PART 1 - GENERAL

1.1 SUMMARY

A. General Requirements: Comply with the testing and inspection, and correction of Non-Conforming Work provisions specified in this Section and elsewhere in the Contract Documents.

B. Owner’s Responsibilities:
   1. The Owner will select and employ an independent “Testing Agency” to conduct the tests and inspections in accordance with applicable standard methods of the American Society for Testing and Materials (ASTM) or other standards as a requirement of the building permit.
   2. The Owner may provide other special inspection services to inspect and verify that the Work installed is in accordance with the Contract Documents and construction industry standards.

C. Contractor’s Responsibilities:
   1. All other tests and inspections which are required to obtain regulatory approval by Authorities Having Jurisdiction (AHJ) shall be provided by and paid for by the Contractor.
   2. The Contractor shall provide other testing services where specified in the Contract Documents.

1.2 DESCRIPTION

A. Definition: For the purpose of this Section, all references made to Testing Agency, or waterproofing and roofing inspections, or geotechnical consulting firm shall be referred to as those tests or inspections which will be conducted by an inspector provided by the Owner.

B. Testing and Inspection: Materials to be tested and inspected are specified by the Contract Documents. In addition, testing and inspection of other materials maybe required by the building permit or as directed by the Owner or AHJ. Quantities and extent of tests and inspections shall be as specified and/or required by the Owner’s inspector or AHJ.

1.3 QUALITY ASSURANCE

A. Qualifications: The inspector for all work of this Section, except for geotechnical and waterproofing and roofing special inspectors, shall be a registered inspector employed by an approved inspection and/or Testing Agency as listed by the Washington Association of Building Officials (WABO) Special Inspection Registration Program. All inspection personnel used on this Project are subject to being disapproved from the Project at the sole discretion of the Owner’s Representative. Minimum levels of qualifications as stated in the WABO Special Inspection Registration Program for various portions of the required Testing Agency inspections and testing must be complied with.
   1. The special Inspector for waterproofing and roofing must have the required technical knowledge and experience for the product being installed.
   2. The Owner may select a Testing Agency, other than the agency employed by the Contractor, to perform tests required by the building permit.
   3. Geotechnical inspection will be performed by a licensed geotechnical consulting firm.
1.4 DUTIES OF OWNER’S TESTING AGENCY

A. General: The Testing Agency shall conduct testing and inspection services, interpret them, evaluate the results for compliance with the building permit and the Contract Documents, and report the findings to the Owner’s Representative, A/E, Contractor, and AHJ. Testing and inspection services shall be in accordance with applicable standard methods of ASTM or other standards specified by AHJ, the Contract Documents, and construction industry standards. The Testing Agency shall reasonably support overtime, second shift, and out-of-area activity if requested by the Contractor and approved at the Owner’s sole discretion.

B. Non-Conforming Work: The Owner’s inspectors will document and immediately notify the Contractor and the Owner’s Representative of any Work found defective or not in accordance with the requirements of the Contract Documents.

C. The Owner’s inspectors are not authorized to:
   1. Release, revoke, alter, or enlarge on the requirements of Contract Documents;
   2. Approve or accept any portion of the Work, except as allowed by the special inspection duties delegated by AHJ for building permit inspections and testing;
   3. Perform any duties of the Contractor; or
   4. Stop the Work.

1.5 COSTS

A. The Owner’s Testing Agency and special Inspector costs for initial testing and inspection as specified in the Contract Documents will be paid for by the Owner. Initial tests and inspections are defined as those required to complete the first tests and inspections specified.

B. Additional tests and inspections not specified but requested by the Owner or A/E shall be paid for by the Owner.
   1. However, if the results of such tests and inspections are found to be not in accordance with the Contract Documents, the Contractor will be back-charged for all costs of this testing and inspection as well as re-testing, re-inspection and Owner’s consultants’ services.

C. Costs for additional tests or inspections required because of a Contractor change in products or materials, or source, after a submittal has been reviewed and accepted, shall be borne by the Contractor.

D. Costs of any testing which is required solely for the convenience of the Contractor in its scheduling and performance of the Work shall be borne by the Contractor.

E. Costs for verification testing and inspection of Work done without timely notice, with improper supervision, or contrary to construction practice, shall be borne by the Contractor.

F. Costs for testing of materials for which fabrication and mill reports are required, but not furnished, shall be borne by the Contractor.

G. Costs of any testing which is the responsibility of the Contractor as specified in the Contract Documents shall be borne by the Contractor.

1.6 TESTS AND INSPECTION REPORTS

A. Copies of Test and Inspection Reports: Electronic copies of Owner’s Testing Agency (or other special inspection services) reports and Contractor’s test and inspection reports shall be
exchanged between Owner and Contractor at weekly intervals and shall be provided to AHJ as required. All reports will be signed by a registered engineer. Such reports shall include all tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory. Samples taken but not tested and records of special sampling operations that are required shall also be reported.

1. Submit copies of inspection reports, certifications, notices, correspondence, and similar documents and records established in conjunction with building industry standards bearing upon the Work.

1.7 CONTRACTOR’S RESPONSIBILITIES

A. General: Inspection of the Work by the Owner’s special inspectors and/or Testing Agency shall not relieve the Contractor from responsibility for compliance with Contract Documents requirements. Owner’s special inspectors and/or Testing Agency and Owner’s Representative shall have authority to reject Work whenever the provisions of the Contract Documents are not being complied with, and the Contractor shall instruct his employees accordingly.

B. Coordination: The Contractor’s shall initiate, coordinate, and conform to the required tests and inspections of AHJ.

C. Access for the Purpose of Inspection: The Contractor shall ensure the Owner’s special inspectors and/or Testing Agency have free access to all parts of the Work and to the shops where the Work is in preparation; are provided proper facilities for safe access for such inspection; and are reasonably furnished equipment, tools, samples, certifications, test reports, design mixes, storage, and assistance as requested by the Owner’s Inspector.

D. Storage Facilities: The Contractor shall furnish adequate facilities for the sole use of the Owner’s Testing Agency to provide safe storage and curing space for test specimens that must remain on-site prior to transport to the laboratory.

E. Data: The Contractor shall furnish accepted submittals and approved Change Orders, certificates, and similar data as may be required by Owner’s inspectors to perform their work to assure compliance with the Contract Documents.

F. Notice: Furnish notice to Owner’s Representative and coordinate with Owner’s inspectors. Provide a minimum of five (5) working days notice in advance of all required tests and a minimum of forty eight (48) hours in advance of all required inspections, unless otherwise specified.

G. Cancellations: Contractor shall give sufficient advance notice to Owner’s Representative and Inspectors to allow rescheduling of their work load in the event of cancellation or time extension of any scheduled test or inspection.

1. Any charges from an Inspector due to insufficient advance notice of cancellations or time extensions shall be borne by the Contractor, at the Owner’s sole discretion.

1.8 TEST FAILURES

A. General: The Owner’s Representative may require a re-test of a sampled material when a sample or procedure has failed to pass the required tests. In such cases, two samples shall be tested and the material shall be rejected if either sample fails.

1. In the event any test or inspection indicates failure of a material or procedure to meet the requirements of the Contract Documents, all costs for re-testing or re-inspection shall be borne by the Contractor.
1.9 REPORTING TEST FAILURES

A. General: Immediately upon determination of a test failure, the Owner’s inspector shall telephone the test results to the Owner’s Representative and Contractor. By the end of the following day, the Owner’s inspector shall send written test results to those named on the distribution list.

B. Contractor shall similarly report test failures to Owner’s Representative resulting from work of testing agencies provided by the Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION
SECTION 10 26 00 - WALL AND DOOR PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Corner guards.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 CORNER GUARDS

A. Surface-Mounted, Metal Corner Guards: Fabricated as one piece from formed or extruded metal with formed edges; with 90- or 135-degree turn to match wall condition.
   1. Basis-of-Design Product: Subject to compliance with requirements, provide TheCornerGuardStore.com; Model CG-554-18482.5-90 or comparable product by one of the following:
      a. American Floor Products Company, Inc.
      b. Arden Architectural Specialties, Inc.
      c. Balco; a CSW Industrials Company.
      d. Boston Retail Products.
      e. Pawling Corporation.
      a. Thickness: Minimum 0.0500 inch.
      b. Finish: Directional satin, No. 4.
   3. Wing Size: Nominal 2-1/2 by 2-1/2 inches.
   5. Mounting: Flat-head, countersunk screws through factory-drilled mounting holes.

2.2 FABRICATION

A. Fabricate wall and door protection according to requirements indicated for design, performance, dimensions, and member sizes, including thicknesses of components.

B. Quality: Fabricate components with uniformly tight seams and joints and with exposed edges rolled. Provide surfaces free of wrinkles, chips, dents, uneven coloration, and other imperfections. Fabricate members and fittings to produce flush, smooth, and rigid hairline joints.
2.3 FINISHES

A. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and wall areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine walls to which wall and door protection will be attached for blocking, grounds, and other solid backing that have been installed in the locations required for secure attachment of support fasteners.
   1. For wall and door protection attached with adhesive, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Complete finishing operations, including painting, before installing wall and door protection.

B. Before installation, clean substrate to remove dust, debris, and loose particles.

3.3 INSTALLATION

A. Installation Quality: Install wall and door protection according to manufacturer’s written instructions, level, plumb, and true to line without distortions. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.

B. Mounting Heights: Install wall and door protection in locations and at mounting heights indicated on Drawings.

C. Accessories: Provide splices, mounting hardware, anchors, trim, joint moldings, and other accessories required for a complete installation.
   1. Provide anchoring devices and suitable locations to withstand imposed loads.

3.4 CLEANING
A. Remove excess adhesive using methods and materials recommended in writing by manufacturer.

END OF SECTION
GENERAL NOTES

1. INSTALL 3/4" PLYWOOD AT LOCATIONS NOTED;
2. WALL ASSEMBLIES WHERE NOTED AS FIRE RATED SHALL CONFORM TO CONFIGURATIONS AS NOTED;
3. WALL TAG IS PLACED IN PLAN ON SIDE COORDINATE EXTENTS WITH INTERIOR ELEVATIONS OF WALL WITH GWB LAYER;
4. SCHEDULED FINISH WHERE OCCURS;

WALL TAG

- PARTITION CONFIGURATION
- METAL STUD ASSEMBLY 1/20/2021 11:58:57 AM
- P3M 1/20/2021 11:58:57 AM
- P2M 1/20/2021 11:58:57 AM
- P1M 1/20/2021 11:58:57 AM
- P4A 1/20/2021 11:58:57 AM
- P4F 1/20/2021 11:58:57 AM

ACOUSTIC PARTITIONS GENERAL NOTES

- 1. WHERE AN ACOUSTIC PARTITION ABUTS PERPENDICULARLY TO A CONTINUOUS GWB PARTITION, INTERRUPT THE GWB AT THE POINT OF INTERSECTION AND CAULK THE JOINT LIBERALLY. DO NOT CONTINUE THE GWB BEHIND THE INTERSECTING STUD.
- 2. CAULK ALONG BOTH SIDES OF THE PERIMETER WITH NON HARDENING SILICONE MASTIC.

DOOR SCHEDULE

<table>
<thead>
<tr>
<th>Door Type</th>
<th>Project No.</th>
<th>Date</th>
<th>Size (in)</th>
<th>Notes</th>
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DOOR SCHEDULE NOTES

- 1. DOOR HANDLES, PULLS, LOCKS, AND OTHER HARDWARE SHALL BE ACCESSIBLE TO ALL PERSONS IN THE BUILDING.

WINDOW TREATMENT SCHEDULE

<table>
<thead>
<tr>
<th>Window Treatment Type</th>
<th>Project No.</th>
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<tbody>
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WINDOW TREATMENT TYPES

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<tr>
<th>Type A</th>
<th>Type B</th>
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PROJECT TEAM MEMBERS

1. CHECK DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE BY SBC CHAPTER 11 SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.
2. CONTROLS, OPERATING MECHANISM AND HARDWARE INTENDED FOR OPERATION BY THE OCCUPANT IN ACCESSIBLE SPACES, ALONG WITH ACCESSIBILITY FEATURES PROVIDED IN THE BUILDING, SHALL CONFORM TO THE REQUIREMENTS OF SBC 1102.

CEILING

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<th>Typical Configuration</th>
<th>Project No.</th>
<th>Date</th>
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<tbody>
<tr>
<td>Metal Stud Assembly</td>
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<td>Metal Stud Assembly</td>
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FLOOR

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TYPICAL CONFIGURATION

- STUD FULL HEIGHT TO CEILING, GWB TERMINATES 9" ABOVE CEILING U.N.O.
- STC / IIC RATING TEST
- FIRE / SMOKE RATINGS
- FURRED WALLS
- METAL STUD ASSEMBLY, STAGGERED STUDS
- METAL STUD ASSEMBLY, STAGGERED STUDS
- METAL STUD ASSEMBLY, STAGGERED STUDS
- METAL STUD ASSEMBLY, STAGGERED STUDS

PARTITION TYPES

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FIRE / SMOKE

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DEPARTMENT

- DOOR SCHEDULE NOTES
- WINDOW TREATMENT SCHEDULE
- PARTITION CONFIGURATION
- METAL STUD ASSEMBLY

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WINDOW TREATMENT TYPES

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1. PROVIDE CUSTOM COLOR SELECTION TO ARCHITECT FOR SELECTION.

2. PROVIDE WITH FRAME AND BORDER TYPE 3 WITH CONCEALED FASTENING FOR VERTICAL MOUNTING.

3. EXISTING DIFFUSER SHALL BE REUSED - BALANCED TO MATCH EXISTING CFM VALUES UNLESS NOTED OTHERWISE.

**PIPE MATERIALS & APPROVED MANUFACTURERS (UNLESS NOTED OTHERWISE FOR SPECIFIC SYSTEMS ABOVE)**

- [PP-R, PP-RCT] AQUATHERM, ORION, ISCO
- [SCHEDULE 40 SOLID WALL ABS] ALL MANUFACTURERS
- [PRE-INSULATED DIRECT BURY PEX-A] UPONOR, REHAU
- [CPVC SCHEDULE 80] SPEARS EVERTUFF
- [DUCTILE IRON] US PIPE
- [TYPE K COPPER] CERRO, MUELLER, WOLVERINE

**PLUMBING SYSTEMS SPECIFICATION**

<table>
<thead>
<tr>
<th>Piping System</th>
<th>Material</th>
<th>Schedule</th>
<th>Color</th>
<th>Insulation</th>
<th>Temp Range</th>
<th>Notes</th>
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<tbody>
<tr>
<td>C. PROVIDE WALL CLEANOUTS FOR ALL SINKS, WATER CLOSETS, AND URINALS.</td>
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**NOTES SPECIFICATION**

- O = OWNERS VENDOR
- PC = PLUMBING CONTRACTOR

- INCLUDE POLYETHYLEN TUBING.

- INCREASE THICKNESS OF PIPE INSULATION BY 1/2 INCH WHERE PIPING IS LOCATED OUTDOORS OR OTHERWISE EXPOSED TO OUTDOOR AMBIENT AIR.

**PIPING SYSTEMS INDICATION SCHEDULE**

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**PLUMBING PIPE, TUBE, AND FITTINGS SPECIFICATION SCHEDULE**

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**FLOORING SYSTEMS INDICATION SCHEDULE**

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**MECHANICAL SCHEDULES**

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SHEET NOTES
1. SEE TYPICAL PLUMBING DETAILS IN M9 SERIES.
2. SLOPE ALL WATER PIPES AT A RADIUS OF 1/32" PER FOOT.
3. ALL FITS, VALVES, AND DRAIN FITTINGS SHALL BE SERVICED FROM OPENED EXTERNAL TRAP PIPES.
4. PROVIDE STAINLESS STEEL LOCKED ACCESS PANEL FOR ALL FIRE PUMPS.
5. BELOW THE OPERATIONAL FLOOR, DRAIN RISERS TO CONFORM TO ARTICULATION OF NAVIGATION MHE.
6. PROVIDE SECTION VIEW FOR ALL Shaft, ALL TOILETROOMS, AND FIXTURES WITHOUT STOPS (MOP SINKS, DPIE, SHOWERS, ETC)
7. PROVIDE越來TO EA Locations for All Toilet Pumps.
8. PROVIDE ALL UNMARKED AREAS FOR BUILDING VACUUM PLUMBING.
9. LOCATE AT ACCESSIBLE LOCATIONS AS SPECIFIED. NOT ALL SHUTOFF VALVE LOCATIONS ARE DIAGRAMMATICALLY SHOWN.
10. LOCATE TOADA Plumbing fixtures.
11. PROVIDE DIRECT CONNECTION FOR ACID WASTE TO DENTAL TO DENTAL FIXTURE BY FIXTURE INSTALLER.
12. PROVIDE WALL CLEANOUT BELOW EACH LAVATORY AND SINK.

LOCATION

Magnuson Health Sciences Center, B-Wing
1705 NE Pacific ST
Seattle, WA 98195

PLUMBING FLOOR PLAN - THIRD FLOOR

© 2016 MITHUN, INC.
OFFSET DENTAL VACUUM EXHAUST ON 4TH FLOOR TO MECHANICAL ROOM.

OFFSET DENTAL VACUUM EXHAUST IN MECHANICAL ROOM.

DENTAL VACUUM EXHAUST THROUGH ROOF.

DENTAL VACUUM EXHAUST UP IN EXISTING SHAFT.

DENTAL VACUUM EXHAUST UP IN EXISTING SHAFT B.

OFFSET DENTAL VACUUM EXHAUST ON 4TH FLOOR TO MECHANICAL ROOM.

OFFSET DENTAL VACUUM EXHAUST IN MECHANICAL ROOM.

DENTAL VACUUM EXHAUST THROUGH ROOF.

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DENTAL VACUUM EXHAUST UP IN EXISTING SHAFT.

DENTAL VACUUM EXHAUST UP IN EXISTING SHAFT B.
NOTES:
1. WHERE SPRINKLER HEADS ARE LOCATED IN AN ACCESSIBLE Celing, THE HEADS SHALL BE LOCATED ON THE CENTERLINE AXIS OF EITHER THE LONG OR SHORT SIDE DIMENSION OF THE REMOVABLE PANEL (SEE DETAIL ABOVE). IN ROOMS WHERE MULTIPLE HEADS ARE REQUIRED, HEADS SHALL BE ALIGNED AND SYMMETRICAL.

2. DUCTWORK, AIR TERMINALS, HVAC ABOVE CEILING ACCESS AND LIGHTING LOCATIONS TAKE FIRST PRIORITY OVER FIRE SPRINKLING SYSTEM. COORDINATION SHALL BE FIRE SPRINKLER CONTRACTOR’S RESPONSIBILITY. SPRINKLER HEAD SHALL NOT BE LOCATED IN CEILING PANELS NEEDED FOR EQUIPMENT ACCESS.

NOTES:
1. PROVIDE DEKTITE FLASHING FOR METAL ROOFS. DETAIL SHOWS LEAD FLASHING FOR COMPOSITE MEMBRANE ROOFS.

2. DETAIL SHOWS PLUMBING VENT THROUGH ROOF PENETRATION. DETAIL ALSO APPLIES TO NATURAL GAS PIPING, LIQUEFIED PETROLEUM PIPING, AND SIMILAR PIPING THROUGH ROOF PENETRATIONS.

NOTES:
1. SLEEVE NOT REQUIRED FOR EXISTING CONCRETE WALLS.

FINISHED GRADE
EXTERIOR INTERIOR SEALANT ON EACH END OF SLEEVE PIPE SLEEVE CONCRETE, METAL, OR WOOD WALL ASSEMBLY

PROVIDE INSECT SCREEN AT OUTLET

PROVIDE INSECT SCREEN AT OUTLET

SEALANT DRAWBAND DEKTITE FLEXIBLE RUBBER BOOT FLASHING LEAD FLASHING SKIRT COMPOSITE BASE FLASHING ROOF AND INSULATION, SEE ARCH DWGS

VENT PIPE FROM INTERIOR VENT SYSTEM, SEE DWGS FOR CONNECTION

FOR REFERENCE ONLY - FIELD VERIFY PARTIAL 4TH FLOOR EXISTING PLUMBING PLAN

DETAIL - TYPICAL LAY-IN CEILING PANEL SPRINKLER HEAD LOCATION

DETAIL - PIPE THROUGH EXTERIOR WALLS

DETAIL - PLUMBING THROUGH ROOF PENETRATION

DETAIL - NOT USED

DETAIL - NOT USED

DETAIL - PIPE THROUGH EXTERIOR WALLS

SCALE: NONE

DETAIL - NOT USED
May 19, 2020

IAN C. FOURNIE
Client Account Manager, Campus Architecture & Planning
UW Facilities, Asset Management

Hello Ian,

On May 14th, 2020, Dan Schwert (Certification Number 176309, expiration date 12-24-20), an AHERA Accredited Building Inspector with the University of Washington, Regulated Materials Management Office, performed targeted sampling of requested materials in specified locations in Suite B339-365 in the B-Wing of the Health Sciences Building on the University of Washington Campus. The inspection was performed under UW Work Order Number 27952, AIM WR# 728889, Phase 001. Fourteen (14) samples were collected to represent the suspected asbestos containing materials present. Four (4) samples were collected to represent the majority of suspect lead-containing materials present. The materials sampled were limited to the specified areas. A summary of the regulated materials is as follows:

Table 1: Bulk Asbestos Sample Results

<table>
<thead>
<tr>
<th>HSA ID, Material Description and AHERA Classification</th>
<th>Material Location</th>
<th>Lab Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>27952-ASB1: Wallboard and joint compound (M)</td>
<td>Throughout Suite B339-365</td>
<td>Gypsum: ND 2% Chrysotile Asbestos 1&lt;1% asbestos as composite sample</td>
</tr>
<tr>
<td>27952-ASB2: Brown 4” cove base with soft, clear mastic and brown, brittle mastic (M)</td>
<td>Rooms B343-B357, common areas and hallways in Suite B339-365</td>
<td>All layers: ND</td>
</tr>
<tr>
<td>27952-ASB3: Light brown 4” cove base with brown, brittle mastic (M)</td>
<td>Rooms B345, B357 &amp; B365 in Suite B339-365</td>
<td>All layers: ND</td>
</tr>
<tr>
<td>27952-ASB4: Tan 4” cove base with brown, brittle mastic (M)</td>
<td>Rooms B345, B357 &amp; B365 in Suite B339-365</td>
<td>All layers: ND</td>
</tr>
<tr>
<td>27952-ASB5: Black 4” cove base with brown, brittle mastic (M)</td>
<td>Rooms B359 &amp; B361 in Suite B339-365</td>
<td>All layers: ND</td>
</tr>
<tr>
<td>27952-ASB6: Light brown 12” x 12” floor tile with black mastic (M)</td>
<td>Throughout Suite B339-365</td>
<td>Floor tile: ND Black mastic: 3% Chrysotile Asbestos</td>
</tr>
<tr>
<td>27952-ASB7: Tan 12” x 12” floor tile (M)</td>
<td>Replacement tiles in hallways and common areas in Suite B339-365</td>
<td>ND</td>
</tr>
</tbody>
</table>
The joint compound associated with the gypsum was found to contain detectable levels of asbestos. The wall system samples (gypsum/joint compound) were analyzed as composite samples and found to contain <1% asbestos.

### Table 2. Paint Chip Sample Results

<table>
<thead>
<tr>
<th>Sample Number and Description</th>
<th>Material Location</th>
<th>Lab Results in PPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>27952-Pb1-01: Light purple paint on wallboard</td>
<td>Room B349 in Suite B339-365</td>
<td>&lt;50</td>
</tr>
<tr>
<td>27952-Pb2-01: Light brown paint on wallboard</td>
<td>Multiple locations throughout Suite B339-365</td>
<td>&lt;51</td>
</tr>
<tr>
<td>27952-Pb3-01: Tan paint on wallboard</td>
<td>Multiple locations throughout Suite B339-365</td>
<td>&lt;52</td>
</tr>
<tr>
<td>27952-Pb4-01: Off-white paint on wallboard</td>
<td>Multiple locations throughout Suite B339-365</td>
<td>&lt;52</td>
</tr>
</tbody>
</table>

*: below the reporting limit, PPM – Parts per Million

HSA: material that is uniform in color, texture, general appearance, and construction and application date, M: Miscellaneous material per AHERA, S: Surfacing material per AHERA, ND: Non-detect
FINDINGS AND RECOMMENDATIONS: 

The black mastic associated with the light brown 12” x 12” floor tiles contains detectable levels of asbestos. The joint compound associated with the gypsum (HSA numbers: 27952-ASB1-01 to 27952-ASB1-05) was found to contain detectable levels of asbestos. The wall system samples (gypsum/joint compound) were analyzed as composite samples and found to contain <1% asbestos.

Should additional materials be uncovered during scheduled work activities not previously identified the Regulated Materials Management Office should be contacted for an assessment. Unidentified materials should be treated as assumed ACM (asbestos-containing material) in accordance with all applicable local, state, and federal regulations.

Asbestos-related work must be performed in compliance with Washington State worker protection and environmental protection regulations. See WAC 296-62, 296-65, and PSCAA Regulation III, Article 4 for additional information.

LEAD-CONTAINING BUILDING MATERIALS CONCLUSIONS

The paint/coatings sampled were found to contain no detectable levels of lead.

If other portions of the building material may be impacted by proposed renovations the Regulated Materials Management Office should be contacted for an assessment. Other paints/coatings may contain detectable levels of lead. If this building or portions of it will be demolished and disposed of, a toxicity characteristic leachate procedure (TCLP) sample that is representative of the waste stream must be collected and analyzed per the requirements of WAC173-303. If the results of the TCLP analysis determine the waste to be a “dangerous waste” as defined by WAC 173-303, it must be disposed of accordingly. It is the University’s responsibility to characterize the waste stream for lead prior to disposal.
Sincerely,

Dan Schwert  
Industrial Hygienist 2  
Regulated Materials Management Office  
Facilities Maintenance & Construction

Plant Services Building  
4515 25th Avenue NE Box 354285  
Seattle, Washington 98195-4285  
Cell: 206-491-6076  
schwertd@uw.edu

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Pictures and Analysis Results
Pic. 1: Off-white paint, Wallboard and joint compound, Brown 4” cove base with soft, clear mastic and brown, brittle mastic, Light brown 12” x 12” floor tile with black mastic & White 2’ x 2’ suspended acoustical ceiling tile with worm hole pattern

Pic. 2: Light brown 4” cove base with brown, brittle mastic & Tan 4” cove base with brown, brittle mastic
Pic. 3: Black 4” cove base with brown, brittle mastic

Pic. 4: Tan 12” x 12” floor tile
Pic. 5: Off-white 12” x 12” floor tile with tan mastic

Pic. 6: Light purple paint
Pic. 7: Light brown paint

Pic. 8: Tan paint

27952-Pb2-01

27952-Pb3-01
May 19, 2020

Dan Schwert
UW- Facilities Maintenance & Construction
Plant Services Building- Box 354285, 4515 25th Ave. NE
Seattle, WA 98105-4104

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2008539.00

Client Project: BPO 441
Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001

Dear Mr. Schwert,

Enclosed please find test results for the 14 sample(s) submitted to our laboratory for analysis on 5/14/2020.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both EPA 600/M4-82-020, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and EPA 600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

[Signature]
Matt Macfarlane, Asbestos Lab Supervisor

Enc.: Sample Results
Bulk Asbestos Fibers Analysis
By Polarized Light Microscopy

Client: UW- Facilities Maintenance & Construction
Address: Plant Services Building- Box 354285,
4515 25th Ave. NE
Seattle, WA 98105-4104

Attention: Mr. Dan Schwert
Project Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001

Samples Received: 14
Samples Analyzed: 14

Method: EPA/600/R-93/116 & EPA/600/M4-82-020

Batch #: 2008539.00
Client Project #: BPO 441
Date Received: 5/14/2020

Lab ID: 20063398   Client Sample #: 27952-ASB1-01
Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001
Comments: Insufficient sample amount for thorough analysis (layer 1).

Layer 1 of 2  Description: White compacted powdery material with paint
   Non-Fibrous Materials: Calcareous binder, Calcareous particles, Paint
   Other Fibrous Materials:% Cellulose 3%
   Asbestos Type: % None Detected ND

Layer 2 of 2  Description: White chalky material with paper
   Non-Fibrous Materials: Gypsum/Binder, Fine grains
   Other Fibrous Materials:% Cellulose 25%
   Asbestos Type: % None Detected ND

Lab ID: 20063399   Client Sample #: 27952-ASB1-02
Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001
Comments: Composite result (per client request) for whole sample is less than 1% asbestos.

Layer 1 of 3  Description: White compacted powdery material with paint
   Non-Fibrous Materials: Calcareous binder, Calcareous particles, Paint
   Other Fibrous Materials:% Cellulose 3%
   Asbestos Type: % Chrysotile 2%

Layer 2 of 3  Description: White compacted powdery material with paper
   Non-Fibrous Materials: Calcareous binder, Calcareous particles
   Other Fibrous Materials:% Cellulose 17%
   Asbestos Type: % Chrysotile 2%

Layer 3 of 3  Description: White chalky material with paper
   Non-Fibrous Materials: Gypsum/Binder, Fine grains
   Other Fibrous Materials:% Cellulose 26%
   Asbestos Type: % None Detected ND
   Glass fibers 4%

Sampled by: Client
Analyzed by: Tiffany Querry
Reviewed by: Matt Macfarlane
Date: 05/18/2020
Date: 05/19/2020

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.
**Bulk Asbestos Fibers Analysis**

By Polarized Light Microscopy

**Client:** UW- Facilities Maintenance & Construction

**Address:** Plant Services Building- Box 354285,
4515 25th Ave. NE
Seattle, WA 98105-4104

**Attention:** Mr. Dan Schwert

Project Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001

**Batch #: 2008539.00**

**Client Project #: BPO 441**

**Date Received:** 5/14/2020

**Samples Received:** 14

**Samples Analyzed:** 14

**Method:** EPA/600/R-93/116 & EPA/600/M4-82-020

---

**Lab ID: 20063400  Client Sample #: 27952-ASB1-03**

**Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

**Comments:** Composite result (per client request) for whole sample is less than 1% asbestos.

**Layer 1 of 3**

**Description:** White compacted powdery material with paint

<table>
<thead>
<tr>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type: %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcareous binder, Calcareous particles, Paint</td>
<td>Cellulose 3%</td>
<td>Chrysotile 2%</td>
</tr>
</tbody>
</table>

**Layer 2 of 3**

**Description:** White compacted powdery material with paper

<table>
<thead>
<tr>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type: %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcareous binder, Calcareous particles</td>
<td>Cellulose 18%</td>
<td>Chrysotile 2%</td>
</tr>
</tbody>
</table>

**Layer 3 of 3**

**Description:** White chalky material with paper

<table>
<thead>
<tr>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type: %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gypsum/Binder, Fine grains</td>
<td>Cellulose 25%</td>
<td>None Detected ND</td>
</tr>
<tr>
<td>Glass fibers 4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lab ID: 20063401  Client Sample #: 27952-ASB1-04**

**Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

**Layer 1 of 1**

**Description:** White chalky material with paper and paint

<table>
<thead>
<tr>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type: %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gypsum/Binder, Fine grains, Paint</td>
<td>Cellulose 26%</td>
<td>None Detected ND</td>
</tr>
<tr>
<td>Glass fibers 5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lab ID: 20063402  Client Sample #: 27952-ASB1-05**

**Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

**Comments:** Composite result (per client request) for whole sample is less than 1% asbestos.

**Layer 1 of 2**

**Description:** Off-white compacted powdery material with paint

<table>
<thead>
<tr>
<th>Non-Fibrous Materials</th>
<th>Other Fibrous Materials</th>
<th>Asbestos Type: %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binder/Filler, Fine grains, Paint</td>
<td>Cellulose &lt;1%</td>
<td>Chrysotile 2%</td>
</tr>
</tbody>
</table>

---

**Sampled by:** Client

**Analyzed by:** Tiffany Querry

**Reviewed by:** Matt Macfarlane

**Date:** 05/18/2020

**Date:** 05/19/2020

**Matt Macfarlane, Asbestos Lab Supervisor**

---

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.
# Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

**Client:** UW- Facilities Maintenance & Construction  
**Address:** Plant Services Building- Box 354285,  
4515 25th Ave. NE  
Seattle, WA 98105-4104  
**Attention:** Mr. Dan Schwert  
**Project Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

**Batch #: 2008539.00**  
**Client Project #: BPO 441**  
**Date Received:** 5/14/2020  
**Samples Received:** 14  
**Samples Analyzed:** 14  
**Method:** EPA/600/R-93/116  
& EPA/600/M4-82-020

| Layer 2 of 2 | Description: White chalky material with paper  
Non-Fibrous Materials:  
Gypsum/Binder, Fine grains | Other Fibrous Materials:  
Cellulose 25%  
Glass fibers 5% | Asbestos Type: %  
None Detected ND |
|---|---|---|---|

**Lab ID:** 20063403  
**Client Sample #:** 27952-ASB2-01  
**Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

| Layer 1 of 4 | Description: Brown rubbery material  
Non-Fibrous Materials:  
Vinyl/Binder, Fine particles | Other Fibrous Materials: %  
None Detected ND | Asbestos Type: %  
None Detected ND |
|---|---|---|---|

| Layer 2 of 4 | Description: Clear soft adhesive  
Non-Fibrous Materials:  
Adhesive/Binder, Fine grains, Fine particles | Other Fibrous Materials: %  
Cellulose 2% | Asbestos Type: %  
None Detected ND |
|---|---|---|---|

| Layer 3 of 4 | Description: Brown brittle mastic  
Non-Fibrous Materials:  
Mastic/Binder, Fine particles | Other Fibrous Materials: %  
Talc fibers 2% | Asbestos Type: %  
None Detected ND |
|---|---|---|---|

| Layer 4 of 4 | Description: White compacted powdery material with paint  
Non-Fibrous Materials:  
Calcareous binder, Calcareous particles, Paint | Other Fibrous Materials: %  
Cellulose <1% | Asbestos Type: %  
Chrysotile 2% |
|---|---|---|---|

**Lab ID:** 20063404  
**Client Sample #:** 27952-ASB3-01  
**Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

| Layer 1 of 3 | Description: Tan rubbery material  
Non-Fibrous Materials:  
Vinyl/Binder, Fine particles | Other Fibrous Materials: %  
None Detected ND | Asbestos Type: %  
None Detected ND |
|---|---|---|---|

---

**Sampled by:** Client  
**Analyzed by:** Tiffany Querry  
**Reviewed by:** Matt Macfarlane  
**Date:** 05/18/2020  
**Date:** 05/19/2020

**Note:** If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

ASB-02  
page 4 of 9
<table>
<thead>
<tr>
<th>Layer 2 of 3</th>
<th>Description:</th>
<th>Brown brittle mastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Fibrous Materials:</td>
<td>Other Fibrous Materials:</td>
<td></td>
</tr>
<tr>
<td>Mastic/Binder, Fine particles</td>
<td>Talc fibers, 2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cellulose, 2%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 2 of 3</th>
<th>Description:</th>
<th>Non-Fibrous Materials:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Fibrous Materials:</td>
<td>Other Fibrous Materials:</td>
<td></td>
</tr>
<tr>
<td>Mastic/Binder, Fine particles</td>
<td>Talc fibers, 2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cellulose, 2%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 3 of 3</th>
<th>Description:</th>
<th>White chalky material with paper and paint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Fibrous Materials:</td>
<td>Other Fibrous Materials:</td>
<td></td>
</tr>
<tr>
<td>Gypsum/Binder, Fine grains, Paint</td>
<td>Cellulose, 27%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab ID: 20063405</th>
<th>Client Sample #: 27952-ASB4-01</th>
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</thead>
<tbody>
<tr>
<td>Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 1 of 3</th>
<th>Description:</th>
<th>Tan rubbery material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Fibrous Materials:</td>
<td>Other Fibrous Materials:</td>
<td></td>
</tr>
<tr>
<td>Vinyl/Binder, Fine particles</td>
<td>None Detected ND</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 2 of 3</th>
<th>Description:</th>
<th>Brown brittle mastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Fibrous Materials:</td>
<td>Other Fibrous Materials:</td>
<td></td>
</tr>
<tr>
<td>Mastic/Binder, Fine particles</td>
<td>Talc fibers, 2%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cellulose, 2%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 3 of 3</th>
<th>Description:</th>
<th>White chalky material with paper and paint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Fibrous Materials:</td>
<td>Other Fibrous Materials:</td>
<td></td>
</tr>
<tr>
<td>Gypsum/Binder, Fine grains, Paint</td>
<td>Cellulose, 29%</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab ID: 20063406</th>
<th>Client Sample #: 27952-ASB5-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Layer 1 of 3</th>
<th>Description:</th>
<th>Black rubbery material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Fibrous Materials:</td>
<td>Other Fibrous Materials:</td>
<td></td>
</tr>
<tr>
<td>Vinyl/Binder, Fine particles</td>
<td>None Detected ND</td>
<td></td>
</tr>
</tbody>
</table>

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

Sampled by: Client
Analyzed by: Tiffany Querry
Reviewed by: Matt Macfarlane
Date: 05/18/2020
Date: 05/19/2020

Matt Macfarlane, Asbestos Lab Supervisor
Bulk Asbestos Fibers Analysis
By Polarized Light Microscopy

Client: UW- Facilities Maintenance & Construction
Address: Plant Services Building- Box 354285, 4515 25th Ave. NE
Seattle, WA 98105-4104

Attention: Mr. Dan Schwert
Project Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001

Samples Received: 14
Method: EPA/600/R-93/116 & EPA/600/M4-82-020

Layer 2 of 3
Description: White soft mastic
Non-Fibrous Materials: Mastic/Binder, Fine particles
Other Fibrous Materials:% None Detected ND
Asbestos Type: % None Detected ND

Layer 3 of 3
Description: White chalky material with paper and paint
Non-Fibrous Materials: Gypsum/Binder, Fine grains, Paint
Other Fibrous Materials:% Cellulose 30%
Asbestos Type: % None Detected ND

Layer 1 of 2
Description: Off-white vinyl tile
Non-Fibrous Materials: Vinyl/Binder, Calcareous particles, Fine particles
Other Fibrous Materials:% None Detected ND
Asbestos Type: % None Detected ND

Layer 2 of 2
Description: Black asphaltic mastic
Non-Fibrous Materials: Mastic/Binder, Fine particles
Other Fibrous Materials:% Cellulose <1%
Asbestos Type: % Chrysotile 3%

Layer 1 of 1
Description: Off-white vinyl tile
Non-Fibrous Materials: Vinyl/Binder, Calcareous particles, Fine particles
Other Fibrous Materials:% None Detected ND
Asbestos Type: % None Detected ND

Layer 1 of 2
Description: Off-white vinyl tile
Non-Fibrous Materials: Vinyl/Binder, Calcareous particles, Fine particles
Other Fibrous Materials:% None Detected ND
Asbestos Type: % None Detected ND

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

Sampled by: Client
Analyzed by: Tiffany Querry
Reviewed by: Matt Macfarlane
Date: 05/18/2020
Date: 05/19/2020

Matt Macfarlane, Asbestos Lab Supervisor
**Bulk Asbestos Fibers Analysis**

*By Polarized Light Microscopy*

**Client:** UW- Facilities Maintenance & Construction  
**Address:** Plant Services Building- Box 354285,  
4515 25th Ave. NE  
Seattle, WA 98105-4104  
**Attention:** Mr. Dan Schwert  
**Project Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

**Batch #: 2008539.00**  
**Client Project #: BPO 441**  
**Date Received:** 5/14/2020  
**Samples Received:** 14  
**Samples Analyzed:** 14  
**Method:** EPA/600/R-93/116 & EPA/600/M4-82-020

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<tr>
<th>Layer</th>
<th>Description</th>
<th>Non-Fibrous Materials:</th>
<th>Other Fibrous Materials:</th>
<th>Asbestos Type:</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>Tan crumbly material</td>
<td>Binder/Filler, Fine grains, Fine particles</td>
<td>None Detected</td>
<td>ND</td>
</tr>
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<td>None Detected</td>
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**Lab ID: 20063410**  
**Client Sample #: 27952-ASB9-01**  
**Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

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<th>Asbestos Type:</th>
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<tr>
<td>1</td>
<td>Tan compressed fibrous material with paint</td>
<td>Binder/Filler, Fine particles, Paint</td>
<td>Cellulose</td>
<td>43%</td>
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<td></td>
<td>Glass debris, Perlite</td>
<td>Glass fibers</td>
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</tbody>
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**Lab ID: 20063411**  
**Client Sample #: 27952-ASB9-02**  
**Location:** HSB B-Wing B339-365. WO 27952 AIM 728889-001

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<td>Glass debris, Perlite</td>
<td>Glass fibers</td>
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**Sampled by:** Client  
**Analyzed by:** Tiffany Querry  
**Reviewed by:** Matt Macfarlane

*Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.*
**Project Name/Number:** BPO 441  
**Project Location:** HSB B-Wing B339-365, WO 27952 AIM 728889-001

**Subcategory:** PLM Bulk  
**Item Code:** ASB-02  
**EPA 600/R-93-116 Asbestos by PLM <bulk>

### Total Number of Samples

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<td>27952-ASB1-04</td>
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### Special Instructions:

- Composite request received 5/19/2020 from schwertd@uw.edu

**Print Name:**  
**Signature:**  
**Company:**  
**Date:** 5/14/2020  
**Time:** 1545

**Sampled by:** Client  
**Relinquished by:** Drop Box

**Office Use Only**

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<td>NVL</td>
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**Entered By:** Fatima Khan

Date: 5/14/2020  
Time: 3:55 PM
CHAIN of CUSTODY
SAMPLE LOG

Client UW- Facilities Maintenance & Construction
Street Plant Services Building- Box 354285, 4515
25th Ave. NE
Seattle, WA 98105-4104

NVL Batch Number
Client Job Number
Total Samples
Turn Around Time

[\[\checkmark\]
\[\square\]
\[\square\]
\[\square\]
\[\square\]
\[\square\]

Please call for TAT less than 24 Hrs

Project Manager Mr. Dan Schwert
Project Location HSB B-Wing 339 - 365

Phone: (206) 685-3357 Fax: (206) 221-7756
Cell (206) 491-6076

Email address schwertd@uw.edu

Asbestos Air [ ] PCM (NIOSH 7400) [ ] TEM (NIOSH 7402) [ ] TEM (AHRA) [ ] TEM (EPA Level II) [ ] Other
Asbestos Bulk [ ] PLM (EPA/600/R-93/116) [ ] PLM (EPA Point Count) [ ] PLM (EPA Gravimetry) [ ] TEM BULK
Mold/Fungus [ ] Mold Air [ ] Mold Bulk [ ] Rotometer Calibration

METALS
[ ] Total Metals
[ ] TCLP
[ ] Cr 6

Det. Limit
[ ] FAA (ppm)
[ ] ICP (ppm)
[ ] GFAA (ppm)

Matrix
[ ] Air Filter
[ ] Drinking water
[ ] Dust/wipe (Area)
[ ] Soil

Paint Chips in % [ ] Paint Chips in cm
Waste Water [ ] Other

RCRA Metals
[ ] Arsenic (As)
[ ] Barium (Ba)
[ ] Cadmium (Cd)
[ ] Chromium (Cr)
[ ] Lead (Pb)
[ ] Mercury (Hg)
[ ] Selenium (Se)
[ ] Silver (Ag)

Other Metals
[ ] All 3
[ ] Copper (Cu)
[ ] Nickel (Ni)
[ ] Zinc (Zn)

Other Types of Analysis
[ ] FiberGlass
[ ] Nuisance Dust
[ ] Other (Specify)
[ ] Silica
[ ] Respirable Dust

Condition of Package: [ ] Good [ ] Damaged (no spillage) [ ] Severe damage (spillage)

Seq. # Lab ID Client Sample Number Comments (e.g Sample are, Sample Volume, etc)

1 27952-ASB 1-01
2 27952-ASB 1-02
3 27952-ASB 1-03
4 27952-ASB 1-04
5 27952-ASB 1-05
6 27952-ASB 2-01
7 27952-ASB 3-01
8 27952-ASB 4-01
9 27952-ASB 5-01
10 27952-ASB 6-01
11 27952-ASB 7-01
12 27952-ASB 8-01
13 27952-ASB 9-01
14 27952-ASB 9-02

Print Below
Samples by
Relinquished by
Received by
Analyzed by
Results Called by
Results Faxed by

Sign Below

Company

Date

Time

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.
May 18, 2020

Dan Schwert

UW- Facilities Maintenance & Construction
Plant Services Building- Box 354285, 4515 25th Ave. NE
Seattle, WA 98105-4104

NVL Batch # 2008543.00

RE: Total Metal Analysis
Method: EPA 7000B Lead by FAA <paint>
Item Code: FAA-02

Client Project: BPO 441
Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001

Dear Mr. Schwert,

NVL Labs received 4 sample(s) for the said project on 5/14/2020. Preparation of these samples was conducted following protocol outlined in EPA 3051/7000B , unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with EPA 7000B Lead by FAA <paint>. The results are usually expressed in mg/Kg and percentage (%). Test results are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more detail.

At NVL Labs all analyses are performed under strict guidelines of the Quality Assurance Program. This report is considered highly confidential and will not be released without your approval. Samples are archived after two weeks from the analysis date. Please feel free to contact us at 206-547-0100, in case you have any questions or concerns.

Sincerely,

Yasuyuki Hida, Laboratory Analyst

Enc.: Sample results
### Analysis Report

**Total Lead (Pb)**

Client: UW- Facilities Maintenance & Construction  
Address: Plant Services Building- Box 354285, 4515 25th Ave. NE  
Seattle, WA 98105-4104

**Attention: Mr. Dan Schwert**  
Project Location: HSB B-Wing B339-365. WO 27952 AIM 728889-001

---

**Lab ID** | **Client Sample #** | **Sample Weight (g)** | **RL in mg/Kg** | **Results in mg/Kg** | **Results in percent**  
--- | --- | --- | --- | --- | ---  
20063475 | 27952-Pb1-01 | 0.1989 | 50 | < 50 | < 0.0050  
20063476 | 27952-Pb2-01 | 0.1964 | 51 | < 51 | < 0.0051  
20063477 | 27952-Pb3-01 | 0.1912 | 52 | < 52 | < 0.0052  
20063478 | 27952-Pb4-01 | 0.1923 | 52 | < 52 | < 0.0052

---

**Sampled by:** Client  
**Analyzed by:** Shalini Patel  
**Reviewed by:** Yasuyuki Hida  
**Date Analyzed:** 05/18/2020  
**Date Issued:** 05/18/2020  
**Yasuyuki Hida, Laboratory Analyst**

---

mg/ Kg = Milligrams per kilogram  
RL = Reporting Limit  
'<' = Below the reporting Limit  
Note: Method QC results are acceptable unless stated otherwise.  
Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

---

Bench Run No: 2020-0518-04  
FAA-02
### Project Details

**Company** | UW- Facilities Maintenance & Construction  
**Address** | Plant Services Building - Box 354285, 4515  
**Project Manager** | Mr. Dan Schwert  
**Phone** | (206) 685-3357  
**Cell** | (206) 491-6076  
**NVL Batch Number** | 2008543.00  
**TAT** | 3 Days  
**AH** | No  
**Due Date** | 5/19/2020  
**Time** | 3:45 PM  
**Email** | schwertd@uw.edu  
**Fax** | (206) 221-7756  

**Project Name/Number:** BPO 441  
**Project Location:** HSB B-Wing B339-365, WO 27952 AIM 728889-001

### Subcategory
- **Flame AA (FAA)**

### Item Code
- FAA-02  
- EPA 7000B Lead by FAA <paint>

### Total Number of Samples
- **4**  
- **Rush Samples**

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<td>4</td>
<td>20063478</td>
<td>27952-Pb4-01</td>
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### Other Information

- **Print Name**  
- **Signature**  
- **Company**  
- **Date**  
- **Time**

- **Sampled by**  
- **Relinquished by**

### Office Use Only

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**Special Instructions:**

**Date:** 5/14/2020  
**Time:** 4:20 PM  
**Entered By:** Fatima Khan

---

**Page 3 of 4**
**CHAIN of CUSTODY SAMPLE LOG**

**2008543**

**Client**: UW- Facilities Maintenance & Construction  
**Street**: Plant Services Building - Box 354285, 4515  
25th Ave. NE  
Seattle, WA 98105-4104

**NVL Batch Number**: BPO 491

**Client Job Number**: 4

**Total Samples**

- [ ] 1 Hr  
- [ ] 6 Hrs  
- [ ] 3 Days  
- [ ] 10 Days  
- [ ] 2 Hrs  
- [ ] 1 Day  
- [ ] 4 Days  
- [ ] 4 Hrs  
- [ ] 2 Days  
- [ ] 5 Days

**Turn Around Time**

- [ ] Please call for TAT less than 24 Hrs

**Project Manager**: Mr. Dan Schwert  
**Email address**: schwertd@uw.edu

**Phone**: (206) 685-3357  
**Fax**: (206) 221-7756  
**Cell**: (206) 491-5076

**Project Location**: HSB B-Wing B339-345  
**Lab Work#: 27852_A1M work #: 728889-001**

**Asbestos Air**  
**PCM (NIOSH 7400)**  
**TEM (NIOSH 7402)**  
**TEM (AHERA)**  
**TEM (EPA Level II)**  
**Other**

**Asbestos Bulk**:  
**PLM (EPA/600/R-93/116)**  
**PLM (EPA Point Count)**  
**PLM (EPA Gravimetry)**  
**TEM BULK**

**Mold/Fungi**:  
**Mold Air**  
**Mold Bulk**  
**Rotometer Calibration**

**METALS**

- [X] Total Metals
- [ ] TCLP
- [ ] Cr 6

**Det. Limit**:  
**Matrix**:  
- [X] FAA (ppm)  
- [ ] Air Filter  
- [ ] ICP (ppm)  
- [ ] Drinking water  
- [ ] GFAA (pppl)  
- [ ] Dust/wipe (Area)  
- [ ] Soil  
- [X] Paint Chips in %  
- [X] Paint Chips in cm  
- [ ] Waste Water  
- [ ] Other

**RCRA Metals**:  
**All 8**:  
- [ ] Lead (Pb)  
- [ ] Mercury (Hg)  
- [ ] Barium (Ba)  
- [ ] Cadmium (Cd)  
- [ ] Chromium (Cr)  
- [ ] Silver (Ag)

**Other Metals**:  
- [ ] All 3  
- [ ] Copper (Cu)  
- [ ] Nickel (Ni)  
- [ ] Zinc (Zn)

**Other Types of Analysis**:  
- [ ] Fiberglass  
- [ ] Nuisance Dust  
- [ ] Respirable Dust  
- [ ] Other (Specify)

**Condition of Package**:  
- [ ] Good  
- [ ] Damaged (no spillage)  
- [ ] Severe damage (spillage)

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**Print Below**

- [ ] Sampled by  
- [ ] Re却ished by  
- [ ] Received by  
- [ ] Analyzed by  
- [ ] Results Called by  
- [ ] Results Fax by

**Sign Below**

- [ ] Company  
- [ ] Date  
- [ ] Time

**Special Instructions**: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

Phone: 206 547.0100 | Fax: 206 634.1936 | Toll Free: 1.888.NVL.LABS (685.5227)  
4708 Aurora Avenue North | Seattle, WA 98103-6516  
Page 4 of 4
December 28, 2020

Anna Daueule
UW Project Delivery Group
Facilities Services Admin. Bldg. (FSAB)
Box 352205
Seattle, WA 98165-2205

RE: HSC B-Wing 350B Clinic Renovation - Additional Asbestos Sampling (2nd Floor Ceiling)
UW 207299/PBS Project No. 40035.900

Project Background
PBS Engineering and Environmental, Inc. (PBS) performed additional sampling for the reference project in the 2nd floor ceiling plenum below Suite B350 (rooms B340 to 355) in the Health Science Center. At the request of the University of Washington, the 2nd floor ceiling plenum was inspected for asbestos-containing materials (ACMs) and lead-containing paint (LCP).

Survey Process
All accessible areas in the 2nd floor ceiling plenum were inspected by AHERA Certified Building Inspector Ryan Hunter (Cert. No. IR-20-7254B Exp. 03/05/2021). The sampling occurred on December 11, 2020.

PBS endeavored to inspect all accessible areas of the scope of work. Inaccessible areas consist of those requiring selective demolition, fall protection, or confined space entry protocols in order to gain access. When observed, suspect materials were sampled. All samples were assigned a unique identification number and transmitted for analysis to SAT Laboratories, Inc. (NVLAP #201057-0) in Seattle, Washington under chain-of-custody protocols. Samples were analyzed according to EPA Method 600R-93/116 using Polarized Light Microscopy (PLM), which has a reliable limit of quantification of 1% asbestos by volume. Information regarding the type and location of sampled materials can be found on the attached PLM Sample Inventory located in Appendix A.

Suspect ACMs may exist in inaccessible areas. PBS endeavored to determine the presence and estimate the condition of suspect materials in all inaccessible areas included in the scope of work. While PBS has endeavored to identify the ACM that may be found in concealed locations, additional unidentified ACM may exist. All building demolition activities should be performed cautiously to prevent impacts to concealed asbestos-containing materials.

FINDINGS
Asbestos-Containing Materials (ACMs)
Federal and state regulations define an asbestos-containing material (ACM) per PLM analysis as any material that contains greater than 1% asbestos.

- None of the 1’x1’ ceiling tile and brown mastic and suspended ceiling panels (2’x2’) tested to contain asbestos (2nd floor ceiling plenum below B350 Suite).
Assumed ACM in pipe insulation and pipe penetration in ceiling plenums of the 2nd floor (50 linear feet) – based on previous survey reports (Prezant B Wing dated January 1992 and PBS Orthodontics survey dated July 2010).

For a complete listing of representative bulk sampling and associated laboratory analysis, refer to the attached PLM Asbestos Laboratory Report.

Suspect paint (for Lead) was not noted on ceiling plenum surfaces of the 2nd floor.

**RECOMMENDATIONS**

Ceiling tiles and mastic tested non-asbestos in the 2nd floor ceiling plenums. However, per other report ACMs are present in the areas to be impacted by the project on the 3rd floor (floor mastic, pipe insulation and pipe penetrations).

PBS recommends that all ACMs that may be impacted by the planned construction/demolition be removed prior to construction activities, or impacted, only by a qualified Washington State licensed asbestos abatement contractor according to applicable local, state and federal regulations (not limited to WAC 296-62-077).

**Advisory Notice - ACM Caution (Hidden Materials).** The possibility exist that suspect ACM may be present at concealed locations in wall and ceiling cavities, within HVAC equipment and potentially in other select concealed areas. These may include, but are not limited to waterproofing membrane, vapor barriers, internal gasketing, mastics, caulking, and sealants on HVAC equipment, construction adhesives, electrical insulators, below grade pipe covering and insulation. In the event that suspect ACMs not included in this report are encountered during construction, contractors should stop work immediately and inform the Owner promptly for confirmation testing. All untested materials should be presumed asbestos-containing or tested for asbestos content prior to impact.

**Survey Limitations**

Suspect materials may exist in inaccessible areas at the project site. PBS endeavors to determine the presence and estimate the condition of suspect materials in all accessible areas included in the scope of work. In the event suspect materials are uncovered during construction, contractor should contact the Client for associated asbestos or other regulated hazardous materials confirmation testing.

**Report prepared by:**
Ryan Hunter  
AHERA Building Inspector  
Cert. No. IRO-20-7254B Exp. 3/05/2021

Willem Mager  
Project Mgr., AHERA Building Inspector  
Cert. #176599, exp. 1/22/2021

Attachments:  
PLM Asbestos Inventory & Laboratory Report  
Prezant B Wing dated January 1992 and PBS Orthodontics survey dated July 2010
<table>
<thead>
<tr>
<th>PBS Sample #</th>
<th>Material Type</th>
<th>Sample Location</th>
<th>Lab Description</th>
<th>Lab Result</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>40035.900 -1</td>
<td>Brown mastic 1x1 Ceiling tile</td>
<td>Second floor ceiling deck</td>
<td>Layer 1: Brown mastic Layer 2: White chalky material with paper</td>
<td>NAD</td>
<td>SAT</td>
</tr>
<tr>
<td>40035.900 -2</td>
<td>2x2 Suspended ceiling tiles</td>
<td>Second floor ceiling lay in tiles</td>
<td>Layer 1: Gray fibrous material with paint</td>
<td>NAD</td>
<td>SAT</td>
</tr>
</tbody>
</table>
Enclosed please find the test results for the bulk samples submitted to our laboratory for asbestos analysis. Analysis was performed using polarized light microscopy (PLM) in accordance with Test Method US EPA - 40 CFR Appendix E of Part 763, Interim Method of Determination of Asbestos in Bulk Insulation Samples and Test Method US EPA/600/R-93/116.

Percentages for this report are done by visual estimate and relate to the suggested acceptable error ranges by the method. Since variation in data increases as the quantity of asbestos decreases toward the limit of detection, the EPA recommends point counting for samples containing between <1% and 10% asbestos (NESHAP, 40 CFR Part 61). Statistically, point counting is a more accurate method. If you feel a point count might be beneficial, please feel free to call and request one.

The test results refer only to the samples or items submitted and tested. The accuracy with which these samples represent the actual materials is totally dependent on the acuity of the person who took the samples. This report must not be used by the client to claim product certification, approval, or endorsement by Seattle Asbestos Test, LLC, NVLAP, NIST, or any agency of the Federal government. The test report or calibration certificate shall not be reproduced except in full, without written approval of the laboratory.

This report is highly confidential and will not be released without your consent. Samples are archived for 30 days after the analysis, and disposed of as hazardous waste thereafter.

Thank you for using our service and let us know if we can further assist you.

Sincerely,

[Signature]

Steve (Fanyao) Zhang
President
**Laboratory Chain of Custody**

**Project:** UW Dental B350

**Analysis requested:** PM

**Relinqu’d by/Signature:** Willem Mager

**Received by/Signature:** Carolynn Eby

**Project #:** 40085-900

**Date:** 12-11-20

**Date/Time:** 8:16:00

**Date/Time:** 12-11-20 17:15

**E-mail results to:**
- [x] Brian Stanford
- [ ] Willem Mager
- [ ] Gregg Middaugh
- [ ] Mark Hiley
- [ ] Tim Ogden
- [ ] Prudy Stoudt-McRae
- [ ] Kaitlin Soukup
- [ ] Janet Murphy
- [ ] Claire Tsai
- [ ] Martin Estira
- [ ] Michelle Dotson
- [ ] Mike Smith
- [ ] Ferman Fletcher
- [ ] Helly Tuttle

**Turn Around Time:**
- [x] 48 Hours
- [ ] 24 Hours
- [ ] 1 Hour
- [ ] 2 Hours
- [ ] 4 Hours
- [ ] 3-5 Days
- [ ] Other

**Sample Data Form**

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Material</th>
<th>Location</th>
<th>Lab</th>
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<tbody>
<tr>
<td>40085-900-1</td>
<td>1x1 Ceiling Tile/BPR Mastic</td>
<td>2nd Floor ceiling deck</td>
<td>W/ ceiling deck saps.</td>
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<tr>
<td>-2</td>
<td>2x2 Lt. Ceiling</td>
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</tr>
<tr>
<td>Lab ID</td>
<td>Client Sample ID</td>
<td>Layer</td>
<td>Description</td>
</tr>
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<td>-----------------------------------</td>
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<tr>
<td>1</td>
<td>40035.900-1</td>
<td>1</td>
<td>Brown mastic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>White chalky material with paper</td>
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<tr>
<td>2</td>
<td>40035.900-2</td>
<td>1</td>
<td>Gray fibrous material with paint</td>
</tr>
<tr>
<td>PBS Sample #</td>
<td>Material Type</td>
<td>Sample Location</td>
<td>Laboratory Description</td>
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<tr>
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<tr>
<td>40035.470-01</td>
<td>Sink undercoat and countertop undercoating -black asphalt</td>
<td>SW section, on 8 feet countertop stainless steel</td>
<td>Layer 1: Black asphalitic flaky material</td>
</tr>
<tr>
<td>40035.470-02</td>
<td>Sink undercoat</td>
<td>Center, south section at clinic</td>
<td>Layer 1: Black asphalitic flaky material</td>
</tr>
<tr>
<td>40035.470-03</td>
<td>2' x 2' Ceiling tile fissured</td>
<td>SW clinic</td>
<td>Layer 1: Tan compressed fibrous material with paint</td>
</tr>
<tr>
<td>40035.470-04</td>
<td>Pipe fitting insulation</td>
<td>SW clinic, south end</td>
<td>Layer 1: Off-white compressed powdery/fibrous material</td>
</tr>
</tbody>
</table>
| 40035.470-05 | Mastic - beige 4" covebase | SW clinic, consult area | Layer 1: Tan rubbery material  
Layer 2: Brown brittle mastic  
Layer 3: White brittle material with paint and woven fibrous mesh  
Layer 4: Off-white chalky material with paper | NAD | NVL  |
| 40035.470-06 | Pipe straight run | SW clinic, west wall | Layer 1: White powdery material | 2% Chrysotile | NVL  |
| 40035.470-07 | Debris on ceiling tile | SW clinic, corridor at consult area | Layer 1: Gray brittle material  
Layer 2: Off-white compacted powdery material  
Layer 3: Trace off-white chalky material with paper | NAD | NVL  |
| 40035.470-08 | Gypsum wallboard and joint compound | Corridor in southwest clinic, northwest entrance | Layer 1: Off-white compacted powdery material  
Layer 2: Off-white compacted powdery material with paper  
Layer 3: Off-white chalky material with paper | 2% Chrysotile | NVL  |
| 40035.470-09 | Beige 12" vinyl floor tile and mastic | Room B346 | Layer 1: Off-white tile  
Layer 2: Black asphalitic mastic | 2% Chrysotile | NVL  |
| 40035.470-10 | Gypsum wallboard and joint compound | B338 (northwest clinic), west wall | Layer 1: Off-white compacted powdery material with paint  
Layer 2: Off-white chalky material with paper | NAD | NVL  |
## PLM ASBESTOS SAMPLE INVENTORY

<table>
<thead>
<tr>
<th>PBS Sample #</th>
<th>Material Type</th>
<th>Sample Location</th>
<th>Laboratory Description</th>
<th>Lab Result</th>
<th>Lab</th>
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<tr>
<td>40035.470 -11</td>
<td>Debris on ceiling tile</td>
<td>B338 northwest corner of record storage</td>
<td>Layer 3: White brittle material with paint</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
<td>40035.470 -12</td>
<td>2' x 2' Ceiling tile fissured</td>
<td>B338</td>
<td>Layer 1: Gray brittle material</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
<td>40035.470 -13</td>
<td>Beige 12&quot; vinyl floor tile and mastic</td>
<td>B338 break area</td>
<td>Layer 1: Tan compressed fibrous material with paint</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
<td>40035.470 -14</td>
<td>Covebase and mastic - beige 4&quot;</td>
<td>B338 (center)</td>
<td>Layer 2: Off-white tile</td>
<td>2% Chrysotile</td>
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<tr>
<td></td>
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<td></td>
<td>Layer 3: Black asphaltic mastic</td>
<td>2% Chrysotile</td>
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<tr>
<td>40035.470 -15</td>
<td>Carpet mastic and 12&quot; vinyl floor tile &amp; mastic</td>
<td>B350 waiting area - VCT floor under carpet</td>
<td>Layer 1: Tan soft mastic</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
<td></td>
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<td></td>
<td>Layer 2: Off-white tile</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
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<td></td>
<td>Layer 3: Off-white soft mastic</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
<td></td>
<td></td>
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<td>Layer 4: Black asphaltic mastic</td>
<td>2% Chrysotile</td>
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<tr>
<td>40035.470 -16</td>
<td>Debris on ceiling tile</td>
<td>B350 waiting area</td>
<td>Layer 1: Gray brittle material</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
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<td></td>
<td>Layer 2: Tan compressed fibrous material with paint</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
<td>40035.470 -17</td>
<td>Grout - wall tile</td>
<td>Women's room</td>
<td>Layer 1: White brittle material</td>
<td>NAD</td>
<td>NVL</td>
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<tr>
<td>40035.470 -18</td>
<td>Grout - floor tile</td>
<td>Women's room</td>
<td>Layer 1: Gray debris</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40035.470 -19</td>
<td>Cementatious material - debris</td>
<td>Women's room chase</td>
<td>Layer 1: Off-white sandy material</td>
<td>&lt;1% Actinolite</td>
<td>NVL</td>
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<tr>
<td>40035.470 -20</td>
<td>Debris on floor</td>
<td>Women's room chase</td>
<td>Layer 1: Gray brittle material</td>
<td>2% Chrysotile</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 2: Off-white sandy material</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Layer 3: Brown fibrous material</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

July 27, 2010

NAD = No Asbestos Detected in Sample Analysis
B-WING HOMOGENEOUS MATERIALS LIST

Materials in **bold type** contain asbestos

1. HARD ELBOWS, JOINTS, AND FITTINGS

2. HARD BLOCK pipe insulation on straight runs

3. TANK INSULATION - hard block, pinkish color
   (Room 020)

4. VALVE INSULATION - cloth blankets, coarse
   (Room 020)

5. VALVE INSULATION - Painted rubberlike
   (Room 010, visual)

6. HARD FOAM PIPE INSULATION, fiberglass, cloth covering
   (Room 010, visual)

7. FLEX CONNECTORS - black, rubbery
   (Room 010; visual)

8. CAB LINING in electrical boxes
   * (Room 010, assumed positive)

9. CAB LABORATORY HOOD LINING
   * (Room 149, assumed positive)

10. HARD LAB COUNTERTOPS
    * (Room 149, not sampled)

11. LAB COUNTERTOPS - wood and formica
    * (Room 149, not sampled)

12. FIBERGLASS STRAIGHTS AND FITTINGS
    (Visual)

13. DUCT INSULATION, fiberglass
    (Visual)

14. **9 X 9 FLOORTILE** - Grey with tan and black streaks
    (Throughout building)

15. **9 X 9 FLOORTILE** - Pale green with tan streaks
    (1st and 5th floor)

16. **9 X 9 FLOORTILE** - Medium green with tan and black streaks
    (1st and 5th floor)

17. FLOORTILE MASTIC, black, for Material # 14

* These materials were not sampled because destructive means would have been necessary. They should be tested before being disturbed.

Revised 01/09/92
B-WING HOMOGENEOUS MATERIALS LIST

Materials in **bold type** contain asbestos

36 9 X 9 FLOORTILE - light grey with tan streaks
   (1st and 6th floor)

37 12 X 12 FLOORTILE - Tan with white splotchy pattern
   (Throughout)

38 MASTIC for Material # 37

39 MASTIC for Material # 36

40 9 X 9 FLOORTILE - light taupe with dark taupe and tan streaks
   (Room 110 A-C)

41 2 X 2 and 2 X 4 drop-in CEILING TILES, tiny pinholes
   (E.G. Room 410)

42 9 X 9 FLOORTILE - Gray-brown with black and tan splotches
   (Room 137, 127A)

43 MASTIC for Material # 42, black

44 12 X 12 FLOORTILE - Olive green with light and dark green mottled
   * (Room 157-170, < 100 SF)

45 12 X 12 FLOORTILE - Beige with dark brown and white markings
   (Room 137A, 503)

46 MASTIC for Material # 45, black

47 12" X 12" CEILING TILE - uniform holes
   (Room 129A & 530F above drop ceiling)

48 Foam rubber PIPE INSULATION
   (Room 129A, visual)

49 MASTIC for Material # 47, brown

50 PENETRATION COMPOUND
   * (Room 125, unable to sample)

51 12 X 12 FLOORTILE - tan grey and white marbled pattern
   (Room 128)

52 MASTIC for Material # 51
   * (Unable to sample)

* These materials were not sampled because destructive means would have been necessary. They should be tested before being disturbed

Revised 01/09/92
B-WING HOMOGENEOUS MATERIALS LIST

Materials in bold type contain asbestos

53 MASTIC for Material # 15

54 MASTIC for Material # 40

55 Black vinyl COVE BASE
   (Mastic # 35)

56 12 X 12 FLOOR TILE - Off white w/ light and dark brown marbled pattern
   (Room 170)

57 MASTIC for Material # 56
   * (Unable to sample)

58 2' X 2' CEILING TILES - swirled, multi-sized holes
   (Room 170B)

59 Cloth FLEX CONNECTOR
   * (Room 177, unable to sample)

60 12" X 12" CEILING TILE - small uneven craters
   * (Room 177A, < 100 SF)

61 CAB INSULATION PANELS lining cable trays
   * (Room 010, assumed positive)

62 MUD ON JOINTS of black foam pipe insulation
   (Room 010)

63 DUCT PUTTY on seams of ducting, green-grey
   (Mech. Room 010, inside large air duct)

64 DOOR GASKET MATERIAL, black
   (Room 010)

65 HARD BLOCK PIPE INSULATION (labelled "NON ASBESTOS")
   (Room 020)

66 ELBOWS, JOINTS, and FITTINGS (labelled "NON ASBESTOS")
   (Room 020)

67 White TANK INSULATION on large heating converter tank
   (Room 020)

68 12" X 12" CEILING TILE - white, deep gouges and pinholes
   (2nd & 3rd floor, above drop ceiling)

69 MASTIC for Material # 68, brown

* These materials were not sampled because destructive means would have been necessary. They should be tested before being disturbed.

Revised 01/09/92
B-WING HOMOGENEOUS MATERIALS LIST

Materials in **bold type** contain asbestos

70 Pipe hanger PENETRATION MUD
   (2nd floor, above ceiling)

71 HARD BLOCK AUTOCLAVE INSULATION
   (Room 357A)

72 SPECIAL PAINT - lumpy pastel, coating undersides of sinks
   (Room 339)

73 2 X 4 drop-in CEILING TILES - gray, sandpaper-looking surface
   (Room 306 & 316, Visual)

74 SHEET VINYL FLOORING, grey, taupe, and pale yellow mosaic pattern
   (Room 309)

75 2' X 2' CEILING TILES - white with large, mshapen craters
   (Room 309)

76 COVE MASTIC, tan and brown mix

77 2 X 4 drop-in CEILING TILES - long jagged craterd and small pinholes
   (Room 508)

78 9 X 9 FLOORTILE - Taupe with light green and tan markings
   (5th floor hallways)

79 MASTIC for Material # 78
   *

80 Paper type DUCT TAPE
   (Room 503B)

81 2 X 4 drop-in CEILING TILES - thin, jagged lines and pinholes
   (Room 503C)

82 12' X 12' CEILING TILE - crinkled, jagged lines
   (530C on walls)

83 MASTIC for Material # 82

84 12 X 12 FLOORTILE - Light grey with dark grey and white blotches
   (525 & 529)

85 MASTIC for Material # 84
   * (Unable to sample)

86 FLEX CONNECTOR - coarse weave

* These materials were not sampled because destructive means would have been necessary. They should be tested before being disturbed.
B-WING HOMOGENEOUS MATERIALS LIST

Materials in **bold type** contain asbestos

87 HARD ELBOWS, JOINTS, and FITTINGS
(Under wash sinks in dental clinics)

88 12" X 12" CEILING TILE - metal, filled with fiberglass
(Room 416, visual)

89 DOOR INSULATION inside fan ducting
(Mech Room 657)

90 MASTIC for Material # 16

91 9X9 FLOORTILE - tan with white streaks
(6th floor)

92 MASTIC for Material # 91

93 9X9 FLOORTILE - Chocolate brown w/ white and dk. brown markings
(6th floor)

94 MASTIC for Material # 93
* (Unable to sample)

95 9X9 FLOORTILE - Light brown with dark brown and white markings
(6th floor)

96 MASTIC for Material # 95

97 Straw mat CEILING TILE above GWB ceiling on Floor 6

98 CAB wallboard along E and S walls of floor 6
* (Assumed positive)

99 12 X 12 FLOOR TILE - tan w/ beige and tan and light grey splotches
* (In Room 429 only, < 100 Sq Ft)

* These materials were not sampled because destructive means would have been necessary. They should be tested before being disturbed.
Revised 01/09/92
B-WING HOMOGENEOUS MATERIALS LIST

Materials in **bold type** contain asbestos

18 COVE MASTIC, dark brown
   (Throughout building)

19 AIR CELL pipe insulation
   (Resembles hard block unless cut into)

20 12 X 12 FLOORTILE - Mottled rosey tan w/ taupe and grey spots
   (1st floor)

21 MASTIC for Material # 20

22 9 X 9 FLOORTILE - white with black rippled pattern and lines
   (147 series rooms)

23 MASTIC for Material # 22

24 2 X 4 drop-in CEILING TILES - short small squiggly lines and multisized holes
   (Throughout)

26 1 X 2 drop-in CEILING TILES - large jagged craters and large pin holes
   (147 series rooms)

27 Gypsum WALLBOARD located throughout the building

28 MUDDED SEAM MATERIAL on gypsum wallboard

29 12 X 12 glue-on CEILING TILES - many random tiny pin holes
   * (Room 147F, <100SF)

30 MASTIC for Material # 29
   *

31 Special Purpose PAINT - coating undersides of lab sinks
   (Throughout)

32 12 X 12 FLOORTILE - Mottled grey tan and taupe
   (Throughout)

33 MASTIC for Material # 32

34 WALL PLASTER located throughout building

35 Black COVE MASTIC - typically around lab benches and sinks

* These materials were not sampled because destructive means would have been necessary. They should be tested before being disturbed.

Revised 01/09/92
# 1/19/21 Pre-Bid Site Walk Attendees

## 207299 HSC B-Wing 350B Clinic Renovation Project

<table>
<thead>
<tr>
<th>Name</th>
<th>Company Name</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ian Hogan</td>
<td>Centennial</td>
<td><a href="mailto:lhogan@cce-inc.com">lhogan@cce-inc.com</a></td>
</tr>
<tr>
<td>Erin Smith</td>
<td>Centennial</td>
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<tr>
<td>John Emershaw</td>
<td>Centennial</td>
<td><a href="mailto:Jemershaw@cce-inc.com">Jemershaw@cce-inc.com</a></td>
</tr>
<tr>
<td>Lon Weaver</td>
<td>Forma Construction Company</td>
<td><a href="mailto:lonw@formacc.com">lonw@formacc.com</a></td>
</tr>
<tr>
<td>Chad Shannon</td>
<td>Solutionz inc.</td>
<td><a href="mailto:Chads@demolitionsolutionz.com">Chads@demolitionsolutionz.com</a></td>
</tr>
<tr>
<td>Tynan Gilmore</td>
<td>PCI Democon</td>
<td><a href="mailto:tynan.gilmore@pcg.com">tynan.gilmore@pcg.com</a></td>
</tr>
<tr>
<td>Angela Kirk</td>
<td>Forma Construction</td>
<td><a href="mailto:Angela.kirk@formacc.com">Angela.kirk@formacc.com</a></td>
</tr>
<tr>
<td>Jeremy Schlegel</td>
<td>Cochran Inc</td>
<td><a href="mailto:Jschlegel@cochraninc.com">Jschlegel@cochraninc.com</a></td>
</tr>
<tr>
<td>Casey</td>
<td>Seabay Building Group</td>
<td><a href="mailto:Casey@seabay-group.com">Casey@seabay-group.com</a></td>
</tr>
<tr>
<td>Fred Dresser</td>
<td>CDK Construction</td>
<td><a href="mailto:Fdresser@cdkconstruction.com">Fdresser@cdkconstruction.com</a></td>
</tr>
<tr>
<td>Todd Ray</td>
<td>Pacific Northwest Envioronmental LLC</td>
<td><a href="mailto:Seabids@pnwellc.com">Seabids@pnwellc.com</a></td>
</tr>
<tr>
<td>Evan Bourquard</td>
<td>MITHUN</td>
<td><a href="mailto:evanb@mithun.com">evanb@mithun.com</a></td>
</tr>
<tr>
<td>Joe Reynolds</td>
<td>Reynolds General Contracting</td>
<td><a href="mailto:joe@reynoldsgc.com">joe@reynoldsgc.com</a></td>
</tr>
<tr>
<td>Sonya Murphy</td>
<td>Metrix Construction</td>
<td><a href="mailto:Sonya@metrixconstruction.com">Sonya@metrixconstruction.com</a></td>
</tr>
<tr>
<td></td>
<td>Sky North west Inc.</td>
<td><a href="mailto:Briandho1@yahoo.com">Briandho1@yahoo.com</a></td>
</tr>
<tr>
<td>Logan Hardt</td>
<td>PCL Construction</td>
<td><a href="mailto:Lhardt@pcl.com">Lhardt@pcl.com</a></td>
</tr>
<tr>
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<tr>
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<tr>
<td>Colin Mercer</td>
<td>Apollo Mechanical</td>
<td><a href="mailto:Colin.mercer@apollomech.com">Colin.mercer@apollomech.com</a></td>
</tr>
<tr>
<td>Shane Jensen</td>
<td>Valley</td>
<td><a href="mailto:Shanej@velectric.com">Shanej@velectric.com</a></td>
</tr>
<tr>
<td>Anthony Fontanez</td>
<td>Centennial</td>
<td><a href="mailto:Afontanez@cce-inc.com">Afontanez@cce-inc.com</a></td>
</tr>
<tr>
<td>Darrell Lambert</td>
<td>NorthStar Demolition</td>
<td><a href="mailto:dlambert@northstar.com">dlambert@northstar.com</a></td>
</tr>
<tr>
<td>Jess Lemieux</td>
<td>Prime</td>
<td><a href="mailto:Jess.lemieux@primee.com">Jess.lemieux@primee.com</a></td>
</tr>
<tr>
<td>Marc Pineda</td>
<td>PCL Construction</td>
<td><a href="mailto:mpineda@pcl.com">mpineda@pcl.com</a></td>
</tr>
<tr>
<td>Brian Dewitt</td>
<td>Sky North West Inc.</td>
<td><a href="mailto:Briandno1@yahoo.com">Briandno1@yahoo.com</a></td>
</tr>
<tr>
<td>Angela Kirk</td>
<td>Forma Construction</td>
<td><a href="mailto:Angela.kirk@formacc.com">Angela.kirk@formacc.com</a></td>
</tr>
<tr>
<td>Jon Ross</td>
<td>Ascendent Demolition</td>
<td><a href="mailto:Jross@ascdemo.com">Jross@ascdemo.com</a></td>
</tr>
<tr>
<td>Wes Bennett</td>
<td>Washington Heating &amp; AC</td>
<td><a href="mailto:Wbennett@washingtonheating.com">Wbennett@washingtonheating.com</a></td>
</tr>
</tbody>
</table>
2nd floor below B350

photos taken in marked rooms
<table>
<thead>
<tr>
<th>B241F</th>
<th>B241B</th>
<th>B241E</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Above ceiling:" /></td>
<td><img src="image2" alt="Above ceiling:" /></td>
<td><img src="image3" alt="Above ceiling:" /></td>
</tr>
<tr>
<td><img src="image4" alt="Above ceiling:" /></td>
<td><img src="image5" alt="Above ceiling:" /></td>
<td><img src="image6" alt="Above ceiling:" /></td>
</tr>
</tbody>
</table>
### Utility Specifications

**Table 5. Utility Specifications - Preference Collection**

<table>
<thead>
<tr>
<th>Utility</th>
<th>Finish</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>Protrude 1” (25.4 mm) for 3/8” compression</td>
<td>80-125 psi (550 to 860 KPa), 2.5 scfm (71 sl/min) minimum, during normal use (7.5 scfm [210 sl/min] peak intermittent flow). Flush lines prior to making connections to dental equipment.</td>
</tr>
<tr>
<td>Water</td>
<td>Protrude 1” (25.4 mm) for 3/8” compression</td>
<td>60 ± 20 psi (410 ±140 KPa), 1.5 gpm (5.7 l/min) minimum, not to exceed 40°C (104°F). Flush lines prior to making connections to dental equipment.</td>
</tr>
<tr>
<td>Central vacuum</td>
<td>Protrude 1” (25.4 mm) for 5/8” (16 mm) O.D. tubing and other specified by the central vacuum supplier</td>
<td>Wet Systems: 10 ± 2 inches of Hg (34 ± 7 KPa) and 9 scfm (255 sl/min) minimum. Dry/Semi-dry Systems 4.5 ± 1 inches of Hg (16 ± 3.5 KPa) and 12 scfm (340 sl/min) minimum.</td>
</tr>
<tr>
<td>Electrical</td>
<td>Protrude 1” (25.4 mm)</td>
<td>Refer to the electrical requirements listed throughout this section.</td>
</tr>
<tr>
<td>Gravity drain</td>
<td>Protrude 1” (25.4 mm)</td>
<td>Basket strainer connects to 1-1/4” or 1-1/2” flanged tailpiece.</td>
</tr>
<tr>
<td>Nitrous Oxide</td>
<td>Specified by the product manufacturer</td>
<td>Specified by the product manufacturer.</td>
</tr>
<tr>
<td>Oxygen</td>
<td>Specified by the product manufacturer</td>
<td>Specified by the product manufacturer.</td>
</tr>
</tbody>
</table>
Universal 5543

Round and square centrals

Figure 8. Loop Vent Diagram - Preference Collection 5543 and 5531

5531 Accessory Console

35° sink module
Electrical Specifications

Electrical Rough-In

A contractor should supply the x-ray junction box, wiring, conduit and flex conduit. The conduit must protrude 3" (76.2 mm) from the finished floor.

Use the flex conduit, as required, to connect the 3" (76.2 mm) piece from the floor to the junction box. Wire as per local and national electrical codes.

The low voltage conduit is used for routing data lines and touchpad wires, not for line voltage.

Figure 1. Electrical Rough-In Example

Legend:
- = Line voltage conduit
- = Low voltage conduit (2" diameter)
## Electrical Configuration

### Table 1. Operating Current for Ancillary Devices

<table>
<thead>
<tr>
<th>Ancillary Device</th>
<th>Operating Current (Amps) @ 110-120 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-dec Preference Collection task light</td>
<td>0.3</td>
</tr>
<tr>
<td>A-dec 300-watt power supply</td>
<td>2.8</td>
</tr>
<tr>
<td>A-dec 17-watt power supply</td>
<td>0.2</td>
</tr>
<tr>
<td>Monitor, typical</td>
<td>1.1</td>
</tr>
<tr>
<td>Intraoral camera, typical</td>
<td>2.0</td>
</tr>
<tr>
<td>Curing light</td>
<td>2.0</td>
</tr>
<tr>
<td>Amalgamator, typical</td>
<td>2.3</td>
</tr>
<tr>
<td>Ultrasonic scaler, typical</td>
<td>0.9</td>
</tr>
<tr>
<td>X-ray viewer, typical</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**NOTE**  
Connect incoming power to each cabinet to a 20-amp circuit breaker. Table 1 shows typical current draw for various devices that might be installed in a cabinet. Always consult device name plate for actual power requirements. Mobile equipment may have substantial power requirements and should be considered when determining total treatment room branch circuits.

---

## Task Lighting

Power switch locations for Preference Collection task lights:

- Stack switch located on the 12 o’clock console
- Power switch located on each device: Doctor’s, Assistant’s, and 12 o’clock task light
Concrete Floors

Table 2. Concrete Floor Mounting Chart

<table>
<thead>
<tr>
<th>Anchor</th>
<th>Dimension A Diameter Hole</th>
<th>Dimension B Minimum Depth</th>
<th>Fastener</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference Collection Subbase Clips</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>Preference ICC Leg Anchor</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.005543</td>
</tr>
<tr>
<td>5543 X-Ray Column Anchor</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>A-dec 500® 541/545 Mount</td>
<td>1/2” (12.7 mm)</td>
<td>2-3/4” (69.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 4-1/4”</td>
<td>038.004.00</td>
</tr>
</tbody>
</table>

**NOTE** Dimension C per architectural drawings. Anchors are only approved for use in slabs greater than 5” (127 mm) thick. If concrete does not meet minimum requirements, consult with a licenced engineer for alternate anchors.

Figure 2. Floor-Mounting - Concrete
A and B
A, B Preference

A-dec 5580 Treatment Console

Preference Collection 5580 with A-dec 5580 Treatment Console

Preference Collection 5580 with A-dec 541 or 545 system

Preference Collection 5580 with A-dec 4631 or 4635 system
5580
Treatment Console 42", 69", and 96"

Figure 28. Templates and Utilities - 5580 Treatment Console 42", 69", and 96"

A, B Preference

Chase to Chair Floor Box

This product configuration supports the use of 541/545 delivery systems.

A-dec Utility Requirements:

<table>
<thead>
<tr>
<th>Utility</th>
<th>Requirement</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>1/2&quot; Copper Stub, 3/8&quot; Compression Angle Stop</td>
<td>✓</td>
</tr>
<tr>
<td>Water: HW/CW</td>
<td>1/2&quot; Copper Stub, 3/8&quot; Compression Angle Stop</td>
<td>✓</td>
</tr>
<tr>
<td>Vacuum</td>
<td>1/2&quot; Copper Stub, 1-3&quot; FFF</td>
<td>✓</td>
</tr>
<tr>
<td>Electrical</td>
<td>3' Flexible Whip</td>
<td>✓</td>
</tr>
<tr>
<td>Data Chase</td>
<td>2&quot; ID Conduit for Cable Management</td>
<td>✓</td>
</tr>
<tr>
<td>Drain</td>
<td>See Contract Documents</td>
<td></td>
</tr>
<tr>
<td>TapMaster</td>
<td>Optional Needed if Air is Not Plumbed</td>
<td></td>
</tr>
</tbody>
</table>
SOLID SURFACE CAPS

(2) COAT HOOKS (TO BE FIELD INSTALLED, SHIPPED LOOSE)

SOFFIT

PLUMBING MAY INTERFERE WITH WASTE BASKET

FOOT ACTIVATION W/TAPMASTER

CID 0290624

CID 0290625

REQUIRED

I AUTHORIZE A-dec TO BUILD
THE CUSTOM PRODUCT AS SHOWN
NAME: ______________________
DATE: _____________________

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CID: VARIOUS
Drawing Rev: B
Designer: C.Zemke
## Concrete Floors

### Table 2. Concrete Floor Mounting Chart

<table>
<thead>
<tr>
<th>Anchor</th>
<th>Dimension A Diameter Hole</th>
<th>Dimension B Minimum Depth</th>
<th>Fastener</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference Collection Subbase Clips</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>Preference ICC Leg Anchor</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>5543 X-Ray Column Anchor</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>A-dec 500® 541/545 Mount</td>
<td>1/2” (12.7 mm)</td>
<td>2-3/4” (69.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 4-1/4”</td>
<td>038.004.00</td>
</tr>
</tbody>
</table>

**NOTE** Dimension C per architectural drawings. Anchors are only approved for use in slabs greater than 5” (127 mm) thick. If concrete does not meet minimum requirements, consult with a licenced engineer for alternate anchors.

### Figure 2. Floor-Mounting - Concrete
A-dec 5543 Central Console SP and SB

Preference Collection: 5543 with A-dec 542 Delivery System

Preference Collection: 5543 with 342 Delivery System
5543
Round/Square-End Central Console

Figure 25. Templates and Utilities - 5543 Round/Square-End Central Console

A-dec Utility Requirements:
- Air: 1/2" Copper Stub, 3/8" Compression Angle Stop
- Water: HW/CW: 1/2" Copper Stub, 3/8" Compression Angle Stop
- Vacuum: 1/2" Copper Stub, 1-3" FFF
- Electrical: 3" Flexible Whip
- Data Chase: 2" ID Conduit for Cable Management
- Drain: See Contract Documents
- TapMaster: Optional Needed if Air is Not Plumbed
FOOT ACTIVATION W/TAPMASTER
**A-dec 5531 Accessory Console with A-dec 542 Delivery System**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>432 mm</th>
<th>508 mm</th>
<th>64 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>17&quot;</td>
<td>432 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20&quot;</td>
<td>508 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32-1/4&quot;</td>
<td>819 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35&quot;</td>
<td>889 mm</td>
<td></td>
<td></td>
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<tr>
<td>43&quot;</td>
<td>1092 mm</td>
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<tr>
<td>44&quot;</td>
<td>1118 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72&quot;</td>
<td>1829 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>86&quot;</td>
<td>2184 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17&quot; or 20&quot;</td>
<td>432 or 508 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Diagrams showing the dimensions in both inches and millimeters.
5531 and 5631
30" Accessory Console

Figure 17. Templates and Utilities - 5531 and 5631 30" Accessory Console
RIGHT SINK, FAUCET AND WASTE

FOOT ACTIVATION W/TAPMASTER

16.9"

32.2"

58"

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CID: 0290622
Drawing Rev: B
Designer: C.Zemke
5531 and 5631
58" Accessory Console

Figure 19. Templates and Utilities - 5531 and 5631 58" Accessory Console
A-dec 5531 Accessory Console with 342 Delivery System

16.87" 429 mm
32 1/4" 819 mm
35" 889 mm
2-1/2" 64 mm

20" 508 mm
32 1/4" 819 mm
35" 889 mm
2-1/2" 64 mm

30" 762 mm
17" or 20" 432 or 508 mm

44" 1118 mm
17" or 20" 432 or 508 mm

58" 1473 mm
17" or 20" 432 or 508 mm
46 1/2" 1181 mm

72" 1829 mm
17" or 20" 432 or 508 mm
46 1/2" 1181 mm

86" 2184 mm
17" or 20" 432 or 508 mm
46 1/2" 1181 mm
D and F

5531 and 5631
Wall-Mounted Utilities

Figure 24. Templates and Utilities - 5531 and 5631 Wall-Mounted Utilities

<table>
<thead>
<tr>
<th>A-dec Utility Requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
</tr>
<tr>
<td>Water: HW/CW</td>
</tr>
<tr>
<td>Vacuum</td>
</tr>
<tr>
<td>Electrical</td>
</tr>
<tr>
<td>Data Chase</td>
</tr>
<tr>
<td>Drain</td>
</tr>
<tr>
<td>TapMaster</td>
</tr>
</tbody>
</table>

Electrical is optional
5531
Floor-Mounted Utilities Template

Figure 23. Templates and Utilities - 5531 Floor-Mounted Utilities

FLOOR-MOUNTED UTILITIES
FOR 5531
LEFT-SIDE
SINK

FLOOR-MOUNTED UTILITIES
FOR 5531
RIGHT-SIDE
SINK

Preference Collection
Templates and Utilities ■ 5531 Floor-Mounted Utilities Template

A-dec Utility Requirements:
Air 1/2" Copper Stub, 3/8" Compression Angle Stop
Water: HW/CW 1/2" Copper Stub, 3/8" Compression Angle Stop
Vacuum 1/2" Copper Stub, 1-3" FFF
Electrical 3' Flexible Whip
Data Chase 2" ID Conduit for Cable Management
Drain See Contract Documents
TapMaster Optional Needed if Air is Not Plumbed

NOTE: Verify w/local codes on use of mechanical vent. If not allowed use option #2.

NOTE: Stubs are shown in approximate location

Electrical is Optional
A-dec 5730 Dispenser Unit
5730 Dispenser Unit or 5731 Storage Unit

**WARNING** For .22 or .29 modules (22-5/8" [574.7 mm] or 29-5/8" [752.5 mm] wide), you must mount the module anchor strips directly to wall studs in two locations (see Figure 12).

For .32 or .42 modules (34” [86.3 mm] or 42-1/8” [1070 mm] wide), you must mount the anchor strip directly to wall studs in a minimum of three locations (see Figure 12). If the ends of the anchor clip are more than 10" (254 mm) from a direct stud attachment, you must install an additional toggle bolt anchor to attach the anchor strip to the gypsum wallboard. Install the additional toggle bolt anchor approximately 10" (254 mm) from the direct stud attachment point.

If you cannot make the proper number of stud attachments, you must change the module position or reinforce the wall framing. Refer to page 2 for required consultation.

**Metal Studs**

- 1-1/4” x 22 ga min
- Top: 22" (558.8 mm), 29" (736.6 mm), 34" (863.6 mm), and 42" (1066.8 mm)
- T.W. anchors in stud flange
- Bottom: #9 x 2-1/4" S.D. screw in each stud

**Wood Studs**

- Std or Better/D.F. or S.P.
- Top: #10 x 3" wood screws
- Bottom: #10 x 3" wood screws in each stud

Min 12" metal strapping or wood backing center point 64" from floor run the length of cabinet.
Figure 11. 5730 and 5731 Mounting Cleat Attaching to Wall

Figure 12. 5730 and 5731 Mounting Specifications

Cabinet weight = 60-85 lb. (27.2 - 38.5 kg) / Design live weight = 75-105 lb. (34-47.6 kg) depending upon size.

Min 12” metal strapping or wood backing center point 64” from floor run the length of cabinet.
Anchor Locations

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## Concrete Floors

### Table 2. Concrete Floor Mounting Chart

<table>
<thead>
<tr>
<th>Anchor</th>
<th>Diameter Hole</th>
<th>Minimum Depth</th>
<th>Fastener</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference Collection Subbase Clips</td>
<td>1/2&quot; (12.7 mm)</td>
<td>3-1/2&quot; (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>Preference ICC Leg Anchor</td>
<td>1/2&quot; (12.7 mm)</td>
<td>3-1/2&quot; (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>5543 X-Ray Column Anchor</td>
<td>1/2&quot; (12.7 mm)</td>
<td>3-1/2&quot; (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>A-dec 500® 541/545 Mount</td>
<td>1/2&quot; (12.7 mm)</td>
<td>2-3/4&quot; (69.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 4-1/4”</td>
<td>038.004.00</td>
</tr>
</tbody>
</table>

**NOTE** Dimension C per architectural drawings. Anchors are only approved for use in slabs greater than 5" (127 mm) thick. If concrete does not meet minimum requirements, consult with a licensed engineer for alternate anchors.

### Figure 2. Floor-Mounting - Concrete
The written material is not intended to be, and should not be, used as a substitute for the compliance with local, state, federal code and Americans with Disabilities Act. It is the responsibility of the user to integrate the A-dec equipment specifications presented herein with the regulations and codes overseen by local planning and inspection authorities. A-dec Inc. shall not be held liable for any errors contained herein or any consequential or other damages concerning the furnishing, performance or use of this material. The information in this document is subject to change without notice. If you find any problems with this document, please report them to us in writing.
Anchor Locations

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The information in this Quote is subject to change without notice. If you find any problems with this Quote, please report them to us in writing.

CID: Template_0292713
Drawing Rev: A
Designer: C.Zemke

I AUTHORIZE A-dec TO BUILD
THE CUSTOM PRODUCT AS SHOWN

REQUIRED

NAME:__________________________
DATE:__________________________
## Concrete Floors

### Table 2. Concrete Floor Mounting Chart

<table>
<thead>
<tr>
<th>Anchor</th>
<th>Dimension A Diameter Hole</th>
<th>Dimension B Minimum Depth</th>
<th>Fastener</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference Collection Subbase Clips</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>Preference ICC Leg Anchor</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>5543 X-Ray Column Anchor</td>
<td>1/2” (12.7 mm)</td>
<td>3-1/2” (88.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 5-1/2”</td>
<td>038.034.00</td>
</tr>
<tr>
<td>A-dec 500® 541/545 Mount</td>
<td>1/2” (12.7 mm)</td>
<td>2-3/4” (69.9 mm)</td>
<td>Stud, anchor, 1/2-13 x 4-1/4”</td>
<td>038.034.00</td>
</tr>
</tbody>
</table>

**NOTE**  Dimension C per architectural drawings. Anchors are only approved for use in slabs greater than 5” (127 mm) thick. If concrete does not meet minimum requirements, consult with a licenced engineer for alternate anchors.

---

**Figure 2. Floor-Mounting - Concrete**

![Diagram of floor mounting with labels for Anchor, Hex nut, Washer, Bolt, Dimension A, Dimension B, and Dimension C.]
## Utility Specifications

<table>
<thead>
<tr>
<th>Utility</th>
<th>Finish</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>Protrude 1&quot; to 2&quot; (25 mm to 51 mm) for 1/2&quot; (13 mm) compression</td>
<td>• Right-angle manual shutoff valve with 3/8&quot; compression outlet supplied and installed by the contractor, with the top of the handle no higher than 3-3/4&quot; (95 mm) above the finished floor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 80-125 psi (550 to 860 kPa), 2.5 scfm (71 SL/min) minimum, during normal use (7.5 scfm [210 SL/min] peak intermittent flow).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 90 psi (621 kPa) (minimum unregulated) is recommended for delivery systems with Advanced Air.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Flush lines prior to making connections to dental equipment.</td>
</tr>
<tr>
<td>Water*</td>
<td>Protrude 1&quot; to 2&quot; (25 mm to 51 mm) for 1/2&quot; (13 mm) compression</td>
<td>• Right-angle manual shutoff valve with 3/8&quot; compression outlet supplied and installed by the contractor, with the top of the handle no higher than 3-3/4&quot; (95 mm) above the finished floor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 60±20 psi (410 ± 140 kPa), 1.5 gpm (5.7 L/min) minimum, not to exceed 40°C (104°F).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Flush lines prior to making connections to dental equipment.</td>
</tr>
<tr>
<td>Central vacuum</td>
<td>Protrude 1&quot; (25 mm) for 5/8&quot; (16 mm) O.D. tubing and other specified by the central vacuum supplier</td>
<td>• Wet systems: 10±2 inches of Hg (34±7 kPa), 9 scfm (255 SL/min) minimum.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dry/semi-dry systems: 4.5±1 inches of Hg (16±3.5 kPa), 12 scfm (340 SL/min) minimum.</td>
</tr>
<tr>
<td>Gravity Drain**</td>
<td>Protrude 1&quot; (25 mm) for 1-1/2&quot; (38 mm) nominal pipe</td>
<td>• Place trap in line, conforming to local codes, contractor-supplied.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Waste water drain must have a minimum slope of 1/4&quot; per foot (21 mm per meter) and accommodate a flow of 4.5 gpm (17 L/min) without overflow.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Floor mount only. Not recommended for wall mount utilities.</td>
</tr>
<tr>
<td>Electrical</td>
<td>1/2&quot; (13 mm) conduit and electrical box with a hospital-grade quad power receptacle</td>
<td>• Conduit, electrical box, and power receptacle supplied and installed by the contractor (wired as per code).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Electrical box should be oriented vertically, with the top no higher than 5&quot; (127 mm) above the finished floor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• See the “Electrical Ratings” table for voltage and amperage ratings.</td>
</tr>
</tbody>
</table>

---

* The delivery system comes with a self-contained water bottle. Municipal water is only required if the equipment configuration includes a cuspidor or if the facility has special requirements.

** Gravity drains are needed only on systems with a cuspidor.
A-dec 511B Dental Chair

Plan View with Elevation

- **27” (684 mm)** Width of Baseplate
- **25” (631 mm)** Width of Back Rest
- **9-5/8” (244 mm)** Headrest Extension
- **73-1/4” (1861 mm)** Full Range of Chair Movement at Factory Set Upper Limit
- **91-7/8” (2334 mm)** Full Range of Chair Movement at Maximum Upper Limit
- **12” (305 mm)** Forward Chair Travel at Factory Set Upper Limit
- **12” (305 mm)** Forward Chair Travel at Maximum Upper Limit
- **9-5/8” (244 mm)** Headrest Extension
- **67-1/4” (1708 mm)** Factory Set Upper Limit
- **69-3/4” (1772 mm)** Maximum Upper Limit
- **29” (737 mm)** Factory Set Upper Limit to Seat Pocket
- **31-1/2” (800 mm)** Maximum Upper Limit to Seat Pocket
- **34-3/4” (883 mm)** to Seat Pocket
- **51-3/4” (1314 mm)**

**13-1/2” (343 mm)**

**12” (305 mm)**

**21” (534 mm)**

**55-3/4” (1416 mm)**

**58-3/4” (1492 mm)**

**21” (534 mm)** at Factory Set Upper Limit

**24” (610 mm)** at Maximum Upper Limit
A-dec 532B Delivery System

Plan View with Elevation

12-1/4" Radius
(309 mm)

34-1/2"
(872 mm)

33" Radius
(835 mm)

22-5/8" (575 mm)

9" (229 mm)
Forward Chair Travel at
Factory Set Upper Limit
12" (305 mm)
at Maximum Upper Limit
A-dec 572L Dental Light on A-dec 511B Dental Chair

- 91-3/4" (2330 mm) Factory Set Upper Limit
- 94-1/4" (2394 mm) Maximum Upper Limit from Floor to Full Extension
- Full Base Up

- 83-3/4" (2127 mm) Factory Set Upper Limit
- 86-1/4" (2191 mm) Maximum Upper Limit from Floor to Full Extension
- Full Base Up

- 29" (737 mm)

- 22-1/4" Radius (563 mm)

- 17-3/8" (441 mm)

- 34-3/4" (883 mm)

- 37" Forward Chair Travel at Factory Set Upper Limit
- 12" (305 mm) at Maximum Upper Limit
A-dec 500

A-dec 511 Dental Chair

[Diagram showing chair dimensions]

- Width of Baseplate: 25" (635 mm)
- Width of Backrest: 21" (533 mm)
- Range of Headrest: 9-5/8" (244 mm)
- Full Range of Chair Movement: 93-3/4" (2381 mm)
- Forward Chair Travel: 21" (533 mm)
- Space Between Arms: 9-5/8" (244 mm)
- 80º
- 13-1/2" (343 mm) To Seat Pocket
- 24-1/2" (622 mm)
- 51.625" (1311 mm)
- 34-3/4" (883 mm)
- 31-1/2" (800 mm) To Seat Pocket
- 58-1/2" (1486 mm)
- 2-1/2" (64 mm)
- 9" (229 mm)

[Additional text not provided in the diagram]
A-dec 332/333 Delivery System on 511 Dental Chair
A-dec 572, 572L, or 372L Dental Light on 511 Dental Chair

- A-dec 572 Light
- A-dec 572L Light
- A-dec 372L Light

Dimensions:
- 78-3/4" - 96-3/4" (1905 mm - 2362 mm)
- Full Base Down to Full Base Up from Floor
- 70-3/4" - 88-3/4" (1797 mm - 2254 mm)
- Full Base Down to Full Base Up from Floor

Additional Measurements:
- 29" (737 mm)
- 27" (686 mm)
- 30-1/2" rad (775 mm)
- 83-5/8" (2124 mm)
- 36" (915 mm)
- Full Base Up (forward chair travel = 12-1/2" [318 mm])
A-dec Track Light

**NOTE:** If the track opposite the transformer is closer than 9-1/2" (241 mm) from a wall, the trolley and post assembly must be installed before the track is installed on the ceiling.

**CAUTION:** Please see note below.

A-dec LED Light

77-1/2" (1969 mm)

58" (1473 mm)

7-1/2" (191 mm)

7-1/2" (191 mm) from track light to centerline of mounting post. Positioning ensures adequate space for both mounting plate and mounting plate cover.

A-dec Plumbing Elevations:

- 5/8" (16 mm) O.D. tubing and other specified by the central vacuum supplier. (see General/Utility Notes)
- 1-1/2" (38 mm) nominal pipe for gravity drain (when required)
- 3/4" (19 mm) max. wall finish stub height
- 1/2" (13 mm) conduit for electrical (supplied by contractor; check ampereage requirements)
- 1/2" (13 mm) nominal pipe compression fitting with right-angle manual shutoff valves with 3/8" compression outlet for air and water (supplied by contractor)
- 1/2" (13 mm) O.D. tubing and other specified by the central vacuum supplier. (see General/Utility Notes)
### A-dec Utility Requirements:

<table>
<thead>
<tr>
<th>Utility</th>
<th>Requirement</th>
<th>Checkmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>1/2&quot; Copper Stub, 3/8&quot; Compression Angle Stop</td>
<td>✔</td>
</tr>
<tr>
<td>Vacuum</td>
<td>1/2&quot; Copper Stub, 1-3&quot; FFF</td>
<td>✔</td>
</tr>
<tr>
<td>Electrical</td>
<td>Quad outlet</td>
<td>✔</td>
</tr>
<tr>
<td>Data Chase</td>
<td>2&quot; ID Conduit for Cable Management</td>
<td>✔</td>
</tr>
</tbody>
</table>

### A-dec Plumbing Elevations:

- 5/8" (16 mm) O.D. tubing and other specified by the central vacuum supplier (see General Utility Notes).
- 1-1/2" (38 mm) nominal pipe for gravity drain (when required).
- 1/2" (13 mm) nominal pipe compression fitting with right-angle manual shut-off valves with 3/8" compression outlet for air and water (supplied by contractor).
- 1/2" (13 mm) conduit for electrical (supplied by contractor; check ampereage requirements).

**PLEASE NOTE:** This drawing is for reference purposes ONLY. It is NOT TO SCALE.

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Chase to 12 O’Clock Cabinet

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A-DEC 511 FLOOR BOX TEMPLATE
Utilities and Shutoff Valves

The utilities are located in the contoured floor box for chair-mounted systems (A-dec 532/533) or in the cabinet for side delivery systems (A-dec 542). To access, lift up the floor box cover or removable cabinet panel.

![Diagram of shutoff valves]

**CAUTION** When removing or replacing covers, take care not to damage any wiring or tubing. Verify that the covers are secure after replacing them.

The manual shutoff valves control the air and water to the system. Leave these valves completely open (turned counterclockwise) during normal use to prevent leaks. From the valves, air and water pass through separate filters before entering the pre-regulators. Replace these filters when they become clogged and restrict flow.

To check for a clogged air or water filter:

1. Flip the master toggle to the on position.
2. While watching the air pressure gauge, press the syringe air button. If the pressure drops by more than 15 psi, replace the air filter.
3. While watching the cuspidor, press the bowl rinse button. If the water flow fades or stops, replace the water filter.

To replace the filter:

1. Flip the master toggle to the off position and close the shutoff valve (turn clockwise).
2. Bleed the system of air and water pressure by operating the syringe buttons until air and water no longer flow.
3. Using a standard screwdriver, remove the filter housing from the water pre-regulator assembly and remove the filter.
4. Replace the filter if it is clogged or discolored. Install the filter with the beveled edge facing the manifold.
5. Open the shutoff valves, flip the master toggle to the on position, and operate the bowl rinse to remove air from the waterline.

**CAUTION** To ensure proper operation, install the filter with the beveled edge facing the manifold.
A-dec 541 Duo 12 O'Clock and 545 Assistant's 12 O'Clock Round Work Surfaces
A-dec 521 Doctor's Stool

521 Doctor's Stool

Tall Cylinder
19-5/8" (498 mm)
to
24-1/8" (612 mm)

Short Cylinder
16-1/2" (417 mm)
to
21-3/4" (551 mm)

From Floor to Bottom of Seat Pocket

12-1/2" (318 mm)
to
16-1/2" (419 mm)
From Bottom of Seat Pocket to Top of Backrest

24-1/4" (619 mm)
A-dec 522 Assistant's Stool

522 Assistants Stool

20-3/8" Dia. (518 mm)

24-3/4" (69 mm)

24-1/2" (620 mm)

7" (178 mm) to 11" (729 mm)
From Bottom of Seat Pocket to Top of Torso Support

23-1/8" (587 mm) to 28-3/4" (729 mm)
From Floor to Bottom of Seat pocket

522 Assistants Stool w/Foot Pedestal and Backrest

30-1/2" (778 mm)

28" (710 mm)

12-1/2" (318 mm) to 16-1/2" (419 mm)
From Bottom of Seat Pocket to Top of Backrest

23-1/8" (587 mm) to 28-3/4" (729 mm)
From Floor to Bottom of Seat pocket
# Utility Specifications

## Specifications Table

<table>
<thead>
<tr>
<th>Utility</th>
<th>Rough-In</th>
<th>Finish</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>Protrude 3&quot; (76 mm)</td>
<td>Protrude 1&quot; (25.4 mm) for 3/8&quot; compression</td>
<td>80-125 psi (550 to 860 kPa), 2.5 scfm (71 sL/min) minimum, during normal use (7.5 scfm [210 sL/min] peak intermittent flow). Flush lines prior to making connections to dental equipment.</td>
</tr>
<tr>
<td>Water</td>
<td>Protrude 3&quot; (76 mm)</td>
<td>Protrude 1&quot; (25.4 mm) for 3/8&quot; compression</td>
<td>60 ± 20 psi (410 ±140 kPa), 1.5 gpm (5.7 L/min) minimum, not to exceed 40 °C (104 °F). Flush lines prior to making connections to dental equipment.</td>
</tr>
<tr>
<td>Central vacuum</td>
<td>Protrude 3&quot; (76 mm)</td>
<td>Protrude 1&quot; (25.4 mm) for 5/8&quot; (15.9 mm) O.D. tubing and other specified by the central vacuum supplier</td>
<td>Wet Systems: 10 ± 2 inches of Hg (34 ± 7 kPa) and 9 scfm (255 sL/min) minimum. Dry/Semi-dry Systems 4.5 ± 1 inches of Hg (16 ± 3.5 kPa) and 12 scfm (340 sL/min) minimum.</td>
</tr>
<tr>
<td>Electrical</td>
<td>1/2&quot; conduit to protrude 3&quot; (76 mm)</td>
<td>Protrude 1&quot; (25.4 mm)</td>
<td>Make connection to junction box using 1/2&quot; (13 mm) flexible conduit as needed. Wire box per code.</td>
</tr>
<tr>
<td></td>
<td>Low voltage conduit (2” diameter) for select 594s. For more information, see “Electrical Rough-In Operatory Example” on page 10.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gravity drain</td>
<td>Protrude 3&quot; (76 mm)</td>
<td>Protrude 1&quot; (25.4 mm)</td>
<td>Basket strainer connects to 1-1/4&quot; or 1-1/2&quot; flanged tailpiece.</td>
</tr>
</tbody>
</table>

See “Plan Views” on page 25 for information on the locations of utilities.
**Loop Vent Diagram**

Follow standard local codes for sink venting and loop vent plumbing. Here are examples with the relative location to critical features:

**Undermount Stainless Steel Sink**

29” (737 mm) to 34” (864 mm) Max height depending on cabinet configuration

**Vessel Sink**

Flexible vent pipe must be at least 6” above the top of the sink rim. Ensure vent pipe does not drape downward and is firmly secured inside.
Electrical Specifications

Electrical Rough-In

A contractor should supply the x-ray junction box, wiring, conduit and flex conduit. The conduit must protrude 3" (76 mm) from the finished floor.

Use the 1/2" flex conduit, as required, to connect the 3" (76 mm) piece from the floor to the junction box. Wire as per local and national electrical codes.

The low voltage conduit is used for routing data lines and touchpad wires, not for line voltage.

If you plan on connecting and controlling LED task lights on all cabinets from the Control Center, consider this during the rough-in.

Electrical Rough-In Operatory Example

| = Line voltage conduit |
| = Low voltage conduit (2" diameter) |

Electrical Rough-In, Sterilization Center Example (galley)

| = Line voltage conduit |
| = Low voltage conduit (2" diameter) |

591 Treatment Console

592 Central or 593 Side Console

592 Central or 593 Side Console

594 Receiving and Prep Modules

Optional Dryer

Power Box

594 Storage Modules 594 Packaging/Prep Modules
**Electrical Connection to Mains**

**CAUTION** Local regulation requires licensed electricians to install electrical utilities. All electrical utilities must conform to prevailing local codes. Final electrical connections will be required after the equipment is placed.

**NOTE** Connect incoming power to a 20 A circuit breaker.

Mains power is connected at the junction box located in the cabinet base. See the example below:
Operating Current for Ancillary Devices/Operatory

<table>
<thead>
<tr>
<th>Ancillary Device</th>
<th>Typical Operating Current (Amps) @ 110-120 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution Box (control center, task lights, ICV®)</td>
<td>2.0</td>
</tr>
<tr>
<td>Distribution Box (control center, task lights, ICV, plus optional devices plugged into auxiliary outlets)</td>
<td>9.0 (duplex output = 7 A max)</td>
</tr>
<tr>
<td>Monitor</td>
<td>1.1</td>
</tr>
<tr>
<td>Intraoral Camera</td>
<td>2.0</td>
</tr>
<tr>
<td>Curing Light</td>
<td>2.0</td>
</tr>
<tr>
<td>Amalgamator</td>
<td>2.3</td>
</tr>
<tr>
<td>Ultrasonic Scaler</td>
<td>0.9</td>
</tr>
<tr>
<td>X-Ray Viewer</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**NOTE** Connect incoming power to each cabinet to a 20 A circuit breaker. The table above shows typical current draw for various devices that might be installed in a cabinet. Always consult the device nameplate for actual power requirements. Ancillary equipment may have substantial power requirements and should be considered when determining total treatment room branch circuits.

Operating Current for Ancillary Devices/594 Sterilization Center

<table>
<thead>
<tr>
<th>Ancillary Device</th>
<th>Typical Operating Current (Amps) @ 110-120 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument Dryer</td>
<td>14.5</td>
</tr>
<tr>
<td>Power Box</td>
<td>4.5</td>
</tr>
</tbody>
</table>

**NOTE** When an instrument dryer is selected, the cabinet (dryer and power box) must be connected to a dedicated 20 A 120 VAC circuit. To prevent nuisance tripping of the circuit breaker and to ensure proper operation of the dryer and power box functions, no other loads can be included on this circuit.

Additional Electrical Requirements for the 594

**Instrument Dryer**

For the instrument dryer, A-dec provides a junction box in the sink module. A licensed electrician will need to connect the junction box to mains power.

**Power Box/Individual Servo Power Supply**

For the power box, the contractor will need to locate a duplex outlet in the base area under the receiving module. Locate the duplex outlet:

- in the floor under the receiving modules,
- in the base of the wall behind the receiving modules, or
- on the end of a conduit provided by a licensed electrician, wired to the junction box under the sink, and long enough to reach the receiving modules and/or Sterile Servo modules.
- in the floor under Sterile Storage modules

**Ancillary Devices**

For ancillary devices, such as sterilizers and ultrasonic cleaners, provide the electrical supply in the space noted on the utility/back panel templates, or anchor it to the floor in the base area. Refer to the device manufacturer for supply requirements. There are no electrical duplex receptacles supplied with the A-dec Inspire 594 Sterilization Cabinets. These must be provided by the contractor.
Structural and Other Construction Requirements

**NOTE** Anchoring requirements are determined by local seismic and structural codes and vary depending on the cabinet model and configuration. See the following section and the Plan View section for potential anchoring locations for specific module configurations.

**Floor Anchoring - Concrete Floors**

![Diagram of concrete floor anchoring](image)

**NOTE** Anchors are only approved for use in slabs at least 4" (102 mm) thick. If concrete does not meet minimum requirements, consult with a licensed engineer for alternate anchors.

**Floor Anchoring - Non-Concrete Floors**

![Diagram of non-concrete floor anchoring](image)

**NOTE** Anchors are only approved for use in wood flooring at least 3" (76 mm) thick. The lag screw must exceed a minimum embedment depth of 2-5/8" (67 mm). If the flooring material does not meet minimum requirements, consult with a licensed contractor about adding reinforcements.

**NOTE** Some local seismic or structural codes may require additional anchoring, which may, in turn, require additional wood flooring support. Contact A-dec Customer Service for more information.
594 Sterilization Center Anchoring
For 594 configurations, anchors are required in the following positions according to the type of cabinet module:

**Straight Run of Lowers**
Four anchors, one in each corner. Extended run lengths before and after the corner may ship with additional anchors.

**Lower Next to a Tower**
Two anchors, one in front and one in back.

**Towers**
Two anchors, one in front and one in back, on each tower.

---

**NOTE**  The lower corner and the corner tower do not get anchored.
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DATE:__________________________

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Drawing Rev: A
Initials: C.Zemke
Customer Name: Direct University of Washington
Reference: B350 Combined
Quote #: WQLH000034-1

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Drawing Rev: A
Initials: C.Zemke

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Utility location for SciCan HydriM G4, see manufacturer specs for additional details

Drawing is not to scale, unless otherwise specified, dimensions are in inches. Tolerances are: X ± .5, Y ± .25, Z ± .05

VIEW FROM FRONT OF CABINET

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Template Rev: A
Designer: J. Eichler
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Utility location for Midmark M11 see manufacturer for additional details

Utility location for SciCan Statim sterilizer, see manufacturer for additional details

VIEW FROM FRONT OF CABINET

CID: 0292694 TEMPLATE
Template Rev: A
Designer: J. Eichler
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Available space for the placement of utilities to support ancillary devices within the unit.

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Utilities for Midmark M11, see manufacturers specs for additional details.
594 Sterilization Center, Tower Modules TW4002 and TW4006, Utilities/Back Panel

Utility location for Midmark M11 sterilizer, see manufacturer for additional details

Utility location for SciCan Statim sterilizer, see manufacturer for additional details
594 Sterilization Center, 18” Sink Module

Available space for the placement of utilities to support the sink and HVE (locate as needed)

Optional, tap master required if not installed

<table>
<thead>
<tr>
<th>A-dec Utility Requirements:</th>
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<tbody>
<tr>
<td><strong>Air</strong></td>
</tr>
<tr>
<td>1/2&quot; Copper Stub, 3/8&quot; Compression Angle Stop</td>
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<tr>
<td><strong>Water: HW/CW</strong></td>
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<tr>
<td>1/2&quot; Copper Stub, 3/8&quot; Compression Angle Stop</td>
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<tr>
<td><strong>Vacuum</strong></td>
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<tr>
<td>1/2&quot; Copper Stub, 1-3&quot; FFF</td>
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<tr>
<td><strong>Electrical</strong></td>
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<tr>
<td>3' Flexible Whip</td>
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<tr>
<td><strong>Data Chase</strong></td>
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<tr>
<td>2&quot; ID Conduit for Cable Management</td>
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<tr>
<td><strong>Drain</strong></td>
</tr>
<tr>
<td>See Contract Documents</td>
</tr>
<tr>
<td><strong>TapMaster</strong></td>
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<tr>
<td>Optional Needed if Air is Not Plumbed</td>
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</tbody>
</table>
594 - 82" Straight Sterilization Center

- 11-3/4" (299 mm)
- 6-3/8" (162 mm)
- 34-3/4" (884 mm)
- 81-7/8" (2080 mm)
- 88-1/8" (2239 mm)
- 25-1/8" (640 mm)
- 25-7/8" (658 mm)

*If finished back is present*