



CITY OF PETALUMA

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PETALUMA, CA 94953-0061

ADDENDUM NO. 2

Petaluma City Hall West Wing Permit Center and Council Chambers Project C11202017

July 27, 2023

This Addendum No. 2 modifies the Bidding Documents for the Petaluma City Hall West Wing Permit Center and Council Chambers Project C11202017. This Addendum shall become part of the Contract and all provisions of the Contract shall apply thereto. Bidders shall acknowledge all Addendums in the Bid Schedule.

TECHNICAL SPECIFICATIONS CHANGE

Add Sections. Attached.

- 1. SECTION 06 40 10 Architectural Woodwork and Countertops:** Replace this entire section with the section attached to this Addendum. The changed sections are highlighted yellow.
- 2. DIVISION 01 GENERAL REQUIREMENTS:** These sections were omitted from the contract documents provided on the City of Petaluma Bid Opportunities webpage. The sections are attached to this Addendum.

PROJECT DRAWINGS

Sheet A2.1 Enlarged Plan has been updated to callout the location of the new countertop finish material. The Forbo Furniture Linoleum takes the place of the glass or clear laminate surface finish.

Sheet SK-1.c is added to the plan set and the Finish Schedule on sheet SK-1.c replaces the Finish Schedule originally provided on sheet A2.

PRODUCT CUTSHEETS

Add the Forbo Furniture Linoleum and the Birch brochure attached to this Addendum to the Product Cutsheet section of the Contract Documents.

TECHNICAL CLARIFICATION TO CONTRACTORS – QUESTION AND RESPONSE

Question #1: Do the new doors between the Lobby 1 and the Meeting Room or Lobby 2 require push button operation for accessibility?

Response #1: *If the strike side of the door has 18" then a push button operator is not required.*

Question #2: For low bid purposes, would it be allowed to turn the "Schedule of Base Bid Prices for the Permit Center" and "List of Material Suppliers and Material Guarantee" forms 24 hours after the bid opening?

Response #2: *The City wants to receive all of the documents in the Bid Forms section at the time of bidding.*

Kevin McDonnell
Mayor

Brian Barnacle
Janice Cader-Thompson
Mike Healy
Karen Nau
Dennis Pocekay
John Shribbs
Councilmembers

Public Works & Utilities

City Engineer
11 English Street
Petaluma, CA 94952
Phone (707) 778-4303

Environmental Services

Ellis Creek Water
Recycling Facility
3890 Cypress Drive
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Phone (707) 776-3777
Fax: (707) 656-4067

Parks & Facility Maintenance

840 Hopper St. Ext.
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Transit Division

555 N. McDowell Blvd.
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Phone (707) 778-4421

Utilities & Field Operations

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TECHNICAL CLARIFICATION TO CONTRACTORS – QUESTION AND RESPONSE

Question #3: The plans do not show the location of the IDF for the new data/telephone. Can you provide us with information?

Response #3: These construction contracts do not include IT related equipment or data cabling. The City's IT Department will take care of data cabling and related equipment. The contractor must provide pathways through the new cabinetry to accommodate data cabling.

Question #4 I don't see a note in the IE about wrapping the doors but there is in the Spec 097200. The edge of the mural can't wrap around as then you would see the wrap on the other side. The likelihood of it lifting from inside edge from overuse of the door is high. Please advise?

Response #4 On page A5 of the plan set the wall covering pattern shows that the wall covering goes to the door moldings, not over the doors. Technical Specification Section 09 72 00 Wall Coverings, part 2.5.A.2 ... "wraps around doors" does not intend that the wall covering material is wrapped onto the door, but around the door opening.

Question #5 I don't see any mechanical pages in the plans. There is a ceiling vent in the wall in the front of the permit office. Do you expect any HVAC work at all?

Response #5 The ceiling vent will need to be adjusted to one side of the wall. The best placement will be determined during construction. The City has mechanical plans for this section of the building but assumes that additional changes have been made over the years and were not documented into a plan set.

Question #6 The plans for the permit office lists on the finish schedule: COLUMBIA FOREST PRODUCTS, PUREBOND, LAURENTIDE BIRCH 1/2". Our vendors are having trouble identifying this material. Is it still available? Is it intended that the material is purchased raw or finished?

Response #6 The Architect has provided an alternate specification for a wood veneer after confirming availability. The Architect has also provided contacts for purchasing the specified materials.

*David Hodges, Purchasing Manager
Northern California/Northern Nevada
Mobile 916-214-2497, Office 916-638-7800
DHodges@hardwoods-inc.com*

*Hardwoods, Inc.
2477 Mercantile Drive
Rancho Cordova, CA, 95742*

Question #7 *Where does the Forbo Furniture Linoleum get applied?*

Response #7 the furniture linoleum will be adhered to the countertop surface of the new cabinetry and take the place of the call out for optional glass or clear laminate.

This Addendum No. 1 shall become part of the Contract and all provisions of the Contract shall apply thereto. Bidders shall acknowledge all Addendums in the Bid Schedule.

Summary of Changes: No Changes to bid items, only clarifications.

City of Petaluma,

Diane Ramirez, Project Manager

A signed copy of this Addendum and the attached acknowledgement form shall be attached to the bid proposal. Failure to do so may cause rejection of your bid as being non-responsive.

ADDENDUM NO. 2

**Petaluma City Hall West Wing Permit Center
and Council Chambers Project
C11202017**

July 27, 2023

ACKNOWLEDGEMENT

Receipt of Addendum No. 2 is hereby acknowledged by _____
(Contractor's Name)

on the _____ day of _____, 2023.

By: _____

Signature

Title

Company

SECTION 06 40 10
ARCHITECTURAL WOODWORK & COUNTERTOPS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide mill fabricated architectural woodwork with accessories as required for complete finished installation including cabinet hardware.
- B. Project shall meet all of the requirements for a Woodwork Institute Certified Compliance Program (CCP).

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's literature for manufactured items.
- B. Shop Drawings: Submit shop drawings of all millwork, countertops, gates, and plywood wall panels in conformance with Architectural Woodwork Standards (AWS) Section 1 – Submittals. Indicate materials and wood species, component profiles, fastening, joining details, finishes, and accessories.
 - 1. Certification: Provide Woodworking Institute (WI) Manual of Millwork Certified Compliance Label on shop drawings.
- C. Samples: Furnish samples of material listed in the Finish Schedule, with stain/finish per this section.

1.3 QUALITY ASSURANCE

- A. Fabricator Qualifications: Member of Architectural Woodworking Institute (AWI) or Woodwork Institute (WI) with minimum five years successful experience fabricating architectural woodwork similar to that required for Project.
- B. Standards: Perform architectural woodwork in accordance with recommendations of the AWS, 1st Edition.
 - 1. Installation Certification Program: Install work in this section as specified in the AWS and provide WI Certified Compliance Certificate for installation at completion of Project installation.
- C. Seismic Anchorage: Provide seismic anchorage for wall cabinets; comply with California Code of Regulations (CCR), Title 24, Part 2, load requirements for essential facilities.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver architectural woodwork until site conditions are adequate to receive work; protect items from weather while in transit.
 - 1. Allow architectural woodwork shop finish to completely dry prior to delivery to site; allow materials to off-gas volatile organic compound (VOC) emissions off site.
- B. Store materials indoors, in ventilated areas with constant but minimum temperature of 60 degrees F and maximum relative humidity of 25% to 55%.
- C. Do not begin installation of architectural woodwork until space is fully enclosed and mechanical systems are fully operational.
 - 1. Maintain interior installation areas at 70 degrees F and 50% to 55% relative humidity.
- D. Immediately remove from site materials with visible mold and materials with mildew.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Casework, Under-Counter Supports, Countertop, Wainscot, Wall Panels: Columbia Forest Products, PureBond, Formaldehyde-free, ½", Sap Birch Face, A4 or A2, plain slice (no rotary cut), 4x8 or 4x10 panels as required. Core material varies:
 - 1. Counters/Millwork, Permit Center and wherever plywood edge grain is exposed: Columbia Forest Products, 'Europly PLUS' core, FSC certified.
 - 2. Wall panels, Council Chambers and Permit Center South Lobby wainscot. Conditions with no exposed edges. Face veneer and finish must be from same source/batch and an exact to match to 'Europly PLUS' panels.
 - 3. The two plywood core products listed above must not be mixed at any single assembly.
- B. Anchors, Nails, and Screws: Select material, type, size and finish required by each substrate for secure anchorage; provide toothed steel or lead expansion bolt screws for drilled-in-place anchors.

2.2 FABRICATION

- A. General: Fabricate architectural woodwork in accordance with specified quality standards.
- B. Use exposed fastening devices or nails only when approved and unavoidable; arrange neatly.
- C. Assemble woodwork in shop in sizes easily handled and to ensure passage through building openings.

2.3 FINISHES

- A. Casework, Under-Counter Supports, Countertop, Wainscot, Wall Panels: Columbia Forest Products Factory-applied, UV, clear, no tint, manufacturer's ARCHITECTURAL WOODWORK & COUNTERTOPS SPECIFICATION Low Gloss 25% sheen.
- B. Miscellaneous Woodwork:
 - 1. Finish architectural woodwork in shop unless otherwise indicated.
 - 2. Sand work smooth; seal, stain and varnish concealed and semi-concealed surfaces of transparent finished woodwork; brush apply.
 - 3. Transparent/Clear Finish: No tint, zero VOC premium grade polyurethane or acrylic polyurethane finish to match Columbia Forest Products Factory-applied finish, as approved by Architect. Must be easily reapplied in field for maintenance / touch up.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication where possible; do not delay job progress, allow for trimming and fitting.

3.2 INSTALLATION

- A. Install work consistent with specified quality grade, plumb, level, true and straight with no distortions.
 - 1. Shim as required, using concealed shims.
- B. Ensure mechanical and electrical items affecting architectural woodwork are properly placed, complete, and have been inspected by Architect prior to installation.
- C. Secure work to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation.
- D. Scribe and cut for accurate fit to other finished work.

- E. Attach architectural woodwork securely in place with uniform joints providing for thermal and building movements.
- F. Acceptable Tolerances:
 - 1. Variation from True Position: Maximum 1/16" at any position and maximum 1/8" in any 10'-0" length.
 - 2. Adjoining Surfaces of Same Material: No variation permitted.
 - 3. Offset with Abutting Materials: Maximum 1/32"

END OF SECTION

SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Project consists of construction for the City of Petaluma City Hall Permit Center Project, located in Petaluma California, as further indicated or described in the Contract Documents.
 - 1. Items noted "NIC" (Not In Contract) will be furnished and installed by Owner or under separate contract.
 - 2. Owner reserves right to remove and retain possession of existing items prior to start of Contract.
- B. Division 1: Where provisions of General Conditions relate to Project administration or work-related requirements of the Contract, those paragraphs are expanded in Division 1 - General Requirements.
 - 1. General Conditions, Supplementary Conditions and Division 1 - General Requirements contain information necessary for completion of every part of Project.
 - 2. Where items of Work are done under subcontracts, each item shall be subject to these conditions.

1.2 REQUIREMENTS INCLUDED

- A. This section includes administrative provisions:
 - 1. Work sequence.
 - 2. Contractor use of premises.
 - 3. Owner occupancy.
 - 4. Field engineering.
 - 5. Regulatory requirements and reference standards.
 - 6. Special definitions.

1.3 WORK SEQUENCE

- A. Coordinate construction schedule and operations with Owner and Architect.
 - 1. Construct Work to accommodate Owner's occupancy requirements during construction period.
- B. Perform construction in phases as approved by Owner and Architect.

1.4 CONTRACTOR USE OF PREMISES

- A. Limit use of premises for Work and construction operations and to allow for:
 - 1. Building occupancy.
 - 2. Work by other contractors.
 - 3. Authorized access to restricted areas.
 - 4. Public access to public areas.
- B. Coordinate use of premises and access to site under direction of Owner or Architect.

1.5 BUILDING OCCUPANCY

- A. Building will be occupied during construction for conduct of normal operations; cooperate with Owner to minimize conflict and to facilitate building operations.

1.6 FIELD ENGINEERING

- A. Provide field engineering services; establish lines and levels by use of recognized engineering survey practices.
- B. Locate and protect control and reference points.

1.7 REGULATORY REQUIREMENTS AND REFERENCE STANDARDS

A. Regulatory Requirements:

1. Architect has contacted governing authorities and reviewed design requirements of local, state and federal agencies for applicability to Project.
2. Contractor shall be responsible for contacting governing authorities directly for necessary information and decisions bearing upon performance of Work.

B. Reference Standards:

1. For Products specified by association or trade standards, comply with requirements of referenced standard, except when more rigid requirements are specified or are required by applicable codes.
2. Applicable date of each standard is that in effect as of date on proposal or date on Contract where no proposal is available, except when a specific date is specified.

1.8 SPECIAL DEFINITIONS

- A. Approved: Approved, directed, selected, required, ordered, designated, accepted, acceptable, and satisfactory shall require written action by Architect.
- B. Equal, or Approved Equal: Equal and approved equal shall require requests for substitutions for products or manufacturers not specified.
1. Requests for substitutions shall be in accordance with requirements of Section 01 63 00 – Product Substitution Procedures.
- C. Furnish: Furnish means supply and deliver to Project, unless otherwise defined in greater detail.
- D. Install: Install is used to describe operations at Project, from inspecting and unloading, to completion in place, ready for intended use.
- E. Provide: Provide means furnish and install, complete and ready for intended use, unless otherwise defined in greater detail.

END OF SECTION

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes general procedural requirements for ongoing submittals.
 - 1. Construction progress schedules.
 - 2. Schedule of values.
 - 3. Shop drawings.
 - 4. Product data.
 - 5. Samples.
 - 6. Manufacturers' certificates.
- B. Related Requirements:
 - 1. Section 01 40 00: Quality Requirements.
 - 2. Section 01 63 00: Product Substitution Procedures.
 - 3. Section 01 70 00: Execution Requirements.
 - 4. Section 01 77 00: Closeout Procedures.
 - 5. Section 01 78 00: Warranties.

1.2 PROCEDURES

- A. Submittals: Transmit each item under form furnished by or acceptable to Architect; where Contractor proposes to use customized submittal transmittal form or no form is furnished, submit sample to Owner and Architect for approval prior to use.
 - 1. Identify Project, Contractor, subcontractor, major supplier.
 - a. Date and attach sequential identification number for each new submittal.
 - b. Identify each resubmittal using original submittal number and sequential identification clearly indicating item is resubmitted.
 - 2. Identify pertinent Drawing sheet and detail number, and Specification section number as appropriate.
 - 3. Identify deviations from Contract Documents.
 - 4. Provide space for Contractor and Architect review stamps.
 - 5. Contractor: Review and stamp submittals from subcontractors prior to submitting to Architect.
 - a. Review submittals and indicate where conflicts occur with Contract Documents and with work of other subcontractors.
 - b. Return submittals that vary significantly from Contract Documents for correction and resubmittal prior to submitting to Architect.
 - c. Submittals that vary significantly from Contract Documents and that fail to indicate thorough Contractor review prior to submission to Architect will be returned without review.
 - d. cursory review and stamping of subcontractor submittal by Contractor shall not be acceptable.
- B. Submit Schedule of Values within 15 working days after Contract execution.
 - 1. After review and comment by Owner and Architect, Contractor shall revise and resubmit schedules as necessary to meet the requirements of the Project and Contract for Construction.
- C. Comply with progress schedule for submittals related to Work progress. Coordinate submittal of related items.
- D. After Architect review of submittal, revise and resubmit as required, identify changes made since previous submittal.

- E. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply.

1.3 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit "Construction Progress Schedule" with separate items for each major trade and operation, identifying first day of each week.
 - 1. Show complete sequence of construction by activity, identifying work of separate stages and logically grouped activities.
 - 2. Clearly indicate construction activities that constitute critical path necessary to complete the work during the prescribed period of time allotted by the Contract for Construction.
- B. Progress Schedule Format: Horizontal bar chart or approved equal.
- C. Progress Schedule Updates: Submit updated progress schedules with each and every Application for Payment.
 - 1. Applications for Payment shall not be processed until the Progress Schedule is properly updated to reflect current construction activities.
 - 2. Show projected percentage of completion for each item of Work as of time of each progress Application for Payment.
 - 3. Updated schedule shall reflect changes that occurred since previous schedule submittal.
 - 4. Updated schedule shall include all approved changes to the scope of work and extensions of time as authorized by the Owner by written change order.

1.4 SUBMITTALS SCHEDULE: Show Contractor submittal dates required for shop drawings, product data, and samples, and product delivery dates.

- 1. "Submittal Schedule" may be incorporated into construction progress schedule or may be separate, Contractor option.
- 2. Clearly indicate construction activities that constitute critical path necessary to complete the work during the prescribed period of time allotted by the Contract for Construction.
- 3. Submittal Schedule shall also include submission of product samples illustrating all color and finish options for all products required.
 - a. Product color and finish selection may be delayed if Contractor does not provide all color and finish information required for all products specified.
- 4. Architect's Review Period: Architect will review and respond within five (5) working days.
 - a. Contractor shall schedule submittals recognizing the possibility that the Architect or Engineers may require resubmittal of information presented.
 - b. Contractor shall have five (5) working days to resubmit revised submittals.
 - c. Contract extension shall not be allowed for Contractor's failure to properly schedule submittals or to allow for Architect or Engineers requiring resubmittal of information.

1.5 SCHEDULE OF VALUES

- A. Submit typed schedule on AIA Form G703 or another Owner and Architect pre-approved 8-1/2" by 11" paper format; Contractor's standard media-driven printout will be considered on request. Submit within 15 days after award of Contract.
- B. Format: Table of Contents of these Technical Provisions, with modifications as pre-approved by Owner and Architect; identify each line item with number and title of major Specification sections.
- C. Revise schedule to list change orders for each Application for Payment.

1.6 SHOP DRAWINGS

- A. Shop drawings shall be submitted electronically in PDF format.
 - 1. Electronic file attachments shall not exceed 5MB.
- B. As an alternate to electronic submittals, Contractor may submit four reproducible prints; minimum sheet size 8-1/2" by 11".
 - 1. After approval, reproduce and distribute.

1.7 PRODUCT DATA/MANUFACTURERS' LITERATURE

- A. Mark each copy to identify applicable Products, models, options, and other data; supplement manufacturers' standard data to provide information unique to the Work.
- B. Include manufacturers' installation instructions only when required by Specifications or specifically requested by Architect.
 - 1. Maintain copy of manufacturer installation instructions and recommendations in Contractor's field office for review.
- C. Product Data shall be submitted electronically in PDF format.
 - 1. Electronic file attachments shall not exceed 10MB.
- D. As an alternate to electronic submittals, Contractor may submit the number of physical copies the Contractor requires, plus three copies to be retained by Architect, Inspector, and Owner.

1.8 SAMPLES

- A. Submit full range of manufacturers' standard colors, textures, and patterns for Architect's selection.
- B. Submit samples to illustrate functional characteristics of Product, with integral parts and attachment devices.
- C. Coordinate submittal of different categories for interfacing work.
- D. Include identification on each sample, giving full information.
- E. Submit number of samples required by Contractor plus one to be retained by Architect.
 - 1. Maintain one set of approved samples at Project Field Office.
- F. Sizes: Provide following sizes unless otherwise specified.
 - 1. Flat or Sheet Products: Minimum 6" square, maximum 12" by 12".
 - 2. Linear Products: Minimum 6", maximum 12" long.
 - 3. Bulk Products: Minimum one pint, maximum one gallon.
- G. Full size samples may be used in the Work upon approval.

1.9 MATERIALS

- A. Equipment and Materials: Shall be new.
- B. Substitutions of Materials and Equipment:
 - 1. Specific names used in connection with materials are mentioned as standard, but this implies no right on the part of this Section to substitute other materials or methods without written permission of the Architect. The decision of the Architect shall govern as to what material may be substituted, but the burden of proof as to the quality of any proposed substitution shall be upon the Contractor.
 - 2. Within thirty (30) days after awarding of the Contract, submit to the Architect for approval, five (5) copies of a list of all materials to be used. This list shall include the manufacturer's name, the model, type, number and size of equipment and the capacity of the equipment. All equipment shall be submitted at one time. If the material is not definitely specified, use the product of any manufacturer as listed under the specific material or equipment, or approved equal, if approved in writing. Any material or

equipment installed without the approval of the Architect shall be subject to immediate removal if found unsatisfactory.

1.10 MANUFACTURERS' CERTIFICATES

- A. Submit certificates, in duplicate in accordance with requirements of each Specification section.

2.0 GENERAL REQUIREMENTS

- A. Visit the site of the work, compare it with the Drawings and Specifications as to the conditions under which Work is to be performed, ascertain and check all conditions and elevations and take all measurements which may affect the Work. Where revisions or changes to the Work are required to permit the installation of new work, they shall be made by this contract without extra cost. No allowance shall subsequently be made for any expense due to failure or neglect to make such an examination, or to observe areas of difficult working conditions which may affect the contract cost.
- B. Pay all fees and obtain all permits and licenses necessary for the completion of the Work and notify all interested authorities when this Work is ready for any necessary or required inspections. Deliver to the Owner a certificate of all inspections and acceptances issued by the jurisdictional authorities, approving the complete installation.
- C. All work shall be in strict accordance with the latest rules of any local or State ordinances and codes, UPC, building codes, and the NFPA. No extra charge will be paid for furnishing items required by the regulations but not specified herein or shown on the Drawings. Rulings and interpretations of the agencies shall be considered as part of the regulations if commonly known to the trade prior to the submittal of bids.
- D. Follow manufacturers' directions in all cases where manufacturers of equipment used in this Contract furnish directions covering points not shown on the Drawings or specified herein.
- E. Quiet and vibration-free operation of all equipment is a requirement of this installation. Properly adjust, repair, balance or replace any equipment producing objectionable noise or vibration in any of the occupied areas of the building, including providing additional brackets, bracing, etc., to prevent objectionable noise or vibration.
- F. The Drawings and Specifications do not undertake to list every item that will be installed. When an item is necessary for the satisfactory operation of the equipment or is required by the equipment manufacturer, law, ordinance or rule, furnish without change in Contract cost. Work called for in the Specifications, but not on the Drawings, or vice versa, shall be done as though required by both. Lack of specific mention of any work necessary for proper completion of the work in the Specifications and/or Drawings shall not lessen the Contractor's responsibility or entail any change in Contract cost.
- G. All saw cutting and patching necessary for the installation of the work and repair of all damage to work under other trades shall be included in the work. No cutting shall be done except with the Architect's approval.
- H. Do not permit or cause any Work to be covered or enclosed until it has been inspected, tested and approved. Should any of the Work be enclosed or covered before inspection and test, the Contractor shall, at his own expense, uncover the Work; and, after it has been inspected, tested and approved, make all repairs with such materials as may be required to restore his Work and that of the other Work to its original and proper condition.

- I. Be responsible for damage to any of this work before acceptance. Securely cover all openings, apparatus, fixtures, and appliances, both before and after setting into place, to prevent obstructions in the pipes and breakage or disfigurement of equipment. Should the equipment become damaged, restore it to its original condition and finish before final acceptance without change in Contract cost.

END OF SECTION

SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Description of Project management and coordination including but not necessarily limited to the following:
 - 1. General Project coordination procedures.
 - 2. Staff names.
 - 3. Administrative and supervisory personnel.
 - 4. Project meetings.
- B. Related Sections:
 - 1. Section 01 30 00: Administrative requirements.

1.2 COORDINATION

- A. Coordination: Coordinate construction operations included in various Specifications sections to ensure efficient and orderly installation of each part of Work.
 - 1. Coordinate construction operations that depend on each other for proper installation, connection, and operation.
 - 2. Coordinate work to assure efficient and orderly sequence of installation of construction elements.
 - 3. Make provisions for accommodating items installed by Owner or under separate contracts.
- B. Prepare memoranda for distribution to each party involved as needed, outlining special procedures required for coordination.
 - 1. Include required notices, reports, and list of attendees at meetings; include Architect and Owner in distribution.
- C. Verify characteristics of interrelated operating equipment are compatible; coordinate work having interdependent responsibilities for installing, connection to, and placing such equipment in service.
- D. Coordinate space requirements and installation of mechanical and electrical work indicated diagrammatically on Drawings.
 - 1. Make runs parallel with lines of building.
 - 2. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated; coordinate locations of fixtures and outlets with finish elements.
- F. Administrative Procedures: Coordinate scheduling and timing of administrative procedures with other construction activities and activities of other contractors to avoid conflicts and ensure orderly progress of Work.

1.3 PROJECT MANAGEMENT SUBMITTALS

- A. Staff Names: Immediately after receipt of notice to proceed or immediately after signing of Contract by Owner and Contractor, submit list of principal staff assignments, including superintendent and other personnel in attendance at Project site.

1.4 SUPERVISORY AND ADMINISTRATIVE PERSONNEL

- A. Provide supervisory personnel, in addition to Project Superintendent, as required for proper and timely performance of Work and coordination of subcontracts.
- B. Provide administrative staff as required to allow Project Superintendent and supervisory personnel to allocate maximum time to Project supervision and coordination.

1.5 PROJECT MEETINGS

- A. Schedule and administer Project meetings throughout progress of Work:
 - 1. Pre-construction meeting.
 - 2. Progress meetings at weekly or regular intervals.
 - 3. Pre-installation conferences where required by specific sections of the work.
 - 4. Coordination meetings where required.
 - 5. Special meetings as deemed necessary by project scope of work.
- B. Make physical arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes and distribute copies within two days to Architect, Owner, participants, and those affected.
- C. Attendance: Job superintendent, major subcontractors and suppliers as appropriate to agenda; Architect, Owner, and Owner and Architect's consultants as appropriate to agenda topics for each meeting.
- D. Suggested Agenda: Review of Work progress, status of progress schedule and adjustments, delivery schedules, submittals, requests for information, maintenance of quality standards, pending changes and substitutions, and issues needing resolution.

END OF SECTION

SECTION 01 35 00
SPECIAL ENVIRONMENTAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Work includes special environmental “Green” building practices related to energy efficiency, indoor air quality, and resource efficiency, including following special requirements.
 - 1. Maximize inclusion of recycled content in materials, products, and systems.
 - 2. Provide wood from certified sustainably harvested sources.
 - 3. Establish special practices to ensure final Project indoor air quality.
 - 4. Maximize use of reusable and recyclable packaging.
 - 5. Maximize use of durable products.
 - 6. Maximize use of products requiring low embodied (production, manufacturing, and transportation) energy.
- B. Related Requirements:
 - 1. Section 01 74 00: Waste Management and Recycling Program.

1.2 DEFINITIONS

- A. Carcinogens: Materials that contain chemicals listed in following.
 - 1. California Environmental Protection Agency, Air Resources Board (ARB), list of Toxic Air Contaminants (California Air Toxics).
 - 2. California Health and Welfare Agency, Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), which lists chemicals known to cause cancer and reproductive toxicity.
 - 3. International Agency on Research and Cancer (IARC) List of Chemical Carcinogens.
 - 4. National Toxicology Program carcinogen list.

1.3 ENVIRONMENTAL GOALS

- A. Owner has established general environmental goals for design and for construction of Project; Design team and construction team are encouraged to participate to maximum degree possible to realize Owner’s environmental goals.
 - 1. Contract Documents are not intended to limit alternative means of achieving environmental goals.
 - a. Suggestions from Contractor, subcontractors, suppliers, and manufacturers for implementing goals are encouraged; team approach is also encouraged.
- B. Environmental Goals:
 - 1. Refer to specific Specifications sections for more detailed construction requirements related to specific materials and systems.
 - a. Energy Efficiency (Throughout Project Life): Materials and systems are intended to maximize energy efficiency for operation of Project throughout service life (substantial completion to demolition).
 - b. Indoor Air Quality: Materials are selected and processes specified, such as preconditioning and temporary ventilation, to maximize healthy indoor air quality.
 - c. Resource Efficiency (Project Construction): Materials and systems are to maximize environmental construction techniques, including waste recycling, reusable delivery packaging, and reusability of selected materials.
- C. Use resources efficiently.
 - 1. Reuse existing building materials to extent feasible within concept expressed in Contract Documents.

2. Select materials that use resources efficiently.
 3. Use construction practices that achieve most efficient use of resources and materials.
 4. Provide materials that utilize recycled content to maximum degree possible without being detrimental to product performance.
- D. Avoid scarce, irreplaceable, and endangered resources.
1. Select materials from abundant resources.
 2. Select replaceable materials, renewable materials, and materials which can be replenished.
 3. Select materials that minimize damage to natural habitats and the natural environment.
- E. Use durable materials.
1. Select materials with longest usable life.
 2. Select materials that can be re-used or may be recycled.
- F. Use resource efficient materials; consider energy use over life cycle of material including harvesting, mining, manufacturing, transport, installation, use, operations, recycling and disposal.
1. Select materials that use less energy to manufacture.
 2. Select materials that save energy during building operations.
 3. Select locally made materials.
- G. Select materials that generate least amount of pollution; consider pollution and volatile organic compound (VOC) emissions generated during harvesting, mining, manufacturing, transport, installation, use, and disposal.
1. Avoid materials that contain ozone depleting chemicals and that emit potentially harmful volatile organic compounds (VOC) emissions.
 2. Employ construction practices that minimize dust production and combustion byproducts.
 3. Avoid materials that can leach harmful chemicals into ground water; do not allow potentially harmful chemicals to enter sewers nor storm drains.
 4. Minimize noise generation during construction; screen mechanical equipment to block noise.
 5. Select materials that can be reused or recycled and materials with significant percentage of recycled content; set specific recycled content percentages for individual materials; avoid materials difficult to recycle.
- H. Wood Products: Use woods from certified sustainably harvested sources.
1. Certified Wood Products: Wood products to be from forests certified "well-managed" by an agency accredited by Forest Stewardship Council (FSC) including SmartWood Program and Forest Conservation Program.

1.4 SUBMITTALS

A. Resource Efficient Product Data:

1. Environmental Issues Data: Submit data and manufacturer's certifications verifying information and test data, where Specifications sections require data relating to environmental issues including but not limited to:
 - a. Project Recyclability: Submit information to assist Owner and Contractor in recycling materials involved in shipping, handling, and delivery, and for temporary materials necessary for installation of products.
 - b. Recycled Content: Submit information regarding product recycled content information, post industrial recycled and post consumer recycled.

- c. Product Recyclability: Submit information regarding product and product's component's recyclability including potential sources accepting recyclable materials.
 - 2. Volatile Organic Compound (VOC) Emissions: Identify volatile organic compound emissions, total (TVOC) and individual (IVOC) emissions, which have been identified as carcinogens, and identify VOC emissions that may cause reproductive toxicity.
 - 3. MSDS: Furnish manufacturer's Materials Safety Data Sheets.
- B. IAQ Data:
 - 1. Environmental Issues Data: Furnish material safety data sheets (MSDS).
 - 2. Environmental Issues: Submit test data by approved laboratory listing indoor air quality requirements including emissions test data on volatile organic compounds, total (TVOC) emissions and individual (IVOC) emissions.
- C. Certificates:
 - 1. General Environmental Issues Certifications:
 - a. Submit documentation certifying accuracy of recycled content, and recyclability.
 - b. Submit documentation certifying cleaning materials have low volatile organic compound (VOC) emissions and have low odor.
 - 2. Certification Prior to Final Completion:
 - a. Submit certificate signed by corporate office holder (i.e. President or Vice President, or similar position of authority) of Contractor, subcontractor, supplier, or manufacturer indicating:
 - 1) Post-industrial and post-consumer recycled content as applicable.
 - 2) Product recyclability.
 - 3) Indoor air quality requirements.
 - b. Certification shall state products and materials provided are same as, and contain same components as products and materials tested.
 - c. Certification shall state products and materials provided meet Project requirements for indoor air quality, for recycled content, and for recyclability.
 - 3. Comply with requirements specified in Section 01 77 00 – Closeout Procedures.
- D. Closeout Submittals: Submit data relating to environmental issues.
 - 1. Submit environmental product certifications, in two forms:
 - a. Two CD-ROMs organized by CSI Format.
 - b. Two three-ring binders organized by CSI Format with Table of Contents and with dividers for each division.

1.5 QUALITY ASSURANCE

- A. Environmental Project Management and Coordination: Contractor to identify one person on Contractor's staff to be responsible for environmental issues compliance and coordination.
 - 1. Responsibilities: Carefully review Contract Documents for environmental issues, coordinate work of trades, subcontractors, and suppliers; instruct workers relating to environmental issues; and oversee Project Environmental Goals.
 - 2. Meetings: Discuss Environmental Goals at following meetings.
 - a. Pre-construction meeting.
 - b. Pre-installation meetings.
 - c. Regularly scheduled job-site meetings.
- B. Environmental Issues Criteria: Comply with requirements listed in various Specification sections.
- C. Environmental Issues Tests:

1. Provide large and small chamber tests using ASTM E5116, Standard Test Methodology for Determining Volatile Organic Compound Emission Factors.
- 1.6 DELIVERY, STORAGE, AND HANDLING
- A. Environmental Issues: Take special care to prevent accumulation of moisture on materials and within packaging during delivery, storage, and handling to prevent development of mold and mildew on packaging and on products.
 - B. Use packaging that is reusable or recyclable.
- 1.7 PROJECT CONDITIONS
- A. Certifications:
 1. Environmental Product Certification:
 - a. Include manufacturer certification indicating product contains maximum recycled content possible without being detrimental to product performance.
 - b. Include certification indicating cleaning materials are environmentally benign.
 - B. Construction Ventilation and Preconditioning:
 1. Temporary Construction Ventilation: Maintain sufficient temporary ventilation of areas where materials having volatile organic compound (VOC) emissions for 24 hours before installation, continuously during installation, and for emissions after installation.
 - a. Period after installation to be sufficient to dissipate odors and volatile organic compounds.
 - b. Ventilate areas directly to outside; ventilation to other enclosed areas is not acceptable.
 2. Preconditioning: Allow products which have odors and which have significant volatile organic compound emissions to off-gas in ventilated warehouse for sufficient period to dissipate odor and VOC emissions prior to delivery to Project.
 - a. Store products in warehouse without containers and without packaging to maximize off-gassing and to prevent contamination of containers and packaging.
 - b. Comply with substitution requirements for consideration of other locations for preconditioning than ventilated warehouse.
 - C. Protection and Packaging:
 1. Protection: Take special care to prevent accumulation of moisture on materials and within packaging during delivery, storage, and handling to prevent development of molds and mildew on packaging and on products.
 - a. Immediately remove from site materials showing signs of mold and signs of mildew, including materials with moisture stains.
 2. Packaging: Deliver materials in recyclable or in reusable packaging such as cardboard, wood, paper, or reusable blankets, which will be reclaimed by supplier or manufacturer for recycling.
 - a. General: Minimize packaging materials to maximum extent possible while still ensuring protection of materials during delivery, storage, and handling.
 - 1) Unacceptable Packaging Materials: Polyurethane, polyisocyanurate, polystyrene, polyethylene, and similar plastic materials such as "foam" plastics and "shrink-fit" plastics.
 - b. Reusable Blankets: Deliver and store materials in reusable blankets and mats that are reclaimed by manufacturers or suppliers for reuse where program exists or where program can be developed for such reuse.
 - c. Pallets: Where pallets are used, suppliers shall be responsible to ensure pallets are removed from site for reuse or for recycling.

- d. Cardboard and Paper: Where paper products are used, either recycle as part of construction waste management recycling stream, or recycle for use by manufacturer or supplier where program is available for such recycling.
- e. Sealant, Paint, Primers, Adhesives, and Coating Containers: Return to supplier or manufacturer for reuse where such program is available.

1.8 SEQUENCING

A. Environmental Issues:

- 1. On-Site Application: Where high volatile organic compound (VOC) emitting products and where odorous products are applied on-site, apply prior to installation of porous materials.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General Environmental Issues:

- 1. Mold and Mildew: Materials that have evidence of growth of molds or of mildew are not acceptable, including both stored and installed materials; immediately remove from site.
- 2. Moisture Stains: Materials that have evidence of moisture damage, including stains, are not acceptable, including both stored and installed materials; immediately remove from site.

B. Ducts: Seal ducts during construction to prevent accumulation of construction dust and construction debris inside ducts.

2.2 SUBSTITUTIONS

A. Substitutions Environmental Issues: Requests for substitutions shall comply with requirements specified in Section 01 63 00 – Product Substitution Procedures, with following additional information required where environmental issues are specified.

- 1. Indicate each proposed substitution complies with requirements for volatile organic compounds, both TVOC and IVOC.
- 2. Owner and Architect reserve right to reject proposed substitutions where TVOC and IVOC information is not provided and where TVOC or IVOC are higher than specified materials.
- 3. Comply with specified recycled content and other environmental requirements.

PART 3 - EXECUTION

3.1 CLEANING

A. Final Cleaning Environmental Issues:

- 1. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces using solvent-free materials low volatile organic compound (VOC) emitting materials, low odor materials, and materials environmentally benign.
- 1. Clean equipment and fixtures to sanitary condition using materials solvent free materials, low VOC emitting materials, and low odor materials.
- 2. Vacuum carpeted and soft surfaces with high efficiency particulate arrestor (HEPA) vacuum.
- 3. Clean ducts using HEPA vacuum immediately prior to Substantial Completion and prior to using ducts to circulate air.
- 4. Replace filters just prior to Substantial Completion.
- 5. Remove and properly dispose of recyclable materials using construction waste management program described in Section 01 74 00 – Waste Management and Recycling Program.

3.2 PROTECTION

A. Environmental Issues:

1. Protect interior materials from water damage; where interior products not intended for wet applications are exposed to moisture, immediately remove from site.
2. Protect installed products using methods that do not support growth of molds and mildews.
 - a. Immediately remove from site materials with mold and materials with mildew.

END OF SECTION

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes general quality control requirements to be incorporated into the Scope of Work.
 - 1. General quality control.
 - 2. Manufacturers' field services.
 - 3. Mock-ups.
 - 4. Independent testing laboratory services.
- B. Related Requirements:
 - 1. Refer to applicable codes and Specifications sections for test requirements.

1.2 QUALITY CONTROL, GENERAL

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

1.3 MANUFACTURER'S FIELD SERVICES

- A. When specified in respective Specification sections, require manufacturer or supplier to have qualified personnel provide on-site observations and recommendations.
 - 1. Observe field conditions, including conditions of surfaces and installation.
 - 2. Observe quality of workmanship.
 - 3. Provide recommendations to assure acceptable installation and workmanship.
 - 4. Where required, start, test, and adjust equipment as applicable.
- B. Representative shall submit written report to Architect listing observations and recommendations.

1.4 MOCK-UPS

- A. Erect field samples and field mock-ups at locations on site as approved in advance and in accordance with requirements where included in Specifications section.
 - 1. Test mock-ups requiring special equipment may be erected at location having access to necessary equipment; coordinate with Architect.
- B. Field samples and mock-ups not approved and not capable of being acceptably revised shall be removed from site.
- C. Approved field samples and mock-ups may be used as part of Project.

1.5 TESTING LABORATORY SERVICES

- A. An independent testing laboratory shall perform inspections, tests, and other services required by applicable codes and various Specification sections.
 - 1. Owner or Architect may also require independent testing of items where doubts exist that product or system does not conform to Contract Documents.
 - 2. Owner will employ and pay for testing laboratory to provide Project specific testing under applicable codes and Specification sections except where indicated otherwise.
 - a. Owner employment of testing laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of applicable codes and Contract Documents.
 - 1) Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

- b. Retesting required because of non-conformance to specified requirements shall be performed by Owner's testing laboratory.
 - 1) Payment for retesting shall be charged to Contractor by deducting inspection and testing charges from Contract amount.
 - 2) Contractor Option: Pay Owner's testing laboratory directly for costs of retesting where acceptable to Owner and testing laboratory.
- c. Owner provided testing shall be limited to Project specific testing and shall not include general tests or approvals of materials, equipment or systems.
- B. Services shall be performed in accordance with requirements of governing authorities and with specified standards.
- C. Reports will be submitted to Architect in duplicate giving observations and results of tests, indicating compliance or non-compliance with specified standards and with Contract Documents.
 - 1. Where required, testing laboratory will submit copy of test results directly to enforcing agency.
- D. Contractor shall cooperate with testing laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
 - 1. Notify Owner, Architect and testing laboratory sufficiently in advance of expected time for operations requiring testing services.

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes temporary construction facilities and temporary controls.
 - 1. Electricity and lighting.
 - 2. Heat and ventilation.
 - 3. Water and sanitary facilities.
 - 4. Construction aids.
 - 5. Temporary enclosures.
 - 6. Barriers.
 - 7. Cleaning during construction.
 - 8. Project identification.
 - 9. Field telephone service.
- B. Related Requirements:
 - 1. Section 01 30 00: Administrative Requirements
 - 2. Section 01 31 00: Project Management and Coordination
 - 3. Section 01 70 00: Execution Requirements
- C. Provide temporary construction facilities and temporary controls as required to conform to applicable authorities and as required to complete Project in accordance with Contract Documents.
 - 1. Authorities: Contact governing authorities to establish extent of temporary facilities and temporary controls required by authorities.

1.2 ELECTRICITY AND LIGHTING

- A. Provide electrical service required for construction operations, with branch wiring and distribution or spider boxes located to allow service and lighting by means of construction-type power cords.
 - 1. Connection to existing electrical service is permitted.
 - 2. Owner will pay costs of energy used from existing on-site services.
- B. Provide lighting for construction operations.
 - 1. Permanent lighting may be used during construction; maintain lighting and make routine repairs.

1.3 HEAT AND VENTILATION

- A. Provide heat and ventilation as required to maintain specified conditions for construction operation, to protect materials and finishes from damage due to temperature and humidity.
- B. Coordinate use of existing facilities with Owner.
 - 1. Supplement with temporary units as required to maintain specified conditions for construction operations, and to protect materials and finishes from damage due to temperature or humidity.
- C. Owner will pay costs of energy used from existing on-site services.

1.4 WATER AND SANITARY FACILITIES

- A. Provide water service required for construction operations; extend branch piping with outlets located so water is available by use of hoses.
 - 1. Connection to existing facilities is permitted.
 - 2. Owner will pay for water used from existing on-site services.
- B. Provide and maintain separate portable sanitary facilities and enclosures.
 - 1. Existing facilities shall not be used by any construction personnel.

1.5 CONSTRUCTION AIDS

- A. Noise, Dust and Pollution Control: Provide materials and equipment necessary to comply with local requirements for noise, dust and pollution control.
- B. Fire Protection: Maintain on-site fire protection facilities as required by applicable authorities and insurance requirements.
- C. Use of Existing Facilities: Verify availability of existing facilities for construction operations with Owner prior to beginning on-site construction.

1.6 ENCLOSURES

- A. Temporary Closures: Provide temporary weather-tight closures for exterior openings for acceptable working conditions, for protection for materials, to protect interior materials from dampness, for temporary heating, and to prevent unauthorized entry.
 - 1. Provide doors with self-closing hardware and locks.
- B. Temporary Partitions: Provide temporary partitions as required to separate all work areas from remaining occupied areas of the building, to prevent penetration of dust and moisture into occupied areas, and to prevent damage to existing areas and equipment.
 - 1. Construction: Framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces; Flame Spread Rating of 25 in accordance with ASTM E84.

1.7 BARRIERS

- A. Barriers: Provide barriers as required to prevent public entry to construction areas and to protect adjacent properties from damage from construction operations.
- B. Barricades: Provide barricades as required by governing authorities.

1.8 CLEANING DURING CONSTRUCTION

- A. Control accumulation of waste materials and rubbish; recycle or dispose of off-site.
- B. Maintain all building areas free of dust and other contaminants during construction operations
- C. Clean all interior areas prior to start of any finish work.

1.9 PROJECT IDENTIFICATION

- A. Signs: Subject to approval of Owner and Architect.

1.10 FIELD TELEPHONE SERVICE, AND STORAGE

- A. Field Telephone Service: Provide cellular telephone service for Contractor's on-site manager at all times during construction operations.
 - 1. Submit to Owner and Architect list of on-site managers, their schedules, and their cellular telephone numbers so Owner and Architect can call on-site manager at all times during construction operations.
- B. Storage for Tools, Materials, and Equipment: Limit on-site storage to Project area; provide weather-tight storage, with heat and ventilation for products requiring controlled conditions.
 - 1. Maintain adequate space for organized storage and access.
 - 2. Provide lighting for inspection of stored materials.

1.11 REMOVAL

- A. Remove temporary materials, equipment, services, and construction prior to Substantial Completion Inspection.
- B. Clean and repair damage caused by installation or use of temporary facilities.
- C. Restore existing facilities used during construction to specified or original condition.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes basic product requirements governing material and equipment.
 - 1. General product requirements.
 - 2. Product list.
 - 3. Quality assurance.
 - 4. Delivery, storage, and handling.
- B. Related Requirements:
 - 1. Section 01 30 00: Administrative Requirements.
 - 2. Section 01 63 00: Product Substitution Procedures.
 - 3. Section 01 77 00: Closeout Procedures.

1.2 GENERAL PRODUCTS REQUIREMENTS

- A. Products include material, equipment, and systems.
- B. Comply with Specifications, referenced standards, and applicable codes and regulations as minimum requirements.
- C. Provide new materials except as specifically allowed by Contract Documents.
- D. Materials to be supplied in quantity within a Specification section shall be by one manufacturer, shall be the same, and shall be interchangeable.
- E. Provide equipment and systems composed of materials from a single manufacturer except where otherwise recommended by equipment or systems manufacturer or where otherwise indicated in Contract Documents.

1.3 SUBMITTALS

- A. Product List: Within 15 days after award of Contract, submit to Owner and Architect a complete list of major products proposed for installation, with name of manufacturer, trade name, and model.
 - 1. Tabulate products by Specification number and title.
- B. Substitutions: Refer to Section 01 63 00 - Product Substitution Procedures.

1.4 QUALITY ASSURANCE

- A. Comply with industry standards and applicable codes except when more restrictive tolerances or requirements indicate more rigid standards or precise workmanship.
- B. Perform work by persons qualified to produce workmanship of specified quality.
- C. Install products straight, true-to-line, and in correct relationship to adjacent materials, with hairline joints, free of rough, sharp and potentially hazardous edges.
- D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.
 - 1. Seismic Anchors: Conform to code requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Transport products by methods to avoid product damage, deliver in undamaged condition in manufacturer's unopened containers or packaging.
- B. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- C. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.
- D. For exterior storage of fabricated products, place on sloped supports above ground.

- E. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.
- F. Arrange storage to provide access for inspection; periodically inspect to assure products are undamaged and are maintained under required conditions.
- G. Provide equipment and personnel to handle products by methods to prevent soiling and prevent damage.
- H. Promptly inspect shipments to assure products comply with requirements, quantities are correct, and products are undamaged.
- I. Immediately remove from Project products damaged, wet, stained, and products with mold and products with mildew.
 - 1. Take special care to prevent absorbent products such as gypsum board and acoustical ceiling units from becoming wet.

END OF SECTION

SECTION 01 63 00
PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide products listed in Contract Documents, products by manufacturers listed in Contract Documents, and products meeting specified requirements.
 - 1. Contract Amount: Base on materials and products included in Contract Documents.
 - a. Where listed in Contract Documents, materials and products by manufacturers not listed shall not be used without Owner's and Architect's approval of Contractor's written request for substitution.
 - 2. Purpose: After bidding, substitutions will only be considered where Owner will receive benefit or because specified materials are no longer available due to no fault of Contractor.
 - a. Owner benefits either from a Contractor proposed reduction of the Contract amount or from a reduction in Contract time based on acceptance of proposed substitution.
 - b. List proposed cost or time reductions on request for substitution.
 - c. Requests not including a proposed cost or time reduction will not be considered unless Contractor submits supporting information indicating specified materials are not available.
- B. Procedures are described for requesting substitution of unlisted materials in lieu of materials named in Specifications or approved for use in addenda.
 - 1. Refer to Section 01 35 00 - Special Environmental Requirements for substitutions affecting green building practices.

1.2 CONTRACTOR'S OPTIONS

- A. Products Identified by Reference Standards: Select product meeting referenced standard for products specified only by reference standard.
- B. Named Manufacturers and Named Products: Select products of any named manufacturer meeting Specifications for products specified by naming one or more products or manufacturers.
- C. Substitutions for Named Manufacturers and Named Products: Submit request for substitution for products and for manufacturers not specifically named where products or manufacturers are named in Specifications.
- D. "Or Equal" Clauses: Submit request for substitution for product or manufacturer not specifically named in Specifications where terms "or equal", "or approved equal", or similar references are made.

1.3 SUBSTITUTIONS

- A. Within a period of 35 days after award of Contract, Owner and Architect will consider formal requests for substitutions only from Contractor as specified in 1.1 Summary.
 - 1. Owner and Architect will consider only one request for substitution for each material; where requests are denied Contractor shall be required to provide specified materials.
 - 2. After initial 35 day period, requests will be considered only when a product becomes unavailable through no fault of Contractor; more than one request for substitution will be considered if necessary.

- B. Submit each request with sequentially numbered "Substitution Request Transmittal" acceptable to Owner and Architect; submit separate request for each product and support each request with:
 - 1. Product identification with manufacturer's literature and samples where applicable.
 - 2. Name and address of similar projects on which product has been used, and date of installation.
 - C. Submit itemized comparison of proposed substitution with product specified and list significant variations.
 - D. Submit data relating to changes in construction schedule.
 - E. Note effect of substitution on other work, products, or separate contracts.
 - 1. Note if acceptance of substitution could require revision of Contract Documents, Drawings, details or Specifications.
 - F. Include accurate cost data comparing proposed substitution with product and amount of net change in Contract price.
 - 1. Include costs to other contractors and costs for revisions to Drawings, details or Specifications.
 - G. Substitutions will not be considered for acceptance when:
 - 1. They are indicated or implied on submittals without a formal request from Contractor.
 - 2. They are requested directly by a subcontractor or supplier.
 - 3. Acceptance will require substantial revision of Contract Documents.
 - H. Substitute products shall not be ordered without written acceptance of Owner and Architect.
 - I. Owner and Architect will determine acceptability of proposed substitutions and reserves right to reject proposals due to insufficient information.
- 1.4 CONTRACTOR'S REPRESENTATION
- A. Requests constitute a representation that Contractor:
 - 1. Has investigated proposed product and determined it meets or exceeds, in all respects, specified product.
 - 2. Will provide same warranty or longer warranty for substitution as for specified product.
 - 3. Will coordinate installation and make other changes that may be required for Work to be complete in all respects.
 - 4. Waives claims for additional costs that subsequently become apparent.
 - 5. Will pay costs of changes to Contract Documents, Drawings, details and Specifications required by accepted substitutions.
- 1.5 ARCHITECT'S DUTIES
- A. Review Contractor's requests for substitutions with reasonable promptness.
 - 1. Architect will recommend that Owner accept or reject substitution request.
 - 2. Upon request, Architect will provide cost for changes to Contract Documents, Drawings, details and Specifications required for substitutions.
 - B. Notify Contractor in writing of decision to accept or reject requested substitution.

END OF SECTION

SECTION 01 70 00
EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes execution requirements.
 - 1. Subcontractor or Installer qualifications.
 - 2. Examination.
 - 3. Manufacturer's instructions.
 - 4. Installation.
 - 5. Cleaning.
 - 6. Protection.

1.2 SUBCONTRACTOR OR INSTALLER QUALIFICATIONS

- A. Experienced Subcontractors and Installers: Subcontractors or Installers to have minimum five years successful experience installing items similar to those required for this Project on at least five projects of similar size and value, except for individuals in training under direct supervision of experienced installer.
 - 1. Provide a detailed summary of subcontractor or installer qualifications including, but not limited to, work history, project name, size, date of completion, and current reference contact information.

1.3 EXAMINATION

- A. Acceptance of Conditions: Beginning installation of a product signifies installer has examined substrates, areas, and conditions for compliance with manufacturer requirements for tolerances and other conditions affecting performance.
- B. Field Measurements: Take field measurements as required to fit Work properly; recheck measurements prior to installing each product.
 - 1. Where portions of Work are to fit to other construction verify dimensions of other construction by field measurements before fabrication; allow for cutting and patching in order to avoid delaying Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

1.4 MANUFACTURERS' INSTRUCTIONS

- A. Manufacturer's Recommendations: When work is specified to comply with manufacturers' recommendations or instructions, distribute copies to persons involved and maintain one set in field office.
 - 1. Conform to requirements specified in Section 01 30 00 for submittal of recommendations or instructions to Architect; submit to Architect only where specified or where specifically requested.
- B. Perform work in accordance with details of recommendations and instructions and specified requirements.
 - 1. Should a conflict exist between Specifications and recommendations or instructions consult with Architect.
- C. Where manufacturer's information notes special recommendations in addition to installation instructions, comply with both recommendations and instructions.

1.5 INSTALLATION

- A. Pre-Installation Meetings: Installers and suppliers are to attend pre-installation meetings scheduled by Contractor.
- B. Comply with manufacturers written recommendations and installation instructions unless more restrictive requirements are specified.
- C. Locate Work and components accurately, in correct alignment and elevation.

1. Make vertical work plumb and horizontal work level.
 2. Install components to allow space for maintenance and ease of removal for replacement.
- D. Install products at time and under conditions to ensure best possible results; maintain conditions required for product performance until Substantial Completion.
- E. Conduct operations so no part of Work is subject to damaging operations or loading in excess of that expected during normal conditions.
- F. Securely anchor permanent construction in place, accurately located and aligned with other portions of Work.
- G. Allow for building movement including thermal expansion and contraction.
- H. Make joints of uniform width; arrange joints as indicated, for best visual effect where not otherwise indicated; fit exposed connections together to form hairline joints except where otherwise indicated.
- 1.6 CLEANING
- A. Cleaning During Construction: Specified in Section 01 50 00 - Temporary Facilities and Controls.
- B. Progress Cleaning: Keep installed areas clean using cleaning materials specifically recommended by manufacturers of product being cleaned; where not otherwise recommended use nontoxic materials that will not damage surfaces.
1. Remove debris from concealed spaces before enclosing space.
 2. Supervise construction operations to assure no part of construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.
- C. Final Cleaning: Execute final cleaning at Substantial Completion.
1. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances; polish transparent and glossy surfaces; vacuum carpeted and soft surfaces.
 - a. Vacuuming Equipment: Type with high efficiency particulate arrestor (HEPA) type filters; properly maintained.
 2. Clean equipment and fixtures to a sanitary condition, clean filters of mechanical equipment, replace filters where cleaning is impractical.
 - a. Clean ducts.
 3. Clean site; sweep paved areas.
 4. Remove waste, surplus materials and rubbish from Project and site; recycle to maximum extent feasible.
- 1.7 PROTECTION
- A. Protect products subject to deterioration with impervious cover. Provide ventilation to avoid condensation and trapping water.
- B. Take care to use protective covering and blocking materials that do not soil, stain, or damage materials being protected.
- C. After installation, provide coverings to protect products from damage from traffic and construction operations, remove when no longer needed.
- D. Protect interior materials from water damage; immediately remove wet materials from site to prevent growth of mold and mildew on site.

END OF SECTION

SECTION 01 73 00
CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Contractor shall be responsible for cutting, fitting and patching required to complete Work and to:
 - 1. Make its parts fit together properly.
 - 2. Uncover work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to Contract Documents.
 - 5. Remove samples of installed work as required for testing.
 - 6. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.
- B. Related Requirements:
 - 1. Section 01 40 00: Quality Requirements
 - 2. Section 01 70 00: Execution Requirements

1.2 SUBMITTALS

- A. Submit a written request to Architect well in advance of executing cutting or alteration which affects:
 - 1. Work of Owner or separate contractor.
 - 2. Structural value or integrity of any element of Project.
 - 3. Integrity of weather-exposed or moisture-resistant elements.
 - 4. Efficiency, operational life, maintenance or safety of operational elements.
 - 5. Visual qualities of sight-exposed elements.
- B. Request shall include:
 - 1. Identification of Project and description of affected work.
 - 2. Necessity for cutting or alteration.
 - 3. Effect on work of Owner or separate contractor.
 - 4. Effect on structural integrity, or weatherproof integrity of Project.
 - 5. Alternatives to cutting and patching.
 - 6. Cost proposal, when applicable.
 - 7. Written permission of separate contractor whose work will be affected.
 - 8. Description of proposed work including:
 - a. Scope of cutting, patching, alteration, or excavation.
 - b. Products proposed to be used.
 - c. Extent of refinishing to be included.
- C. Should conditions of Work or schedule indicate a change of products from original installation, Contractor shall submit request for substitution as specified in Section 01 63 00 - Product Substitution Procedures.
- D. Submit written notice to Architect designating date and time work will be uncovered.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Comply with Specifications and standards for each specific product involved.
- B. Where Specifications and standards have not been provided, provide materials and fabrication consistent with quality of Project and intended for commercial construction.
- C. Provide new materials for cutting and patching unless otherwise indicated.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions of Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect conditions affecting installation of products, or performance of work.
- C. Report unsatisfactory or questionable conditions to Architect in writing; do not proceed with work until Architect has provided further instructions.

3.2 PREPARATION

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of Work.
 - 1. Provide services of licensed engineer for designing temporary support where required by applicable authorities for temporary supports and for shoring; submit engineering calculations directly to applicable authorities upon request.
- B. Protect other portions of Project from damage.

3.3 PERFORMANCE

- A. Execute cutting by methods that provide proper surfaces to receive installation of repairs and finishes.
- B. Employ same installer or fabricator to perform cutting and patching work as employed for new construction for:
 - 1. Weather-exposed or moisture resistant elements.
 - 2. Sight-exposed finished surfaces.
- C. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- D. Restore work that has been cut or removed; install new products to provide completed Work in accordance with requirements of Contract Documents.
- E. Fit work tight to pipes, sleeves, ducts, conduit and penetrations through surfaces.
- F. Refinish entire surfaces as necessary to provide even finish to match adjacent finishes:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.

END OF SECTION

SECTION 01 74 00

WASTE MANAGEMENT AND RECYCLING PROGRAM

PART 1 - GENERAL

1.1 SUMMARY

- A. Waste Management: Comply with Local or Regional Green Building Ordinance for diverting Project waste from landfill; aim for waste management goal of 80% or higher.
 - 1. Inform Owner and Architect where Waste Management Program requirements could detrimentally impact construction schedule.
 - 2. Provide separate itemization of costs related to Site Waste Management Program.
 - 3. Effect optimum control of solid wastes.
 - 4. Prevent environmental pollution and damage.
- B. Related Work:
 - 1. Section 01 50 00: Temporary Facilities and Controls
 - 2. Section 01 73 00: Cutting and Patching

1.2 DEFINITIONS

- A. Inert Fill: A permitted facility that accepts inert waste such as asphalt and concrete exclusively.
- B. Class III Landfill: A landfill that accepts non-hazardous waste such as household, commercial, and industrial waste, including construction, remodeling, repair, and demolition operations.
- C. Construction and Demolition Waste: Includes solid wastes, such as building materials, packaging, rubbish, debris, and rubble resulting from construction, remodeling, repair, and demolition operations.
 - 1. Rubbish: Includes both combustible and noncombustible wastes, such as paper, boxes, glass, crockery, metal and lumber scrap, tin cans, and bones.
 - 2. Debris: Includes both combustible and noncombustible wastes, such as leaves and tree trimmings that result from construction or maintenance and repair work.
- D. Chemical Waste: Includes petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, organic chemicals and inorganic wastes.
- E. Sanitary Wastes:
 - 1. Garbage: Refuse and scraps resulting from preparation, cooking, distribution, or consumption of food.
 - 2. Sewage: Domestic sanitary sewage.

1.3 SUBMITTALS

- A. Waste Management and Recycling Program: Prior to commencement of Work, schedule and conduct meeting with Owner and Architect to discuss proposed Waste Management and Recycling Program.
 - 1. Develop mutual understanding relative to details of recycling, and rebate programs.
 - 2. Review all Specification requirements, Contract Documents and site conditions and estimate total Project C&D materials to be generated, names of landfills where Project C&D materials would normally be disposed of. Indicate types and quantities of materials under the Work that are anticipated to be feasible for on-site processing, and source-separation for re-use or recycling. Indicate procedures that will be implemented in this program to effect jobsite source-separation, such as, identifying a convenient location where dumpsters would be located, signage to identify materials to be placed in dumpsters, etc.,
- B. Prepare a Waste Management and Recycling Plan that includes, but is not limited to, the following:

- Contractor's name and project identification information;
 - Procedures to be used;
 - Materials to be re-used and recycled;
 - Estimated total quantities of materials generated in Project;
 - Names and locations of landfills, re-use and recycling facilities/sites;
 - Tonnage calculations that demonstrate that Contractor will re-use and recycle a minimum of 80% by weight of C&D materials generated in the Work.
- C. Submit a Contractor's Reuse, Recycling, and Disposal Report or Summary with each application for progress payment that includes recycling activities. Failure to submit the form and its supporting documentation will render the application for progress payment incomplete and delay progress payments. If applicable, include manifests, weight tickets, receipts, and invoices specifically identifying the Project for re-used and recycled materials:
- On-site crushing of asphalt and concrete for use off-site;
 - Reuse of building materials or salvageable items;
 - Source-separated recycling facilities;
 - Mixed debris recycling facilities;
 - Recycling of material, including soils, as landfill alternative daily cover;
 - Delivery of soils or mixed inerts to an inert landfill or other use;
 - Disposal of soils or other materials at a landfill or transfer station;
1. Contractor's Reuse, Recycling, and Disposal Report must quantify all materials generated in the Work, disposed in Class III Landfills, or diverted from disposal through recycling. Indicate zero (0) if there is no quantity to report for a type of material. As indicated on the form:
- Report disposal or recycling either in tons or in cubic yards: if scales are available at disposal or recycling facility, report in tons; otherwise, report in cubic yards. Report in units for salvage items when no tonnage or cubic yard measurement is feasible.
 - Indicate locations to which materials are delivered for reuse, salvage, recycling, accepted as daily cover, inert backfill, or disposal in landfills or transfer stations.
 - Provide legible copies of weigh tickets, receipts, or invoices that specifically identify the project generating the material. Said documents must be from recyclers and/or disposal site operators that can legally accept the materials for the purpose of re-use, recycling, or disposal.
- D. Revise and resubmit Waste Management and Recycling Program as required by Owner and Architect.
1. Review of Contractor's Waste Management and Recycling Program will not relieve Contractor of responsibility for control of pollutants and other environmental protection measures.
- E. If necessary, prepare 3-ring binder with rebate information and product documentation as required for Owner to qualify for rebate programs; submit binder with final closeout submittals.

1.4 RECYCLING PROGRAM

- A. Recycling: Implement recycling program that includes separate collection of waste materials of types as applicable to Project; recycling program to be applied by Contractors and subcontractors.
- B. Recycling: Implement recycling program that includes separate collection of waste materials of following types as applicable to Project; recycling program to be applied by Contractors and subcontractors.

1. Land clearing debris.
 2. Green Vegetative Materials (i.e. tree trimmings).
 3. Soil.
 4. Concrete, Concrete Block, Concrete Masonry Units (CMU), Slump Stone (Decorative Concrete Block), and Rocks.
 5. Asphaltic concrete.
 6. Ferrous metal.
 7. Non-ferrous metal.
 8. Clean dimensional wood and palette wood.
 9. Plywood, oriented strand board, and medium density fiberboard.
 10. Glass.
 11. Paper: Bond, Newsprint, Cardboard, Paper, Packing Materials, and Packaging.
 12. Plastics.
 13. Gypsum board (unpainted).
 14. Paint.
 15. Rigid foam.
 16. Cement Fiber Products: Shingles, Panels, Siding.
 17. Fluorescent Light Tubes: per Department of Toxic Substances Control Regulations.
 18. Carpet and pad.
 19. Beverage containers.
 20. Porcelain plumbing fixtures.
 21. Insulation.
 22. Other materials as appropriate.
- C. Handling: Keep materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to recycling process.
1. Clean materials contaminated prior to placing in collection containers.
 2. Arrange for collection by or delivery to appropriate recycling center or transfer station that accepts construction and demolition waste for purpose of recycling.
- D. Participate in Re-Use Programs: Rebates, tax credits, and other savings obtained for recycled or re-used materials shall accrue to Contractor.

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES AND SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes Contract closeout procedures.
 - 1. Substantial completion.
 - 2. Final completion.
 - 3. Project record documents.
 - 4. Material and finish data.
 - 5. Operation and maintenance data.
- B. Related Requirements:
 - 1. Section 01 78 00: Warranties.
 - 2. Section 01 79 00: Systems Demonstration.

1.2 SUBSTANTIAL COMPLETION

- A. Immediately prior to Substantial Completion, schedule agency reviews as required for “temporary certificate of occupancy” or for “certificate of occupancy”.
- B. When Contractor considers the Work or a designated portion thereof is substantially complete, submit written notice, with list of items to be completed or corrected.
 - 1. List (“Punch List”): Format pre-approved by Owner and Architect; tabular form with each space listed required.
- C. Within a reasonable time, Owner and Architect will inspect status of completion and may add to “Punch List”.
- D. Should Owner and Architect determine Work is not substantially complete, Contractor will be promptly notified in writing, giving reasons.
- E. Contractor shall remedy deficiencies and send a second written notice of substantial completion; Architect will reinspect Work.
 - 1. Contractor shall pay for Architect's time and direct expenses where more than one Substantial Completion inspection is required.
- F. When Architect determines Work is substantially complete, a Certificate of Substantial Completion will be prepared in accordance with General Conditions.

1.3 FINAL COMPLETION

- A. When Work is complete, submit written certification indicating:
 - 1. Work has been inspected for compliance with Contract Documents.
 - 2. Work has been completed in accordance with Contract Documents and deficiencies listed (in ‘Punch List’) with Certificate of Substantial Completion have been corrected.
 - 3. Equipment and systems have been tested in presence of Owner's representative and are operational.
 - 4. Work is complete and ready for final inspection.
- B. Special Submittals: In addition to submittals required by Contract, submit following.
 - 1. Provide submittals required by governing authorities to governing authorities with copies included in Project Record Documents.
 - 2. Submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 PROJECT RECORD DOCUMENTS

- A. Keep documents current; do not permanently conceal any work until required information has been recorded.

1. Owner will provide Contractor with a separate set of Drawings to maintain for Project Record Documents.
 2. Store reproducible Drawings, one set of Project Manual, and one copy of each Change Order separate from documents used for construction, for use as Project Record Documents.
 3. Indicate actual work on Drawings; indicate actual products used in Project Manual, including manufacturer, model number and options.
 4. Update Project Record Documents daily and allow for Architect inspection at least once a month.
- B. At Contract close-out submit documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.
- 1.5 MATERIAL AND FINISH DATA
- A. Provide data for primary materials and finishes.
 - B. Submit two sets prior to final inspection, bound in 8-1/2" by 11" three-ring binders with durable plastic covers, clearly identified regarding extent of contents.
 1. Electronic Format: Where available in electronic format, submit computerized compact disk (CD's) of material and finish data.
 - C. Arrange by Specification division and give names, addresses, and telephone numbers of subcontractors and suppliers. List:
 1. Trade names, model or type numbers.
 2. Cleaning instructions.
 3. Product data.
- 1.6 OPERATION AND MAINTENANCE DATA
- A. Provide data for:
 1. Electrically operated items.
 2. Mechanical equipment and controls.
 3. Electrical equipment and controls.
 - B. Submit two sets prior to final inspection, bound in 8-1/2" by 11" three-ring binders with durable plastic covers, clearly identified regarding extent of contents.
 - C. Provide a separate volume for each system, with a table of contents and index tabs for each volume.
 - D. Arrange by Specification division and gives names, addresses, and telephone numbers of subcontractors and suppliers. List:
 1. Appropriate design criteria.
 2. List of equipment and parts lists.
 3. Operating and maintenance instructions.
 4. Shop drawings and product data.
 - E. Electronic Format: Where available in electronic format, submit computerized compact disk (CD's) of operation and maintenance data.

END OF SECTION

SECTION 01 78 00
WARRANTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Compile required and incidental warranties required by Contract Documents.
- B. These warranties shall be in addition to and not a limitation of other rights Owner may have against Contractor under Contract Documents and which may be prescribed by law, regardless of wording of warranty.

1.2 FORM OF SUBMITTAL

- A. Provide duplicate copies, notarized or on Contractor and Manufacturer's letterhead.
 - 1. Assemble documents executed by subcontractors, installers, suppliers, and manufacturers.
 - 2. Provide table of contents and assemble in binder with durable plastic cover, clearly identified regarding extent of contents.
 - 3. Electronic Format: Submit computerized compact disk (CD's) of warranties, in Microsoft Word, Microsoft Excel, or in PDF formats.
- B. Warranty Form: Use form acceptable to Owner; completed form shall not detract from or confuse interpretations of Contract Documents.
 - 1. Manufacturer shall countersign warranty.
 - 2. Subcontractor and installer shall countersign warranty where specified.
 - a. Provide required warranties for waterproofing and roofing systems countersigned by subcontractor and installer.
- C. Submit final warranties prior to final application for payment.
 - 1. For equipment put into use with Owner's permission during construction, submit within ten days after first operation.
 - 2. For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.
- D. Provide information for Owner's personnel regarding proper procedure in case of failure and instances that might affect validity of warranty.
- E. Size: 8-1/2" by 11" for three-ring binder; fold larger sheets to fit.

1.3 WARRANTIES

- A. Warranties are intended to protect Owner against failure of work and against deficient, defective and faulty materials and workmanship, regardless of sources.
- B. Limitations: Warranties are not intended to cover failures that result from:
 - 1. Unusual or abnormal phenomena of the elements.
 - 2. Owner's misuse, maltreatment or improper maintenance of work.
 - 3. Vandalism after substantial completion.
 - 4. Insurrection or acts of aggression including war.
- C. Related Damages and Losses: Remove and replace work which is damaged as result of failure, or which must be removed and replaced to provide access for correction of warranted work.
- D. Warranty Reinstatement: After correction of warranted work, reinstate warranty for corrected work to date of original warranty expiration, but not less than half original warranty period.
- E. Replacement Cost: Replace or restore failing warranted items without regard to anticipated useful service lives.

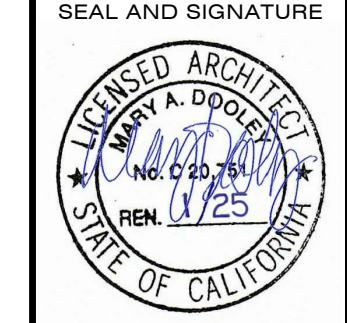
- F. Rejection of Warranties: Owner reserves right to reject unsolicited and coincidental product warranties that detract from or confuse interpretations of Contract Documents.

END OF SECTION

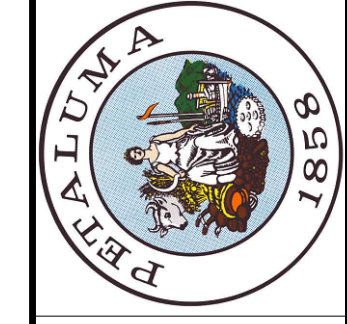
REVISED: 7/25/23

PERMIT REVISION
DATE: 07/19/2023
DESIGNED BY: MD
DRAWN BY: CH
CHECKED BY: MD

PROJECT NO.
C11202017



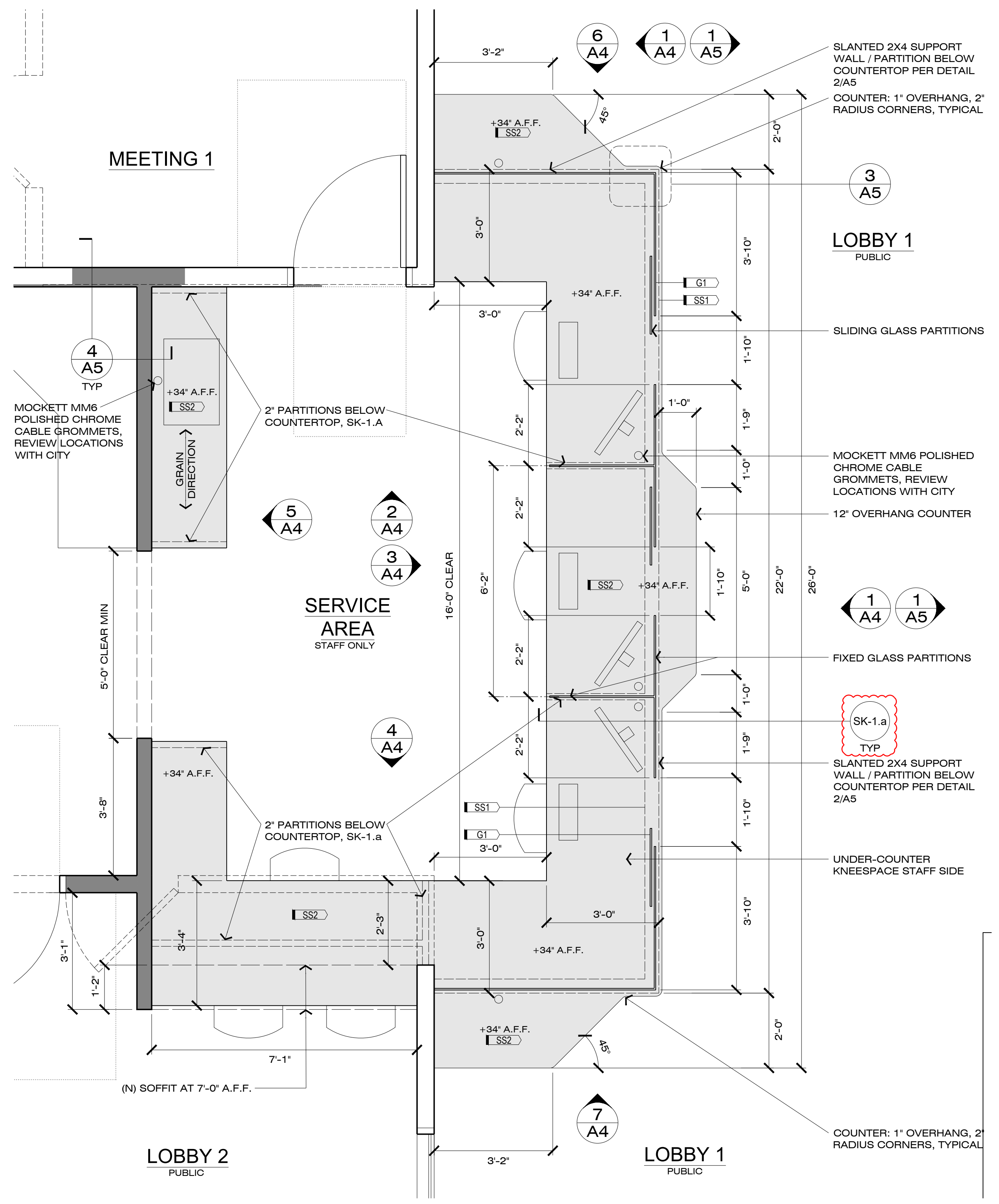
CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH: 707-778-4546 FAX: 707-778-4508



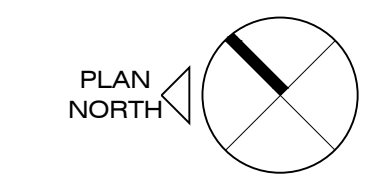
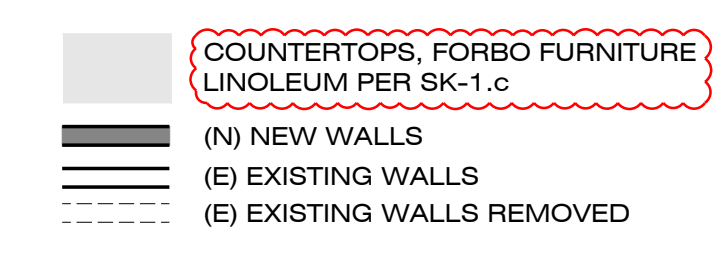
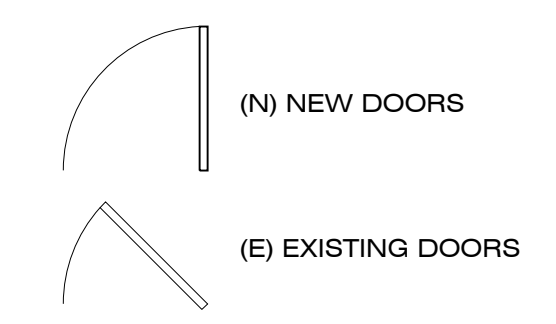
PETALUMA CITY HALL WEST WING
PERMIT CENTER
11 ENGLISH STREET, PETALUMA, CA 94952

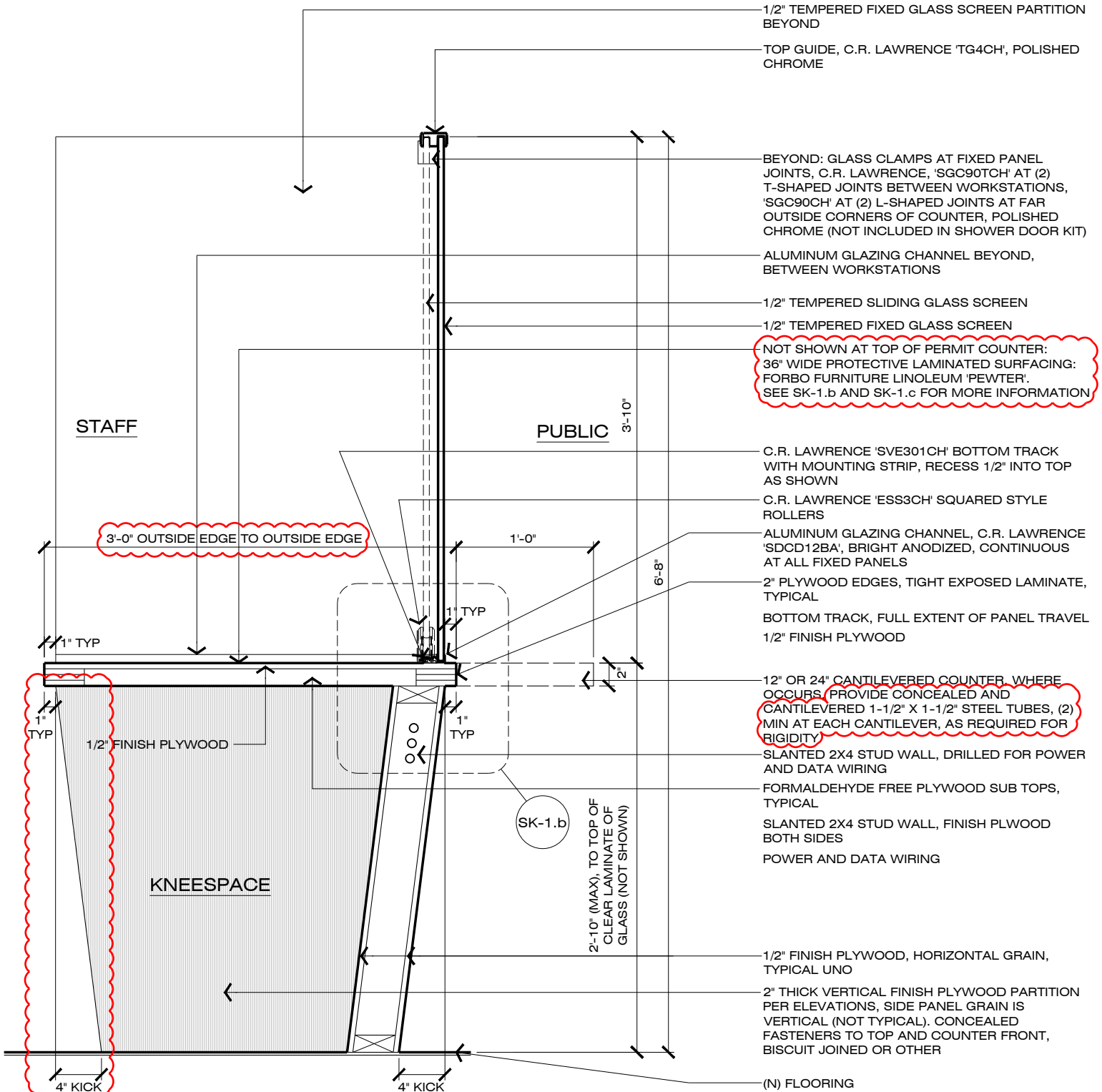
ENLARGED PLAN

SHEET
A2.1
6 OF 10



1 ENLARGED PLAN
SCALE: 1/2" = 1'-0"

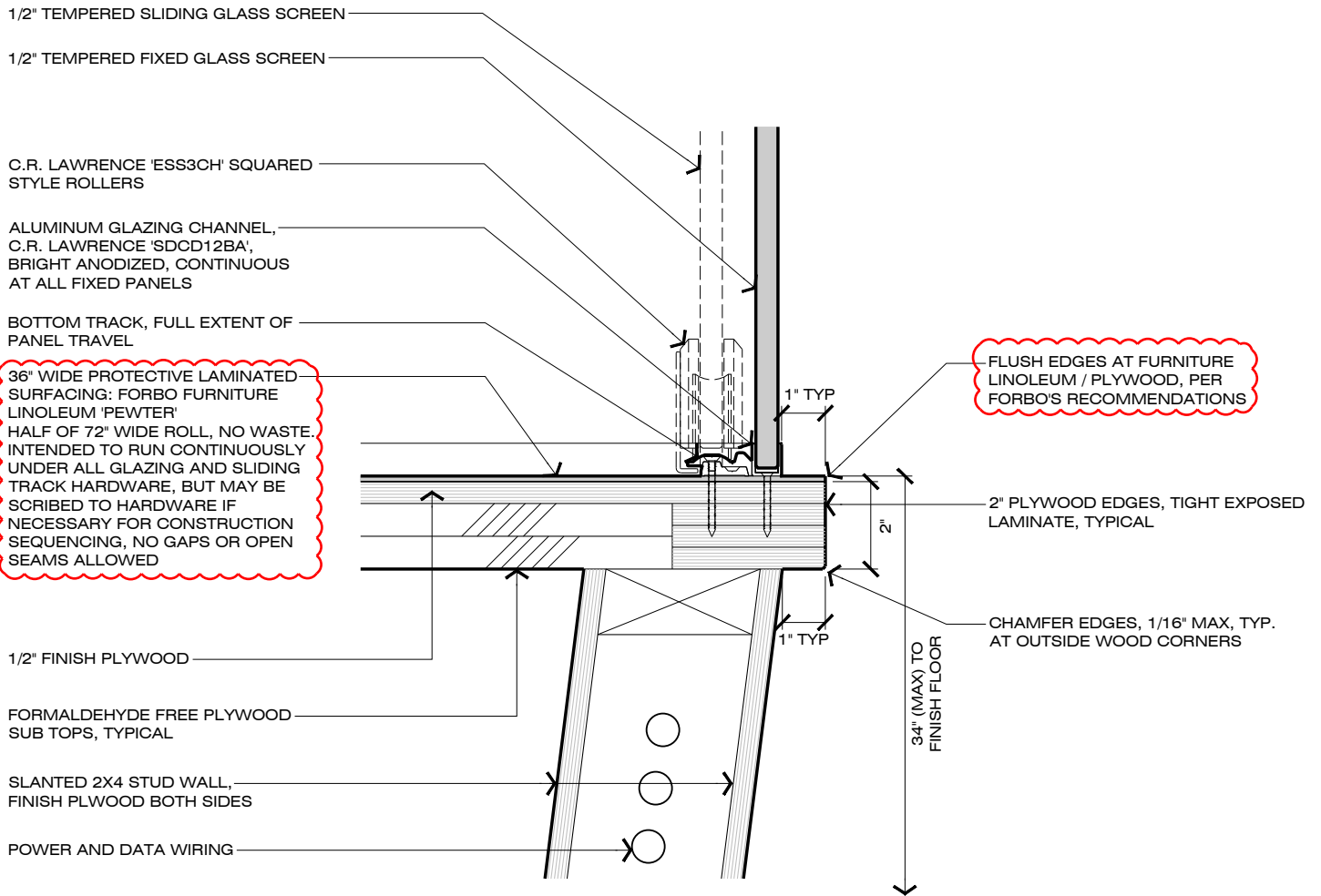




AT WORK STATIONS 1-3 PER FLOOR PLAN, PROVIDE A COMPLETE C.R. LAWRENCE 'ESS3CH' POLISHED CHROME ESSENCE SERIES BASIC SLIDING SHOWER DOOR KIT WITH SQUARED CORNER ROLLERS. GLAZING CHANNELS ARE FULL LENGTHS OF ALL FIXED GLASS SCREENS. SOME BUT NOT ALL INDIVIDUAL PARTS OF KIT ARE INDICATED ABOVE. SEE SPECIFICATIONS

REPLACES

2
A5



REPLACES

2.A
A5

FINISH SCHEDULE - PERMIT CENTER

DESCRIPTION	MODEL OR PRODUCT	MANUFACTURER / MODEL	REMARKS
F1 (N) FLOORING	LINOLEUM TILE	FORBO MARMOLEUM T5237, - COLOR BLACK SHEEP	39.4" X 9.8" TILES, REVIEW LAYOUT WITH ARCHITECT
F2 (N) FLOORING	CARPET TILE	MOHAWK NUTOPIA URBAN FRINGE II, COLOR - ARCHWAY	12" X 36" TILES, REVIEW LAYOUT WITH ARCHITECT
G1 (N) CLEAR PARTITIONS	3/8" GLASS, CLEAR, TEMPERED		POLISHED EDGES, SEE DETAILS FOR CHANNEL AND CORNER HARDWARE
W1 (E) OR (N) WALL FINISH	5/8" GYPSUM WALL BOARD, LEVEL 4, SMOOTH, PAINTED		PATCH WHERE REQUIRED. PAINT ALL GWB IN WORK AREA W/ BENJAMIN MOORE OC-122 COTTON BALLS
W2 (N) WALL FINISH	GRAPHIC WALL COVERING TO BE DETERMINED		SEE SPECIFICATIONS
WC1 (N) WAINSCOT	MATCH SS1 MATERIAL		34" HIGH, FLUSH WITH GYPSUM WALL BOARD, ALIGN TOP WITH COUNTER PER ELEVATIONS
BB1 (N) BASEBOARD	4" RESILIENT, RUBBER	TARKETT T44, GATEWAY WG	
C1 (E) CEILING	ACOUSTIC CEILING TILES GLUED OVER 5/8" GYPSUM WALL BOARD		EXISTING, TYPICAL, UNO. PATCH/REPAIR/REPLACE WHERE INDICATED ON SHEET A3
C2 (N) CEILING	ACOUSTIC CEILING TILES GLUED OVER 5/8" GYPSUM WALL BOARD	ARMSTRONG 741, DIRECT APPLIED, FINE FISSURE, WHITE, 12"X12", 1/2" THICK, BEVELED TONGUE & GROOVE, 0.55-NRC.	
* SS1 (N) FINISH PLYWOOD	COLUMBIA FOREST PRODUCTS PUREBOND, 1/2"		RUN GRAIN HORIZONTALLY, TYPICAL, EXCEPT VERTICALLY AT PERMIT CENTER UNDER COUNTER PARTITIONS
SS2 (N) COUNTERTOPS	FORBO FURNITURE LINOLEUM 'PEWTER'		SEE DETAILS AND REVISED SPECIFICATIONS 'ARCHITECTURAL WOODWORK & COUNTERTOPS'

* ALSO APPLIES TO COUNCIL CHAMBERS SCOPE OF
WORK. SEE REVISED SPECIFICATIONS SECTION 06 40 10
'ARCHITECTURAL WOODWORK & COUNTERTOPS' FOR
FULL PRODUCT SPECIFICATIONS

REPLACES PERMIT CENTER FINISH SCHEDULE, SHEET A2



furniture linoleum

Linoleum surfacing material

creating better environments

forbo
FLOORING SYSTEMS

SEE ME, FEEL ME, TOUCH ME

Elegant and natural

Forbo's Furniture Linoleum, Desktop, is a natural surfacing material that delivers the finishing touch for all high end 3D furniture designs such as desks, chairs, stools, cabinets, doors and displays. The material is flexible and can be applied as a surface on all kinds of constructions. Furniture Linoleum is renowned for its elegance and durability, radiating high quality and finesse.

Warm and tactile character

Furniture Linoleum delivers a combination of a satin matt surface with a warm, fine texture creating interior furniture with a truly distinctive, genuinely individual look and feel that really is unlike any other surface material available. The natural character of Furniture Linoleum means that the material achieves a beautiful patina over time.

Colour is the new black

Whilst the colourways of charcoal black and dark anthracite grey will always remain classic favourite amongst designers, Forbo's new Furniture Linoleum collection now offers a range of contemporary and modern colours that complement current design trends and interior styling features.



Unique benefits for users

- tactile finish that is warm and comfortable
- matt surface
- natural material
- environmentally friendly choice
- no marks from fingerprints
- antistatic
- long lasting vibrant colourways
- pleasant to write on



Unique benefits for manufacturers

- flexible
- easy to apply
- suitable for many kinds of substrates
- processes like wood
- coatable
- manual and industrial installation possible

THE FINISHING TOUCH

Forbo's Furniture Linoleum is distinctive the way it looks as well as the way it feels. Furniture Linoleum has an earthy, solid quality to it, yet it also 'gives' when you touch it. It looks matt and natural and feels warm to the hand. And it has one other unique feature: it doesn't show fingerprints.

Hygienic and antistatic by nature

The all-natural composition and Forbo's special surface finish ensure that Furniture Linoleum is naturally antistatic. This gives it a key practical advantage in comparison with other furniture finishes because the surface actively resists the build-up of static charges. This helps to prevent dust or dirt from sticking to it and helps to ensure that the material remains unblemished, hygienic and clean.

Easy to apply

Flexible, organic shapes can be created by Furniture Linoleum as the material is naturally flexible, which makes it perfect for all kinds of furniture and interior furnishing requirements. Furniture Linoleum is supplied in a roll format and can be applied horizontally or vertically, as well as to curved surfaces. The material is also versatile enough to allow edge covers to be made to create a perfect finish.

A High-performing natural winner

Furniture Linoleum is produced from a very finely ground linoleum granulate created from pure oxidised vegetable linseed oil and natural pine rosin, to which wood flour and colour pigments have been added. The Furniture linoleum is created by a calander process which rolls the material on to an impregnated paper backing. It is finished with a water-based, cross-linked acrylic finish that protects the surface while maintaining the flexibility special touch of linoleum.



Explore Pinboard linoleum

Another product in our range of linoleum surface materials is Pinboard linoleum. This material offers a practical, simple solution to collect and exchange thoughts and ideas whenever people plan, create and meet. This all-natural material can be applied in framed or mounted pin boards, directly to the wall or on furniture. Its surface is tactile & colourful, creating a decorative element in your space. Find out more on the Forbo website.



Furniture Linoleum has a unique character, is flexible and supplied as a sheet on a roll. The material can be easily milled and shaped, in the same way as wood.

FEEL, TOUCH, LOVE

With our products we aim at creating a better quality indoor environment, one that gives pleasure to people to live and work in. In the case of Furniture Linoleum this is created through high quality furnishings that are hygienic and pleasant to touch and use. Furniture Linoleum, being a natural product that has very low emission helps to create a healthier environment where people can be happy and are good company.



Furniture Linoleum 4155 | pewter (chair covering)
Marmoleum Solid 3706 | beton (floor covering)

SIMPLE ELEGANCE

furniture linoleum

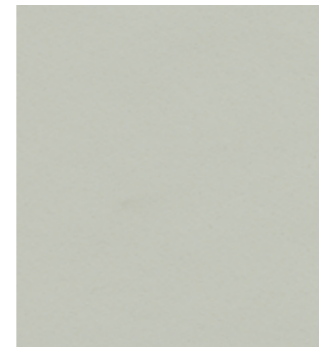
A number of new fresh and stylish colours have been added to the classic colour range as have several warm hues and natural tones used in contemporary furniture, providing inspiration for a hospitality feel.



Furniture Linoleum 4183 | pistacio + 4154 | burgundy + 4180 | aquavert + 4174 | conifer
Marmoleum Solid 3363 | lilac (floor covering)



4157 | pearl NCS 1010 - Y10R LRV 67%



4177 | vapour NCS 2005 - G10Y LRV 50%



4180 | aquavert NCS 3020 - B40G LRV 35%



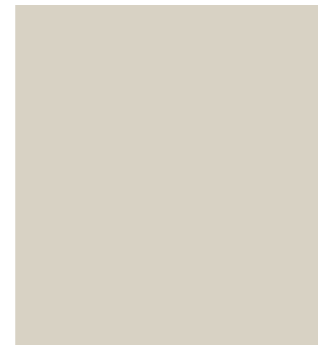
4183 | pistachio NCS 2010 - G30Y LRV 47%



4185 | powder NCS 1510 - Y60R LRV 54%



4178 | iron NCS 8000 - N LRV 8%



4176 | mushroom NCS 2002 - Y LRV 54%



4132 | ash NCS 5502 - G LRV 23%



4174 | conifer NCS 8010 - B90G LRV 7%



4184 | olive NCS 5010 - G LRV 18%



4154 | burgundy NCS 7010 - R10B LRV 7%



4155 | pewter



4166 | charcoal NCS 8502 - B LRV 6%



4175 | pebble NCS 3502 - Y LRV 35%



4155 | pewter NCS 7005 - B20G LRV 12%



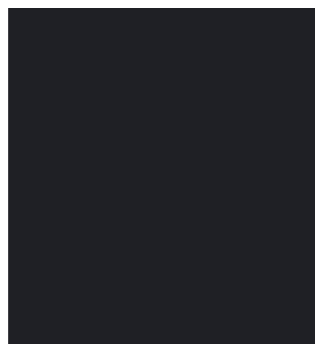
4186 | orange blast + 4164 | salsa + 4185 | powder
Marmoleum Solid 3360 | vintage blue (floor covering)



4181 | midnight blue NCS 5040 - R90B LRV 9%



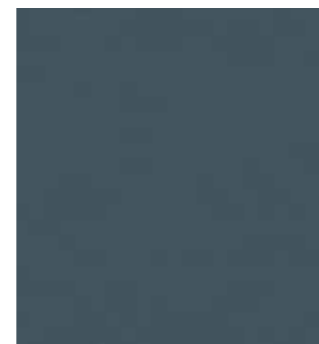
4164 | salsa NCS 2570 - Y90R LRV 9%



4023 | nero NCS 9000 - N LRV 5%



4172 | mauve NCS 7005 - Y80R LRV 11%



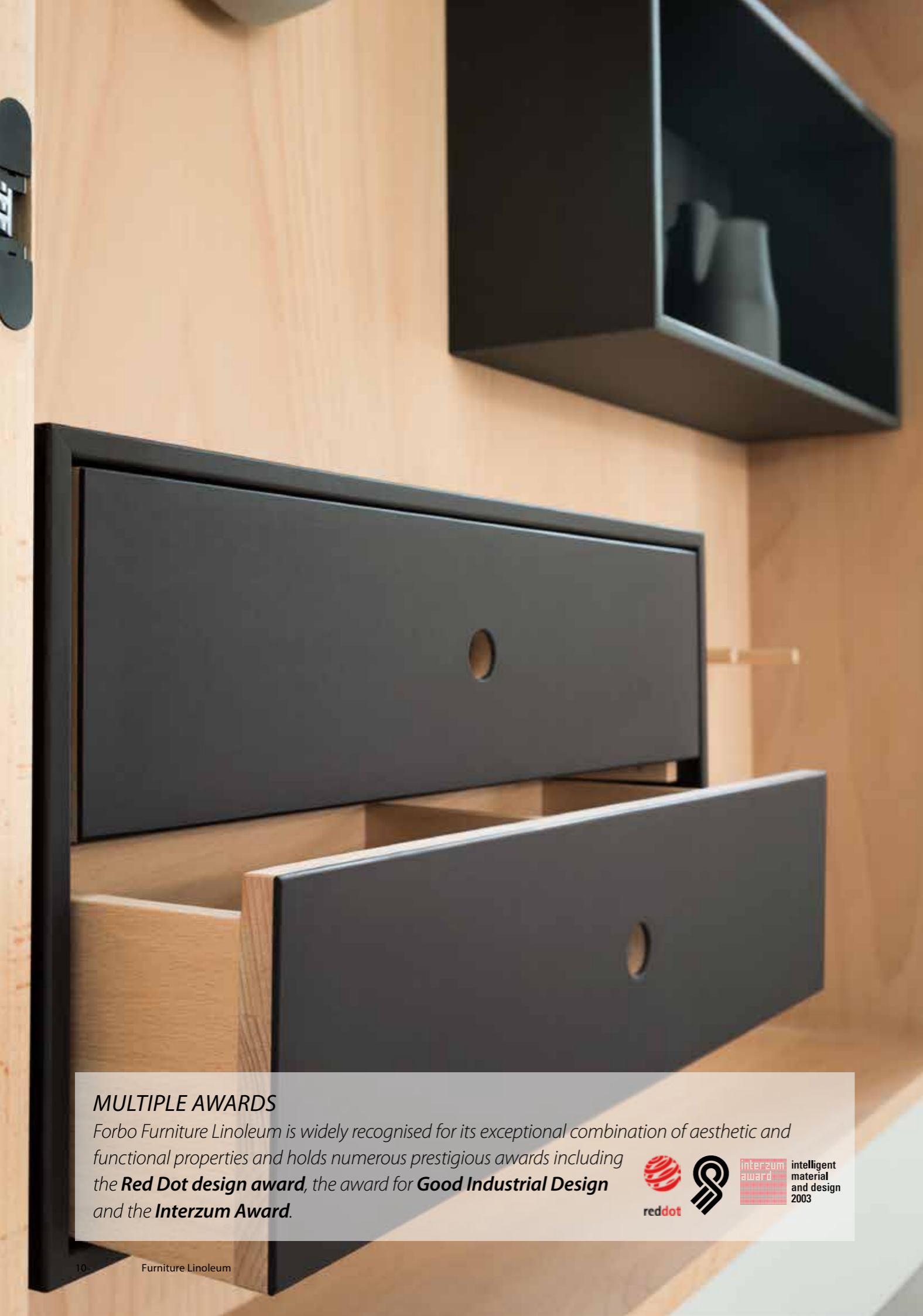
4179 | smokey blue NCS 7010 - R90B LRV 8%



4182 | spring green NCS 1050 - G60Y LRV 47%



4186 | orange blast NCS 1080 - Y70R LRV 22%



MULTIPLE AWARDS

Forbo Furniture Linoleum is widely recognised for its exceptional combination of aesthetic and functional properties and holds numerous prestigious awards including the **Red Dot design award**, the award for **Good Industrial Design** and the **Interzum Award**.

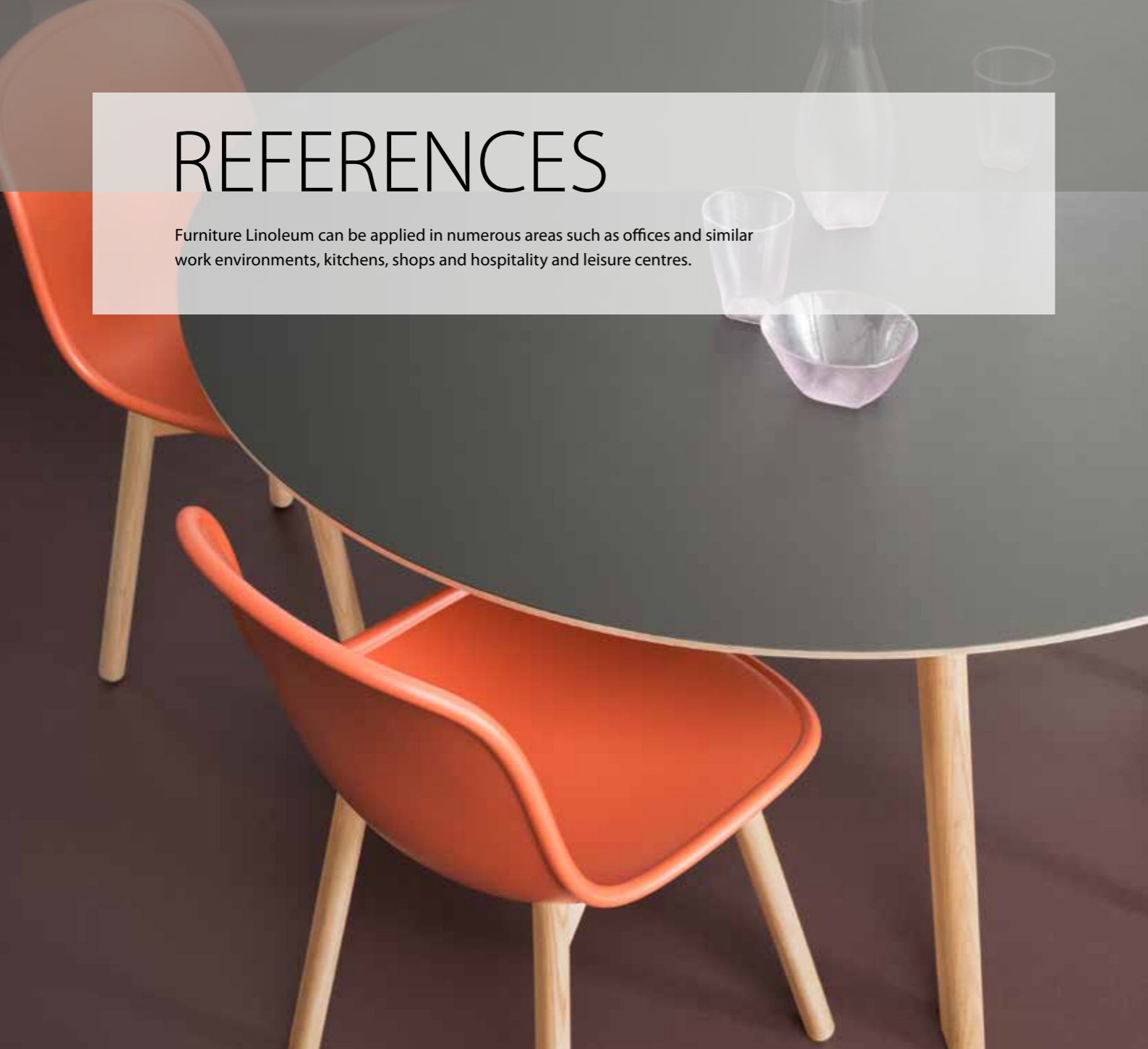


interzum
award
intelligent
material
and design
2003



REFERENCES

Furniture Linoleum can be applied in numerous areas such as offices and similar work environments, kitchens, shops and hospitality and leisure centres.



Designer table; Ronan & Erwan Bouroullec | Producent: Hay | Photo: Hotze Eisma



Designer: Suzanne Zolatan Illes | Producent: Furn by Ox | Foto: Maibritt Høj Clausen | www.furnbyox.dk



Gira | www.gira.de



Sabine T. Appel | www.vonappel.dk



Photography: Forbo Flooring Systems



Designer: Thor Høy | Producent & foto: Nicolaj Bo™ | www.thdesign.dk / www.nicolajbo.dk



Sabine T. Appel & Mads M. Mikkelsen | www.vonappel.dk



Designer: Karsten Lauritsen | Producent: Zesigner Zoo | Foto: Tom Jersø | www.dzoo.dk



Möbeltischlerei Marko Wust | www.tischlereiwust.de | Foto: Daniel Hanke

AN EYE FOR DETAIL

Furniture Linoleum can be milled and shaped like wood and, for edge solutions, it can be combined with other materials (also see page 22)



Produktion: &SHUFL | Design: | &SHUFL | www.andshufl.com



Normann Copenhagen ApS | Designer: Simon Legald | www.normann-copenhagen.com



Faust Linoleum | www.faustlinoleum.de | Foto: Arne Hofmann, Haw-Lin, Michael Kastenbauer, Studio Muy



Faust Linoleum | www.faustlinoleum.de



Møbelsnedkeri Kjeldtoft* | Designer: Arkitekt MAA Rasmua Thrane, Wilhelmsen, Marxen og Bech-Jensen A/S | Foto: Lars Kiel | www.kjeldtoft.com



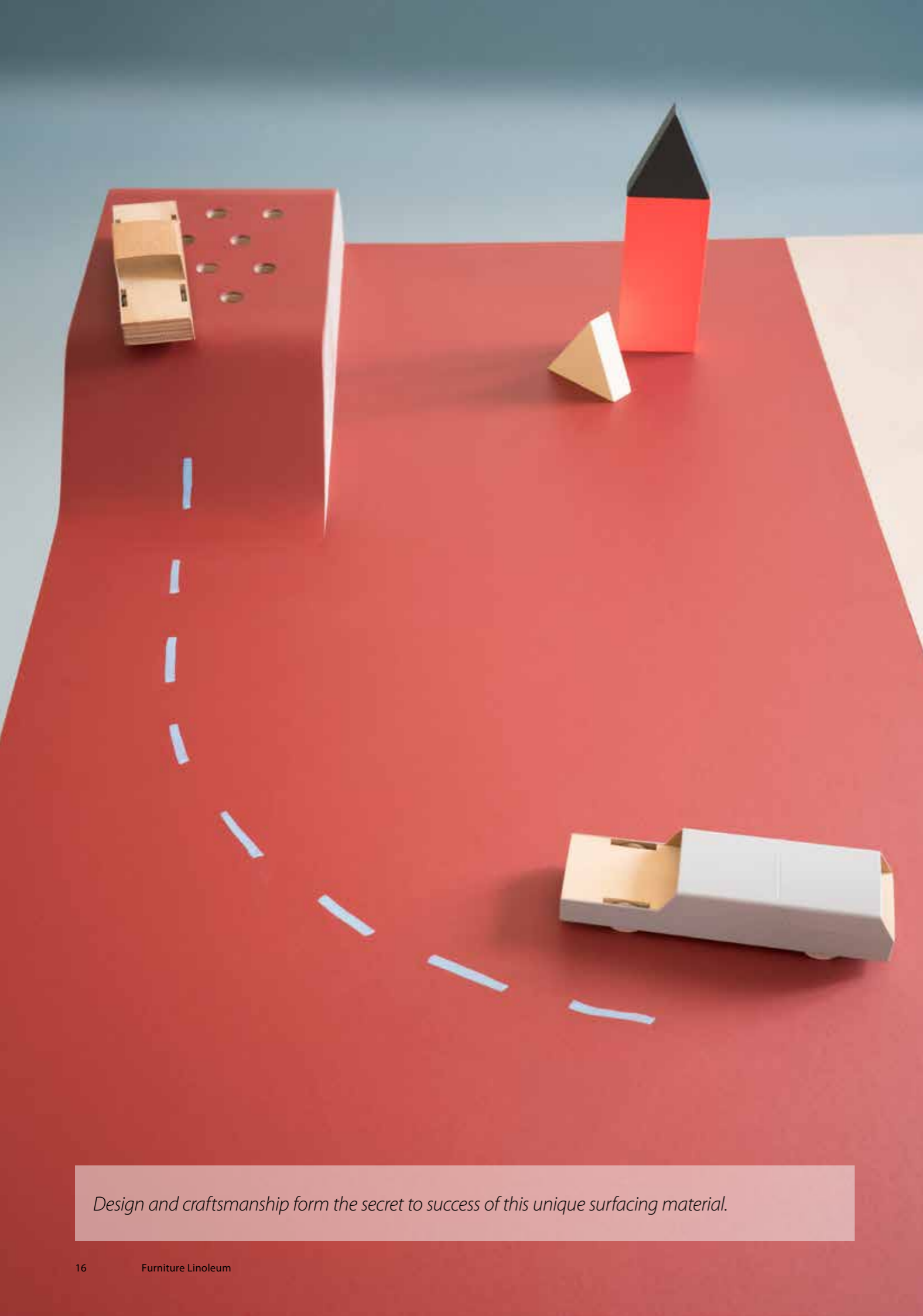
Designer: Anders M. Jensen | Produced: Kolon Total Inventar | www.kolon.dk



Confect A/S, Ribu Inventarsnedkeri A/S | www.confect.dk / www.ribu.dk



Garde Hvalsøe A/S | Design: Søren Hvalsøe Garde | Foto: Pernille Kaalund | www.gardehvalsoe.dk



Design and craftsmanship form the secret to success of this unique surfacing material.

Furniture Linoleum 4164 | salsa + 4185 | powder + 4181 | midnight blue + 4186 | orange blast
Marmoleum Solid 3360 | vintage blue (floor covering)

EASY APPLICATION

Furniture Linoleum can be applied easily on all common materials such as MDF, chipboard and Plywood as well as steel or composite materials.

Furniture Linoleum has a special matt appearance to prevent unpleasant light reflections. Generally, Furniture Linoleum does not require additional treatment but an additional coat may be applied if required (e.g., a UV-resistant PU coating), using a spray gun for even application.

Colour

As Furniture Linoleum is made from natural raw materials, different production runs may show slight colour variations. This is something to bear in mind when repeating an order.

Drying room film

During the last phase of the production process, a yellowish tint – known as drying room yellowing – may form on Furniture Linoleum, especially on lighter shades. This may be visible when unpacking a roll or reusing a roll after storage. This is an entirely normal and natural phenomenon of furniture linoleum and disappears soon after exposing the product to natural light.

Handling and transportation

Furniture Linoleum is well protected by robust packaging to prevent it from being damaged during transportation. Keeping rolls vertical during transportation will also help with this. When the linoleum is cut into sheets, the individual sheets should be lifted rather than pulled. It's also advisable to use pallets when transporting large numbers of sheets.

Storage

Store rolls vertically and sheets horizontally (flat). Do not let dirt get between sheets and avoid situations in which heavy and/or sharp objects may be placed on top of the stack. To ease installation, store the linoleum at room temperature.

Preparations for installation

Cut Furniture Linoleum approximately 1% oversized. Lay it flat and leave it (along with the adhesive and the carrier material) to acclimatise for approximately 24 hours at room temperature



Application

Furniture Linoleum should always be applied to a carrier material, e.g.: MDF, chipboard, multiplex or pressed composite plates. Whenever two different types of material are stuck together, tension develops between them. To alleviate this, it is required to 'counter balance' the material. This also applies to linoleum when adhered to a carrier, especially loose panels. It is recommended to apply a material with the same technical properties to both sides of the carrier material.

Where larger surfaces are concerned, the following aspects are important:

1. Choice of carrier material
2. Thickness, symmetry and strength of carrier material
3. Choice of backing used for counterbalancing
4. Good acclimatisation of materials employed.

The best results are achieved when the same material is applied to both sides of the carrier material, at the same time and in the same direction.

Furniture Linoleum is flexible and resilient, and (apart from acclimatisation) no preparations are required before installing it. To prevent any undesirable projections in its surface, ensure that the surface of the carrier material and of the reverse side of the material are clean. The carrier material should be free of any irregularities or other materials that could interfere with the flat, smooth finish.

Adhesive

The adhesive used largely depends on the manner of installation and the intended use of the finished product. The carrier material also plays a role. General guidelines are given in the table below.

	Manual installation	Industrial installation
Flat surface	Acrylic adhesive	Polyvinyl acetate
Curved surface	Polyvinyl acetate (contact)	Polyvinyl acetate
Pressing	-	Polyvinyl acetate
Vacuum forming	-	Polyvinyl acetate



4181 | midnight blue

Manual application on a flat surface

If a flat surface is to be covered entirely with Furniture Linoleum:

1. Stick the slightly oversized linoleum to the carrier material. To prevent undesirable projections showing through, apply the adhesive to the carrier with a high-pile roller.
2. Press the linoleum firmly into position with, for example, a hand roller.
3. Saw, mill, cut or plane the carrier material and the linoleum together into the desired shape as soon as the adhesive has set. Always use sharp tools.
4. If required, apply an edge by way of finishing.

Manual application of a countersunk surface

When applied to desktops, etc., Furniture Linoleum can be countersunk. To do so, glue the linoleum to a sheet of MDF (approx. 6mm thick) and install this combination in the pre-treated desktop.

Manual application on a curved form

Before applying Furniture Linoleum on a curved form, bear in mind that:

- It is easier to bend linoleum lengthways than widthways.
- The minimum bending diameter is 5 cm for Desk Top, if at all possible, bend the material lengthways.
- The curved surface of the carrier material must not contain any sharp edges.
- Porous carrier materials must be pre-treated with a primer.



The following is the recommended method for applying Furniture Linoleum in a curved form:

1. Apply contact adhesive to the carrier material.
2. When the adhesive on the carrier material is half set, apply adhesive to the linoleum.
3. When the adhesive on the linoleum is half set, press the linoleum onto the carrier material. Start pressing at the flat end of the surface and gradually work towards the curve.
4. Rub your hand over the surface to expel any air bubbles. Work a small section at a time to ensure that the linoleum is applied properly before sticking the next section.

Cover Furniture Linoleum with tape if the edges are to be coated. Remove the tape immediately after varnishing. If you sand the edges, avoid damaging the linoleum surface. Immediately remove any residue of adhesive with water. After the adhesive has dried, remove any hard residues with white spirit, then immediately remove any residue of white spirit with water.

Industrial installation

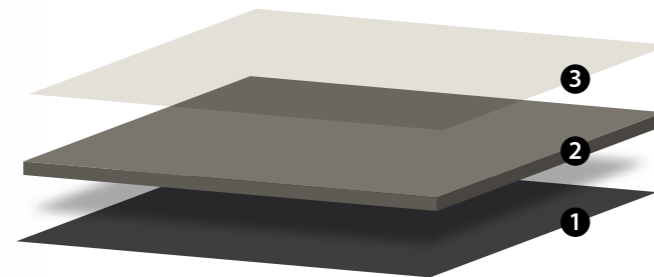
No special equipment is required to install Furniture Linoleum. Machinery and tools suitable to install HPL may also be used for Furniture Linoleum.

When employing a press or stacking press, ensure that the surface of the press and of the linoleum are clean. Furniture Linoleum can be pressed cold or warm (maximum 70° C). The pressure will vary between 75 and 150 bars and the pressing time from 2 to 15 minutes, depending on the adhesive used.

To a certain extent, Furniture Linoleum can be stuck to a surface which is curved in more than one direction (e.g. the seat of a chair). Press the linoleum in a mould together with plywood and adhesive into the desired shape.

NB: It is always advisable to carry out trials prior to commencing actual production. After the Furniture Linoleum has been stuck to the carrier material, machine it to size.

Techniques such as sawing, milling, drilling, cutting and planing can be employed. Always use sharp tools.



3. Water-based, cross-linked finish
2. Linoleum
1. Paper



Finishing off the edges

Any type of finish is possible with Furniture Linoleum. Stick the edges with an adhesive that is transparent when dry, and immediately remove any residue. Always protect the Furniture Linoleum surface.



The easiest way to finish off edges is to cut Furniture Linoleum off straight and to mill and varnish the edges of the carrier material (figure A). Bevel the edges a little. It is also possible to finish edges with a strip of aluminium, wood or plastic, for example. (figures B and C). Figure D shows Furniture Linoleum applied to edges; to achieve a good result, however, this technique requires a certain degree of both experimentation and expertise.



As mentioned, it is possible to round off the edges with Furniture Linoleum (figure E). Always provide an additional 3-5 cm of linoleum at the bottom to prevent it from coming loose due to bending stress.



This design solution, namely the combination of tapered surface and half-round wooden strip, illustrates the many possibilities offered by Furniture Linoleum (figure F).



Industrial rounding

In general, machinery used to bend HPL can also be used to bend Furniture Linoleum. The maximum temperature employed may not exceed 70°C.

HYGIENIC AND CLEAN

Cleaning after application

- Remove any residual adhesive, coating and/or stains caused by fingerprints with a clean, moist cloth and, if necessary, a pH-neutral cleansing agent (e.g. Forbo Cleaner).
- Use white spirit to remove dried adhesive, then immediately remove the white spirit with a clean dry cloth.

Regular cleaning

- Clean with a damp cloth, optional a pH-neutral detergent can be used.
- Remove stains immediately after spillage.

Occasional maintenance

- Apply a 5 % solution of a pH-neutral detergent in water.
- Allow soaking for 10 minutes.
- Scrub the surface gently with a soft scrub brush.
- Pick up dirty water.
- Rinse with clean water and allow surface to dry.
- Apply a thin maintenance film of undiluted Forbo Monel.
- Buff vigorously with a clean (new) cotton pad.

Preventive measures and stain removal

- Sharp items may cause scratches, use soft protection in case of doubt.
- Remove stains immediately after spillage (such as ink, coffee, tea, red wine).
- Prevent stubborn stains from forming; use coasters under flowerpots, vases, cups etc.
- Desk Top: for stubborn stains such as ink and pencil, use a clean cloth and neutral cleaner.

Technical specifications

	Total thickness	EN-ISO 24346	2.0 mm
	Roll width	EN-ISO 24341	1.83 m
	Roll length	EN-ISO 24341	≤ 30 m
	Weight	EN-ISO 23997	2.1 kg/m ²
	Indentation-residual	EN-ISO 24341-1	< 0.20 mm
	Light fastness	EN-ISO 105-B02	Method 3: blue scale minimum 6.
	Gloss level	ISO 2813	< 5
	Flexibility	EN-ISO 24344	ø 50 mm
	Resistance to chemicals	EN-ISO 26987	Resistant to diluted acids, oils, fats and to the conventional solvents. Not resistant to prolonged exposure to alkalis.
	Heat resistance		70 °C
	Body voltage	EN 1815	< 2 kV
	LCA Life Cycle Assessment		LCA is the foundation for securing the lowest environmental impact.

All Forbo Flooring Systems' sales organisations worldwide have a certified Quality Management System in accordance with ISO 9001. All Forbo Flooring Systems' manufacturing operations have a certified Environmental Management System in accordance with ISO 14001. The Life Cycle Assessment (LCA) of Forbo Flooring Systems' products is documented in individual Environmental Product Declarations (EPD's) which can be found on all of our websites.





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Forbo Flooring Systems is part of the Forbo Group, a global leader in flooring, bonding and movement systems, and offers a full range of flooring products for both commercial and residential markets. High quality linoleum, vinyl, textile, flocked and entrance flooring products combine functionality, colour and design, offering you total flooring solutions for any environment.



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FLOORING SYSTEMS

BIRCH (*Betula spp.*)

Common names: White Birch, Yellow Birch, Red Birch

Sources: USA and Canada

Description: Light tan to pale yellow sapwood with red to ruddy heart wood. Grain is tight and smooth with normal amounts of figure and other characteristics.

Common cuts: Rotary (primarily), Plain sliced (available)

Uses: Decorative veneer and lumber primarily for kitchen cabinetry and furniture. Excellent surface for painting.

Availability: Abundant

Price: \$



**Birch Sap
Rotary Whole Piece A**



**Birch Sap
Rotary Whole Piece B**



**Birch Sap
Rotary Whole Piece C**



Birch Sap Plain Sliced A



Birch Sap Plain Sliced A



**Birch Sap
Rotary Back 1**



**Birch Sap
Rotary Spliced A**