DIABLO VALLEY COLLEGE
321 Golf Club Road
Pleasant Hill, California

ENGINEERING TECHNOLOGY BUILDING ASSESSMENT REPORT

INTERACTIVE
RESOURCES

Architects & Engineers

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RESOURCES

Architecture
Engineering
Planning
Construction Review
Failure Analysis

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June 5, 2006

Mr. Jack Shaffer
Contra Costa Community College District
500 Court Street
Martinez, CA 94553

Subject: **DVC E.T. ADA and Seismic Assessment Report** **2006-047.01**

Dear Mr. Shaffer:

We have visited the Engineering Technology Center at Diablo Valley College, Pleasant Hill, CA, on May 22, 2006, to perform a cursory review of the building. The purpose of this review is to provide a comprehensive report identifying building systems that require upgrade and or renovation. This includes seismic/structural systems, electrical systems and architectural barriers requiring removal for ADA compliance. (This report does not include assessment of HVAC system.)

The Engineering Technology Center is comprised of two separate buildings connected by exterior covered walkway and inner courtyard. North Building is approximately 10,000 SF and South Building is approximately 40,000 SF. Both buildings are single story.

This report is comprised of three separate assessment reports. Structural/Seismic portion is prepared by Interactive Resources (structural division). ADA portion is prepared by Interactive Resources (architectural division) and electrical/fire alarm portion is prepared by WHM Incorporated.

Please review and let us know if you have any questions or clarifications.

Sincerely,

George Y. Namkung, AIA
Principal

Performance of Existing
System – South Bldg.

PROJECTED STRUCTURAL PERFORMANCE OF EXISTING SYSTEM

SOUTH BUILDING

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Diablo Valley College
ENGINEERING TECHNOLOGY - South Building
PROJECTED STRUCTURAL PERFORMANCE OF EXISTING SYSTEM

Current CBC Code Level Earthquake

Existing Construction

The existing structure is a single story irregular shaped building that was constructed in 1970. The building appears to have been designed in accordance with the era's UBC. The roof is composed of open web wood truss joists with plywood roof sheathing. The primary seismic load resistance in the longitudinal and transverse directions of the building is provided by exterior reinforced brick masonry shear walls. Foundations are conventional spread or continuous wall footings.

A lateral load resisting system and load path, although deficient, does exist. Numerous deficiencies are present. The deficiencies observed and their expected performance are as follows:

- Out-of-plane wall anchorage is deficient and is expected to provide limited resistance to out-of plane loading. Lack of appropriate out-of-plane anchorage may result in over stressing of the existing wall anchorage connection, local diaphragm tearing, dislocation of the concrete walls from the roof, structural deformation and partial collapse of the structure.
- Collector elements are deficient and are expected to provide limited resistance. It is anticipated that due to inadequate connections to transfer horizontal forces to the vertical shear walls local yielding will occur as a result of the anticipated seismic loads. This yielding will result in partial or total collapse of the roof and walls.
- Shear walls in select locations are deficient and are expected to provide limited resistance. In select locations the shear walls do not extend up to the roof diaphragm relying instead on the steel posts in bending to provide both out-of-plane and in-plane lateral load resistance. It is anticipated that local yielding of these walls will occur as a result of the anticipated seismic loads and that partial or total collapse of these walls and the supported roof may result.
- The roof diaphragm in select locations is deficient. It is anticipated that local yielding of the diaphragm will occur, resulting localized deformation of the roof diaphragm and partial or total collapse of the roof.
- The western portion of the structure is highly irregular. Diaphragm tearing and partial collapse of the roof at the re-entrant corner is anticipated.

As a result, due to projected earthquake demand, it is anticipated that the building, in all probability, will pose a life safety hazard.

The existing conditions are shown on Figure 3 in Appendix C of this report. The structural system and observed deficiencies are summarized in the Seismic System Review in Appendix B of this report.

PROJECTED STRUCTURAL PERFORMANCE OF UPGRADED SYSTEM

The addition of new shear walls and/or bracing and the addition of supplemental bracing within the structural steel framing above the discontinuous shear walls will eliminate the overstressed shear walls. Strengthened collector connections and collector elements will eliminate the overstress occuring in these elements.

Strengthening of the roof diaphragm in select locations will eliminate the overstress condition. The addition of a seismic expansion joint at the highly irregular western portion will eliminate the potential for roof collapse in this area.

The addition of supplemental out-of-plane anchors will eliminate the potential for separation of the masonry walls from the roof and subsequent collapse of the roof.

These modifications will reduce drift within the building, significantly reduce serious damage and, coupled with out-of-plane retrofit of the existing reinforced brick masonry walls, subsequently eliminate the life safety hazard.

The addition of appropriate seismic bracing of the suspended ceiling system, mechanical and electrical equipment will significantly reduce deflection and deformation of these elements. As a result, damage will be minimized.

The proposed upgrade is shown on Figure 4 in Appendix C of this report. Proposed upgrades are summarized in the Seismic System Upgrade Summary in Appendix B of this report.

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Projected Structural
Performance of Existing
System – North Bldg.

PROJECTED STRUCTURAL PERFORMANCE OF EXISTING SYSTEM

NORTH BUILDING

INTERACTIVE
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Diablo Valley College
ENGINEERING TECHNOLOGY - North Building
PROJECTED STRUCTURAL PERFORMANCE OF EXISTING SYSTEM

Current CBC Code Level Earthquake

Existing Construction

The existing structure is a single story rectangular shaped building that was constructed in 1970. The building appears to have been designed in accordance with the era's UBC. The roof is composed of open web wood truss joists with plywood roof sheathing. The primary seismic load resistance in the longitudinal and transverse directions of the building is provided by exterior reinforced brick masonry shear walls. Foundations are conventional spread or continuous wall footings.

A lateral load resisting system and load path, although deficient, does exist. Numerous deficiencies are present. The deficiencies observed and their expected performance are as follows:

- Out-of-plane wall anchorage is deficient and is expected to provide limited resistance to out-of plane loading. Lack of appropriate out-of-plane anchorage may result in over stressing of the existing wall anchorage connection, local diaphragm tearing, dislocation of the masonry walls from the roof, structural deformation and partial collapse of the structure.
- Collector elements are deficient and are expected to provide limited resistance. It is anticipated that due to inadequate connections to transfer horizontal forces to the vertical shear walls local yielding will occur as a result of the anticipated seismic loads. This yielding will result in partial or total collapse of the roof and walls.
- Shear walls on the South wall are deficient and are expected to provide limited resistance. In select locations the shear walls do not extend up to the roof diaphragm relying instead on the steel posts in bending to provide both out-of-plane and in-plane lateral load resistance. It is anticipated that local yielding of these walls will occur as a result of the anticipated seismic loads and that partial or total collapse of these walls and the supported roof may result.
- Foundations in certain areas are deficient and are expected to provide limited resistance. It is anticipated that local yielding of the soil foundation interface will result in increased rotation of the shear walls and resulting localized deformation of the roof diaphragm and collector elements.

As a result, due to projected earthquake demand, it is anticipated that the building, in all probability, will pose a life safety hazard.

The existing conditions are shown on Figure 1 in Appendix C of this report. The structural system and observed deficiencies are summarized in the Seismic System Review in Appendix A of this report.

PROJECTED STRUCTURAL PERFORMANCE OF UPGRADED SYSTEM

The addition of the new shear walls and supplemental bracing within the structural steel framing above the discontinuous shear walls will eliminate the overstressed shear walls along the South wall. Strengthened collector connections and collector elements will eliminate the overstress occuring in these elements. Strengthened foundations will reduce the foundation rotations and subsequent deformation of the diaphragm and collector elements.

The addition of supplemental out-of-plane anchors will eliminate the potential for separation of the masonry walls from the roof and subsequent collapse of the roof.

These modifications will reduce drift within the building, significantly reduce serious damage and, coupled with out-of-plane retrofit of the existing reinforced brick masonry walls, subsequently eliminate the life safety hazard.

The addition of appropriate seismic bracing of the suspended ceiling system, mechanical and electrical equipment will significantly reduce deflection and deformation of these elements. As a result, damage will be minimized.

The proposed upgrade is shown on Figure 2 in Appendix C of this report. Proposed upgrades are summarized in the Seismic System Upgrade Summary in Appendix A of this report.

Seismic System Review
North Building

APPENDIX A

SEISMIC SYSTEM REVIEW

NORTH BUILDING

INTERACTIVE
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DIABLO VALLEY COLLEGE
ENGINEERING TECHNOLOGY – NORTH BUILDING
SEISMIC SYSTEM REVIEW

ITEM	DESCRIPTION & COMMENTS	UPGRADE REQUIRED
CONFIGURATION	Regular shaped one story building approximately 15 feet high measuring approximately 160 by 60 feet.	NO
STRUCTURAL SYSTEM: LONGITUDINAL & TRANSVERSE SYSTEMS	Roof framing: 1 1/8 inch plywood sheathing on wood open web joists, supported by structural steel trusses and reinforced brick masonry perimeter walls. The primary seismic load resistance in both the longitudinal and transverse directions of the building are provided by exterior reinforced brick masonry shear walls. Ground Floor: Concrete slab-on-grade. • Deficient out-of-plane anchorage between roofs joists and exterior brick masonry walls. • Deficient in-plane vertical shear resisting elements. Brick masonry walls do not extend to the diaphragm in some areas. Deficient wall length. Anticipate ductile failure.	YES
LOAD PATH	Seismic load path appears inadequate at select locations. • Deficient load path between roof diaphragm and south shear wall. • Deficient collector elements and connections	YES
ROOF DIAPHRAGM	1 1/8 inch plywood sheathing over existing open web wood trusses. •	NO
EXTERIOR WALL SYSTEM	Reinforced brick masonry walls. • Out-of-plane anchorage of brick masonry walls is deficient.	YES
FOUNDATIONS	In select locations the foundations are deficient.	YES
INTERIOR PARTITIONS	• N/A	NO
SUSPENDED CEILINGS	• N/A	NO
MECH/ELECT	• Majority of lighting does not appear to be independently braced. • Sprinkler system does not appear to be adequately braced. • Internal unit heaters/fans, although relatively small in mass, lack appropriate lateral bracing.	YES
ROOF EQUIPMENT	• Roof mounted equipment/ minimal in size. Anchorage not visible. Based on age of units, anticipate deficient equipment anchorage.	YES
SPECIAL EQUIPMENT	• N/A	NO

DIABLO VALLEY COLLEGE
ENGINEERING TECHNOLOGY – NORTH BUILDING
SEISMIC SYSTEM UPGRADE SUMMARY

ITEM	RECOMMENDATIONS
STRUCTURAL SYSTEM: LONGITUDINAL & TRANSVERSE SYSTEMS	• Provide supplemental bracing along south wall to reduce shear stresses on existing brick masonry. • Add infill bracing between top of brick masonry wall and roof diaphragm to provide a complete load path.
LOAD PATH	• Add out-of-plane anchorage connections. • Strengthen existing collector elements and connections.
ROOF DIAPHRAGM	• N/A
EXTERIOR WALL SYSTEM	• Add out-of-plane anchorage connections for brick masonry walls.
FOUNDATIONS	• Increase footing width and/or length to reduce foundation bearing pressure.
SUSPENDED CEILINGS	• N/A
MECH/ELECT	• Add diagonal bracing system from lights to roof framing in deficient areas. • Add bracing to sprinkler system. • Provide bracing for interior unit heaters/fans.
ROOF EQUIPMENT	• Provide additional anchorage of roof mounted equipment to curb and roof framing below
SPECIAL EQUIPMENT	• N/A

Seismic System Review
South Building

APPENDIX B

SEISMIC SYSTEM REVIEW

SOUTH BUILDING

INTERACTIVE
RESOURCES

Architects & Engineers

DIABLO VALLEY COLLEGE
ENGINEERING TECHNOLOGY – SOUTH BUILDING
SEISMIC SYSTEM REVIEW

ITEM	DESCRIPTION & COMMENTS	UPGRADE REQUIRED
CONFIGURATION	Irregular shaped one story building approximately 15 feet high measuring approximately 230 by 190 feet.	YES
STRUCTURAL SYSTEM: LONGITUDINAL & TRANSVERSE SYSTEMS	Roof framing: 1 1/8 inch plywood sheathing on wood open web joists, supported by structural steel trusses and reinforced brick masonry perimeter walls. The primary seismic load resistance in both the longitudinal and transverse directions of the building are provided by exterior reinforced brick masonry shear walls. Ground Floor: Concrete slab-on-grade. • Deficient out-of-plane anchorage between roofs joists and exterior brick masonry walls. • Deficient in-plane vertical shear resisting elements. Brick masonry walls do not extend to the diaphragm in some areas. Deficient wall length. Anticipate ductile failure. • Highly irregular plan configuration at the re-entry corner of the west wing with potential for localized collapse	YES
LOAD PATH	Seismic load path appears inadequate at select locations. • Deficient load path between roof diaphragm and shear walls. • Deficient collector elements and connections	YES
ROOF DIAPHRAGM	1 1/8 inch plywood sheathing over existing open web wood trusses. • Deficient diaphragm in select locations	YES
EXTERIOR WALL SYSTEM	Reinforced brick masonry walls. • Out-of-plane anchorage of brick masonry walls is deficient.	YES
FOUNDATIONS	• N/A	NO
INTERIOR PARTITIONS	• N/A	NO
SUSPENDED CEILINGS	• N/A	NO
MECH/ELECT	• Majority of lighting does not appear to be independently braced. • Sprinkler system does not appear to be adequately braced. • Internal unit heaters/fans, although relatively small in mass, lack appropriate lateral bracing.	YES
ROOF EQUIPMENT	• Roof mounted equipment/ minimal in size. Anchorage not visible. Based on age of units, anticipate deficient equipment anchorage.	YES
SPECIAL EQUIPMENT	• N/A	NO

DIABLO VALLEY COLLEGE
ENGINEERING TECHNOLOGY – SOUTH BUILDING
SEISMIC SYSTEM UPGRADE SUMMARY

ITEM	RECOMMENDATIONS
STRUCTURAL SYSTEM: LONGITUDINAL & TRANSVERSE SYSTEMS	• Provide supplemental bracing along south wall to reduce shear stresses on existing brick masonry. • Add infill bracing between top of brick masonry wall and roof diaphragm to provide a complete load path. • Add seismic expansion joint to separate the west wing from the rest of the building
LOAD PATH	• Add out-of-plane anchorage connections. • Strengthen existing collector elements and connections.
ROOF DIAPHRAGM	• Add additional nailing to diaphragm in select locations.
EXTERIOR WALL SYSTEM	• Add out-of-plane anchorage connections for brick masonry walls.
FOUNDATIONS	• N/A
SUSPENDED CEILINGS	• N/A
MECH/ELECT	• Add diagonal bracing system from lights to roof framing in deficient areas. • Add bracing to sprinkler system. • Provide bracing for interior unit heaters/fans.
ROOF EQUIPMENT	• Provide additional anchorage of roof mounted equipment to curb and roof framing below
SPECIAL EQUIPMENT	• N/A

APPENDIX C
Figures 1 – 6

APPENDIX C

FIGURES 1 THROUGH 6

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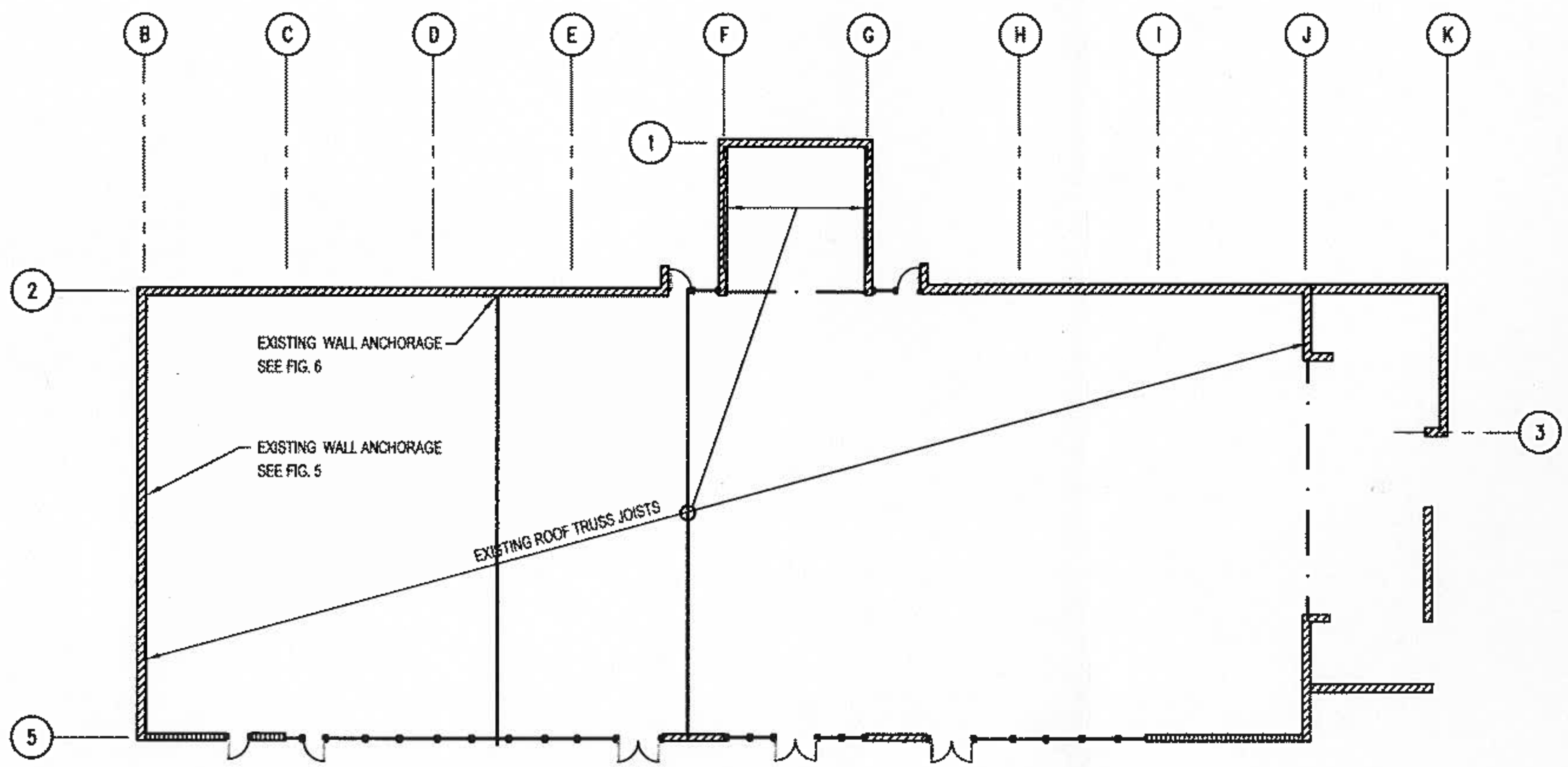
LEGEND

EXISTING REINFORCING BRICK WALL

EXISTING PLYWOOD SHEAR WALL



EXISTING NORTH BUILDING

NOT TO SCALE

DVC E.T. ADA AND SEISMIC ASSESSMENT REPORT
ENGINEERING TECHNOLOGY
DIABLO VALLEY COLLEGE
CONCORD, CA
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PAGE **FIG. 1**

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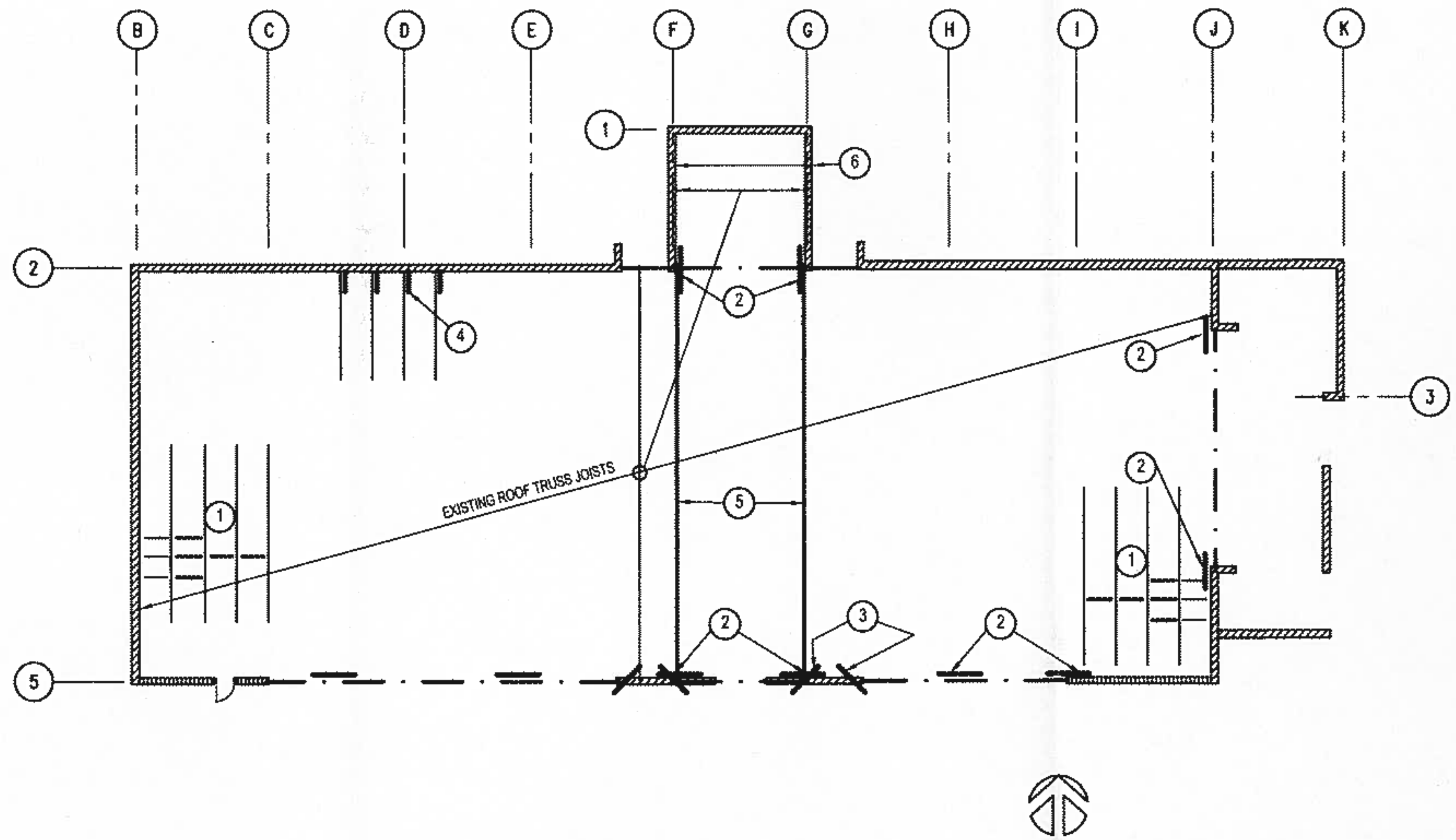

LEGEND

EXISTING REINFORCED BRICK WALL

EXISTING PLYWOOD SHEAR WALL

SEISMIC UPGRADE NOTES

1. UPGRADE EXISTING OUT-OF-PLANE WALL ANCHORAGE AND SUB-DIAPHRAGM STRENGTH.
2. REINFORCE EXISTING COLLECTOR CONNECTIONS.
3. INCREASE EXISTING MASONRY WALL CAPACITY AND ADD BRACED FRAME ABOVE EXISTING AND / OR NEW MASONRY WALL.
4. UPGRADE EXISTING OUT-OF-PLANE WALL ANCHORAGE.
5. STRENGTHEN EXISTING TRUSS JOISTS FOR COLLECTOR CAPACITY
6. STRENGTHEN EXISTING FOOTING FOR OVERTURNING.

PROPOSED SEISMIC UPGRADE TO NORTH BUILDING

NOT TO SCALE

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PAGE
FIG 2

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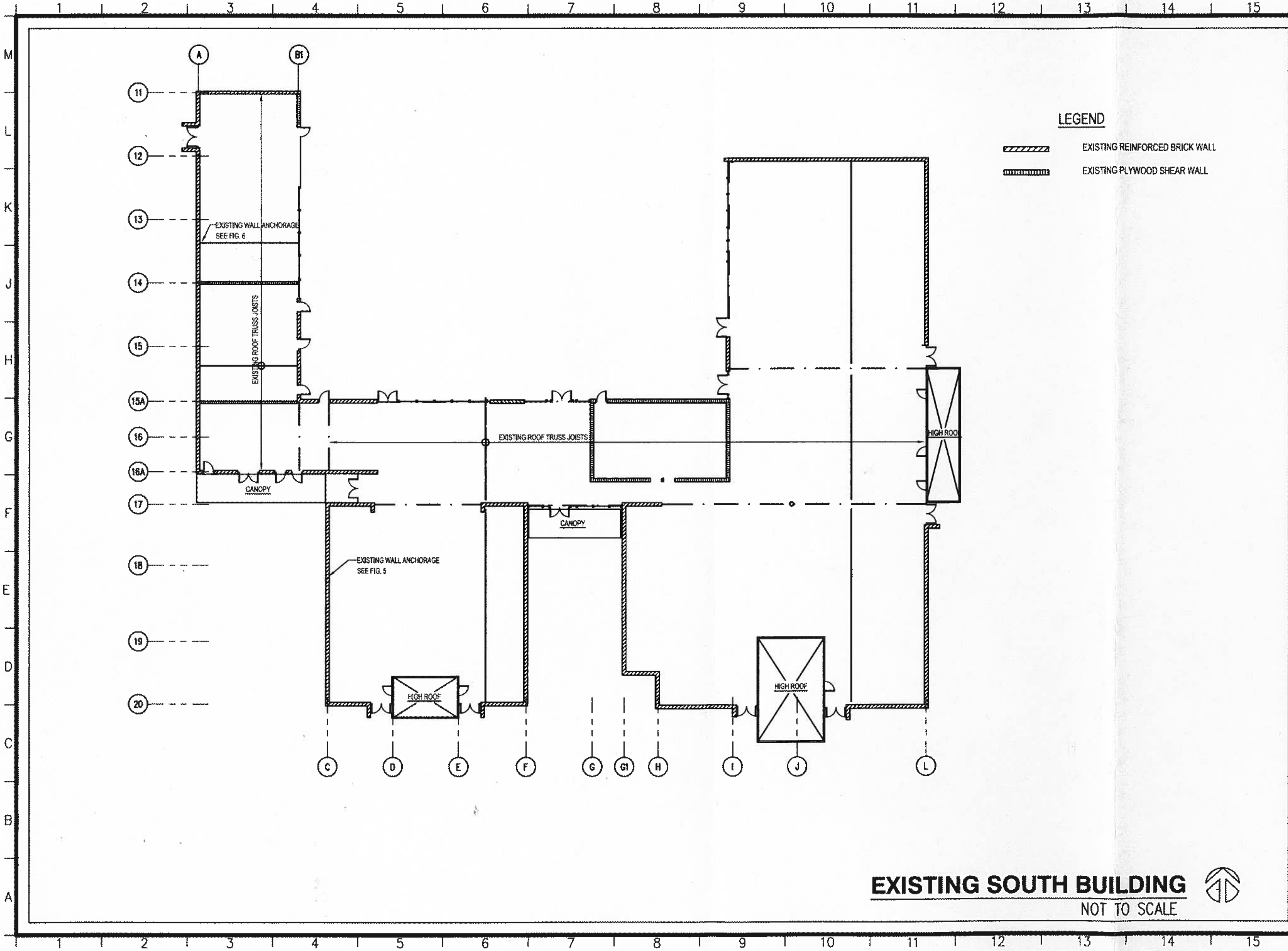

EXISTING SOUTH BUILDING

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FIG. 3

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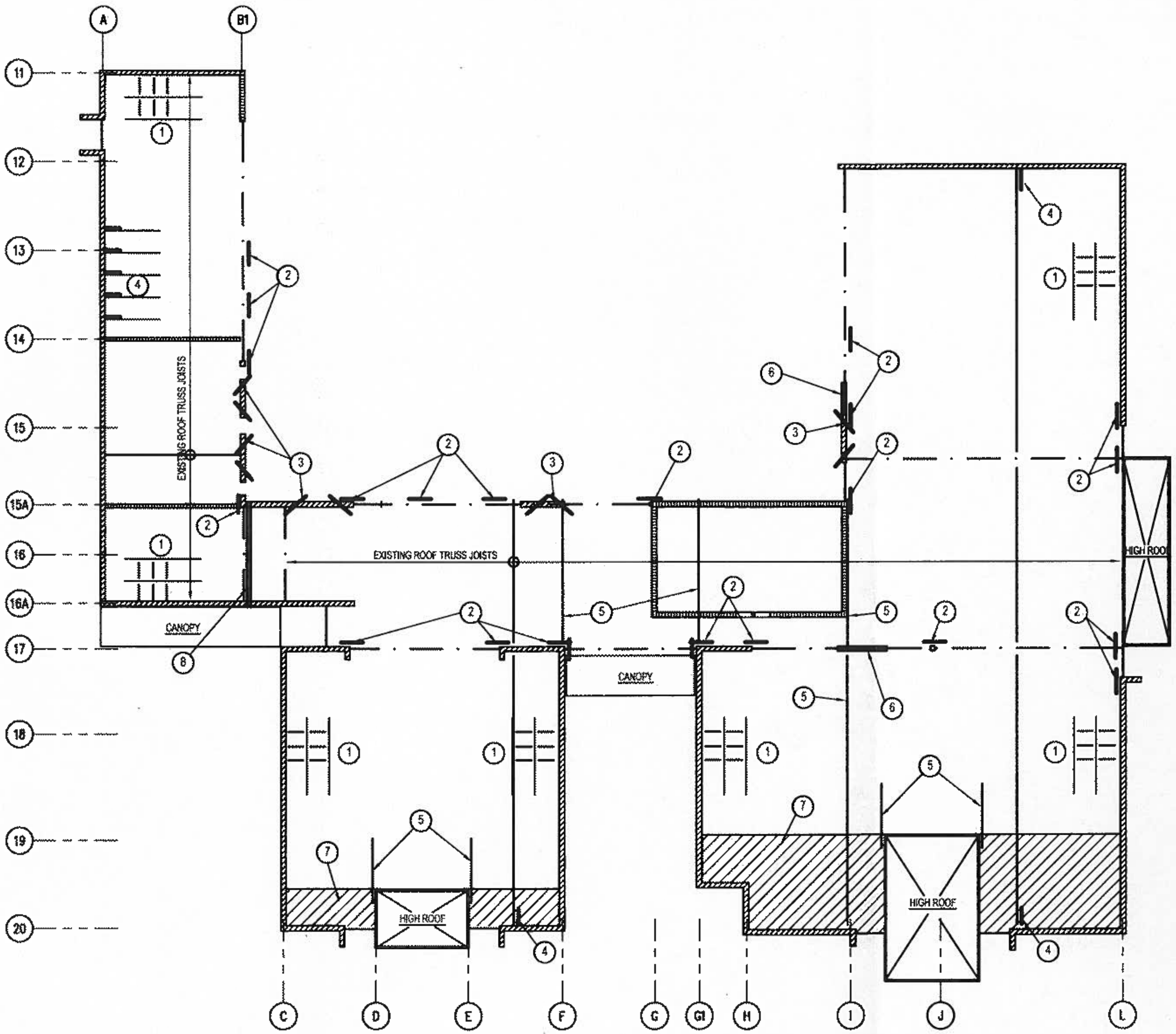

LEGEND

- EXISTING REINFORCED BRICK WALL
- EXISTING PLYWOOD SHEAR WALL
- NEW REINFORCED BRICK WALL

SEIMIC UPGRADE NOTES

1. UPGRADE EXISTING OUT-OF-PLANE WALL ANCHORAGE AND SUB-DIAPHRAGM STRENGTH.
2. REINFORCE EXISTING COLLECTOR CONNECTIONS.
3. INCREASE EXISTING MASONRY WALL CAPACITY AND ADD BRACED FRAME ABOVE EXISTING AND / OR NEW MASONRY WALL.
4. UPGRADE EXISTING OUT-OF-PLANE WALL ANCHORAGE.
5. STRENGTHEN EXISTING TRUSS JOISTS FOR COLLECTOR CAPACITY
6. ADD NEW REINFORCED MASONRY WALL
7. STRENGTHEN EXISTING ROOF DIAPHRAGM CAPACITY
8. ADD NEW SEISMIC EXPANSION JOINT

PROPOSED SEISMIC UPGRADE TO SOUTH BUILDING

NOT TO SCALE

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PAGE **FIG. 4**

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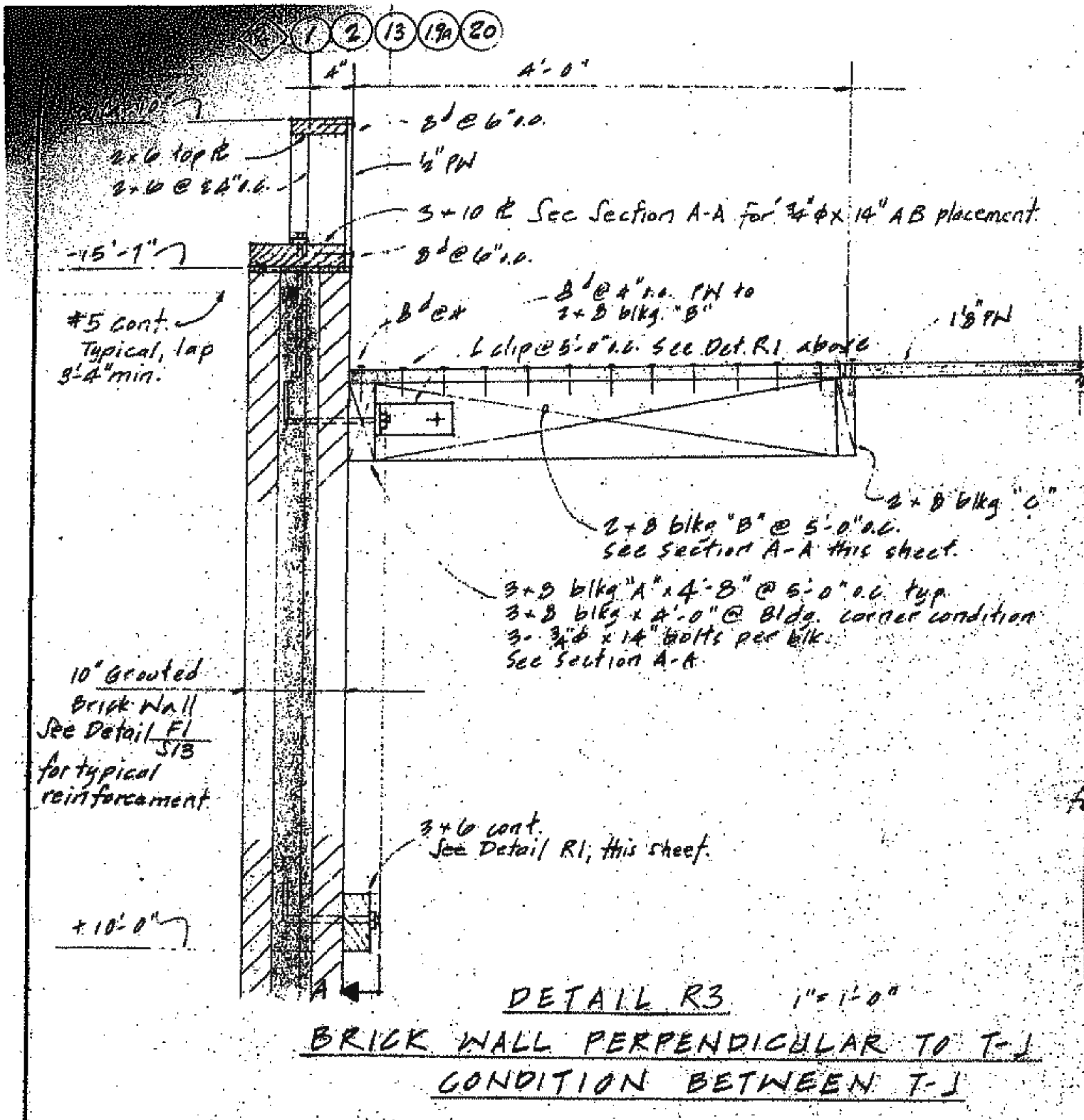

DETAIL R3 1" = 1'-0"

BRICK WALL PERPENDICULAR TO T-J CONDITION BETWEEN T-J

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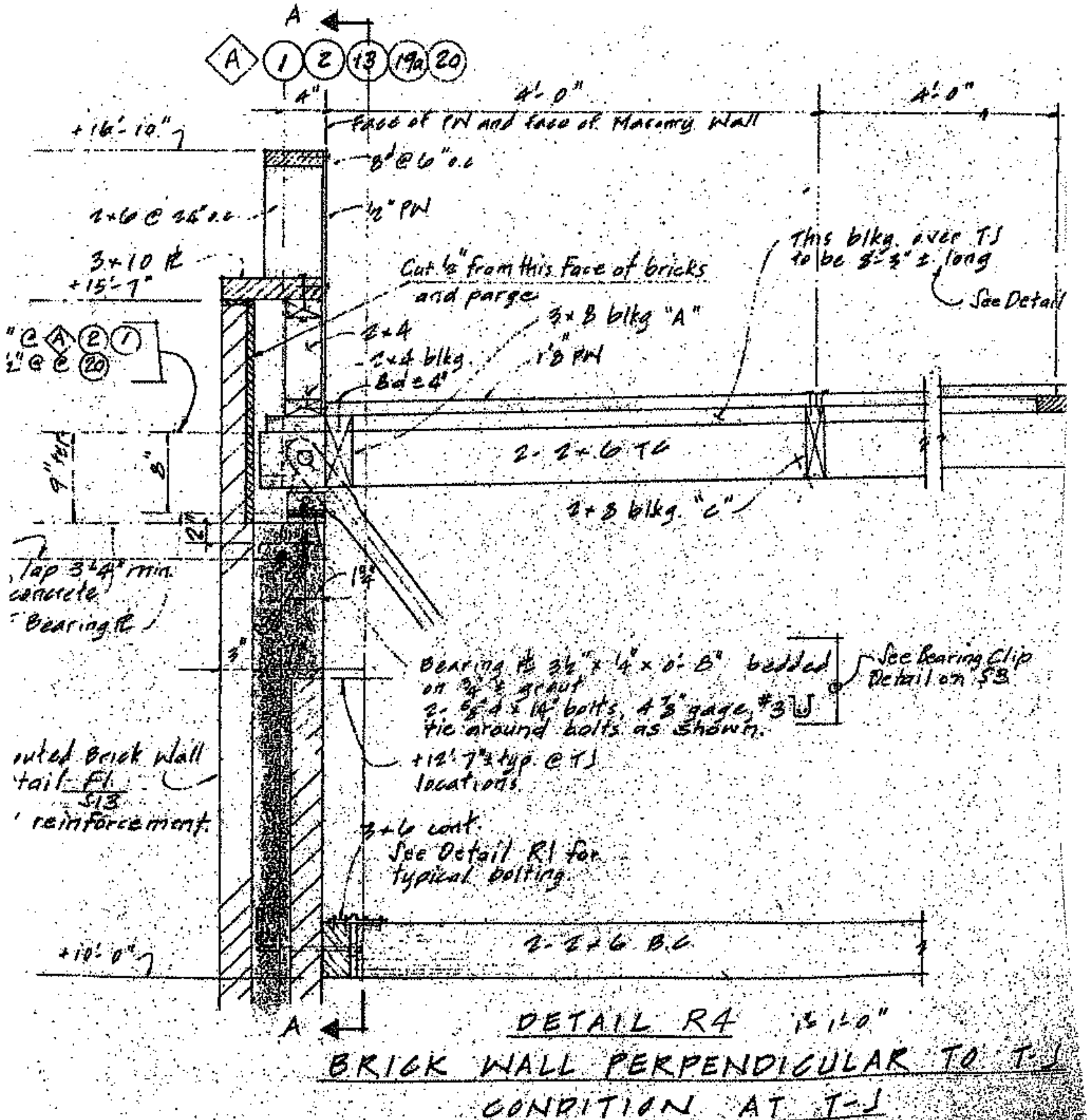

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PAGE	FIG. 6

ADA
Assessment Report

ADA

ASSESSMENT REPORT

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South Building (Main Building):
South Building contains (4) vocational laboratories, several mid size classrooms, small lecture hall with stepped seating and projection booth, men's and women's restrooms with lockers, faculty offices and other miscellaneous support facilities.

Path of Travel from faculty parking lot (lot no.2)
Faculty parking lot is located at the south side of the South Building. This faculty parking lot currently does not have accessible parking spaces. Based on the total number of parking spaces, 9 accessible parking spaces (including one van accessible space) are required with pole mounted sign, 5'-0" painted aisle (8'-0" wide painted aisle for van parking) and pavement marking of International Sign of Accessibility at each space.

From the accessible parking spaces, an accessible path of travel to the front entrance of the building is required. The slope of the existing concrete walkway leading to the front entrance complies with the ADA requirements. However, the walkway is not in good condition with cracks and offsets. Our recommendation is to remove and replace the existing walkway. Additionally, the existing curb ramp at edge of concrete walk does not comply with ADA requirements. A new curb ramp with maximum 8.33% slope is required.

Path of Travel from the student parking lot (lot no.1)
Student parking is located at the east side of the South Building. Currently, there are 5 accessible parking spaces. There is no van accessible parking space. The existing accessible parking spaces do not have an accessible path of travel to the building. The slope of existing walkway from the parking spaces to the east entrance of the South Building does not comply with ADA requirements. Our recommendation is to convert one accessible parking space into van accessible parking with required signage and replace the existing walkway with new paving with maximum 5% slope in the direction of travel and 2% cross slope.

Path of Travel (interior):
We found the following items to be non-ADA compliant:

1. All interior swing doors have knob hardware.
2. Some doors do not have the required 18" clearance at strike side of door.
3. There are several aluminum storefront entry doors without the required 10" bottom rail.
4. All faculty offices have sliding glass doors. Typically, sliding glass door creates a barrier. It depends on the size and weight of doors. If the force required to open exceeds 5 pounds, then it becomes non-

compliant. (We were unable to verify opening force at time of site visit.)

5. Some thresholds at exterior doors have more than ½" vertical offset.

Recommendations:

1. Replace all knob hardware with lever type (locksets)
2. Reconfigure rooms as required to provide clearances at doors or install automatic door operators.
3. Replace non-ADA compliant aluminum storefront doors.
4. Replace all sliding glass doors with swing doors.
5. Replace thresholds.

<u>Men's Restroom /Locker Room:</u>

Men's Restroom/Locker Room is not accessible.

1. The entry door from the corridor and entry door from the exterior courtyard do not have the required 60" x 60" clear space in front of the door.
2. There is no accessible stall.
3. The circular hand wash sink is not accessible.
4. Mounting heights of toilet room accessories are not accessible.
5. Locker room area does not have a designated accessible locker with required grab bar.

Recommendations:

- This room requires complete modernization to be ADA compliant.

<u>Women's Restroom:</u>

Women's Restroom is not accessible.

1. The entry door from the corridor do not have the required 60" x 60" clear space in front of the door.
2. There is no accessible stall.
3. Mounting heights of toilet room accessories are not accessible.

Recommendations:

- This room requires complete modernization to be ADA compliant.

<u>Lecture Room 112:</u>

This is a stepped room with fixed seating. It has a projection booth at the rear of the room. ADA requires designated areas for wheel chairs at the front and rear of the room. At the rear of the room, remove fixed seating and create a level platform (min. 48" x 33"). ADA requires designated wheel chair space adjacent to fixed seating for use by an able bodied companion.

At the front of the room, there is no path of travel. The stepped aisle at each side of room is too steep for modification to a ramp. The most economical solution is to abandon this room for classroom use completely. If the college cannot abandon this room, there are two options for providing access to the front of this room:

- Option 1: Install wheel chair lift at exterior wall of this room.
- Option 2: Install accessible ramp at west side of the building. There is a ramp at the west side of the building. This ramp leads to an electrical storage room (adjacent to this room) but the ramp is non ADA compliant. The slope is too steep, not wide enough, and does not have the handrails. Additionally it does not have the required level landing at change of direction.

Additionally, ADA requires installation of permanent assistive listening systems at lecture hall/theater with fixed seating.

North Building (Auxiliary Building):
North Building contains several drafting/materials testing labs, study rooms, faculty offices, outdoor service yard and other miscellaneous support facilities. There are no restrooms in this building.

<u>Path of Travel from the South Building:</u>
North Building is connected to the South Building by covered walkways surrounding an inner courtyard. The path of travel under the covered walkway is ADA compliant. This inner courtyard has concrete seating and serves as a gathering place for students. However, the cross slope of paving at the inner courtyard exceeds the maximum 2%. In order to be ADA compliant, we suggest a portion of the inner courtyard to be re paved with a maximum 2% cross slope.

<u>Path of Travel (interior):</u>
In general, the classrooms and labs are adjacent to each other without hallways connecting the rooms. Although all interior doors (that connects the classrooms and labs) have knob type hardware, they all have the required clear space in front of the doors. The only corrective measures required at these doors are replacing the knob hardware with lever type hardware.

As in the case with the South Building, the faculty offices located within this building has sliding glass doors. As stated in the report for the South Building, sliding glass doors might not be ADA compliant if the required force to open these doors exceeds 5 pound maximum.

Drafting/Materials Testing Labs:
These rooms have built-in lab tables with sinks. The tables do not comply with ADA requirements in height and knee spaces. Our recommendation is to lower a section of lab tables to 30" at each room and create a knee space for wheel chair access.

Outdoor Service Yard:
Outdoor Service Yard is located at the east end of this building. At the time of survey, we could not determine if this area is used for instructional purposes. The paving in this area is in need of repair. There are several cracks and offsets exceeding ½ inch. If this area is used for instructional purposes, we recommend repaving the entire area.

Miscellaneous Items:

- Signs: There are no room identification signs with braille. ADA requires room identification signs with Braille at strike side of doors including accessibility signage at restroom doors. Additionally, we recommend installation of directional accessibility signage at path of travel from the parking lot to accessible entrances at each building.

- Light switches, electrical outlets: Mounting height of light switches, thermostats and other control devices exceeds maximum height of +48"AFF in some areas. Mounting height of electrical outlets are lower than or exceed the required height of +15" AFF in some areas.

- Fire alarm devices: Existing fire alarm system devices do not comply with ADA requirements. See electrical system report.

- Drinking fountains: The existing drinking fountains in both buildings are single height and do not comply with ADA requirements. These drink fountains must be replaced with new hi-lo drinking fountains.

- Emergency eye-wash/shower: The existing eye-wash/shower located at the North Building does not comply with ADA requirements. The eye-wash needs to be lowered for wheel chair access.

- Covered Walkway: At west side of covered walkway between north and south buildings, we observed dry rot damage in the structure. It appears that it is caused by leakage from HVAC unit mounted above the walkway. We recommend the relocation of HVAC unit and repair framing/finish, or rebuild the structure with larger framing member to support the weight of HVAC unit and install sheet metal flashing to prevent moisture from seeping into the framing.

Electrical Systems /
Requirements

ELECTRICAL SYSTEMS / REQUIREMENTS

INTERACTIVE
RESOURCES

Architects & Engineers

WHM Incorporated, Engineering Consultants,1605 School Street Moraga, CA 94556
Tel (925) 376-2902 • Fax (925) 376-2904

DIABLO VALLEY COLLEGE
Engineering & Technology Buildings
June 2, 2006

The purpose of this report is to provide a general observation and determine the integrity and condition of the existing electrical systems/equipment for the Engineering & Technology ("ET") Buildings. We have also provided our recommendations for the electrical systems that do not conform with current code requirements.

A general visual inspection was conducted on the buildings on May 22 and May 30, 2006. The inspection helped to identify the physical condition of the existing systems in terms of age, deterioration and physical configuration.

A. Lighting:

1. Typical Classroom:

The general illumination in the classroom consists of 2-lamp fluorescent fixtures with 'batwing' style acrylic lens. While these lenses seem to effectively spread the illumination throughout the classroom, lighting levels in classrooms averaged between 25 to 35 footcandles. This is below the 50 footcandle minimum Illuminating Engineering Society ("IES") recommended level of lighting in classrooms.

Recommendation:

Replace lighting system with new high-efficiency type fixtures to bring lighting levels to IES standards.

2. Machine Shop, Electrical/Carpentry Shop and Drafting Area:

As in the typical classrooms, the type of fixtures used is the same fluorescent type with 'batwing' acrylic lens with 2-lamp configuration. Lighting levels averaged between 35 to 40 footcandles. This too, is below the 50 footcandle minimum recommendation by IES for shops, laboratories, and drafting areas.

The switching of the lighting system in the Machine Shop is through a single toggle switch with lighting contactor to turn all the lights on and off.

Recommendation:

Replace lighting system with new high-efficiency type fixtures to bring the lighting levels to IES standards and provide bi-level switching.

3. Corridor and Lobby:

We observed low light output from various fixtures in the Lobby area. Numerous fixtures in the Corridor either do not work or need attention.

Recommendation:

Repair or replace lighting in Corridor and Lobby areas with new high-efficiency type fixtures.

B. Exterior Lighting:

The exterior lighting consists of wall-mounted HID fixtures and fluorescent troffers. These fluorescent troffers have open lenses with exposed lamps. Some of the wall mounted HID are old and corroded and may no longer provide effective light output.

Recommendation:

Replace exterior lighting system with new high-efficiency type fixtures with vandal proof and weatherproof housing.

C. Power System:

The buildings' distribution system is served by a 1,200 Amp switchboard with 277/480 volt, 3 phase, 4 wire and 120/208 volt, 3 phase, 4 wire. The 277/480 volt system serves the lighting and other heavy equipment, such as welders, HVAC, etc. The 120/208 volt system serves the receptacles and other small electrical loads.

Unless there is a massive addition to existing equipment, there appears to be sufficient power supply to these buildings.

D. Fire Alarm System:

The existing fire alarm system is a manual system consisting of pull stations, horn/strobes, and strobes. The existing system does not provide full coverage for both ET Buildings. Also, the location of the devices, such as pull stations, horns, and strobes does not comply with the current ADA Code. The public areas and toilets do not have fire alarm devices installed.

Recommendation:

Provide a new addressable fire alarm system for full coverage of both buildings connected to existing campus-wide system complete with new horn/strobe, smoke detectors and other required initiation devices.

E. Clock System:

The existing battery operated clock system was reported to be malfunctioning at times and do not serve the School well.

Recommendation:

Provide a new wireless clock system that has been tested and manufactured by a reputable company with sufficient track record otherwise a new conventional hard-wired system is also recommended.

END OF REPORT

INTERACTIVE
RESOURCES

Architects & Engineers

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www.intres.com

Thornton Tomasetti

Structural Feasibility Study

Diablo Valley College
Engineering Technology Building

321 Golf Club Road
Pleasant Hill, CA

Thornton Tomasetti U22175.00

Prepared For
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January 31, 2023
Updated: February 28, 2023

REGISTERED PROFESSIONAL ENGINEER
BRIAN M. SHEN
NO. 4961
STRUCTURAL
STATE OF CALIFORNIA

signed 02/28/2023

Date:	January 31, 2023; updated February 28, 2023
Prepared For:	Ron Hoyle
Company:	Kitchell CEM

Subject:	**ET Building Feasibility Study**
Project Name:	Engineering Technology Renovation
Prepared By:	Jason Albright, P.E.
Reviewed By:	Brian Shen, P.E., S.E., LEED AP
TT Project Number:	U22175.00

1.0 Introduction

Thornton Tomasetti, Inc. (TT) was retained by Kitchell CEM (the Client) on behalf of the Contra Costa Community College District (the District) to perform a feasibility study of the existing Engineering Technology Building (ET Building) at the Diablo Valley College Pleasant Hill Campus (DVC Campus) located at 321 Golf Club Road, Pleasant Hill, CA. The District requested the study in order to assess the viability of renovating and possibly expanding the existing ET Building. Our scope includes review of relevant code parameters from the California Administrative Code (CAC), the California Building Code (CBC), and the California Existing Building Code (CEBC) for projects under the jurisdiction of the Division of State Architects (DSA), as well as a review of the existing structure's condition.

2.0 Received Documents

The Client provided the following documents for our review as part of this study (Table 1).

Table 1: List of documents received

Date	File Name	Author
October 3, 1969	ETC Structural Drawings	Cometta and Sootaru (AOR) Milton G. Leong (EOR)
June 5, 2006	DVC ET Building ADA and Seismic Assessment Report	Interactive Resources
January 25, 2017	Geotechnical Investigation Report for Proposed Switchgear Facility (D4009) Diablo Valley Community College	RMA Group
October 19, 2017	GEOTECHNICAL REPORT ADDENDUM #1 Geotechnical Investigation Report for Proposed Switchgear Facility (D4009) Diablo Valley Community College	RMA Group

3.0 Description of the Existing Structure

The ET Building consists of two single-story buildings (referred to as the North Building and South Building) constructed circa 1969. The buildings are structurally independent and border a central courtyard, which is bounded by a covered walkway at its perimeter (Figure 1). The North Building is a rectangular floor plan measuring approximately 60 feet by 160 feet. The South Building has a central spine measuring approximately 180 feet in the east-west direction with four wings extending from the spine. The courtyard is a rectangular plan measuring approximately 130 feet by 90 feet. The covered walkways at the perimeter of the courtyard are approximately 10 feet wide and are structurally independent from the North and South Buildings. Table 2 summarizes the approximate areas of each portion of the ET Building plan.

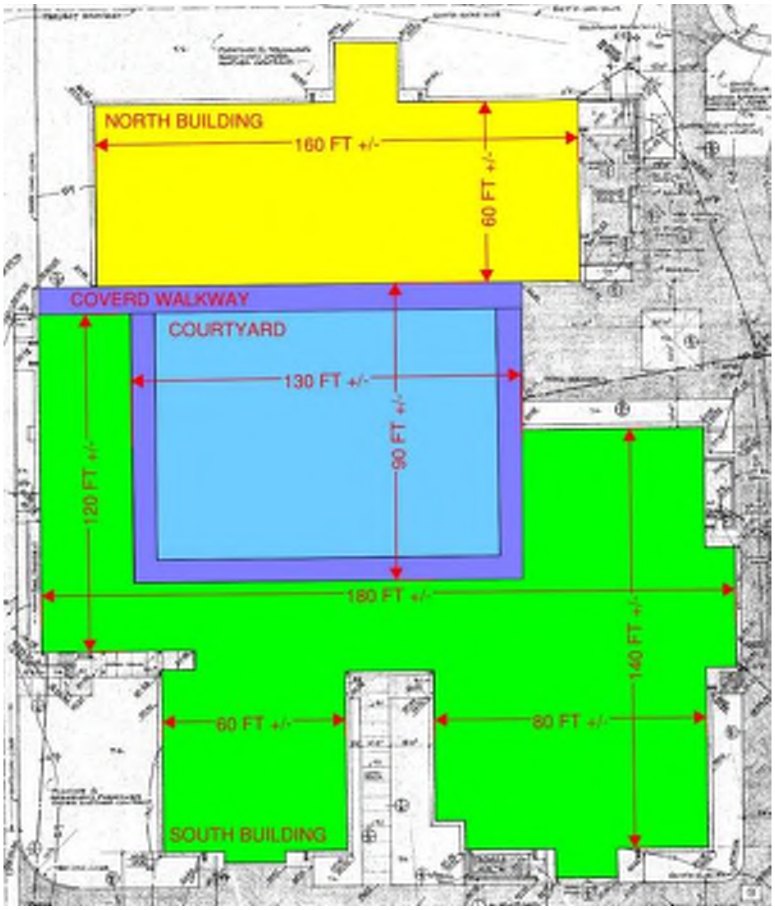

Figure 1: Overall layout and approximate dimensions of the ET Building.

Table 2: Approximate areas.

Structure	Approximate Area (Square Feet)
North Building	10,500
South Building	22,000
Courtyard	12,000

North and South Buildings

The North and South Buildings are comprised of reinforced masonry shear walls situated around the building perimeter with some plywood shear walls at the building interior, steel wide flange beams and tube columns at the curtain walls, and open-web truss joists with a plywood sheathing roof system. The shear walls are supported by shallow continuous footings, while the steel columns are supported by spread footings. Footings are typically 3 feet deep with a varying width of 18 inches to 2 feet. The slab is specified as a 4-inch-thick slab-on-grade.

The roof system consists of open-web truss joists spaced approximately 5 feet on center and measuring approximately 5 feet deep. The top and bottom chords consist of two 2x6 wood members, and the webs are comprised of 2-inch diameter steel bars. The roof diaphragm consists of continuous 1-1/8-inch-thick plywood sheathing. Steel framing at curtain walls consists of wide flange beams aligned with the joist top chord and supported by tube columns. Steel tube ledgers span between the columns and are aligned with the joist bottom chords, approximately 5 feet below the wide flange beams.

Lateral resistance is primarily provided via the perimeter masonry shear walls, which are typically 10 inches thick, grouted, and reinforced with vertical #4 bars spaced at 9 inches on center and horizontal #4 bars spaced at 12 inches on center. The masonry shear walls are supplemented by a limited number of plywood shear walls. For masonry walls perpendicular to the roof framing (Figure 2), the joist top and bottom chords are typically fastened to the walls, providing a continuous load path for shear resistance. For masonry walls parallel to the roof framing (Figure 3), the joist top chord is anchored to the wall, and transverse blocking extends to the first truss for lateral force transfer. In some locations facing the central courtyard, masonry shear walls stop at the joist bottom chord elevation, forming a clerestory between the masonry walls and roof diaphragm (Figure 4). The clerestory does not have adequate strength or rigidity to transfer lateral forces to the partial height masonry shear walls, creating an insufficient local load path in the lateral system at these locations.

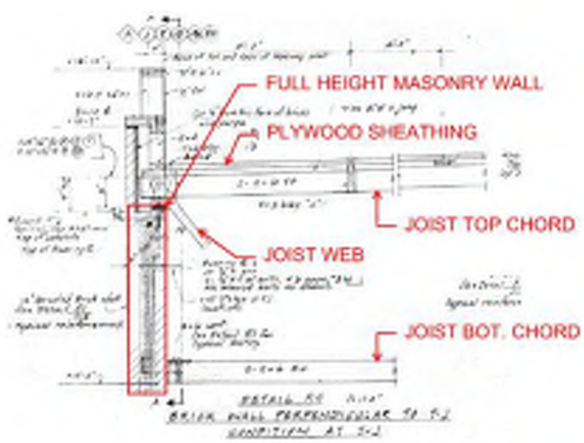

Figure 2: Typical framing condition for masonry walls perpendicular to roof framing.

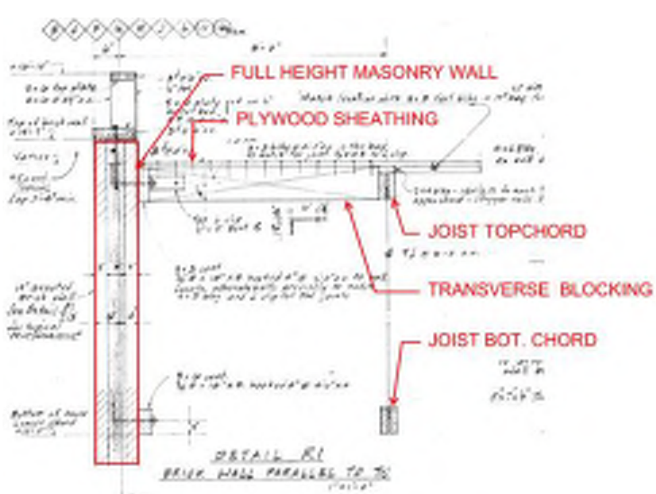

Figure 3: Typical framing condition for masonry walls parallel to roof framing.

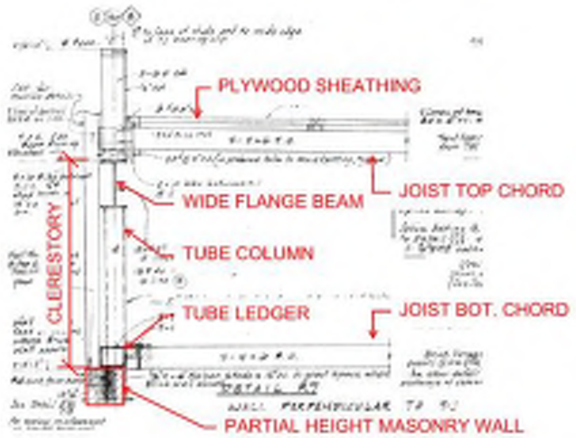

Figure 4: Framing condition for partial-height masonry shear walls with clerestory.

Covered Walkways

The steel framing for the covered walkways consists of 5-inch-by-5-inch steel tube columns and W12x27 wide flange beams. The beams are supported by the columns through a bearing cap plate and four 3/4-inch diameter bolts. The walkways are covered by 5/16-inch-thick plywood sheathing. The columns are embedded in 3-foot-deep footings.

4.0 Site Visit Observations

TT representatives Mirela Tumbeva and Blake Berger visited the site on January 6, 2023 to perform a visual assessment of various structural components, including the roof joists, steel framing, and connections. Visual observation of the roof membrane was also conducted, though opining on the condition of the building's roofing and waterproofing systems is not part of the scope of this report. Some areas were obstructed by finishes or were otherwise inaccessible. All observations were non-destructive in nature. Representative photographs documenting the condition of the building are included in Appendix A.

Based on our visual assessment, the as-built condition conformed with the existing drawings, and the structure was generally in good condition. We did not observe visible decay or corrosion in the framing, nor major deterioration of the masonry walls.

5.0 Review of Applicable Codes

As part of the DVC Campus, the ET Building is subject to review by the Division of the State Architect (DSA), which is the authority having jurisdiction over California public schools. DSA has developed specific codes and thresholds incorporated into the California Administrative Code (CAC), California Building Code (CBC), and California Existing Building Code (CEBC) that dictate requirements for the construction or renovation of buildings on public school campuses. Each of these codes issued a new code iteration in 2022, effective January 1, 2023. As such, future work at the ET Building will be governed by the 2022 CAC, 2022 CBC, and 2022 CEBC and relevant amendments incorporated by DSA.

5.1 2022 California Administrative Code (CAC)

The safety of construction of public schools, as regulated by DSA, is covered by CAC Chapter 4 Group 1. §4-309 details requirements for reconstruction or alteration projects that exceed $100,000. Some of these requirements are summarized below.

- All modifications to the existing building that affect the structural elements carrying gravity loads shall be in accordance with CEBC §503.3.
- If the proposed reconstruction, alteration, or addition to the existing school building results in any of the following conditions, a mandatory rehabilitation is triggered, requiring the structure to be evaluated and retrofitted to comply with currently effective regulations (§4-309(c)).
    - The cost of the reconstruction, alteration, or addition exceeds 50% of the replacement cost value of the exiting building.
    - There is an increase in the seismic or wind loads by more than 10%, cumulative since the original construction.
    - There is a reduction of the capacity or stiffness of the lateral load resisting system in any direction by more than 10%, cumulative since the original construction. Evaluation of the capacity or stiffness of the lateral load resisting system may include all prior upgrades to the structural components that were approved and certified by DSA.
- If a mandatory rehabilitation is triggered, the District is required to submit an Evaluation and Design Criteria Report to DSA for approval, which establishes the criteria for the evaluation and design to be used by the project design team, as well as the material testing and condition assessment requirements for the project. Per §4-306 of the CAC, the seismic evaluation and retrofit design shall comply with the provisions of §317 through §323 of the CEBC.
- If a modification to the exiting building results in an increase of the seismic or wind loads by more than 10%, or reduction of the capacity or stiffness of any of the lateral load resisting structural elements by more than 5%, each of the affected components must be upgraded to meet the CEBC §319.1 or §317.7 and CBC §1609A.

The CAC defines an Addition and Alteration as follows (§4-314):

- Addition – an increase in permanently constructed floor area or volume of enclosed space placed immediately adjacent to or above and sharing use with an existing certified building. The addition may be of the same occupancy or a different occupancy and may be either structurally attached or structurally detached form the existing building. An existing building with an existing expansion joint which was previously added is considered the same building.
- Alteration – any construction or renovation to an existing certified building other than reconstruction, rehabilitation, or addition.

In summary, a mandatory rehabilitation would be triggered if the renovation increases the seismic mass by more than 10%, or if the cost of the renovation exceeds 50% of the replacement cost of the building. Note that this amount includes the cost for any new construction to expand the facility even if it is not structurally attached to the new building.

5.2 2022 California Existing Building Code (CEBC) and California Building Code (CBC)

In addition to the CAC, the project is also subject to the requirements of the CEBC, specifically §503.3 governing the gravity load resisting system and §317 through §323, which establish minimum standards for earthquake evaluation and rehabilitation of existing public buildings under the jurisdiction of DSA.

§503.3 of the CEBC states that if the gravity loads on any single element increase by more than 5% since original construction, then that element will need to be evaluated and possibly upgraded to comply with contemporary gravity load requirements.

Additionally, if building rehabilitation is triggered by CAC §4-309(c), the CAC states that the building's lateral system, and/or each of the affected components, must be upgraded in accordance with CEBC §317.7, which allows for the project to be evaluated in accordance with current code requirements for a new building, or CEBC §319.1, which provides three technical approaches for the evaluation and retrofit design of the existing building, as follows:

1. Method A of §320 – A linear analysis as outlined in §7.4.1 or §7.4.2 of ASCE 41.
2. Method B of §321 – A performance-based analysis based on the requirements of §317. Such an approach requires approval by a peer reviewer and the enforcing agency (e.g., DSA).
3. Specific Procedures of §319.1.1 – Earthquake Hazard Reduction in Existing Reinforced Concrete and Reinforced Masonry Wall Building with Flexible Diaphragms (CEBC Chapter A2).

For both methods A and B, the evaluation and potential retrofit should be in accordance with the applicable requirements of ASCE 41 Chapter 6 and Chapter 7. For the methods described in ASCE 41, and for the specific procedures described in §319.1.1 and Chapter A2, lateral loading for some elements is permitted to be evaluated at 75% of design values according to the current code requirements.

Furthermore, all new elements of an additional or alteration, or new construction will need to conform to the CBC.

6.0 Structural Alterations Discussion

6.1 Gravity Considerations

As the existing framing system is relatively light, even minor alterations may tip the structure over the 5% increase threshold, which triggers a mandatory evaluation and possible upgrade to the affected element. Changes to the roof, ceiling finishes, equipment, and other improvements to the ET Building will require careful consideration to their impact on the gravity framing, in particular if the District should wish to avoid triggering gravity framing upgrades, which in turn would increase the cost of any prospective renovation.

6.2 Lateral Considerations

The lateral load resisting system for the ET Building primarily consists of reinforced masonry shear walls and a flexible wood diaphragm; a limited number of plywood shear walls supplement the masonry shear walls (Figure 5). The following sections describe the potential increase in design loading, as well as a cursory review of the building's lateral system for potential vulnerabilities should a mandatory rehabilitation be triggered. If a mandatory rehabilitation is not triggered, TT still recommends that the

District consider a voluntary seismic upgrade of some of the conditions identified in the following sections though such upgrades would increase the cost of any prospective renovation.

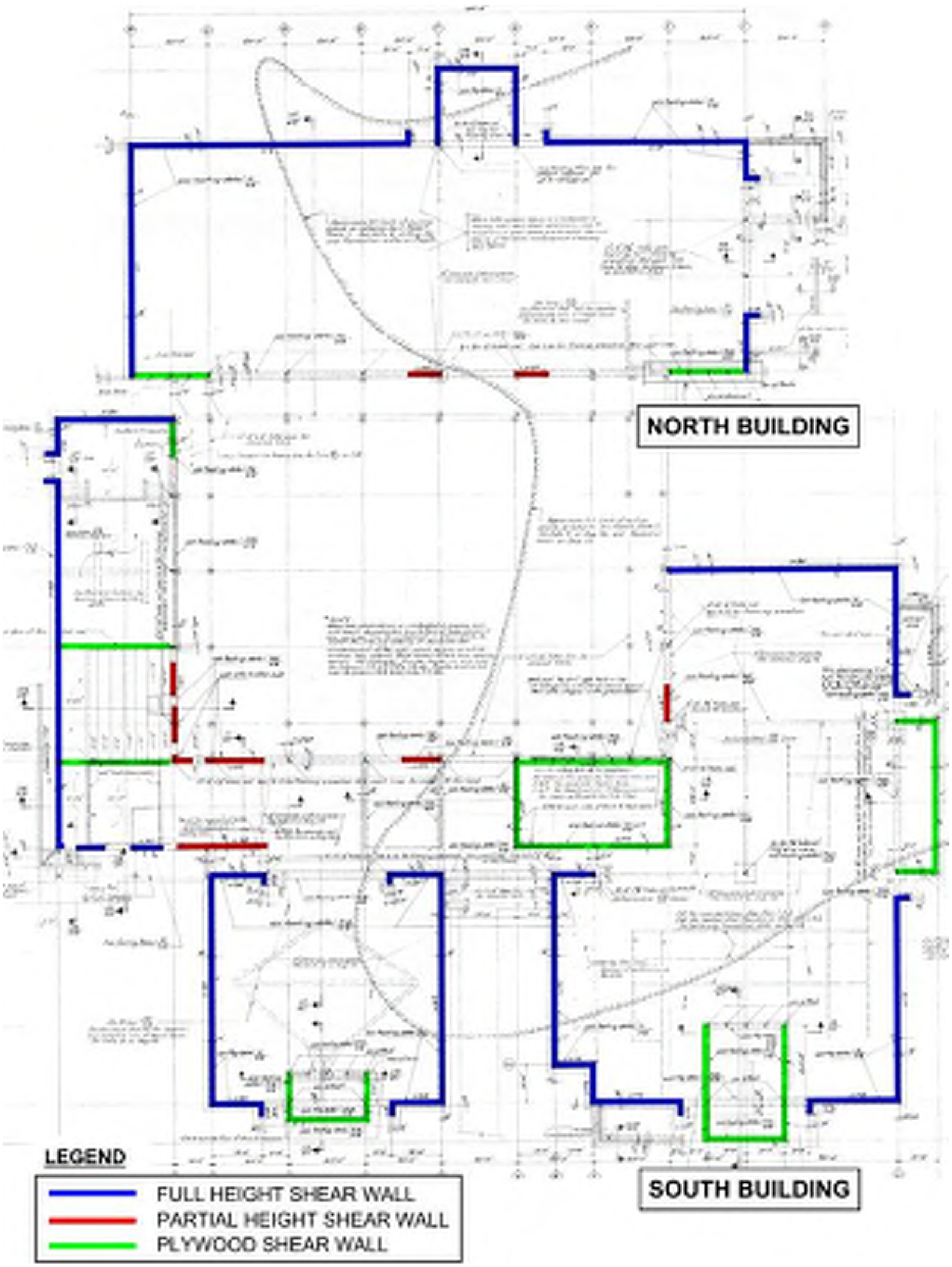

Figure 5: Shear wall layout for North (top) and South (bottom) buildings showing full-height and partial-height shear walls.

6.2.1 Seismic Parameters

To determine the potential impact of a seismic rehabilitation, we calculated the seismic coefficient, C_s, using the 2022 CBC and the assumed effective design code at the time of construction, the 1967 Uniform Building Code (UBC). The 2022 CBC seismic coefficient was estimated[1] using the 2017 Geotechnical Investigation Report, which provided the following seismic parameters:

1) Building Site Class C
2) Seismic Design Category D
3) Design Earthquake Spectral Acceleration S_{DS} = 1.258g and S_{D1} = 0.575g.

Using these seismic parameters, the seismic coefficient C_s per the 2022 CBC was calculated as 0.629.[2] Following the 1967 UBC, the seismic coefficient ranges from 0.1 to 0.2.[3] If a mandatory code upgrade is triggered, the seismic demand per the current code provisions would be approximately 3 to 6 times larger than the seismic loading for which the building was originally designed. ASCE 41 and specific procedures of the CEBC (described in Section 5 of this report) allow for design lateral forces to be reduced to 75% of current loading requirements; however, that still amounts to seismic design forces that are 2.4 to 4.7 times greater than the original design loads per 1967 UBC.

6.2.2 Preliminary Lateral System Evaluation

As mentioned in the preceding section, a mandatory building upgrade would cause the design lateral forces to increase by more than double when compared to the original design requirements. For a building of this era and construction type, the typical vulnerabilities include the connections between collectors and shear walls, and the anchorage of the masonry shear walls to the diaphragm for out-of-plane loading. Inadequate connections may lead to partial or full collapse of the roof during a significant earthquake. As a result, upgrading these connections would be a critical first step in any building retrofit, whether it be voluntary or mandatory.

All of the masonry shear walls adjacent to the courtyard, as well as an additional wall at the South Building, do not extend full height to the roof diaphragm (refer to Figure 4 and the red "Partial Height Shear Walls" in Figure 5), creating a clerestory condition. The tube steel columns which support the roof pass (vertically) through the clerestory but do not possess enough strength nor rigidity to sufficiently transfer in-plane shear forces from the diaphragm into the partial height masonry shear walls. Additionally, the clerestory and tube steel columns represent a significant vulnerability for a potential out-of-plane wall failure. It is advisable to infill the masonry walls up to the roof elevation to provide a direct load path for both in- and out-of-plane forces between the roof diaphragm and a full-height wall.

Finally, it is important to note that the existing masonry shear walls do not contain sufficient reinforcement to be classified as a reinforced masonry shear wall per contemporary code requirements; instead, they are classified as detailed plain (unreinforced) masonry shear walls, which are not permitted for new construction in Seismic Design Category D. A cursory review of the building's lateral system found that most shear walls met allowable stress requirements based on reduced seismic loading per

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[1] 2022 CBC seismic coefficients will need to be updated with a revised geotechnical investigation.
[2] TT evaluated the building as Risk Category II with an assumed occupancy load of less than 500 people, which will need to be confirmed during the programming of any substantive renovation
[3] The 1967 UBC states that the seismic coefficient is 0.1 for all single-story buildings; it also states that the seismic coefficient for some portions of the building, in particular masonry shear walls, should use a coefficient of 0.2.

ASCE 41; however, further analysis will be required to verify the extent to which the existing masonry walls would need to be upgraded. Additionally, prior to submittal of the project application, the District will need to submit a pre-application for the rehabilitation project and an EDCR to DSA for its approval of the intended design approach (discussed in Section 5.2 of this report). A full building analysis and review with DSA was beyond the scope of this review.

6.3 Foundations

Foundation Notes in the original structural drawings indicate an allowable bearing capacity for combined dead and live load of 3,000 psf, with an allowable capacity of 4,500 psf for combined dead, live, and lateral loads. The 2017 geotechnical report gives an allowable bearing capacity of 3,500 psf, stating that this value can be increased by 10% for each foot of width or depth to a maximum value of 5,250 psf. The report also states that, because the site is underlain by bedrock, there is no potential for liquefication or seismically induced settlement, or seismically induced sliding. However, since the 2017 report was conducted for a proposed switchgear facility to the west of the ET Building, it does not include borings for the east side of the project site. As such, additional geotechnical investigation should be performed to verify the soil conditions for the rest of the site.

Based on our review of the building's lateral system, we found that increased seismic demands could overload foundations beyond the allowable bearing capacity. To avoid significant modifications to the existing footings, the diaphragm can be strengthened to allow for a more even distribution of lateral forces. See Section 6.4 for further discussion. However, should a mandatory rehabilitation be triggered, the foundations would need to be evaluated with seismic "overstrength" per CBC 1617.11.13, which further increases the demand on the footings by a factor of 2.5. In such an event, it would be highly likely that the foundations would require strengthening.

6.4 2006 Seismic Assessment

Interactive Resources performed a seismic assessment of the ET Building in 2006, provided to TT by the District. The report does not clarify what assumptions were made in evaluating seismic demand; however, it does state that the ET Building was evaluated for a "current CBC code level earthquake." As of 2006, the effective code was the 2001 CBC, which was based on the 1997 UBC. The report concluded that the lateral systems for both the North and South Buildings were deficient and provided several recommendations for strengthening the buildings, including but not limited to:

- Strengthening diaphragm to shear wall anchorage
- Infilling where masonry shear walls do not extend to the roof diaphragm
- Installation of an expansion joint at the South Building's west wing
- Widening certain strip footings at the north side of the North Building
- Strengthening roof trusses to drag shear force to shear walls

We reviewed the rehabilitation and seismic design requirements of the 2001 CBC and found that base shear per the 2001 CBC was roughly similar to the base shear calculated per the current code iteration. Should a mandatory rehabilitation be triggered by CAC §4-309(c), then the plans and recommendations provided in the 2006 study represent an approximate extent of structural improvement that would be anticipated, coupled with the addition of foundation upgrades for overstrength as noted in Section 6.3. Further analysis of the structure, including the production of an Evaluation and Design Criteria Report, would be necessary to determine the full extent to which the structure needs to be upgraded.

7.0 Cost Evaluation

TT received a cost estimate produced by MicroEstimating, which is included in Appendix B of this report. The estimate outlines five scenarios that were evaluated for a rough-order-of-magnitude (ROM) estimate, as follows:

- **Option 1 –** Full gut renovation of the North and South Buildings, including seismic upgrades identified in the 2006 seismic assessment and foundation improvements.
- **Option 2 –** Minor renovations of the North and South Buildings with no structural upgrades.
- **Option 3 –** Full replacement cost of the North and South Buildings.
- **Option 4 –** Replacement cost for the covered walkway and central courtyard.
- **Option 5 –** Construction of a new 7,000 square-foot addition.

Based on the estimate, the cost for a light renovation to gut renovation and seismic upgrade ranges from approximately 53.3% to 76.8% of the replacement cost for the North and South Buildings. If the replacement cost of the courtyard is also factored in, then this drops to roughly 49.8% to 71.8% of replacement cost. As such, it is likely that a gut renovation of the ET Building will trigger a mandatory rehabilitation based on the replacement cost threshold established in CAC §4-309(c).

7.1 Additional Conceptual Retrofit

As noted in Section 6.2.2, the existing masonry shear walls are classified as detailed plain (unreinforced) masonry shear walls, which are not permitted for new construction in Seismic Design Category D. The extent to which DSA requires a retrofit of the existing masonry shear walls elements will ultimately depend on the holistic renovation approach that the District decides to pursue and DSA's acceptance of the project's Evaluation and Design Criteria Report.

Conceptually, the existing masonry shear walls can be strengthened with fiber-reinforced polymer (FRP), wherein sheets of FRP are adhered to the faces of the masonry walls. Based on information provided by an FRP supplier with DSA experience, TT estimates a ROM of $1.32M for a conceptual FRP retrofit, wherein all lengths of masonry wall in the ET Buildings are reinforced. Taken in concert with Option 1, the inclusion of FRP raises the estimated gut renovation and seismic upgrade cost to 80.6% of the replacement costs of the North and South Buildings.

8.0 Conclusions

The following summarizes our preliminary conclusions based on this study:

- Any addition to the existing ET Building should be structurally independent from the existing structures to avoid significantly increasing the seismic demand on the existing lateral system.
- An addition and renovation to the ET Building will likely trigger a mandatory rehabilitation based on the cost thresholds established in §4-309(c) of the CAC.
    - To avoid triggering a mandatory rehabilitation, the project cost must remain below 50% of the replacement cost of the building. Based on ROM estimates for the project, this would limit the project scope to a minimal renovation of the existing buildings and/or inhibit the addition of new class space.

- Should mandatory rehabilitation of the ET Building be triggered, the 2006 seismic assessment represents the minimum extent of anticipated strengthening required to meet current seismic demands; additionally, foundation strengthening will likely be required. The probable construction cost for such a seismic upgrade is included in Appendix B.

- To determine the full extent of strengthening necessary to upgrade the ET Building to conform with current regulations, the building will need to be evaluated via a prescriptive or performance-based approach per the 2022 CEBC. Additionally, the District will need to submit an EDCR to DSA for approval of the proposed rehabilitation design approach prior to proceeding with the design development phase of the project.

- Regardless of whether a mandatory rehabilitation is triggered, the existing building may need to be locally improved if the gravity loads on any individual element increases by more than 5% or if lateral demands increase by more than 10%.

Appendix A – Site Visit Photos taken by Thornton Tomasetti


Photo 1: Machine shop study (looking south).


Photo 2: Truss roof joists in north-south direction.


Photo 3: Perimeter wall extending to upper chord of joist.


Photo 4: Attachment of lower chord to masonry wall.


Photo 5: Upper chord joist connection to south shear wall.


Photo 6: Lower chord joist connection to shear wall.


Photo 7: Blocking between joist and parallel shear wall.


Photo 8: L-clip connecting blocking and shear wall.

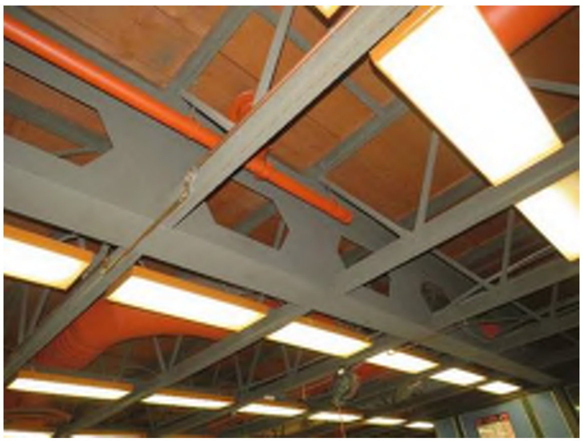
Photo 9: Transfer steel girder.


Photo 10: Transfer steel girder.

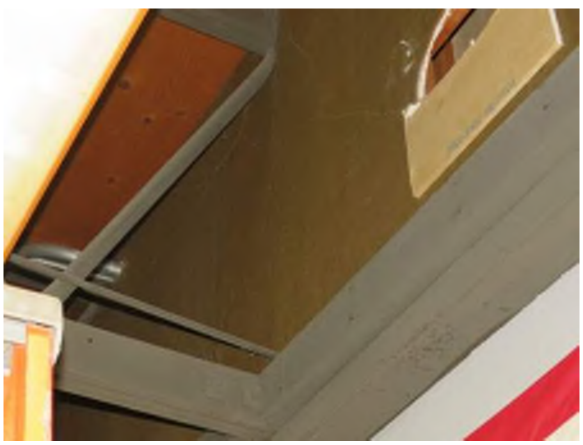
Photo 11: Stains on roof joists.


Photo 12: Additional wood blocking.


Photo 13: Beam-to-column connection (grid line 15a).


Photo 14: Steel framing along grid line 5.


Photo 15: Beam-to-column connection and stiffener.


Photo 16: Wide flange beam at transverse shear wall.


Photo 17: Steel beam to shear wall connection.

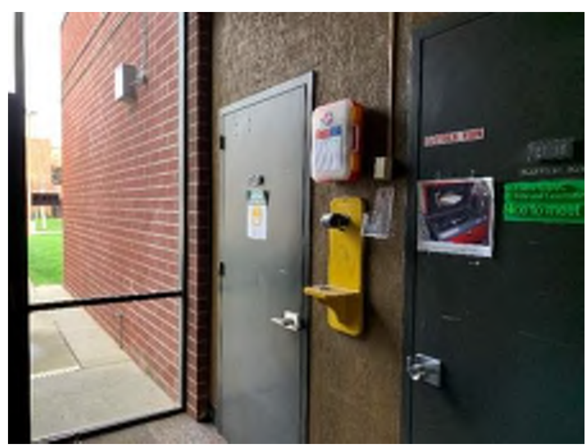
Photo 18: Shear wall continuous to floor


Photo 19: Overall condition of the South Building roof.


Photo 20: Overall condition of the South Building roof.


Photo 21: Overall condition of the North Building roof


Photo 22: Debris on North Building roof.

Appendix B: ET Building Probable Construction Cost by MicroEstimating

Opinion of Probable Construction Cost

Feasibility Study Rough Order of Magnitude

Engineering Technology Building

DIABLO VALLEY COLLEGE

321 Golf Club Road

Pleasant Hill, CA

Based on Assessment Report Prepared By:

Interactive Recourses, Dated 05/22/2006

ROM Prepared for:

Thornton Tomasetti

301 Hayward Street, Suite 1030

San Francisco, CA 94105

Cost Estimate Date 01/23/2023

Prepared by:

MicroEstimating Inc.
a preconstruction services company

Engineering Technology Building

Engineering Technology Building

Feasibility Study Rough Order of Magnitude

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Engineering Technology Building

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DIABLO VALLEY COLLEGE

321 Golf Club Road
Pleasant Hill, CA

Engineering Technology Building

Rough Order of Magnitude

Cost Estimate Date 01/2[illegible]/2023

EXECUTIVE SUMMARY COST ESTIMATE	GROSS SQUARE FEET GSF	COST/SQ. FT	CONSTRUCTION COST	Percentage of each scenario to compare with Replacement cost.
Option 1- Gut the Entire North and South Building to a the Bare Bone Structure then Provide Seismic Upgrade to the Existing Structure and then Remodel the Entire North and South Building (Court Yard will be a separate Estimate)	32,500	823.02	$ 26,748,204	**76.82%**
Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Building A & B	32,500	570.51	$ 18,541,603	**53.25%**
Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP	32,500	1,071.43	$ 34,821,517	Replacement
Option 4- New Courtyard	12,000	202.76	$ 2,433,126	
Option 5- New North Addition	7,000	1,071.43	$ 7,500,019	

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Rough Order of Magnitude — Date of Conceptual Estimate 1/25/2023

North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 1- Interiors demolition and seismic + ADA upgrade of the 2 buildings (Court Yard will be a separate Estimate)

	Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
Div. 01	**GENERAL REQUIREMENTS**						
01 91 13	**General Commissioning Requirements**						**See Indirect Cost**
	Division 01 - GENERAL REQUIREMENTS						**See Indirect Cost**
Div. 02	**EXISTING CONDITIONS**						
02 41 19	**Selective Demolition**						**$ 386,750**
	Interiors demolition (only) of existing buildings	Both	32,500	SF	$ 8.00	$ 260,000	
	Misc. demo at roof/sub-roof level to accommodate seismic work	Both	32,500	SF	$ 1.50	$ 48,750	
	Slab on grade partial demo for foundation work	NB	1,400	SF	$ 15.00	$ 21,000	
	Slab on grade partial demo for foundation work	SB	3,800	SF	$ 15.00	$ 57,000	
	Division 02 - EXISTING CONDITIONS				11.90	**$ 386,750**	**$ 386,750**
Div. 03	**CONCRETE**						
03 30 00	**Cast In Place Concrete**						**$ 810,200**
	Add 2 foot wide section on inside of the continuous wall foundation (3 feet deep) - with epoxy dowels into (E) footing, 350 lf total	NB	78	CY	$ 1,800.00	$ 140,400	
	Epoxy dowels 2each at 2' o/c for footing	NB	420	EA	$ 75.00	$ 31,500	
	Earthwork and subgrade prep for foundation work	NB	100	CY	$ 140.00	$ 14,000	
	Slab on grade patch back	NB	1,050	SF	$ 30.00	$ 31,500	
	Add 2 foot wide section on inside of the continuous wall foundation (3 feet deep) - with epoxy dowels into (E) footing, 900 lf total	SB	200	CY	$ 1,800.00	$ 360,000	
	Epoxy dowels 2each at 2' o/c for footing	SB	1,080	EA	$ 75.00	$ 81,000	
	Earthwork and subgrade prep for foundation work	SB	220	CY	$ 140.00	$ 30,800	
	Slab on grade patch back	SB	2,700	SF	$ 30.00	$ 81,000	
	Equipment Pads	Both	2	Bldg.	$ 20,000.00	$ 40,000	
03 30 10	**Lightweight Concrete Fill**						**N/A**
	Over Metal Deck					N/A	
	Division 03 - CONCRETE				24.93	**$ 810,200**	**$ 810,200**
Div. 04	**MASONRY**						
04 40 00	**Masonry**						**$ 439,500**
	Add reinforced masonry shear walls (item 6)	SB	2,360	SF	$ 75.00	$ 177,000	
	Miscellaneous repairs and patch work at existing masonry walls	SB	10,000	SF	$ 15.00	$ 150,000	
	Miscellaneous repairs and patch work at existing masonry walls	NB	7,500	SF	$ 15.00	$ 112,500	
	Division 04 - MASONRY				13.52	**$ 439,500**	**$ 439,500**
Div. 05	**METALS**						
05 10 10	**Structural Steet**						**N/A**
	Structural Steel Frame- Assume 20#/SF					N/A	
05 50 00	**Metal Fabrications**						**$ 659,000**
	Add brace frames above shear walls at 2 locations - item 3	NB	2	LOC	$ 50,000.00	$ 100,000	
	Strengthen truss joists along gridline F and G - item 5	NB	120	LF	$ 450.00	$ 54,000	
	Addition of seismic expansion joint at the western addition	SB	100,000	Bldg.	$ 1.00	$ 100,000	
	Add brace frames above shear walls at 2 locations - item 3	SB	5	LOC	$ 35,000.00	$ 175,000	
	Strengthen truss joists - item 5	SB	150	LF	$ 450.00	$ 67,500	
	Misc. Metal Fabrications	Both	32,500	SF	$ 5.00	$ 162,500	

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	Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
05 51 16	**Metal Stairs**						**N/A**
	Stairs for each Building - not required					N/A	
05 52 13	**Railings**						**$ 50,000**
	Railings and Guardrails at interior spaces	Both	2	Bldg.	$ 25,000.00	$ 50,000	
	Division 05 - METALS				21.82	**$ 709,000**	**$ 709,000**
Div. 06	**WOOD AND PLASTICS**						
06 10 53	**Miscellaneous Rough Carpentry**						**$ 1,378,300**
	Add OOP wall anchorage - parallel direction (every 5 ft) - item 4	NB	51	LOC	$ 2,600.00	$ 132,600	
	Add OOP wall anchorage - perpendicular direction (every 5 fT) - item 1	NB	41	LOC	$ 3,500.00	$ 143,500	
	Reinforce existing collector connections - item 2	NB	10	LOC	$ 5,000.00	$ 50,000	
	Add OOP wall anchorage - parallel direction (every 5 ft) - item 4	SB	87	LOC	$ 2,600.00	$ 226,200	
	Add OOP wall anchorage - perpendicular direction (every 5 fT) - item 1	SB	193	LOC	$ 3,500.00	$ 673,750	
	Strengthen roof diaphragm - item 7	SB	1,075	SF	$ 30.00	$ 32,250	
	Reinforce existing collector connections - item 2	SB	20	LOC	$ 5,000.00	$ 100,000	
	Misc. scaffolding for high bay work	SB	10,000	SF	$ 2.00	$ 20,000	
06 20 23	**Interior Finish Carpentry**						**$ 260,000**
	Interior Finish Carpentry	Both	32,500	SF	$ 8.00	$ 260,000	
	Misc. backing and blocking	Both	32,500	SF	$ 1.50	$ 48,750	
	Division 06 - WOOD AND PLASTICS				50.41	**$ 1,687,050**	**$ 1,638,300**
Div. 07	**THERMAL AND MOISTURE PROTECTION**						
07 11 13	**Waterproofing and Dam proofing**						**$ 16,250**
	Restrooms, Breakrooms, Café and Restaurant	Both	32,500	SF	$ 0.50	$ 16,250	
07 21 00	**Thermal Insulation**						**$ 48,750**
	Interior Wall Insulation	Both	32,500	SF	$ 1.50	$ 48,750	
07 50 00	**Roof**						**$ 975,000**
	New TPO membrane and R30 tapered insulation	Both	32,500	SF	$ 30.00	$ 975,000	
07 62 00	**Sheet Metal Flashing and Trim**						**$ 260,000**
	Sheet Metal Flashing around MEP eqpt and roof	Both	32,500	SF	$ 8.00	$ 260,000	
07 84 13	**Penetration Firestopping**						**$ 65,000**
	Penetration Firestopping	Both	32,500	LS	$ 2.00	$ 65,000	
07 84 43	**Joint Firestopping**						**$ 24,375**
	Joint Firestopping	Both	32,500	SF	$ 0.75	$ 24,375	
07 92 00	**Joint Sealants**						**$ 16,250**
	Joint Sealants	Both	32,500	SF	$ 0.50	$ 16,250	
	Division 07 - THERMAL AND MOISTURE PROTECTION				43.25	**$ 1,405,625**	**$ 1,405,625**
Div. 08	**OPENINGS**						
08 11 13	**Hollow Metal Doors and Frames**						**$ 256,000**
	Doors Frames and Hardware	Both	80	EA	$ 3,200.00	$ 256,000	
08 31 13	**Access Doors and Frames**						**$ 8,000**
	Access Doors and Frames Allowance	Both	2	Bldgs.	$ 4,000.00	$ 8,000	

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Option 1- Interiors demolition and seismic + ADA upgrade of the 2 buildings (Court Yard will be a separate Estimate)

	Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
08 41 13	**Aluminum-Framed Entrances and Storefront**						**$ 50,000**
	Main Entrance - only (1 pair each)	Both	2	Bldg.	$ 25,000.00	$ 50,000	
08 41 13	**Aluminum Windows**						**$ 375,000**
	Aluminum Windows - replace some windows / repairs	Both	15,000	SF	$ 25.00	$ 375,000	
08 71 11	**Automatic Door Operators**						**$ 81,250**
	Building Services/Utility Rooms	Both	32,500	SF	$ 0.50	$ 16,250	
	Panic Devices	Both	32,500	SF	$ 1.00	$ 32,500	
	Access Controls	Both	32,500	SF	$ 1.00	$ 32,500	
	Elevator Smoke Guard Doors/ not required				No Elevator	N/A	
08 80 00	**Glazing**						**100,000**
	Interior Glazing						
	Interior Glazing	Both	2	Bldg.	50,000	$ 100,000	
	Division 08 - OPENINGS				26.78	**$ 870,250**	**$ 870,250**
Div. 09	**FINISHES**						
09 22 16	**Non-Structural Metal Framing Including Gypsum Drywall**						**$ 156,000**
	Interior Wall Type	Both	13,000	SF	$ 12.00	$ 156,000	
09 29 00	**Gypsum Board**						**$ 1,430,000**
	Gypsum Board Walls	Both	130,000	SF	$ 10.00	$ 1,300,000	
	Gypboard ceiling - 20% Gyp and 80% Acoustic	Both	6,500		$ 20.00	$ 130,000	
09 30 13	**Ceramic Tiling**						**$ 108,000**
	Wall Tile at Bathrooms	Both	2,400	SF	$ 45.00	$ 108,000	
09 51 23	**Acoustical Ceilings**						**$ 416,000**
	Exposed Concrete Ceilings	Both	26,000	SF	$ 16.00	$ 416,000	
09 68 13	**Tile Carpeting or Floor Covering**						**$ 250,000**
	Flooring in average price range for various finishes	Both	25,000	SF	$ 10.00	$ 250,000	
09 91 00	**Painting**						**$ 130,000**
	Painting	Both	32,500	SF	$ 4.00	$ 130,000	
	Division 09 - FINISHES				76.62	**$ 2,490,000**	**$ 2,490,000**
Div. 10	**SPECIALTIES**						
10 11 00	**Visual Display Units**						**$ 57,525**
	Visual Display Units/Projectors/Projector Screens	Both	32,500	SF	$ 1.77	$ 57,525	
	Projectors						
	Projector Screens						
10 11 10	**Signage**						**$ 16,250**
	Door Signage & Misc. Signage	Both	32,500	SF	$ 0.50	$ 16,250	
10 22 30	**Operable Partitions**						**$ 75,000**
	Operable Partitions	Both	1,000	SF	$ 75.00	$ 75,000	
10 21 13	**Metal Toilet Compartments**						**$ 16,250**
	Toilet Partitions	Both	32,500	SF	$ 0.25	$ 8,125	
	Toilet Accessories	Both	32,500	SF	$ 0.25	$ 8,125	
10 26 00	**Wall and Door Protection**						**$ 20,000**
	Corner Guards		2	LS	$ 10,000.00	$ 20,000	

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Option 1- Interiors demolition and seismic + ADA upgrade of the 2 buildings (Court Yard will be a separate Estimate)

	Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
10 44 13	**Fire Protection Cabinets**						**$ 8,125**
	Fire Extinguisher and Cabinets	Both	32,500	SF	$ 0.25	$ 8,125	
	Division 10 - SPECIALTIES				5.94	**$ 193,150**	**$ 193,150**
Div. 11	**EQUIPMENT**						
11 00 00	**EQUIPMENT - FF&E**					Excluded	**Excluded**
	Division 11 - EQUIPMENT					**N/A**	**N/A**
Div. 12	**FURNISHINGS**						
12 24 13	**Roller Window Shades**						**$ 330,000**
	Mechoshade at all Exterior Windows	Both	15,000	SF	$ 22.00	$ 330,000	
	Division 12 - FURNISHINGS				10.15	**$ 330,000**	**$ 330,000**
Div. 13	**SPECIAL CONSTRUCTION**						
13 00 00	**SPECIAL CONSTRUCTION**						**$ -**
	Division 13 - SPECIAL CONSTRUCTION					**$ -**	**$ -**
Div. 14	**CONVEYING SYSTEMS**						
	Elevators						**N/A**
	Elevators & Cab Finishes		No Elevator			N/A	
	Cab Finishes/ 2 elevator per Building		No Elevator			N/A	
	Division 14 - CONVEYING SYSTEMS				0.00	**$ -**	**$ -**
Div. 21	**FIRE SUPPRESSION**						
21 13 13	**Wet-Pipe Sprinkler Systems**						**$ 260,000**
	Automatic Wet Sprinkler System - Complete new system with w/concealed heads, including reconfiguring and rerouting sprinkler mains	Both	32,500	SF	$ 8.00	$ 260,000	
	Division 21 - FIRE SUPPRESSION				8.00	**$ 260,000**	**$ 260,000**
Div. 22	**PLUMBING**						
22 42 13	**Sanitary fixtures, including rough-in piping**	Both	32,500	SF	$ 8.50	$ 276,250	**$ 276,250**
	Water closet, wall hung, sensor flush valve Urinal, wall hung, sensor flush valve Lavatory, undermount type, sensor faucet Break room sink Mop sink, floor type, terrazzo w/ SSK faucet, etc. Drinking fountain, electric hi/low type w/ bottle filler						
22 13 16	**Sanitary Waste and Vent Piping**	Both	32,500	SF	$ 7.50	$ 243,750	**$ 243,750**
	Cleanouts, VTR Floor drains and floor sinks Rough-in piping, waste and vent						
22 11 16	**Domestic Water Piping**	Both	32,500	SF	$ 3.00	$ 97,500	**$ 97,500**
	Hose bibbs Water hammer arrestor Rough-in piping, domestic cold/hot and pipe insulation Reduced pressure backflow preventor						
22 11 23	**Water treatment and storage**						

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Option 1- Interiors demolition and seismic + ADA upgrade of the 2 buildings (Court Yard will be a separate Estimate)

	Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
	Domestic hot water piping including hot water recirculation pump and expansion tank	Both	32,500	SF	$ 1.00	$ 32,500	**$ 32,500**
22 11 10	**Natural Gas Piping**	Both	32,500	SF	$ 1.65	$ 53,625	**$ 53,625**
	Natural gas piping, including seismic shut off valve, valves and specialties						
22 11 10	**Surface water drainage**						
	Roof drainage - existing						
22 00 00	**Basic Plumbing Requirements**						**$ 142,253**
	Clean, test & disinfect building utility piping systems	Both	80	HR	$ 195.00	$ 15,600	
	Project management/requirements/detailing and site supervision	Both	18%		$ 703,625	$ 126,653	
	Division 22 - PLUMBING				26.03	**$ 845,878**	**$ 845,878**
Div. 23	**HEATING, VENTILATING, and AIR CONDITIONING (HVAC)**						
23 05 00	**Central Heating and Cooling**	Both	32,500	SF	$ 5.00	$ 162,500	**$ 162,500**
	Gas fire boilers						
23 05 00	**Thermal storage and circulation pumps**	Both	32,500	SF	$ 1.20	$ 39,000	**$ 39,000**
	Air separator/Expansion tanks Circulation pumps, chilled water, heated hot water, VFD, vibration isolation pads						
23 05 00	**Piping, valves and insulation**	Both	32,500	SF	$ 5.00	$ 162,500	**$ 162,500**
	Heated hot water piping, chilled water piping, condenser water piping, including pipe insulation, valves and specialties						
23 05 00	**Air handling equipment**	Both	32,500	SF	$ 10.00	$ 325,000	**$ 325,000**
	Air handling units, SF, RF, CC,HC, filtered Humidification and dehumidification Terminal valves, VAV and CAV w/reheat coils Sound attenuation Split 4-pipe fan coil system - IDF/MDF rooms						
23 05 00	**Air distribution and return**	Both	32,500	SF	$ 13.00	$ 422,500	**$ 422,500**
	Galvanized Sheetmetal ductwork, flexible ductwork, volume dampers, combination fire/smoke dampers, duct insulation, acoustical insulation						
23 05 00	**Diffusers, registers and grilles**	Both	32,500	SF	$ 2.40	$ 78,070	**$ 78,070**
	Galvanized Sheetmetal ductwork, flexible ductwork, volume dampers, combination fire/smoke dampers, duct insulation, acoustical insulation						
23 05 00	**Testing and balancing**	Both	32,500	SF	$ 2.40	$ 78,070	**$ 78,070**
	Testing and balancing						
23 05 00	**Controls and instrumentation**	Both	32,500	SF	$ 11.00	$ 357,500	**$ 357,500**
	DDC controls						
23 05 00	**Unit Ventilation**	Both	32,500	SF	$ 5.00	$ 162,500	**$ 162,500**
	Galvanized Sheetmetal ductwork, exhaust, general exhaust fans Smoke control exhaust system						
22 00 00	**Basic HVAC Requirements**						

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Option 1- Interiors demolition and seismic + ADA upgrade of the 2 buildings (Court Yard will be a separate Estimate)

	Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
	Project management/requirements/detailing and site supervision		20%		$ 1,625,139	$ 325,028	**$ 325,028**
	Division 23 - HEATING, VENTILATING, and AIR CONDITIONING (HVAC)				65.01	**$ 2,112,667**	**$ 2,112,667**
Div. 26	**ELECTRICAL**						
26000	**Switchgear And Distribution**	Both	32,500	SF	$ 4.00	$ 130,000	**$ 130,000**
	Switchgear And Distribution						
	1600 Amp 277/480 Volt Nema 1 Switchboard (existing)					Included Above	
	Testing of existing switchboard.					Included Above	
	Additional panel boards that may be required in final design.					Included Above	
	Additional feeders that may be required in final design.					Included Above	
	Lighting to include:						
	Lighting to include:	Both	32,500	SF	$ 40.00	$ 1,300,000	**$ 1,300,000**
	Lite fixtures						
	Fixture outlets					Included Above	
	Branch Conduit And Wire					Included Above	
	Inverter for emergency lighting					Included Above	
	Home Runs					Included Above	
	Lighting Control to include	Both	32,500	SF	$ 12.00	$ 390,000	**$ 390,000**
	Lighting Control to include						
	LCP						
	Switch					Included Above	
	SS switch					Included Above	
	SSSS switch					Included Above	
	Dimmer					Included Above	
	Ceiling Occupancy Sensors					Included Above	
	Room Occupancy Sensor					Included Above	
	Room Controllers					Included Above	
	Emergency relay					Included Above	
	Network Bridge					Included Above	
	Photo Cells					Included Above	
	Shade control					Included Above	
	Conduit And Wire					Included Above	
	Programming					Included Above	
	Training					Included Above	
	Outlets						
	Outlets	Both	32,500	SF	$ 6.00	$ 195,000	**$ 195,000**
	Duplex Outlets						
	GFI Outlets					Included Above	
	4plex Outlets					Included Above	
	Dedicated Outlets					Included Above	
	WP GFI					Included Above	
	Controlled Outlets					Included Above	
	Controlled GFI					Included Above	
	Poke-thru					Included Above	
	Furniture feed					Included Above	
	Plug Controller					Included Above	
	MDF room dedicated outlets					Included Above	
	Branch Conduit And Wire					Included Above	
	Homerun					Included Above	
	Power to Mechanical Systems						
	Power to Mechanical Systems	Both	32,500	SF	$ 2.00	$ 65,000	**$ 65,000**
	Connection For Chiller					Included Above	
	Connection For ACU					Included Above	
	Connection For ERV					Included Above	
	Connection For Boiler					Included Above	
	Connection For Exhaust Fan					Included Above	

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	Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
	Connection For pump					Included Above	
	Connection For FC					Included Above	
	Connection For ACCU					Included Above	
	Connection For water heater					Included Above	
	Disconnect switches					Included Above	
	Feeder conduit and wire					Included Above	
	Misc.						
	Misc.	Both	32,500	SF	$ 1.00	$ 32,500	**$ 32,500**
	Arch Flash Study					Included Above	
	Co-Ordination Study					Included Above	
	Seismic Calcs					Included Above	
	Temp Power					Included Above	
	Temp Power Maintenance					Included Above	
	Independent Testing					Included Above	
	Division 26 - ELECTRICAL				65.00	**$ 2,112,500**	**$ 2,112,500**
Div. 27	**COMMUNICATIONS**						
Div. 27	**COMMUNICATIONS - Conduits & backbone - Wire are OFOI**						
	Communications	Both	32,500	SF	$ 8.00	$ 260,000	**$ 260,000**
	12"x4" Cable Tray					Included Above	
	12" T'S					Included Above	
	12" ELBOWS					Included Above	
	Cable tray supports					Included Above	
	Cable tray coupling					Included Above	
	Cable tray grounding					Included Above	
	3/4" AC Grade Plywood					Included Above	
	Ladder style cable tray					Included Above	
	Building Ground Bus					Included Above	
	Connect ground to main bus					Included Above	
	Outlet Drops (Cable devices terminations OFOI)					Included Above	
	EZ path fire seal					Included Above	
	J-hooks					Included Above	
	1" EMT MT					Included Above	
	1-1/4" EMT MT					Included Above	
	IDF Room Build Out (By Owner)					Included Above	
	CATV						**$ 325,000**
	CATV Drops Only (Allowance) Equipment OFOI	Both	32,500	SF	$ 5.00	$ 162,500	
	A/V	Both	32,500	SF	$ 5.00	$ 162,500	
	Division 27 - COMMUNICATIONS				18.00	**$ 585,000**	**$ 585,000**
Div. 28	**ELECTRONIC SAFETY AND SECURITY**						
Div. 28	**ELECTRONIC SAFETY AND SECURITY**						
28 46 00	**Fire Detection Alarm and Voice Evac System**						
	Fire Alarm to include	Both	32,500	SF	$ 10.00	$ 325,000	**$ 325,000**
	Submittals, engineering, fire marshal co-ordination					Included Above	
	Smoke detector					Included Above	
	Heat detector					Included Above	
	Speaker/strobe					Included Above	
	Speaker					Included Above	

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	Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
	Strobe					Included Above	
	Pull station					Included Above	
	Damper control relay					Included Above	
	Fire/smoke damper control					Included Above	
	Flow and tamper switch					Included Above	
	Monitoring module					Included Above	
	Duct detectors (Div.26 furnish, Div 25 install)					Included Above	
	Modules for elevator recall					Included Above	
	Nac					Included Above	
	Power to Nac					Included Above	
	FATC					Included Above	
	FAAP					Included Above	
	3/4" EMT w/ fire alarm cables					Included Above	
	Pre-test					Included Above	
	Fire marshal test					Included Above	
	Training					Included Above	
	Security	Both	32,500	SF	$ 4.00	$ 130,000	**$ 130,000**
	ACCESS CONTROL					Included Above	
	Door control panel					Included Above	
	Power supply for door					Included Above	
	Motion sensor					Included Above	
	Card reader					Included Above	
	Door position switch					Included Above	
	Request to exit					Included Above	
	Electric lock (F&I by door contractor)					Included Above	
	Conduit and wire					Included Above	
	Label terminate and test cable					Included Above	
	Training					Included Above	
	CCTV						
	Exterior camera PTZ	Both	32,500	SF	$ 5.00	$ 162,500	**$ 162,500**
	Interior camera					Included Above	
	CAT 6 cable					Included Above	
	Label terminate and test cable					Included Above	
	Patch cords					Included Above	
	Camera headend					Included Above	
	Training					Included Above	
	Cable tray					Included Above	
	J-hooks					Included Above	
	Division 28- ELECTRONIC SAFETY AND SECURITY				19.00	**$ 617,500**	**$ 617,500**
Div. 33	**SITE UTILITIES**						
Div. 33	**Site Utilities & Site Improvements**						**$ 200,000**
	Electrical Services - modifications to existing (only)	Both	2	Bldg.	$ 50,000.00	$ 100,000	

Engineering Technology Building MicroEstimating

Rough Order of Magnitude Date of Conceptual Estimate 1/25/2023

North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 1- Interiors demolition and seismic + ADA upgrade of the 2 buildings (Court Yard will be a separate Estimate)

Description	Loc	Quantity	Unit	Unit Cost	Extension	Group Extension
PG&E	Both	2	Bldg.	$ 25,000.00	$ 50,000	
Water/Sewer/Storm - modifications to existing (only)	Both	2	Bldg.	$ 25,000.00	$ 50,000	
New rooftop PV panel system - excluded	Both	-	Watt	$ 3.00	$ -	
Division 33- SITE UTILITIES				6.15	**$ 200,000**	**$ 200,000**
SUBTOTAL OF DIRECT CONSTRUCTION COST				492.50	**$ 16,055,070**	**$ 16,006,320**
INDIRECT COST						
CONTINGENCIES				20.00%		**$ 3,201,264**
TOTAL DIRECT TRADE COST INCLUDING CONTINGENCY						**$ 19,207,584**
GENERAL CONDITIONS & GENERAL REQUIREMENTS				15.00%		**$ 2,881,138**
OFFICE OVERHEAD/GENERAL CONTRACTOR FEE				6.00%		**$ 1,325,323**
BOND AND INSURANCE				2.00%		**$ 468,281**
TOTAL COST BEFORE ESCALATION						**$ 23,882,325**
ESCALATION TO MID- POINT OF CONSTRUCTION				12.00%		**$ 2,865,879**
TOTAL CONSTRUCTION COST WITHOUT OWNER'S (FEE/PM/DELIVERY) COST					$ 823.02	**$ 26,748,204**

Engineering Technology Building — MicroEstimating

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North Building	10,500	GSF
South Building	22,000	GSF
Grand -Total	32,500	GSF

Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

	Description	Quantity	Unit		Unit Cost		Extension		Group Extension
Div. 01	**GENERAL REQUIREMENTS**								
01 91 13	**General Commissioning Requirements**								**See Indirect Cost**
	Division 01 - GENERAL REQUIREMENTS								**See Indirect Cost**
Div. 02	**EXISTING CONDITIONS**								
02 41 19	**Selective Demolition**							**$**	**260,000**
	Interiors demolition (only) of existing buildings	32,500	SF	$	8.00	$	260,000		
	Division 02 - EXISTING CONDITIONS				24.76	**$**	**260,000**	**$**	**260,000**
Div. 03	**CONCRETE**								
03 30 00	**Cast In Place Concrete**							**$**	**40,000**
	Seismic Upgrade Foundation - excluded in this option	-	SF	$	10.00	$	-		
	Equipment Pads	2	Bldg.	$	20,000.00	$	40,000		
03 30 10	**Lightweight Concrete Fill**								**N/A**
	Over Metal Deck						N/A		
	Division 03 - CONCRETE				3.81	**$**	**40,000**	**$**	**40,000**
Div. 04	**MASONRY**								
04 40 00	**Masonry**							**$**	**204,000**
	Miscellaneous repairs and patch work at existing masonry walls	12,000	SF	$	17.00	$	204,000		
	Division 04 - MASONRY					**$**	**204,000**	**$**	**204,000**
Div. 05	**METALS**								
05 10 10	**Structural Steet to Frame 4th Floor**							**$**	**-**
	Structural Steel Frame- Assume 20#/SF	-	TONS	$	8,000.00	$	-		
	Metal Deck	-	SF	$	10.00	$	-		
05 50 00	**Metal Fabrications**							**$**	**162,500**
	Misc. Metal Fabrications	32,500	SF	$	5.00	$	162,500		
05 51 16	**Metal Stairs**								**N/A**
	Stairs for each Building - Not Required (One Story)						N/A		
05 52 13	**Railings**							**$**	**50,000**
	Railings and Guardrails at interior spaces	2	Bldg.	$	25,000.00	$	50,000		
	Division 05 - METALS				20.24	**$**	**212,500**	**$**	**212,500**
Div. 06	**WOOD AND PLASTICS**								
06 10 53	**Miscellaneous Rough Carpentry**							**$**	**37,520**
	Misc. backing and blocking	160	MHRS	$	172.00	$	27,520		
	material	2	EA	$	5,000.00	$	10,000		
06 20 23	**Interior Finish Carpentry**							**$**	**48,750**
	Interior Finish Carpentry	32,500	SF	$	1.50	$	48,750		
	Division 06 - WOOD AND PLASTICS				8.22	**$**	**86,270**	**$**	**86,270**

Rough Order of Magnitude

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North Building	10,500	GSF
South Building	22,000	GSF
Grand -Total	32,500	GSF

Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
Div. 07	**THERMAL AND MOISTURE PROTECTION**					
07 11 13	**Waterproofing and Dam proofing**					**$ 16,250**
	Restrooms, Breakrooms, Café and Restaurant	32,500	SF	$ 0.50	$ 16,250	
07 21 00	**Thermal Insulation**					**$ 48,750**
	Interior Wall Insulation	32,500	SF	$ 1.50	$ 48,750	
07 50 00	**Roof**					**$ 325,000**
	Repair Roof (only)	32,500	SF	$ 10.00	$ 325,000	
07 62 00	**Sheet Metal Flashing and Trim**					**$ 260,000**
	Sheet Metal Flashing around Mechanical Equipment	32,500	SF	$ 8.00	$ 260,000	
07 84 13	**Penetration Firestopping**					**$ 65,000**
	Penetration Firestopping	32,500	LS	$ 2.00	$ 65,000	
07 84 43	**Joint Firestopping**					**$ 24,375**
	Joint Firestopping	32,500	SF	$ 0.75	$ 24,375	
07 92 00	**Joint Sealants**					**$ 16,250**
	Joint Sealants	32,500	SF	$ 0.50	$ 16,250	
	Division 07 - THERMAL AND MOISTURE PROTECTION			71.96	**$ 755,625**	**$ 755,625**
Div. 08	**OPENINGS**					
08 11 13	**Hollow Metal Doors and Frames**					**$ 256,000**
	Doors Frames and Hardware	80	EA	$ 3,200.00	$ 256,000	
08 31 13	**Access Doors and Frames**					**$ 8,000**
	Access Doors and Frames Allowance	2	Bldgs.	$ 4,000.00	$ 8,000	
08 41 13	**Aluminum-Framed Entrances and Storefront**					**$ 50,000**
	Main Entrance - only (1 pair each)	2	Bldg.	$ 25,000.00	$ 50,000	
08 41 13	**Aluminum Windows**					**$ 75,000**
	Aluminum Windows - replace some windows / repairs	15,000	SF	$ 5.00	$ 75,000	
08 71 11	**Automatic Door Operators**					**$ 81,250**
	Building Services/Utility Rooms	32,500	SF	$ 0.50	$ 16,250	
	Panic Devices	32,500	SF	$ 1.00	$ 32,500	
	Access Controls	32,500	SF	$ 1.00	$ 32,500	
	Elevator Smoke Guard Doors/ not required	No Elevator			N/A	
08 80 00	**Glazing**					**100,000**
	Interior Glazing					
	Interior Glazing	2	Bldg.	50,000	$ 100,000	
	Division 08 - OPENINGS			54.31	**$ 570,250**	**$ 570,250**
Div. 09	**FINISHES**					
09 22 16	**Non-Structural Metal Framing Including Gypsum Drywall**					**$ 156,000**
	Interior Wall Type	13,000	SF	$ 12.00	$ 156,000	
09 29 00	**Gypsum Board**					**$ 1,430,000**
	Gypsum Board Walls	130,000	SF	$ 10.00	$ 1,300,000	
	Gypboard ceiling - 20% Gyp and 80% Acoustic	6,500		$ 20.00	$ 130,000	

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Grand -Total	**32,500**	**GSF**

Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
09 30 13	**Ceramic Tiling**					**$ 108,000**
	Wall Tile at Bathrooms	2,400	SF	$ 45.00	$ 108,000	
09 51 23	**Acoustical Ceilings**					**$ 416,000**
	Exposed Concrete Ceilings	26,000	SF	$ 16.00	$ 416,000	
09 68 13	**Tile Carpeting or Floor Covering**					**$ 250,000**
	Flooring in average price range for various finishes	25,000	SF	$ 10.00	$ 250,000	
09 91 00	**Painting**					**$ 130,000**
	Painting	32,500	SF	$ 4.00	$ 130,000	
	Division 09 - FINISHES			237.14	**$ 2,490,000**	**$ 2,490,000**
Div. 10	**SPECIALTIES**					
10 11 00	**Visual Display Units**					**$ 57,525**
	Visual Display Units/Projectors/Projector Screens	32,500	SF	$ 1.77	$ 57,525	
	Projectors					
	Projector Screens					
10 11 10	**Signage**					**$ 16,250**
	Door Signage & Misc. Signage	32,500	SF	$ 0.50	$ 16,250	
10 22 30	**Operable Partitions**					**$ 75,000**
	Operable Partitions	1,000	SF	$ 75.00	$ 75,000	
10 21 13	**Metal Toilet Compartments**					**$ 16,250**
	Toilet Partitions	32,500	SF	$ 0.25	$ 8,125	
	Toilet Accessories	32,500	SF	$ 0.25	$ 8,125	
10 26 00	**Wall and Door Protection**					**$ 20,000**
	Corner Guards	2	LS	$ 10,000.00	$ 20,000	
10 44 13	**Fire Protection Cabinets**					**$ 8,125**
	Fire Extinguisher and Cabinets	32,500	SF	$ 0.25	$ 8,125	
	Division 10 - SPECIALTIES			18.40	**$ 193,150**	**$ 193,150**
Div. 11	**EQUIPMENT**					
11 00 00	**EQUIPMENT - FF&E**				Excluded	**Excluded**
	Division 11 - EQUIPMENT				**N/A**	**N/A**
Div. 12	**FURNISHINGS**					
12 24 13	**Roller Window Shades**					**$ 330,000**
	Mechoshade at all Exterior Windows	15,000	SF	$ 22.00	$ 330,000	
	Division 12 - FURNISHINGS			31.43	**$ 330,000**	**$ 330,000**
Div. 13	**SPECIAL CONSTRUCTION**					
13 00 00	**SPECIAL CONSTRUCTION**					**N/A**

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Grand -Total	**32,500**	**GSF**

Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

	Description	Quantity	Unit	Unit Cost		Extension		Group Extension
	Division 13 - SPECIAL CONSTRUCTION							**N/A**
Div. 14	**CONVEYING SYSTEMS**							
	Elevators							**N/A**
	Elevators & Cab Finishes- 2 Stops x 2 Elevators/blgs	No Elevators				N/A		
	Upgrading the Elevators					N/A		
	Division 14 - CONVEYING SYSTEMS							**N/A**
Div. 21	**FIRE SUPPRESSION**							
21 13 13	**Wet-Pipe Sprinkler Systems**						**$**	**162,500**
	Sprinklers - move heads only	32,500	SF	$ 5.00	$	162,500		
	Division 21 - FIRE SUPPRESSION			15.48	**$**	**162,500**	**$**	**162,500**
Div. 22	**PLUMBING**							
22 42 13	**Sanitary fixtures, including rough-in piping**	32,500	SF	$ 8.50	$	276,250	**$**	**276,250**
	Water closet, wall hung, sensor flush valve							
	Urinal, wall hung, sensor flush valve							
	Lavatory, undermount type, sensor faucet							
	Break room sink							
	Mop sink, floor type, terrazzo w/ SSK faucet, etc.							
	Drinking fountain, electric hi/low type w/ bottle filler							
22 13 16	**Sanitary Waste and Vent Piping**	32,500	SF	$ 7.50	$	243,750	**$**	**243,750**
	Cleanouts, VTR							
	Floor drains and floor sinks							
	Rough-in piping, waste and vent							
22 11 16	**Domestic Water Piping**	32,500	SF	$ 3.00	$	97,500	**$**	**97,500**
	Hose bibbs							
	Water hammer arrestor							
	Rough-in piping, domestic cold/hot and pipe insulation							
	Reduced pressure backflow preventor							
22 11 23	**Water treatment and storage**							
	Domestic hot water piping including hot water recirculation pump and expansion tank	32,500	SF	$ 1.00	$	32,500	**$**	**32,500**
22 11 10	**Natural Gas Piping**	32,500	SF	$ 1.65	$	53,625	**$**	**53,625**
	Natural gas piping, including seismic shut off valve, valves and specialties							
22 11 10	**Surface water drainage**							
	Roof drainage - existing							
22 00 00	**Basic Plumbing Requirements**						**$**	**142,253**
	Clean, test & disinfect building utility piping systems	80	HR	$ 195.00	$	15,600		
	Project management/requirements/detailing and site supervision	18%		$ 703,625	$	126,653		
	Division 22 - PLUMBING			80.56	**$**	**845,878**	**$**	**845,878**
Div. 23	**HEATING, VENTILATING, and AIR CONDITIONING (HVAC)**							
23 05 00	**Central Heating and Cooling**	32,500	SF	$ 5.00	$	162,500	**$**	**162,500**

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North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
	Gas fire boilers					
23 05 00	**Thermal storage and circulation pumps**	32,500	SF	$ 1.20	$ 39,000	**$ 39,000**
	Air separator/Expansion tanks Circulation pumps, chilled water, heated hot water, VFD, vibration isolation pads					
23 05 00	**Piping, valves and insulation**	32,500	SF	$ 5.00	$ 162,500	**$ 162,500**
	Heated hot water piping, chilled water piping, condenser water piping, including pipe insulation, valves and specialties					
23 05 00	**Air handling equipment**	32,500	SF	$ 10.00	$ 325,000	**$ 325,000**
	Air handling units, SF, RF, CC,HC, filtered Humidification and dehumidification Terminal valves, VAV and CAV w/reheat coils Sound attenuation Split 4-pipe fan coil system - IDF/MDF rooms					
23 05 00	**Air distribution and return**	32,500	SF	$ 13.00	$ 422,500	**$ 422,500**
	Galvanized Sheetmetal ductwork, flexible ductwork, volume dampers, combination fire/smoke dampers, duct insulation, acoustical insulation					
23 05 00	**Diffusers, registers and grilles**	32,500	SF	$ 2.40	$ 78,070	**$ 78,070**
	Galvanized Sheetmetal ductwork, flexible ductwork, volume dampers, combination fire/smoke dampers, duct insulation, acoustical insulation					
23 05 00	**Testing and balancing**	32,500	SF	$ 2.40	$ 78,070	**$ 78,070**
	Testing and balancing					
23 05 00	**Controls and instrumentation**	32,500	SF	$ 11.00	$ 357,500	**$ 357,500**
	DDC controls					
23 05 00	**Unit Ventilation**	32,500	SF	$ 5.00	$ 162,500	**$ 162,500**
	Galvanized Sheetmetal ductwork, exhaust, general exhaust fans Smoke control exhaust system					
22 00 00	**Basic HVAC Requirements**					
	Project management/requirements/detailing and site supervision	20%		$ 1,625,139	$ 325,028	**$ 325,028**
	Division 23 - HEATING, VENTILATING, and AIR CONDITIONING (HVAC)			201.21	**$ 2,112,667**	**$ 2,112,667**
Div. 26	**ELECTRICAL**					
26000	**Switchgear And Distribution**	32,500	SF	$ 4.00	$ 130,000	**$ 130,000**
	Switchgear And Distribution					
	1600 Amp 277/480 Volt Nema 1 Switchboard (existing)				Included Above	
	Testing of existing switchboard.				Included Above	
	Additional panel boards that may be required in final design.				Included Above	
	Additional feeders that may be required in final design.				Included Above	
	Lighting to include:					
	Lighting to include:	32,500	SF	$ 40.00	$ 1,300,000	**$ 1,300,000**

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North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

Description	Quantity	Unit	Unit Cost	Extension	Group Extension
Lite fixtures					
Fixture outlets				Included Above	
Branch Conduit And Wire				Included Above	
Inverter for emergency lighting				Included Above	
Home Runs				Included Above	
Lighting Control to include	32,500	SF	$ 12.00	$ 390,000	**$ 390,000**
Lighting Control to include					
LCP					
Switch				Included Above	
SS switch				Included Above	
SSSS switch				Included Above	
Dimmer				Included Above	
Ceiling Occupancy Sensors				Included Above	
Room Occupancy Sensor				Included Above	
Room Controllers				Included Above	
Emergency relay				Included Above	
Network Bridge				Included Above	
Photo Cells				Included Above	
Shade control				Included Above	
Conduit And Wire				Included Above	
Programming				Included Above	
Training				Included Above	
Outlets					
Outlets	32,500	SF	$ 6.00	$ 195,000	**$ 195,000**
Duplex Outlets					
GFI Outlets				Included Above	
4plex Outlets				Included Above	
Dedicated Outlets				Included Above	
WP GFI				Included Above	
Controlled Outlets				Included Above	
Controlled GFI				Included Above	
Poke-thru				Included Above	
Furniture feed				Included Above	
Plug Controller				Included Above	
MDF room dedicated outlets				Included Above	
Branch Conduit And Wire				Included Above	
Homerun				Included Above	
Power to Mechanical Systems					
Power to Mechanical Systems	32,500	SF	$ 2.00	$ 65,000	**$ 65,000**
Connection For Chiller				Included Above	
Connection For ACU				Included Above	
Connection For ERV				Included Above	
Connection For Boiler				Included Above	
Connection For Exhaust Fan				Included Above	
Connection For pump				Included Above	
Connection For FC				Included Above	
Connection For ACCU				Included Above	
Connection For water heater				Included Above	
Disconnect switches				Included Above	
Feeder conduit and wire				Included Above	
Misc.					
Misc.	32,500	SF	$ 1.00	$ 32,500	**$ 32,500**
Arch Flash Study				Included Above	
Co-Ordination Study				Included Above	
Seismic Calcs				Included Above	

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Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
	Temp Power				Included Above	
	Temp Power Maintenance				Included Above	
	Independent Testing				Included Above	
	Division 26 - ELECTRICAL			201.19	**$ 2,112,500**	**$ 2,112,500**
Div. 27	**COMMUNICATIONS**					
Div. 27	**COMMUNICATIONS - Conduits & backbone - Wire are OFOI**					
	Communications	32,500	SF	$ 8.00	$ 260,000	**$ 260,000**
	12"x4" Cable Tray				Included Above	
	12" T'S				Included Above	
	12" ELBOWS				Included Above	
	Cable tray supports				Included Above	
	Cable tray coupling				Included Above	
	Cable tray grounding				Included Above	
	3/4" AC Grade Plywood				Included Above	
	Ladder style cable tray				Included Above	
	Building Ground Bus				Included Above	
	Connect ground to main bus				Included Above	
	Outlet Drops (Cable devices terminations OFOI)				Included Above	
	EZ path fire seal				Included Above	
	J-hooks				Included Above	
	1" EMT MT				Included Above	
	1-1/4" EMT MT				Included Above	
	IDF Room Build Out (By Owner)				Included Above	
	CATV					**$ 325,000**
	CATV Drops Only (Allowance) Equipment OFOI	32,500	SF	$ 5.00	$ 162,500	
	A/V	32,500	SF	$ 5.00	$ 162,500	
	Division 27 - COMMUNICATIONS			55.71	**$ 585,000**	**$ 585,000**
Div. 28	**ELECTRONIC SAFETY AND SECURITY**					
Div. 28	**ELECTRONIC SAFETY AND SECURITY**					
28 46 00	**Fire Detection Alarm and Voice Evac System**					
	Fire Alarm to include	32,500	SF	$ 10.00	$ 325,000	**$ 325,000**
	Submittals, engineering, fire marshal co-ordination				Included Above	
	Smoke detector				Included Above	
	Heat detector				Included Above	
	Speaker/strobe				Included Above	
	Speaker				Included Above	
	Strobe				Included Above	
	Pull station				Included Above	
	Damper control relay				Included Above	
	Fire/smoke damper control				Included Above	
	Flow and tamper switch				Included Above	

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Grand -Total	**32,500**	**GSF**

Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
	Monitoring module				Included Above	
	Duct detectors (Div.26 furnish, Div 25 install)				Included Above	
	Modules for elevator recall				Included Above	
	Nac				Included Above	
	Power to Nac				Included Above	
	FATC				Included Above	
	FAAP				Included Above	
	3/4" EMT w/ fire alarm cables				Included Above	
	Pre-test				Included Above	
	Fire marshal test				Included Above	
	Training				Included Above	
	Security	32,500	SF	$ 5.00	$ 162,500	**$ 162,500**
	ACCESS CONTROL				Included Above	
	Door control panel				Included Above	
	Power supply for door				Included Above	
	Motion sensor				Included Above	
	Card reader				Included Above	
	Door position switch				Included Above	
	Request to exit				Included Above	
	Electric lock (F&I by door contractor)				Included Above	
	Conduit and wire				Included Above	
	Label terminate and test cable				Included Above	
	Training				Included Above	
	CCTV					
	Exterior camera PTZ	32,500	SF	$ 4.00	$ 130,000	**$ 130,000**
	Interior camera				Included Above	
	CAT 6 cable				Included Above	
	Label terminate and test cable				Included Above	
	Patch cords				Included Above	
	Camera headend				Included Above	
	Training				Included Above	
	Cable tray				Included Above	
	J-hooks				Included Above	
	Division 28- ELECTRONIC SAFETY AND SECURITY			58.81	**$ 617,500**	**$ 617,500**
Div. 33	**SITE UTILITIES**					
Div. 33	**Site Utilities & Site Improvements**					**N/A**
	Electrical Services	2	Bldg.	$ -	$ -	
	PG&E	2	Bldg.	$ -	$ -	
	Water/Sewer/Storm	2	Bldg.	$ -	$ -	

Engineering Technology Building MicroEstimating

Rough Order of Magnitude Date of Conceptual Estimate 1/25/2023

North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 2- Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Buildings (no courtyard alterations or seismic upgrades)

Description	Quantity	Unit	Unit Cost	Extension	Group Extension
New rooftop PV panel system - excluded	-	Watt	$ 3.00	$ -	
Division 33- SITE UTILITIES					**N/A**
SUBTOTAL OF DIRECT CONSTRUCTION COST			356.24	**$ 11,577,840**	**$ 11,577,840**
INDIRECT COST					
CONTINGENCIES			15.00%		**$ 1,736,676**
TOTAL DIRECT TRADE COST INCLUDING CONTINGENCY					**$ 13,314,516**
GENERAL CONDITIONS & GENERAL REQUIREMENTS			15.00%		**$ 1,997,177**
OFFICE OVERHEAD/GENERAL CONTRACTOR FEE			6.00%		**$ 918,702**
BOND AND INSURANCE			2.00%		**$ 324,608**
TOTAL COST BEFORE ESCALATION					**$ 16,555,002**
ESCALATION TO MID- POINT OF CONSTRUCTION			12.00%		**$ 1,986,600**
TOTAL CONSTRUCTION COST WITHOUT OWNER'S (FEE/PM/DELIVERY) COST				**$ 570.51**	**$ 18,541,603**

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North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
Div. 01	**GENERAL REQUIREMENTS**					
01 91 13	**General Commissioning Requirements**					**See Indirect Cost**
	Division 01 - GENERAL REQUIREMENTS					**See Indirect Cost**
Div. 02	**EXISTING CONDITIONS**					
02 41 19	**Selective Demolition**					**$ 487,500**
	Complete Demolition of Existing Building	32,500	SF	$ 15.00	$ 487,500	
	Division 02 - EXISTING CONDITIONS			46.43	**$ 487,500**	**$ 487,500**
Div. 03	**CONCRETE**					
03 30 00	**Cast In Place Concrete**					**$ 1,340,000**
	New Foundation System	32,500	SF	$ 30.00	$ 975,000	
	Slab on Grade	16,250	SF	$ 20.00	$ 325,000	
	Equipment Pads	2	Bldg.	$ 20,000.00	$ 40,000	
03 30 10	**Lightweight Concrete Fill**					**$ 325,000**
	Over Metal Deck	32,500	SF	$ 10.00	$ 325,000	
	Division 03 - CONCRETE			158.57	**$ 1,665,000**	**$ 1,665,000**
Div. 04	**MASONRY**					
04 40 00	**Masonry**					**$ 825,000**
	Masonry Brick Panels/Assume 60% of exterior to be Masonry and 40% to be Windows and Glazing= 1,250 LX20= 25,000 SF	15,000	SF	$ 55.00	$ 825,000	
	Division 04 - MASONRY				**$ 825,000**	**$ 825,000**
Div. 05	**METALS**					
05 10 10	**Structural Steet**					**$ 3,607,500**
	Structural Steel Frame- Assume 20#/SF	325	TONS	$ 10,000.00	$ 3,250,000	
	Covered Walkway structure	I			Included in Courtyard	
	Metal Deck including edge plate	32,500	SF	$ 11.00	$ 357,500	
05 50 00	**Metal Fabrications**					**$ 162,500**
	Misc. Metal Fabrications	32,500	SF	$ 5.00	$ 162,500	
	Covered Walkway structure - see option 4 (courtyard)					
05 51 16	**Metal Stairs**					**$ 35,000**
	Steps - misc. level changes	10	rsr	$ 3,500.00	$ 35,000	
05 52 13	**Railings**					**$ 50,000**
	Railings and Guards	2	Bldg.	$ 25,000.00	$ 50,000	
	Division 05 - METALS			367.14	**$ 3,855,000**	**$ 3,855,000**
Div. 06	**WOOD AND PLASTICS**					
06 10 53	**Miscellaneous Rough Carpentry**					**$ 37,520**
	Rough Carpentry/ Building safety Feature and Temp Stairs/Accessory having a carpenter and a labor and some material. 80 MHRS/Building	160	MHRS	$ 172.00	$ 27,520	
	material	2	EA	$ 5,000.00	$ 10,000	
06 20 23	**Interior Finish Carpentry**					**$ 260,000**

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North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

	Description	Quantity	Unit	Unit Cost		Extension		Group Extension
	Interior Finish Carpentry	32,500	SF	$ 8.00	$	260,000		
	Division 06 - WOOD AND PLASTICS			28.34	**$**	**297,520**	**$**	**297,520**
Div. 07	**THERMAL AND MOISTURE PROTECTION**							
07 11 13	**Waterproofing and Dam proofing**						**$**	**16,250**
	Restrooms, Breakrooms, Café and Restaurant	32,500	SF	$ 0.50	$	16,250		
07 21 00	**Thermal Insulation**						**$**	**48,750**
	Interior Wall Insulation	32,500	SF	$ 1.50	$	48,750		
07 50 00	**Roof**						**$**	**975,000**
	TPO	32,500	SF	$ 30.00	$	975,000		
07 62 00	**Sheet Metal Flashing and Trim**						**$**	**260,000**
	Sheet Metal Flashing around Mechanical Equipment	32,500	SF	$ 8.00	$	260,000		
07 84 13	**Penetration Firestopping**						**$**	**65,000**
	Penetration Firestopping	32,500	LS	$ 2.00	$	65,000		
07 84 43	**Joint Firestopping**						**$**	**24,375**
	Joint Firestopping	32,500	SF	$ 0.75	$	24,375		
07 92 00	**Joint Sealants**						**$**	**16,250**
	Joint Sealants	32,500	SF	$ 0.50	$	16,250		
	Division 07 - THERMAL AND MOISTURE PROTECTION			133.87	**$**	**1,405,625**	**$**	**1,405,625**
Div. 08	**OPENINGS**							
08 11 13	**Hollow Metal Doors and Frames**						**$**	**256,000**
	Doors Frames and Hardware	80	EA	$ 3,200.00	$	256,000		
08 31 13	**Access Doors and Frames**						**$**	**5,000**
	Access Doors and Frames Allowance	2	Bldgs.	$ 2,500.00	$	5,000		
08 41 13	**Aluminum-Framed Entrances and Storefront**						**$**	**50,000**
	Main Entrance	2	Bldg.	$ 25,000.00	$	50,000		
08 41 13	**Aluminum Windows**						**$**	**1,750,000**
	Aluminum Windows	10,000	SF	$ 175.00	$	1,750,000		
08 71 11	**Automatic Door Operators**						**$**	**81,250**
	Building Services/Utility Rooms	32,500	SF	$ 0.50	$	16,250		
	Panic Devices	32,500	SF	$ 1.00	$	32,500		
	Access Controls	32,500	SF	$ 1.00	$	32,500		
	Elevator Smoke Guard Doors - not required					No Elevator		
08 80 00	**Glazing**							**40,000**
	Interior Glazing							
	Interior Glazing	2	Bldg.	20,000	$	40,000		
	Division 08 - OPENINGS			207.83	**$**	**2,182,250**	**$**	**2,182,250**
Div. 09	**FINISHES**							
09 22 16	**Non-Structural Metal Framing Including Gypsum Drywall**						**$**	**156,000**
	Interior Wall Type	13,000	SF	$ 12.00	$	156,000		

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Grand -Total	**32,500**	**GSF**

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
09 29 00	**Gypsum Board**					$ **1,430,000**
	Gypsum Board Walls	130,000	SF	$ 10.00	$ 1,300,000	
	Gypboard ceiling - 20% Gyp and 80% Acoustic	6,500		$ 20.00	$ 130,000	
09 30 13	**Ceramic Tiling**					$ **108,000**
	Wall Tile at Bathrooms	2,400	SF	$ 45.00	$ 108,000	
09 51 23	**Acoustical Ceilings**					$ **416,000**
	Exposed Concrete Ceilings	26,000	SF	$ 16.00	$ 416,000	
09 68 13	**Tile Carpeting or Floor Covering**					$ **325,000**
	Flooring in average price range for various finishes	32,500	SF	$ 10.00	$ 325,000	
09 91 00	**Painting**					$ **130,000**
	Painting	32,500	SF	$ 4.00	$ 130,000	
	Division 09 - FINISHES			244.29	$ **2,565,000**	$ **2,565,000**
Div. 10	**SPECIALTIES**					
10 11 00	**Visual Display Units**					$ **57,525**
	Visual Display Units/Projectors/Projector Screens	32,500	SF	$ 1.77	$ 57,525	
	Projectors					
	Projector Screens					
10 11 10	**Signage**					$ **16,250**
	Door Signage & Misc. Signage	32,500	SF	$ 0.50	$ 16,250	
10 22 30	**Operable Partitions**					$ **75,000**
	Operable Partitions	1,000	SF	$ 75.00	$ 75,000	
10 21 13	**Metal Toilet Compartments**					$ **16,250**
	Toilet Partitions	32,500	SF	$ 0.25	$ 8,125	
	Toilet Accessories	32,500	SF	$ 0.25	$ 8,125	
10 26 00	**Wall and Door Protection**					$ **20,000**
	Corner Guards	2	LS	$ 10,000.00	$ 20,000	
10 44 13	**Fire Protection Cabinets**					$ **8,125**
	Fire Extinguisher and Cabinets	32,500	SF	$ 0.25	$ 8,125	
	Division 10 - SPECIALTIES			18.40	$ **193,150**	$ **193,150**
Div. 11	**EQUIPMENT**					
11 00 00	**EQUIPMENT - FF&E**				Excluded	**Excluded**
	Division 11 - EQUIPMENT				**N/A**	**N/A**
Div. 12	**FURNISHINGS**					
12 24 13	**Roller Window Shades**					$ **250,000**
	Mechoshade at all Exterior Windows	10,000	SF	$ 25.00	$ 250,000	
	Division 12 - FURNISHINGS			23.81	$ **250,000**	$ **250,000**
Div. 13	**SPECIAL CONSTRUCTION**					
13 00 00	**SPECIAL CONSTRUCTION**					**N/A**

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North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

	Description	Quantity	Unit		Unit Cost		Extension		Group Extension
	Division 13 - SPECIAL CONSTRUCTION						**N/A**		**N/A**
Div. 14	**CONVEYING SYSTEMS**								
	Elevators								**No Elevator**
	Elevators & Cab Finishes- 2 Stops x 2 Elevators/blgs - not required						N0 Elevator		
	Cab Finishes/ 2 elevator per Building - not required						N0 Elevator		
	Division 14 - CONVEYING SYSTEMS						**N/A**		**N/A**
Div. 21	**FIRE SUPPRESSION**								
21 13 13	**Wet-Pipe Sprinkler Systems**							**$**	**325,000**
	Automatic Wet Sprinkler System - Complete w/concealed heads, including reconfiguring and rerouting sprinkler mains	32,500	SF	$	10.00	$	325,000		
	Division 21 - FIRE SUPPRESSION				30.95	**$**	**325,000**	**$**	**325,000**
Div. 22	**PLUMBING**								
22 42 13	**Sanitary fixtures, including rough-in piping**	32,500	SF	$	8.50	$	276,250	**$**	**276,250**
	Water closet, wall hung, sensor flush valve								
	Urinal, wall hung, sensor flush valve								
	Lavatory, undermount type, sensor faucet								
	Break room sink								
	Mop sink, floor type, terrazzo w/ SSK faucet, etc.								
	Drinking fountain, electric hi/low type w/ bottle filler								
22 13 16	**Sanitary Waste and Vent Piping**	32,500	SF	$	9.75	$	316,875	**$**	**316,875**
	Cleanouts, VTR								
	Floor drains and floor sinks								
	Rough-in piping, waste and vent								
22 11 16	**Domestic Water Piping**	32,500	SF	$	5.86	$	190,357	**$**	**190,357**
	Hose bibbs								
	Water hammer arrestor								
	Rough-in piping, domestic cold/hot and pipe insulation								
	Reduced pressure backflow preventor								
22 11 23	**Water treatment and storage**								
	Domestic hot water piping including hot water recirculation pump and expansion tank	32,500	SF	$	1.00	$	32,500	**$**	**32,500**
22 11 10	**Natural Gas Piping**	32,500	SF	$	1.65	$	53,625	**$**	**53,625**
	Natural gas piping, including seismic shut off valve, valves and specialties								
22 11 10	**Surface water drainage**								
	Roof drainage - existing								
22 00 00	**Basic Plumbing Requirements**							**$**	**172,129**
	Clean, test & disinfect building utility piping systems	80	HR	$	195.00	$	15,600		
	Project management/requirements/detailing and site supervision	18%		$	869,607	$	156,529		

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North Building	**10,500**	**GSF**
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Grand -Total	**32,500**	**GSF**

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

	Description	Quantity	Unit		Unit Cost		Extension		Group Extension
	Division 22 - PLUMBING				99.21	**$**	**1,041,736**	**$**	**1,041,736**
Div. 23	**HEATING, VENTILATING, and AIR CONDITIONING (HVAC)**								
23 05 00	**Central Heating and Cooling** Gas fire boilers	32,500	SF	$	5.00	$	162,500	**$**	**162,500**
23 05 00	**Thermal storage and circulation pumps** Air separator/Expansion tanks Circulation pumps, chilled water, heated hot water, VFD, vibration isolation pads	32,500	SF	$	1.20	$	39,000	**$**	**39,000**
23 05 00	**Piping, valves and insulation** Heated hot water piping, chilled water piping, condenser water piping, including pipe insulation, valves and specialties	32,500	SF	$	8.00	$	260,000	**$**	**260,000**
23 05 00	**Air handling equipment** Air handling units, SF, RF, CC,HC, filtered Humidification and dehumidification Terminal valves, VAV and CAV w/reheat coils Sound attenuation Split 4-pipe fan coil system - IDF/MDF rooms	32,500	SF	$	10.00	$	325,000	**$**	**325,000**
23 05 00	**Air distribution and return** Galvanized Sheetmetal ductwork, flexible ductwork, volume dampers, combination fire/smoke dampers, duct insulation, acoustical insulation	32,500	SF	$	13.00	$	422,500	**$**	**422,500**
23 05 00	**Diffusers, registers and grilles** Galvanized Sheetmetal ductwork, flexible ductwork, volume dampers, combination fire/smoke dampers, duct insulation, acoustical insulation	32,500	SF	$	2.40	$	78,070	**$**	**78,070**
23 05 00	**Testing and balancing** Testing and balancing	32,500	SF	$	2.40	$	78,070	**$**	**78,070**
23 05 00	**Controls and instrumentation** DDC controls	32,500	SF	$	11.00	$	357,500	**$**	**357,500**
23 05 00	**Unit Ventilation** Galvanized Sheetmetal ductwork, exhaust, general exhaust fans Smoke control exhaust system	32,500	SF	$	5.00	$	162,500	**$**	**162,500**
22 00 00	**Basic HVAC Requirements** Project management/requirements/detailing and site supervision	20%		$	1,722,639	$	344,528	**$**	**344,528**
	Division 23 - HEATING, VENTILATING, and AIR CONDITIONING (HVAC)				212.35	**$**	**2,229,667**	**$**	**2,229,667**
Div. 26	**ELECTRICAL**								
26000	**Switchgear And Distribution** Switchgear And Distribution	32,500	SF	$	4.00	$	130,000	**$**	**130,000**
	1600 Amp 277/480 Volt Nema 1 Switchboard (existing)						Included Above		
	Testing of existing switchboard.						Included Above		
	Additional panel boards that may be required in final design.						Included Above		
	Additional feeders that may be required in final design.						Included Above		

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North Building	**10,500**	**GSF**
South Building	**22,000**	**GSF**
Grand -Total	**32,500**	**GSF**

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

Description	Quantity	Unit	Unit Cost	Extension	Group Extension
Lighting to include:					
Lighting to include:	32,500	SF	$ 40.00	$ 1,300,000	**$ 1,300,000**
Lite fixtures					
Fixture outlets				Included Above	
Branch Conduit And Wire				Included Above	
Inverter for emergency lighting				Included Above	
Home Runs				Included Above	
Lighting Control to include	32,500	SF	$ 12.00	$ 390,000	**$ 390,000**
Lighting Control to include					
LCP					
Switch				Included Above	
SS switch				Included Above	
SSSS switch				Included Above	
Dimmer				Included Above	
Ceiling Occupancy Sensors				Included Above	
Room Occupancy Sensor				Included Above	
Room Controllers				Included Above	
Emergency relay				Included Above	
Network Bridge				Included Above	
Photo Cells				Included Above	
Shade control				Included Above	
Conduit And Wire				Included Above	
Programming				Included Above	
Training				Included Above	
Outlets					
Outlets	32,500	SF	$ 6.00	$ 195,000	**$ 195,000**
Duplex Outlets					
GFI Outlets				Included Above	
4plex Outlets				Included Above	
Dedicated Outlets				Included Above	
WP GFI				Included Above	
Controlled Outlets				Included Above	
Controlled GFI				Included Above	
Poke-thru				Included Above	
Furniture feed				Included Above	
Plug Controller				Included Above	
MDF room dedicated outlets				Included Above	
Branch Conduit And Wire				Included Above	
Homerun				Included Above	
Power to Mechanical Systems					
Power to Mechanical Systems	32,500	SF	$ 2.00	$ 65,000	**$ 65,000**
Connection For Chiller				Included Above	
Connection For ACU				Included Above	
Connection For ERV				Included Above	
Connection For Boiler				Included Above	
Connection For Exhaust Fan				Included Above	
Connection For pump				Included Above	
Connection For FC				Included Above	
Connection For ACCU				Included Above	
Connection For water heater				Included Above	
Disconnect switches				Included Above	
Feeder conduit and wire				Included Above	

	Engineering Technology Building					MicroEstimating
	Rough Order of Magnitude			Date of Conceptual Estimate		1/25/2023
	North Building	**10,500**	**GSF**			
	South Building	**22,000**	**GSF**			
	Grand -Total	**32,500**	**GSF**			

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
	Misc.					
	Misc.	32,500	SF	$ 1.00	$ 32,500	**$ 32,500**
	Arch Flash Study				Included Above	
	Co-Ordination Study				Included Above	
	Seismic Calcs				Included Above	
	Temp Power				Included Above	
	Temp Power Maintenance				Included Above	
	Independent Testing				Included Above	
	Division 26 - ELECTRICAL			201.19	**$ 2,112,500**	**$ 2,112,500**
Div. 27	**COMMUNICATIONS**					
Div. 27	**COMMUNICATIONS - Conduits & backbone - Wire are OFOI**					
	Communications	32,500	SF	$ 8.00	$ 260,000	**$ 260,000**
	12"x4" Cable Tray				Included Above	
	12" T'S				Included Above	
	12" ELBOWS				Included Above	
	Cable tray supports				Included Above	
	Cable tray coupling				Included Above	
	Cable tray grounding				Included Above	
	3/4" AC Grade Plywood				Included Above	
	Ladder style cable tray				Included Above	
	Building Ground Bus				Included Above	
	Connect ground to main bus				Included Above	
	Outlet Drops (Cable devices terminations OFOI)				Included Above	
	EZ path fire seal				Included Above	
	J-hooks				Included Above	
	1" EMT MT				Included Above	
	1-1/4" EMT MT				Included Above	
	IDF Room Build Out (By Owner)				Included Above	
	CATV					**$ 325,000**
	CATV Drops Only (Allowance) Equipment OFOI	32,500	SF	$ 5.00	$ 162,500	
	A/V	32,500	SF	$ 5.00	$ 162,500	
	Division 27 - COMMUNICATIONS			55.71	**$ 585,000**	**$ 585,000**
Div. 28	**ELECTRONIC SAFETY AND SECURITY**					
Div. 28	**ELECTRONIC SAFETY AND SECURITY**					
28 46 00	**Fire Detection Alarm and Voice Evac System**					
	Fire Alarm to include	32,500	SF	$ 10.00	$ 325,000	**$ 325,000**
	Submittals, engineering, fire marshal co-ordination				Included Above	
	Smoke detector				Included Above	
	Heat detector				Included Above	
	Speaker/strobe				Included Above	

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Grand -Total	**32,500**	**GSF**

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

Description	Quantity	Unit	Unit Cost	Extension	Group Extension
Speaker				Included Above	
Strobe				Included Above	
Pull station				Included Above	
Damper control relay				Included Above	
Fire/smoke damper control				Included Above	
Flow and tamper switch				Included Above	
Monitoring module				Included Above	
Duct detectors (Div.26 furnish, Div 25 install)				Included Above	
Modules for elevator recall				Included Above	
Nac				Included Above	
Power to Nac				Included Above	
FATC				Included Above	
FAAP				Included Above	
3/4" EMT w/ fire alarm cables				Included Above	
Pre-test				Included Above	
Fire marshal test				Included Above	
Training				Included Above	
Security	32,500	SF	$ 4.00	$ 130,000	**$ 130,000**
ACCESS CONTROL				Included Above	
Door control panel				Included Above	
Power supply for door				Included Above	
Motion sensor				Included Above	
Card reader				Included Above	
Door position switch				Included Above	
Request to exit				Included Above	
Electric lock (F&I by door contractor)				Included Above	
Conduit and wire				Included Above	
Label terminate and test cable				Included Above	
Training				Included Above	
CCTV					
Exterior camera PTZ	32,500	SF	$ 5.00	$ 162,500	**$ 162,500**
Interior camera				Included Above	
CAT 6 cable				Included Above	
Label terminate and test cable				Included Above	
Patch cords				Included Above	
Camera headend				Included Above	
Training				Included Above	
Cable tray				Included Above	
J-hooks				Included Above	

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North Building	10,500	GSF
South Building	22,000	GSF
Grand -Total	32,500	GSF

Option 3- Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
	Division 28- ELECTRONIC SAFETY AND SECURITY			58.81	$ 617,500	$ 617,500
Div. 33	**SITE UTILITIES**					
Div. 33	**Site Utilities & Site Improvements**					$ 200,000
	Electrical Services	2	Bldg.	$ 50,000.00	$ 100,000	
	PG&E	2	Bldg.	$ 25,000.00	$ 50,000	
	Water/Sewer/Storm	2	Bldg.	$ 25,000.00	$ 50,000	
	Solar PV panels - not compulsory	-	Watt	$ 3.00	$ -	
	Division 33- SITE UTILITIES			19.05	$ 200,000	$ 200,000
	SUBTOTAL OF DIRECT CONSTRUCTION COST			641.15	$ 20,837,449	$ 20,837,449
	INDIRECT COST					
	CONTINGENCIES			15.00%		$ 3,125,617
	TOTAL DIRECT TRADE COST INCLUDING CONTINGENCY					$ 23,963,066
	GENERAL CONDITIONS & GENERAL REQUIREMENTS			20.00%		$ 4,792,613
	OFFICE OVERHEAD/GENERAL CONTRACTOR FEE			6.00%		$ 1,725,341
	BOND AND INSURANCE			2.00%		$ 609,620
	TOTAL COST BEFORE ESCALATION					$ 31,090,640
	ESCALATION TO MID- POINT OF CONSTRUCTION			12.00%		$ 3,730,877
	TOTAL CONSTRUCTION COST WITHOUT OWNER'S (FEE/PM/DELIVERY) COST				$ 1,071.43	$ 34,821,517

Engineering Technology Building MicroEstimating

Rough Order of Magnitude Date of Conceptual Estimate 1/25/2023

Court Yard **12,000** **GSF**

Option 4- Courtyard to include a cover walkway with Hardscape and landscape

	Description	Quantity	Unit	Unit Cost	Extension	Group Extension
Div. 01	**GENERAL REQUIREMENTS**					
01 91 13	**General Commissioning Requirements**					**See Indirect Cost**
	Division 01 - GENERAL REQUIREMENTS					**See Indirect Cost**
	COURTYARD CONSTRUCTION					
	Courtyard Construction					**$ 1,560,000**
	Complete Demolition	12,000	SF	$ 15.00	$ 180,000	
	Pad Preparation	12,000	SF	$ 5.00	$ 60,000	
	Landscape Assumed 50% of the area	6,000	SF	$ 40.00	$ 240,000	
	Hradscapeassume 50% of the area	6,000	SF	$ 10.00	$ 60,000	
	Covered Structure	12,000	SF	$ 50.00	$ 600,000	
	Site Utilities	12,000	SF	$ 25.00	$ 300,000	
	Exterior Lighting	12,000	SF	$ 10.00	$ 120,000	
	Division 02 - EXISTING CONDITIONS			130.00	**$ 1,560,000**	**$ 1,560,000**
	SUBTOTAL OF DIRECT CONSTRUCTION COST			130.00	**$ 1,560,000**	**$ 1,560,000**
	INDIRECT COST					
	CONTINGENCIES			15.00%		**$ 234,000**
	TOTAL DIRECT TRADE COST INCLUDING CONTINGENCY					**$ 1,794,000**
	GENERAL CONDITIONS & GENERAL REQUIREMENTS			12.00%		**$ 215,280**
	OFFICE OVERHEAD/GENERAL CONTRACTOR FEE			6.00%		**$ 120,557**
	BOND AND INSURANCE			2.00%		**$ 42,597**
	TOTAL COST BEFORE ESCALATION					**$ 2,172,434**
	ESCALATION TO MID- POINT OF CONSTRUCTION			12.00%		**$ 260,692**
	TOTAL CONSTRUCTION COST WITHOUT OWNER'S (FEE/PM/DELIVERY) COST				**$ 202.76**	**$ 2,433,126**

Qualifications & Assumptions

Basis Of the Estimate

The estimate is based on the following documents:

- ET Building Feasibility Study, by Thornton Tomesetti dated 01/31/23
- DVC ET Building ADA and Seismic Assessment Report dated 06/05/06

We have provided 4 options for costs based on different scenarios per the followings:

Option(1)

Gut the Entire North and South Building to a the Bare Bone Structure then Provide Seismic Upgrade to the Existing Structure and then Remodel the Entire North and South Building (Court Yard will be a separate Estimate)

Option(2)

Keep the Existing Structure intact and Provide a Complete Interior Remodeling to Both Building A & B

Option(3)

Replacement- Demolish the Entire Both Building A & B and Replace with New Buildings form Ground UP

Option (4)

New Courtyard

Inclusions:

- Strengthening of truss joists is limited to where shown on the proposed seismic upgrade plan (item 5). Every truss joist does not receive strengthening based.

- Estimate assumes continuous footings at wall will get strengthened by extending the existing continuous footings with 2 feet wide by 3 feet deep extension with epoxy dowels tieing the extension back to the existing foundation.

Scope Exclusions:

- Converting the building(s) to all electric.
- Engineering and architectural fees
- Design contingency
- Escalation – costs assumed per 2023 rates.
- Any market impacts or tariffs
- Builder's risk insurance
- Permits and fees, including plan check fees and/or expeditors
- Utility permit & connection fees (i.e. Domestic Water, Sanitary Sewer, Storm Drain, Fire Water, Electrical).
- Consumption costs for power & water, including during construction.
- Tax exempt provisions, including accounting and documentation.

Qualifications & Assumptions

- All contaminated or hazardous materials, conditions, and associated work or impacts (including delays and delay damages).
- Differing subsurface or concealed conditions
- Premium and Overtime provisions; all work has been provided on regular hours.
- Furniture, fixtures and equipment.
- Structural load upgrades to existing structure.
- Bonds.
- Testing and inspection.
- 3rd Party Testing, Inspections or commission.
- Phased construction work or work in occupied building.
- Assumes on waterproofing membrane below slab on grade
- Re-nail or additions to roof plywood.
- Move out and store existing furniture/equipment.
- Install of owner furnished equipment.
- Lab equipment procurement.
- Addition of plywood shear walls and/or concrete overlay shear walls

Additional general Exclusions:

The estimate specifically excludes the following items:

1) - Unforeseen Conditions, Such as, Arti-Facts, Major Buried Underground Utilities or Burial Objects.
2) -Utility Connection Fees
3) - Architectural, Engineering, Landscape Architect, Consultants, and any Soft Costs
4) - Financing Cost and Legal Fees
5) - Permit & Plan Check Fees
6) -Testing and Inspection Cost
7) - Administration Cost such as Bidding, Bid Solicitation Cost and Contract Award
8) - Owner's Project Administration, Management and Supervision
9) -Change Orders During Construction Costs
10) -Cost Escalation Beyond the Assumed Construction Schedule
11) -Owner's Relocation Costs
12) - Construction Change Order
13) -Café and Restaurant TI
14) -Offsite Improvements Such as Sidewalks, Street Work, New Trees and Exterior Lighting
15) - Any Core and Shell Improvement
16) - Renewable Energy, Solar or Energy Recovery System
17) - Kitchen Equipment and Hood or Exhaust
18) - Owner Furnished and Installed Furniture and Equipment
19) - IT, Telephone/Data Equipment other than what included in Low Voltage Electrical Estimate
21) -Third Party MEP Commissioning
22) - Environmental Impact Mitigation
23) - Builders Risk Insurance

Basis of Quantities

Wherever possible, this estimate has been based upon the actual measurement of different items of work. For the remaining items, parametric measurements were used in conjunction with references from other projects of a similar nature.

Qualifications & Assumptions

Direct Cost

a- The unit prices used in the direct cost estimate section are composite unit prices which include costs for material, labor, equipment and subcontractor's/supplier's mark-ups and sales tax.
b- Subcontractor's overhead and profit is included in each line item unit cost.
c- Labor costs are based on State of California prevailing wages for City and County of San Francisco.

Indirect Cost

Markups are added in the Summary to cover the following needed costs:
a- General Contractor's general conditions and general requirements.
b- General contractor's overhead and profit, bonds and insurance.
c- Design phase contingency.
d- Cost escalation beyond the assumed construction mid-point of December 31, 2020.
e- Other indirect costs which may be needed to complete the project.

Cost Escalation

Based on current market conditions, we have included a cost escalation allowance at 6 % per year compounded annually from today to the mid-point of construction.
Assumed 12% to the Mid-Point of Construction for all (3) Options

General Qualification of Estimate: This estimate represents MicroEstimating' s opinion of probable construction costs based on professional experience and qualifications. Since we have no control over the cost of labor, materials or equipment, services furnished by others, contractor's method of pricing and carrying out of work, design work still to be completed, competitive bidding, or market conditions, we cannot guarantee that bid or final construction costs will not vary from our opinion of probable costs. These opinions costs are based on the current market conditions with a relatively low level of participations from General Contractors and Subcontractors on public works and private projects. If the level of bid participation is low for both General Contractors and Trade Contractors, the cost estimate may be exceeded by from 5% to 15%. If participation by General Contractors and Subcontractors exceeds 8, the project cost maybe lower than anticipated. If there are 2 to 3 bidders, the bid amount may vary by +7% to 20%. Receipt of 4 to 5 Bids may vary from 0% to 5%.

Bid Conditions

Experience shows that fewer bidders may result in higher bids, and conversely, more bidders may result in lower bids. Therefore it is important to obtain as many bids as possible.
The following table provides a general guideline for probable impacts due to number of bids:

1 bid	+21% to +40%
2-3 bids	+5% to +20%
4-5 bids	-4% to +4%
6-7 bids	-7% to -5%
8 or more bids	-12% to -8%

Market Conditions:

Qualifications & Assumptions

Due to the high number of construction projects in the San Francisco Bay Area there is a shortage of participation in some special trades, as well as shortages in the number of available laborers and skilled workers. This may impact the cost of construction. These conditions may continue for several more years before construction slows. For this reason we suggest that the owner carry an additional 10% above and beyond these construction costs. This 10% is not considered to be an escalation contingency, but is only to account for market volatility.

General Qualifications of the Estimate

This estimate represents MicroEstimating' s opinion of probable construction costs based on professional experience and qualifications. Since we have no control over the cost of labor, materials or equipment, services furnished by others, contractor’s method of pricing and carrying out of work, design work still to be completed, competitive bidding, or market conditions, we cannot guarantee that bid or final construction costs will not vary from our opinion of probable costs. These opinions of cost are based on current market conditions with a relatively low level of participation from General Contractors and Subcontractors on public works and private projects.

Bid Conditions

Experience shows fewer bidders may result in higher bids, and conversely more bidders may result in lower bids. Therefore, it is important to obtain as many bids as possible.

Cost Estimate Classification System – As Applied in Engineering, Procurement, and Construction According to AACE International Recommended Practice No. 18R-97
Cost Estimate Based on Class 1 Classifications
Budget authorization or control, Semi-detailed unit cost ranges suggested as below:
L: -10% to -20%
H: +10% to +25%

Market Conditions:

Due to the high number of construction projects currently underway in Bay Area there is a shortage or lack of participation in some special trades, as well as shortages of labor and skilled workers that may impact the cost of construction projects. These conditions may continue for a few years before construction slows. For this reason we suggest that the owner carry an additional 10% above and beyond this construction cost. This 10% is not considered to be a contingency of escalation factor, but is only to account for market volatility.

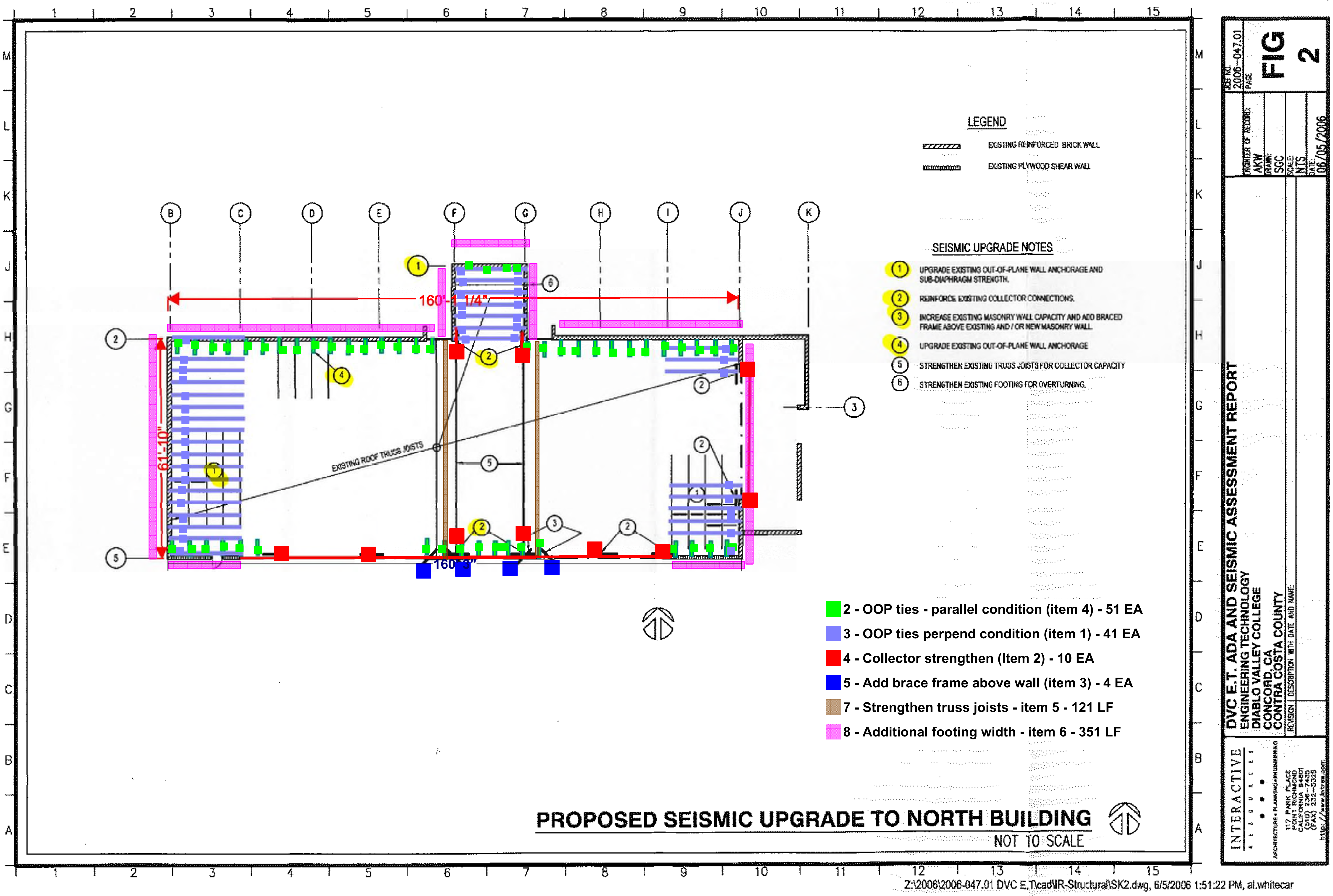
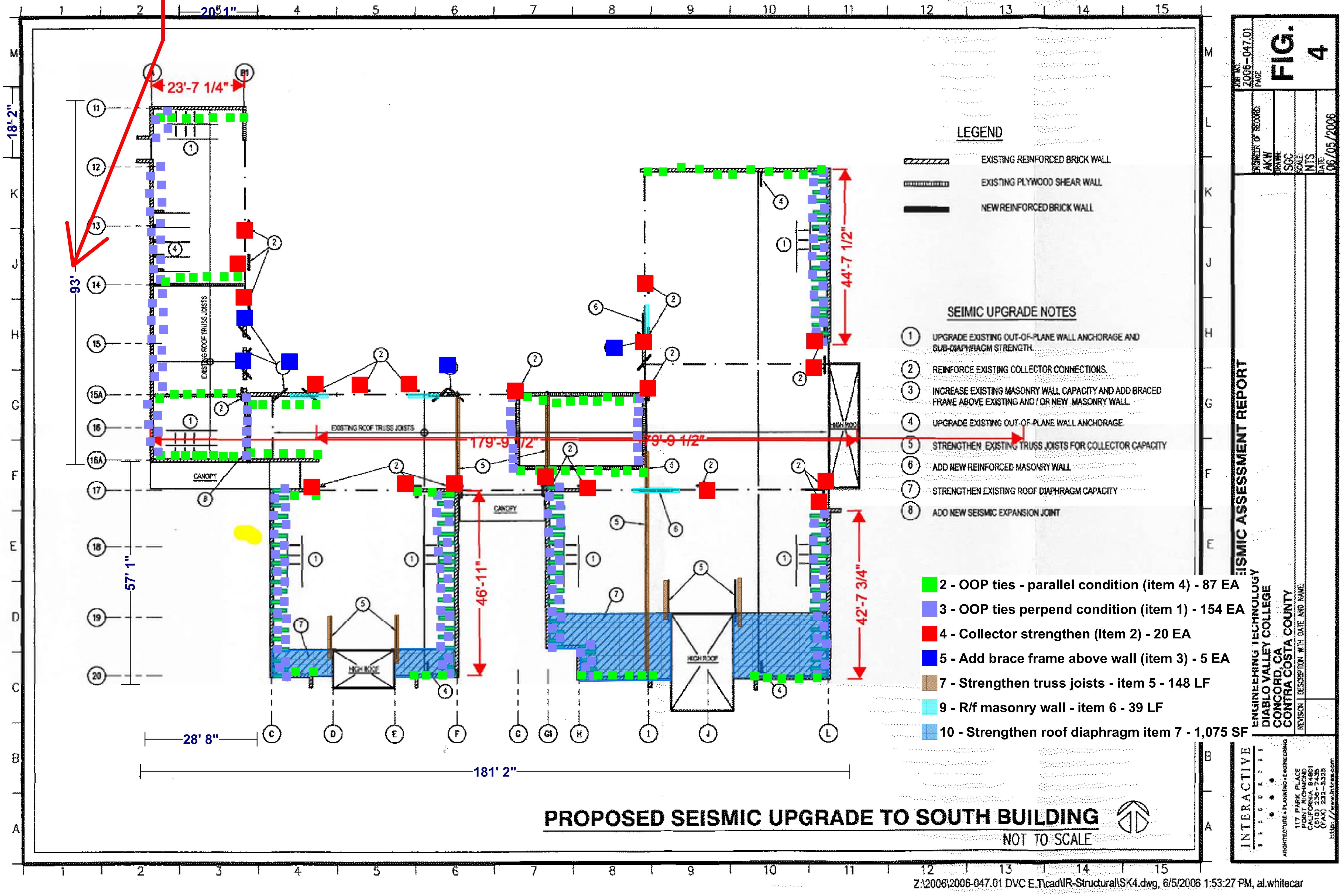

LEGEND
EXISTING REINFORCED BRICK WALL
EXISTING PLYWOOD SHEAR WALL
SEISMIC UPGRADE NOTES
1 UPGRADE EXISTING OUT-OF-PLANE WALL ANCHORAGE AND SUB-DIAPHRAGM STRENGTH.
2 REINFORCE EXISTING COLLECTOR CONNECTIONS.
3 INCREASE EXISTING MASONRY WALL CAPACITY AND ADD BRACED FRAME ABOVE EXISTING AND / OR NEW MASONRY WALL.
4 UPGRADE EXISTING OUT-OF-PLANE WALL ANCHORAGE
5 STRENGTHEN EXISTING TRUSS JOISTS FOR COLLECTOR CAPACITY
6 STRENGTHEN EXISTING FOOTING FOR OVERTURNING.
160'-1 1/4"
61'-10"
EXISTING ROOF TRUSS JOISTS
2 - OOP ties - parallel condition (item 4) - 51 EA
3 - OOP ties perpend condition (item 1) - 41 EA
4 - Collector strengthen (Item 2) - 10 EA
5 - Add brace frame above wall (item 3) - 4 EA
7 - Strengthen truss joists - item 5 - 121 LF
8 - Additional footing width - item 6 - 351 LF
PROPOSED SEISMIC UPGRADE TO NORTH BUILDING
NOT TO SCALE
JOB NO. 2006-047.01
PAGE
FIG 2
ENGINEER OF RECORD: AKW
DRAWN: SGC
SCALE: NTS
DATE: 06/05/2006
DVC E.T. ADA AND SEISMIC ASSESSMENT REPORT
ENGINEERING TECHNOLOGY
DIABLO VALLEY COLLEGE
CONCORD, CA
CONTRA COSTA COUNTY
REVISION DESCRIPTION WITH DATE AND NAME
INTERACTIVE RESOURCES
ARCHITECTURE • PLANNING • ENGINEERING
117 PARK PLACE
POINT RICHMOND
CALIFORNIA 94801
(510) 236-7435
(FAX) 232-5325
http://www.intres.com
Z:\2006\2006-047.01 DVC E.T\cad\IR-Structural\SK2.dwg, 6/5/2006 1:51:22 PM, al.whitecar

Image scale is different in Y-axis. This 93' should be



Diablo Valley College
Engineering Technology Building Design Project
Phase 1

Phase 1: Investigating Program Needs

Curated Portfolio of Findings and Planning Principles

This portfolio of findings provides an overview of data related to Engineering Technology programs, including enrollment trends, student outcomes, discipline-relevant labor market information, and key themes from ET program reviews, surveys of external partners, faculty focus groups, student focus groups, and college site visits.

Integrated Academic Solutions, LLC (September 2022)

Phase 1: Investigating Program Needs

ET ENROLLMENT TREND DATA

The information presented in this section provides a summary of the overall findings regarding the vitality of instructional locations and programs with implications for patterns of growth, stability, or decline. In assessing instructional program data, it is important to be mindful of a variety of factors that impact enrollment, including but not limited to, enrollment management strategies, scheduling patterns, class size maximums, facilities, safety considerations, availability of staff, and recruiting and hiring practices.

ET Program Enrollment Trends

ET Department enrollment data examined as part of the program needs assessment over four academic years (2018-2019 through 2021-2022) includes four basic sets of metrics with notable implications for space planning - sections, fill rates, WSCH (weekly student contact hours), and FTES/FTEF (full-time equivalent students/full-time equivalent faculty) – which provide indicators of demand, growth, and efficiency.

Sections

Due to consistency in course scheduling, the number of sections offered each semester varied little from year to year. However, the number of sections offered in the ET Department declined in the last few years (e.g., 77 total sections in Fall 2018 to 70 sections in Fall 2021) – most likely as a result of overall declines in student enrollment due to the human toll of the COVID-19 pandemic in 2020 and 2021. In sum, the ET Department offered an average number of 74 sections per regular term. The table below illustrates the four-year average by discipline (presented in descending order).

Discipline	Section Average/Academic Year
ARCHI	22
ENGIN	17
CONST	12
ENGTC	9
ELECT	6
ELTRN	4
IDSGN	2
ENSYS	2

Fill Rates

ET Department fill rates ranged over the four-year period from a high of 69% (Fall 2020) to a low of 58% in Spring 2020. The fill rate for the most recent semester (Spring 2022) stood at 59%; however ,the average over the entire four-year period is 63%. The table below illustrates the four-year average for each ET discipline relative to the department's 63% overall average.

Discipline	Four-Year Average Fill Rate
ENGIN	84%
ARCHI	83%
CONST	79%
ELECT	71%
ET DEPT AVG	**63%**
IDSGN	61%
ENGTC	46%
ENSYS	37%
ELTRN	28%

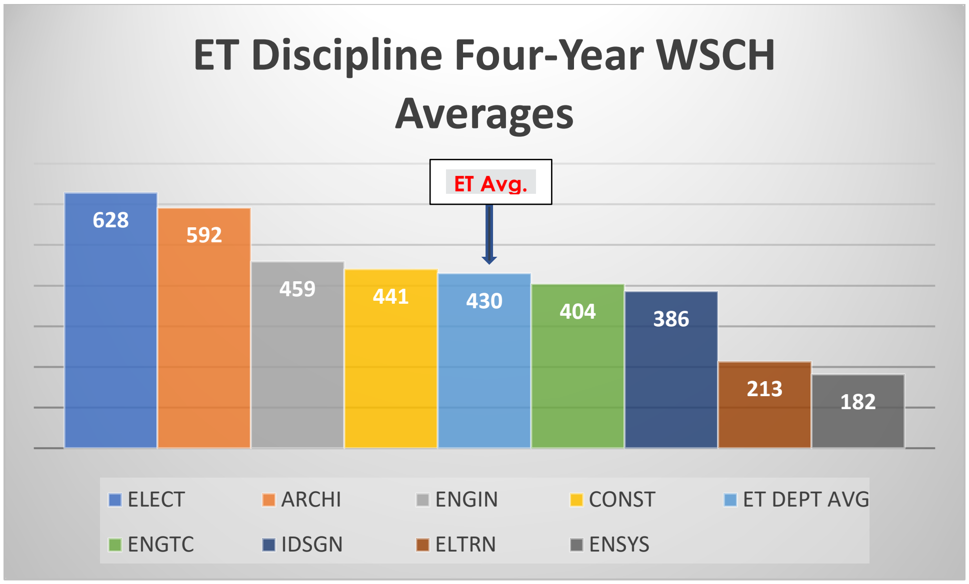
WSCH

WSCH stands for Weekly Student Contact Hours. It is defined as the number of students in a class at census multiplied by the hours of student instruction conducted in that class in a week during a primary (fall or spring) term of an academic year. Because WSCH is used to calculate FTES (full-time equivalent students), it carries significant implications for funding. Additionally, state standards for construction and renovation of facilities basically focus on capacity, which is correlated with the production of WSCH.

Like fill rates, WSCH can vary from semester to semester based upon a variety of scheduling factors. However, as the table below captures, several disciplines have seen increases in WSCH – the most notable in ELTRN and ARCHI.

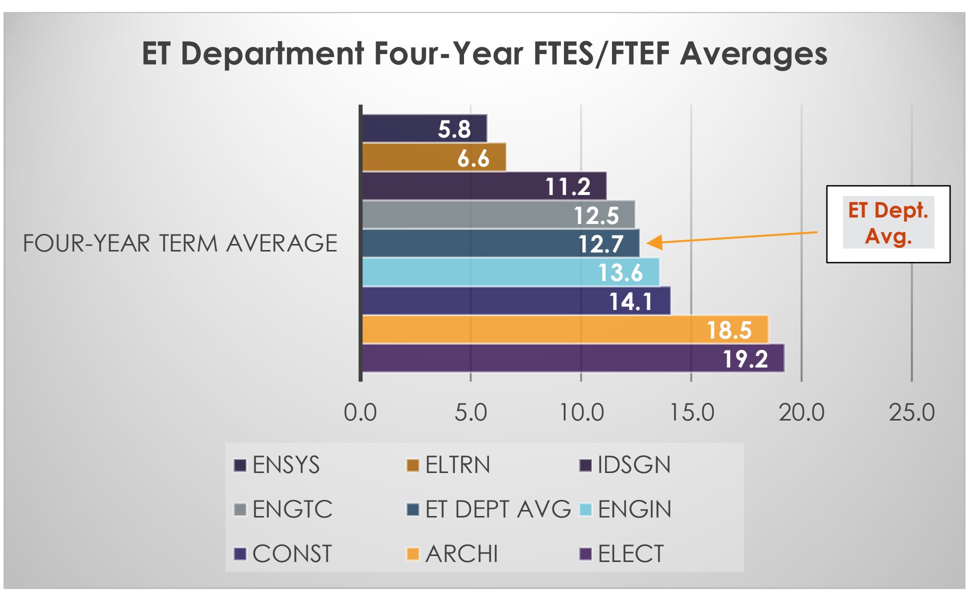
Discipline	AY18-19 Avg.	AY19-20 Avg.	AY20-21 Avg.	AY21-22 Avg.	Four-Year Avg.	Percent Change (2018/19 - 2021/22)
ARCHI	579	533	607	648	592	12%
CONST	489	455	439	380	441	-22%
ELECT	596	628	671	619	628	4%
ELTRN	213	218	177	245	213	15%
ENGIN	446	441	484	466	459	4%
ENGTC	387	446	389	396	404	2%
ENSYS	232	132			182	-100%
IDSGN	382	385	450	327	386	-14%
ET DEPT	**416**	**405**	**460**	**440**	**430**	**6%**

The chart below presents the four-year WSCH averages for ET disciplines relative to the department average of 430.



FTES/FTEF

Community colleges typically use FTES/FTEF as a preferred way of measuring program efficiency over time. Target FTES/FTEF ratios are typically 17.5 per semester or 35 for an academic year. As the chart below shows, four-year term averages for four disciplines (ELECT, ARCHI, CONST, ENGIN) are above the ET Department Average of 12.7; two exceed the 17.5 benchmark (i.e., ELECT and ARCHI).



ET Program Student Outcomes

The data examined in this section includes student headcount, course completion, course success, persistence to the next term, and program awards (i.e., degrees and certificates).

Headcount

While student headcount is often included in program enrollment data, this information is also an important indicator of student access to programs of study. As illustrated in the table below, only one discipline experienced an increase in headcount over the last four academic years (eight regular terms): CONST. (Note: the lack of data for ENSYS since Fall 2020 suggest program suspension or discontinuance.)

DEPT	F18	SP22	Percent Change
CONST	141	150	6%
ENGIN	362	355	-2%
ARCHI	374	361	-3%
ENGTC	111	102	-8%
ELECT	113	93	-18%
ELTRN	32	25	-22%
IDSGN	43	30	-30%
ENSYS	30		-100%

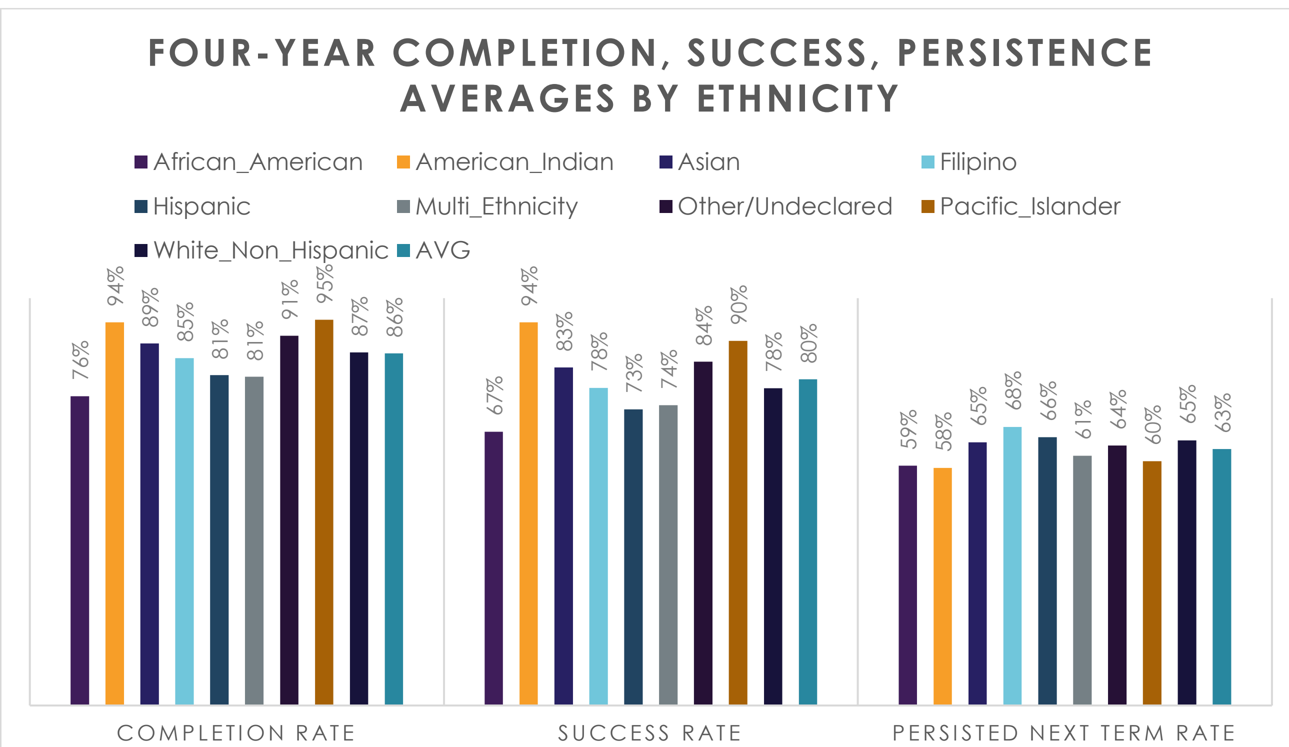
Course Completion, Course Success, and Persistence to Next Term by Ethnicity

Like many California community colleges, DVC serves a diverse population. The most recent data indicates that the College's student population is predominantly White (31%), while 27% of students identify as Hispanic (Latinx), and 18% identify as Asian. Multi-Ethnic students comprise 8% of the student population and only 5% identify as Black or African American. This demographic data provides important comparative context for disaggregated ET program student success metrics.

As illustrated in the table below, the department averages for course completion (86%) and course success (80%) are comparatively higher than the department average for persistence to the next term (63%). Additionally, the ET average for course success is comparable to DVC's 81% for 2020-2021 (see Calpass Plus Launchboard Metrics). However, in regard to persistence, the ET Department average of 63% is notably lower than the 71% rate for the College.

Ethnicity	Completion Rate	Success Rate	Persisted Next Term Rate
African-American	76%	67%	59%
American Indian	94%	94%	58%
Asian	89%	83%	65%
Filipino	85%	78%	68%
Hispanic	81%	73%	66%
Multi-Ethnicity	81%	74%	61%
Other/Undeclared	91%	84%	64%
Pacific Islander	95%	90%	60%
White/Non-Hispanic	87%	78%	65%
ET Department Average	**86%**	**80%**	**63%**

As both the table above and the bar chart below illustrate, equity gaps are also notable, as evidenced by comparatively lower rates for African American students across all metrics, and for Hispanic, Filipino, and Multi-ethnic students in respect to success and persistence rates.



Course Completion, Course Success, and Persistence to Next Term by Gender

Females are the majority of the DVC student population (51.9%) but they represent a relatively small number of students in ET programs – a pattern which is typical in higher education STEM programs and many career education related disciplines. For comparative purposes, course success rates among male and female students at DVC are similar (81% for women, 80% for men) but lower for non-binary identifying students (67%). The table below provides a summary by gender of headcount, completion, success, and persistence by ET discipline. Programs that exceed the ET Department averages for completion, success, and persistence by gender are highlighted in green.

DEPARTMENT	GENDER	Headcount	Completion Rate	Success Rate	Persisted Next Term Rate
ARCHI	Female	720	84%	78%	63%
	Male	1077	85%	77%	66%
	Unknown	40	91%	87%	64%
CONST	Female	198	91%	84%	51%
	Male	702	88%	75%	49%
	Unknown	10	90%	70%	50%
ELECT	Female	36	81%	69%	37%
	Male	432	84%	72%	53%
	Unknown	5	71%	71%	33%
ELTRN	Female	15	72%	56%	55%
	Male	196	71%	56%	60%
	Unknown	3	50%	50%	33%
ENGIN	Female	473	86%	78%	62%
	Male	1546	85%	76%	62%
	Unknown	29	89%	78%	63%
ENGTC	Female	105	87%	77%	55%
	Male	452	87%	79%	57%
	Unknown	8	100%	100%	71%
ENSYS	Female	9	83%	67%	63%
	Male	43	81%	74%	47%
	Unknown	2	50%	50%	25%
IDSGN	Female	46	73%	67%	67%
	Male	143	84%	80%	66%
	Unknown	3	100%	86%	86%

ET Program Awards Summary

Key Highlights:

- substantial increase 2015-2016 to 2020-2021;

- steady increases to the highest year prior to pandemic (2018-2019) reflects capacity for increased completions;

- highest number of awards ARCHI AS (n. 98);

- second highest number of awards ENGIN AS (n. 77);

- ENSYS – lowest number; assume discontinued program based on enrollment data.

Key Planning Questions:

- Do departments have plans to decrease number of units to completion? If so, what are the implications for course scheduling?

- Are there plans for braided/integrated student support services? Different/upgraded technology?

Awards

The ***Vision for Success*** goals call for:

- an increase by at least 20 percent (over five years) in the number of California Community College students annually who acquire associate degrees, credentials, certificates, or specific skill sets that prepare them for an in-demand job;

- a decrease in the average number of units accumulated by California Community College students earning associate degrees (i.e., decrease from approximately 87 total units - system-wide average - to 79 total units); and,

- reducing equity gaps with the goal of cutting achievement gaps by 40 percent within 5 years and fully closing those achievement gaps within 10 years.

[Source: CCCCO-Vision-for-Success-Goals-and-Commitments]

In light of these goals and the associated fiscal implications for the Student-Centered Funding Formula (SCFF), an examination of disaggregated data for degree and certificate awards for ET programs of study is an important feature for this portfolio of findings.

PROGRAM	TYPE	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
ARCHI	AS	8	17	10	22	19	22	98
	CA	1	0	0	4	22	10	37
CONST	AS	1	5	7	11	8	9	41
	CA	1	12	11	27	6	5	62
	CC	0	0	9	9	2	2	22
ELECT	AS	11	13	17	6	12	4	63
	CA	6	13	29	5	6	2	61
	CC	1	17	7	5	2	4	36
ENGIN	AS	4	5	14	19	15	20	77
ENGTC	AS	3	1	2	6	5	4	21
	CA	1	1	1	0	1	1	5
	CC	4	1	8	2	5	2	22
ENSYS	CC	1	0	0	0	0	0	1
IDESGN	AS	0	0	2	4	3	2	11
	CA	0	0	1	1	0	1	3
ET TOTALS		42	85	118	121	106	88	560

Awards by Ethnicity (Six Year Period: 2015-2016 through 2020-2021)

Ethnicity	Six Year Total (n.)	Percent
African American	40	7%
Asian	47	8%
Filipino	39	7%
Hispanic	162	29%
Multi-racial	47	8%
Pacific Islander	3	1%
Undeclared	31	6%
White	191	34%

Key Highlights and Planning Questions

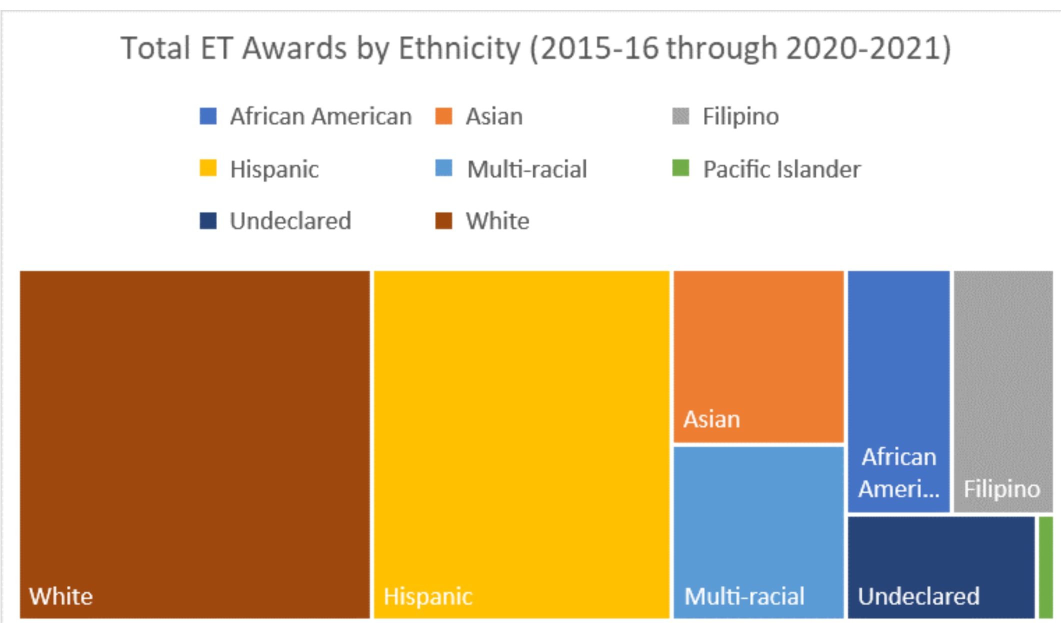
Key Highlights:

- The number and percent of awards generally parallel DVC's student population demographics.

Questions:

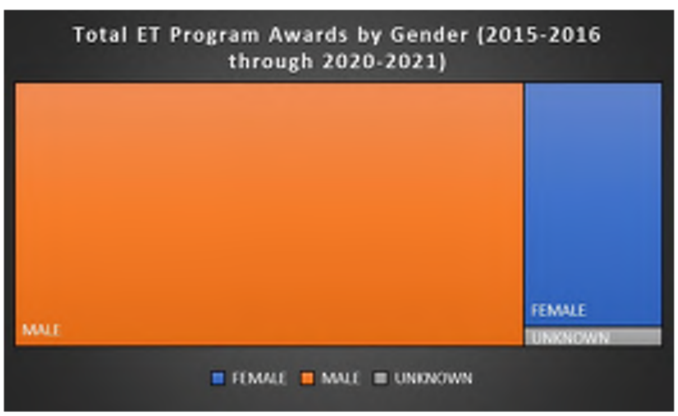
- Are there any plans to increase outreach and support for diverse students and increase completion rates for students of color in ET programs?

- If so, what are the implications for instruction, student services, technology, facilities?



Awards by Gender (Six-Year Period: 2015-2016 through 2020-2021)

GENDER	AWARDS	PERCENT
Female	111	20%
Male	439	79%
Unknown	9	2%



Key Highlights and Planning Questions

Highlights

 The number of awards in ET disciplines increased overall among both males and females but decreased slightly for students of "unknown" genders.

 Females are the majority of the DVC student population (51.9%) but they represent 20% of awards, which is a typical pattern in STEM disciplines.

 The number and percentage of awards to female students increased over a six-year period (7 in 2015-2016; 23 in 2020-2021), which is particularly notable given the disproportionate impact of the pandemic on women in general and among female college students.

Planning Questions

 Are there any plans to increase gender diversity completion rates for under-represented student populations in ET programs?

 If so, what are the implications for instruction, student services, technology, facilities?

Average Units to Completion

As the table below illustrates, the average number of units to program completion in ET disciplines exceeds the Vision for Success goal of 79 units for AA/AS degrees and several programs have seen notable increases in the average units to completion.

ET Program	Award	Average Units to Completion 2015-2016	Average Units to Completion 2020-2021	Percent Change
ARCHI	Degrees	88	105	19%
	Certificates	81	110	36%
CONST	Degrees	107	90	-16%
	Certificates	98	56	-43%
ELECT	Degrees	84	87	4%
	Certificates	35	74	111%
ENGIN	Degrees	100	103	3%
	Certificates	NA	NA	NA
ENGTC	Degrees	64	102	59%
	Certificates	101	65	-36%
ENSYS	Degrees	153	168	10%
	Certificates	28	29	4%
IDESGN	Degrees	124	79	-36%
	Certificates	55	111	102%

Key Labor Market Information

Labor market trends for ET related disciplines are critical to understanding future program demand. The LMI analysis conducted for this environmental scan focused on projections for future job openings in occupations that provide living wages in Contra Costa County. Thus, the occupations identified for this assessment are ones that meet the *MIT Living Wage Calculator* benchmark estimates for salaries in Contra Costa County, which offer a local wage rate that allows residents to meet minimum standards of living. There are several limitations to this tool; namely, data is currently 2019, and therefore, does not account for recent inflation or up-to-date changes in the consumer price index. However, given the critical importance of aligning programs of study to jobs that provide living wages, the *MIT Living Wage Calculator* does help colleges establish baseline indicators for both short and long-range planning.

Several basic assumptions inform the reference point for living-wage occupations in Contra Costa County:

1. Because living-wage calculations are calibrated to household size and the average number of persons per household in the County is 2.86 and 70% are family households, the living wage thresholds are based upon a three-person household.
2. Since the relatively high cost of living in the East Bay region requires more than a single income, the operating assumption applied for the occupational focus is two (2) adults - both working and one child: $26.28/hour or $53,045 annually given 2,020 FT payroll hours per calendar year.

Additionally, two industry sectors most closely align with the programs of study in the Engineering Technology Department: 1) Advanced Manufacturing, and 2) Energy, Construction, Utilities.

Thus, the LMI occupational demand analysis is predicated on the following combination of factors:

- California Employment Development Department Long-Range occupational forecasts (2018-2028) for the Oakland-Hayward-Berkeley Metropolitan District;
- Advanced Manufacturing and Energy, Construction, Utilities sectors;
- entry level education of AA/AS or Post-secondary/Non-degree Award (i.e., "certificate"), or bachelor's degree; and,
- annual average earnings above $53,045.

Notably, as the data tables below reflect, a number of ET programs of study prepare students to enter occupations, which, based on the most current estimates, will provide degree and certificate award-earners as well as transfer students with living wages for the Bay Area. Occupational titles that do not correlate to ET programs have been omitted from the data tables.

Advanced Manufacturing Sector

AA/AS/Post-Secondary Nondegree

Occupational Title	Entry Level Education	2018 Jobs	2018-2028 Total Job Openings	Annual Job Openings	Average Annual Earnings
Mechanical Drafters	Associate's degree	390	420	42	$69,422
Drafters, All Other	Associate's degree	180	200	20	$69,822
Electrical and Electronics Engineering Technicians	Associate's degree	2,280	2,620	262	$68,056
Electro-Mechanical Technicians	Associate's degree	130	150	15	$61,589
Industrial Engineering Technicians	Associate's degree	370	460	46	$58,408
Mechanical Engineering Technicians	Associate's degree	280	300	30	$64,200
Engineering Technicians, Except Drafters, All Other	Associate's degree	940	1,060	106	$72,828
Electrical and Electronics Repairers, Commercial and Industrial Equipment	Postsecondary non-degree award	410	370	37	$70,342
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	Postsecondary non-degree award	140	210	21	$86,047
Tool and Die Makers	Postsecondary non-degree award	210	290	29	$74,469

Source: Employment estimates (current and projected); California Employment Development Department, Labor Market Information Division, Long-term Occupational Projections for Oakland-Hayward-Berkeley Metropolitan District, 2018-2028. Online at www.labormarketinfo.edd.ca.gov.

Bachelor's Degree

Occupational Title	Entry Level Education	2018 Jobs	2018-2028 Total Job Openings	Annual Job Openings	Average Annual Earnings
Industrial Production Managers	Bachelor's degree	1,650	1,410	141	$137,792
Chemical Engineers	Bachelor's degree	280	190	19	$110,405
Electrical Engineers	Bachelor's degree	2,400	1,940	194	$118,858
Electronics Engineers, Except Computer	Bachelor's degree	1,780	1,320	132	$112,951
Industrial Engineers	Bachelor's degree	1,490	1,580	158	$116,693
Materials Engineers	Bachelor's degree	290	230	23	$143,078
Mechanical Engineers	Bachelor's degree	2,080	1,820	182	$124,539

Source: Employment estimates (current and projected); California Employment Development Department, Labor Market Information Division, Long-term Occupational Projections for Oakland-Hayward-Berkeley Metropolitan District, 2018-2028. Online at www.labormarketinfo.edd.ca.gov.

Energy, Construction, Utilities Sector

AA/AS/Post-Secondary Nondegree

Occupational Title	Entry Level Education	2018 Jobs	2018-2028 Total Job Openings	Annual Job Openings	Average Annual Earnings
Architectural and Civil Drafters	Associate's degree	1,320	1,350	135	$66,589
Electrical and Electronics Drafters	Associate's degree	340	380	38	$66,089
Civil Engineering Technicians	Associate's degree	750	750	75	$76,792

Source: Employment estimates (current and projected); California Employment Development Department, Labor Market Information Division, Long-term Occupational Projections for Oakland-Hayward-Berkeley Metropolitan District, 2018-2028. Online at www.labormarketinfo.edd.ca.gov.

Bachelor's Degree

Occupational Title	Entry Level Education	2018 Jobs	2018-2028 Total Job Openings	Annual Job Openings	Average Annual Earnings
Construction Managers	Bachelor's degree	5,070	4,070	407	$129,695
Architectural and Engineering Managers	Bachelor's degree	3,410	2,830	283	$190,208
Architects, Except Landscape and Naval	Bachelor's degree	1,220	1,070	107	$120,286
Surveyors	Bachelor's degree	540	400	40	$92,141
Engineers, All Other	Bachelor's degree	2,670	2,150	215	$111,367

Source: Employment estimates (current and projected); California Employment Development Department, Labor Market Information Division, Long-term Occupational Projections for Oakland-Hayward-Berkeley Metropolitan District, 2018-2028. Online at www.labormarketinfo.edd.ca.gov.

Environmental Scan Conclusions

Engineering Technology programs have proven to be relatively resilient in the face of unprecedented changes, such as system-wide mandates and requirements as well as the COVID-19 pandemic. Notably:

- ✓ *Headcount enrollment (unduplicated) decreased in a number of programs over the previous five academic years, which impacted the number of sections, WSCH, and FTES/FTEF.*
- ✓ *Course completion and course success rates have remained relatively stable; however, rates for persistence-to-next-term for the ET disciplines (average of 63%) are notably lower than the 71% rate for the College.*
- ✓ *The number of degree and certificate awards for ET programs steadily increased over a six-year period. However, the average units-to-completion of degrees remains relatively high, and for several programs, the average has increased; thus, should programs begin*

to address this with curriculum modifications there will likely be implications for course scheduling and enrollment data.

- ✓ *Equity gaps persist across all metrics, which points to the need to consider ways to improve access to programs and support services for diverse student populations and develop facilities and technologies that enhance inclusiveness and belonging for historically-marginalized people of color.*
- ✓ *ET programs of study continue to align with regional labor market demand and a significant number of ET disciplines prepare students to directly enter living-wage occupations in the East Bay Area and to transfer to four-year colleges and universities for degrees that lead to relatively high-wage employment.*

In respect to anticipated program growth, absent enrollment targets for ET programs (established in college-wide enrollment management plan) or educational master plan projections by discipline, several factors should be considered in forecasting future enrollments for facility space planning purposes: broader enrollment patterns in California, nationwide, and locally, labor market demand, and discipline WSCH trends.

- **Broad Enrollment Patterns**
  - As students and families question the value proposition of a college education in light of rising costs and the burden of loan debt, college enrollments across the nation have been declining. Community college enrollments have been declining since 2010 by an average of 2.2% per year– a pattern that the COVID-19 pandemic accelerated. (See AACC: Community College Enrollment Crisis? Historical Trends in Community College Enrollment).
  - DVC has experienced a decrease in student headcount over the past decade from 30,077 in AY2011-2022 to 25,253 in AY2021-2022 – a 16% decline or 1.6% annual average decrease.
- **Labor Market Demand**
  - As delineated in the section above describing labor market trends, forecasted occupational demand in ET-related discipline areas is strong. Thus, with targeted outreach to both the high school student population and working adults, conceivably, ET programs can expect future growth.
- **Discipline WSCH Trends**
  - Two disciplines – ELTRN and ARCHI - have seen the most notable increases in WSCH over the previous four years, which serves as one indicator of future demand and program growth.

ET Program Review Topics and Themes

ET programs completed program reviews in 2021. Captured here are the topics and themes from these most recent program evaluations, which are noted in multiple disciplines' reviews.

Space Types by Function or Purpose

- ✓ dedicated drop-in computer lab space
- ✓ display spaces
- ✓ makerspace
- ✓ flexible shared spaces
- ✓ fabrication space
- ✓ studio spaces
- ✓ project storage areas
- ✓ controlled storage for materials, tools, parts
- ✓ spaces to accommodate large equipment
- ✓ restroom facilities
- ✓ integrated project space
- ✓ integrated lecture and lab space

Spatial Features or Characteristics

- ✓ spaces to support interdisciplinary and cross-collaboration
- ✓ room function and adjacency considerations related to noise
- ✓ furniture – seating, worktables, desks
- ✓ proper ventilation
- ✓ light
- ✓ spaces to support range of activities (e.g., seminar/small group workspaces, didactic and interactive learning)
- ✓ spaces to support range of faculty functions and activities (e.g., teaching, research, mentoring, and student advising)
- ✓ state-of-the-art audio-visual technology
- ✓ code and safety compliance

ET Building Remodel Industry and Transfer Partners Survey Themes

Common themes from surveys administered to industry and transfer institution partners indicated a need for DVC's ET programs to continue to build upon the following knowledge, skills, abilities, and resources for current and future students:

- ✓ ***communication skills (oral, written)***
- ✓ ***reading and math skills***
- ✓ ***collaboration/teaming skills***
- ✓ ***diversity and inclusion***
- ✓ ***soft skills***
- ✓ ***hands-on/practical knowledge -> apprenticeships, internships***
- ✓ ***analysis/critical thinking/problem-solving skills***
- ✓ ***design skills***
- ✓ ***fabrication***
- ✓ ***makerspaces***
- ✓ ***technology/programming/graphics skills***
- ✓ ***flexibility (both space, function, interpersonal)***

ET Faculty Focus Groups and Themes

A critical component of the Phase 1 environmental scan included four focus groups with ET discipline faculty, which were conducted via Zoom in July 2022 with the following groups:

- Architecture and Construction/pre-Apprenticeship
- Electrical Technology, Engineering Technology and Industrial Design
- Engineering, M&E Interest Area Staff and Liaisons

Rather than conferring on specific building design elements, square footage, or other construction related issues, these sessions were focused on exploring current and emerging trends and the implications for student-centered, equity-infused learning and teaching environments. General lines of inquiry centered upon the following planning concepts:

INVESTIGATING PROGRAM NEEDS

- *How can we best understand the current and future (optimal) program mix in the Engineering Technology building?*
- *How can we best ensure that the buildings constructed today will continue to support student-centered, equity-infused learning and teaching environments 30 to 40 years in the future?*
- *Student-focused Lines of Inquiry: What do students need in this space and what do the faculty and staff who serve these students need? What activities (i.e., learning and support) take place in this space? What are the current limitations? What will be the future space needs?*

ENVIRONMENTAL SCAN INFORMATION

- *What new instructional approaches, such as "flipped classrooms" and Hy-flex modalities, will impact space needs?*
- *What new programs will the College develop over the next five to ten years and what facilities will be needed to support the delivery of instruction in these programs?*
- *What have industry advisory boards indicated as high priorities for Career Education programs related to Engineering Technology?*
- *What impact will efforts to meet industry demands have on program and space needs?*
- *What noteworthy implications for future technology or facilities have been noted in program reviews?*
- *How will the College address the need for the remote delivery of support services?*

Key Themes and Planning Implications from ET Faculty Focus Groups

FLEXIBLE, COLLABORATIVE SPACES

- Shared Makerspace; a "destination"
- Mix: Some programs need very specific spaces (e.g., construction) , plus opportunities for shared instructional spaces – efficient, flexible, optimized use of space ideas and enhance collaborations
- Range of office types/configurations ("loud," collaborative spaces as well as quiet spaces)
- Spaces to accommodate a variety of instruction and student support activities, such as:
    - counseling/student services nearby, integrated, or co-located
    - tutoring and instructional support spaces (e.g., Math "outpost")
    - spaces to create prototypes, drawings, and similar projects
    - high demand for computer labs
    - "Outward facing" spaces (e.g., visually accessible classrooms, display/showcasing areas for the full array of ET program activities and outputs)

DIVERSITY, EQUITY, INCLUSION, ACCESS

- Creating welcoming spaces that foster a sense of belonging (e.g., centralized local library, kitchenette/café, indoor and outdoor places to meet, socialize, rest)
- Spaces that reflect and help foster understanding of social justice, ecology, environmental justice, and sustainability
- Consider how diverse student populations (e.g., women, people of color) experience space (e.g., safety with lighting, bathroom configurations/ locations, enclosed spaces)
- Universal design for equitable access

Math and Engineering Center Dialogue Themes

Dialogue with the faculty from DVC's Math and Engineering Center yielded a number of ideas that align with and echo the key concepts that emerged from ET Faculty Focus Groups, including the following principles:

- Integration and Connection to Support Student Success:
  - Connect services for students by integrating more intentionally with ET, such as tutoring spaces for discipline-specific space (ARCHI, ENGIN);
  - Make spaces accessible and welcoming (e.g., consider adjacency of ET classes and the Math and Engineering Center); and,
  - Create more effective signage to help students with wayfinding.
- Adaptable, flexible spaces, to support a range of activities, such as:
  - supplemental instruction;
  - "Q/A" work;
  - quiet study;
  - open studio space;
  - workshop spaces; and,
  - student support area.
- Address Technology Needs:
  - Consider a kiosk for laptop check-out;
  - Ubiquitous, consistent, reliable Wi-Fi; and,
  - accessible abundant power and device charging stations.

Student Focus Groups and Themes

In September 2022, three students with experience in ET programs (both pre- and post-pandemic) and facilities participated in a small focus group to provide input on the student experience and to share their ideas for consideration in the redesign of ET spaces. Areas of inquiry included:

- general impressions and experiences in ET facilities;
- what they currently like about ET spaces;
- what they would change about ET spaces;
- what kind of spaces or space designs students need as they work on projects throughout the semester;
- what would make classroom and/or lab spaces attractive to students;
- favorite locations or facilities on the DVC Campus;
- where on the DVC campus they feel most comfortable, connected, welcome, safe;
- what services or supports would be most helpful to have in or closely located to the ET Building;
- what kinds of spaces are best for collaboration;
- how they see the ET programs in the future - in-person vs. remote/online learning; and,
- comments or suggestions for the ET Building Redesign Committee.

As captured below, a number of major themes emerged from these focus group sessions in respect to features that would optimize the student experience: welcoming, warm, clean, safe, flexible, accessible, and "hands-on."

Welcoming and Warm

- building attractiveness – interiors and exteriors
- no "sterile spaces"
- light - more windows, more natural light, skylights, well-lit hallways and common areas
- connection –
  - display spaces
  - community/social space (inside and outside) – activity hubs where students can visit, share, connect, sit, eat, get coffee and healthy food
  - maximize or enhance features of the natural environment
- color – paint, carpet, flooring
- gender-neutral bathrooms
- accessibility for differently-abled populations

Safety Prioritized

- better egress
    - Classrooms
    - Labs
    - Bathrooms
- well-lit hallways and common areas

Flexible, Accessible, Hands-On Learning

- makerspace – place to "build things" and "build relationships"
- space for semester-long projects
- locking storage for projects, tools, materials, supplies
- large open tables accessible throughout the day (could be connected to makerspace)
- easily accessible and available tools and rooms
- spaces for discipline-specific tutoring or supplemental instruction (e.g., help with more challenging concepts in courses)
- dedicated computer lab with laser printers
- accessible, secure storage for projects, supplies, tools, equipment
- small "store" and/or supply vending machine for supplies
- lending library (books and materials)
- reliable Wi-Fi and power outlets
- rooms to support delivery of "hyflex" instruction ("optimal")

College Site Visits and Observations

To gain insights, ideas, and perspectives for teaching and learning spaces in the region, which support similar programs of study, in September 2022 the DVC ET Project Group visited one university facility (i.e., UC Berkeley) and two community colleges with ET discipline-related facilities (i.e., Cosumnes River College Architecture/Construction and their makerspaces and Sierra College). Tour participants captured their thoughts, observations, ideas, and photographs of these spaces on *Site Observation Forms*, which encapsulate the themes identified below and notably align with the themes from both the Faculty and Student Focus Groups.

Light, Bright, Open

- natural light, sense of openness
- central open, working areas; breakout rooms and offices surrounding
- student projects on display
- open areas suitable for large equipment (e.g., laser cutters), tables with tools, labs with high-end 3D printers, robotics

Accessibility

- equipment "access controlled"
- help and information readily available
- accessible tools (e.g., "Doordash" area where students could have their designs 3D printed by a student worker for low cost); makerspace as a "library of tools"
- tables and workspaces "central"- tools, offices and breakout space
- good signage (plus "feedback" options); Monitors, bulletin boards to share projects, updates, status
- store where students could purchase materials and picked up in the makerspace
- spaces well-organized; areas where tools and additional materials could be stored

Flexibility

- fully open makerspace - tools for laser cutting, 3D printing, wood shop, etc., all in one area
- flexible classrooms with breakout rooms – supports lecture and hands-on work
- instruction space adjacent to makerspace

Welcoming and Warm

- student centered, "unpretentious," comfortable
- kitchenette, food spaces for students
- informal student "hangout areas" within the large spacious facility
- ample sitting and relaxation areas for students and staff

Planning Principles

The driving purpose behind the activities for Phase 1 of the ET Building Redesign was to investigate program needs to inform the development of planning principles upon which to ground the design of ET facilities. Key lines of inquiry for this critical phase of planning, which framed the data analysis as well as the dialogues and supporting activities, included:

1) How can we best understand the current and future(optimal) program mix in the Engineering Technology(ET) Building?
2) How can we best ensure that the buildings constructed today will continue to support student-centered, equity-infused learning and teaching environments 30 to 40 years in the future?
3) Student-focused Lines of Inquiry: What do students need in this space and what do the faculty and staff who serve these students need? What activities (i.e., learning and support) take place in this space? What are the current limitations? What will be the future space needs?

Consequently, the planning principles delineated here (i.e., concise, general criterion of important matters to be considered in space planning and design decisions) are informed by key themes from the environmental scan, focus groups, dialogues, and site visits, which collectively serve to address the three fundamental Phase 1 questions above and which were endorsed by the ET Department at the final Phase 1 Planning Meeting on September 28, 2022.

DVC ET Building Remodel Planning Principles

Equity:

- Warm, welcoming, attractive spaces (indoor/outdoor) that foster a sense of belonging and social connection
- Spaces that reflect and help foster understanding of social justice, ecology, environmental justice, and sustainability
- Spaces that reflect consideration for how diverse student populations (e.g., women, people of color) experience space (e.g., safety, lighting, egress)
- Universal design for equitable access

Centralized, Student-Centered Support and Engagement:

- Need for counseling/student services nearby, integrated, or co-located
- Adjacency to support tutoring & other instructional support activities(e.g., Math "outpost")
- Centralized local library

- Healthy food availability, "kitchenette," cafe (enhance belonging, places to meet, socialize, rest)
- Lending library and/or "store" for supplies
- Additional computer space – "open lab"

Collaboration:

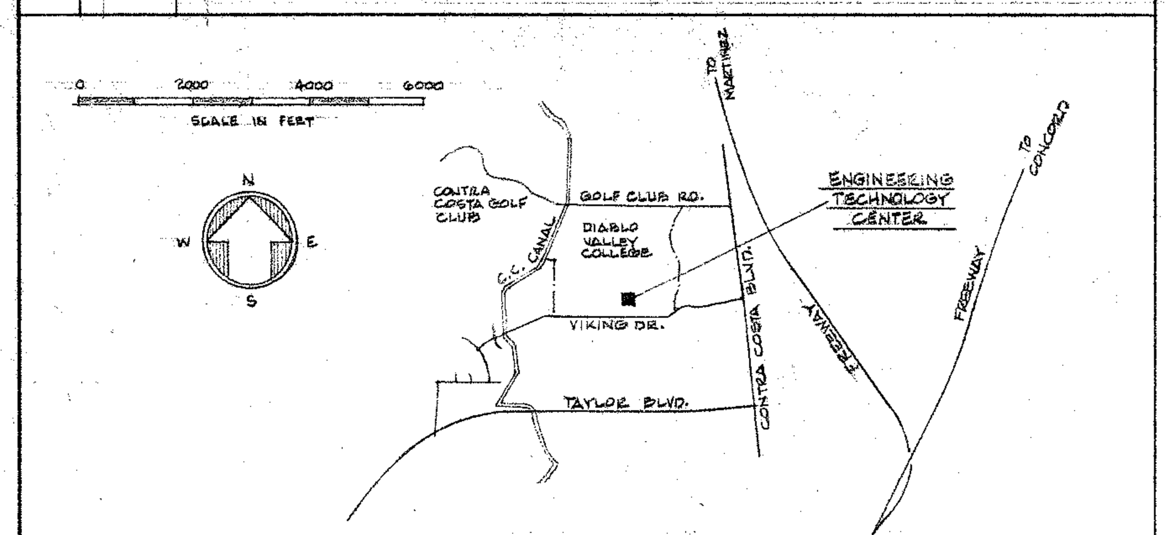
- students and faculty
- cross-disciplinary
- shared makerspace student projects and collaboration; a "destination"

Adaptability, Flexibility and Visibility:

- Some programs need very specific spaces (e.g., construction)
- Shared spaces – efficient, flexible, optimized use of space to enhance collaboration and connection
- Space to create prototypes, drawings, and similar projects
- Accessible, secured storage for a range of different projects, tools, supplies, and equipment
- Range of office and room types/configurations ("loud," collaborative spaces, and quiet spaces)
- "Outward facing," visually accessible spaces
- Reliable, ubiquitous, flexible technology (e.g., hyflex classrooms, power outlets, charging stations, instructional technology)

LIST OF DRAWINGS

	NO.	TITLE
ARCHITECTURAL	1	TITLE SHEET
	2	SITE PLAN, SITE DETAILS, SYMBOLS
	3R	DETAIL SITE PLAN
	4	ROOM FINISH SCHEDULE
	5	FLOOR PLAN I
	6	FLOOR PLAN II
	7	ROOF PLAN, DETAILS
	8	EXTERIOR ELEVATIONS
	9	EXTERIOR ELEVATIONS
	10	BUILDING SECTIONS, DETAILS
	11	EXTERIOR WALL SECTIONS
	12	DOOR SCHEDULE, WINDOW WALL & DOOR DETAILS
	13	INTERIOR ELEVATIONS
	14	REFLECTED CEILING PLAN, DETAILS
	15	INTERIOR WALL SECTIONS, DETAILS
	AB-1	AS BUILT DETAILS
STRUCTURAL	S-1	GENERAL NOTES AND TYPICAL DETAILS
	S-2	CARPENTRY NOTES AND TYPICAL DETAILS
	S-3	TRUSS JOIST NOTES AND DETAILS
	S-4	TRUSS JOIST PROFILES AND SCHEDULE
	S-5	FOUNDATION AND FLOOR PLAN I
	S-6	FOUNDATION AND FLOOR PLAN II
	S-7	ROOF FRAMING PLAN I
	S-8	ROOF FRAMING PLAN II
	S-9	STRUCTURAL SECTIONS
	S-10	STRUCTURAL SECTIONS
	S-11	STRUCTURAL SECTIONS
	S-12	STRUCTURAL SECTIONS
	S-13	FOOTING, FLOOR, AND WALL DETAILS
	S-14	ROOF AND WALL DETAILS
	S-15	ROOF AND WALL DETAILS
	S-16	STEEL FRAMING ELEVATIONS AND DETAILS
	S-17	STEEL FRAMING ELEVATIONS AND DETAILS
	S-18	STEEL FRAMING ELEVATIONS AND DETAILS
	S-19	MISCELLANEOUS FRAMING DETAILS
	R-1	AS BUILT ROOF SCREENS
	R-2	AS BUILT FRAMING - LINE 5
	R-3	AS BUILT CONTROL JOINT LAYOUT
PLUMBING	P-1	PLUMBING SITE PLAN, LEGEND, GENERAL NOTES AND FIXTURE SCHEDULE
	P-2	PLUMBING FLOOR PLAN DETAILS
	P-3	PLUMBING FLOOR PLAN & DETAILS & SCHEDULES
MECHANICAL	M-1	MECHANICAL DETAILS, SCHEDULES & GENERAL NOTES
	M-2	MECHANICAL FLOOR PLAN
	M-3	MECHANICAL FLOOR PLAN & DETAIL
ELECTRICAL	E-1	ELECTRICAL - SITE PLAN - NOTES & SYMBOLS
	E-2	ELECTRICAL - PARTIAL FLOOR PLAN - POWER
	E-3	ELECTRICAL - PARTIAL FLOOR PLAN - LIGHTING
	E-4	ELECTRICAL - PARTIAL FLOOR PLAN - POWER & LIGHTING
	E-5	ELECTRICAL - PANEL DIAGRAMS & DETAILS
	E-6	ELECTRICAL - FIXTURE & PANEL SCHEDULES & DETAILS



LOCATION MAP

PLEASANT HILL, CALIF.

DIABLO VALLEY COLLEGE

ENGINEERING-TECHNOLOGY CENTER

PLEASANT HILL CALIFORNIA

HEW NO. 3-9-00468-0

CCJCD NO. 234-68

APPROVED 32247 APPROVED OCT 3 1969

COMETTA AND SOOTARU 3316 MACDONALD AVENUE RICHMOND, CALIF. 232-2637

CONFER + LARSEN + CROSSEN 1600 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292

ASSOCIATED ARCHITECTURAL FIRMS

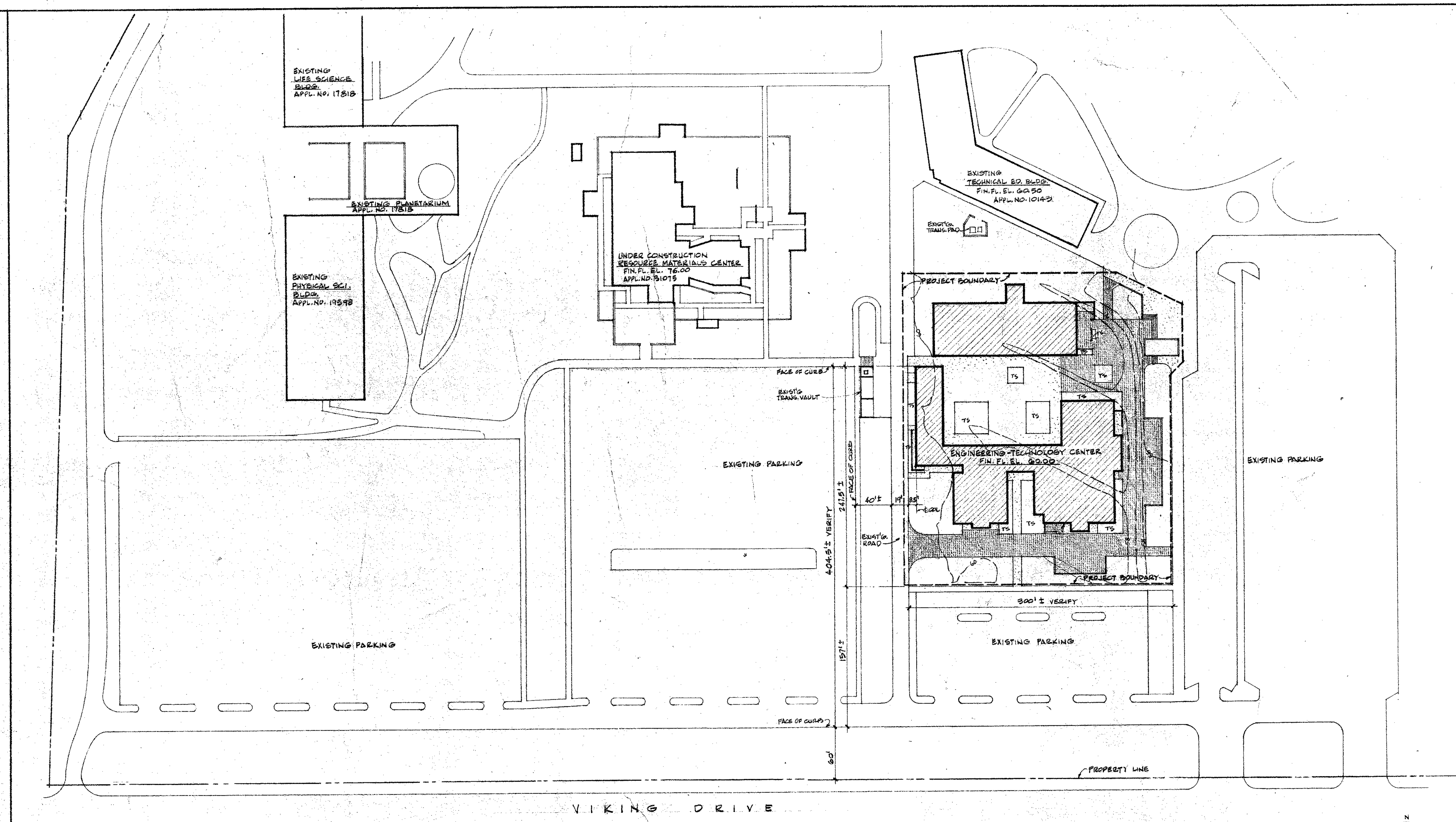
TITLE SHEET

TECHNICAL - VOCATIONAL FACILITY (ENGINEERING - TECHNOLOGY CENTER) DIABLO VALLEY COLLEGE CONTRA COSTA JUNIOR COLLEGE DISTRICT PLEASANT HILL CALIFORNIA

SHEET 1 OF 15

DATE 9-26-69

REVISED AS BUILT 11-19-71



SITE PLAN 1" = 60'

NOTES:

1. SITE INFO. TAKEN FROM A MAP ENTITLED "DIABLO VALLEY COLLEGE SITE PLAN AND UTILITY MAP" BY HAMMON, JENSEN & WALLEN, MAPPING & FORESTRY SERVICES, OAKLAND, CALIFORNIA, NOVEMBER, 1964. PHOTOGRAMMETRICALLY PREPARED USING AERIAL PHOTOS DATED SEPT. 30, 1964. HORIZONTAL AND VERTICAL CONTROLS ESTABLISHED BY LEPTIEN-CRONIN-COOPER, CIVIL ENGINEERS. VERIFY EXISTING CONDITIONS AND GRADES AT TIME OF BIDDING.
2. SEE PARTIAL SITE PLAN, SHEET 3, FOR FINISH GRADES AROUND BUILDINGS AND OTHER SITE INFO. NOT SHOWN HERE.

SYMBOLS

- COLUMN LINE
- ELEVATION NUMBER
- SHEET NUMBER
- DETAIL NUMBER
- SHEET NUMBER
- SECTION NUMBER
- SHEET NUMBER
- ROOM NUMBER
- DOOR NUMBER

- MASONRY WALL
- WOOD STUD WALL W/BRICK VENEER (2x6S U.N.O.)
- WOOD STUD WALL (2x4S U.N.O.)
- 1-HOUR RATED WOOD STUD WALL
- WOOD STUD SOUND CONTROL WALL
- 2-HOUR RATED WOOD STUD WALL
- METAL PARTITION
- STORM DRAINAGE
- EXISTING CONTOUR
- FINISH ELEVATION
- CONCRETE PAVING
- ASPHALTIC CONCRETE PAVING

ARCHITECT
STRUCT. ENGINEER
CONSULT. ENGINEER

APPROVED STATE FIRE MARSHAL STATE OF CALIFORNIA

STATE OF CALIFORNIA DEPARTMENT OF GENERAL SERVICES OFFICE OF ARCHITECTURE AND CONSTRUCTION
32217 APPROVED OCT 3 - 1969

COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
R. A. COMETTA, PARTNER · F. L. R. CONFER, ARCHITECT · G. C. LARSEN, ARCHITECT · J. E. CROSSEN, ARCHITECT
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

SITE PLAN, SITE DETAILS, SYMBOLS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

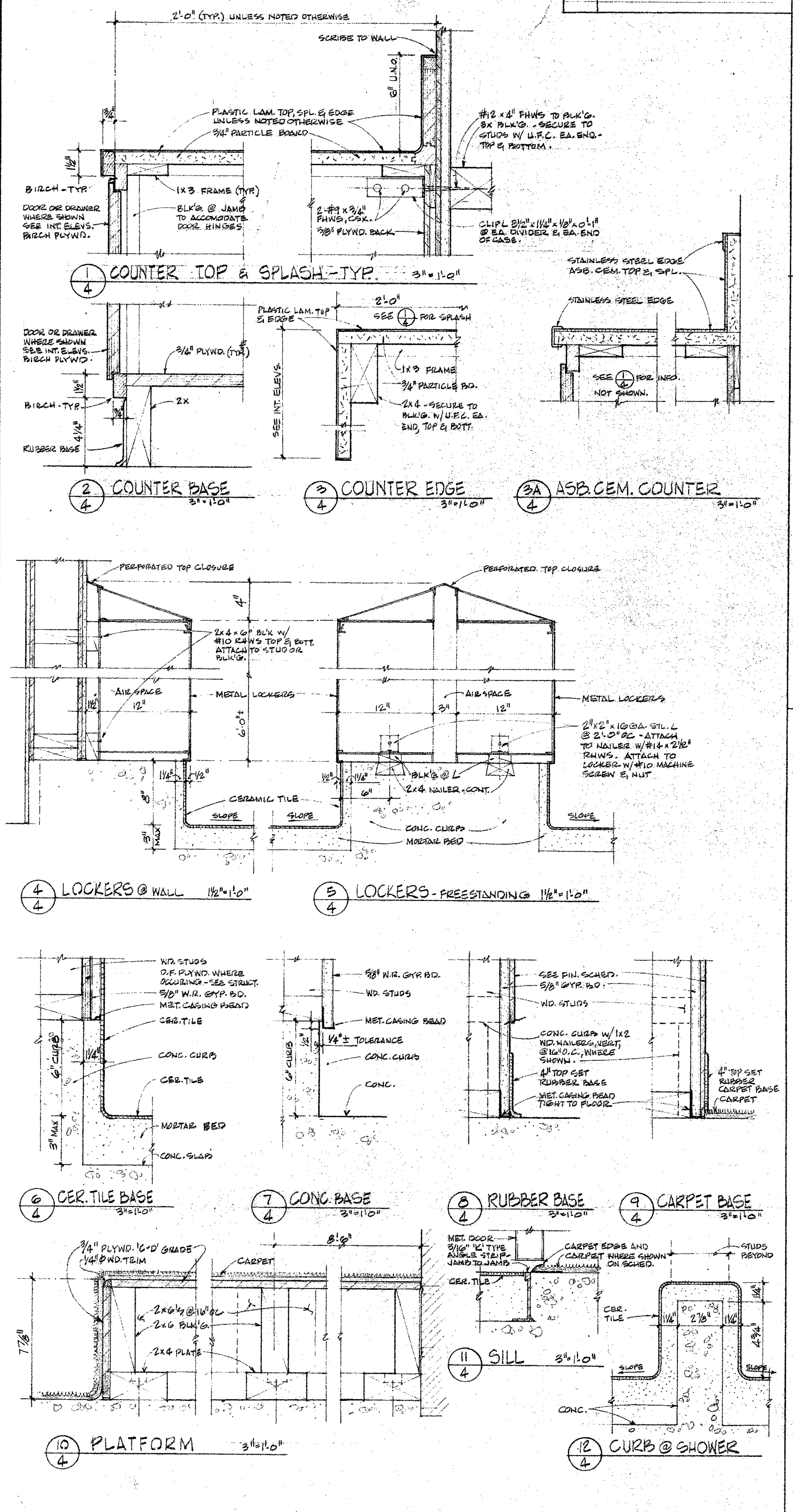
SHEET 2 OF 15
DATE 9-26-69

1/3 GATE ELEVATION 1/2"=1'-0"
2/3 GATE JAMB 3"=1'-0"
3/3 GATE SECTION 3/4"=1'-0"
4/3 GUARD POST 1/4"=1'-0"
5/3 CONC. CURB 1"=1'-0"
6/3 ASPHALT PAVING HDR. 1"=1'-0"
7/3 CONC. WALK 1"=1'-0"
8/3 EXP. JNT. @ CONC. WALK 1"=1'-0"
9/3 BRICK & CONC. PAVING @ COURT
10/3 PARTIAL PLAN - COURT PAVING 1/2"=1'-0"
11/3 TYP. STAIR & RAILING 1/2"=1'-0"
12/3 CURB @ GRAVEL & SAND STG. 1/2"=1'-0"
13/3 OUTDOOR SINK 1"=1'-0"
COURT
ENGINEERING - TECHNOLOGY CENTER
FIN. FL. ELEV. 60.30
PROJECT BOUNDARY
STORAGE YARD
NOTE: FINISH GRADE TO MEET EXISTING CONDITIONS - TYPICAL AT SITE PERIMETERS.
SITE PLAN 1/16"=1'-0"
COMETTA AND SOOTARU
CONFER + LARSEN + CROSSEN
ASSOCIATED ARCHITECTURAL FIRMS
DETAIL SITE PLAN
TECHNICAL - VOCATIONAL FACILITY (ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL, CALIFORNIA
SHEET 3R OF 15
DATE 9-26-69
Revised 11-11-69
Revised As Built 11-19-71

FINISH NOTES

1. PROVIDE GYP.BD. UNDER ALL WALL FINISHES (2 LAYERS AT 2-HOUR AND SOUND CONTROL WALLS). SEE FLOOR PLANS FOR LOCATIONS.
2. ALL CASEWORK IN CONTRACT TO BE STAINED. SEE SPECIFICATIONS
3. PAINT ALL EXPOSED STEEL COLUMNS. (SEMI-GLOSS)
4. SEE INTERIOR ELEVATIONS AND PLANS FOR LOCATION OF VARIOUS MATERIALS.
5. VINYL WALL PANELS OCCUR IN METAL PARTITIONS.

FINISH LEGEND	SEE SPECS.
A	FLAT PAINT
B	SEMI-GLOSS STIPPLE PAINT
C	SEMI-GLOSS PAINT
D	FACTORY FINISH
E	STAIN
F	SANDBLAST



ROOM FINISH SCHEDULE (SEE FINISH NOTES)

	ROOM NAME	ROOM NO.	FLOOR	FIN.	BASE	FIN.	WAINSCOT	FIN.	WALLS (SEE FINISH NOTE 1 & 4)	FIN.	CEILING HEIGHT	CEILING	FIN.	TRIM	FIN.	REMARKS
FLOOR PLAN I	LOBBY	100	CARPET	D	RUBBER/BRICK MET.	D			BRICK / D.F. PLYWD. *	D/E	10'-4"±	LUMINOUS (MET.)/GYP. BD.	D/A	MET.	C	* CLASS II FLAMESPREAD FINISH.
	SECRETARY	100A	CARPET	D	RUBBER	D			D.F. PLYWD./BRICK	E/D	10'-4"±	LUMINOUS (MET.)/GYP. BD.	D/A	MET.	C	PAINT ROLL-UP DOOR - 'A' FIN.
	DIRECTOR	101	CARPET	D	RUBBER	D			D.F. PLYWD.	E	10'-4"±	LUMINOUS / WD.	D/A	MET.	C	
	MIMEO	102	CARPET	D	RUBBER	D			D.F. PLYWD.	E	8'-0"	LUMINOUS / WD.	D/A	MET.	C	
	EVENING INSTRUCTORS OFFICE	103	CARPET	D	RUBBER	D			D.F. PLYWD.	E	8'-0"	LUMINOUS / WD.	D/A	MET.	C	
	CONFERENCE	104	CARPET	D	MET. / RUBBER BRICK	D			BRICK / D.F. PLYWD.	D/E	10'-4"±	LUMINOUS / WD.	D/A	MET. / WD.	C/A	
	OFFICE	104A	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	104B	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	104C	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	ELEC. SYSTEMS LAB	105	CARPET *	D	RUBBER/MET. BRICK	D			BRICK/D.F. PLYWD. / VINYL WALL PANEL	D/E/D	10'-4"±	LUMINOUS / WD.	D/A	MET./WD.	C/A	* CARPET ON TRENCH DUCT COVER, ALSO.
	TOOL ROOM	106	CONC. W/COLOR		RUBBER	D			D.F. PLYWD.	E	10'-0"	GYP. BD.	A	MET.	C	
	REPAIR ROOM	106A	CONC. W/COLOR		RUBBER	D			D.F. PLYWD.	E	10'-0"	GYP. BD.	A	MET.	C	
	ELEC. CIRCUIT LAB	107	CARPET *	D	MET. / RUBBER BRICK	D			BRICK/D.F. PLYWD. / VINYL WALL PANEL	D/E/D	10'-4"±	LUMINOUS / WD.	D/A	MET. / WD.	C/A	* CARPET ON TRENCH DUCT COVER, ALSO
	SEMINAR CLASSROOM	108	CARPET	D	RUBBER BRICK	D			BRICK / D.F. PLYWD.	D/E	10'-4"±	LUMINOUS / WD.	D/A	MET. / WD.	C/E	
	PREP. RM.	109	CONC.		RUBBER/BRICK	D			BRICK / D.F. PLYWD.	D/E	8'-0"	GYP. BD.	A	MET.	C	
	MECHANICAL	110	CONC.		CONC./BRICK	D			BRICK / W.R. GYP. BD.	D/B	—	EXPOSED STRUCT.	A/E	MET.	C	
	PREP. RM.	111	CONC.		RUBBER/BRICK	D			BRICK / D.F. PLYWD.	D/E	8'-0"	GYP. BD.	A	MET.	C	
	CLASSROOM	112	CARPET * CONC. W/COLOR	D	WOOD / BRICK	E/D			BRICK / ACOUSTIC CEDAR BATTS	D/E/E	10'-0"± TO 14'-8"±	LUMINOUS / WD.	D/A	MET. / WD.	C/E	* SEE PLAN FOR EXTENT OF CARPET.
	PROJECTOR	113	CONC.		RUBBER	D			D.F. PLYWD.	E	8'-0"	GYP. BD.	A	MET.	C	
	LINK TRAINER CLASSROOM	114	CARPET *	D	WOOD / CONC. BRICK	E/D			BRICK / D.F. PLYWD.	D/E	10'-4"± TO 14'-4"±	LUMINOUS / WD.	D/A	MET. / WD.	C/E,A	* CARPET ON TRENCH DUCT COVER, ALSO.
	OFFICE	114A	CARPET	D	BRICK / MET.	D			BRICK / VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	114B	CARPET	D	RUBBER / MET. BRICK	D			BRICK / VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
FLOOR PLAN II	SURVEY EQUIP.	115	CONC.		BRICK/MET.	D			BRICK / D.F. PLYWD.	D/E	—	EXPOSED STRUCT.	A/E	MET.	C	
	DRAFTING ROOM	116	CARPET	D	RUBBER/MET. BRICK	D			BRICK/D.F. PLYWD. / VINYL WALL PANEL	D/E/D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	DRAFTING ROOM	116A 116B	CARPET	D	BRICK / MET.	D			BRICK / ASB. CEM. PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	DRAFTING ROOM	117	CARPET	D	RUBBER/BRICK	D			BRICK / D.F. PLYWD.	D/E	10'-4"±	LUMINOUS / WD.	D/A	MET.	C	
	REPRODUCTION ROOM	118	CARPET	D	RUBBER	D			D.F. PLYWD.	E	10'-4"±	LUMINOUS / WD.	D/A	MET.	C	
	CONFERENCE	119	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	119A	CARPET	D	RUBBER / MET.	D			VINYL WALL PANEL / BRICK	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	119B	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	119C	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	119D	CARPET	D	RUBBER/MET.	D			VINYL WALL PANEL / D.F. PLYWD.	D/E	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	119E	CARPET	D	RUBBER / MET.	D			VINYL WALL PANEL / D.F. PLYWD.	D/E	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	119F	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	119G	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	119H	CARPET	D	RUBBER/MET.	D			VINYL WALL PANEL / BRICK	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	MATERIAL TESTING & CONST. LAB	120	CONC. W/COLOR		BRICK / MET. RUBBER	D	ASB. CEM. *	D	BRICK/D.F. PLYWD. / VINYL WALL PANEL	D/E/D	—	EXPOSED STRUCT.	A/E	MET. / WD.	C/A	* SEE PLAN & ELEV. FOR LOCATION
	OPTICAL ROOM	120A	CONC. W/COLOR		RUBBER	D			D.F. PLYWD.	E	9'-9"	GYP. BD.	A	MET.	C	
	POLISHING ROOM	120B	CONC. W/COLOR		RUBBER	D			BRICK / D.F. PLYWD.	D/E	9'-9"	GYP. BD.	A	MET.	C	
	STORAGE	121	CONC. W/COLOR		RUBBER / MET.	D			D.F. PLYWD.	E	—	EXPOSED STRUCT.	A,E	MET.	C	
FLOOR PLAN I	WELDING LAB	122	CONC. W/COLOR		BRICK / MET. RUBBER	D			BRICK/D.F. PLYWD. / VINYL WALL PANELS / ASB. CEM. PANEL *	D/E/D/D	7'-0" @ WELDING BOOTHS	EXPOSED STRUCT. / ASB. CEM. *	A,E/D	MET. / WD.	C/A	* @ WELDING BOOTHS
	WELDING MACHINE ROOM	122A	CONC.		BRICK/MET.	D			BRICK / INSULATION BATTS	D	—	EXPOSED STRUCT.	—	MET.	C	
	WELDING MACHINE ROOM	122B	CONC.		BRICK/MET.	D			BRICK / INSULATION BATTS	D	—	EXPOSED STRUCT.	—	MET.	C	
	STORAGE	122D	CONC. W/COLOR		RUBBER	D			D.F. PLYWD.	E	—	EXPOSED STRUCT.	A,E	MET.	C	
	MACHINE LAB	123	CONC. W/COLOR		BRICK / MET. RUBBER	D			BRICK/D.F. PLYWD./ VINYL WALL PANEL / ASB. CEM. PANEL	D/E/D/D	—	EXPOSED STRUCT.	A,E	MET. / WD.	C/A	
	FOUNDRY	123A	CONC. W/COLOR		RUBBER/MET.	D			ASB. CEM.	D	10'-0"±	GYP. BD.	B	MET.	C	
	INSTRUMENTS	123B	CONC. W/COLOR		RUBBER/MET.	D			ASB. CEM. PANEL / D.F. PLYWD.	D/E	10'-4"±	LUMINOUS	D	MET./WD.	C/A	
	GRINDING	123C	CONC. W/COLOR		RUBBER/MET.	D			ASB. CEM. PANEL / D.F. PLYWD.	D/E	10'-4"±	LUMINOUS	D	MET./WD.	C/A	
	CONFERENCE	124	CARPET	D	BRICK / MET.	D			BRICK / VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	MET. / WD.	C/A	
	OFFICE	124A	CARPET	D	RUBBER/MET.	D			VINYL WALL PANEL / BRICK	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	124B	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	124C	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	124D	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	124E	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	OFFICE	124F	CARPET	D	MET.	D			VINYL WALL PANEL	D	10'-4"±	LUMINOUS / WD.	D/A	WD.	A	
	AIR-CONDITIONING LAB	125	CONC. W/COLOR		BRICK / MET. RUBBER	D			BRICK/D.F. PLYWD. / ASB. CEM. PANEL	D/E/D	—	EXPOSED STRUCT.	A,E	MET./WD.	C/A	
	EXPERIMENTS	125A	CONC. W/COLOR		BRICK/RUBBER	D			BRICK / D.F. PLYWD.	D/E	8'-0"	ACOUSTIC BD. IN T-BAR	D	MET.	C	
	PRINTED CIRCUIT LAB	125B	CONC. W/COLOR		BRICK / RUBBER	D			BRICK / GYP. BD.	C/B	9'-9"	GYP. BD.	B	MET.	C	
	PRINTED CIRCUIT LAB	125C	CONC. W/COLOR		BRICK / RUBBER	D			BRICK / GYP. BD.	C/B	9'-9"	GYP. BD.	B	MET.	C	
	DARK ROOM	125E	CONC. W/COLOR		BRICK / RUBBER	D			BRICK / GYP. BD.	C/B	8'-0"	GYP. BD.	B	MET.	C	
	TOOL ROOM	126	CONC. W/COLOR		RUBBER	D			D.F. PLYWD.	E	—	EXPOSED STRUCT.	A,E	MET.	C	
	PAINTING	127	CONC. W/COLOR		RUBBER	D			D.F. PLYWD.	E	10'-0"	GYP. BD.	A	MET.	C	
	STORAGE	127A	CONC. W/COLOR		RUBBER				D.F. PLYWD. (1 LAYER 5/8" G.B. EA. SIDE OF WALLS TO ROOF)	E	10'-0"	GYP. BD.	A	MET.	C	
	MENS LOCKER ROOM	128	CER. TILE	D	CER. TILE	D	CER. TILE ON GYP. BD. *	D	GYP. BD.	B	9'-9"	GYP. BD.	B	MET.	C	* SEE ELEVS. FOR LOCATION
	VESTIBULE	128A	CARPET	D	RUBBER	D			D.F. PLYWD.	E	8'-0"	GYP. BD.	A	MET.	C	
	JANITOR	128B	CONC.		CONC.		CER. TILE ON W.R. GYP. BD. *	D	W.R. GYP. BD.	B	8'-0"	GYP. BD.	B	MET.	C	* SEE ELEVS. FOR LOCATION
	VESTIBULE	128C	CER. TILE	D	CER. TILE	D			CER. TILE ON W.R. GYP. BD.	D	8'-0"	GYP. BD.	B	MET.	C	
	MEN	128D	CER. TILE	D	CER. TILE	D			CER. TILE ON W.R. GYP. BD.	D	8'-0"	GYP. BD.	B	MET.	C	
	SHOWER	128E	CER. TILE	D	CER. TILE	D			CER. TILE ON W.R. GYP. BD.	D	7'-0"	CER. TILE ON W.R. GYP. BD.	D	—	—	
	LOUNGE	129	CARPET	D	RUBBER	D			D.F. PLYWD.	E	8'-0"	GYP. BD.	A	MET.	C	
	VESTIBULE	129A	CARPET	D	RUBBER	D			D.F. PLYWD.	E	8'-0"	GYP. BD.	A	MET.	C	
	WOMEN	129B	CER. TILE	D	CER. TILE	D			CER. TILE ON W.R. GYP. BD.	D	8'-0"	GYP. BD.	A	—	C	
	HALL	130	CARPET	D	BRICK/MET.	D			BRICK / D.F. PLYWD. *	D/E	10'-4"±	LUMINOUS (MET.)/GYP. BD.	D/A	MET./WD.	C/A	* CLASS II FLAMESPREAD FINISH.

ARCHITECT
STRUCT. ENGINEER
CONSULT. ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF GENERAL SERVICES OFFICE OF ARCHITECTURE AND CONSTRUCTION
32247 APPROVED OCT 3 - 1969

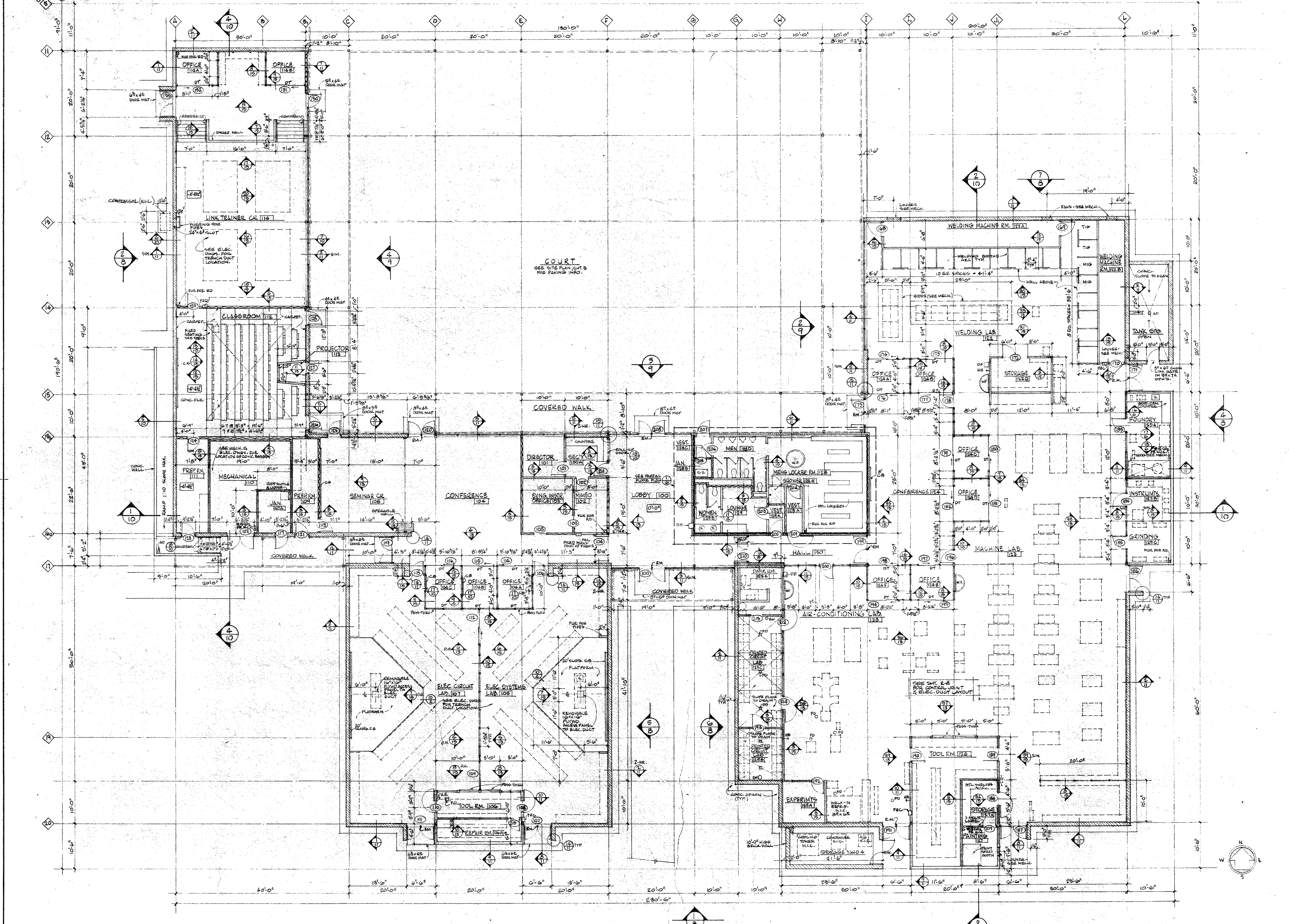
APPROVED STATE FIRE MARSHAL STATE OF CALIFORNIA

COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
E. A. COMETTA, PARTNER · F. L. R. CONFER, ARCHITECT · O. C. LARSEN, ARCHITECT · J. E. CROSSEN, ARCHITECT
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

ROOM FINISH SCHEDULE
TECHNICAL - VOCATIONAL FACILITY (ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL, CALIFORNIA

SHEET 4 OF 15
DATE 9-26-69

FOR CONTINUATION OF PLAN SEE SHT. 6



FLOOR PLAN I 1/8" = 1'-0"

NOTE: ALL EQUIPMENT & FURNITURE SHOWN DOTTED IS NOT IN THE CONTRACT (N.I.C.)

FIRE EXTINGUISHERS SHALL BE PROVIDED AS PER SECTION 8.15, TITLE 19.

ARCHITECT

STRUCT. ENGINEER

CONSULT. ENGINEER

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SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS F. W. CONFER, PARTNER

FLOOR PLAN I
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 5 OF 15

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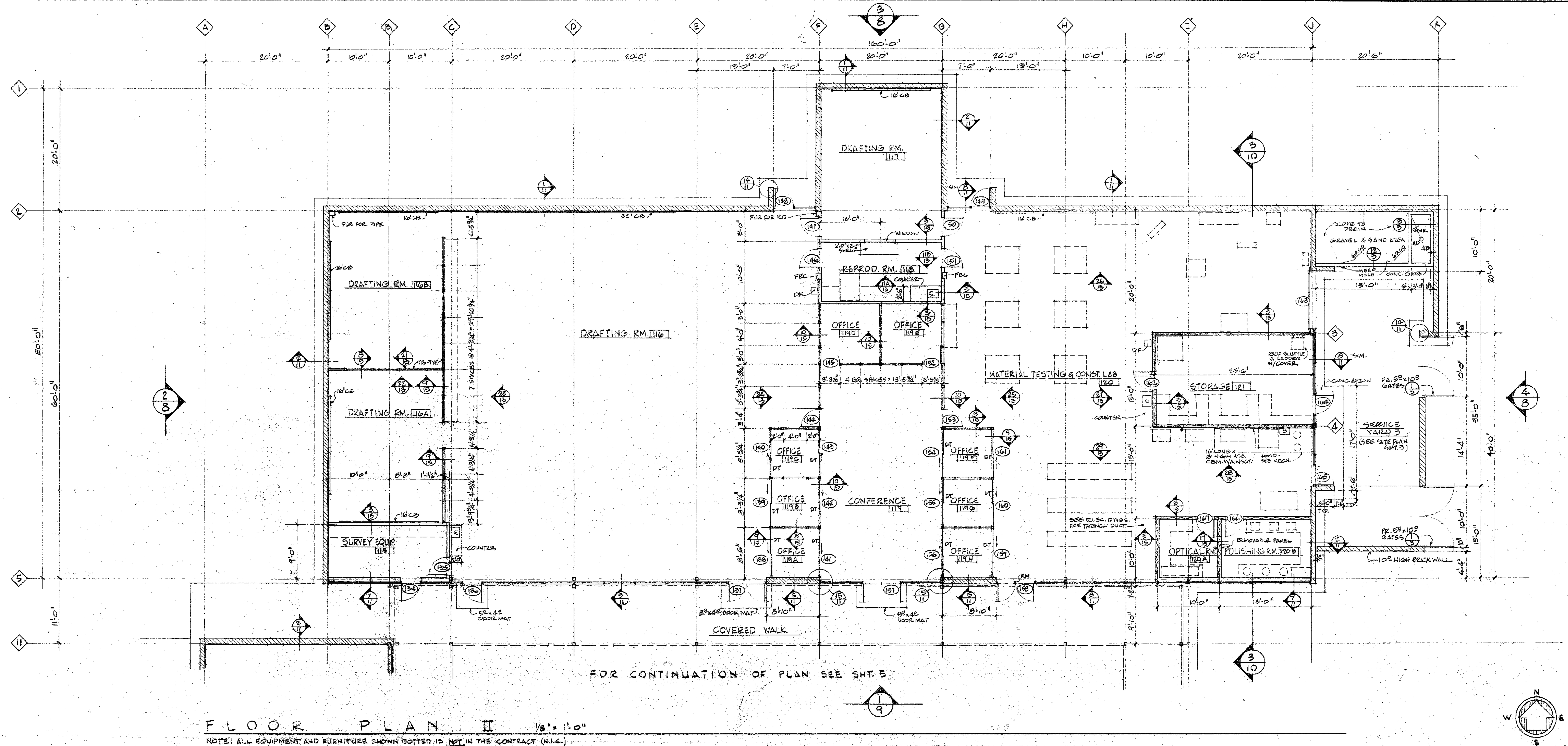

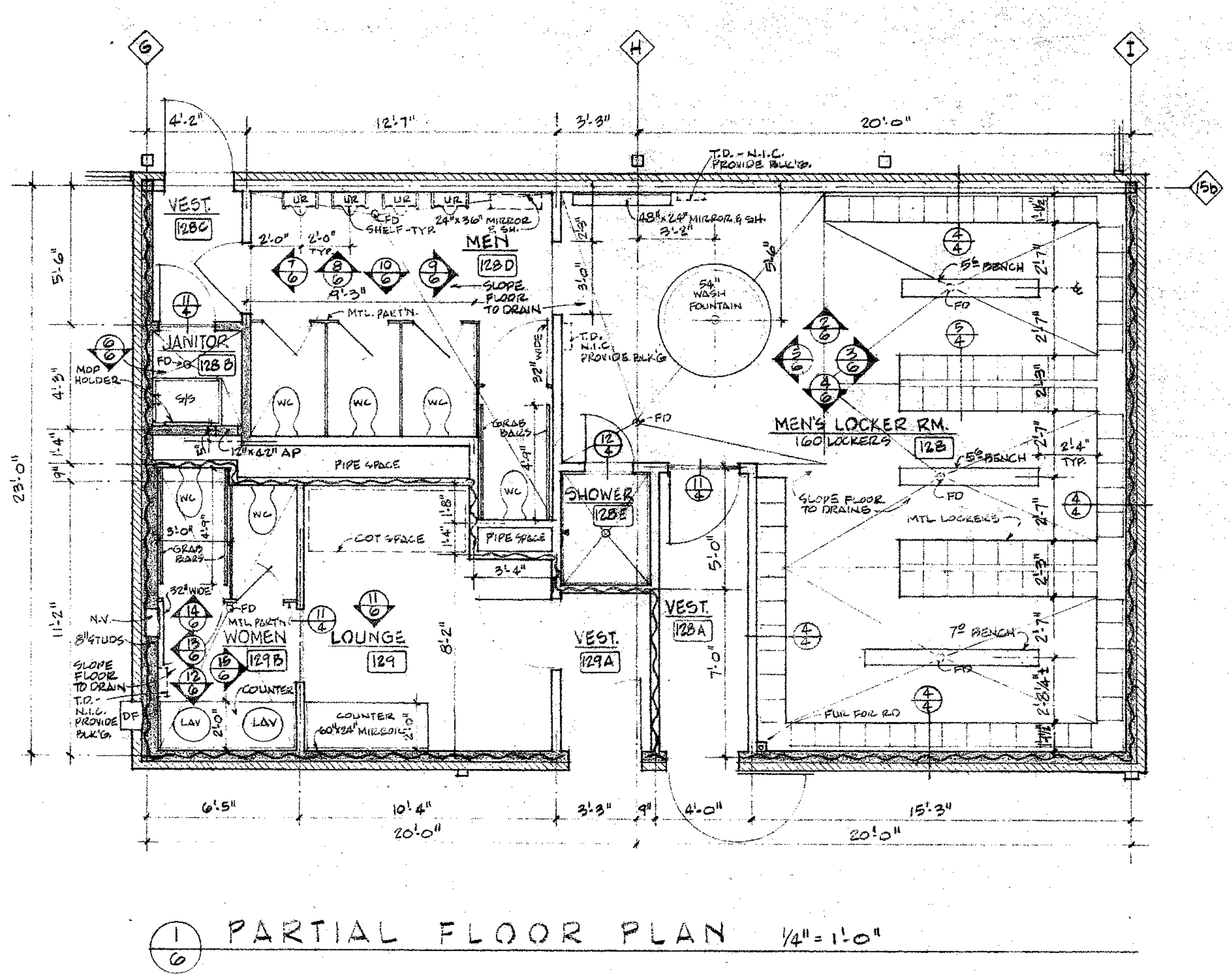

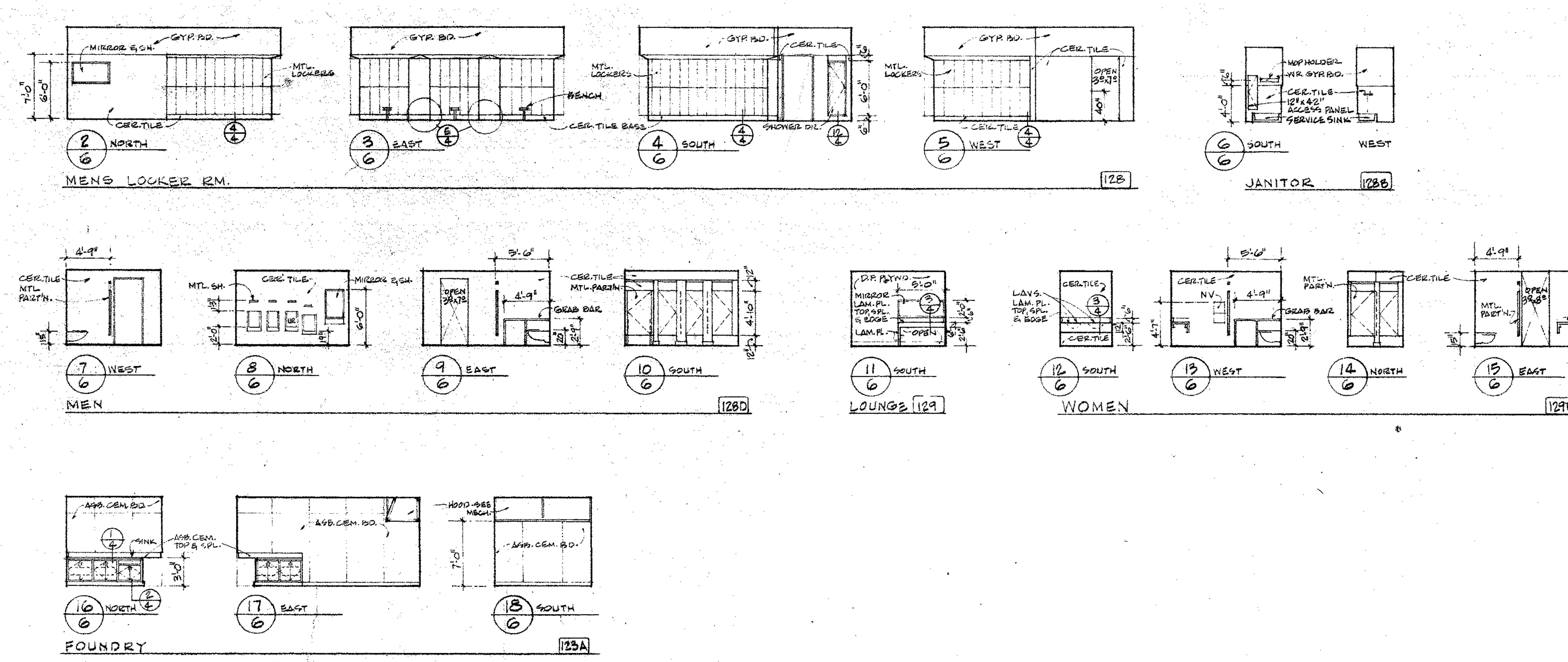

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A. SOOTARU, ARCHITECT · P. W. CONFER, PARTNER

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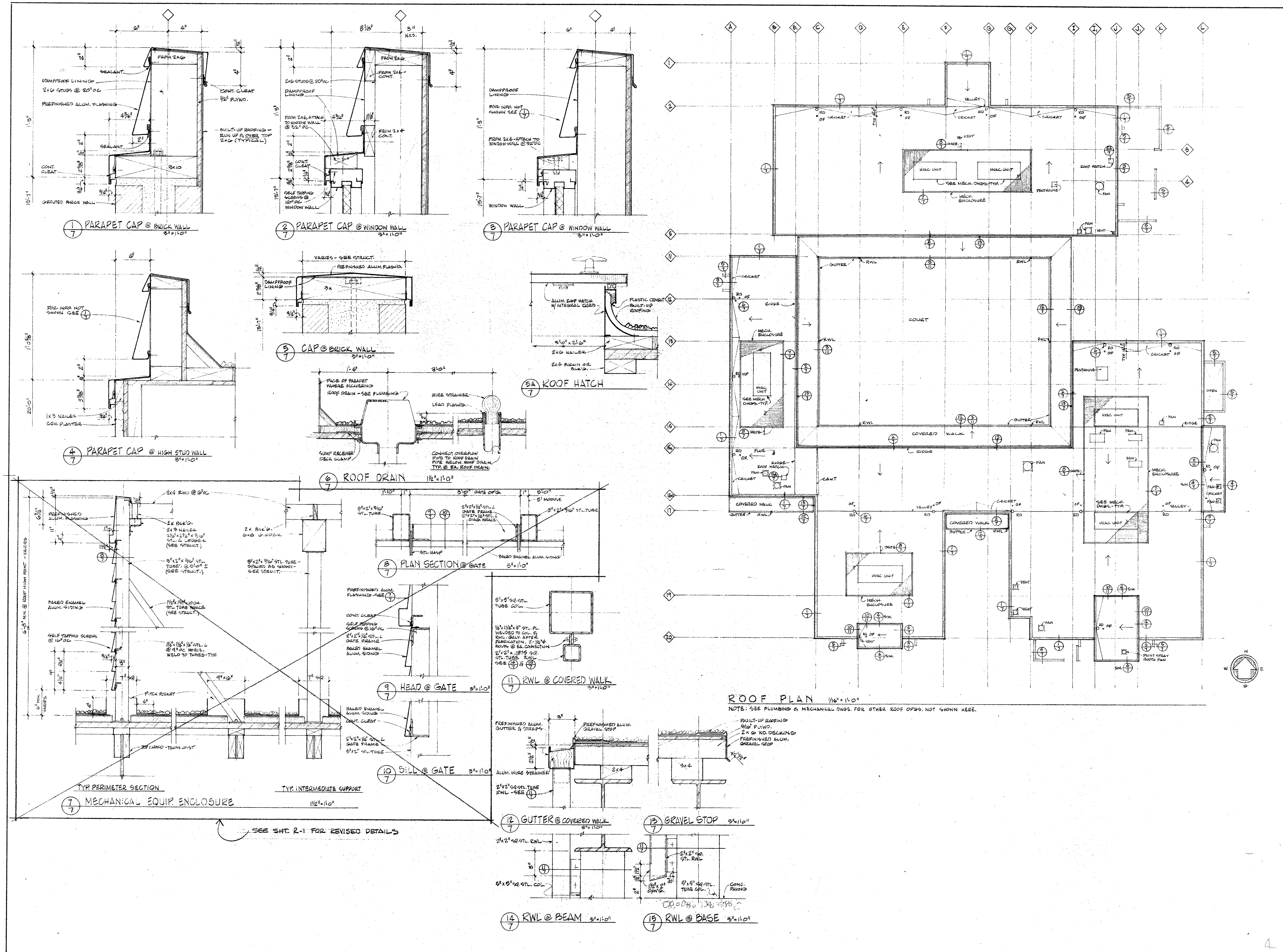
ASSOCIATED ARCHITECTURAL FIRMS

FLOOR PLAN II, PARTIAL FLOOR PLAN

TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 6 OF 15

DATE 9-26-69



ARCHITECT
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CONSULT. ENGINEER

32247

COMETTA AND SOOTARU
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E. A. COMETTA, PARTNER · F. L. R. CONFER, ARCHITECT · G. C. LARSEN, ARCHITECT · J. E. CROSSEN, ARCHITECT
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

ROOF PLAN, DETAILS

TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET
7
OF 15
DATE 9-26-69

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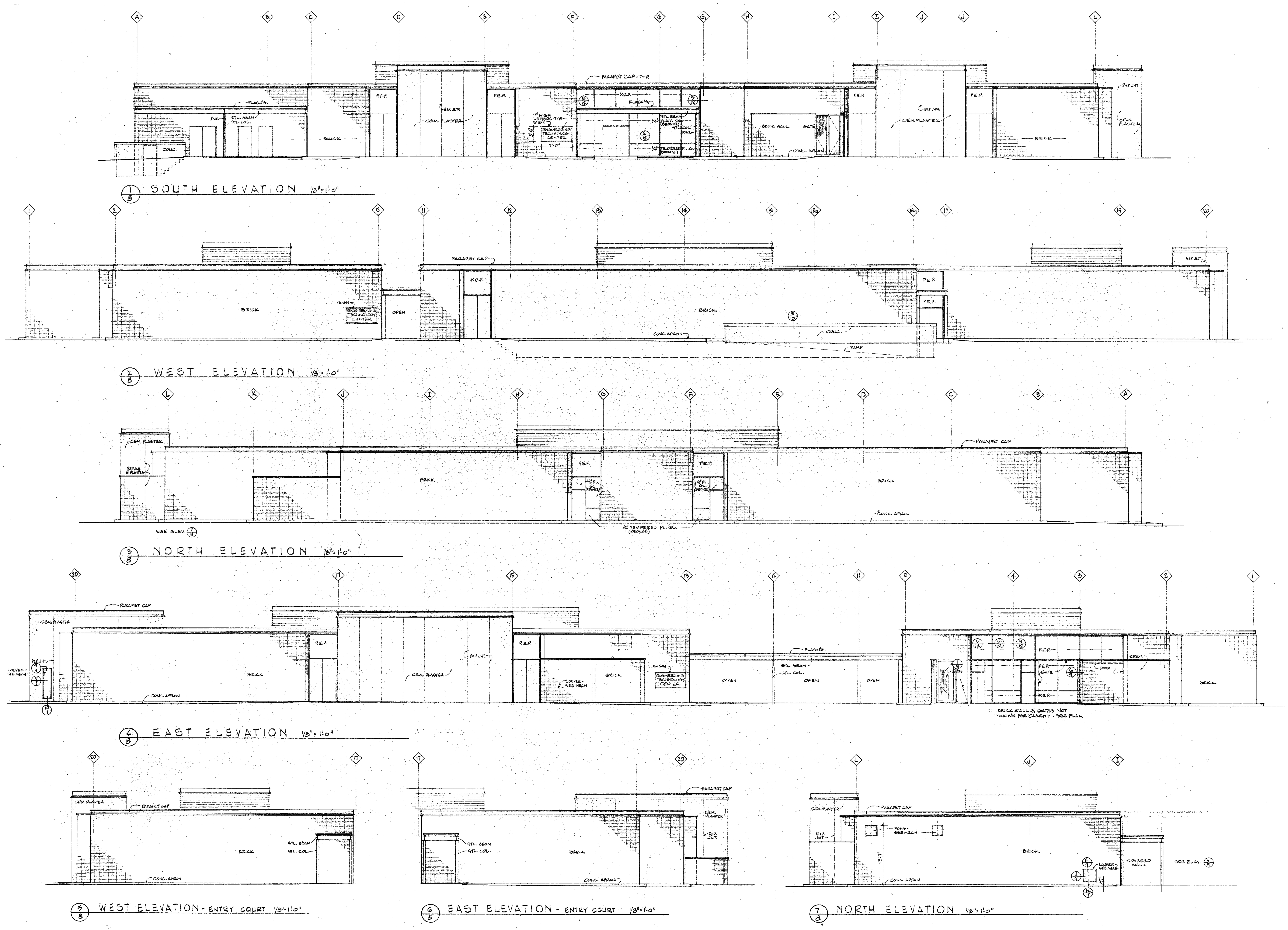

ARCHITECT

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CONSULT. ENGINEER

APPROVED

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CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292

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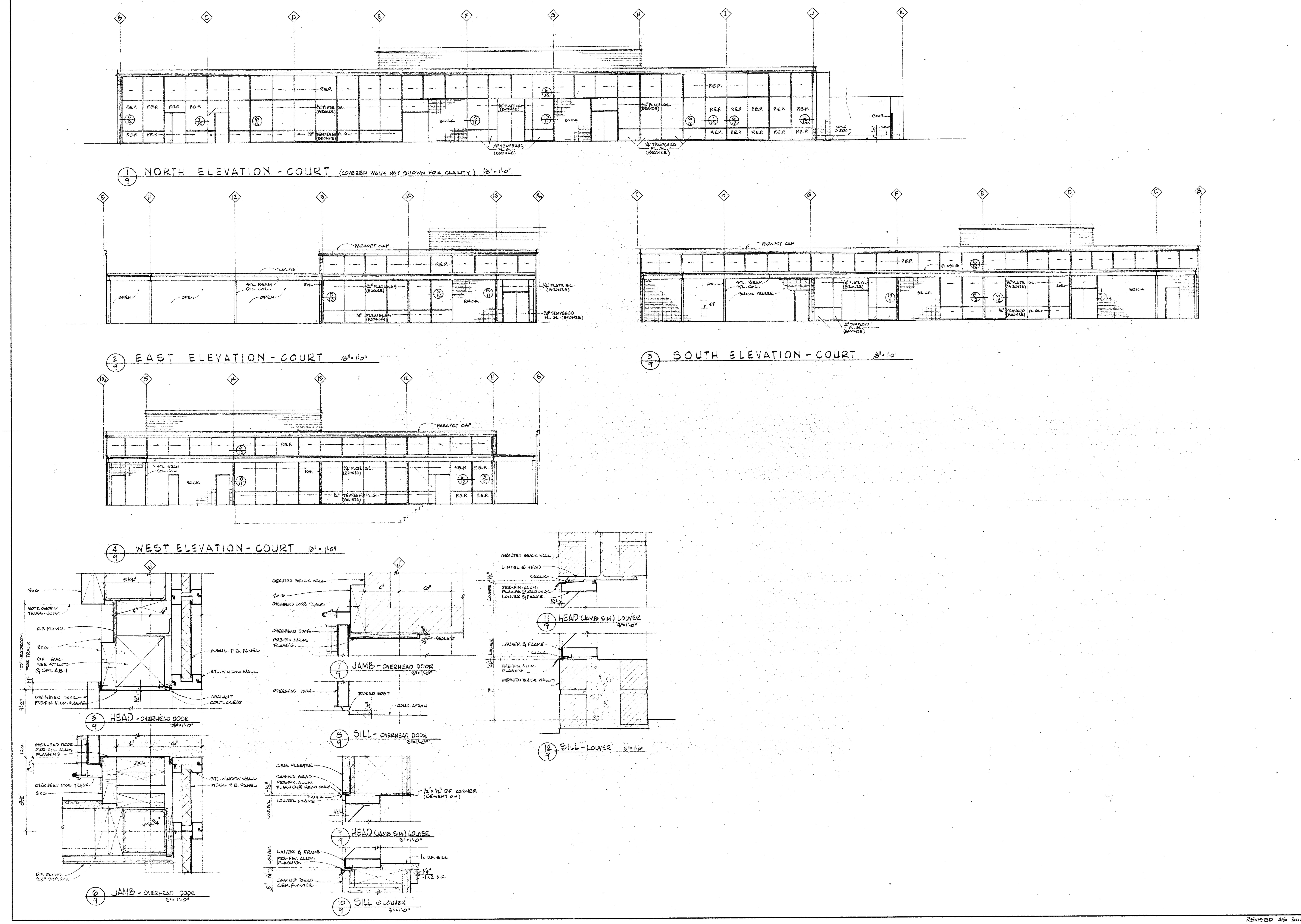
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

EXTERIOR ELEVATIONS

TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 8 OF 15

DATE 9-26-69



COMETTA AND SOOTARU
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1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
E. A. COMETTA, PARTNER · F. L. R. CONFER, ARCHITECT · O. C. LARSEN, ARCHITECT · J. E. CROSSEN, ARCHITECT
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

EXTERIOR ELEVATIONS

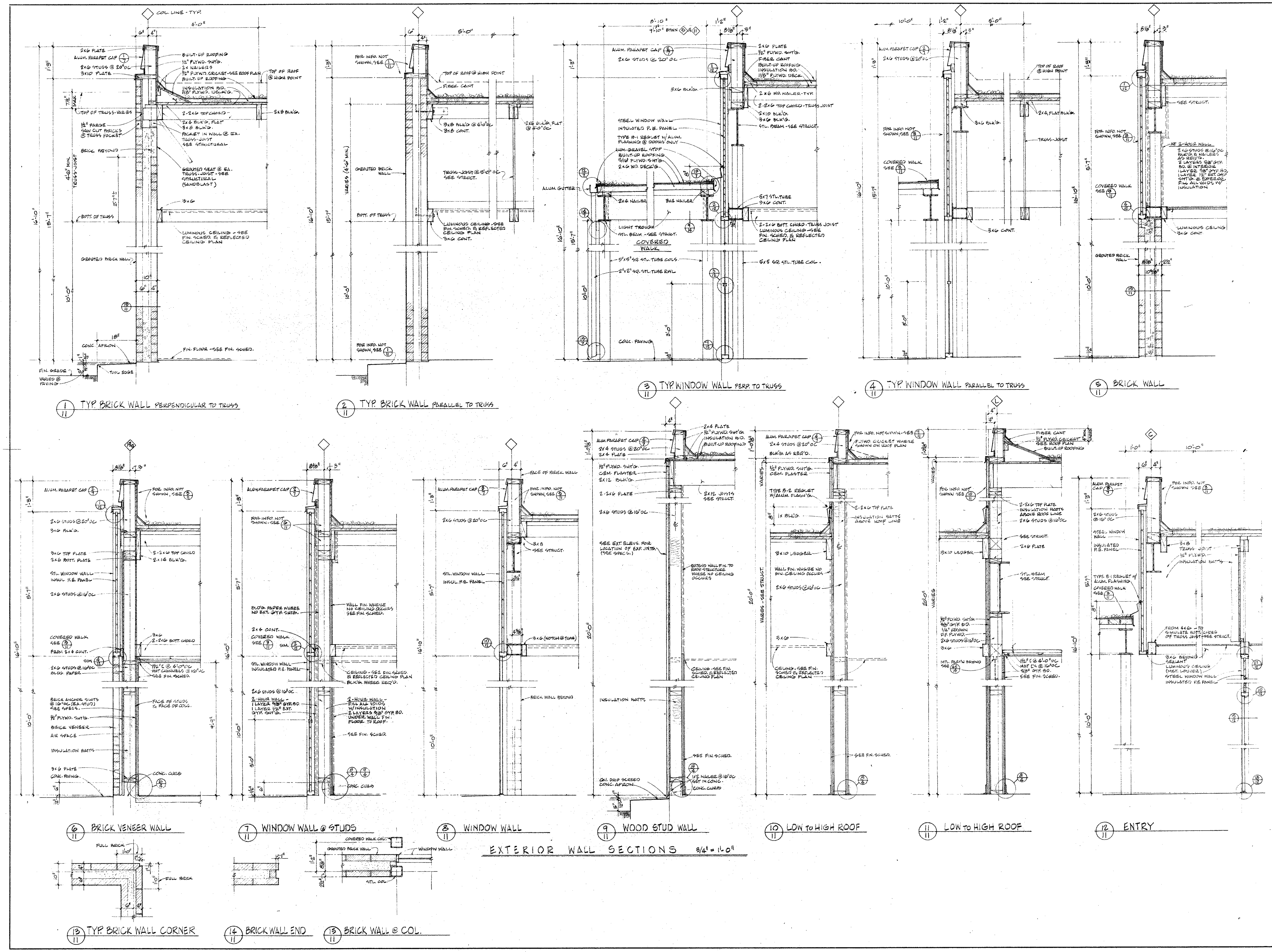
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 9 OF 15

DATE 9-26-69

REVISED AS BUILT 11-19-71

1 SECTION 1/8" = 1'-0"
PREP RM.
MECH. 110
JAN. 110A
PREP RM. 109
SEMINAR CR. 108
OPERABLE WALL
CONFERENCE 104
OFFICE 103
MIMEO 102
LOBBY 100
WOMEN 129B
LOUNGE 129
VEST. 129A
VEST. 128A
MENS LOCKER 128
CONFERENCE 124
OFFICE 124D
MACHINE LAB 123
INSTRUM'TS 123B
H-V UNIT
2 SECTION 1/8" = 1'-0"
PAINTING 127
STORAGE 127A
TOOL RM. 126
MACHINE LAB 123
OFFICE 124D
OFFICE 124C
WELDING LAB 122
HOOD
WELDING BOOTH
MACHINE RM. 122A
3 SECTION 1/8" = 1'-0"
STORAGE 121
MAT. TESTING CONST. LAB
4 SECTION 1/8" = 1'-0"
MECHANICAL 110
CLASSROOM 112
LINK TRAINER CR. 114
5 RAMP 3/4" = 1'-0"
6 WALL @ LOW FLOOR LEVEL 3/4" = 1'-0"
7 WINDOW WALL @ LOW FLOOR LEVEL 3/4" = 1'-0"
8 HEAD (JAMB, SILL SIM.) FIXED GLASS
9 HEAD - SLIDING GLASS
10 JAMB - SLIDING GLASS
11 HEAD @ COUNTER DR.
12 JAMB @ COUNTER DR.
13 SILL @ COUNTER DR.
14 CHALKBD. @ BRICK
15 CHALKBD. @ STUDS
16 SLID'G CHALK BD.
17 CHALKBD. @ MET. PART'N.
18 HANDRAIL
19 HANDRAIL
20 JAMB @ AC. BATTS
21 HEAD @ AC. BATTS
22 BASE @ AC. BATTS
23 INT. NAILER @ AC. BATTS
COMETTA AND SOOTARU
3515 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1260 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
ASSOCIATED ARCHITECTURAL FIRMS
BUILDING SECTIONS, DETAILS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA
ARCHITECT
STRUCT. ENGINEER
CONSULT. ENGINEER
SHEET 10 OF 15

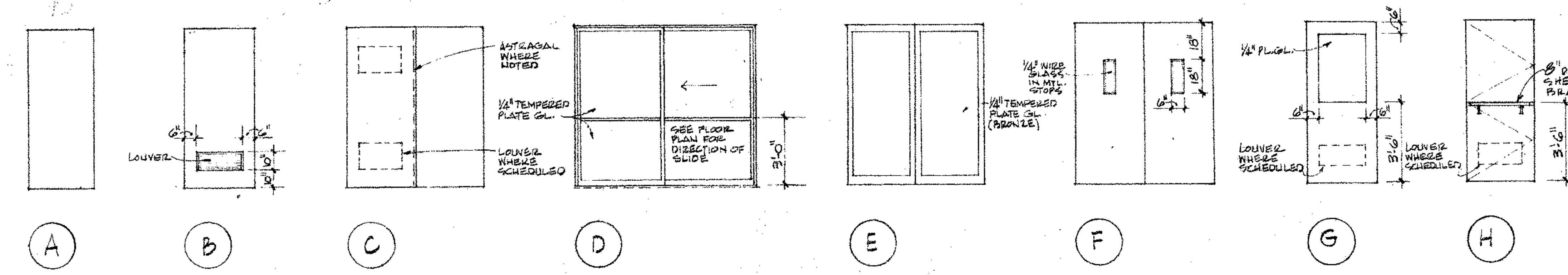


ARCHITECT
STRUCT. ENGINEER
CONSULT. ENGINEER

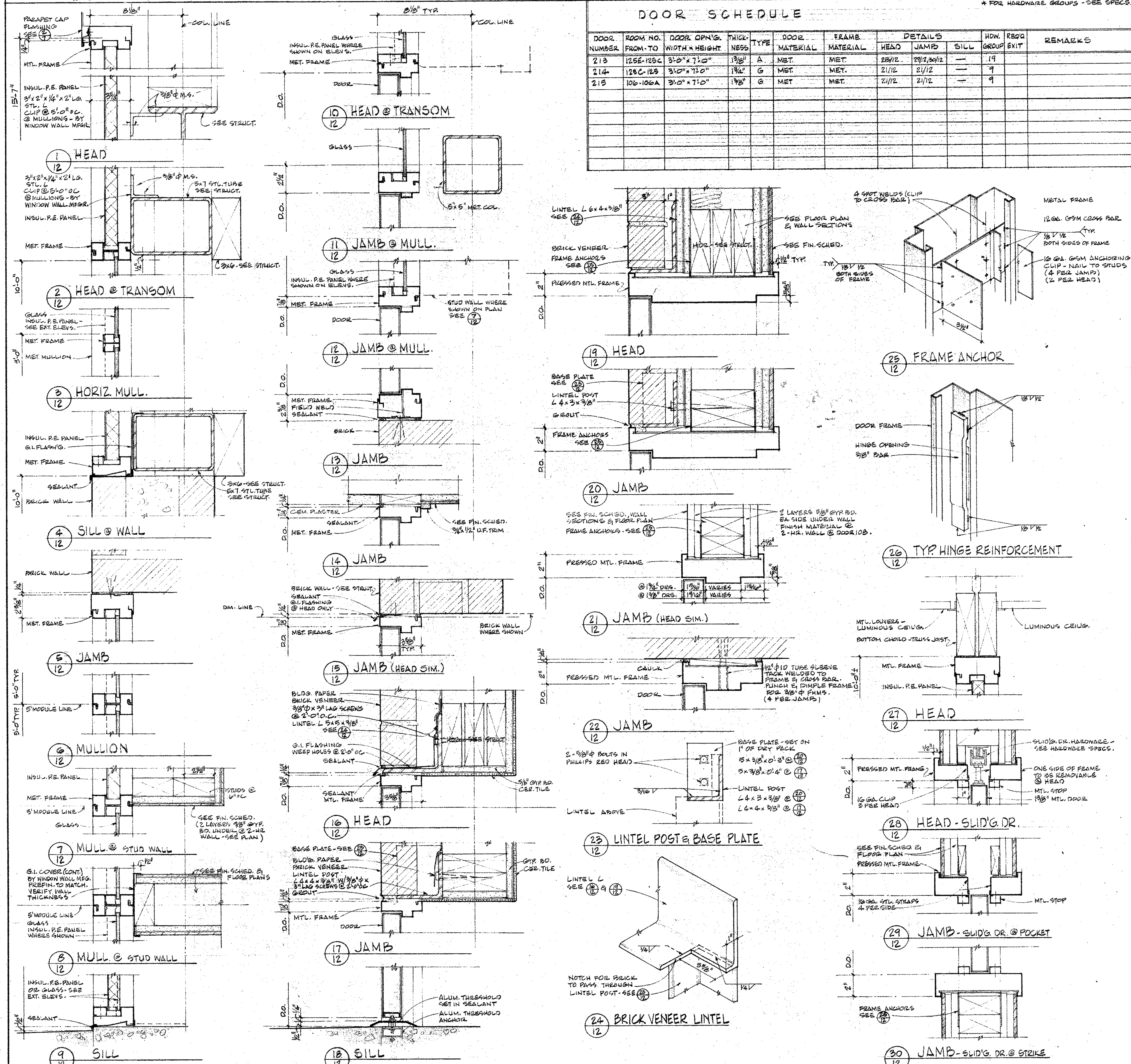
COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
E. A. COMETTA, PARTNER · F. L. R. CONFER, ARCHITECT · G. C. LARSEN, ARCHITECT · J. E. CROSSEN, ARCHITECT
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

EXTERIOR WALL SECTIONS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 11
OF 15
DATE 9-26-69



DOOR TYPES NO SCALE SEE DOOR SCHEDULE



EXTERIOR WINDOW WALL & DOOR DETAILS 3"=1'-0"

DOOR SCHEDULE

* FOR HARDWARE GROUPS - SEE SPECS.

DOOR NUMBER	ROOM NO. FROM-TO	DOOR OPN'G. WIDTH x HEIGHT	THICK-NESS	TYPE	DOOR MATERIAL	FRAME MATERIAL	DETAILS			HDW. GROUP	REQ'D EXIT	REMARKS
							HEAD	JAMB	SILL			
213	125E-125C	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	28/12	29/12, 30/12	—	19		
214	125C-125	3'-0" x 7'-0"	1 3/4"	G	MET.	MET.	21/12	21/12	—	9		
215	106-106A	3'-0" x 7'-0"	1 3/8"	G	MET.	MET.	21/12	21/12	—	9		

DOOR SCHEDULE

* FOR HARDWARE GROUPS - SEE SPECS.

FLOOR PLAN I / FLOOR PLAN II / FLOOR PLAN I

DOOR NUMBER	ROOM NO. FROM-TO	DOOR OPN'G. WIDTH x HEIGHT	THICK-NESS	TYPE	DOOR MATERIAL	FRAME MATERIAL	DETAILS			HDW. GROUP	REQ'D EXIT	REMARKS
							HEAD	JAMB	SILL			
100	100-EXT.	2-3'-0" x 7'-0"	1 3/4"	E	MET.	MET.	10/12	12/12	18/12	20	●	
101	100A-101	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
102	100A-102	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
103	102-103	3'-0" x 7'-0"	1 3/8"	A	MET.	WD.	28/12	29/12, 30/12	—	19		
104	104-100	2-3'-0" x 7'-0"	1 3/4"	C	MET.	MET.	21/12	21/12	—	5		1 1/2 HR. RATED
105	103-104	3'-0" x 7'-0"	1 3/8"	A	MET.	WD.	28/12	29/12, 30/12	—	19		
106	105-104	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	35/15	36/15, 37/15	—	11		
107	105-EXT.	2-3'-0" x 10'-0"	1 3/4"	C	MET.	MET.	10/12	14/12, 15/12	18/12	20	●	
108	106-105	2'-8" x 7'-0"	1 3/8"	G	MET.	MET.	21/12	21/12	—	9		26"x10" LOUVER
109	105-107	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	31/15, 26/15	24/15	17		SLIDING
110	106-107	2'-8" x 7'-0"	1 3/8"	G	MET.	MET.	21/12	21/12	—	9		26"x10" LOUVER
111	107-EXT.	2-3'-0" x 10'-0"	1 3/4"	C	MET.	MET.	10/12	14/12, 15/12	18/12	20	●	
112	105-107	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 27/15	24/15	17		SLIDING
113	109-108	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
114	104-104A	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 25/15	24/15	17		
115	104-104B	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15,	24/15	17		SLIDING
116	104-104C	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 25/15	24/15	17		
117	110A-EXT.	3'-0" x 6'-10"	1 3/4"	B	MET.	MET.	15/12	15/12	18/12	6		26"x10" LOUVER
118	107-104	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	35/15	36/15, 37/15	—	11		
119	104-EXT.	2-3'-0" x 7'-0"	1 3/4"	E	MET.	MET.	10/12	15/12	18/12	1		ASTRAGAL
120	104-EXT.	2-3'-0" x 7'-0"	1 3/4"	E	MET.	MET.	10/12	15/12, 11/12	18/12	20	●	
121	EXT.-109	3'-0" x 6'-10"	1 3/4"	A	MET.	MET.	15/12	15/12 SIM.	18/12	10		
122	110-EXT.	2-3'-0" x 6'-10"	1 3/4"	C	MET.	MET.	15/12	15/12	18/12	4		ASTRAGAL/2-26"x14" FUSIBLE LINK LOUVERS - TOP & BOTT.
123	EXT.-111	3'-0" x 6'-10"	1 3/4"	A	MET.	MET.	15/12	15/12 SIM.	18/12	10		
124	112-111	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
125	108-EXT.	3'-0" x 6'-11"	1 3/4"	A	MET.	MET.	15/12	15/12	18/12	3	●	
126	112-EXT.	3'-0" x 6'-11"	1 3/4"	A	MET.	MET.	15/12	15/12	18/12	3	●	
127	113-EXT.	2'-4" x 6'-11"	1 3/4"	A	MET.	MET.	15/12	15/12	18/12	6		
128	112-EXT.	3'-0" x 6'-11"	1 3/4"	A	MET.	MET.	15/12	15/12	18/12	3	●	
129	112-114	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
130	114-EXT.	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	10/12	12/12	18/12	7		
131	114-114B	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	31/15, 26/15	24/15	17		SLIDING
132	114-114A	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	31/15, 26/15	24/15	17		SLIDING
133	114-EXT.	2-3'-0" x 10'-0"	1 3/4"	C	MET.	MET.	10/12	15/12	18/12	21		ASTRAGAL
134	115-EXT.	3'-0" x 7'-0"	1 3/4"	H	MET.	MET.	10/12	12/12	18/12	24		DUTCH DOOR W/SHELF
135	116A-115	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
136	116A-EXT.	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	10/12	12/12	18/12	3	●	
137	116-EXT.	2-3'-0" x 7'-0"	1 3/4"	E	MET.	MET.	10/12	12/12, 13/12	18/12	1		ASTRAGAL
138	116-119A	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	31/15, 26/15	24/15	17		SLIDING
139	116-119B	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15	24/15	17		SLIDING
140	116-119C	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	25/15, 26/15	24/15	17		SLIDING
141	119-119A	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 31/15	24/15	17		SLIDING
142	119-119B	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15	24/15	17		SLIDING
143	119-119C	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 25/15	24/15	17		SLIDING
144	119-116	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	35/15	30/15, 33/15	—	11		
145	119-119D	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	35/15	37/15, 33/15	—	9		
146	118-116	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	11		
147	117-116	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	11		
148	116-EXT.	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	10/12	12/12, 13/12	18/12	23	●	
149	120-EXT.	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	10/12	12/12, 13/12	18/12	23	●	
150	117-120	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	11	●	
151	118-120	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	11		
152	119-119E	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	35/15	37/15, 33/15	—	9		
153	119-120	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	35/15	30/15, 33/15	—	11		
154	119-119F	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	30/15, 26/15	24/15	17		SLIDING
155	119-119G	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15	24/15	17		SLIDING
156	119-119H	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 31/15	24/15	17		SLIDING
157	119-EXT.	2-3'-0" x 7'-0"	1 3/4"	E	MET.	MET.	10/12	12/12	18/12	1	●	ASTRAGAL
158	120-EXT.	2-3'-0" x 7'-0"	1 3/4"	E	MET.	MET.	10/12	12/12, 13/12	18/12	20	●	
159	120-119H	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 31/15	24/15	17		SLIDING
160	120-119G	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15	24/15	17		SLIDING
161	120-119F	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 25/15	24/15	17		SLIDING
162	121-120	3'-0" x 7'-0"	1 3/4"	H	MET.	MET.	21/12	21/12	—	24		DUTCH DOOR W/SHELF 26"x10" FUSIBLE LINK LOUVER
163	120-EXT.	9'-3 1/2" x 9'-2"	1 3/8"	—	ALUM./PLEXGL.	ALUM.	5/9	6/9, 7/9	8/9	18		OVERHEAD - SEE SPECS.
164	121-EXT.	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	10/12	12/12	18/12	6		
165	120-EXT.	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	10/12	12/12, 13/12	18/12	6		
166	120-120B	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
167	120-120A	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
168	122A-122	3'-4" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
169	122A-122	3'-4" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
170	122B-122	3'-4" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
171	122-EXT.	2-3'-0" x 10'-0"	1 3/4"	C	MET.	MET.	10/12	14/12, 15/12	18/12	20	●	
172	122D-122	2-3'-0" x 7'-0"	1 3/8"	C	MET.	MET.	21/12	21/12	—	12		
173	122-124B	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	25/15, 26/15	24/15	17		SLIDING
174	122-124A	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 31/15	24/15	17		SLIDING
175	124-EXT.	2-3'-0" x 7'-0"	1 3/4"	E	MET.	MET.	10/12	12/12	18/12	20	●	
176	124-124A	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 31/15	24/15	17		SLIDING
177	124-124B	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 38/15	24/15	17		SLIDING
178	122-124	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	35/15	38/15, 33/15	—	11		
179	124-124C	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15	24/15	17		SLIDING
180	123-124C	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 25/15	24/15	17		SLIDING
181	123-124D	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15, 25/15	24/15	17		SLIDING
182	124-124D	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	26/15	24/15	17		SLIDING
183	123A-123	3'-0" x 7'-0"	1 3/4"	G	MET.	MET.	21/12	21/12	—	9		
184	123B-123	3'-0" x 7'-0"	1 3/8"	G	MET.	MET.	35/15	33/15	—	9		
185	123C-123	3'-0" x 7'-0"	1 3/8"	G	MET.	MET.	35/15	33/15	—	9		
186	123-EXT.	2-3'-0" x 10'-0"	1 3/4"	C	MET.	MET.	10/12	14/12, 15/12	18/12	21		ASTRAGAL
187	123-EXT.	2-3'-0" x 10'-0"	1 3/4"	C	MET.	MET.	10/12	14/12, 15/12	18/12	21		ASTRAGAL
188	127A-123	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	21/12	21/12	—	9		1-HR. RATED
189	123-126	3'-0" x 7'-0"	1 3/8"	B	MET.	MET.	21/12	21/12	—	9		26"x10" LOUVER
190	125-126	3'-0" x 7'-0"	1 3/8"	B	MET.	MET.	21/12	21/12	—	9		26"x10" LOUVER
191	125-EXT.	2-3'-0" x 10'-0"	1 3/4"	C	MET.	MET.	10/12	14/12, 15/12	18/12	20	●	
192	125-125A	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	21/12	21/12	—	9		
193	125B-125	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	21/12	21/12	—	9		
194	125-124F	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	25/15, 26/15	24/15	17		SLIDING
195	125-124E	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	25/15, 26/15	24/15	17		SLIDING
196	123-124	3'-0" x 7'-0"	1 3/8"	A	MET.	MET.	35/15	33/15, 34/15	—	11		
197	124-124E	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	34/15, 26/15	24/15	17		SLIDING
198	124-124F	8'-0" x 7'-0"	—	D	MET.	MET.	23/15	39/15, 26/15	24/15	17		SLIDING
199	124-100	2-2'-8" x 7'-0"	1 3/4"	F	MET.	MET.	21/12	22/12, 39/15	—	20		
200	100-125	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	35/15	33/15	—	11		
201	128A-100	3'-0" x 7'-0"	1 3/4"	B	MET.	MET.	19/12	20/12	—	15		26"x10" FUSIBLE LINK LOUVER
202	100-127A	3'-0" x 7'-0"	1 3/4"	B	MET.	MET.	19/12	20/12	—	15		26"x10" FUSIBLE LINK LOUVER
203	129A-129	3'-0" x 7'-0"	1 3/8"	B	MET.	MET.	21/12	21/12	—	14		26"x10" LOUVER
204	128A-128	3'-0" x 7'-0"	1 3/8"	B	MET.	MET.	21/12	21/12	11/4	14		26"x10" LOUVER
205	128B-128C	2'-4" x 7'-0"	1 3/4"	B	MET.	MET.	21/12	21/12	11/4	9		18"x10" FUSIBLE LINK LOUVER
206	128D-128C	3'-0" x 7'-0"	1 3/8"	B	MET.	MET.	21/12	21/12	—	14		26"x10" LOUVER
207	128C-EXT.	3'-0" x 6'-11"	1 3/4"	A	MET.	MET.	16/12	17/12	18/12	13		
208	100-EXT.	2-3'-0" x 7'-0"	1 3/4"	E	MET.	MET.	10/12	12/12	18/12	20	●	
209	127-127A	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	21/12	21/12	—	9		1 HR. RATED
210	130-100	2-2'-8 3/4" x 7'-0"	1 3/4"	F	MET.	MET.	21/12	22/12	—	22	●	
211	100-100A	3'-0" x 7'-0"	1 3/4"	A	MET.	MET.	21/12	21/12	—	11		1 1/2 HR. RATED
212	125C-125	3'-0" x 7'-0"	1 3/4"	G	MET.	MET.	21/12	21/12	—	9		

REVISED AS BUILT 11-19-71

ARCHITECT

STRUCT. ENGINEER

CONSULT. ENGINEER

STATE OF CALIFORNIA — DEPARTMENT OF GENERAL SERVICES OFFICE OF ARCHITECTURE AND CONSTRUCTION

32247 APPROVED OCT 3 - 1969

APPROVED STATE FIRE MARSHAL STATE OF CALIFORNIA DATE BY

COMETTA AND SOOTARU
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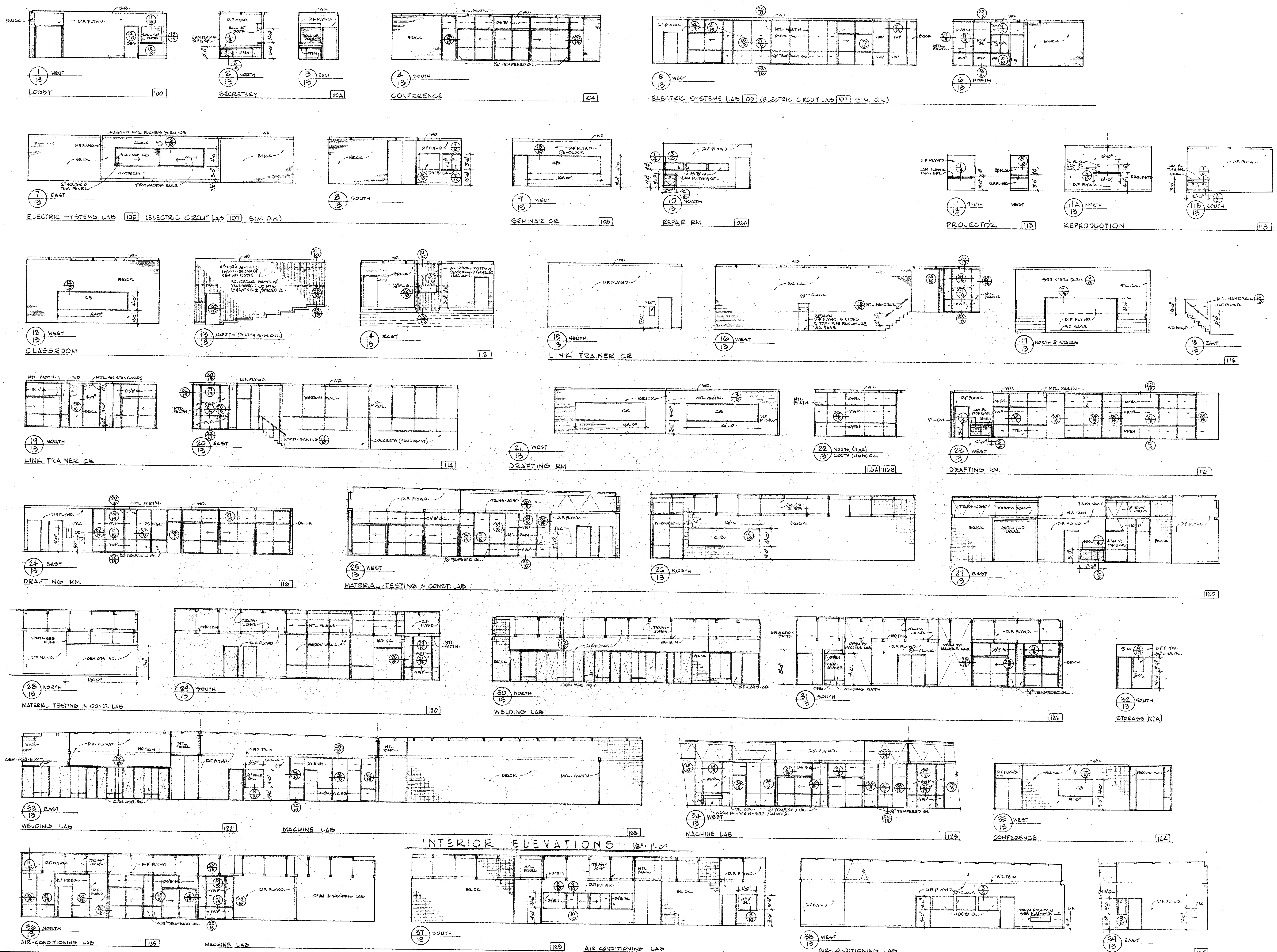
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

DOOR SCHEDULE, WINDOW WALL & DOOR DETAILS

TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 12 OF 15

DATE 9-26-69



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INTERIOR ELEVATIONS

TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 13 OF 15
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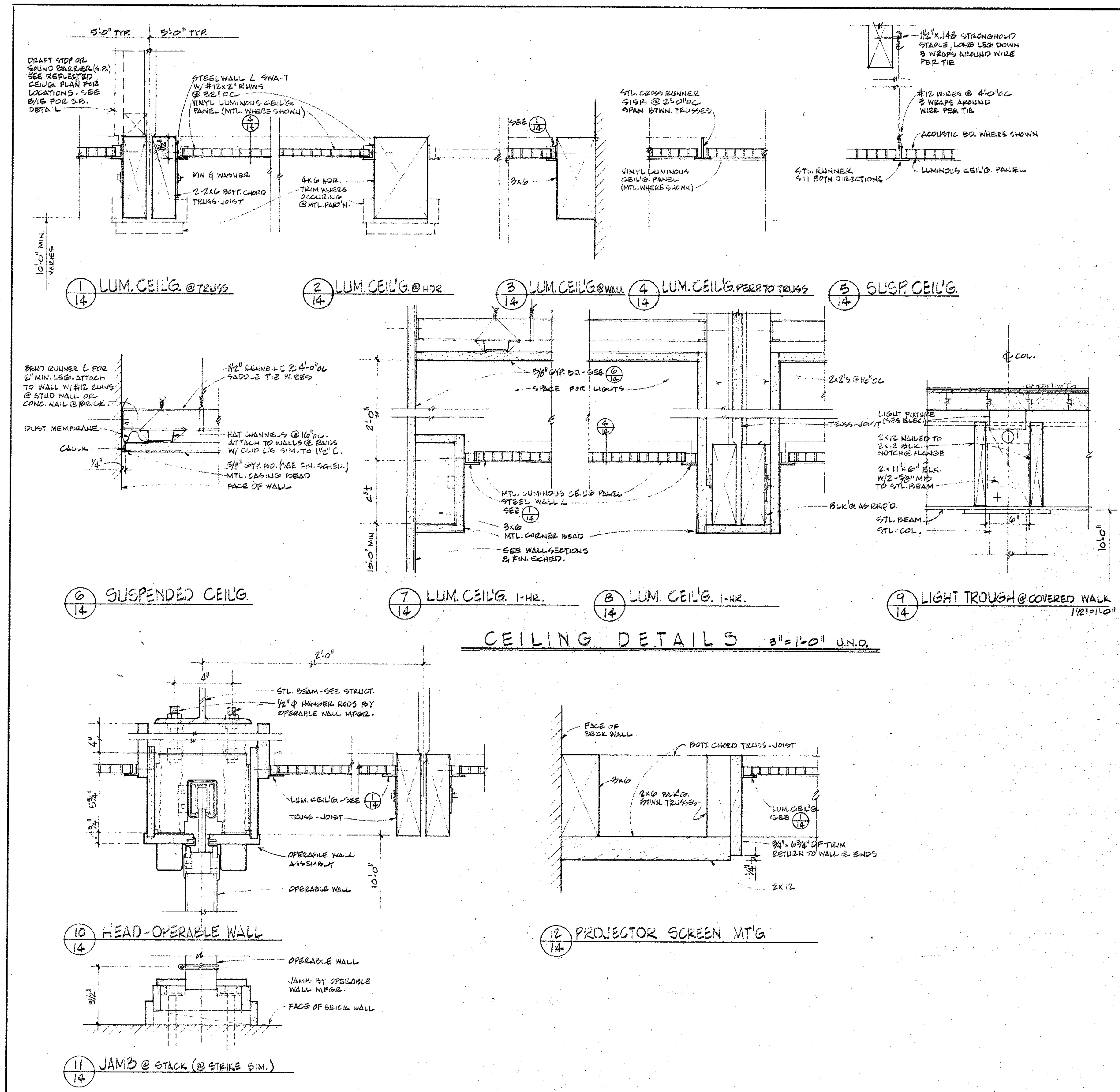
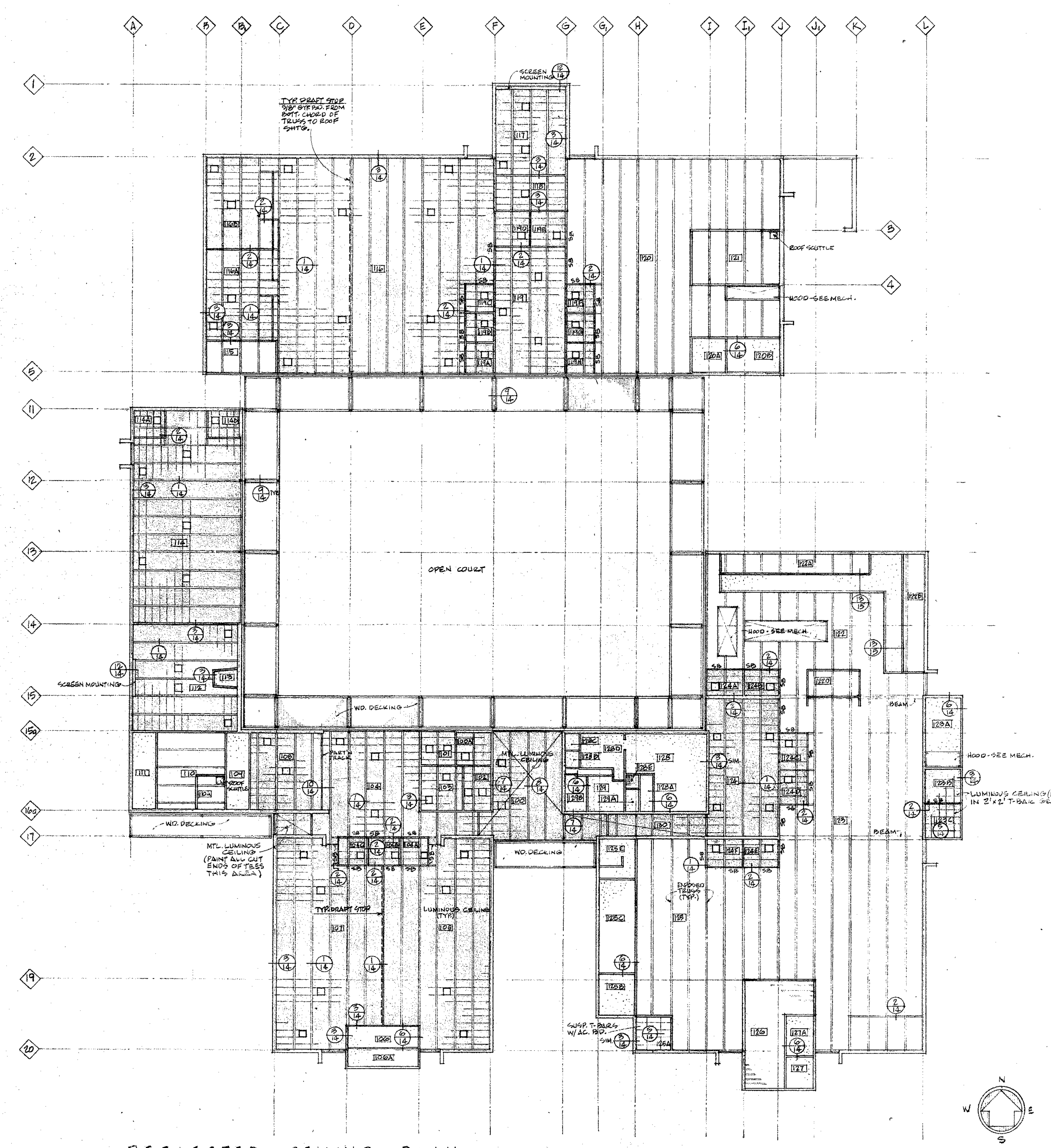


CEILING DETAILS 3"=1'-0" U.N.O.



REFLECTED CEILING PLAN 1/16"=1'-0"

NOTE: SHADED AREAS ARE LUMINOUS CEILING AREAS.
SEE MECH. DWGS. FOR LOCATIONS OF DIFFUSERS AND GRILLES - COORDINATE.
SEE ELEC. DWGS. FOR LOCATIONS OF LIGHT FIXTURES - COORDINATE.

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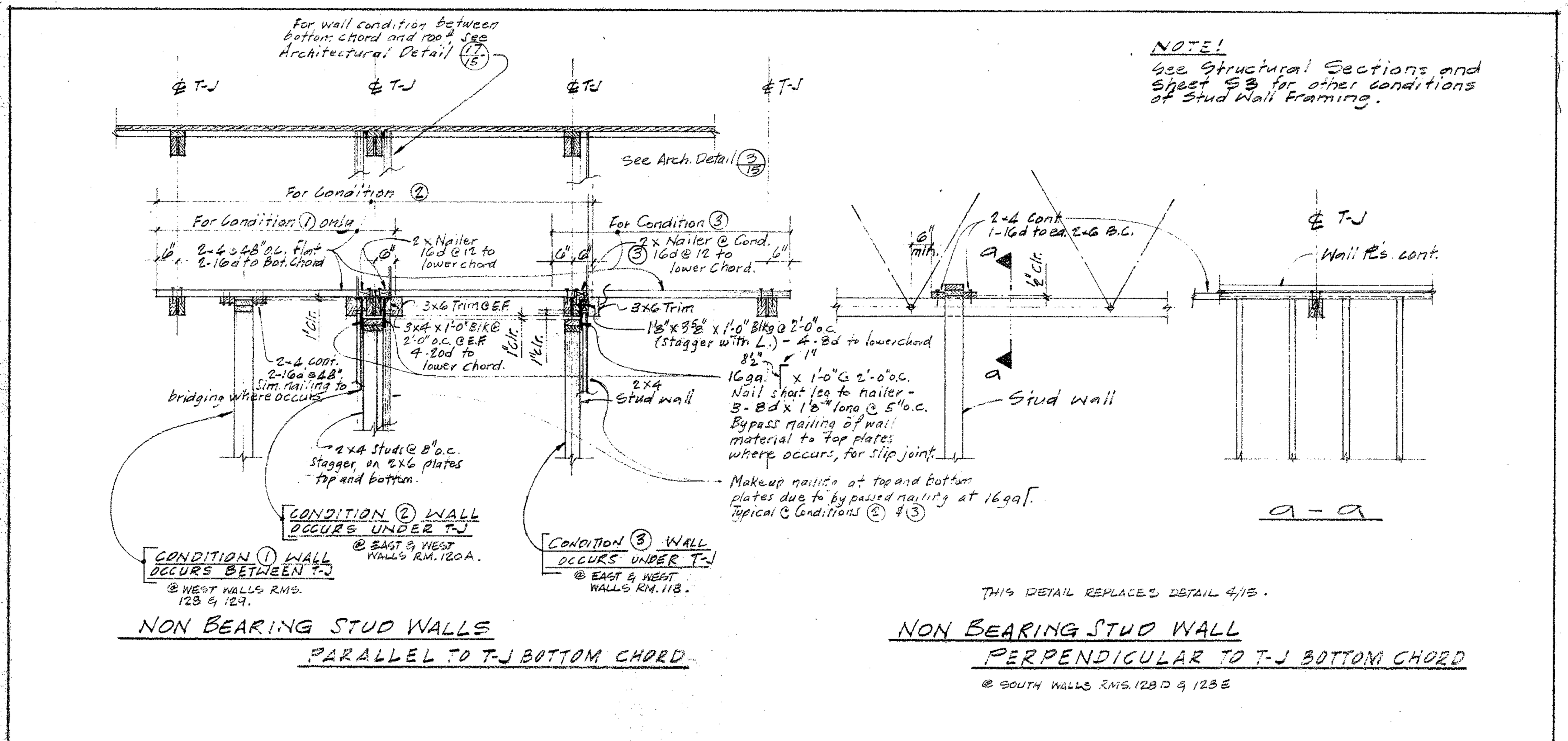
REFLECTED CEILING PLAN, DETAILS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 14 OF 15

DATE 9-26-69

REVISED AS BUILT 11-19-71


1A/15 1/15 BRICK WALL
2/15 BRICK VENEER WALL (SOUND CONTROL)
3/15 WOOD STUD WALL
4/15 WOOD STUD WALL
5/15 WALL @ FLOOR LEVEL CHANGE
6/15 WALL @ FLOOR LEVEL CHANGE
7/15 DWARF WALL
8/15 MTL. PART'N. PERP. TO TRUSS
9/15 MTL. PART'N. PARALLEL TO TRUSS
INTERIOR WALL SECTIONS 3/4" = 1'-0"
SEE REVISED STUD WALL DETAILS - SHT. AB-1
10/15 MTL. PART'N. @ TRUSS
11/15 MTL. PART'N @ BEAM - 1 HR.
12/15 MTL. PART'N. @ BEAM
13/15 WELDING BOOTHS
14/15 MTL. PART'N. @ BEAM
15/15 BRICK WALL
16/15 WALL @ WELDING
17/15 SOUND TEST'G. WALL
20/15 HEAD
21/15 HORIZ. MULL. (VERT. WHERE SHOWN)
22/15 BASE
23/15 HEAD - SLIDING GL. DR.
24/15 SILL - SLIDING GL. DR.
25/15 JAMB @ CORNER
26/15 JAMB
27/15 JAMB
28/15 MULLION
29/15 MULLION
30/15 JAMB
31/15 JAMB
32/15 JAMB
33/15 JAMB
34/15 JAMB @ COL.
35/15 HEAD @ DOOR
36/15 JAMB
37/15 JAMB
38/15 JAMB
39/15 JAMB
40/15 HEAD
41/15 MULLION
42/15 BOTT. RAIL - (END, TOP, SIM.)
43/15 BASE
44/15 JAMB
45/15 HEAD
METAL PARTITION DETAILS 3" = 1'-0"
COMETTA AND SOOTARU
CONFER + LARSEN + CROSSE
ASSOCIATED ARCHITECTURAL FIRMS
INTERIOR WALLS & DETAILS
TECHNICAL - VOCATIONAL FACILITY (ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA
SHEET 15 OF 15
DATE 9-26-69
REVISED AS BUILT 11-19-71



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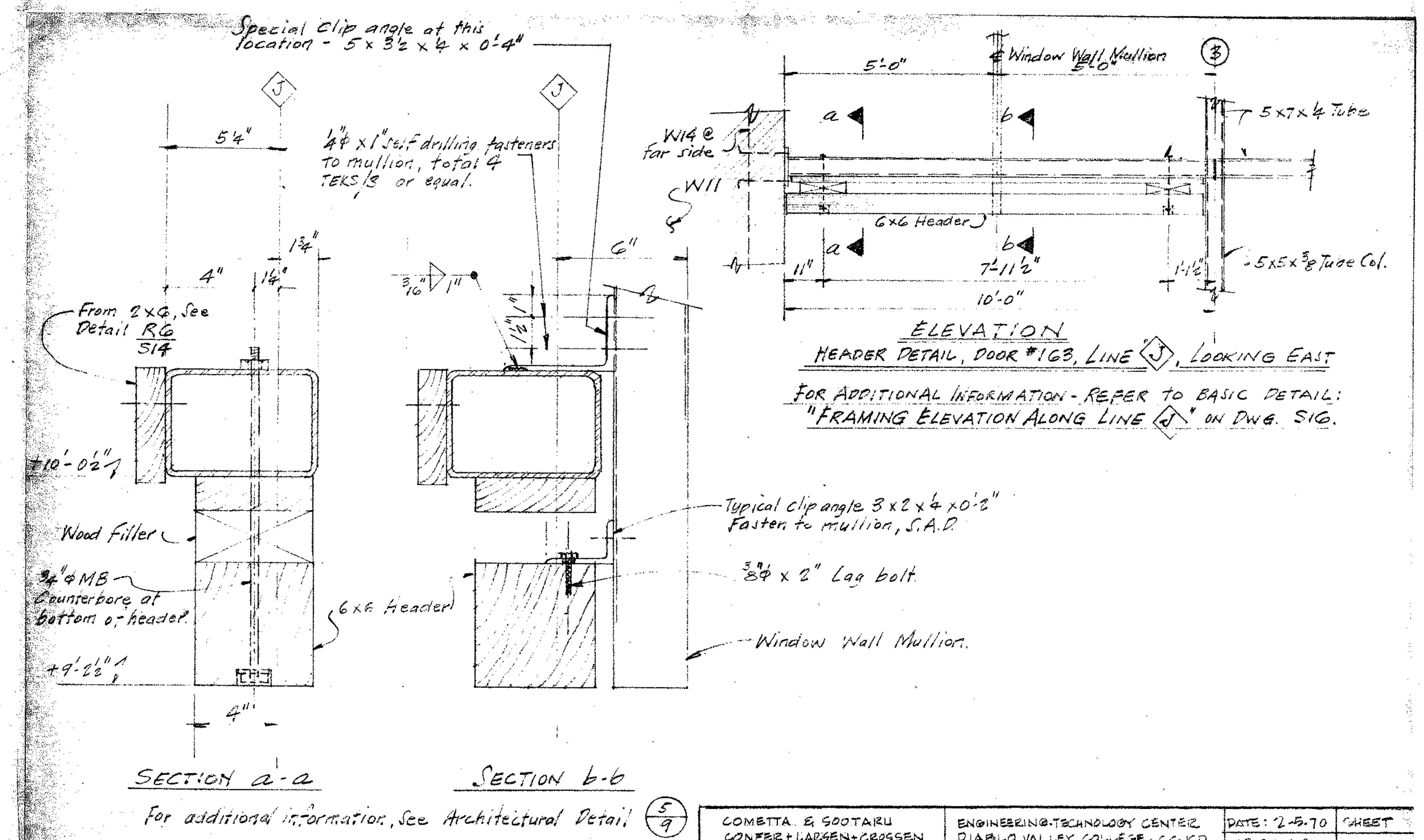
PLEASANT HILL CALIFORNIA

CLARIFICATION OF NON-BEARING STUD WALLS.

DATE: 1-30-70
N23-9-00468-0
SHEET K6



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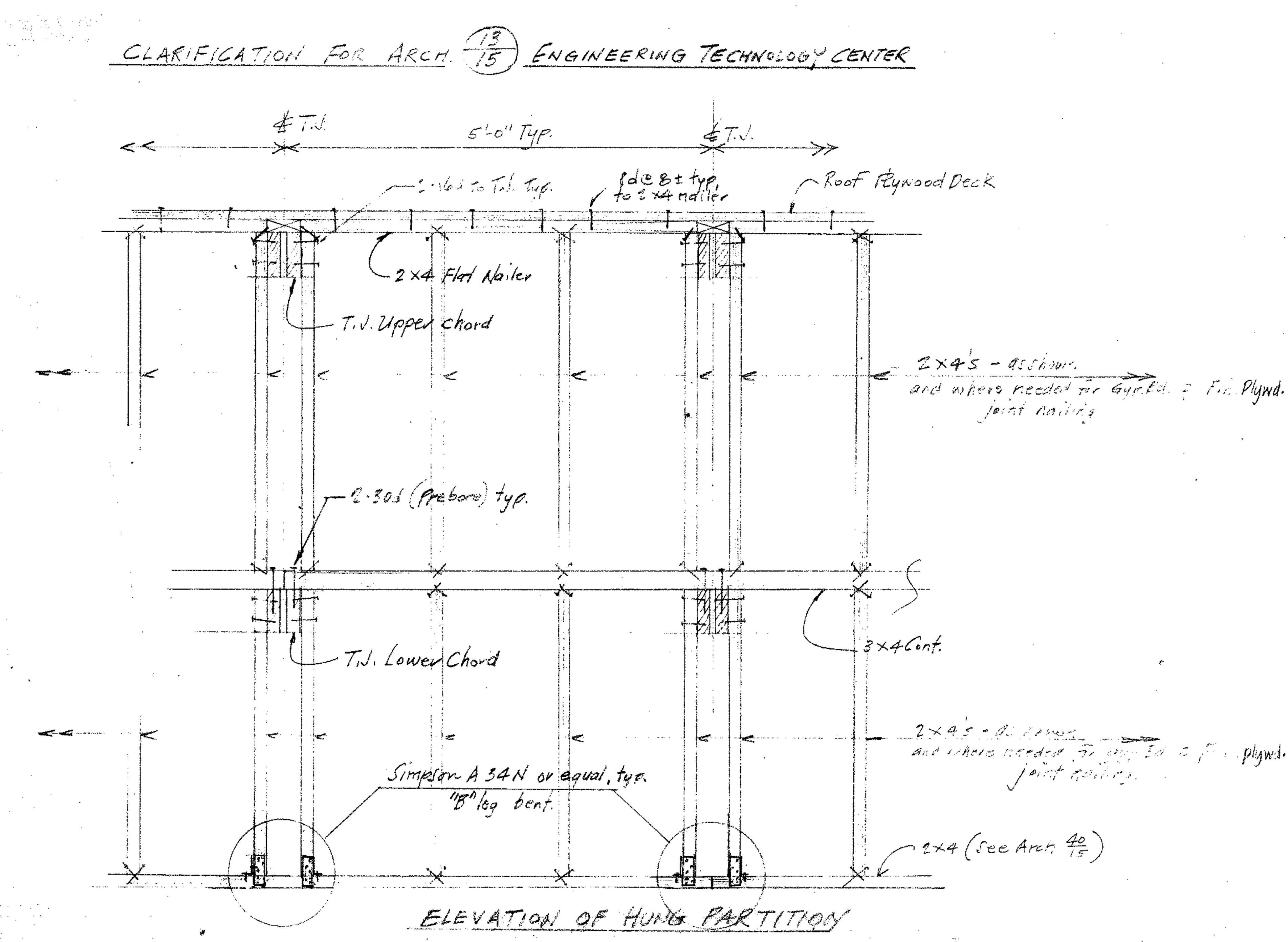
CLARIFICATION OF HEADER DETAIL AT DOOR 163.

DATE: 2-5-70
N23-9-00468-0
SHEET R7



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ENGINEERING-TECHNOLOGY CENTER
DIABLO VALLEY COLLEGE - CCJCD
PLEASANT HILL CALIFORNIA
CLARIFICATION OF DETAIL 13/15 @ WELDING BOOTHS

DATE 6-17-70
N23-9-00468-0
SHEET K11

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AS BUILT DETAILS
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(ENGINEERING - TECHNOLOGY CENTER)
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CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET AB-1
OF
DATE NOV. 19, 1971
JOB No.

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, AND TITLE 24, CALIFORNIA ADMINISTRATIVE CODE, 1969 EDITION.
THESE NOTES SHALL APPLY TO ALL STRUCTURAL DRAWINGS UNLESS OTHERWISE NOTED OR SHOWN.
FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL, AND SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS.
REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FLOOR FINISH AND THEIR LOCATIONS; DEPRESSIONS AND CURBS ON FLOORS; OPENINGS IN WALLS, SLABS, AND FLOORS AS REQUIRED FOR WINDOWS, DOORS, DUCTS, VENTS, PLUMBING, ETC.; ALL TYPES OF FLASHING, INSERTS, ANCHORAGE, HANGERS, ETC., EMBEDDED IN OR ATTACHED TO THE STRUCTURE; ROADWAY, PAVING, WALKS, STAIRS, RAMPS, TERRACES, ETC.; EXTERIOR GRADES; ELEVATION OF ROOF SURFACES; LOCATION OF DRAINS; PARTITION WALLS AND BRICK VENEER.
THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AS TO ALL LAYOUTS, DIMENSIONS AND ELEVATIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT FOR PROPER ADJUSTMENTS BEFORE PROCEEDING WITH THE WORK.
IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWING OR CALLED FOR IN THE GENERAL NOTES OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN FOR SIMILAR CONDITIONS.

SYMBOLS AND ABBREVIATIONS

RW	INDICATES	REDWOOD LUMBER	JH	INDICATES	GALVANIZED JOIST HANGER
	"	A CONTINUOUS MEMBER IN SECTION	OTJH	"	OVER THE TOP GALVANIZED JOIST HANGER
	"	A NON-CONTINUOUS MEMBER SUCH AS SOLID BLKG OR END FACE OF CONTINUOUS MEMBER	PW	"	STRUCTURAL PLYWOOD
			SAD	"	SEE ARCHITECTURAL DRAWINGS, OR SEE ARCHITECTURAL DETAILS
FC	"	FRAMING CLIP - SEE DETAIL & SIZE SCHEDULE			
NTS	"	NOT TO SCALE	FOS	"	FACE OF STUDS
A-S2	"	SECTION A ON DRAWING S2, ETC.	FOC	"	FACE OF CONCRETE
JOISTS	"	JOISTS OR RAFTERS	TOS	"	TOP OF STEEL
DJ	"	DOUBLE JOIST OR DOUBLE RAFTER	TOF	"	TOP OF FOOTING
			BOF	"	BOTTOM OF FOOTING

FOUNDATION NOTES

THE SOIL REPORT APPLICABLE TO THE PROJECT SITE IS NOTED ON FOUNDATION PLAN DRAWING. THESE REPORTS ARE AVAILABLE FOR PERUSAL AT THE OFFICE OF THE ARCHITECT. SEE SPECIFICATIONS.
DESIGN SOIL PRESSURE UNDER FOOTINGS IS NOTED ON FOUNDATION PLAN DRAWING. SEE FOUNDATION PLAN FOR ADDITIONAL NOTES.

CONCRETE NOTES

CONCRETE SHALL TEST NOT LESS THAN 3000 P.S.I. AT 28 DAYS FOR STRUCTURAL AND FOUNDATION ELEMENTS. FLOOR SLABS ON GRADE SHALL TEST NOT LESS THAN 2000 P.S.I. AT 28 DAYS, UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS.
ALL CONCRETE SHALL BE REINFORCED UNLESS NOTED: "NOT REINFORCED".
REINFORCEMENT SHALL BE ASTM A615-40, UNLESS SPECIFICALLY NOTED OTHERWISE ON STRUCTURAL DETAILS OR SCHEDULES.
LAP ALL BARS 40 DIAMETERS AT SPLICES; STAGGER SPLICES WHEREVER POSSIBLE. VERTICAL WALL BARS SHALL EXTEND INTO FOOTINGS, BUT MAY BE DOWELLED WITH 40 DIAMETER LAPS OF SAME SIZE BARS.
REINFORCEMENT, ANCHOR BOLTS, PIPE SLEEVES AND OTHER INSERTS SHALL BE POSITIVELY SECURED IN PLACE BEFORE CONCRETE IS POURED.
BAR COVERAGE TO FACE OF BAR, EXCEPT AS OTHERWISE SHOWN, SHALL BE:

3"	WHERE CONCRETE IS POURED AGAINST EARTH, OR AGAINST GROUND CONTACT.
2"	FOR BARS LARGER THAN #5, WHERE CONCRETE SURFACES ARE EXPOSED TO EARTH OR TO WEATHER AFTER REMOVAL OF FORMS.
1½"	FOR #5 BARS OR SMALLER, WHERE CONCRETE SURFACES ARE EXPOSED TO EARTH OR TO WEATHER AFTER REMOVAL OF FORMS.
1½"	FOR COLUMN SPIRALS OR TIES.
1½"	FOR STIRRUPS OF BEAM
1"	FOR WALL BARS (DOUBLE MAT)
3/4"	FOR STRUCTURAL SLAB BARS, TOP AND BOTTOM

UNLESS GOVERNED ABOVE BY EXPOSURE TO WEATHER, OR AS NOTED ON DETAILS.

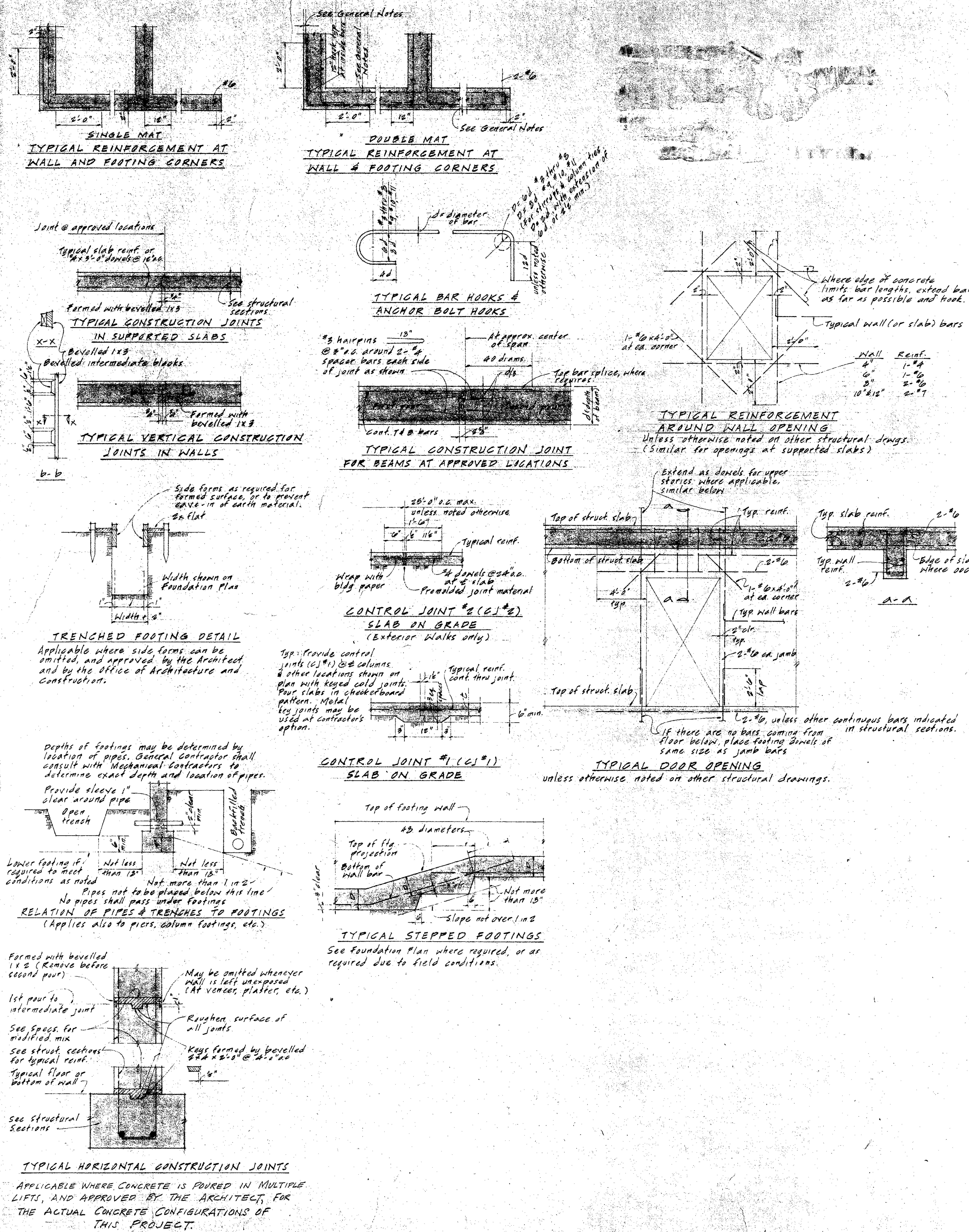
SLABS ON GROUND SHALL BE REINFORCED AS SHOWN ON STRUCTURAL PLANS. LOCATION OF CONSTRUCTION JOINTS MUST BE APPROVED BY THE ARCHITECT.
ALL EXPOSED CORNERS SHALL BE CHAMFERED AS NOTED ON THE ARCHITECTURAL DRAWINGS.
ALL CONCRETE CURBS ARE 6" HIGH UNLESS OTHERWISE NOTED. ALL TOILET ROOM STUD WALLS SHALL HAVE CONCRETE CURBS.

STRUCTURAL STEEL

ALL STRUCTURAL STEEL AND STRUCTURAL TUBING SHALL BE ASTM A-36.
ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, LATEST REVISION.
ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" HIGH-STRENGTH (A-325) BOLTS (UNLESS NOTED OTHERWISE) AND COMPLY WITH PROVISIONS OF THE "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A-325 BOLTS" AS APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS.
ALL CONNECTIONS SHALL BE AS SHOWN BY STRUCTURAL DETAILS.
ALL WELDS SHALL BE INSPECTED IN ACCORDANCE WITH SECTION T21-823(d), TITLE 24
ALL COLUMNS SHALL BE MILLED AT BASE FOR FULL BEARING.
WOOD NAILERS ON STRUCTURAL STEEL, IF CALLED FOR ON THIS PROJECT, SHALL BE BOLTED WITH 5/8" ø CARRIAGE BOLTS @ 24" O.C. STAGGERED. (1/16" OVERSIZE HOLES IN STEEL MAY BE USED), OR 5/8" ø WELDED STUD BOLTS @ 24" O.C. UNLESS SIZE, TYPE AND SPACING IS NOTED OTHERWISE.
ALL WELDS FOR LIGHT-GAGE STEEL SHALL BE IN ACCORDANCE WITH SECTION T21-972, TITLE 24.

MASONRY NOTES:

1. See Section 4-A of the Specifications on "Masonry" for the following elements: Materials, mortar & grout, [illegible] construction, [illegible]
2. Masonry [illegible] true alignment and accurately spaced.
3. Lap all bars 40 diameters. Stagger all lap splices. [illegible] shall be [illegible] in position prior to [illegible] grout pour.
4. Concrete surfaces receiving masonry shall be cleaned and [illegible] to expose coarse aggregate.
5. Provide cleanouts at bottom of walls and bottom of all lifts. Brace clean-out [illegible] to withstand grout pressure.
6. Mortar Strength: [illegible] @ 7 days; [illegible] @ 28 days. Grout Strength: [illegible] @ 7 days; 2000 psi minimum @ 28 days.
7. Bolts which are embedded in masonry shall be grouted solidly in place with not less than one inch of grout between bolt and masonry. All bolts shall have a [illegible] at the embedded end.
8. [illegible] construction [illegible] with the approval of the Architect.
9. See typical detail on Dwg. S2 for anchorage of masonry veneer to stud walls and to concrete walls.
10. See [illegible] structural sections for masonry construction, but in particular the following Details: F1, F6, F11, F15, F17, F18, F21, F22 (S13); R1, R3, R4, R7, R8 & R9, R11 (S14, S15); Section W100 & W101 (S6)



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STATE OF CALIFORNIA — OFFICE OF ARCHITECTURE AND CONSTRUCTION
88217 APPROVED OCT 3 1969

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GENERAL NOTES AND TYPICAL DETAILS
TECHNICAL-VOCATIONAL FACILITY
(ENGINEERING-TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET S1
OF 19
DATE SEPT. 26, 1969

CARPENTRY NOTES

SILLS ON CONCRETE SHALL BE FOUNDATION GRADE REDWOOD 3" THICK AT STRUCTURAL PLYWOOD SHEAR WALLS AND 2" MINIMUM THICK ELSEWHERE. THEY SHALL BE ANCHORED WITH 5/8" x 14" BOLTS UNLESS OTHERWISE NOTED (HOLES MAY BE 1/16" OVERSIZE) WITH A BOLT WITHIN 9" OF EACH END OF EACH STICK AND SPACED NOT OVER 48" O.C. BETWEEN. SEE STRUCTURAL DETAILS FOR SPECIFIC SPACING OF ANCHOR BOLTS WHICH MAY BE NOTED AS LESS THAN 48" O.C. THERE SHALL BE AT LEAST 2 BOLTS IN EACH STICK. WHERE NOTCHES FOR PIPES, ETC. EXCEED 1/3 THE WIDTH OF THE SILL, PLACE A BOLT WITHIN 9" OF EACH SIDE OF NOTCH. TIEDOWN BOLTS SHALL NOT BE CONSIDERED AS SILL BOLTS. SILL SHALL BE BEDDED IN 1:2 MORTAR 3/4" THICK.

ALL OTHER LUMBER NOT OTHERWISE NOTED SHALL BE DOUGLAS FIR MANUFACTURED AND GRADED IN ACCORDANCE WITH THE WEST COAST LUMBER INSPECTION BUREAU, "STANDARD GRADING AND DRESSING RULES, NO. 15", MARCH 15, 1956, REVISED FEB. 1, 1966, OR EQUIVALENT STRESS GRADES OF WESTERN WOOD PRODUCTS ASSOCIATION FOR STRUCTURAL DOUGLAS FIR.

BLOCKING AND BRIDGING - PROVIDE AS FOLLOWS:

A. 2" SOLID BLOCKING BETWEEN JOISTS AND RAFTERS OVER SUPPORT.

B. 2" x 3" (MIN) CROSS BRIDGING BETWEEN JOISTS AND RAFTERS NOT OVER 8'-0" O.C. NOR MORE THAN 8'-0" FROM SUPPORT.

C. OMIT CROSS BRIDGING BETWEEN CEILING JOISTS AND RAFTERS 2 x 8 AND SMALLER.

D. CONTINUOUS 2" HERRINGBONE BRIDGING, SLOPE 3 IN 12, AT MID-HEIGHT OF STUDS OR SO SPACED THAT UNBRACED LENGTH OF STUDS SHALL NOT EXCEED 8'-0" EXCEPT WHERE WALL FINISH OR PLYWOOD SHEATHING AT SHEAR WALLS CALLS FOR SOLID HORIZONTAL BLOCKING.

WHERE JOISTS SPAN BETWEEN CONCRETE OR MASONRY WALLS, STEEL PLATE ANCHOR CONNECTORS SHALL BE PROVIDED AT EACH END OF THE SAME JOIST, SUCH CONNECTED JOISTS SPACED NOT OVER 48" ON CENTER.

WHERE A JOIST OR STUD IS PLACED AGAINST CONCRETE OR MASONRY WALL, BOLT TO WALL WITH 3/4" ø x A.B. AT NOT OVER 48" O.C.

DOUBLE TOP PLATES OF EXTERIOR WALLS SHALL NOT BE CUT TO LAP THE TOP PLATES OF INTERSECTING WALLS, EXCEPT AT EXTERIOR WALL CORNERS OR AS OTHERWISE NOTED ON DRAWING.

PIPES EXCEEDING ONE-THIRD OF THE PLATE WIDTH SHALL NOT BE PLACED IN PARTITIONS USED AS BEARING OR SHEAR WALLS, UNLESS COMPLETELY FURRED CLEAR OF THE STUDS. PIPE SHALL PASS THRU THE CENTER OF THE PLATES USING A NEATLY BORED HOLE. NO NOTCHING WILL BE ALLOWED.

LAGSCREWS SHALL BE SCREWED (NOT DRIVEN) INTO PLACE. DRILL HOLE SAME DIAMETER AND DEPTH AS SHANK, THEN DRILL HOLE SAME DIAMETER AS AT BASE OF THREAD FOR THE THREADED PORTION. USE PLATE WASHER AS REQUIRED FOR SAME BOLT SIZE.

BOLTS IN WOOD SHALL BE MACHINE BOLTS, UNLESS OTHERWISE NOTED.

BOLT HOLES IN WOOD AND STEEL SHALL BE THE DIAMETER OF THE BOLT PLUS 1/16". PROVIDE SQUARE PLATE WASHER UNDER HEAD AND NUT WHERE BEARING IS AGAINST WOOD. CUT WASHERS UNDER NUT WHERE BEARING IS AGAINST STEEL. WASHERS WILL NOT BE REQUIRED UNDER HEAD OF CARRIAGE BOLTS. LENGTH OF THREAD SHALL BE SUCH THAT THREADS DO NOT BEAR AGAINST WOOD OR STEEL. ALL NUTS SHALL BE TIGHTENED WHEN PLACED AND RETIGHTENED AT COMPLETION OF THE JOB OR IMMEDIATELY BEFORE CLOSING WITH FINISH CONSTRUCTION.

BOLT DIAMETER	SQUARE STEEL PLATE WASHERS	BOLT DIAMETER	SQUARE STEEL PLATE WASHERS
1/2"	2 x 2 x 1/4"	7/8"	3½ x 3½ x 3/8"
5/8"	2½ x 2½ x 1/4"	1"	3½ x 3½ x 3/8"
3/4"	3 x 3 x 5/16"	1- 1/8"	4 x 4 x 7/16"
		1- 1/4"	4½ x 4½ x 1/2"

MALLEABLE IRON WASHERS MAY BE USED IN LIEU OF SQUARE STEEL PLATE WASHERS.

PLYWOOD SHEATHING

WHERE NOTED ON STRUCTURAL PLANS, ROOFS, EXTERIOR SHEAR WALLS, INTERIOR SHEAR WALL PARTITIONS, SHALL BE SHEATHED WITH DOUGLAS FIR PLYWOOD, STRUCTURAL I, EXTERIOR TYPE, C-C OR BETTER.

ALL PLYWOOD SHEATHING USED STRUCTURALLY SHALL EXTEND CONTINUOUSLY BEHIND ALL FINISH. WHERE IT IS TO BE PLASTERED, IT SHALL BE PROTECTED BY AN UNBROKEN LAYER OF MOISTURE-TIGHT PAPER UNDER LATHING. AT BRICK VENEER WALLS, PLYWOOD SHEATHING SHALL BE FACED WITH BUILDING PAPER IN ACCORDANCE WITH SECTION 1001 (d), TITLE 21.

IN GENERAL, PLYWOOD SHEETS SHALL BE 4'-0" x 8'-0" AT WALLS, AND 4'-0" x 10'-0" AT ROOF. THEY MAY BE LAID EITHER HORIZONTALLY OR VERTICALLY AT WALLS. ROOF SHEETS SHALL BE LAID WITH FACE PLIES ACROSS JOISTS OR ROOF FRAMING MEMBERS AND WITH END JOINTS STAGGERED 4'-0". ALL PLYWOOD JOINTS SHALL BE ACCURATELY CENTERED ON SUPPORTING ELEMENTS, INCLUDING BLOCKING. BLOCKING BETWEEN STUDS SHALL BE 3 x STUD DEPTH. BLOCKING BETWEEN JOISTS FOR PLYWOOD EDGE NAILING SHALL BE 2 x 3 MINIMUM FLAT BLOCKING, EXCEPT WHERE DETAILED OTHERWISE. BLOCKING AT 4'-0" ON CENTER WHICH SPANS BETWEEN TRUSS-JOISTS SHALL BE 2 x 4 FLAT BLOCKING.

NAILING

ALL NAILS SHALL BE COMMON WIRE NAILS. WHERE NAILS TEND TO SPLIT THE WOOD, NAIL HOLES SHALL BE SUB-DRILLED.

SCHEDULE OF MINIMUM PERMISSIBLE CONNECTION

DETAILS		FASTENING
STUDS TO BEARING	2x6 AND SMALLER	2-10d TOENAILS EA SIDE (3-10d TOENAILS EA SIDE WHEN HEIGHT OF 2x6 @ 16 EXCEEDS 13'-4"
	2x8 AND LARGER	3-10d TOENAILS EA SIDE (3-16d TN EA SIDE TO RWD SILL WHEN 2x8 @ 16 EXCEEDS 20'-0"
	3x4 AND LARGER	2-16d TOENAILS EA FACE
SOLE PLATES (ON SHEATHING)	PERPENDICULAR TO JOISTS	2-30d EACH JOIST
	PARALLEL TO JOISTS	30d @ 8" O.C. STAGGERED
DOUBLE 2" TOP PLATES	LOWER PLATE TO STUD	2-20d FOR 2x6 STUDS OR SMALLER; 3-20d FOR 2x8 STUDS; 2-20d FOR 3x4 STUDS
(USE 30d FOR 3" PLATES)	UPPER TO LOWER STAGGERED	16d @ 12" O.C. (MIN. LAP 4'-0" WITH 16-16d EA LAP) SEE PLANS FOR SPECIAL CONDITIONS.
	LAP AT INTERSECTIONS	3-16d
JOISTS OR RAFTERS	TO BEARING	2-10d TOENAILS EA SIDE
	TO SIDE OR EDGE OF STUD	3-16d FIR 8" DEPTH JOIST OR LESS (AND 1-16d FOR EA ADDITIONAL 4" IN DEPTH OF JOIST)
	TO PARALLELING MEMBERS (PLATES, ETC.)	16d @ 12" O.C.
	AT LAPS (12" MINIMUM)	4-16d
BLOCKING	TO JOISTS OR RAFTERS	2-10d TOENAILS EA SIDE EA END
	TO BEARINGS	2-10d TOENAILS EA SIDE
HERRINGBONE BRIDGING	TO STUDS	2-10d
CROSSBRIDGING	TO JOISTS OR RAFTERS	2-8d
MULTIPLE STUDS	EACH LAYER	16d @ 8" O.C.
BUILT-UP BEAMS (MULTIPLE JOIST)	EACH LAYER	16d @ 8" O.C. FOR BEAMS LESS THAN 10" IN DEPTH ONLY; ½" ø BOLTS @ 24" O.C. STAGGERED FOR BEAMS 10" OR GREATER IN DEPTH.
DOUBLE JOIST UNDER PARTITION	WHERE NOT BLOCKED APART	16d @ 6" O.C.
	WHERE BLOCKED APART	3-16d EA BLOCK EACH SIDE (BLOCKS 2 x @ 24" O.C.)

	PW NAILING LOCATION	1-1/8" PW AT TRUSS-JOIST ROOF FRAMING; ½" PW @ OTHER ROOF FRAMING	½" PW AT DESIGNATED SHEAR WALL LOCATIONS AS INDICATED ON STRUCTURAL PLANS.	PW AT OTHER PARTITIONS THAT ARE SHOWN ON ARCHITECTURAL PLANS OR REFERED TO ARCHITECTURAL PLANS.
PLYWOOD SHEATHING	AT ALL EDGES OF SHEET	8d @ 4" O.C.	10d @ 4" O.C.	8d @ 6" O.C.
	AT ALL OTHER CONTACTS, UNLESS OTHERWISE NOTED	8d @ 12" O.C.	10d @ 12" O.C.	8d @ 12" O.C.
	AT DOUGLAS FIR SILLS	------	10d @ 4" O.C.	8d @ 6" O.C.
	AT REDWOOD SILLS	------	10d @ 3" O.C.	8d @ 6" O.C.

CEILING STRIPPING	1 x NOMINAL	2-8d 1 STRAIGHT, 1 SLANT AND SUB-BORED AT JOINT
	1 x NET	2-8d 1 STRAIGHT, 1 SLANT AND SUB-BORED AT JOINT
	1¼ x NET	2-10d 1 STRAIGHT, 1 SLANT AND SUB-BORED AT JOINT
	2 x NOMINAL	2-16d 1 STRAIGHT, 1 SLANT AND SUB-BORED AT JOINT

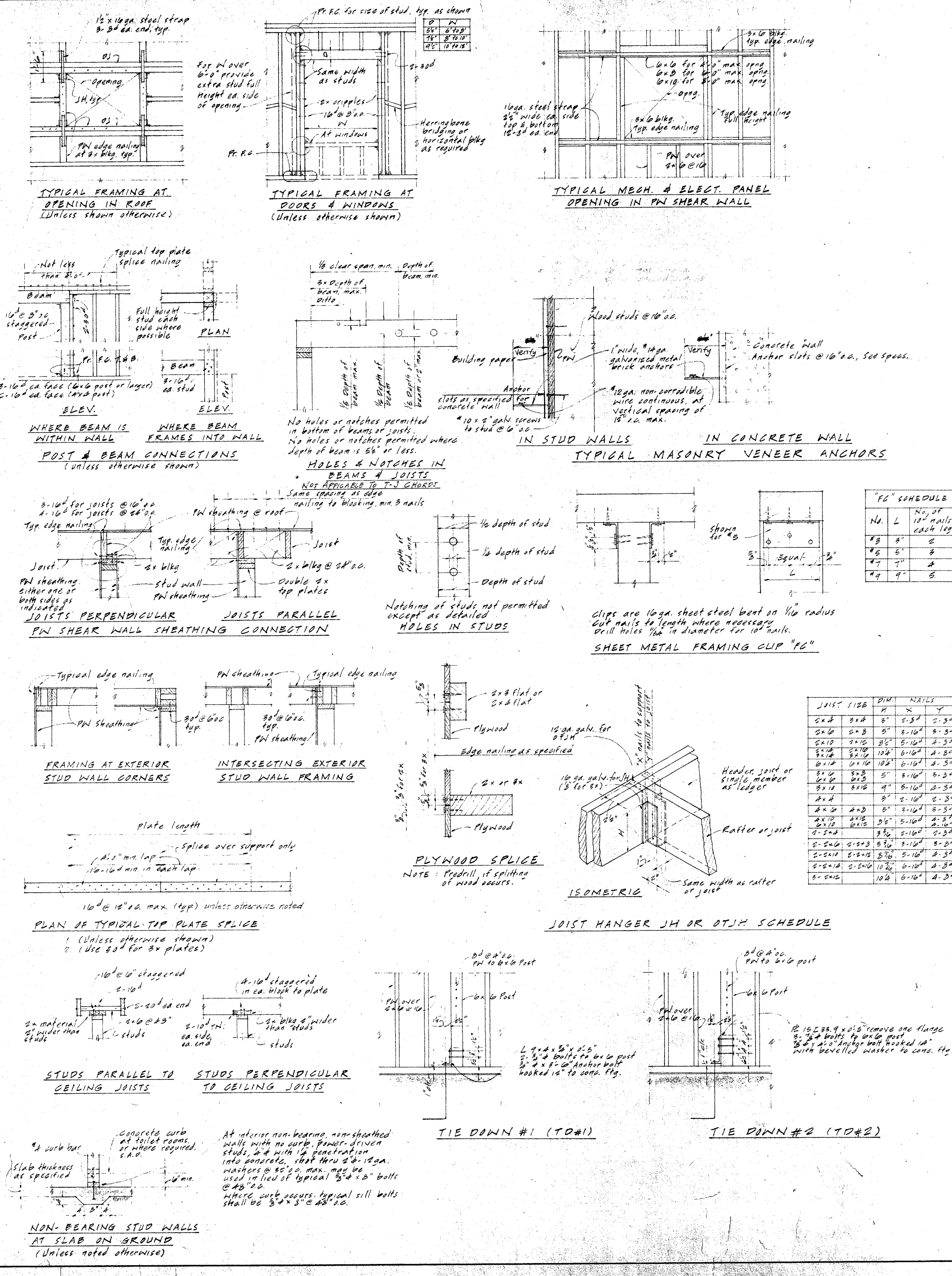
CEILING STRIPPING AT PLASTERED CEILINGS OR CEILINGS WITH GYPSUM BOARD SHALL HAVE IN ADDITION TO NAILING, 16 GA. GALVANIZED ANNEALED WIRE TIGHTLY SADDLE-LOOPED AROUND EACH STRIP AT 48" O.C. STAGGERED AND SECURELY FASTENED TO THE SIDE OF THE CEILING JOIST WITH 1-16d THRU NAIL OR 1-1 3/4" BARBED ROOFING NAIL AT EACH SIDE AND AT LEAST 2" ABOVE BOTTOM OF JOIST. WIRES MAY BE LOOPED AROUND THE FULL JOIST INSTEAD OF USING NAILS. AT THE CONTRACTOR'S OPTION THE WIRES MAY BE OMITTED IF THE STRIPPING IS NAILED WITH "STRONGHOLD" COMMON NAILS (SAME SIZE AND NUMBER AS COMMON WIRE NAILS LISTED ABOVE.)

3" MATERIAL (AND 2" MATERIAL ON FACE OF SHEATHING) SHALL BE NAILED WITH 30d NAILS INSTEAD OF THE 16d NOTED IN THE SCHEDULE

NAILING NOT NOTED ABOVE OR ON DETAILS SHALL BE AT LEAST 2 NAILS AT ALL CONTACT POINTS, USING 8d THROUGH 1" MATERIAL AND 16d THROUGH 2" MATERIAL. WHERE CONTACTING MEMBERS ARE PARALLEL, USE 8d @ 12" O.C. THROUGH 1" MATERIAL AND 16d @ 12" O.C. THROUGH 2" MATERIAL.

ALL WOOD WINDOW AND DOOR FRAMES SHALL BE SECURED IN PLACE. BLOCK OUT SOLIDLY BETWEEN JAMBS AND CRIPPLES OR MULLIONS,--ONE NEAR TOP AND BOTTOM AND NOT OVER 24" O.C. BETWEEN. NAIL TO EACH BLOCK WITH 2-16d CASING NAILS SET 1/8".

#881



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CARPENTRY NOTES AND TYPICAL DETAILS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
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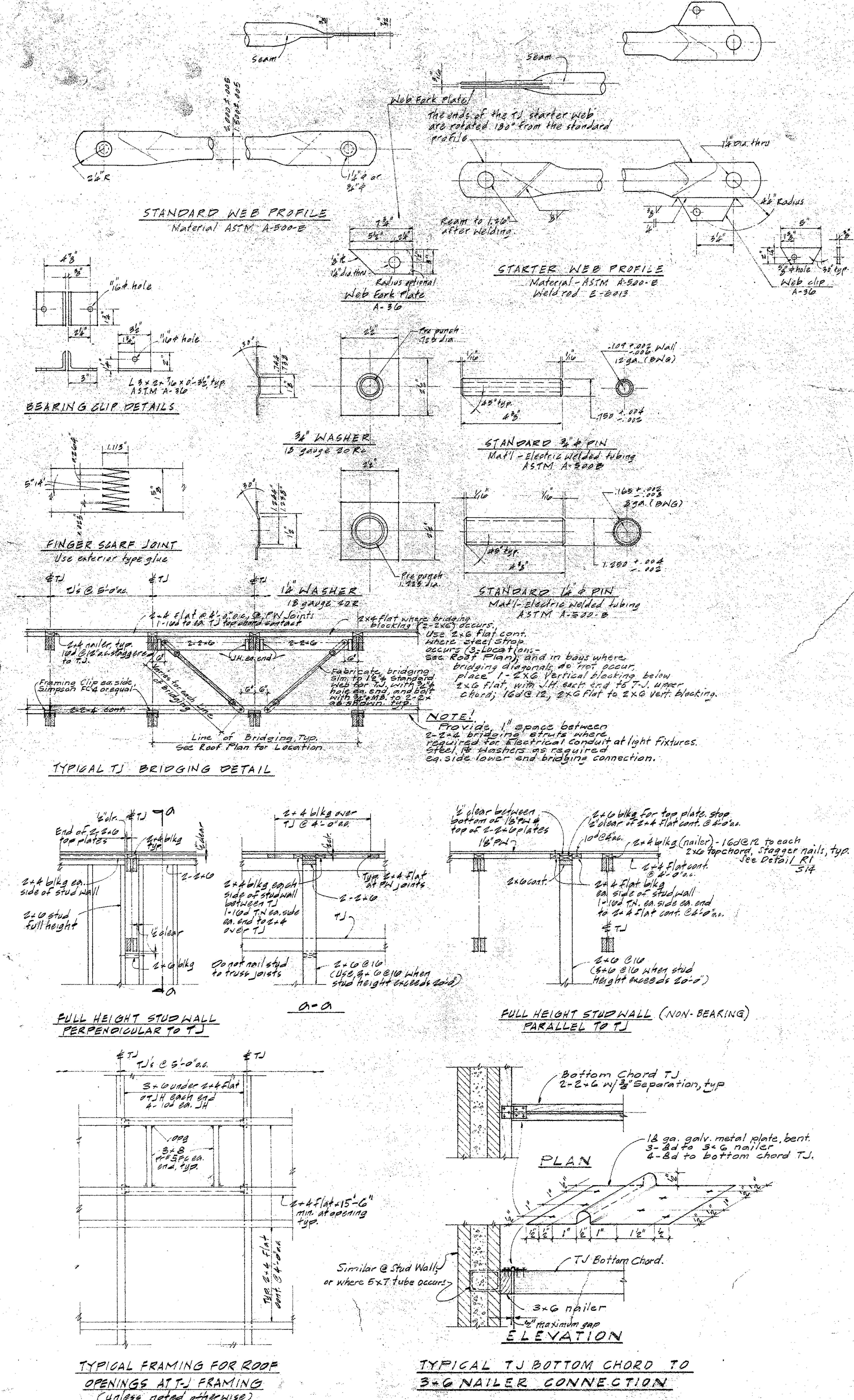
PLEASANT HILL CALIFORNIA

SHEET S2 OF 19
DATE SEPT. 26, 1969



NOTES:

For typical bearing of Truss-Joists on Stud walls, see Framing Elevations on Dwgs. S16 & S18, see Section 112/S11.

For typical bearing of Truss-Joists on Masonry Walls, see Detail 24/S14.

For typical bearing of Truss-Joists on Steel Framing, including steel plate on top of 14" masonry wall on Line 17, see various Framing Elevations on Dwgs S16, S17, & S18.

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CONFER + LARSEN + CROSSEN
1800 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2282

E. A. COMETTA, PARTNER · A. SOOTARU, ARCHITECT · ASSOCIATED ARCHITECTURAL FIRMS

TRUSS JOIST NOTES AND DETAILS

TECHNICAL - VOCATIONAL FACILITY
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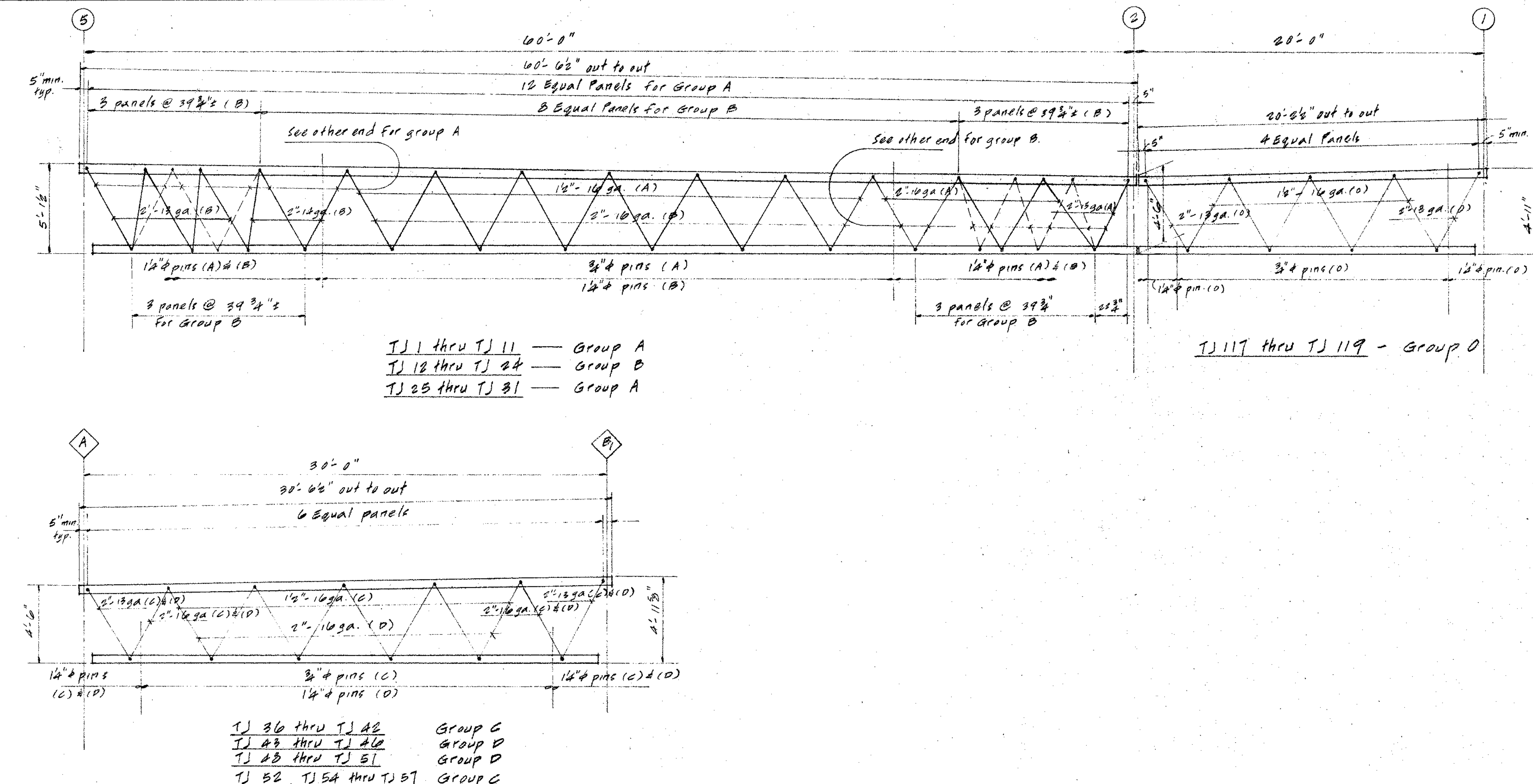
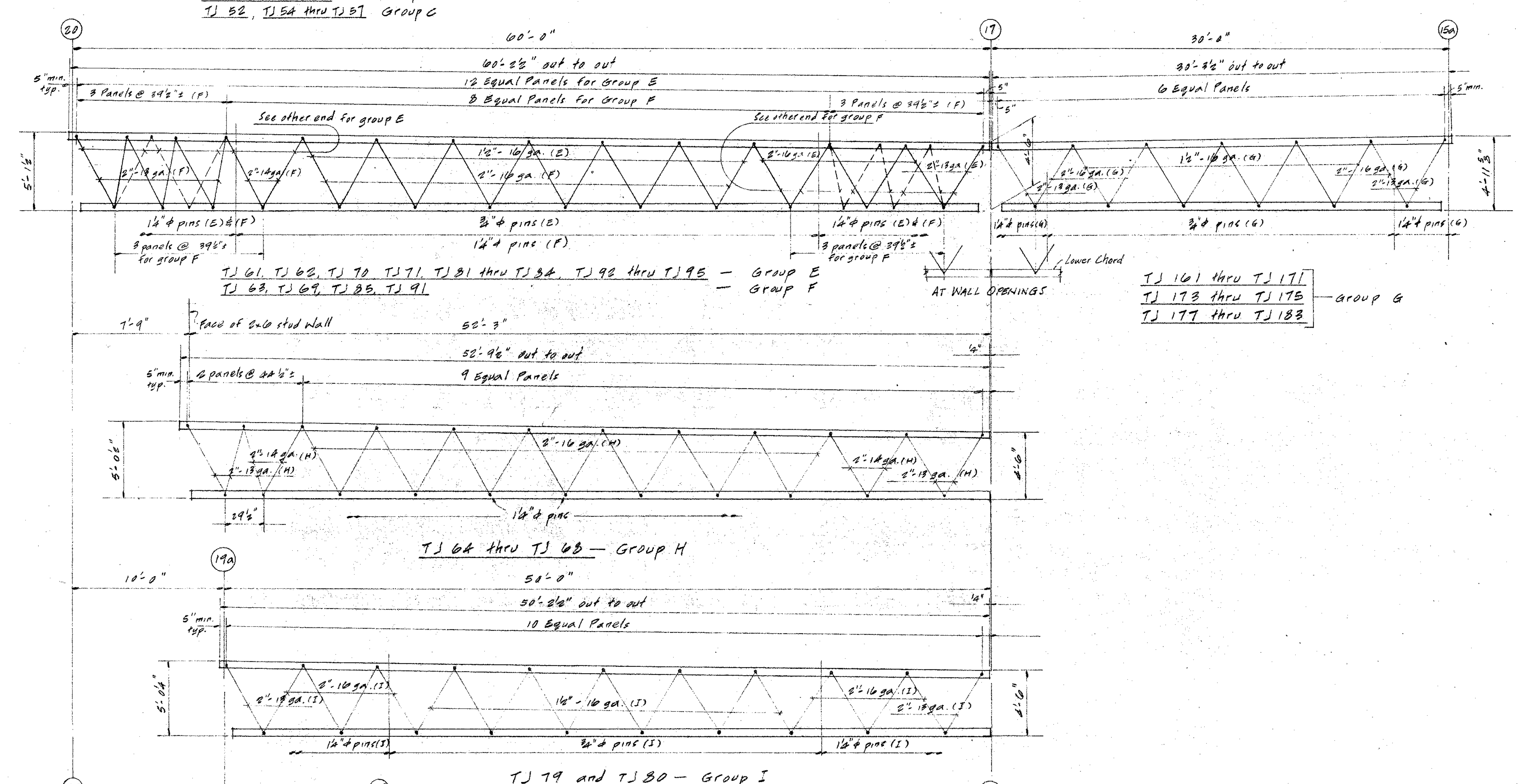
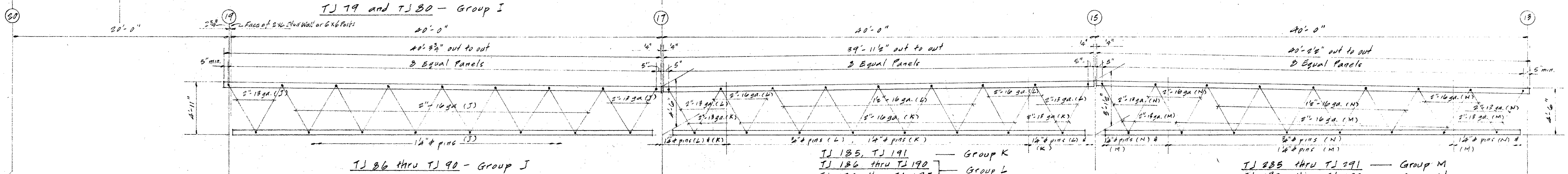
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL, CALIFORNIA

SHEET S3 OF 19

DATE SEPT. 26, 1969







TRUSS - JOIST SCHEDULE

①	②	③	④	⑤	⑥	⑦	⑧	⑨
			DIMENSIONS					
NOMINAL SPAN	MARK	GROUP REFERENCE FOR WEB AND PIN REQUIREMENTS (SEE TRUSS PROFILES)	O/O UPPER CHORD		DEPTH LOW END	DEPTH HIGH END	QUANTITY	
60'	TJ 1 THRU TJ 11	A	60'-6½"		4'-6"	5'-1½"	11	
	TJ 12 THRU TJ 24	B	60'-6½"		4'-6"	5'-1½"	13	
	TJ 25 THRU TJ 31	A	60'-6½"		4'-6"	5'-1½"	7	
	TJ 61, TJ 62	E	60'-2½"		4'-6"	5'-1½"	2	
	TJ 63, TJ 69	F	60'-2½"		4'-6"	5'-1½"	2	
	TJ 70, TJ 71	E	60'-2½"		4'-6"	5'-1½"	2	
	TJ 81 THRU TJ 84	E	60'-2½"		4'-6"	5'-1½"	4	
	TJ 85, TJ 91	F	60'-2½"		4'-6"	5'-1½"	2	
	TJ 92 THRU TJ 95	E	60'-2½"		4'-6"	5'-1½"	4	
52'-6"	TJ 64 THRU TJ 68	H	52'-9½"		4'-6"	5'-0½"	5	
50'	TJ 79, TJ 80	I	50'-2½"		4'-6"	5'-0¼"	2	
40'								
	TJ 86 THRU TJ 90	J	40'-3¾"		4'-6"	4'-11"	5	
	TJ 185	K	39'-11½"		4'-6"	5'-1½"	1	
	TJ 186 THRU TJ 190	L	39'-11½"		4'-6"	5'-1½"	5	
	TJ 191	K	39'-11½"		4'-6"	5'-1½"	1	
	TJ 192 THRU TJ 195	L	39'-11½"		4'-6"	5'-1½"	4	
	TJ 285 THRU TJ 291	M	40'-2½"		4'-6"	5'-1½"	7	
	TJ 292 THRU TJ 295	N	40'-2½"		4'-6"	5'-1½"	4	
30'	TJ 36 THRU TJ 42	C	30'-6½"		4'-6"	4'-11⅝"	7	
	TJ 43 THRU TJ 46	D	30'-6½"		4'-6"	4'-11⅝"	4	
	TJ 48 THRU TJ 51	D	30'-6½"		4'-6"	4'-11⅝"	4	
	TJ 52; TJ 54 THRU TJ 57	C	30'-6½"		4'-6"	4'-11⅝"	5	
	TJ 161 THRU TJ 167	G	30'-3½"		4'-6"	4'-11⅝"	7	
	TJ 169 THRU TJ 171	G	30'-3½"		4'-6"	4'-11⅝"	3	
	TJ 173 THRU TJ 175	G	30'-3½"		4'-6"	4'-11⅝"	3	
	TJ 177 THRU TJ 183	G	30'-3½"		4'-6"	4'-11⅝"	7	
20'	TJ 117 THRU TJ 119	O	20'-2½"		4'-6"	4'-11"	3	
						TOTAL	124	

NOTES:

1. All top & bottom chords shall be Douglas Fir, 2400f, Machine stress rated and 1900f visually graded.
2. See Dwg. S3 for other Truss joist typical details.
3. See Roof framing Plan on S7 & S8 for Truss Joist locations per Mark designations.
4. See specification for detail requirements of materials and fabrication of Truss joists.
5. Minimum camber to be provided for Truss joist shall be equal to the deflection due to twice the design Dead Load. Camber shall be indicated on the shop drawings, subject to approval by the Architect.
6. The designations on this sheet: 1½" - 16 ga. indicates 1½"φ x 16 ga. web member, etc. See Details on S3 for typical web profiles.
7. Fabricator shall study the plans thoroughly, and shall verify that truss configurations as shown on the shop drawing submittals are such as to clear structural elements when erected. Any discrepancies shall be brought to the attention of the Architect for resolution.
8. See bridging detail on Dwg. S3, and locations of bridging on plans, Dwgs. S7 & S8.

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TRUSS JOIST PROFILES AND SCHEDULE
TECHNICAL - VOCATIONAL FACILITY
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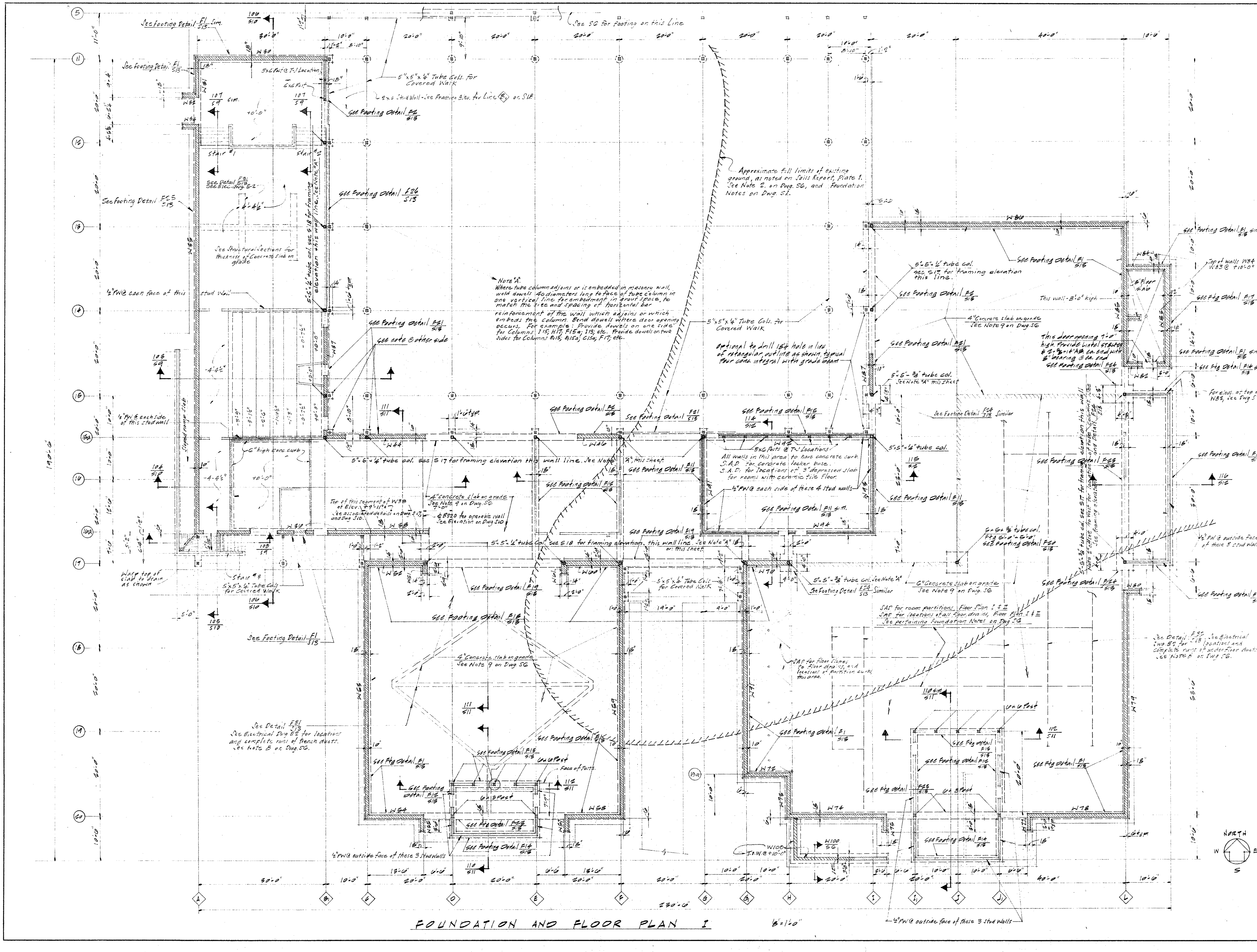
DATE SEPT. 26, 1969



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FOUNDATION AND FLOOR PLAN I
TECHNICAL - VOCATIONAL FACILITY
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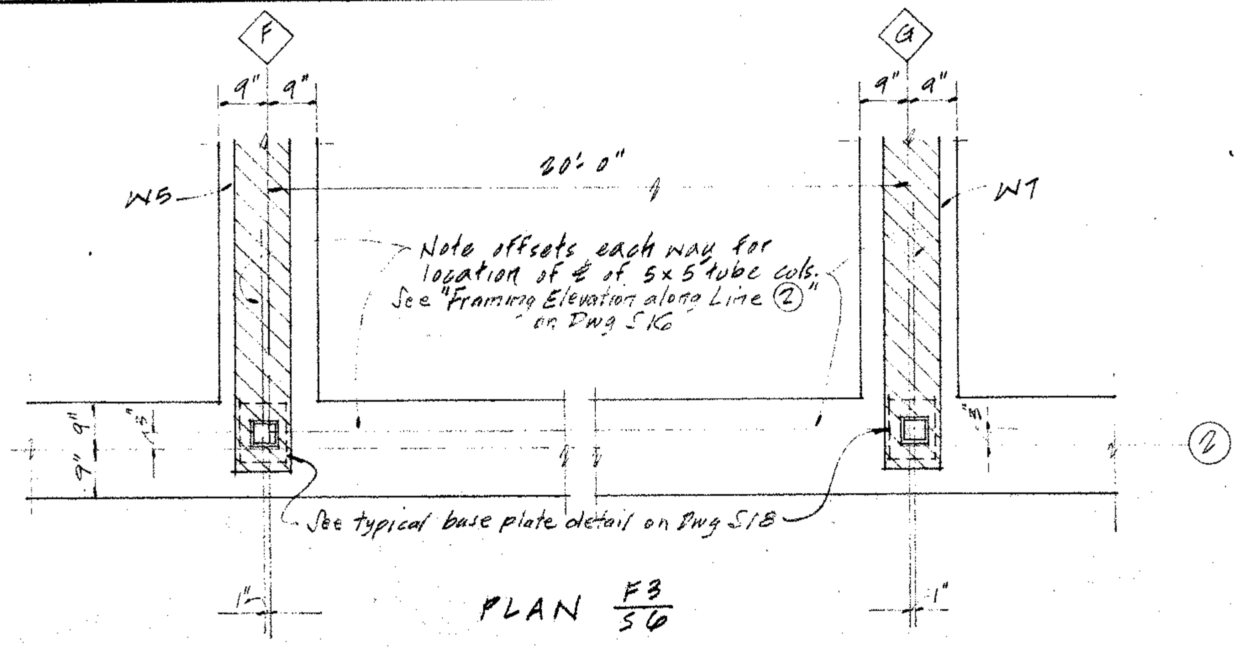
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

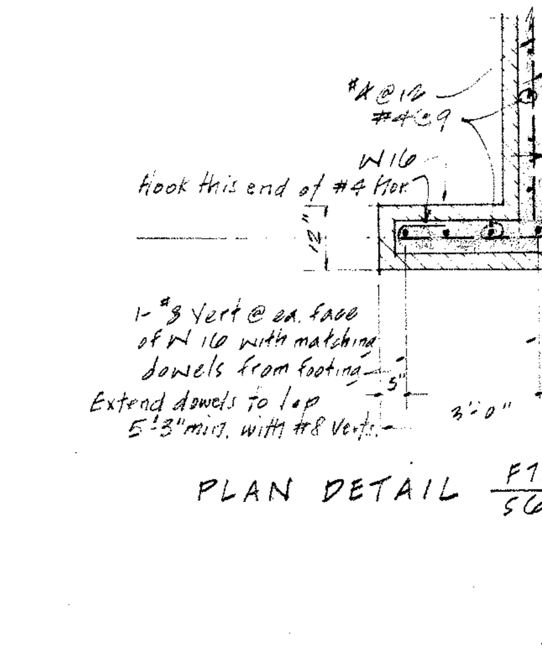
SHEET
S5
OF 19
DATE
SEPT. 26, 1969

FOUNDATION NOTES

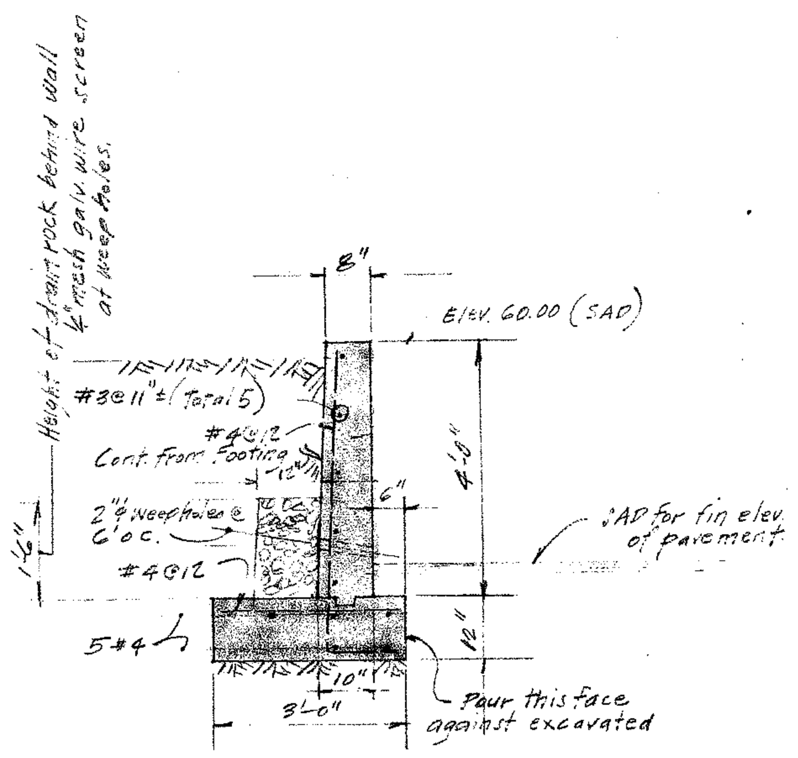
1. SEE GENERAL NOTES AND TYPICAL DETAILS, SHEETS S1 AND S2 FOR PERTAINING OR AMPLIFIED DETAILS NOT SHOWN ON THIS SHEET.
2. THE SOIL REPORT APPLICABLE TO THIS PROJECT SITE IS BY HARDING, MILLER, LAWSON & ASSOCIATES, ENTITLED "SOIL INVESTIGATION--TECHNICAL VOCATIONAL FACILITY, DIABLO VALLEY COLLEGE, CONCORD, CALIFORNIA", DATED JANUARY 14, 1969.
3. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED GROUND, AS EXCAVATED TO DEPTHS INDICATED ON THE FOUNDATION PLAN, OR ON APPROVED COMPACTED FILL CONTROLLED AND SUPERVISED BY A DULY APPOINTED SOILS ENGINEER, AND RE-EXCAVATED TO DEPTHS INDICATED ON THE FOUNDATION PLAN.
4. FOR BIDDING PURPOSES, THE ELEVATION OF THE BOTTOM OF FOOTINGS SHALL BE AS INDICATED ON THE FOUNDATION PLAN AND ON DETAILS (OR SCHEDULES). THESE FOOTING DEPTHS SHALL BE APPROVED DURING FOUNDATION EXCAVATION AND CONSTRUCTION BY THE SOIL ENGINEER. SEE SPECIFICATIONS FOR CONTRACT ADJUSTMENT DUE TO VARIATION FROM PLANS.
5. SOIL PRESSURES UNDER FOOTINGS AS DESIGNED DO NOT EXCEED 3000 PSF DUE TO COMBINED DEAD LOAD PLUS DESIGN LIVE LOADS, NOR EXCEED 4500 PSF DUE TO COMBINED DEAD LOAD PLUS DESIGN LIVE LOADS PLUS GOVERNING DESIGN WIND OR SEISMIC LOAD.
6. WHERE FOUNDATION WALL BACKFILL IS NECESSARY, THE BACKFILL SHALL BE PLACED SIMULTANEOUSLY ON EACH SIDE OF WALL, AND THE LEVEL ON ONE SIDE SHALL NOT EXCEED THE OTHER SIDE BY MORE THAN 6" DURING THIS OPERATION. FOR BASEMENT TYPE OF WALL, WITH BACKFILL ON ONE SIDE, BACKFILL SHALL BE PLACED NOT SOONER THAN 15 DAYS AFTER CONCRETE HAS BEEN POURED.
7. +0'-0" = ELEV. + 60'-0" FINISH FIRST FLOOR. COORDINATE THROUGHOUT FOR DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
8. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND ANY OTHER INCLUDED DRAWINGS, AND CONSULT WITH THE RESPECTIVE TRADES, FOR VERFICATION OF ALL ITEMS SHOWN OR NOT SHOWN ON STRUCTURAL PLANS PRIOR TO POURING CONCRETE FOOTINGS, GRADE BEAMS, WALLS, AND FLOOR SLABS. VERIFY LOCATIONS FOR OPENINGS OR PENETRATIONS THROUGH CONCRETE, CONCRETE CURBS, FLOOR DEPRESSIONS, FLOOR SLOPES AND DRAINS, INSERTS, ETC.
9. See Detail F1/S13 for typical subgrade under all interior concrete slab on grade. For requirements of fill or excavation at the building site with respect to Finish Floor elevations, see Architectural Dwg. 2 for approximate existing ground elevations from contours shown on Site plan. See Specifications for requirements of site preparation, fill materials, dampproof lining, etc.



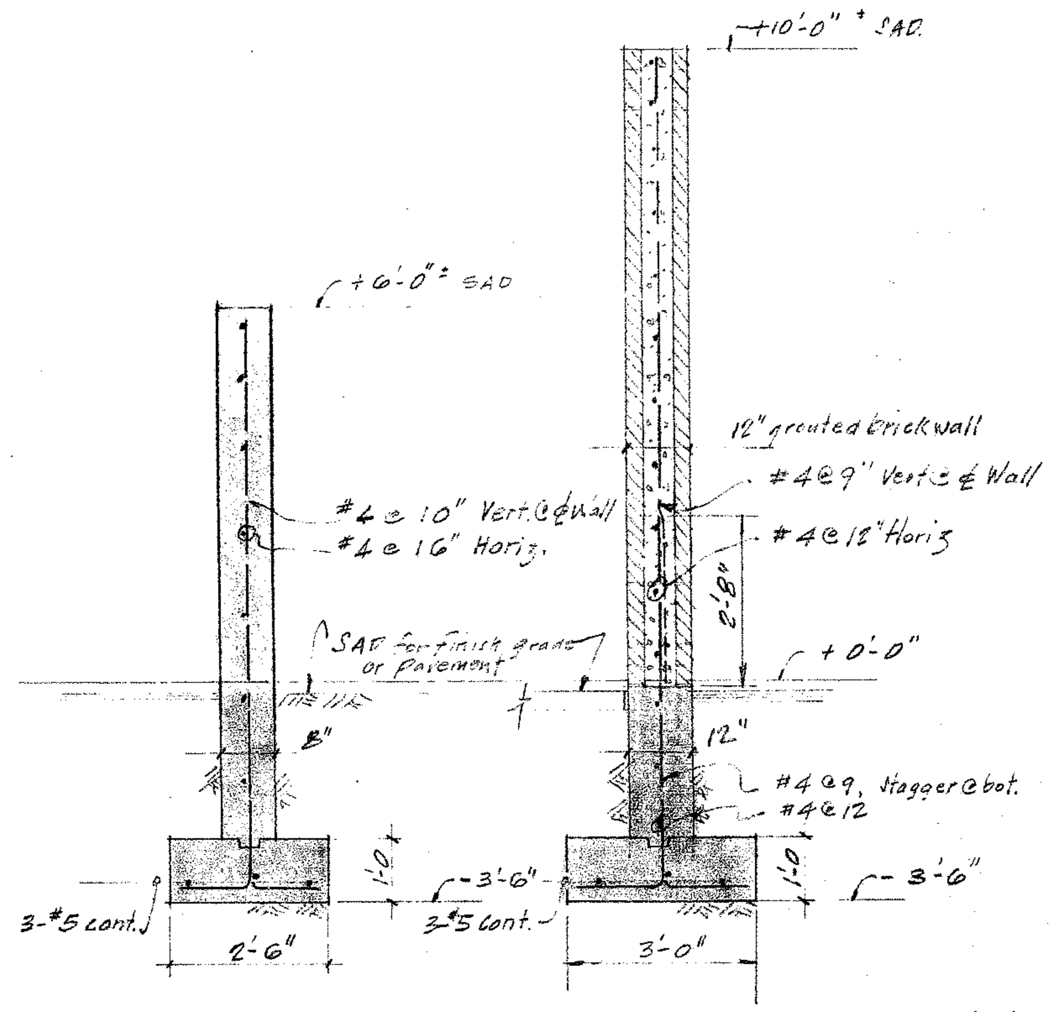
PLAN F3/S6



PLAN DETAIL F11/S6

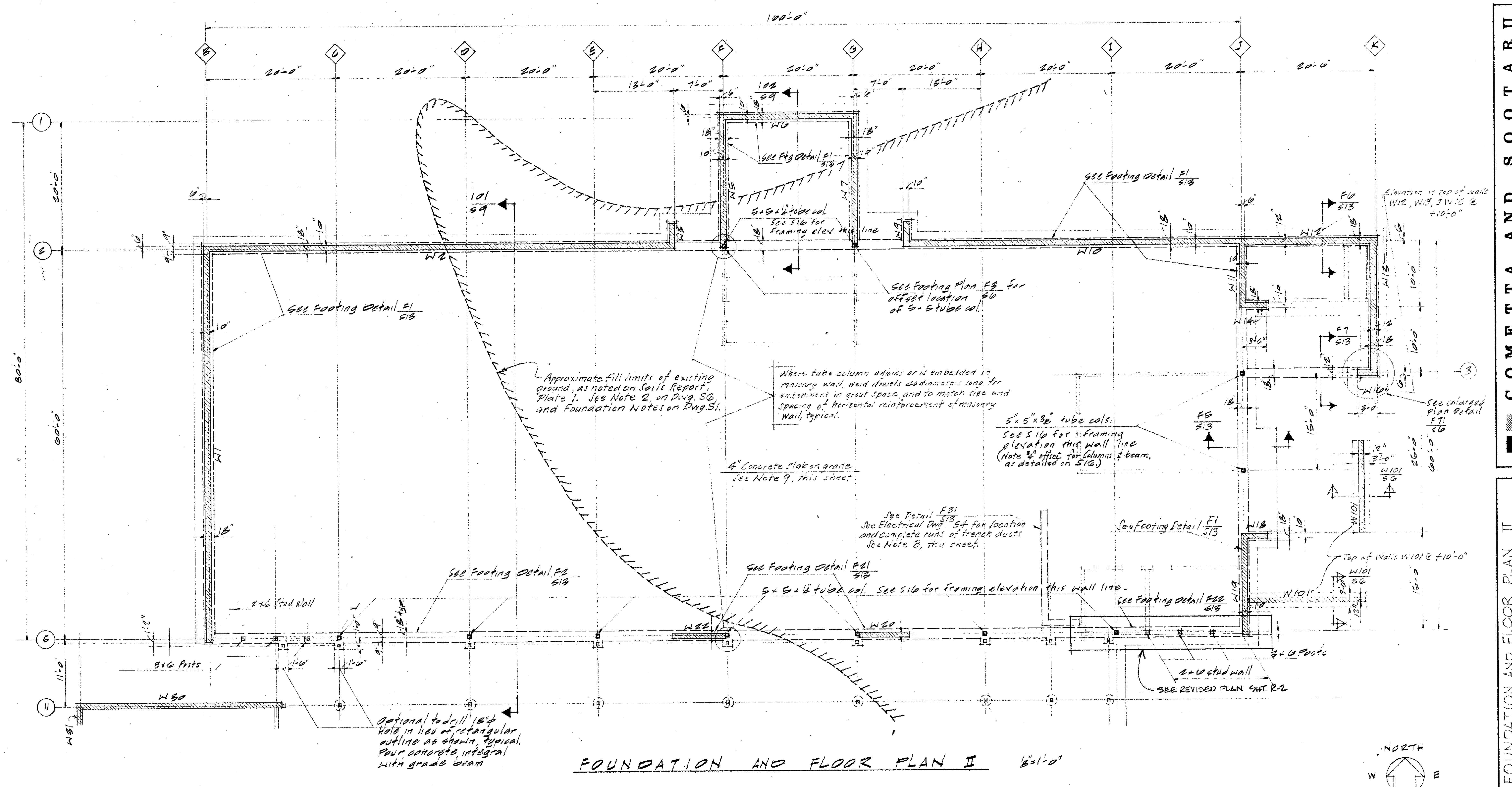


RETAINING WALL
See Architectural Drawing 3 for locations



SECTION W103/S6
¾"=1'-0"
See Architectural Dwg 3, for locations of 6' high concrete walls at Storage Yards 1 & 2.

SECTION W100/S6 & W101/S6
¾"=1'-0"
See this sheet for locations of W101
See Dwg S5 for locations of W100



FOUNDATION AND FLOOR PLAN II ⅛"=1'-0"

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FOUNDATION AND FLOOR PLAN II
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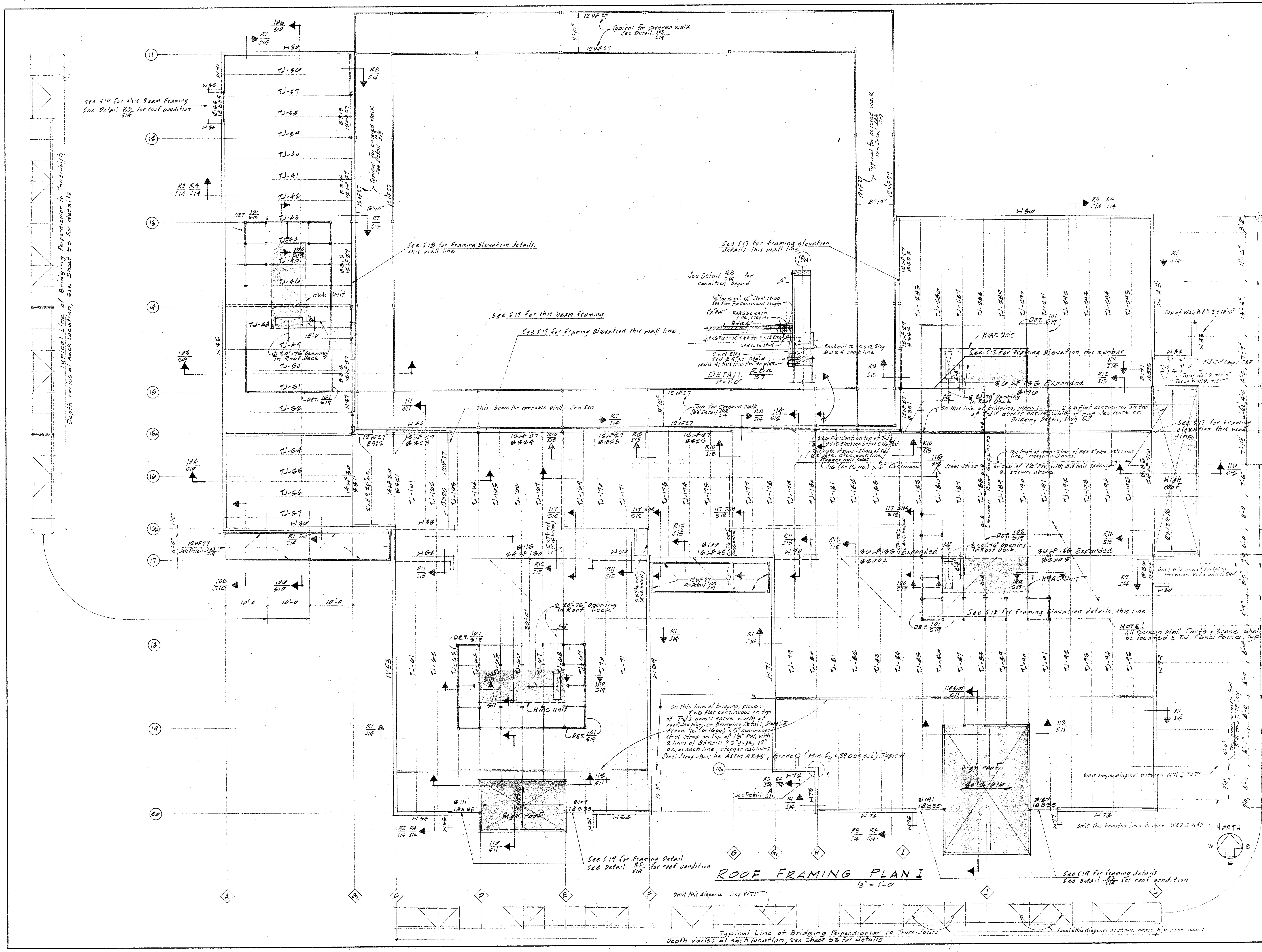

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A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

ROOF FRAMING PLAN I

TECHNICAL - VOCATIONAL FACILITY
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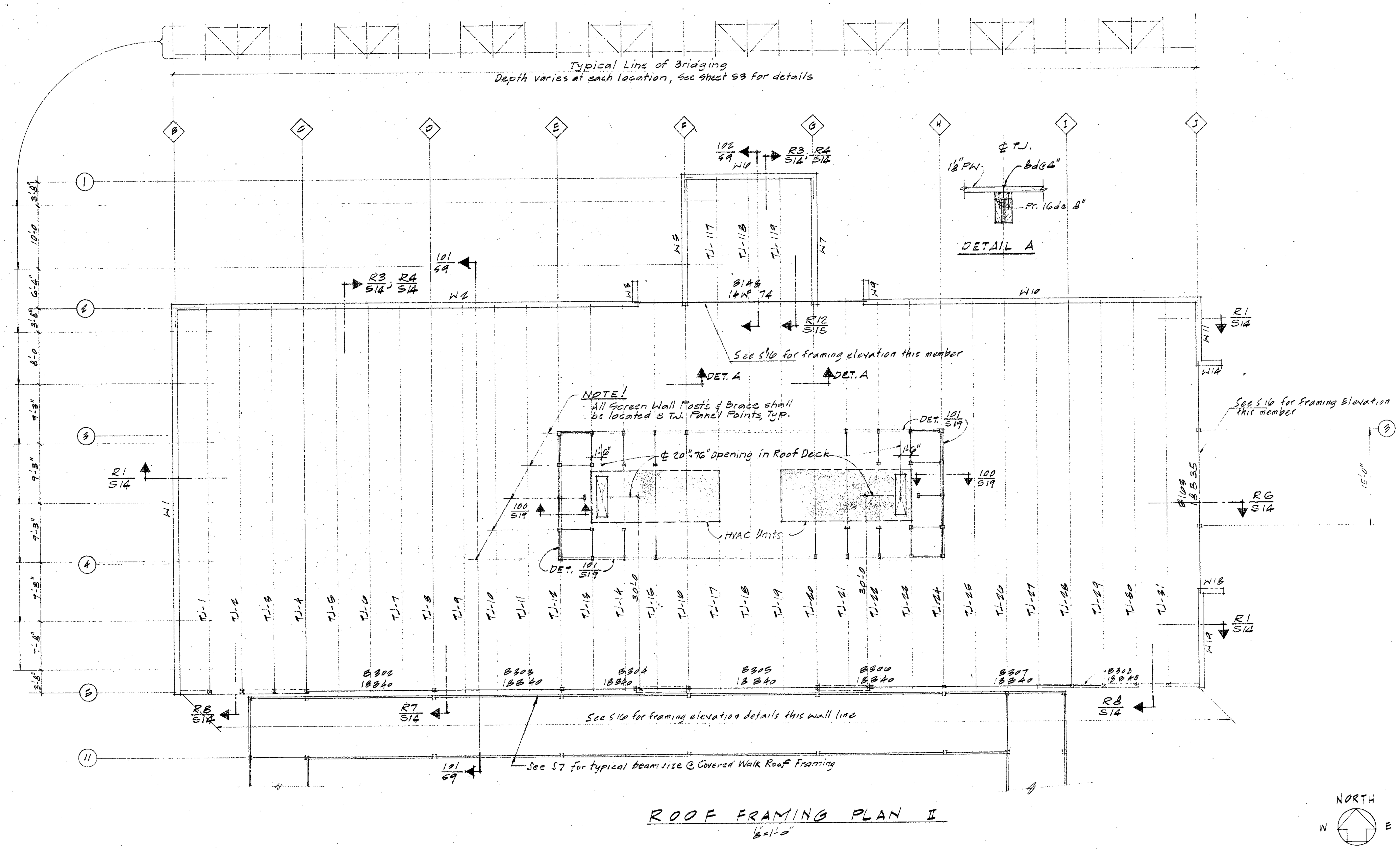

ROOF FRAMING PLAN II

1/8" = 1'-0"

ROOF FRAMING PLAN II

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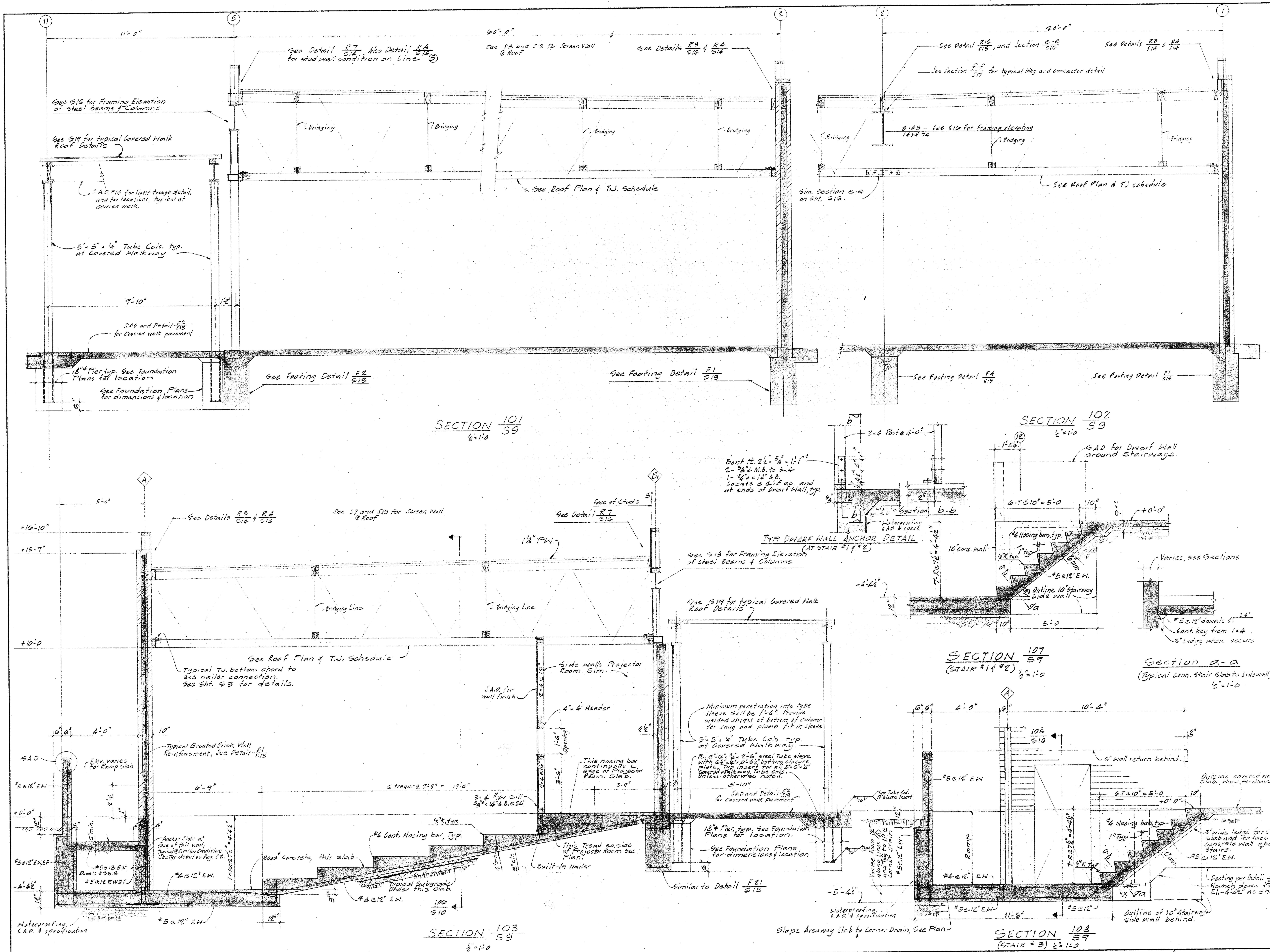
DATE SEPT. 26, 1969



STRUCTURAL SECTIONS

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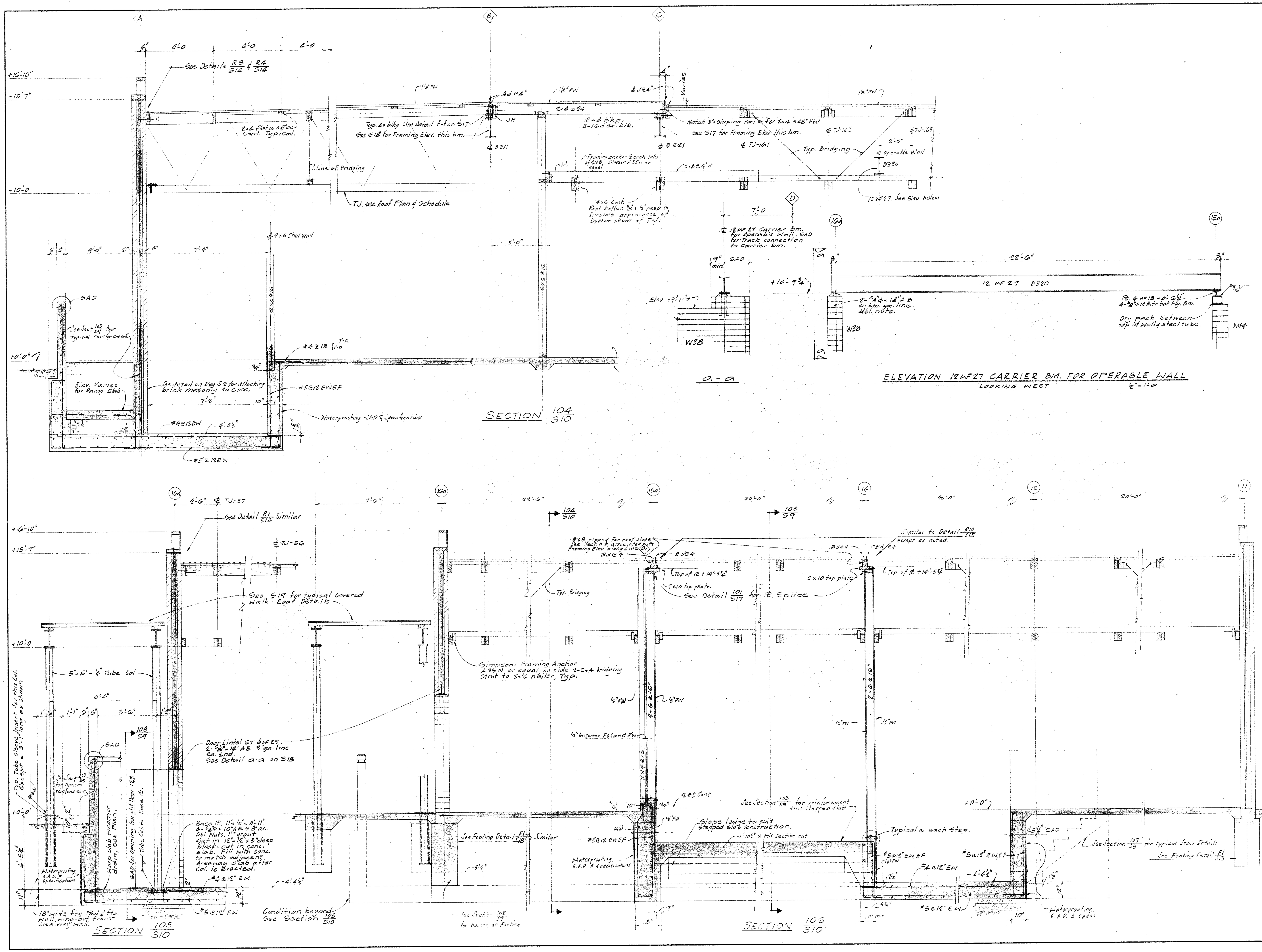
DATE SEPT. 26, 1968



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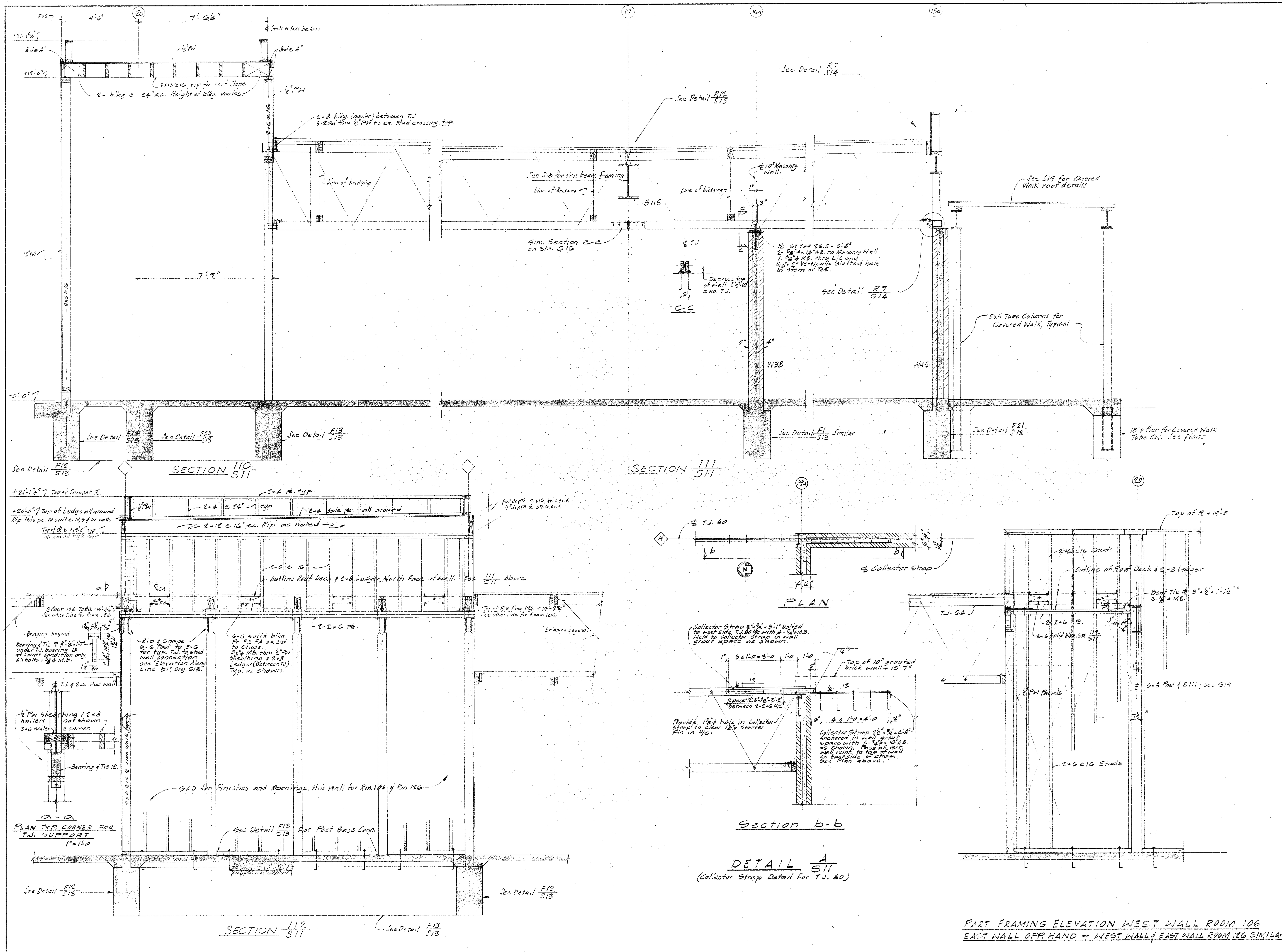

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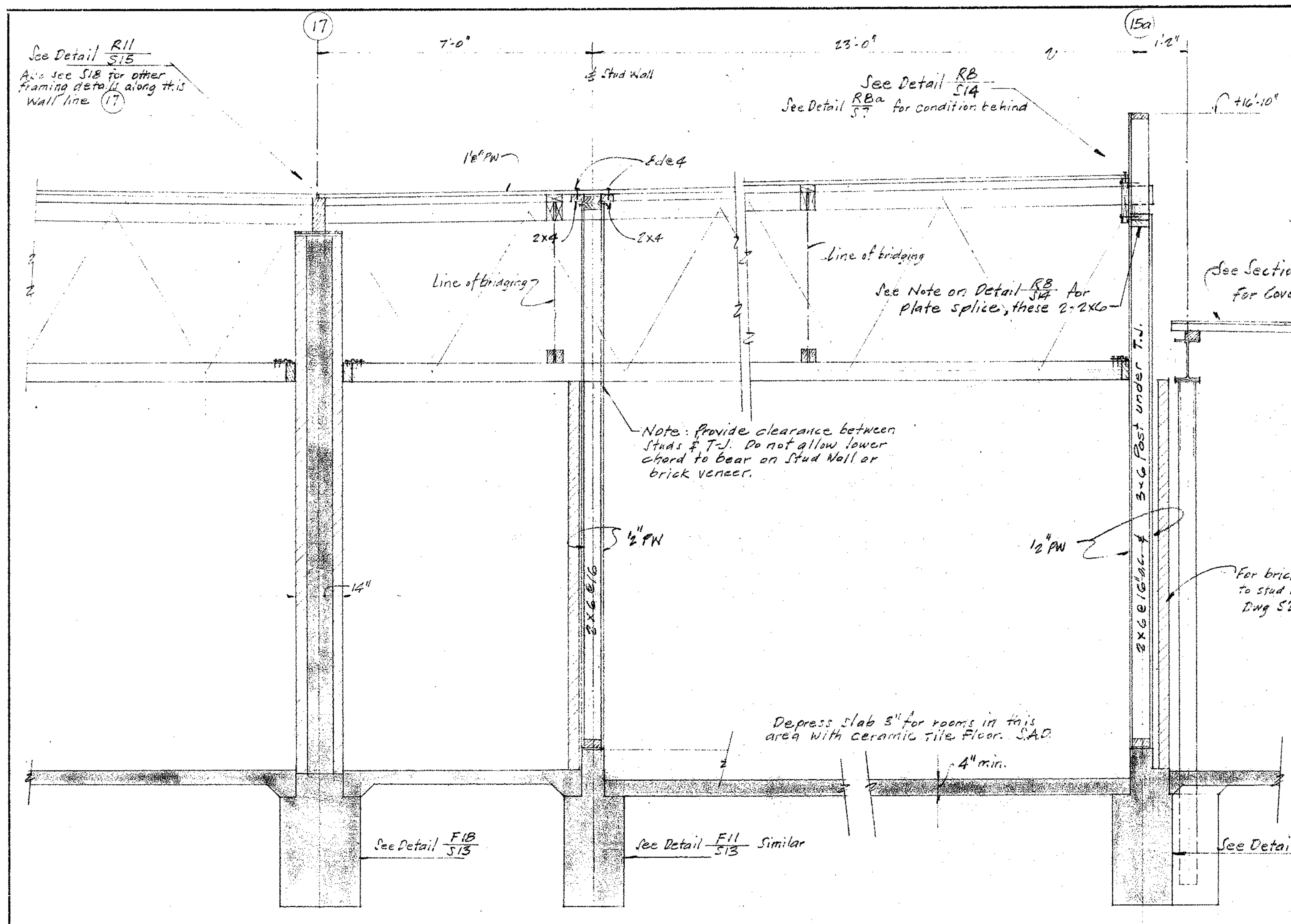
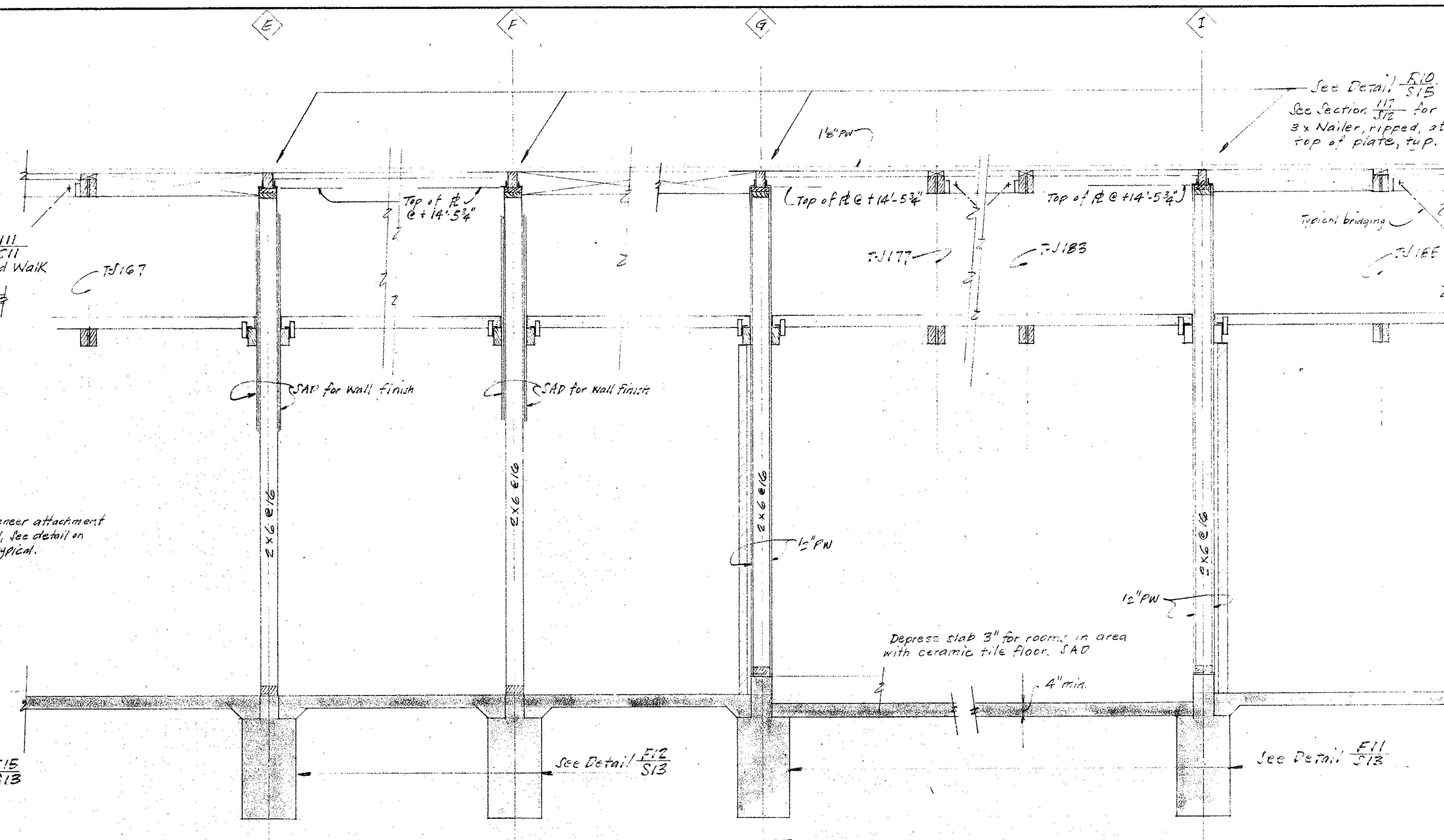
SEPT. 26, 1969



SECTION 114/S12



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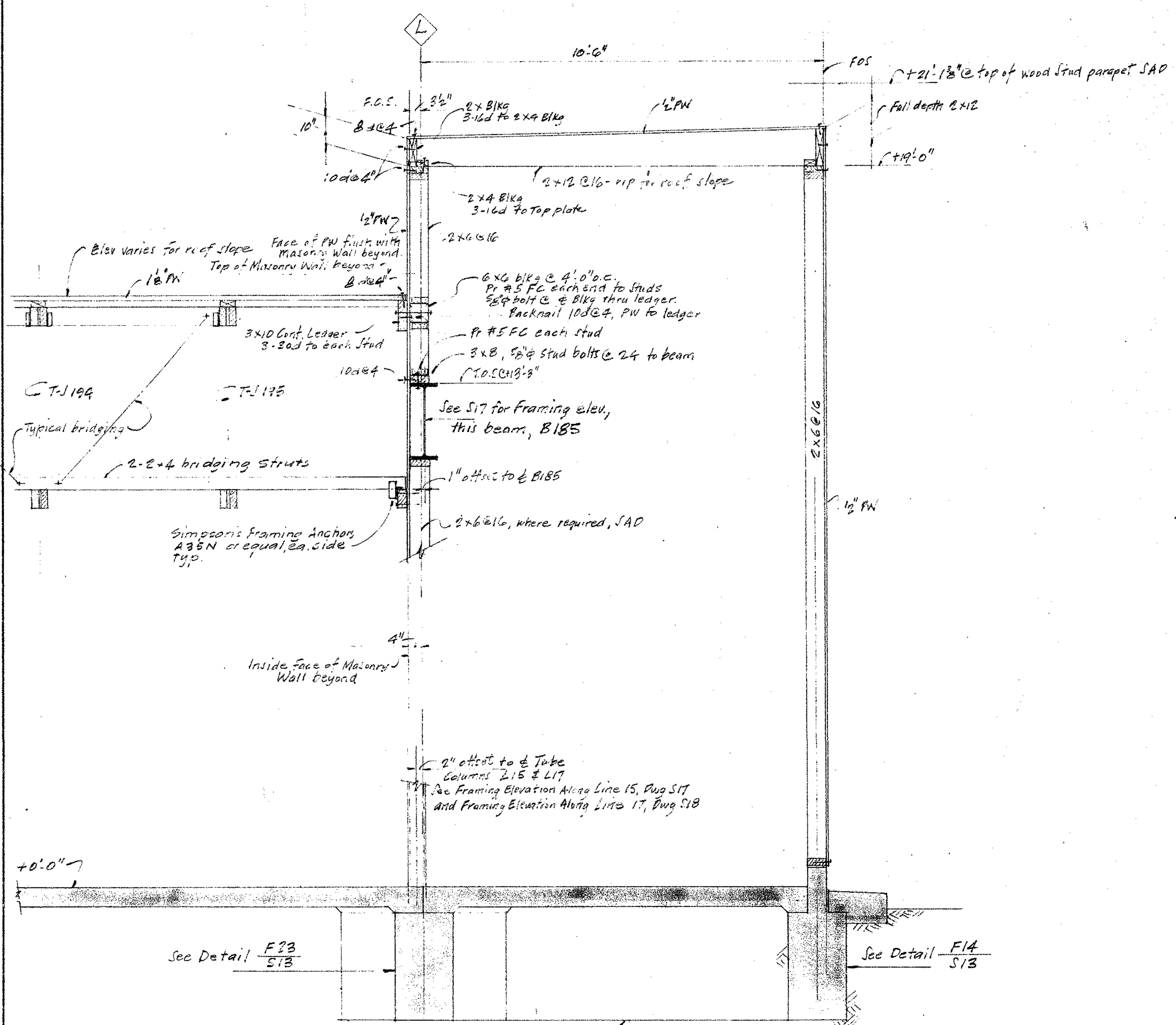
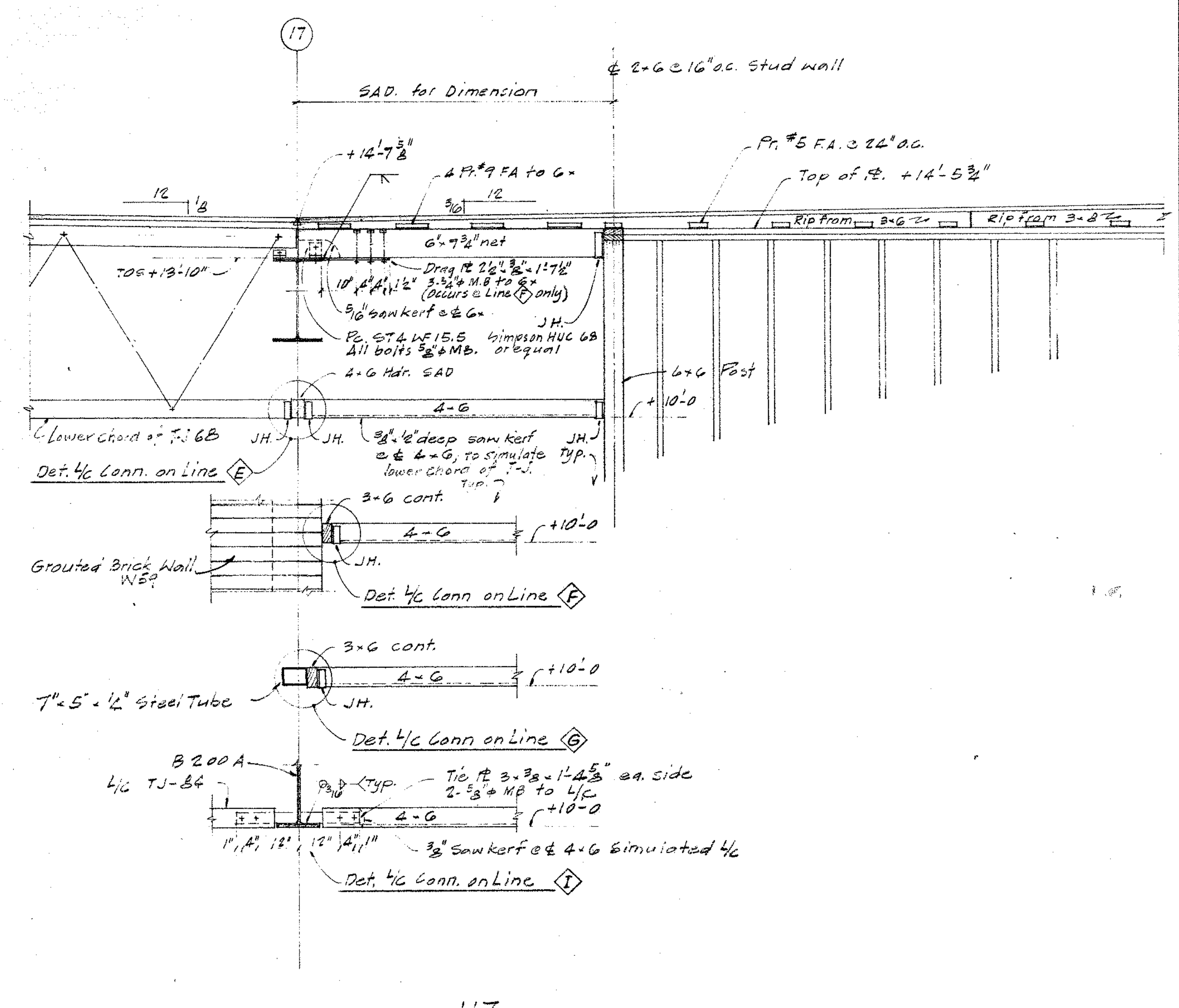


SECTION 116/S12

See Detail F14/S13 Similar



SECTION 117/S12

SIMULATED LOWER CHORD CONDITIONS ALONG LINES AS NOTED

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A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS F. W. CONFER, PARTNER

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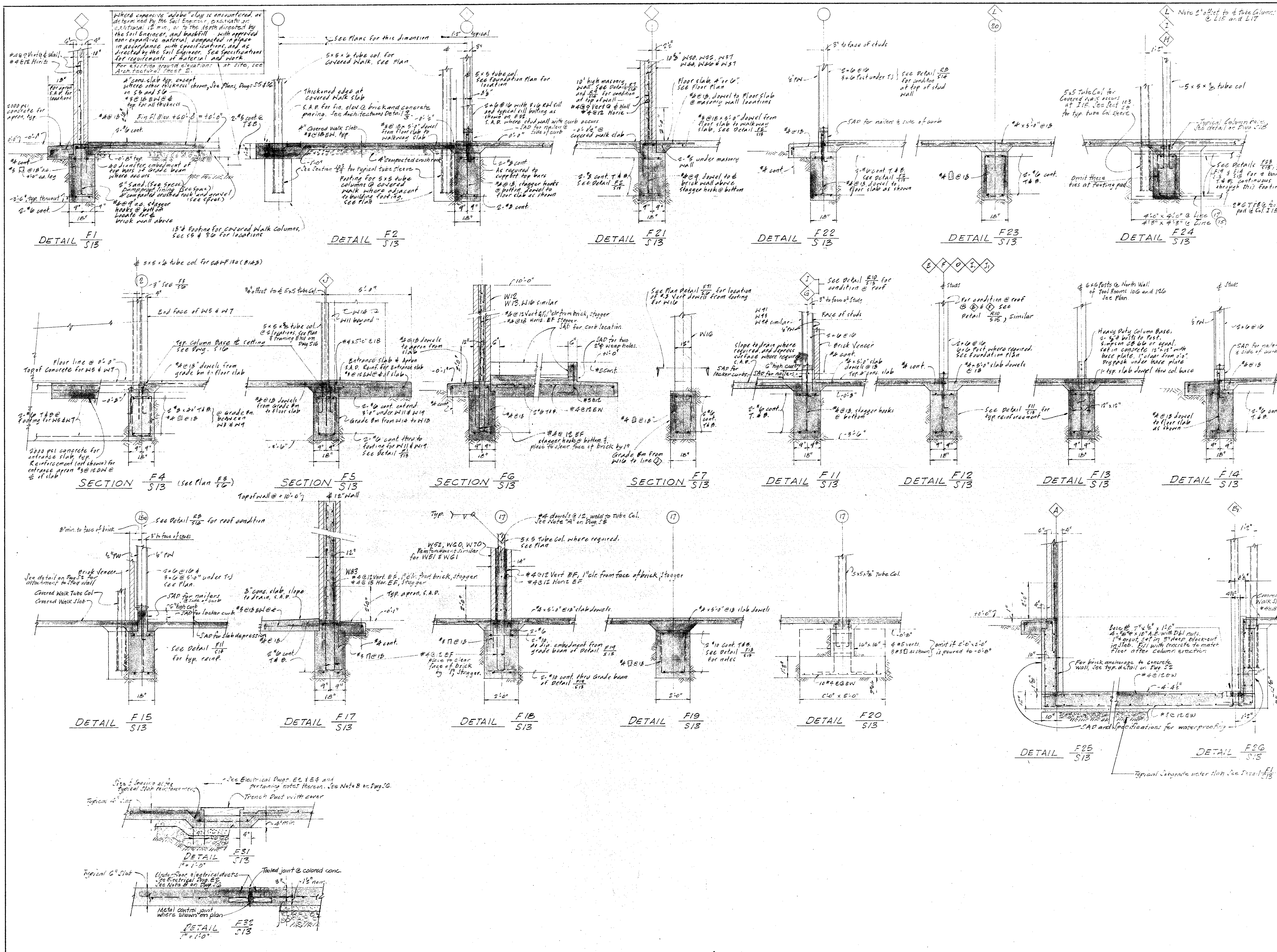
DATE SEPT. 26, 1969



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ASSOCIATED ARCHITECTURAL FIRMS

FOOTING, FLOOR, AND WALL DETAILS

TECHNICAL-VOCATIONAL FACILITY
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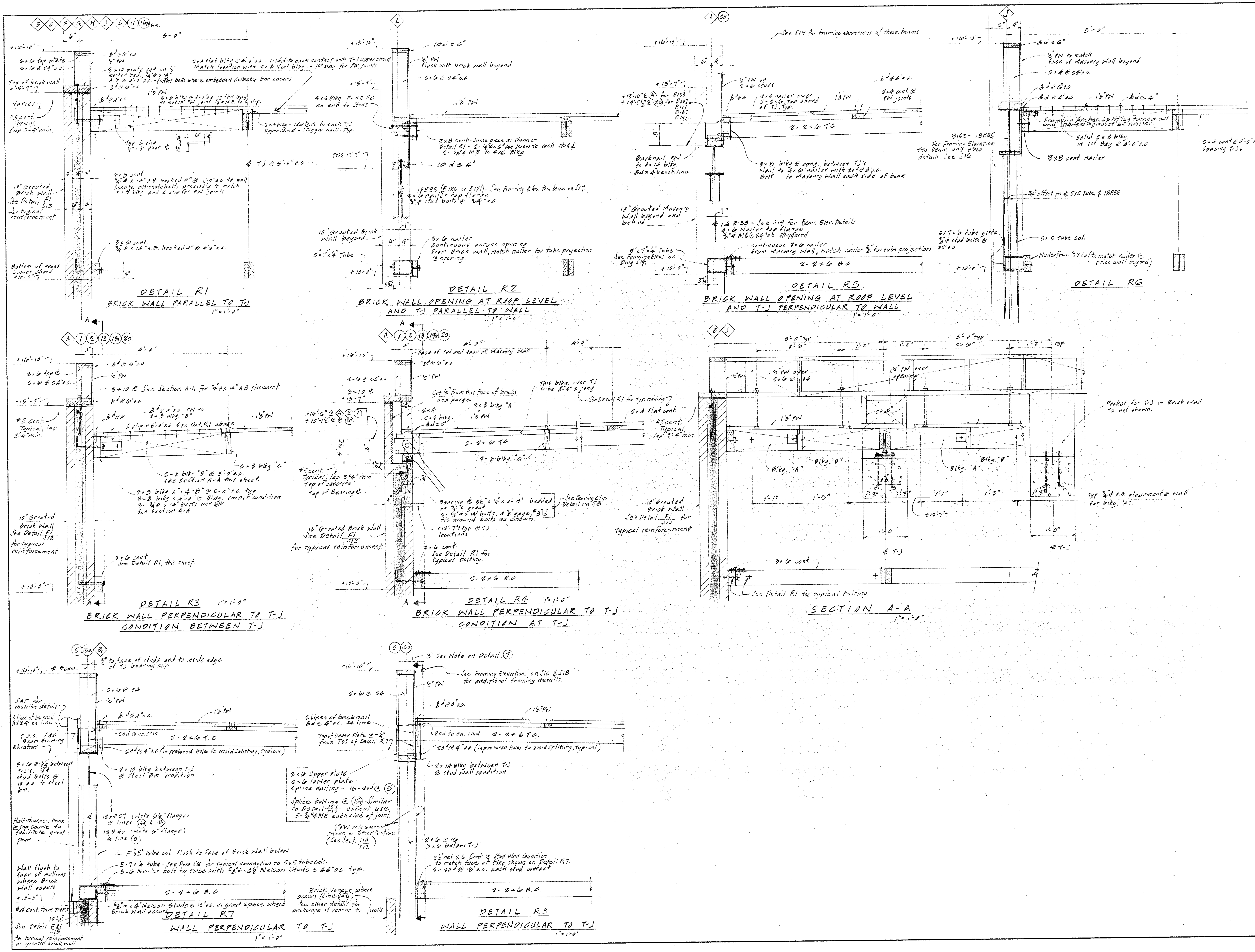

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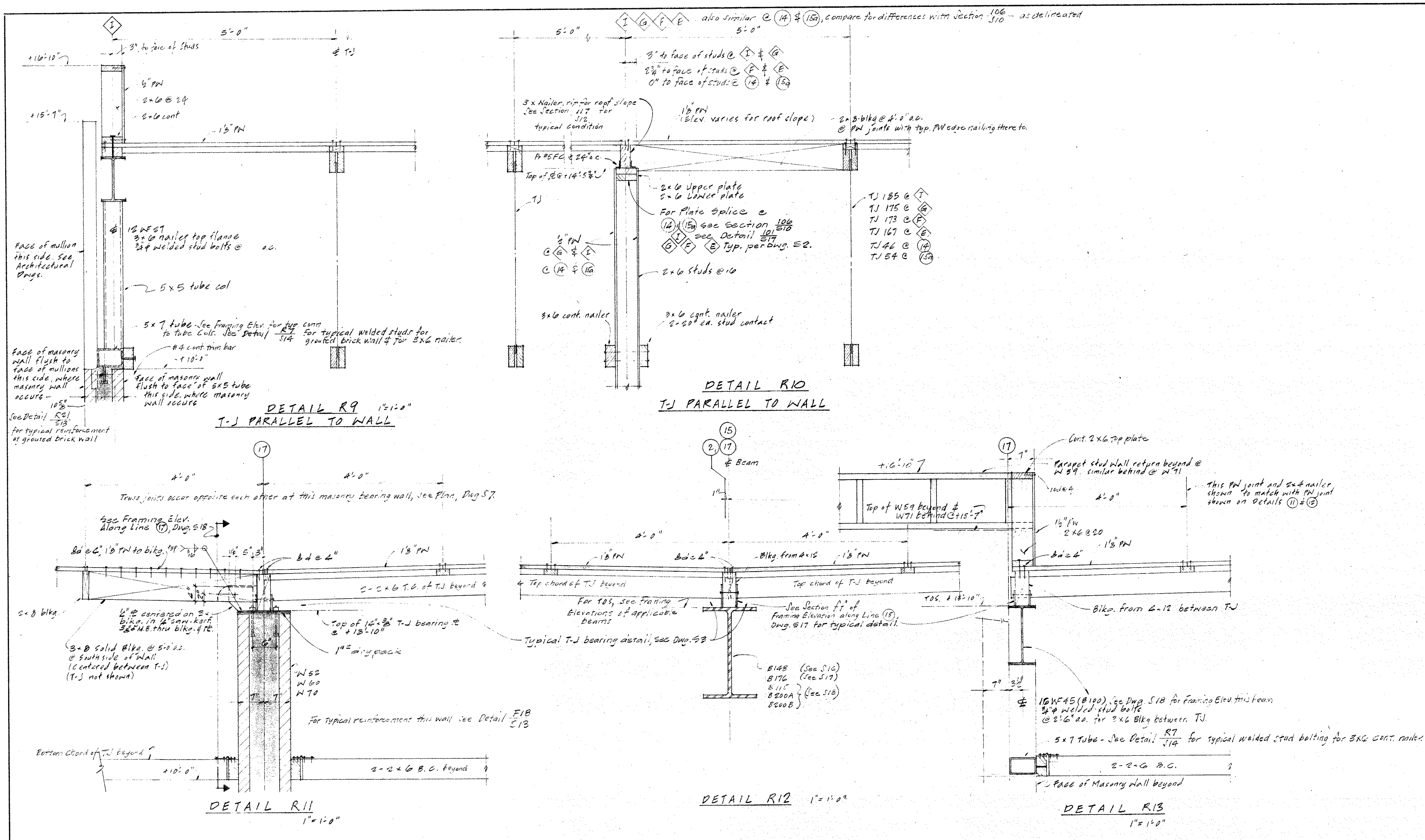
ROOF AND WALL DETAILS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL, CALIFORNIA

SHEET
S14
OF 19
DATE
SEPT. 28, 1968



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ROOF AND WALL DETAILS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
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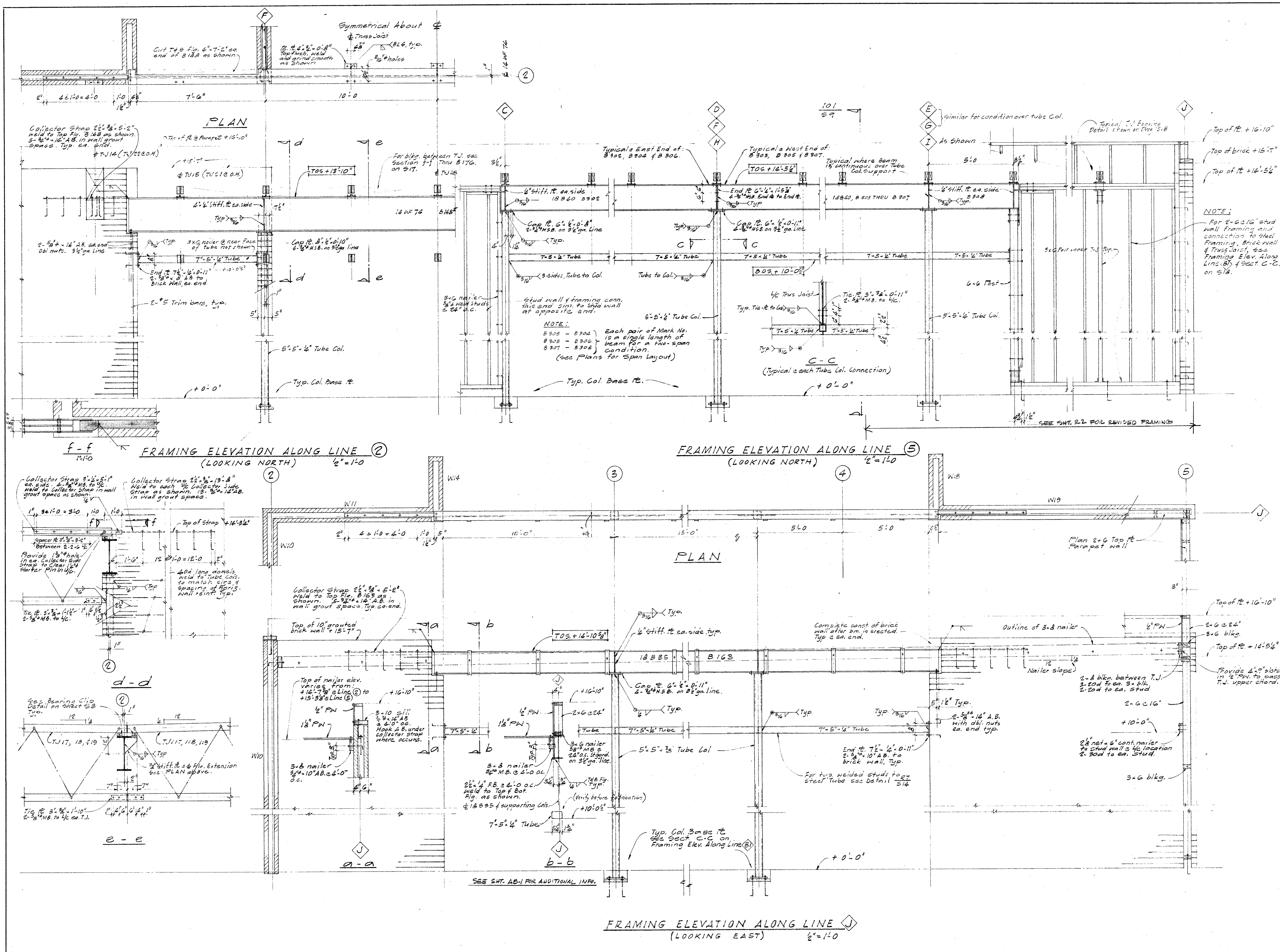
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET
S15
OF 19
DATE
SEPT. 20, 1969



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STEEL FRAMING ELEVATIONS AND DETAILS
TECHNICAL - VOCATIONAL FACILITY
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SEPT. 26, 1969

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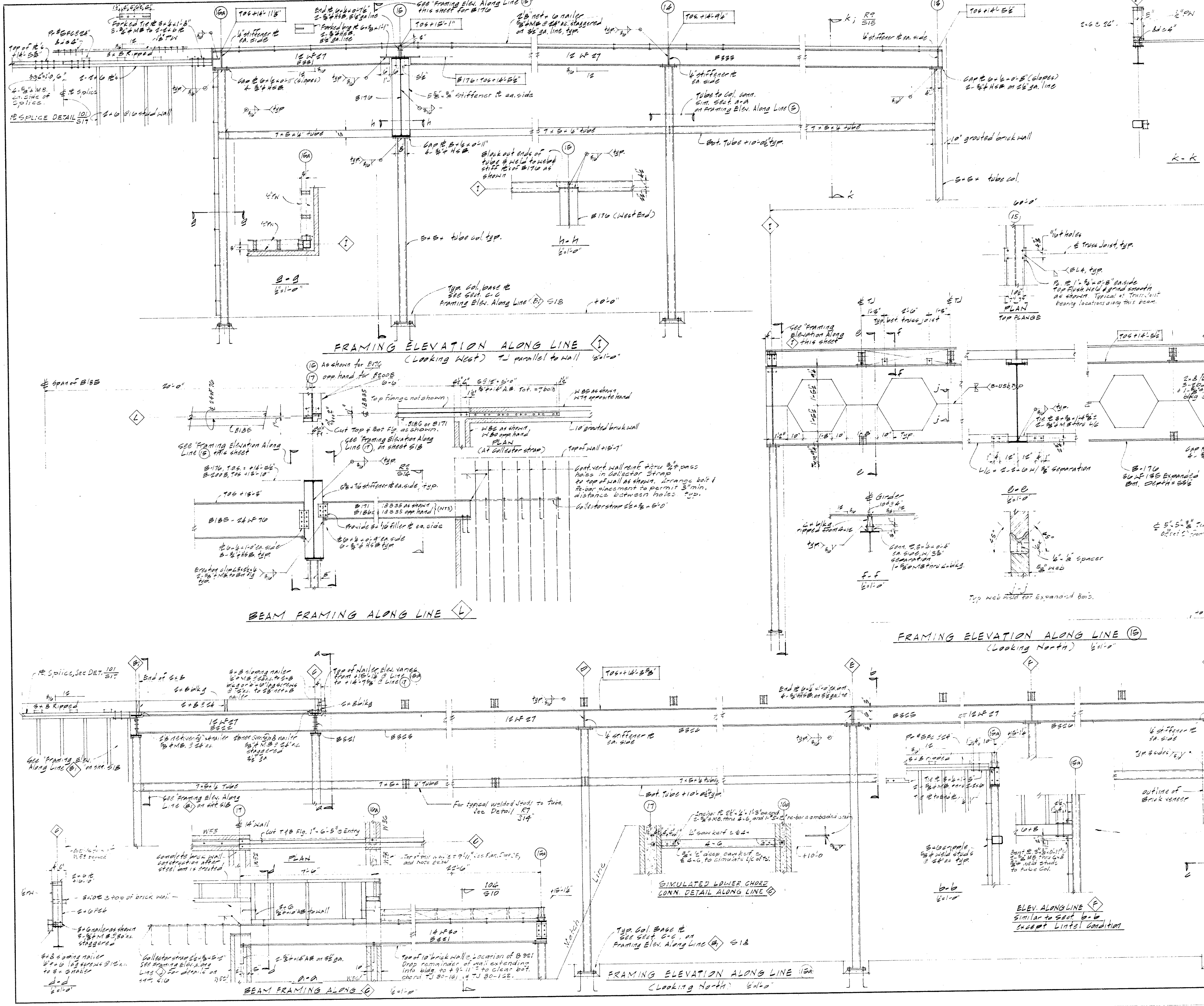
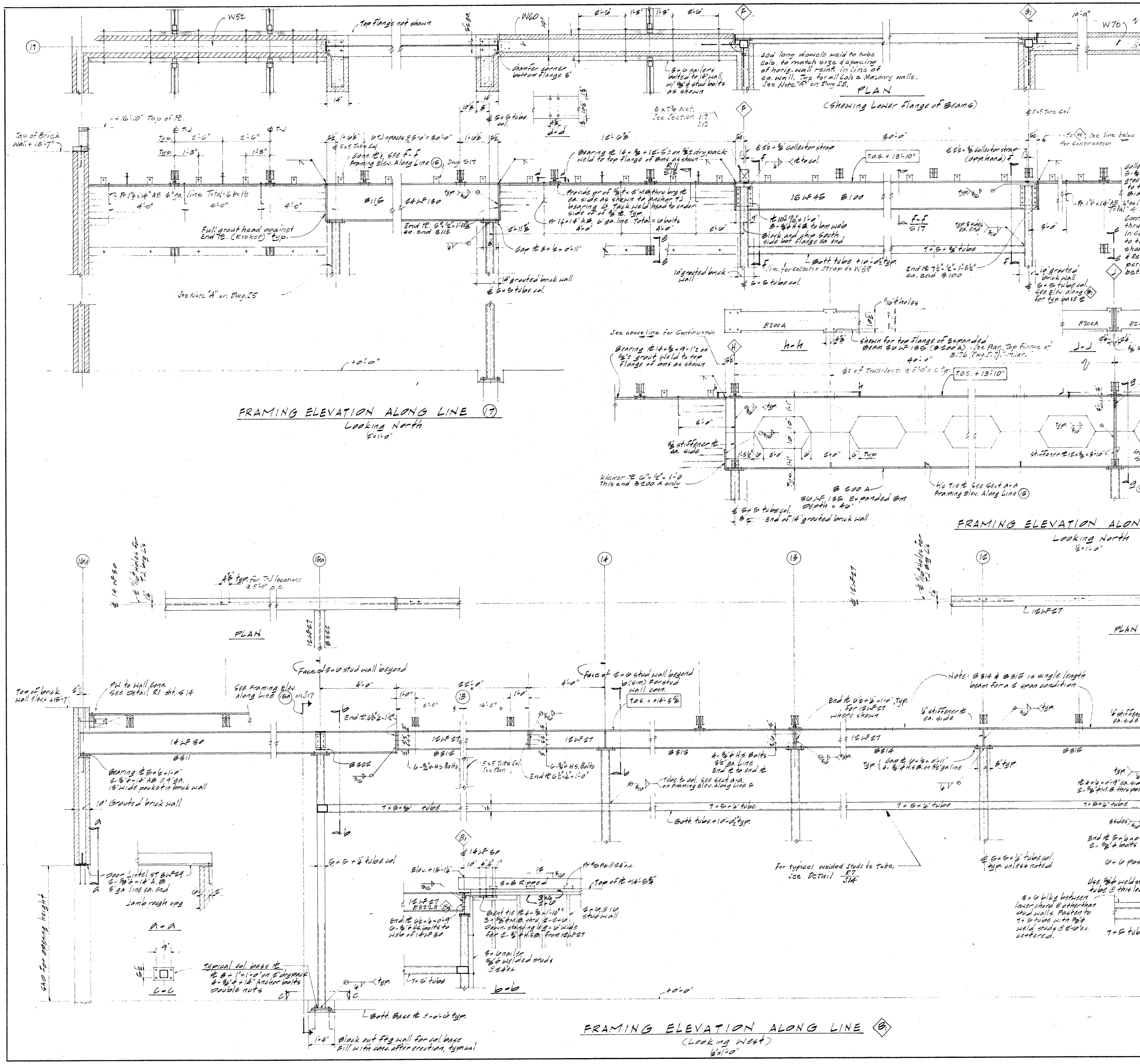


COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
E. A. COMETTA, PARTNER • F. L. R. CONFER, ARCHITECT • G. C. LARSEN, ARCHITECT • J. E. CROSSEN, ARCHITECT
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS F. W. CONFER, PARTNER

STEEL FRAMING ELEVATIONS AND DETAILS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING-TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET S17 OF 19
DATE SEPT. 26, 1969



ARCHITECT
STRUCT. ENGINEER
CONSULT. ENGINEER

MILTON G. LEONG

COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF.
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF.
ASSOCIATED ARCHITECTURAL FIRMS

STEEL FRAMING ELEVATIONS AND DETAILS
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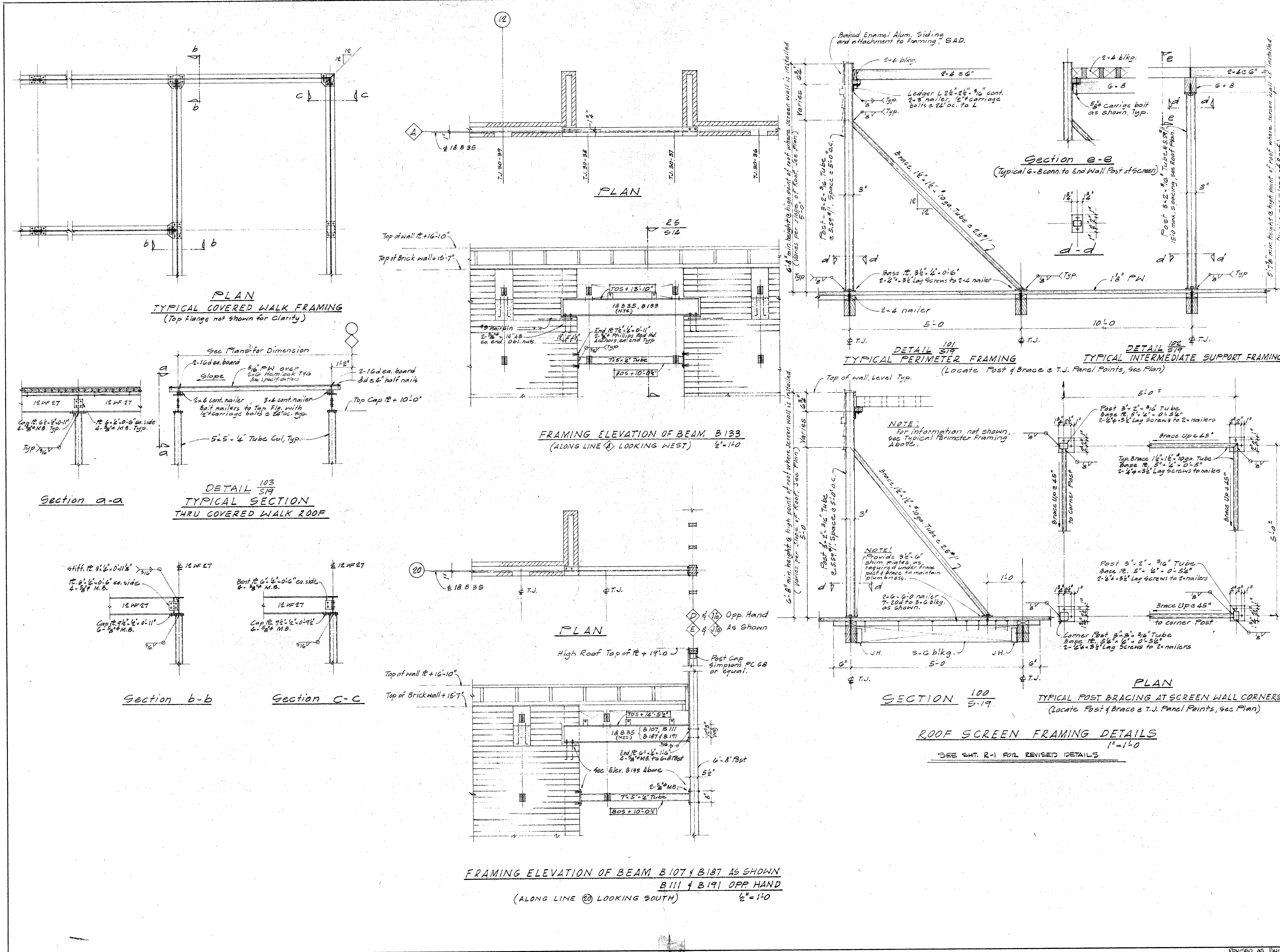
SHEET
S18
OF 19



MILTON G. LEONG
STRUCTURAL ENGINEER

COMETTA AND SOOTARU
CONNER + LARSEN + CROSSEN
ASSOCIATED ARCHITECTURAL FIRMS

MISCELLANEOUS FRAMING DETAILS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING - TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL, CALIFORNIA

SHEET S19 OF 19
DATE SEPT. 26, 1959

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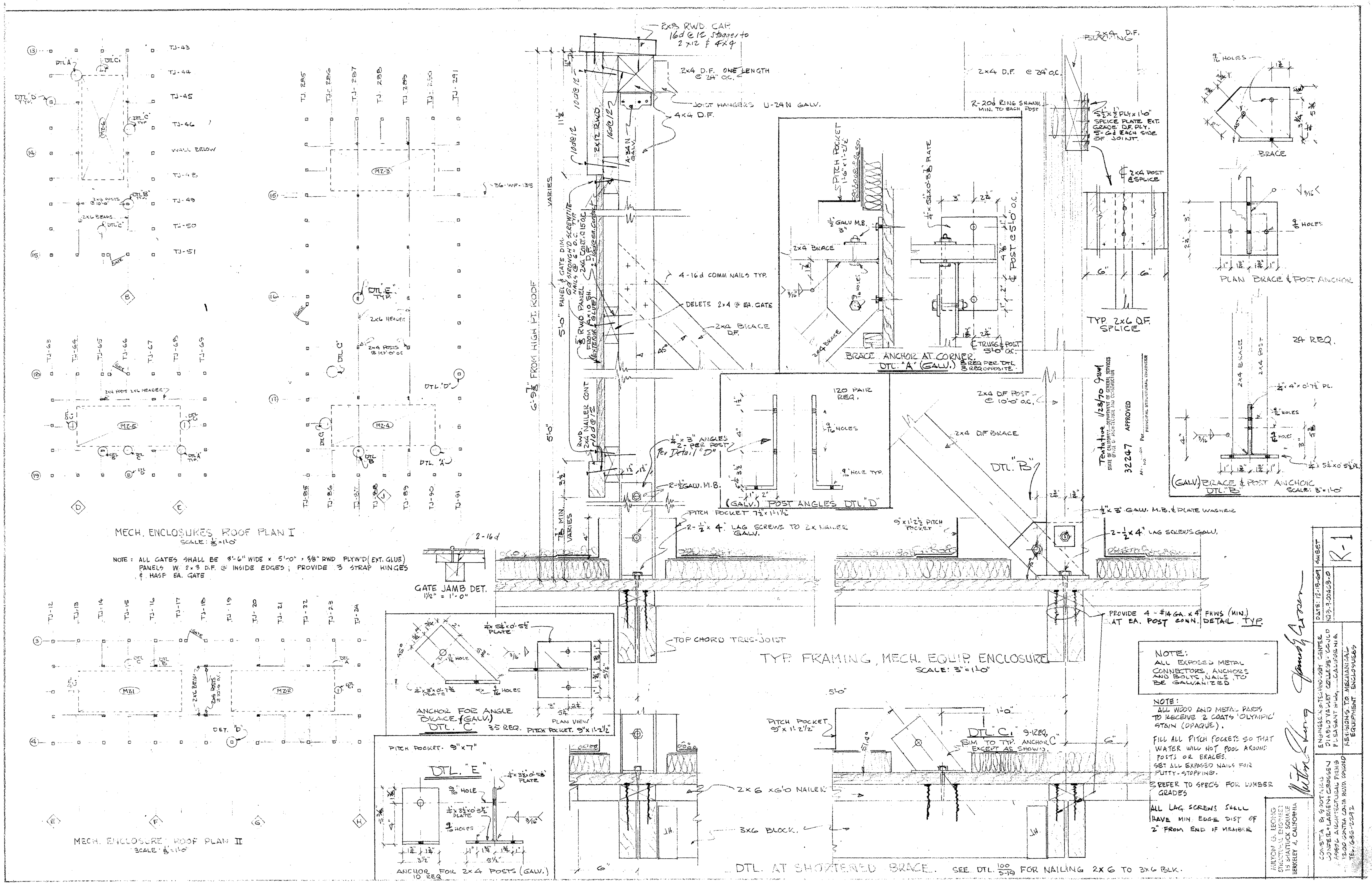
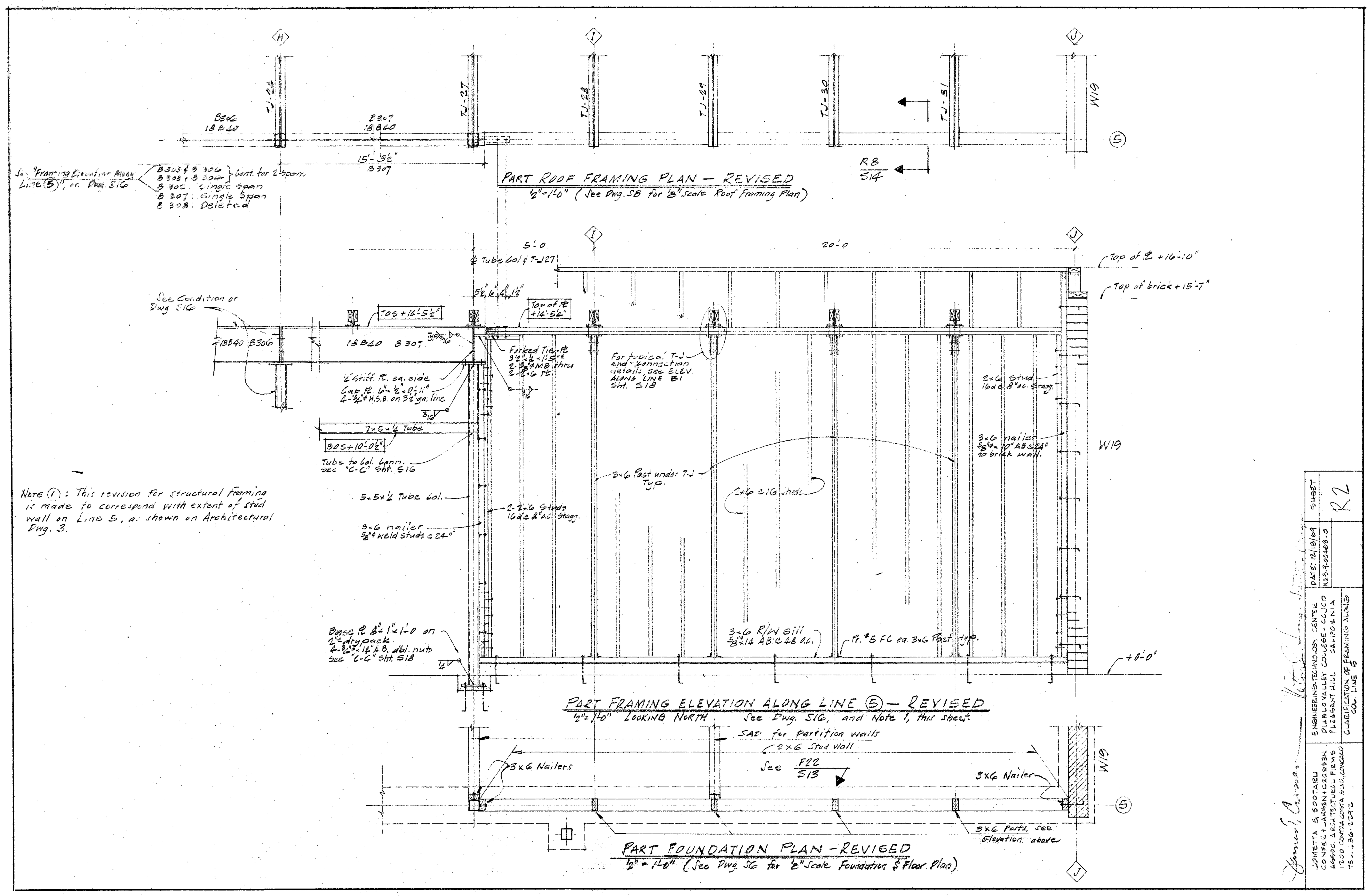
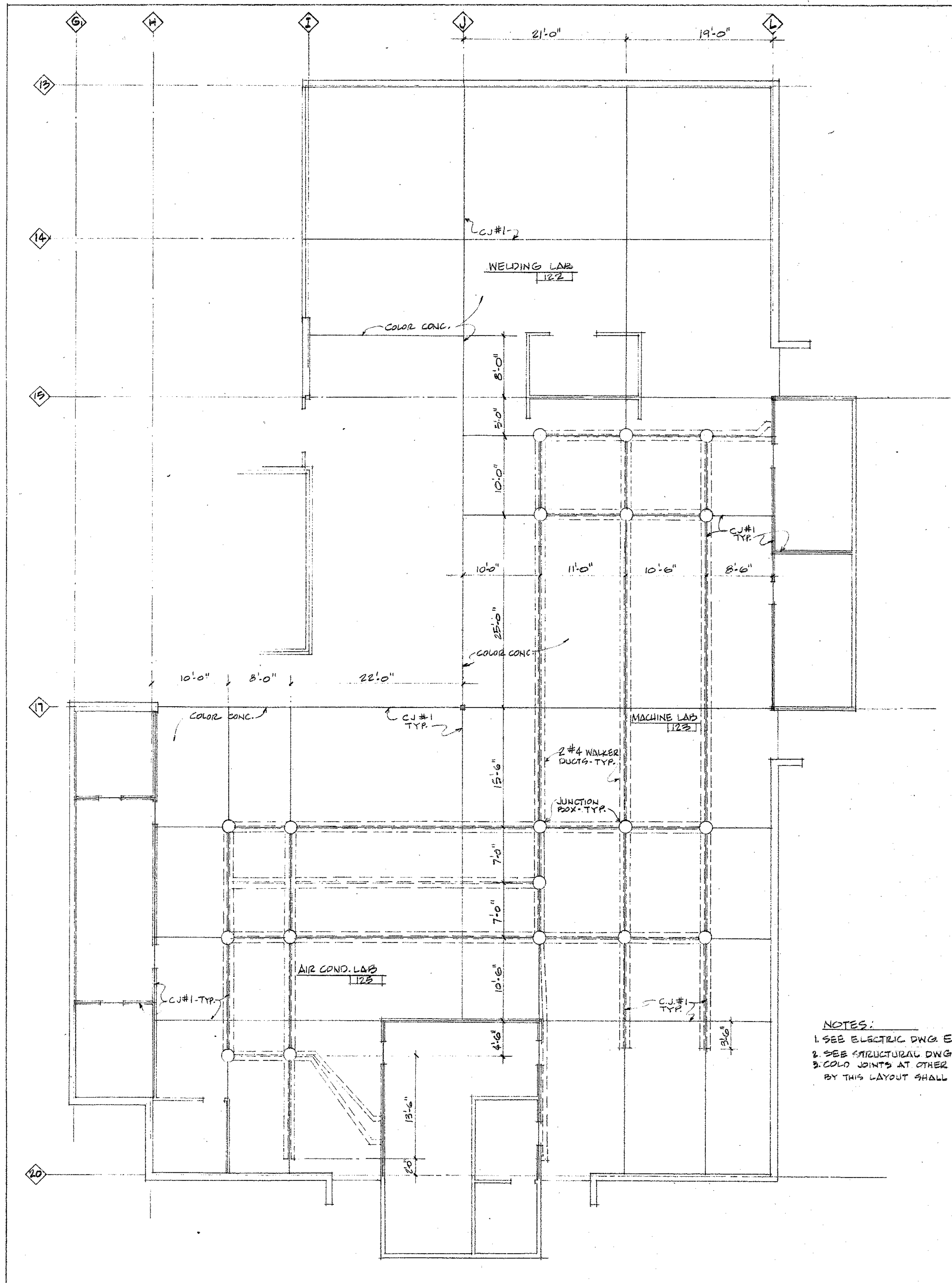
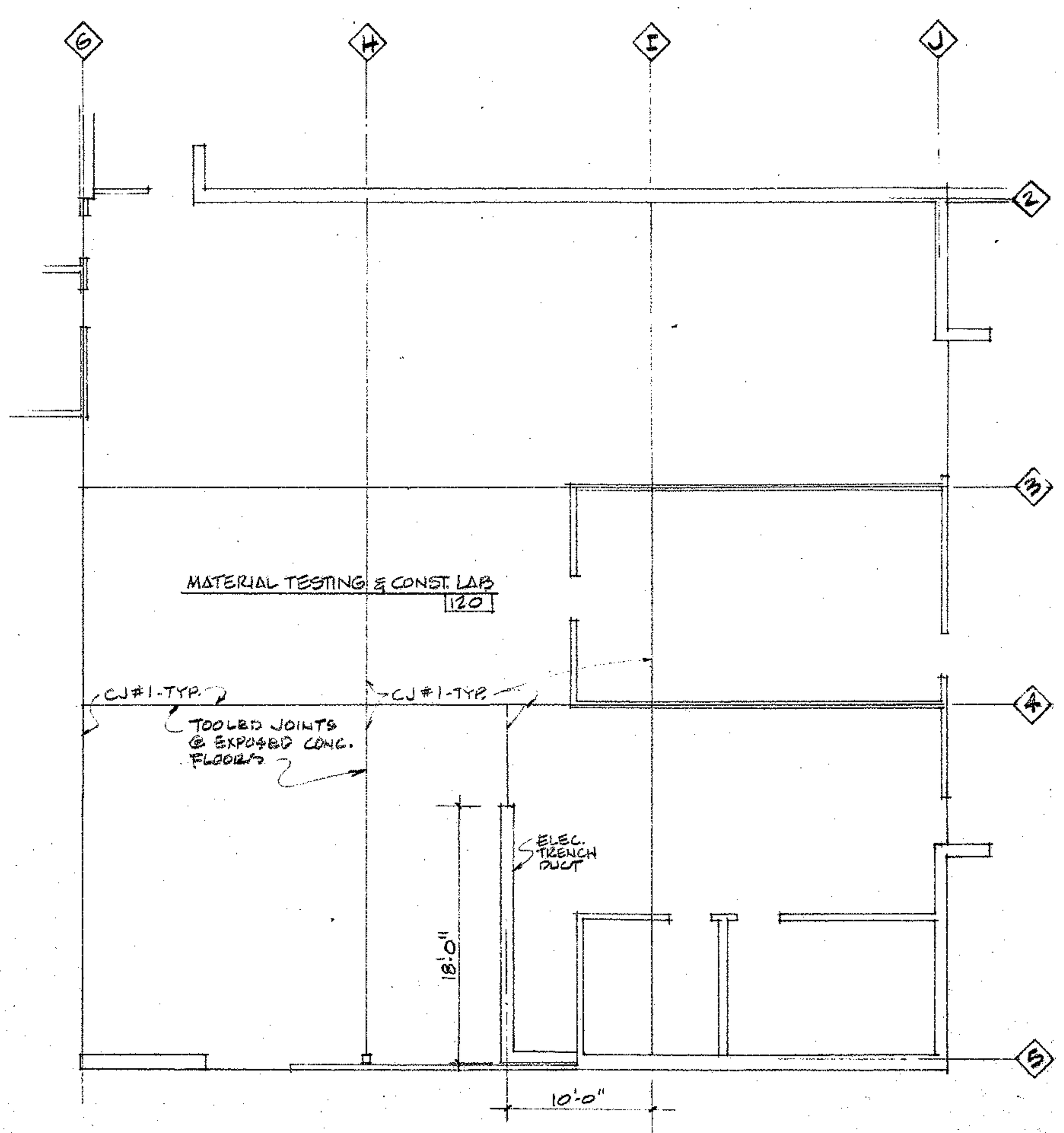

MECH. ENCLOSURES ROOF PLAN I
SCALE: 1/8"=1'0"
NOTE: ALL GATES SHALL BE 3'-6" WIDE x 5'-0", 5/8" RWD PLYW'D (EXT. GLUE) PANELS W. 2x3 D.F. @ INSIDE EDGES; PROVIDE 3 STRAP HINGES & HASP EA. GATE
MECH. ENCLOSURE ROOF PLAN II
SCALE 1/8"=1'0"
GATE JAMB DET.
1 1/2" = 1'-0"
TYP. FRAMING, MECH. EQUIP. ENCLOSURE
SCALE: 3"=1'0"
BRACE ANCHOR AT CORNER
DTL. "A" (GALV.)
(GALV.) POST ANGLES DTL. "D"
DTL. "B"
TYP. 2x6 D.F. SPLICE
PLAN BRACE & POST ANCHOR
(GALV.) BRACE & POST ANCHOR
DTL. "B"
ANCHOR FOR ANGLE BRACE (GALV.)
DTL. "C"
DTL. "E"
ANCHOR FOR 2x4 POSTS (GALV.)
DTL. AT SHORTENED BRACE. SEE DTL. 100/5-19 FOR NAILING 2x6 TO 3x6 BLK.
NOTE: ALL EXPOSED METAL CONNECTORS, ANCHORS AND BOLTS, NAILS, TO BE GALVANIZED
NOTE: ALL WOOD AND METAL PARTS TO RECEIVE 2 COATS 'OLYMPIC' STAIN (OPAQUE).
FILL ALL PITCH POCKETS SO THAT WATER WILL NOT POOL AROUND POSTS OR BRACES.
SET ALL EXPOSED NAILS FOR PUTTY-STOPPING.
REFER TO SPECS FOR LUMBER GRADES
ALL LAG SCREWS SHALL HAVE MIN EDGE DIST OF 2" FROM END OF MEMBER
APPROVED
R-1


PART ROOF FRAMING PLAN - REVISED
1/2" = 1'-0" (See Dwg. S8 for 1/8" Scale Roof Framing Plan)
See "Framing Elevation Along Line (5)", on Dwg. S16
B305 & B306 Cont. for 2-Spans
B303 & B304
B305: Single Span
B307: Single Span
B308: Deleted
PART FRAMING ELEVATION ALONG LINE (5) - REVISED
1/2" = 1'-0" LOOKING NORTH. See Dwg. S16, and Note 1, this sheet.
Note (1): This revision for structural framing is made to correspond with extent of stud wall on Line 5, as shown on Architectural Dwg. 3.
Top of ℄ +16'-10"
Top of brick +15'-7"
3x6 Post under T-J Typ.
2x6 Stud 16d @ 8" o.c. Stagg.
3x6 nailer
5x5x1/4 Tube Col.
3x6 R/W sill
+0'-0"
PART FOUNDATION PLAN - REVISED
1/2" = 1'-0" (See Dwg. S6 for 1/8" Scale Foundation & Floor Plan)
3x6 Nailers
2x6 Stud wall
SAD for partition walls
See F22/S13
3x6 Nailer
3x6 Posts, see Elevation above
W19
R2



CONTROL JOINT & ELECTRIC DUCT LAYOUT
@ EXPOSED CONC. SLAB @ FLOOR PLAN I 1/8"=1'-0"

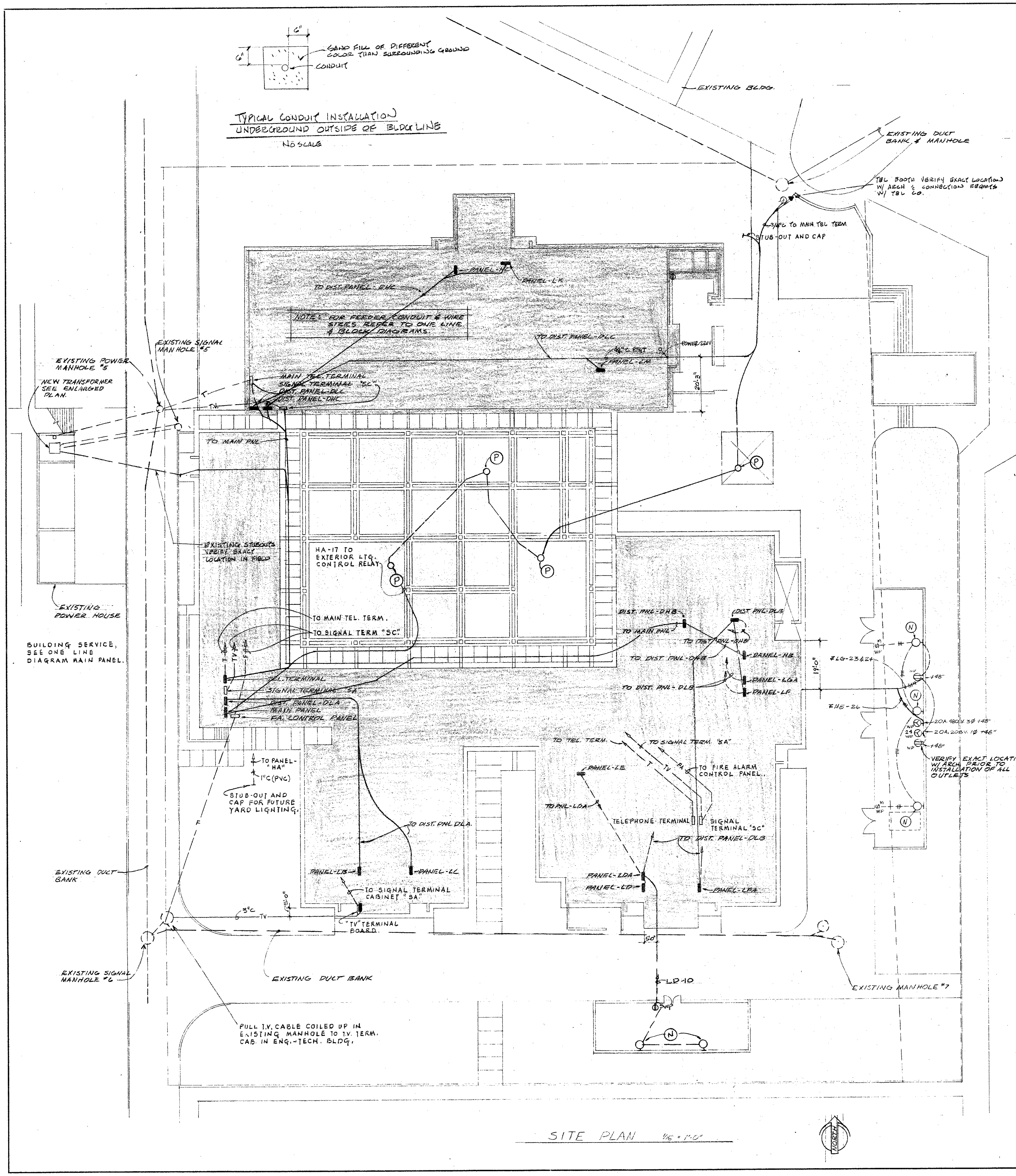


CONTROL JOINT LAYOUT @ EXPOSED
CONC. SLAB @ FLOOR PLAN II 1/8"=1'-0"

NOTES:

1. SEE ELECTRIC DWG. E-2
2. SEE STRUCTURAL DWG S-1 FOR COLD JOINT #1 (CJ#1)
3. COLD JOINTS AT OTHER SLAB LOCATIONS NOT COVERED BY THIS LAYOUT SHALL BE LOCATED AS APPROVED BY ARCH.

COMETTA & SOOTARU CONFER+LARSEN+GROSSEN ASSOC. ARCHITECTURAL FIRMS 1200 CONTRA COSTA BLVD, CONCORD TEL 686.2292	ENGINEERING-TECHNOLOGY CENTER DIABLO VALLEY COLLEGE - CCJCD PLEASANT HILL CALIFORNIA CONTROL JOINT LAYOUT @ EXPOSED CONC. SLABS.	DATE: 3-20-70 NO.3-9-00468-0	SHEET R8



GENERAL NOTES

1. ELECTRICAL DESIGN IS BASED ON SPECIFIC EQUIPMENT. EQUIPMENT ACTUALLY INSTALLED WHICH REQUIRES ALTERATIONS OR ADDITIONS TO THE DESIGNED SYSTEM SHALL BE PAID FOR BY THE GENERAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
2. MOUNTING HEIGHTS (+5'-0") ARE TO CENTER LINE OF DEVICE OR EQUIPMENT FROM FINISHED FLOOR LINE UNLESS NOTED OTHERWISE.
3. ALL BACKBOARDS FOR SURFACE MOUNTED ELECTRICAL EQUIPMENT SHALL BE FURNISHED & INSTALLED UNDER THIS SECTION OF THE WORK. BACK BOARDS SHALL BE 3/4" WP PLYWOOD, SIZE AS REQD. PAINT WITH TWO (2) COATS FLAT BLACK.
4. ALL CONTROL DEVICES, TIME SWITCHES, RELAYS, STARTERS, REMOTE CONTROL SWITCHES, PANELS, DIST. PNLS MAIN PANEL & TERMINAL CABINETS ETC, SHALL BE PROVIDED WITH ENGRAVED NAMEPLATES SECURED TO EQUIPMENT WITH SCREWS.
5. ALL ELECTRICAL EQUIPMENT & MECHANICAL EQUIPMENT WITH ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH TITLE 24, BLDG STANDARDS CALIF. ADMIN. CODE.
6. SEE MECHANICAL DRAWINGS & SPECIFICATION FOR CONTROL & EXACT LOCATION OF MECHANICAL EQUIPMENT. WIRING & INSTALLATION SHALL BE IN ACCORDANCE WITH MECHANICAL DRAWINGS & SPECIFICATIONS.
7. AS BUILT DRAWINGS. UPON COMPLETION OF THE PROJECT DELIVER TO THE ARCHITECT REPRODUCABLE AS BUILT DRAWINGS.
8. PRIOR TO TRENCHING OR EXCAVATION WORK, VERIFY EXISTING UTILITIES IN THE AREA. ANY DAMAGE TO EXISTING UTILITIES OR EXISTING YARD SURFACES SHALL BE REPAIRED AS DIRECTED BY THE ARCHITECT.

LIGHTING FIXTURE NOTES

1. ALL INCANDESCENT LAMPS SHALL BE INSIDE FROSTED, UNLESS NOTED OTHERWISE, STANDARD 130VOLT.
2. ALL FLUORESCENT LAMPS SHALL BE STANDARD COOL WHITE.
3. ALL RECESSED FIXTURES SHALL BE INSTALLED WITH PLASTER FRAMES & WIRED IN ACCORDANCE WITH LOCAL RULES & REGULATIONS.
4. ALL FLUORESCENT FIXTURES SHALL HAVE CLASS "P" ETL-CBM-HPF THERMALLY PROTECTED AUTOMATIC RESETTING BALLAST, RADIO NON INTERFERING, FOR 277 VOLT OPERATION UNLESS NOTED OTHERWISE.
5. SURFACE FLUORESCENT FIXTURE ON LOW DENSITY CEILING TILE SHALL BE APPROVED FOR SUCH USE OR MOUNTED ON 1/2" SPACERS.
6. EXIT LIGHTS SHALL HAVE TWO (2) SEPARATE CIRCUITS, ONE CIRCUIT SEPARATE FROM EVERY OTHER CIRCUIT IN THE BUILDING PER U.B.C. 3312 (C).
7. ALL FLUORESCENT FIXTURES OUTSIDE OF THE BLDG OR IN AREAS SUBJECT TO LOW OR WINTER TEMP. SHALL BE PROVIDED WITH LOW TEMP. BALLAST.

PANELBOARD NOTES

1. ALL PANELBOARDS SHALL BE EQUIPPED WITH POSITIVE "OFF" LOCKOUT DEVICES, PADLOCKING TYPE, FOR CIRCUITS FEEDING FLUORESCENT LIGHTING FIXTURES PER TITLE 24, BLDG STANDARDS, CALIF. ADMIN. CODE.
2. ALL PANELBOARDS, DIST. PNLS, MAIN PANEL & TERMINAL CABINETS SHALL BE EQUIPPED WITH CORBIN LOCKS MASTER KEY CAT #15. VERIFY LOCKS & KEYS WITH ARCHITECT. LOCK COMPANY SHALL DELIVER MASTER KEYS TO ARCHITECT.
3. FURNISH TEN (10) LOCKING DEVICES PER PANEL & INSTALL ON CIRCUIT BREAKER HANDLES AS DIRECTED BY ARCHITECT.
4. FROM EACH FLUSH PANELBOARD INSTALL 3-1" MTC & CAP IN NEAREST ACCESSABLE CEILING SPACE.
5. SEE SPECIFICATIONS FOR ADDITIONAL PANELBOARD REQUIREMENTS.

SYMBOL LIST

- INCANDESCENT CEILING FIXTURE, SMALL LETTER INDICATES CONTROLLING SWITCH.
- INCANDESCENT WALL MOUNTED FIXTURE, LETTERS SAME AS ABOVE.
- INCANDESCENT RECESSED FIXTURES, LETTERS SAME AS ABOVE.
- FLUORESCENT FIXTURE, LETTERS SAME AS ABOVE.
- OUTLET OR JUNCTION BOX WITH BLANK COVER.
- SPECIAL RECEPT 250V 20A 3W, UNLESS NOTED OTHERWISE, +12" OR AS NOTED. PROVIDE MATCHING CORD GRIP CAP FOR EACH RECEPTACLE.
- FLUSH FLOOR BOX WITH DUPLEX FLUSH RECEPT. LEW ELECTRIC CO. #632-SA-DFB. PROVIDE CARPET FLANGE WHERE REQD.
- FLUSH FLOOR TEL. BOX, LEW ELECTRIC CO #532-XD WITH #530 BELL NOZZLE. PROVIDE CARPET FLANGE AS REQD.
- TEL. OUTLET 4 11/16" SQ BOX WITH ONE HOLE COVER PLATE +12" UNLESS NOTED OTHERWISE.
- ELECTRONIC PROGRAM CLOCK +7'-8" UNLESS NOTED OTHERWISE.
- FIRE ALARM BREAK GLASS STATION +5'-0"
- FIRE ALARM HORN FLUSH MOUNTED +7'-8"
- S_a SINGLE POLE SWITCH +52" UNLESS NOTED. SMALL LETTER INDICATES OUTLET CONTROLLED.
- S_3 THREE WAY SWITCH, +52"
- S_4 4-WAY SWITCH, +52"
- S_P SWITCH WITH PILOT LIGHT, +52"
- S_K KEY OPERATED SWITCH, +52" HUBBELL #1209 KEY
- S_{MK} S.P.D.T., CENTER OFF POSITION, MOMENTARY CONTACT SWITCH HUBBELL #1557-I. ENGRAVE FACE PLATE AS DIRECTED BY ARCHITECT.
- S_T MOTOR THERMAL OVERLOAD SWITCH, SIZE & RATING AS REQD. MOUNTED AT MOTOR OR WALL MOUNTED +52".
- MOTOR DISCONNECT SWITCH, SIZE & RATING AS REQUIRED. MOUNTED AT MOTOR OR WALL MTD.
- MOTOR OUTLET COMPLETE WITH ALL CONNECTIONS.
- MOTOR STARTER FURNISHED UNDER OTHER SECTION OF THE WORK, INSTALLED & CONNECTED UNDER THE ELECTRICAL SECTION OF THE WORK.
- EXIT LIGHT
- BRANCH CIRCUIT IN CONDUIT CONCEALED IN WALL OR CEILING.
- BRANCH CIRCUIT IN CONDUIT CONCEALED UNDER FLOOR OR GROUND.
- #10 DENOTES 3#10 WIRES IN CODE SIZE CONDUIT.
- HOME RUN TO PANEL. CROSSMARKS INDICATE THE NUMBER OF #12 WIRES. 2#12 IN 1/2"C UNLESS INDICATED OTHERWISE.
- —T— TELEPHONE SYSTEM CONDUIT ONLY, 3/4"C MIN. W/ #12 PULL WIRE.
- —F— FIRE ALARM SYSTEM CONDUIT & WIRE
- NL NIGHT SECURITY LIGHT.
- WP WEATHERPROOF
- C CONDUIT
- A-1 CIRCUIT TAG DENOTES CIRCUIT NO. 1 ON PANEL-A
- R ELECTRONIC PROGRAM CONTROL RELAY WALL MOUNTED +5'-0" UNLESS NOTED.
- TV T.V. OUTLET +12" UNLESS NOTED. STUB 1"C INTO NEAREST ACCESSABLE CEILING SPACE. (FOR FUTURE OPEN-CABLE BY OTHERS.)
- B FIXTURE IDENTIFICATION TAG. DENOTES FIXTURE TYPE IN ROOM OR AREA. SEE FIXTURE SCHEDULE FOR FIXTURE TYPE.
- LIGHTING PANEL +6'-0" TO TOP OF CABINET.
- TERMINAL CABINET 18"x24"x4" UNLESS NOTED OTHERWISE +48" TO TOP OF CABINET.
- DUPLEX RECEPT. +12" UNLESS NOTED.
- FLUSH FLOOR OUTLET BOX NATIONAL SERIES 800 CI.
- GROUND BOX, SEE DETAIL.
- EMERGENCY BATTERY FULLY AUTOMATIC, UNIT SHELF MTD, +6'-6" 6 VOLT TEAL SERIES 652-A1-S2 W/HEAD WHERE SHOWN & LEAD ANTIMONY, 40 AH 20 HR RATED BATTERY. CONNECT DIRECT TO J.B. (DO NOT PLUG IN)
- EMERGENCY BATTERY LIGHT 6 VOLT W/ FLOOD LAMPS WALL MTD. NEAR CLG OR CLG MTD.
- PROJECTOR CONTROL OUTLET W/ BLANK COVER +12".
- PROJECTOR SOUND OUTLET W/ BLANK COVER +12".
- —PC— PROJECTOR CONTROL CONDUIT 1 1/4"C. W/ PULL WIRE FOR FUT. CONTROL CABLE BY OWNER.
- —PS— PROJECTOR SOUND SYSTEM, 1/2"C. W/ 2#19 TWISTED SHIELDED.

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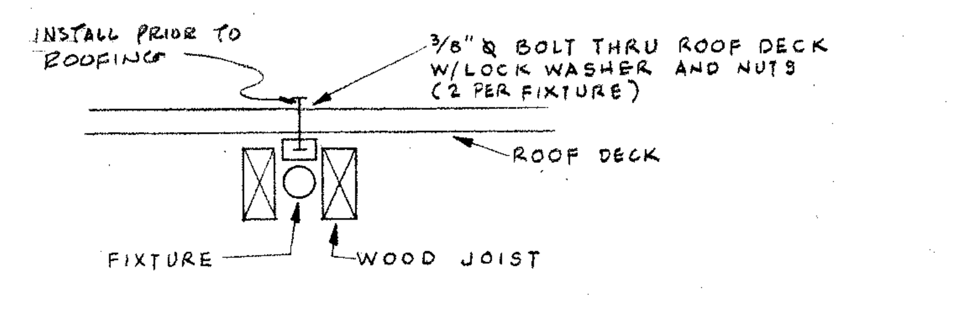
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2282
ASSOCIATED ARCHITECTURAL FIRMS

ELECTRICAL SITE PLAN, NOTES & SYMBOLS
TECHNICAL VOCATIONAL FACILITY (ENGINEERING TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET E-1 OF 6
DATE 9-26-69

REVISED AS BUILT 11-19-71


SHEET NOTES - APPLY TO THIS SHEET ONLY.
1 UNDERFLOOR DUCT, SEE DETAIL 1/E-2
2 VERTICLE MILL 5HP 3Ø 208V.
3 UNIVERSAL MILL 5HP 3Ø 208V.
4 SHAPER 3HP 3Ø 208V.
5 UNIVERSAL MILL 5HP 3Ø 208V.
6 GEAR FOR DRIVE 3HP 3Ø 208V.
7 LATHE 5 HP 3Ø 208V.
8 RADIAL DRILL 3Ø 208V.
9 DRILL PRESS 3/4 HP 3Ø 208V.
10 GRINDER 1HP 3Ø 208V.
11 DUST COLLECTOR 3HP 3Ø 208V.
12 DO ALL 3HP 3Ø 208V.
13 MOUNT ON TABLE AS DIRECTED.
14 GRINDER 120V +36"
15 HYDRAULIC AND ARBOR PRESS 208V. 3Ø 1HP.
16 208V. 3Ø 20A.
17 MOUNT 6" ABOVE COUNTER OR CENTER IN BACKSPLASH WHERE SPLASH OCCURS.
18 ELECTRIC FURNACE 8.0 K.W. 3Ø 208V.
19 BUFFER 2HP 3Ø 208V.
20 BELT SANDER 1HP 3Ø 208V.
21 CUTTER 3/4 HP 3Ø 208V. +36"
22 CENTERLESS GRINDER 1 1/2 HP 3Ø 208V. +36"
23 SURFACE GRINDER 1 1/2 HP 3Ø 208V. +36"
24 CYL. GRINDER 1 1/2 HP 3Ø 208V. +36"
25 JIG BORDER 3HP 3Ø 208V.
26 SPRAY BOOTH 1/2 HP 3Ø 440V. INSTALLATION SHALL CONFORM TO CLASS I DIV. I E.S.O.
27 CONTROL BOARD 3-115V 1Ø 20A CIRCUITS.
28 4 11/16" SQUARE BOX FOR FUTURE ANTENNA STUB THRU ROOF W/1" PLASTIC CONDUIT TERMINATE 12" ABOVE ROOF W/WEATHERHEAD. FLASH AND COUNTERFLASH THRU ROOF AS DIRECTED.
29 WALKER BROS. TRENCH DUCT TYPE "TA" 12" WIDE X 2 1/2" DEEP COMPLETE W/NECESSARY HARDWARE. PROVIDE COVER FOR APPLICATION OF FLOOR FINISH MATERIAL BY OTHERS ON SAME. PROVIDE TRENCH W/3 (THREE) BARRIERED SECTIONS; 3" WIDE SECTION FOR POWER, AND 6" WIDE SECTION FOR AIRLINES. 3" WIDE SECTION FOR AV & ANTENNA PROVIDE COVER W/BUSHED HOLES AND SPLIT COVERS FOR OUTLETS. SUBMIT SHOP DWGS. FOR ARCHITECTS APPROVAL. SEE DETAIL 2/E-2
30 STUB UP AND CAP 6" NEAR WALL
31 SAME AS 29 EXCEPT W/2-6" WIDE SECTIONS FOR AV AND ANTENNA CIRCUITS ONLY.
32 3/4" PLYWOOD BACKBOARD 24"X6'-0" TELEPHONE TERMINAL RUN 3/4"C TO CW. PIPE.
33 1"C TO TELEPHONE TERMINAL CABINET
34 SIGNAL SYSTEM TERMINAL CABINET "SB" 24"X 24"X 4 1/2" BARRIERED SECTIONS, 12" WIDE FOR FA. & T.V.
35 2HP 3Ø 208V GRINDER.
36 HACKSAW 1HP 3Ø 208V.
37 FURNACE 1/2 HP 1Ø 120V. + 24".
38 1HP 3Ø CHILLED WATER PUMP MOUNTED ON FLOOR TEST STAND.
39 BOILER OUTLET 1Ø 120V. MOUNTED ON FLOOR TEST STAND.
40 AIR HANDLER 5HP 3Ø 208V. MOUNTED ON FLOOR TEST STAND.
41 10 TON CHILLER 3Ø 208V. MOUNTED ON FLOOR TEST STAND.
42 RECEPTACLE 1Ø 20A 4W 208V.
43 OUTLETS FOR LINK TRAINERS.
PRINTED CIRCUIT LAB NOTES
1 CAUSTIC SODA TANK 120V. 10 AMPS.
2 ANODIZING TANK 120V. 10 AMPS.
3 ALODINE TANK 120V. 10 AMPS.
4 HOT OIL TANK 120V. 20 AMPS.
5 Fe Cl3 TANK 120V 20 AMPS.
6 Cr O2, H2 SO4 TANK 120V. 20 AMPS.
7 ALCHELATE TANK 120V. 20 AMPS.
8 ELECTROLYSIS COP. PLATE 120V. 20 AMPS.
9 CLEANER 120V. 20 AMPS.
10 HOT TIN TANK 120V. 20 AMPS.
11 NICKLE CATHODE 120V. 10 AMPS.
12 Cu SO, H2 SO TANK 120V. 10 AMPS.
13 Sn - Ni TANK 120V. 10 AMPS.
14 Sn - Pb TANK 120V. 10 AMPS.
15 FOR FUTURE OUTLETS BY OWNER.
FUTURE OUTLETS BY OWNER.
FOR MACHINES WHICH ARE NOT INSTALLED BY OWNER AT THIS TIME, CONTRACTOR SHALL INSTALL AFTER SET W/PLUG CAP, COIL WIRE AND LEAVE IN DUCT.
18" WIRE TAILS, TAPE FOR FUTURE CONNECTION TO MACHINES BY OWNER.
CONNECTOR
SHOP MACHINE N.I.C.
6'-0" SEAL TIGHT FLEX CONDUIT
AFTER SET
FINISHED FLOOR
1 1/2" MIN.
WALKER BROS. UNDERFLOOR DOUBLE DUCT. 2-4 DUCTS COMPLETE W/ALL HARDWARE AND JUNCTION BOXES W/COVERS AS REQUIRED FOR FLOORING MATERIALS.
UNDERFLOOR DUCT
TYPICAL SHOP MACHINE - FLOOR DUCT CONNECTION 1/E-2
NO SCALE
LINK TRAINER FLOOR TRENCH DETAIL
WALKER BROS TRENCH DUCT SERIES TA 18"W x 6" DEEP COMPLETE W/ ALL NECESSARY HARDWARE. PROVIDE COVER FOR FLOOR FINISH MATERIAL AS E220.
LINK TRAINER CLASSROOM - 114
OFFICE 114A
OFFICE 114B
CLASSROOM - 112
MECHANICAL ROOM - 110
TRANSFORMER
TELEPHONE TERMINAL CAB'T.
CLOCK SYSTEM TRANSMITTER UNIT.
DISTRIBUTION PANEL-"DLA"
MAIN PANEL
SIGNAL TERMINAL CAB. "SA"
PANEL-"LA"
PANEL-"HA"
FIRE ALARM CONTROL PANEL
PREP. ROOM - 111
PROJECTOR RM - 113
PREP RM # 109
SEMINAR C.R. 108
JAN RM. 110-A
DIRECTOR - 101
FIRE ALARM DISARRANGEMENT AND SUPERVISORY STATION
CONFERENCE 104
EVENING INSTR. 103
LOBBY-100
SEC'Y-100A
MIMEO 102
MEN 128D
MENS LOCKER ROOM 128
SHOWER 128E
LOUNGE 129
WOMEN 129B
HALL - 130
OFFICE 104-C
OFFICE 104-B
OFFICE 104-A
TYPICAL TABLE OUTLET, SEE DETAIL THIS SHT.
ELECTRICAL CIRCUIT LAB 107
FLUSH IN PLATFORM
ELECTRICAL SYSTEMS LAB 105
PROVIDE T.V. & ANTENNA OUTLETS FLUSH IN FLOOR AT PLATFORM, TYPICAL AT INSTRUCTORS DESK BOTH RMS.
NO. 4 DUCT W/ CKTS. LB - 2,3,4,5,6,7,8,9,10, 11,12,13,15 & 17.
NO. 4 DUCT W/CKTS. LC - 11, 12,13,14,15,16,17,18,19,20, 21 & 22.
PANEL-"LB"
PANEL-"LC"
TOOL ROOM. 106
REPAIR RM. 106A
30"X8' PLYWOOD BACKBOARD FOR FUTURE TELEVISION AND ELECTRONIC EQUIP.
DARK RM - 125-E
PANEL-"LE"
PRINTED CIRCUIT LAB. 125-C
PRINTED CIRCUIT LAB 125-B
EXHAUST FAN
EXPERIMENTS 125-A
OUTLET +9'-0" FOR WALK-IN BOX COMPRESSOR 3Ø 208V. 5HP.
COOLING TOWER 1 1/2 HP FAN 3Ø 208V. 1HP PUMP 3Ø 208V.
FUTURE GAS AC. UNIT 5 TON AIR COOLED CONDENSER 3Ø 208V.
AIR CONDITIONING LAB - 125
STORAGE 127A
PAINTING 127 CLASS I DIV. I (EXPLOSION PROOF)
PANEL-"LFA"
PANEL-"LDA"
PANEL-"LD"
WELDING MACHINE ROOM 122A
TYPICAL WELDING RECEPTACLE, MT. BELOW SWITCH. 4W 60A ARK TIGHT RECEPTACLE CROUSE HINDS # AREA 6415 W/MATCHING PLUG. LOCATE SWITCH AND RECEPT TO CLEAR REMOVABLE WALL PANEL.
TYPICAL 3P 60A SWITCH 600V. W/50 OR 60A FUSE TO SUIT MACHINE INSTALLED. MOUNT BELOW WIREWAY.
TYPICAL WIREWAY 6X6 + 6'-0"
WELDING BOOTHS
WELDING LAB 122
STORAGE 122D
EXHAUST FAN 1/3 HP 120V. WALL MTD. INTERLOCK W/5HP FAN.
WELDER EQUIPMENT, SEE TYPICAL NOTES TO LEFT.
TANK STORAGE
20A, 4W, 480V RECEPT.
PANEL-LGA
FOUNDRY 123A
PANEL-"HB"
TO DIST. PANEL-"DHB"
INSTRUMENTS 123B
SURFACE MTD IN CAST OUTLET BOX.
GRINDING - 123C
MACHINE LAB 123
OFFICE 124-A
OFFICE 124-B
OFFICE 124-C
CONFERENCE 124
OFFICE 124D
OFFICE 124-F
OFFICE 124-E
DISTRIBUTION PANL-"DLB"
ONE #4 DUCT TO EACH PANEL
TO SHUNT TRIP ON MAIN BRKR IN PNL-"LF"
TO SHUNT TRIP ON MAIN BRKR PNL-"LFA"
PANEL "LF"
PANEL "LFA"
MTD. IN PANEL TRIM.
2-P, 15A CONTROL CIRCUIT
OIL TIGHT MUSHROOM HEAD HEAVY DUTY PUSHBUTTON W/PILOT LIGHT TO CONTROL SHUNT TRIP BREAKERS IN PANEL "LF" AND "LFA".
MOUNTED IN SHOP AREA.
SHUNT TRIP CONTROL PANEL "LF" & "LFA"
NOTE:
SHOP MACHINES: FINAL CONNECTION TO SHOP MACHINES SHALL BE MADE BY THE OWNER. PROVIDE CONDUIT, CIRCUITING, AND OUTLETS UNDER THE ELECTRICAL SECTION OF THE WORK. EXACT LOCATION OF MACHINE OUTLETS SHALL BE VERIFIED W/THE OWNER PRIOR TO INSTALLATION.
PROVIDE 10'-0" OF FLEX AND WIRE TAIL FOR CONNECTIONS BY OWNER.
TAPE ENDS
TYPICAL TABLE OUTLET 1 1/2" Ø HOLE THRU SPLIT COVER W/RUBBER BUSHING.
BARRIERS
AIR LINE SECTION, 6" WIDE. SEE PLUMB. DWGS.
A.V. & ANTENNA SECTION 3" WIDE
POWER SECTION. 3" WIDE
SPLIT COVER
FINISHED FLOOR
FLOOR FINISH ON COVER
TRENCH DUCT
SECTION A-A
TRENCH DUCT DETAIL 2/E2
NO SCALE
POWER PLAN SCALE: 1/8" = 1'-0"
NOTE: SEE DETAIL SHEET E-4 FOR METAL PARTITION WIRING.
NORTH
COMETTA AND SOOTARU
CONFER + LARSEN + CROSSEN
ASSOCIATED ARCHITECTURAL FIRMS
ELECTRICAL-PARTIAL FLOOR PLAN-POWER
TECHNICAL VOCATIONAL FACILITY (ENGINEERING TECHNOLOGY COLLEGE)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA
SHEET E-2
OF 6
DATE 9-26-69
WILLIAMSON AND VOLLMER ENGINEERING INC.



MOUNTING DETAIL FIXTURE "G"

NO SCALE

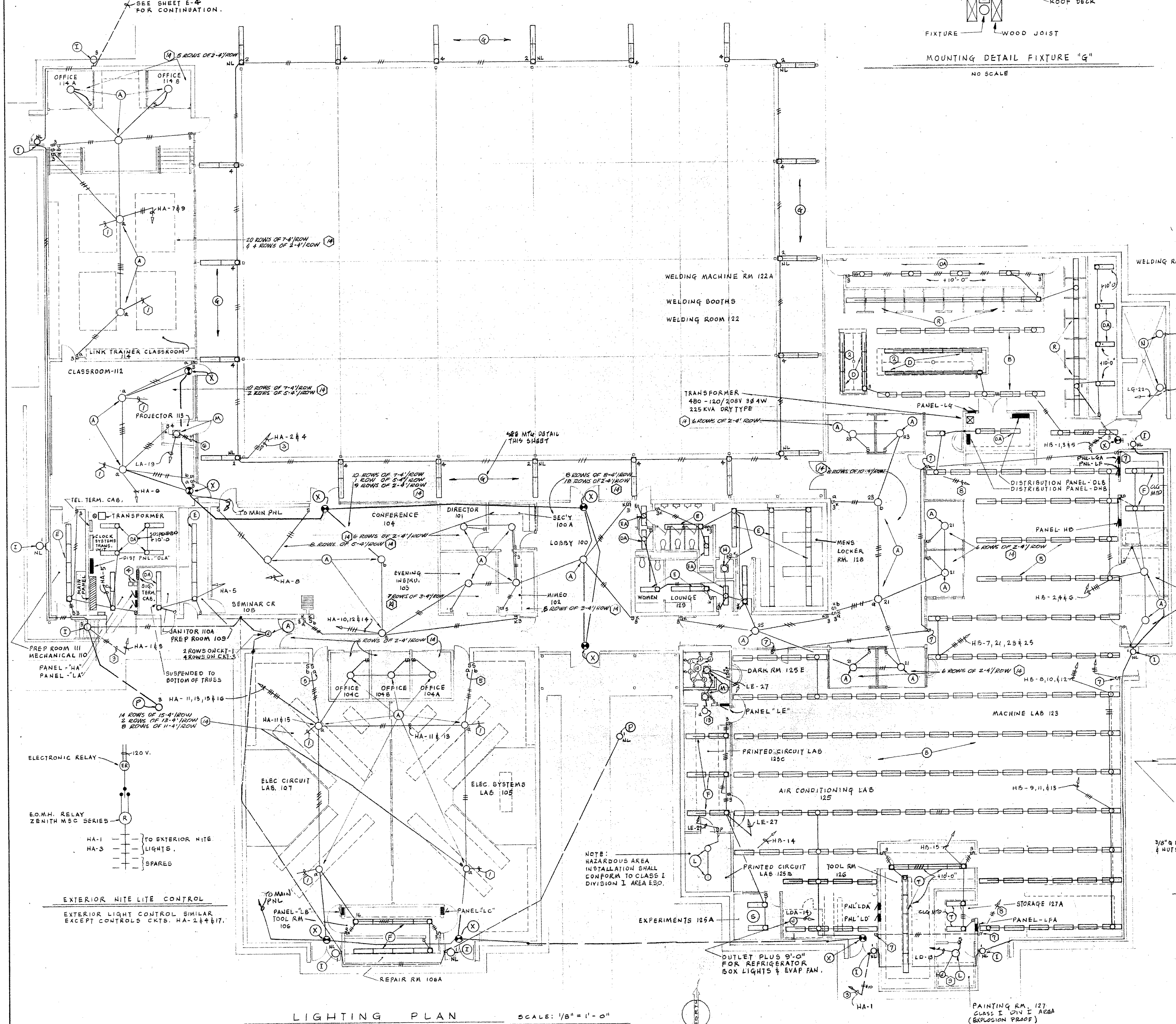
SHEET NOTES (APPLY TO THIS SHEET ONLY)

1. SWITCH TO CONTROL LIGHTS FOR LOW LEVEL LIGHTING FOR MOVIE PROJECTION. CONNECT SUFFICIENT LAMPS IN LUMINOUS CLG TO PROVIDE 5 TO 10 FOOTCANDLES.
2. MOUNT IN WELDING HOOD ON SIDE NEAR BOTTOM
3. WIRE ENTIRE CIRCUIT WITH #10 WIRE, RUN CIRCUITS THRU ELECTRIC RELAYS. SEE CONTROL DIAGRAMS.
4. EXTERIOR LIGHT CONTROL RELAYS SURFACE MOUNTED ADJACENT TO PANEL-"HA"
5. SWITCH "a" D.P.S.T.
6. LUXTROL DIMMER #WBD-200 WIRE ON LOAD SIDE OF ROOM, ON-OFF SWITCH.
7. S.P.D.T. MOM CONTACT SWITCH W/ CENTER OFF POSITION TO CONTROL CONTACTOR IN PANEL-"HB."

LUMINOUS CEILING NOTES

1. FIXTURES AND LAMPS TO BE FURNISHED, INSTALLED, AND WIRED UNDER THE LUMINOUS CEILING SECTION OF THE WORK. FURNISH AND INSTALL CIRCUIT OUTLETS ONLY W/36" TAILS ON WIRE. COORDINATE EXACT LOCATION OF OUTLETS.
2. FOR EXACT SIZE OF LUMINOUS CEILINGS REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
3. LUMINOUS CEILINGS SHALL BE EVENLY ILLUMINATED, FREE OF SHADOWS AND BRIGHT SPOTS. PRIOR TO INSTALLATION SUBMIT DETAILED SHOP DRAWINGS FOR THE ARCHITECTS APPROVAL. WHERE NECESSARY, LIGHTING FIXTURE ARRANGEMENTS SHALL BE ALTERED TO SUIT FIELD CONDITIONS.
4. UNLESS NOTED ON FLOOR PLANS LUMINOUS CEILING INSTALLATION SHALL PROVIDE A MINIMUM OF SEVENTY (70) FOOTCANDLES AT WORKING LEVEL 30" ABOVE FLOOR.

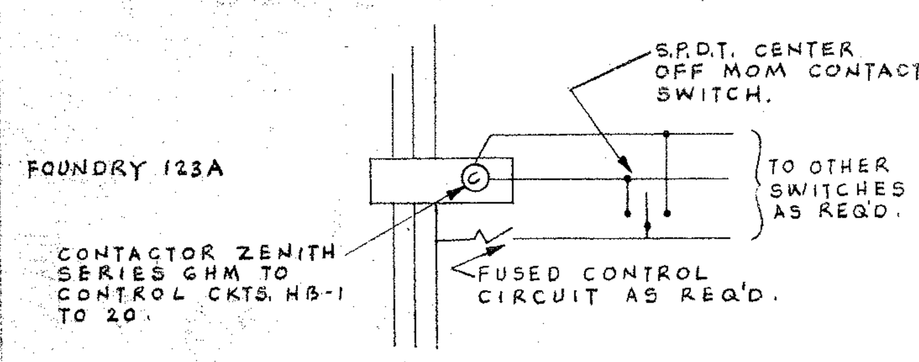
8. TO PANEL "HB"
9. OUTLET FOR HOOD LIGHTS.
10. NOT USED.
11. ~~NOT USED~~
12. OUTLET FLUSH IN CEILING FOR FUTURE SAFELIGHT.
13. SILVRAY-LIGHTCRAFT SIGNAL INDICATOR LIGHT #XG6OR W/25 WATT LAMP. MOUNT OVER DOOR.
14. LUMINOUS CLG LAYOUT LAMPS AND ROWS INDICATED IS SUGGESTED MINIMUM LAYOUT ONLY, & SHALL BE INCREASED AS NECESSARY TO MEET MINIMUM REQMTS & FIELD CONDITIONS.



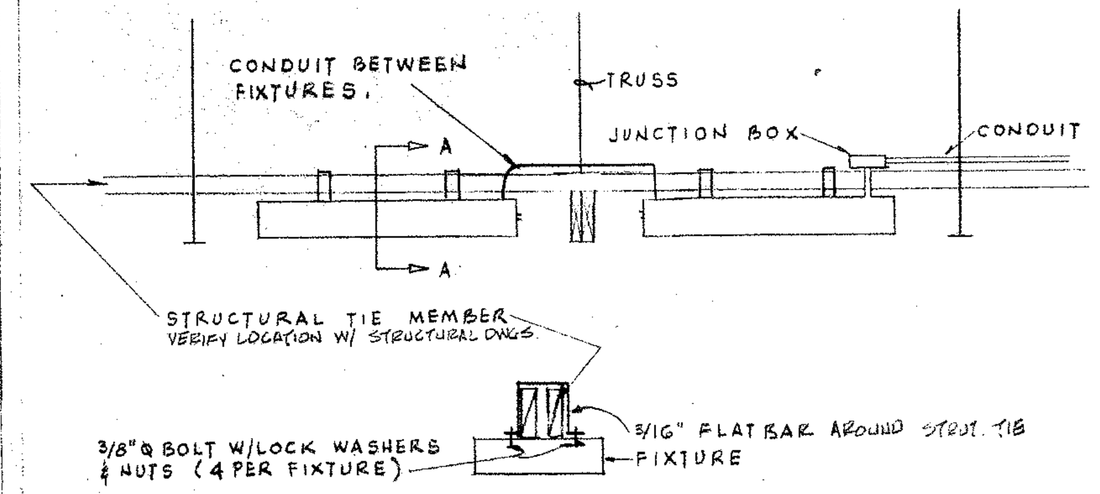
EXTERIOR NITE LITE CONTROL

EXTERIOR LIGHT CONTROL SIMILAR EXCEPT CONTROLS CKTS. HA-2 4 & 17.

LIGHTING PLAN SCALE: 1/8" = 1'-0"



PANEL-"HB" LIGHTING CONTROL



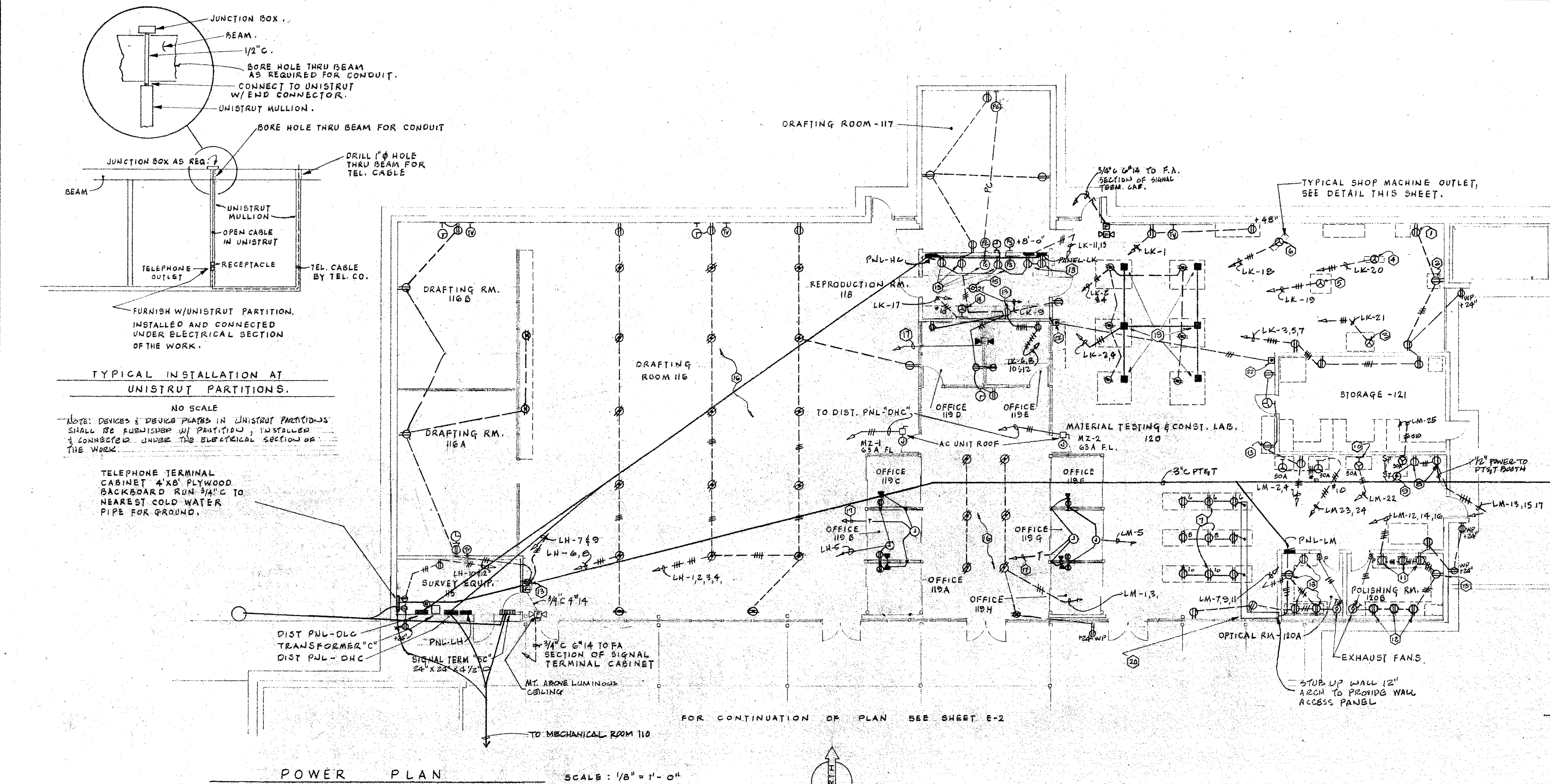
SECTION A-A

FIXTURE TYPE "B" MOUNTING DETAIL

COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
E. A. COMETTA, PARTNER · F. L. R. CONFER, ARCHITECT · G. C. LARSEN, ARCHITECT · J. E. CROSSEN, ARCHITECT
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS P. W. CONFER, PARTNER

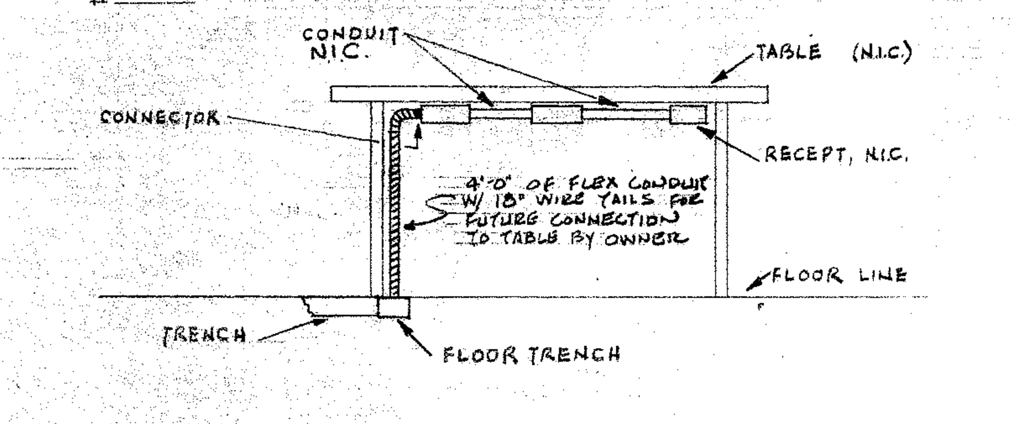
ELECTRICAL. PARTIAL FLOOR PLAN. LIGHTING
TECHNICAL - VOCATIONAL FACILITY
ENGINEERING TECHNOLOGY CENTER
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 3
E-3
OF 6
DATE 9-26-69



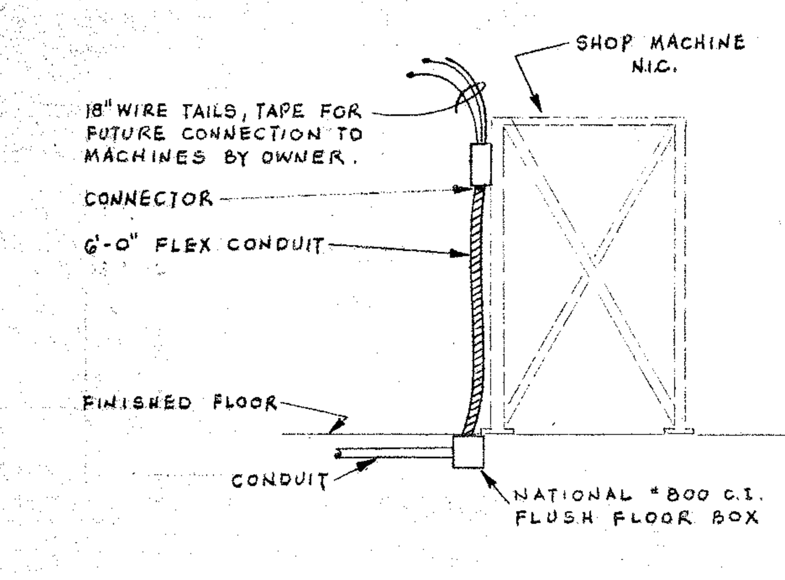
SHEET NOTES (APPLY TO THIS SHEET ONLY)

1. BAND SAW 120V +48"
2. GRINDER 120V +48"
3. RADIAL ARM SAW 3Ø 208V +48"
4. JOINTER 3Ø 208V.
5. TABLE SAW 3Ø 208V.
6. WOOD LATHE 3Ø 208V.
7. WORK TABLE W/ RECEPTS CONNECTED BY DISTRICT SEE DETAIL THIS SH.
8. FURNACE OUTLETS 120V. +36"
9. FURNACE HOOD FAN 120V.
10. OVEN OUTLET 208V 1Ø +48"
11. SANDER 120V MOUNT ABOVE COUNTER
12. POLISHING WHEELS 120V MOUNT ABOVE COUNTER
13. MOUNT 6" ABOVE COUNTER OR CENTER IN BACKSPLASH WHERE SPLASH OCCURS.
14. OZALID MACHINE 1Ø 208V MOUNT ABOVE COUNTER
15. OZALID MACHINE EXHAUST FAN
16. VERIFY EXACT LOCATION OF FLUSH FLOOR OUTLETS PRIOR TO INSTALLATION W/ ARCHITECT.
17. 1"C TO TELEPHONE TERMINAL CABINET.
18. SWITCH TO CONTROL LIGHTS FOR LOW LEVEL LIGHTING FOR MOVIE PROJECTION. CONNECT SUFFICIENT LAMPS IN LUMINOUS CEILING TO PROVIDE 5 TO 10 FOOTCANDLES.
19. INDUSTRIAL ELECTRIC REELS INC. # DB-33A W/3/C#12 TYPE SO CABLE 30'-0" LONG W/ 3 WIRE 20A HEAVY DUTY CORD GRIP RECEPT. RECEPT SHALL BE SUSPENDED TO 6'-8". MOUNT REEL ON TRUSS.
20. WALKER BROS. TRENCH DUCT TYPE "TA" 9" WIDE X 2 1/2" DEEP COMPLETE W/ALL NECESSARY HARDWARE AND COVERS. PROVIDE TRENCH W/2 (TWO) BARRIERED SECTIONS 3" WIDE SECTION FOR POWER AND 6" SECTION FOR GAS & WATER. PROVIDE COVERS W/ BUSHED HOLES AND SPLIT COVERS FOR OUTLETS. PROVIDE NECESSARY LENGTHS OF FLEX CONDUIT FROM TRENCH DUCT TO JUNCTION BOX MOUNTED BELOW OUTLET WHERE REQUIRED. SECURE FLEX TO J.B. W/ CONNECTOR.
21. LUMINOUS CEILING LAYOUT LAMPS & ROWS INDICATED IS SUGGESTED MINIMUM LAYOUT ONLY, & SHALL BE INCREASED AS NECESSARY TO MEET MINIMUM REQMTS & FIELD CONDITIONS.
22. TO CONTROL CONTACTOR IN PNL-LK



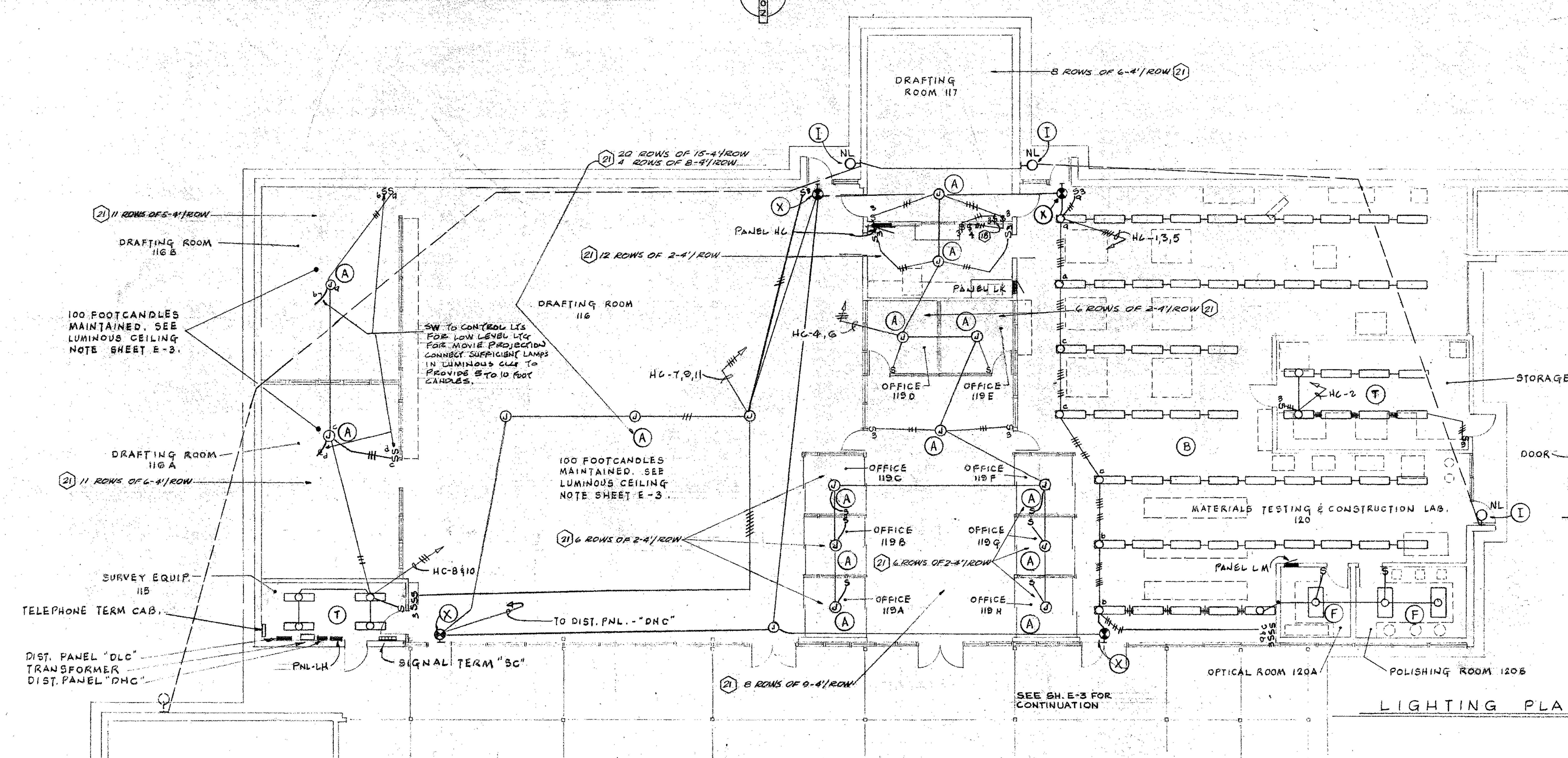
TYPICAL INSTALLATION AT WORK TABLE

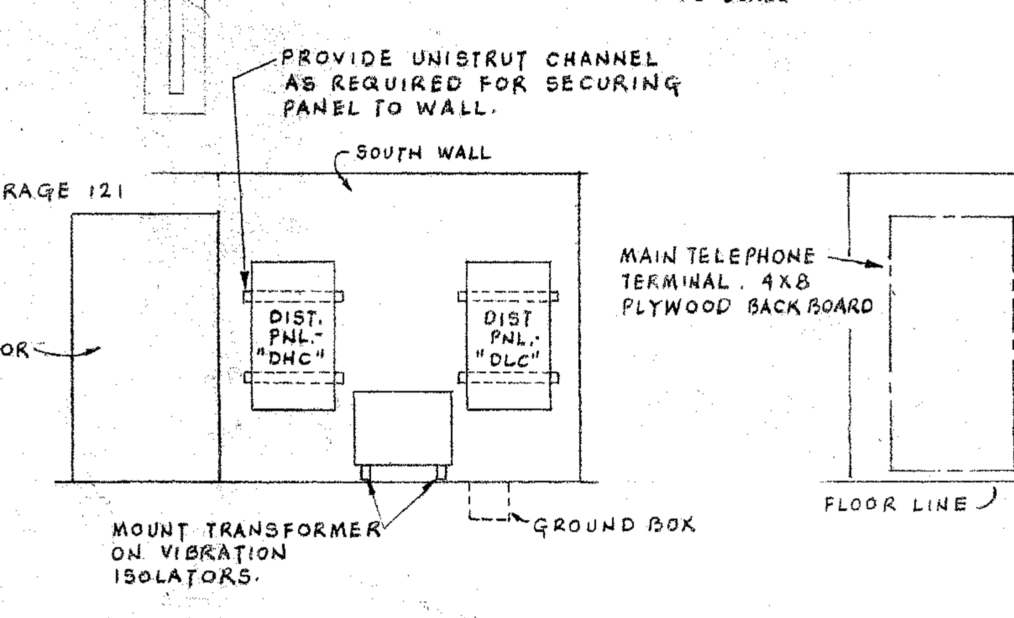
NO SCALE



TYPICAL FLOOR SHOP MACHINE OUTLET INSTALLATION.

NO SCALE





ELEVATION AT PANELS IN SURVEY EQUIP. RM-115

NO SCALE

WILLIAMSON AND VOLLMER ENGINEERING, INC.
365 PARK STREET
MILL VALLEY CALIF. 94941

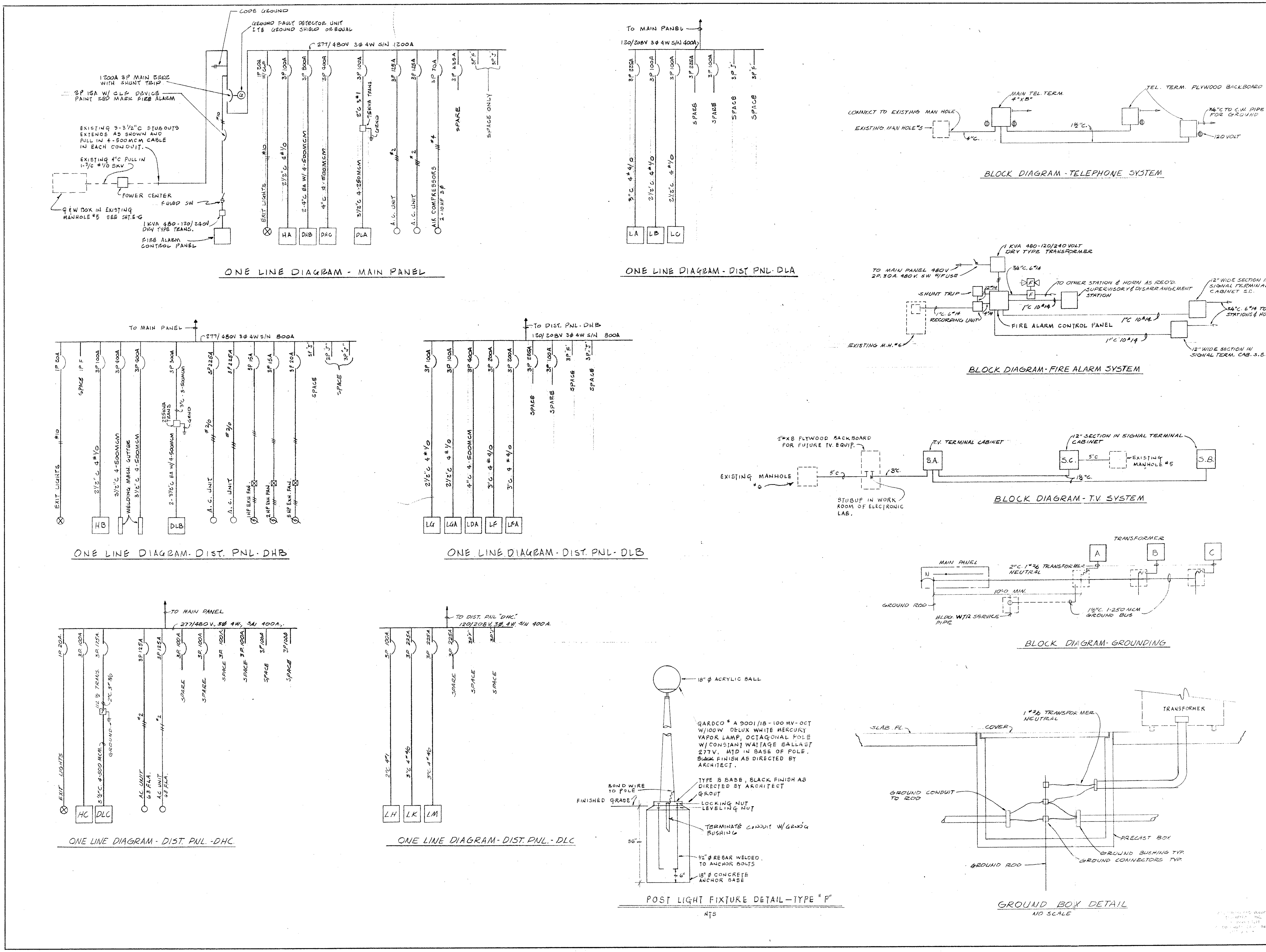
ARCHITECT / STRUCT. ENGINEER / CONSULT. ENGINEER

COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1300 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
ASSOCIATED ARCHITECTURAL FIRMS

ELECTRICAL - PARTIAL FLOOR PLAN - POWER & LIGHTING
TECHNICAL - VOCATIONAL FACILITY (ENGINEERING TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 4
E-4
OF 6
DATE 9-26-69

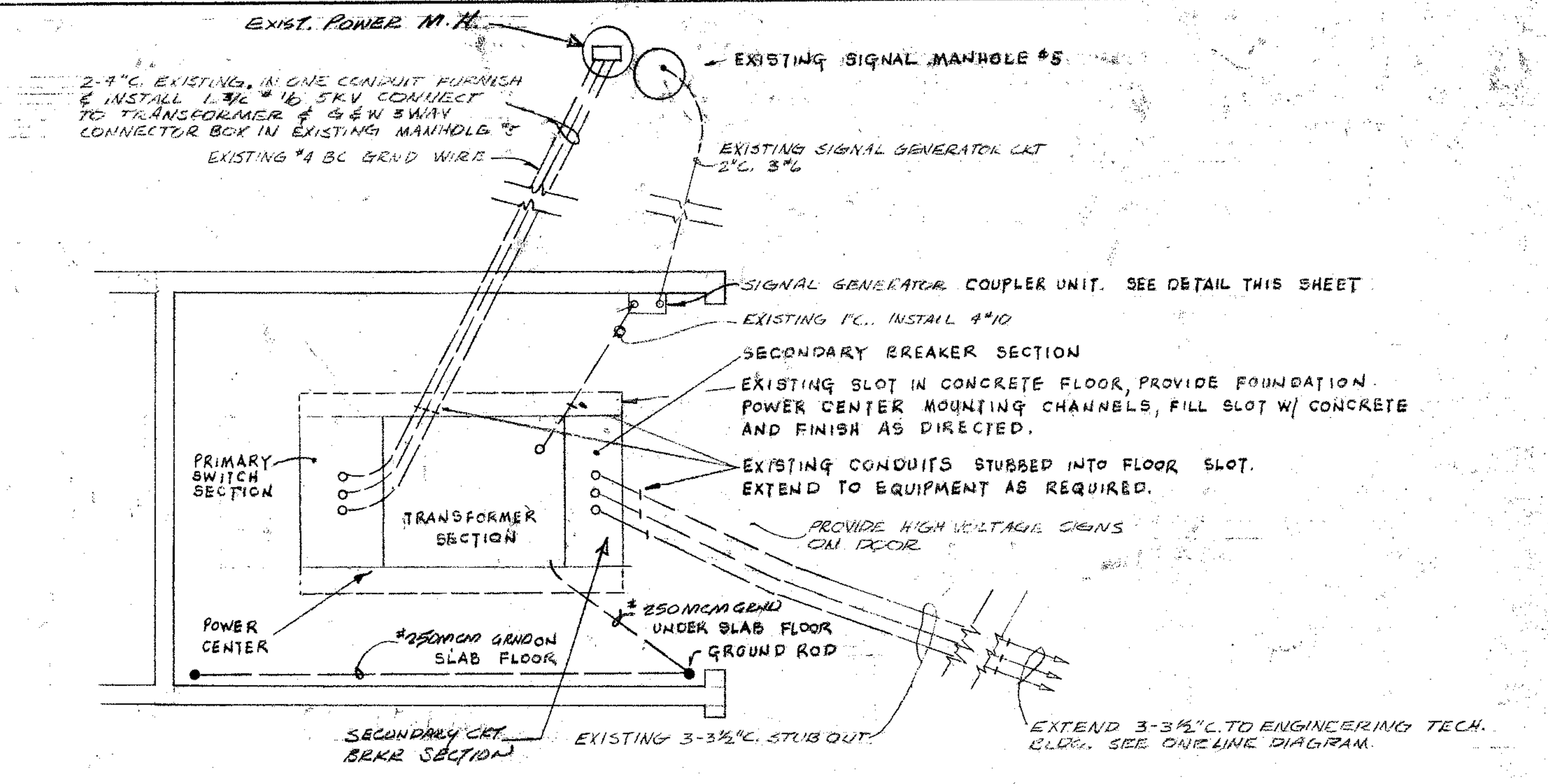
REVISED AS BUILT 11-19-71



COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2657
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2282
ASSOCIATED ARCHITECTURAL FIRMS

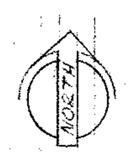
ELECTRICAL - PANEL DIAGRAMS & DETAILS
TECHNICAL - VOCATIONAL FACILITY
(ENGINEERING TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

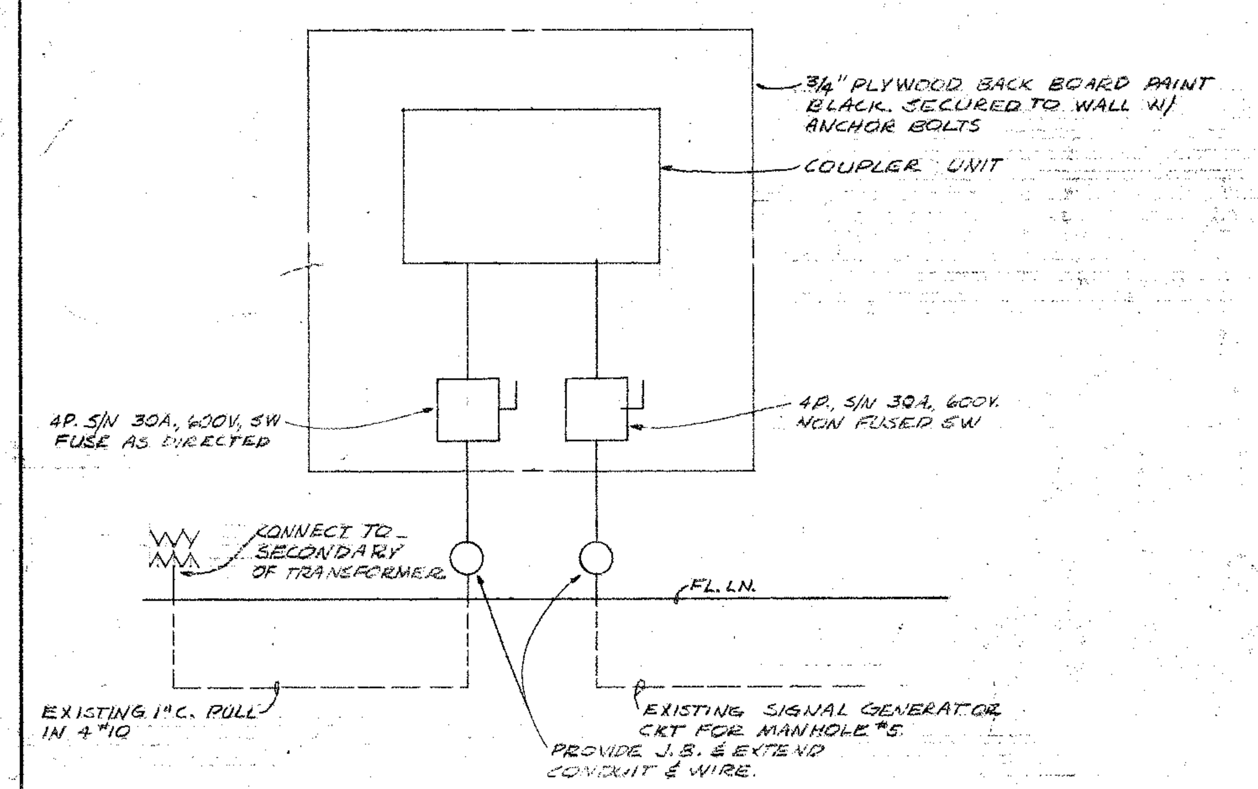
SHEET 5
E-5
OF 6
DATE 3-26-69



PARTIAL FLOOR PLAN OF EXISTING POWER HOUSE

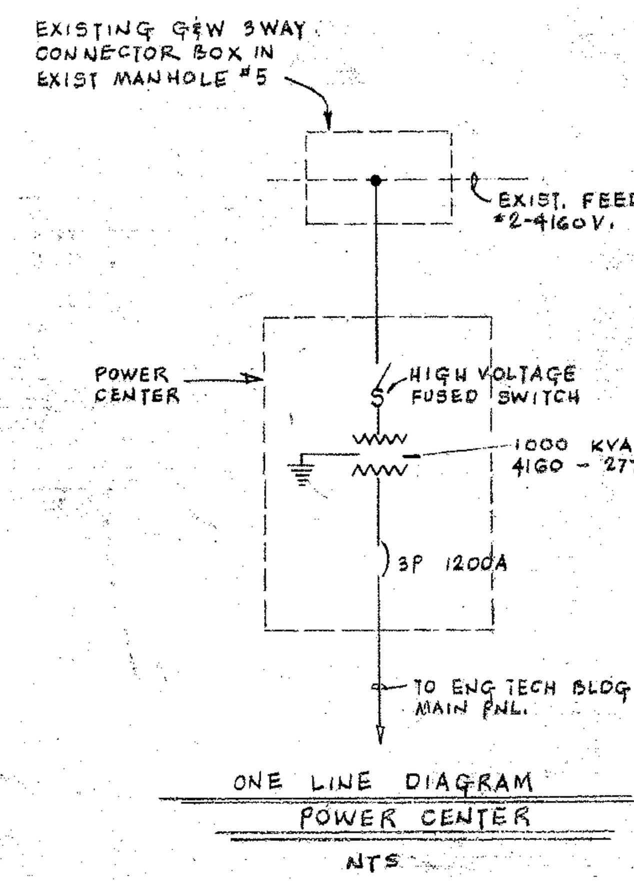
SCALE: 3/16" = 1'-0"





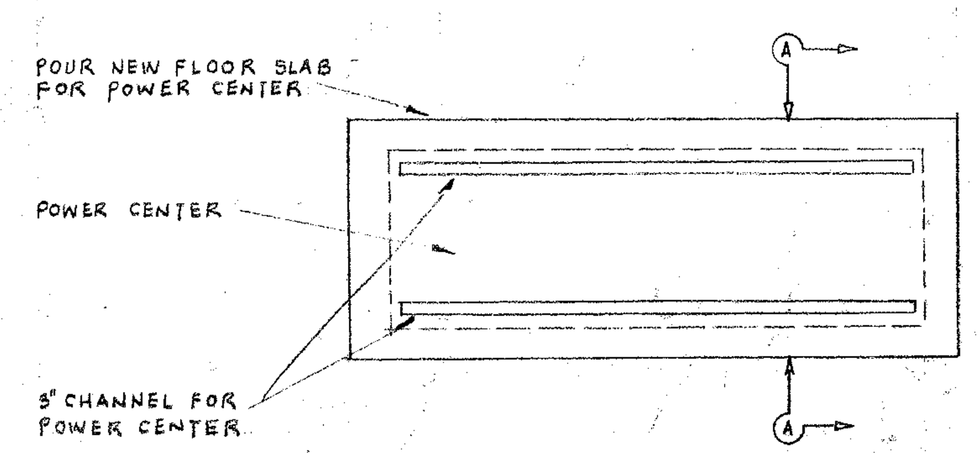
ELEVATION OF SIGNAL GENERATOR COUPLER UNIT

NO SCALE



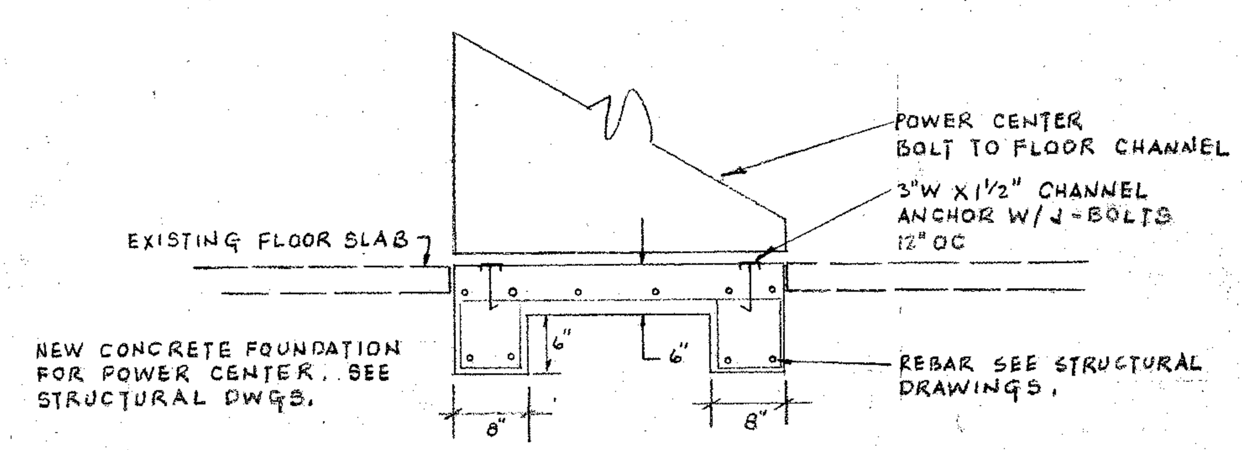
ONE LINE DIAGRAM POWER CENTER

NTS



PLAN

NTS.



SECTION A-A

N.T.S.

DETAIL POWER CENTER INSTALLATION

INSTALLATION OF POWER CENTER SHALL BE ALTERED AS REQUIRED TO SUIT EQUIPMENT ACTUALLY INSTALLED. ROUGH-IN REQUIREMENTS, CONDUIT STUBUPS, ETC SHALL BE LAYED OUT FROM MANUFACTURERS TEMPLATES.

PANELBOARD SCHEDULE

PANEL-LGA FLUSH MTD. 120/208V., 3Ø, 4W, S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 7	1	20	120	RECEPTACLES
8	1	20	120	SPARE
9	1	20	120	RECEPTACLE
10	1	20	120	SPARE
11	3	20	208	RECEPTACLE
12 TO 16	1	20	120	RECEPTACLES
17 & 24	1	20	120	SPARE
25 TO 30	–	—	—	SPACE ONLY

PANEL-LH SURFACE MTD. 120/208V., 3Ø, 4W, S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 10	1	20	120	RECEPTACLES
11	1	20	120	SPARE
12	1	20	120	RECEPTS
13 TO 20	1	20	120	SPARES

PANEL-LK FLUSH MTD. 120/208V., 3Ø, 4W, S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 8	1	20	120	RECEPTACLES
9	1	20	120	EXH. FANS
10	1	20	120	RECEPTACLE
11 & 13	1	20	120	RECEPTACLE
12	1	20	120	RECEPTACLE
14 TO 16	1	20	120	SPARES
17	2	30	208	OZALID MACH.
18 TO 22	1	20	120	SPARES
SPLIT BUS 3P 70A CONTACTOR TO CONTROL CKTS 23 TO 34				
23 TO 26	3	20	208	SHOP MACHINES
27 TO 30	1	—	—	SPARE
31-34	3	—	—	SPACE

PANEL-LM FLUSH MTD. 120/208V., 3Ø, 4W., S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 17	1	20	120	RECEPTACLES
18 TO 22	1	20	120	SPARES
23 TO 25	2	30	208	OVEN & RECEPT.
26 TO 32	1	—	—	SPACE ONLY

PANEL-HA FLUSH MTD 277/480V., 3Ø, 4W, S/N.

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 17	1	20	277	LIGHTING
18 TO 22	1	20	277	SPARE
23 TO 30	1	—	—	SPACE ONLY
31	3	15	480	EXHAUST FAN

PANEL-HB FLUSH MTD. 277/480V., 3Ø, 4W, S/N.

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 15	1	20	277	LIGHTING
16 TO 20	1	20	277	SPARE
SPLIT BUS 3P, 150A, CONTRACTOR TO CONTROL CKTS 1 TO 20.				
21	1	20	277	LIGHTING
22				SPARE
23				LIGHTING
24				SPARE
25				LIGHTING
26 & 27	3	20	480	RECEPTS
28 TO 34	1	20	277	SPARE
35	3	15	480	SPRAY BOOTH FAN.

PANEL-HC FLUSH MTD. 277/480V., 3Ø, 4W, S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 11	1	20	277	LIGHTING
12 TO 16	1	20	277	SPARE
17 TO 24	1	—	—	SPACE ONLY

PANEL-LA FLUSH MTD. 120/208V., 3Ø, 4W., S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 18	1	20	120	RECEPTACLES
19	1	20	120	LIGHTING
20 & 21	1	20	120	RECEPTACLES
22	1	20	120	CIRC. PUMP.
23 TO 30	1	20	120	SPARE (23 & 25 RECEP)
31 TO 36	1	—	—	SPACE ONLY
37	3	20	208	COMPRESSOR.

PANEL-LB FLUSH MTD. 120/208V., 3Ø, 4W., S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 13	1	20	120	RECEPTACLES
14				SPARE
15				RECEPTACLE
16				SPARE
17				RECEPTACLE
18 TO 24				SPARES
25 TO 32	1	–	–	SPACES ONLY

PANEL-LC FLUSH MTD. 120/208V., 3Ø, 4W., S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 22	1	20	120	RECEPTACLES
23 & 24	2	20	208	RECEPTACLES
25 TO 30	1	20	120	SPARE

PANEL-LD FLUSH MTD. 120/208V., 3Ø, 4W., S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 12 & 15 TO 18	1	20	120	RECEPT. & MISC. EQUIPT. (8 SPARE)
13 & 14	1	20	120	LTS & BOX LTS & FANS
19 TO 22	1	20	120	SPARES
23 TO 32	1	20	120	SPACES

PANEL-LDA FLUSH MTD. 120/208V., 3Ø, 4W, S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1	3	15	208	C.W. PUMP
2	3	40	208	AIR HAND. UNIT
3	3	40	208	WALK IN REFRIG
4	3	70	208	CHILLER
5	3	30	208	COOLING TOWER
6	3	40	208	AIR COOL CONDENSER
7	3	150	208	PANEL-LD
8	3	150	208	PANEL-LE
9 & 10	3	20	208	SPARE
11 TO 14	3	—	—	SPACE ONLY

PANEL-LE FLUSH MTD. 120/208V., 3Ø, 4W., S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 10	1	20	120	P.C. LAB. EQUIP. (1,2,3,4,6 SPARE)
11 TO 17	1	30	120	RECEPT. & P.C. LAB. EQUIP.
18 TO 24	1	20	120	RECEPTACLES
25	1	20	120	SPARE
26	1	20	120	RECEPTACLE
27	1	20	120	LIGHTING
28 TO 32	1	20	120	SPARE

PANEL-LF FLUSH MTD. 120/208V., 3Ø, 4W., S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 & 2	3	30	208	VERT MILL
3 & 4	3	40	208	UNIV. MILL
5	3	30	208	SHAPER
6	3	40	208	UNIV. SHAPER
7	3	30	208	GEAR DRIVE
8 TO 13	3	40	208	LATHE
14	3	30	208	JIG BOARDER
15	3	30	208	RAD DRILL
16 TO 22	3	20	208	MACHINES
23	3	225	208	MAIN W/SHUNT TRIP

MT PUSHBUTTON IN FACE OF PANEL TRIM.

PANEL-LFA FLUSH MTD. 120/208V., 3Ø, 4W. S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 5	3	40	208	LATHE
6	3	20	208	SHOP EQUIP.
7 TO 13	3	15	208	SHOP EQUIP.
14 TO 17	3	30	208	SHOP EQUIP. (16 & 17 SPARE)
18 TO 20	3	—	—	SPACE ONLY
21	3	225	208	MAIN W/SHUNT TRIP
22	2	15	208	SHUNT TRIP CONTROL CKT.

MT PUSHBUTTON IN FACE OF PANEL TRIM.

PANEL-LG FLUSH MTD. 120/208V., 3Ø, 4W., S/N

CIR. NO.	POLES	AMPS	VOLTS	REMARKS
1 TO 11	1	20	120	RECEPTACLES
12	1	20	120	EXH. FAN
13	1	20	120	RECEPTACLE
14 TO 20	1	20	120	SPARE (14 EXH. FAN)
21 & 22	3	20	208	LIGHTING & MACHINE
23	1	20	120	RECEPTACLE
24	2	20	208	RECEPTACLE
25 TO 30	1	—	—	SPACE ONLY

LIGHTING FIXTURE SCHEDULE

(A) LUMINOUS CEILING COMPLETE W/LIGHTING FIXTURES & LAMPS FURNISHED INSTALLED & CONNECTED UNDER LUMINOUS CEILING SECTION OF THE WORK. SEE ARCH. DWGS & SPECIFICATION FOR DETAILS. ROUGH-IN OUTLET, CIRCUITING & SWITCH CONTROL ONLY UNDER ELECTRICAL WORK. SEE LUMINOUS CEILING NOTES ON SHEET E-3

(B) FLUORESCENT SURFACE UNIT W/ FLAT CONTROL LENS ALUM. HOUSING & 4-40 WATT LAMPS W/ 10% UP LIGHT. BAKED ENAMEL FINISH. GARDCO #K9410/14/440RS 10% UPLIGHT. SEE MTG DETAIL SHT. E-3.

(D) FLUORESCENT STRIPLIGHT W/TWO LAMP 2', 4", 6' OR 8' LONG AS SHOWN ON PLAN CLG MTD UNLESS NOTED GLOBE ILLUMINATION CO. SERIES #951

(DA) FLUORESCENT STRIPLIGHT W/TWO LAMPS 2'-4'-6' OR 8' LONG AS SHOWN ON PLAN. CLG MTD UNLESS NOTED GLOBE ILLUMINATION CO. SERIES #952

(E) FLUORESCENT RECESSED UNIT W/ DROP PLEX GLASS DIFFUSER & 2-40 WATT LAMPS. RECESSED IN CLG. GLOBE ILLUMINATION CO DP#G92-48RS

(EA) SAME AS (E) EXCEPT 24" LONG W/ 2-20 WATT T.S. LAMPS

(F) FLUORESCENT SURFACE UNIT W/ 4-40 WATT LAMPS & CONTROL LENS. CLG MTD. GLOBE ILLUMINATION CO. QP 74-3654-48RS

(G) FLUORESCENT SURFACE WEATHER PROOF UNIT W/1-40 WATT LAMP. MOUNT BETWEEN BEAMS, SEE DETAIL. GARDCO K6039-148RS. BLACK FINISH.

(H) INCANDESCENT RECESSED UNIT W/ GASKET, LENS & 60 WATT LAMP. RECESSED IN CLG. SILVRAY LITECRAFT #F12X-5L.

(I) MERCURY VAPOR WALL BRACKET W/75 WATT LAMP, CONSTANT WATTAGE BALLAST. WALL MTD, +12" ABOVE DOOR HEIGHT TO BOTTOM OF FIXTURE, LIGHTOLIER #LB7244-MV BLACK FINISH AS DIRECTED BY ARCH.

(L) INCANDESCENT EXPLOSION PROOF UNIT W/ GLOBE GUARD & 150 WATT LAMP. CLG MTD. CROUSE HINDS #EVCX 2105.

(M) INCANDESCENT RECESSED UNIT W/ FRESNEL LENS & 150 WATT LAMP. RECESSED IN CLG. SILVRAY LITECRAFT #E 486-53.

(N) INCANDESCENT WALL BRACKET W/ 100 WATT LAMP. WALL MTD., 6" BELOW TOP OF WALL. PRESCOLITE #WB-2 W/ WIRE GUARD. BLACK FINISH.

(X) FLUORESCENT EXIT LIGHT W/ 2-LAMPS 6" HIGH RED LETTERS ON STENCIL FACE. SURFACE WALL MTD, ABOVE DOOR HEIGHT. PROVIDE DIRECTIONAL ARROWS WHERE REQD. SILVRAY LITECRAFT #X813-R.

(X1) SAME AS (X) EXCEPT CLG. MTD.

(P) POST LIGHT SEE DETAIL SHEET E-5

(R) FLUORESCENT TAMPER PROOF UNIT W/PLEXIGLASS DIFFUSER 2-40 WATT LAMPS CEILING MTD. GLOBE ILLUMINATION CO. # SP 702-48RS.

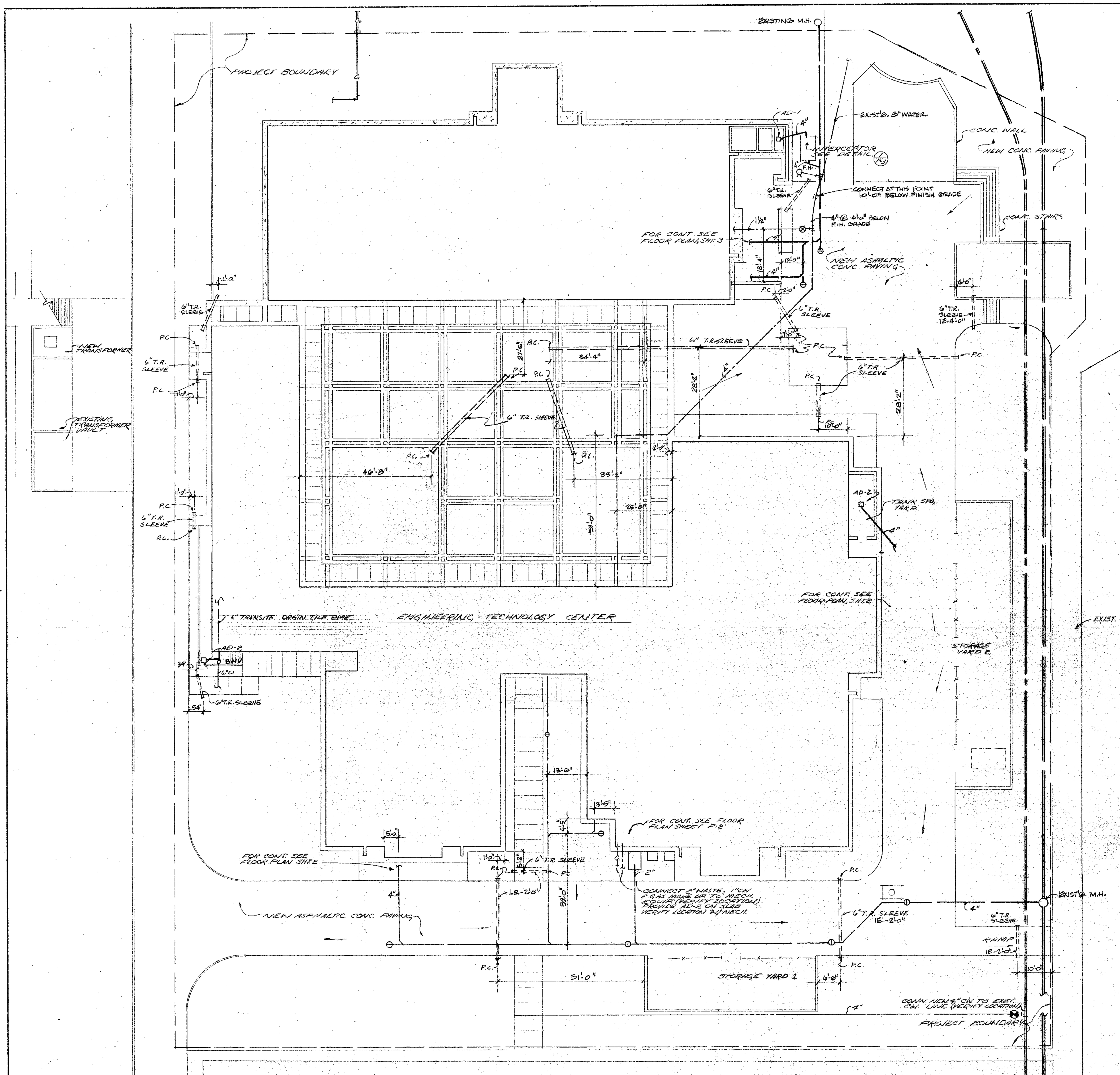
(T) FLUORESCENT INDUSTRIAL UNIT W/10% UPLIGHT AND 2-40 WATT LAMPS. STEM SUSPENDED. GLOBE ILLUMINATION CO. # 412-48RS

(S) GLOBE ILLUM CO. RECESSED LAYIN TEE BAR UNIT W/ DROP PLEX DIFFUSER, 4-40 WATT LAMPS 277V OPERATION GLOBE CO CAT # DP 604-48RS STYLE S MTG

COMETTA AND SOOTARU
CONFER + LARSEN + CROSSEN
ASSOCIATED ARCHITECTURAL FIRMS

ELECTRICAL FIXTURE & PANEL SCHEDULES & DETAILS
TECHNICAL-VOCATIONAL FACILITY (ENGINEERING-TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET 6
E-6
OF 6
DATE 9-26-69



SITE PLAN

SCALE: 1/16" = 1'-0"

LEGEND

SYMBOL	ABBREV.	DESCRIPTION
		EXIST. LINE (TYPE DESIGNATED)
	W	SANITARY OR SEWER WASTE
AW	AW	ACID WASTE
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
G	G	GAS
SD	SD	STORM DRAIN
	V	VENT (ACID VENT = AV)
A	A	COMPRESSED AIR LINE
V	VAC	VACUUM LINE
		DIRECTION OF PIPE PITCH
	GV	GATE VALVE
		GATE VALVE (IN BOX)
	CV	CHECK VALVE
	GC	GAS COCK
		GAS COCK (ON RISER)
	GCO	GRADE CLEANOUT
	FCO	FLOOR CLEANOUT
	FD	FLOOR DRAIN
	VR	VENT RISER (ACID VENT RISER = AVR)
	VTR	VENT THRU ROOF
	HB	HOSE BIBB
	P.C.	PLUG OR CAP
	T.R.	TRANSITE PIPE
AD	A.D.	AREA DRAIN
	S.I.	SAND AND GRAVEL INTERCEPTOR

GENERAL NOTES

1. VERIFY ALL SITE CONDITIONS PRIOR TO BIDDING.
2. CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR LOCATING EXISTING SERVICES AND MAKING SERVICEABLE CONNECTIONS TO SAME.
3. HOSE BIBBS SHALL BE UP 1'-6" UNLESS OTHERWISE STIPULATED BY THE ARCHITECT.
4. ALL UNDERGROUND PIPING SHALL BE RUN WITH A MINIMUM OF 2'-0" COVER BELOW FINISH GRADE UNLESS OTHERWISE SHOWN OR APPROVED BY THE ARCHITECT.
5. COORDINATE DETAIL LOCATION OF FIXTURES, VALVES, BOXES, ETC. WITH ARCHITECTUAL & SITE DRAWINGS REQUIREMENTS.
6. CONTRACTORS SHALL CONSULT THE LOCAL UTILITY CO, WATER CO., & SEWAGE DISTRICT TO DETERMINE THE EXACT EXTENT OF THIS WORK. HE SHALL EXTENT HIS SERVICES TO THE LOCATION DISIGNATED BY THEM AND FURNISH ALL MATERIAL AND PAY ALL COSTS NOT FURNISHED OR PAID BY THEM.
7. FIRE SPRINKLER HEADS SHALL BE INSTALLED AND CONNECTED TO THE DOMESTIC WATER LINE AS REQUIRED BY THE STATE FIRE MARSHAL. INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA. No. 13.

FIXTURE LIST AND CONNECTION SCHEDULE

FIXTURE NUMBERS LISTED ARE AMERICAN STANDARD AND ARE FOR ILLUSTRATIVE PURPOSES ONLY, ELJER OR KOHLER SAME QUALITY, PATTERN AND MAINTAINABILITY ARE ACCEPTABLE. ALL CHINA SHALL BE OF QUALITY KNOWN AS "TWICE FIRED" VITREOUS CHINA ALL TRIM AND EXPOSED METAL ITEMS SHALL BE CHROME PLATED. STOPS "SPEEDWAY" OR EQUAL, CARRIERS - JAY R. SMITH, JOSAM, WADE OR EQUAL. TRAPS - AMERICAN STANDARD OR EQUAL.

MARK	DESCRIPTION	WASTE	TRAP	VENT	C.W.	H.W.	SPECIFICATIONS
P-1	WATER CLOSET	4"	-	2"	1¼"	-	#F-2505 "GLENCO" VITREOUS CHINA, ELONGATED BOWL; SIPHON JET ACTION FLUSH VALVE SLOAN ROYAL #143-FYV, CARRIER JAY R. SMITH #100.
P-2	URINAL	2"	-	1½"	1"	-	#F-6500 "WASHBROOK" VITREOUS CHINA, WASHOUT TYPE, FLUSH VALVE SLOAN ROYAL #186-FYV, CARRIER JAY R. SMITH #636.
P-3	LAVATORY	2"	1¼" x 1½"	1½"	½"	½"	#F-463 "RONDALYN", 18" DIA. VITREOUS CHINA, DRILLINGS 8" O.C., FAUCET #N-2131, W/GRID STRAINER, W/STAINLESS STEEL MOUNTING RIM, STOPS #SST-R1715A, TRAP # R-7000-45
P-4	WASH FOUNTAIN	2"	2" C.I.	2"	1"	1"	BRADLEY #BFB, 54" ∅ STAINLESS STEEL, BOWL AND PEDESTAL W/ALL STANDARD EQUIPMENT.
P-5	WASH FOUNTAIN	2"	2" C.I.	2"	1"	1"	BRADLEY #CFB-B 54" SEMI-CIRCULAR STAINLESS STEEL BOWL AND PEDESTAL W/ALL STANDARD EQUIPMENT.
P-6	SINK	2"	1½" x 1½"	1½"	½"	½"	#P-7013, 24x21 ACID RESISTING ENAMELED CAST-IRON W/STAINLESS STEEL MOUNTING RIM, FAUCET CHICAGO #1889, STRAINER #R-4505, STOPS #SST-R3720A, TRAP # R-7000-55
P-7	SINK	2"	1½" x 1½"	1½"	½"	½"	ELKAY #LR-1722, 17" x 22" 18 GAUGE STAINLESS STEEL, CHICAGO FAUCET #50-E3, STRAINER #R4505, STOPS #SST-R3720A, TRAP # R-7000-55.
P-8	SINK	2" A.W.	1½" x 1½" ACID	1½" A.V.	½"	½"	ROUGH-IN AND CONNECT.
P-9	SERVICE SINK	3"	2"	2"	¾"	¾"	FIAT #MSB-3624, 36" x 24" x 10" W/STAINLESS STEEL CAP & 3" C.I. TRAP, STRAINER, CHICAGO FAUCET #HC-956-R W/5' BLACK RUBBER HOSE AND HOSE HOOK.
P-10	SHOWER	2"	2" C.I.	2"	½"	½"	ACORN SHOWER SET #511-G-A-K-Y, HEAD DISCHARGE SET @ 6'-0", SHOWER DRAIN FD-1, SEE DRAIN SCHEDULE.
P-11	DRINKING FOUNTAIN	2"	1¼" x 1½"	1½"	½"	-	HAWS #HWTA-6S, WALL MOUNTED, STAINLESS STEEL, 1/5 HP, 120 V., 1∅ FAN COOLED. TRAP #R-7000-45, STOP #T-82.
P-12	SINK	2"	1½" x 1½"	1½"	½"	-	ELKAY CUSTOM MADE SINK, SIMILAR TO #E-24-362-23, EXCEPT GALV. STEEL AND 1 CENTER HOLE DRILLING W/FAUCET #R-4442, STRAINER #R-4505, TRAP #R-7000-55, STOPS #SST-R3720A.
P-13	SINK	2"	1½" x 1½"	1½"	½"	½"	ROUGH-IN AND CONNECT PROVIDE TRAP AND STOP.
P-14	DRINKING FOUNTAIN	2"	1¼" x 1½"	1½"	½"	-	HAWS #HI-LO-6-S, WALL MOUNTED STAINLESS, 1/5 H.P., 120 V., 1∅, FAN COOLED, TRAP #R-7000-45, STOP #T-82
P-15	EYE WASH	2"	1¼" x 1½"	1½"	½"		HAWS #7162-BT ACID RESISTING ENAMELED CAST IRON W/WALL BRACKET AND TRAP, STOP #T82
P-16	WASH FOUNTAIN	2"	2" C.I.	2"	1"	1"	BRADLEY #CFB 54" SEMI-CIRCULAR, STAINLESS STEEL BOWL AND PEDESTAL W/ALL STANDARD EQUIPMENT.
P-17	EMERGENCY SHOWER	FD-1 W/TP	—	—	1"	-	HAWS 8162 H WITH 1" CHROME PLATED BRASS NIPPLE.

COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
E. A. COMETTA, PARTNER • F. L. R. CONFER, ARCHITECT • G. C. LARSEN, ARCHITECT • J. E. CROSSEN, ARCHITECT
A. SOOTARU, ARCHITECT ASSOCIATED ARCHITECTURAL FIRMS F. W. CONFER, PARTNER

PLUMBING SITE PLAN, LEGEND, GENERAL NOTES AND FIXTURE SCHEDULE
TECHNICAL-VOCATIONAL FACILITY
DIABLO VALLEY COLLEGE
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PLEASANT HILL CALIFORNIA

SHEET P-1 OF 3
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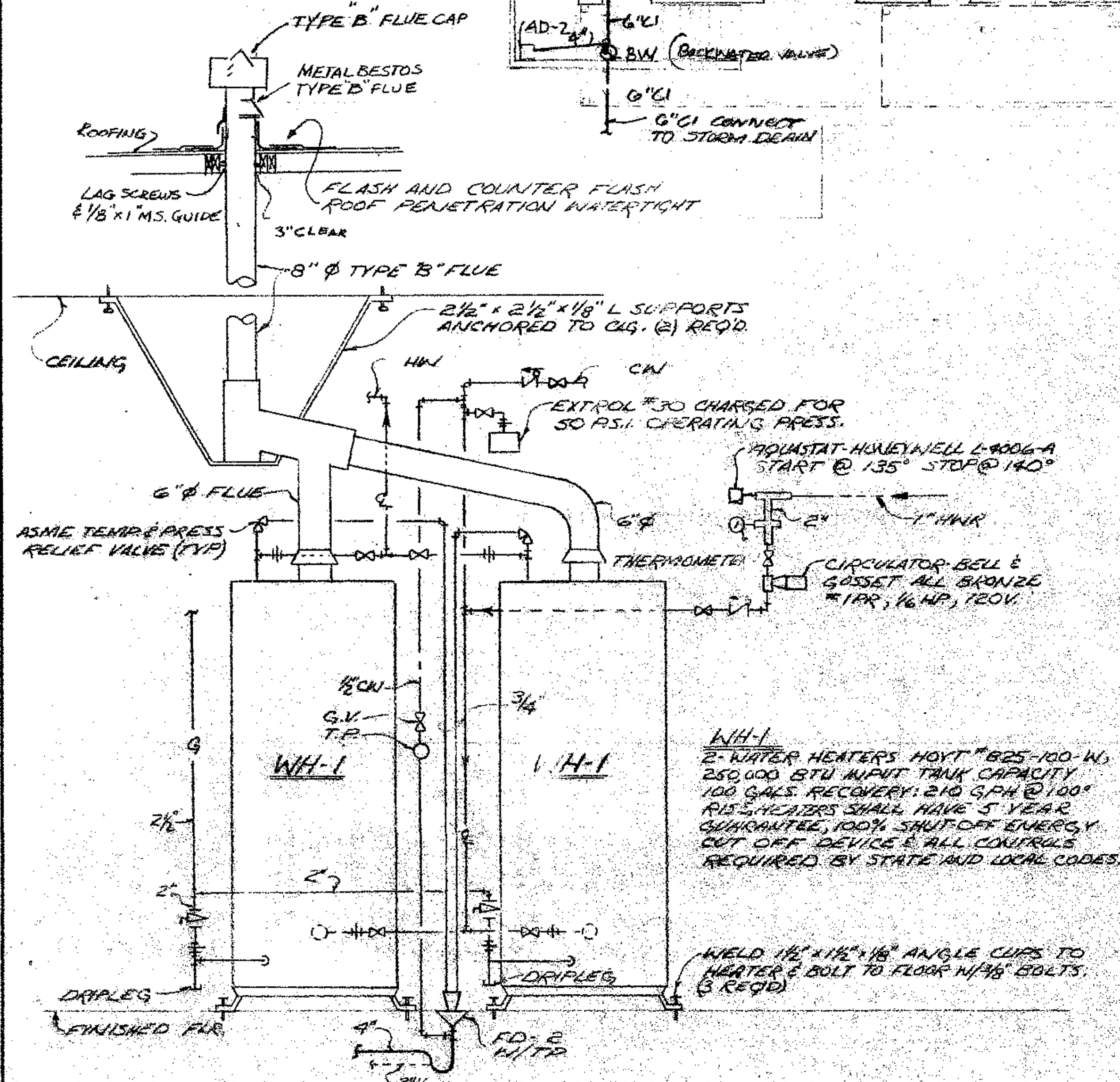
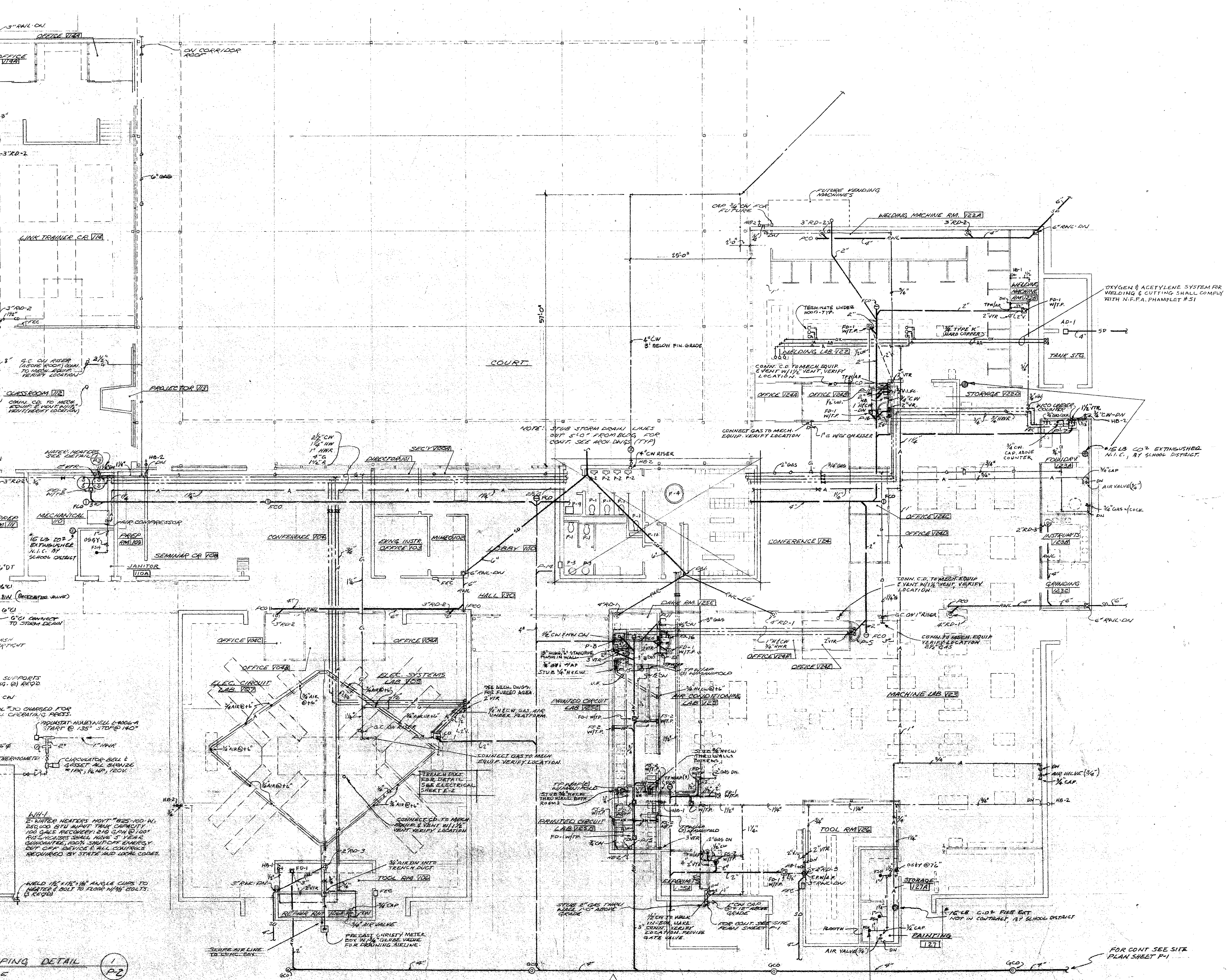


WATER HEATER PIPING DETAIL 1/P-2

NO SCALE



PLUMBING FLOOR PLAN

SCALE: 1/8" = 1'-0"

NOTE: SEE ARCH ROOF PLAN FOR EXACT LOCATION OF ROOF DRAINS.

ARCHITECT

STRUCT. ENGINEER

CONSULT. ENGINEER

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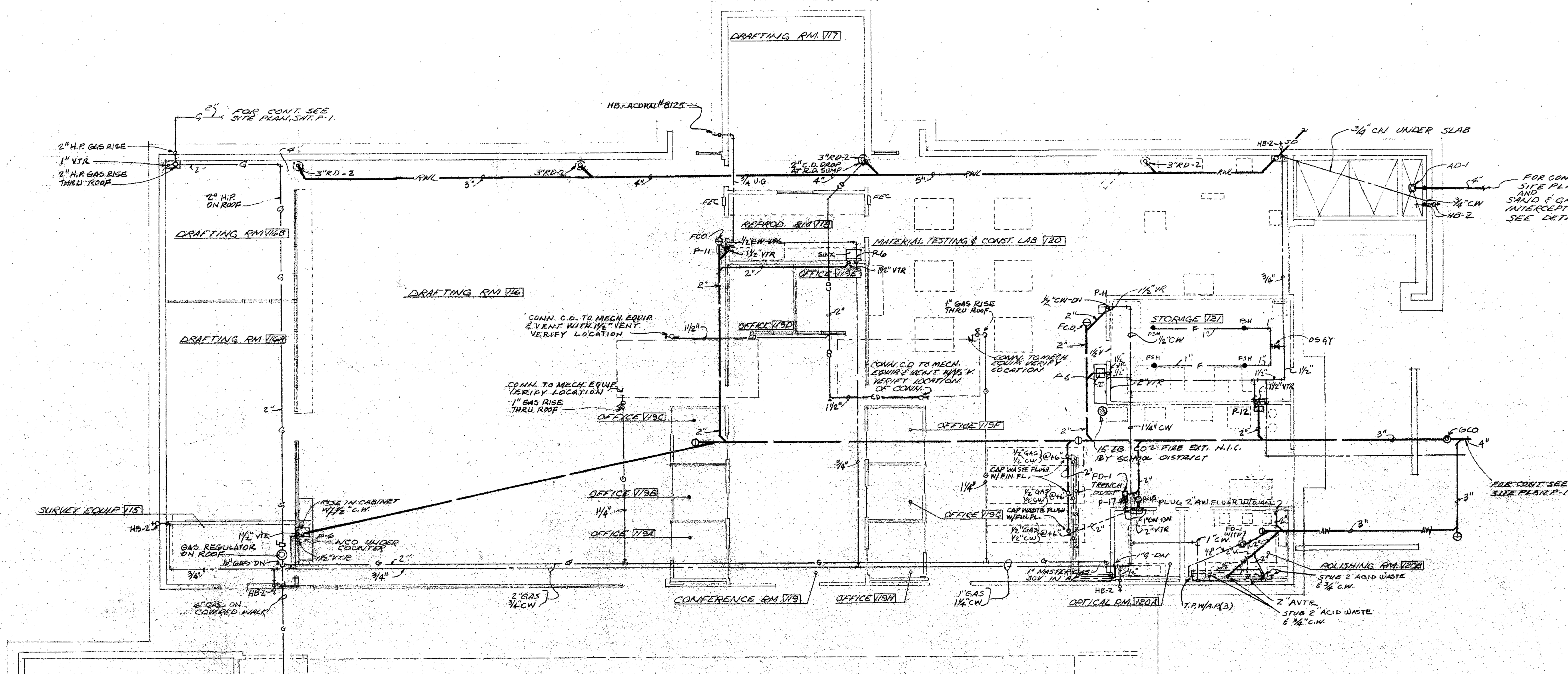
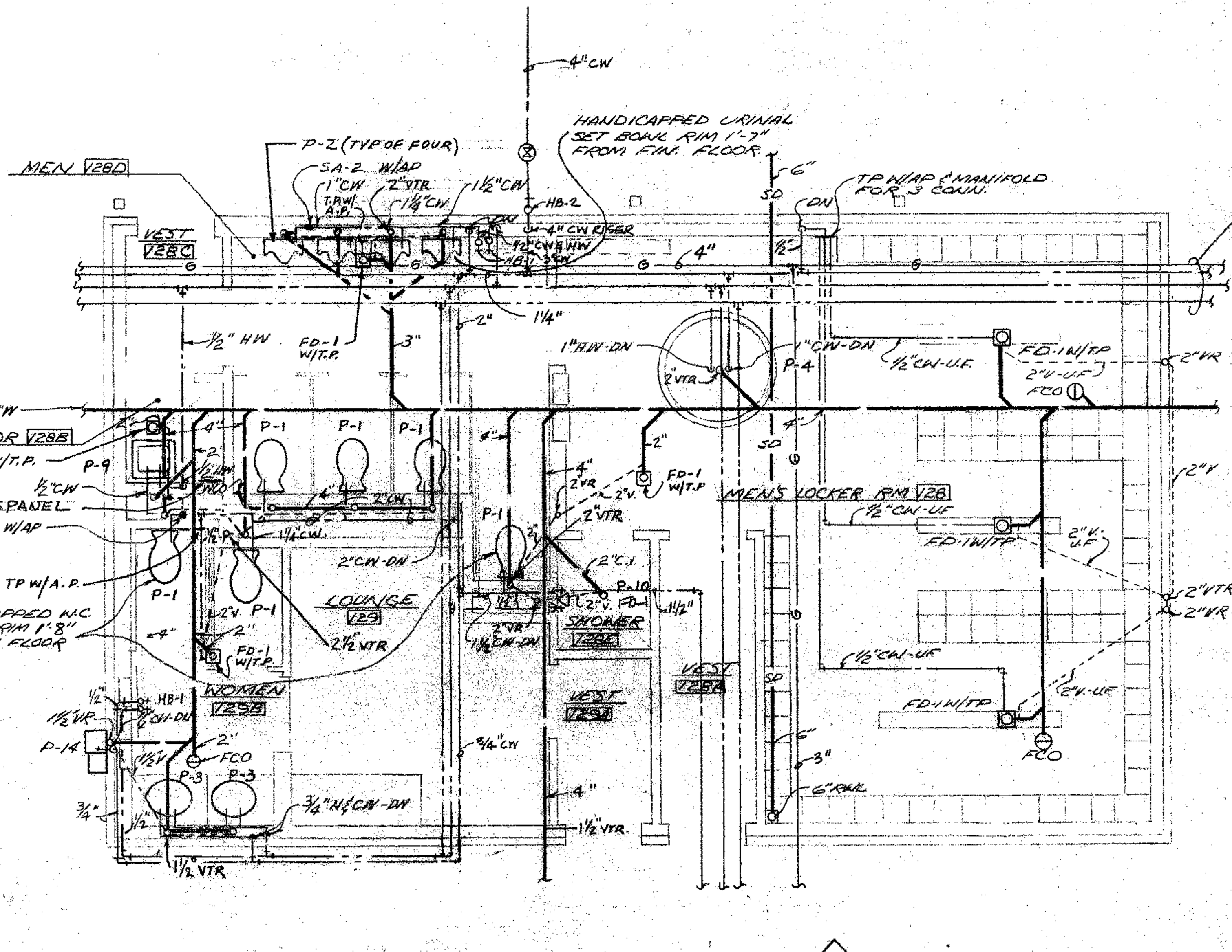


PLUMBING FLOOR PLAN

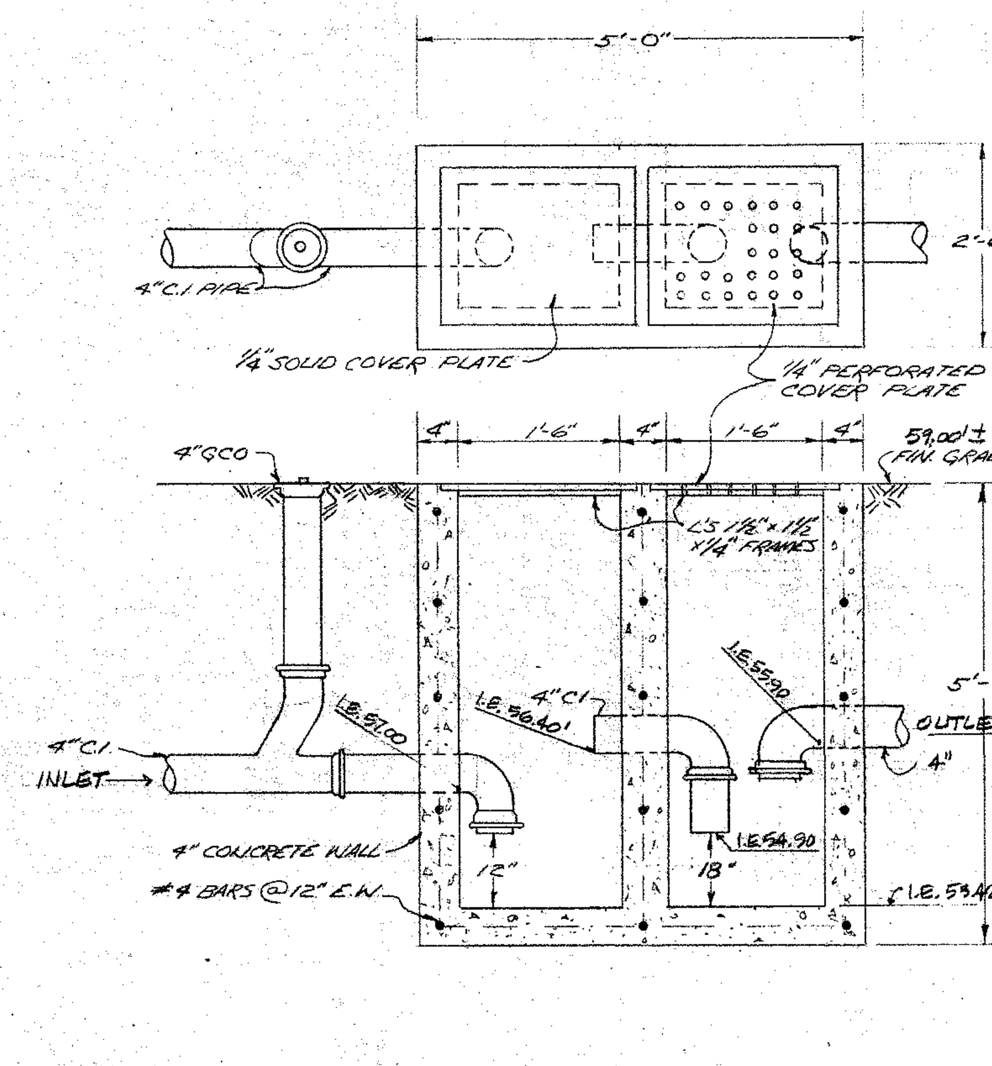
SCALE: 1/8" = 1'-0"

NORTH



TOILET FLOOR PLAN

SCALE: 1/4" = 1'-0"



1/P-3 SAND AND GRAVEL INTERCEPTOR

NO SCALE

DRAINS AND MISCELLANEOUS SCHEDULE

JAY R. SMITH, JOSAM, WADE OR EQUAL

CODE	DESCRIPTION	WASTE	TRAP	VENT	SMITH NO.	REMARKS
FD-1	FLOOR DRAIN	2"	2"	2"	2010-A	5" Ø NB STRAINER, CLAMPING RING, VANDAL PROOF, W/ 1/2" C.W.
FD-2	FUNNEL DRAIN	4"	4"	2"	3510-11	6" Ø FUNNEL & GRADE P.B., W/CLAMPING RING
BWV	BACKWATER VALVE	6"	—	—	7022-6"	PROVIDE SOIL PIPE EXTENSION
FS-1	FLOOR SINK	4"	4"	2"	3040-13	8 1/2" Ø NB RIM & 3/4 GRATE CLAMPING RING DOME BOTTOM STRAINER.
FS-2	FLOOR SINK	2"	2"	2"	3040-14	8 1/2" Ø NB RIM & GRATE W/2 1/2" CENTER HOLE, CLAMPING RING, DOME BOTTOM STRINER.
AD-1	AREA DRAIN	JAY R. SMITH #2220, 8" Ø W/FLASHING RING, SEDIMENT BUCKET, VANDAL PROOF. W/ SAND & GRAVEL INTERCEPTOR SEE DETAIL 1/P-3				
AD-2	AREA DRAIN	JAY R SMITH #2220, 8" Ø W/FLASHING RING, SEDIMENT BUCKET, VANDAL PROOF				
FCO	FLOOR CLEANOUT	JAY R. SMITH #4020 NB SCORIATED COVER, CLAMPING RING, VANDAL PROOF.				
WCO	WALL CLEANOUT	JAY R. SMITH #4531 CAST BRONZE PLUG, VANDAL PROOF.				
GCO	GRADE CLEANOUT	JAY R. SMITH #4240 C.I. TOP, GALV. VANDAL PROOF.				
SA-1	SHOCK ABSORBER	JAY R. SMITH #5030 INSTALL UP-RIGHT W/ACCESS DOOR.				
SA-2	SHOCK ABSORBER	JAY R. SMITH #5020 INSTALL UP-RIGHT W/ACCESS PANEL.				
T.P.	TRAP PRIMER	J.M.J. CORP. #P-1 INSTALL UP-RIGHT W/ACCESS PANEL, W/MANIFOLD WHEN REQ'D.				
HB-1	HOSE BIBB.	CHICAGO #293, 1/2" SIZE, POLISHED CHROME PLATE.				
HB-2	HOSE BIBB.	CHICAGO #387, 3/4" SIZE, ROUGH CHROME PLATED				
RD-1	ROOF DRAIN	JAY R. SMITH #1010-RE-UDC, 4" OUTLET, 16" Ø SUMP RECEIVER, UNDE DECK CLAMP.				
RD-2	ROOF DRAIN	JAY R. SMITH #1010-RE-UDC, 3" OUTLET, 16" Ø SUMP RECEIVER, UNDERDECK CLAMP.				
RD-3	ROOF DRAIN	JAY R. SMITH #1310-RE-UDC 2" OULET, 12" Ø, SUMP RECEIVER, UNDERDECK CLAMP.				
FEC	FIRE EXTINGUISHER CABINET	STANDARD HOSE CO., CABINET 1015S-RT. W/DOOR STYLE "BG", WITH CORBIN #15 LOCK. EXTINGUISHER BY DISTRICT. (N.I.C.)				

ARCHITECT
STRUCT. ENGINEER
CONSULT. ENGINEER

32247 APPROVED OCT 3 - 1969

APPROVED STATE FIRE MARSHAL STATE OF CALIFORNIA

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SHEET P-3 OF 3

DATE 9-26-69

REVISED AS BUILT 11-19-71

D.V.C. ENG. TECH # 582.5 PLUMBING

GENERAL NOTES & LEGEND

1. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MFR'S RECOMMENDATIONS & INSTRUCTIONS.
2. MAINTAIN 42" CLEAR IN FRONT OF ALL ELECTRICAL PANELS.
3. ALL 90° NON-RADIUS TURNS SHALL HAVE TURNING VANES. ALL 90° DUCT TAKE-OFFS INCLUDING OUTLETS SHALL USE EXTRACTORS.
4. ALL DUCT SIZES SHOWN ARE NET INSIDE OF INSULATION OR LINING.
5. COORDINATE THE LOCATION OF ALL AIR OUTLETS WITH OTHER TRADES INCLUDING LIGHT FIXTURES. SEE ARCH. REFLECTED CEILING PLANS.
6. EVERY BRANCH DUCT TAKEOFF FROM A MAIN DUCT SHALL HAVE BALANCING DAMPER, THE ENTIRE DUCTWORK SYSTEM SHALL HAVE SUFFICIENT DAMPERING TO ACHIEVE A PROPERLY BALANCED SYSTEM. ALSO ALL DISCHARGE DUCTS FROM MULTI-ZONES SHALL HAVE A DAMPER PER ZONE FOR BALANCING.

(T) ROOM THERMOSTAT UP 52".

D.L. DOOR LOUVER SEE ARCH. DRW'S.

F.D. FIRE DAMPER SEE DETAIL 1/M1

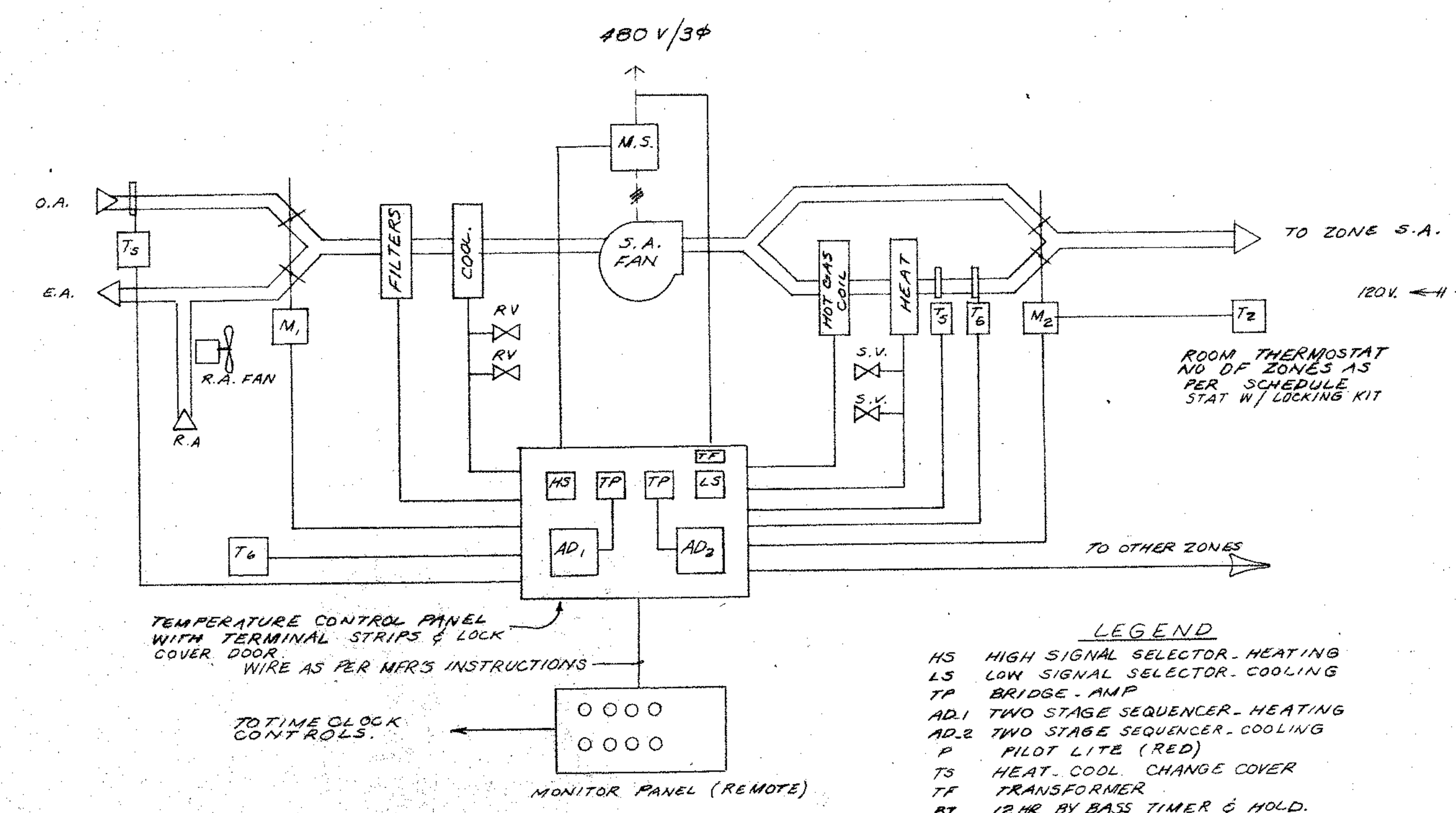
EQUIPMENT SCHEDULE

ROOF TOP MULTIZONES

MARK	MAKE & MODEL	BTU/HR HEAT	COOLING NOM. TONS	SUPPLY FAN	ZONES & SIZE CFM	RETURN FAN	VOLTAGE	WEIGHT
MZ-1	NESBITT No RMA100 500, C24, 7½, C, B04, R1, 40	500,000	24	7½ H.P. 8135 CFM	1- 1. 4800 2. 1115 3. 1580 4. 640	1 H.P. 8135 CFM	480 VOLTS 63 AMPS	#5940
MZ-2	NESBITT NO RMA100 500, C24, 7½, C, B04, R1, 40	500,000	24	7½ H.P. 8620 CFM	2. 1. 1300 2. 1480 3. 4840 4. 1000	1 H.P. 8120 CFM	480 VOLTS 63 AMPS	#5940
MZ-3	NESBITT NO RMA100 500, C30, 7½, C, B04, R1, 40	500,000	30	7½ H.P. 8840 CFM	3- 1. 1800 2. 1110 3. 940 4. 4990	1 H.P. 7545 CFM	480 VOLTS 91 AMPS	#6120
MZ-4	NESBITT NO RMA100 500, C30, 7½, C, B04, R1, 40	500,000	30	7½ H.P. 9060	4- 1. 1780 2. 840 3. 1400 4. 5040	1 H.P. 8160 CFM	480 VOLTS 91 AMPS	#6120
MZ-5	NESBITT NO RMA100 500, C24, 7½, B, B04, R1, 40	500,000	24	7½ H.P. 8475 CFM	5- 1. 2470 2. 2470 3. 3135 4. 400	3/4 H.P. 5715 CFM	480 VOLTS 63 AMPS	#5940
MZ-6	NESBITT NO. RMA100 500, C22, 7½, B, B05, R1, 40	500,000	22	7½ H.P. 7160 CFM	6 1. 1090 2. 1450 3. 2870 4. 1200 5. 550	3/4 H.P. 6890	480 VOLTS 63 AMPS	#5940

FANS, RELIEF VENTS

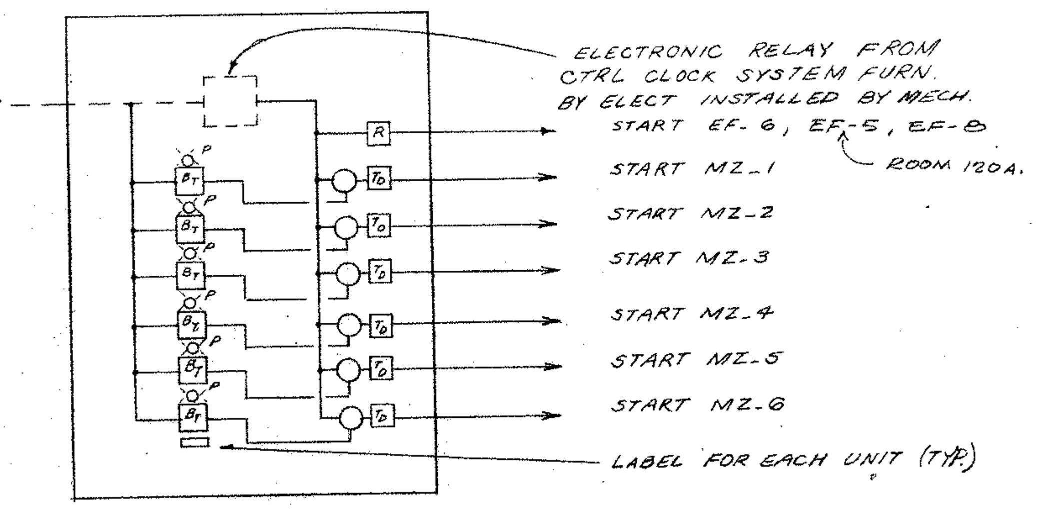
MARK	MAKE	MODEL NO	CFM	STATIC PRESSURE	H.P. & VOLTAGE	BIRD SCREEN	REMARKS
EF-1	ILG	FCS-1500FA	2,000	1/2"	1 H.P. 480/3φ	YES	
EF-2	ILG	BCF-3000FG	8,000	1"	2 H.P. 480/3φ		
EF-3	CAR. MON	35-F	5,400	4"	5 H.P. 480/3φ		
EF-4	ILG	PV243	4000	1/8"	1/3 H.P. 120		WITH SAFETY GUARD ON THE MOTOR SIDE & MOTOR OPERATED KITS
EF-5	ILG	CRF-A100	235	1/4"	1/30 H.P. 120		BACKDRAFT DAMPER NOT MOTORIZED
EF-6	ILG	CRF-A270	3170	1/4"	1/2 H.P. 480/3φ		
EF-7	ILG	CRF-A222	2,000	1/4"	1/3 H.P. 120		
EF-8	ILG	CRF-A135	500	1/8"	1/12 H.P. 120		
RV-3	ILG	S-RVE-12	500				
RV-1	ILG	S-RVE-8	200				
RV-2	ILG	S-RVE-8	235				
RV-3	ILG	S-RVS-24	2,000				
PH-1	AIROLITE		10,000				PENTHOUSE SHALL BE BAKED ENAMEL STEEL 72"x60"x24" HT. — COLOR AS SELECTED BY THE ARCH.
PH-2	AIROLITE		2,000				PENTHOUSE SHALL BE ENAMEL STEEL 24"x24"x18" HT. — COLOR AS SELECTED BY THE ARCH.
WL-1	AIROLITE		4,000				WALL LOUVER SHALL BE BAKED ENAMEL STEEL 36"x36" — COLOR AS SELECTED BY THE ARCH.



RMA MULTIZONE

LEGEND

HS HIGH SIGNAL SELECTOR - HEATING
LS LOW SIGNAL SELECTOR - COOLING
TP BRIDGE - AMP
AD-1 TWO STAGE SEQUENCER - HEATING
AD-2 TWO STAGE SEQUENCER - COOLING
P PILOT LITE (RED)
TS HEAT - COOL CHANGE COVER
TF TRANSFORMER
BT 12 HR BY BASS TIMER & HOLD.
TD TIME DELAY RELAY
--- WIRING BY ELECT. CONTRACTOR
—— WIRING BY MECH. CONTRACTOR
MS MAGNETIC MOTOR STARTER (3-LEG)
R RELAY

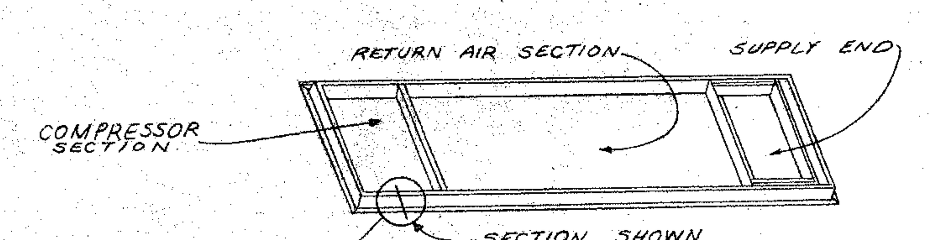


CONTROL PANEL

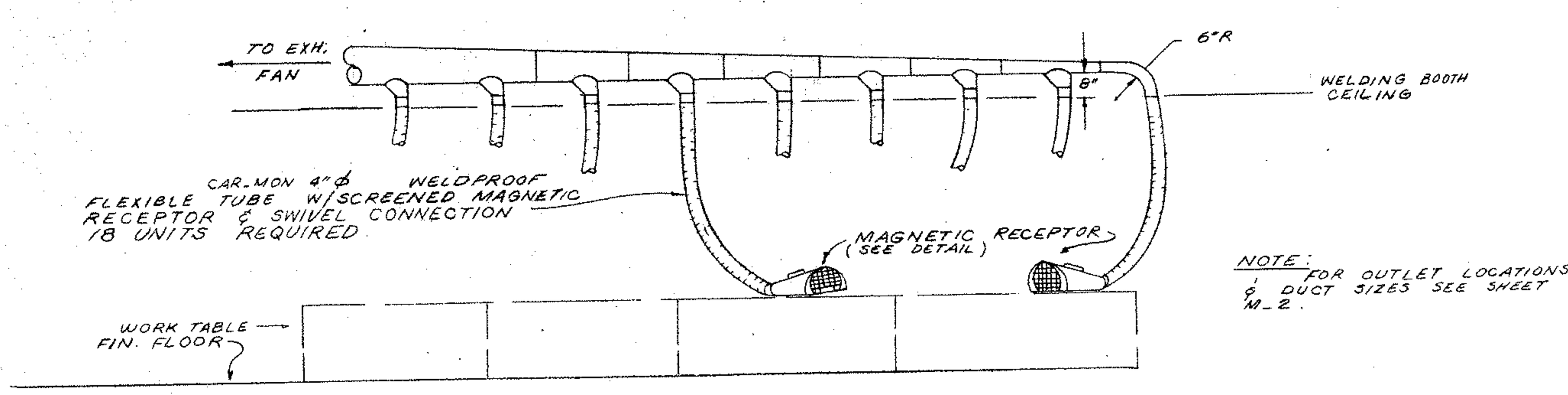
CODE GAUGE PANEL WITH LOCK

TEMPERATURE CONTROL SYSTEM NO SCALE:

NOTE: ALL PART NOS ARE "BARBER COLMAN CO"

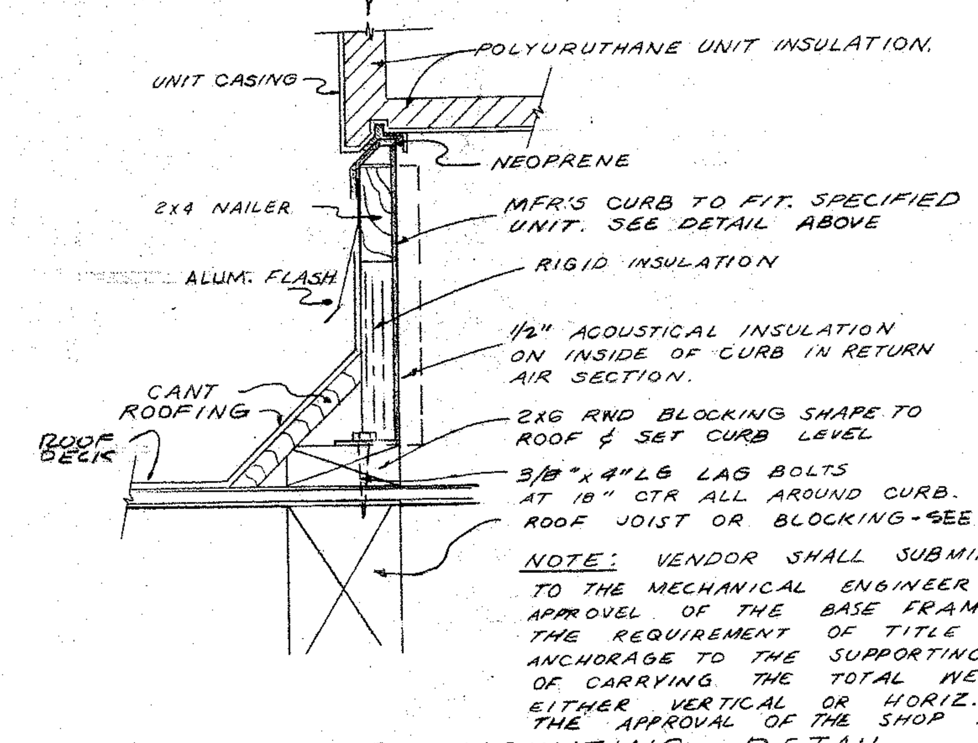


MFR'S MOUNTING CURB NO SCALE:



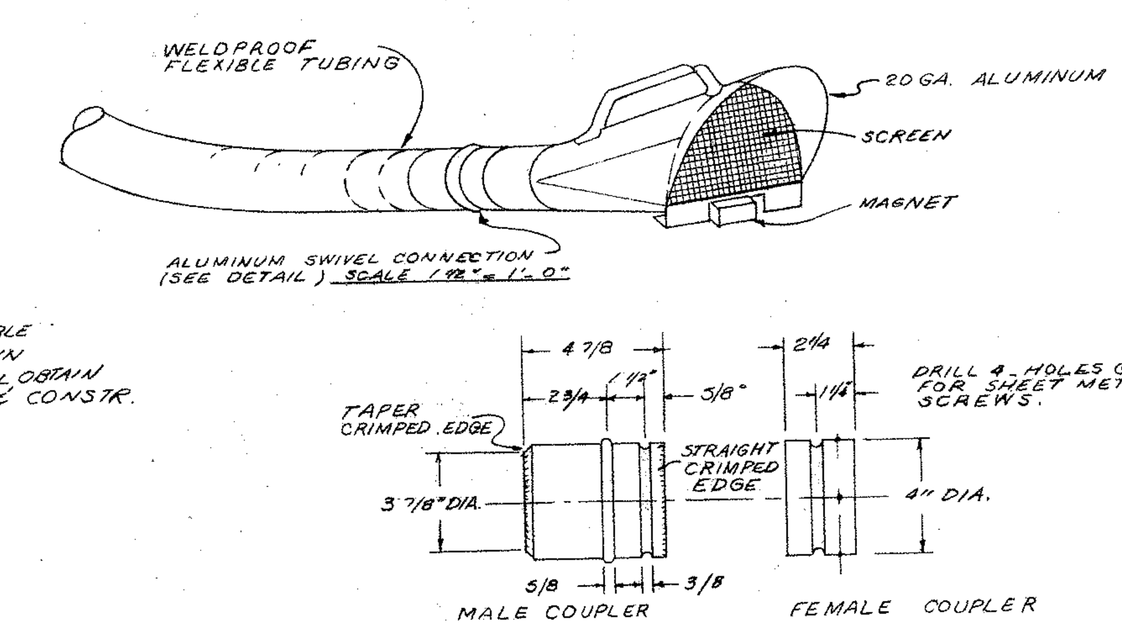
NOTE: FOR OUTLET LOCATIONS & DUCT SIZES SEE SHEET M-2.

TYPICAL ELEVATION - WELDING SYSTEMS NO SCALE: 4/M-1



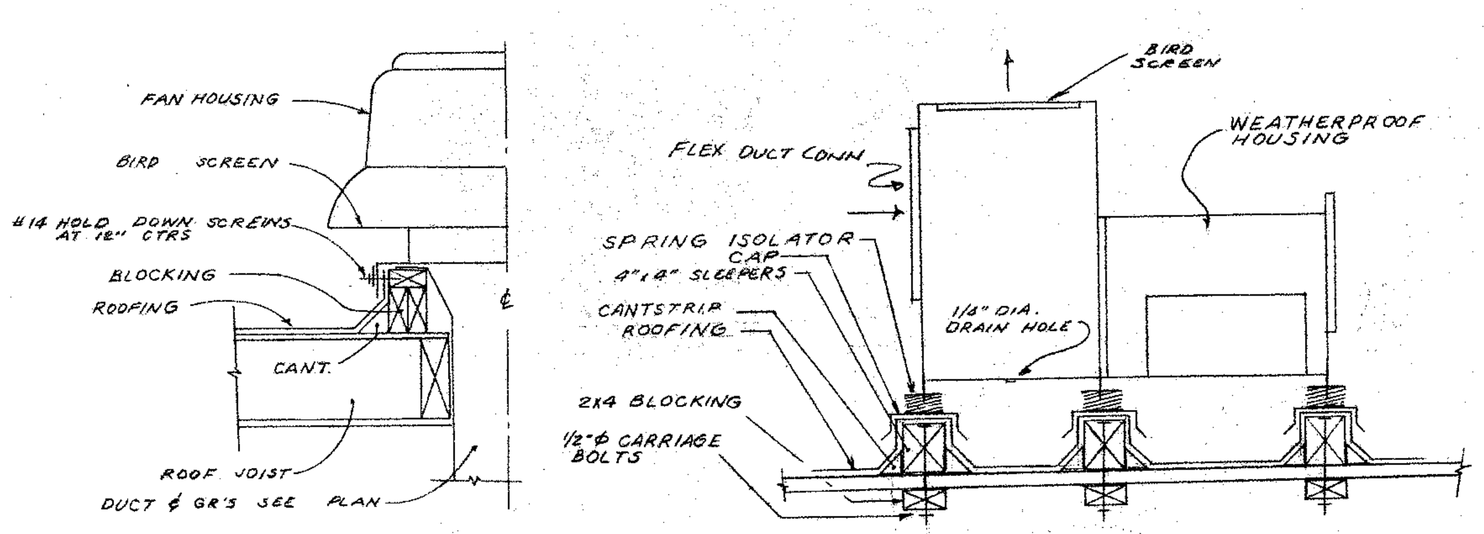
NOTE: VENDOR SHALL SUBMIT SHOP DWGS. & STRUCT. CALCS. TO THE MECHANICAL ENGINEER & THE ARCHITECT FOR THEIR APPROVEL OF THE BASE FRAME CONSTRUCTION TO COMPLY WITH THE REQUIREMENT OF TITLE 21. THE BASE FRAME & THEIR ANCHORAGE TO THE SUPPORTING ROOF MEMBERS SHALL BE CAPABLE OF CARRYING THE TOTAL WEIGHT OF THE MECHANICAL UNIT IN EITHER VERTICAL OR HORIZ. DIRECTION. THE ARCH. THEN SHALL OBTAIN THE APPROVAL OF THE SHOP DWGS. FROM THE OFFICE OF ARCH. & CONSTR.

MULTI-ZONE MOUNTING DETAIL NO SCALE: 5/M-1

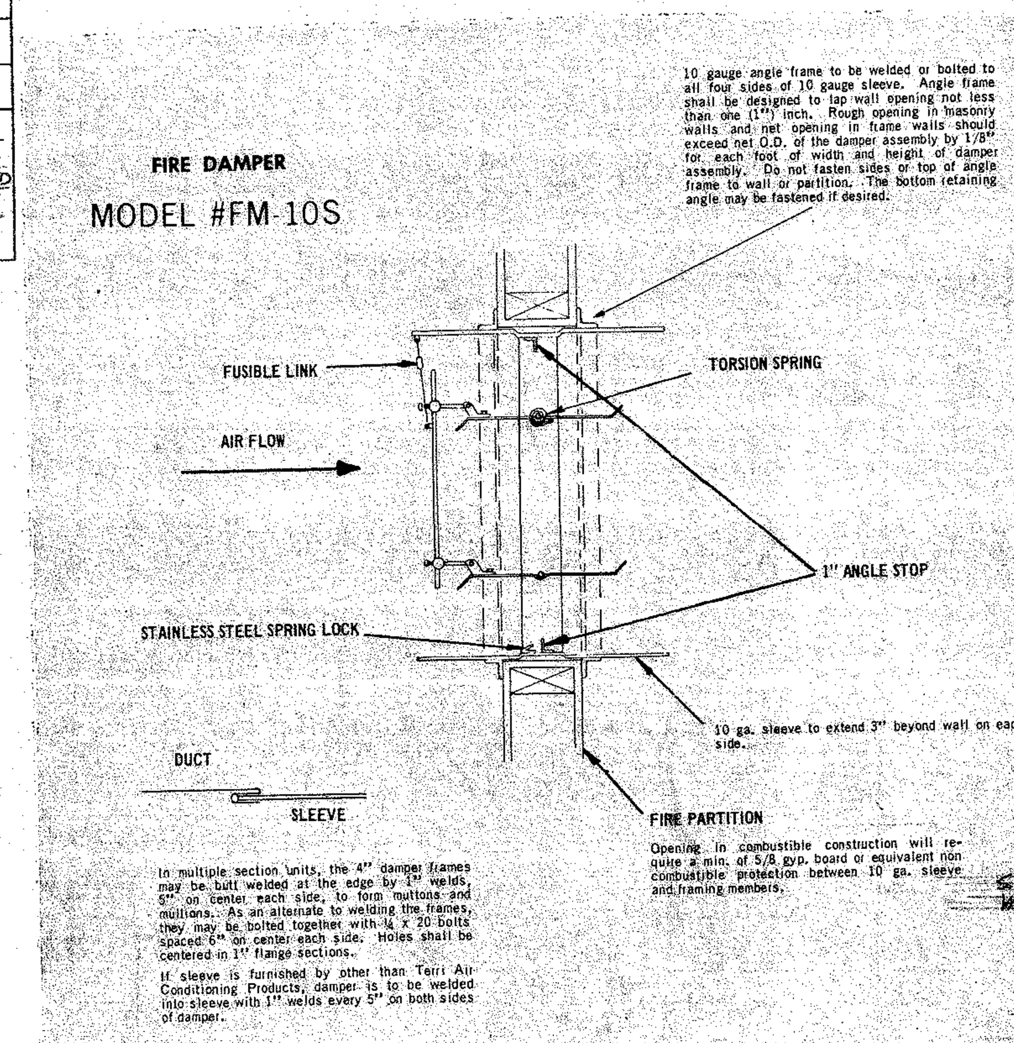


WELDING EXHAUST RECEPTOR

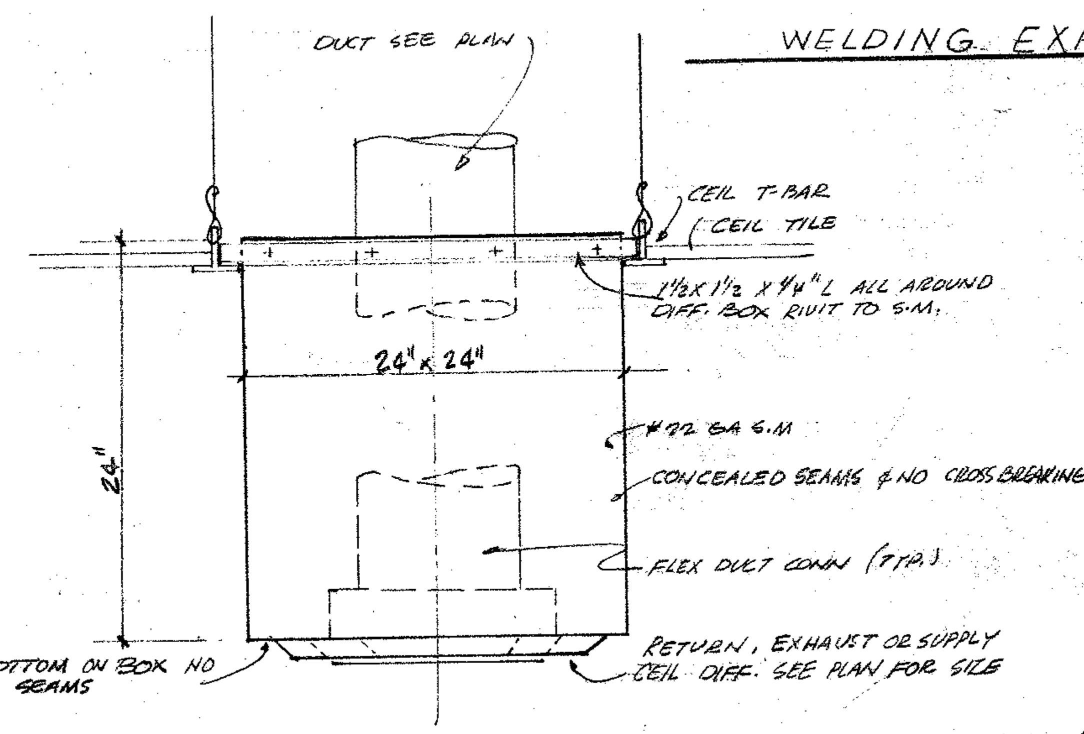
SCALE: 3" = 1'-0"



EXHAUST FAN MOUNTING DETAIL 2/M-1 NO SCALE:

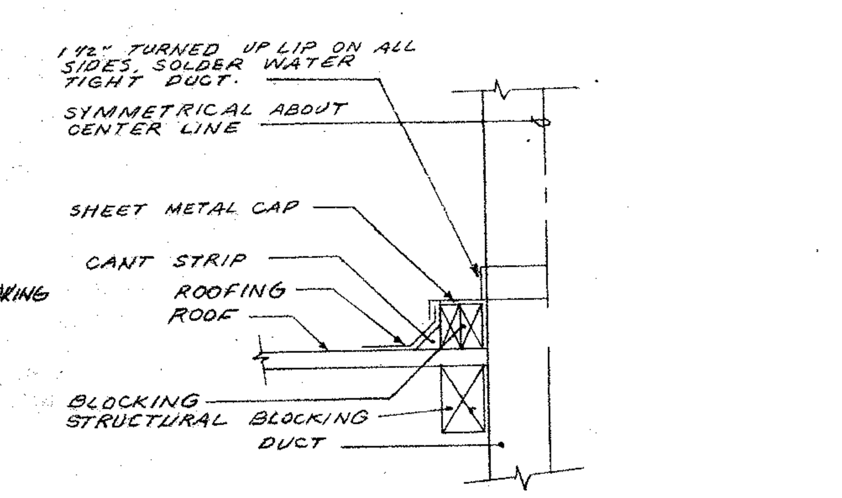


FIRE DAMPER DETAIL 1/M-1



TYPICAL AIR OUTLET BOX DROP-FOR ALL OUTLETS IN SUSPENDED CEILINGS No Scale:

NOTE: SHOP DRAWINGS AND A SAMPLE UNIT OF THIS DROP BOX SHALL BE FURNISHED TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OR FABRICATION.



DUCT MOUNTING DETAIL 3/M-1 NO SCALE:

ARCHITECT [signature]
STRUCT. ENGINEER
CONSULT. ENGINEER Clarence B. Brennan M.E. [signature]

STATE OF CALIFORNIA — DEPARTMENT OF GENERAL SERVICES OFFICE OF ARCHITECTURE AND CONSTRUCTION
32217 APPROVED OCT 3 - 1969

COMETTA AND SOOTARU
3516 MACDONALD AVENUE RICHMOND, CALIF. 232-2637
CONFER + LARSEN + CROSSEN
1200 CONTRA COSTA BLVD. CONCORD, CALIF. 686-2292
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A. SOOTARU, ARCHITECT · ASSOCIATED ARCHITECTURAL FIRMS · F. W. CONFER, PARTNER

MECHANICAL DETAILS, SCHEDULES & GENERAL NOTES
TECHNICAL, VOCATIONAL FACILITY (ENGINEERING TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

WILLIAMSON AND VOLLMER ENGINEERING, INC. 362 PARK STREET PLEASANT VALLEY, CALIF. 94570

SHEET M-1 OF 3

DATE 9-26-69

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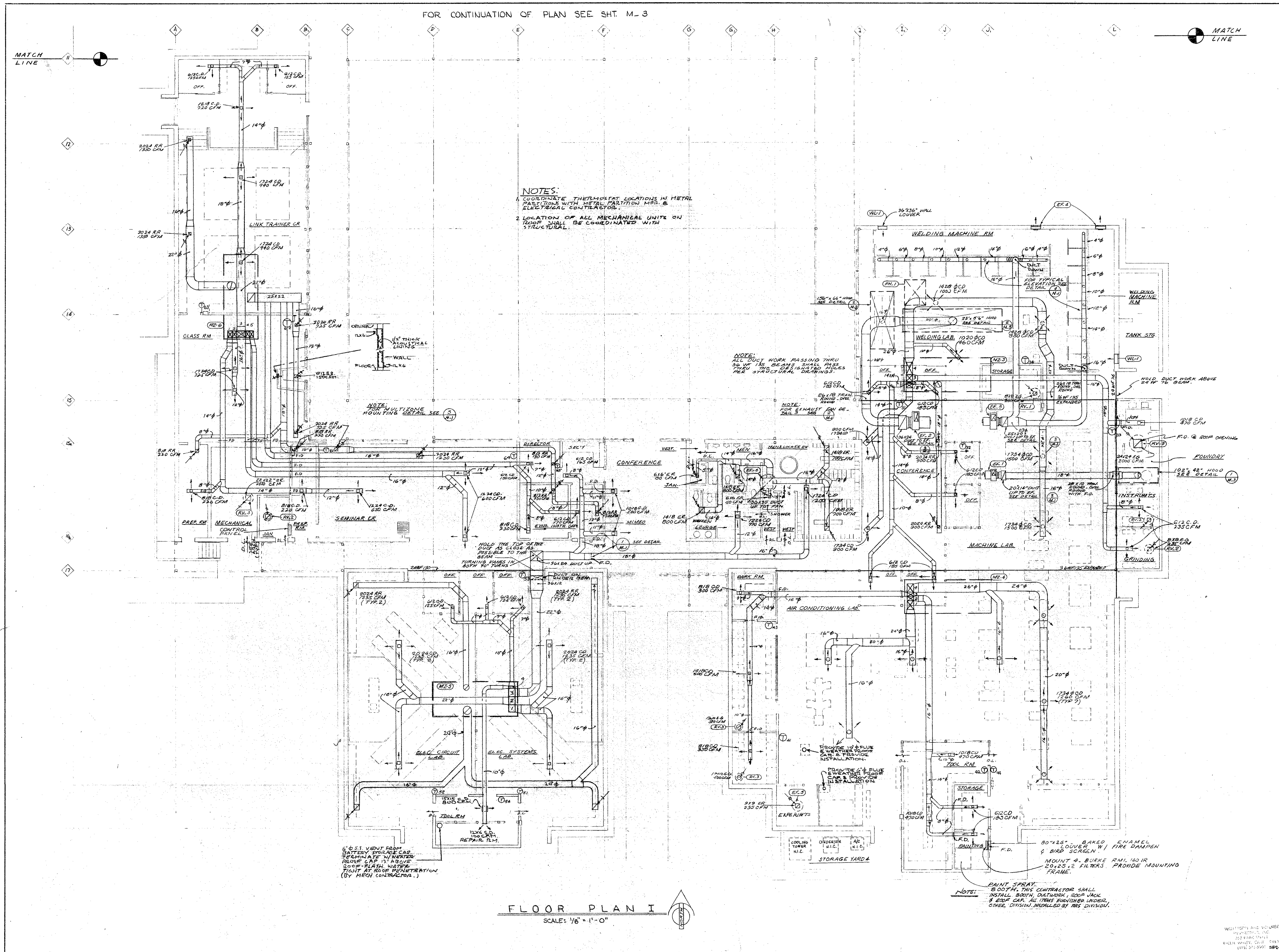

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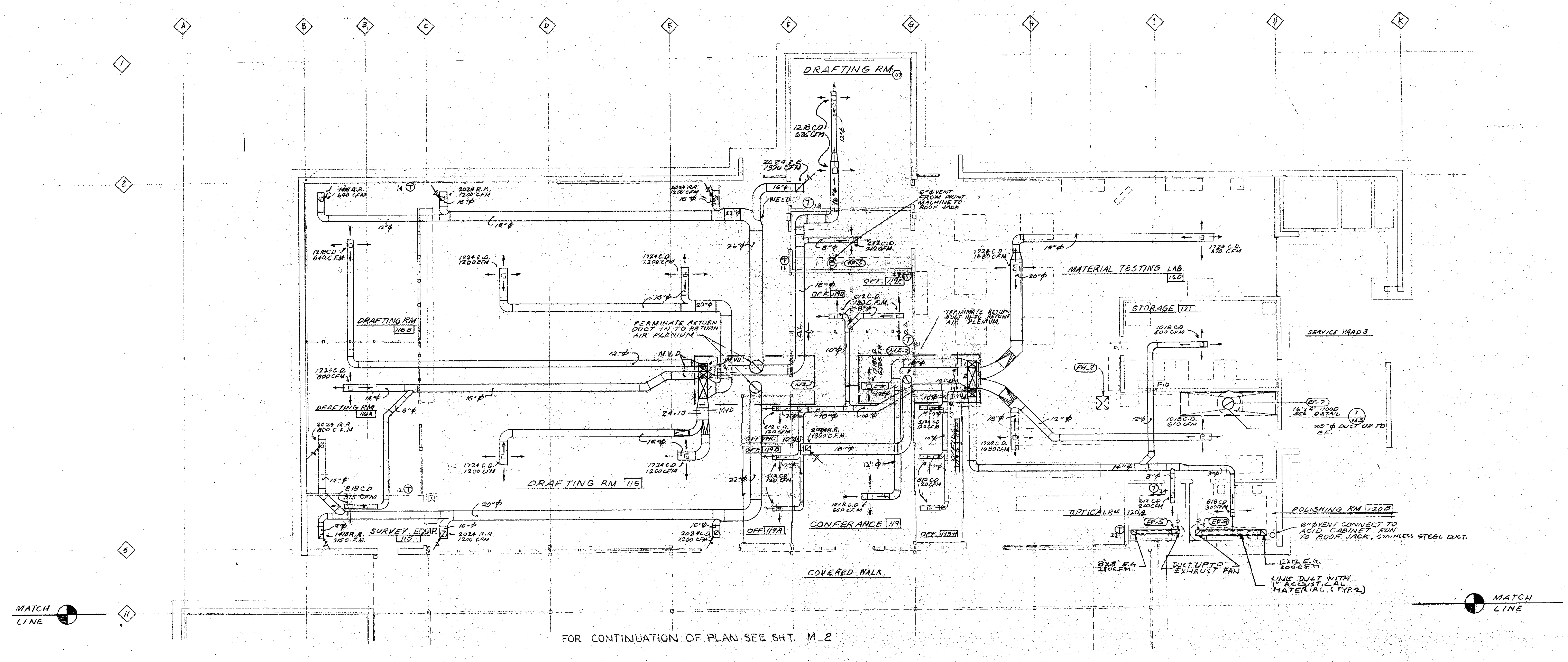
ASSOCIATED ARCHITECTURAL FIRMS

MECHANICAL FLOOR PLAN
TECHNICAL VOCATIONAL FACILITY
(ENGINEERING TECHNOLOGY CENTER)
DIABLO VALLEY COLLEGE
CONTRA COSTA JUNIOR COLLEGE DISTRICT
PLEASANT HILL CALIFORNIA

SHEET
M-2
OF 3
DATE
9-26-69



FLOOR PLAN II

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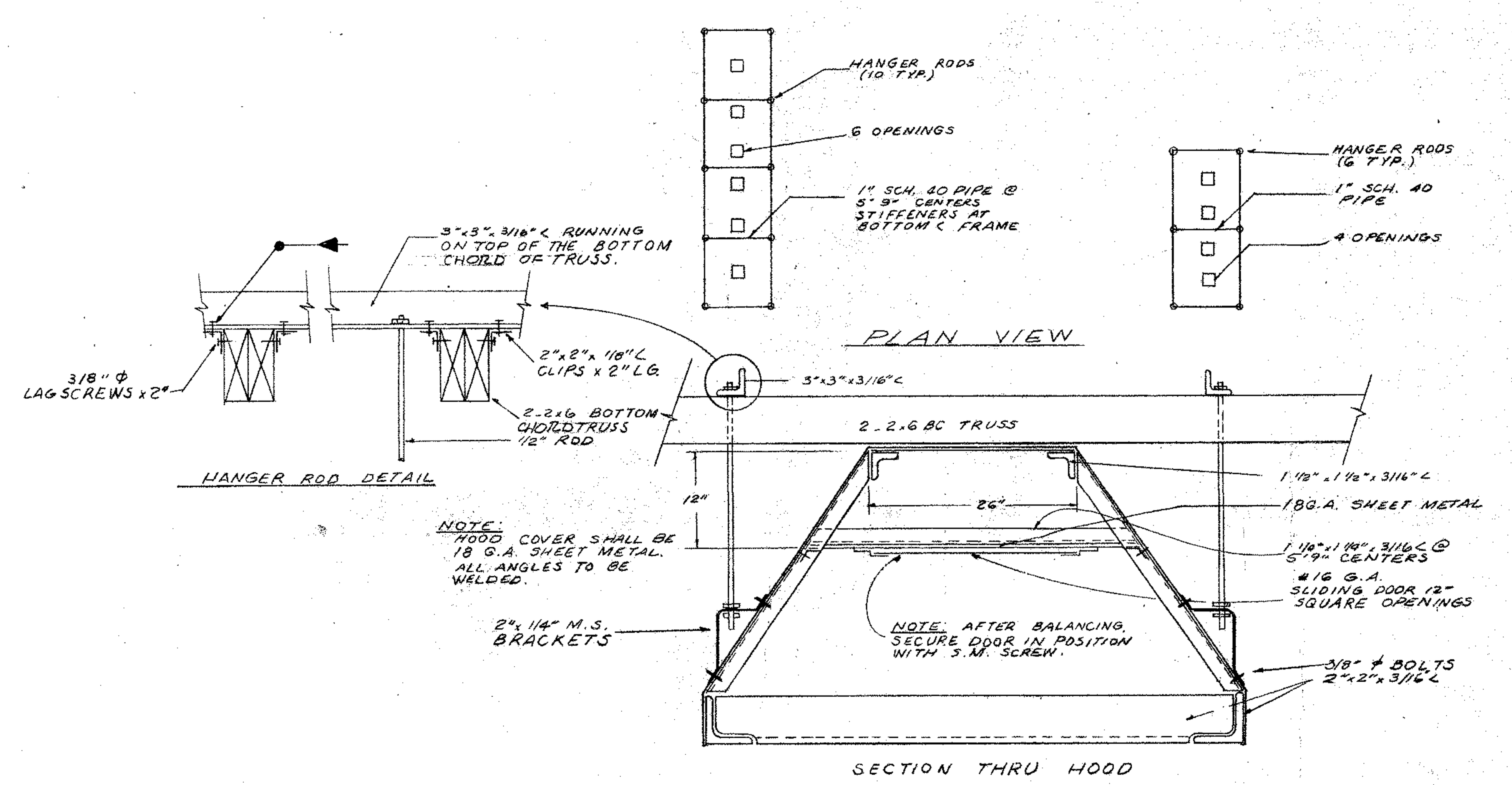

HOOD DETAILS 2 M-3

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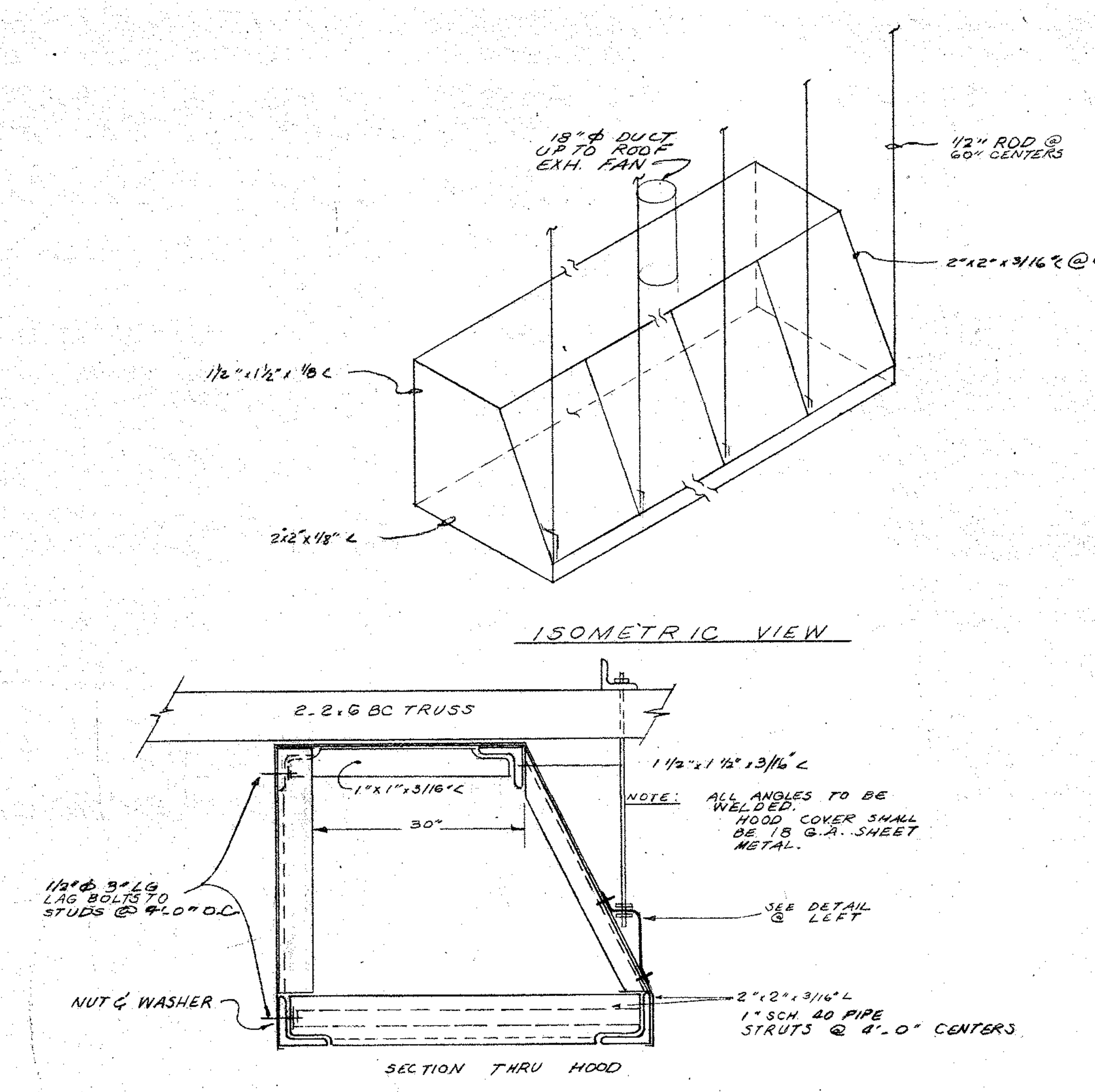
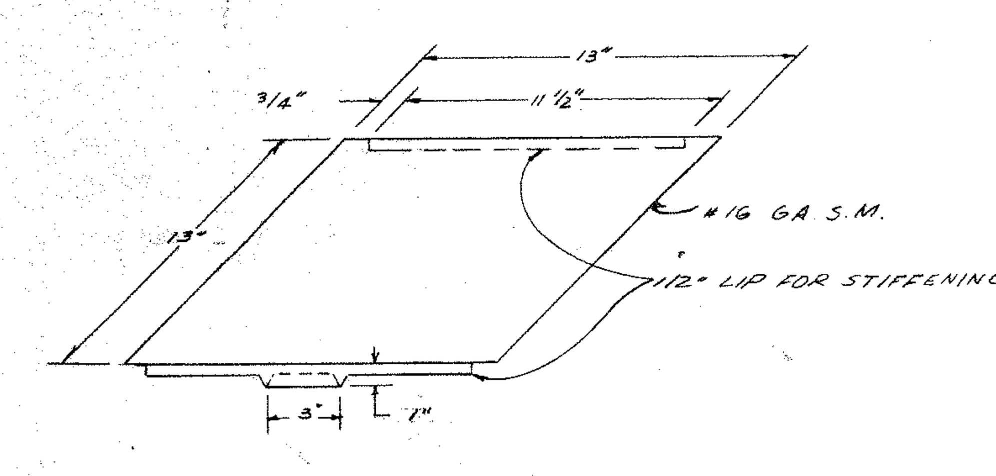


HOOD DETAIL 1 M-3

NOT TO SCALE



BALANCING SLIDE DOORS

NOT TO SCALE

ARCHITECT

STRUCT. ENGINEER

CONSULT. ENGINEER

COMETTA AND SOOTARU
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ASSOCIATED ARCHITECTURAL FIRMS

MECHANICAL FLOOR PLAN & DETAIL

TECHNICAL VOCATIONAL FACILITY (ENGINEERING TECHNOLOGY CENTER)

DIABLO VALLEY COLLEGE

CONTRA COSTA JUNIOR COLLEGE DISTRICT

PLEASANT HILL CALIFORNIA

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9-26-69

Pre-renovation Hazardous Materials Survey

Engineering Technology (ET) Building
Diablo Valley College
321 Golf Club Road
Pleasant Hill, California

March 27, 2023 | Report Number: R1227901

Terracon

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March 27, 2023

Contra Costa Community College District
500 Court Street
Martinez, CA 94553

Attn: Mr. Ron Hoyle
T: 925-324-7626
E: rhoyle@kitchell.com

RE: Pre-renovation Hazardous Materials Survey
Engineering Technology (ET) Building
Diablo Valley College
321 Golf Club Road
Pleasant Hill, California
Terracon Project No: R1227901

Dear Mr. Hoyle:

Terracon Consultants, Inc. (Terracon) is pleased to submit the attached report for the referenced site to Contra Costa Community College District (CCCCD). The purpose of this report is to present the findings of the pre-renovation hazardous materials survey performed January 11 – 12, 2023. This survey was conducted in general accordance with Terracon's proposal PR1227901, dated December 21, 2022. We understand this survey was requested to identify and quantify asbestos-containing materials (ACM), lead-containing paints and materials, polychlorinated biphenyl (PCBs) materials (ballasts and building envelope sealants), and other hazardous materials likely to be impacted during the planned renovation of the ET Building.

Terracon collected one hundred thirty-six (136) samples from forty-three (43) homogeneous areas of suspect ACMs. Asbestos content was confirmed in eight (8) of the materials identified, sampled, and analyzed. Eighteen (18) painted surfaces and one (1) other building material suspected to contain lead were sampled and analyzed. Lead was detected in twelve (12) of the surfaces or materials sampled. PCBs were detected in one (1) of the five (5) bulk samples collected from multiple building sealants. Other hazardous building materials present include mercury containing fluorescent light tubes, high intensity discharge (HID) bulbs, suspect PCB lighting ballasts, regulated refrigerants, and life safety equipment with backup batteries. Please refer to the attached report for details.

Terracon appreciates the opportunity to provide this service to CCCCD. If you have any questions regarding this report, please contact our office at your convenience.

Sincerely,
Terracon Consultants, Inc.

Steffen Steiner, CAC, CDPH Lead
Office Manager

Denise Wallen, CSST
Project Assistant

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PRE-RENOVATION HAZARDOUS MATERIALS SURVEY
Engineering Technology (ET) Building
Diablo Valley College
321 Golf Club Road
Pleasant Hill, California

Terracon Project March 27, 2023

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted a pre-renovation hazardous materials survey of the ET Building located on the Diablo Valley College (DVC) campus at 321 Golf Club Road in Pleasant Hill, California (Site). The survey also included the structures on the east and south sides of the ET Building. The survey was conducted January 11 – 12, 2023 in general accordance with Terracon's proposal PR1227901, dated December 21, 2022, and the asbestos sampling protocols established in Environmental Protection Agency (EPA) regulation 40 Code of Federal Regulations (CFR) Part 763 Subpart E 763.86, (Asbestos Hazard Emergency Response Act, AHERA). Sample collection of suspect asbestos-containing materials (ACMs), lead containing paints (LCPs) and building materials, and polychlorinated biphenyl (PCBs) materials was completed on the interior, exterior, and roof of the ET Building and the concrete courtyard and walkways. Other hazardous building materials were noted if observed.

1.1 Project Objective

The objective of this survey was to identify the presence or absence of suspect ACMs, lead-containing paints and building materials, PCBs (ballasts and building envelope sealants), universal waste (fluorescent light tubes, mercury containing switches, batteries), and regulated refrigerants associated with the site structures that are likely to be impacted during the planned renovation work.

EPA regulation 40 CFR 61, Subpart M, the National Emission Standards for Hazardous Air Pollutants (NESHAP) prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that regulated ACM be identified, classified, and quantified prior to planned disturbances, renovations, or demolition activities.

1.2 Reliance

This report is for the exclusive use of Contra Costa Community College District (CCCCD) for the renovation of the structure located at 321 Golf Club Road in Pleasant Hill, California. Reliance by any other party on this report is prohibited without written authorization of Terracon and CCCCD. Reliance on this report by CCCCD and all authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, this report, and the project contract.

2.0 FIELD ACTIVITIES

2.1 Asbestos, Lead, PCBs, and Other Hazardous Building Materials

The survey was conducted by Michael Reed, a Cal/OSHA Certified Site Surveillance Technician (CSST) and CDPH Lead Sampling Technician. Copies of pertinent training certifications are included in Appendix F. The asbestos portion of the survey was conducted in general accordance with the sample collection protocols established in EPA 40 CFR Part 763 Subpart E 763.86, AHERA. A summary of survey activities is provided below.

2.2 Visual Assessment - Asbestos

Survey activities were initiated with visual observation of the survey areas of the subject structures to identify homogeneous areas of suspect ACM. A homogeneous area (HA) consists of a building material that appears similar throughout in terms of color, size and texture with consideration given to the date of application. Assessment was conducted in all accessible areas of the ET building including the interiors, exteriors, roofs, and surrounding hardscape.

2.3 Physical Assessment - Asbestos

A physical assessment of each HA of suspect ACM was conducted to assess the current friability and condition of the materials. A friable material is defined by the EPA as a material which can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with EPA AHERA sampling protocols. Samples of suspect materials were collected from representative locations in each homogeneous area. Bulk samples were collected using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

The selection of sample locations and frequency of sampling were based on Terracon's observations and the assumption that like materials in the same area are homogeneous in content.

Terracon collected one hundred thirty-six (136) samples from forty-three (43) homogeneous areas of suspect ACM. Laboratory analysis reported that eight (8) of the materials sampled contain asbestos. A summary of the materials reported as containing asbestos is included in Table I below and a summary of all suspect ACM samples collected during the survey is included as Appendix A.

2.4 Sample Analysis - Asbestos

Asbestos bulk samples were submitted under chain of custody to Eurofins EPK Built Environment Testing, LLC (Eurofins) in Tustin, California for analysis by polarized light microscopy (PLM) with dispersion staining techniques per EPA methodology 600/R-93/116. The percentage of asbestos, where applicable, was determined by microscopic visual estimation.

One (1) of the positive materials reported by PLM analysis was additionally analyzed by point count methodology. Point counting is a process of more precisely quantifying the asbestos content in bulk samples that contain small amounts of asbestos. Eurofins is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) Accreditation No. 200757-0. The laboratory reports for the asbestos bulk samples are included as Appendix B.

2.5 Lead Containing Paint and Bulk Materials

Terracon collected paint chip samples to determine the lead content in parts per million (ppm) of the predominant painted interior and exterior surfaces throughout the survey areas of the site structures. In addition, suspect lead containing ceramic tile was sampled to determine potential lead content. Suspect lead paint and bulk material samples were collected in sealable containers and labeled with unique sample numbers using an indelible marker.

2.6 Visual Assessment – Lead Containing Paint and Bulk Materials

Inspection activities began with visual observations of painted surfaces to identify unique combinations of paint. A unique combination of paint consists of paint that is applied to a building material and has similar color, substrate, and component. Assessment was conducted throughout the visually accessible survey areas of the site. Ceramic tile was observed in the restrooms of the structure.

2.7 Physical Assessment – Lead Containing Paint and Bulk Materials

A physical assessment of each unique combination of paint was conducted to assess the condition of the paint. Lead paint chip and bulk material samples were collected to comply with Cal-OSHA regulations (Title 8 CCR 1532.1 – Lead Exposure in Construction) for the proposed renovation activities. Paint and bulk materials were sampled to identify potential worker exposure and potential disposal restrictions. Painted surfaces ranged from intact to poor condition at the time of the survey.

Terracon sampled nineteen (19) painted surfaces and bulk materials during the survey. Of the paints and materials sampled, twelve (12) were found to contain lead concentrations in exceedance of the laboratory detection limit. A summary of suspect paint and bulk samples collected during the survey is summarized in Table II.

2.8 Sample Analysis - Lead Containing Paint and Bulk Materials

Paint chip and bulk material samples were submitted under chain of custody to Eurofins in Tustin, California. Paint chip and material samples were analyzed by Flame Atomic Absorption, EPA method 7000B. Eurofins is accredited by the American Industry Hygiene Association's (AIHA) Environmental Lead Laboratory Accreditation Program (ELLAP) (Lab Code 178697) to perform Flame Atomic Absorption analysis. The laboratory reports for the lead samples are included as Appendix C.

2.9 PCBs - Interior / Exterior Sealants

Bulk sealant samples were collected using a razor knife and were placed into individual containers. Each sample was provided a discreet sample number, which was recorded on a chain of custody form. The samples were transported under chain of custody procedures to McCampbell Analytical, Inc. in Pittsburg, California. All samples were analyzed for PCB content in accordance with EPA Method SW8082. The laboratory reports for PCB samples are included as Appendix D.

Terracon collected five (5) bulk samples of suspect PCB containing materials throughout the structures. One (1) sample collected was reported with a PCB concentration exceeding the laboratory reporting limit. A summary of the PCB results is included in Table III.

2.10 Visual Assessment - Other Hazardous Building Materials

The interior and exterior of the structures and the surrounding hardscape were visually surveyed for the presence of mercury containing products such as fluorescent light tubes, switches, high intensity discharge (HID) bulbs, and thermometers. Lighting fixtures were screened for the potential presence of PCB containing ballasts. Exit signs were evaluated for the presence of self-illuminating, tritium gas tubes (radioactive) and life safety equipment with backup battery supplies. Materials were visually assessed and noted if observed. No testing was performed.

3.0 REGULATORY OVERVIEW

3.1 Asbestos

The Asbestos NESHAP program in California is enforced by federal, state, and county Asbestos NESHAP Coordinators. For projects occurring in Pleasant Hill, California, the Bay Area Air Quality Management District (BAAQMD) governs renovation and demolition projects has been delegated authority from the EPA to enforce the Asbestos NESHAP within its respective jurisdictional boundaries, excluding tribal lands.

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. The asbestos NESHAP regulation also requires the identification and classification of existing ACM according to friability prior to demolition or renovation activity. Friable ACM is a material containing more than 1% asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. All friable ACM is considered regulated asbestos-containing material (RACM). The NESHAP regulation is implemented locally by the BAAQMD under Regulations 11, Rule 2.

The asbestos NESHAP regulation classifies ACM as either RACM, Category I non-friable ACM or Category II non-friable ACM. RACM includes all friable ACM, along with Category I and Category II non-friable ACM that has become friable, will be or has been subjected to sanding, grinding, cutting, or abrading, or ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder during renovation or demolition activity. Category I non-friable ACM are exclusively asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products that contain more than 1% asbestos. Category II non-friable ACM are all other non-friable materials other than Category I non-friable ACM that contain more than 1% asbestos.

Friable ACM, along with Category I and Category II non-friable ACM, which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting, abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM).

Building materials confirmed to be ACM through the collection of bulk sampling and subsequent laboratory analysis, or presumed ACM, must be removed prior to intentional disturbance during the planned renovation activities. Asbestos abatement must be conducted by California licensed and registered abatement contractors and workers with Cal/OSHA-accredited training. Third-party air monitoring is recommended during the abatement activities.

Cal/OSHA requires that only properly licensed and certified asbestos abatement contractors are allowed to remove ACM. As per NESHAP, all RACM shall be removed from a facility being demolished or renovated before any non-burning demolition or renovation begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. According to BAAQMD, if more than 100 square feet or 100 linear feet of any RACM is to be stripped, removed, dislodged, cut, drilled, or similarly disturbed, or for any demolition, the asbestos abatement contractor or facility owner must submit an Asbestos Notification of Demolition and Renovation form to NESHAP along with the appropriate fees within at least 10 working days prior to the scheduled asbestos removal activity or demolition start date. Planned renovations that do not meet the definition of ‘demolition or renovation of a facility’ per NESHAP and where no ACM exists do not require notification to NESHAP.

The California Department of Occupational Safety and Health (DOSH) asbestos standard for construction (Title 8 CCR 1529) regulates workplace exposure to asbestos. The DOSH standard requires that employee exposure to airborne asbestos must not exceed 0.1 fibers per cubic centimeter of air (0.1 f/cc) as an eight-hour time weighted average (TWA) and not exceed 1.0 fibers per cubic centimeter of air (1.0 f/cc) over a 30-minute time period known as an excursion limit (EL). The TWA and EL are known as DOSH’s asbestos permissible exposure limits (PELs). The DOSH standard classifies construction and maintenance activities which could disturb ACM and specifies work practices and precautions which employers must follow when engaging in each class of regulated work.

Asbestos containing construction materials (ACCM) is a term developed by Cal/OSHA out of concern for non-hazardous building materials used inside and outside a building that contain less than 1% asbestos. The definition of ACCM includes any manufactured building material that has more than one-tenth of 1% (>0.1%) asbestos content. The SJVAPCD requires point counting of friable samples of ACM at concentrations of less than 10% to determine more accurately determine the content of asbestos and proper classification of the material for proper abatement and disposal requirements. Alternatively, materials may be presumed as ACMs. If the material is less than one tenth of 1%, the material is not regulated by the EPA however Cal/OSHA worker protection regulations apply if any asbestos is detected.

3.2 Lead Containing Paint/Materials

Personnel performing demolition activities that may disturb painted components or materials with concentrations of lead above the designated analytical detection limit should comply with all current Cal-OSHA regulations in order to minimize employee exposure. Cal-OSHA defines lead containing paint as a paint, which contains lead, regardless of the concentration. Currently, any proposed renovation/demolition is subject to the Cal-OSHA regulations (Title 8 CCR 1532.1 – Lead Exposure in Construction). The Cal-OSHA regulation defines specific training requirements, engineering controls and working practices for construction personnel subject to this standard. Occupational exposure to lead occurring during construction work, including maintenance activities, painting, alteration, and repairs is subject to the Cal-OSHA Lead Exposure in Construction standard.

Construction work covered by Title 8 CCR 1532.1 includes any repair or renovation activities or other activities that disturb in-place lead-containing materials. Employers must assure that no employee will be exposed to lead at concentrations greater than 50 micrograms per cubic meter ($\mu g/m^3$) averaged over an eight-hour period without adequate protection. The Cal-OSHA Standard also establishes an action level of 30 $\mu g/m^3$ which if exceeded triggers the requirement for medical monitoring.

Proper waste stream categorization is required for the disposal of all lead containing materials and painted construction debris with total lead content that exceeds 50 ppm. The debris should be classified as hazardous waste if lead waste concentrations exceed either the total lead concentration or soluble lead concentration regulatory limits. Total lead concentration is determined by Total Threshold Limit Concentration (TTLC). Soluble or leachable lead is determined by the Soluble Threshold Limit Concentration (STLC, California required test) and/or Toxicity Characteristic Leaching Procedure (TCLP) (Federal EPA required test). Regulatory limits characterize a lead waste as a hazardous waste if lead concentrations exceed 1,000 ppm by TTLC or 5 milligram per liter by STLC or TCLP.

The above overview is not intended to be inclusive of all potentially pertinent regulatory information. The relevant EPA and OSHA standards should be consulted prior to undertaking activities involving the demolition, renovation, or maintenance of surfaces coated with lead containing paints.

3.3 PCBs - Interior / Exterior Sealants

PCBs are regulated by the EPA under 40 CFR 761. The production of PCBs has been banned since 1979 and may be present in electrical capacitors, sealants, hydraulic oils, and transformers commonly found in buildings. Materials with greater than 50 ppm PCB content are considered PCB contaminated waste while materials with greater than 500 ppm PCB are considered PCB containing.

PCB containing equipment and/or contaminated materials must be removed and disposed properly prior to demolition of a building. PCB containing lighting ballasts may be present in some lighting fixtures and must be verified by labeling. PCB containing materials must be removed and disposed during renovation or prior to building demolition.

3.4 Universal Waste

Universal wastes are common wastes with hazardous properties that must be managed and have landfill disposal restrictions. Examples of universal waste include electronic devices, batteries, and mercury containing equipment or lighting. Handling, transportation, and disposal is simplified under the universal waste regulation in the California Code of Regulations Title 22, Division 4.5 Chapter 11.

All materials in the buildings meeting the definition of the universal waste that will be impacted by the renovation must be removed and handled, transported, and disposed through an appropriate vendor.

4.0 FINDINGS

4.1 Asbestos

Asbestos was identified in the building materials listed in Table I below. A complete sample summary in included as Appendix A. Laboratory analytical reports are included as Appendix B.

Table I
Asbestos Containing Materials

Material Description	Sample Locations	Result	NESHAP Category	Est Quantity
HM 03 / 12" Lime Green Vinyl Floor Tile (VFT) with Yellow Glue	Room 109 – SW Corner Door, Room 109 – Center, Room 109 – East Side	Floor Tile: 3% CH Glue: ND	Cat. I	135 SF
HM 05 / Black Window Glaze (Putty) – Glass to Frame	Room #100 – Lobby – (S) Side Store Front Window, Lab Room #107	Black Window Glazing: 2% CH	Cat. II	575 LF
HM 15 / Light Gray Sink Under Coat	Lab Room #107 – (S) Side	Light Gray Sink Under Coat: 2% CH	Cat. II	5 SF
HM 16 / Silver Sink Under Coat	Machine Shop – (S) Side	Silver Sink Under Coat: <1% CH	Cat. II	5 SF
HM 24 / Drywall with Joint Compound & Texture – West Side Rooms	Room #114, T.V. Lab – N, T.V. Lab – SW	Joint Compound: 2% CH Drywall & Tape: ND	RACM	850 SF
HM 25 / Texture on Drywall (West Side Rooms)	Room #114 – N, T.V. Lab – N & S	White Texture: 2% CH	RACM	850 SF
HM 33 / Drywall with Joint Compound (Smooth)	Mechanical Room #110, Room #110 Custodian, Men's Restroom at Lockers, Men's Restroom Ceiling, Women's Restroom Ceiling (Hall)	Joint Compound 2% CH Drywall & Tape: ND Composite Point Count Analysis: 0.5% CH	N/A	4,500 SF
HM 35 / Black Sink Under Coat	Room #120B	Black Sink Under Coat: 2% CH	Cat. II	10 SF
HM 44 / Mirror Mastic	N/A	Mirror Mastic: Assumed	Cat. II	20 SF

ND = None Detected, CH = Chrysotile, RACM = Regulated asbestos containing material (friable), Cat. I = Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal), Cat. II = Category II Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal), SF = square feet, LF = linear feet, *Estimate quantity should be field verified prior to abatement or abatement design

It should be reemphasized that although reasonable efforts were made to survey accessible suspect materials, additional suspect but un-sampled materials could be located under existing building materials, inside walls, above ceilings, in isolated areas or in other concealed areas. Therefore, if suspect materials are encountered during renovation activities that do not appear to have been characterized as ACM or non-ACM, these materials must be assumed to be ACM until samples are collected and analyzed to prove otherwise. Any assumed material should be treated as asbestos or sampled to determine asbestos content before disturbing the material.

4.2 Lead Containing Paint/Materials

Terracon sampled eighteen (18) painted surfaces and one (1) ceramic tile during the survey. Twelve (12) of the paint samples were reported with lead content. A summary of sample locations and analytical results is below in Table II. Samples reported with "<" is below the laboratory analytical reporting limit for the sample submitted.

Table II
Lead Containing Paint/Materials

Sample #	Material Description	Sample Location	Lead Content
Pb-01	White Paint on Wood Wall	Conference Room #104	1,800 ppm
Pb-02	White Paint on Fiber Board Wall	Conference Room #104 – (W) Wall Panel	<39 ppm
Pb-03	Blue Ceramic Tile on Concrete Wall	Men's Restroom – Near Stalls	<40 ppm
Pb-04	Brown Paint on Wood Wall	Hallway – Near Restrooms	5,600 ppm
Pb-05	Beige Paint on Concrete Floor	Machine Shop – (N) Side Floor	680 ppm
Pb-06	Off-White Paint on Drywall Wall	(SW) Corner – Room #104 - Electrical	1,300 ppm
Pb-07	White Paint on Drywall Wall	Room #122B – (S) Wall	<40 ppm
Pb-08	Dark Green Paint on Metal Wall Frame	Room #104C Wall Frame	14,000 ppm
Pb-09	White Paint on Concrete Wall	T.V. Lab – (E) Wall – Sub-Grade	<40 ppm
Pb-10	Dark Gray Paint on Metal Column	T.V. Lab – (E) Support Column	26,000 ppm
Pb-11	Gray Paint on Concrete Floor	Room #120B Floor	<39 ppm
Pb-12	Pink Paint on Drywall Wall	Room #116C	55 ppm
Pb-13	Orange Paint on Metal HVAC Duct	HVAC Ceiling Duct – Room #104	60,000 ppm

Sample #	Material Description	Sample Location	Lead Content
Pb-14	Dark Brown Paint on Metal Support Column	North Side Portico Column Near Room #120A	110,000 ppm
Pb-15	Gray Paint on Metal Door	Exterior Side – Room #107	7,900 ppm
Pb-16	Green Paint on Wood Roof Trim	South Side Detached – Structure	<40 ppm
Pb-17	Red-Orange Paint on Metal Column	Support Column - East Detached Shed	2,300 ppm
Pb-18	Tan Paint on Wood Wall	Wood Siding – East Detached Shed	<40 ppm
Pb-19	Red Paint on Metal HVAC Duct	(N) Roof – Center HVAC Wall	97 ppm

ppm = parts per million

Uncharacterized paints and/or suspect materials should be assumed to contain lead until sampling and analysis prove otherwise.

4.3 PCB Containing Materials

Terracon collected five (5) bulk samples from multiple building sealants during the survey. Of the materials sampled, one (1) was reported to contain PCBs in concentrations exceeding the laboratory limit of detection. A summary of PCB sample locations and analytical results is below in Table III.

Table III
PCB Containing Materials

Sample #	Material Description	Sample Location	PCB Content (ppm)
PCB-01	Black Window Glaze – Glass to Frame	South Side – Lobby Store Front Window – Room #100	36
PCB-02	Black Sealant – Associated with Door Frame to Brick	Machine Lab – Room #123 – (S) Perimeter Door Frame	ND <10
PCB-03	Black Sealant – Associated with Off. Metal Partition Wall Frames	Room #104A	ND <10
PCB-04	Grayish Sealant – Associated with Exterior Wall Panel Side	North Side – Bldg. – Courtyard (E)	ND <10
PCB-05	Black Sealant on Wood Side & Door Frame	East Side – Detached Shed	ND <10

mg/kg = milligrams per kilogram, ppm = parts per million, < = less than laboratory reporting limit

4.4 Other Hazardous Building Materials

Terracon visually assessed the building for the presence of other hazardous materials likely to be impacted by the renovation work. Select lighting ballasts were inspected for labeling indicating the absence of PCBs. Ballasts observed in the building were labeled as non-PCB ballasts. All ballasts should be inspected prior to disposal to verify the presence/absence of PCBs. Ballasts should be assumed to be PCB-containing unless specified by the manufacturer's label as containing "No PCBs". Terracon estimates that 450 suspect PCB ballasts are present in the building.

Terracon also visually assessed the building for the presence of mercury containing products such as fluorescent light tubes, HID bulbs, mercury switches, thermostats and compact fluorescent light bulbs. Mercury-containing tubes, bulbs, switches, and thermostats should be removed from the fixtures or equipment without breakage and packaged for mercury reclamation as a universal waste through an appropriate vendor prior to removal of any fixtures. Terracon estimates that 900 mercury containing fluorescent light ballasts are present in the building.

Terracon visually inspected select equipment with potential chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) refrigerants. Six (6) R-22 and one (1) R-410A HVAC systems were identified on the roof of the building. In addition, one (1) drinking fountain suspected to contain a regulated refrigerant was observed. No testing was performed. All refrigerant systems should be verified prior to disconnection; lubricating fluids and refrigerant must be reclaimed for recycling or destruction prior to removal of the equipment.

Emergency egress equipment was evaluated for the presence of backup batteries that are considered universal waste. Batteries associated with the exit signs and egress lighting (estimated at 12) were identified throughout the interior of the structure. Tritium gas exit signs were not identified in building.

5.0 LIMITATIONS/GENERAL COMMENTS

Terracon performed limited destructive testing such as knocking holes in walls, dismantling of equipment or removal of protective coverings during the survey. Uncharacterized hidden materials may exist under existing finishes, equipment, or structural materials.

This hazardous materials survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our survey at the subject site. The information contained in this report is relevant to the date on which this survey was performed and should not be relied upon to represent conditions at a later date.

This report has been prepared on behalf of and exclusively for use by Contra Costa Community College District for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied is made.

APPENDIX A

PRE-RENOVATION HAZARDOUS MATERIALS SURVEY
Engineering Technology Building
Diablo Valley College
Pleasant Hill, California

Terracon Project No. R1227901
March 27, 2023

ASBESTOS SAMPLE SUMMARY

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
Engineering Technology (ET) Building						
1	Carpet Glue (Yellow)	1A	Conference Room 104	ND	N/A	Good
		1B	Room 102	ND		
		1C	Conference Room 124 – East Near Machine Shed	ND		
		1D	Room #108 Lab - SW	ND		
		1E	Corridor Hall – Near Restrooms	ND		
		1F	(N) Bldg. – Room #116	ND		
		1G	(N) Bldg. – Room #119	ND		
2	12” Cork Acoustical Door Tile w/ Yellow Glue	2A	Conference Room 104 – SW Corner Door	ND	N/A	Good
		2B	Conference Room 104 – SW Corner Door	ND		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
		2C	Conference Room 104 – SW Corner Door	ND		
3	12" Lime Green VFT with Yellow Glue	3A	Room 109 – SW Corner	*By PLM analysis:* Light Green Floor Tile: 3% CH Yellow Mastic: ND	Cat. II	Good
		3B	Room 109 – Center	*By PLM analysis:* Lime Green Floor Tile: 3% CH Yellow Mastic: ND		
		3C	Room 109 – East Side	*By PLM analysis:* Lime Green Floor Tile: 3% CH Yellow Mastic: ND		
4	White Sealant – On Door Frame/Door Seam	4A	Conference Room 104 – SW Corner	ND	N/A	Good
		4B	Conference Room 104 – SW Corner	ND		
5	Black Window Glaze (Putty) – Glass to Frame	5A	Room #100 – Lobby – (S) Side Store Front Window	*By PLM analysis:* Black Window Glazing: 2% CH	Cat. II	Good
		5B	Lab Room #107	ND		
		5C	Corridor Hall – Office #124A – (S) Window Frame	*By PLM analysis:* Black Window Glazing: 2% CH		
6	Black Sealant – Associated with Metal Wall Frames	6A	Room #104B – Office Partition Wall – Frame to Frame	ND	N/A	Good
		6B	Room 104C – Office Partition Wall – Frame to Frame	ND		
		6C	Room #124C – Office Partition Wall – Frame to Frame	ND		
7	6" Cove Base – With Yellow & Brown Glue	7A	Room #104 - Conference	ND	N/A	Good
		7B	Hallway Outside Room #104 & Near Lobby	ND		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
		7C	Room #124 – (E) Wall	ND		
8	1” Blue Ceramic Floor Tile (CFT) – Grout & Mortar	8A	Women’s Restroom Floor	ND	N/A	Good
		8B	Women’s Restroom Floor	ND		
		8C	Women’s Restroom Floor	ND		
9	1” Blue Ceramic Wall Tile (CWT) – Grout & Yellow Glue	9A	Women’s Restroom	ND	N/A	Good
		9B	Men’s Restroom	ND		
		9C	Men’s Restroom	ND		
10	Door Frame Sealant	10A	Conference Room #104	ND	N/A	Good
		10B	Lobby – (S) Side Entry	ND		
		10C	Machine Shop	ND		
11	Wood Panel Varnish Coating – Brown	11A	Hallway – Near Room #104 Conference	ND	N/A	Good
		11B	Lobby	ND		
		11C	East Side Corridor – Near Restrooms	ND		
		11D	North Bldg. – Room #120B	ND		
		11E	North Bldg. – Room #120A	ND		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
12	Aqua Green Carpet Glue	12A	(NE) Corridor Hall – Near Room #122A	ND	N/A	Good
		12B	Room #122A	ND		
		12C	Room #122B	ND		
13	Beige Paint Floor Covering	13A	Machine Shop – (N)	ND	N/A	Good
		13B	Machine Shop – Center	ND		
		13C	Machine Shop – (S)	ND		
14	Brick Wall & Grout	14A	Lobby – (E) Wall	ND	N/A	Good
		14B	Conference Room #104 – (N) Wall	ND		
		14C	West Side Corridor Hall at Entry	ND		
15	Light Gray Sink Under Coat	15A	Lab Room #107 – (S) Side	*By PLM analysis:* Light Gray Sink Undercoating: 2% CH	Cat. II	Good
		15B	Lab Room #107 – (S) Side	*By PLM analysis:* Light Gray Sink Undercoating: 2% CH		
16	Silver Sink Under Coat	16A	Machine Shop – (S) Side	*By PLM analysis:* Silver Sink Undercoating: <1% CH	Cat. II	Good
		16B	Machine Shop – (S) Side	*By PLM analysis:* Silver Sink Undercoating: <1% CH		
17	4" Brown Cove Base with Brown Glue	17A	Mechanical Room	ND	N/A	Good
		17B	Mechanical Room	ND		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
18	2'x4' White Pinhole Fissure ACT	18A	Room #107	ND	N/A	Good
		18B	Room #108	ND		
		18C	Room #108	ND		
19	Modular Tack Board with Yellow Adhesive	19A	Conference Room 104 (NW)	ND	N/A	Good
		19B	Conference Room 104 (N)	ND		
		19C	Conference Room 104 (S)	ND		
20	Drywall with Joint Compound & Orange Peel (OP) Texture	20A	Corridor Hall	ND	N/A	Good
		20B	Room #122B	ND		
		20C	Room #122A	ND		
21	OP Texture on Drywall	21A	Corridor Hall – NW	ND	N/A	Good
		21B	Corridor Hall – NE	ND		
		21C	Room #122B – S	ND		
		21D	Room #122A – NE	ND		
		21E	Room #122A – S	ND		
22	Blue Wall Board Panels Associated with Offices	22A	Room #104A	ND	N/A	Good

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
		22B	Room #107 at #104C Partition	ND		
		22C	Machine Lab at #123E	ND		
23	Yellow Glue on Brick Wall Wood Brace	23A	Room #107 – West Wall	ND	N/A	Good
		23B	Room #107 – West Wall	ND		
		23C	Room #107 – West Wall	ND		
24	Drywall with Joint Compound & Texture – West Side Rooms	24A	Room #114	ND	RACM	Good
		24B	T.V. Lab – N	*By PLM analysis:* Joint Compound: 2% CH Drywall & Tape: ND		
		24C	T.V. Lab – SW	*By PLM analysis:* Joint Compound: 2% CH Drywall & Tape: ND		
25	Texture on Drywall (West Side Rooms)	25A	Room #114 – N	*By PLM analysis:* Texture: 2% CH	RACM	Good
		25B	T.V. Lab – S	ND		
		25C	T.V. Lab – S	*By PLM analysis:* Texture: 2% CH		
26	Carpet Glues – West Side Rooms	26A	Room #112 at Threshold	ND	N/A	Good
		26B	T.V. Lab – Center	ND		
		26C	Room #114 – W	ND		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
27	White Coating on Concrete Wall	27A	Room Sub Grade T.V. Lab – E Wall	ND	N/A	Good
		27B	Room Sub Grade T.V. Lab – E Wall	ND		
		27C	Room Sub Grade T.V. Lab – E Wall	ND		
28	Brown Epoxy Floor Cover	28A	(N) Bldg. – Room #120	ND	N/A	Good
		28B	(N) Bldg. – Room #120	ND		
		28C	(N) Bldg. – Room #120	ND		
29	Texture on Drywall – North Side Offices	29A	(N) Bldg. – Room #116C	ND	N/A	Good
		29B	(N) Bldg. – Room #116E	ND		
		29C	(N) Bldg. – Room #116D	ND		
30	Drywall with Joint Compound & Texture – (N) Offices	30A	Room #116C	ND	N/A	Good
		30B	Room #116E	ND		
		30C	Room #116D	ND		
31	Concrete – Slab Floor	31A	Lobby	ND	N/A	Good
		31B	Room #104 at (N) Entry	ND		
		31C	Survey Storeroom	ND		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
32	2'x6' White Pinhole & Fissures ACT	32A	(N) Side – Room #116	ND	N/A	Good
		32B	(N) Side – Room #116B	ND		
		32C	(N) Side – T & C Lab	ND		
33	Drywall with Joint Compound (Smooth)	33A	Mechanical Room #110	*By PLM analysis:* Joint Compound: 2% CH Drywall: ND *By 400-point count analysis:* Joint Compound and Drywall Composite: 0.25% CH	N/A	Good
		33B	Room #110A – Custodian	*By PLM analysis:* Joint Compound: 2% CH Drywall: ND *By 400-point count analysis:* Joint Compound and Drywall Composite: <0.25% CH		
		33C	Men's Restroom – At Lockers	ND		
		33D	Men's Restroom Ceiling	*By PLM analysis:* Joint Compound: 2% CH Drywall: ND *By 400-point count analysis:* Joint Compound and Drywall Composite: 0.5% CH		
		33E	Women's Restroom Ceiling (Hall)	*By PLM analysis:* Joint Compound: 2% CH Drywall: ND *By 400-point count analysis:* Joint Compound and Drywall Composite: 0.25% CH		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
34	4" Black Cove Base w/ Yellow & Brown Glue	34A	Room #100A	ND	N/A	Good
		34B	Room #124	ND		
		34C	Machine Lab #123	ND		
35	Black Sink Under Coat	35A	Room #120B	*By PLM analysis:* Black Sink Undercoating: 2% CH	Cat. II	Good
		35B	Room #120B	*By PLM analysis:* Black Sink Undercoating: 2% CH		
36	Concrete Slab – Courtyard	36A	Courtyard – Slab – (N)	ND	N/A	Good
		36B	Courtyard – Slab – (Center)	ND		
		36C	Courtyard – Slab – (E)	ND		
37	Roof – Main Field - PVC	37A	Roof – (N)	ND	N/A	Good
		37B	Roof – (SW)	ND		
		37C	Roof – (SE)	ND		
38	Exterior Stucco Wall	38A	East Side – (N) Wall – at Roof Level	ND	N/A	Good
		38B	East Side – (W) Wall – at Roof Level	ND		
		38C	East Side – (S) Wall – at Roof Level	ND		
		38D	South Side – (W) Wall	ND		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
		38E	South Side – (E) Wall	ND		
39	Roof Sheet Metal Sealant (Gray)	39A	Roof – North Perimeter	ND	N/A	Good
		39B	Roof – South Perimeter	ND		
		39C	Roof – East Perimeter	ND		
40	Silver Paint on Roof Pipe Conduit	40A	Roof (N)	ND	N/A	Good
		40B	Roof (SW)	ND		
		40C	Roof (E)	ND		
41	Gray VSF with Mastic	41A	Women's Restroom – (SW)	ND	N/A	Good
		41B	Women's Restroom – (S)	ND		
		41C	Women's Restroom – (Center)	ND		
42	Roof – Main Roof – Shingles	42A	South Side Bldg. – Main Field	ND	N/A	Good
		42B	South Side Bldg. – Main Field	ND		
		42C	South Side Bldg. – Main Field	ND		
43	Exterior – Wood Siding Wall Sealant	43A	East Bldg. – Exterior Siding	ND	N/A	Good
		43B	East Bldg. – Exterior Siding	ND		

HM #	Material Description	Sample #	Sample Location	Result	NESHAP Category	Condition
		43C	East Bldg. – Exterior Siding	ND		

ND = None Detected, CH = Chrysotile, RACM = Regulated asbestos containing material (friable), Cat. I = Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal), Cat. II = Category II Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal)

APPENDIX B

ASBESTOS ANALYTICAL LABORATORY DATA

Report for:

Mr. Steff Steiner
Terracon Consultants, Inc.-Oakland
1220 Concord Avenue
Suite 450
Concord, CA 94520

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: R1227901; Engineering Technology (ET Bldg)
EML ID: 3136431

Approved by:

Approved Signatory
Danny Li

Dates of Analysis:
Asbestos PLM: 01-19-2023

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1267)
NVLAP Lab Code 200757-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the samples as received and tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

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2841 Dow Avenue, Suite 300, Tustin, CA 92780
(866) 888-6653 www.eurofinsus.com/Built

Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; Engineering Technology (ET Bldg)

Date of Sampling: 01-11-2023 and 01-16-2023
Date of Receipt: 01-17-2023
Date of Report: 01-19-2023

ASBESTOS PLM REPORT

Total Samples Submitted: 136
Total Samples Analyzed: 136
Total Samples with Layer Asbestos Content > 1%: 17

Location: 1A, Carpet Glue, Yellow; Conf. Room 104 Lab ID-Version‡: 15167808-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1B, Carpet Glue, Yellow; Room 102 Lab ID-Version‡: 15167809-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1C, Carpet Glue, Yellow; Conf. Room 124, East Near Machine Shop Lab ID-Version‡: 15167810-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 2A, 12" Cork Acoustical Door Tile with Yellow Glue; Conf Room 104, SW Corner Door Lab ID-Version‡: 15167811-1

Sample Layers	Asbestos Content
Brown Non-Fibrous Material	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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ASBESTOS PLM REPORT

Location: 2B, 12" Cork Acoustical Door Tile with Yellow Glue; Conf Room 104, SW Corner Door Lab ID-Version‡: 15167812-1

Sample Layers	Asbestos Content
Brown Non-Fibrous Material	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 2C, 12" Cork Acoustical Door Tile with Yellow Glue; Conf Room 104, SW Corner Door Lab ID-Version‡: 15167813-1

Sample Layers	Asbestos Content
Brown Non-Fibrous Material	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 3A, 12" Lime Green VFT with Yellow Glue; Room 109, SW Corner Lab ID-Version‡: 15167814-1

Sample Layers	Asbestos Content
Light Green Floor Tile	3% Chrysotile
Yellow Mastic	ND
Sample Composite Homogeneity:	Moderate

Location: 3B, 12" Lime Green VFT with Yellow Glue; Room 109, Center Lab ID-Version‡: 15167815-1

Sample Layers	Asbestos Content
Light Green Floor Tile	3% Chrysotile
Yellow Mastic	ND
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT

Location: 3C, 12" Lime Green VFT with Yellow Glue; Room 109, East Side Lab ID-Version‡: 15167816-1

Sample Layers	Asbestos Content
Light Green Floor Tile	3% Chrysotile
Yellow Mastic	ND
Sample Composite Homogeneity:	Moderate

Location: 4A, White Sealant, on Door Frame/Door Seam; Conf Room 104, SW Corner Lab ID-Version‡: 15167817-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 4B, White Sealant, on Door Frame/Door Seam; Conf Room 104, SW Corner Lab ID-Version‡: 15167818-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 5A, Black Window Glaze, Putty, Glass to Frame; Room #100, Lobby, S Side Store Front Window Lab ID-Version‡: 15167819-1

Sample Layers	Asbestos Content
Black Window Glazing	2% Chrysotile
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 5B, Black Window Glaze, Putty, Glass to Frame; Lab Room #107 Lab ID-Version‡: 15167820-1

Sample Layers	Asbestos Content
Black Window Glazing	ND
Sample Composite Homogeneity:	Good

Location: 5C Lab ID-Version‡: 15179627-1

Sample Layers	Asbestos Content
Black Window Glazing	2% Chrysotile
Sample Composite Homogeneity:	Good

Location: 1D, Carpet Glue, Yellow; Room 108 Lab, SW Lab ID-Version‡: 15167821-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1E, Carpet Glue, Yellow; Corridor Hall, Near RR Lab ID-Version‡: 15167822-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 6A, Black Sealant, Associated with Metal Wall Frames; Room #104B, Office Partition Wall, Frame to Frame
Lab ID-Version‡: 15167823-1

Sample Layers	Asbestos Content
Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 6B, Black Sealant, Associated with Metal Wall Frames; Room #104C, Office Partition Wall, Frame to Frame
Lab ID-Version‡: 15167824-1

Sample Layers	Asbestos Content
Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 6C, Black Sealant, Associated with Metal Wall Frames; Room #124C, Office Partition Wall, Frame to Frame
Lab ID-Version‡: 15167825-1

Sample Layers	Asbestos Content
Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 7A, 6" Cove Base, with Yellow and Brown Glue; Room #104, Conf.
Lab ID-Version‡: 15167826-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Brown Glue	ND
Sample Composite Homogeneity:	Moderate

Comments: Baseboard not detected.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 7B, 6" Cove Base, with Yellow and Brown Glue; Hallway Outside Rm #104 and Near Lobby

Lab ID-Version‡: 15167827-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Brown Glue	ND
Sample Composite Homogeneity:	Moderate

Comments: Baseboard not detected.

Location: 7C, 6" Cove Base, with Yellow and Brown Glue; Room #124, E Wall

Lab ID-Version‡: 15167828-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 8A, 1" Blue CFT, Grout and Mortar; Womens Restroom Floor

Lab ID-Version‡: 15167829-1

Sample Layers	Asbestos Content
Blue Tile	ND
Black Grout	ND
Gray Mortar	ND
Sample Composite Homogeneity:	Moderate

Location: 8B, 1" Blue CFT, Grout and Mortar; Womens Restroom Floor

Lab ID-Version‡: 15167830-1

Sample Layers	Asbestos Content
Blue Tile	ND
Black Grout	ND
Gray Mortar	ND
Sample Composite Homogeneity:	Moderate

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Date of Report: 01-19-2023

ASBESTOS PLM REPORT

Location: 8C, 1" Blue CFT, Grout and Mortar; Mens Restroom Floor Lab ID-Version‡: 15167831-1

Sample Layers	Asbestos Content
Blue Tile	ND
Black Grout	ND
Gray Mortar	ND
Sample Composite Homogeneity:	Moderate

Location: 9A, 1" Blue CWT, Grout and Yellow Glue; Womens Restroom Lab ID-Version‡: 15167832-1

Sample Layers	Asbestos Content
Blue Tile	ND
Black Grout	ND
Sample Composite Homogeneity:	Moderate

Comments: Glue not detected.

Location: 9B, 1" Blue CWT, Grout and Yellow Glue; Restroom, Mens Lab ID-Version‡: 15167833-1

Sample Layers	Asbestos Content
Blue Tile	ND
Black Grout	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 9C, 1" Blue CWT, Grout and Yellow Glue; Mens Restroom Lab ID-Version‡: 15167834-1

Sample Layers	Asbestos Content
Blue Tile	ND
Black Grout	ND
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 10A, Door Frame Sealant; Conf Rm #104 Lab ID-Version‡: 15167835-1

Sample Layers	Asbestos Content
Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 10B, Door Frame Sealant; Lobby, S Side Entry Lab ID-Version‡: 15167836-1

Sample Layers	Asbestos Content
Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 10C, Door Frame Sealant; Machine Shop Lab ID-Version‡: 15167837-1

Sample Layers	Asbestos Content
Black Sealant	ND
Sample Composite Homogeneity:	Good

Location: 11A, Wood Panel Varnish Coating, Brown; Hallway, Near Rm #104 Conf Lab ID-Version‡: 15167838-1

Sample Layers	Asbestos Content
Brown Wood Coating	ND
Sample Composite Homogeneity:	Good

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Location: 11B, Wood Panel Varnish Coating, Brown; Lobby Lab ID-Version‡: 15167839-1

Sample Layers	Asbestos Content
Brown Wood Coating	ND
Sample Composite Homogeneity:	Good

Location: 11C, Wood Panel Varnish Coating, Brown; East Side Corridor, Near Restrooms Lab ID-Version‡: 15167840-1

Sample Layers	Asbestos Content
Brown Wood Coating	ND
Sample Composite Homogeneity:	Good

Location: 12A, Aqua Green Carpet Glue; NE Corridor Hall, Near Rm #122A Lab ID-Version‡: 15167841-1

Sample Layers	Asbestos Content
Brown/Green Glue	ND
Sample Composite Homogeneity:	Good

Location: 12B, Aqua Green Carpet Glue; Room #122A Lab ID-Version‡: 15167842-1

Sample Layers	Asbestos Content
Brown/Green Glue	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 12C, Aqua Green Carpet Glue; Room #122B Lab ID-Version‡: 15167843-1

Sample Layers	Asbestos Content
Brown/Green Glue	ND
Sample Composite Homogeneity:	Good

Location: 13A, Beige Paint Floor Covering; Machine Shop, N Lab ID-Version‡: 15167844-1

Sample Layers	Asbestos Content
Beige Flooring Material	ND
Sample Composite Homogeneity:	Good

Location: 13B, Beige Paint Floor Covering; Machine Shop, Center Lab ID-Version‡: 15167845-1

Sample Layers	Asbestos Content
Beige Flooring Material	ND
Sample Composite Homogeneity:	Good

Location: 13C, Beige Paint Floor Covering; Machine Shop, S Lab ID-Version‡: 15167846-1

Sample Layers	Asbestos Content
Beige Flooring Material	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 14A, Brick Wall and Grout; Lobby, E Wall Lab ID-Version‡: 15167847-1

Sample Layers	Asbestos Content
Red Brick Wall	ND
Gray Grout	ND
Sample Composite Homogeneity:	Moderate

Location: 14B, Brick Wall and Grout; Conf. Rm #104, N Wall Lab ID-Version‡: 15167848-1

Sample Layers	Asbestos Content
Red Brick Wall	ND
Gray Grout	ND
Sample Composite Homogeneity:	Moderate

Location: 14C, Brick Wall and Grout; West Side Corridor Hall at Entry Lab ID-Version‡: 15167849-1

Sample Layers	Asbestos Content
Red Brick Wall	ND
Gray Grout	ND
Sample Composite Homogeneity:	Moderate

Location: 15A, Light Gray Sink Under Coat; Lab Rm #107, S Side Lab ID-Version‡: 15167850-1

Sample Layers	Asbestos Content
Light Gray Sink Undercoating	2% Chrysotile
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 15B, Light Gray Sink Under Coat; Lab Rm #107, S Side Lab ID-Version‡: 15167851-1

Sample Layers	Asbestos Content
Light Gray Sink Undercoating	2% Chrysotile
Sample Composite Homogeneity:	Good

Location: 16A, Silver Sink Under Coat; Machine Shop, S Side Lab ID-Version‡: 15167852-1

Sample Layers	Asbestos Content
Silver Sink Undercoating	< 1% Chrysotile
Sample Composite Homogeneity:	Good

Location: 16B, Silver Sink Under Coat; Machine Shop, S Side Lab ID-Version‡: 15167853-1

Sample Layers	Asbestos Content
Silver Sink Undercoating	< 1% Chrysotile
Sample Composite Homogeneity:	Good

Location: 17A, 4" Brown Cove Base with Brown Glue; Mechanical Room Lab ID-Version‡: 15167854-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Brown Glue	ND
Sample Composite Homogeneity:	Moderate

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 17B, 4" Brown Cove Base with Brown Glue; Mechanical Room Lab ID-Version‡: 15167855-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Brown Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 18A, 2'x4' White Pinhole Fissure ACT; Room #107 Lab ID-Version‡: 15167856-1

Sample Layers	Asbestos Content
Tan Ceiling Tile	ND
Composite Non-Asbestos Content:	45% Glass Fibers 35% Cellulose
Sample Composite Homogeneity:	Good

Location: 18B, 2'x4' White Pinhole Fissure ACT; Room #108 Lab ID-Version‡: 15167857-1

Sample Layers	Asbestos Content
Tan Ceiling Tile	ND
Composite Non-Asbestos Content:	45% Glass Fibers 35% Cellulose
Sample Composite Homogeneity:	Good

Location: 18C, 2'x4' White Pinhole Fissure ACT; Room #108 Lab ID-Version‡: 15167858-1

Sample Layers	Asbestos Content
Tan Ceiling Tile	ND
Composite Non-Asbestos Content:	45% Glass Fibers 35% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 19A, Modular Tack Board with Yellow Adhesive; Conf. Room 104, NW Lab ID-Version‡: 15167859-1

Sample Layers	Asbestos Content
Gray Fibrous Material	ND
Composite Non-Asbestos Content:	99% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Adhesive not detected.

Location: 19B, Modular Tack Board with Yellow Adhesive; Conf. Room 104, N Lab ID-Version‡: 15167860-1

Sample Layers	Asbestos Content
Gray Fibrous Material	ND
Yellow Adhesive (Trace)	ND
Composite Non-Asbestos Content:	99% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 19C, Modular Tack Board with Yellow Adhesive; Conf. Room 104, S Lab ID-Version‡: 15167861-1

Sample Layers	Asbestos Content
Gray Fibrous Material	ND
Yellow Adhesive (Trace)	ND
Composite Non-Asbestos Content:	99% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 20A, Drywall with Joint Comp. and OP Texture; Corridor Hall Lab ID-Version‡: 15167862-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Texture not detected.

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ASBESTOS PLM REPORT

Location: 20B, Drywall with Joint Comp. and OP Texture; Room #122B Lab ID-Version‡: 15167863-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Texture not detected.

Location: 20C, Drywall with Joint Comp. and OP Texture; Room #122A Lab ID-Version‡: 15167864-1

Sample Layers	Asbestos Content
White Joint Compound with Paint	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Texture not detected.

Location: 21A, OP Texture on Drywall; Corridor Hall, NW Lab ID-Version‡: 15167865-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 21B, OP Texture on Drywall; Corridor Hall, NE Lab ID-Version‡: 15167866-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 21C, OP Texture on Drywall; Room #122B, S Lab ID-Version‡: 15167867-1

Sample Layers	Asbestos Content
White Texture (Trace)	ND
Sample Composite Homogeneity:	Good

Location: 21D, OP Texture on Drywall; Room #122A, NE Lab ID-Version‡: 15167868-1

Sample Layers	Asbestos Content
White Texture (Trace)	ND
Sample Composite Homogeneity:	Good

Location: 21E, OP Texture on Drywall; Room #122A, S Lab ID-Version‡: 15167869-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 22A, Blue Wall Board Panels Associated with Offices; Room #104A Lab ID-Version‡: 15167870-1

Sample Layers	Asbestos Content
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	98% Cellulose
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 22B, Blue Wall Board Panels Associated with Offices; Room #107 at #104C Partition

Lab ID-Version‡: 15167871-1

Sample Layers	Asbestos Content
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	98% Cellulose
Sample Composite Homogeneity:	Good

Location: 22C, Blue Wall Board Panels Associated with Offices; Machine Lab at #123E

Lab ID-Version‡: 15167872-1

Sample Layers	Asbestos Content
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	98% Cellulose
Sample Composite Homogeneity:	Good

Location: 23A, Yellow Glue on Brick Wall Wood Brace; Room #107, West Wall

Lab ID-Version‡: 15167873-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 23B, Yellow Glue on Brick Wall Wood Brace; Room #107, West Wall

Lab ID-Version‡: 15167874-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

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ASBESTOS PLM REPORT

Location: 23C, Yellow Glue on Brick Wall Wood Brace; Room #107, West Wall Lab ID-Version‡: 15167875-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 24A, Drywall with Joint Comp and Texture West Side Rooms; Room #114 Lab ID-Version‡: 15167876-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Texture not detected.

Location: 24B, Drywall with Joint Comp and Texture West Side Rooms; T.V. Lab, N Lab ID-Version‡: 15167877-1

Sample Layers	Asbestos Content
White Texture	2% Chrysotile
Cream Tape	ND
White Joint Compound	2% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location: 24C, Drywall with Joint Comp and Texture West Side Rooms; T.V. Lab, SW Lab ID-Version‡: 15167878-1

Sample Layers	Asbestos Content
White Joint Compound	2% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Texture not detected. Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 25A, Texture on Drywall, West Side Rooms; Room #114, N Lab ID-Version‡: 15167879-1

Sample Layers	Asbestos Content
White Texture	2% Chrysotile
Sample Composite Homogeneity:	Good

Location: 25B, Texture on Drywall, West Side Rooms; T.V. Lab, S Lab ID-Version‡: 15167880-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 25C, Texture on Drywall, West Side Rooms; T.V. Lab, S Lab ID-Version‡: 15167881-1

Sample Layers	Asbestos Content
White Texture	2% Chrysotile
Sample Composite Homogeneity:	Good

Location: 26A, Carpet Glues, West Side Rooms; Room #112 at Threshold Lab ID-Version‡: 15167882-1

Sample Layers	Asbestos Content
Yellow Carpet Glue	ND
Sample Composite Homogeneity:	Moderate

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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Location: 26B, Carpet Glues, West Side Rooms; Room #112 at Threshold Lab ID-Version‡: 15167883-1

Sample Layers	Asbestos Content
Yellow Carpet Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 26C, Carpet Glues, West Side Rooms; Room #112 at Threshold Lab ID-Version‡: 15167884-1

Sample Layers	Asbestos Content
Yellow Carpet Glue	ND
Sample Composite Homogeneity:	Moderate

Location: 27A, White Coating on Concrete Wall; Room Sub Grade T.V. Lab, E Wall Lab ID-Version‡: 15167885-1

Sample Layers	Asbestos Content
White Coating	ND
Sample Composite Homogeneity:	Good

Location: 27B, White Coating on Concrete Wall; Room Sub Grade T.V. Lab, E Wall Lab ID-Version‡: 15167886-1

Sample Layers	Asbestos Content
White Coating	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 27C, White Coating on Concrete Wall; Room Sub Grade T.V. Lab, E Wall Lab ID-Version‡: 15167887-1

Sample Layers	Asbestos Content
White Coating	ND
Sample Composite Homogeneity:	Good

Location: 11D, Brown Varnish; North Bldg., Rm #120B Lab ID-Version‡: 15167888-1

Sample Layers	Asbestos Content
Brown Wood Coating	ND
Sample Composite Homogeneity:	Good

Location: 11E, Brown Varnish; North Bldg., Rm #120A Lab ID-Version‡: 15167889-1

Sample Layers	Asbestos Content
Brown Wood Coating	ND
Sample Composite Homogeneity:	Good

Location: 28A, Brown Epoxy Floor Cover; N Bldg., Rm #120 Lab ID-Version‡: 15167890-1

Sample Layers	Asbestos Content
Brown Flooring Material	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 28B, Brown Epoxy Floor Cover; N Bldg., Rm #120 Lab ID-Version‡: 15167891-1

Sample Layers	Asbestos Content
Brown Flooring Material	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 28C, Brown Epoxy Floor Cover; N Bldg., Rm #120 Lab ID-Version‡: 15167892-1

Sample Layers	Asbestos Content
Brown Flooring Material	ND
Gray Cementitious Material	ND
Sample Composite Homogeneity:	Good

Location: 1F, Carpet Glue; N Bldg., Rm #116 Lab ID-Version‡: 15167893-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Good

Location: 1G, Carpet Glue; N Bldg., Rm #119 Lab ID-Version‡: 15167894-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 29A, Texture on Drywall, North Side Offices; N Bldg, Rm #116C Lab ID-Version‡: 15167895-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 29B, Texture on Drywall, North Side Offices; N Bldg, Rm #116E Lab ID-Version‡: 15167896-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 29C, Texture on Drywall, North Side Offices; N Bldg, Rm #116D Lab ID-Version‡: 15167897-1

Sample Layers	Asbestos Content
White Texture	ND
Sample Composite Homogeneity:	Good

Location: 30A, Drywall with Joint Comp and Text. N Offices; Rm #116C Lab ID-Version‡: 15167898-1

Sample Layers	Asbestos Content
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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(866) 888-6653 www.eurofinsus.com/Built

Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; Engineering Technology (ET Bldg)

Date of Sampling: 01-11-2023 and 01-16-2023
Date of Receipt: 01-17-2023
Date of Report: 01-19-2023

ASBESTOS PLM REPORT

Location: 30B, Drywall with Joint Comp and Text. N Offices; Rm #116E Lab ID-Version‡: 15167899-1

Sample Layers	Asbestos Content
White Texture	ND
Cream Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: 30C, Drywall with Joint Comp and Text. N Offices; Rm #116D Lab ID-Version‡: 15167900-1

Sample Layers	Asbestos Content
White Texture	ND
Cream Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: 31A, Concrete, Slab Floor; Lobby Lab ID-Version‡: 15167901-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

Location: 31B, Concrete, Slab Floor; Rm #104 at N Entry Lab ID-Version‡: 15167902-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 31C, Concrete, Slab Floor; Survey Store Room Lab ID-Version‡: 15167903-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

Location: 32A, 2'x6' White Pinhole and Fissures ACT; N Side, Rm #116 Lab ID-Version‡: 15167904-1

Sample Layers	Asbestos Content
White Ceiling Tile	ND
Composite Non-Asbestos Content:	35% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 32B, 2'x6' White Pinhole and Fissures ACT; N Side, Rm #116B Lab ID-Version‡: 15167905-1

Sample Layers	Asbestos Content
White Ceiling Tile	ND
Composite Non-Asbestos Content:	35% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

Location: 32C, 2'x6' White Pinhole and Fissures ACT; N Side, T and C Lab. Lab ID-Version‡: 15167906-1

Sample Layers	Asbestos Content
White Ceiling Tile	ND
Composite Non-Asbestos Content:	35% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 33A, Drywall with Joint Compound, Smooth; Mechanical Rm #110 Lab ID-Version‡: 15167907-1

Sample Layers	Asbestos Content
White Texture	2% Chrysotile
Cream Tape	ND
White Joint Compound	2% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location: 33B, Drywall with Joint Compound, Smooth; Rm #110A Custodian Lab ID-Version‡: 15167908-1

Sample Layers	Asbestos Content
White Joint Compound	2% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location: 33C, Drywall with Joint Compound, Smooth; Restroom Mews, at Lockers Lab ID-Version‡: 15167909-1

Sample Layers	Asbestos Content
White Texture	ND
Cream Tape	ND
White Joint Compound	ND
White Drywall	ND
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 33D, Drywall with Joint Compound, Smooth; Mens Restroom Ceiling Lab ID-Version‡: 15167910-1

Sample Layers	Asbestos Content
White Joint Compound	2% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 33E, Drywall with Joint Compound, Smooth; Womens Restroom Ceiling, Hall

Lab ID-Version‡: 15167911-1

Sample Layers	Asbestos Content
White Joint Compound	2% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	5% Cellulose
Sample Composite Homogeneity:	Good

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location: 34A, 4" Black Cove Base with Yellow and Brown Glue; Room #100A

Lab ID-Version‡: 15167912-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 34B, 4" Black Cove Base with Yellow and Brown Glue; Room #124

Lab ID-Version‡: 15167913-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Location: 34C, 4" Black Cove Base with Yellow and Brown Glue; Machine Lab #123

Lab ID-Version‡: 15167914-1

Sample Layers	Asbestos Content
Yellow Glue	ND
Brown Glue	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 35A, Black Sink Under Coat; Room #120B Lab ID-Version‡: 15167915-1

Sample Layers	Asbestos Content
Black Sink Undercoating	2% Chrysotile
Sample Composite Homogeneity:	Good

Location: 35B, Black Sink Under Coat; Room #120B Lab ID-Version‡: 15167916-1

Sample Layers	Asbestos Content
Black Sink Undercoating	2% Chrysotile
Sample Composite Homogeneity:	Good

Location: 36A, Concrete Slab, Courtyard; Courtyard, Slab, N Lab ID-Version‡: 15167917-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

Location: 36B, Concrete Slab, Courtyard; Courtyard, Slab, Center Lab ID-Version‡: 15167918-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 36C, Concrete Slab, Courtyard; Courtyard, Slab, E

Lab ID-Version‡: 15167919-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

Location: 37A, Roof, Main Field, PVC; Roof, N

Lab ID-Version‡: 15167920-1

Sample Layers	Asbestos Content
Gray/Black Roofing Material	ND
White Semi-Fibrous Material	ND
Yellow Glue	ND
Yellow Foam	ND
Composite Non-Asbestos Content:	20% Glass Fibers 10% Synthetic Fibers 5% Cellulose
Sample Composite Homogeneity:	Poor

Location: 37B, Roof, Main Field, PVC; Roof, SW

Lab ID-Version‡: 15167921-1

Sample Layers	Asbestos Content
Gray/Black Roofing Material	ND
White Semi-Fibrous Material	ND
Yellow Glue	ND
Yellow Foam	ND
Composite Non-Asbestos Content:	20% Glass Fibers 10% Synthetic Fibers 5% Cellulose
Sample Composite Homogeneity:	Poor

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ASBESTOS PLM REPORT

Location: 37C, Roof, Main Field, PVC; Roof, SE

Lab ID-Version‡: 15167922-1

Sample Layers	Asbestos Content
Gray/Black Roofing Material	ND
White Semi-Fibrous Material	ND
Yellow Glue	ND
Yellow Foam	ND
Composite Non-Asbestos Content:	20% Glass Fibers 10% Synthetic Fibers 5% Cellulose
Sample Composite Homogeneity:	Poor

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ASBESTOS PLM REPORT

Location: 38A, Exterior Stucco Wall; East Side, N Wall at Roof Level Lab ID-Version‡: 15167923-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 38B, Exterior Stucco Wall; East Side, W Wall at Roof Level Lab ID-Version‡: 15167924-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 38C, Exterior Stucco Wall; East Side, S Wall at Roof Level Lab ID-Version‡: 15167925-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 38D, Exterior Stucco Wall; South Side, W Wall Lab ID-Version‡: 15167926-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 38E, Exterior Stucco Wall; South Side, E Wall Lab ID-Version‡: 15167927-1

Sample Layers	Asbestos Content
Beige Stucco	ND
Gray Stucco	ND
Sample Composite Homogeneity:	Good

Location: 39A, Roof Sheet Metal Sealant, Gray; Roof, North Perimeter Lab ID-Version‡: 15167928-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 39B, Roof Sheet Metal Sealant, Gray; Roof, South Perimeter Lab ID-Version‡: 15167929-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 39C, Roof Sheet Metal Sealant, Gray; Roof, East Perimeter Lab ID-Version‡: 15167930-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 40A, Silver Paint on Roof Pipe Conduit; Roof, N Lab ID-Version‡: 15167931-1

Sample Layers	Asbestos Content
Silver Paint	ND
Black Tar	ND
Sample Composite Homogeneity:	Good

Location: 40B, Silver Paint on Roof Pipe Conduit; Roof, SW Lab ID-Version‡: 15167932-1

Sample Layers	Asbestos Content
Silver Paint	ND
Black Tar	ND
Sample Composite Homogeneity:	Good

Location: 40C, Silver Paint on Roof Pipe Conduit; Roof, E Lab ID-Version‡: 15167933-1

Sample Layers	Asbestos Content
Silver Paint	ND
Black Tar	ND
Sample Composite Homogeneity:	Good

Location: 41A, Gray VSF with Mastic; Womens Restroom Lab ID-Version‡: 15167934-1

Sample Layers	Asbestos Content
Gray Sheet Flooring	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

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ASBESTOS PLM REPORT

Location: 41B, Gray VSF with Mastic; Womens Restroom Lab ID-Version‡: 15167935-1

Sample Layers	Asbestos Content
Gray Sheet Flooring	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: 41C, Gray VSF with Mastic; Womens Restroom Lab ID-Version‡: 15167936-1

Sample Layers	Asbestos Content
Gray Sheet Flooring	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: 42A, Roof, Main, Roof, Shingles; South Side Bldg., Main Field Lab ID-Version‡: 15167937-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles 1	ND
Black Roofing Shingle with Pebbles 2	ND
Black Roofing Felt 1	ND
Black Roofing Felt 2	ND
Black Roofing Felt 3	ND
Composite Non-Asbestos Content:	30% Glass Fibers 25% Cellulose
Sample Composite Homogeneity:	Good

Location: 42B, Roof, Main, Roof, Shingles; South Side Bldg., Main Field Lab ID-Version‡: 15167938-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles 1	ND
Black Roofing Shingle with Pebbles 2	ND
Black Roofing Felt 1	ND
Black Roofing Felt 2	ND
Composite Non-Asbestos Content:	30% Glass Fibers 25% Cellulose
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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ASBESTOS PLM REPORT

Location: 42C, Roof, Main, Roof, Shingles; South Side Bldg., Main Field Lab ID-Version‡: 15167939-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles 1	ND
Black Roofing Shingle with Pebbles 2	ND
Black Roofing Felt 1	ND
Black Roofing Felt 2	ND
Composite Non-Asbestos Content:	30% Glass Fibers 25% Cellulose
Sample Composite Homogeneity:	Good

Location: 43A, Exterior, Wood Siding Wall Sealant; East Bldg., Exterior Siding Lab ID-Version‡: 15167940-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 43B, Exterior, Wood Siding Wall Sealant; East Bldg., Exterior Siding Lab ID-Version‡: 15167941-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

Location: 43C, Exterior, Wood Siding Wall Sealant; East Bldg., Exterior Siding Lab ID-Version‡: 15167942-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Sample Composite Homogeneity:	Good

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003136431

Terracon

EMAIL REPORT TO: *SEE BELOW PROJECT MANAGER (PM)*

☑ PM – S. Steiner [illegible]

☐ PM – K. Schroeter [illegible]

☐ PM – K. Pilgrim [illegible]

☐ PM- M. Burcheit [illegible]

☐ PM – T. Kalichee [illegible]

☐ PM – W. Frieszel [illegible]

☐ PM- D. Block [illegible]

☐ [illegible] Engineering Assistant

☐ [illegible] Engineering Assistant

ACM BULK SAMPLE DATA SHEET

☑ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. [illegible] Technology (ET Bldg)

Project# R[illegible] Sampled By: M. R[illegible] Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☑ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☑ 48HR ☐ 3-5 days

HM# 01	Material Description: [illegible]	Quantity:
Sample ID	**Sample Location & Material Location**	
1A	[illegible] Room 104	
1B	Room 107	
1C	Conf. Room [illegible]	

HM# 02	Material Description: [illegible]	Quantity:
Sample ID	**Sample Location & Material Location**	
2A	Conf. Room 104 [illegible]	
2B		
2C		

HM# 03	Material Description: [illegible]	Quantity: [illegible]
Sample ID	**Sample Location & Material Location**	
3A	Room 109 [illegible]	
3B	[illegible]	
3C	[illegible]	

HM# 04	Material Description: [illegible]	Quantity:
Sample ID	**Sample Location & Material Location**	
4A	Conf. Room 104 [illegible]	
4B	[illegible]	

HM# 05	Material Description: [illegible] Window [illegible]	Quantity:
Sample ID	**Sample Location & Material Location**	
5A	[illegible] Lobby (S) Side [illegible] Window	
5B	[illegible] Room # 107	
5C		

Relinquished By: M. Reed Signature: [signature] Date/Time: 1-16-2023

Received By: Signature: [signature] Date/ Time: JAN 17 2023 09[illegible]

Relinquished By: [illegible] Signature: Date/Time:

Received By: Signature: Date/Time:

Terracon

*****E-MAIL REPORT TO:** *SEE BELOW PROJECT MANAGER (PM)****

☒ PM – S. Steiner [illegible]	☐ PM – K. Schroeter [illegible]	☐ PM – K. Pilgrim [illegible]
☐ PM- M. Benefield [illegible]	☐ PM – T. Katchee [illegible]	☐ PM – W. Frieszell [illegible]
☐ PM- D. Block [illegible]	☐ [illegible] Engineering Assistant	☐ [illegible] Engineering Assistant

ACM BULK SAMPLE DATA SHEET 2

☒ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. DVC - ET BLDG.

Project# R122 7901 Sampled By: M. REED Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☐ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☒ 48HR ☐ 3-5 days

HM# 05	Material Description: Continuation HM #01 - Carpet [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:**
1D	Room # 108 [illegible]	
1E	Corridor [illegible] ZZ	

HM# 06	Material Description: Black [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:** [illegible]
6A	Room # 104 B [illegible] Partition [illegible] - Frame. To Frame	
6B	Room # 104 C	
6C	Room # 124 C -	

HM# 07	Material Description: [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:**
7A	Room # 104 [illegible]	
7B	[illegible]	
7C	Room # 124 [illegible]	

HM# 08	Material Description: [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:**
8A	Women's Restroom Floor	
8B	Women's Restroom	
8C	Men's Restroom	

HM# 09	Material Description: [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:**
9A	Women's Restroom	
9B	[illegible] Restroom - Men's	
9C	Men's Restroom	

Relinquished By: M. REED	Signature: [signature]	Date/Time: 1-16-2023	
Received By: [illegible]	Signature: [signature]	Date/ Time: JAN 1 7 2023 0958	
Relinquished By:	Signature:	Date/Time:	
Received By:	Signature:	Date/Time:	

003136431

Terracon

E-MAIL REPORT TO: SEE BELOW PROJECT MANAGER (PM)

☑PM – S. Steiner ☐PM – K. Schroeter ☐PM – K. Pilgrim
☐PM- M. Benefield ☐PM – T. Katchee ☐PM – W. Frieszell
☐PM- D. Block ☐ Engineering Assistant ☐ Engineering Assistant

ACM BULK SAMPLE DATA SHEET 3

☑ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. ET BLDG. - DLC

Project# R1727901 Sampled By: M. REED Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☑ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☑ 48HR ☐ 3-5 days

HM# 10	Material Description: [illegible]	Quantity:
Sample ID	Sample Location & Material Location	
10A	CONF RM #104	
10B	LOBBY (S) SIDE BOTTOM	
10C	MACHINE SHOP	

HM# 11	Material Description: WOOD PANEL VARNISH COATING [illegible]	Quantity:
Sample ID	Sample Location & Material Location	
11A	HALLWAY NEAR RM # 104 CONF	
11B	LOBBY	
11C	EAST SIDE CORRIDOR - NEAR RESTROOMS	

HM# 12	Material Description: AQUA GREEN CARPET ON CF	Quantity:
Sample ID	Sample Location & Material Location	
12A	(NE) CORRIDOR HALL - NEAR RM #122A	
12B	ROOM # 122A	
12C	ROOM # 122B	

HM# 13	Material Description: BEIGE PAINT FLOOR COVERING	Quantity:
Sample ID	Sample Location & Material Location	
13A	MACHINE SHOP - (N)	
13B	CENTER	
13C	(S)	

HM# 14	Material Description: BROWN WALL & GROUT	Quantity:
Sample ID	Sample Location & Material Location	
14A	LOBBY (E) WALL	
14B	CONF RM # 104 - (N) WALL	
14C	WEST SIDE CORRIDOR HALL AT ENTRY	

Relinquished By: M REED	Signature: M. Reed	Date/Time: 1-16-2023	0858
Received By: EZRA RIBLLS	Signature:	Date/ Time: JAN 17 2023	
Relinquished By:	Signature:	Date/Time:	
Received By:	Signature:	Date/Time:	

003136431

Terracon

E-MAIL REPORT TO: SEE BELOW PROJECT MANAGER (PM)

- [x] PM – S. Steiner [illegible]
- [ ] PM – K. Schroeder [illegible]
- [ ] PM – K. Pilgrim [illegible]
- [ ] PM – M. Benefield [illegible]
- [ ] PM – L. Kallchue [illegible]
- [ ] PM – W. Frieszell [illegible]
- [ ] PM – D. Block david.block@terracon.com
- [ ] [illegible] Engineering Assistant
- [ ] [illegible] Engineering Assistant

ACM BULK SAMPLE DATA SHEET

- [x] PLM Analysis (Analyze all samples)
- [ ] Stop Analysis at First Positive
- [ ] Point Count Analysis (400 point)

Project Name/ Address/ Building No. PUC - ET Bldg.

Project# R1227901 Sampled By: M. Reed Sampling Date: 1-11-2023

Sample(s) sent to: [ ] MAL [ ] ASB TEM [ ] EMLAB [ ] Other

TAT [ ] Rush [ ] 24HRS [x] 48HR [ ] 3-5 days

HM# 15	Material Description: [illegible] Slab Under Coat	
Sample ID	Sample Location & Material Location	Quantity:
15A	Lab Rm # 107 -(S) Side	
15B	↓	

HM# 16	Material Description: Silver Slab Under Coat	
Sample ID	Sample Location & Material Location	Quantity:
16A	Machine Shop - (S) Side	
16B	↓	

HM# 17	Material Description: 4" Black Cove Base with Brown Glue	
Sample ID	Sample Location & Material Location	Quantity:
17A	Mechanical Room	
17B	↓	

HM# 18	Material Description: 2'x4' White Pinhole Fissured ACT	
Sample ID	Sample Location & Material Location	Quantity:
18A	Room # 107	
18B	Room # 108	
18C	Room # 109	

HM# 19	Material Description: Mounted Tack Board with Yellow Adhesive	
Sample ID	Sample Location & Material Location	Quantity:
19A	Conf Room 104 (W)	
19B	↓ (N)	
19C	↓ (S)	

Relinquished By:	M. Reed	Signature:	M. Reed	Date/Time:	1-16-2023
Received By:	[illegible]	Signature:	[illegible]	Date/ Time:	JAN 17 2023 0958
Relinquished By:		Signature:		Date/Time:	
Received By:		Signature:		Date/Time:	

1466 66th Street Emeryville CA 94608 Tel: (510) 547-[illegible] Fax: (510) 547-1983

003136431

Terracon

E-MAIL REPORT TO: *SEE BELOW PROJECT MANAGER (PM)*		
☑ PM – S. Steiner [illegible]	☐ PM – K. Schroeter [illegible]	☐ PM – K. Pilgrim [illegible]
☐ PM – M. Benefield [illegible]	☐ PM – T. Kaltenee [illegible]	☐ PM – W. Freezell [illegible]
☐ PM – D. Block [illegible]	☐ [illegible] Engineering Assistant	☐ [illegible] Engineering Assistant

ACM BULK SAMPLE DATA SHEET

☑ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. DYC - ET BLDG.

Project# R222 7701 Sampled By: MD & CM Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☑ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☑ 48HR ☐ 3-5 days

HM# 20	Material Description: Drywall with joint comp. & OP texture	Quantity:
Sample ID	Sample Location & Material Location	
20A	Corridor wall	
20B	Room # 122 B	
20C	Room # 122 A	

HM# 21	Material Description: OP texture on Drywall	Quantity:
Sample ID	Sample Location & Material Location	
21A	Corridor wall [illegible]	
21B	Corridor wall [illegible]	
21C	Room # 122 B [illegible]	

HM# 21	Material Description: [illegible]	Quantity:
Sample ID	Sample Location & Material Location	
21D	Room # 122 A [illegible]	
21E	Room # 122 A S	

HM# 22	Material Description: [illegible] Board [illegible] associated [illegible]	Quantity:
Sample ID	Sample Location & Material Location	
22A	Room # [illegible] A	
22B	Room # 107 [illegible]	
22C	[illegible] 123 B	

HM# 23	Material Description: [illegible]	Quantity:
Sample ID	Sample Location & Material Location	
23A	Room # 107 west wall	
23B		
23C		

Relinquished By:	M. Reed	Signature:	M. Reed	Date/Time:	1-16-2023
Received By:	[illegible]	Signature:	[illegible]	Date/ Time:	JAN 1 7 2023 0850
Relinquished By:		Signature:		Date/Time:	
Received By:		Signature:		Date/Time:	

003136431

Terracon

E-MAIL REPORT TO: SEE BELOW PROJECT MANAGER (PM)

☐ PM – S. Steiner [illegible]@terracon.com
☐ PM – K. Schroeter [illegible]@terracon.com
☐ PM – K. Pilgrim [illegible]@terracon.com
☐ PM- M. Benefield [illegible]@terracon.com
☐ PM – T. Kattenes [illegible]@terracon.com
☐ PM – W. Friessell [illegible]@terracon.com
☐ PM- D. Block [illegible]@terracon.com
☐ [illegible]@terracon.com Engineering Assistant
☐ [illegible]@terracon.com Engineering Assistant

ACM BULK SAMPLE DATA SHEET

☑ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. DVC – [illegible] Bldg.

Project# [illegible] Sampled By: MD & CM Sampling Date: 1 - [illegible] - 2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☑ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☑ 48HR ☐ 3-5 days

HM# 24	Material Description: [illegible] & TEXTURE [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:**
24A	Room [illegible]	
24B	[illegible] LAB [illegible]	
24C	[illegible] LAB [illegible]	

HM# 25	Material Description: TEXTURE and [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:**
25A	Room [illegible]	
25B	[illegible] LAB [illegible]	
25C	[illegible] LAB [illegible]	

HM# 26	Material Description: CARPET [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:**
26A	Room [illegible]	
26B		
26C		

HM# 27	Material Description: WHITE [illegible] ON CONCRETE WALL	
Sample ID	**Sample Location & Material Location**	**Quantity:**
27A	ROOM [illegible] LAB [illegible] WALL	
27B		
27C		

HM# 11	Material Description: [illegible]	
Sample ID	**Sample Location & Material Location**	**Quantity:**
11D	[illegible] Rm # [illegible]	
11E	" Rm # 120A	

Relinquished By: M. Reed	Signature: [signature]	Date/Time: 1-16-2023	
Received By: [illegible]	Signature: [signature]	Date/ Time: JAN 1 [illegible] 2023	0858
Relinquished By:	Signature:	Date/Time:	
Received By:	Signature:	Date/Time:	

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Terracon

E-MAIL REPORT TO: *SEE BELOW PROJECT MANAGER (PM)*

☒ PM – S. Steiner [illegible]	☐ PM – K. Schroeter [illegible]	☐ PM – K. Prigure [illegible]
☐ PM- M. Benefield [illegible]	☐ PM – T. Kattonee [illegible]	☐ PM – W. Froezed [illegible]
☐ PM- D. Block [illegible]	☐ [illegible] Engineering Assistant	☐ [illegible] Engineering Assistant

ACM BULK SAMPLE DATA SHEET

☒ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

7

Project Name/ Address/ Building No. DUC - ET BLDG.

Project# R222790 1 Sampled By: M. REED Sampling Date: 1-10-2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☒ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☒ 48HR ☐ 3-5 days

HM# 28	Material Description [illegible]
Sample ID	Sample Location & Material Location — Quantity:
28A	(N) [illegible] Rm # 120
28B	
28C	

HM# 01	Material Description: [illegible] HM #01 [illegible]
Sample ID	Sample Location & Material Location — Quantity:
1F	(N) [illegible] - Rm # 116
1G	(N) [illegible] Rm # 11[illegible]

HM# 29	Material Description: [illegible]
Sample ID	Sample Location & Material Location — Quantity:
29A	(N) [illegible] - Rm # 116 C
29B	Rm # 116 E
29C	Rm # 116 D

HM# 30	Material Description: [illegible] Joint Comp. & Tape. ~~[illegible]~~
Sample ID	Sample Location & Material Location — Quantity: (N) Offices
30A	Rm # 116 C
30B	Rm # 116 E
30C	Rm # 116 D

HM# 31	Material Description: CONCRETE - SLAB FLOOR
Sample ID	Sample Location & Material Location — Quantity:
31A	Lobby
31B	Rm # [illegible]
31C	South Storage Room

Relinquished By: M. REED Signature: M. Reed Date/Time: 1-16-2023

Received By: [illegible] Signature: [illegible] Date/ Time: JAN 17 2023 095

Relinquished By: Signature: Date/Time:

Received By: Signature: Date/Time:

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Terracon

E-MAIL REPORT TO: SEE BELOW PROJECT MANAGER (PM)			ACM BULK SAMPLE DATA SHEET
☒ PM – S. Steiner	☐ PM – K. Schroeter	☐ PM – K. Pilgrim	☒ PLM Analysis (Analyze all samples)
☐ PM- M. Benefield	☐ PM – T. Katchee	☐ PM – W. Freszell	☐ Stop Analysis at First Positive
☐ PM- D. Block	☐ Engineering Assistant	☐ Engineering Assistant	☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. DVC - BT Bldg.

Project# R1227901 Sampled By: M. Reed Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☒ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☒ 48HR ☐ 3-5 days

HM# 32	Material Description: 2' X 6' White Pinhole & Fissured ACT	
Sample ID	Sample Location & Material Location	Quantity:
32A	(N) Side - Rm [illegible]	
32B	(Rm # 116B	
32C	↓ - [illegible] Lab	

HM# 33	Material Description: Drywall with Joint Compound (Composite)	
Sample ID	Sample Location & Material Location	Quantity:
33A	[illegible] Rm # 110	
33B	Rm # 107 [illegible]	
33C	Restroom [illegible] - At [illegible]	

HM# 33	Material Description: [illegible] HM # 33	
Sample ID	Sample Location & Material Location	Quantity:
33D	Men's Restroom Ceiling	
33E	Women's Restroom Ceiling (Hall)	

HM# 34	Material Description: [illegible] Cove Base w/ [illegible]	
Sample ID	Sample Location & Material Location	Quantity:
34A	Room # 100	
34B	Room # 124	
34C	Machine Lab # 123	

HM# 35	Material Description: Black [illegible] Under Cove	
Sample ID	Sample Location & Material Location	Quantity:
35A	Room # 107B	
35B	Room # 107B	

Relinquished By:	M. Reed	Signature:	[signature]	Date/Time:	1-16-2023
Received By:	[illegible]	Signature:	[signature]	Date/ Time:	JAN 1 7 2023 0958
Relinquished By:		Signature:		Date/Time:	
Received By:		Signature:		Date/Time:	

003136431

Terracon

E-MAIL REPORT TO: *SEE BELOW PROJECT MANAGER (PM)*

- [x] PM – S. Stevler [illegible]
- [ ] PM – K. Schroeter [illegible]
- [ ] PM – K. Pignm [illegible]
- [ ] PM- M. Benefield [illegible]
- [ ] PM – 7. Katchee [illegible]
- [ ] PM – W. Fuoseen [illegible]
- [ ] PM- D. Block [illegible]
- [ ] [illegible] Engineering Assistant
- [ ] [illegible] Engineering Assistant

ACM BULK SAMPLE DATA SHEET

- [x] PLM Analysis (Analyze all samples)
- [ ] Stop Analysis at First Positive
- [ ] Point Count Analysis (400-point)

9

Project Name/ Address/ Building No. DVC - ET BLDG.

Project# R122-7901 Sampled By: M. REBO Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☐ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☐ 48HR ☐ 3-5 days

HM# 36	Material Description: CONCRETE SLAB - COURTYARD	
Sample ID	Sample Location & Material Location	Quantity:
36A	COURTYARD - SLAB - (N)	
36B	- (CENTER)	
36C	- (E)	

HM# 37	Material Description: ROOF - MAIN FIELD - PVC	
Sample ID	Sample Location & Material Location	Quantity:
37A	ROOF (N)	
37B	ROOF (SW)	
37C	ROOF - (SE)	

HM# 38	Material Description: EXTERIOR STUCCO WALL	
Sample ID	Sample Location & Material Location	Quantity:
38A	EAST SIDE - (N) WALL AT ROOF LEVEL	
38B	" " - (W) WALL	
38C	EAST SIDE - (S) WALL	

HM# 38	Material Description: CONTINUE HM # 38	
Sample ID	Sample Location & Material Location	Quantity:
38D	SOUTH SIDE - (W) WALL	
38E	" " - (E) WALL	

HM# 39	Material Description: ROOF SHEET METAL SEALANT (GRAY)	
Sample ID	Sample Location & Material Location	Quantity:
39A	ROOF - NORTH PERIMETER	
39B	ROOF - SOUTH	
39C	ROOF - EAST	

Relinquished By:	M. REBO	Signature:	M. R	Date/Time:	1-16-2023
Received By:	[illegible]	Signature:		Date/ Time:	JAN 17 2023 095
Relinquished By:		Signature:		Date/Time:	
Received By:		Signature:		Date/Time:	

1466 66th Street Emeryville CA 94608 Tel: (510) 547-7771 Fax: (510) 547-1983

003136431

Terracon

E-MAIL REPORT TO: SEE BELOW PROJECT MANAGER (PM)

- ☒ PM – S. Steiner
- ☐ PM – K. Schroeter
- ☐ PM – K. Pilgrim
- ☐ PM- M. Benefield
- ☐ PM – T. Kallonee
- ☐ PM – W. Friesen
- ☐ PM- D. Brock
- ☐ Engineering Assistant
- ☐ Engineering Assistant

ACM BULK SAMPLE DATA SHEET

- ☒ PLM Analysis (Analyze all samples)
- ☐ Stop Analysis at First Positive
- ☐ Point Count Analysis (400-point)

IO

Project Name/ Address/ Building No. DVC - ET BLDG.

Project# R1227901 Sampled By: M. REED Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☒ EMLAB ☐ Other

TAT ☐ Rush ☐ 24HRS ☒ 48HR ☐ 3-5 days

HM# 40	Material Description: [illegible] ON ROOF PIPE [illegible]	
Sample ID	Sample Location & Material Location	Quantity:
40A	ROOF (N)	
40B	ROOF (SW)	
40C	ROOF (E)	

HM# 41	Material Description: GRAY VSF W/ MASTIC	
Sample ID	Sample Location & Material Location	Quantity:
41A	WOMENS RESTROOM -	
41B		
41C		

HM# 42	Material Description: ROOF - MAIN - ROOF - SHINGLES	
Sample ID	Sample Location & Material Location	Quantity:
42A	SOUTH SIDE BLDG. - MAIN FIELD	
42B		
42C		

HM# 43	Material Description: EXTERIOR - WOOD SIDING WALL SEALANT	
Sample ID	Sample Location & Material Location	Quantity:
43A	EAST BLDG. - EXTERIOR SIDING	
43B	-	
43C	-	

HM#	Material Description:	
Sample ID	Sample Location & Material Location	Quantity:

Relinquished By:	M. REED	Signature:	[signature]	Date/Time:	1-16-2023
Received By:	[illegible]	Signature:	[signature]	Date/ Time:	JAN 17 2023 0851
Relinquished By:		Signature:		Date/Time:	
Received By:		Signature:		Date/Time:	

003136431

Report for:

Mr. Steff Steiner
Terracon Consultants, Inc.-Oakland
1220 Concord Avenue
Suite 450
Concord, CA 94520

Regarding:
Eurofins EPK Built Environment Testing, LLC
Project: R1227901; Engineering Technology (ET Bldg)
EML ID: 3136431

Approved by:

Approved Signatory
Danny Li

Dates of Analysis:
Asbestos-EPA 400 point count: 01-24-2023

Service SOPs: Asbestos-EPA 400 point count (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1262)
NVLAP Lab Code 200757-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

Eurofins EPK Built Environment Testing, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(866) 888-6653 www.eurofinsus.com/Built

Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; Engineering Technology (ET Bldg)

Date of Sampling: 01-11-2023
Date of Receipt: 01-17-2023
Date of Report: 01-24-2023

ASBESTOS POINT COUNT REPORT

Location:	33A Drywall with Joint Compound, Smooth; Mechanical Rm #110		
Total Points Counted:	400		
Lab ID-Version‡:	15187308-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
White Joint Compound and Drywall Composite	Chrysotile	1	0.25
Layer Totals:		1	0.25

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location:	33B Drywall with Joint Compound, Smooth; Rm #110A Custodian		
Total Points Counted:	400		
Lab ID-Version‡:	15187309-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
White Joint Compound and Drywall Composite	Chrysotile	0	< 0.25
Layer Totals:		0	NA

Comments: Asbestos was detected, but no points counted. Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location:	33D Drywall with Joint Compound, Smooth; Mens Restroom Ceiling		
Total Points Counted:	400		
Lab ID-Version‡:	15187310-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
White Joint Compound with Drywall Composite	Chrysotile	2	0.5
Layer Totals:		2	0.5

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

All samples were received in acceptable condition unless otherwise noted. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EPK Built Environment Testing, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(866) 888-6653 www.eurofinsus.com/Built

Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; Engineering Technology (ET Bldg)

Date of Sampling: 01-11-2023
Date of Receipt: 01-17-2023
Date of Report: 01-24-2023

ASBESTOS POINT COUNT REPORT

Location:	33E Drywall with Joint Compound, Smooth; Womens Restroom Ceiling, Hall		
Total Points Counted:	400		
Lab ID-Version‡:	15187311-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
White Joint Compound with Drywall Composite	Chrysotile	1	0.25
Layer Totals:		1	0.25

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

APPENDIX C

LEAD ANALYTICAL LABORATORY DATA

eurofins | Built Environment Testing

Report for:

Mr. Steff Steiner
Terracon Consultants, Inc.-Oakland
1220 Concord Avenue
Suite 450
Concord, CA 94520

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: R1227901; DVC-ET Bldg
EML ID: 3136447

Approved by:

Laboratory Manager
Danny Li

Dates of Analysis:
Lead - Flame AA: 01-19-2023

Service SOPs: Lead - Flame AA (EM-BC-S-8443)
AIHA-LAP, LLC accredited service, Lab ID #178697

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested. Sample size, as it relates to Wipe samples only, is supplied by the client.

Eurofins EPK Built Environment Testing, LLC's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Eurofins EPK Built Environment Testing, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(866) 888-6653 www.eurofinsus.com/Built

Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; DVC-ET Bldg

Date of Sampling: 01-11-2023
Date of Receipt: 01-17-2023
Date of Report: 01-19-2023

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

Location:	Pb-1: White, Wood	Pb-2: White, Fiber Board	Pb-3: Blue, Concrete	Pb-4: Brown, Wood
Comments (see below)	None	None	None	None
Lab ID-Version‡:	15165839-1	15165840-1	15165841-1	15165842-1
Analysis Date:	01/19/2023	01/19/2023	01/19/2023	01/19/2023
Sample type	Paint Chip sample	Paint Chip sample	Bulk sample	Paint Chip sample
Method*	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified
† Method Reporting Limit	38 ppm	39 ppm	40 ppm	39 ppm
Sample size	0.2599 grams	0.2597 grams	0.2523 grams	0.2571 grams
§Total Lead Result	1800 ppm	< 39 ppm	< 40 ppm	5600 ppm

Comments:

Sample results have not been corrected for blank values.

Bulk samples are not covered under the AIHA-LAP, LLC service accreditation.

Wipe samples must meet ASTM E1792 criteria. Method Reporting Limits may not be valid for non-ASTM E1792 wipe samples.

*Sample preparation and analytical methods are based upon NIOSH 7082 and EPA 7000B.

† The Method Reporting Limit is the minimum concentration of Lead that the laboratory can confidently detect in the sample.

§ Total Lead Result has been rounded to two significant figures to reflect analytical precision.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; DVC-ET Bldg

Date of Sampling: 01-11-2023
Date of Receipt: 01-17-2023
Date of Report: 01-19-2023

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

Location:	Pb-5: Beige, Concrete	Pb-6: Off-White, Drywall	Pb-7: White, Drywall	Pb-8: Dark Green, Metal
Comments (see below)	None	None	None	None
Lab ID-Version‡:	15165843-1	15165844-1	15165845-1	15165846-1
Analysis Date:	01/19/2023	01/19/2023	01/19/2023	01/19/2023
Sample type	Paint Chip sample	Paint Chip sample	Paint Chip sample	Paint Chip sample
Method*	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified
† Method Reporting Limit	38 ppm	39 ppm	40 ppm	43 ppm
Sample size	0.2599 grams	0.2593 grams	0.2502 grams	0.2337 grams
§Total Lead Result	680 ppm	1300 ppm	< 40 ppm	14000 ppm

Comments:

Sample results have not been corrected for blank values.

Bulk samples are not covered under the AIHA-LAP, LLC service accreditation.

Wipe samples must meet ASTM E1792 criteria. Method Reporting Limits may not be valid for non-ASTM E1792 wipe samples.

*Sample preparation and analytical methods are based upon NIOSH 7082 and EPA 7000B.

† The Method Reporting Limit is the minimum concentration of Lead that the laboratory can confidently detect in the sample.

§ Total Lead Result has been rounded to two significant figures to reflect analytical precision.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; DVC-ET Bldg

Date of Sampling: 01-11-2023
Date of Receipt: 01-17-2023
Date of Report: 01-19-2023

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

Location:	Pb-9: White, Concrete	Pb-10: Dark Grey, Metal	Pb-11: Gray, Concrete	Pb-12: Pink, Drywall
Comments (see below)	None	None	None	None
Lab ID-Version‡:	15165847-1	15165848-1	15165849-1	15165850-1
Analysis Date:	01/19/2023	01/19/2023	01/19/2023	01/19/2023
Sample type	Paint Chip sample	Paint Chip sample	Paint Chip sample	Paint Chip sample
Method*	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified
† Method Reporting Limit	40 ppm	40 ppm	39 ppm	53 ppm
Sample size	0.2509 grams	0.2524 grams	0.2593 grams	0.1871 grams
§Total Lead Result	< 40 ppm	26000 ppm	< 39 ppm	55 ppm

Comments:

Sample results have not been corrected for blank values.

Bulk samples are not covered under the AIHA-LAP, LLC service accreditation.

Wipe samples must meet ASTM E1792 criteria. Method Reporting Limits may not be valid for non-ASTM E1792 wipe samples.

*Sample preparation and analytical methods are based upon NIOSH 7082 and EPA 7000B.

† The Method Reporting Limit is the minimum concentration of Lead that the laboratory can confidently detect in the sample.

§ Total Lead Result has been rounded to two significant figures to reflect analytical precision.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EPK Built Environment Testing, LLC
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(866) 888-6653 www.eurofinsus.com/Built

Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; DVC-ET Bldg

Date of Sampling: 01-11-2023
Date of Receipt: 01-17-2023
Date of Report: 01-19-2023

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

Location:	Pb-13: Orange, Metal	Pb-14: Dark Brown, Metal	Pb-15: Gray, Metal	Pb-16: Green, Wood
Comments (see below)	None	None	None	None
Lab ID-Version‡:	15165851-1	15165852-1	15165853-1	15165854-1
Analysis Date:	01/19/2023	01/19/2023	01/19/2023	01/19/2023
Sample type	Paint Chip sample	Paint Chip sample	Paint Chip sample	Paint Chip sample
Method*	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified
† Method Reporting Limit	74 ppm	40 ppm	39 ppm	40 ppm
Sample size	0.1355 grams	0.2522 grams	0.2576 grams	0.2526 grams
§Total Lead Result	60000 ppm	110000 ppm	7900 ppm	< 40 ppm

Comments:

Sample results have not been corrected for blank values.

Bulk samples are not covered under the AIHA-LAP, LLC service accreditation.

Wipe samples must meet ASTM E1792 criteria. Method Reporting Limits may not be valid for non-ASTM E1792 wipe samples.

*Sample preparation and analytical methods are based upon NIOSH 7082 and EPA 7000B.

† The Method Reporting Limit is the minimum concentration of Lead that the laboratory can confidently detect in the sample.

§ Total Lead Result has been rounded to two significant figures to reflect analytical precision.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EPK Built Environment Testing, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(866) 888-6653 www.eurofinsus.com/Built

Client: Terracon Consultants, Inc.-Oakland
C/O: Mr. Steff Steiner
Re: R1227901; DVC-ET Bldg

Date of Sampling: 01-11-2023
Date of Receipt: 01-17-2023
Date of Report: 01-19-2023

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

Location:	Pb-17: Orange-Red, Metal	Pb-18: Tan, Wood	Pb-19: Red, Metal
Comments (see below)	None	None	None
Lab ID-Version‡:	15165855-1	15165856-1	15165857-1
Analysis Date:	01/19/2023	01/19/2023	01/19/2023
Sample type	Paint Chip sample	Paint Chip sample	Paint Chip sample
Method*	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified
† Method Reporting Limit	39 ppm	40 ppm	39 ppm
Sample size	0.2536 grams	0.2511 grams	0.2536 grams
§Total Lead Result	2300 ppm	< 40 ppm	97 ppm

Comments:

Sample results have not been corrected for blank values.

Bulk samples are not covered under the AIHA-LAP, LLC service accreditation.

Wipe samples must meet ASTM E1792 criteria. Method Reporting Limits may not be valid for non-ASTM E1792 wipe samples.

*Sample preparation and analytical methods are based upon NIOSH 7082 and EPA 7000B.

† The Method Reporting Limit is the minimum concentration of Lead that the laboratory can confidently detect in the sample.

§ Total Lead Result has been rounded to two significant figures to reflect analytical precision.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

003136447

Terracon

E-MAIL REPORT TO: *PROJECT MANAGER (PM)*

☐ Engineering Assistant	☐ Engineering Assistant
☒ PM – S. Steiner	☐ PM – K. Schoester

☐ PM – K. Pagoni	☐ PM M. Benefield	☐ PM – W. Freezell	☐ PM – T. Kattenee	☐ PM – D. Block

LEAD PAINT SAMPLE DATA SHEET

* Lead Analysis
___ Flame AA (EPA 7420) ___ TTLC

PAGE 1 OF 4

Project Name/ Address/ Building No. DVC · BT Bldg.

Project# R122 7901 Sampled By: M. REED Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ EMSL ☐ Aerobiology ☐ Quantem Other

TAT ☐ Rush ☐ 24HRS ☒ 48HRS ☐ 3-5 Day

Sample ID	Paint Description and Sample Location	Condition (I/F/P)
Pb-1	Paint Color: White Substrate: wood Component: Wall Sample Location: Bldg # BT Unit # Room Conf Room # 104 · NW corner	I
Pb-2	Paint Color: White Substrate: ~~[illegible]~~ Board Component: Wall Sample Location: Bldg # Unit # Room Conf Room # 104 (W) wall Panel	I
Pb-3	~~Paint~~ Brick Color: Brick Substrate: Concrete Component: Wall Sample Location: Bldg # Unit # Room	F
Pb-4	Paint Color: Brown Substrate: wood Component: Wall Sample Location: Bldg # Unit # Room Hallway near Restrooms	I
Pb 5	Paint Color: Brick Substrate: Concrete Component: Floor Sample Location: Bldg # Unit # Room Machine Shop (N) Side Floor	F

Relinquished By: M REED	Signature: M Reed	Date/Time:	1-16-2023
Received By: [illegible]	Signature:	Date/Time:	JAN 17 2023 0958
Received By:	Signature:	Date/Time:	

003136447

Terracon

E-MAIL REPORT TO: PROJECT MANAGER (PM)				
☐ Engineering Assistant	☐ Engineering Assistant			
☒ PM – S. Steiner	☐ PM – K. Schroeder			
☐ PM – K. Pilgrim	☐ PM – M. Benedick	☐ PM – W. Paeszek	☐ PM – T. Kennee	☐ PM – D. Block

LEAD PAINT SAMPLE DATA SHEET

* Lead Analysis

Flame AA (EPA 7420) ______ TTLC

PAGE 2 OF 4

Project Name/ Address/ Building No. DVC - ET BLDG.

Project# R122 7901 Sampled By: M. REED Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAL ☐ EMSL ☐ Aerobiology ☐ Quantem Other

TAT ☐ Rush ☐ 24HRS ☒ 48HRS ☐ 3-5 Day

Sample ID	Paint Description and Sample Location	Condition (I/F/P)
Pb-6	Paint Color: Off White Substrate: Drywall Component: Wall Sample Location: Bldg # ____ Unit # ____ Room ____ SW corner Room # 104 Electrical	I
Pb 7	Paint Color: White Substrate: Drywall Component: Wall Sample Location: Bldg # ____ Unit # ____ Room ____ Room # 122 B - (S) wall	I
Pb-8	Paint Color: Dark Green Substrate: Metal Component: Wall Frame Sample Location: Bldg # ____ Unit # ____ Room ____ Room # 104 C wall frame	I
Pb-9	Paint Color: White Substrate: Concrete Component: Wall Sample Location: Bldg # ____ Unit # ____ Room ____ T.U. Lab - (E) wall - sub grade	P
Pb-10	Paint Color: Dark Green Substrate: Metal Component: Column Sample Location: Bldg # ____ Unit # ____ Room ____ T.U. Lab (E) support col.	I

Relinquished By:	M. REED	Signature:	M. Reed	Date/Time:	1-16-2023
Received By:	EZRA DINGAR	Signature:		Date/Time:	JAN 17 2023 0958
Received By:		Signature:		Date/Time:	

003136447

Terracon

E-MAIL REPORT TO: PROJECT MANAGER (PM)

☐ [email] Engineering Assistant | ☐ [email] Engineering Assistant
☒ PM – S. Stever [email] | ☐ PM – K. Schroeder [email]
☐ PM – K. Pilgrim [email] | ☐ PM- M. Benefield [email] | ☐ PM – W. Freszell [email] | ☐ PM – T. Kaltchee [email] | ☐ PM – D. Block [email]

LEAD PAINT SAMPLE DATA SHEET

* Lead Analysis
Flame AA (EPA 7420) ____ TTLC

PAGE 3 OF 4

Project Name/ Address: Building No. DUC - ET BLDG

Project# R1227901 Sampled By: M. REED Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAI ☐ EMSL ☐ Aerobiology ☐ Quantem Other ______

TAT ☐ Rush ☐ 24HRS ☒ 48HRS ☐ 3-5 Day

Sample ID	Paint Description and Sample Location	Condition (I/F/P)
Pb 11	Paint Color: GRAY; Substrate: CONCRETE; Component: FLOOR; Sample Location: Bldg # ____ Unit # ____ Room ____; ET NORTH BLDG. - RM # 120 B FLOOR	F
Pb-12	Paint Color: PINK; Substrate: DRYWALL; Component: WALL; Sample Location: Bldg # ____ Unit # ____ Room ____; ET NORTH BLDG. - RM # 116C	I
Pb-13	Paint Color: ORANGE; Substrate: METAL; Component: HVAC DUCT; Sample Location: Bldg # ____ Unit # ____ Room ____; HVAC CEILING DUCT - RM # 104	I
Pb-14	Paint Color: DARK BROWN; Substrate: METAL; Component: SUPPORT COL.; Sample Location: Bldg # ____ Unit # ____ Room ____; NORTH SIDE SUPPORT COL. NEAR RM # 120A	I
Pb 15	Paint Color: GRAY; Substrate: METAL; Component: DOOR; Sample Location: Bldg # ____ Unit # ____ Room ____; BATHROOM SIDE RM # 107	P

Relinquished By: M. REED Signature: [signature] Date/Time: 1-16-2023

Received By: [stamp] Signature: [signature] Date/Time: JAN 17 2023 0958

Received By: ______ Signature: ______ Date/Time: ______

003136447

Terracon

E-MAIL REPORT TO: PROJECT MANAGER (PM)

☐ Engineering Assistant
☐ Engineering Assistant
☒ PM – S. Steiner
☐ PM – K. Schroeter
☐ PM – K. Pagan
☐ PM – M. Benedum
☐ PM – W. Faeszel
☐ PM – T. Kahrose
☐ PM – D. Block

LEAD PAINT SAMPLE DATA SHEET

* Lead Analysis
___ Flame AA (EPA 7420) ___ TTLC

PAGE 4 OF 4

Project Name/ Address/ Building No. DVC

Project# R1227901 Sampled By: M. REED Sampling Date: 1-11-2023

Sample(s) sent to: ☐ MAI ☐ EMSL ☐ Aerobiology ☐ Quantem Other ______

TAT ☐ Rush ☐ 24HRS ☒ 48HRS ☐ 3-5 Day

Sample ID	Paint Description and Sample Location	Condition (I/F/P)
Pb-16	Paint Color: [illegible] Substrate: WOOD Component: ROOF TRIM Sample Location: Bldg # ___ Unit # ___ Room ___ SOUTH SIDE DETACHED [illegible]	F
Pb-17	Paint Color: ORANGE RED Substrate: METAL Component: COL. Sample Location: Bldg # ___ Unit # ___ Room ___ SUPPORT COL. EAST DETACHED SHED	F
Pb-18	Paint Color: TAN Substrate: WOOD Component: WALL Sample Location: Bldg # ___ Unit # ___ Room ___ WOOD SIDING - EAST DETACHED SHED	F
Pb-19	Paint Color: RED Substrate: METAL Component: HVAC PIPE Sample Location: Bldg # ___ Unit # ___ Room ___ (N) BLDG - CENTER HVAC WALL	I
	Paint Color: ___ Substrate: ___ Component: ___ Sample Location: Bldg # ___ Unit # ___ Room ___	

Relinquished By: M. REED Signature: [signature] Date/Time: 1.16.2023

Received By: Signature: [signature] Date/ Time: JAN 17 2023 0958

Received By: Signature: Date/Time:

1466 66th Street Emeryville CA 94608 Tel: (510) 547-7771 Fax: (510) 547-1983

APPENDIX D

PCB ANALYTICAL LABORATORY DATA

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2301904

Report Created for: Terracon

1220 Concord Avenue, Suite 450
Concord, CA 94520

Project Contact: Steffen Steiner
Project P.O.:
Project: R1227901; DUC-321 Golf Club RD.- ET BLDG

Project Received: 01/18/2023

Analytical Report reviewed & approved for release on 01/25/2023 by:

Yen Cao

Yen Cao
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in a case narrative.

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Terracon **WorkOrder:** 2301904

Project: R1227901; DUC-321 Golf Club RD.- ET BLDG

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
CPT	Consumer Product Testing not NELAP Accredited
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
LQL	Lowest Quantitation Level
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	MDL is the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results. Definition and Procedure for the Determination of the Method Detection Limit, Revision 2, 40CFR, Part 136, Appendix B, EPA 821-R-16-006, December 2016.
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting limit is the lowest level that can be reliably determined within specified limits of precision and accuracy during routine laboratory operating conditions. (The RL cannot be lower than the lowest calibration standard used in the initial calibration of the instrument and must be greater than the MDL.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Terracon **WorkOrder:** 2301904

Project: R1227901; DUC-321 Golf Club RD.- ET BLDG

Analytical Qualifiers

A	The reported value is determined using a "single point" calibration by GC-ECD as allowed by the method.
a4	Reporting limits raised due to the sample's matrix prohibiting a full volume extraction.
h4	Sulfuric acid permanganate (EPA 3665) cleanup.

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Terracon	**WorkOrder:**	2301904
Date Received:	01/18/2023 10:59	**Extraction Method:**	SW3550B/3630C
Date Prepared:	01/18/2023	**Analytical Method:**	SW8082
Project:	R1227901; DUC-321 Golf Club RD.- ET BLDG	**Unit:**	mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors w/ Column Style Clean-up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PCB-1A	**2301904-001A**	**Caulk**	**01/11/2023**	**GC22 01192328.D**	**262026**

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Aroclor1016	ND		10	20	01/19/2023 16:44
Aroclor1221	ND		10	20	01/19/2023 16:44
Aroclor1232	ND		10	20	01/19/2023 16:44
Aroclor1242	ND		10	20	01/19/2023 16:44
Aroclor1248	ND		10	20	01/19/2023 16:44
Aroclor1254	**36**	A	10	20	01/19/2023 16:44
Aroclor1260	ND		10	20	01/19/2023 16:44
PCBs, total	**36**		10	20	01/19/2023 16:44

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	113	70-130	01/19/2023 16:44

Analyst(s): CK Analytical Comments: a4,h4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PCB-2A	**2301904-002A**	**Caulk**	**01/11/2023**	**GC20 01202343.D**	**262026**

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	10	20	01/20/2023 19:29
Aroclor1221	ND	10	20	01/20/2023 19:29
Aroclor1232	ND	10	20	01/20/2023 19:29
Aroclor1242	ND	10	20	01/20/2023 19:29
Aroclor1248	ND	10	20	01/20/2023 19:29
Aroclor1254	ND	10	20	01/20/2023 19:29
Aroclor1260	ND	10	20	01/20/2023 19:29
PCBs, total	ND	10	20	01/20/2023 19:29

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	121	70-130	01/20/2023 19:29

Analyst(s): CK Analytical Comments: a4,h4

(Cont.)

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Terracon	**WorkOrder:**	2301904
Date Received:	01/18/2023 10:59	**Extraction Method:**	SW3550B/3630C
Date Prepared:	01/18/2023	**Analytical Method:**	SW8082
Project:	R1227901; DUC-321 Golf Club RD.- ET BLDG	**Unit:**	mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors w/ Column Style Clean-up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PCB-3A	**2301904-003A**	**Caulk**	**01/11/2023**	**GC20 01202348.D**	**262026**

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	10	20	01/21/2023 12:02
Aroclor1221	ND	10	20	01/21/2023 12:02
Aroclor1232	ND	10	20	01/21/2023 12:02
Aroclor1242	ND	10	20	01/21/2023 12:02
Aroclor1248	ND	10	20	01/21/2023 12:02
Aroclor1254	ND	10	20	01/21/2023 12:02
Aroclor1260	ND	10	20	01/21/2023 12:02
PCBs, total	ND	10	20	01/21/2023 12:02

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	121	70-130	01/21/2023 12:02

Analyst(s): CK   Analytical Comments: a4,h4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PCB-4A	**2301904-004A**	**Caulk**	**01/11/2023**	**GC20 01202349.D**	**262026**

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	10	20	01/21/2023 12:19
Aroclor1221	ND	10	20	01/21/2023 12:19
Aroclor1232	ND	10	20	01/21/2023 12:19
Aroclor1242	ND	10	20	01/21/2023 12:19
Aroclor1248	ND	10	20	01/21/2023 12:19
Aroclor1254	ND	10	20	01/21/2023 12:19
Aroclor1260	ND	10	20	01/21/2023 12:19
PCBs, total	ND	10	20	01/21/2023 12:19

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	107	70-130	01/21/2023 12:19

Analyst(s): CK   Analytical Comments: a4,h4

(Cont.)

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Terracon	**WorkOrder:**	2301904
Date Received:	01/18/2023 10:59	**Extraction Method:**	SW3550B/3630C
Date Prepared:	01/18/2023	**Analytical Method:**	SW8082
Project:	R1227901; DUC-321 Golf Club RD.- ET BLDG	**Unit:**	mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors w/ Column Style Clean-up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PCB-5A	**2301904-005A**	**Caulk**	**01/11/2023**	**GC20 01202350.D**	**262026**

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	10	20	01/21/2023 12:36
Aroclor1221	ND	10	20	01/21/2023 12:36
Aroclor1232	ND	10	20	01/21/2023 12:36
Aroclor1242	ND	10	20	01/21/2023 12:36
Aroclor1248	ND	10	20	01/21/2023 12:36
Aroclor1254	ND	10	20	01/21/2023 12:36
Aroclor1260	ND	10	20	01/21/2023 12:36
PCBs, total	ND	10	20	01/21/2023 12:36

Surrogates	REC (%)	Limits		
Decachlorobiphenyl	112	70-130		01/21/2023 12:36

Analyst(s): CK | Analytical Comments: a4,h4

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Quality Control Report

Client:	Terracon	**WorkOrder:**	2301904
Date Prepared:	01/18/2023	**BatchID:**	262026
Date Analyzed:	01/19/2023	**Extraction Method:**	SW3550B/3630C
Instrument:	GC20	**Analytical Method:**	SW8082
Matrix:	Bulk Material	**Unit:**	mg/kg
Project:	R1227901; DUC-321 Golf Club RD.- ET BLDG	**Sample ID:**	MB/LCS/LCSD-262026

QC Summary Report for SW8082 w/ Column Clean-up

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Aroclor1016	ND	0.050	0.050	-	-	-
Aroclor1221	ND	0.050	0.050	-	-	-
Aroclor1232	ND	0.050	0.050	-	-	-
Aroclor1242	ND	0.050	0.050	-	-	-
Aroclor1248	ND	0.050	0.050	-	-	-
Aroclor1254	ND	0.050	0.050	-	-	-
Aroclor1260	ND	0.050	0.050	-	-	-
Surrogate Recovery						
Decachlorobiphenyl	0.048			0.05	95	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aroclor1016	0.14	0.14	0.15	94	95	70-130	1.14	20
Aroclor1260	0.16	0.15	0.15	105	103	70-130	1.63	20
Surrogate Recovery								
Decachlorobiphenyl	0.049	0.049	0.050	99	97	70-130	1.43	20

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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2301904 **ClientCode: RGAE**

☐ WaterTrax ☐ CLIP ☐ EDF ☐ EQuIS ☐ Dry-Weight ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag
☐ Detection Summary ☐ Excel

Report to:
Steffen Steiner
Terracon
1220 Concord Avenue, Suite 450
Concord, CA 94520
(510) 547-7771 FAX: (510) 547-1983

Email: steff.steiner@terracon.com
cc/3rd Party:
PO:
Project: R1227901; DUC-321 Golf Club RD.- ET BLDG

Bill to:
Paul King
Terracon
1220 Concord Avenue, Suite 450
Concord, CA 94520
apinvoices@terracon.com

Requested TAT: **5 days;**

Date Received: **01/18/2023**
Date Logged: **01/18/2023**

Lab ID	ClientSampID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
2301904-001	PCB-1A	Caulk	1/11/2023 00:00	☐	A	A										
2301904-002	PCB-2A	Caulk	1/11/2023 00:00	☐	A	A										
2301904-003	PCB-3A	Caulk	1/11/2023 00:00	☐	A	A										
2301904-004	PCB-4A	Caulk	1/11/2023 00:00	☐	A	A										
2301904-005	PCB-5A	Caulk	1/11/2023 00:00	☐	A	A										

Columns 1–12: Requested Tests (See legend below)

Test Legend:

1	8082_PCB_SG_Caulk	2	PRDisposal Fee	3		4	
5		6		7		8	
9		10		11		12	

Prepared by:

Comments:

NOTE: Soil samples are discarded 60 days after receipt unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: TERRACON | **Project:** R1227901; DUC-321 Golf Club RD.- ET BLDG | **Work Order:** 2301904

Client Contact: Steffen Steiner | **QC Level:** LEVEL 2

Contact's Email: steff.steiner@terracon.com | **Comments:** | **Date Logged:** 1/18/2023

☐ WaterTrax ☐ CLIP ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

LabID	ClientSampID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	U**	Head Space	Dry-Weight	Collection Date & Time	TAT	Test Due Date	Sediment Content	Hold	Sub Out
001A	PCB-1A	Caulk	SW8082 (PCBs w/ Column Style Clean-up)	1	Plastic Baggie, Extra Small	☐	☐	☐	1/11/2023	5 days	1/26/2023		☐	☐
002A	PCB-2A	Caulk	SW8082 (PCBs w/ Column Style Clean-up)	1	Plastic Baggie, Extra Small	☐	☐	☐	1/11/2023	5 days	1/26/2023		☐	☐
003A	PCB-3A	Caulk	SW8082 (PCBs w/ Column Style Clean-up)	1	Plastic Baggie, Extra Small	☐	☐	☐	1/11/2023	5 days	1/26/2023		☐	☐
004A	PCB-4A	Caulk	SW8082 (PCBs w/ Column Style Clean-up)	1	Plastic Baggie, Extra Small	☐	☐	☐	1/11/2023	5 days	1/26/2023		☐	☐
005A	PCB-5A	Caulk	SW8082 (PCBs w/ Column Style Clean-up)	1	Plastic Baggie, Extra Small	☐	☐	☐	1/11/2023	5 days	1/26/2023		☐	☐

NOTES: * STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- Organic extracts are held for 40 days before disposal; Inorganic extract are held for 30 days.

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

U = An unpreserved container was received for a method that suggests a preservation in order to extend hold time for analysis.**

2301904

Terracon

***E-MAIL REPORT TO: PROJECT MANAGER (PM) AND ADDITIONAL RECIPIENTS BELOW ***			PCB BULK SAMPLE DATA SHEET
☑ PM – S. Steiner spsteiner@terracon.com	☑ PM – K. Schroeter kmschroeter@terracon.com	☐ PM – K. Pilgrim kmpilgrim@terracon.com	PAGE 1 OF 1
☐ PM- M. Benefield msbenefield@terracon.com	☐ PM – T. Kattchee takattchee@terracon.com	☐ PM – W. Frieszell wmfrieszell@terracon.com	
☐ PM – D. Block David.block@terracon.com	☐ denise.wallen@terracon.com Engineering Assistant	☐ eric.dyer@terracon.com Engineering Assistant	

Project Name/ Address/ Building No. DVC - 321 GOLF CLUB RD. - ET BLDG.

Project# R1227901 **Sampled By:** M. REED **Sampling Date:** 1-11-2023

Sample(s) sent to: ______ **TAT** ☐ Rush ☐ 24HRS ☐ 48HR ☒ -5 days

HM# PCB-01	Material Description: BLACK WINDOW GLAZE - GLASS TO FRAME
Sample ID	Sample Location & Material Location — Quantity:
PCB - 1A	SOUTH SIDE - LOBBY STORE FRONT WINDOW RM #100

HM# PCB-02	Material Description: BLACK SEALANT - ASSOCIATED WITH DOOR FRAME TO BRICK
Sample ID	Sample Location & Material Location — Quantity:
PCB - 2A	MACHINE LAB - ROOM #123 - (S) PERIMETER DOOR FRAME

HM# PCB-03	Material Description: BLACK SEALANT - ASSOCIATED WITH OFF. METAL PARTITION
Sample ID	Sample Location & Material Location — Quantity: WALL FRAMES
PCB - 3A	AT ROOM #104A

HM# PCB-04	Material Description: GRAYISH SEALANT - ASSOCIATED WITH EXTERIOR WALL
Sample ID	Sample Location & Material Location — Quantity: PANEL SIDE
4A	NORTH SIDE - BLDG - COURTYARD (E)

HM# PCB-05	Material Description: BLACK SEALANT ON WOOD SIDE & DOOR FRAME
Sample ID	Sample Location & Material Location — Quantity:
5A	EAST SIDE - DETACHED SHED

Relinquished By:	M. REED	Signature	M. Reed	Date/Time:	1-16-2023
Received By:	Mgan	Signature:	Mgn	Date/ Time:	1/18/ 945
Received By:	Moore	Signature:	L Moore	Date/Time:	1/18/23 10:16

REC: Agustina. Agustina. 1/18/2023 1016A

1466 66th Street Emeryville CA 94608 Tel: (510) 547-7771 Fax: (510) 547-1983

2.3C WET

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name:	Terracon	Date and Time Received:	1/18/2023 10:59
Project:	R1227901; DUC-321 Golf Club RD.- ET BLDG	Date Logged:	1/18/2023
		Received by:	Agustina Venegas
WorkOrder №:	2301904 Matrix: Caulk	Logged by:	
Carrier:	Laurie Moore (MAI Courier)		

Chain of Custody (COC) Information

	Yes	No	NA
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☑	☐	
Chain of custody agrees with sample labels?	☑	☐	
Sample IDs noted by Client on COC?	☑	☐	
Date and Time of collection noted by Client on COC?	☑	☐	
Sampler's name noted on COC?	☑	☐	
COC agrees with Quote?	☐	☐	☑

Sample Receipt Information

	Yes	No	NA
Custody seals intact on shipping container/cooler?	☐	☐	☑
Custody seals intact on sample bottles?	☐	☐	☑
Shipping container/cooler in good condition?	☑	☐	
Samples in proper containers/bottles?	☑	☐	
Sample containers intact?	☑	☐	
Sufficient sample volume for indicated test?	☑	☐	

Sample Preservation and Hold Time (HT) Information

	Yes	No	NA
All samples received within holding time?	☑	☐	☐
Samples Received on Ice?	☑	☐	
	(Ice Type: WET ICE)		
Sample/Temp Blank temperature	Temp: 2.3°C		☐
ZHS conditional analyses: VOA meets zero headspace requirement (VOCs, TPHg/BTEX, RSK)?	☐	☐	☑
Sample labels checked for correct preservation?	☑	☐	
pH acceptable upon receipt (Metal: <2; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)?	☐	☐	☑

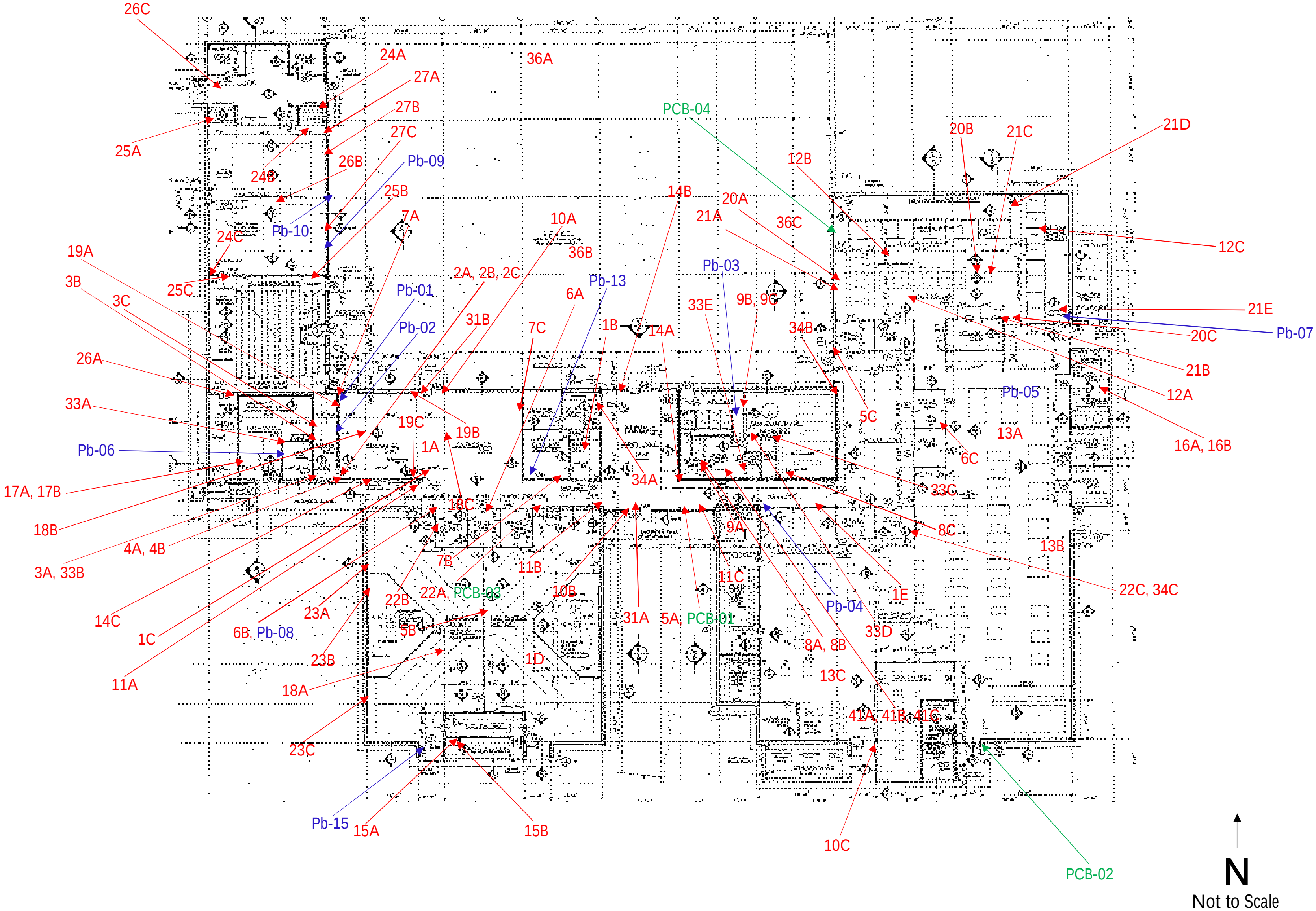
UCMR Samples:

	Yes	No	NA
pH tested and acceptable upon receipt (200.7: ≤2; 533: 6 - 8; 537.1: 6 - 8)?	☐	☐	☑
Free Chlorine tested and acceptable upon receipt (<0.1mg/L) [not applicable to 200.7]?	☐	☐	☑

Comments:

APPENDIX E

SAMPLE LOCATION FIGURES



Terracon

Diablo Valley College

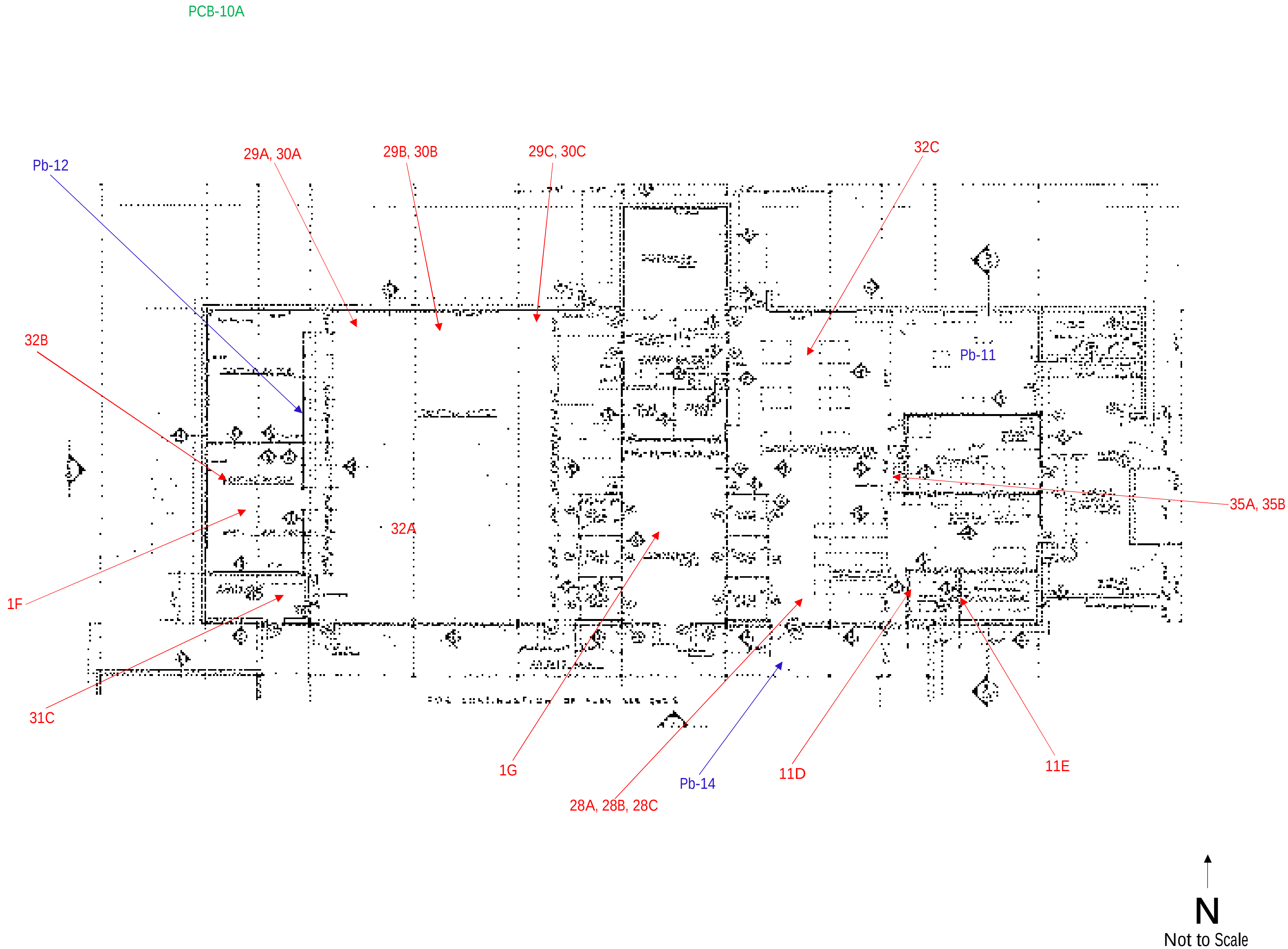
Engineering Technology (ET) Building South Side

321 Golf Club Road
Pleasant Hill, California

Date	Drafted By
February 2023	DW
Project Number	**Checked By**
R1227901	SPS

Sheet Name
ET Building - South Side

Sheet Number
Figure 1



Terracon

Diablo Valley College

Engineering Technology (ET) Building North Side

321 Golf Club Road
Pleasant Hill, California

Date	Drafted By
February 2023	DW
Project Number	**Checked By**
R1227901	SPS

Sheet Name
ET Building - North Side

Sheet Number
Figure 2

N
Not to Scale

Terracon

Diablo Valley College

Engineering Technology (ET) Building Roof & Additional Structures

321 Golf Club Road
Pleasant Hill, California

Date	Drafted By
February 2023	DW
Project Number	**Checked By**
R1227901	SPS

Sheet Name
ET Building – Roof & Additional Structures

Sheet Number
Figure 3

APPENDIX E

CERTIFICATIONS

State of California
Division of Occupational Safety and Health

Certified Site Surveillance Technician

Michael H Reed

Name

Certification No. **08-4464**

Expires on **12/18/23**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH

LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:	CERTIFICATE TYPE:	NUMBER:	EXPIRATION DATE:
 **Micheal Reed**	Lead Sampling Technician	LRC-00000224	5/21/2023

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD

STATE OF CALIFORNIA Gavin Newsom, Governor

DEPARTMENT OF INDUSTRIAL RELATIONS
Division of Occupational Safety and Health-Asbestos Certification
1750 Howe Avenue, Suite 460
Sacramento, CA 95825
(916) 574-2993 Office http://www.dir.ca.gov/dosh/asbestos.html actu@dir.ca.gov

212150850C **034**

December 22, 2022

Steffen Paul Steiner

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

Please contact our office at the above address or email w any changes in your contact/mailing information within 15 days of the change.

Sincerely,

Eric Berg

Eric Berg
Deputy Chief of Health

Attachment: Certification Card

cc: File

Renewal – Card Attached

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Steffen Paul Steiner
Name

Certification No. **92-0850**

Expires on **01/08/24**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH

LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:	CERTIFICATE TYPE:	NUMBER:	EXPIRATION DATE:
 **Steffen Steiner**	Lead Inspector/Assessor	LRC-00005586	5/15/2024

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD

FINAL

DIABLO VALLEY COLLEGE IMPROVEMENTS IMPLEMENTATION PROJECT INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

LSA

January 2009

DRAFT MITIGATED NEGATIVE DECLARATION

Project Name. Diablo Valley College Improvements Implementation Project

Project Location. The approximately 110-acre project site is located at 321 Golf Club Road in Pleasant Hill, Contra Costa County, California. The site is bounded by Golf Club Road, Grayson Creek, Viking Drive and Stubbs Road (APN 153-040-009).

Summary Description of Project. The Contra Costa Community College District is proposing to demolish, construct, and renovate buildings and make improvements to the landscaping and campus facilities on the Diablo Valley College campus as described in the campus' 2007 Facilities Master Plan. The Student Activities Building, Counseling Center, Learning Center Building, District Storage Building and part of the Performing Arts Center would be demolished; a new Central Quad, an English Center/Match Center, an Art/Performing Arts Building, Student Services Building, and a Student Activities Building would be constructed. The District also proposes to renovate the existing P.E./Athletic Facility, the Science Center and the Engineering Technology Center. The proposed project would include landscaping improvements to the lake, the parking lot, the North Entry Plaza, Main Boulevard, the South Entry Plaza and the P.E./Athletics Plaza and Entry.

Findings. It is hereby determined that, based on the information contained in the attached Initial Study, the project would not have a significant adverse effect on the environment.

Mitigation measures necessary to avoid or reduce to a less-than-significant level the project's potentially significant effects on the environment are detailed in the Initial Study that has been prepared for the project. These mitigation measures are hereby incorporated and fully made part of this Draft Mitigated Negative Declaration. The District will incorporate these measures as part of the project and implement each of the identified mitigation measures, which would be adopted as part of the Mitigation Monitoring and Reporting Program.

Date: Nov 24, 2008

Ray Pile, Chief Facilities Planner
Contra Costa Community College District

FINAL

DIABLO VALLEY COLLEGE IMPROVEMENTS IMPLEMENTATION PROJECT INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

Submitted to:

Contra Costa Community College District
Facilities & Planning
500 Court Street
Martinez, CA 94553

Prepared by:

LSA Associates, Inc.
2215 Fifth Street
Berkeley, CA 94710
510.540.7331

LSA

January 2009

TABLE OF CONTENTS

FIGURES

TABLES

1. INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) and the *CEQA Guidelines*, this document includes a Draft Mitigated Negative Declaration and an Initial Study (IS/MND) to support the Negative Declaration findings for the implementation of the proposed Diablo Valley College Improvements Implementation Project (hereinafter "project") by the Contra Costa Community College District. The District is the Lead Agency under CEQA for the proposed project.

The Initial Study and proposed Mitigated Negative Declaration describe the project, its location and setting, and evaluate the potential environmental impacts that may result from implementation of the proposed project. The potential environmental impacts are evaluated through the use of an environmental checklist as provided in Appendix G of the *CEQA Guidelines*.

A. CONTACT PERSON

Questions regarding the preparation of this IS/MND, its assumptions, or conclusions, should be referred to:

> Ray Pyle, Chief Facilities Planner
> Contra Costa Community College District
> Facilities Planning
> 500 Court Street
> Martinez, CA 94553
> (925) 229-1000

B. REPORT ORGANIZATION

This document is organized into the following chapters:

- *Chapter 1 – Introduction:* Discusses the overall purpose of the IS/MND, provides contact information, and summarizes the organization of the IS/MND.
- *Chapter 2 – Project Description:* Provides a description of the proposed project, the project site and surroundings, and a history of activities at the project site that are relevant to the environmental analysis, and identifies other projects in the vicinity that may influence implementation of the project.
- *Chapter 3 – Environmental Checklist Responses:* Evaluates the potential environmental impacts of the proposed project through responses to the Initial Study checklist questions derived from Appendix G of the *CEQA Guidelines*.
- *Chapter 4 – Report Preparation:* Identifies preparers of the IS/MND and references used.
- *Appendices:* The appendices contain documentation prepared to support the analysis provided in the IS/MND.

2. PROJECT DESCRIPTION

Chapter 2 describes the proposed improvements at the Diablo Valley College (DVC) campus and the project's regional and local context, planning context, and background. Required project approvals and permits are identified at the end of the chapter.

A. PROJECT LOCATION, SETTING, AND BACKGROUND

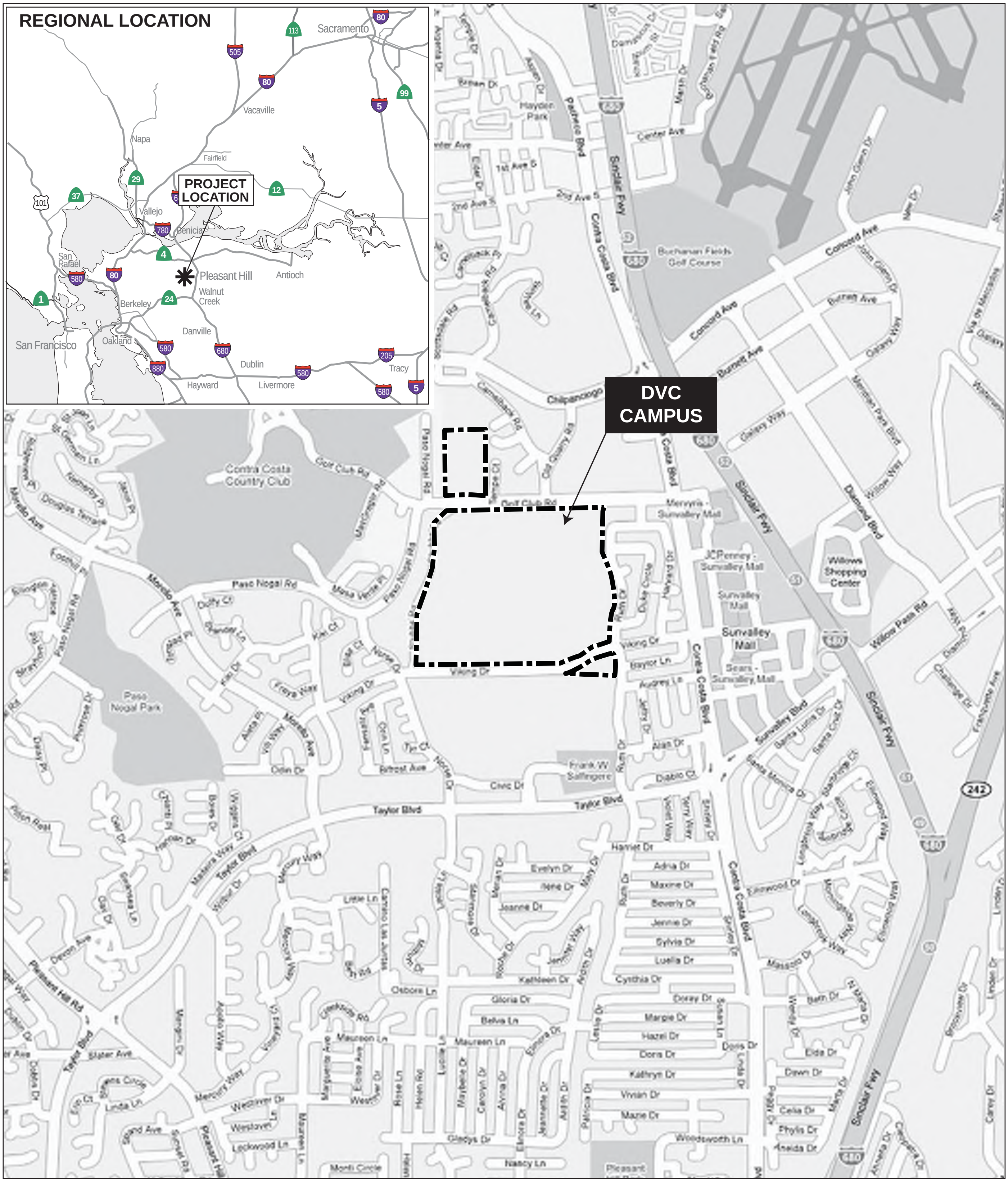
The project site is located on the DVC campus at 321 Golf Club Road in the City of Pleasant Hill. The campus is in central Contra Costa County, west of Interstate 680 (I-680) and south of State Route 4 (SR 4). The majority of the campus is bound by Golf Club Road to the north, Grayson Creek to the east, Viking Drive to the south, and Stubbs Road to the west. Additionally, a parking lot that is part of the DVC campus is located north of Golf Club Road. Figure 1 shows the regional location of the DVC campus, and Figure 2 shows and aerial photo of the DVC campus.

The campus encompasses approximately 110 acres, with current enrollment at 22,000 part and full-time students. Figure 3 shows a map of the DVC campus. The campus consists of approximately 44 buildings which house administrative and academic offices; student services; classrooms; laboratories; physical education facilities; a library; and various maintenance or warehouse facilities. The bulk of these buildings are located within a campus core surrounded by parking facilities and athletic fields.

A variety of land uses surround the campus. Commercial/retail and multi-family residential uses are located to the north, residential uses are located to the west, College Park High School is south of the DVC campus, and residential uses are located to the east.

The 2007 Facilities Master Plan for Diablo Valley College (Facilities Master Plan) was adopted to provide a guide for future campus development. The Facilities Master Plan integrates both immediate and future building projects and provides a comprehensive approach to improving the campus. The demolition, construction, renovation and site improvements analyzed within this environmental document are those actions described in the Facilities Master Plan that are funded and/or are likely to occur within the next 10 years.

A portion of the funding for this project is provided through Measure A, a bond measure passed by Contra Costa County voters in 2006. Measure A provides $286.5 million in bond funding for improvements to the Contra Costa College, Diablo Valley College, Los Medanos College, and the San Ramon Campus and Brentwood centers. Improvements specifically called out for the Diablo Valley College include the construction of a new Student Services Building, a new Student Activities Building, modifications to the campus entrance way, a new Quad area connecting the new buildings and the construction of pedestrian and vehicular access to the Math, Science and Library Quad area.



LSA

FIGURE 1

N

0 900 1800

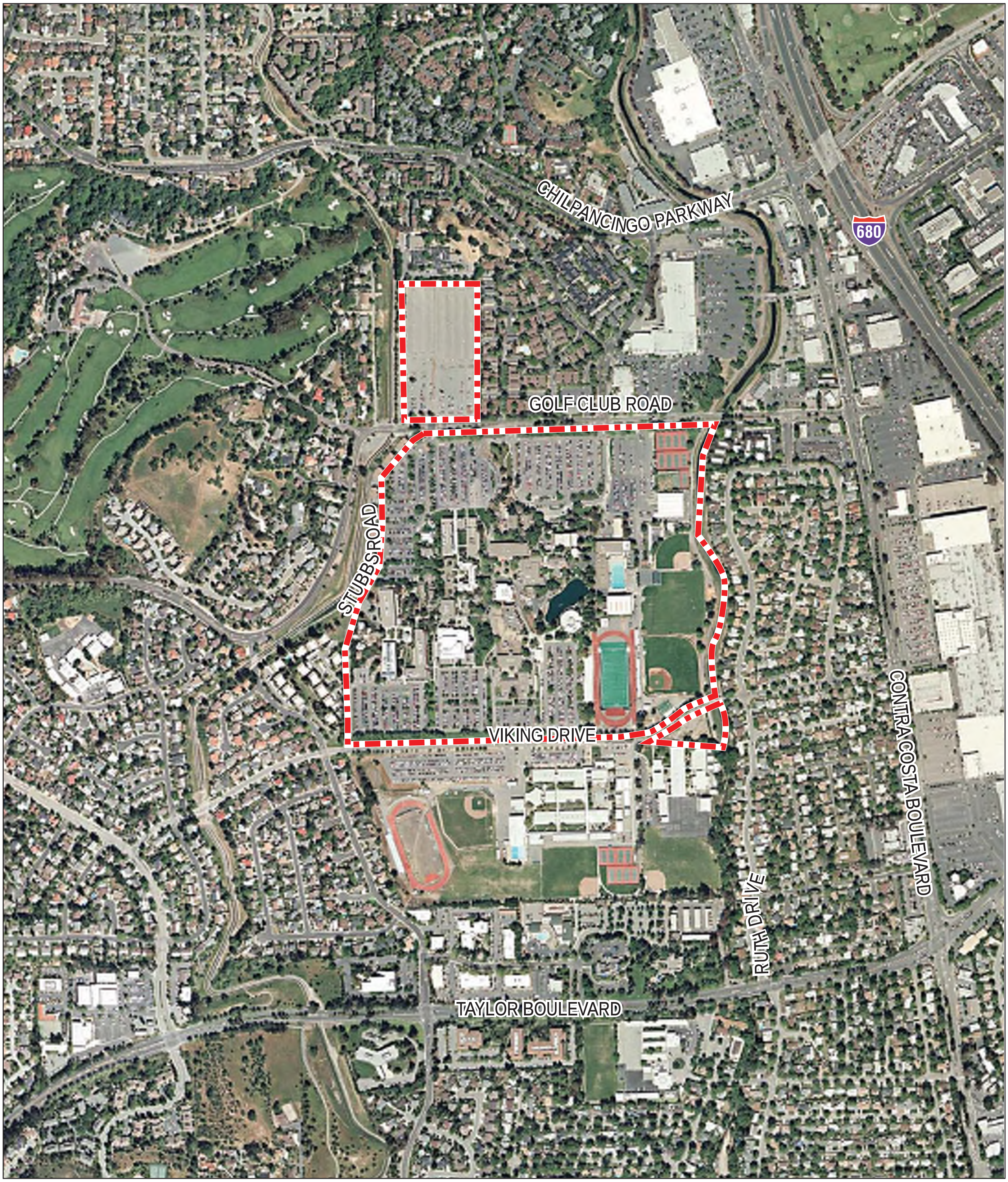
FEET

DVC CAMPUS BOUNDARIES

Diablo Valley College Improvements Implementation Project

Project Vicinity and Regional Location Map

SOURCE: GOOGLE MAPS, 2008



LSA

FIGURE 2

N

0 450 900

FEET

DVC CAMPUS BOUNDARIES

Diablo Valley College Improvements
Implementation Project
Aerial Photo

SOURCE: GLOBEXPLORER, 2008

I:\CTD0803 Diablo Valley College\figures\Fig_2.ai (8/01/08)

LSA

FIGURE 3

Diablo Valley College Improvements
Implementation Project
Existing Conditions

0 200 400
FEET

SOURCE: TBP ARCHITECTURE, 2007

I:\CTD0803 Diablo Valley College\figures\Fig_3.ai (8/04/08)

B. PROJECT OBJECTIVES

Diablo Valley College is one of the District's three primary campuses located in Contra Costa County and has been located at its present site since 1951. Many of the buildings on campus are deteriorating and in need of repair or renovation. The objectives of the improvements project include:

- Provide new and updated facilities to meet the educational and instructional needs of the students and faculty at DVC.
- Update the DVC facilities to create a better learning environment.
- Demolish building/portions of buildings that are outdated and in need of repair.
- Provide new outdoor meeting areas for students.
- Improved internal pedestrian circulation within the DVC campus.
- Provide improvements/new structures that are consistent with 2007 Facilities Master Plan.

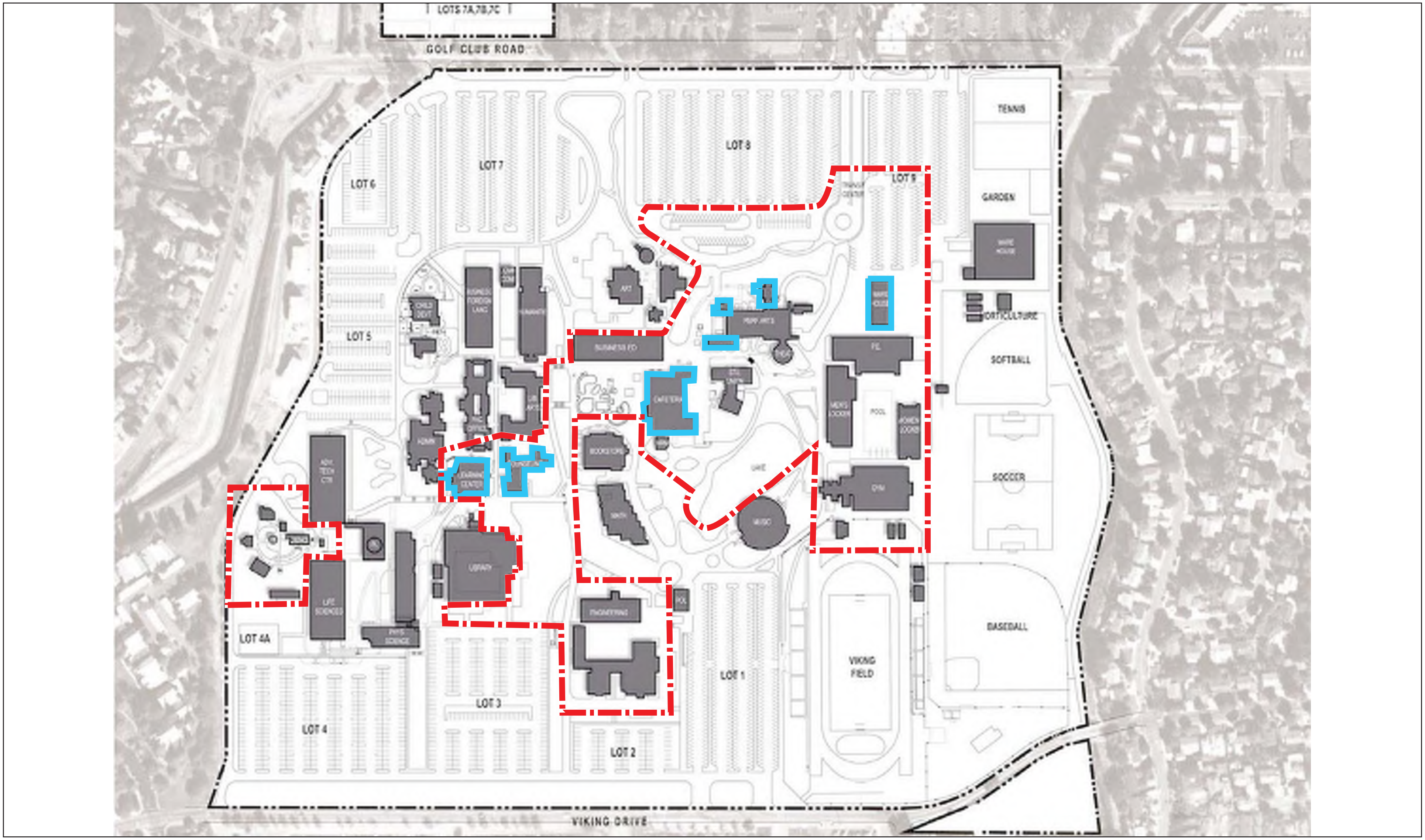
C. PROPOSED PROJECT

Proposed demolition, construction and renovation activities would occur at various locations on the DVC campus as shown in Figures 4, 5 and 6. Implementation of these project activities would occur in two phases. The phasing would be based on a logical sequencing of actions that would address the priority needs of the College while continuing to support all College uses on site. There would be a small increase in the usable square footage of buildings once all phases of work are complete; the current facilities to be demolished encompass approximately 51,000 aggregate square feet and the proposed new buildings encompass approximately 52,500 aggregated square feet. The improvements project would provide new, modernized facilities and site improvements for the campus; these improvements would not increase campus capacity. The District's programmed growth would remain the same regardless of whether the improvements are implemented.

Phase 1

During Phase 1 of the project, the District is proposing to demolish the cafeteria and Business Education building, construct new Student Services and Food/Meeting Buildings, and make various improvements to the Quad and the area around the lake. The District estimates that the construction activities associated with Phase 1 improvements would occur between Fall 2009 and Spring 2012. Figure 5 shows the location of the new buildings/site improvements. The Phase 1 improvements are as follows:

- *Demolition of the Student Activities Building.* The Student Activities Building, built in 1961, is a single-story structure located east of the Quad. It has 22 rooms and approximately 18,450 square feet of usable space. A photograph of the structure can be seen in Figure 7a, Photo 1. This structure would be demolished and the new Student Services Building would be located in its place.
- *Demolition of the Business Education Building.* The Business Education Building, built in 1955, is a two-story structure located north of the Quad. This structure would be demolished to allow construction of the new Student Activities Building.



LSA

FIGURE 4

N

0 200 400

FEET

PROJECT AREA

BUILDINGS/PORTIONS OF BUILDINGS TO BE DEMOLISHED

Diablo Valley College Improvements
Implementation Project
Project Site

SOURCE: TBP ARCHITECTURE, 2007

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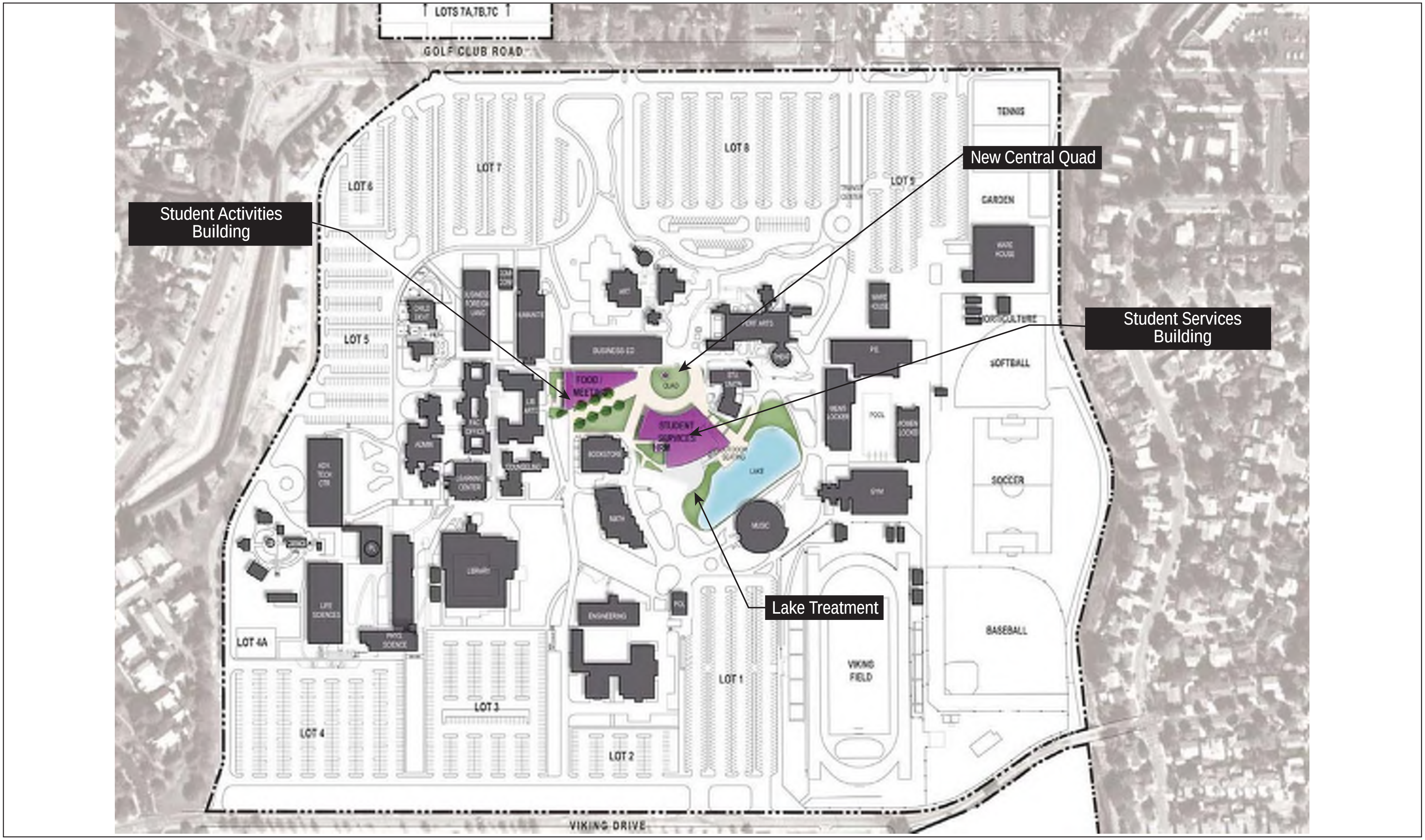

LSA

FIGURE 5

Diablo Valley College Improvements
Implementation Project
Phase 1 Improvements

N

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FEET

SOURCE: TBP ARCHITECTURE, 2007

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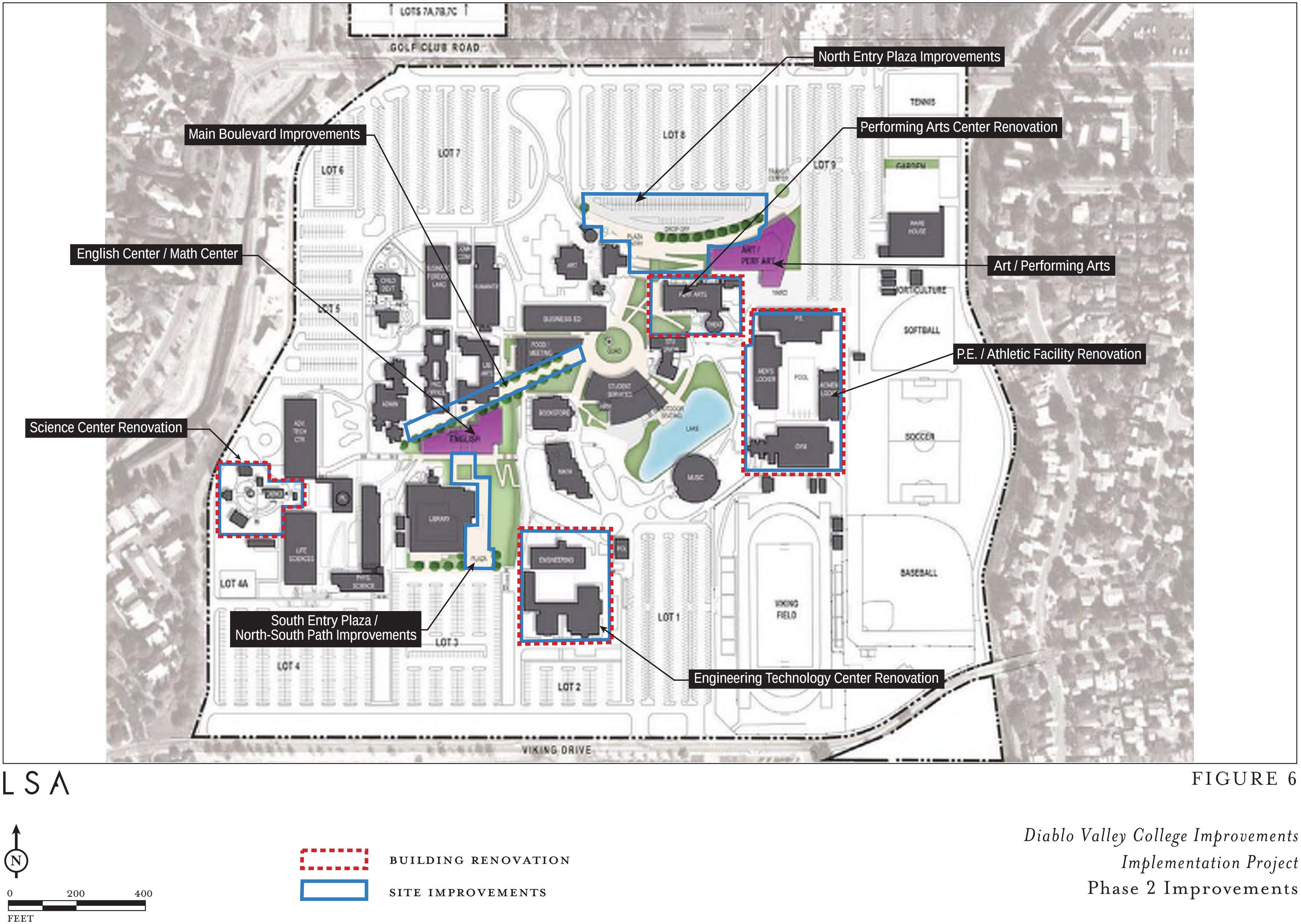

LSA

FIGURE 6

Diablo Valley College Improvements
Implementation Project
Phase 2 Improvements

SOURCE: TBP ARCHITECTURE, 2007

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View looking southeast of Cafeteria building

View looking northwest of the Counseling Center

LSA

FIGURE 7a

Diablo Valley College Improvements
Implementation Project
Pedestrian Views of the Project Site

SOURCE: LSA ASSOCIATES, INC., 2008

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View looking north of the Learning Center

View looking west of the District Storage Building

LSA

FIGURE 7b

Diablo Valley College Improvements
Implementation Project
Pedestrian Views of the Project Site

SOURCE: LSA ASSOCIATES, INC., 2008

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- *Construction of the Student Services Building.* A new Student Services Building would merge with the existing Hotel Restaurant Management Center (HRM) and would be partially located on the site of the demolished cafeteria. This building would be approximately 30,000 square feet, and would allow for the consolidation of multiple services into one central location. This would increase students' access to the College's student support services as well as orient the first time visitors.
- The HRM Center would be expanded with new classrooms, demonstration and computer labs as well as larger kitchen and baking areas. The service area would be accessible through the rear of the building and would be screened with new trees from outdoor seating areas. The building would be visible from the main entry of the campus. In addition, an outdoor seating and overlook section would step down to the lake and provide views towards the athletics facilities and Mt. Diablo in the distance.
- *Construction of the Student Activities Facility.* This approximately 25,000 square foot, two-story building would provide a central dining facility for the College. It would be located directly south of the new Central Quad. Outdoor seating would be provided in multiple areas, contributing to the Quad as the heart of campus. The building would have entries on both levels, linking the upper instructional zone with the lower student activity zone. In addition to a cafeteria and dining room, flexible spaces, such as a food court, cafes, juice bars, informal lounges, meeting rooms, and performance spaces might be incorporated into the design. The area would be designed to support a number of indoor-outdoor activities associated with the adjacent buildings.
- *Central Quad Improvements.* A new Central Quad would be constructed north of the Student Services/HRM building and east of the Student Union Building. The new Central Quad would be the largest formal space on the campus and be directly visible from the main plaza entry. The Central Quad would connect the existing Student Union and Bookstore with the new Student Services/HRM and Student Activities Buildings. The new Central Quad would include wide pedestrian paths radiating to the north, southwest and southeast of the campus.
- *Lake Treatments.* Improvements, including new terraces, fountains, seating, and landscaping, would be made to the lake area.

Phase 2

During Phase 2, the District is proposing to demolish the Counseling Center, the Learning Center, the District Storage Building, and parts of the Performing Arts Center; to construct the English Center/Math Center and the Art/Performing Arts Building; to renovate the Performing Arts Center, P.E./Athletic Facility, the Science Center, and the Engineering Technology Center; and to make site improvements that include restriping and expanding the existing parking lots, installing stairs, ramps, and landscaping at the North Entry Plaza, a South Entry Plaza, and a new P.E./Athletics Plaza and Entry, and partially installing a "Main Boulevard" within the campus. The District estimates that the construction activities associated with Phase 2 improvements would occur between Fall 2011 and Spring 2015. Figure 6 shows the location of the new buildings and improvements. The Phase 2 improvements are as follows:

- *Demolition of Counseling Center.* The Counseling Center, built in 1970, is a single-story wood structure located south of the Liberal Arts Building and east of the Learning Center. This building has 36 rooms and approximately 4,000 square feet of usable space. Mature landscaping and trees are located immediately adjacent to the building; the landscaping and trees would be removed when the structure is demolished. A photograph of the structure can be seen in Figure 7a, Photo 2.

- *Demolition of the Learning Center Building.* The Learning Center Building, built in 1971, is a two-story wood structure located south of the Faculty Offices Building and west of the Counseling Center. The building has 31 rooms and approximately 13,000 square feet of usable space. Mature landscaping and trees are located immediately adjacent to the building; the landscaping and trees will be removed when the structure is demolished. A photograph of the structure can be seen in Figure 7b, Photo 3.
- *Demolition of the District Storage Building.* The District Storage Building is located north of the P.E./Athletic Facilities. This building is a single-story wood structure used as a warehouse. A photograph of the structure can be seen in Figure 7b, Photo 4.
- *Demolition and Renovation of Parts of the Performing Arts Center.* The Performing Arts Center (PAC) is located north of the Student Union Building, and is a wood multi-story structure. Several wood-framed wings of the PAC have deteriorated and would be demolished as part of the project. A new entry plaza would be added for the PAC off of the main pedestrian corridor. The new plaza would be located at the front of the building and would serve as an outdoor lobby space.
- *Construction of the English Center/Math Center.* This building would be located south of the Liberal Arts Building and the Faculty Offices Building and north of the Library. This instructional building would have both Math and English classrooms and would be two stories with multiple entry ways. The building would be divided with mathematics instruction occupying the eastern portion of the building and English instruction occupying the western portion of the building. This instructional division of the building would be accentuated by a north/south pedestrian path that would continue through the building.
- *Construction of the Art/Performing Arts Building.* The Art/Performing Arts Building would be located northeast of the Performing Arts Center and north of the P.E./Athletic Buildings. This facility would replace the Art building as well as portions of the Performing Arts Center. This building would have its main entry at the drop off plaza on the parking lot level, as well as an entry on the Central Quad level. The building would include classrooms, studios, and performing arts space. The new Art/Performing Arts Building is intended to be compatible with the existing Performing Arts Center: the two buildings would share open space located between them and a back door service entry.
- *Renovation of the P.E./Athletic Facility.* The Master Plan calls for an analysis of the existing athletic buildings to determine the appropriate level of renovation and replacement required to support the P.E./Athletics programs. Renovation will focus on accessibility and building systems upgrades (HVAC, electrical).
- *Renovation of the Science Center.* The Science Center is comprised of nine small buildings and is located in eastern edge of the campus. The oldest building in this group dates back to 1958. These wood framed buildings have deteriorated, and are in need of replacement or renovation. Renovations will focus on building systems upgrades (HVAC, electrical and data) and exterior finishes (painting and roofing).
- *Renovation of the Engineering Technology Center.* The Engineering Technology Center, located in the southern portion of the campus, was built in the 1960s. Renovations to the Center have been funded by the State through an approved Final Project Proposal. The complex would be upgraded

and renovated while respecting the existing architecture. The interior courtyard would receive new landscaping. In addition, a new outdoor quad between the Math and Engineering Technology Center is currently under construction.

- *Parking Lot Improvements.* Parking lots would be restriped and expanded in the north and east areas of the campus. The District Storage Building would be demolished, which would allow Parking Lot 9 to expand southward. Additionally, Parking Lot 8 would be reconfigured to allow for parking and a drop-off area at the new entry plaza. The parking lots in the southern parking area are anticipated to accommodate arrays of solar panels. Landscaping would be incorporated into the parking lots to soften hardscape and to reduce heat gain.
- *North Entry Plaza Improvements.* To improve the “front door” experience at DVC, a new drop off and entry plaza would be built at the south end of Parking Lot 8. This curving plaza would extend to link the music, art and performing arts facilities that would frame the new gateway to the College. The plaza would provide a clearly defined entry to the campus. The stairs and ramps currently leading up the grade change and into the center of the campus would be replaced.
- *Main Boulevard Improvements.* Main Boulevard, a major new pedestrian path, would run in a southwest/northeast direction connecting the Central Quad to the Advanced Technology Center. The campus varies in elevation across its length and the path would provide a connection between the major grade changes of the campus enabling disabled access between the grades and creating a prominent primary pathway. This feature would be partially completed during Phase 2; it might be expanded to the southwest at some time in the future in accordance with the Facilities Master Plan.
- *South Entry Plaza Improvements.* A new South Entry Plaza would be built to create a main entry from Parking Lot 3 in the south parking area. The new plaza would extend northward along the east side of the library. During later phases of implementation of the Facilities Master Plan a North-South Path might be constructed in accordance with the Facilities Master Plan. The path would extend north from the South Entry Plaza toward Parking Lot 7.
- *P.E./Athletics Plaza and Entry.* A new entry plaza and drop-off area would be constructed at the north end of the athletic facilities, at the south end of Parking Lot 9. From the entry plaza a wide landscaped path would link all the physical education facilities together, and connect the parking lots on the north and south sides of campus. The path would accommodate pedestrians as well as service and emergency vehicles.

D. APPROVALS AND PERMITS

This IS/MND is intended to evaluate the environmental impacts of the proposed project, which will require approval from a variety of agencies, including but not limited to the agencies listed in Table 1. Completion of the proposed project may require compliance with existing planning and development regulations that may lessen the environmental effects of this project. Following is a summary of applicable local and regional plans.

Table 1: Approvals and Permits

Lead Agency	Potential Permit/Approval/Responsibility/Trust
Contra Costa Community College District	Project construction and operation.
Responsible Agency	
State Department of General Services, Division of State Architect	Approval of construction plans.
California Community Colleges Chancellor's Office	School construction approval.
Other Agencies	
State Water Resources Control Board/San Francisco Regional Water Quality Control Board	Notice of Intent to comply with the terms of the general permit to discharge stormwater associated with construction activity
Contra Costa County Public Works Department	Stormwater permits.

Source: LSA Associates, Inc., 2008.

E. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- ❐ Aesthetics
- ❐ Agricultural Resources
- ❐ Air Quality
- ❐ Biological Resources
- ❐ Cultural Resources
- ❐ Geology/Soils
- ❐ Hazards & Hazardous Materials
- ❐ Hydrology/Water Quality
- ❐ Land Use/Planning
- ❐ Mineral Resources
- ❐ Noise
- ❐ Population/Housing
- ❐ Public Services
- ❐ Recreation
- ❐ Transportation/Traffic
- ❐ Utilities/Service Systems
- ❐ Mandatory Findings of Significance

F. DETERMINATION

On the basis of this initial evaluation:

❐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

❐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

❐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

❐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Ray C. Pyle
Ray Pyle, Chief Facilities Planner
Contra Costa Community College District

Nov 24, 2008
Date

3. ENVIRONMENTAL CHECKLIST RESPONSES

1. Project Title:

Diablo Valley College Improvements Implementation Project

2. Lead Agency Name and Address:

Contra Costa Community College District
500 Court Street, 4th Floor
Martinez, CA 94553

3. Contact Person And Phone Number:

Ray Pyle, Chief Facilities Planner
Contra Costa Community College District
Facilities Planning
(925) 229-1000

4. Project Location:

The project site is located at 321 Golf Club Road in the City of Pleasant Hill in Contra Costa County (Assessor's Parcel Number 153-040-009). As shown in Figure 1, the project site is located west of Interstate 680 (I-680) just south of State Route 4 (SR4). The site is bounded by Golf Club Road to the north, Grayson Creek to the east, Viking Drive to the south and Stubbs Road to the west.

5. Project Sponsor's Name and Address:

Ray Pyle, Chief Facilities Planner
Contra Costa Community College District
Facilities Planning
500 Court Street
Martinez, CA 94553

6. General Plan Designation:

Public and Semi-Public, School

7. Zoning:

R7 (Single Family – 7,000 square foot lots)

8. Description of Project:

The Contra Costa Community College District is proposing to demolish, construct, and renovate buildings and make improvements to the landscaping and campus facilities on the DVC Campus as described in the 2007 Facilities Master Plan for the DVC campus. The actions proposed are those described in the 2007 Facilities Master Plan that are funded and/or are likely to occur within the next 10 years as described in Chapter 2.

9. Surrounding Land Uses and Setting:

The campus encompasses approximately 110 acres occupied by approximately 44 buildings that house administrative and academic offices; student services; classrooms; laboratories; physical education facilities; a library; and various maintenance or warehouse facilities. Most of the buildings are located within a campus core surrounded by parking facilities and athletic fields. Commercial/retail and multi-family residential uses are located to the north, residential uses are located to the west and east, and College Park High School is located south of the DVC campus.

10. Other agencies whose approvals are required (e.g., permits, financing approval, or participation agreement.):

State Department of General Services, Division of State Architect; California Community Colleges Chancellor's Office; State Water Resources Control Board/San Francisco Bay Regional Water Quality Control Board; Contra Costa County Public Works Department.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	❒	❒	■	❒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	❒	❒	❒	■
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	❒	❒	■	❒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	❒	❒	■	❒

a) Have a substantial adverse effect on a scenic vista? ***(Less-than-Significant Impact)***

The project site is a developed college campus in an urban area. The DVC campus consists of approximately 44 buildings with a variety of architectural and landscape styles. The bulk of the buildings are located within a central campus core surrounded by parking facilities and athletic fields. Grayson Creek runs along the eastern edge of campus and an ornamental pond is located in the center of campus. The City of Pleasant Hill General Plan does not designate scenic vistas in close proximity to the DVC campus. However, Golf Club Road, which borders the campus to the north, is designated as a scenic route in the General Plan.

Current views of the campus from Golf Club Road are dominated by Parking Lots 8 and 9 on the north side of the campus. Because most new construction would be located away from the roadway and new landscaping would soften views of some parking areas, the project would not have an adverse effect on views from the roadway. The construction of the Student Services Building, Student Activities Facility, English Center/Math Center and many landscaping improvements would occur in the central core of the campus, which is not visible from the roadway. The Art/Performing Arts Building would be constructed on the north edge of the central core and would be partly visible from Golf Club Road. New landscaping and hardscape for the building would be consistent with that of the proposed North Entry Plaza. The North Entry Plaza would be a major gateway entrance, the goal of which is to achieve a dynamic and welcoming entry to the DVC campus. The proposed campus modifications would comply with the goals and policies identified in the Visual Quality chapter of the City's General Plan, and therefore, the project would have a less-than-significant effect on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway? ***(No Impact)***

The closest state scenic highway to the project site is State Highway 24, which is not visible from the campus. [1] The proposed improvements would not impact a State scenic highway.

c) *Substantially degrade the existing visual character or quality of the site and its surroundings?* ***(Less-than-Significant Impact)***

The proposed project would not degrade or substantially change the existing visual character of the project site. Construction of new college buildings and remodeling of existing campus buildings would be consistent with the surrounding character and profile of the college campus. The proposed project would help achieve design objectives set forth by the Diablo Valley College 2007 Facilities Master Plan and would comply with the goals and policies identified in the Visual Quality chapter of the City's General Plan. Construction of the North Entry Plaza would help create a "front door" for the DVC campus. The building modifications proposed would honor the character of the DVC campus by maintaining lively and consistent styles. Project related activity and demolition would mainly occur in the center of the campus and therefore the construction site would mostly be obstructed from surrounding views. Landscaping and architecture consistent with the existing campus environment would be included as part of the project design, and any potential impact would be less than significant.

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?* ***(Less-than-Significant Impact)***

The proposed project would not significantly increase lighting or propose highly reflective buildings that would impact surrounding uses. It would include indoor and outdoor lighting for safety purposes. At night, lights would be concentrated in the parking lot, main automobile entry, and along major pedestrian circulation routes as they are currently. While lighting for safety purposes could be visible from a distance at night, the addition of the project lighting would generally blend in with the campus and surrounding development. Lighting installed as a result of the project would not result in a significant increase in light or glare over current conditions and would not adversely affect day or nighttime views in the project area.

	Potentially Significant Impact	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
II. AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				

[1] Official State of California Department of Transportation. Website: www.dot.ca.gov.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?	☐	☐	☐	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	■

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use? ***(No Impact)***

The project site is a developed college campus in an urban area that does not support agricultural uses. The site is zoned residential and designated for school use in the City of Pleasant Hill's General Plan. The project site is not classified by the State of California Department of Conservation as farmland and there are no agricultural uses or farmlands within or adjacent to the project site. Implementation of the proposed project would not convert agricultural land to non-agricultural uses.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? ***(No Impact)***

The project site is not zoned for agricultural uses and is not under a Williamson Act contract.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use? ***(No Impact)***

Project activities would occur on an existing college campus. Implementation of the proposed project would not extend infrastructure into an undeveloped area, develop urban uses on a greenfield site, or cause other physical changes that would result in the conversion of farmland to non-agricultural uses.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	❒	❒	❒	■
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	❒	■	❒	❒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	❒	❒	■	❒
d) Expose sensitive receptors to substantial pollutant concentrations?	❒	■	❒	❒
e) Create objectionable odors affecting a substantial number of people?	❒	❒	■	❒

a) Conflict with or obstruct implementation of the applicable air quality plan? ***(No Impact)***

The project site is located within the San Francisco Bay air basin and is subject to the rules and regulations of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD's 2000 Clean Air Plan (CAP) and the Bay Area 2005 Ozone Strategy are applicable to the project site and surrounding area within the air basin. The air quality plans describe air pollution control strategies to be implemented within the San Francisco Bay region, which is classified as a nonattainment area for ozone and small particulate matter, and are intended to bring the area into compliance with the requirements of federal and State air quality standards for these pollutants.

Air quality plans use assumptions and projections from local planning agencies, including data used in the development of General Plans, to determine control strategies for regional compliance with air quality standards. The Pleasant Hill General Plan is consistent with the ozone strategy. The project would not require amendments to the Pleasant Hill General Plan. The proposed project would not lead to increased emissions and would be consistent with the BAAQMD's 2000 CAP and the Bay Area 2005 Ozone Strategy

The proposed project would: 1) comply with State and national ambient air quality standards; 2) be consistent with the air quality management policies in the current air quality plan; and 3) would not create emissions that exceed the emissions thresholds established in BAAQMD's *CEQA Guidelines, December 1999*, as discussed in Section IIIb, below. As the proposed project would not violate air quality standards or exceed emission thresholds, and it is generally consistent with the buildout scenario envisioned in the City's General Plan and current air quality management policies, the project would not conflict with the Ozone Attainment Plan or the CAP.

b) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?* ***(Potentially Significant Unless Mitigation Incorporated)***

Pollutant monitoring results for the years 2005 to 2007 at the Concord (2975 Treat Boulevard) ambient air quality monitoring station indicate that air quality in the project area has generally been good. As indicated in the monitoring results, zero violations of State PM_{10} standards occurred in 2005, seventeen violations occurred in 2006, twelve violations occurred in 2007 and no violation of federal PM_{10} standard was recorded. The federal $PM_{2.5}$ standard was not exceeded during the 3-year period. In addition, State 1-hour O_3 standards were exceeded once in 2005, eight times in 2006 and once in 2007 at these monitoring stations. Federal 1-hour O_3 standards have not been exceeded over the last three years. The 8-hour O_3 standards have not been exceeded in 2005 and 2007, but were exceeded four times in 2006. CO, NO_2 and SO_2 standards were not exceeded in this area during the 3-year period.

Project construction activities would emit air pollutants over short periods of time during the construction period. Grading would generate dust, construction vehicles and equipment would emit exhaust, and construction materials such as paint and solvents would emit organic vapors. Vehicles driven by employees and students traveling to and from the campus would generate long-term emissions once the project facilities have been built. The discussion below describes potential air quality effects that could occur as a result of construction equipment exhaust emissions; fugitive dust; long-term vehicle emissions; local carbon monoxide hot spots; organic gas emissions; and greenhouse gas emissions.

Short-Term Construction Emissions. Project construction activities would generate short-term organic gas emissions from the use of construction materials, and vehicle exhaust and dust from the operation of earthmoving equipment.

Construction Materials and Equipment Exhaust Emissions. Solvents in adhesives, non-waterbased paints, thinners, some insulating materials and caulking materials would evaporate into the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application. Diesel-powered vehicles and equipment used during construction would generate exhaust. In 1998, the California Air Resources Board (ARB) identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). The ARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[2] High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as having the highest associated risk.

Health risks from TACs are a function of both concentration and duration of exposure. Unlike the sources of TACs that present the highest risk as identified in the previous paragraph, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks. Additionally, construction-related sources are mobile and transient in nature, and the emissions occur within the project site. The BAAQMD has accounted for construction emissions in its plans for the air basin and provides standard emission control measures in its CEQA Guidelines that are intended to reduce emissions during construction activities to less-than-significant levels. If the construction emission

[2] California Air Resources Board (CARB), 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October.

control measures outlined in the BAAQMD's CEQA Guidelines are implemented, then air pollutant emissions from construction activities would be considered a less-than-significant impact.

Implementation of the following mitigation measure would reduce construction related impacts to a less-than-significant level.

> Mitigation Measure AIR-1: Consistent with guidance from the BAAQMD, the District shall require contractors to include emissions control measures in construction specifications for the project. The District shall review the final construction specifications to verify that the requirements have been included prior to beginning grading and excavating activities for the project. The District shall verify via field inspection at least twice during construction that the measures are being implemented. The following actions are required:
>
> 1) Idling time of diesel powered construction equipment shall be limited to 2 minutes;
> 2) Alternative powered construction equipment (i.e., CNG, biodiesel, electric) shall be utilized when feasible;
> 3) Add-on control devices shall be used such as diesel oxidation catalysts or particulate filters;
> 4) Project construction shall be phased; and
> 5) Operating hours of heavy duty equipment shall be minimized.

Construction Dust. Demolition, clearing, grading and earthmoving activities would generate dust whenever soil moisture levels are low. In addition, windy weather has the potential to carry the fugitive dust toward downwind receptors and to create a nuisance at other campus facilities or on nearby properties. In addition to nuisance effects, excess dustfall can increase maintenance and cleaning requirements and adversely affect sensitive electronic devices. Emissions of particulate matter or visible emissions are regulated by the BAAQMD under Regulation 6 "Particulate Matter and Visible Emissions." Specifically, visible particulate emissions are prohibited where the particulates are deposited and cause annoyance on real property other than that of the person responsible for the emissions.

Implementation of the following mitigation measure would reduce construction related impacts to a less-than-significant level.

> Mitigation Measure AIR-2: Consistent with the guidance from the BAAQMD, the District shall include dust control measures in construction contracts and specifications for the project. The District shall verify via field inspection at least twice during construction of each project that the measures are being implemented.
>
> The following controls shall be implemented at all construction sites:
>
> - Water all active construction areas at least twice daily and more often during windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers to control dust;
> - Cover all trucks hauling soil, land, and other loose materials *or* require all trucks to maintain at least two feet of freeboard;

- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, inactive construction areas, and staging areas at construction sites;
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality;
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets;
- Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);
- Install base rock at entryways for all existing trucks, and wash off the tires or tracks of all trucks and equipment in designated areas before leaving the site;
- Limit traffic speeds on unpaved roads to 15 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible; and
- Suspend excavation and grading activity when sustained wind speeds exceed 25 mph. Sustained wind speed shall be determined by averaging observed values over a two- minute period. Wind monitoring by the construction manager shall be required at all times during excavation and grading activities.

Long-Term Emissions. Long-term air emission impacts would be those associated with changes in permanent usage of the project site. A potential source of long-term emissions would be from buses, cars and other vehicles that employees and students drive or take to and from campus. The Urban Emissions Model (URBEMIS 2007) computer program, which is the most current air quality model available in California for estimating emissions associated with land use development projects, was used to estimate long-term mobile source emissions. Project-related emission estimates (including construction, vehicle, and area sources emissions) are provided in Table 2. The BAAQMD has established a significance threshold for ozone precursors, reactive organic gases (ROG) and nitrous oxide (NO_x), and particulate matter of 10 microns or less (PM_{10}) at 80 lbs/day. A significance threshold for $PM_{2.5}$ has not been established; $PM_{2.5}$ emissions are provided for informational purposes only.

Table 2: Project Regional Emissions in Pounds per Day

	Reactive Organic Gases	**Nitrogen Oxides**	**PM_{10}**	**$PM_{2.5}$**
Regional Emissions	29.16	45.97	45.81	8.75
BAAQMD Significance Threshold	**80**	**80**	**80**	**NA**
Exceed?	**No**	**No**	**No**	**NA**

Source: LSA Associates, Inc., 2008.

The estimated emissions associated with the project would not exceed the BAAQMD significance thresholds. Future emissions would not be substantially different from current emissions because the proposed project would not generate additional student growth, but rather would provide new, modernized facilities and other site improvements to serve the current student population and the student population projected in the Educational Master Plan.[3] The project would not generate additional vehicle trips and the long-term vehicular emissions associated with trips to and from the campus would not increase as a result of the project. The project would not generate long-term emissions in excess of the BAAQMD's air quality thresholds and the project would not result in the increased emission of any criteria pollutant.

Local CO Hot Spots. The primary mobile source pollutant of local concern is carbon monoxide (CO), the generation of which is a direct function of vehicle idling time caused by traffic flow conditions. While CO transport is limited, it does disperse from the source under normal meteorological conditions. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthy levels affecting local sensitive receptors (e.g., residents, school children, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. Areas of vehicle congestion create pockets of high CO concentration called "hot spots." These pockets have the potential to exceed the State 1-hour standard of 20 parts per million (ppm) of CO and/or the 8-hour standard of 9.0 ppm. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels. The proposed project would not increase local CO levels because it would not add vehicle trips to the site.

Greenhouse Gas Emissions. There is a general scientific consensus that global climate change is occurring, caused in whole or in part by increased emissions of greenhouse gases (GHGs) that keep the Earth's surface warm by trapping heat in the Earth's atmosphere. While many studies show evidence of warming over the last century and predict future global warming, the causes of such warming and its potential effects are far less certain. In its "natural" condition, the greenhouse effect is responsible for maintaining a habitable climate on Earth, but human activity has caused increased concentrations of these gases in the atmosphere, thereby contributing to an increase in global temperatures. Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor (H_2O) are the principal GHGs, and when concentrations of these gases exceed the natural concentrations in the atmosphere, the greenhouse effect may be enhanced. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs – with much greater heat-absorption potential than CO_2 – include fluorinated gases such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6) which are by-products of certain industrial processes.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05, establishing statewide GHG emission reduction targets. This order provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent of 1990 levels. On August 31, 2006, the California Assembly passed Bill 32 (AB 32 – signed into law on September 27, 2006 which is also known as the Global Warming Solutions Act), which commits California to reduce GHG emissions to 1990 levels and establishes a multi-year regulatory process under the jurisdiction of the CARB to establish regulations to achieve these goals. On December 6 and 7, 2007, the CARB approved a resolution to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which must be achieved by

[3] Contra Costa Community College District, 2007. *Diablo Valley College Educational Master Plan*.

2020. By January 1, 2011, CARB is required to adopt rules and regulations, which will become operative on January 1, 2012, to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

Because the proposed project would not generate additional student growth, but rather provide new, modernized facilities and other site improvements to serve the current student population and the student population projected in the Educational Master Plan, it would not generate additional vehicle trips that would consume fossil fuels. The project would not create new long-term activities that would result in the increased emission of GHGs. New buildings would replace older buildings and would be built to current codes and standards that encourage energy conservation. Further, the project would be constructed in accordance with the goals of the Facilities Master Plan, which include the incorporation of sustainable Leadership in Energy and Environmental Design (LEED) design principles and steps to seek carbon neutrality in building operations. Thus the project would not substantially increase GHG emissions and would have a less-than-significant impact.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? ***(Less-than-Significant Impact)***

The proposed project is located in a federal and State non-attainment area for 8-hour ozone emissions, in a State non-attainment for 1-hour ozone emissions, and in a State non-attainment area for PM_{10} and $PM_{2.5}$.[4] However, because the proposed project would not generate additional student growth, but rather provide new, modernized facilities and other site improvements to serve the current student population and the student population projected in the Educational Master Plan, it would not generate additional vehicle trips and the long-term vehicular emissions associated with trips to and from the campus are not anticipated to increase as a result of the project. Thus, the project would not generate long-term emissions in excess of the BAAQMD's air quality thresholds and would not result in a cumulatively considerable net increase of any criteria pollutant and the project's impact would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations? ***(Potentially Significant Unless Mitigation Incorporated)***

Implementation of the proposed project may expose surrounding, sensitive land uses to airborne particulates and fugitive dust, as well as a small quantity of pollutants associated with the use of construction equipment (e.g., diesel-fueled vehicles and equipment). Sensitive receptors are facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Since there are single-family houses in the project vicinity, sensitive receptors could be exposed to increased pollutant concentrations, especially during construction.

Implementation of the following two-part mitigation measure would reduce impacts to a less-than-significant level:

[4] Bay Area Air Quality Management District. Website: www.baaqmd.gov/pln/air_quality/ambient_air_quality.htm

Mitigation Measure AIR-3a: Implement Mitigation Measure AIR-1.

Mitigation Measure AIR-3b: Implement Mitigation Measure AIR-2.

Air pollution associated with the proposed project would be primarily vehicle related, and would not necessarily be concentrated in the vicinity of the project site. Since the proposed project would not generate additional traffic, long term emissions would be less than significant. Therefore, implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

e) Create objectionable odors affecting a substantial number of people? ***(Less-than-Significant Impact)***

The proposed project would not create any permanent major sources of odor. Some objectionable odors may be generated from the operation of diesel-powered construction equipment and/or asphalt paving for short periods of time during the project construction period. However, these odors would not result in permanent impacts to surrounding land uses, including sensitive receptors in the vicinity of the project site. Therefore, impacts related to objectionable odors would be less than significant.

	Potentially Significant Impact	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	❐	❐	❐	■
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	❐	❐	❐	■
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) Through direct removal, filling, hydrological interruption, or other means?	❐	❐	❐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	❒	❒	❒	■
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	❒	❒	❒	■
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?	❒	❒	❒	■

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?* ***(No Impact)***

The project site is located in an urbanized area of Pleasant Hill less than a half-mile from Interstate 680. The project site is developed with ornamental landscaping, campus buildings and parking lots. No habitat exists on site that would support candidate, sensitive or special status species. Wildlife species that occupy the DVC campus are common species that easily adapt to disturbed, urban conditions. No sensitive species identified in local or regional plans, policies or regulations would be affected by implementation of the project.

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?* ***(No Impact)***

Grayson Creek runs along the eastern edge of the project site. The renovation work for the P.E./Athletics facilities would take place approximately 400 feet west of the creek and the demolition of the existing warehouse would take place approximately 85 feet west of the creek. No work is planned for the riparian corridor around the creek. An ornamental pond constructed of masonry plaster is located on the campus and does not contain any riparian vegetation associated with a sensitive natural community.

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) Through direct removal, filling, hydrological interruption, or other means?* ***(No Impact)***

See Section IV.b, above. Implementation of the proposed project would have no impact to any wetlands.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ***(No Impact)***

See Section IV.a, above. The project site is entirely developed with campus facilities and there is no habitat on site that functions as a wildlife corridor and there would be no significant impacts on wildlife species.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ***(No Impact)***

Demolition and construction activities would remove and replace existing landscaping and ornamental trees in some project areas as indicated in the project description. The District does not have a tree protection policy or ordinance and therefore, the removal and replacement of landscaping, including trees, would not create a conflict.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan? ***(No Impact)***

The project is entirely site urbanized and is not subject to any provisions of an adopted HCP or NCCP, or other approved local, regional or State habitat conservation plans.

V. CULTURAL RESOURCES. Would the project:	**Potentially Significant Impact**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	❐	❐	❐	■
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	❐	■	❐	❐
c) Directly or indirectly destroy a unique paleontological resource or area or unique geologic feature?	❐	■	❐	❐
d) Disturb any human remains, including those interred outside of formal cemeteries?	❐	■	❐	❐

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? ***(No Impact)***

CEQA defines a "historical resource" as a resource which meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register;
- Listed in a local register of historical resources;
- Identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code; or
- Determined to be a historical resource by a project's lead agency.

A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California . . . Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (CCR Title 14(3) § 15064.5(a)(3)). Archaeological resources may also be considered historical resources.

For a cultural resource to qualify for listing in the California Register it must be significant under one or more of the following criteria:

- *Criterion 1*: Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- *Criterion 2*: Associated with the lives of persons important in our past;
- *Criterion 3*: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- *Criterion 4*: Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to being significant under one or more of these criteria, a resource must retain enough of its historic character and appearance to be recognizable as an historical resource and be able to convey the reasons for its significance (CCR Title 14 section 4852(c)). Generally, a cultural resource must be 50 years old or older.

Evaluation of Resources on the Project Site. The DVC campus has operated at its present location since 1951, known then as the East Contra Costa Junior College, and was constructed by the Contra Costa Community College District. The only building 50 years old or older that would be demolished as part of the project is the warehouse, a prefabricated metal building erected as part of the initial campus in 1951. Buildings 50 years old or older that would be renovated are the Gymnasium Building, designed by Richmond, California-based architect Donald L. Hardison in 1956; and the Science Building, designed by San Francisco-based architectural firm John Carl Warnecke and Associates with associate architect Charles F. Strothoff in 1958. Based on previous evaluations done in and adjacent to the project area[5, 6] and a study done by LSA for the current project, these three buildings are not histor-

[5] Holson, John, 1997. *Archaeological Survey for Diablo Valley College Physical Science Building and Classes Faculty Office.* Pacific Legacy, Inc., Berkeley, California. On file, Northwest Information Center, Sonoma State University, Rohnert Park, California.

ical resources pursuant to CEQA because they are undistinguished representations of a common style and physical alterations made subsequent to their construction have compromised their historical integrity.

Because the buildings on the project site do not meet any of the California Register eligibility criteria and none of the buildings that would be demolished or renovated are listed on the City of Pleasant Hill's register of historical resources, [7] implementation of the proposed project would not adversely affect any known historical resources.

Refer to Section V.b below, which addresses archaeological deposits that may qualify as historical resources pursuant to Section 15064.5.

b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?* ***(Potentially Significant Unless Mitigation Incorporated)***

There are no prehistoric or historical archaeological sites are on the DVC campus. Based on previous studies (Holson 1997; Herbert and McLoughlin 2005) that evaluated specific sites comprised of footprints of individual buildings within the larger current project site, and the background research and field survey conducted by LSA, the likelihood of encountering prehistoric or historic archaeological resources or deposits (which may be considered historical resources under CEQA) is low. Also, the proposed project site is completely developed, and campus buildings, paved areas and ornamental landscaping currently occupy the proposed project site. Soils and sediments at the project site have been previously disturbed during the construction of the existing structures. Nevertheless, the possibility remains that previously unrecorded or unknown archaeological resources and subsurface deposits may be encountered during project ground-disturbing activities. Implementation of the following mitigation measure would reduce potential impacts to archaeological deposits to a less-than-significant level:

> Mitigation Measure CULT-1: The District shall inform its contractor(s) of the possibility of encountering archaeological resources during subsurface excavations by including the following directive in contract documents:
>
> > "If prehistoric or historical archaeological deposits are discovered during project activities, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations regarding the treatment of the discovery. Project personnel shall not collect or move any archaeological materials or human remains and associated

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[6] Herbert, Rand, and Kate McLoughlin, 2005. *Cultural Resources Report: Contra Costa Canal*. State of California Department of Parks and Recreation (DPR) form 523 record for P-07-002695 (update of Sept. 2002 DPR record). JRP Historical Consulting, Davis, California. On file, Northwest Information Center, Sonoma State University, Rohnert Park, California.

[7] *City of Pleasant Hill General Plan 2003*; Table CD4. Structures of Historic Significance. City of Pleasant Hill, California. Accessed at <www.ci.pleasant-hill.ca.us/DocumentView.asp?DID=314> on June 26, 2008.

materials. Adverse effects to archaeological deposits shall be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for their California Register of Historical Resources eligibility."

The Contra Costa Community College District shall verify that the language has been included in the contract documents.

If the deposit is not eligible, a determination shall be made as to whether it qualifies as a "unique archaeological resource" under CEQA (see V.b). If the deposit is neither a historical nor unique archaeological resource, avoidance is not necessary.

If the deposit is eligible for the California Register, or is a unique archaeological resource, adverse effects shall be avoided or such effects must be mitigated. Mitigation may consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits; creation of a record for the resource; preparation of a report of findings; and an offer of the recovered archaeological materials to an appropriate curation facility. Public educational outreach may also be appropriate. Upon a completion of the assessment, the archaeologist shall prepare a report documenting the assessment methods and results, and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to the Contra Costa Community College District and the Northwest Information Center.

c) Directly or indirectly destroy a unique paleontological resource or area or unique geologic feature? ***(Potentially Significant Unless Mitigation Incorporated)***

LSA conducted a geologic and paleontological review to assess the likelihood of encountering fossil resources and unique geologic features during the project construction period. Review of geologic maps indicates the presence of Late Pleistocene (126,000 to 10,000 years B.P.) alluvial deposits (Wagner et al. 1991), which may contain significant Rancholabrean land mammal (300,000 to 10,000 years B.P.) vertebrate fossils (Bell et al. 2004; Savage 1951; Stirton 1951), underlying the artificial fill and Holocene (10,000 years B.P. to present) deposits in the project site. The Holocene alluvial deposit may extend 0 to 4 meters below ground surface. The Late Pleistocene alluvial deposits are underlain at an unknown depth at the project site by the Miocene (23,800,000 to 5,300,000 years B.P.) Monterey Formation of marine shale and sandstone, and by the Miocene San Pablo Group of marine sandstone (Wagner et al. 1991), both of which may contain marine vertebrate and invertebrate fossils. No unique geologic features were identified.

The soils in the project area are of the Mill Shlom-Los Osos-Los Gatos Series, which includes Cut and Fill Land, Los Osos Clay Loam, Lodo Clay Loam; and the Clear Lake-Pescadero-Cropley Series, which includes Conejo Clay Loam, Cropley Clay, and Diablo Clay (U.C. Davis Soil Resource Laboratory 2008). Los Osos Clay Loam is a moderately developed soil, extending approximately 3 feet below ground surface (bgs), weathered from the surrounding Miocene marine sandstone and shale. Lodo Clay Loam is a shallow, poorly developed soil, extending approximately 2 feet bgs, and is weathered from the surrounding Miocene marine sandstone and shale. Conejo Clay Loam is a moderately developed soil, extending approximately 5 feet bgs, and is derived from alluvium weathered from sedimentary rock. Cropley Clay is a poorly developed soil, extending approximately 5 feet bgs, and is derived from alluvium. Diablo Clay is a poorly developed soil that extends approximately 4 feet bgs, and is weathered from the surrounding Miocene marine sandstone (U.C. Davis Soil Resource Laboratory 2008).

A fossil locality search was conducted on July 9, 2008, by Dr. Pat Holroyd of the University of California Museum of Paleontology (UCMP), Berkeley. The purpose of this search was to (1) identify known paleontological areas within a ten-mile radius of the project site, and (2) identify the geologic formations and types of fossils that might be expected within and adjacent to the project site based on the existing geological and paleontological data.

There are no recorded fossil localities within or adjacent to the project site. Two vertebrate fossil localities are within a half mile of the project area, in the same deposit of Late Pleistocene alluvium that underlies the project site. The Late Pleistocene Rancholabrean (300,000 to 10,000 years B.P.) fossils from these localities include *Mammut americanum* (mammoth), *Megalonyx jeffersoni* and *Glossotherium harlani* (giant ground sloths), *Camelops* (camel), and *Equus* (horse), as well as mammalian and reptilian microfauna. Eleven additional land and aquatic vertebrate fossil localities are within 10 miles of the project site and include specimens from the Late Pleistocene Rancholabrean (300,000 to 10,000 years B.P.), Miocene Barstovian (15,500,000 to 11,800,000 years B.P.), Miocene Clarendonian (11,800,000 to 9,000,000 years B.P.), and Miocene Hemphillian (9,000,000-4,750,000 years B.P.) (Berkeley Natural History Museum 2008).

Based on the results of this fossil locality search and on an analysis of the soils and geology of the project site, the project site is sensitive for significant paleontological fossils. However, due to the substantial previous disturbance that has occurred at the project site, as well as the presence of artificial fill and Holocene alluvium, there is a low to moderate possibility of encountering significant paleontological resources.

Construction related ground-disturbance in the Pleistocene alluvium and Miocene deposits below the artificial fill and Holocene alluvium, may encounter paleontological resources. Implementation of the mitigation measure described below will reduce impacts to potential paleontological resources in the area to less-than-significant level.

> Mitigation Measure CULT-2: The District shall inform its contractor(s) of the sensitivity of the project area for paleontological resources by including the following directive in contract documents:
>
> > "The subsurface at the construction site may be sensitive for paleontological resources. If paleontological resources are encountered during project construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any paleontological materials. Paleontological resources include fossil plants and animals, and such trace fossil evidence of past life as tracks. Ancient marine sediments may contain invertebrate fossils such as snails, clam and oyster shells, sponges, and protozoa; and vertebrate fossils such as fish, whale, and sea lion bones. Vertebrate land mammals may include bones of mammoth, camel, saber tooth cat, horse, and bison. Paleontological resources also include plant imprints, petrified wood, and animal tracks."

The Contra Costa Community College District shall verify that the language has been included in the contract documents.

Adverse effects to such deposits shall be avoided by project activities. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. Paleontological resources are considered significant if they possess the possibility of providing new information regarding past life forms, paleoecology, stratigraphy, and geological formation processes. If the resources are not significant, avoidance is not necessary. If the resources are significant, project activities shall avoid disturbing the deposits, or the adverse effects of disturbance shall be mitigated. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, a final report, and accessioning the fossil material and technical report to a paleontological repository. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting the assessment methods, findings, and recommendations shall be prepared and submitted to the Contra Costa Community College District, and, if paleontological materials are recovered, a paleontological repository, such as the University of California Museum of Paleontology.

d) Disturb any human remains, including those interred outside of formal cemeteries? ***(Potentially Significant Unless Mitigation Incorporated)***

There has been no indication of human remains at the project site. There is, however, the possibility that previously unrecorded Native American or historical human remains are present. Such remains could be uncovered during construction period activities that involve ground disturbance. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level:

Mitigation Measure CULT-3: If human remains are encountered, these remains shall be treated in accordance with HSC Section 7050.5. The project applicant shall inform its contractor(s) of the sensitivity of the project area for human remains by including the following directive in contract documents:

> "If human remains are encountered during project activities, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted, if an archaeological monitor is not present, to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods, , which may include scientific removal and analysis of human remains and items associated with Native American burials."

The Contra Costa Community College District shall verify that the language has been included in the contract documents.

Upon completion of the assessment, the archaeologist shall prepare a report documenting the assessment methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the Contra Costa Community College District and the Northwest Information Center.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	■	☐
ii) Strong seismic ground shaking?	☐	☐	■	☐
iii) Seismic-related ground failure, including liquefaction?	☐	■	☐	☐
iv) Landslides?	☐	☐	☐	■
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	■	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	■	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	■

Information for this section was obtained from a site reconnaissance and reports, maps, and publications published from the United States Geological Survey (USGS), the California Geological Survey (CGS), the Association of Bay Area Governments (ABAG), and the United States Department of Agriculture Natural Resource Conservation Service (NRCS).

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42);[8] ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides?* ***(Potentially Significant Unless Mitigation Incorporated)***

The project site is located in the Coast Ranges Geomorphic Province. The regional structure of the Coast Ranges consists of northwest-trending folds and faults along the San Andreas Fault Zone (SAFZ). As a result, northwest-southeast trending ranges of low mountains and intervening valleys dominate this region.

In general, the Coast Ranges are composed predominately of sedimentary bedrock.[9] The project site is underlain by Briones Formation sandstone bedrock.[10] Soils at the project site consist of fill materials ranging in thickness from one to eleven feet underlain by sandy/clayey unconsolidated sediments ranging in thickness from two to five feet.[11]

Fault Rupture. The Alquist-Priolo Earthquake Fault Zoning Act regulates development in California near known active faults due to hazards associated with surface fault ruptures. The CGS delineates the boundary of Earthquake Fault Zones, about one-quarter mile around a known active fault trace. The Earthquake Fault Zones indicate areas with potential fault-rupture hazards and specific geological investigations are required prior to development.

The project site is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone.[12] The nearest Alquist-Priolo Earthquake Fault Zone is located along the Concord-Green Valley Fault approximately two miles east of the project site. Therefore, the potential for impacts associated with fault rupture to occur at the project site is unlikely.

Strong Seismic Ground Shaking. Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in

[8] California Department of Conservation – CGS, 2007 (Interim Revision), Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps, Special Publication 42.

[9] California Geologic Survey (CGS), 2002, California Geomorphic Provinces, Note 36, December.

[10] Graymer, R.W., Jones, D.L., and Brabb, E.E., 1994, Preliminary geologic map emphasizing bedrock formations in Contra Costa County, California, USGS Open-File Report 94-622.

[11] Kleinfelder, Inc., 2003, Geologic and Seismic Hazards Assessment Report, Diablo Valley College Campus, Pleasant Hill, California, 26 September.

[12] City of Pleasant Hill, 2003, General Plan, 21 July.

seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions.

The magnitude of a seismic event is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The intensity of an earthquake is a subjective measure of the perceptible effects of a seismic event at a given point and varies with distance from the epicenter and local geologic conditions. The Modified Mercalli Intensity Scale (MMI) (Table 2) is the most commonly used scale to measure the subjective effects of earthquake intensity. Intensity can also be quantitatively measured using accelerometers (strong motion seismographs) that record ground acceleration at a specific location, a measure of force applied to a structure under seismic shaking.

The greatest potential for ground shaking in the vicinity of the project site is from an earthquake along the active Concord-Green Valley Fault, located approximately two miles east of the project site. The Concord-Green Valley Fault has an estimated four percent probability of a Magnitude 6.7 or greater earthquake during the period from 2002 to 2031.[13] An earthquake of Magnitude 6.7 along the Concord-Green Valley Fault is capable of generating very violent ground shaking (MMI-IX) in the vicinity of the project site[14] (see Table 3). A large earthquake from the Concord-Green Valley Fault (or any of the regional active faults) is more likely to cause damage to people and property when structures are not seismically reinforced according to the 2007 California Building Code (CBC) standards.

The planning, design, and construction of public schools and community colleges have been governed by the Field Act since 1933. The Field Act provides a higher level of structural design for earthquake forces in school buildings than the CBC through a more stringent seismic design, review, and inspection process. In 2006, Assembly Bill 127 was passed that gave community colleges the option to conduct building projects in accordance with the CBC standards or the Field Act.

Construction plans for new buildings and reconstruction, alterations, or additions to existing buildings at community colleges must be submitted to the California Division of State Architect (DSA) for review. The DSA ensures that construction plans are at a minimum in compliance with the 2007 CBC standards and may require higher standards such as provisions from the Field Act. The project would comply with the 2007 CBC standards and requirements of the DSA, thus ensuring that the adverse impacts of seismically-generated ground shaking on potential development infrastructure, structures, and people would be less than significant.

[13] Working Group on California Earthquake Probabilities, 2003, Earthquake Probabilities in the San Francisco Bay Region: 2002 to 2031, USGS Open-File Report 03-214.

[14] ABAG, 2004. Interactive Maps for Future Earthquake Scenarios, based on work by the ABAG Earthquake Program. Website: www.abag.ca.gov.

Table 3: Modified Mercalli Intensity (MMI) Scale

I	Not felt except by a very few under especially favorable circumstances.
II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
III	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing of truck. Duration estimated.
IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
VII	Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted.

Source: California Geological Survey, 2002, How Earthquakes and Their Effects are Measured, Note 32.

Liquefaction. Liquefaction is the temporary transformation of loose, saturated, granular sediments to a fluid-like state as a result of seismic ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement such as lateral spreading. Based on factors such as proximity to faults, groundwater level, and soil characteristics, ABAG has rated the central, west, and southeast portions of project site as having a very low liquefaction potential.[15] Geotechnical investigations in the central and west portions of the project site did not identify groundwater above bedrock and soils were characterized by dense sands and hard clays,[16] which confirms ABAG regional liquefaction determination.

[15] ABAG, 2004, Interactive Susceptibility Map, Liquefaction Susceptibility Map, based on work by William Lettis & Associates, Inc. and USGS. Open-File Report 00-444, Knudsen & others, 2000. Website: www.abag.ca.gov.

[16] Kleinfelder, Inc., 2003, Geologic and Seismic Hazards Assessment Report, Diablo Valley College Campus, Pleasant Hill, California, 26 September.

ABAG rated areas located near Grayson Creek on the east side and north sides of the project site as having a high liquefaction potential.[15] The high liquefaction potential in the east and north portions of the project site could cause damage to people and structures if liquefiable sediments are present. Project areas mapped with a high susceptibility to liquefaction included proposed improvements to the P.E./Athletic Facility, Performing Arts Center, and the north entrance plaza, as well as construction of the new Art/Performing Arts building. Geotechnical investigations have not been performed in the east and north portions of the project site. Mitigation Measure GEO-1 would reduce this potentially significant impact to a less-than-significant level.

> Mitigation Measure GEO-1: A geotechnical investigation shall be performed by a Certified Engineering Geologist or Geotechnical Engineer approved by the DSA to identify whether potential liquefiable sediments are present in the east and north portions of the project site. If liquefiable sediments are identified at the project site, the District shall implement appropriate grading and design elements recommended by a Certified Engineering Geologist or Geotechnical Engineer to reduce the potential impact from liquefaction.

Landslides. Slope failure can occur as either rapid movement of large masses of soil or imperceptibly slow movement of soils on slopes. The project site gradually slopes down from the west to the east towards Grayson Creek. The terrain in the east and north portions of the project site is relatively flat.[17] Evidence of previous slope failures has not been identified in the vicinity of the project site.[18] Based on the absence of previous landslides in the vicinity of the project site, the risk of slope failure is considered to be low and would have no related impact.

b) Result in substantial soil erosion or the loss of topsoil? ***(Less-than-Significant Impact)***

Soils on the east side of the project site in the vicinity of improvements for the P.E./Athletic Facility and construction of the new Art/Performing Arts building are classified as having low susceptibility to erosion.[19] Soils in the central, northwest, west, and southwest portions of the project site are classified as having moderate susceptibility to erosion.[20] The potential for water-induced erosion is generally increased during the rainy season when soil is exposed to rainfall and storm water runoff. Compliance with erosion control measures, as required by the National Pollutant Discharge Elimination System (NPDES) program (please refer to Section VIII, Hydrology and Water Quality for additional information about erosion control requirements) would reduce the impacts of soil erosion to a less-than-significant level.

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[17] United States Geological Survey, 1993, Walnut Creek Quadrangle, California-Contra Costa County, 7.5-Minute Series (Topographic).

[18] Kleinfelder, Inc., 2003, Geologic and Seismic Hazards Assessment Report, Diablo Valley College Campus, Pleasant Hill, California, 26 September.

[19] United States Department of Agriculture, National Resource Conservation Service, 2008, K Factor, Whole Soil–Alameda Area, California, and Wind Erodibility Group–Alameda Area, California, 12 June. Website: www.websoilsurvey.nrcs.usda.gov

[20] United States Department of Agriculture, National Resource Conservation Service, 2008, Erosion Hazard (Off-Road, Off-Trail), Contra Costa County, California, 12 June. Website: www.websoilsurvey.nrcs.usda.gov

c) *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?* ***(Potentially Significant Unless Mitigation Incorporated)***

As discussed above, the soils in the central, west, and southwestern portions of the project site have very low liquefaction potential. The soils in the east and north portions of the project site have been identified on a regional basis as having a high liquefaction potential and liquefiable soils could spread laterally. The potentially significant impacts associated with the possible presence of liquefiable soils in the east and north portions of the project site are reduced to less-than-significant by implementing Mitigation Measure GEO-1, discussed above.

Subsidence is often caused by human activities, such as pumping groundwater from an aquifer for irrigation. Future use of the project site does not include groundwater extraction and would therefore not cause subsidence.

The saturation of soils characterized by loose fine sand and/or silt can results in large decrease in the volume of the soils (collapse). Previous geotechnical investigations at the project site indicate that the soils are dense and would not likely collapse due to saturation.

Soils identified at the project site have a low potential for caving during excavations to a maximum depth of approximately 5 feet below ground surface.[21] The California Division of Occupational Safety and Health (DOSH) requires adequate protection from potential caving during all excavations, such as the installation of protective barricades along the walls of the excavation.[22] Compliance with the DOSH regulations would render this potentially significant impact less than significant.

d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?* ***(Potentially Significant Unless Mitigation Incorporated)***

Soils at the project site have been identified as having a high shrink-swell potential (expansive soils). Expansive soils have the potential to damage buildings, roads, and other structures if not properly treated.[23] The potential significant impact associated with expansive soils on development infrastructure, structures, and people would be reduced to a less-than-significant level by implementation of Mitigation Measure GEO-2.

> <u>Mitigation Measure GEO-2:</u> The District shall incorporate all recommendations of a final site-specific design-level geotechnical investigation as prepared by a Certified Engineering Geologist or Geotechnical Engineer into all engineering and construction plans submitted for the project, including recommendations for grading, placement of fill materials, pretreatment of expansive soils, and avoidance of settlement and/or differential settlement of infrastructure and buildings.

[21] United Stated Department of Agriculture, National Resource Conservation Service, 2008, Shallow Excavations, Contra Costa, California, 12 June. Website: www.websoilsurvey.nrcs.usda.gov.

[22] Title 8, California Code of Regulations, Sections 1539-1543. Website: www.dir.ca.gov/Title8/sub4.html.

[23] United Stated Department of Agriculture, 1977, Soil Survey of Contra Costa County, California.

*e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? **(No Impact)***

On-site treatment and disposal of waste water is not proposed for the project site.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	❒	❒	■	❒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	❒	■	❒	❒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	❒	❒	■	❒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	❒	❒	■	❒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	❒	❒	■	❒
f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	❒	❒	❒	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❒	❒	❒	■

	Potentially Significant Impact	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	❐	❐	❐	■

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ***(Less-than-Significant Impact)***

The proposed campus improvements would involve the use of and disposal of chemical agents, solvents, paints, and other hazardous materials associated with construction and demolition activities. The amount of these chemicals present during construction would be limited, would be in compliance with existing government regulations, and would not be considered a significant hazard. During construction of the proposed project, no significant impact is expected to result from the routine use and disposal of these materials. Furthermore, routine operation of the college is not characterized by the use or storage of significant hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ***(Potentially Significant Unless Mitigation Incorporated)***

Some permanent structures at the project site were constructed prior to the 1980s, and therefore may contain lead-based paint and/or asbestos-containing materials. Demolition of the structures may have the potential to release lead particles and asbestos fibers into the air, which could pose a potential health risk to construction workers and the general public.

Implementation of the following two-part mitigation measure would reduce the impacts of exposure to asbestos-containing materials and lead-based paint to a less-than-significant level:

> <u>Mitigation Measure HAZ-1a</u>: Prior to demolition of structures on the site, a comprehensive lead-based paint survey shall be conducted. If any lead-based paint is identified, it shall be removed from the site in accordance with all applicable regulations, including Occupational Safety and Health Administration (OSHA) guidelines. The District shall verify that the survey has been conducted before beginning demolition of buildings.

> <u>Mitigation Measure HAZ-1b</u>: Prior to demolition of structures on the site, a complete Asbestos Hazard Emergency Response Act-Level Pre-Demolition Asbestos Survey shall be conducted. If asbestos is identified, a licensed asbestos abatement contractor shall be retained to abate identified asbestos-containing material in accordance with all applicable regulations. The District shall verify that the survey has been conducted before beginning demolition of buildings.

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?* ***(Less-than-Significant Impact)***

The proposed project consists of improvements to existing buildings within a college campus. The use of hazardous materials, substances, or waste during construction or operations of these facilities would be in compliance with all applicable regulations and would not pose a significant impact.

d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?* ***(Less-than-Significant Impact)***

A search of government agency databases compiled pursuant to Section of 65962.5 of the Government Code was conducted in 2003 for a previous environmental document prepared for the campus.[24] As the campus has been under the District's control since that time and site use has not changed, and the District is not aware of any new hazardous waste/materials releases at the site, the information from the 2003 report is provided here.

The results from the records search identified two listings at the DVC campus. One listing identified the Contra Costa College Health Services facility as a waste generator. This on-site health facility produces waste associated with health services that require proper handling and disposal pursuant to applicable State and federal laws. Due to this specific waste disposal requirement, the DVC health facility appeared on the records search. This waste is not disposed of on-site, and therefore, the facility does not constitute a hazardous waste site. The other listing identified in the records search pertains to historic underground storage tanks (USTs) that previously existed within the DVC campus. Additional information regarding the USTs was gathered by contacting the Contra Costa County Hazardous Materials Division[25] and the District.[26] Results from this investigation revealed that all USTs had been previously identified and removed by the District during previous campus-related construction projects. In addition to removal of the USTs, all required clean-up and remediation (where necessary) has been completed, documented, and filed with the appropriate regulatory agency. Therefore, no outstanding concerns are associated with these USTs. Based on the review of all available information, the project site is not classified as a hazardous waste site nor is it identified on a list as a hazardous waste site pursuant to Section 65962.5 of the Government Code. No significant impacts would occur.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?* ***(Less-than-Significant Impact)***

The DVC campus is within 1 mile of the Buchanan Field Airport. Education Code Section 81022(c) states that if the proposed site is within 2 miles of an airport, and the District plans to acquire property for an expansion of the campus, the California Department of Transportation Aeronautics Division

[24] Environmental Data Resources, Inc. (EDR). 2003. Hazardous Site Assessment Report. January 21.

[25] Phone conversation with Paul Andrew at the Contra Costa County Hazardous Materials Division (01-22-03).

[26] Phone conversation with Tom Beckett at the Contra Costa College District (01-22-03).

should review and comment on the expansion. Although the DVC campus is within 2 miles of the Buchanan Field Airport, the proposed improvements would occur within the existing campus boundaries and the project does not include any land acquisition. As such, the Aeronautics Division, Education Code Section 81033(c) does not apply to this project.

The entire campus is located within the Airport Influence Area, and the northeastern portion of the campus is located in the Airport Safety Zone 4. Airport Safety Zone 4 Compatibility Criteria state that land use intensity is not limited other than that buildings shall have no more than four habitable floors above ground, and aboveground storage of more than 2,000 gallons of fuel or other hazardous materials is prohibited in existing or planned residential or commercial areas. Construction of the Art/Performing Arts Building, renovation of the P.E./Athletic Facility and improvements to Parking Lots 8 and 9 would take place inside Safety Zone 4, but the rest of the project construction would be outside of this Safety Zone.[27] The proposed uses within Zone 4 are the same as the existing uses in these areas and would not exceed the limits set forth for Zone 4 in the airport land use plan. None of the proposed improvements propose buildings over four floors or the storage of large amounts of fuel or other hazardous materials and thus the impact would be less than significant.

f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ***(No Impact)***

The project site is not located in the vicinity of a private airstrip.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ***(No Impact)***

Implementation of the proposed project would not impair or interfere with an adopted emergency response plan or evacuation plan. Existing emergency access routes through and around the campus would remain.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ***(No Impact)***

The proposed project is located within a developed urban area and is not susceptible to wildland fires.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	❐	■	❐	❐

[27] Contra Costa County Airport Land Use Compatibility Plan (December 2000)

	Potentially Significant Impact	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	■	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	■	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	■	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	■	☐	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	■
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	■
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?	☐	☐	☐	■
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

Information for the preparation of this section was obtained from a site reconnaissance and reports, maps, and publications published from the United States Geological Survey (USGS), the California Geological Survey (CGS), the Association of Bay Area Governments (ABAG), the State Water Resource Control Board (SWRCB), the San Francisco Bay Regional Water Quality Control Board, Contra Costa Colleges Campus Master Plan for Diablo Valley College, the City of Pleasant Hill General Plan, and other sources.

The climate of the San Francisco Bay area is characterized as dry-summer subtropical (often referred to as Mediterranean), with cool wet winters and relatively warmer dry summers. In the vicinity of the project the annualized average high temperature for the period of 1970 to 2007 is 73.1º Fahrenheit (F); the average low is 47.5º F. The mean annual rainfall in the vicinity of the proposed project for the same period is approximately 19.5 inches, the majority of which occurs from November through April. During this period of record, annual rainfall has varied from 7.8 inches (1976) to 39.1 inches (1983), with a one-day high of 4.4 inches of precipitation on January 5, 1982.[28] Analysis of long-term precipitation records indicates that wetter and drier cycles lasting several years are common in the region. Severe, damaging rainstorms occur in the Bay Area at a frequency of about once every three years.[29]

a) *Violate any water quality standards or waste discharge requirements?* ***(Potentially Significant Unless Mitigation Incorporated)***

The SWRCB and nine Regional Water Quality Control Boards regulate water quality of surface water and groundwater bodies throughout California. In the Bay Area, including the project site, the San Francisco Bay Regional Water Quality Control Board (Water Board) is responsible for implementation the Water Quality Control Plan (Basin Plan). The Basin Plan establishes beneficial water uses for waterways and water bodies within the region.

Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Program (established through the federal Clean Water Act). The NPDES program objective is to control and reduce pollutant discharges to surface water bodies. Compliance with the NPDES permits is mandated by State and federal statutes and regulations. Locally, the NPDES Program is administered by the Water Board. Water quality impacts of the proposed project are subject to the direct jurisdiction of Water Board[30] while review and approval of plans for school projects is conducted by the Facilities Division of the CCCCD and the State Department of General Services, Division of the State Architect.[31]

NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (99-08-DWQ), the Construction General Permit (CGP). Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the Construction General Permit for Discharges of Storm Water Associated with Construction Activity. For projects that qualify for coverage, the CGP has provisions requiring storm water management both during the construction and operational periods. The CCCCD is not a participant under a Municipal Separate Storm Sewer System (MS4) program, and so the operational period requirements

[28] Western Regional Climate Center, 2008. General Climate Summary Tables, Martinez Water Plant (045378), California. Website: www.wrcc.dri.edu/summary/Climsmcca.html, accessed 6/19/08.

[29] Brown, William M. III, 1988. Historical Setting of the Storm: Perspectives on Population, Development, and Damaging Rainstorms in the San Francisco Bay Region, in Landslides, Floods, and Marine Effects of the Storm of January 3-5, 1982, in the San Francisco Bay Region, California, Stephen D. Ellen and Gerald F. Wieczorek, Eds., U.S. Geological Survey Professional Paper 1434.

[30] Freitas, Donald, 2008. Program Manager Contra Costa County Clean Water Program, personal communication with Baseline, 19 June.

[31] California Community Colleges, 1997. *The Facilities Planning Manual, for the California Community Colleges,* November. Accessed 6/14/08 at: www.cccco.edu.

of the CGP prevail in lieu of coverage under an MS4.[32] Nevertheless, because the campus discharges to the City's stormwater system the District intends to comply with the City's stormwater standards.

Projects seeking coverage under the CGP are required to file a Notice of Intent (NOI) with the Water Board for discharges of storm water associated with construction activity. An applicant must propose control measures that are consistent with the CGP. A Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered by the CGP. The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect storm water runoff and the placement of those BMPs for both the construction and operational phases of the project. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants is to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.[32] Section A of the CGP describes the elements that must be contained in a SWPPP.

A revision to the current CGP is currently undergoing review, and may be adopted by the Water Board during 2008. Some of the changes proposed in the new CGP include required numeric action levels for pH, turbidity, total petroleum hydrocarbons, additional BMPs, low impact development (LID) implementation, effluent monitoring and reporting, active treatment systems, performance standards for hydromodification impacts, technical training for staff, and annual report requirements.

Low Impact Development - Sustainable Storm Water Management. On January 20, 2005, the SWRCB adopted sustainability as a core value for all California Water Boards' activities and programs, and directed California Water Boards' staff to consider sustainability in all future policies, guidelines, and regulatory actions.

Low Impact Development is a sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional stormwater management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID takes a different approach by using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. LID is an alternative to conventional storm water management. The Water Board is advancing LID in California by adopting guidelines and policies encouraging the use of LID type BMPs as well as adding LID requirements to site-specific and general stormwater permits.[33]
At the time of the preparation of this Initial Study, a SWPPP had not yet been prepared for the proposed project; therefore, the following mitigation would ensure that significant impacts related to storm water quality are reduced to a less-than-significant level.

Mitigation Measure HYD-1: The District shall prepare a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce potential impacts to surface water quality through the construction and

[32] Grayson Creek and Suisan Bay are not included on the 303(d) list as impaired for sediment

[33] State Water Resources Control Board, 2008. *Low Impact Development,* website: www.waterboards.ca.gov/water_issues/programs/low_impact_development/.

operational periods of the project including all on- and off-site improvements. The SWPPP shall be prepared by the Facilities Division of the CCCCD and submitted to the Division of the State Architect prior to issuance of project approvals. The SWPPP must be maintained on site and made available to Water Board staff upon request. The SWPPP shall include specific and detailed BMPs designed to mitigate construction-related and operational period pollutants.

Construction Period: At a minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain.

An important component of the stormwater quality protection effort is the knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of stormwater quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP.

The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, which must include both dry and wet weather inspections. In addition, in accordance with State Water Resources Control Board Resolution No. 2001-046, monitoring would be required during the construction period for pollutants that may be present in the runoff that are “not visually detectable in runoff.” Water Board personnel, who may make unannounced site inspections, are empowered to levy considerable fines if it is determined that the SWPPP has not been properly implemented.

BMPs designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences, placement of fiber rolls, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control; that is, keeping sediment on the site. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash-down facilities shall be designed to be accessible and functional during both dry and wet conditions

Operational Period: (*Post-Construction Storm Water Management)* The SWPPP shall include descriptions of the BMPs to reduce pollutants in storm water discharges after all construction phases have been completed at the site (Post-Construction BMPs). Post-Construction BMPs include the minimization of land disturbance, the minimization of impervious surfaces, treatment of storm water runoff using infiltration, detention/retention, bio-filter BMPs, use of efficient irrigation systems, ensuring that interior drains are not connected to a storm sewer system, and appropriately designed and constructed energy dissipation devices. These must be consistent with all applicable post-construction storm water management requirements, policies, and guidelines. The District must consider site-specific and seasonal conditions when designing the control practices. Operation and maintenance of control practices after construction is completed shall be addressed, including short-and long-term funding sources and the responsible party. Because the campus discharges to the City of Pleasant Hill's stormwater system, the District shall review the City's stormwater standards and ensure that its discharges comply with the City's stormwater requirements.

The SWPPP shall include a discussion of the program to inspect and maintain all BMPs as identified in the site plan or other narrative documents throughout the entire life of the project. A qualified person shall be assigned the responsibility to conduct inspections. Inspections shall be performed before and after storm events and once each 24-hour period during extended storm events to identify BMP effectiveness and implement repairs or design changes as soon as feasible depending upon field conditions. Equipment, materials, and workers must be available for rapid response to failures and emergencies. All corrective maintenance to BMPs shall be performed as soon as possible after the conclusion of each storm depending upon worker safety.

The SWPPP shall include operational-period BMPs that would result in treatment of an appropriate percentage of the runoff from the project including all on- and off-site improvements. The SWPPP shall include as many LID BMPs as feasible. The Facilities Division of the CCCCD shall prepare and the Division of the State Architect shall approve the SWPPP, including operational period BMPs, prior to the beginning of construction. Implementation of this mitigation would reduce this impact to a less-than-significant level.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? ***(Less-than-Significant Impact)***

It is likely that, with the installation of new buildings, and improved pavement surfaces, that on-site recharge would be reduced relative to the existing condition. However, implementation of the proposed project is not expected to contribute to depletion of groundwater supplies because the proposed project would not use groundwater underlying the site. In addition, per Mitigation Measure HYD-1, required LID-type BMPs that detain water on-site would include infiltration components (permeable pavement, pavers, swales, water treatment planters, and/or detention basins) that would encourage recharge.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or of-site? ***(Potentially Significant Unless Mitigation Incorporated)***

No creeks are located within the area of disturbance of the proposed project; therefore, the proposed project would not alter the course of a creek or any tributaries. The activities of the proposed project do not include industrial, commercial, or agricultural activities likely to generate materials that would significantly degrade water quality. There is some potential for erosion to occur when unvegetated surface soils are exposed during project construction. Compliance with Mitigation Measure HYD-1 addresses transient water quality impacts related to the construction process. The project as proposed and in compliance with Mitigation Measure HYD-1 would result in a less-than-significant impact *d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?* ***(Less-than-Significant Impact)***

The proposed project is not within nor adjacent FEMA mapped 100- or 500- year floodplains for nearby Grayson Creek.[34] New buildings and other facilities would be constructed on essentially level sites and the project would not substantially change site topography or drainage patterns. The amount of new impervious surfaces created by the proposed project would be largely offset by the demolition or removal of existing facilities. There would be only a small increase in the amount of impervious surface. Neither the minor changes to drainage patterns nor the small increase in impervious surfaces would substantially increase the rate or amount of surface runoff and the project impact would be less than significant.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ***(Potentially Significant Unless Mitigation Incorporated)***

Runoff from the proposed project leaves the property of CCCCD and enters stormwater conveyances maintained by the City of Pleasant Hill to Grayson Creek, and north to Suisan Bay.[35] After implementation of the operational period LID components of the SWPPP, as required under Mitigation Measure HYD-1, runoff volume and duration would not increase substantially over existing flows. Therefore, this would be a less-than-significant impact after mitigation.

f) Otherwise substantially degrade water quality? ***(No Impact)***

No unique or unusual activities or facilities are proposed by the project that would substantially contribute to a degradation of water quality. Therefore, the proposed project would not otherwise degrade or impact water quality.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? ***(No Impact)***

The proposed project would not include additional residential structures at the project site, nor increase the capacity of the campus. The proposed development is not located within a FEMA 100-year flood hazard zone,[36] or otherwise mapped flood area.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? ***(No Impact)***

[34] Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM), 2003, Community-Panel Number 060 0340003C , Pleasant Hill, Contra Costa County, December 2.

[35] Contra Costa Clean Water Program, 2004. *Contra Costa Creeks Inventory and Watershed Characterization Report*, 31 March.

[36] FEMA, 2003. op. cit.

According to the most recent FEMA mapping, the proposed project is not located within the 100-year flood hazard zone, and therefore, no placement of structures in a flood hazard zone would occur under the proposed project.[37]

i) *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?* ***(No Impact)***

According to the most recent FEMA mapping, the portion of the project proposed for development is not located within the 100- or 500-year flood hazard zone.[38] The project is not located in any currently mapped dam failure inundation zones.[39] Potential impacts of dam failure inundation would be less-than-significant.

i) *Inundation by seiche, tsunami, or mudflow?* ***(No Impact)***

The project is about 4.5 miles from the coastline of Suisan Bay with a minimum elevation of 40 feet above mean sea level.[40] Coastal hazards, such as extreme high tides, tsunami, or sea level rise would not represent significant impacts.

IX. LAND USE AND PLANNING. Would the project:	**Potentially Significant Impact**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?	❒	❒	❒	■
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	❒	❒	❒	■
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	❒	❒	❒	■

a) *Physically divide an established community?* ***(No Impact)***

[37] Ibid.

[38] Ibid.

[39] Association of Bay Area Governments, 2005. Interactive ABAG (GIS) Maps Showing Dam Failure Inundation Website: http://www.abag.ca.gov.

[40] Kleinfelder, Inc., 2003, Geologic and Seismic Hazards Assessment Report, Diablo Valley College Campus, Pleasant Hill, California, 26 September.

The proposed project site is within an existing college campus surrounded by an established, built-up urban area; the project would not physically divide an established community.

b) *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?* ***(No Impact)***

The proposed project consists of modernization and building improvements within an existing college campus. Although, as a State institution, the DVC campus is exempt from local planning and zoning regulations, the ongoing use of the site as a college campus is consistent with the City of Pleasant Hill's General Plan, which designates the campus as "Public and Semi-Public, School." Implementation of the proposed project would not require any changes to the project site zoning or General Plan designation, and would not conflict with any land use plans or policies.

c) *Conflict with any applicable habitat conservation plan or natural community conservation plan?* ***(No Impact)***

The project site is urbanized and not included in any habitat conservation plan or natural community conservation plan.

X. MINERAL RESOURCES. Would the project:	**Potentially Significant Impact**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	❒	❒	❒	■
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	❒	❒	❒	■

a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?* ***(No Impact)***

The proposed project site is located within an existing college campus surrounded by urban development. No known mineral resources are located within or near the project site. Mineral extraction activities have not taken place within or around the project site during recent history. As no known mineral resources are present at the project site, implementation of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State.

b) *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?* ***(No Impact)***

See Section X.a, above. The proposed project is not located within a designated mineral resource as indicated within the Contra Costa County General Plan. The Pleasant Hill General Plan does not address locally important mineral resources. Because there are no locally important resources identified on the project site, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site.

XI. NOISE. Would the project result in:	**Potentially Significant Impact**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	❐	■	❐	❐
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	❐	❐	■	❐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	❐	❐	■	❐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	❐	❐	■	❐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	❐	❐	❐	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	❐	❐	❐	■

a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?* ***(Potentially Significant Unless Mitigation Incorporated)***

Long-Term Noise Impacts. No new long-term noise sources would be created by the proposed project. Noise levels resulting from operation and use of the project would be consistent with existing noise levels and would not be greater than noise levels currently produced by campus uses. Thus it is not expected that the new facilities would result in significant operational noise impacts to the existing campus environment. Noise levels associated with traffic volumes would not increase as a result of the proposed project since the project would not generate any growth in the campus population.

Although the District, as a State educational institution, is exempt from local planning and zoning laws when using property in furtherance of its educational purposes, the project would nevertheless comply with the City of Pleasant Hill's Municipal Code with regard to noise[41] and the City's General Plan Safety and Noise Element, which finds that sound levels up to 70 L_{dn} are "normally acceptable" for the project's proposed land use.[42]

Construction Noise Impacts. Demolition, excavation, grading and building erection would generate short-term noise impacts during the project construction period. The construction related short-term noise levels would be higher than the existing or ambient noise levels in the project area today. Typically, the various construction activities are completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table 4 lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor.

Table 4: Typical Construction Equipment Maximum Noise Levels

Type of Equipment	Range of Maximum Sound Levels (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	74 to 84	80
Scrapers	83 to 91	87
Haul Trucks	83 to 94	88
Cranes	79 to 86	82
Portable Generators	71 to 87	80
Rollers	75 to 82	80
Dozers	77 to 90	85
Tractors	77 to 82	80
Front-End Loaders	77 to 90	86
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 89	86
Trucks	81 to 87	86

Source: Bolt, Beranek & Newman, 1987. *Noise Control for Buildings and Manufacturing Plants.*

The site preparation phase, which includes excavation and grading, tends to generate the highest noise levels, because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

As shown in Table 4, the typical maximum noise level generated by most earthmoving equipment (e.g., loader, backhoes, excavators and graders) is 86 dBA L_{max} at 50 feet from the operating equipment. Assuming each piece of construction equipment operates at some distance apart from the

[41] Pleasant Hill, City of, 2007. *City of Pleasant Hill Municipal Code,* Chapter 9.15 Noise. June 4.

[42] Pleasant Hill, City of 2003. *City of Pleasant Hill General Plan 2003. Safety and Noise.*

other equipment, the worst-case combined noise level during the site preparation phase of construction would be 91 dBA L_{max} at a distance of 50 feet from an active construction area. The District does not anticipate that the noisiest activities listed in Table 4, such as pile driving and rock drilling, would be required during project construction.

The closest off-site sensitive receptors include the residential uses to the east, north and west and the College Park High School located immediately south of the project site. These uses are located a minimum of 600 feet from areas where earthmoving activities would be required to construct the new buildings in the central portion of the campus, such as the English, Student Services, and Performing Arts buildings. The closest off-site receptors would be exposed to construction noise levels during this phase of construction of up to 70 dBA L_{max} when excavation occurs in the central campus area. Maximum levels at the nearby classrooms and other campus facilities could reach up to 91 dBA L_{max}. In order to minimize the disturbance to on-site classrooms or other noise sensitive buildings, construction contractors and the District should coordinate the schedule for loud construction activities to occur during less sensitive time periods.

The transportation of workers and construction equipment and materials to and from the project site for project construction would incrementally increase noise levels on roads leading to the construction areas. Although there would be relatively high single event noise exposure potential with passing trucks (up to 87 dBA L_{max} at 50 feet), causing potential short-term intermittent annoyances, the effect on long-term ambient noise levels would be small and less than significant. Therefore, short-term construction related impacts associated with worker and equipment transportation to the project site would result in a less than significant impact on sensitive receptors along the access routes leading to and from the project construction areas.

Although, noise impacts to off-site receptors would be less than significant, because of the potential impact of noise to the on-site classroom environment the following mitigation measure is recommended:

> Mitigation Measure NOISE-1: The project shall implement the following noise reduction measures:
>
> - The District shall coordinate with the DVC campus administration and the construction contractor to schedule loud construction activities to less sensitive time periods.
> - All heavy construction equipment used on the project site shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? ***(Less-than-Significant Impact)***

Construction activities associated with implementation of the proposed project could temporarily expose persons in the vicinity of the project site to excessive ground borne vibration or ground borne noise levels. Implementation of Mitigation Measure NOISE-1 would reduce this impact to a less-than-significant level.

The proposed project consists of modernization and building improvements within an existing college campus; no permanent noise sources that would expose persons to excessive ground borne vibration or noise levels are proposed as part of the project. Implementation of the proposed project would not permanently expose persons within or around the project site to excessive ground borne vibration or noise.

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?* ***(Less-than-Significant Impact)***

See Section XI.a, above. No new long-term noise sources would be created by the proposed project. Noise levels resulting from operation and use of the project would be consistent with existing noise levels and would not be greater than noise levels currently produced by campus uses. Thus it is not expected that the new facilities would result in significant operational noise impacts to the existing campus environment.

d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?* ***(Less-than-Significant Impact)***

See Section XI.a, above. Activities associated with proposed project construction would temporarily increase ambient noise levels. However, implementation of Mitigation Measure NOISE-1 would ensure that construction related noise would be reduced to a less-than-significant level.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?* ***(No Impact)***

The DVC campus is within 1 mile of the Buchanan Field Airport and is located within the Airport Influence Area. According to the contours shown in the Contra Costa County Airport Land Use Compatibility Plan, the outdoor noise level due to the airport at the project site would not exceed 60 dB CNEL.[43] This is within the City's "normally acceptable" range for the project's proposed land uses. Therefore, implementation of the proposed project would not expose students, faculty or other persons on the campus to excessive noise levels from aircraft overflights above those that currently exist on the DVC campus.

f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?* ***(No Impact)***

The project site is not located within the vicinity of a private airstrip. Therefore, the proposed project would not expose persons on the project site to excessive noise levels from a private airstrip.

[43] Contra Costa County Airport Land Use Compatibility Plan, December 2000.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	❐	❐	❐	■
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	❐	❐	❐	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	❐	❐	❐	■

*a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? **(No Impact)***

The proposed project includes construction and remodeling of campus buildings in response to technological advancements that would serve the needs of existing and future student enrollment more efficiently and effectively. The project would not increase the capacity of the campus for additional students. The proposed project would not construct housing units nor increase the population in the area.

*b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? **(No Impact)***

The project site currently is a college campus. There are no housing units on the site that would be displaced by construction of the project.

*c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? **(No Impact)***

See Section XII.b, above. No persons would be displaced by the project.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	■	☐
Police protection?	☐	☐	☐	■
Schools?	☐	☐	☐	■
Parks?	☐	☐	☐	■
Other public facilities?	☐	☐	☐	■

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection, police protection, schools, parks, other public facilities?*

Fire protection? ***(Less-than-Significant Impact)***

Fire protection services are provided by the Contra Costa County Fire District (CCCFD). The CCCFD is responsible for the review and approval of the emergency access and water supply for the proposed project. Additionally, the CCCFD is responsible for the review and approval of emergency access, water supply (locating hydrants) and the location of fire sprinkler connections and control valves.[44] Older buildings would be demolished and new buildings would be constructed or renovated to house similar activities. No expansion of fire protection facilities or construction of additional fire protection facilities would be required to serve the proposed project. Because the new facilities would include fire protection systems, such as sprinklers, and would not require the expansion of fire protection services, the project impact would be less than significant.

[44] Communication with Richard Carpenter at the Contra Costa County Fire District

Police protection? ***(No Impact)***

The provision of and demand for police protection to the project site would not change as a result of the proposed project. Twenty-four-hour Police services are provided by the Contra Costa Community College Police Department in collaboration with the Pleasant Hill Police Department. The District maintains 21 sworn officers, three senior parking officers, two parking officers and six dispatchers. The District's dispatchers operate Monday through Thursday from 7:30 a.m. to 11 p.m., Friday from 7:30 a.m. to 5:30 p.m., Saturday from 7:30 a.m. to 3:30 p.m., and are off-duty on Sunday.[45] During the off hours not covered by District dispatchers, the District Police Department collaborates with the Pleasant Hill Police Department. The Pleasant Hill Police Department's dispatchers are on contract with the District to dispatch and forward all campus related calls to District police officers during off hours.

The improvements to the DVC campus would not increase the student enrollment and therefore would not increase the demand for police protection services or require an increase in personnel or the expansion of existing facilities.

Schools? ***(No Impact)***

The proposed project is an improvement to an existing college campus. The project would not create new residential development that would bring school-aged children to the surrounding cities. Implementation of the proposed project would result in a beneficial impact to the community college.

Parks? ***(No Impact)***

The proposed project is an improvement to an existing college campus and no additional student enrollment is anticipated. Therefore, no impacts associated to parks would occur as a result of implementation of the proposed project.

Other public facilities? ***(No Impact)***

No other public facilities are anticipated to be affected by the project.

[45] Contra Costa Community College District Police Department. Website: www.4cd.net/Police_services/default.asp

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

*a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? **(No Impact)***

The DVC campus has playfields and recreational facilities for student and faculty use. The proposed project would not increase student enrollment or faculty and would not increase the use of existing neighborhood and regional parks or other recreational facilities.

*b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? **(No Impact)***

The playfields and recreational facilities on the DVC campus are available for community use. The proposed project would not require the construction or expansion of recreational facilities.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC. Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	■	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency or designated roads or highways?	☐	☐	■	☐

	Potentially Significant Impact	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	❑	❑	❑	■
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	❑	❑	❑	■
e) Result in inadequate emergency access?	❑	❑	■	❑
f) Result in inadequate parking capacity?	❑	❑	❑	■
g) Conflict with adopted polices, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	❑	❑	❑	■

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? ***(Less-than-Significant Impact)***

The Contra Costa Transportation Authority Growth Management Program requires a detailed traffic impact analysis for projects that generate 100 or more peak hour trips. A detailed analysis was not performed for the proposed project because the DVC campus improvements would not increase student enrollment on the site nor increase student-generated traffic over current conditions. However, construction activity to and from the project site would temporarily add traffic to the roadways during the construction period. This traffic would include large trucks entering and leaving the DVC campus to deliver and pick up equipment/supplies as well as to remove debris from demolition activities. In addition, construction workers would arrive and depart the site on a daily basis. Based on the size of the construction crew needed at any given time – approximately 25 workers – the number of trips would be considerably less than the 100 trips per hour that would trigger the need for a traffic analysis and would be only a small fraction of the daily trips on nearby roadways. The primary routes that construction vehicles would utilize to reach the site include the nearby freeway and roads, including I-680, Concord Parkway, Old Quarry Road and Golf Club Road. Golf Club Road averages between 6,700-13,200 trips per day and Old Quarry Road averages 7,800 trip per day, for example.[46] These roadways would not be significantly impacted by the relatively small number of trips associated with short-term construction traffic. No other work would be needed in any public streets to accommodate the project improvements. There would be no significant impacts on the City's roadways during the construction process.

[46] City of Pleasant Hill, 2003. *General Plan 2003*

b) *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?* ***(Less-than-Significant Impact)***

See Section XV.a. No long term increase in traffic would be generated by the project. Project construction would result in a small, temporary increase in traffic to the campus, but these trips would not significantly impact campus facilities or other roads or highways in the project vicinity.

c) *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?* ***(No Impact)***

The proposed project would not have any impact on air traffic patterns.

d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?* ***(No Impact)***

The project would not alter any of the surrounding roadways or access to the DVC campus.

e) *Result in inadequate emergency access?* ***(Less-than-Significant Impact)***

The proposed project would not alter emergency access to the site. A major new pedestrian path would run in a southwest/northeast direction connecting the Central Quad to the Advanced Technology Center. Additionally, a new entry plaza and drop-off area would be constructed at the north end of the athletic facilities, at the south end of Parking Lot 9. From the entry plaza a wide landscaped path would link all the physical education facilities together, and connect the parking lots on the north and south sides of campus. These paths would improve existing emergency access and no other campus roadways would be changed resulting from implementation of the proposed project. The proposed project would not result in inadequate emergency access.

f) *Result in inadequate parking capacity?* ***(No Impact)***

Implementation of the proposed project would require parking spaces for some construction vehicles during the short-term construction period. It is expected that the college would establish a construction staging and parking area on the site. Sufficient land is available for this purpose. This temporary short-term use would be a less-than-significant impact.

Parking lots would be restriped and expanded in the north and east areas of the campus as part of the proposed project. The District Storage Building would be demolished, which would allow Parking Lot 9 to expand southward. Additionally, Parking Lot 8 would be reconfigured to allow for parking and a drop-off area at the new entry plaza. The project would not add students or faculty that would increase demand or result in an inadequate amount of parking spaces. As a result, the project would not result in inadequate parking capacity and the long-term impact would be less than significant.

g) *Conflict with adopted polices, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?* ***(No Impact)***

The proposed project consists of structural improvements within an existing college campus and does not affect adopted policies supporting alternative transportation. It would not remove facilities supporting alternative transportation, such as bike racks, paths, or bus stops. The project does not conflict with alternative transportation plans.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	■
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	■
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	■
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	■
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	■	☐
g) Comply with federal, State, and local statutes and regulations related to solid waste?	☐	☐	■	☐

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? ***(No Impact)***

The DVC campus wastewater is conveyed via the District's on-site wastewater infrastructure to the municipal sewer system. The wastewater is then treated by the Contra Costa Sanitary District. The proposed project would not increase the student capacity of the campus, nor would it generate wastewater volumes beyond those currently generated, nor would it exceed any wastewater treatment requirements.

b) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?* ***(No Impact)***

See Section XVI.a, above. The proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

c) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?* ***(No Impact)***

The DVC campus has been previously paved and developed and includes adequate on-site storm water drainage facilities. The proposed campus improvements involve the demolition, construction and renovation of existing campus facilities which would not result in an increase in impervious surfaces. Therefore, the proposed project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities.

d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?* ***(No Impact)***

The Contra Costa Water District provides water to the campus. The proposed improvements would replace and/or remodel existing campus buildings. The proposed project would not increase in student enrollment or staff nor would it increase demand or usage of water supplies or require new or expanded water entitlements.

e) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?* ***(No Impact)***

See Section XVI.a, above.

f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?* ***(Less-than-Significant Impact)***

Solid waste disposal service is provided to the DVC campus by Pleasant Hill Bay Shore Disposal. General solid waste is collected from the campus and transported to the Martinez Transfer and Recovery Facility where it is sorted and compacted. Trash is then taken to the Keller Canyon Landfill located in Pittsburg, California. All waste that requires special handling and disposal is picked up by North State Environmental.

The proposed improvements would include demolition, construction and remodeling activities. Short-term construction waste generation associated with demolition and construction activities would increase the amount of solid waste generated within the campus. However, this increase in solid waste generation would be temporary. Construction related waste is often recycled and used for other construction related applications minimizing the amount disposed of in the landfill. Given that the project does not increase the student capacity at the campus, the proposed project would not result in an increase in the volume of solid waste or require additional solid waste disposal services beyond those currently provided.

g) *Comply with federal, State, and local statutes and regulations related to solid waste?* **(Less-than-Significant Impact)**

See Section XVI.f, above. The proposed project would comply with all applicable recycling and solid waste policies.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	❐	■	❐	❐
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	❐	❐	■	❐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	❐	■	❐	❐

a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?*

The proposed project is located within an existing college campus surrounded by a developed urban area. The project site does not contain habitat for sensitive wildlife, plants or sensitive biological communities and there are no threatened or endangered species present on the project site. Therefore, the proposed project would not degrade the quality of the environment or substantially reduce or restrict the range of a plant or animal community. Implementation of Mitigation Measures CULT-1, CULT-2, and CULT-3 would ensure that potential impacts to cultural resources would also be reduced to a less-than-significant level. ***(Potentially Significant Unless Mitigation Incorporated)***

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)* ***(Less-than-Significant Impact)***

Because the proposed improvements to the existing community college campus do not increase the campus student capacity and would serve the nearby communities of Pleasant Hill, Concord, Walnut Creek, and Martinez, the project would not generate significant cumulative impacts to the greater region. Impacts would be individually limited and would not be cumulatively considerable.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?* ***(Potentially Significant Unless Mitigation Incorporated)***

The proposed campus improvements would not cause substantial adverse effects on human beings with incorporation of Mitigation Measures AIR-1, AIR-2, AIR-3a, AIR-3b, GEO-1, GEO-2, HAZ-1a, HAZ-1b, HYD-1, and NOISE-1 recommended in this IS/MND.

4. REPORT PREPARATION

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C. COMMUNICATIONS

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Dunbar, Peter, 2008. Chief of Police, Pleasant Hill Police Department. Personal communication with LSA Associates, Inc. June 10.

Freitas, Donald, 2008. Program Manager, Contra Costs County Clean Water Program. Personal communication with Baseline. June 19.

Terstegge, Teddy M., 2008. Emergency Services Coordinator, Contra Costa Community College District Police Department. Personal communication with LSA Associates, Inc. June 17.

5. MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) was formulated based on the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) prepared for the Diablo Valley College Improvements Implementation Project. This MMRP is in compliance with Section 15097 of the *CEQA Guidelines*, which requires that the Lead Agency "adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects." The MMRP lists mitigation measures recommended in the IS/MND and identifies mitigation monitoring requirements.

Table 1 presents the mitigation measures identified for the project. Each mitigation measure is numbered according to the topical section to which it pertains in the IS/MND. As an example, Mitigation Measure AIR-1 is the first mitigation measure identified in the IS/MND for the project.

The first column of Table 1 identifies the mitigation measure from the IS/MND. The second column, entitled "Action and Implementation Timing," describes each mitigation measure. The third column, "Party Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is implemented. The fourth column, "Action by Monitor" outlines the steps for monitoring the action identified in the mitigation measure. The fifth column entitled "Monitoring Timing," states the time the monitor must ensure that the mitigation measure has been implemented. The last column will be used by the District to ensure that individual mitigation measures have been monitored.

Table 5: Mitigation Monitoring and Reporting Program

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
III. AIR QUALITY						
AIR-1: Consistent with guidance from the BAAQMD, the District shall require contractors to include emissions control measures in construction specifications for the project. The District shall review the final construction specifications to verify that the requirements have been included prior to beginning grading and excavating activities for the project. The District shall verify via field inspection at least twice during construction that the measures are being implemented. The following actions are required: • Idling time of diesel powered construction equipment shall be limited to 2 minutes; • Alternative powered construction equipment (i.e., CNG, biodiesel, electric) shall be utilized when feasible; • Add-on control devices shall be used such as diesel oxidation catalysts or particulate filters; • Project construction shall be phased; and • Operating hours of heavy duty equipment shall be minimized.	Implement the emission control measures listed in Mitigation Measure AIR-1 during construction	Contra Costa Community College District and construction contractor	Contra Costa Community College District	1. Review final construction specifications to ensure all requirements listed in Mitigation Measure AIR-1 are included 2. Visit project site at least twice to verify that emission control measures are being implemented	1. Before grading begins 2. During project construction	*Name:* *Date:*

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
AIR-2: Consistent with the guidance from the BAAQMD, the District shall include dust control measures in construction contracts and specifications for the project. The District shall verify via field inspection at least twice during construction of each project that the measures are being implemented. The following controls shall be implemented at all construction sites: • Water all active construction areas at least twice daily and more often during windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers to control dust; • Cover all trucks hauling soil, land, and other loose materials or require all trucks to maintain at least two feet of freeboard; • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, inactive construction areas, and staging areas at construction sites; • Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality; • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets;	Implement the dust control measures listed in Mitigation Measure AIR-2 during construction	Contra Costa Community College District and construction contractor	Contra Costa Community College District	1. Review final construction specifications to ensure all requirements listed in Mitigation Measure AIR-2 are included 2. Visit project site at least twice to verify that dust control measures are being implemented	1. Before grading begins 2. During project construction	*Name:* *Date:*

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
AIR-2 *Continued* • Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.); • Install base rock at entryways for all existing trucks, and wash off the tires or tracks of all trucks and equipment in designated areas before leaving the site; • Limit traffic speeds on unpaved roads to 15 mph; • Install sandbags or other erosion control measures to prevent silt runoff to public roadways; • Replant vegetation in disturbed areas as quickly as possible; and • Suspend excavation and grading activity when sustained wind speeds exceed 25 mph. Sustained wind speed shall be determined by averaging observed values over a two- minute period. Wind monitoring by the construction manager shall be required at all times during excavation and grading activities.						
AIR-3a: Implement Mitigation Measure AIR-1.	See Mitigation Measure AIR-1.					
AIR-3b: Implement Mitigation Measure AIR-2.	See Mitigation Measure AIR-2.					

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
V. CULTURAL RESOURCES						
CULT-1: The District shall inform its contractor(s) of the possibility of encountering archaeological resources during subsurface excavations by including the following directive in contract documents: "If prehistoric or historical archaeological deposits are discovered during project activities, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations regarding the treatment of the discovery. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. Adverse effects to archaeological deposits shall be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for their California Register of Historical Resources eligibility."	1. Include the directive described in Mitigation Measure CULT-1 in contract documents 2. Evaluate any archaeological resources discovered during project construction as described in CULT-1 and submit report of findings to the District and the NWIC	1. Contra Costa Community College District 2. Construction contractor	1. Contra Costa Community College District 2. Contra Costa Community College District	1. Verify that the appropriate language has been incorporated in contract documents 2. Visit project site and verify that measures are being implemented and that any reports are submitted to the NWIC	1. Before grading begins 2. During project construction	*Name:* *Date:*

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
CULT-1 *Continued* The Contra Costa Community College District shall verify that the language has been included in the contract documents. If the deposit is not eligible, a determination shall be made as to whether it qualifies as a "unique archaeological resource" under CEQA (see V.b). If the deposit is neither a historical nor unique archaeological resource, avoidance is not necessary. If the deposit is eligible for the California Register, or is a unique archaeological resource, adverse effects shall be avoided or such effects must be mitigated. Mitigation may consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits; creation of a record for the resource; preparation of a report of findings; and an offer of the recovered archaeological materials to an appropriate curation facility. Public educational outreach may also be appropriate. Upon a completion of the assessment, the archaeologist shall prepare a report documenting the assessment methods and results, and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to the Contra Costa Community College District and the Northwest Information Center.						

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
<u>CULT-2</u>: The District shall inform its contractor(s) of the sensitivity of the project area for paleontological resources by including the following directive in contract documents: "The subsurface at the construction site may be sensitive for paleontological resources. If paleontological resources are encountered during project construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any paleontological materials. Paleontological resources include fossil plants and animals, and such trace fossil evidence of past life as tracks. Ancient marine sediments may contain invertebrate fossils such as snails, clam and oyster shells, sponges, and protozoa; and vertebrate fossils such as fish, whale, and sea lion bones. Vertebrate land mammals may include bones of mammoth, camel, saber tooth cat, horse, and bison. Paleontological resources also include plant imprints, petrified wood, and animal tracks." The Contra Costa Community College District shall verify that the language has been included in the contract documents.	1. Include the directive described in Mitigation Measure CULT-2 in contract documents 2. Evaluate any paleontological resources discovered during project construction as described in CULT-2 and submit report of findings to the District and a paleontological repository	1. Contra Costa Community College District 2. Construction contractor	1. Contra Costa Community College District 2. Contra Costa Community College District	1. Verify that the appropriate language has been incorporated in contract documents 2. Visit project site and verify that measures are being implemented and that any reports are submitted to a paleontological repository	1. Before grading begins 2. During project construction	*Name:* *Date:*

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
CULT-2 *Continued* Adverse effects to such deposits shall be avoided by project activities. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. Paleontological resources are considered significant if they possess the possibility of providing new information regarding past life forms, paleoecology, stratigraphy, and geological formation processes. If the resources are not significant, avoidance is not necessary. If the resources are significant, project activities shall avoid disturbing the deposits, or the adverse effects of disturbance shall be mitigated. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, a final report, and accessioning the fossil material and technical report to a paleontological repository. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting the assessment methods, findings, and recommendations shall be prepared and submitted to the Contra Costa Community College District, and, if paleontological materials are recovered, a paleontological repository, such as the University of California Museum of Paleontology.						
CULT-3: If human remains are encountered, these remains shall be treated in accordance with HSC Section 7050.5. The project applicant shall inform its contractor(s) of the sensitivity of the project area for human remains by including the following directive in contract documents:	1. Include the directive described in Mitigation Measure CULT-3 in contract documents	1. Contra Costa Community College District	1. Contra Costa Community College District	1. Verify that the appropriate language has been incorporated in contract documents	1. Before grading begins	*Name:* *Date:*

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
CULT-3 *Continued* "If human remains are encountered during project activities, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted, if an archaeological monitor is not present, to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods, , which may include scientific removal and analysis of human remains and items associated with Native American burials." The Contra Costa Community College District shall verify that the language has been included in the contract documents. Upon completion of the assessment, the archaeologist shall prepare a report documenting the assessment methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the Contra Costa Community College District and the Northwest Information Center.	2. Stop work within 25 feet of human remains discovered during project construction; prepare and submit report of findings to the District and NWIC.	2. Construction contractor	2. Contra Costa Community College District	2. Visit project site and verify that measures are being implemented and that any reports are submitted to NWIC	2. During project construction	

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
VI. GEOLOGY AND SOILS						
GEO-1: A geotechnical investigation shall be performed by a Certified Engineering Geologist or Geotechnical Engineer approved by the DSA to identify whether potential liquefiable sediments are present in the east and north portions of the project site. If liquefiable sediments are identified at the project site, the District shall implement appropriate grading and design elements recommended by a Certified Engineering Geologist or Geotechnical Engineer to reduce the potential impact from liquefaction.	Perform a geotechnical investigation prior to construction to identify potential liquefiable sediments in the east and north portions of the project site	Contra Costa Community College District	Contra Costa Community College District	Verify that geotechnical investigation is completed	Prior to construction	*Name:* *Date:*
GEO-2: The District shall incorporate all recommendations of a final site-specific design-level geotechnical investigation as prepared by a Certified Engineering Geologist or Geotechnical Engineer into all engineering and construction plans submitted for the project, including recommendations for grading, placement of fill materials, pretreatment of expansive soils, and avoidance of settlement and/or differential settlement of infrastructure and buildings.	Incorporate recommendations from geotechnical investigations into development plans	Contra Costa Community College District	Contra Costa Community College District	Verify that recommendations from geotechnical investigations are incorporated into all development plans	Prior to construction	*Name:* *Date:*
VII. HAZARDS AND HAZARDOUS MATERIALS						
HAZ-1a: Prior to demolition of structures on the site, a comprehensive lead-based paint survey shall be conducted. If any lead-based paint is identified, it shall be removed from the site in accordance with all applicable regulations, including Occupational Safety and Health Administration (OSHA) guidelines. The District shall verify that the survey has been conducted before beginning demolition of buildings.	Complete a lead-based paint survey as described in Mitigation Measure HAZ-1a	Contra Costa Community College District	Contra Costa Community College District	Verify that the survey has been conducted	Before demolition begins	*Name:* *Date:*

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
HAZ-1b: Prior to demolition of structures on the site, a complete Asbestos Hazard Emergency Response Act-Level Pre-Demolition Asbestos Survey shall be conducted. If asbestos is identified, a licensed asbestos abatement contractor shall be retained to abate identified asbestos-containing material in accordance with all applicable regulations. The District shall verify that the survey has been conducted before beginning demolition of buildings.	Complete an asbestos survey as described in Mitigation Measure HAZ-1b	Contra Costa Community College District	Contra Costa Community College District	Verify that the survey has been conducted	Before demolition begins	*Name:* *Date:*
VIII. HYDROLOGY AND WATER QUALITY						
HYD-1: The District shall prepare a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce potential impacts to surface water quality through the construction and operational periods of the project including all on- and off-site improvements. The SWPPP shall be prepared by the Facilities Division of the CCCCD and submitted to the Division of the State Architect prior to issuance of project approvals. The SWPPP must be maintained on site and made available to Water Board staff upon request. The SWPPP shall include specific and detailed BMPs designed to mitigate construction-related and operational period pollutants.	Facilities Division of the District shall prepare and the Division of the State Architect shall approve a SWPPP that includes requirements listed in HYD-1	Contra Costa Community College District	Contra Costa Community College District	Verify that the SWPPP has been prepared	Before construction begins	*Name:* *Date:*

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
HYD-1 *Continued* *Construction Period*: At a minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain. An important component of the stormwater quality protection effort is the knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of stormwater quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP. The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, which must include both dry and wet weather inspections. In addition, in accordance with State Water Resources Control Board Resolution No. 2001-046, monitoring would be required during the construction period for pollutants that may be present in the runoff that are “not visually detectable in runoff.” Water Board personnel, who may make unannounced site inspections, are empowered to levy considerable fines if it is determined that the SWPPP has not been properly implemented.						

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
HYD-1 *Continued* BMPs designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences, placement of fiber rolls, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control; that is, keeping sediment on the site. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash-down facilities shall be designed to be accessible and functional during both dry and wet conditions. *Operational Period*: (*Post-Construction Storm Water Management)* The SWPPP shall include descriptions of the BMPs to reduce pollutants in storm water discharges after all construction phases have been completed at the site (Post-Construction BMPs). Post-Construction BMPs include the minimization of land disturbance, the minimization of impervious surfaces, treatment of storm water runoff using infiltration, detention/retention, bio-filter BMPs, use of efficient irrigation systems, ensuring that interior drains are not connected to a storm sewer						

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
HYD-1 *Continued* system, and appropriately designed and constructed energy dissipation devices. These must be consistent with all applicable post-construction storm water management requirements, policies, and guidelines. The District must consider site-specific and seasonal conditions when designing the control practices. Operation and maintenance of control practices after construction is completed shall be addressed, including short-and long-term funding sources and the responsible party. Because the campus discharges to the City of Pleasant Hill's stormwater system, the District shall review the City's stormwater standards and ensure that its discharges comply with the City's stormwater requirements. The SWPPP shall include a discussion of the program to inspect and maintain all BMPs as identified in the site plan or other narrative documents throughout the entire life of the project. A qualified person shall be assigned the responsibility to conduct inspections. Inspections shall be performed before and after storm events and once each 24-hour period during extended storm events to identify BMP effectiveness and implement repairs or design changes as soon as feasible depending upon field conditions. Equipment, materials, and workers must be available for rapid response to failures and emergencies. All corrective maintenance to BMPs shall be performed as soon as possible after the conclusion of each storm depending upon worker safety.						

Table 5 *Continued*

Recommended Mitigation Measures	Action and Implementation Timing	Party Responsible for Implementing Mitigation	Party Responsible for Monitoring	Action by Monitor	Monitoring Timing	Verification of Compliance Name/Date
HYD-1 *Continued* The SWPPP shall include operational-period BMPs that would result in treatment of an appropriate percentage of the runoff from the project including all on- and off-site improvements. The SWPPP shall include as many LID BMPs as feasible. The Facilities Division of the CCCCD shall prepare and the Division of the State Architect shall approve the SWPPP, including operational period BMPs, prior to the beginning of construction.						
XI. NOISE						
NOISE-1: The project shall implement the following noise reduction measures: • The District shall coordinate with the DVC campus administration and the construction contractor to schedule loud construction activities to less sensitive time periods. • All heavy construction equipment used on the project site shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.	Implement the noise-reducing measures described in Mitigation Measure NOISE-1	Construction contractor	Contra Costa Community College District	Visit project site and verify that noise control measures are being implemented	During project construction	*Name:* *Date:*

APPENDIX A

CULTURAL AND PALEONTOLOGICAL RESOURCES STUDY

A CULTURAL AND PALEONTOLOGICAL RESOURCES STUDY FOR THE DIABLO VALLEY COLLEGE FACILITIES MASTER PLAN PROJECT

PLEASANT HILL, CONTRA COSTA COUNTY, CALIFORNIA

Submitted to:

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LSA Project #CTD0803

LSA

January 29, 2009

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INTRODUCTION

In March 2001 and June 2006, Contra Costa County voters approved bond Measure A and Measure A+. These bonds enabled the Contra Costa Community College District (CCCCD) to refurbish aging facilities, construct new facilities to accommodate increasing student populations, and purchase laboratory equipment for its three campuses. A portion of Measure A+'s $286.5 million bond issue called for improvements to the 110-acre Diablo Valley College (DVC). DVC has been at its present location since the campus was originally constructed in 1951. The campus is comprised of 56 buildings which house administrative, academic, and athletic functions. Measure A+ improvements call for new and updated facilities to meet educational needs, improve the learning environment, demolish outdated buildings too costly to repair, create new outdoor seating areas; improve intercampus traffic circulation, and make other improvements consistent with the 2007 Facilities Master Plan.

The DVC campus is at 321 Golf Club Road, in the City of Pleasant Hill, Contra Costa County, California (Figure 1). The 110-acre project site (Assessor's Parcel #153-040-009) is bordered on the north by Golf Club Road, on the west by Stubbs Road, on the south by Viking Drive, and on the east by Grayson Creek (Figure 2). LSA Associates, Inc., (LSA), conducted this cultural and paleontological resources study portions of the DVC campus in support of an Initial Study/Mitigated Negative Declaration.

The purpose of this study is to (1) identify cultural resources that may meet the California Environmental Quality Act (CEQA) definition of a historical resource or unique archaeological resource and may be affected by the proposed project; and, (2) identify paleontological resources (fossils) that may be significant and may be affected by the project; (3) identify human remains, including those interred outside of formal cemeteries; and (4) present mitigation recommendations to avoid, minimize, or offset effects on (a) significant cultural and paleontological resources, and (b) human remains.

The cultural resources study consisted of a literature review, a records search, architectural and archaeological field surveys, and evaluation of the cultural resources in the project site. Cultural resources identified in the project site consist of a ca.1952 Storage Building; a Business Education Building built in 1955; a Gymnasium Building built in 1956; and a Science Building built in 1958. These cultural resources were evaluated for their California Register of Historical Resources (California Register) eligibility, and they do not appear to be eligible. The resources do not qualify as "historical resources" as defined under CEQA at CCR Title 14(3) §15064.5(a), and further study or protection of these cultural resources is not recommended. Background research and field studies did not indicate the presence of archaeological resources in the project site.

The paleontological resources study consisted of a fossil locality search and literature review. Paleontological resources were identified within a ½-mile of the project site, and there is the possibility of significant paleontological resources underlying the project site. Please refer to the Study Results and Recommendations sections for details.

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FIGURE 1

Cultural and Paleontological Resources Study

Diablo Valley College Master Plan IS/MND
Pleasant Hill, Contra Costa County, California

Project Location and Vicinity

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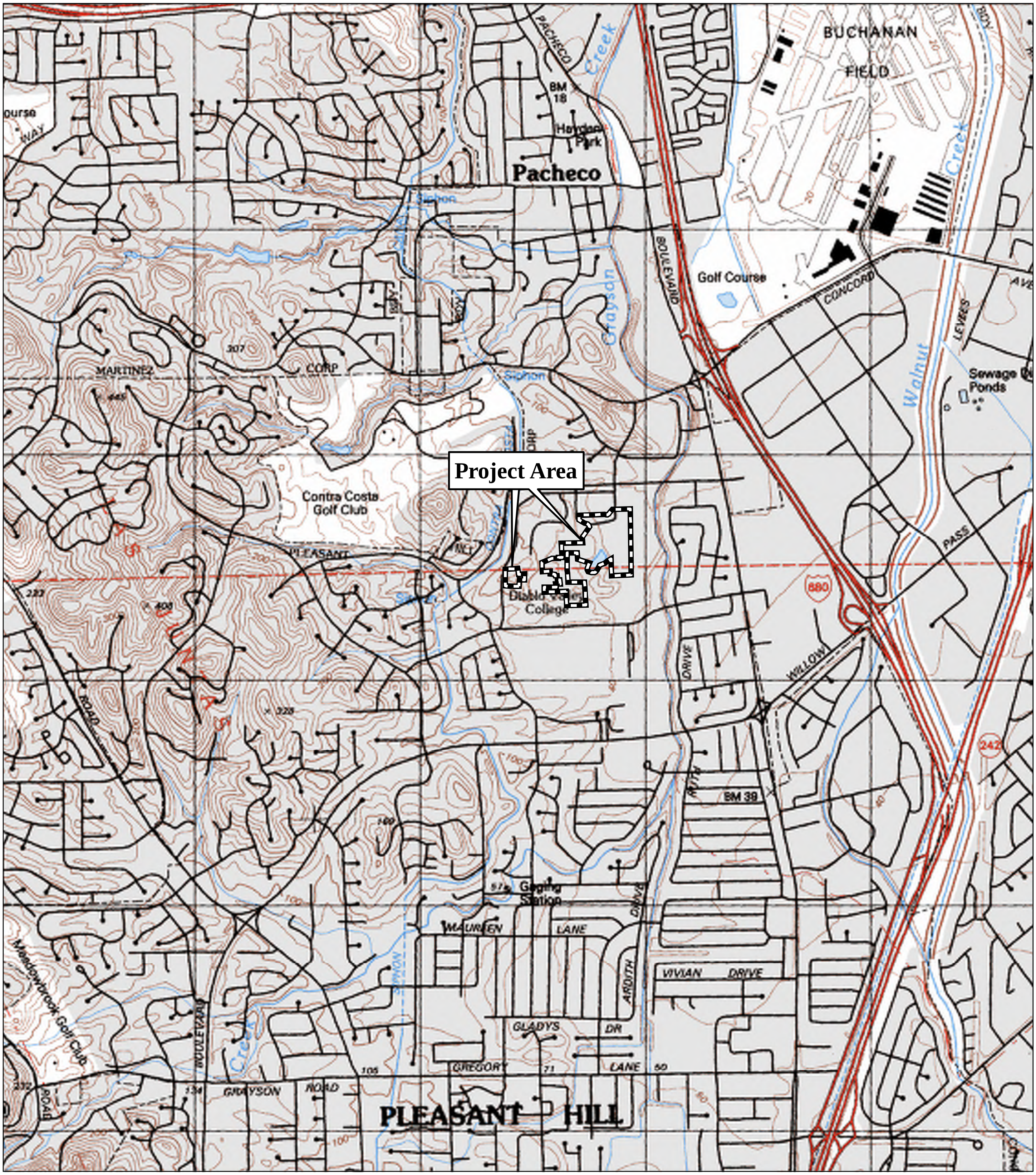

LSA

FIGURE 2

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Cultural and Paleontological Resources Study

Diablo Valley College Master Plan IS/MND
Pleasant Hill, Contra Costa County, California

Project Area

USGS 7.5' topographic quadrangle: *Walnut Creek, Calif.* 1999

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PROJECT SITE

The project site is within the 110-acre Diablo Valley Community College campus in Pleasant Hill, Contra Costa County, California and is situated in Township 1 North/Range 2 West, in unsectioned lands of Rancho Las Juntas, as shown on the *Walnut Creek, Calif.* 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle. The project site is bounded by Golf Club Road on the north, Stubbs Road on the west, Viking Road on the south, and Grayson Creek on the east. The project site contains 56 buildings housing administration offices, and student services; classrooms; laboratories; physical education facilities; a library and maintenance warehouse, and utility facilities. The campus is extensively landscaped and includes a large artificial pond situated between the Student Union and Gymnasium buildings. The project site built environment is in the central area of the campus and is surrounded by asphalt parking lots and athletic fields.

The project site is on moderately undulating terrain at approximately 40-120 feet above mean sea level. Geologically, the area is underlain by Holocene (10,000 years B.P.[1] to present) alluvial deposits that may extend to a depth of 13 feet below ground surface (Helley et al. 1979; Wagner et al. 1991). Underlying the Holocene alluvium are Late Pleistocene (126,000 to 10,000 years B.P.) alluvial deposits (Helley et al. 1979; Wagner et al. 1991). The Late Pleistocene alluvial deposits are underlain at an unknown depth by the Miocene (23,800,000 to 5,300,000 years B.P.) Monterey Formation of marine shale and sandstone and by the Miocene San Pablo Group of marine sandstone (Derrega, Gray, and Zafir 2003; Wagner et al. 1991).

The soils in the project site are of the Milsholm-Los Osos-Los Gatos Series, which includes Cut and Fill Land, Los Osos Clay Loam, Lodo Clay Loam; and the Clear Lake-Pescadero-Cropley Series, which includes Conejo Clay Loam, Cropley Clay, and Diablo Clay (U.C. Davis Soil Resource Laboratory 2008). These soils range from poorly to moderately well-developed. Los Osos Clay Loam, Lodo Clay Loam, and Diablo Clay are derived from the residuum weathered from the surrounding Miocene marine sandstone and shale. Conejo Clay Loam is derived from alluvium weathered from sedimentary rock. Cropley Clay is derived from alluvium. (U.C. Davis Soil Resource Laboratory 2008).

No natural water sources exist within the project site. The closest natural water source is Grayson Creek, a perennial creek on the eastern boundary of the project site.

The native vegetation community was a mixture of hardwood forest represented by broad-leaved forest formation, and California prairie grasses that extended northwesterly and southeasterly from the Carquinez Strait south of Vallejo, to the northern base of Mount Diablo (Küchler 1977). Currently, the project site is landscaped with sod, ivy, native grasses, pines, ash, redwoods, Italian Cypress, and various bushes and shrubs.

[1] Before Present

LEGISLATIVE CONTEXT

California Environmental Quality Act (CEQA)

CEQA requires that historical resources and unique archaeological resources be taken into consideration during the CEQA planning process (CCR Title 14(3) §15064.5; PRC §21083.2). If feasible, adverse effects to the significance of historical resources must be avoided or the effects mitigated (CCR Title 14(3) §15064.5(b)(4)). CEQA requires that all feasible mitigation be undertaken even if it does not mitigate impacts to a less than significant level (California Office of Historic Preservation 2001b:6; see also CCR Title 14(3) §15126.5 (a)(1)).

The term CEQA uses for significant cultural resources is "historical resource," which is defined as any resource that meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register;
- Listed in a local register of historical resources;
- Identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code; or
- Determined to be a historical resource by a project's lead agency.

A historical resource consists of "Any object, building, structure, site, area, place, record, or manu-script which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California . . . Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (CCR Title 14(3) § 15064.5(a)(3)). Archaeological resources may also be considered historical resources. For a cultural resource to qualify for listing in the California Register it must be significant under one or more of the following criteria:

- *Criterion 1*: Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- *Criterion 2*: Associated with the lives of persons important in our past;
- *Criterion 3*: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- *Criterion 4*: Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to being significant under one or more of these criteria, a resource must retain enough of its historic character and appearance to be recognizable as an historical resource and be able to convey the reasons for its significance (CCR Title 14 section 4852(c)). Generally, a cultural resource must be 50 years old or older.

Paleontological Resources

Paleontological resources are the fossilized remains of plants and animals and associated deposits. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources (Conformable Impact Mitigation Guidelines Committee 1995).

CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)).

Human Remains

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

BACKGROUND RESEARCH

Cultural Resources

Background research was done to identify cultural resources within and cultural resources studies of the project area. The background research consisted of records searches at the Northwest Information Center and the Native American Heritage Commission, and a literature review.

Records Searches. A records search (#07-1761) of the project site and a 1/4-mile radius was conducted on June 9, 2008, at the Northwest Information Center (NWIC) of the California Historical Resources Information System, Sonoma State University, Rohnert Park. The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of cultural resource records and reports for Contra Costa County.

There are no recorded cultural resources within the project site. One archaeological survey within the project site was done by Pacific Legacy, Inc. (Holson 1997). The survey consisted of an intensive pedestrian survey at two locations of proposed construction: one for a building to house faculty offices and classrooms; the other site for a new Physical Sciences Building. The survey report stated that "No cultural materials were noted in the exposed areas" (Holson 1997:3).

Two recorded built environment cultural resources, P-07-002695 and P-07-002648 are within a 1/4-mile of the project site (Herbert 2003; McMorris and McLoughlin 2005).

- *P-07-002695*, the Contra Costa Canal, is a linear water conveyance feature associated with the Central Valley Project. In 2005, the Contra Costa Canal was determined eligible by survey personnel. The California Department of Transportation and California Office of Historic Preservation concurred that the canal was eligible for listing in the National Register of Historic Places (National Register) under Criterion A for its association with the economic development of eastern Contra Costa County.

- *P-07-002648*, the Contra Costa Canal Bridges, a set of nine bridges that includes Bridge #28C0396, a single-span reinforced concrete bridge that carries Golf Club Road over the Contra Costa Canal near Paso Nogal Road at the northwestern corner of the project site. This bridge was built in 1940 and widened in 1974. Caltrans assigned a "5" to the bridge, indicating it is "ineligible for the National Register" due to loss of integrity.

As part of the records search, LSA reviewed the following State of California inventories for cultural resources in the project site:

- *California Inventory of Historic Resources* (California Department of Parks and Recreation 1976);
- *Five Views: An Ethnic Site Survey for California* (California Office of Historic Preservation 1988);
- *California Historical Landmarks* (California Office of Historic Preservation 1996);
- *Statewide Historic Bridges Inventory Update* (California Department of Transportation 2006);
- *California Points of Historical Interest* (California Office of Historic Preservation 1992); and
- *Directory of Properties in the Historic Property Data File* (California Office of Historic Preservation, March 7, 2008). The directory includes the listings of the National Register of Historic Places, National Historic Landmarks, the California Register of Historical Resources, California Historical Landmarks, and California Points of Historical Interest.

These inventories list do not list any cultural resources within the project site.

On June 9, 2008, LSA sent a letter describing the project with maps depicting the project site to the California Native American Heritage Commission (NAHC) requesting a review of the Sacred Lands File for any Native American cultural resources that might be affected by the project. The NAHC is the official state repository of Native American sacred site location records. Ms. Debbie Pilas-Treadway, NAHC Environmental Specialist III, responded in a faxed letter dated June 12, 2008, that the Sacred Lands File did not "indicate the presence of Native American cultural resources in the immediate project area."

Literature Review. LSA reviewed publications and maps for archaeological, ethnographic, historical, and environmental information about the project site and its vicinity. These resources did not describe or depict cultural resources within the project site. See the References Consulted section for the literature reviewed.

Archival Research. Background research was done at the CCCCD offices in Martinez to determine building construction date(s) for the Diablo Valley Community College; the general historical architectural context for these buildings; and the architects and builders associated with these buildings and any historical significance these individuals may have.

The archival research identified four buildings 50 years old or older: a ca.1952 prefabricated metal warehouse erected as part of the initial campus; a 1955 Business Education Building designed by

Martinez, California-based architect Harry Nakahara; a 1956 Gymnasium Building designed by Richmond, California-based architect Donald L. Hardison; and the 1958 Science Building, designed by the San Francisco-based architectural firm John Carl Warnecke and Associates with associate architect Charles F. Strothoff. Substantial subsequent work was done to the Science Building in 1974 by the Richmond, California-based architectural firm of Cometta & Cianfichi.

Further research was done at the Environmental Design Library at the University of California, Berkeley of architects identified on building blueprints on file at the CCCCD offices in Martinez. This research did not demonstrate these architects as significant.

Paleontological Resources

Background research was done to determine whether paleontological resources (fossils) and geologic units known to contain fossils are within or adjacent to the project site. This research consisted of a fossil locality search and a review of geological literature and maps.

Fossil locality search. A fossil locality search was conducted on July 9, 2008, by Dr. Pat Holroyd of the University of California Museum of Paleontology (UCMP), Berkeley. The purpose of this search was to (1) identify known paleontological areas within a ten-mile radius of the project site, and (2) identify the geologic formations and types of fossils that might be expected within and adjacent to the project site based on the existing geological and paleontological data.

There are no recorded fossil localities within or adjacent to the project site. Two vertebrate fossil localities are within half a mile of the project site, in the same Late Pleistocene alluvium that underlies the project site. The Late Pleistocene Rancholabrean (300,000 to 10,000 years B.P.) fossils from these localities include *Mammut americanum* (mammoth), *Megalonyx jeffersoni* and *Glossotherium harlani* (giant ground sloths), *Camelops* (camel), and *Equus* (horse), as well as mammalian and reptilian microfauna. Eleven other land and aquatic vertebrate fossil localities are within ten miles of the project site and include specimens from the Late Pleistocene Rancholabrean (300,000 to 10,000 years B.P.), Miocene Barstovian (15,500,000 to 11,800,000 years B.P.), Miocene Clarendonian (11,800,000 to 9,000,000 years B.P.), and Miocene Hemphillian (9,000,000-4,750,000 years B.P.) (Berkeley Natural History Museum 2008).

Literature Review. LSA reviewed paleontological and geological literature to identify the geological formations and paleontological resources that may occur at the project site.

The project site is situated on Holocene (10,000 years B.P. to present) alluvial deposits that may be as deep as 13 feet below ground surface (Helley et al. 1979; Wagner et al. 1991). Underlying the Holocene alluvium are Late Pleistocene (126,000 to 10,000 years B.P.) alluvial deposits (Helley et al. 1979; Wagner et al. 1991), which may contain significant Rancholabrean land mammal (300,000 to 10,000 years B.P.) vertebrate fossils (Bell et al. 2004; Kurtén and Anderson 1980; Savage 1951; Stirton 1951). The Late Pleistocene alluvial deposits are underlain at an unknown depth at the project site by the Miocene (23,800,000 to 5,300,000 years B.P.) Monterey Formation of marine shale and sandstone, and by the Miocene San Pablo Group of marine sandstone (Wagner et al. 1991), both of which may contain marine vertebrate and invertebrate fossils. No unique geologic features were identified. See the References Consulted section for the literature, maps, and websites reviewed.

FIELD SURVEY

Cultural Resources

LSA architectural historian Michael Hibma conducted a thorough historical architectural field survey of the project site on June 4, 2008. A supplemental survey was conducted on January 27, 2009 as per changes in the project plans that included the Business Education Building. Mr. Hibma reviewed the entire project site with a focus on the built environment resources identified in background research as 50 years old and older. The survey was documented with field notes, maps, and photographs. No significant built environment resources were identified by the architectural field survey.

LSA archaeologist Theodora Furstenberg conducted a thorough pedestrian archaeological survey of the project site on June 13, 2008. Areas surveyed included all of the exposed ground between and adjacent to buildings marked for demolition or renovation. Most of the area reviewed was heavily landscaped. No cultural resources were identified by the archaeological field survey.

Paleontological Resources

A lack of surface geological features in the project site precluded an effective field survey, and a paleontological field survey was not done.

STUDY RESULTS

Cultural Resources

Cultural resources identified within the project site consist of a ca. 1952 Storage Building; a Business Education Building built in 1955; a Gymnasium Building built in 1956; and a Science Building built in 1958. Although these built environment features meet the age requirement for eligibility consideration, none are eligible for listing in the California Register nor do they otherwise constitute historical resources in accordance with CEQA.[2]

LSA's background research and field survey did not identify any prehistoric or historical archaeological resources or ethnographic sites within the project site. The project site was predominately undeveloped land until the dedication of the East Contra Costa Junior College (predecessor to the Diablo Valley College) in 1952. Although not anticipated, there is always a possibility that subsurface archaeological features associated with activity before the creation of the modern college campus are present in the project site.

[2] Fifty years is used as a general estimate of the time needed to understand the historical importance of a resource (California Office of Historic Preservation 2006:3; CCR Title 14(11.5) §4852 (d)(2)) and cultural properties must generally be 50 years of age or more to be eligible for listing in the National Register (National Park Service 1997:2). The State of California Office of Historic Preservation recommends documenting, and taking into consideration in the planning process, any cultural resource that is 45 years or older (California Office of Historic Preservation 1995:2).

Paleontological Resources

This study did not identify any known paleontological resources within or adjacent to the project site. The proximity of two Late Pleistocene Rancholabrean (300,000 to 10,000 years B.P.) fossil localities in the same Late Pleistocene alluvial deposit as that underlying the project site, indicates that the area is sensitive for significant paleontological fossils. However, due to the substantial previous disturbance that has occurred in the project site, as well as the presence of artificial fill and Holocene alluvium, there is a low possibility of encountering significant paleontological resources during project ground-disturbing activities.

RECOMMENDATIONS

This study identified four buildings 50 years old or older in the project site, none of which qualify as "historical resources" under CEQA (CCR Title 14(3) § 15064.5(a)). Further study or protection of these cultural resources is not recommended.

Paleontological resources may be encountered if project ground-disturbance will occur in the Pleistocene alluvium and Miocene deposits underlying fill and Holocene alluvium. All fossils encountered during project ground-disturbing construction should be handled according to the accidental discovery section below.

In the event of discovery, project personnel should not collect or move any archaeological or paleontological materials or human remains and associated materials. Fill soils used for construction purposes should not contain archaeological or paleontological materials. Please see below for details.

Cultural Resources

Accidental Discovery. If deposits of prehistoric or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery should be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel should not collect or move any archaeological materials. It is recommended that adverse effects to such deposits be avoided by project activities. If such deposits cannot be avoided, they should be evaluated for their California Register of Historical Resources eligibility. If the deposit is not eligible, a determination shall be made as to whether it qualifies as a "unique archaeological resource" under CEQA. If the deposit is neither a historical nor unique archaeological resource, avoidance is not necessary. If the deposit is eligible to the California Register, or is a unique archaeological resource, it will need to be avoided by adverse effects or such effects must be mitigated. Adverse effects will be mitigated through the implementation of a treatment plan developed in consultation with the Contra Costa Community College District. Mitigation may consist of, but is not necessarily limited to, systematic recovery and analysis of archaeological deposits; recording the resource; preparation of a report of findings; and accessioning recovered archaeological materials at an appropriate curation facility. The report should be submitted to the Contra Costa Community College District and the Northwest Information Center.

Prehistoric materials can include flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Prehistoric sites often contain human remains. Historical materials can include wood, stone, concrete footings, walls, and other structural remains; and deposits of wood, glass, ceramics, metal, and other refuse.

Encountering Human Remains. If human remains are encountered, work within 25 feet of the discovery should be redirected and the Contra Costa County Coroner notified immediately. At the same time, an archaeologist should be contacted to assess the situation and consult with agencies as appropriate. Project personnel should not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. Upon completion of the assessment, the archaeologist should prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report should be submitted to the Contra Costa Community College District and the Northwest Information Center.

Paleontological Resources

Accidental Discovery. Should paleontological resources be encountered during project construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel should not collect or move any paleontological materials. It is recommended that adverse effects to such deposits be avoided by project activities. Paleontological resources are considered significant if they possess the possibility of providing new information regarding past life forms, paleoecology, stratigraphy, and geological formation processes. If found to be significant, and project activities cannot avoid the paleontological resources, adverse effects to paleontological resources shall be mitigated. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, a final report, and accessioning the fossil material and technical report to a paleontological repository. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting the assessment methods, findings, and recommendations shall be prepared and submitted to the Contra Costa Community College District, and, if paleontological materials are recovered, a paleontological repository, such as the University of California Museum of Paleontology, Berkeley.

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APPENDIX A

CONSULTATION CORRESPONDENCE

L S A

LSA ASSOCIATES, INC.
157 PARK PLACE
PT. RICHMOND, CALIFORNIA 94801
510.236.6810 TEL
510.236.3480 FAX

BERKELEY
CARLSBAD
COLMA
FORT COLLINS
IRVINE
PALM SPRINGS
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO

FAXED
JUN 9 2008

June 9, 2008

Larry Myers
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814
Fax: 916-657-5390

Subject: Diablo Valley College Facilities Master Plan Initial Study. Pleasant Hill, Contra Costa County, California; LSA Project #CTD0803

Dear Mr. Myers:

Diablo Valley College (DVC) is proposing the implementation of the DVC Master Plan, which includes demolition of campus buildings, renovation of buildings, and infrastructure improvements. LSA Associates, Inc. is conducting a study to determine if the project might affect cultural resources. Please review the Sacred Lands File for any Native American cultural resources that may be within or adjacent to the project area. The project area is located at 321 Golf Club Road in Pleasant Hill, Contra Costa County, in unsectioned land in Las Juntas Land Grant, Township 2 North/Range 2 West, Mount Diablo Base Line and Meridian, as depicted on the accompanying portion of the USGS *Walnut Creek, Calif.* 7.5' topographic map.

We also request a list of Native American individuals and organizations who may have knowledge of cultural resources in the project area. If you have any questions, please contact me at the address and phone number above or via e-mail (tim.jones@lsa-assoc.com). We look forward to hearing from you. Thank you.

Sincerely,

LSA ASSOCIATES, INC.

E. Timothy Jones, M.A., RPA #15531
Archaeologist/Cultural Resources Manager

LSA

FIGURE 1

Cultural and Paleontological Resources Study

Diablo Valley College Master Plan IS/MND
Pleasant Hill, Contra Costa County, California

Project Location and Vicinity

SOURCE: ©2006 DeLORME. STREET ATLAS USA®2006.

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L S A

FIGURE 2

Cultural and Paleontological Resources Study

Diablo Valley College Master Plan IS/MND

Pleasant Hill, Contra Costa County, California

Project Area

0 1,000 2,000
FEET

USGS 7.5' topographic quadrangle: *Walnut Creek, Calif* 1999

I:\CTD0801\GIS\Maps\Cultural\Figure2-ProjectArea.mxd (6/03/2008)

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov

June 12, 2008

E. Timothy Jones, M.A., RPA #15531
LSA ASSOCIATES, INC.
157 Park Place
Pt. Richmond, CA 94801

Sent by Fax: 510-236-3480
Number of Pages: 2

Re: Proposed Diablo Valley College Facilities Master Plan Initial Study, Contra Costa County.

Dear Mr. Jones:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

Debbie Pilas-Treadway

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
Contra Costa County
June 12, 2008

Katherine Erolinda Perez PO Box 717 Linden , CA 95236 (209) 887-3415	Ohlone/Costanoan Northern Valley Yokuts Bay Miwok
The Ohlone Indian Tribe Andrew Galvan PO Box 3152 Fremont , CA 94539 chochenyo@AOL.com (510) 882-0527 - Cell (510) 687-9393 - Fax	Ohlone/Costanoan Bay Miwok Plains Miwok Patwin
Trina Marine Ruano Family Ramona Garibay, Representative 16010 Halmar Lane Lathrop , CA 95330	Ohlone/Costanoan Bay Miwok Plains Miwok Patwin

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Diablo Valley College Facilities Master Plan Initial Study, Contra Costa County.

APPENDIX B

BUILDING PHOTOGRAPHS

Storage Building (ca. 1950)

Figure 1: Storage Building, northwest façades, view to the southeast.

Figure 2: Storage Building, northwest façades, view southwest.

Figure 3: Storage Building roof peak, south faced, detail of manufacturer's faceplate, view north.

Business Education Building (1955)

Figure 4: Business Education Building, east faced, view north.

Figures 5 & 6: Business Education Building, upper floor, west façade, views north and south.

Business Education Building (Continued)

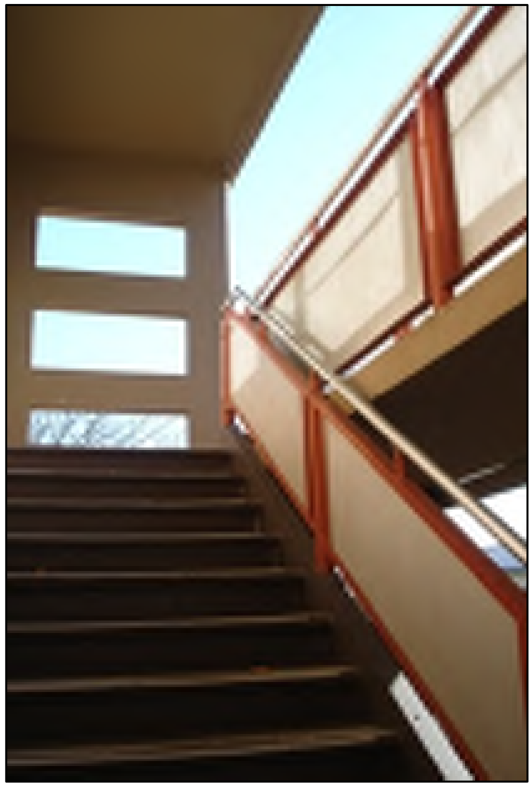

Figure 7: Business Education Building, south stairs, view south.

Figure 8: Business Education building, modern elevator addition, west façade, view east.

Gymnasium Building (1956)

Figure 9: Gymnasium Building, east façade, view west.

Figure 10: Gymnasium building, south façade, view north.

Gymnasium Building (Continued)

Figure 11: Gymnasium Building, main entrance and box office portion, south façade, view to the north.

Figure 12: Gymnasium Building, side entrance, box office portion, south façade, view to the north.

Science Building (1958)

Figure 13: Science Building, northwest façades, view to the southeast.



GEOTECHNICAL INVESTIGATION REPORT for PROPOSED SWITCHGEAR FACILITY (D4009) DIABLO VALLEY COMMUNITY COLLEGE

PLEASANT HILL, CA

FOR:
CONTRA COSTA COMMUNITY COLLEGE DISTRICT
500 COURT STREET
MARTINEZ, CA 94553

RMA Group
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January 25, 2017
16-772-P

RMA Group
Every Project Matters | www.rmacompanies.com

January 25, 2017 RMA Project No.: 16-772-0

Contra Costa Community College District
500 Court Street
Martinez, CA 94553

Attention: Mr. Ray Pyle

Subject: Geotechnical Investigation for
Proposed Electrical Switchgear Facility (D-4009)
Diablo Valley College
321 Golf Club Road
Pleasant Hill, CA

Dear Mr. Pyle:

In accordance with your request, a geotechnical investigation has been completed for the above-referenced project. The report addresses both engineering geologic and geotechnical conditions. The results of the investigation are presented in the accompanying report, which includes a description of site conditions, results of our field exploration and laboratory testing, conclusions, and recommendations.

We appreciate this opportunity to be of continued service to you. If you have any questions regarding this report, please do not hesitate to contact us at your convenience.

Respectfully submitted,

RMA Group

Josh Summers, PE
Project Engineer
PE 85240

PROFESSIONAL GEOLOGIST
GARY W. WALLACE
No. 1255
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Gary Wallace, PG|CEG
Vice President - Geology
CEG 1255

REGISTERED PROFESSIONAL ENGINEER
JORGE F. MENESES
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EXP. 06/18
GEOTECHNICAL
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Jorge Meneses, PE|GE|PhD|D.GE|F. ASCE
Principal Geotechnical Engineer
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RMA Group
Every *Project* **Matters** | www.rmacompanies.com

GEOTECHNICAL INVESTIGATION
FOR
PROPOSED SWITCHGEAR FACILITY (D-4009)
DIABLO VALLEY COLLEGE
321 GOLF CLUB ROAD
PLEASANT HILL, CA

for

Contra Costa Community College District
500 Court Street
Martinez, CA 94553

January 25, 2017

16-772-0

TABLE OF CONTENTS

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(Continued)

1.00 INTRODUCTION

1.01 Purpose

A geotechnical investigation has been completed for a new electrical switchgear facility at Diablo Valley College in Pleasant Hill, California. The purpose of the investigation was to summarize geotechnical and geologic conditions at the site, to assess their potential impact on the proposed development, and to develop geotechnical and engineering geologic design parameters.

1.02 Scope of the Investigation

The general scope of this investigation included the following:

- Review of published and unpublished geologic, seismic, groundwater and geotechnical literature.
- Examination of aerial photographs.
- Contacting of underground service alert to locate onsite utility lines.
- Locating of underground utilities using a private utility locator.
- Contacting the Contra Costa County Environmental Health Department and obtaining well permits for the drilling of exploratory borings.
- Logging, sampling and backfilling of 2 exploratory borings drilled with a CME-45B drill rig.
- Laboratory testing of representative soil samples.
- Geotechnical evaluation of the compiled data.
- Preparation of this report presenting our findings, conclusions and recommendations.

Our scope of work did not include a preliminary site assessment for the potential of hazardous materials onsite.

1.03 Site Location and Description

The proposed switchgear facility will be located within the existing Diablo Valley College campus in the City of Pleasant Hill, Contra Costa County, California. The address of the school is 321 Golf Club Road.

The school is bounded by Viking Drive to the south, residential development and the Contra Costa Canal to the west, Golf Club Road to the north, and Grayson Creek to the east (Figure 1). Its geographic position is at Latitude 37.96831° and Longitude -122.07004°.

The overall gradient of the property is about 30% to the west. Elevation at the site is approximately 62 feet above mean sea level.

The proposed switchgear facility at Diablo Valley College is situated within the existing college campus and is currently covered with maintained landscaping, asphalt pavement, and concrete walkways. The proposed facility site is located on the slope between parking lot 3 and the Engineering Technology complex, immediately south of an existing utility shed.

1.04 Current and Past Land Usage

Aerial photographs indicate that the proposed construction site was vacant from at least 1946 to 1949. Diablo Valley College officially opened in 1952. Aerial photographs reviewed from 1958 to 1968 show that significant construction occurred within the limits of the campus. Aerial photographs reviewed from 1980 to 2012 show that conditions within the proposed construction site during that time period were similar to conditions that currently exist at the site.

1.05 Planned Usage

It is our understanding that the proposed construction will consist of a single-story building covering approximately 450 square feet to house electrical equipment. In addition, the proposed construction will also include a retaining wall located immediately west of the proposed structure.

Our investigation was performed prior to the preparation of grading or foundation plans. To aid in preparation of this report, we utilized the following assumptions:

- Maximum foundation loads of 2 to 3 kips per linear foot for continuous footings and 60 kips for isolated spread footings.
- Cuts and fills will be less than 5 feet.

1.06 Investigation Methods

Our investigation consisted of office research, field exploration, laboratory testing, review of the compiled data, and preparation of this report. It has been performed in a manner consistent with generally accepted engineering and geologic principles and practices, and has incorporated requirements of California Geological Survey Note 48 and the California Buildings Code (CBC). Definitions of technical terms and symbols used in this report include those of the ASTM International, the California Building Code, and commonly used geologic nomenclature.

Technical supporting data are presented in the attached appendices. Appendix A presents a description of the methods and equipment used in performing the field exploration and logs of our subsurface exploration. Appendix B presents a description of our laboratory testing and the test results. Appendix C presents the results of site-specific seismic hazard analysis including the development of design acceleration response spectra for this project. Standard grading specifications and references are presented in Appendices C and D, respectively.

2.00 FINDINGS

2.01 Geologic Setting

The Diablo Valley College is located within the central Coast Ranges geomorphic province. This province consists of northwest trending mountain ranges and valleys that extend from southern California to Oregon. The bedrock within the Coast Ranges consists of a belt of sedimentary, volcanic and metamorphic rocks that have been deformed by transpressional stresses concentrated along the San Andreas fault zone. Valleys within the Coast Ranges are filled with Holocene age alluvium and older sedimentary deposits.

The proposed Switchgear facility is located in the eastern fringe of the Berkeley Hills just west of the Ygnacio Valley Groundwater Basin (California Department of Water Resources, 2004). According to regional geologic mapping by Dibblee and Minch (2005), the Switchgear site is underlain by the Tertiary age Briones Sandstone which has been locally folded into a syncline with steeply dipping limbs (Figure 2).

2.02 Earth Materials

Our subsurface investigation encountered asphalt, base, artificial fill and sedimentary bedrock.

The asphalt was found to be 4.5 inches thick in Boring B-3-1 and 4 inches thick in Boring B-3-2. Six inches of aggregate base was encountered beneath the asphalt in both borings.

Approximately 3.5 feet of artificial fill composed of sandy lean clay was found to underlie the base in Boring B-3-1.

Sandstone bedrock, the Briones Sandstone, was found to underlie the fill in Boring B-3-1 and the base in Boring B-3-2. It was observed to be yellowish brown in color with some reddish brown and gray brown mottling, fine to medium grained, very dense and hard. Blow counts using a 140 lbs hammer and 30 inch drop ranged from 32 to 50 for 3 inches for a California split spoon sampler and 50 for 3 inches to 86 for 11 inches for a standard penetration test sampler. The sandstone was observed to be essential massive with some subtle, high angle variations in grained sizes possibly suggestive of bedding. The sandstone was found to be underlain by brown claystone at a depth of 32 feet in Boring B-3-1 and light brown siltstone at a depth of 8.5 feet in Boring B-3-2. The siltstone or a harder underlying layer caused refusal to drilling at a depth of 10 feet in Boring B-3-2. Orientation of the contact between the sandstone and the underlying siltstone/claystone could not be determined by the drilling method used.

A Site Geologic Map showing the locations of our borings is presented as Figure 3. A geologic cross section is presented as Figure 4.

The subsurface soils encountered in the exploratory borings drilled at the site are described in greater detail on the logs contained in Appendix A.

2.03 Expansive Soils

Soil classification and particle size analysis indicate that near surface soils have a very low expansion potential.

2.04 Surface and Groundwater Conditions

No areas of ponding or standing water were present at the time of our study. Further, no springs or areas of natural seepage were found.

Minor groundwater seepage within the Briones Sandstone was encountered in Boring B-3-1 at a depth of 30 feet. However, California Department of Water Resources (Bulletin 118, 2004) did not identify the Briones Sandstone as a water bearing formation.

2.05 Faults

The site is not located within the boundaries of an Earthquake Fault Zone for fault-rupture hazard as defined by the Alquist-Priolo Earthquake Fault Zoning Act and no faults are known to pass through the property. The nearest Earthquake Fault Zone is located about 1¾ mile to the northeast along the Concord fault.

Locally, Dibblee (2005) mapped a fault concealed by alluvium about ¼ of a mile to the east of the Switchgear site and bedrock faults about ½ of a mile and more to the north and northwest of the Switchgear site (Figure 2). These faults are not unknown to be active and have not been included in Alquist-Priolo Earthquake Fault Zones.

The accompanying Regional Fault Map (Figure 4) illustrates the location of the site with respect to major faults in the region. The distance to notable faults within 100 kilometers of the site is presented on Table 1.

2.06 Historic Seismicity

Numerous large earthquakes have occurred in the San Francisco region, but none have been epicentered near the site. The most notable earthquakes in the region were the great San Francisco Earthquake of 1906 and the Loma Prieta Earthquake of 1989. The Great San Francisco Earthquake had a magnitude of approximately 7.8 and was epicentered about 86 miles from the site. The Loma Prieta Earthquake had a magnitude of 6.9 and was epicentered about 80 miles from the site.

Strong earthquakes that have occurred in this region in historic time and their approximate epicentral distances are summarized in Table 2.

Seismic design parameters relative to the requirements of the 2016 California Building Code and ASCE 7 are presented in Section 3.09.

2.07 Flooding Potential

According to Federal Emergency Management Agency (2009), the site is located within Flood Zone X, which is an area determined to be outside the 0.2% annual chance floodplain.

Control of surface runoff originating from within and outside of the site should, of course, be included in design of the project.

2.08 Landslides

Landslides were not encountered during the current subsurface investigation and topographic landforms suggestive of landslides were not apparent in the field or on aerial photographs.

On a regional perspective, Dibblee and Minch (2005) do not map any landslides within the site (Figure 2).

2.09 Other Geologic Hazard Considerations

California Geological Survey Note 48 (2013) identifies a number of exceptional geologic hazards that can occur at individual sites, but do not occur statewide. Evaluation of these exceptional conditions is referred to as a conditional geologic assessment by Note 48. Specific assessment items listed in Note 48 are addressed in the table on the following page.

CONDITIONAL GEOLOGIC ASSESSMENT

Hazard	Assessment	Reference
Methane gas, hydrogen-sulfide gas, tar seeps	Not applicable, site is not located within an oil field identified as a high risk area for hazardous gas accumulations.	See Section 2.02
Volcanic eruption	Not applicable, site is not is a known hazard area for volcanic eruptions.	Miller, 1989 (U.S.G.S. Bulletin 1847)
Flooding	The proposed development area is not located within the boundaries of a 100-year flood zone.	See Section 2.07
Tsunami and seiches inundation	Not applicable.	See Section 3.10
Radon-222 gas	Not applicable based on proposed use.	See Section 1.04
Naturally occurring asbestos	Not applicable, site is not underlain by serpentinite bedrock.	See Section 2.01
Hydrocollapse due to anthropic use of water	Not applicable, the site is underlain by bedrock.	See Section 2.01
Regional land subsidence	Not applicable, the site is underlain by bedrock.	See Section 2.01
Clays and cyclic softening	Not applicable, the site is underlain by bedrock.	See Section 3.04 and 3.12

3.00 CONCLUSIONS AND RECOMMENDATIONS

3.01 General Conclusion

Based on specific data and information contained in this report, our understanding of the project and our general experience in engineering geology and geotechnical engineering, it is our professional judgment that the proposed development is geologically and geotechnically feasible. This is provided that the recommendations presented below are fully implemented during design, grading and construction.

3.02 General Earthwork and Grading

All grading should be performed in accordance with the General Earthwork and Grading Specifications outlined in Appendix C, unless specifically revised or amended below. Recommendations contained in Appendix D are general specifications for typical grading projects and may not be entirely applicable to this project.

It is also recommended that all earthwork and grading be performed in accordance with Appendix J of the 2016 California Building Code (CBC) and all applicable governmental agency requirements. In the event of conflicts between this report and CBC Appendix J, this report shall govern.

3.03 Earthwork Shrinkage and Subsidence

Shrinkage is the decrease in volume of soil upon removal and recompaction expressed as a percentage of the original in-place volume. Subsidence occurs as natural ground is densified to receive fill. These factors account for changes in earth volumes that will occur during grading. Our estimates are as follows:

- Shrinkage factor = 0%-6% for soil removed and replaced as compacted fill.
- Subsidence factor = 0 - 0.06 feet.

The degree to which fill soils are compacted and variations in the insitu density of existing soils will influence earth volume changes. Consequently, some adjustments in grades near the completion of grading could be required to balance the earthwork.

3.04 Removals and Overexcavation

All vegetation, trash and debris should be cleared from the grading area and removed from the site. Prior to placement of compacted fills, all non-engineered fills and loose, porous, or compressible soils will need to be removed down to competent ground. Removal and requirements will also apply to cut areas, if the depth of cut is not sufficient to reach competent ground. Removed and/or overexcavated soils may be moisture-conditioned and recompacted as engineered fill, except for soils containing detrimental amounts of organic material. Estimated depths of removals are as follows:

- It is expected that competent native soils will be encountered in cuts deeper than approximately 1 to 3 feet below existing grade or the base of existing non-engineered fill. Provided competent soils are exposed, these cut surfaces should be scarified to a minimum depth of 12 inches, moisture conditioned and compacted to at least 90 percent of the maximum dry density, provided that footing overexcavation requirements are met.
- Soils disturbed by demolition of existing structures will need to be over-excavated to competent native ground and then scarified to a minimum depth of 12 inches, moisture conditioned and compacted to at least 90 percent of the maximum dry density

- The asphalt and concrete currently onsite may be either processed and placed in the compacted fill, or hauled off the site. If the asphalt and concrete is use as fill material, it must be broken down to approximately 4 to 8-inch particles and mixed thoroughly with on-site soils. No large and flat pieces are to be used for fill. If asphalt is processed by grinding, it cannot be used in fills and must be removed from the site.

In addition to the above requirements, overexcavation will also need to meet the following criteria for the building pads, concrete flatwork and pavement areas:

- Provided that the undisturbed bedrock is fully exposed at the foundation level, footing areas will not require overexcavation.
- If bedrock is not exposed or if bedrock is only partially exposed at the foundation level, overexcavation should be performed as follows: (1) All footing areas, both continuous and spread, shall be undercut, moistened, and compacted as necessary to produce soils compacted to a minimum of 95% relative compaction to a depth equal to the width of the footing below the bottom of the footing or to a depth of 3 feet below the bottom of the footing, whichever is less. Footing areas shall be defined as the area extending from the edge of the footing for a distance of 5 feet. (2) Alternatively, footings may be deepened to provide a minimum of 12 inches of embedment into bedrock.
- All floor slabs, concrete flatwork and paved areas shall be underlain by a minimum of 12 inches of soil compacted to a minimum of 90% relative compaction.

The exposed soils beneath all overexcavation should be scarified an additional 12 inches, moisture conditioned and compacted to a minimum of 90% relative compaction.

The above recommendations are based on the assumption that soils encountered during field exploration are representative of soils throughout the site. However, there can be unforeseen and unanticipated variations in soils between points of subsurface exploration. Hence, overexcavation depths must be verified, and adjusted if necessary, at the time of grading. The overexcavated materials may be moisture-conditioned and re-compacted as engineered fill.

3.05 Rippability and Rock Disposal

Our exploratory borings were advanced without difficulty and no oversize materials were encountered in our subsurface investigation. Accordingly we expect that all earth materials will be rippable with conventional heavy duty grading equipment and oversized materials are not expected.

It should be noted that some excavation difficulty may be encountered during construction when excavating into the bedrock encountered in our exploratory borings.

3.06 Subdrains

Surface water was not present at the time of our investigation. Minor Seepage was encountered in boring B-3-1 at a depth of about 30 feet below the ground surface. However, this is well below the anticipated depths of grading. Consequently, installation of subdrains is not expected to be necessary.

3.07 Fill and Cut Slopes

Fill and cut slopes reaching maximum heights feet of approximately 12 feet at inclinations of 2 to 1 (horizontal to vertical, H:V) or flatter are expected to be grossly and surficially stable. This is provided that fill slopes are properly keyed and compacted, as indicated in Appendix C, and cut slopes expose bedrock with favorable geologic structure and competent soils. Cut and fill slope stability should be further reviewed upon development of a grading plan.

3.08 Faulting

Since the site is not located within the boundaries of an Earthquake Fault Zone and no faults are known to pass through the property, surface fault rupture within the site is considered unlikely.

3.09 Seismic Design Parameters

The potential damaging effects of regional earthquake activity must be considered in the design of structures.

Mapped Design Parameters

Mapped seismic design parameters have been developed in accordance with Section 1613A of the 2016 California Building Code (CBC) using the online U.S. Geological Survey Seismic Design Maps Calculator (ASCE 10 Standard), a site characterization as Site Class C, and a site location based on latitude and longitude. The parameters generated for the subject site are summarized below:

2016 California Building Code Seismic Parameters

Parameter	Value
Site Location	Latitude = 37.96831 degrees Longitude = -122.07004 degrees
Site Class	Site Class = C Soil Profile Name = Very Dense Soil and Soft Rock
Mapped Spectral Accelerations (Site Class B)	S_s (0.2- second period) = 1.887g S_1 (1-second period) = 0.663g
Site Coefficients (Site Class C)	F_a = 1.000 F_v = 1.300
Maximum Considered Earthquake (MCE) Spectral Accelerations (Site Class C)	S_{MS} (short, 0.2- second period) = 1.887g S_{M1} (1-second period) = 0.862g
Design Earthquake (DE) Spectral Accelerations (Site Class C)	S_{DS} (short, 0.2- second period) = 1.258g S_{D1} (1-second period) = 0.575g

The above table shows that the mapped spectral response acceleration parameter a 1-second period (S_1) $<$ 0.75g. Therefore, for the Seismic Design Category is D for all Risk Categories (CBC Section 1613A.5.6). Consequently, as required for Seismic Design Categories D through F by CBC Section 1803A.5.12, lateral pressures for earthquake ground motions, liquefaction and soil strength loss have been evaluated (see Sections 3.10 and 3.16).

Peak earthquake ground acceleration adjusted for site class effects (PGA_M) has been calculated in accordance with ASCE 7-10 Section 11.8.3 as follows: $PGA_M = F_{PGA} \times PGA = 1.000 \times 0.716 = 0.716$g.

3.10 Liquefaction and Secondary Earthquake Hazards

Potential secondary seismic hazards that can affect land development projects include liquefaction, tsunamis, seiches, seismically induced settlement, seismically induced flooding and seismically induced landsliding.

Liquefaction

Liquefaction is a phenomenon where earthquake- induced ground vibrations increase the pore pressure in saturated, granular soils until it is equal to the confining, overburden pressure. When this occurs, the soil can completely lose its shear strength and enter a liquefied state. The possibility of liquefaction is dependent upon grain size, relative density, confining pressure, saturation of the soils, and intensity and duration of ground shaking. In order for liquefaction to occur, three criteria must be met: underlying loose, coarse-grained (sandy) soils, a groundwater depth of less than about 50 feet, and a potential for seismic shaking from nearby large-magnitude earthquake.

Because the site is underlain by bedrock, the potential for liquefaction is nil.

It should be noted that the California Geological Survey has not yet prepared a Seismic Hazard Zone Map of potential liquefaction hazards for the quadrangle in which the site is located.

Tsunamis and Seiches

Tsunamis are sea waves that are generated in response to large-magnitude earthquakes. When these waves reach shorelines, they sometimes produce coastal flooding. Seiches are the oscillation of large bodies of standing water, such as lakes, that can occur in response to ground shaking. Tsunamis and seiches do not pose hazards due to the inland location of the site and lack of nearby bodies of standing water.

Seismically Induced Settlement

Seismically induced settlement occurs most frequently in areas underlain by loose, granular sediments. Damage as a result of seismically induced settlement is most dramatic when differential settlement occurs in areas with large variations in the thickness of underlying sediments. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement.

Because the site is underlain by bedrock, no significant seismically induced settlement is expected to occur at the site.

Seismically Induced Flooding

There are no up gradient water reservoirs or dams located in close proximity of the site. Consequently seismically induced flooding at the site is unlikely.

Seismically Induced Landsliding

Since the bedrock within the site consists of dense, essentially massive sandstone, seismically induced landsliding is unlikely to occur at the site. It should be noted that the California Geological Survey has not yet prepared a Seismic Hazard Zone Map of potential earthquake-induced landslide hazards for the quadrangle in which the site is located.

3.11 Foundations

Isolated spread footings and/or continuous wall footings are recommended to support the proposed structures. If the recommendations in the section on grading are followed and footings are established in firm native soils or compacted fill materials, footings may be designed using the following allowable soil bearing values:

- Continuous Wall Footings:

  Footings having a minimum width of 12 inches and a minimum depth of 12 inches below the lowest adjacent grade have allowable bearing capacity of 3,250 pounds per square foot (psf). This value may be increased by 10% for each additional foot of width and/or depth to a maximum value of 5,250 psf.

- Isolated Spread Footings:

  Footings having a minimum width of 12 inches and a minimum depth of 12 inches below the lowest adjacent grade have allowable bearing capacity of 3,500 psf. This value may be increased by 10% for each additional foot of width or depth to a maximum value of 5,250 psf.

- Retaining Wall Footings:

  Footings for retaining walls should be founded a minimum depth of 12 inches and have a minimum width of 12 inches. Footings may be designed using the allowable bearing capacity and lateral resistance values recommended for building footings. However, when calculating passive resistance, the upper 6 inches of the footings should be ignored in areas where the footings will not be covered with concrete flatwork. This value may also be increased by 10% for each additional foot of width or depth to a maximum value of 5,250 psf. Reinforcement should be provided for structural considerations as determined by the design engineer.

The above bearing capacities represent an allowable net increase in soil pressure over existing soil pressure and may be increased by one-third for short-term wind or seismic loads. The maximum expected settlement of footings designed with the recommended allowable bearing capacity is expected to be on the order of ½ inch with differential settlement on the order of ¼ inch.

Soils at the site are generally granular, non-plastic and non-expansive in nature. Therefore, reinforcement of footings for expansive soil is not required. However, in view of the seismic setting, a nominal reinforcement consisting of one #4 bar placed within 3 inches of the top of footings and another placed within 3 inches of the bottom of footings is recommended. The structural engineer may require heavier reinforcement.

Due to the preliminary nature of the expansion tests performed for this study, we recommend additional testing be performed near the completion of rough grading to verify the test results and recommended foundation design criteria.

3.12 Foundation Setbacks from Slopes

Setbacks for footings adjacent to slopes should conform to the requirements of the California Building Code (CBC). Specifically, footings should maintain a horizontal distance or setback between any adjacent slope face and the bottom outer edge of the footing.

For slopes descending away from the foundation, the horizontal distance may be calculated by using h/3, where h is the height of the slope. The horizontal setback should not be less than 5 feet, nor need not be greater than 40 feet (per CBC). Where structures encroach within the zone of h/3 from the top of the slope the setback may be maintained by deepening the foundations. Flatwork and utilities within the zone of h/3 from the top of slope may be subject to lateral distortion caused by gradual downslope creep. Walls, fences and landscaping improvements constructed at the top of descending slopes should be designed with consideration of the potential for gradual downslope creep.

For ascending slopes, the horizontal setback required may be calculated by using h/2 where h is the height of the slope. The horizontal setback need not be greater than 15 feet (per CBC).

3.13 Slabs on Grade

We recommend the use of unreinforced slabs on grade for structures. These floor slabs should have a minimum thickness of 4 inches and should be divided into squares or rectangles using weakened plane joints (contraction joints), each with maximum dimensions not exceeding 15 feet. Contraction joints should be made in accordance with American Concrete Institute (ACI) guidelines. If weakened plane joints are not used, then the slabs shall be reinforced with 6x6-10/10 welded wire fabric placed at mid-height of the slab.

If heavy concentrated or moving loads are anticipated, slabs should be designed using a modulus of subgrade reaction (k) of 120 psi/in when soils are prepared in conformance with the grading recommendations contained within the report.

Special care should be taken on floors slabs to be covered with thin-set tile or other inflexible coverings. These areas may be reinforced with 6x6-10/10 welded wire fabric placed at mid-height of the slab, to mitigate drying shrinkage cracks. Alternatively, inflexible flooring may be installed with unbonded fabric or liners to prevent reflection of slab cracks through the flooring.

A moisture vapor retarder/barrier is recommended beneath all slabs-on-grade that will be covered by moisture-sensitive flooring materials such as vinyl, linoleum, wood, carpet, rubber, rubber-backed carpet, tile, impermeable floor coatings, adhesives, or where moisture-sensitive equipment, products, or environments will exist. We recommend that design and construction of the moisture vapor retarder or barrier conform to Section 1805A of the 2016 California Building Code (CBC) and pertinent sections of American Concrete Institute (ACI) guidance documents 302.1R-04, 302.2R-06 and 360R-10.

The moisture vapor retarder/barrier should consist of a minimum 10 mils thick polyethylene with a maximum perm rating of 0.3 in accordance with ASTM E 1745. Seams in the moisture vapor retarder/barrier should be overlapped no less than 6 inches or in accordance with the manufacturer's recommendations. Joints and penetrations should be sealed with the manufacturer's recommended adhesives, pressure-sensitive tape, or both. The contractor must avoid damaging or puncturing the vapor retarder/barrier and repair any punctures with additional polyethylene properly lapped and sealed.

ACI guidelines allow for the placement of moisture vapor retarder/barriers either directly beneath floor slabs or below an intermediate granular soil layer.

The moisture vapor retarder/barrier may be placed directly beneath the floor slab with no intermediate granular fill layer. This method of construction will provide improved curing of the slab bottom and will eliminate potential problems caused by water being trapped in a granular fill layer. However, concrete slabs poured directly on a moisture vapor retarder/barrier can experience shrinkage cracking and curling due to differential rates of curing through the thickness of the slab. Therefore, for concrete placed directly on the moisture vapor retarder/barrier, we recommend a maximum water cement ratio of 0.45 and the use of water-reducing admixtures to increase workability and decrease bleeding.

Alternatively, the slabs may be constructed by placing a 4-inch layer of granular soil over the moisture vapor retarder/barrier in accordance with ACI 302.1R-04. Granular fill should consist of clean, fine-graded materials with 10% to 30% passing the No. 100 sieve and free from clay or silt. The granular layer should be uniformly compacted and trimmed to provide the full design thickness of the proposed slab. The granular fill layer should not be left exposed to rain or other sources of water such as wet-grinding, power washing, pipe leaks or other processes, and should be dry at the time of concrete placement. Granular fill layers that become saturated should be removed and replaced prior to concrete placement.

3.14 Miscellaneous Concrete Flatwork

Miscellaneous concrete flatwork and walkways may be designed with a minimum thickness of 4 inches. Large slabs should be reinforced with a minimum of 6x6-10/10 welded wire mesh placed at miC-height in the slab. Control joints should be constructed to create squares or rectangles with a maximum spacing of 15 feet.

Walkways may be constructed without reinforcement. Walkways should be separated from foundations with a thick expansion joint filler. Control joints should be constructed into non-reinforced walkways at a maximum of 5 feet spacing.

The subgrade soils beneath all miscellaneous concrete flatwork should be compacted to a minimum of 90 percent relative compaction for a minimum depth of 12 inches. The geotechnical engineer should monitor the compaction of the subgrade soils and perform testing to verify that proper compaction has been obtained.

3.15 Footing Excavation and Slab Preparations

All footing excavations should be observed by the geotechnical consultant to verify that they have been excavated into competent soils. The foundation excavations should be observed prior to the placement of forms, reinforcement steel, or concrete. These excavations should be evenly trimmed and level. Prior to concrete placement, any loose or soft soils should be removed. Excavated soils should not be placed on slab or footing areas unless properly compacted.

Prior to the placement of the moisture barrier and sand, the subgrade soils underlying the slab should be observed by the geotechnical consultant to verify that all under-slab utility trenches have been properly backfilled and compacted, that no loose or soft soils are present, and that the slab subgrade has been properly compacted to a minimum of 90 percent relative compaction within the upper 12 inches.

Footings may experience and overall loss in bearing capacity or an increased potential to settle where located in close proximity to existing or future utility trenches. Furthermore, stresses imposed by the footings on the utility lines may cause cracking, collapse and/or a loss of serviceability. To reduce this risk, footings should extend below a 1:1 plane projected upward from the closest bottom of the trench.

Slabs on grade and walkways should be brought to a minimum of 2% and a maximum of 6% above their optimum moisture content for a depth of 18 inches prior to the placement of concrete. The geotechnical consultant should perform insitu moisture tests to verify that the appropriate moisture content has been achieved a maximum of 24 hours prior to the placement of concrete or moisture barriers.

3.16 Lateral Load Resistance

Lateral loads may be resisted by soil friction and the passive resistance of the soil. The following parameters are recommended.

- Passive Earth Pressure = 351 pcf (equivalent fluid weight).
- Coefficient of Friction (soil to footing) = 0.37
- Retaining structures should be designed to resist the following lateral active earth pressures:

Surface Slope of Retained Materials (Horizontal:Vertical)	Equivalent Fluid Weight (pcf)
Level	39
5:1	41
4:1	43
3:1	47
2:1	63

These active earth pressures are only applicable if the retained earth is allowed to strain sufficiently to achieve the active state. The required minimum horizontal strain to achieve the active state is approximately 0.0025H. Retaining structures should be designed to resist an at-rest lateral earth pressure if this horizontal strain cannot be achieved.

- At-rest Lateral Earth Pressure = 59 pcf (equivalent fluid weight)

The Mononobe-Okabe method is commonly utilized for determining seismically induced active and passive lateral earth pressures and is based on the limit equilibrium Coulomb theory for static stress conditions. This method entails three fundamental assumptions (e.g., Seed and Whitman, 1970): Wall movement is sufficient to ensure either active or passive conditions, the driving soil wedge inducing the lateral earth pressures is formed by a planar failure surface starting at the heel of the wall and extending to the free surface of the backfill, and the driving soil wedge and the retaining structure act as rigid bodies, and therefore, experiences uniform accelerations throughout the respective bodies (U.S. Army Corps of Engineers, 2003, Engineering and Design - Stability Analysis of Concrete Structures).

- Seismic Lateral Earth Pressure = 20 pcf (equivalent fluid weight).

The seismic lateral earth pressure given above is an inverted triangle, and the resultant of this pressure is an increment of force which should be applied to the back of the wall in the upper 1/3 of the wall height.

3.17 Drainage and Moisture Proofing

Surface drainage should be directed away from the proposed structure into suitable drainage devices. Neither excess irrigation nor rainwater should be allowed to collect or pond against building foundations or within low-lying or level areas of the lot. Surface waters should be diverted away from the tops of slopes and prevented from draining over the top of slopes and down the slope face.

Walls and portions thereof that retain soil and enclose interior spaces and floors below grade should be waterproofed and dampproofed in accordance with CBC Section 1805A.

Retaining structures should be drained to prevent the accumulation of subsurface water behind the walls. Backdrains should be installed behind all retaining walls exceeding 3 feet in height. A typical detail for retaining wall back drains is presented in Appendix C. All backdrains should be outlet to suitable drainage devices. Retaining wall less than 3 feet in height should be provided with backdrains or weep holes. Dampproofing and/or waterproofing should also be provided on all retaining walls exceeding 3 feet in height.

3.18 Cement Type and Corrosion Potential

Soluble sulfate tests indicate that concrete at the subject site will have a negligable exposure to water-soluble sulfate in the soil. Our recommendations for concrete exposed to sulfate-containing soils are presented in the table below.

Recommendations for Concrete exposed to Sulfate-containing Soils

Sulfate Exposure	Water Soluble Sulfate (SO_4) in Soil (% by Weight)	Sulfate (SO_4) in Water (ppm)	Cement Type (ASTM C150)	Maximum Water-Cement Ratio (by Weight)	Minimum Compressive Strength (psi)
Negligible	0.00 - 0.10	0-150	--	--	2,500
Moderate	0.10 - 0.20	150-1,500	II	0.50	4,000
Severe	0.20 - 2.00	1,500-10,000	V	0.45	4,500
Very Severe	Over 2.00	Over 10,000	V plus pozzolan or slag	0.45	4,500

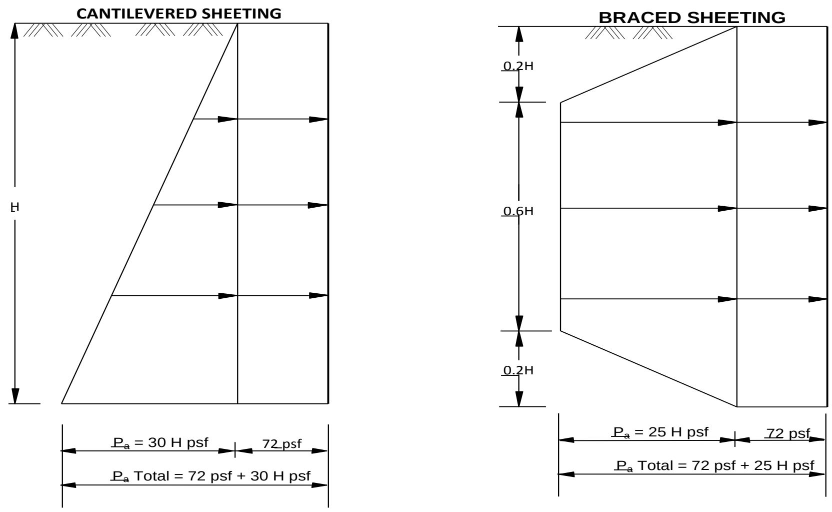
Use of alternate combinations of cementitious materials may be permitted if the combinations meet design recommendations contained in American Concrete Institute guideline ACI 318-11.

The soils were also tested for soil reactivity (pH) and electrical resistivity (ohm-cm). The test results indicate that the on-site soils have a soil reactivity of 7.85, an electrical resistivity of 1,550 ohm-cm and a chloride content of 15.7 ppm. A neutral or non-corrosive soil has a value ranging from 5.5 to 8.4. Generally, soils that could be considered moderately corrosive to ferrous metals have resistivity values of about 3,000 ohm-cm to 10,000 ohm-cm. Soils with resistivity values less than 3,000 ohm-cm can be considered corrosive and soils with resistivity values less than 1,000 ohm-cm can be considered extremely corrosive. Chloride contents of approximately 500 ppm or greater are generally considered corrosive.

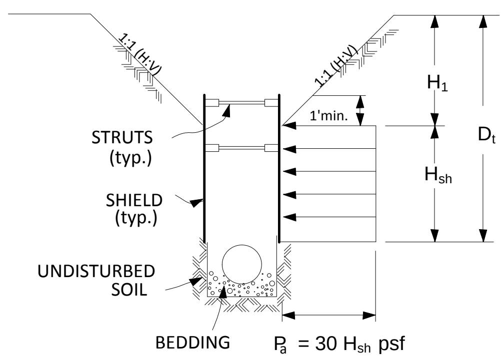
Based on our analysis, it appears that the underlying onsite soils are corrosive to ferrous metals. Protection of buried pipes utilizing coatings on all underground pipes; clean backfills and a cathodic protection system can be effective in controlling corrosion. A qualified corrosion engineer should be consulted to further assess the corrosive properties of the soil.

3.19 Temporary Slopes

Excavation of utility trenches will require either temporary sloped excavations or shoring. Temporary excavations in existing alluvial soils may be safely made at an inclination of 1:1 or flatter. If vertical sidewalls are required in excavations greater than 5 feet in depth, the use of cantilevered or braced shoring is recommended. Excavations less than 5 feet in depth may be constructed with vertical sidewalls without shoring or shielding. Our recommendations for lateral earth pressures to be used in the design of cantilevered and/or braced shoring are presented below. These values incorporate a uniform lateral pressure of 72 psf to provide for the normal construction loads imposed by vehicles, equipment, materials, and workmen on the surface adjacent to the trench excavation. However, if vehicles, equipment, materials, etc., are kept a minimum distance equal to the height of the excavation away from the edge of the excavation, this surcharge load need not be applied.



SHORING DESIGN: LATERAL SHORING PRESSURES



HEIGHT OF SHIELD, H_{sh} = DEPTH OF TRENCH, D_t , MINUS DEPTH OF SLOPE, H_1

TYPICAL SHORING DETAIL

Design of the shield struts should be based on a value of 0.65 times the indicated pressure, Pa, for the approximate trench depth. The wales and sheeting can be designed for a value of 2/3 the design strut value.

Placement of the shield may be made after the excavation is completed or driven down as the material is excavated from inside of the shield. If placed after the excavation, some overexcavation may be required to allow for the shield width and advancement of the shield. The shield may be placed at either the top or the bottom of the pipe zone. Due to the anticipated thinness of the shield walls, removal of the shield after construction should have negligible effects on the load factor of pipes. Shields may be successively placed with conventional trenching equipment.

Vehicles, equipment, materials, etc. should be set back away from the edge of temporary excavations a minimum distance of 15 feet from the top edge of the excavation. Surface waters should be diverted away from temporary excavations and prevented from draining over the top of the excavation and down the slope face. During periods of heavy rain, the slope face should be protected with sandbags to prevent drainage over the edge of the slope, and a visqueen liner placed on the slope face to prevent erosion of the slope face.

Periodic observations of the excavations should be made by the geotechnical consultant to verify that the soil conditions have not varied from those anticipated and to monitor the overall condition of the temporary excavations over time. If at any time during construction conditions are encountered which differ from those anticipated, the geotechnical consultant should be contacted and allowed to analyze the field conditions prior to commencing work within the excavation.

Cal/OSHA construction safety orders should be observed during all underground work.

3.20 Utility Trench Backfill

The onsite fill soils will not be suitable for use as pipe bedding for buried utilities. All pipes should be bedded in a sand, gravel or crushed aggregate imported material complying with the requirements of the Standard Specifications for Public Works Construction Section 306-1.2.1. Crushed rock products that do not contain appreciable fines should not be utilized as pipe bedding and/or backfill. Bedding materials should be densified to at least 90% relative compaction (ASTM D1557) by mechanical methods. The geotechnical consultant should review and approve of proposed bedding materials prior to use.

The on-site soils are expected to be suitable as trench backfill provided they are screened of organic matter and cobbles over 12 inches in diameter. Trench backfill should be densified to at least 90% relative compaction (ASTM D1557). On-site granular soils may be water densified initially. Supplemental mechanical compaction methods may be required in finer ground soils to attain the required 90% relative compaction.

All utility trench backfill within street right of way, utility easements, under or adjacent to sidewalks, driveways, or building pads should be observed and tested by the geotechnical consultant to verify proper compaction. Trenches excavated adjacent to foundations should not extend within the footing influence zone defined as the area within a line projected at a 1:1 drawn from the bottom edge of the footing. Trenches crossing perpendicular to foundations should be excavated and backfilled prior to the construction of the foundations. The excavations should be backfilled in the presence of the geotechnical engineer and tested to verify adequate compaction beneath the proposed footing.

Cal/OSHA construction safety orders should be observed during all underground work.

3.21 Pavement Sections

Structural sections were designed using the procedures outlined in Chapter 630 of the California Highway Design Manual (Caltrans, 2008). This procedure uses the principle that the pavement structural section must be of adequate thickness to distribute the load from the design traffic index (TI) to the subgrade soils in such a manner that the stresses from the applied loads do not exceed the strength of the soil (R-value). A subgrade R-Value of 15 was assumed for use in the design of the pavement structural sections presented below.

Development of the design traffic indexes on the basis of a traffic study is beyond the scope of this report; however, our experience indicates that traffic index of 5 is typical for parking lots. We have provided alternate structural sections for each traffic index. Selection of the final pavement structural section should be based on economic considerations which are beyond the scope of this investigation.

Recommended structural sections are as follows:

<u>Parking Lots (TI=5, R-Value=15):</u>

<u>Parking Lots (TI=5, R-Value=15):</u>

3.0 inches of asphaltic concrete over 8.0 inches of crushed aggregate base	4.0 inches of asphalt concrete over 6.0 inches of crushed aggregate base

Portland cement concrete (PCC) pavements for areas which are not subject to traffic loads may be designed with a minimum thickness of 4.0 inches of Portland cement concrete on compacted native soils. If traffic loads are anticipated, PCC pavements should be designed for a minimum thickness of 6.0 inches of Portland cement concrete on 4.0 inches of crushed aggregate base.

Prior to paving, the subgrade soils should be scarified and the moisture adjusted to within 2% of the optimum moisture content. The subgrade soils should be compacted to a minimum of 90% relative compaction. All aggregate base courses should be compacted to a minimum of 95% relative compaction.

3.22 Plan Review

Once a formal grading and foundation plans are prepared for the subject property, this office should review the plans from a geotechnical viewpoint, comment on changes from the plan used during preparation of this report and revise the recommendations of this report where necessary.

3.23 Geotechnical Observation and Testing During Rough Grading

The geotechnical engineer should be contacted to provide observation and testing during the following stages of grading:

- During the clearing and grubbing of the site.
- During the demolition of any existing structures, buried utilities or other existing improvements.
- During excavation and overexcavation of compressible soils.
- During all phases of grading including ground preparation and filling operations.
- When any unusual conditions are encountered during grading.

A final geotechnical report summarizing conditions encountered during grading should be submitted upon completion of the rough grading operations.

3.24 Post-Grading Geotechnical Observation and Testing

After the completion of grading the geotechnical engineer should be contacted to provide additional observation and testing during the following construction activities:

- During trenching and backfilling operations of buried improvements and utilities to verify proper backfill and compaction of the utility trenches.
- After excavation and prior to placement of reinforcing steel or concrete within footing trenches to verify that footings are properly founded in competent materials.
- During fine or precise grading involving the placement of any fills underlying driveways, sidewalks, walkways, or other miscellaneous concrete flatwork to verify proper placement, mixing and compaction of fills.
- When any unusual conditions are encountered during construction.

4.00 CLOSURE

The findings, conclusions and recommendations in this report were prepared in accordance with generally accepted engineering and geologic principles and practices. No other warranty, either expressed or implied, is made. This report has been prepared for Contra Costa Community College District to be used solely for design purposes. Anyone using this report for any other purpose must draw their own conclusions regarding required construction procedures and subsurface conditions.

The geotechnical and geologic consultant should be retained during the earthwork and foundation phases of construction to monitor compliance with the design concepts and recommendations and to provide additional recommendations as needed. Should subsurface conditions be encountered during construction that are different from those described in this report, this office should be notified immediately so that our recommendations may be re-evaluated.

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FIGURES AND TABLES

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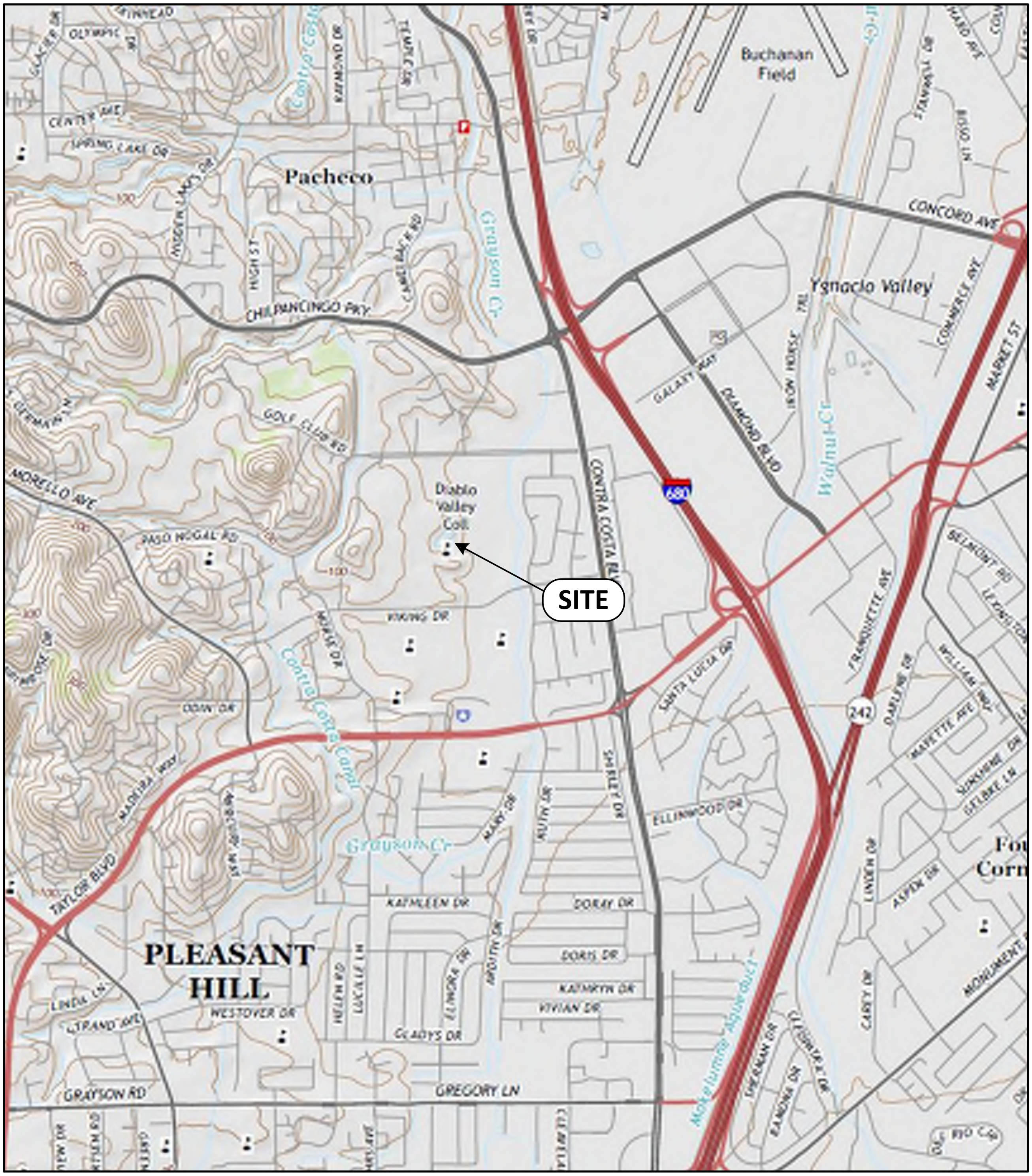
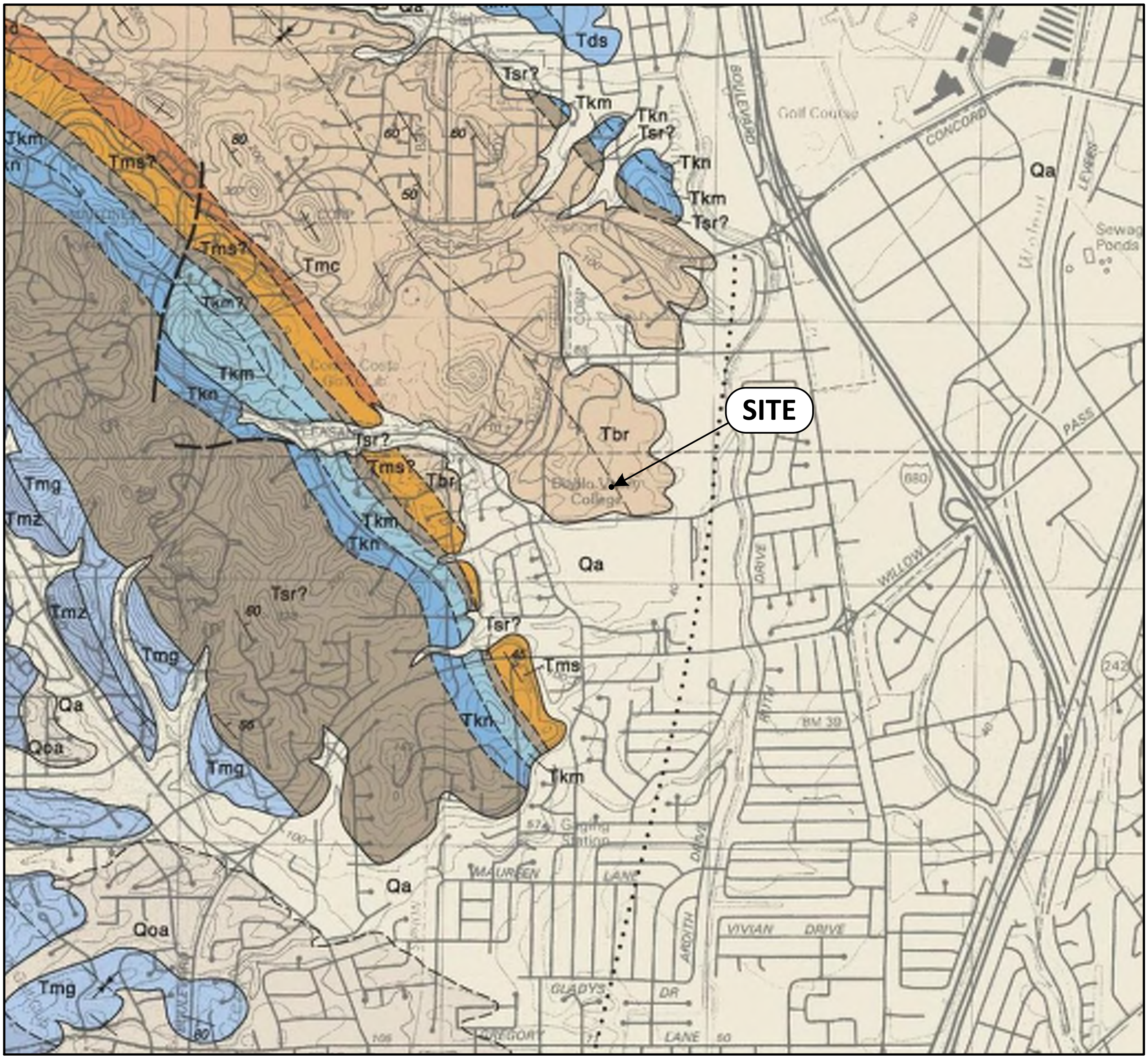


SITE LOCATION MAP

Scale: 1 inch ≈ 2000 feet

Base Map: U.S. Geological Survey Walnut Creek Quadrangle, 2015

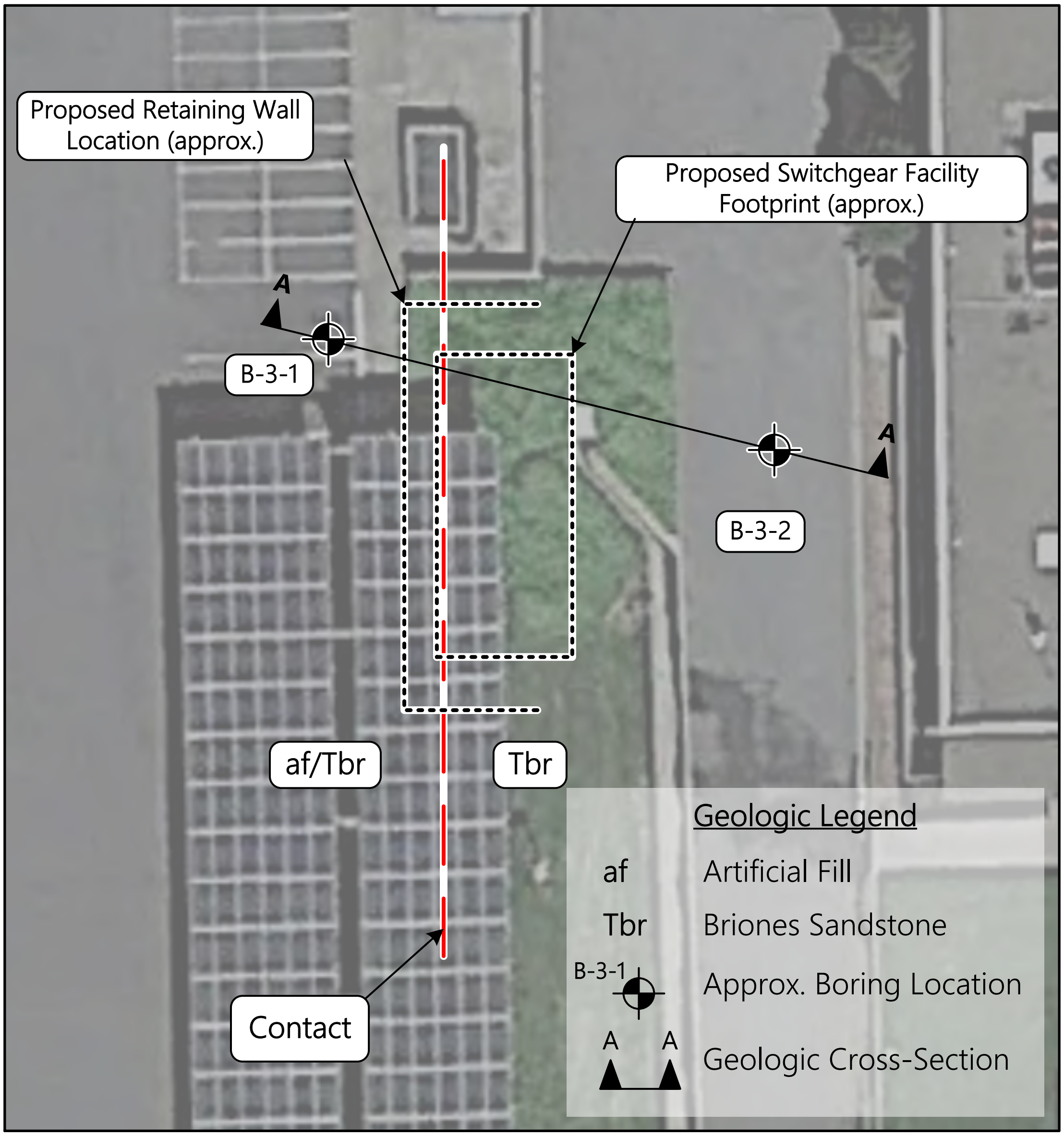


REGIONAL GEOLOGIC MAP
Scale: 1 inch ≈ 2,000 feet

Partial Legend

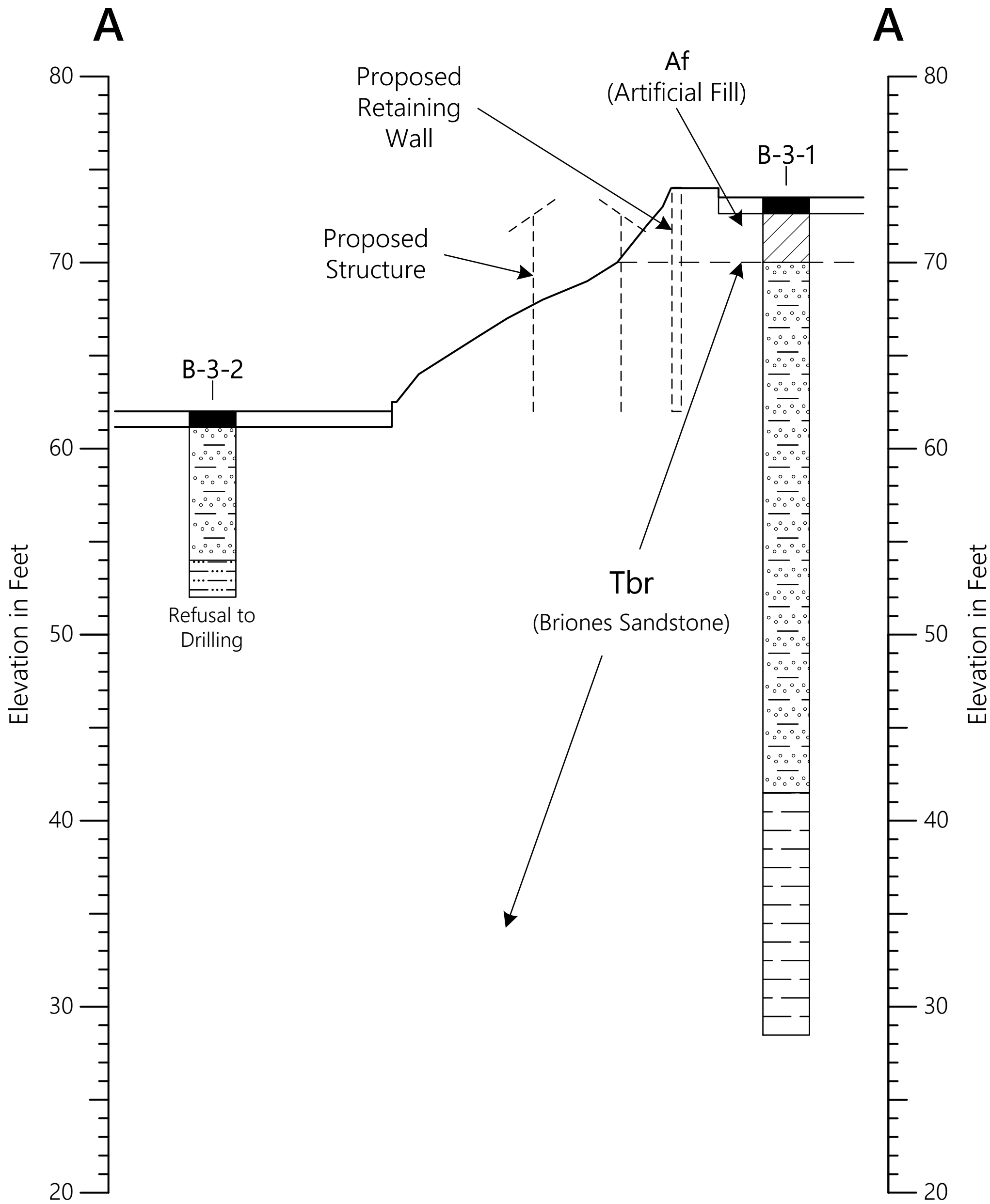
Qa – Holocene alluvium
Qoa – Pleistocene-Holocene older alluvium
Tbr, Tms, Tmc, Tsr, Tkm, Tkn, Tds, Tmg, Tmz – Tertiary Sedimentary Rock

Basemap: Dibblee and Minch, 2005, Geologic Map of Walnut Creek Quadrangle, Dibblee Geologic Foundation Map DF-149



SITE GEOLOGIC MAP
Scale: 1 inch ≈ 20 feet

Base Map: Google Earth Aerial Imagery, 2015

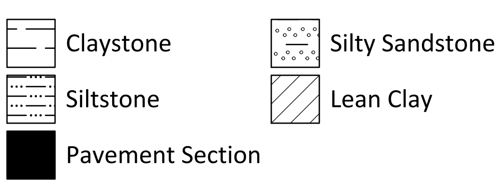


GEOLOGIC CROSS SECTION

Horizontal Scale: 1 inch ≈ 20 feet

Vertical Scale: 1 inch ≈ 10 feet

LEGEND



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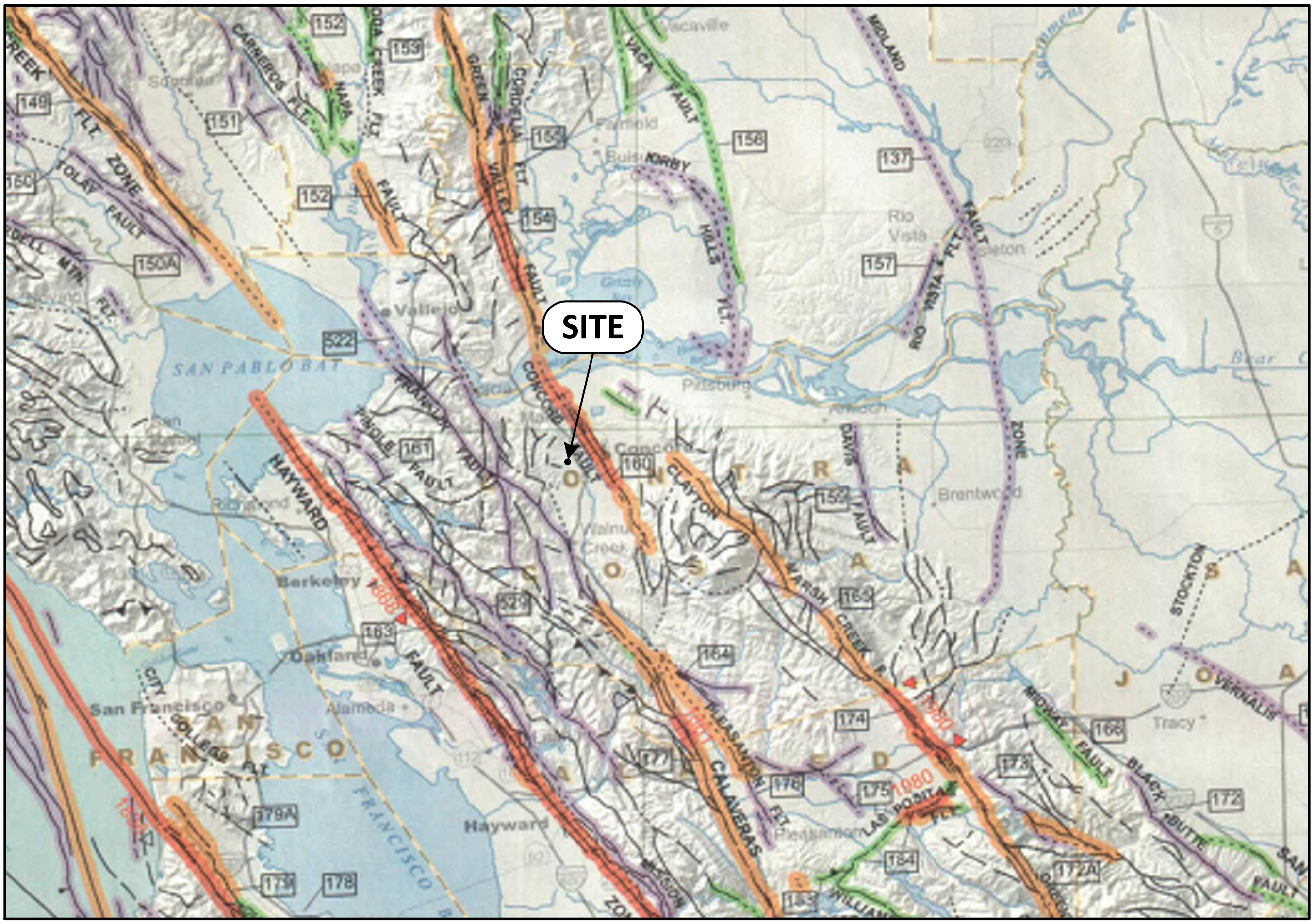

REGIONAL FAULT MAP
Scale: 1 inch ≈ 10 miles

<u>Partial Legend</u>

Red – Historic Fault Displacement

Orange – Holocene Fault Displacment

Green – Late Quaternary Fault Displacement

Purple – Quaternary Fault

Black – Pre-Quaternary Fault

Base Map: California Geological Survey Fault Activity Map, 2010

NOTABLE FAULTS WITHIN 100 KILOMETERS AND SEISMIC DATA

Fault Zone & geometry	Distance (km)	Distance (mi.)	Maximum Moment Magnitude	Slip Rate (mm/yr)
Calaveras (rl-ss)	18	11	6.8	6.0
Concord (rl-ss)	2.8	1.7	6.2	4.0
Great Valley - Segment 4 (r)	40	25	6.6	1.5
Great Valley - Segment 5 (r)	31	19	6.5	1.5
Greenville - (rl-ss)	23	14	6.6	2.0
Hayward - (rl-ss)	19	12	6.7	9.0
Hunting Creek - Berryessa (ri-ss)	55	34	6.4	6.0
Maacama (rl-ss)	87	54	7.0	9.0
Monte Vista - Shannon (r)	61	38	6.7	0.4
Point Reyes (r)	67	42	7.0	0.3
San Andreas (rl-ss)	48	30	7.3	24.0
San Gregorio (rl-ss)	53	33	7.2	7.0
West Napa (rl-ss)	27	17	6.5	1.0
Zayante - Vergeles (rl-r)	98	61	7.0	0.1

Notes:

Fault geometry - (ss) strike slip, (r) reverse, (n) normal, (rl) right lateral, (ll) left lateral, (o) oblique

Fault and Seismic Data - California Geological Survey (Cao), 2003

HISTORIC STRONG EARTHQUAKES SINCE 1836
SACRAMENTO - SAN FRANCISCO BAY REGION

Date	Event	Magnitude	Epicentral Distance (miles)
June 10, 1836	Near San Juan Bautista	6.4	78
June, 1938	San Juan Bautista - San Francisco	7.4	79
November 26, 1858	San Joase Region	6.2	54
February 26, 1964	Southeast of San Jose	6.1	62
March 5, 1864	East of San Francisco Bay	6.0	55
October 8, 1865	Santa Cruz Mountains	6.5	72
July 15, 1866	Western San Joaquin Valley	6.0	31
October 21, 1868	Bay Area - Hayward fault	7.0	64
April 19, 1892	Vacaville	6.6	63
March 31, 1998	Mara Island	6.4	86
June 11, 1903	San Jose	6.1	69
August 3, 1903	San Jose	6.2	63
April 18, 1906	Great San Francisco Earthqauke	7.8	86
July 1, 1911	Morgan Hill area	6.4	64
April 24, 1984	Morgan Hill	6.2	58
Oct. 17, 1989	Loma Prieta	6.9	80
Dec. 22, 2003	San Simeon	6.5	157
August 24, 2014	American Canyon	6.0	75

Notes:

Earthquake data: California Geological Survey online historic earthquake database, Magnitude ≥ 6.0
Magnitudes prior to 1932 are estimated from intensity.
Magnitudes after 1932 are moment, local or surface wave magnitudes.

Site Location:

Longitude: - 121.07004
Latitude: 37.96831

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APPENDIX A

FIELD INVESTIGATION

APPENDIX A

FIELD INVESTIGATION

A-1.00 FIELD EXPLORATION

A-1.01 Number of Borings

Our subsurface investigation consisted of 2 borings drilled with a CME 45B drill rig.

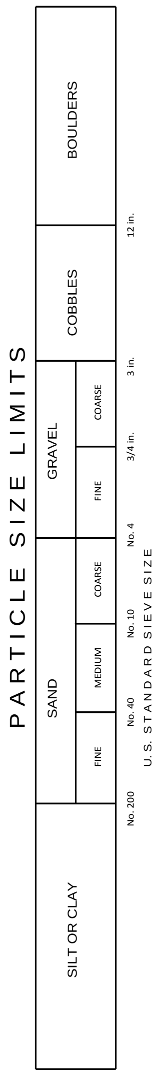
A-1.02 Location of Borings

A Geologic Map showing the approximate locations of the borings is presented as Figure 3.

A-1.03 Boring Logging

Logs of borings were prepared by one of our staff and are attached in this appendix. The logs contain factual information and interpretation of subsurface conditions between samples. The strata indicated on these logs represent the approximate boundary between earth units and the transition may be gradual. The logs show subsurface conditions at the dates and locations indicated, and may not be representative of subsurface conditions at other locations and times.

Identification of the soils encountered during the subsurface exploration was made using the field identification procedure of the Unified Soils Classification System (ASTM D2488). A legend indicating the symbols and definitions used in this classification system and a legend defining the terms used in describing the relative compaction, consistency or firmness of the soil are attached in this appendix. Bag samples of the major earth units were obtained for laboratory inspection and testing, and the in-place density of the various strata encountered in the exploration was determined



MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size.	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravel, gravel-sand mixtures. little or no fines.
			GP	Poorly graded gravel or gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amt. of fines)	GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour silty or clayey fine sands or clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatamaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

UNIFIED SOIL CLASSIFICATION SYSTEM

I. SOIL STRENGTH/DENSITY

BASED ON STANDARD PENETRATION TESTS

Compactness of sand		Consistency of clay	
Penetration Resistance N (blows/Ft)	Compactness	Penetration Resistance N (blows/ft)	Consistency
0-4	Very Loose	<2	Very Soft
4-10	Loose	2-4	Soft
10-30	Medium Dense	4-8	Medium Stiff
30-50	Dense	8-15	Stiff
>50	Very Dense	15-30	Very Stiff
		>30	Hard

N = Number of blows of 140 lb. weight falling 30 in. to drive 2-in OD sampler 1 ft.

BASED ON RELATIVE COMPACTION

Compactness of sand		Consistency of clay	
% Compaction	Compactness	% Compaction	Consistency
<75	Loose	<80	Soft
75-83	Medium Dense	80-85	Medium Stiff
83-90	Dense	85-90	Stiff
>90	Very Dense	>90	Very Stiff

II. SOIL MOISTURE

Moisture of sands		Moisture of clays	
% Moisture	Description	% Moisture	Description
<5%	Dry	<12%	Dry
5-12%	Moist	12-20%	Moist
>12%	Very Moist	>20%	Very Moist, wet

SOIL DESCRIPTION LEGEND

Exploratory Boring Log

Boring No. B-3-1
Sheet 1 of 2

Date Drilled:	December 14, 2016	Drilling Equipment:	CME 45B, SF Auger, Auto Hammer
Logged By:	P. Sorci	Borehole Diameter:	4 in.
Location:	See Site Geologic Map	Drive Weights:	140 lbs.
Elevation:	73.5 feet (approx.)	Drop Height:	30"

Material Description: This log contains factual information and interpretation of the subsurface conditions between the samples. The stratum indicated on this log represent the approximate boundary between earth units and the transition may be gradual. The log show subsurface conditions at the date and location indicated, and may not be representative of subsurface conditions at other locations and times.

Depth (ft)	Samples: Sample Type	Samples: Blows (blows/ft)	Samples: Bulk Sample	Moisture Content (%)	Dry Density (pcf)	USCS	Material Description
0							4.5 inches of Asphalt Concrete over 6 inches of Aggregate Base
						CL	Artificial Fill (Af): Brown sandy lean clay, about 20% fine to coarse sand, low to medium plasticity, moist, trace ¾" angular gravel, firm
			Bulk				
	T	50/6"				--	Briones Sandstone (Tbr): Yellow brown silty sandstone, fine to medium sand, about 15% silt, gray brown mottling, moist, cemented, very dense
5	T	50/6"	Bulk	16.7	104.1		
	S	86/11"					
10	T	32		26.7	93.5		
	T	50/3"	Bulk				
15	S	50/3"					Silty fines content increases to about 45%
	T	50/5"					
20	S	85/10"					
25							
30							
			Bulk			--	Brown sandy claystone, about 30% fine to medium sand, very moist, very firm
35							

***Note**
All blow counts associated with Modified California Sample are uncorrected. The sampler dimensions are as follows:
ID = 2.5" OD = 3"

Sample Types:
S - SPT Sample
Bulk - Bulk Sample
T - Modified California Tube Sample
R - Ring Sample

Symbols:
- Groundwater
- End of Boring

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Exploratory Boring Log

Boring No. B-3-1
Sheet 2 of 2

Date Drilled:	December 14, 2016	Drilling Equipment:	CME 45B, SF Auger, Auto Hammer
Logged By:	B. Wilson	Borehole Diameter:	4 in.
Location:	See Site Geologic Map	Drive Weights:	140 lbs.
Elevation:	73.5 feet (approx.)	Drop Height:	30"

Depth (ft)	Samples: Sample Type	Samples: Blows (blows/ft)	Samples: Bulk Sample	Moisture Content (%)	Dry Density (pcf)	USCS	Graphic Symbol	Material Description
								This log contains factual information and interpretation of the subsurface conditions between the samples. The stratum indicated on this log represent the approximate boundary between earth units and the transition may be gradual. The log show subsurface conditions at the date and location indicated, and may not be representative of subsurface conditions at other locations and times.
								Claystone continues
45								Boring terminated at 45 feet Groundwater encountered at 30 feet Hole backfilled with cement grout
50								
55								
60								
65								
70								
75								

***Note**
All blow counts associated with Modified California Sample are uncorrected. The sampler dimensions are as follows:
ID = 2.5" OD = 3"

Sample Types:
S - SPT Sample
Bulk Sample
T - Modified California Tube Sample
R - Ring Sample

Symbols:
- Groundwater
- End of Boring

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Exploratory Boring Log

Boring No. B-3-2

Sheet 1 of 1

Date Drilled:	December 14, 2016	Drilling Equipment:	CME 45B, SF Auger, Auto Hammer
Logged By:	P. Sorci	Borehole Diameter:	4 in.
Location:	See Site Geologic Map	Drive Weights:	140 lbs.
Elevation:	62 feet (approx.)	Drop Height:	30"

Depth (ft)	Samples: Sample Type	Samples: Blows (blows/ft)	Samples: Bulk Sample	Moisture Content (%)	Dry Density (pcf)	USCS	Graphic Symbol	Material Description
								This log contains factual information and interpretation of the subsurface conditions between the samples. The stratum indicated on this log represent the approximate boundary between earth units and the transition may be gradual. The log show subsurface conditions at the date and location indicated, and may not be representative of subsurface conditions at other locations and times.
								4 inches of Asphalt Concrete over 6 inches of Aggregate Base
			▨			--		Briones Sandstone (Tbr): Yellow brown silty sandstone, fine to medium sand, about 15% silt, dry to moist, reddish brown mottling, cemented, very dense
	T	50/5"		17.9	105.7			
5	S	50/5"						
	T	50/5"		18.8	85.9			
						--		Light brown siltstone, about 10% fine to medium sand, dry, hard
	S	15/0.5"						
10								Boring terminated at 10 feet due to drilling refusal No groundwater encountered Hole backfilled with cement grout
15								
20								
25								
30								
35								

***Note**

All blow counts associated with Modified California Sample are uncorrected. The sampler dimensions are as follows:
ID = 2.5" OD = 3"

Sample Types:
- S - SPT Sample
- ▨ - Bulk Sample
- T - Modified California Tube Sample
- R - Ring Sample

Symbols:
- ▽ - Groundwater
- ◣ - End of Boring

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APPENDIX B

LABORATORY TESTS

APPENDIX B

LABORATORY TESTS

B-1.00 LABORATORY TESTS

B-1.01 Maximum Density

Maximum density - optimum moisture relationships for the major soil types encountered during the field exploration were performed in the laboratory using the standard procedures of ASTM D1557.

B-1.02 Soluble Sulfates and Chlorides

A test was performed on representative sample encountered during the investigation using the Caltrans Test Methods CTM 417 and CTM 422.

B-1.03 Soil Reactivity (pH) and Electrical Conductivity (Ec)

A representative soil sample was tested for soil reactivity (pH) and electrical conductivity (Ec) using California Test Method 643. The pH measurement determines the degree of acidity or alkalinity in the soils. The Ec is a measure of the electrical resistivity and is expressed as the reciprocal of the resistivity.

B-1.04 Particle Size Analysis

Particle size analysis was performed on representative samples of the major soils types in accordance to the standard test methods of the ASTM D422. The hydrometer portion of the standard procedure was not performed and the material retained on the #200 screen was washed.

B-1.05 Direct Shear

Direct shear tests were performed on representative samples of the major soil types encountered in the test holes using the standard test method of ASTM D3080 (consolidated and drained). Tests were performed on remolded samples. Remolded samples were tested at 90 percent relative compaction.

Shear tests were performed on a direct shear machine of the strain-controlled type. To simulate possible adverse field conditions, the samples were saturated prior to shearing. Several samples were sheared at varying normal loads and the results plotted to establish the angle of the internal friction and cohesion of the tested samples.

B-1.06 Moisture Determination

Moisture content of the soil samples was performed in accordance to standard method for determination of water content of soil by drying oven, ASTM D2216. The mass of material remaining after oven drying is used as the mass of the solid particles.

B-1.07 Density of Split-Barrel Samples

Soil samples were obtained by using a split-barrel sampler in accordance to standard method of ASTM D1586

B-1.08 Test Results

Test results for all laboratory tests performed on the subject project are presented in this appendix.

SAMPLE INFORMATION

Sample Number	Sample Description	Sample Location Boring No.	Depth (ft)
1	Silty Sand (SM)	B-3-1	3.5
2	Silty Sand (SM)	B-3-1	4-5
3	Silty Sand (SM)	B-3-1	11.5
4	Silty Sand (SM)	B-3-1	15-16
5	Silty Sand (SM)	B-3-2	1-2.5
6	Silty Sand (SM)	B-3-2	3

MAXIMUM DENSITY - OPTIMUM MOISTURE
(Test Method: ASTM D1557)

Sample Number	Optimum Moisture (Percent)	Maximum Density (lbs/ft^3)
2	17.8	110.3

SOLUBLE SULFATES AND CHLORIDES*
(Test Method: CTM 417 and CTM 422)

Sample Number	Soluble Sulfate (ppm)	Chlorides (ppm)
5	80.3	15.7

*Testing performed by Sunland Analytical

SOIL REACTIVITY (pH) AND ELECTRICAL CONDUCTIVITY*
(Test Method: ASTM D4972)

Sample Number	pH	Resistivity (Ohm-cm)
5	7.85	1,550

*Testing performed by Sunland Analytical

PERCENT PASSING #200 SIEVE

(Test Method: ASTM D422)

Sample Location	Percent Passing #200 Sieve
1	16.1
3	23.3
4	46.0

PARTICLE SIZE ANALYSIS

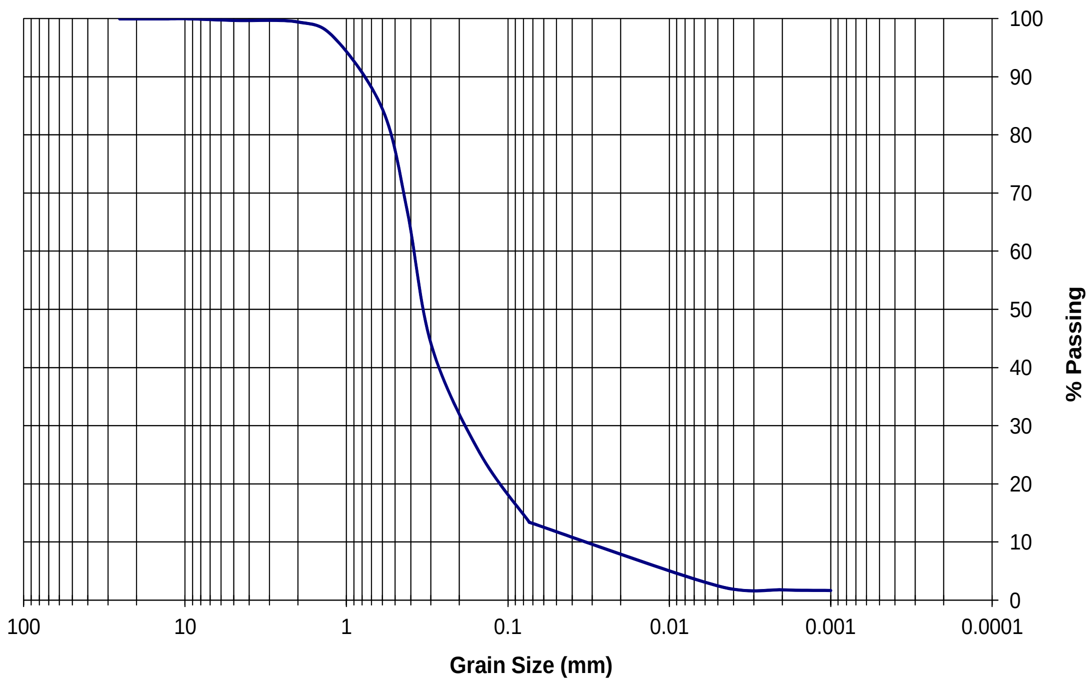
ASTM D422

Sample No: 6
Location: B-3-2 @ 3ft

Fraction A Dry Net Weight (g): 239.7
Fraction B Dry Net Weight (g): 238.4

	Screen Size	Net Retained Weight (g)	Net Passing Weight (g)	% Passing
Fraction A:	1"	0	239.7	100
	3/4"	0	239.7	100
	1/2"	0	239.7	100
	3/8"	0.0	239.7	100
	#4	0.7	239.0	100
	#10	1.3	238.4	99

	Screen Size	Net Retained Weight (g)	Net Passing Weight (g)	% Passing
Fraction B:	#16	6.5	231.9	97
	#30	36.3	202.1	84
	#40	78.0	160.4	67
	#50	133.4	105.0	44
	#100	177.5	60.9	25
	#200	206.2	32.2	13.4



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Direct Shear

ASTM D3080: Remolded

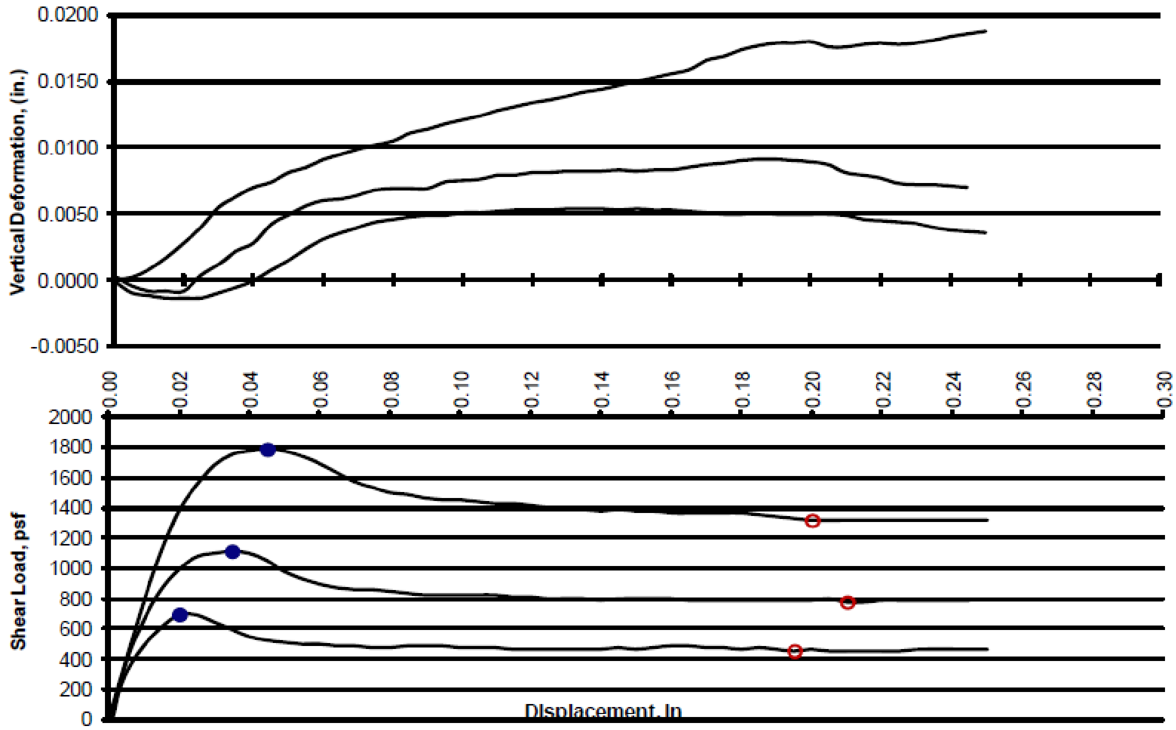
Sample: 2

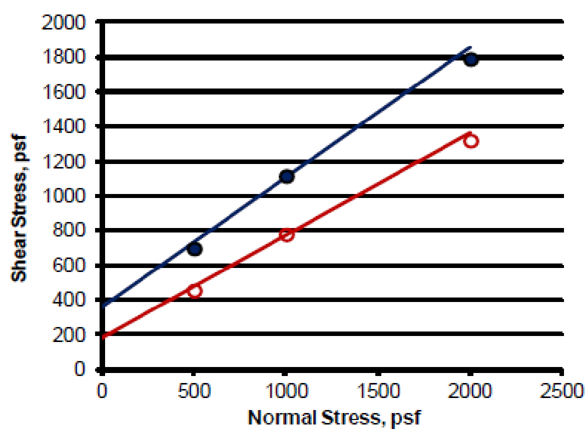
Displacement Rate: 0.006 in/min

Initial Water Content: 18%

Volume: 0.002640 cf

Initial dry density: 99 pcf (90% of 110.3 pcf)





Test Results			
Normal Load, psf	**500**	**1000**	**2000**
Peak Stress, psf	**698**	**1116**	**1789**
Ultimate Stress, psf	457	780	1320
Final Wc, %	21.1	20.0	23.5
Final Height, in	1.017	0.997	0.989
Final γ dry, pcf	97.5	98.5	98.9

	Peak	*Ultimate*
Cohesion Intercept	**362**	187
Friction Angle	**37**	30

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APPENDIX C

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

APPENDIX C

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

C-1.00 GENERAL DESCRIPTION

C-1.01 Introduction

These specifications present our general recommendations for earthwork and grading as shown on the approved grading plans for the subject project. These specifications shall cover all clearing and grubbing, removal of existing structures, preparation of land to be filled, filling of the land, spreading, compaction and control of the fill, and all subsidiary work necessary to complete the grading of the filled areas to conform with the lines, grades and slopes as shown on the approved plans.

The recommendations contained in the geotechnical report of which these general specifications are a part of shall supersede the provisions contained hereinafter in case of conflict.

C-1.02 Laboratory Standard and Field Test Methods

The laboratory standard used to establish the maximum density and optimum moisture shall be ASTM D1557.

The insitu density of earth materials (field compaction tests) shall be determined by the sand cone method (ASTM D1556), direct transmission nuclear method (ASTM D2922) or other test methods as considered appropriate by the geotechnical consultant.

Relative compaction is defined, for purposes of these specifications, as the ratio of the in-place density to the maximum density as determined in the previously mentioned laboratory standard.

C-2.00 CLEARING

C-2.01 Surface Clearing

All structures marked for removal, timber, logs, trees, brush and other rubbish shall be removed and disposed of off the site. Any trees to be removed shall be pulled in such a manner so as to remove as much of the root system as possible.

C-2.02 Subsurface Removals

A thorough search should be made for possible underground storage tanks and/or septic tanks and cesspools. If found, tanks should be removed and cesspools pumped dry.

Any concrete irrigation lines shall be crushed in place and all metal underground lines shall be removed from the site.

C-2.03 Backfill of Cavities

All cavities created or exposed during clearing and grubbing operations or by previous use of the site shall be cleared of deleterious material and backfilled with native soils or other materials approved by the soil engineer. Said backfill shall be compacted to a minimum of 90% relative compaction.

C-3.00 ORIGINAL GROUND PREPARATION

C-3.01 Stripping of Vegetation

After the site has been properly cleared, all vegetation and topsoil containing the root systems of former vegetation shall be stripped from areas to be graded. Materials removed in this stripping process may be used as fill in areas designated by the soil engineer, provided the vegetation is mixed with a sufficient amount of soil to assure that no appreciable settlement or other detriment will occur due to decaying of the organic matter. Soil materials containing more than 3% organics shall not be used as structural fill.

C-3.02 Removals of Non-Engineered Fills

Any non-engineered fills encountered during grading shall be completely removed and the underlying ground shall be prepared in accordance to the recommendations for original ground preparation contained in this section. After cleansing of any organic matter the fill material may be used for engineered fill.

C-3.03 Overexcavation of Fill Areas

The existing ground in all areas determined to be satisfactory for the support of fills shall be scarified to a minimum depth of 6 inches. Scarification shall continue until the soils are broken down and free from lumps or clods and until the scarified zone is uniform. The moisture content of the scarified zone shall be adjusted to within 2% of optimum moisture. The scarified zone shall then be uniformly compacted to 90% relative compaction.

Where fill material is to be placed on ground with slopes steeper than 5:1 (H:V) the sloping ground shall be benched. The lowermost bench shall be a minimum of 15 feet wide, shall be a minimum of 2 feet deep, and shall expose firm material as determined by the geotechnical consultant. Other benches shall be excavated to firm material as determined by the geotechnical consultant and shall have a minimum width of 4 feet.

Existing ground that is determined to be unsatisfactory for the support of fills shall be overexcavated in accordance to the recommendations contained in the geotechnical report of which these general specifications are a part.

C-4.00 FILL MATERIALS

C-4.01 General

Materials for the fill shall be free from vegetable matter and other deleterious substances, shall not contain rocks or lumps of a greater dimension than is recommended by the geotechnical consultant, and shall be approved by the geotechnical consultant. Soils of poor gradation, expansion, or strength properties shall be placed in areas designated by the geotechnical consultant or shall be mixed with other soils providing satisfactory fill material.

C-4.02 Oversize Material

Oversize material, rock or other irreducible material with a maximum dimension greater than 12 inches, shall not be placed in fills, unless the location, materials, and disposal methods are specifically approved by the geotechnical consultant. Oversize material shall be placed in such a manner that nesting of oversize material does not occur and in such a manner that the oversize material is completely surrounded by fill material compacted to a minimum of 90% relative compaction. Oversize material shall not be placed within 10 feet of finished grade without the approval of the geotechnical consultant.

C-4.03 Import

Material imported to the site shall conform to the requirements of Section 4.01 of these specifications. Potential import material shall be approved by the geotechnical consultant prior to importation to the subject site.

C-5.00 Placing and Spreading of Fill

C-5.01 Fill Lifts

The selected fill material shall be placed in nearly horizontal layers which when compacted will not exceed approximately 6 inches in thickness. Thicker lifts may be placed if testing indicates the compaction procedures are such that the required compaction is being achieved and the geotechnical consultant approves their use.
Each layer shall be spread evenly and shall be thoroughly blade mixed during the spreading to insure uniformity of material in each layer.

C-5.02 Fill Moisture

When the moisture content of the fill material is below that recommended by the soils engineer, water shall then be added until he moisture content is as specified to assure thorough bonding during the compacting process.

When the moisture content of the fill material is above that recommended by the soils engineer, the fill material shall be aerated by blading or other satisfactory methods until the moisture content is as specified.

C-5.03 Fill Compaction

After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted to not less than 90% relative compaction. Compaction shall be by sheepsfoot rollers, multiple-wheel pneumatic tired rollers, or other types approved by the soil engineer.

Rolling shall be accomplished while the fill material is at the specified moisture content. Rolling of each layer shall be continuous over its entire area and the roller shall make sufficient trips to insure that the desired density has been obtained.

C-5.04 Fill Slopes

Fill slopes shall be compacted by means of sheepsfoot rollers or other suitable equipment. Compacting of the slopes may be done progressively in increments of 3 to 4 feet in fill height. At the completion of grading, the slope face shall be compacted to a minimum of 90% relative compaction. This may require track rolling or rolling with a grid roller attached to a tractor mounted side-boom.

Slopes may be over filled and cut back in such a manner that the exposed slope faces are compacted to a minimum of 90% relative compaction.

The fill operation shall be continued in six inch (6") compacted layers, or as specified above, until the fill has been brought to the finished slopes and grades as shown on the accepted plans.

C-5.05 Compaction Testing

Field density tests shall be made by the geotechnical consultant of the compaction of each layer of fill. Density tests shall be made at locations selected by the geotechnical consultant.

Frequency of field density tests shall be not less than one test for each 2.0 feet of fill height and at least every one thousand cubic yards of fill. Where fill slopes exceed four feet in height their finished faces shall be tested at a frequency of one test for each 1000 square feet of slope face.

Where sheepsfoot rollers are used, the soil may be disturbed to a depth of several inches. Density reading shall be taken in the compacted material below the disturbed surface. When these readings indicate that the density of any layer of fill or portion thereof is below the required density, the particular layer or portion shall be reworked until the required density has been obtained.

C-6.00 SUBDRAINS

C-6.01 Subdrain Material

Subdrains shall be constructed of a minimum 4-inch diameter pipe encased in a suitable filter material. The subdrain pipe shall be Schedule 40 Acrylonitrile Butadiene Styrene (ABS) or Schedule 40 Polyvinyl Chloride Plastic (PVC) pipe or approved equivalent. Subdrain pipe shall be installed with perforations down. Filter material shall consist of 3/4" to 1 1/2" clean gravel wrapped in an envelope of filter fabric consisting of Mirafi 140N or approved equivalent.

C-6.02 Subdrain Installation

Subdrain systems, if required, shall be installed in approved ground to conform the approximate alignment and details shown on the plans or herein. The subdrain locations shall not be changed or modified without the approval of the geotechnical consultant. The geotechnical consultant may recommend and direct changes in the subdrain line, grade or material upon approval by the design civil engineer and the appropriate governmental agencies.

C-7.00 EXCAVATIONS

C-7.01 General

Excavations and cut slopes shall be examined by the geotechnical consultant. If determined necessary by the geotechnical consultant, further excavation or overexcavation and refilling of overexcavated areas shall be performed, and/or remedial grading of cut slopes shall be performed.

C-7.02 Fill-Over-Cut Slopes

Where fill-over-cut slopes are to be graded the cut portion of the slope shall be made and approved by the geotechnical consultant prior to placement of materials for construction of the fill portion of the slope.

C-8.00 TRENCH BACKFILL

C-.01 General

Trench backfill within street right of ways shall be compacted to 90% relative compaction as determined by the ASTM D1557 test method. Backfill may be jetted as a means of initial compaction; however, mechanical compaction will be required to obtain the required percentage of relative compaction. If trenches are jetted, there must be a suitable delay for drainage of excess water before mechanical compaction is applied.

C-9.00 SEASONAL LIMITS

C-9.01 General

No fill material shall be placed, spread or rolled while it is frozen or thawing or during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the soils engineer indicate that the moisture content and density of the fill are as previously specified.

C-10.00 SUPERVISION

C-10.01 Prior to Grading

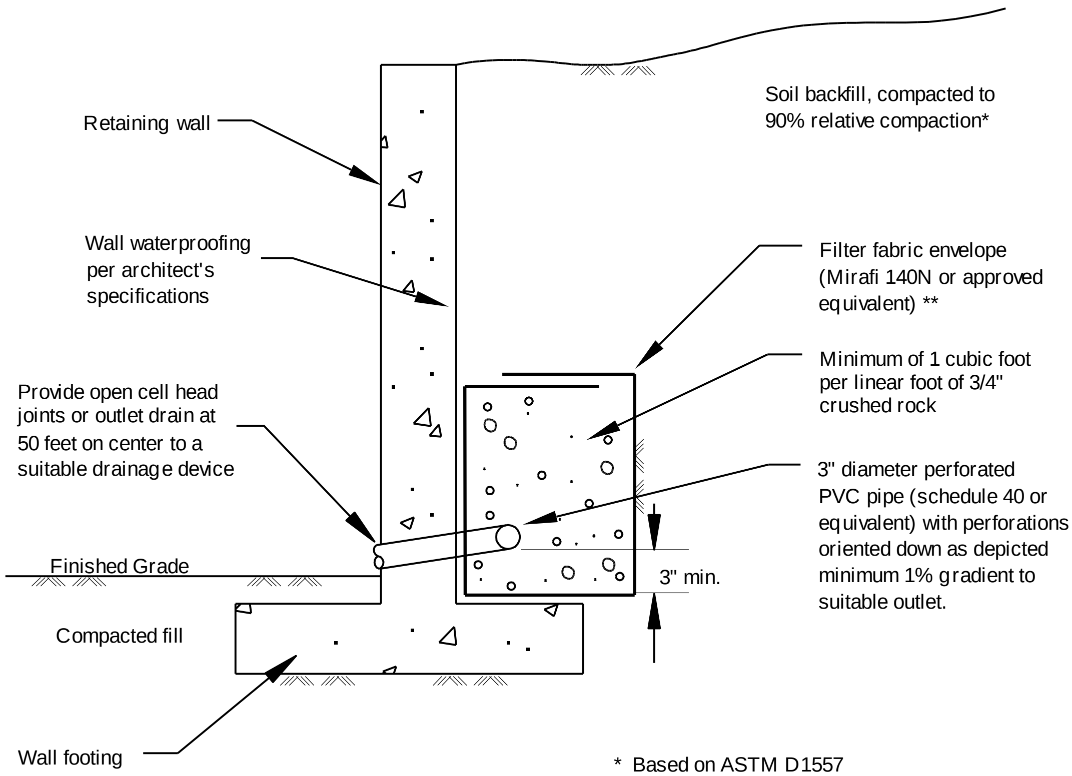
The site shall be observed by the geotechnical consultant upon completion of clearing and grubbing, prior to the preparation of any original ground for preparation of fill.

The supervisor of the grading contractor and the field representative of the geotechnical consultant shall have a meeting and discuss the geotechnical aspects of the earthwork prior to commencement of grading.

C-10.02 During Grading

Site preparation of all areas to receive fill shall be tested and approved by the geotechnical consultant prior to the placement of any fill.

The geotechnical consultant or his representative shall observe the fill and compaction operations so that he can provide an opinion regarding the conformance of the work to the recommendations contained in this report.



* Based on ASTM D1557

** If class 2 permeable material (See gradation to left) is used in place of 3/4" - 1 1/2" gravel. Filter fabric may be deleted. Class 2 permeable material compacted to 90% relative compaction. *

SPECIFICATIONS FOR CLASS 2 PERMEABLE MATERIAL (CAL TRANS SPECIFICATIONS)

Sieve Size	% Passing
1"	100
3/4"	90-100
3/8"	40-100
No.4	25-40
No.8	18-33
No.30	5-15
No.50	0-7
No.200	0-3

RETAINING WALL DRAINAGE DETAIL

APPENDIX D

REFERENCES

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APPENDIX D

REFERENCES

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16. Miller, Dan C., 1989, Potential Hazards from Future Volcanic Eruptions in California: U.S. Geological Survey Bulletin 1847.

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RMA Group
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October 19, 2017 Project Number: 16-0772-0

Contra Costa Community College Districtd
500 Court Street
Martinez, CA 94553

Attention: Mr. Ray Pyle

Subject: **GEOTECHNICAL REPORT ADDENDUM #1**
Switchgear Facility (D-4009)
Diablo Valley College
321 Golf Club Road
Pleasant Hill, California

Reference: 1. Geotechnical Investigation Report for Proposed Switchgear Facility (D-4009), Diablo Valley College, prepared by RMA Group, Inc., project number 16-772-0, dated January 6, 2017.

Dear Mr. Pyle:

In accordance with your request, we have prepared the following geotechnical report addendum to address a proposed change in the location of the Switchgear enclosure facility.

Based on our review of the revised site plan provided by YEI Engineers, we understand that the planned location of the proposed Switchgear Facility will be relocated approximately 90 feet to southwest. The proposed new location of the facility will place it immediately adjacent to the existing Engineering Technology Building (see attached Figure 1).

In order to verify that the subsurface conditions of the relocated Switchgear facility are consistent with the conditions found during our previous investigation (Reference 1), a total of two hand auger borings were advanced within the footprint of the proposed new switchgear facility. Our borings encountered approximately 8 inches of top soil consisting of soft dark brown sandy lean clay with organics. Below the topsoil layer, our borings encountered very dense sandstone bedrock, known as Briones Sandstone, consisting of yellowish brown fine to medium silty sand as excavated. The presence of shallow bedrock was found to be consistent with bedrock found during our initial field investigation. Logs of our hand auger borings are presented as Figures 2 and 3 and attached to this addendum.

Based on the findings of our additional field investigation, it is our professional opinion that the findings, conclusions, and recommendations of the referenced geotechnical report are considered to be applicable to the design and construction of the revised location of the switchgear facility.

We trust that the information provided herewith will satisfy your present needs. Should you require additional information or have any questions, please contact our office.

Sincerely,

RMA Group

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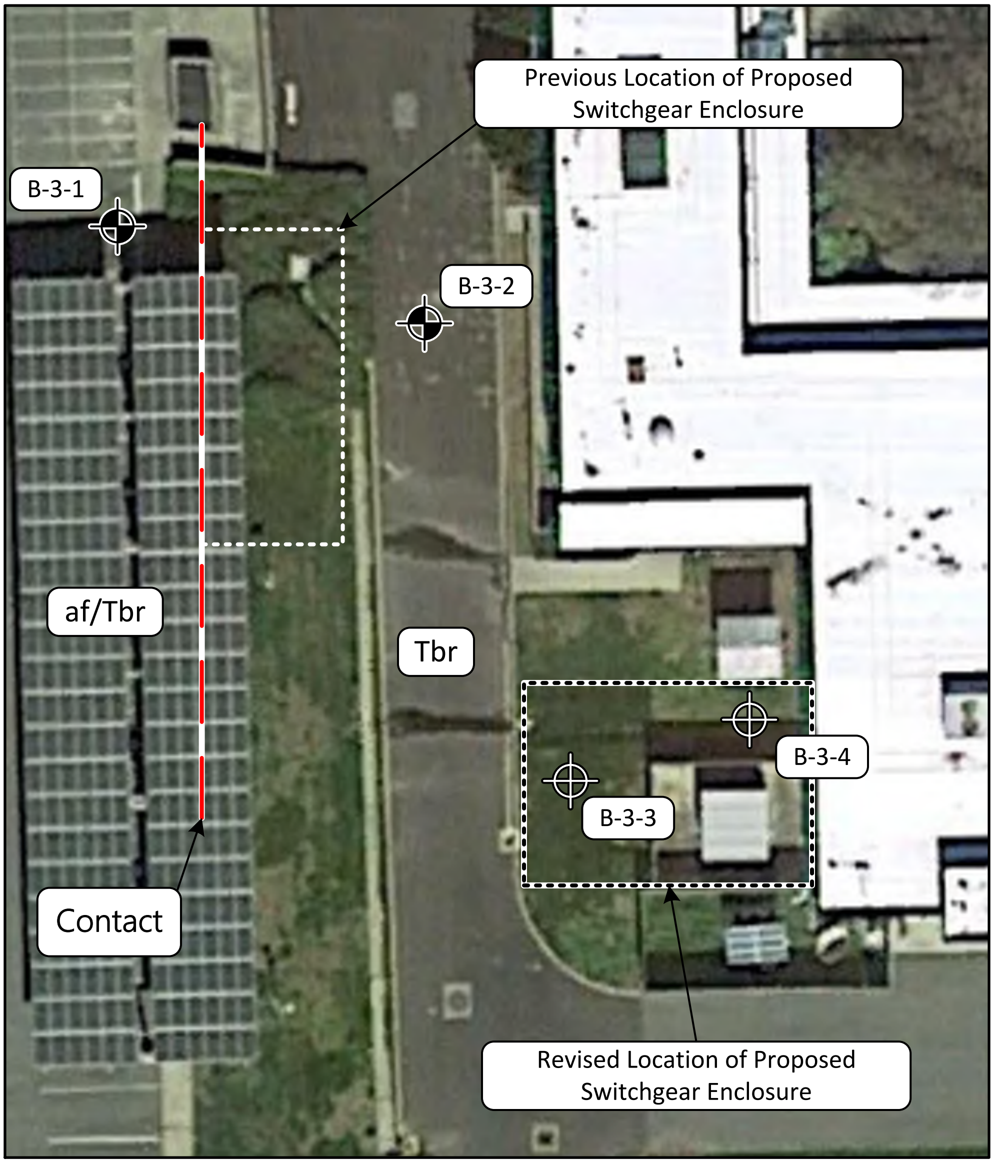

SITE GEOLOGIC MAP

Scale: 1 inch ≈ 30 feet

Geologic Legend

af	Artificial Fill
Tbr	Briones Sandstone
B-3-1	Approx. Boring Location
B-3-3	Approx. Hand Auger Boring Location

Base Map: Google Earth Aerial Image Dated 3/11/2017

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Exploratory Boring Log

Boring No. B-3-3
Sheet 1 of 1

Date Drilled:	October 6, 2017	Drilling Equipment:	Hand Auger
Logged By:	D. Hassel	Borehole Diameter:	4 in.
Location:	See Site Geologic Map	Drive Weights:	Not Applicable
Elevation:	62 feet (approx.)	Drop Height:	Not Applicable

This log contains factual information and interpretation of the subsurface conditions between the samples. The stratum indicated on this log represent the approximate boundary between earth units and the transition may be gradual. The log show subsurface conditions at the date and location indicated, and may not be representative of subsurface conditions at other locations and times.

Depth (ft)	Samples: Sample Type	Samples: Blows (blows/ft)	Samples: Bulk Sample	Moisture Content (%)	Dry Density (pcf)	USCS	Graphic Symbol	Material Description
0						CL		Top Soil: Dark brown sandy lean clay, fine to medium sand, medium plasticity, moist, organics consisting of grass roots, soft
1						--		Briones Sandstone (Tbr): Yellow brown silty sandstone, fine to medium sand, about 15% silt, moist, very dense
2								Boring terminated at 2.0 feet No groundwater encountered Hole backfilled with soil cuttings
3								
4								
5								
6								
7								

***Note**
All blow counts associated with Modified California Sample are uncorrected. The sampler dimensions are as follows:
ID = 2.5" OD = 3"

Sample Types:
S - SPT Sample
Bulk Sample
T - Modified California Tube Sample
R - Ring Sample

Symbols:
- Groundwater
- End of Boring

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Exploratory Boring Log

Boring No. B-3-4
Sheet 1 of 1

Date Drilled:	October 6, 2017	Drilling Equipment:	Hand Auger
Logged By:	D. Hassel	Borehole Diameter:	4 in.
Location:	See Site Geologic Map	Drive Weights:	Not Applicable
Elevation:	62 feet (approx.)	Drop Height:	Not Applicable

Depth (ft)	Samples: Sample Type	Samples: Blows (blows/ft)	Samples: Bulk Sample	Moisture Content (%)	Dry Density (pcf)	USCS	Graphic Symbol	Material Description
								This log contains factual information and interpretation of the subsurface conditions between the samples. The stratum indicated on this log represent the approximate boundary between earth units and the transition may be gradual. The log show subsurface conditions at the date and location indicated, and may not be representative of subsurface conditions at other locations and times.
0						CL		Top Soil: Dark brown sandy lean clay, fine to medium sand, medium plasticity, moist, organics consisting of grass roots, soft
1						--		Briones Sandstone (Tbr): Yellow brown silty sandstone, fine to medium sand, about 15% silt, moist, very dense
								Boring terminated at 1.5 feet No groundwater encountered Hole backfilled with soil cuttings
2								
3								
4								
5								
6								
7								

***Note**

All blow counts associated with Modified California Sample are uncorrected. The sampler dimensions are as follows:
ID = 2.5" OD = 3"

Sample Types:
- S - SPT Sample
- Bulk Sample
- T - Modified California Tube Sample
- R - Ring Sample

Symbols:
- Groundwater
- End of Boring

APPENDIX U

COMPREHENSIVE INTERIOR DESIGN REQUIREMENTS

1. DESIGN REQUIREMENTS

The interior designer must satisfy the following:

1.1. Comply with applicable codes, regulations and laws.

1.2. Provide a design within funding limits, or if requested, assist with development of an FF&E budget.

1.3. Provide a design of appropriate appearance in accordance with Project standards.

1.4. Provide a design that satisfies the functional requirements of the project.

1.5. Provide a design with coordinated systems (interior finish materials, furnishings, fixtures, equipment, electrical, lighting, etc.)

1.6. Provide complete, accurate, and coordinated construction/procurement documentation for the Project.

1.7. Provide a fully coordinated Comprehensive Interior Design (CID), unless otherwise directed, which includes:

1.7.1. Fully coordinated Structural Interior Design (SID;) and

1.7.2. Fully coordinated Furniture, Fixtures & Equipment Interior Design (FF&E.)

1.8. Provide a design that is in accordance with sustainable design principles.

2. DESIGN CONSIDERATIONS

Designers must consider interior design compatibility with the local environment, functional requirements, ergonomics, and economy of construction, energy conservation, interior details, sustainable design and life cycle costs. Additionally, facilities must be designed in harmony with the architectural character of existing facilities that are to remain, especially those that are considered historically or architecturally significant. Design excellence must not add to project costs but balance the functionality, aesthetics, quality, sustainability and maintainability of facilities. Designs must comply with each installation design guide.

2.1. Functional Design: Facility designs will be governed by the functional requirements of the project, will conform to the appropriate criteria and standards, and will be consistent with applicable funding limitations. Provide facilities and furnishings that achieve optimum life-cycle savings. Conduct comparisons as needed to determine the most life-cycle cost effective, materials, finishes, methods of construction, furnishings and services.

2.2. Design for Flexibility: Flexibility in architectural and interior design facilitates the accommodation of changing functional requirements while conserving resources. The District may own or lease a facility from its time of construction until the end of its useful life. During this long tenure of use, functional requirements of buildings will change, often drastically. For this reason, flexibility is a significant design requirement for buildings, except for those with highly specialized functions where adaptive reuse would be cost prohibitive.

2.3. Cost Engineering: Cost Engineering (CE) will be an integral part of the design process. Apply the CE principles and practices in the pre-design and programming development stage relative to establishing costs. Initiate more CE costs relative to the scope and requirements at the concept design on program documents and use throughout the design and construction of projects.

2.4. Life-Cycle Costs: Base design decisions on life-cycle cost considerations to determine an economical design for facilities. Take into account not only the initial construction costs but also the operating and maintenance costs of buildings, the associated impacts on productivity and the missions performed within the facility over their anticipated life. Designers must design within current cost criteria and requirements of each project's programming documents.

2.5. Health & Safety Criteria: Designers must comply with NFPA 101 and provide for safe egress in the event of fire. For other code issues, use the International Building Code as modified by the UFC 3-600-01, Fire Protection Engineering for Facilities. Designers must provide protection against injury and death from falls, chemical emissions, electronic emissions, and microbial conditions. Designers must use materials with low VOC emissions, superior indoor air quality characteristics as well as antimicrobial components. Designers must also incorporate appropriate ergonomic design in the facility and furnishings.

2.6. Environmental Quality: Designers must be concerned with designing an environment that is comfortable, welcoming and conducive to work or other prescribed activity. Contributing factors include proper HVAC, lighting, acoustics and furnishings. Acoustic design issues include speech privacy, sound isolation or sound masking. Lighting, both artificial and daylight, is an important tool in shaping the ambiance of the environment.

2.7. Way Finding: Interior design must incorporate methods of way finding through the facility, including the development of a comprehensive interior signage package, using color and patterns as applicable. These design components will form a well-organized, comprehensible interior environment that guides users and visitors through the building to their destinations.

2.8. Sustainable Design: Designers must incorporate sustainable design in the selection of materials and in the promotion of interior environmental quality. Projects must achieve designated LEED ratings. Consider sustainable or "green" design elements on all projects. Designers will evaluate furnishings and finish materials containing recycled product and materials that can be recycled at the "end of their useful life".

3. FURNITURE, FIXTURES & EQUIPMENT ACQUISITION STRATEGY.

During the Schematic Design phase, the project team, including District Purchasing, shall confirm the FF&E procurement strategies. Additionally, the deliverables that support the procurement such as document and specification format and schedule shall be coordinated. Different procurement strategies will be used, such as:

3.1. Contractor Furnished/Contractor Installed (CFCI) FF&E: The Contractor may procure and install the FF&E, known as Contractor Furnished / Contractor Installed (CFCI). The FF&E design is prepared by the interior designer, and specifications and drawings are included in the Construction Contract Documents. The Contractor is required to purchase the FF&E as specified with no deviations unless approved by the District.

3.2. District Furnished/District Installed (DFDI) FF&E: The District may procure and install the FF&E package independently of the building construction or renovation, known as District Furnished / District Installed (DFDI). The FF&E design is prepared by an A/E interior designer, but the specifications are not included in the Construction Contract Documents, although the FF&E layouts shall be provided in the drawings. The FF&E package is procured through District or state agencies. In this scenario, the project delivery team must plan for extensive coordination between the building design, and the FF&E design.

3.3. District Furnished/Contractor Installed (DFCI) FF&E: The District may have the contractor install existing furnishings as part of its scope of work, known as District Furnished /

Contractor Installed (DFCI). The interior designer must work with the District to determine how these requirements will be integrated into the Construction Contract Documents.

3.4. Any combination of the above may be required in order to capture and execute the comprehensive interior design requirements under this Agreement.

4. DESIGN PROCESS.

4.1. Furniture Footprint Plans: Incorporate FF&E requirements into the project design from the beginning through to the end of the project. The designer will work directly with the using activity to assess their needs and develop a written program of furnishings required for each space within the facility. Develop the furniture footprint plans to show that the furnishings necessary for the user's functional requirements can be accommodated within the spaces, comply with accessibility requirements, and satisfy applicable life safety codes. The furniture foot print plan will show the appropriate size and type of furnishings and critical or required clearances. The furniture footprint plans and documented user requirements serve as the basis for a fully integrated project design as well as the basis for the Furniture, Fixtures & Equipment (FF&E) package.

4.1.1. The interior designer is also responsible for identifying the requirements for equipment items with regards to space allocation and coordination with building systems; even though the interior designer may not be responsible for specifying those equipment items.

4.1.2. The furniture footprint is the furniture plan and is fully developed, along with the FF&E package. Furniture Footprint Plans must be included throughout the design delivery process, from initial concept to Final submission, to ensure coordination of architectural components and engineering disciplines (lighting, power, mechanical, window placement, etc.) with respect to furniture placement.

4.2. Interior Signage Placement Plans: Signage placement plans must indicate the location of every sign and directory in the facility. The sign symbol must indicate the sign type and be keyed to the signage schedule, which then describes message, symbols and details. Separate typical sign drawings must be prepared for each type to indicate plaque size, type, location and message for all signs. For larger projects, incorporate building or floor directories and directional signage. The typical sign drawings and schedule may be included solely in the specification or as an attachment to the specifications instead of on the contract set of drawings.

4.3. Planning and Programming: completed under separate contract.

4.4. Schematic Design: During the schematic design phase, the interior designer will meet with representatives of the using activity and the building design team to determine the design concept. The design concept must be described in the design analysis as required in the project delivery process. The design concept must meet the user's functional, physical, and aesthetic needs. The interior designer will produce programming documents including space utilization, personnel requirements, concept space plan, furniture foot print and FF&E list with cost estimate. Activities and deliverables in this phase include, but are not limited to:

4.4.1. Furniture and equipment research and development. Schedule client visits to showrooms and meet with sales representatives and manufacturers. Office and classroom furniture will be chosen from District and College provided options with design team's input.

4.4.1.1. Research and development of products that will be project appropriate.

4.4.1.2. Assist client in evaluating products that will meet the functional requirements.

4.4.1.3. Coordinate with sales representatives and arrange for client presentations and showroom visits.

4.4.1.4. Meet with manufacturers' representatives to develop standard packages for preliminary cost submittals.

4.4.1.5. Prepare a preliminary furniture cost submittal.

4.4.1.6. Guide clients through the process of short listing products and manufacturers.

4.4.1.7.

4.4.2. Develop space plans and generate a furniture schedule for all areas.

4.4.2.1. Incorporate the furniture into the floor plans.

4.4.2.2. Develop the parameters of the furniture specifications and materials.

4.4.2.3. Develop furniture standardization and finishes for the project, upon approval from the building user group, campus, and the District.

4.4.2.4. Present options for client approval.

4.5. Design Development: Upon approval of the schematic design, the designer will develop the design concept. In addition to participating in the floor plan development, the designer will contribute to the interior architectural detailing. The designer will determine the appropriate interior finish materials as well as the conceptual furniture layout. Ensure architectural and engineering disciplines are coordinated with interior design components. Furnishings layouts and locations of built-in equipment must be considered during the placement of lighting, power and communication receptacles, electrical/fire protection panels, sprinklers, etc. Fully coordinate furnishings with the building systems during design development through the final submittals. Activities and deliverables in this phase include, but are not limited to:

4.5.1. Coordinate the furniture design development process between end users and manufacturers for client approval.

4.5.1.1. Meet with the end users to develop options for workstations and offices.

4.5.1.2. Work with the College to incorporate Campus Standards (if any), options, accessories and finishes.

4.5.1.3. Coordinate with PE/K type equipment manufacturers and dealers for presentation to the end users. Office and classroom furniture will be coordinated based on District provided options.

4.5.1.4. Create an end user evaluation survey for ease of selecting the final products.

4.5.1.5. Finalize end user detail data sheets.

4.5.1.6. Present recommendations and options from users' input to the District for approval.

4.5.1.7. Obtain all furniture approvals from the District for the specification phase.

4.5.1.8. Obtain final cost estimates from the manufacturers, based upon the approved furniture specifications.

4.5.2. Coordinate consultants' scope of work for furniture power and data management requirements.

4.5.2.1. Coordinate all power management issues and requirements with the District, the manufacturer/dealer and electrical consultants.

4.5.2.2. Make any necessary adjustments, to plans and specifications, as require.

4.5.2.3. Discuss field coordination strategies for furniture electrical needs.

4.5.2.4. Confirm dimensional requirements for utilities on Architect-Engineer's drawings.

4.5.2.5. Submit furniture electrical/data package for client's approval.

4.5.3. Furniture Specifications

4.5.3.1. Gather cut sheets for all furniture and accessories (tables, desks, ergonomic chairs, file cabinets, etc.)

4.5.3.2. Modify specifications, if necessary, to meet targeted budget.

4.5.3.3. Gather finish material samples (plastic laminate, wood stain, fabric, metal finish, etc.)

4.5.3.4. Coordinate design details and information with the manufacturer.

4.5.3.5. Compile all specification information (including location), specifications, and cut sheets for purchasing binders. The vendor will provide quantity take-offs for Architect-Engineer to approve.

4.5.3.6. Review specification approvals with the District, prior to the purchasing submittal.

4.6. Contract Documents: In the final stages of a project, the designer follows through with completing the SID/FF&E interior design in sufficient detail to ensure successful execution. Coordinate specifications with the final drawings, schedules and details as well as furnishings types and layouts with other disciplines. In addition to equipment placement, types of furnishings that require coordination with electrical systems include, but are not limited to, furniture systems; motorized projection screens, electrically powered high-density filing, power and communications in conference and training tables or computerized directory systems. During furniture layout and selection, coordinate building elements such as power sources, ceiling heights, column placement, lighting, wall switches, thermostats, alarm panels, window placement, etc. Activities and deliverables in this phase include, but are not limited to:

4.6.1. Furniture Layout Drawings

4.6.1.1. Coordinate background drawings with the dealer for a breakdown and call-out of all furniture components shown on floor plans for installation purposes.

4.6.1.2. Implement furniture wire management requirements on floor plans for installation purposes.

4.6.2. Submit documents to district purchasing for bidding.

4.6.2.1. Review Dealers' furniture installation plans and proposals.

4.6.2.2. Evaluating deviations from specified FF&E to avoid installation of inferior or inappropriate FF&E.

4.7. Review Process: Direct communication with the District's project manager, users, interior designer or architectural reviewer is required. This will avoid unnecessary submittal of plans and specifications due to a misunderstanding. The reviewer's name, phone number and email address should be listed in the project directory. The District reviewer(s) will provide comments regarding corrections or clarifications to be incorporated into contract documents or other design submittals. The interior designer will ensure that comments are incorporated into the subsequent submittal, or the reason for not incorporating the comment must be thoroughly documented in the A-E's response to the comment.

4.8. Construction and FF&E Procurement Phases: During building construction, the interior designer will verify that equipment was coordinated with the FF&E plans and installed properly. The designer will also verify the correct interior finishes and materials have been installed per the specifications, or that those interior finishes that are to be installed, coordinate with the design intent and the FF&E package. The entire Project team shall work to schedule the delivery and installation of FF&E to be complete by the user's beneficial occupancy date. Note that a construction completion date may occur significantly before the user's beneficial occupancy date, depending on the procurement methods selected. The project delivery team will establish an FF&E point of contact. This person will assist the interior designer with verification that the FF&E received match the procurement documents, shop drawings and/or specifications. The designer involved will need to provide consultation services to include:

- 4.8.1. Project Management and Coordination
  - 4.8.1.1. Review and comment on installation plans and specifications, as submitted by the manufactures, prior to installation.
  - 4.8.1.2. Verify field conditions with the dealers and installers prior to any installation and delivery of furniture in conjunction with District purchasing.
  - 4.8.1.3. Confirm and coordinate site conditions with manufacturers and dealers.
  - 4.8.1.4. Coordinate requests for field modifications, on any unforeseen conditions, with the Campus and obtain approval prior to preparing change orders for the District's Purchasing department.
- 4.8.2. Furniture Walk Through
  - 4.8.2.1. Compile a punch list for the Client, and submit to the manufacturers and installers.
  - 4.8.2.2. Create a time line for the execution of the punch list items.
  - 4.8.2.3. Schedule a final walk through for approval.

4.9. Post Occupancy: Approximately one month after occupant move-in, conduct a Post Occupancy Evaluation (POE) of the project to determine the effectiveness of the design. This evaluation involves inspection of the completed facility by a team composed of members of the project delivery team, and the facility maintainers and the using activity. The POE is used by the project delivery team in effecting improvements in the project delivery process.

5. STRUCTURAL INTERIOR DESIGN

5.1. Definition: Structural Interior Design (SID) requires the accommodation of required FF&E within the building and the design, selection and coordination of interior finish materials that are integral to or attached to the building structure. The SID provides basic space planning for anticipated FF&E requirements in conjunction with the functional layout of the building and design issues such as life safety, privacy, acoustics, lighting, ventilation, and accessibility. Completion of a SID involves the selection, specification and sampling of applied finishes for the building's interior features including, but not limited to, walls, floors, ceilings, trims, doors, windows, window treatments, built-in furnishings and installed equipment, lighting, and signage. The SID package will include furniture floor plans, finish schedules, and any supporting interior elevations, details or plans necessary to communicate the building finish design and build out.

This definition and the definition in Appendix A are to be considered complementary and shall not cause a basis for Additional Services where the two do not align exactly.

5.2. Sid Design Submittal Requirements:

5.2.1. SID Binders. Interior and exterior finish color binders must display actual samples of proposed finishes required in the design of a project. Color boards are required at various submittal phases as noted in the project's scope of work. Submit SID information and samples in separate three ring binders with pockets on the inside of the covers. When samples are numerous or thick, use more than one binder. Large D-ring binders are preferred to O-ring binders. Fold out items must have a maximum spread of 25 1/2". Each binder must be labeled on the outside spine and front cover with the following information: Phase %, Date, SID, A-E firm, Project Title and Number, Location and Volume number. Include the Color Schedule or the Room Finish Schedule and Finish Color Schedule from the drawings. The interior designer must coordinate the SID binder format with the installation design guides where applicable.

5.2.2. Narrative of Interior Design Objectives. The SID binder is to include a narrative that discusses the building related finishes. Include topics that relate to base standards, life safety, sustainable design issues, aesthetics and durability. Discuss the Furniture Footprint Plan development and features as it relates to the District's requirements and the building design. This may also be included in the Basis of Design or Design Analysis.

5.2.3. Finish Color Boards for SID Binders. Finish Color boards must be in 8 1/2" x 11" format and sturdy enough to support samples. Use page protectors that are strong enough to keep pages from tearing out. Anchor large or heavy samples with mechanical fasteners, Velcro, or double-faced foam tape rather than rubber cement or glue. Label finish samples with the material codes used in the contract documents. Samples that are difficult to attach, or large samples, such as ceiling tiles or flooring samples can be provided separately from the color board in a loose sleeve. Samples must be labeled with the finish code so they can be identified independently if removed from the binder.

5.2.4. Material and finish samples must indicate true pattern, color and texture. Photographs or colored photocopies of materials or fabrics to show large overall patterns are required in conjunction with actual samples to show the actual colors. Finish samples must be large enough to show a complete pattern or design where practical. For example, if the specified carpet has a large pattern, provide a color photograph showing the overall pattern in addition to the carpet sample with representative colors. Provide a label or header identifying the submittal stage, project title and location, A/E and construction contract numbers, A/E name and date on each color board.

5.2.5. Large Scale Presentation Boards. When required for presentations, large-scale Finish Color boards will be a minimum of 16" X 20", either foam core or mat board. Boards must be sufficiently rigid to support heavy samples. Finish materials must be labeled to fully coordinate with the contract documents. Material and finish samples must represent true pattern, texture and color. Samples must be large enough to indicate any pattern repeats where practical. Provide a label or title block identifying the submittal stage, project title and location, A/E and construction contract numbers, A/E name and date. Separate boards must be submitted for exterior and interior finishes. A copy of the Room Finish Schedule and Finish Color Schedule must be attached to the back of the board.

6. FURNITURE, FIXTURES & EQUIPMENT INTERIOR DESIGN

6.1. DEFINITION: The Furniture, Fixtures & Equipment Interior Design (FF&E) includes the design, selection, specification, color coordination and procurement documentation of the required items necessary to meet the functional, operational, sustainability, and aesthetic needs of the facility. The FF&E package will include placement plans, ordering and finish information on all freestanding furnishings and accessories, and cost estimates. The Interior Designer will select and specify colors, fabrics, and furniture finishes to coordinate with the Structural Interior Design (SID) interior finish materials. The selection of furniture style, function and configuration will be coordinated with the user requirements. Examples of FF&E items are workstations, seating, files, tables, beds, wardrobes, draperies and accessories as well as markerboards, tackboards, and presentation screens. Secondary window treatments such as sheers, draperies, top treatments, and room-darkening shades are specified as required on a project-by-project basis and are usually included as part of the FF&E package. Criteria for furniture selection will include function and ergonomic considerations, maintenance, durability, sustainability, comfort and cost. Also, the designer may have to consider reuse of and coordination with existing furnishings. This definition and the definition in Appendix A are to be considered complementary and shall not cause a basis for Additional Services where the two do not align exactly.

6.2. The FF&E budget, the District's program requirements and the Furniture Footprint plans will be the basis for the FF&E Package. The designer will work directly with the using activity to assess their needs and develop a list of furnishings required for each space within the facility. The FF&E package will be developed and coordinated with the architectural design as is appropriate with the project delivery process and the FF&E acquisition strategy.

6.3. FF&E Design Submittal Requirements: The FF&E submittal is used for procurement of furnishings for new or renovated facilities. It also becomes the record and resource document for facilities management personnel to reference for repairing or replacing furnishings and reordering additional items. FF&E information and samples are to be submitted in 8 1/2" x 11" format using three ring binders with pockets on the inside of the covers. When there are numerous pages with thick samples, use more than one binder. Large D-ring binders are preferred to O-ring binders. Fold out items must have a maximum spread of 25 1/2". Provide cover and spine insert sheets identifying the document as a "Furniture, Fixtures & Equipment" package and include the project title and location, project number, A/E name and date, and the submittal stage. The design submittal requirements will include, but are not limited to.

6.3.1. FF&E Package Format Submittal. The specific format and organization of these binders must be coordinated with the District designer and installation design guides as well as with the contracting specialists or designated contracting official.

6.3.2. Narrative of Interior Design Objectives. Provide a narrative description of the furnishings design addressing the selection of furnishings, finishes and colors. Discuss the Furniture Plan development and features and how it meets project specific requirements. Enumerate the design decisions made to fully coordinate the SID and the FF&E, including function, safety and ergonomic considerations, durability and aesthetics.

6.3.3. Point of Contact List. Provide a comprehensive list of POCs needed to implement the FF&E project. This would include appropriate project team members, using activity contacts, interior design representatives, contractors and installers involved in the project. In addition to name, address, phone, fax and email, include each contact's job function.

6.3.4. Itemized Furnishings Cost Estimate. Provide an itemized cost estimate of furnishings keyed to the plans and specifications of products included in the package. The cost estimate must include percentage allowances for general contingency, shipping, inflation and installation costs, listed as separate line items. Installation and freight quotes from vendors should be used in lieu of a percentage allowance when available.

6.3.5. Item Code Legend. Provide a consolidated list of all FF&E items in the design package with the item code and a short description of each item.

6.3.6. Item Installation List. The Item Code Legend may be expanded to be used as an Item Installation List. Indicate quantity per room, model number, manufacturer and which vendor is responsible for installing each furnishings item. This provides a quick reference for managing larger furniture installations.

6.3.7. Furniture Room Data Sheet: Provide a one Furniture Room Data Sheet for each room specified in the design. This sheet identifies all information required to order each individual item. In addition to the project name and location, project number, and design submittal phase, the order form must include the information itemized in the subparagraph below.

6.3.7.1. Product specification information, manufacturer's item name, series, model number, description, dimensions, configuration, features or options

6.3.7.2. Finishes and fabrics - these must be coded to the furnishings illustration boards

6.3.7.3. An image of the item to be purchased - the image must be as close to the actual item to be purchased or it must be noted that the image is representative or similar if not the actual item. The illustration of each item may be shown on the Furnishings Order Form or on other furnishings illustration materials.

6.3.7.4. Location of items indicating quantity of items used per room number

6.3.7.5. Dealer/Vendor quotes where applicable

6.3.8. Furnishings Illustration Materials. Coordinate the format and information contained in the furnishings illustration sheets with the applicable design guides and installation requirements. The intent is to minimize duplication of information and tailor the illustrations to best communicate the project design, taking into consideration the size and complexity of the project. The finish and fabric samples must be labeled and keyed to the item codes used on the Furnishings Order Forms and the furnishings plans. One or more of the following formats may be used.

6.3.9. Provide Furnishings Color Boards or Furnishings Illustration Forms with the finishes and fabric samples mounted and labeled with finish codes and item codes corresponding to the specifications on the furnishings order forms. If furnishings illustrations are not shown on the Furniture Order Forms, include an image of each item specified with its associated finishes. Verify the format of the Furnishings Illustration Forms with each installation. Color boards must be in 8 1/2" x 11" format and must be sturdy enough to support the finish samples. Use page protectors that are strong enough to keep pages from tearing out. Large samples in protective sleeves must be labeled with the finish code so they can be identified independently if removed from the binder. Finish samples must indicate true pattern, color and texture. Use photographs or color photocopies of materials or fabrics to show large overall patterns in conjunction with finish samples to show the true colors. Finish samples must be large enough to show a complete pattern or design where practical. Provide a label or header identifying the submittal phase, project title and location, A/E and construction contract numbers, A/E name and date on each color board.

[redacted] Large-scale Furnishings Presentation Boards may be required for briefings to illustrate typical products proposed for the project and their associated finishes and fabrics samples. When required, furnishings presentation boards will be a minimum of 16” X 20”, either foam core or mat board. Boards must be sufficiently rigid to support heavy samples. Finish materials must be labeled and keyed to the Furnishings Order Forms. Material and finish samples must represent true pattern, texture and color. Samples must be large enough to indicate any pattern repeats where practical. Color photocopies of artwork and plants are acceptable. For contracted services, provide a label or title block identifying the submittal stage, project title and location, A/E and construction contract numbers, A/E name and date.

6.3.11. Manufacturers Source List. This list identifies the manufacturers and sources used in the FF&E package. Provide the Contractor’s address, the ordering address, and the payment address including contact names, phone numbers, fax, and email address.

[redacted] Furniture Plans. Provide furniture plans in an adequate scale to indicate locations of all furniture, furnishings, equipment and accessories. Identify these items with an item code that is keyed to the Furniture Room Data Sheet and the furnishings illustration materials. Typically, furnishings plans will be the same scale as the architectural drawings. Some projects may require furnishings plans for individual rooms or areas to show furnishings in sufficient detail for installation. Examples of this include enlarged plans for systems furniture; or individual room drawings where exact room configurations are repeated throughout a project. Refer to the A/E/C Tri-Service CADD standards for drawing formats. The furniture plans will be submitted in both the construction set of drawings as well as in the FF&E package. Review and approved Vendor’s final order list and shop drawings for completeness and compliance with the intent of the furniture design.

[redacted] Furniture Systems. Furniture systems must be designed using product and features available from three or more manufacturers to ensure open competition.

[redacted] Artwork Placement Plans. If the artwork cannot be clearly shown on the plans, provide separate artwork placement plans. Ensure that mounting heights and special installation instructions are indicated on the plans and on the Furnishings Order Forms.

END OF APPENDIX

APPENDIX W

DISTRICT LEED CERTIFICATION SCOPE OF SERVICES

1. The Scope of Services to achieve LEED Certification according to the US Green Building Council's Leadership in Energy and Environmental Design includes general management and oversight of the LEED process. Throughout each phase of design, Architect- Engineer will:
    1.1. Maintain a matrix to identify the project team member who is responsible for completing each part of a credit's design and documentation;
    1.2. Administer LEED Online;
    1.3. Verify that all documentation has been submitted on LEED online;
    1.4. Regularly communicate with LEED project team members with action items/agreement notes via email;
    1.5. Provide LEED point tracking in all project phases and provide the District with an updated LEED scorecard when the scorecard changes—for example, when a project team member reports a point is not achievable;
    1.6. Chair LEED team meetings and provide action item summary for same;
    1.7. Pay for and coordinate specialized services from consultants (for example, daylighting studies, energy modeling, acoustics, and indoor air quality testing).
2. During Schematic Design, Architect-Engineer will:
    2.1. Provide preliminary credit scorecard for District review and approval
3. During Design Development, Architect-Engineer will:
    3.1. Lead an eco-charrette;
    3.2. Monitor progress of credits;
    3.3. Coordinate drawings with the Energy Modeler at 100% DDs
4. During construction phase, Architect-Engineer will:
    4.1. Conduct a LEED pre-construction meeting to review specific responsibilities of the General Contractor and establish timeline for credit templates submittal;
    4.2. Review contractors' LEED submittals, suggest changes if necessary and require contractor documentation to be submitted and reviewed with monthly requisitions.
5. Post construction, Architect-Engineer will
    5.1. Coordinate comments from the USGBC;
    5.2. Review all changes prior to resubmittal;
    5.3. At the District's discretion, assist with ordering of plaques and certificates.

6. District will:
    6.1. Be responsible for Online Registration Fees;
    6.2. Pay for Submittals and Certification Fees to USGBC;
    6.3. Pay application fees for Credit Interpretation Rulings (CIR) (if needed). A maximum of two CIRs will be allowed for Architect-Engineer and the District will be consulted before filing.
    6.4. Pay reproduction costs associated with LEED application and certification.
    6.5. Reimburse Architect-Engineer as an additional service if the above fees and costs are paid by Architect-Engineer.
    6.6. Hire the commissioning authority (CxA) to perform fundamental building commissioning to meet LEED 2009 prerequisite and Enhanced Commissioning. Architect-Engineer will coordinate related work with the CxA. The CxA is required to upload required information to Architect-Engineer for commissioning-related credits and to coordinate the Owner's Project Requirements (OPR).
    6.7. Provide Architect-Engineer with all applicable and necessary documentation for owner-assigned credits in a timely manner.
7. Timeline for LEED documentation submission:
    7.1. Design Credits: within three (3) months following bid
    7.2. Response to Reviewer clarification requests: Ten (10) working days response from project team member to Architect-Engineer;
    7.3. Ten (10) additional working days to provide to GBCI
    7.4. Construction credits: Twelve (12) weeks following substantial completion

END OF APPENDIX