

Fayette
COUNTY

"WHERE QUALITY
IS A LIFESTYLE"

PURCHASING DEPARTMENT
140 STONEWALL AVENUE WEST, STE 204
FAYETTEVILLE, GEORGIA 30214
PHONE: 770-305-5420
www.fayettecountyga.gov

January 9, 2015

Subject: Invitation to Bids #928-B Historic Courthouse Roof Repair

Gentlemen/Ladies:

Fayette County is seeking bids from qualified roofing contractors for the repair of the slate roof and the replacement of gutters on the historical courthouse. Descriptive literature and all other required information shall be included with your bid. Any exceptions to the specifications shall be listed in the space provided.

All questions and inquiries concerning this invitation for bids or the specifications shall be addressed to Trina Barwicks, Contract Administrator of Purchasing, 140 Stonewall Avenue West, Suite 204, Fayetteville, Georgia 30214 from 8:00 a.m. to 5:00 p.m. The telephone number is (770) 305-5420 or email address tbarwicks@fayettecountyga.gov. Any deviations from this procedure for questions or information pertaining to this invitation for bids may result in your bid being rejected.

Your bid should be on the attached pricing sheet. All prices shall be F.O.B. Destination, Fayette County. Be sure to include the **bid number** and **reference** along with your company's name and address on the **sealed** envelope in which the bid is returned.

BID MUST BE SUBMITTED TO:
FAYETTE COUNTY PURCHASING DEPARTMENT
140 STONEWALL AVENUE WEST - SUITE 204
FAYETTEVILLE, GEORGIA 30214
BID #928-B
REFERENCE: HISTORIC COURTHOUSE ROOF REPAIR

January 9, 2015

Bids will be received at the above address until 3:00 p.m., Friday, January 23, 2015 in the Purchasing Department, Suite 204. Bids will be opened at approximately 3:00 p.m., January 23, 2015. Bids must be signed to be considered. Late bids will not be considered. Faxed bids will not be considered.

If this invitation for bids is downloaded from our web site, it is the responsibility of the individual or company that downloads this invitation for bids to continue to check the Fayette County web site for any addenda that might come out for this invitation for bids and is posted on the Fayette County web site. Fayette County shall not be responsible for any information that any individual or company fails to get in an addendum that is posted on the Fayette County web site but is not downloaded. However, if the Fayette County Purchasing Department mails the invitation for bids to a company or individual, we will keep a record of who we mailed that invitation for bids to and all addenda for that invitation for bids will also be mailed to those companies or individuals.

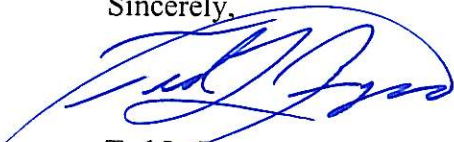
Bids will be posted on the Fayette County web site within 3 business days after the bid opening.

There is no set time for an award to be made. If an award is not made within 45 days of the bid opening, an update will be posted on the Fayette County website.

If the county awards this bid, once everything has been received by that company and the award has been completed, that information will also be posted on the Fayette County website. Please keep this procedure in mind.

The County reserves the right to reject or accept any or all bids and to waive technicalities, informalities, and minor irregularities in bids received.

Sincerely,



Ted L. Burgess
Director of Purchasing

TLB/tcb

GENERAL TERMS AND CONDITIONS

1. **Definitions:** The term “contractor” as used herein and elsewhere in these specifications shall be used synonymously with the term “successful bidder.” The term “county” shall mean Fayette County, Georgia.
2. **Bid is Offer to Contract:** Each bid constitutes an offer to become legally bound to a contract with the county, incorporating the invitation to bid and the bidder’s bid. The binding offer includes compliance with all terms, conditions, special conditions, specifications, and requirements stated in the invitation to bid, except to the extent that a bidder takes written exception to such provisions. All such terms, conditions, special conditions, specifications, and requirements will form the basis of the contract. The bidder should take care to answer all questions and provide all requested information, and to note any exceptions in the bid submission. Failure to observe any of the instructions or conditions in this invitation to bid may result in rejection of the bid.
3. **Binding Offer:** Each bid shall constitute a firm offer that is binding for ninety (90) days from the date of the bid opening, unless the bidder takes exception to this provision in writing.
4. **Bidder’s Questions:** The Fayette County Purchasing Department must receive questions about this invitation to bid in writing at least 72 hours before the scheduled bid opening, excluding Saturdays, Sundays, and holidays. The county will post answers to questions and/or other information concerning the invitation to bid in the form of an addendum on the county’s website at www.fayettecountyga.gov. It is the responsibility of the prospective bidder to check the website for any addenda issued for this invitation to bid.
5. **References:** Include with your bid a list of three (3) jobs that your company has done that are of the same or similar nature to the work described in this invitation to bid, on the form provided. Include all information as requested on the form.
6. **Bid Submission:** Submit your bid, along with any addenda issued by the county, in a sealed opaque envelope with the following information written on the outside of the envelope:
 - a. The bidder’s company name,
 - b. The bid number, which can be found in the cover letter to the invitation to bid document or on the web site, and
 - c. The “reference” which identifies the bid, which can be found in the cover letter or the web site.

Mail or deliver one (1) unbound original bid (paperclip or binder clip acceptable, no staples), signed in ink by a company official authorized to make a legal and binding offer to:

Fayette County Government
Purchasing Department
140 Stonewall Avenue West, Suite 204
Fayetteville, GA 30214

Attention: Contracts Administrator

You may submit bids in person, by U.S. mail, or by a commercial carrier. Do not submit bids by facsimile, e-mail, or other electronic means. Once submitted, all bids become the property of Fayette County.

7. **Bid Preparation Costs:** The bidder shall bear all costs associated with preparing the bid.

8. **Late Bids:** Bids not received by the time and date of the scheduled bid opening will not be considered, unless the delay is a result of action or inaction by the county.
9. **More than One Bid:** Do not submit alternate bids or options, unless requested or authorized by the county in the Invitation to Bid. If a responder submits more than one bid without being requested or authorized to do so, the county may disqualify the bids from that responder, at the county's option.
10. **Bid Corrections or Withdrawals:** The bidder may correct a mistake, or withdraw a bid, before the bid opening by sending written notification to the Director of Purchasing. Bids may be withdrawn after the bid opening only with written authorization from the Director of Purchasing.
11. **Defects or Irregularities in Bids:** The county reserves the right to waive any defect or irregularity in any bid received. In case of an error in extension of prices or totals in the bid, the unit prices shall govern.
12. **Prices Held Firm:** Prices quoted shall be firm for the period of the contract, unless otherwise specified in the bid. All prices for commodities, supplies, equipment, or other products shall be quoted FOB Destination, Fayette County or job site.
13. **Brand Name:** If items in this invitation for bid have been identified, described or referenced by a brand name or trade name description, such identification is intended to be descriptive, but not restrictive and is to indicate the quality and characteristics of products that may be offered. Alternative products may be considered for award if clearly identified in the bid. Items offered must meet required specifications and must be of a quality which will adequately serve the use and purpose for which intended.
14. **Bidder Substitutions:** Bidders offering substitutions or deviations from specifications stated in the invitation to bid, shall list such substitutions or deviations on the "Exceptions to Specifications" sheet provided, or on a separate sheet to be submitted with the bid. The absence of such list shall indicate that the bidder has taken no exception to the specifications. The evaluation of bids and the determination as to equality and acceptability of products or services offered shall be the responsibility of the county.
15. **Samples:** When the county requires samples as part of the bid and vendor selection process, bidders must provide requested samples within the time allotted, and at no cost to the county unless otherwise specified. Any goods provided under contract shall conform to the sample submitted. The county will return samples only at the bidder's request, and at the bidder's expense, if they are not destroyed by testing.
16. **Non-Collusion:** By responding to this invitation to bid, the bidder represents that the bid is not made in connection with any competing bidder, supplier, or service provider submitting a separate response to this invitation to bid, and is in all respects fair and without collusion or fraud.
17. **Arrears:** Bids will not be accepted from any person, firm, or corporation who is in arrears in any debt or obligation to Fayette County.
18. **Bid Evaluation:** Award will be made to the lowest responsive, responsible bidder, taking into consideration payment terms, vendor qualifications and experience, quality, references, any exceptions listed, and/or other factors deemed relevant in making the award. The county may make such investigation as it deems necessary to determine the ability of the bidder to perform, and the bidder shall furnish to the county all information and data for this purpose as the county may request. The county reserves the right to reject any bid item, any bid, or all bids, and to re-advertise for bids.

19. **Discounts:** Cash discounts offered will be a consideration in awarding the bid, but only if they give the county at least 15 days from receipt of invoice to pay. For taking discounts, time will be computed from the date of acceptance at destination or the date a correct invoice is received, whichever is the later date. Payment is deemed made, for the purpose of earning the discount, on the date of the check. For payment of full invoice price, minimum terms of net 30 are preferred.
20. **Trade Secrets - Confidentiality:** A bid is a public record, except for material which qualifies as trade secret information. To keep this information confidential, a bidder must submit trade secret materials in a separate, sealed envelope marked "Trade Secret – Confidential and Proprietary Information – Do Not Disclose Except for the Purpose of Evaluating this Bid." Each page in the envelope should be stamped or otherwise marked designating it as trade secrets or confidential. Do not attempt to designate the entire bid as a trade secret, and do not attempt to designate pricing information as a trade secret, as doing so may result in your bid being disqualified. See O.C.G.A. 50-18-72 for specific Georgia law on this subject.
21. **Trade Secrets – Internal Use:** In submitting a bid, the bidder agrees that the county may reveal any trade secret materials contained in the bid to all county staff and officials involved in the selection process, and to any outside consultant or other third parties who may assist in the selection process. The bidder agrees to hold harmless the county and each of its officers, employees, and agents from all costs, damages, and expenses incurred in connection with refusing to disclose any material which the bidder has designated as a trade secret.
22. **Contract Execution & Notice to Proceed:** After the Board of Commissioners makes an award, all required documents are received by the county, and the contract is fully executed with signature of both parties, the county will issue a written Notice to Proceed. The county shall not be liable for payment of any work done or any costs incurred by any bidder prior to the county issuing the Notice to Proceed.
23. **Unavailability of Funds:** This contract will terminate immediately and absolutely at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of the county under the contract.
24. **Insurance:** The successful bidder shall, without expense to the county, carry the following insurance, to be in effect throughout the term of the contract, in at least the amounts and limits as follows:
- a. **General Liability Insurance:** \$1,000,000 combined single limit per occurrence, including bodily and personal injury, destruction of property, and contractual liability.
 - b. **Automobile Liability Insurance:** \$1,000,000 combined single limit each occurrence, including bodily injury and property damage liability.
 - c. **Worker's Compensation & Employer's Liability Insurance:** Workers Compensation as required by Georgia statute.

Before a contract with the successful bidder is executed, the successful bidder shall provide Certificates of Insurance for all required coverage. The successful offeror can provide the Certificate of Insurance after award of the contract, but must be provided prior to execution of the contract document by both parties. The certificate shall list an additional insured as follows:

Fayette County, Georgia
140 Stonewall Avenue West
Fayetteville, GA 30214

25. **Bid Bond:** You must include a bid bond with your bid, equal to five percent (5%) of the total amount bid. Bid bonds shall be provided by a surety who appears on Georgia's list of approved sureties administered by the State Insurance Commissioner, or the U.S. Treasury's list of approved bond sureties (Circular 570).
26. **Performance and Payment Bonds:** Prior to execution of a contract, the successful bidder shall submit performance and payment bonds each equal to 100 percent of the contract value, provided by a surety which appears on Georgia's list of approved sureties administered by the State Insurance Commissioner, or the U.S. Treasury's list of approved bond sureties (Circular 570).
27. **Unauthorized Performance:** The county will not compensate the contractor for work performed unless the work is authorized under the contract, as initially executed or as amended.
28. **Assignment of Contract:** Assignment of any contract resulting from this invitation to bid will not be authorized.
29. **Indemnification:** The contractor shall defend and indemnify the county and all its officers, agents and employees against any suits, actions, or other claims brought on account of any injuries or damages to any person, persons, or property resulting from any negligent act or fault of the contractor, or of any agent, employee, subcontractor or supplier in the performance of any contract which may be awarded. The contractor shall pay any judgment with cost which may be obtained against the county growing out of such injury or damages.
30. **Patent Indemnity:** The contractor guarantees to save the county, its agents, officers, or employees harmless from liability of any nature or kind for use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, articles or appliances furnished or used in the performance of the contract, for which the contractor is not the patentee, assignee or licensee.
31. **Severability:** The invalidity of one or more of the phrases, sentences, clauses or sections contained in the contract shall not affect the validity of the remaining portion of the contract. If any provision of the contract is held to be unenforceable, then both parties shall be relieved of all obligations arising under such provision to the extent that the provision is unenforceable. In such case, the contract shall be deemed amended to the extent necessary to make it enforceable while preserving its intent.
32. **Delivery Failures:** If the contractor fails to deliver contracted goods or services within the time specified in the contract, or fails to replace rejected items in a timely manner, the county shall have authority to make open-market purchases of comparable goods or services. The county shall have the right to invoice the contractor for any excess expenses incurred, or deduct such amount from monies owed the contractor. Such purchases shall be deducted from contracted quantities.
33. **Substitution of Contracted Items:** The contractor shall be obligated to deliver products awarded in this contract in accordance with terms and conditions specified herein. If a contractor is unable to deliver the products under the contract, it shall be the contractor's responsibility to obtain prior approval of the ordering agency to deliver an acceptable substitute at the same price quoted in the contractor's original bid. In the event any

contractor consistently needs to substitute or refuses to substitute products, the County reserves the right to terminate the contract or invoke the "Delivery Failures" clause stated herein.

34. **Inspection and Acceptance of Deliveries:** The county reserves the right to inspect all goods and products delivered. The county will decide whether to accept or reject items delivered. The inspection shall be conclusive except with respect to latent defects, fraud, or such gross mistakes as shall amount to fraud. Final inspection resulting in acceptance or rejection of the products will be made as soon as practicable, but failure to inspect shall not be construed as a waiver by the county to claim reimbursement or damages for such products which are later found to be in non-conformance with specifications. Should public necessity demand it, the county reserves the right to use or consume articles delivered which are substandard in quality, subject to an adjustment in price to be determined by the Purchasing Director.
35. **Termination for Cause:** The county may terminate the contract for cause by sending written notice to the contractor of the contractor's default in the performance of any term of this agreement. Termination shall be without prejudice to any of the county's rights or remedies by law.
36. **Termination for Convenience:** The county may terminate the contract for its convenience at any time with 10 days' written notice to the contractor. In the event of termination for convenience, the county will pay the contractor for services performed. The county will compensate partially completed performance based upon a signed statement of completion submitted by the contractor, which shall itemize each element of performance completed.
37. **Governing Law:** This agreement shall be governed in accordance with the laws of the State of Georgia. The parties agree to submit to the jurisdiction in Georgia, and further agree that any cause of action arising under this agreement shall be required to be brought in state court in Fayette County, Georgia.

Fayette County, Georgia
Checklist of Required Documents

(Please Return This Checklist with Your Bid)

BID #928-B HISTORIC COURTHOUSE ROOF REPAIR

Be sure to include with your bid, in the order listed:

- Company information – on the form provided _____
- Bid bond _____
- Contractor Affidavit under O.C.G.A. §13-10-91(b)(1) _____
- Bid Sheet – Exhibit A (including Bid Form pages) _____
- List of exceptions, if any – on the form provided _____
- References – on form provided _____

COMPANY NAME: _____

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1)

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of Fayette County, Georgia has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

BID #928-B HISTORIC COURTHOUSE ROOF REPAIR

Name of Project

FAYETTE COUNTY GEORGIA

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 2015 in (city) _____, (state) _____

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE _____ DAY OF _____, 201 _____.

NOTARY PUBLIC

My Commission Expires:

HISTORIC COURTHOUSE ROOF REPAIR

I. INTRODUCTION

Fayette County is seeking bids from qualified roofing contractors for the repair of the slate roof and the replacement of gutters on the historical courthouse. The contractor should specialize in slate roof repair/restoration and new installation. This contractor should have the experience and expertise to perform repairs to the damaged Historic Courthouse roof that will include but not be limited to replacing broken, cracked, or dislodged slate, replacing gutters, replacing hip ridge caps, cleaning mildew and possibly replacing a small section of asphalt roof with a slate roof. All work must be done to an acceptable slate roofing standard such as that established by the SRCA. Contractor should present a bid that demonstrates their experience and qualifications to perform work that meets the specifications contained herein.

II. BACKGROUND

Our roofing project is one phase of several to provide progressive restoration of the Historic Fayette County Courthouse located in the heart of downtown Fayetteville, Georgia. Many activities and events are planned throughout the year around this historic building. It has become more apparent, even to the casual observer that the roof, gutter and building are weathering and in a state of decline. To address that initial observation, Fayette County feels that restoration and/or replacement of various elements is needed to maintain its aesthetic appeal in the community. Our initial restoration focus is to begin at the roof and continue restoration efforts throughout the remaining exterior of the building. The Old County Courthouse building is listed on the National Register of Historical Buildings, #80001020, and is located at 200 Courthouse Square, in Fayetteville, Georgia.

This historic building has an existing slate roof that we understand to be approximately 32 years old. It was installed after a major fire in 1982 at the Historic Courthouse. The Clock Tower was completely built on the ground and installed using a crane and bolted to the ridge at the bottom of the tower. Some of the copper was replaced in 1998. Since that time, we have made periodic maintenance repairs to the roof.

III. SCOPE OF WORK

GENERAL SPECIFICATIONS

1. All slate materials and workmanship associated with this project shall meet SRCA (Slate Roofing Contractors Association – see attachment) and ASTM C 406 (American Society for Testing and Materials) specifications for construction materials, methods and procedures.
2. Contractor shall provide a price for replacing existing asphalt shingle roof over the main (i.e., north) entrance with a new slate roof. Fayette County may elect to not have this work performed as a part of this contract.

3. County expectations are that contractors provides the following project warranties:
 - a. Installation warranty for all gutter replacement work done on the roof.
 - b. 50-year material warranty for the copper gutter, hip ridge caps and flashing material installed.
4. Based on our estimates the roof including the clock tower is approximately 5328 sq. ft. (NOTE: Each bidder is responsible for verifying this quantity and should not base their price solely on this measurement).
5. During working hours, the contractor is responsible for roping off the entire work area and placing the appropriate signage to notify pedestrian traffic of the overhead hazards within the work zone area. Since the building will be open for employees and others as work ensues, contractor is responsible to provide canopy or other overhead protection for pedestrians entering and leaving the building through at least one designated access point. During non-working hours, the contractor is responsible for roping, flagging, placing signs, etc. as is reasonable and prudent to warn pedestrians of hazardous areas that are off limits.
6. The contractor is to police the roof and grounds daily and clean up all trash and debris which will be disposed of in the jobsite dumpster supplied by contractor.
7. The contractor shall plan the work around scheduled Main Street events identified in EXHIBIT B that impact the Old Courthouse and grounds immediately adjacent to the Old Courthouse. We will supply the event calendar.
8. Time is of the essence. Contractor will state the expected time that it will take to complete the project from start to finish. Once work has started, contractor shall continue to perform all needed work through completion of the project per the accepted schedule without extended delays or breaks. The exception to this is delays that are outside the direct control of the contractor due to weather or owner scheduling or coordination issues associated with prescheduled events. Upon contract award, contractor shall provide a more defined schedule of activities for the work.
9. Contractor should have a foremen or supervisor for this project that has a minimum of five years of professional experience in installing natural slate roofing. Contractor shall provide at least three references for slate roof installation projects they successfully completed within the last five years.
10. Fayette County will have the right to inspect the roof after each critical phase of work is finished.
11. Contractor is responsible to repair or replace, to equal or better condition, any damage caused by them or their subs to the building, sidewalk, landscaping, lighting decor, improvements, etc. within the immediate vicinity of the work.
12. Once contractor has started replacement of existing roof slates, Contractor shall protect all underlying roof material from rain and damage during construction. Contractor shall be responsible to repair or replace any damage to existing roof material, walls, floors, or contents that are damaged as a result of contractors'

failure to appropriately cover roof to avoid rainwater entering the building once work has started. Contractor shall maintain a watertight roof during all work tasks and shall insure there are no leaks after the installation is complete. Fayette County's inspection of the clock tower finds that there may be some rainfall accessing this area, but may not necessarily be from the roof. Fayette County has no evidence or history of leaking from the roof within this historic structure.

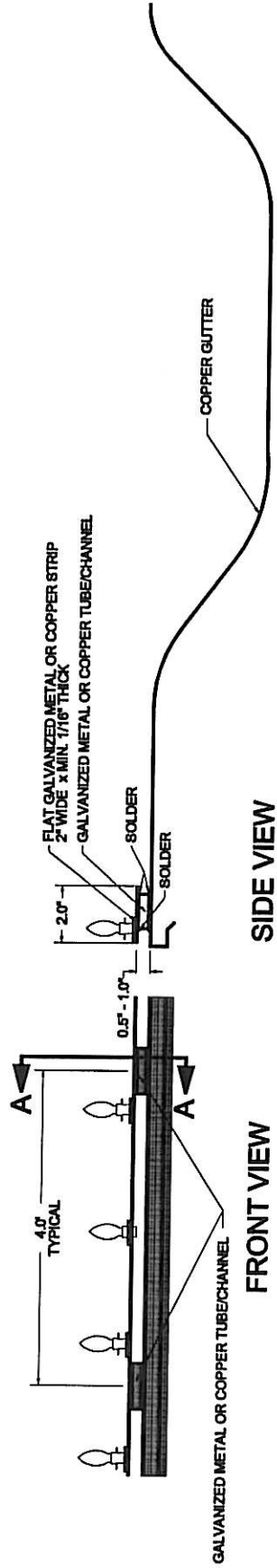
13. A pre-bid conference will not be held for this project. Questions from bidders shall be submitted by the required cutoff date as noted in the bid documents.
14. Contractor is responsible for taking photos of all pre-existing damage/issues with the building, sidewalk, lamp post, landscaping, etc. around or within the vicinity of the work and submitting that information to Fayette County prior to mobilizing to the project site.
15. Dumpsters placed on site for the work should not be placed on sidewalk without protecting the sidewalk from cracking. Contractor shall be responsible for repairing all damaged sidewalk due to the work.
16. Contractor is hereby notified that the grounds around the Old Courthouse contain a working sprinkler system that waters the grass and landscape bed areas. Fayette County does not have an as-built of this system. Fayette County will coordinate a date with contractor to mark each sprinkler head with a marking flag and to test the current condition and/or operation of the system. The contractor is responsible for any damage they may cause to the system due to their work, and shall take the necessary precautions to protect and avoid damage to this system.
17. Contractor shall be responsible for all materials, labor, vehicles, tools, equipment needed to complete the work as contracted.
18. Contractor shall supply a schedule to complete the project.
19. To avoid move-in & move-out cost associated with scaffolding setup/breakdown, it is the intent of Fayette County to provide the needed scaffolding setup for the job. Fayette County will continue with extended building facade repairs after roofing work is done. Contractor should include price in EXHIBIT A for their own scaffolding understanding that Fayette County may elect to provide this service. Contractor shall thoroughly outline any requirements they have for the scaffolding setup within their bid if Fayette County elects to provide this service.

ROOF SPECIFICATIONS

20. Contractor is to remove and subsequently replace all existing gutter pans, ridges, base and flashing as noted herein with specified copper products.
21. When providing a complete roof job (example: main north entrance roof) the existing roofing product or slate roofing, underlayment, flashings, water table and gutters shall be removed down to the existing wood deck. The wood decking, fascia, etc. shall be inspected for damage and replaced as required.

22. Fayette County will keep all the copper and slate removed from the roof under this contract unless Fayette County has accepted the contractor's credit for this material. Contractor is responsible for coordinating the immediate delivery of any copper material removed to avoid it being stolen. No storage of that material in the unsecured project dumpster overnight will be permitted. Fayette County will establish an offsite location within 5-miles of the project site for contractor to deliver this material to for storage.
23. A layer of self-adhering bituminous sheet (ice and water shield) underlayment shall be installed over any new or existing wood decking that is exposed prior to installing the roof.
24. Contractor is to remove all existing gutters and shall install new 20-ounce copper gutter pans. The gutter will be fashioned to fit the profile of the existing built-in wood trough. All seams, miters, end caps and outlets shall be pre-tinned and sweat soldered watertight. Likewise, new 20-ounce copper pans shall be installed over the ledges, under the gables (dormers) and tied into the gutter pans. All seams shall be pre-tinned and sweat soldered water tight.
25. Fayette County is to replace all existing decorative track lighting located along the existing gutters and shall re-install them onto the new gutter system in generally the same location so as to provide the same look when illuminated at night. Contractor's new copper installation shall provide a means of attachment for the track lighting per Detail A.
26. Contractor shall install new 12x22 Vermont Black slate, 3/8" to 1/2" thickness, Grade S-1 (minimum 575 lbf breaking load-1, maximum 0.25% absorption-2, and maximum 0.002 inches depth of softening-3). Material shall be installed to conform to ASTM C 406 (American Society for Testing and Materials). Copper slate nails shall be used to secure each slate.
[1-ASTM C120, Test Methods of Flexure Testing of Slate (Breaking Load, Modulus of Rupture, Modulus of Elasticity); 2-ASTM C 121, Test Method for Water Absorption of Slate; 3-ASTM C 217, Test Method for Weather Resistance of Slate]
28. Also, new 16-ounce copper base and counter flashing shall be installed along each sidewall in conjunction with the slate installation.
29. The ledges along the base of the slate roof on the clock/bell tower shall be replaced with new 20-ounce copper pans.
30. Install new 16-ounce copper hip ridge caps on the bell tower. The caps shall be fashioned to match existing caps as closely as possible. These caps are to have decorative strip lighting attached to them similar to what is located around the rest of the building. The new hip ridge caps shall be installed with a metal attachment strip per Detail A that will allow the lights to be added at a later date without damaging the new copper. Contractor to submit sample of the hip ridge cap profile for approval by Fayette County prior to installation.
31. Contractor to remove rusted hip/ridge caps along the main roof profile and replace with new 16-oz copper hip/ridge caps.

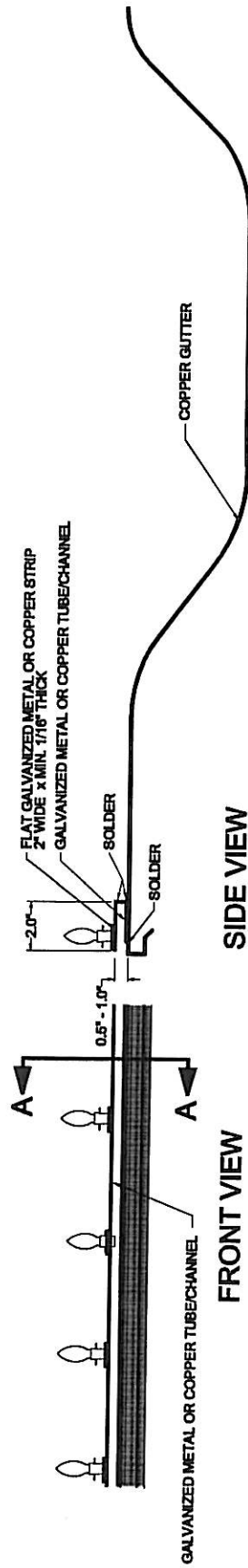
32. All existing ground rods shall remain. Rusted metal roof ornaments shall be sanded and painted a copper color to match the ridge lines. Copper color to be used by contractor is to be submitted and approved by Fayette County.
33. All existing pigeon roosting spikes shall remain, and if removed for the work shall be re-installed back at the same location.
34. The new slate replacement on the clock tower shall match the existing design of the slate as close as possible.



SIDE VIEW

FRONT VIEW

METHOD A



SIDE VIEW

FRONT VIEW

METHOD B

DETAIL A
NOT TO SCALE



BELL/CLOCK TOWER ROOF SIDE VIEW
(ALL DIMENSIONS SHOWN ARE APPROXIMATE ONLY)

SCALE: 1" = 20'

EXCEPTIONS TO SPECIFICATIONS

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

COMPANY NAME _____

BID SHEET FOR BID #928-B HISTORIC COURTHOUSE ROOF REPAIR

EXHIBIT A

ITEM NO	ITEM DESCRIPTION	QTY & UNIT	UNIT COST	TOTAL ITEM COST
1	Replace broken, damaged, missing or deteriorated slate w/ new S-1 rated 12x22 Vermont Black slate, 3/8" to 1/2" thick, using Copper slate nails to secure each slate. No separate payment will be made for the cant strip or incidental material for this work.	2100 SF		
2	Install new underlayment layer of self-adhering bituminous sheet (ice & water shield) over wood decking	2100 SF		
3	Replace all existing roof gutters with new 20-oz. copper gutter, with soldered seams. Gutters are to include a light attachment strip along entire gutter as shown in Detail A.	142 LF		
4	Reroof entire Belltower Roof with new S-1 rated 12x22 Vermont Black slate, 3/8" to 1/2" thick, using Copper slate nails to secure each slate. Match existing pattern and style of slate.	1380 SF		
5	Replace rusted metal hip-ridge caps on bell tower with new 16-oz copper hip-ridge caps. Caps are to include attachment for light strip placement along entire cap as shown in Detail A.	125 LF		
6	Replace roof valley flashing with 16-oz copper valley flashing	162 LF		
7	Replace Bell Tower Ledges with new 20-oz copper pans to match existing profile	76 LF		
8	Replace existing pans at gutter line ledge under each dormer with new 20-oz copper pans	60 LF		
9	Wood Removal & Replacement (as required - pertains to any wood other than wood decking. Replacement to be same thickness, grade, etc. of damaged wood if meeting specs, Includes painting of wood to match existing)	200 SF		
10	Wood Decking Removal & Replacement (where required)	500 SF		

11	Clean mildew from existing slate	LUMP SUM		
12	Sand and Paint all rusted metal roof ornaments, copper color	LUMP SUM		
13	Remove and re-install existing pigeon spikes onto new pans in the same location	LUMP SUM		
14	Replace all existing vent pipe flashing with copper vent pipe flashing.	LUMP SUM		
14	Install Scaffolding for roof repair work. Fayette County may elect to provide scaffolding due to other ongoing façade work to begin immediately after roof repair work is done and accepted.	LUMP SUM		
15	Credit for removed slate and copper gutter (Credit applies only if contractor keeps this material)	LUMP SUM	(-)	
16	Allowance – For owner use only to address scope changes			\$10,000.00
	BASE BID PRICE			
17	ALTERNATE: Replace existing asphalt shingle roof over North Entrance with a slate roof per the specifications (AREA ≈ 245SF)	LUMP SUM		

All estimated quantities (QTY) noted above are based on aerial photos and field measurements at ground level per the Detail B attachment. Contractor is responsible to verify all quantities prior to beginning work.

Note: A 10% retainage will be withheld from each payment up to 50% of the contract value.

Retainage is released when the project scope of work including any accepted change orders have been signed by Fayette County as complete and accepted per the contract.

STATE PAYMENT TERMS _____

STATE LENGTH OF TIME TO COMPLETE PROJECT AFTER NOTICE TO PROCEED IS
RECEIVED _____ DAYS.

COMPANY'S NAME: _____

BID FORM - Please complete the requested information below and turn in with your EXHIBIT A Bid Sheet.

1. How long has your Company been in the roofing business? _____ years.
2. Provide the approximate percentage (%) of the type of roofing work your company performed in the last 10-years.

<u>Type of Roof Construction</u>	<u>% of total company work performed</u>
A. Slate Roof	_____
a. Asphalt Shingle Roof	_____
b. Built-up Roof	_____
c. Membrane-type Roof	_____
d. Other:	_____

TOTAL ROOF WORK PERCENTAGE = 100%

The overview should identify by name and title, the primary individual(s) proposed for the oversight/management of this work and what their role and responsibilities will be. Individual resumes may be attached that define the ability of the project team to perform the work.

3. Name of Project Foreman for this job and how long individual has been installing slate roofs
 - a. Project Foreman Name _____
 - b. No. years Installing Slate Roofs _____ (years)
4. List name and Certifications of staff that will be assigned to this job.

<u>NAME</u>	<u>#Years doing Slate Roof Installation</u>	<u>CERTIFICATIONS</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

5. Who is the slate manufacturer you will use for this project? _____

6. List three (3) Slate Roof Jobs completed within the past 10-years

A. Project (brief Description):

Amount of Contract (\$): _____

Name of Contact (person): _____

Phone Number of Contact: _____

Email Address of Contact : _____

B. Project (brief Description):

Amount of Contract (\$): _____

Name of Contact (person): _____

Phone Number of Contact: _____

Email Address of Contact : _____

C. Project (brief Description):

Amount of Contract (\$): _____

Name of Contact (person): _____

Phone Number of Contact: _____

Email Address of Contact : _____

7. Project Warranties

PRODUCT

WARRANTY

Slate: _____ Manufacturers
Material Warranty: _____ years

Copper: _____ Manufacturers
Material Warranty: _____ years
(Gutters, Hips, Ridges, Valleys, etc.)

Other (specify): _____ Warranty: _____ years

LABOR

WARRANTY

Roof Repair: _____ Workmanship: _____ years

COMPANY NAME: _____



Version 1.2, Published by unanimous vote of the SRCA Board of Directors, 6/23/2012

Slate Roofing Contractors Association of North America, Inc.

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INTRODUCTION

These installation guidelines have been developed and produced for the general public by professional slate roofing contractor members of the Slate Roofing Contractors Association of North America, Inc., a non-profit trade association. These installation guidelines, if followed, are designed to produce a long-lasting weather tight slate roof for most basic applications. Refer to the SRCA Section 07310 "Slate Shingles" for architectural specifications.

PART 1 — GENERAL PROJECT PREPARATION AND EXECUTION

1.1. CONTRACTORS

- A. It is recommended that prospective contractors have foremen or supervisors who have a minimum of five years of professional experience in installing natural slate roofing and who provide a resume listing successful completion of slate roof installations of similar size and scope.
- B. Contractors shall furnish all insurance, permits, labor, materials, equipment, apparatus, tools, transportation and services necessary for, and incidental to, the proper installation and completion of the slate roof. This work may include removing and properly disposing off-site of existing slate roofing or other shingles, if any; installing underlayment; installing new sheet metal roof flashings, and installing new or salvaged roofing slate to cover the entire existing slate roof area, leaving a very long term, damage resistant, weatherproof roof.
- C. Contractors shall use workmen who are trained and experienced in laying slate, installing metal flashing, and all other skills needed to satisfactorily complete the project as specified, or use workmen who are under the full-time supervision of a foreman or supervisor with such training and experience.
- D. Contractors shall use workmen familiar with the use of slate hammers for punching and nailing slate shingles, slate rippers for removing slates already installed, slate cutters for trimming and cutting slate shingles, slater's stakes used with slate hammers that have a cutting shank, roof brackets and scaffolding for staging the roof, and hook ladders for accessing areas of the roof not staged.

1.2. CONTRACT DOCUMENTS

- A. Contractors will provide contract documents that include detailed specifications for all materials and installation styles, including, but not limited to slate types, thicknesses, colors, and origins; nail types and lengths; underlayment types and weights; headlaps; ridge style; valley style; flashing materials, including weights, types and sizes of metals.

- B. Contract documents shall also include a detailed warranty (see Section 1.8). It is recommended that this SRCA General Roofing Installation Guidelines for Natural Quarried Slate document be attached to the contract as an addendum.

1.3. MATERIALS DELIVERY AND STORAGE

- A. Slate roofing shingles shall be delivered on manufacturer's skids with intact labels indicating source whenever possible.
- B. Rolled underlayment's shall be stored on end and manufacturer's recommendations for job-site storage and protection shall be followed.
- C. Materials shall not be stored on existing fire escapes, in areas that may obstruct the ingress or egress of essential doorways or walkways, or on low-slope roofs or other roof slopes where the weight of the materials may damage the roof structure.

1.4 CODES AND REGULATIONS

- A. Contractor shall comply with all federal, state, local and contractual regulations regarding specific installations, and abide by applicable building, safety and health codes related to construction practices or use of equipment.
- B. Contractor shall comply with the regulations of local governing Historical Societies and the National Registry of Historic Properties, when applicable.

1.5 PROTECTION OF ROOF SURFACES

- A. Workers shall not damage slates by walking on them.
- B. The roof shall be properly staged to allow safe work surfaces, such as planks, that prevent unnecessary foot traffic on the slates.
- C. Where foot traffic is unavoidable, roof ladders, hook ladders, chicken ladders, foam pads or other such devices should be used to protect the slates.

1.6 INSURANCE

- A. Contractor shall carry Liability Insurance and Workers Compensation Insurance according to state requirements.
- B. Contractor will provide, upon request, Certificates of Insurance to Owner prior to the execution of any work.

1.7 CLEAN UP

- A. Tools, equipment, surplus materials, slate scraps, and debris resulting from the slate roof installation shall be organized and cleaned up, or removed and properly disposed of, on a daily basis.

- B. Gutters and roof areas will be cleaned of debris at the end of each work day and upon completion of the work.
- C. Dust and dirt may infiltrate into the attic space during installation or removal of roofing slate. Owner shall be advised to remove any valuable items from the attic space and/or to cover such items with plastic, tarps, or other suitable covering prior to the commencement of any work.

1.8 WARRANTY

- A. Contractor shall warranty a new slate roof installation, covering both material and labor for defects that may occur, for a minimum period of five years.
- B. Owner shall visually inspect the Work on an annual basis and report to the contractor any observed defects that are covered by the warranty.
- C. The contractor cannot be held responsible for damage caused by other persons or by unusual and damaging weather events such as large hail, strong winds, lightning, flooding, earthquakes, excessive snow and ice buildup, or other "acts of God."
- D. Contractor's warranty terms shall be clearly detailed in the contract documents.
- E. An extended service maintenance agreement is recommended beyond the warranty period.

1.9 EXTRA MATERIAL

- A. Contractor shall provide for the Owner two percent of field slates used in the Work as maintenance stock for future repairs.
- B. The maintenance stock is to be placed in storage in a location at the work site to be determined by the Owner.

PART 2 — ROOFING SLATE

2.1 PROCUREMENT

- A. Procure new roofing slates from known sources so that additional matching supplies can be obtained if needed. A single quarry source is recommended.
- B. Slates shall be supplied by manufacturers that are experienced in the production of roofing slate and that quarry or mine high-quality rock specifically selected for roofing grade applications. Provide manufacturer's warranty in writing. Substitution of slates with slates from other sources shall not be permitted without written approval from the Owner or architect.
- C. Slates shall be identified and labeled according to the quarry source and location. For example, foreign slates shall not be misrepresented as domestic slates.

2.2 QUALITY CONTROL

- A. Slates shall conform to ASTM C 406 and shall be Grade S1 (minimum 575 lbf breaking load¹, maximum 0.25% absorption², and maximum 0.002 inches depth of softening³).
[1ASTM C120, Test Methods of Flexure Testing of Slate (Breaking Load, Modulus of Rupture, Modulus of Elasticity); 2ASTM C 121, Test Method for Water Absorption of Slate; 3ASTM C 217, Test Method for Weather Resistance of Slate]
- B. All slate shall be hard, dense, sound rock of natural cleft with chamfered (beveled) edges. No broken or cracked slate shall be used, although broken slates may be cut into smaller, unbroken pieces.
- C. Slates up to 3/8" in thickness shall be punched for nail holes; slates over 3/8" in thickness may be drilled and countersunk, for a minimum of two nail holes each. The holes punched in the slates shall be the correct diameter to provide a snug fit for the shank of the roofing nails. Slates shall be punched back to front (except starter slates, which are punched front to back). Slates shall be punched on the thinner end if there is a variation in the thickness along the length of the slate.
- D. Rectangular slates with broken corners on the exposed end shall be rejected if a corner is broken off greater than 1.5 inches in either direction, although such slates may be used for cutting into smaller pieces.
- E. Curvature of slates shall not exceed 1/8 inch over a distance of 12 inches. Curved slates shall be trimmed and punched to permit them to be laid with the convex side facing up.
- F. Defects in slates such as "knuckles," "knots," "knurls" and "cramps" which protrude above the surface of the slates shall be positioned such that they remain on the exposed top surface of the slate after installation. Knots, knurls and cramps shall not be permitted on the back or covered portions of the slates unless removed by grinding beforehand. A slate shall be rejected if a surface defect adversely affects the proper laying of the slate.
- G. Slates shall be free of pyrite inclusions that can visibly leach rust stains onto the roof.
- H. Slates shall not have carbon-bearing bands known as "ribbons" as these are considered defects that undermine the longevity of the slate.
- I. Nail holes are to be positioned no more than 1.5" in from the side edges of the slate. Nail holes must be positioned approximately 2/3 the distance from the bottom of the slate when using standard 3" headlap. The top of the underlying slate shall not be penetrated by the slating nails.

2.3 INSTALLATION STYLES

- A. Slate installation styles may include, but are not limited to:
 - 1. A "standard" pattern where all of the slates are the same length and width, although these can include slates of differing colors and shapes;

2. A “random width” style where the slates are the same length, but differing widths;
 3. A “textural” style where thicknesses, textures, colors, lengths, widths and types of slate may be blended for architectural effect;
 4. A “graduated” style where thicker, longer slates are installed near the eaves and the slates gradually decrease in thickness and size as they near the top of the roof;
 5. A “staggered butt” style where slates of varying lengths are installed in such a manner that the exposed butts are staggered.
- B. When mixed, graduated, or textural slate styles are to be installed, or slates with mixed colors, sizes, types and/or thicknesses, the quantities of the various sizes and types of slates and the layout patterns of the slates are to be clearly specified in the contract documents.
- C. If necessary, build mockups to demonstrate aesthetic effects and to set quality standards.
1. Use materials specified for the project in the mockup.
 2. Retain mockup for duration of the project.
 3. Approved mockups may become part of the completed work.

PART 3 — GENERAL MATERIALS

3.1 ROOFING FELT

- A. Cover surfaces to be slated with roofing underlayment in order to weather in the building, when needed.
- B. Roofing underlayment shall, at a minimum, comply with ASTM D 226 asphalt-saturated organic felt, Type II, No. 30, unperforated.
- C. Felt shall be installed horizontally with sections overlapped toward eaves or drains by a minimum of two inches and at ends by a minimum of six inches. The felt shall overlap hips and ridges by approximately 12 inches. All felt shall be preserved unbroken, tight, and whole.
- D. Felt shall be secured with minimum 1” electro-galvanized roofing nails along laps, ends, and in the field as necessary to properly hold the felt in place and to protect the building from water infiltration until covered with slate.
- E. The maximum length of exposure for felts prior to slating shall be one month. When the felt must be left for long periods before the slates can be installed, the exposed nail heads are to be skimmed over with a thin layer of trowel grade roof mastic to prevent leakage around the nail heads.

- F. When self-adhesive underlayment is used along eaves or elsewhere, it shall be covered with felt.
- G. On slopes from 4:12 to 12:12, a half-lapped double layer of No. 30 felt is recommended when the felt is not going to be slated over immediately. Slopes over 12:12 may use a single layer of felt as may any slope that is to be slated within a few days.
- H. Additional underlayment may also be used in ice-dam prone areas, such as Type II felt installed on top of the existing felt, with a layer of trowel-grade roof mastic spread evenly underneath the additional felt layer.

3.2 NAILS

- A. Nails shall be solid copper, smooth-shank roofing nails, minimum 11 gauge, minimum 1.25" length. Copper nails 2.5" or longer shall be minimum 10 gauge. Alternatively, Type 304 smooth-shank stainless steel roofing nails can be used, not less than 1.25" long.
- B. Hot-dipped galvanized smooth-shank roofing nails may be utilized when specified.
- C. Nail length is to be approximately twice the thickness of the slates plus one inch. Nails are to fully embed into the roof decking material without more than 1/4" nail length being exposed on the underside of the roof decking. When the underside of the roof decking is exposed, such as at overhanging eaves, the nails shall be long enough to penetrate the roof decking, but not so long that they may be visibly driven through.
- D. Recommended nail lengths are as follows when 1" or thicker roof deck is utilized:
 - 1. 3/16"-1/4" thick slates are to be fastened with 1.5" nails.
 - 2. 3/8" thick slates are to be fastened with 1.75" nails.
 - 3. 1/2" thick slates are to be fastened with 2" nails.
 - 4. 3/4" thick slates are to be fastened with 2.5" nails.
 - 5. 1" thick slates are to be fastened with 3" nails.

3.3 FLASHING

- A. Flashing shall be minimum 16 ounce copper conforming to ASTM B 370, minimum 28 gauge stainless steel, or minimum 4 lb. sheet lead. Twenty ounce copper flashing is recommended.
- B. Flashing shall be installed where there are roof plane intersections, where the roof abuts walls, parapets, dormers and chimneys, or where there are roof penetrations.
- C. All flashings and fasteners are to be galvanically compatible metals.

- D. Flashing shall be installed according to the SMACNA "Architectural Sheet Metal Manual" and the publication "Copper and Common Sense" by Revere Copper Products.

3.4 MASTIC

- A. Roof mastic shall be non-asbestos fibered asphalt cement complying with ASTM D 4586.
- B. Roof mastic shall be designed for trowel application.

3.5 SLATE HOOKS

- A. Slate hooks shall be minimum three inches long, solid copper or stainless steel.
- B. Standard slate hooks are for use with slate of commercial standard thickness only. Custom slate hooks may be fabricated for use with slates up to 1/2" in thickness.

3.6 CANTS

- A. Wood cants for installing underneath the starter course of slate shingles shall be minimum 1/4 inch by 1 inch lath or other solid, glue-free wood. Alternatively, minimum 16 ounce copper or 28 gauge stainless steel edging with a built-in cant may be used.
- B. When installing standard thickness slates (3/16" to 1/4" thick) the cant should be approximately 1/4" to 3/8". Thicker slates will require a thicker cant.

3.7 ROOF DECKING

- A. The roof deck shall be a minimum of 3/4" thick wood. Solid, glue-free wood is recommended.
- B. Nailable concrete and gypsum concrete may also be suitable roof decking materials.
- C. Minimum 3/4" glue-free slating lath or skip sheathing can be spaced on rafters as a nailing substrate.
- D. Minimum 3/4" glue-free boards, slating lath or skip sheathing can be installed over glued or laminated roof decks to provide a suitable nailing substrate.
- E. Surfaces to which the roof slates are to be applied shall be in a suitable condition or shall be repaired to a condition satisfactory for slating. All surfaces to be slated shall be swept clean of any debris.

PART 4 — SLATE EXECUTION

4.1 FASTENERS

- A. All standard slates shall be fastened with minimum two roofing nails fastened above the head of the underlying slate and as far from the center of the slate as is practical.

- B. Larger, heavier slates may need four nails per slate.
- C. Screws shall not be used when fastening slates.
- D. Slates overlapping sheet metal shall have the nails placed so as to not puncture the metal.
- E. Exposed nail heads are not permissible except where unavoidable. Any exposed nail heads shall be sealed with gaskets or approved sealants. The application of slate dust to cover exposed sealants is recommended.
- F. Nails shall not be driven in so far as to produce an excessive strain on the slates, and shall instead be driven to a depth such that the nail heads lie within the counter-sunk nail hole and do not rub excessively against the overlying slates.
- G. Use of pneumatic or electric nail guns to install slate shingles shall not be permitted.
- H. Slates shall not be bedded in roof mastic or other adhesives except where absolutely necessary such as at exposed edges in high-wind areas.
- I. Ridges and hips shall be installed without exposed fasteners.
- J. If a slating nail is installed in a crack or hole in the sheathing, it shall be renailed properly.

4.2 HEADLAP

- A. All standard field slates shall be installed with a minimum 3" head lap when the roof slope is 8:12 up to 20:12.
- B. Less than an 8:12 slope down to 4:12, the slates shall be installed with a minimum 4" headlap.
- C. Installing roofing slates on slopes less than 4:12 is not recommended.
- D. On slopes 20:12 or greater, slates may be installed with a 2" headlap.
- E. Headlaps may be increased at ice-dam prone or poor drainage areas.

4.3 EAVES SLATES, EDGE SLATES AND STARTER COURSES

- A. Eave slates shall be laid to provide a minimum 1.5" projection beyond the furthest extent of the fascia, cornice, crown molding, metal drip edge, trim, or other construction material at the eaves.
- B. Rake edge (gable end) slates shall extend 1" beyond the furthest extent of the gable trim, fascia or drip edge.
- C. Slates at the eaves shall be doubled by first installing a slate starter or under-eave course installed back side up (chamfered side down). The first course of slate shall be laid over the starter course so that the drip edges of both courses align flush. The first course of

slates shall break side-butt joints with the starter course side-butt joints by not less than 3". The second course of slates must overlap the starter course by a minimum of 3" and not less than the general headlap of the field slates along the eaves [see Figure 1].

- D. The starter course of slates is to be canted to allow the starter slates to be tilted to the same angle as the field slates.

4.4 SLATE INSTALLATION

- A. Slate shall be installed starting at the bottom or eaves and proceeding toward the ridge or top.
- B. All slates will be installed following chalk lines marking the top edge of each course of slates, whenever possible.
- C. When supplied on pallets, slates are not to be used from one pallet at a time, but are to be used from all pallets simultaneously in order to blend the various pallets uniformly on the roof.
- D. Slate side-butt joints shall be positioned as near the mid-point of the underlying slates as possible, and not less than 3" from the underlying side-butts. Each slate course shall break butt-joints laterally by a minimum of 3", if possible, with the underlying or overlying courses.
- E. When installed, slates shall be laid side-to-side with a maximum 1/8" gap between slates, on average, unless otherwise specified.
- F. Slate will be neatly fitted around any pipes, ventilators, and other roof penetrations.
- G. Slates are to be cut from the back side in order to preserve the chamfered edge on the front exposed surface. Use of grinders, saws, or other mechanical means to cut and trim roofing slates shall not be permitted unless the slates maintain a chamfered appearance along the exposed sawn edges. At the apex of slated hips and ridges, and at the juncture of a closed valley, the chamfered edge may, as an option, be reversed to create a tighter fitting joint.
- H. Slates along valleys shall be cut in neat and straight lines. Valley slates are to be cut on the back side of the slate to maintain a chamfered slate edge when along an open valley.
- I. Contractor shall visually and manually inspect the slates when roof brackets are removed to make sure no slates were broken by the roof scaffolding. Upon completion, all slate shall be sound, unbroken, un-cracked, whole and clean, showing no exposed roof cement.
- J. Individual slates that must be installed in the field of the roof after the installation is complete, such as where a roof bracket had been removed or where a repair has been made, shall be installed using stainless steel or copper slate hooks or the "nail and hidden bib" installation method where standard nailing is not possible. Slates thicker than 1/2" may require the "nail and bib," rather than a slate hook fastener. The top of bib flashings shall extend to the top of the head of the underlying slate.

- K. Contractors shall keep the building weatherproof and make every reasonable attempt to complete the project on schedule. Work is to be scheduled when weather conditions allow the work to be performed according to manufacturer's recommendations and in compliance with warranty requirements.
- L. Temporary roof coverings, tarps, or other materials shall remain available onsite in the event that the work must be ceased suddenly due to weather conditions and the roof needs to be weathered in until such time as the work may be continued.

PART 5 — REFERENCE INFORMATION

5.1 ASTM REFERENCES

ASTM A167 — Type 304 Terne coated stainless steel, 0.015 inch (0.38 mm) thick stainless steel core material, coated with 0.092 lb/sq ft (450 g/sq m) Terne alloy on both sides

ASTM A666 — Type 304 stainless steel, soft annealed 2D finish (unless harder temper is required for forming or performance), 0.0156 inch (0.4 mm) thick

ASTM B101 — Specification for Lead-Coated Copper Sheet and Strip for Building Construction

ASTM B370 — Specification for Copper Sheet and Strip for Building Construction

ASTM B749 — Specification for Lead and Lead Alloy Strip, Sheet, and Plate Products

ASTM C406 — Specification for Roofing Slate

ASTM C920 — Specification for Elastomeric Joint Sealants

ASTM C1311 — Specification for Solvent Release Sealants

ASTM D312 — Specification for Asphalt Used in Roofing

ASTM D1079 — Standard Terminology Relating to Roofing, Waterproofing, and Bituminous Materials

ASTM D1970 — Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection

ASTM D2626 — Specification for Asphalt-Saturated and Coated Organic Felt Base Roofing Sheet

ASTM D2822 Specification for Asphalt Roof Cement, Asbestos-Containing

ASTM D3019 — Specification for Lap Cement Used with Asphalt Roll Roofing, Non Fibered, Asbestos, Fibered, and Non Asbestos Fibered

ASTM D4022 — Specification for Coal Tar Roof Cement, Asbestos Containing

ASTM D4586 — Specification for Asphalt Roof Cement, Asbestos-Free.

ASTM D4869 — Specification for Asphalt-Saturated Organic Felt Underlayment for Steep Slope Roofing.

ASTM F1667 — Specification Standard for Driven Fasteners

5.2 SLATE GRADES

- A. ASTM C 406 Grade S1: Expected service life in excess of 75 years.
- B. ASTM C 406 Grade S2: Expected service life 40-75 years.
- C. ASTM C 406 Grade S3: Expected service life 20-40 years.

5.3 SLATE THICKNESSES, SIZES AND COLORS

A. Thicknesses

- 1. Standards; Nominal 3/16 inch (5 mm) to 1/4 inch (7 mm)
- 2. Quarters; Nominal 1/4 inch (7 mm) to 3/8 inch (10 mm)
- 3. Heavies; Nominal 3/8 inch (10 mm) to 1/2 inch (13 mm)
- 4. Extra Heavies; Nominal 1/2 inch (13 mm) to 3/4 inch (19 mm)

B. Standard Slate Sizes

- 1. 24"L X 14"W (610 mm X 356mm)
- 2. 24"L X 12"W (610 mm X 305 mm)
- 3. 22"L X 12"W (559 mm X 305 mm)
- 4. 22"L X 11"W (559 mm X 279 mm)
- 5. 20"L X 14"W (508 mm X 356 mm)
- 6. 20"L X 12"W (508 mm X 305 mm)
- 7. 20"L X 11"W (508 mm X 279 mm)
- 8. 20"L X 10"W (508 mm X 254 mm)
- 9. 18"L X 14"W (457 mm X 356 mm)

10. 18"L X 12"W (457 mm X 305 mm)
11. 18"L X 11"W (457 mm X 279 mm)
12. 18"L X 10"W (457 mm X 254 mm)
13. 18"L X 9"W (457 mm X 229 mm)
14. 16"L X 14"W (406 mm X 356 mm)
15. 16"L X 12"W (406 mm X 305 mm)
16. 16"L X 11"W (406 mm X 279 mm)
17. 16"L X 10"W (406 mm X 254 mm)
18. 16"L X 9"W (406 mm X 229 mm)
19. 16"L X 8"W (406 mm X 203 mm)
20. 14"L X 10" W (356 mm X 254 mm)
21. 14"L X 9"W (356 mm X 229 mm)
22. 14"L X 8"W (356 mm X 203 mm)
23. 14"L X 7"W (356 mm X 178 mm)
24. 12"L X 10"W (305 mm X 254 mm)
25. 12"L X 9"W (305 mm X 229 mm)
26. 12"L X 8"W (305 mm X 203 mm)
27. 12"L X 7"W (305 mm X 178 mm)
28. 12"L X 6"W (305 mm X 152 mm)

C. North American Roofing Slate Colors

1. Unfading Black
2. Semi-Weathering Gray/Black
3. Unfading Gray
4. Semi-Weathering Gray
5. Unfading Purple

6. Semi-Weathering Purple
7. Unfading Mottled Green and Purple
8. Unfading Green
9. Semi-Weathering Green (Sea Green, Gray/Green)
10. Unfading Red

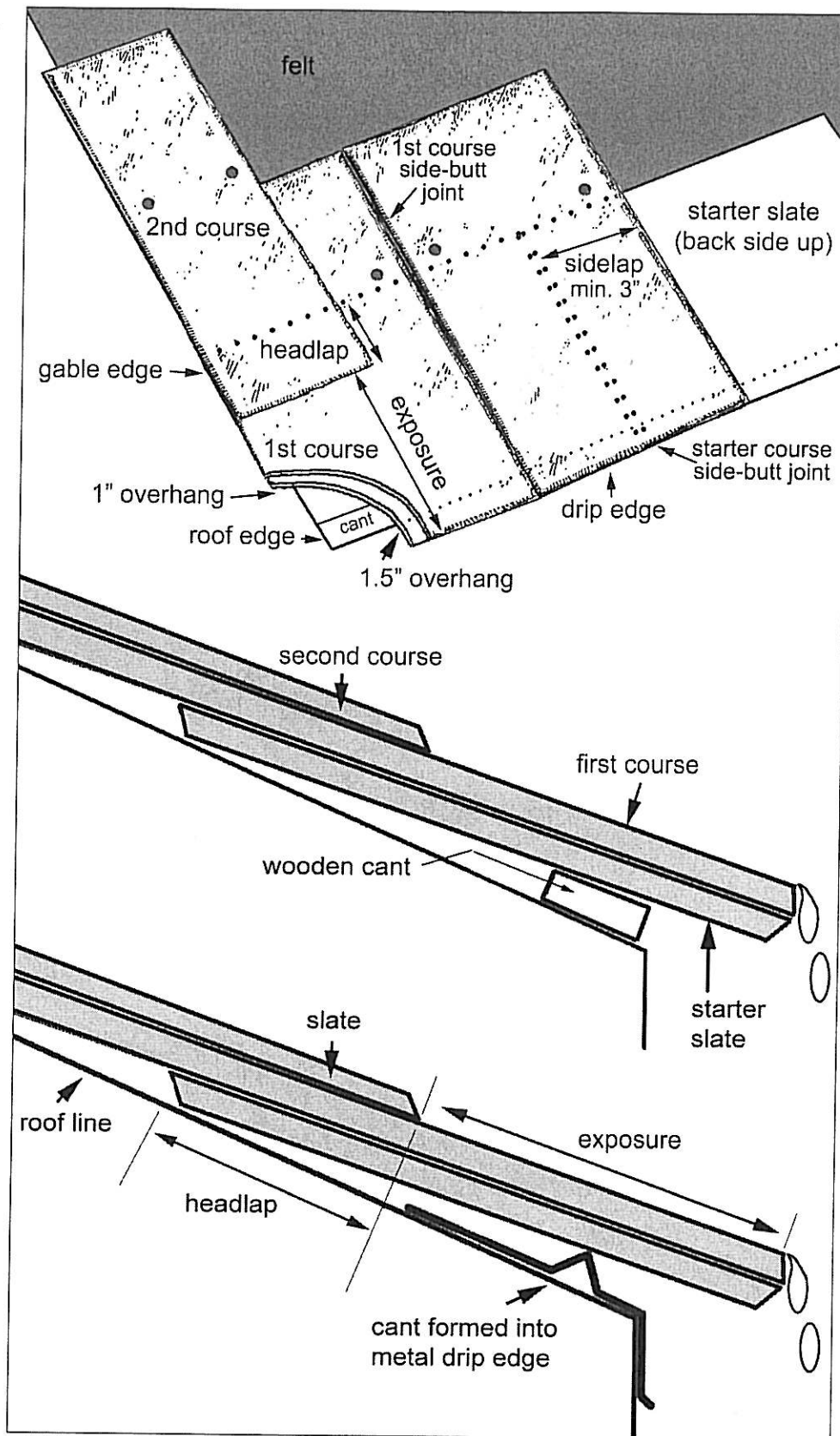
5.4. SLATE EXPOSURES AND HEADLAPS

When Using 3" and 4" Headlaps (showing Number of Slates per Square)

<u>Slate Size (in.)</u>	<u>Exposure (3" H.L.)</u>	<u>Slates/Square</u>	<u>Exp. (4" Headlap)</u>	<u>Slates/Square</u>
6x10	3 1/2"	686	3"	800
7x10	3 1/2"	588	3"	686
8x10	3 1/2"	514	3"	600
6x12	4 1/2"	533	4"	600
7x12	4 1/2"	457	4"	515
8x12	4 1/2"	400	4"	450
9x12	4 1/2"	355	4"	400
10x12	4 1/2"	320	4"	360
7x14	5 1/2"	374	5"	412
8x14	5 1/2"	327	5"	360
9x14	5 1/2"	290	5"	320
10x14	5 1/2"	261	5"	288
12x14	5 1/2"	218	5"	240
8x16	6 1/2"	277	6"	300
9x16	6 1/2"	246	6"	256
10x16	6 1/2"	222	6"	230
12x16	6 1/2"	185	6"	192
9x18	7 1/2"	213	7"	221
10x18	7 1/2"	192	7"	199
11x18	7 1/2"	175	7"	187
12x18	7 1/2"	160	7"	171
10x20	8 1/2"	170	8"	180
11x20	8 1/2"	154	8"	164
12x20	8 1/2"	141	8"	150
14x20	8 1/2"	121	8"	129

11x22	9 1/2"	138	9"	146
12x22	9 1/2"	126	9"	134
14x22	9 1/2"	109	9"	115
12x24	10 1/2"	114	10"	120
14x24	10 1/2"	98	10"	103

Fig. 1



BIDDER'S REFERENCES BID #928-B: Please list three (3) references of current or very recent customers who can verify the quality of service your company provides. Projects of similar size and scope are preferred.

REFERENCE ONE

Government/Company Name _____

City _____

Contact Person and Title _____

Phone _____ Email Address _____

Scope of Work & Contract Period _____

REFERENCE TWO

Government/Company Name _____

City _____

Contact Person and Title _____

Phone _____ Email Address _____

Scope of Work & Contract Period _____

REFERENCE THREE

Government/Company Name _____

City _____

Contact Person and Title _____

Phone _____ Email Address _____

Scope of Work & Contract Period _____

COMPANY'S NAME: _____

COMPANY INFORMATION

Company _____

Physical Address of Business _____

Mailing Address (**If Different**) _____

Authorized Representative _____

(Print or Type)

Authorized Representative _____

(Signature)

Title _____

Email Address: _____

Telephone Number: () _____

Cellular Number: () _____

Fax Number: () _____