SEISMIC REHABILITATION CRITERIA REPORT

DSA APP NUMBER: REH-10086

EXISTING MEN’S LOCKER BUILDING
CONTRA COSTA COMMUNITY COLLEGE
SAN PABLO, CA

June 1, 2018

LIONAKIS Project # 017034
# Structural Rehabilitation Criteria Report

Existing Men’s Locker Building

DSA Application Number: 01REH-10086

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<td>D1</td>
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<td>E1</td>
</tr>
</tbody>
</table>
Scope

This report has been prepared in accordance with the requirements of the 2016 CAC Section 4-306 which requires an Evaluation and Design Criteria to be submitted to DSA along with the pre-application forms and fees.

The existing Men’s Locker Building rehabilitation is part of a project that consists of renovations to four separate buildings constructed during the 1950’s and 1960’s which comprise the Physical Education and Kinesiology complex at Contra Costa College. The community college is located in San Pablo, CA.

The structural scope of work for the Men’s Locker Building renovation includes removal of all interior bearing walls which will be replaced with new relocated bearing walls and additional beams, columns and footings. Relocation of existing interior shearwalls will require additional diaphragm shear transfer, collector beams, connections and footings. Portions of the existing roof skylights will be infilled and miscellaneous mechanical roof equipment will be added or removed.

Building Description

The existing Men’s Locker Building is a single story wood and steel framed structure constructed in 1956 with an approximate footprint of 8,704 square feet. The as-built drawings were prepared by Donald L. Hardison, Architect from Richmond, CA and dated May 8, 1956 (DSA application No: SAN 14373). The height of the roof structure is an average of 10’-6” and is framed with ½” plywood sheathing over 2x4 flat stripping spaced at 2’-0” centers between typical 4x10 beams. The 4x10 beams are spaced at 4-0” on centers and span 18’-0” between wood stud bearing walls or steel Wide Flange (WF) girders. The WF girders are supported by steel 3” diameter standard pipe columns. The foundations below bearing walls and columns are typical concrete spread footings. The existing slab on grade is 5” thick reinforced concrete.

The existing Seismic Force Resisting System is comprised of a plywood roof diaphragm which transfers horizontal seismic force to resisting wood stud shearwalls sheathed with plywood. The shearwalls are supported at the foundation by continuous concrete footings.

Seismic Rehabilitation Triggers

Per 2016 CAC section 4-309(c)2.B, a seismic rehabilitation is required when alterations result in a reduction in the lateral-force capacity or stiffness by more than 10 percent in any one direction. Per discussion with DSA on 5/1/17, the removal and subsequent relocation of all interior shearwalls constitutes a reduction of lateral-force capacity which exceeds the 10 percent threshold. Therefore, a seismic rehabilitation will be required. Refer to sketch SK-15 in Appendix-A for schematic plans and details showing proposed new interior wall locations.
Potential Existing Building Deficiencies and Proposed Mitigation

As part of the project scope, the entire structural system will be evaluated for deficiencies in the gravity and lateral load path. All deficiencies related to load carrying elements will be mitigated as part of the construction application.

After a preliminary review of the as-built drawings, some areas of potential structural deficiencies have been identified. These will be reviewed in-depth during the evaluation phase of the project. The potential issues in the lateral force resisting system observed after review of the as-built documents may include:

<table>
<thead>
<tr>
<th>Item#</th>
<th>Potential Structural Deficiencies</th>
<th>Possible Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inadequate shear transfer at horizontal diaphragm to shearwalls</td>
<td>Additional nailing or framing clips</td>
</tr>
<tr>
<td>2</td>
<td>Inadequate shear wall nailing</td>
<td>Additional nailing for reduced spacing, or add 2nd side of shear sheathing to existing stud walls</td>
</tr>
<tr>
<td>3</td>
<td>Inadequate shear wall sill bolting</td>
<td>Post-install epoxy sill bolts to reduce anchor spacing</td>
</tr>
<tr>
<td>4</td>
<td>Lack of holdowns</td>
<td>Post-install epoxy anchor bolts and holdowns at end of shear walls.</td>
</tr>
<tr>
<td>5</td>
<td>Inadequate shear wall footing resistance to overturning</td>
<td>Widen existing concrete footings and tie new to existing with epoxy reinforcing dowels.</td>
</tr>
<tr>
<td>6</td>
<td>New shearwall locations</td>
<td>At new shear wall locations a full lateral load path will be required including, continuous collector ties and splices, shear transfer nailing, sill bolting, holdowns, new or widened footings where required.</td>
</tr>
</tbody>
</table>

Evaluation and Analysis Methods

The 2016 California Existing Building (CEBC) Section 317 provides the minimum standards for evaluating community college buildings for seismic rehabilitation. CEBC Section 317.5 establishes the use of an ASCE 41 Tier 3 Systematic Evaluation and Retrofit procedure for the existing gravity and seismic force resisting system. The seismic performance objective requirements are set forth in CEBC Table-317.5. The following steps will be taken to determine extents of retrofit required.

1) Analysis of the existing building structure shall be performed to verify conformance with the selected Performance Criteria (refer to acceptance criteria).
2) Design retrofit strategies as needed where analysis indicates structural elements are non-conforming with the performance criteria.
3) Re-analyze building structure including any retrofit measures designed in Step 2.
4) Prepare construction documents, including drawings, specifications, and testing and inspection requirements.
The seismic analysis procedure selected to be performed on the building is a Linear Static Procedure (LSP) which is intended to provide a conservative estimate of building response for buildings with regular configurations similar to the one-story existing Men’s Locker Building structure. The pseudo seismic force levels will be determined from section 7.4 using as-built information, USGS site specific data and current information from the geotechnical report.

The seismic performance level that will be used for analysis of the existing Men’s Locker Building is specified in the 2016 California Existing Building Code (CEBC) section 317. The design will be based on the DSA-SS/CC provisions of the code. Refer to Appendix D for an attached letter from the school district acknowledging and accepting use of the DSA-SS/CC provisions. The following seismic criteria will be used as determined by table 317.5 in the 2016 CEBC:

<table>
<thead>
<tr>
<th>Code Provisions</th>
<th>Risk Category</th>
<th>Level 1</th>
<th>Level 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSA-SS/CC</td>
<td>II</td>
<td>BSE-1E</td>
<td>BSE-2N</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S3 (Life Safety)</td>
<td>S5 (collapse prevention)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NC (Life Safety)</td>
<td>ND (not considered)</td>
</tr>
</tbody>
</table>

Acceptance Criteria:

Each component within the seismic force resisting load path will be classified as primary or secondary elements and further classified as deformation controlled (ductile) or force controlled (non-ductile) as required per ASCE 41 section 7.5.

The expected material properties of each element will be selected from both as-built drawings and default values as allowed per the requirements of ASCE 41 table 6-1 and subsequent material specific code sections. The Knowledge Factor “k” used for adjusted material values will be 1.0 per table 6-1 under “usual” level testing. Please refer to the Data Collection Program Criteria below for additional information.

The individual component capacities for each element in the seismic force resisting system will be calculated in compliance with the appropriate material specific chapter of the ASCE 41 and using the material properties and classification of element described above.

For ASCE 41 component capacities which reference new building construction standards for specific materials (for example, use of the NDS SPDWS for shearwall capacities) all design and detailing provisions of the current 2016 CBC will be applied to the retro-fit strategies.

The complete lateral load path system will be evaluated including the chords and collectors of the horizontal diaphragm system and foundations for bearing stress under new load combinations. The Seismic Force Resisting System will be evaluated for wind as well as seismic loads including vertical wind load.

The specific elements of the Seismic Force Resisting System load path that will be evaluated during the rehabilitation are as follows:
### Acceptance Criteria Table

<table>
<thead>
<tr>
<th>SFRS System</th>
<th>SFRS Component</th>
<th>Material</th>
<th>Primary/Secondary</th>
<th>Controlling Behavior</th>
<th>Material Property:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diaphragm</td>
<td>Plywood Decking</td>
<td>Wood</td>
<td>Primary</td>
<td>Deformation</td>
<td>$f_b,f_v,E$ (default values)</td>
</tr>
<tr>
<td></td>
<td>2x flat Stripping</td>
<td>Wood</td>
<td>Secondary</td>
<td>Deformation</td>
<td>$f_b,f_v,f_c,E$ (default values)</td>
</tr>
<tr>
<td></td>
<td>4x beams Chords/Collectors</td>
<td>Wood</td>
<td>Primary</td>
<td>Deformation / Force</td>
<td>$f_b,f_v,f_c,E$ (default values)</td>
</tr>
<tr>
<td></td>
<td>Top Plate Chords</td>
<td>Wood</td>
<td>Primary</td>
<td>Deformation</td>
<td>$f_b,f_v,f_c,E$ (default values)</td>
</tr>
<tr>
<td></td>
<td>Collector Connections</td>
<td>Steel, Wood</td>
<td>Primary</td>
<td>Deformation</td>
<td>$f_b,f_v,f_c,E$ (default values)</td>
</tr>
<tr>
<td></td>
<td>Shear Connections (in-plane)</td>
<td>Steel, wood</td>
<td>Primary</td>
<td>Deformation</td>
<td>$f_y, f'_c, E$ (as-built dwgs)</td>
</tr>
<tr>
<td>Shear wall</td>
<td>Plywood sheathing</td>
<td>Wood</td>
<td>Primary</td>
<td>Deformation</td>
<td>$f_b,f_v,f_c,E$ (default values)</td>
</tr>
<tr>
<td></td>
<td>Sill Plate Bolting Shear Connection to footings</td>
<td>Wood, Concrete</td>
<td>Primary</td>
<td>Deformation</td>
<td>$f_b,f_v,f_c,E$ $f_y, f'_c$ (as-built dwg, default values)</td>
</tr>
<tr>
<td></td>
<td>Wood Studs OOP resistance</td>
<td>Wood</td>
<td>Primary</td>
<td>Force</td>
<td>$f_b,f_v,f_c,E$ (default values)</td>
</tr>
<tr>
<td>Foundations</td>
<td>Concrete footings</td>
<td>Concrete</td>
<td>Primary</td>
<td>Deformation</td>
<td>$f_y, f'_c$ (as-built dwg)</td>
</tr>
<tr>
<td>SFRS System</td>
<td>SFRS Component</td>
<td>Material</td>
<td>Primary/Secondary</td>
<td>Material Property:</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------</td>
<td>-----------</td>
<td>------------------</td>
<td>---------------------</td>
<td></td>
</tr>
<tr>
<td>Vertical Load Path</td>
<td>Plywood Decking</td>
<td>Wood</td>
<td>Primary</td>
<td>fb, fv, E (default values)</td>
<td></td>
</tr>
<tr>
<td>(Gravity)</td>
<td>2x flat Stripping</td>
<td>Wood</td>
<td>Primary</td>
<td>fb, fv, fc, E (default values)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4x Beams</td>
<td>Steel</td>
<td>Primary</td>
<td>fy, E (as-built dwg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WF Girders</td>
<td>Steel</td>
<td>Primary</td>
<td>fy, E (as-built dwg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Steel Columns</td>
<td>Steel, Concrete</td>
<td>Primary</td>
<td>fy, f'c, E (as-built dwg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wood Stud Bearing Walls</td>
<td>Concrete</td>
<td>Primary</td>
<td>fy, f'c (as-built dwg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Concrete Footings</td>
<td>Concrete</td>
<td>Primary</td>
<td>fy, f'c (as-built dwg)</td>
<td></td>
</tr>
</tbody>
</table>
Data Collection Requirements

The level of data collection for the project is defined as the “Usual” level for community college buildings constructed in conformance with the field act per 2016 CEBC section 319.2.2. The data collection requirements for “Usual” level of ASCE 41 section 6.2.2 and each material specific section of ASCE 41 will be used as the basis for gathering information of the existing structure materials and condition assessment. The results of the field data will be compiled and used to supplement and verify the properties currently listed in the as-built structural drawings. These properties will be used during the analysis of specific elements in the seismic force resisting system as outlined in the Acceptance Criteria table above. Per ASCE 41 table 6-1, the Knowledge Factor k applied to material values is 1.00 for Usual level testing.

Material Testing

See below for a matrix of existing material properties and required “Usual” level testing. The material testing indicated will be submitted to DSA for review and approval prior to approval of retrofit construction plans.

Material Testing: Data Collection Matrix

<table>
<thead>
<tr>
<th>No.</th>
<th>Material</th>
<th>Properties</th>
<th>Material Values (Lower Bound)</th>
<th>Test Quantity</th>
<th>Code Section</th>
<th>Test Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wood Plywood</td>
<td>Grade = Shear capacity</td>
<td>DF, C-C (as-builts)</td>
<td>(1)</td>
<td>ASCE 41 12.2.2.4.1.1</td>
<td>T1/SK-1A</td>
</tr>
<tr>
<td>2</td>
<td>Wood Beams</td>
<td>Species = Grade = fb,fv,fc,E,Z,W</td>
<td>Unknown Unknown (default - NDSx.85)</td>
<td>(3)</td>
<td>ASCE 41 12.2.2.4.2, 12.2.2.5</td>
<td>T2/SK-1A</td>
</tr>
<tr>
<td>3</td>
<td>Wood Studs</td>
<td>Species = Grade = fb,fv,fc,E,Z,W</td>
<td>Unknown Unknown (default-NDSx.85)</td>
<td>(3)</td>
<td>ASCE 41 12.2.2.4.2</td>
<td>T3/SK-1A</td>
</tr>
<tr>
<td>4</td>
<td>Wood Sill</td>
<td>Species = Grade = fb,fv,fc,E,Z</td>
<td>Redwood Unknown (default-NDSx.85)</td>
<td>(3)</td>
<td>ASCE 41 12.2.2.4.2</td>
<td>T4/SK-1B</td>
</tr>
<tr>
<td>5</td>
<td>Structural Steel</td>
<td>Grade: ASTM A7 Fy = Fu =</td>
<td>(as-builts) 30ksi 55ksi</td>
<td>none</td>
<td>ASCE 41 9.2.2.4.1</td>
<td>N/A</td>
</tr>
<tr>
<td>6</td>
<td>Concrete</td>
<td>f’c =</td>
<td>2500psi (as-builts)</td>
<td>(3)</td>
<td>ASCE 41 10.2.2.4.1.1</td>
<td>T5/SK-1B</td>
</tr>
<tr>
<td>7</td>
<td>Concrete Reinf</td>
<td>ASTM A15 (Int) fy =</td>
<td>(as-builts) 40ksi</td>
<td>none</td>
<td>ASCE 41 10.2.2.4.1.3</td>
<td>N/A</td>
</tr>
<tr>
<td>8</td>
<td>Soil</td>
<td>Soil Bearing D = D+L =</td>
<td>(as-builts) 2000 psf 3000 psf</td>
<td>None</td>
<td>ASCE 41 8.2.1.2 / 8.4.1.1</td>
<td>N/A</td>
</tr>
</tbody>
</table>
**Work Procedure for Material Testing:**

(item 1) locate exposed area of existing plywood roof decking and observe manufacturing stamp for product grade and exposure. If no stamp is visible for observation obtain 2” diameter core sample required for pathological wood lab to determine grade and species using same sample plywood location as item 1 of the condition assessment (see below) where roofing is removed. Patch back with flat 6” square x ½” plywood at top of panel fastened w/(4) #8 screws. Report findings of investigation.

(Item 2,3,4) locate either exposed area of wood framing or remove portion of gyp board as required to observe manufacturing stamp for wood species and grade framing locations indicated. If no stamp is visible for observation obtain core sample required for pathological wood lab to determine grade and species. Patch back existing finish as required. Report findings of investigation.

(Item 6) obtain concrete cylinder cores as required for lab testing of compression strength. Apply concrete bonding adhesive and backfill with non-shrink grout obtaining 28 day compressive strength of 6000psi minimum. Report findings of investigation including mean of test results (labeled Expected Strength) and subtraction of (1) standard deviation (labeled Lower Bound Strength).
**Condition Assessment**

The condition assessment requirements for existing structures under the “Usual” level data collection criteria of ASCE 41 table 6-1 are listed as “visual” for structures with existing design drawings. The intent of the investigation is to confirm accuracy of the as-built drawings and observe any damage or material degradation in the structure. Some locations requiring condition assessment such as collector connection nailing, shearwall sheathing, sill plate and holdown anchorage will require removal of finishes to access visual observation.

See below for a matrix summary of the elements requiring condition assessment proposed to meet the ASCE 41 “Usual” level data collection requirements. Also refer to the attached schematic plan and details for proposed general locations of visual observation. Any materials damaged or removed during the condition assessment shall be repaired and/or replaced (refer to work procedure for condition assessment).

Where significant element degradation is observed during the condition assessment or major discrepancies exist between as-built drawings and actual configuration or material is observed, subsequent material sampling and testing may be required by the SEOR prior to completing the Tier 3 analysis.

The condition assessment investigation indicated will be reported and submitted to DSA for review and approval prior to approval of retrofit construction plans.

**Condition Assessment: Data Collection Matrix**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Condition Assessment Description and Requirements</th>
<th>Assessment Quantity (Usual)</th>
<th>Assessment Locations (see schematic drawings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td><strong>General Requirements</strong> – Verify presence, configuration, physical dimensions, and physical condition of primary and secondary elements listed below and components and their connections. Note any degradation of elements or components.</td>
<td>SK-1A SK-1B</td>
<td></td>
</tr>
</tbody>
</table>
| 1        | **Plywood Decking**  
Element – Thickness, dimensions, grade, condition Connections  
-Nailing to 2x4 flat stripping: Size (length and diameter), spacing. | 2 | SK-2 |
| 2        | **2x4 Flat Stripping**  
Element – Dimensions, spacing, species, grade, condition Connections  
-Nailing to 4x10 Beams: Size, spacing. | 2 | SK-2 |
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Condition Assessment Description and Requirements</th>
<th>Assessment Quantity (Usual)</th>
<th>Assessment Locations (see schematic drawings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>2x6 Collector Strip</strong>&lt;br&gt;Element- Dimensions, spacing, species, grade, condition&lt;br&gt;Connections-&lt;br&gt;-Nailing to roof decking: Size, Spacing&lt;br&gt;-Splice Connection: Length of splice, dimension of splice member, nailing size and spacing.</td>
<td>2</td>
<td>SK-3&lt;br&gt;SK-7</td>
</tr>
<tr>
<td>4</td>
<td><strong>4x10 Beams</strong>&lt;br&gt;Element – Dimension, spacing, condition&lt;br&gt;Connections -&lt;br&gt;-Bolting to steel WF girders: Steel bracket size, bolt size and spacing, condition.&lt;br&gt;-Outrigger connection: 2x outrigger dimensions and splice length, bolt size and spacing, nail size and spacing.</td>
<td>1</td>
<td>SK-4&lt;br&gt;SK-5&lt;br&gt;SK-7</td>
</tr>
<tr>
<td>5</td>
<td><strong>WF Beams</strong>&lt;br&gt;Element-Dimensions, condition&lt;br&gt;Connections-&lt;br&gt;-Beam to column bolted connection: Steel plate dimensions, bolt size and spacing.&lt;br&gt;-WF splice connection: Plate size, bolt size and spacing.&lt;br&gt;-Overhang Split Level Connection: Weld size and condition, bolt size and condition.</td>
<td>1</td>
<td>SK-8&lt;br&gt;SK-9&lt;br&gt;SK-10</td>
</tr>
<tr>
<td>6</td>
<td><strong>Wood Shear Walls</strong>&lt;br&gt;Element–&lt;br&gt;-Top Plate: Dimension, spacing, species, grade, condition.&lt;br&gt;-Studs: Dimension, spacing, species, grade, condition.&lt;br&gt;-Sill Plate: Dimension, spacing, species, grade, condition.&lt;br&gt;-Plywood Sheathing: thickness, grade, condition.&lt;br&gt;Connections&lt;br&gt;-Sheathing nailing: size and spacing at top plate, sill plate, end studs, typical studs.&lt;br&gt;-Top Plate Splice: dimensions, length of splice, nail size and spacing.&lt;br&gt;-Sill Plate Anchorage: size, spacing, presence of nut-washer, bolt hole drilled size in sill.&lt;br&gt;-Holdown: steel holdown bracket size, dimensions, bolt to studs size and spacing, anchor bolt to footing size.</td>
<td>2</td>
<td>SK-11&lt;br&gt;SK-12&lt;br&gt;SK-13&lt;br&gt;SK-14</td>
</tr>
<tr>
<td>Item No.</td>
<td>Condition Assessment Description and Requirements</td>
<td>Assessment Quantity (Usual)</td>
<td>Assessment Locations (see schematic drawings)</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------</td>
<td>-----------------------------</td>
<td>-----------------------------------------------</td>
</tr>
</tbody>
</table>
| 7        | **Wood Ridge – Shear Transfer**  
Element-3x continuous: dimensions, species, grade, condition  
Connections-  
nailing to plywood roof decking: size and spacing  
splice connection: Splice plate dimensions, species grade condition, nailing size and spacing. | 1 | SK-5 |
| 8        | **Shearwall Blocking – Shear Transfer**  
Element-2x blocking: dimensions, species, grade, condition.  
Connections-  
nailing at roof plywood to blocking: Size, spacing.  
nailing at shearwall plywood sheathing to blocking: Size, spacing. | 2 | SK-6  
2 | SK-7 |
| 9        | **Skylights**  
Element – Confirm plan dimensions, perimeter framing sizes, condition of elements | 2 | SK-5 |
| 10       | **Concrete Elements**  
Element- concrete slab on grade: condition, cracking, degradation | 1 | SK-1B |

**Work Procedure for Condition Assessment**

Refer to Condition Assessment Data Collection Matrix for items below:

**Items 1, 3, 7, and 8:** Remove existing roofing to expose edge nailing of one full sheet of plywood at ridge line, interior wall line, and over exterior walls. Obtain nail samples to confirm size and type. Refer to data collection matrix and attached sketches for specific items to observe and document. Report findings of either conformance or deficiencies of all items including field photos of conditions. Provide weatherproof patch back of all roofing where demolition occurs.

**Items 2 and 3:** Observe 2x4 flat stripping and splicing of 2x6 continuous strip from underside of deck. Cut and remove 2’-0” long by 4” wide strip of plywood over blocking at exterior walls to expose 2x6 fasteners. Refer to data collection matrix and attached sketches for specific items to observe and document. Report findings of either conformance or deficiencies of all items including field photos of conditions. Replace section of plywood material removed in-kind with matching thickness and fasteners to original.
Items 4 and 8: Observe 4x10 beams from underside of deck. Remove portions of ceiling and interior wall finish as necessary to expose connections to overhang framing lap splice and blocking above top plates. Refer to data collection matrix and attached sketches for specific items to observe and document. Report findings of either conformance or deficiencies of all items including field photos of conditions. Patch back all ceiling and finish where demolition occurs.

Item 5: Observe steel WF beams from underside of deck. Remove portions of ceiling and interior wall finish as necessary to expose connections to overhang split level connection. Refer to data collection matrix and attached sketches for specific items to observe and document. Report findings of either conformance or deficiencies of all items including field photos of conditions. Patch back all ceiling and finish where demolition occurs.

Items 6 and 8: Remove exterior wall finish to expose edge fasteners of minimum 4'-0" wide full height section of plywood sheathing to supporting wood stud wall framing including top plates and sill plates. Remove minimum 1'-0" wide section of exterior overhang soffit in order to verify continuity of plywood sheathing and fasteners to blocking above double top plates (refer to sketch SK-7). Remove interior wall finishes to confirm sill plate anchorage and presence of blocking at horizontal wall sheathing joints. Remove interior wall and ceiling finishes to expose one full length of double top plate lap splice and topside fasteners. During removal of full brick veneer, verify and document presence of wall anchors to wood stud wall. Refer to data collection matrix and attached sketches for specific items to observe and document. Report findings of either conformance or deficiencies of all items including field photos of conditions. Patch back all exterior finishes with weatherproof plaster/stucco system where demolition occurs. Patch back all interior ceiling and finish where demolition occurs.

Item 9: Remove vertical interior plywood facing to expose skylight framing on one side of skylight. Report findings of either conformance or deficiencies of all items including field photos of conditions. Patch back all finishes where demolition occurs.
Non-Structural Components Evaluation

ASCE 41-13 requires an evaluation of non-structural components as part of the Seismic Rehabilitation. As indicated above the performance objective for non-structural components for the Men’s Locker Building is N-C: Life Safety with a High Seismicity Level. The ASCE 41 Chapter 13 specifies the provisions necessary for the evaluation and retrofit of non-structural components. The steps required include the following:

1) Walk through and condition assessment performed in accordance ASCE 41 section 13.2.
2) Analysis and evaluation for all items determined from ASCE 41 Table 13-1.
3) Design of retrofit for all items that do not meet the applicable acceptance criteria specified in ASCE 41 Section 13.3.
4) Review Interaction between structural and non-structural components.

Evaluation of existing non-structural components will use Level 1 BSE-1E level seismicity and required Fp forces determined from ASCE 41 section 13.4. Level 2 forces (BSE-2N) are not a required performance level for Risk Category II (refer to table above in section titled: Evaluation and Analysis Methods). Evaluation and anchorage of new non-structural components under performance level Life Safety will be analyzed using seismicity and forces per new construction codes (ASCE 7-10, CBC 2016) as indicated in ASCE 41 section 13.1. Non-structural items to be replaced include: interior partition walls, ceilings, ductwork, piping, HVAC units.

Some of the potential deficiencies for existing non-structural items to remain are: inadequate brick veneer wall anchorage, inadequate MEP unit anchorage. Possible mitigation of brick veneer anchorage is to remove and replace full depth brick with either a thinner adhered veneer or provide an mechanical anchorage system such as steel anchors embedded in mortar joints with connection to vertical slotted channel system fastened to wall studs. Existing MEP unit anchorage can be removed and post installed with adequate expansion anchors.

Refer to the table below for the acceptance criteria of non-structural components. Table 13-1 has been included in Appendix of this report as a reference for the selection of components occurring within the building.
## Existing Non-Structural Evaluation and Acceptance Criteria

<table>
<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Acceptance Criteria</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick Veneer</td>
<td>Arch: Anchored Veneer</td>
<td>Fpx, Fpz, Ip-1.0 Drift Ratio=.02</td>
<td>1. Stability, joint detail and maintenance to prevent moisture intrusion to anchors, 2. Veneer support over openings 3. Confirm any deterioration.</td>
</tr>
<tr>
<td>Boiler</td>
<td>Mech Equip: Category 1</td>
<td>Fpx, Fpz, Ip-1.0</td>
<td>1. Analyze for acceleration induced forces. 2. Visually observe and document supports, holdowns, bracing. 3. Provide pull test of anchors or replace/add new anchors.</td>
</tr>
<tr>
<td>Hot Water Heater</td>
<td>Mech Equip: Category 2</td>
<td>Fpx, Fpz, Ip-1.0</td>
<td>1. Analyze for acceleration induced forces. 2. Visually observe and document supports, holdowns, bracing. 3. Provide pull test of anchors or replace/add new anchors.</td>
</tr>
<tr>
<td>Gas Lines</td>
<td>Mech Equip: Pressure Piping</td>
<td>1.ASME B-31 2. Fpx, Fpz, Ip-1.0</td>
<td>1. Tested by an approved method. Lines shall be hydrostatically tested to 150% of max anticipated pressure of system.</td>
</tr>
</tbody>
</table>

## Non-Structural Data Collection:

**Scope of Work:**

1. Determine the presence and configuration of each component listed and its attachment to structure.
2. Determine the physical condition of each component and whether or not degradation is present.
3. Determine the presence of nonstructural components whose failure could affect the performance of the component being verified.

<table>
<thead>
<tr>
<th>Item</th>
<th>Drawings Available</th>
<th>Frequency of Observation</th>
<th>Assessment Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brick Veneer</td>
<td>No</td>
<td>(3) Locations</td>
<td>See SK-1B and SK-14</td>
</tr>
<tr>
<td>Boiler</td>
<td>No</td>
<td>(1) Unit</td>
<td>See SK-1B</td>
</tr>
<tr>
<td>Hot Water Heater</td>
<td>No</td>
<td>(2) Units</td>
<td>See SK-1B</td>
</tr>
<tr>
<td>Gas Lines</td>
<td>No</td>
<td>(3) Locations</td>
<td>To be determined in field</td>
</tr>
</tbody>
</table>
Accessibility Evaluations

All new construction and remodeled elements of PE and Kinesiology facilities at Contra Costa College will be designed to be in compliance with the current CBC and existing portions of the parking, accessible routes, entrances, and other features that are existing to remain.

The extensive site improvements which includes additional accessible stalls, accessible walkways and seating areas will seamlessly connect and improve accessibility between existing buildings and pool area of PE&K facility. The Lobby addition to Building G is featured as the new ‘front door’ to PE&K Facilities will provide a prominent arrival point to the campus.

Accessibility Site Plan is provided to demonstrate that the project meets the path of travel requirements specified by DSA Procedure 08-03 (C.2) and Site Arrival Points per 11B-206.2.1. See attached Appendix D -Sheet GA102 — Site Accessibility Plan.

HVAC systems

Air-moving systems supplying air in excess of 2000 CFM shall be interlocked to and shutdown by an area wide fire alarm system signal. For buildings without an area wide system, the equipment shall be equipped with an automatic shutoff activated by a smoke detector located in the main supply-air duct. HVAC systems that are impacted by rehabilitation work and incorporate smoke detector shut down, shall be tested prior to approval of the project to verify correct operation of the system. In the event that the system does not function as originally designed, repairs or replacements will be required for the automatic shutdown feature.

Fire Life Safety Evaluations

In response DSA FLS comments per PR-08-03 Appendix C, see responses below:

C1.3.

   a. A complete building code analysis are provided for Building L. see attached Appendix D for code analysis.

       Building L – refer to sheet LT.GL-111

   b. Per code analysis, means of egress of each buildings are identified.

   c. There are no fire rated construction at existing and renovated buildings

   d. Asbestos abatement are not required.

   e. Per code analysis, existing and new occupancy groups are identified for each building

   f. Refer to HVAC write-up

   g. Refer to HVAC write-up.

Fire Alarm System

A new Fire Alarm System is being installed in this project. The system will be tested at completion in accordance with NFPA72 requirements.
Fire Sprinkler Systems

A Full Fire Sprinkler System design, encompassing the ENTIRE building shall be designed within NFPA, CBC & Local (DSA) guidelines. System piping shall be seismically braced per NFPA guideline, and supported by bracing calculations (provided as part of the Fire System Submittal package). It is the intent that ALL seismic bracing installations (entirely comprised of NEW installations), and components be attached to the structure @ STEEL members ONLY. Spacing of brace locations shall be adjusted to accommodate this intent to the extent possible. Where this is not possible / feasible, the Structural EOR may require additional “Blocking” to the buildings WOOD members in order to provide the required seismic load capabilities.
LEGEND

- T1 ROOF PLYWOOD
- T2 WOOD ROOF BEAM
- T3 WOOD STUD
- SK- CONDITION ASSESSMENT LOCATION - REFER TO SKETCH

Notes:
1. Refer to Work Procedure for Material Testing and Condition Assessment for additional info
2. Final locations of Condition Assessment and Material Test samples to be confirmed in field and coordinated with SEOR and AOR.

CONDITION ASSESSMENT AND MATERIAL TESTING FOR MEN'S LOCKER ROOM - EXISTING ROOF FRAMING PLAN
LEGEND

Notes:
1. Refer to Work Procedure for Material Testing and Condition Assessment for additional info.
2. Final locations of Condition Assessment and Material Test samples to be confirmed in field and coordinated with SEOR and AOR.

GENERAL LOCATION OF EXISTING WATER HEATER AND BOILER, VERIFY IN FIELD

CONDITION ASSESSMENT AND MATERIAL TESTING FOR MEN’S LOCKER ROOM - EXISTING FOUNDATION PLAN

SK-1B
Typical Details - Plywood Sheathing

2. All Plywood shall be "Exterior Type" Sheathing Grade "C-C" or equal Douglas Fir Plywood Commercial Standards C5-45-48. Each panel shall bear the grade mark of the Douglas Fir Plywood Association.
3. Contractor shall use #8 Berkeley Plywood Nails or 8d common cut 2" length.
4. 2x4's for Purlins shall be in as long lengths as practicable. Unless noted, splice over 4x roof members - stagger splices. Purlins and blocking shall be located accurately so as to fit plywood.
5. Edge of plywood shall be not closer than 3/4" to edge of bearing.
6. Nails shall be at least 3/4" from edge of plywood.

Plywood Nailing
8d @ 3" cc at edges of all sheets
8d @ 12" cc at interior bearings

At Roof

Purlin

Stagger joints
(Typical)

1/2 Plywood (Typical)

Blocking at edge
of panels - See
details on Framing
Plans.

Panel edge on
4" bearing
Nail as for panel edge

2 x 4 (Flst) Typical Rafter. 24" oc.

Over wall: 2 x 6 cont. Strip. Splice on 2 4 x 10 as shown Sect 32 for 2 x 4 stripping

2 x 10 x 1 - 16 19
d - 16" ea. end.

2 x 6 Studs @ 16" cc.

Sect. 35
Details not noted same as Sect. 31

2-16" joist
Ceiling Joists 2 x 4 @ 16 cc

1x4 ribbon

CONFIRM ALL HIGH LIGHTED INFORMATION AND CONDITION OF MATERIAL
2x6 Strip (Flat) on 6" Beam - Splice as shown Sect. 34.

2" Plywood

2x4 (flat stripping)
Cont. @ 24" cc
2x4 Blky.

Elev. Top Flange?
See Roof Framing

Cut to bear

Nailing as for panel edge

Typ. Splice for 2x4 Strip

16° as shown

Clip K1
See Sect. 34

CONFIRM ALL HIGH LIGHTED INFORMATION AND CONDITION OF MATERIAL
CONFIRM ALL HIGH LIGHTED INFORMATION AND CONDITION OF MATERIAL
4x10 joist @ bearing wall only, 3/8" carriage bolts @ 1-0cc
2x6 plate - 16d nails, 6" o.c.
CONFIRM ALL HIGH LIGHTED INFORMATION AND CONDITION OF MATERIAL
CONFRM ALL HIGH LIGHTED INFORMATION AND CONDITION OF MATERIAL

Splice — See Rf. Framing

5" End Condition

For Elev. see Rf. Framing

3/8" x Stiff. Plate both side cope corners at Beam fillets.

5 1/2" x 1 1/2" x 0'-10" lg. Pl. thus:

3/4" x 3/4" x 3/4" Bolts

10" x 5/8" x 0'-10" lg. Pl.
3/4" x 12" lg. Anchor Bolts
15/16" Holes, 1 1/2" Grout

Vary's

Nom. Floor Line

Constr. Joint see Gen. Notes

Grout

SK-8
CONFIRM ALL HIGH LIGHTED INFORMATION AND CONDITION OF MATERIAL
CONFIRM ALL HIGH LIGHTED INFORMATION AND CONDITION OF MATERIAL

2-2x6 Continuous
2x4 Blkg.
2x4 (flat)

See Sect. 38

Clip Kl-see sect. 34
For Gutter dets. see Arch. Dwg.
2x6 Studs@ 12" cc@ North Wall
2x6 Studs@16 cc @South Wall

3" Std. Pipe Col.

1-3/4" bolt

L6 x 3 1/2" x 6 x 1 - 5

4x6 Post

Universal Framing Clip

1/2" welded Studs (Nelson or equal) 4'-0" cc.
4'-9" from ends of boards
(Typ.)

1/2" Plywood
2x8 Blkg.

2x4 Blkg.

Similar Sect. 35
**Typical Details - Plywood Sheathing**

1. Roof Sheathing shall be 6" Plywood. Wall Sheathing shall be 3/8" Plywood.
2. All Plywood shall be Exterior Type Sheathing Grade "C-C" or equal Douglas Fir Plywood Commercial Standards C5-45-48. Each panel shall bear the grade mark of the Douglas Fir Plywood Association.
3. Contractor shall use 8 Berkeley Plywood Nails or 8d common cut 2" length.
4. 2x4"s for Purlins shall be in as long lengths as practicable. Unless noted, splice over 4 x roof members - stagger splices. Purlins and blocking shall be located accurately so as to fit plywood.
5. Edge of plywood shall be not closer than 3" to edge of bearing.
6. Nails shall be at least 3/4" from edge of plywood.
Typical Splice Upper Plate
All Splices over bearings.
Plywood Sheath, see sh.5-2

{3x10 for Sect. F.30
Rwcl.sill {3x6 for Sect. F.30a
set on 1/2" grout 5/8 x 12" bolts.

For Col. location see Fnd. Plan.

#5 Cont. @ 4 of curb
Hook 12" of doors and Pipe Cols.
Grade see Arch. Dwgs.

Vert bars, #4 @ 30" cc.
Horiz bars, #4 @ 12" cc.
Elev. see Found Plan

See Found. Plan

Sect. F.30

{6" Studs @ 16" cc.
4 x 6 Mullions at windows

Pipe Cols. For Typ. Details see Sh. S-3
For Curb Detail see Arch. Dwgs.
Slab on Grade see Gen. Notes.

Nom. Fl. Line

For depression see Arch. Dwgs.
Constr. Joint see Gen. Notes
#5 Cont.
CONFIRM ALL HIGH LIGHTED INFORMATION AND CONDITION OF MATERIAL

CONFIRM ANCHORAGE OF BRICK VENEER TO WOOD STUD WALL: SIZE, THICKNESS SPACING, FASTENERS, CONDITION.

Brick veneer see Architectural Dwgs. for location

Slab on Grade see Gen. Notes

Slopes-see Arch. Dwgs.

Grade See Arch. Dwgs.

Elev. see Fnd. Plan

See Fnd. Plan

Slab at section not veneered

& Curb & Footing

Sect. F31

6" Studs @ 16" cc.

4x6 Mullions at windows

Sect. F31a

6" Studs @ 12" cc.
1. Existing Perimeter walls to remain.

LEGEND

- Existing interior walls, to be removed
- Proposed new interior partition walls
- Proposed new interior structural shear walls

Notes:
1. Existing Perimeter walls to remain
### Table 13-1. Nonstructural Components: Applicability of Life Safety and Position Retention Requirements and Methods of Analysis

<table>
<thead>
<tr>
<th>Component Type</th>
<th>Seismicity</th>
<th>High Seismicity</th>
<th>Moderate Seismicity</th>
<th>Low Seismicity</th>
<th>Analysis Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pr</td>
<td>Ls</td>
<td>Pr</td>
<td>Ls</td>
<td>Pr</td>
<td>Ls</td>
</tr>
</tbody>
</table>

#### Architectural (Section 13.6)

1. **Cladding and Glazing**
   - Adhered veneer: Yes, Yes, Yes, Yes, Yes, Yes, F/D
   - Anchored veneer: Yes, Yes, Yes, Yes, Yes, Yes, F/D
   - Glass blocks and other nonstructural masonry walls: Yes, Yes, Yes, Yes, Yes, Yes, F/D
   - Prefabricated panels: Yes, Yes, Yes, Yes, No, No, F/D
   - Glazed exterior wall systems: Yes, Yes, Yes, Yes, No, No, F/D

2. **Partitions**
   - Heavy, URM, or hollow clay tile: Yes, Yes, Yes, Yes, Yes, Yes, F/D
   - Light: Yes, No, Yes, No, No, No, F/D
   - Glazed: Yes, Yes, Yes, Yes, No, No, F/D

3. **Interior Veneers**
   - Stone, including marble: Yes, Yes, Yes, Yes, No, No, F/D

4. **Ceilings**
   - Directly applied to structure: Yes, No*, Yes, No*, No, No, F
   - Dropped furred gypsum board: Yes, Yes, No, No, No, No, F
   - Suspended lath and plaster: Yes, Yes, Yes, Yes, No, No, F
   - Suspended integrated ceiling: Yes, No, Yes, No, No, No, P

5. **Parapets and Cornices**
   - Unreinforced masonry: Yes, Yes, Yes, Yes, Yes, Yes, F
   - Concrete and reinforced masonry: Yes, Yes, Yes, Yes, Yes, No, F
   - Other: Yes, Yes, Yes, Yes, Yes, No, F

6. **Architectural Appendages and Marquees**
   - Stone, including marble: Yes, Yes, Yes, Yes, Yes, Yes, F/D

7. **Chimneys and Stacks**
   - Yes, Yes, Yes, Yes, Yes, Yes, F/D

8. **Stairs**
   - Yes, Yes, Yes, Yes, Yes, Yes, F/D

9. **Doors Required for Emergency Services Egress**
   - Yes, Yes, Yes, No, No, No, F/D

#### Mechanical Equipment (Section 13.7)

1. **Mechanical Equipment**
   - Boilers, furnaces, pumps, and chillers: Yes, No*, No, No, No, No, F
   - General manufacturing and process machinery: Yes, No*, No*, No, No, No, F
   - Hazardous material equipment: Yes, Yes, Yes, Yes, Yes, Yes, F
   - Fire suppression equipment: Yes, Yes, Yes, Yes, Yes, Yes, F
   - HVAC equipment, vibration isolated: Yes, No*, No*, No, No, No, F
   - HVAC equipment, non-vibration isolated: Yes, No*, No*, No, No, No, F
   - HVAC equipment, mounted in line with ductwork: Yes, Yes, No*, No, No, No, P

2. **Storage Vessels and Water Heaters**
   - Structurally supported vessels (Category 1): Yes, No*, No*, No, No, No, P/F
   - Flat bottom vessels (Category 2): Yes, No*, No*, No, No, No, F
   - Fire water storage tanks and reservoirs: Yes, Yes, Yes, Yes, Yes, Yes, F

3. **Pressure Piping**
   - Yes, Yes, No, No, No, No, D

4. **Fire Suppression Piping**
   - Yes, Yes, Yes, Yes, Yes, Yes, F

5. **Fluid Piping, not Fire Suppression**
   - Yes, No, No, No, No, No
   - Hazardous materials: Yes, Yes, Yes, Yes, Yes, Yes, P/F/D
   - Nonhazardous materials: Yes, No, No, No, No, No, P/F/D

6. **Ductwork**
   - Stair and smoke ducts: Yes, Yes, Yes, Yes, Yes, Yes, P/F/D
   - Hazardous material ducts: Yes, Yes, Yes, Yes, Yes, Yes, P/F/D
   - Other HVAC ducts: Yes, No*, No*, No*, No*, No, P/F/D

#### Electrical and Communications (Section 13.7)

1. **Electrical and Communications Equipment**
   - Yes, No*, Yes, No, No, No, F

2. **Electrical and Communications Distribution Equipment**
   - Emergency power equipment: Yes, Yes, Yes, Yes, Yes, Yes, P/F/D
   - Other: Yes, No, Yes, No, No, No, P/F/D

---

Items marked indicate existing non-structural components to remain.
**Contra Costa County – PE & Kinesiology Complex Renovation**  
Lionakis Project No. 017034  
Seismic Rehabilitation - Pre-App Meeting

Meeting Number: 01  
Meeting Date: May 1, 2017

**Attendees:**  
Rich Denio, DSA – Structural Safety  
Karen Van Dorn, DSA – Architectural Intake  
Ben Azarnoush, Contra Cost Community College District  
Jonathon McMurtry AIA, Lionakis  
Bill Anders S.E., Lionakis

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Action</th>
<th>Subject/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Existing Gym: Per DSA, the cost analysis for seismic rehab trigger per CAC 4-309(c) shall consider present day replacement cost of a similar size and construction method of existing building.</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Existing Gym: Proposed new lobby is considered an addition due to shared floor space, regardless of whether seismic gap occurs. Therefore, cost is included in 4-309(c) cost trigger for seismic rehab.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lionakis</td>
<td>Prepare cost analysis of proposed additions and alterations to the existing gym. Determine whether Seismic Rehab is triggered per CAC 4-309(c).</td>
</tr>
<tr>
<td></td>
<td>Lionakis</td>
<td>Prepare Seismic Rehabilitation report as required by CAC 4-306 for proposed alterations and additions to existing gym.</td>
</tr>
<tr>
<td>1.3</td>
<td>Existing Gym: exterior covered patio area proposed to be enclosed with non-bearing store-front glazing. No specific considerations required, minor seismic mass and no alteration of current wind force profile.</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Existing Gym: expected seismic upgrades include evaluation of out-of-plane anchorage.</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Existing Gym: new mechanical units servicing Gym to be located on new lobby roof.</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>Existing Gym: new lobby addition to be steel framed structure.</td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td>Existing Men’s Locker Building: removal of more than 10% of existing shearwall length with result in a required seismic rehabilitation of the entire structure regardless of the replacement location of the walls. Therefore, the proposed gutting and rebuilding of all interior walls requires a full seismic rehab per CAC section 4-309(c). Further, the roof diaphragm and all other structural elements require evaluation and design regardless of whether relocation of shearwalls decreases actual seismic loading to each element.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lionakis</td>
<td>Prepare Seismic Rehabilitation report as required by CAC 4-306 for proposed alterations to existing mens locker building.</td>
</tr>
<tr>
<td>1.8</td>
<td>Existing Women’s Locker Building: Minor building alterations will include some reduction in shearwall length that does not exceed 10% overall for the building. Individual elements will be analyzed and designed as required by CAC 4-309 depending on whether they exceed 5% reduction in strength capacity.</td>
<td></td>
</tr>
</tbody>
</table>
| 1.9      | Existing Gym Annex Building: Minor building alterations will include some new window openings in existing concrete shearwalls that will not exceed

I:\2017\017034 ccc pe&k renovation\07_agency\dsa\01 pre-submittal\meetings\dsa mtg 1\pre-application meeting minutes 170501.docx
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Action</th>
<th>Subject/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.10</td>
<td>Contra Costa College</td>
<td>Seismic Rehab Process: Per DSA, testing reports from original construction may be used in-lieu of new material testing for specific structural elements. Review archives for testing reports during original construction.</td>
</tr>
<tr>
<td></td>
<td>DSA</td>
<td>Confirm whether DSA collected archive data of certified projects during this construction period.</td>
</tr>
<tr>
<td>1.11</td>
<td>DSA</td>
<td>Seismic Rehab Process: Per DSA, building permits for seismic rehabilitation projects are only issued after material testing program results are submitted and shown to validate evaluation and design assumptions. A rehabilitation project may still be submitted for design review prior to final testing report.</td>
</tr>
<tr>
<td>1.12</td>
<td>Lionakis</td>
<td>Seismic Rehab Process: Per DSA, the proposed material testing criteria shall include an exhaustive list of testing required including, material, element location, frequency of testing, and a sketch of general location of testing as an appendix to the Pre-App report. This list is commonly used as an RFP for the district when selecting testing labs for the Rehab project. Incorporate requested report format in Seismic Rehab reports.</td>
</tr>
<tr>
<td>1.13</td>
<td></td>
<td>Seismic Rehab Process: Per DSA, the schedule for DSA review time of the Pre-App Rehab report includes both bin-time and review. Bin time is variable, review takes typical 1-2 weeks.</td>
</tr>
<tr>
<td>1.14</td>
<td>Lionakis</td>
<td>Seismic Rehab Process: Per DSA, the Pre-App Rehab report shall include FLS and ACC criteria. Incorporate required disciplines within Rehab Pre-App reports.</td>
</tr>
<tr>
<td>1.15</td>
<td></td>
<td>Seismic Rehab Process: Per DSA, Electronic submittal of the Pre-Abb Report is not recommended.</td>
</tr>
<tr>
<td>1.16</td>
<td></td>
<td>Seismic Rehab Process / FLS: per DSA, due to the fact that the Men’s LockerRoom building is being largely gutted, the criteria for FLS on the Pre-App report may indicate generally that FLS will be brought up to current code.</td>
</tr>
<tr>
<td>1.17</td>
<td></td>
<td>Seismic Rehab Process: if it is found that the existing Gym will not trigger a seismic rehab per CAC 4-309(c), then any criteria for voluntary upgrades of the SFRS shall be noted on the plans.</td>
</tr>
<tr>
<td>1.18</td>
<td></td>
<td>Processing: Per DSA, it is acceptable for the AOR to decide when to use separate increments for standard submittal processing. However, “swing space” elements such as relocatable shall be submitted over-the-counter and under a separate project number.</td>
</tr>
<tr>
<td>1.19</td>
<td></td>
<td>Processing: Per DSA, where multiple Building Re-habs occur within a single permit, each Rehab shall be given a separate number but may be submitted under the same permit or increment.</td>
</tr>
<tr>
<td>1.20</td>
<td></td>
<td>Increments: Per DSA, Multiple increments within a single permit must have separate change order numbering system.</td>
</tr>
<tr>
<td>1.21</td>
<td></td>
<td>Scheduling: Per Lionakis, this project is tentatively scheduled to be submitted in March of 2018.</td>
</tr>
<tr>
<td>1.22</td>
<td></td>
<td>Scheduling: Per DSA, bin-time for review of Rehab reports is 4-6 weeks. DSA recommends submitting Rehab reports ASAP.</td>
</tr>
</tbody>
</table>

10% overall for the building. Individual elements will be analyzed and designed as required by CAC 4-309 depending on whether they exceed 5% reduction in strength capacity and stiffness.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Action</th>
<th>Subject/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.23</td>
<td>Lionakis</td>
<td>Rehab Pre-App Reports: Per DSA, Exterior and interior photos of the building should be included for each building being submitted as a seismic rehab. Include requested photos within Seismic Rehab pre-app reports</td>
</tr>
<tr>
<td>1.24</td>
<td>Lionakis</td>
<td>Rehab Pre-App Reports: Per DSA, As-built drawings should be submitted along with each Pre-App Report. Hard copies may be ½ size. CD-ROM PDF files are also acceptable in-lieu of hard copies.</td>
</tr>
<tr>
<td>1.25</td>
<td>Lionakis</td>
<td>Rehab Pre-App Reports: Per DSA, Include non-structural element evaluation criteria within the Pre-App Report. Include non-structural element evaluation criteria within Seismic Rehab pre-app report</td>
</tr>
</tbody>
</table>

These notes represent Lionakis’ understanding of the discussion and events of the meeting. These notes form the basis of future work. Should there be any incomplete or inaccurate information contained herein, please notify this office immediately for appropriate action. This report, if not corrected within five (5) days of receipt, shall be acknowledged as an accurate report of the events that took place at this meeting.
Interior locker building walls gutted and replaced. Seismic Rehab Triggered per CAC 4-309(c).2.a
August 9, 2017

Ray Pyle
Chief Facilities Planner
Contra Costa Community College District
500 N. Court St.
Martinez, CA 94533

Re: CCC PE&K Renovation Project – Seismic Criteria

Dear Ray:

This letter is to inform you that Lionakis recommends use of the DSA Community College (DSA-SS/CC) provisions of the 2016 California Existing Building Code (CEBC) for selection of the Seismic Performance Level for analysis and design of the Existing Gym building and Existing Men’s Locker Room building. Both of these buildings will be undergoing a seismic rehabilitation triggered by the proposed modifications to each building per the 2016 California Administrative Code.

DSA has adopted alternative provisions for community college buildings that are more closely in line with the building code requirements for other college-level facilities not governed by DSA. These alternate provisions allow existing buildings to be evaluated to a seismic Performance Objective less than typical K-12 requirements. The community college amendments are voluntary, therefore please review the changes outlined below and contact us if you have any questions. If acceptable to you, please sign and return this document to Lionakis.

The differences between K-12 and Community College provisions for existing building evaluation are as follows in bold italics:

<table>
<thead>
<tr>
<th>Code Provisions</th>
<th>Risk Category</th>
<th>Performance Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSA-SS (K-12)</td>
<td>III</td>
<td>Seismic Hazard Level</td>
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<td></td>
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<td>Structural Criteria</td>
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<tr>
<td></td>
<td></td>
<td>Non-Structural Criteria</td>
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<td></td>
<td></td>
<td>Non-Structural Criteria</td>
</tr>
</tbody>
</table>

I, ________________, acknowledge and accept Lionakis recommendation to use the DSA SS/CC provisions for the Existing Gym and existing Men’s Locker seismic rehabilitation.

Sincerely,

William R. Anders, SE
Senior Engineer