



**Public Health Research Center
Interior Renovations - Millwork**

Project # BC00392344-C

April 28, 2012

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Project Number: BC00392344-C

Project Name: Public Health Research Center Interior Renovations - Millwork

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SE-311 Invitation for Minor Construction Quotes

SCBO NOTES 2, 4 and 5 APPLY TO THIS INVITATION FOR QUOTES

PROJECT NAME: Public Health Research Center - Interior Renovations - Millwork

PROJECT NUMBER: BC00392344-C PROJECT LOCATION: Columbia

BID SECURITY REQUIRED? Yes No

PERFORMANCE BOND REQUIRED? Yes No

PAYMENT BOND REQUIRED? Yes No CONSTRUCTION COST RANGE: \$10,000.00 - \$50,000.00

DESCRIPTION OF PROJECT:

Furnish all labor, materials, equipment and supervision to manufacture, finish and install complete all millwork, tops, and trim as described on plans A1.00, A1.01, A1.02, A2.01, A8.01 and A9.01 and specs. sections 06 10 00, 06 41 00 and 12 36 00 by Jenkins-Peer Architects. Work includes but is not limited to all millwork, trim, blocking, laminate tops, millwork hardware, glass where it is installed in millwork, finishing and installation. Not included are stone tops which will be furnished under separate contract by USC. Small and minority business participation is encouraged.

A/E NAME: Jenkins-Peer Architects A/E CONTACT: Ben Benson

ADDRESS: 112 South Tryon St. PHONE: 704-372-6665 Fax: _____

CITY: Charlotte STATE: NC ZIP: 28284 E-MAIL: bbenson@jenkinspeer.com

PLANS ON FILE AT: AGC: _____

DODGE: _____

OTHER: Vendor is responsible for all downloads from USC's website.

PLANS MAY BE OBTAINED FROM: "http://purchasing.sc.edu(See Facilities/Construction Solicitation & Awards)"

PLAN DEPOSIT AMOUNT: NONE IS DEPOSIT REFUNDABLE? Yes No

PRE-QUOTE CONFERENCE? Yes No MANDATORY ATTENDANCE? Yes No

DATE: 5/8/2012 TIME: 10:00 AM PLACE: 743 Greene St., Columbia SC, Conf. Rm 53

AGENCY: University of South Carolina

NAME AND TITLE OF AGENCY COORDINATOR: Kay Keisler, Procurement Specialist

ADDRESS: 743 Greene St. PHONE: 803-777-5812 Fax: 803-777-8739

CITY: Columbia STATE: sc ZIP: 29208 E-MAIL: kkeisler@fmc.sc.edu

IFQ CLOSING DATE: 5/15/2012 TIME: 2:30 PM LOCATION: 743 Greene St., Cola. SC, Conf. Rm. 53

IFQ DELIVERY ADDRESSES:

HAND-DELIVERY:

University of South Carolina
743 Greene St., Cola., SC 29208 ATTN: Kay Keisler

MAIL SERVICE:

University of South Carolina
743 Greene St., Cola., SC 29208 ATTN: Kay Keisler

IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? (Agency MUST check one) YES NO

APPROVED BY: _____ (State Engineer) _____ (Date)

SE-331
Quote Form

2011 Edition

Quotes shall be submitted only on SE-331

QUOTE SUBMITTED BY: _____
(Offeror's Name)

QUOTE SUBMITTED TO: _____
University of South Carolina
(Agency Name)

FOR PROJECT: BC00392344-C _____
(Number) Public Health Research Center Interior Renov. - Millwork
(Name)

OFFER

1. In response to the Form SE-311, *Request for Minor Construction Quotes*, and in compliance with the *Instructions to Bidders* for the above-named Project, the undersigned **OFFEROR** proposes and agrees, if this Quote is accepted, to enter into a Contract with the **AGENCY** in the form included in the Solicitation Documents, and to perform all Work as specified or indicated in the Solicitation Documents, for the prices and within the time frames indicated in the Solicitation and in accordance with the other terms and conditions stated.

2. Pursuant to Section 11-32-3030(1) of the SC Code of Laws, as amended, **OFFEROR** has submitted Bid Security as follows in the amount and form required by the Solicitation Documents:

Bid Bond with Power of Attorney Electronic Bid Bond Cashier's Check
(OFFEROR check one, if Bid Security is required)

3. **OFFEROR** acknowledges the receipt of the following Addenda to the Solicitation documents and has incorporated the effects of said Addenda into its Quote:

ADDENDUM No: _____

4. **OFFEROR** agrees that this Quote, including all bid alternates, if any, may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of 30 Days following the Quote Date, or for such longer period of time that **OFFEROR** may agree to in writing upon request of the **AGENCY**.

5. **OFFEROR** agrees that from the compensation to be paid, the **AGENCY** shall retain as Liquidated Damages the amount of for each calendar day the actual construction time required to achieve Substantial Completion exceeds the specified or adjusted Contract Time for Substantial Completion, as provided in the Contract Documents.

6. **OFFEROR** herewith submits its offer to provide all labor, materials, equipment, tools of trades and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fee, permits, licenses and applicable taxes necessary to complete the following items of construction work:

6.1 **BASE BID** _____
(enter BASE BID in figures only)

6.2 **ALTERNATE NO. 1** N/A _____ to be ADDED/DEDUCTED from BASE BID.
(circle one)

6.3 **ALTERNATE NO. 2** N/A _____ to be ADDED/DEDUCTED from BASE BID.
(circle one)

FEIN/SSN: _____
SC Contractor's License Number: _____
Address: _____

Telephone/Fax _____
E-mail _____

This Quote is hereby submitted on behalf of the Offeror named above.
BY: _____
(Signature of Offeror's Representative)

(Print or Type Name of Offeror's Representative)
ITS: _____

USC SUPPLEMENTAL GENERAL CONDITIONS
FOR CONSTRUCTION PROJECTS

1. Contractor's employees shall take all reasonable means not to interrupt the flow of student traffic in building corridors, lobbies and stairs. All necessary and reasonable safety precautions shall be taken to prevent injury to building occupants while transporting materials and equipment through the building to the work area. Providing safe, accessible, plywood pedestrian ways around construction may be required if a suitable alternative route is not available.
2. Fraternalization between Contractor's employees and USC students, faculty or staff is strictly prohibited - zero tolerance!
3. USC will not tolerate rude, abusive or degrading behavior on the job site. Heckling and cat-calling directed toward students, faculty or staff or any other person on USC property is strictly prohibited. Any contractor whose employees violate this requirement will be assessed a fine of up to \$500 per violation.
4. Contractor's employees must adhere to the University's policy of maintaining a drug-free and smoke-free/tobacco free workplace.
5. Contractor must sign a Contractor Key Receipt/Return form before any keys are issued. Keys must be returned immediately upon the completion of the work. The Contractor will bear the cost of any re-keying necessary due to the loss of or failure to return keys.
6. A welding permit must be issued by the University Fire Marshall before any welding can begin inside a building. Project Manager will coordinate.
7. Contractor must notify the University immediately upon the discovery of suspect material such as those potentially containing asbestos or other such hazardous materials. These materials **must not** be disturbed until approved by the USC Project Manager.
8. At the beginning of the project, the USC Project Manager will establish the Contractor's lay-down area. This area will also be used for the Contractors work vehicles. No personal vehicles will be allowed in this area, or in any areas surrounding the construction site that are not regular or authorized parking lots. Personal vehicles must 'be parked in the perimeter parking lots. Parking permits can be obtained at the USC Parking Office located in the Pendleton Street parking garage. The lay down area will be clearly identified to the contractor by the PM, with a sketch or drawing provided to Parking. In turn, the contractor will mark off this area with a sign containing the project name, PM name, Contractor name and contact number, and end date. Where this area is subject to foot traffic, protective barriers will be provided as specified by the PM. The area will be maintained in a neat and orderly fashion.
9. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.

10. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.
11. For all projects over \$100,000, including IDC's, an SE-395, Contractor Performance Evaluation, will be completed by the USC Project Manager and reviewed with the GC at the beginning of the project and a copy given to the GC. At the end of the project the form will be completed and a Construction Performance rating will be established.
12. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied at least one (1) times per week. Construction waste must not be placed in University dumpsters. The construction site must be thoroughly cleaned with all trash picked up and properly disposed of on a daily basis and the site must be left in a safe and sanitary condition each day. The University will inspect job sites regularly and will fine any contractor found to be in violation of this requirement an amount up to \$1,000.00 daily per violation.
13. Contractor must provide all O&M manuals, as-built drawings, and training of USC personnel on new equipment, controls, etc. prior to Substantial Completion. Final payment will not be made until this is completed.
14. Tree protection fencing is required to protect existing trees and other landscape features to be preserved within a construction area. The limits of this fence will be evaluated for each situation with the consultant, USC Arborist and USC Project Manager. The tree protection fence shall be 6' high chain link fence unless otherwise approved by USC Project Manager. No entry or materials storage will be allowed inside the tree protection zone. A 3" layer of mulch shall be placed over the tree protection area to maintain moisture in the root zone if USC Arborist determines that construction may decrease amount of moisture needed to sustain health of tree(s).
15. Contractor shall water trees and other landscape material as directed by USC Arborist until site is returned to Owner.
16. Where it is necessary to cross walks, tree root zones (i.e., under canopy) or lawns the following measures shall be taken: For single loads up to 9,000 lbs., a 3/4" minimum plywood base shall be placed over areas impacted. For single loads over 9,000 lbs., two layers of 3/4" plywood is required.
17. For projects requiring heavy loads to cross walks, tree root zones or lawns on a regular basis (as determined by USC Project Manager), a construction entry road consisting of 10' X 16' oak logging mats placed on 12" coarse, chipped, hardwood base. Mulch and logging mats shall be supplemented throughout the project to keep matting structurally functional.
18. Any damage to existing landscaping (including lawn areas) will be remediated at Contractor's expense before final payment is made.

Contractor Vehicle Requirements on Campus

1. All motorized vehicles on the University campus are expected to travel and park on roadways and/or in parking stalls.
2. All motorized vehicle traffic on USC walkways must first be authorized by USC Grounds Department and USC Project Manager. Violators may be subject to fines and penalties.
3. All motorized vehicles that leak or drip liquids are prohibited from traveling or parking on walks or landscaped areas.
4. Contractors, vendors, and delivery personnel are required to obtain prior parking authorization before parking in a designated space. Violators may be subject to fines and/or penalties. See Item 10 below.
5. Drivers of equipment or motor vehicles that damage university hardscape or landscape will be held personally responsible for damages and restoration expense.
6. Vehicle drivers who park on landscape or drives must be able to produce written evidence of need or emergency requiring parking on same.
7. All vehicles parked on landscape, hardscape, or in the process of service delivery, must display adequate safety devices, i.e. flashing lights, cones, signage, etc.
8. All drivers of equipment and vehicles will be respectful of University landscape, equipment, structures, fixtures and signage.
9. All incidents of property damage will be reported to Parking Services or the Work Management Center.
10. Parking on campus is restricted to spaces designated by Parking Services at the beginning of the project. Once the project manager and contractor agree on how many spaces are needed, the project manager will obtain a placard for each vehicle. This placard must be hung from the mirror of the vehicle, otherwise a ticket will be issued and these tickets cannot be Afixed@. Parking spaces are restricted to work vehicles only; no personal vehicles.

Project Name: Public Health Research Center Interior Renovations – Millwork

Project Number: BC00392344-C

University of South Carolina

CONTRACTOR'S ONE YEAR GUARANTEE

STATE OF _____

COUNTY OF _____

WE _____
as General Contractor on the above-named project, do hereby guarantee that all work executed under the requirements of the Contract Documents shall be free from defects due to faulty materials and /or workmanship for a period of one (1) year from date of acceptance of the work by the Owner and/or Architect/Engineer; and hereby agree to remedy defects due to faulty materials and/or workmanship, and pay for any damage resulting wherefrom, at no cost to the Owner, provided; however, that the following are excluded from this guarantee;

Defects or failures resulting from abuse by Owner.

Damage caused by fire, tornado, hail, hurricane, acts of God, wars, riots, or civil commotion.

[Name of Contracting Firm]

*By _____

Title _____

*Must be executed by an office of the Contracting Firm.

SWORN TO before me this _____ day of _____, 20____ (seal)

_____ State

My commission expires _____

TECHNICAL SPECIFICATIONS

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Preservative treated wood materials.
- B. Concealed wood blocking, nailers, grounds and supports.

1.2 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- B. AWPA U1 - Use Category System: User Specification for Treated Wood; American Wood Protection Association.
- C. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce).
- D. SPIB (GR) - Grading Rules; Southern Pine Inspection Bureau, Inc..

1.3 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. Product Data: Provide technical data on wood preservative materials.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species: Southern Pine, unless otherwise indicated.
 - 2. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 3. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

2.2 DIMENSION LUMBER

- A. Grading Agency: Southern Pine Inspection Bureau, Inc. (SPIB).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.

- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.

2.3 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M.

2.4 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWWA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWWA standards.
- B. Preservative Treatment:
 - 1. Manufacturers:
 - a. Arch Wood Protection, Inc: www.wolmanizedwood.com.
 - b. Viance, LCC: www.treatedwood.com.
 - c. Osmose, Inc: www.osmose.com.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Preservative Pressure Treatment of Lumber Above Grade: AWWA U1, Use Category UC3B, Commodity Specification A using waterborne preservative to 0.25 lb/cu ft retention.
 - 1. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - 2. Treat lumber in contact with concrete.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.2 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- C. Specifically, provide the following non-structural framing and blocking:
 - 1. Cabinets and shelf supports.
 - 2. Wall-mounted door stops.

3.3 SITE APPLIED WOOD TREATMENT

- A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
- B. Allow preservative to dry prior to erecting members.

END OF SECTION

SECTION 06 41 00 - ARCHITECTURAL WOOD CASEWORK

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Specially fabricated cabinet units.
- B. Cabinet hardware.
- C. Preparation for installing utilities.

1.2 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Support framing, grounds, and concealed blocking.
- B. Section 12 36 00 - Countertops.
- C. Section 09 21 16 - Gypsum Board Assemblies: Cabinet substrate.

1.3 REFERENCE STANDARDS

- A. AWI (QCP) - Quality Certification Program, www.awiqcp.org.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards.
- C. GSA CID A-A-1936 - Adhesive, Contact, Neoprene Rubber; Federal Specifications and Standards.
- D. NEMA LD 3 - High-Pressure Decorative Laminates; National Electrical Manufacturers Association.

1.4 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
 - 1. Minimum Scale of Detail Drawings: 1-1/2 inch to 1 foot.
 - 2. Provide the information required by AWI/AWMAC/WI Architectural Woodwork Standards.
- C. Samples: Submit two samples, 8 x 10 inches in size, illustrating plastic laminate finish. Submit finish samples of panel products for casework and lumber products at the same time for comparison.
- D. Samples: Submit actual sample items of proposed pulls and hinges, demonstrating hardware design, quality, and finish.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
 - 1. Accredited participant in the specified certification program prior to the commencement of fabrication and throughout the duration of the project.

- B. Quality Certification: Provide AWI Quality Certification Program inspection report and quality certification of completed work.
 - 1. Provide labels or certificates indicating that the work complies with requirements of AWS Grade or Grades specified.
 - 2. Prior to delivery to the site provide shop drawings with certification labels.
 - 3. Provide labels on each product when required by certification program.
 - 4. Upon completion of installation provide certificate certifying that the installation and products meet the specified requirements.
 - 5. Arrange and pay for inspections required for certification.
 - 6. Replace, repair, or rework all work for which certification is refused.

1.6 MOCK-UP

- A. Provide mock-up of typical base cabinet and wall cabinet, including hardware, finishes, and plumbing accessories.
- B. Locate where directed.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.8 FIELD CONDITIONS

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 - PRODUCTS

2.1 CABINETS

- A. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI/AWMAC/WI Architectural Woodwork Standards for Grades as indicated.
- B. Plastic Laminate Faced Cabinets: Premium grade.
- C. Cabinets:
 - 1. Finish - Exposed Exterior Surfaces: Decorative laminate as scheduled.
 - 2. Finish - Semi-exposed Surfaced: Melamine.
 - 3. Adjustable Shelf Loading: 50 lbs. per sq. ft..
 - 4. Cabinet Style: Flush overlay.

2.2 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.
- B. Hardwood Edgebanding: Use premium grade solid hardwood edgebanding where indicated on the Drawings.

2.3 PANEL MATERIALS

- A. Veneer Core Plywood: HPVA HP-1, made with adhesive containing no urea formaldehyde.

- B. Hardwood Edgebanding: Use solid hardwood edgebanding, 0.020 inches thick, matching species, color, grain, and grade for exposed portions of cabinetry.

2.4 LAMINATE MATERIALS

- A. Manufacturers:
 - 1. Formica Corporation: www.formica.com.
 - 2. Panolam Industries International, Inc\Nevamar: www.nevamar.com.
 - 3. Wilsonart International, Inc: www.wilsonart.com.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications and as follows:
 - 1. Vertical Surfaces: VGS, 0.028 inch nominal thickness, through color, colors as scheduled, finish as scheduled.
 - 2. Laminate Backer: BKL, 0.020 inch nominal thickness, undecorated; for application to concealed backside of panels faced with high pressure decorative laminate.

2.5 ACCESSORIES

- A. Adhesive: GSA CID A-A-1936 contact adhesive.
- B. Plastic Edge Banding: Extruded PVC, convex shaped; smooth finish; self locking serrated tongue; of width to match component thickness.
 - 1. Color: As selected by Architect from manufacturer's full range.
 - 2. Use at all exposed shelf edges.
- C. Fasteners: Size and type to suit application.
- D. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application .
- E. Grommets for Cable Passage through Countertops: 1-1/4-inch or 2-inch as required OD, color as selected, molded-plastic grommets and matching plastic caps with slot for wire passage.

2.6 HARDWARE

- A. General Requirements: The products of the following manufacturers are used herein and the accompanying abbreviations for the company name are used at the product designation.
- B. Hardware Finish: US26 (Bright Chrome) for plastic laminate finish
- C. Manufacturers:
 - 1. BA - Baldwin Hardware Mfg. Corp.
 - 2. BL - Julius Blum Mfg.
 - 3. BO - Bommer Spring Hinge Co., Inc.
 - 4. GA - Garcy Corporation
 - 5. GRA - Grass America
 - 6. HA - Hager Hinge Co.
 - 7. HE - Hettich
 - 8. HF - Hafele
 - 9. IV - The H. B. Ives Co.
 - 10. KV - Knape and Vogt

11. McK - McKinney Sales Co.
12. NCL - National Cabinet Locks
13. ST - Stanley Hardware

D. Hinges and Baseplates:

1. For 3/4 inch thick doors: Julius Blum 170 degree opening hinge, Product Number 71.6550 used in conjunction with baseplate 175H9100, zinc die cast, two-piece, wing type. Mount baseplate with two 5mm system screws and one #7 wood screw (3 screws total each baseplate) or approved equals by Grass America, Salice or approved equal.
2. Number of hinges per door shall depend on weight and size of door. Following information is only a guideline and it is the responsibility of the contractor to ensure that a sufficient number of hinges are installed to prevent sagging or binding.
3. Number of Hinges Door Height Door Weight
 - a. 2 Less than 36 inches Less than 15 lbs.
 - b. 3 Less than 66 inches Less than 30 lbs.
 - c. 4 Less than 84 inches Less than 45 lbs.
 - d. 5 Less than 96 inches Less than 60 lbs.

E. Pulls:

1. For doors and drawers:
 - a. No. 346120 as manufactured by ST satin chrome plated wire pull.
 - b. Equals as manufactured by BA or BL.

F. Drawer Slides (Light/Medium Duty Drawers - 24 inches wide or less):

1. No. 8405 as manufactured by KV full extension 1 inch over travel.
2. No. KA5632 as manufactured by HE 100# ball bearing full extension.
3. No. 422.93 as manufactured by HF.
4. No. 7434 Ball Bearing manufactured by Accuride 100#/L HD full extension 1 inch over travel.

G. Drawer Slides (Heavy Duty Drawers - 42 inches wide or less):

1. No. 8525 as manufactured by KV 175# full extension 1-1/2 inch over travel.
2. No. 422.05 as manufactured by HF.
3. No. 3640 Ball Bearing manufactured by Accuride 100# 1 inch over travel.

H. Drawer Locks: No. 987 as manufactured by KV or equal provided by NCL.

I. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.

J. Adjustable Shelf Supports: Standard side-mounted system using multiple holes for pin supports and coordinated self rests, satin chrome finish, for nominal 1 inch spacing adjustments.

2.7 FABRICATION

- A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
 1. Drawer Construction: At all casework, provide single species solid lumber drawer boxes dovetailed all 4 sides.
 - a. Drawer Bottoms: Veneer core, "B" face veneer; fully captured all 4 sides.
- B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

- C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
- D. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises.
 - 1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
- E. Provide cutouts for plumbing fixtures. Verify locations of cutouts from on-site dimensions. Seal cut edges.
- F. Plastic Laminate:
 - 1. Install plastic laminate in accordance with printed instructions of manufacturer of plastic laminate. Install plastic balancing sheet on concealed face to prevent warping.
 - 2. Install plastic laminate on cabinet surfaces as follows:
 - a. All exposed and semi-exposed surfaces shall have laminate of same finish and pattern including cabinet interiors.
 - b. Cabinet Shelves: Melamine finish on all horizontal surfaces.
 - c. Exposed Adjustable Shelves: 3/4 inch thick panel product core with NEMA 0.028 inch thick plastic laminate as indicated and detailed.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section are in place and ready to receive this work.

3.2 INSTALLATION

- A. Set and secure custom built cabinets in place, assuring that they are rigid, plumb, and level.
- B. Use fixture attachments in concealed locations for wall mounted components.
- C. Use concealed joint fasteners to align and secure adjoining cabinet units.
- D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- E. Secure cabinets to floor using appropriate angles and anchorages.
- F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.3 ADJUSTING

- A. Adjust installed work.
- B. Adjust moving or operating parts to function smoothly and correctly.

3.4 CLEANING

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

SECTION 12 36 00 - COUNTERTOPS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Countertops.

1.2 RELATED REQUIREMENTS

- A. Section 06 41 00 - Architectural Wood Casework.

1.3 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards.
- C. NEMA LD 3 - High-Pressure Decorative Laminates.
- D. PS 1 - Structural Plywood.

1.4 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Specimen warranty.
- C. Shop Drawings: Complete details of materials and installation.
- D. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 COUNTERTOP ASSEMBLIES

- A. Quality Standard: Premium Grade, in accordance with AWI/AWMAC/WI Architectural Woodwork Standards.
- B. Plastic Laminate Countertops: High pressure decorative laminate sheet bonded to substrate.
 - 1. Laminate Sheet, Unless Otherwise Indicated: NEMA LD 3 Grade HGS, 0.048 inch nominal thickness.
 - a. Surface Burning Characteristics: Flame spread 25, maximum; smoke developed 450, maximum; when tested in accordance with ASTM E84.
 - b. Finish: See Finish Schedule.
 - c. Surface Color and Pattern: As scheduled.

- d. Manufacturers:
 - 1) Formica Corporation: www.formica.com.
 - 2) Lamin-Art, Inc: www.laminart.com.
 - 3) Panolam Industries International, Inc\Nevamar: www.nevamar.com.
 - 4) Panolam Industries International, Inc\Pionite: www.pionitelaminates.com.
 - 5) Wilsonart International, Inc: www.wilsonart.com.
 - 6) Substitutions: See Section 01 60 00 - Product Requirements.
 2. Exposed Edge Treatment: As detailed.
 3. Back and End Splashes: Same material, same construction.
 4. Fabricate in accordance with AWI/AWMAC Quality Standards Illustrated Premium Grade.
- C. Natural Stone Granite Countertops: Stone slabs bonded to substrate; use as large pieces as possible with inconspicuous adhesive joints.
1. Stone: Granite without cracks, voids, or pin holes.
 2. Color: See Finish Schedule.
 3. Quarry Name: As scheduled or selected by the Architect; substitutions will be considered under provisions of Section 01 60 00.
 4. Stone Thickness: 3 cm.
 5. Surface Finish: As scheduled.
 6. Exposed Edge Treatment: Stone bullnose.
 7. Back and End Splashes: Same material, same thickness; for field attachment.

2.2 ACCESSORY MATERIALS

- A. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum total thickness 1 inch thick; join lengths using metal splines. Where substrate sheets require lamination to achieve total thickness, lamination adhesive shall be moisture-cure, waterproof polyurethane.
- B. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.
- C. Joint Sealant: Mildew-resistant silicone sealant, clear.

2.3 FABRICATION

- A. Fabricate tops in the largest sections practicable, with top surface of joints flush.
 1. Join lengths of tops using best method recommended by manufacturer.
- B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
 1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
 2. Height: 4 inches, unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

- C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Securely attach countertops using concealed fasteners. Make flat surfaces level; shim where required.
- B. Attach plastic laminate countertops using screws with minimum penetration into substrate board of 5/8 inch.
- C. Seal joint between back/end splashes and vertical surfaces.

3.4 CLEANING

- A. Clean countertops surfaces thoroughly.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION