF	Total ASF	
1.0 CLASSROOM FACILITIES				3555
1.01	Academic Storage	1	399	399
1.02	General Purpose Classroom (308)	1	984	984 49 capacity
1.03	General Purpose Classroom (309)	1	981	981 49 capacity
1.04	General Purpose Classroom (310)	1	984	984 49 capacity ²
1.05	Classroom Storage	1	113	113
1.06	Classroom Storage	1	48	48
1.07	Classroom Storage	1	46	46
2.0 LABORATORY FACILITIES				1279
2.01	Testing Center Exam Room	1	356	356 10 testing stations + 1 admin. station
2.02	Makerspace	1	923	923 30 capacity
3.0 OFFICE FACILITIES				5660
3.01	Archivist Office	1	188	188 Intervening door w/ Research-Res. Coll.
3.02	Library Coordinator / Director Office	1	160	160
3.03	Library Assistant Office	1	79	79 Intervening door w/ Library Workroom
3.04	Security Office	1	91	91
3.05	SSC Director Office	1	165	165
3.06	Academic Coordinator Office	1	144	144
3.07	Disabilities Coordinator - CTE Advisor Office	1	146	146
3.08	Transfer Coordinator Office	1	130	130
3.09	Upward Bound Coordinator Office	1	130	130
3.10	Future Student Success Center Office	1	130	130
3.11	SSC Lounge	1	1958	1958 Incl. Tutoring tables, Workshop area
3.12	SSC Work Study Stations	4	25	100
3.13	TRiO Workstations	14	94	94 Incl. Writing Lab, TSJC SS to confirm #
3.14	SSC Storage	1	44	44
3.15	Testing Center Director Office	1	165	165 Option to proctor
3.16	Testing Center - Check-in/Wait Area	1	241	241 Incl. student station, lockers
3.17	Business Incubator	1	316	316 Net; Gross incl. Huddle Rooms = 532
3.18	Huddle Room	1	103	103
3.19	Huddle Room	1	103	103
3.20	Faculty Office Suite	7	125	880
3.21	Solution Room	1	114	114
3.22	Solution Room	1	114	114
3.23	Faculty Office Storage	1	65	65

Space Name	Program			Comments
	Quantity ¹	Unit ASF	Total ASF	
4.0 STUDY FACILITIES				7901
4.01	Resource-Research Collection	8	539	539 Visitors and staff use
4.02	Conservation Workroom	4	380	380 Binding, repairs
4.03	Archives	1	1075	1075 Gunsmithing and rare collections
4.04	Library Collection	1	1849	1849 Incl. reading areas
4.05	Circulation	4	65	260 Includes self-serve kiosk
4.06	Library Workroom	1	372	372
4.07	Library Storage	1	61	61
4.08	Media Room	4	43	174
4.09	Listening Room	1	67	67
4.10	Study Lounge	1	2159	2159 72 read. rm. cap.; 144 assembly cap.
4.11	Study Lounge Storage	1	69	69 Storage for tables and chairs
4.12	Study Room	1	130	130
4.13	Study Room	1	130	130
4.14	Study Room	1	100	100
4.15	Study Room	1	100	100
4.16	Study Room	1	130	130 See footnote 2 option.
4.17	Study Room	1	130	130 See footnote 2 option.
4.18	Study Lounge - Mezzanine	1	176	176
6.0 GENERAL USE				1769
6.01	Gallery Lounge	1	1371	1371 46 capacity
6.02	Meeting Room	1	398	398 16 capacity
7.0 SUPPORT FACILITIES				26
7.01	IT Closet	1	26	26
TOTAL NET BUILDING AREA				20,190 ASF
TOTAL GROSS BUILDING AREA				32,473 GSF
Efficiency				62.17%

Program
Room Use Codes
Assignable
POSTSECONDARY EDUCATION
FACILITIES INVENTORY AND
CLASSIFICATION MANUAL FICM

- Classroom Facilities (100)
- Laboratory Facilities (200)
- Office Facilities (300)
- Study Facilities (400)
- General Use Facilities (600)
- Facilities Support (700)

Footnotes:

1. Quantity will indicate ASF for entire room or area of room, unless noted by seat/station, or number of rooms.
2. TSJC can option to maintain the original 1,282 ASF classroom for a STEM-type classroom and remove Study Rooms 4.16 and 4.17. Capacity is 64 with 2 required exits.

II.D. ALTERNATIVES ANALYSIS

The proposed renovation project for the Freudenthal Library is the highest and best solution to address the present use of this facility and improving its efficiency of operations, as well as planning for growth and change all within its existing framework. Additionally this project intends to address reported health and life safety deficiencies.

Two alternatives are presented below for discussion, though they do not adequately address the space needs. The College will continue to consider means of delivering the project in the most timely and cost effective manner.

Option One: Continued use of existing building and do nothing.

The impacts of this alternative will have long-term repercussions which ultimately affect growth potential for the College and its programs. Ongoing security issues will lead to intermittent use of the building. Without the proper attention needed to maintain the Library's special collections, some materials will need to be off-loaded or sold. Programs such as gunsmithing and the general public will lose access to these valued materials.

Option Two: Relocate programs to other Campus buildings

The relocation of the Loudon-Henritze Museum is already being addressed in the proposed renovation project. With over 2,000 ASF for its operations, it is a size reasonably managed for reassignment to another building. The Student Success Center operations are mission critical to TSJC. Relocating these operations would prove disruptive for the College, especially the students. Relocating the Library, which provides critical services to TSJC, would not be a reasonable undertaking. The space assigned to the Library operations, over 8,000 ASF is significant. The special collections alone have specific requirements for storage and handling. The costs for relocating the Library's established operations to another campus building and repurposing the vacated space for other functions would prove expensive.

TSJC remains committed to make innovative education opportunities accessible to all segments of its service areas. With insufficient program space, student engagement becomes difficult.

III. IMPLEMENTATION AND DESIGN CRITERIA

III.A. SPATIAL RELATIONSHIPS

The programs planned for the Freudenthal Library building required a thorough understanding of spatial relationships within the academic functions and their interdependence with the Library, the Student Services departments, and other building functions such as the Museum. Consideration was placed on people traffic and distractions between functions and spaces, scheduled times in the building, operations logistics, and physical comfort within the assigned space and that of their adjacent spaces.

The planners relied on a variety of data ascertaining space requirements, logical room placements and growth potential, further confirmed by TSJC Administrators, the Library Coordinator, the CTE Dean, Business Faculty, Facilities and IT staff, and the Institutional Research Department. The planners further investigated other similar buildings; Hall Architects reviewed Colorado Springs’ Pikes Peak Library District’s Library 21C and Penrose Library, libraries with makerspaces and business centers featuring incubators and co-working space.

Programmed spaces for the Freudenthal Library have been organized into the following assignable space categories, as listed in the Postsecondary Education Facilities Inventory and Classification Manual, published by IES, and illustrated in the graphic below:

Classroom Facilities

*General Purpose Classrooms
Storage*

Laboratory Facilities

Open Teaching Labs

Office Facilities

*Faculty Offices, Administrative Offices, Reception areas,
Huddle Rooms, Solution Rooms, Storage*

Study Facilities

*Study Areas, Student Lounge, Library Collections (stacks, multi-media),
Circulation, Workrooms*

General Use Facilities

Meeting Rooms

Support Facilities








General Storage; Telecom Distribution (IT closets);

Nonassignable

Public Restrooms, Janitor Closets, Mechanical Rooms, Public Corridors

**Program
Room Use Codes
Assignable**

POSTSECONDARY EDUCATION
FACILITIES INVENTORY AND
CLASSIFICATION MANUAL FICM

-  CLASSROOM FACILITIES (100)
-  LABORATORY FACILITIES (200)
-  OFFICE FACILITIES (300)
-  STUDY FACILITIES (400)
-  GENERAL USE FACILITIES (600)
-  SUPPORT FACILITIES (700)
-  NON ASSIGNABLE

Programmed Study Space, which accounts for study rooms, reading rooms, library stacks, and all support spaces, including but not limited to processing rooms, workrooms and storage, comprised the most space under the Program Plan with over 39% of overall assignable building square footage.

Programmed Academic spaces (Classrooms and Teaching Laboratories) provide not only for current class sizes but are also configured to be flexible and purposeful with room to adapt to a variety of activities as well as for growth. These spaces comprise 17.6 percent of overall assignable building

square footage and are mostly concentrated on the Upper Level, with the exception of the Testing Center on the Main Level.

Programmed Office Space takes into account staffing for various operations, including anticipated growth, as well as faculty and their respective storage needs. Offices comprised 28% of overall assignable building square footage.

Louden-Henritze Museum of Archaeology

Developing this program plan needed to consider the spaces assigned to the Louden-Henritze Museum, but more important, the Museum as a significant contributor to the building's identity and history and to Trinidad State. It was decided that the Museum spaces, occupying significantly less space overall could find a home on the Trinidad Campus, as it has been known for all its life as being associated with the campus and the institution; the Museum and its exhibits were previously set up in the Berg Building.

Two phases have been set up to address the Museum:

Phase One: The museum and its spaces remain for a period of time, until a new location is found and to allow for its space to be vacated. Some of the Library collections will be moved offsite temporarily.

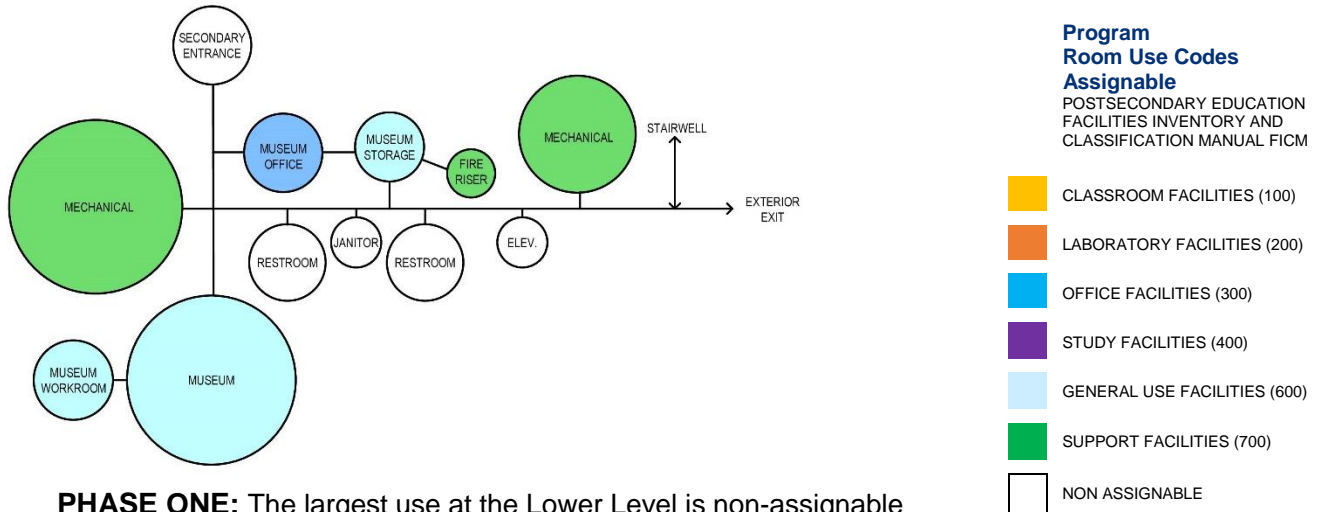
Phase Two: The vacated spaces are reassigned to Library Operations.

i. Diagrammatic Plan

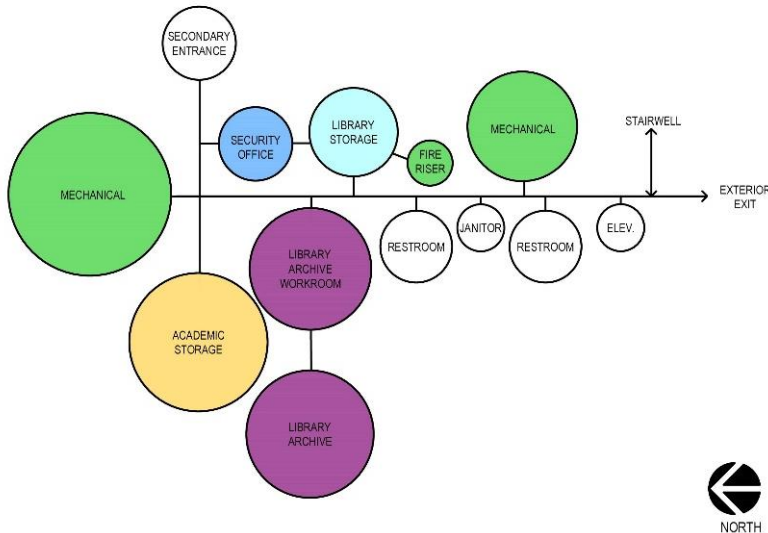
The bubble diagram schemes on the following pages illustrate the space relationships. These layouts is derived from statements of desired adjacencies. This diagram loosely represents a building configuration used in developing an overall cost model for the project, however, it should not be construed as the ultimate building configuration. The design A/E is encouraged to explore innovative solutions for building configuration, using the adjacencies and general spatial needs outlined in this program plan as a guide. Furthermore, creative solutions for the use of shared facilities should be investigated along with the critical design criteria derived from a detailed site investigation and Green Building considerations.

LOWER LEVEL: THE LOUDEN_HENRITZE MUSEUM & THE LIBRARY

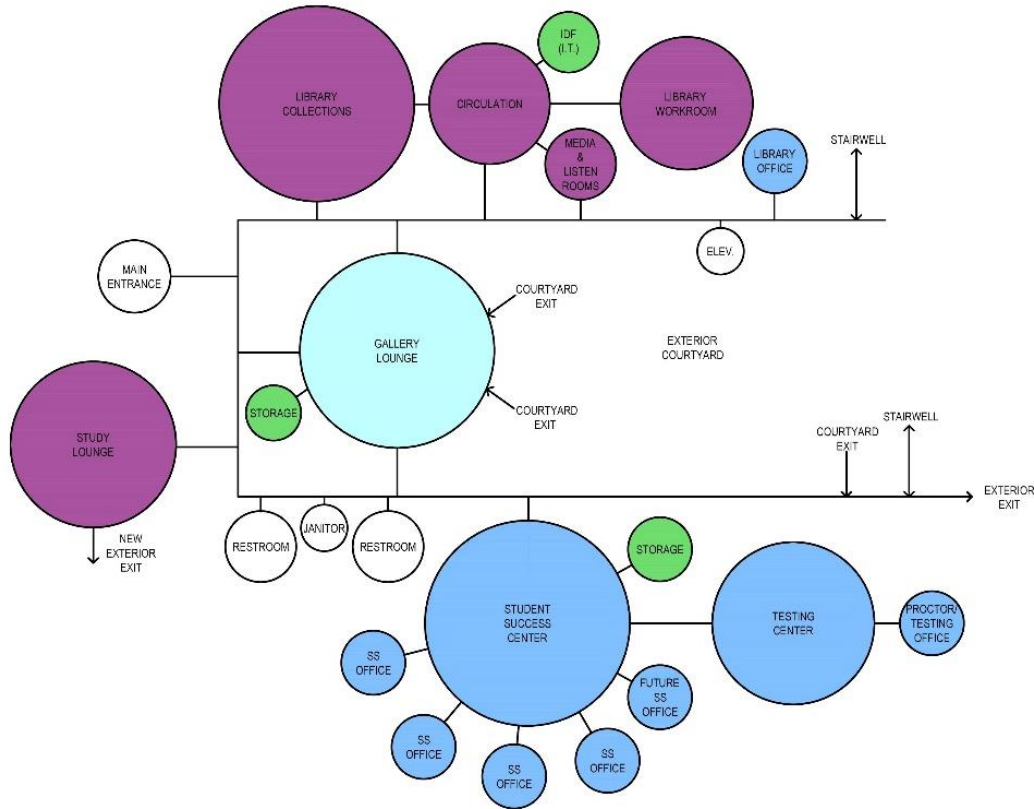
The Museum’s physical spaces in the building are appropriately located at the Lower Level shared by Physical Plant non-assignable space, with little interaction and distraction from other building functions. Two phases have been set up to address: (1) the presence of the museum for a period of time, when a new location can be located to allow for its space to be vacated; and (2) assigned to other uses.



PHASE ONE: The largest use at the Lower Level is non-assignable Mechanical-related space. Museum space remains unchanged.

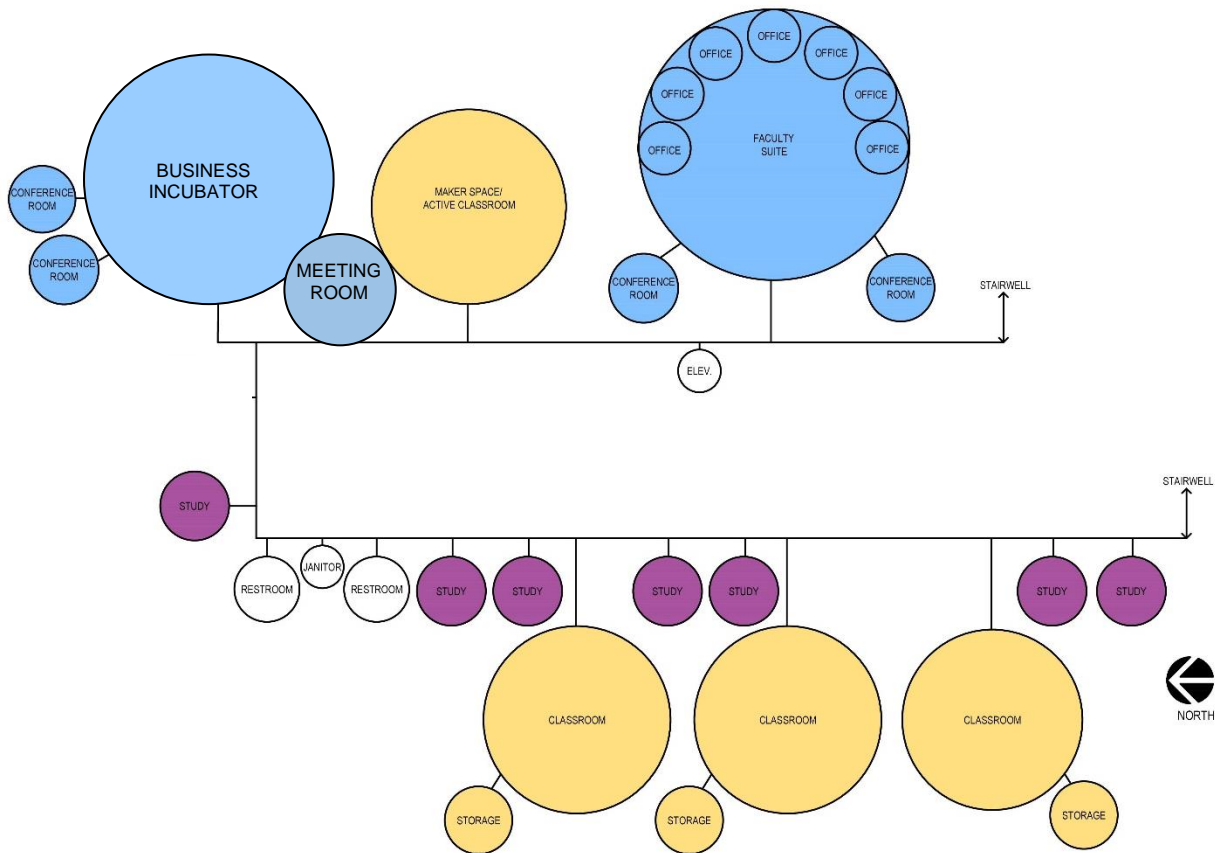


PHASE TWO: Spaces vacated by the Museum are reassigned to the Library operations, particularly to similar archived collections.



MAIN LEVEL: TSJC LIBRARY AND THE STUDENT SUCCESS CENTER

The Library operations remain in their current spaces on the east wing with newly created department spaces. The decrease of current circulating library collections allow for space to be vacated. The Student Success Center is reorganized, with the Testing Center moved to the West Wing for its relationship as a similar student service. Additional study space is created for the Library in the form of the Study Lounge, which takes over the Library stack space, and will be primarily for Study Hall use, and free up space in the Student Success Center for program growth.



UPPER LEVEL: CLASSROOMS, A MAKERSPACE, A BUSINESS INCUBATOR, FACULTY OFFICES AND STUDY AREAS

The original design for the Upper Level was purposed primarily for teaching spaces with five large classrooms, averaging over 900 ASF. The conclusion of the utilization studies reporting a surplus of classrooms resulted in repurposing two original classrooms into a Makerspace and Business Incubator. Study areas are added to give students purposeful study space, particularly for study groups. The Faculty Offices stay in the same area but are reorganized into a more flexible open office space. The Meeting Room (Seminar A) is physically removed from its location and relocated to be adjacent to the newly created Makerspace and Incubator to serve as a formal presentation space. The removal of Seminar A allows for the entry vestibule to be more open and welcoming to visitors.

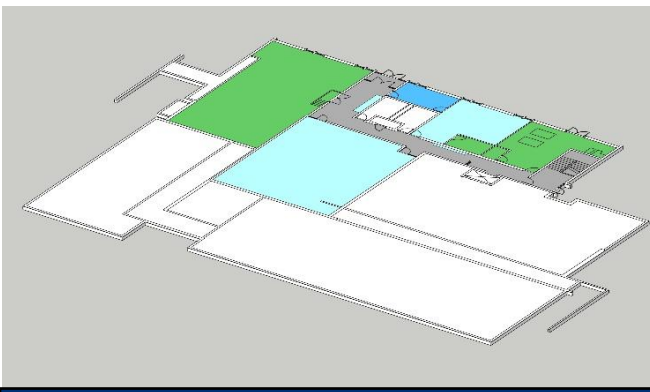
ii. **Conceptual Floor Plans – Phase One**
See Appendix IV.A for individual floor plans.



Proposed Plan removes the room occupied by Seminar A to open up the entry vestibule below. It also creates the TSJC Business Incubator, High Tech Makerspace and a new Meeting Room within current rooms 311 and 312. Three identically sized Classrooms (984 ASF) 308, 309 and 310 will be created with adjacent Study Rooms. The Faculty Office suite will create an open office area for 7 stations with 2 Solution Rooms. Additionally, a study area mezzanine directly off the Upper Level will be a feature space of the new two story tall Study Lounge.



Proposed Plan involves removing the library stacks and assigning a large study lounge for study hall and special events. The library collections will be consolidated in the east wing as with the circulation desk and other library support functions. Collections that cannot be accommodated under this phase will be moved offsite temporarily. Media/Listening Rooms will be introduced. The Student Success Center will be renovated to include the new Testing Center and additional offices, as well as enlarge its entrance for better viewing out. The Security Office will be centrally located to monitor the main building entrance. A new Gallery Lounge will feature exhibit space for TSJC and community artists. The exterior courtyard will be open for regular use and planned events.



Proposed Plan maintains the current layout and functions. Construction at this level involves mostly accessibility upgrades to restrooms, stairwell railings; this work will apply to all levels. Plumbing fixture count will be required to be verified with anticipated larger occupant loads.

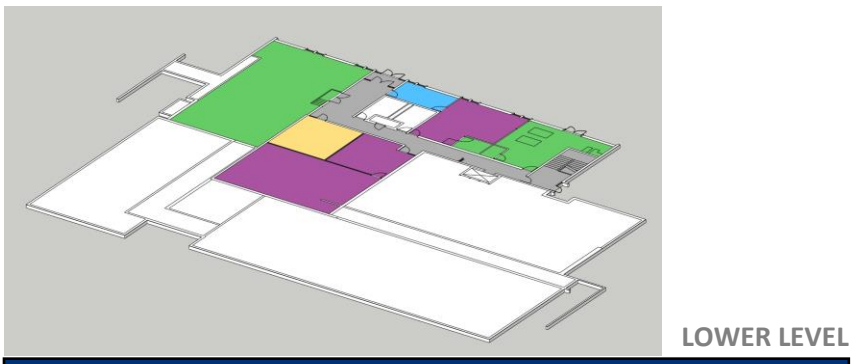
ii. **Conceptual Floor Plans – Phase Two**
See Appendix IV.A for individual floor plans.



Proposed Plan under this phase will not involve any change.



Proposed Plan under this phase will not involve any change.



Proposed Plan under this phase moves the Museum offsite and assigns its spaces to the Library and Storage for Academic needs.

III.B. SITE IMPROVEMENTS AND REQUIREMENTS

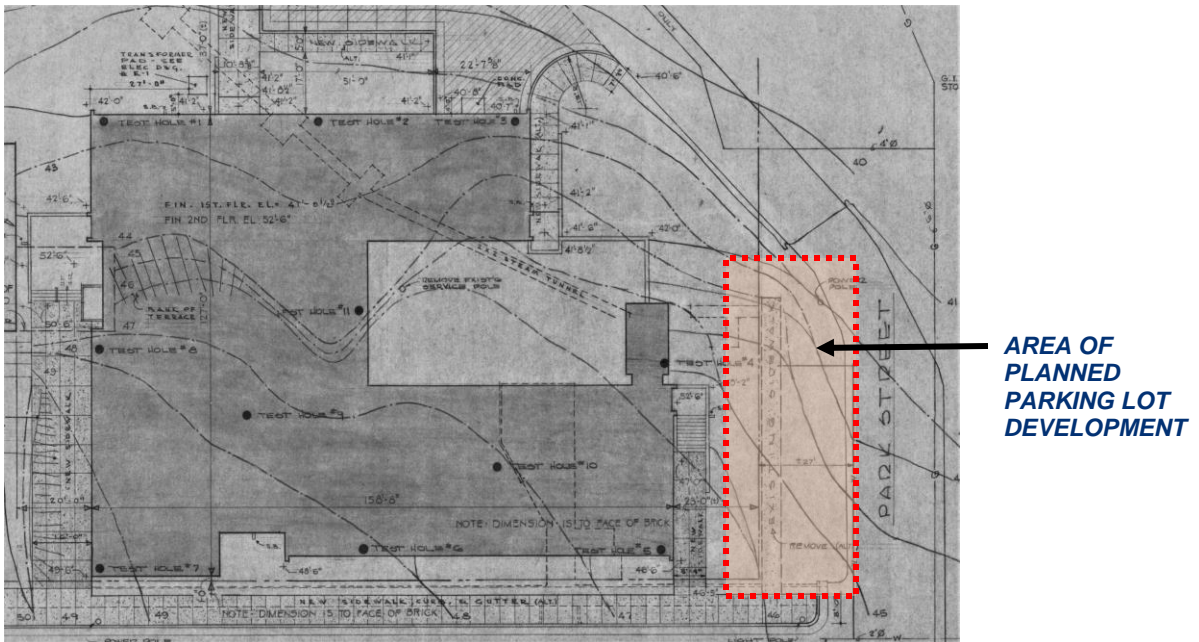
As this Renovation project is largely interior in its scope, there are few site improvements, as noted below.

Site and Utility Issues

No new utilities are planned for this project.

Parking

Under Phase Two, the Project will involve installing street parking to the south of the existing building, along Park Street, with associated accessible sidewalk development. See drawing below.



Utilities

Utilities to service the proposed Project are well established. All utilities are supplied by the City of Trinidad.

Other site amenities and landscaping

Site studies for the parking design should include assigning designated parking for rideshare and carpool vehicles to encourage less motor vehicle traffic. Bicycle/motorcycle racks should be planned, with consideration for a campus-wide bike share program.

In addition, possible use of permeable paving materials should be considered for LEED goals.

For the exterior courtyard improvements, artificial turf materials are being planned with a built-in permeable drainage system to reduce maintenance.

III.C. DESIGN REQUIREMENTS

The following narratives address the scope of work pursued with the completion of Phase 2.

i. New Utilities Required

No new utilities are required for this project. Possible new Photovoltaic (PV) and wind applications can be conceptually planned. Additional information on specific utility requirements is covered in depth in Appendix IV.C., "Room Data Sheets."

ii. Building Systems and Any Applicable Performance Criteria

Building Construction

The Conceptual building design anticipates the renovation to be accomplished within its existing footprint, with the exceptions of an added low profile glass vestibule (78 ASF) in the outdoor courtyard to address required exiting, and the addition of an exterior exit door with exterior stairs from the interior floor level to grade. The work will occur in two phases, with the majority of work scoped under Phase 1, which

Anticipated Total Building Area based on programmatic needs, and taking into account required support space, is 20, square feet per the TSJC space needs analysis included in this Program Plan.

Building Systems

Modifications to the building's structural system are planned for this renovation project. The intent to create more open interiors will involve the sawcut of openings in load bearing partitions at both the Main and Upper Levels for widened doorways, and the removal of the Seminar A Meeting Room floor slab. Exterior wall openings are planned for addressing the additional required exits, both out of the exterior courtyard and the new Study Lounge which replaces the Library Stacks Reading Room. Additionally, a new mezzanine floor structure will be supported off of the Third Level as well as new supports dropped in to the Main Level Study Lounge. The planned exterior screen feature will tie into the existing roof structure over the main entrance doors with footings drilled into existing pavement.

There are temperature control distribution issues with the Freudenthal Library building, which will entail redesign and/or modification of the interior mechanical distribution system, and better thermal control of exterior walls with shading technologies and exterior window replacement.

At least one classroom and the new Meeting Room will have videoconferencing interface with the Valley Campus. Infrastructure for the campus' telecommunications system with appropriate distribution should be coordinated with TSJC's most current IT Master Plan. Information on specific room requirements are covered in depth in Appendix IV.C., "Room Data Sheets."

Applicable Performance Criteria

The following building codes and standards are anticipated to be in effect and adopted by the State Architect's Office at the time of Architect Selection. They are the minimum requirements to be applied to all state-owned buildings and physical facilities, including capital construction and controlled maintenance projects:

2018 IBC, IEBC, IMC, IECC, IFGC, IFC, IPC
2017 NEC
NFPA standards
2015 ASME Boiler and Pressure Vessel Code
2009 ICC / ANSI A117.1 Accessible and Useable Buildings and Facilities

ii.a. Planned Green Building Goals

Green Building for Green Technology

Trinidad State Junior College has the opportunity to create an environment aligned with sustainable principles with the renovation of the Freudenthal Library Building. TSJC is planning to seek LEED certification. Building commissioning, site infrastructure design, energy conservation features (e.g. use of natural daylighting, lighting control systems, building automation systems, and demand side ventilation design where feasible) and building design material selections employing renewable resources will factor into creating a LEED certified building. Information on initial LEED concepts to be pursued are shown on the attached Appendix IV.A.iv., "LEED v4.1 for Operations and Maintenance: Existing Buildings Scorecard".

Alternative transportation options, storm water and waste management plans, open space and alternative energy systems are high design priorities. Provisions for carpool parking and bicycle/motorcycle racks will encourage these modes of transportation.

iii. Architectural Design Features

Exterior Improvements

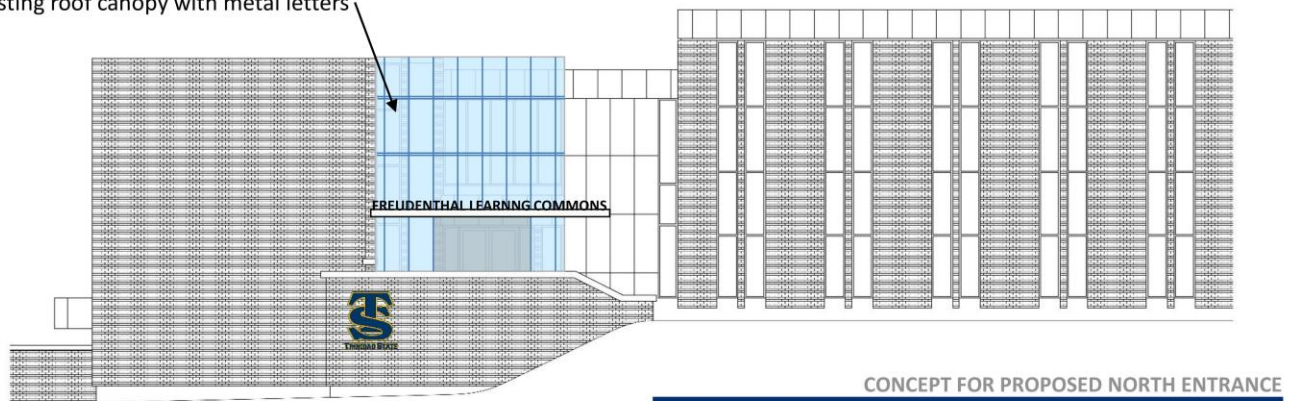
The Program Plan does not propose any major exterior building alterations, except for the replacement of the exterior single glazed window system throughout with insulated, low-E glazing. Other exterior improvements are described below.

Main Entrance:

The Plan proposes a transformation of the north-facing main entrance with a modern and vibrant open screen system of metal and glass. Its simplicity of line aligning with the building’s existing panel joints allow this system to blend into the architecture, announcing the entrance on the campus landscape to attract students, faculty, staff and visitors.

Contemporary metal signage identifies and lends to the sense of place and the site’s legacy.

Perforated Metal with glass framed around existing roof canopy with metal letters



Conceptual drawing: Hall Architects

Courtyard:



Location of future glass vestibule, noted by red circle.



Source: Google search, Pinterest. Turf ideas.

Though the building’s courtyard is an exterior space feature, the Program Plan proposes to rejuvenate and refresh this space with a purposeful installation of low maintenance artificial turf and new modern bench seating. A low profile exterior egress glass vestibule will be planned to meet exiting requirements at the southwest corner of the courtyard. See photograph and proposed conceptual plans. Outdoor events, such as lectures, music and art exhibits and catered meals are envisioned in celebrating this outdoor space.

Interior Improvements

The Program Plan seeks to address the concerns highlighted in Section II.A., particularly space inefficiencies, health and life safety deficiencies along with security concerns. Some of the major improvements are detailed in the narratives below.

Opening up the entry vestibule:

“Seminar A”, the 374 ASF meeting room on the Upper Level, directly above the building’s main entrance is proposed to be physically removed along with its floor plate, to open up the entry vestibule. The resulting effects will visually open the entrance from the Upper Level, create a more inviting and welcoming space, raise awareness of people movement in the building, thereby aiding people entering as well as the people already in the building. The quad area can now be directly viewed from the central Upper Level stair landing. Properly placed signage will also assist in directing visitors.

Security Office moved to a central location:

Moving the Security Office to a highly visible location in the central lounge area, places “eyes” on the activities of people entering and leaving the building. TSJC and their Security Department will need to review their security goals to determine the most appropriate protocols for the Freudenthal Building, whether security personnel will be very visible to the public or take a more semi-visible approach.

Securing entrance into the Main Level large spaces:

Overhead rolling grille doors will be installed over the new large entrances being created for the Library areas and Student Success Center, as well as the existing opening to the new Study Lounge. These doors will keep building visitors out of respective areas during after hour functions.

Accessibility improvements:

Updating and achieving accessible public restroom entrances, plumbing fixtures, guardrails and railings are among the improvements planned for the Renovation project.

New spaces for making special and rare materials accessible for research and posterity:

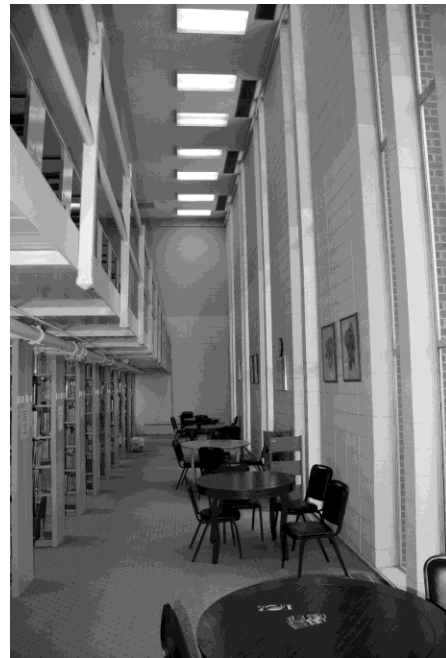
Trinidad State’s legacy from the unique program offerings over its history, including a former robust Archaeology program to its renowned gunsmithing program extend into the special collections presently housed in the Freudenthal Library. Spaces planned for specific activities include a Research room opened to the public for genealogy studies, a Conservation room for repair and binding, and a Listening Room for accessing early twentieth century shellac recordings and vinyl media. Each of these environments will require special planning for proper storage and protection from ultraviolet exposure and extreme room temperatures. The Listening Room will also consider the use by the patron who is interested in transcribing. See Appendix IV.A.ii. for “Design Recommendations for a Library Listening Room”.



Source: Google search. 45 RPM vinyl.



Source, NYC Library:
SMITHGROUP.

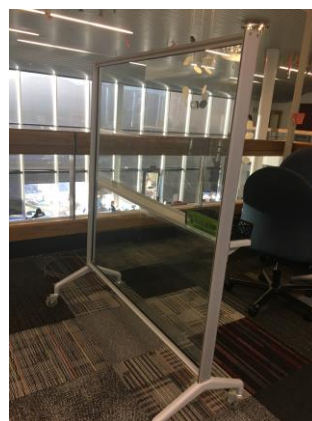


Creating a Wow Space:

The elimination of the Library Stacks structure will open the room occupants to a dramatically tall and impressive space, punctuated with natural light coming from north-facing slim windows. See photos above. The photo example of the tall reading room at the New York City Library (above) illustrates the special ambience of such a space. Special rated ceiling and wall treatments will be installed to address sound reverberation and absorption.

Makerspace and Business Incubator:

The inherent entrepreneurial nature of both the Makerspace and Business Incubator models will have a fitting place on the Upper Level being created under the Freudenthal Library Renovation project. Both spaces will also have access to the newly created Meeting Room with robust videoconferencing capabilities, which will allow for Trinidad State students to demonstrate business products and present business plans. Access to the Makerspace and Incubator will be scheduled, with multiple potential collaborations with the City of Trinidad, Co-op artists, community groups, and entrepreneurs, in addition to Robotics Club members, Trinidad State faculty and staff.



Photos of Business Center, Library 21C, Pikes Peak Library District. Source: Hall Architects.



Photos of Makerspaces: Innovate & Make Space, Lamar Community College, Lamar, CO (left), and Make I, Library 21C, Pike Peak Library District, Colorado Springs, CO (right). Source: Hall Architects.

Finishes and other features:

Low maintenance floors (porcelain tile, linoleum, carpet tile with hard-working entry zone mats) will address high traffic and the outdoor elements of dirt / dust / rain / mud / snow, and reduced maintenance scheduling. The selection of low VOC high performance coatings and paints will address health and long term maintenance of exterior and interior finishes. Sound attenuation will be addressed throughout the building – public spaces vs. controlled sound spaces (academics and support, administration etc.) to create desirable ambient quality and speech-intelligibility through properly selected ceiling, wall and flooring finishes. Casework with lockable storage will be required for areas being opened to more community visitors. Building lockers for the Testing Center, the Makerspace, and the Business Incubator will be located throughout the building. The planned Study Alcoves can employ specialized flexible furnishings. Mobile glass boards and/or whiteboards will be utilized in study areas. Single seat furniture has been requested for student congregating areas. Security features from door hardware via card readers and surveillance cameras will be planned. Refer to Appendix IV.C., “Room Data Sheets” for additional planning requirements.

The College will need to evaluate existing Furniture, Fixture and Equipment to determine if they are appropriate; the cost model developed in this report has assumed a fair amount of replacement costs. The College should develop their FFE list early in the project design phase to assure that they can properly outfit the facility.

III.D. PROJECT SCHEDULE, COST ESTIMATES, AND FINANCIAL ANALYSIS

i. Project Schedule

General

The probable Design and Construction schedule for the Freudenthal Library Renovation project is as follows:

- Step (1): **Summer 2021 – Spring 2022** (9 months): Design, Life Cycle Cost Analysis
- Step (2): **Spring 2022 – Summer 2023** (12 – 15 months): Phase 1 Construction
- Step (3): **Summer 2023 – December 2023** (5 months): Phase 2 Construction

ii. Cost Estimates

Information for cost estimates are covered on the following pages.

iii. Financing Explanation

Trinidad State Junior College anticipates that this Project will be financed through State provided Capital Construction funds.

PHASE ONE: ESTIMATE OF PROBABLE COST DETAIL

TRINIDAD STATE JUNIOR COLLEGE - FREUDENTHAL LIBRARY RENOVATION

Program Plan Phase - Estimate of Probable Cost

4/15/2020

PHASE 1 RENOVATION

	Unit Cost	Unit	Quantity	Est'd Cost	Total
<u>Lower Floor</u>					
Renovate Restrooms	18,000.00	ea	2	36,000	
Door Operators at Restrooms	1,500.00	ea	2	3,000	
					39,000
<u>Second Floor</u>					
Demo for Vestibule at Courtyard	7,500.00	ls	1	7,500	
Vestibule at Courtyard	55,000.00	ls	1	55,000	
Remove Stacks	10,000.00	ls	1	10,000	
Architectural Upgrades Old Stacks Rm / New Study Rm	22.00	sf	2150	47,300	
New Overhead Grille at Study Room	4,500.00	ea	1	4,500	
Add new exit and exit stair to Study Room	25,000.00	ls	1	25,000	
Modify courtyard doors at existing Reading Reference Rm	9,500.00	ea	2	19,000	
Architectural Upgrades New Gallery Lounge	18.00	sf	1407	25,326	
Replace Main Entry vestibule doors/enclosure	9,000.00	ea	3	27,000	
Architectural upgrades to New Student Success Ctr	22.00	sf	2550	56,100	
Listening Rm/Security Office Modifications	15,000.00	ls	1	15,000	
Architectural upgrades to New Collections/Circulation	25.00	sf	2100	52,500	
Structural upgrades to New Collections/Circulation	20.00	sf	2100	42,000	
New Overhead Grille at Collections/Circulation	4,500.00	ea	1	4,500	
Architectural upgrades to New Library Support	25.00	sf	521	13,025	
Misc Architectural Upgrades - Remainder of Floor	12.00	sf	3500	42,000	
Door Operators at Restrooms	1,500.00	ea	2	3,000	
Restroom Upgrades	18,000.00	ea	2	36,000	
Stairwell Guardrail/Handrail code upgrades	6,000.00	flight	6	36,000	
Fire Alarm modifications throughout floor	1.75	sf	14675	25,681	
Fire sprinkler modifications throughout floor	1.30	sf	14675	19,078	
HVAC Improvements throughout floor	26.00	sf	14675	381,550	
Lighting Improvements throughout floor	7.50	sf	14675	110,063	
Electrical Improvements throughout floor	5.50	sf	14675	80,713	
					1,137,835
<u>Third Floor</u>					
General Purpose Classrooms / study rooms Renovation	34.00	sf	3650	124,100	
Structural Mods for GP Classroom Renovation	16,000.00	ls	1	16,000	
Structural Mods to remove floor at existing conf rm	22,000.00	ls	1	22,000	
Architectural Repairs at removed conference rm	18.00	sf	750	13,500	
Architectural Upgrades for Incubator	25.00	sf	532	13,300	
Architectural Upgrades for Makerspace	25.00	sf	932	23,300	
Architectural Upgrades for Office Suite	25.00	sf	1173	29,325	
Change upper gallery/guardrail aesthetic	125.00	lf	100	12,500	
Add small mezzanine structure & guardrail to New Study lounge	36,000.00	ls	1	36,000	
Architectural Finishes at new mezzanine	20.00	sf	176	3,520	
Misc Architectural Upgrades - Remainder of Floor	12.00	sf	3500	42,000	
Door Operators at Restrooms	1,500.00	ea	2	3,000	
Restroom Upgrades	18,000.00	ea	2	36,000	
Fire Alarm modifications throughout floor	1.75	sf	12150	21,263	
Fire sprinkler modifications throughout floor	1.30	sf	12150	15,795	
HVAC Improvements throughout floor	26.00	sf	12150	315,900	
Lighting Improvements throughout floor	7.50	sf	12150	91,125	
Electrical Improvements throughout floor	5.50	sf	12150	66,825	
					885,453
<u>Building Exterior Work</u>					
Replace exterior windows / storefronts throughout	85.00	sf	2950	250,750	
New Main Entry Structure	95,000.00	ls	1	95,000	
					345,750
<u>Site Work</u>					
	-	sf	0	-	
	-	ls	0	-	
					-
Phase 1 Subtotal				2,408,037	
General Conditions 18%	0.18			433,447	
Contractor's Fee 8%	0.08			192,643	
			Subtotal	3,034,127	
24% Conceptual Design Contingency	0.24			728,190	
Base Bid Phase 1 Construction Total (April 2020)				3,762,317	
					56.24% GC & Contingency mark-ups
Base Bid Phase 1 Construction Total (July 2021 projected)				3.50%	3,893,999

PHASE TWO: ESTIMATE OF PROBABLE COST DETAIL

PHASE 2 RENOVATION

	Unit Cost	Unit	Quantity	Est'd Cost	Total
<u>Lower Floor</u>					
Architectural Upgrades Old Museum spaces	25.00	sf	2650	66,250	
Misc Architectural Upgrades - Remainder of occupied Floor	14.00	sf	750	10,500	
Fire Alarm modifications throughout occupied floor	1.75	sf	3400	5,950	
Fire sprinkler modifications throughout occupied floor	1.30	sf	3400	4,420	
HVAC Improvements throughout occupied floor	26.00	sf	3400	88,400	
Lighting Improvements throughout occupied floor	7.50	sf	3400	25,500	
Electrical Improvements throughout occupied floor	5.50	sf	3400	18,700	
					219,720
<u>Second Floor</u>					
	-	ea	0	-	
	-	ea	0	-	
	-	sf	0	-	
					-
<u>Third Floor</u>					
	-	ea	0	-	
	-	ea	0	-	
	-	sf	0	-	
					-
<u>Building Exterior Work</u>					
	-	sf	0	-	
	-	ls	0	-	
					-
<u>Site Work</u>					
Site Demo Grading and compaction prep	16.50	sf	3500	57,750	
Site Paving	2,450.00	/space	12	29,400	
Curb & Gutter	15.00	lf	130	1,950	
Sidewalks	30.00	lf	130	3,900	
Exterior Lighting improvements	16,500.00	ls	1	16,500	
Misc Landscaping & Re-Seed	14,000.00	ls	1	14,000	
					123,500
Phase 2 Subtotal				343,220	
General Conditions 18%	0.18			61,780	
Contractor's Fee 8%	0.08			27,458	
			Subtotal	432,457	
24% Conceptual Design Contingency	0.24			103,790	
			Base Bid Phase 2 Construction Total	536,247	56.24% GC & Contingency mark-ups
Base Bid Phase 2 Construction Total (July 2021 projected)			3.50%	555,016	

SC4.1 SIMULATION WORKSHEET

TSJC - FREUDENTHAL LIBRARY RENOVATION - COMBINED PHASES
SC-4.1 Simulation Worksheet

4/15/2020
 Projected to July 2021

	Phase 1	Phase 2	Notes
A. Land / Building Acquisition			
			<u>\$0</u>
B. Professional Services			
Master Planning			
Site Surveys, Investigations, Reports	\$15,000	\$12,000	1
Architectural/Engineering Basic Services (11%)	\$443,332	\$62,446	2
Code Review / Inspection (1.5%)	\$60,454	\$8,515	3
Project Mgt Assistance (4%)	\$176,212	\$27,108	4
Advertisements	\$2,000	\$2,000	
Abatement	\$175,000	\$45,000	
Library Collections - Relocations/Storage	\$35,000		
Museum Collections - Relocations/Storage		\$35,000	
			<u>\$1,099,066</u>
C. Construction or Improvement			
Infrastructure			
Service / Utilities			
Site Improvements		\$192,956	5
Structure / Systems / Components	\$3,893,999	\$362,060	
Other			
High Performance Certification Program (3.5%)	\$136,290	\$12,672	
			<u>\$4,597,977</u>
D. Equipment / Furnishings / Communications			
Equipment	\$95,000	\$25,000	
Furnishings	\$220,000	\$60,000	
Communication	\$60,000	\$25,000	
			<u>\$485,000</u>
E. Miscellaneous			
Art in Public Spaces (1%)	\$50,323	\$7,848	
Other			
			<u>\$58,170</u>
			<u>\$6,240,214</u>
G. Project Contingencies (5% new, 10% renov, B,C,D,E only)	\$536,261	\$87,760	\$624,021
H. Total Budget	<u>\$5,898,870</u>	<u>\$965,365</u>	<u>\$6,864,235</u>

- Notes: 1. Asbestos reports, soils reports,
 2. Need to add in soils engineer for Phase 2 const phase
 3. Need Code Consultant and Special inspections for drilled piers, concrete, steel
 4. Assumed necessary due to limited staff availability for significant renovation management
 5. Parking improvements estimated budget