



**CONTRACT DOCUMENTS
AND
SPECIFICATIONS**

FOR

**Roof Replacement for the Phoenix
Building**

101 East Vine Street, Lexington, KY 40507

Bid No. 22-2013

Prepared By:

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ROOF REPLACEMENT FOR THE PHOENIX BUILDING

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ADVERTISEMENT FOR BIDS

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ADVERTISEMENT FOR BIDS

1. INVITATION

Sealed proposals for the following work will be received by the Lexington-Fayette Urban County Government (LFUCG) until **2:00 p.m., local time, Thursday, April 11, 2013**, for furnishing all labor and/or materials and performing all work as set forth by this advertisement, conditions (general and special), specifications, and/or the drawings prepared by and for Lexington-Fayette Urban County Government, Department of General Services. Immediately following the scheduled closing time for reception of bids, all proposals which have been submitted in accordance with the above will be publicly opened and read aloud.

2. DESCRIPTION OF WORK

This project includes the roof removal and replacement of the Phoenix Building roof including the penthouse roof. The existing two roof systems are to be removed to existing gypsum deck and flashings removed from parapet walls. Base bid to include 10% gypsum roof repairs, and all new wood blocking in existing locations. Base sheet shall be set in hot bitumen, insulation, 3", installed, followed by 1/2" recovery board, second base ply and modified bituminous smooth surface cap sheet set in hot bitumen. Entire roof to be coated with aluminized coating. Lightening rod system is to be repaired and certified. Man door to roof is to be replaced with new frame, sill and threshold. The plans and specifications explain the intention of the repair work and outline acceptable products and procedures.

3. OBTAINING PLANS, SPECIFICATIONS, AND BID DOCUMENTS

Specifications, Plans, and Bid Documents may be examined at the following places:

Lexington-Fayette Urban County Government
Division of Central Purchasing
200 East Main Street, Third Floor, Room 338
Lexington, Kentucky 40507
(859) 258-3320

4. METHOD OF RECEIVING BIDS

Bids will be received from Prime Contracting firms on a **Lump Sum Basis** for total Project. The Bidder must include a price for all bid items to be considered. Bids shall be submitted in the manner and subject to the conditions as set forth and described in the Instruction to Bidders and Special Conditions.

Sealed bids shall be clearly marked on the outside of the container as follows: Company Name and Address, Bid Invitation Number, and the Project Name. Bids are to remain sealed until official Bid closure time.

Mailed bids/proposals should be sent to the Director, Division of Central Purchasing, 200 East Main Street, Lexington, KY 40507.

5. **METHOD OF AWARD**

The Contract, if awarded, will be to the lowest, qualified responsible bidder for the total project whose qualifications indicate the award will be in the best interest of the OWNER and whose bid/proposal complies with all the prescribed requirements. No Notice of Award will be given until the OWNER has concluded such investigation as deemed necessary to establish the responsibility, qualifications and financial ability of Bidders to do the work in accordance with the Contract Documents to the satisfaction of the OWNER within the time prescribed. The OWNER reserves the right to reject the Bid of any Bidder who does not pass such investigation to the OWNER's satisfaction. In analyzing Bids, the OWNER may take into consideration alternate and unit prices, if requested by the Bid forms.

6. **BID WITHDRAWAL**

No bidder may withdraw his bid for a period of sixty (60) calendar days after the closing date for receipt of bids. Errors and omissions will not be cause for withdrawal of bid without forfeit of bid bond. Bids may be withdrawn in person prior to the closing date of receipt of bids.

7. **BID SECURITY**

If the bid is \$50,000 or greater, bid shall be accompanied by a certified check or bid bond payable to the Lexington-Fayette Urban County Government in an amount not less than Five Percent (5%) of the base bid. Bid bond shall be executed by a Surety Company authorized to do business in the Commonwealth of Kentucky and countersigned by a licensed Kentucky Resident Agent, representing the Surety Company. Bid Bonds are not required for bids under \$50,000. A cashier's check or irrevocable letter of credit is an acceptable form of bid security.

8. **SUBMISSION OF BIDS**

CONTRACTORS shall submit their bids to the Lexington-Fayette Urban County Government, Division of Purchasing, Third Floor, 200 East Main Street, Lexington, Kentucky 40507. Bids shall be submitted in a sealed envelope not later than **2:00 p.m. local time, Thursday, April 11, 2013**. Sealed proposals shall be clearly marked on the outside of the container as follows: **"Company Name and Address, Bid Invitation Number, and Project Name to be opened at 2:00 p.m. local time, Thursday, April 11, 2013**. Bids are to remain sealed until official Bid closure time. Bids received after the scheduled closing time for receipt of bids will not be considered and will be returned unopened.

9. **RIGHT TO REJECT**

The Lexington-Fayette Urban County Government reserves the right to reject any and all bids and to waive all informalities and/or technicalities where the best interest of the Lexington-Fayette Urban County Government may be served.

10. NOTIFICATION TO THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT FOR AFFIRMATIVE ACTION PLAN AND CURRENT WORKFORCE

The successful bidder must submit, within seven (7) calendar days of the bid opening, the following to the Lexington-Fayette Urban County Government:

1. Affirmative Action Plan for his/her firm.

Failure to submit this as required herein may result in disqualification of the Bidder from the award of the contract.

All submissions should be directed to:

Lexington-Fayette Urban County Government
Division of Purchasing
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507

11. NOTICE CONCERNING DBE GOAL

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) contract participation.

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this contract be subcontracted to Disadvantaged Business Enterprises. The goal for the utilization of Disadvantaged Business Enterprises as subcontractors is a recommended goal. Contractors who fail to meet such goals will be expected to provide written explanations to the EEO Office and the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goals, and the extent to which they are successful in accomplishing the recommended goals will be a consideration in the procurement process.

For assistance in locating Disadvantaged Business Enterprises Subcontractors contact:

Marilyn Clark, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507
(859) 258-3323

12. PRE-BID MEETING

There is a pre-bid meeting scheduled for this project for 10:00 AM on Thursday, April 4 at the Phoenix Building in the 1st Floor Large Conference room located at 101 East Vine Street, Lexington, Kentucky, 40507.

PART II
INFORMATION FOR BIDDERS

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PART II

INFORMATION FOR BIDDERS

1. RECEIPT AND OPENING OF BIDS

The Lexington-Fayette Urban County Government (herein called the OWNER) invites bids from firms on the project described in the Advertisement for Bids. The OWNER will receive bids at the Division of Purchasing, at the time and in the manner set forth in the Advertisement for Bids, and the Bids will then be publicly opened and read aloud. The OWNER may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual time and date of the bid opening, but OWNER may, in its sole discretion, release any bid and return the Bid Security prior to that date.

The Lexington-Fayette Urban County Government assumes no responsibility for bids that are not addressed and delivered as indicated above. Bids that are not delivered to the Division of Central Purchasing by the stated time and date will be rejected.

2. PREPARATION OF BID

Each bid must be submitted on the prescribed Form of Proposal. All blank spaces for the bid prices must be filled in, either in ink or typewritten, for both unit prices and extensions. Totals for each bid item must be added to show the total amount of the bid. Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, their address, the name of the project, the invitation number and time and date for which the bid is submitted. Bids must be addressed to the Director of Purchasing, Lexington-Fayette Urban County Government, Third Floor, 200 East Main Street, Lexington, Kentucky 40507. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified above.

3. SUBCONTRACTS

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the OWNER. All proposed subcontractors must be identified on the Form of Proposal. Prior to the award of Contract, the OWNER or the OWNER'S representative will advise the CONTRACTOR of the acceptance and approval thereof or of any action necessary to be taken. Should any Subcontractor be rejected by the OWNER, the CONTRACTOR shall present a new name and/or firm to the OWNER at no change in the Contract Price.

The CONTRACTOR agrees that all requirements of this contract shall also be applicable and binding on all subcontractors. The CONTRACTOR shall enter into written

agreements with all subcontractors, providing the Lexington-Fayette Urban County Government a copy of each subcontractor agreement at the time each subcontractor agreement is executed. Each subcontractor agreement shall include a copy of the applicable federal wage decision

4. QUALIFICATION OF BIDDER

The OWNER may make such investigations as the OWNER deems necessary to determine the ability of the bidder to perform the Work, and the bidder shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the OWNER that such bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein. Conditional bids will not be accepted.

In evaluating Bids, OWNER shall consider the qualifications of the BIDDERS, whether or not the Bids comply with the prescribed requirements, and alternatives and unit prices, as requested. OWNER may consider maintenance requirements, performance data, and disruption or damage to private property. It is OWNER'S intent to accept alternatives, if requested by the bid forms, in the order in which they are listed in the Bid Form but OWNER may accept or decline them in any order or combination. The contract, if awarded, will be awarded to the lowest, qualified, responsible BIDDER based upon OWNER'S evaluation which indicates that the award will be in the best interest of OWNER and the general public.

In the event there is any question as to the bidder's qualifications and ability to complete the work, a final determination will be made in accordance with a fair evaluation by the Urban County Government of the above listed elements.

- A. If the OWNER requires filling out a detailed financial statement, the bidder may provide its current certified financial statement(s) for the required time interval.
- B. Corporate firms are required to be registered and in good standing with the requirements and provisions of the Office of the Secretary of State, Commonwealth of Kentucky.
- C. Good standing with Public Works Act - any CONTRACTOR and/or subcontractors in violation of any wage or work act provisions (KRS 337.510 to KRS 337.550) are prohibited by Statutory Act (KRS 337.990) from bidding on or working on any and all public works contracts, either in their name or in the name of any other company, firm or other entity in which he might be interested. No bid from a prime contractor in violation of the Act can be considered, nor will any subcontractor in violation of the Act be approved and/or accepted. The responsibility for the qualifications of the subcontractor is solely that of the prime contractor.
- D. Documents Required of CONTRACTOR - (1) A sworn statement signed by the President or owner of the Company regarding all current work in progress anywhere; (2) A document showing the percent of completion of each project and the total

worth of each project; and (3) Documentation showing the percentage of the DBE employment levels on each project of the Bidder's current work force, and DBE participation levels for Subcontractors.

- E. Optional OWNER Requirements - The OWNER, at its discretion, may require the BIDDER/CONTRACTOR to provide: (1) a current detailed financial statement for a period including up to 3 prior years; (2) financial security or insurance in amounts and kinds acceptable to the OWNER to meet the financial responsibility requirements for the CONTRACTOR to indemnify the OWNER. (3) Additional information and/or DBE work force data, as well as DBE participation data.

Each bidder agrees to waive any claim it has or may have against the Owner, the Architect/Engineer, and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any bid.

5. BID SECURITY

- A. Each bid must be accompanied by a bid bond prepared on a Form of Bid Bond and attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the OWNER, in the amount of 5% of the bid. Such bid bond will be returned to the unsuccessful bidder(s) only upon written request to the Director of Central Purchasing within seven (7) days of opening of bids. Bid bond shall be made payable to the Lexington-Fayette Urban County Government. Bid security is not required for projects under \$50,000.
- B. Bonds shall be placed with an agent licensed in Kentucky with surety authorized to do business within the state. When the premium is paid for such coverage, the full commission payable shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.

6. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful bidder, upon his failure or refusal to execute and deliver the Contract and bonds required within ten (10) days after he has received notice of the acceptance of his bid, shall forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited with his bid.

7. TIME OF COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" from the OWNER and to fully complete the Project within the time as specified in the Contract. Bidder must agree also to pay \$200 per day as liquidated damages, or the sum as specified in the Contract for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

8. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site(s) to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider Federal, State and Local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.
- B. Bidders should examine the requirements of section 4 of the General Conditions for information pertaining to subsurface conditions, underground structures, underground facilities, and availability of lands, easements, and rights-of-way. The completeness of data, presented in the Contract Documents, pertaining to subsurface conditions, underground structures, and underground facilities for the purposes of bidding or construction is not assured. The Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface and subsurface) which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents. On request in advance, OWNER will provide access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.
- C. The submission of a Bid will constitute an incontrovertible representation by the Bidder that Bidder has complied with every requirement of this paragraph 8; that without exception the Bid is premised upon furnishing and performing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents; and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

9. SECURITY FOR FAITHFUL PERFORMANCE

- A. Simultaneously with his delivery of the executed Contracts, the CONTRACTOR shall furnish a surety bond or bonds as security for the faithful performance of this Contract and for payment of all persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the OWNER and authorized to do business in the Commonwealth of Kentucky.
- B. All bonds required by this Contract and laws of this State shall be placed with agents licensed in the State of Kentucky. When the premium is paid for such coverage's,

the full commission shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.

- C. **Contractor shall use standard Performance and Payment Bond forms such as documents provided with this contract book or AIA form A312-1984 (or later).**

10. POWER OF ATTORNEY

Attorney-in-fact who signs bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

11. TAXES AND WORKMEN'S COMPENSATION

The CONTRACTOR and subcontractor will be required to accept liability for payment of all payroll taxes, sales and use tax, and all other taxes or deductions required by local, state or federal law, such as old age pension, social security, or annuities measured by wages. Each shall carry Workmen's Compensation Insurance to the full amounts as required by Statutes and shall include the cost of all foregoing items in the proposal. The CONTRACTOR will not otherwise be reimbursed or compensated for such tax payments. The CONTRACTOR is urged to ascertain at his own risk his actual tax liability in connection with the execution or performance of his Contract.

12. LAWS AND REGULATIONS

The bidder's attention is directed to the fact that all applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the contract, the same as though herein written out in full.

13. EROSION AND SEDIMENT CONTROL AND PERMITS

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall also comply with all applicable federal, state, and local environmental regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits as described in Part 4 General Conditions Paragraph 5.17.

14. PREVAILING WAGE LAW AND MINIMUM HOURLY RATES

Federal or state wage rates and regulations, if required for this Project, will be as described in the Special Conditions.

15. AFFIRMATIVE ACTION PLAN

The successful Bidder must submit with their bid, the following items to the Urban County Government:

1. Affirmative Action Plan for his/her firm -- see Part II, page IB-7

2. Current Work Force Analysis Form – see Part III, page P-26
3. Good Faith Effort Documentation – see Part III, page P-18
4. List of Disadvantaged Business Enterprise Subcontractors and the Dollar Value of each Subcontract – see Part III, page 12

Bidders who frequently bid on Urban County Government projects may file a copy of their firm's Affirmative Action Plan with the Urban County Government. If an Affirmative Action Plan is filed with the Urban-County Government, additional submissions will not be required unless said plan is revised.

A Work Force Analysis Form shall be submitted for each Contract. Failure to submit these items as required herein may result in disqualification of the Bidder from award of the Contract.

All submissions should be directed to:

Director, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Third Floor
Lexington, KY 40507

16. CONTRACT TIME

The number of calendar days within which the Work is to be substantially completed and ready for final payment (the Contract Time) is set forth in the Form of Proposal and the Agreement.

17. SUBSTITUTE OR "OR-EQUAL" ITEMS

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by the CONTRACTOR if acceptable to the ENGINEER and OWNER, application for such acceptance will not be considered by the ENGINEER and OWNER until after the effective date of the Agreement. The procedure for submission of any such application by the CONTRACTOR and consideration by the ENGINEER and OWNER is set forth in the General Conditions.

18. ALTERNATE BIDS

Bidders shall submit alternate bids/proposals only if and when such alternate bids/proposals have been specifically requested in an Invitation for Bids. If alternate bids/proposals are requested in an Invitation for Bids, the form of submission of such alternate bid and the conditions under which such alternate bids will be considered for award of a contract will be established in the Invitation.

Any Bidder who submits a bid incorporating an alternate proposal when alternate bids/proposals have not been requested in the Invitation for Bids shall have his/her bid rejected as non-responsive.

Any Bidder who submits a bid incorporating two (2) or more prices for an item or groups of items (unless such method of pricing is requested in the Invitation for Bids), or which imposes conditions for acceptance other than those established in the Invitation for Bids, shall have their bid rejected as non-responsive.

19. SIGNING OF AGREEMENT

When OWNER gives a Notice of Award to the successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten days thereafter, CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds, Certificate of Insurance, and Power of Attorney. The OWNER will deliver one fully signed counterpart to CONTRACTOR at such time as it has been signed by the Mayor.

20. ASSISTANCE TO BE OFFERED TO DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACTORS

I. Outreach

The Lexington-Fayette Urban County Government (LFUCG) maintains a mailing list of DBE contractors and organizations. When a LFUCG construction project is advertised for bidding, notices are sent to the entire mailing list. The notices describe the project, indicate the deadline for submitting bids, and review the bonding assistance which is available.

If you wish to be added to the LFUCG DBE contractor mailing list, please contact:

Marilyn Clark
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507

II. Eligibility for Bid Bond Assistance

In order to be eligible for any bid bonding assistance, a DBE construction company must be owned or controlled at the level of 51% or more, by a member or members of a minority group or females. Prior to receiving assistance, a statement providing evidence of ownership and control of the company by a member or members of a minority group or females must be signed by the OWNER or corporate officer and by an attorney or accountant and submitted to:

Marilyn Clark
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507

III. Subcontractors

The LFUCG will, upon request, assist prime contractors in the procurement of eligible DBE subcontractors in an effort to achieve the 10% minimum DBE goal.

For a list of eligible DBE subcontractors please contact:

Marilyn Clark
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507

IV. Questions

If you have questions or wish to have additional information, please contact:

Sondra Stone, Buyer
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor
Lexington, Kentucky 40507
(859) 258-3320

21. MBE/WBE PARTICIPATION GOALS

A. GENERAL

- 1) The LFUCG request all potential contractors to make a concerted effort to include Minority-Owned (MBE) and Woman-Owned (WBE) Business Enterprises as subcontractors or suppliers in their bids.
- 2) Toward that end, the LFUCG has established 10% of total procurement costs as a Goal for participation of Minority-Owned and Woman-Owned Businesses on this contract.
- 3) **It is therefore a request of each Bidder to include in its bid, the same goal (10%) or for MBE/WBE participation and other requirements as outlined in this section.**

B. PROCEDURES

- 1) The successful bidder will be required to report to the LFUCG, the dollar amounts of all purchase orders submitted to Minority-Owned or Woman-Owned subcontractors and suppliers for work done or materials purchased for this contract. (See Subcontractor Monthly Payment Report)
- 2) Replacement of a Minority-Owned or Woman-Owned subcontractor or supplier listed in the original submittal must be requested in writing and must be accompanied by documentation of Good Faith Efforts to replace the subcontractor / supplier with another MBE/WBE Firm; this is subject to approval by the LFUCG. (See LFUCG MBE/WBE Substitution Form)
- 3) For assistance in identifying qualified, certified businesses to solicit for potential contracting opportunities, bidders may contact:
 - a) The Lexington-Fayette Urban County Government, Division of Central Purchasing (859-258-3320)
- 4) The LFUCG will make every effort to notify interested MBE/WBE subcontractors and suppliers of each Bid Package, including information on the scope of work, the pre-bid meeting time and location, the bid date, and all other pertinent information regarding the project.

C. DEFINITIONS

- 1) A Minority-Owned Business Enterprise (MBE) is defined as a business which is certified as being at least 51% owned and operated by persons of African American, Hispanic, Asian, Pacific Islander, American Indian or Alaskan Native Heritage.
- 2) A Woman-Owned Business Enterprise (WBE) is defined as a business which is certified as being at least 51% owned and operated by one or more Non-Minority Females.

D. OBLIGATION OF BIDDER

- 1) **The bidder shall make a Good Faith Effort to achieve the Participation Goal for MBE/WBE subcontractors/suppliers. The failure to meet the goal shall not necessarily be cause for disqualification of the bidder; however, bidders not meeting the goal are required to furnish with their bids written documentation of their Good Faith Efforts to do so.**
- 2) Award of Contract shall be conditioned upon satisfaction of the requirements set forth herein.
- 3) The Form of Proposal includes a section entitled "MBE/WBE Participation Form". The applicable information must be completed and submitted as outlined below.
- 4) **Failure to submit this information as requested will be cause for rejection of bid.**

E. DOCUMENTATION REQUIRED

- 1) Bidders reaching the Goal are required to submit only the "MBE/WBE Participation Form." The form must be fully completed including names and telephone number of participating MBE/WBE firm(s); type of work to be performed; estimated value of the contract and value expressed as a percentage of the total Lump Sum Bid Price. The form must be signed and dated, and is to be submitted with the bid.
- 2) Bidders not reaching the Goal must submit the "MBE/WBE Participation Form", the "MBE Quote Summary Form" and a written statement documenting their Good Faith Effort to do so (If bid includes no MBE/WBE participation, bidder shall enter "None" on the subcontractor / supplier form). In addition, the bidder may submit the following as proof of Good Faith Efforts to meet the Participation Goal:
 - a) Advertisement by the bidder of MBE/WBE Contracting opportunities associated with this bid in at least two (2) of the following:
 1. A periodical in general circulation throughout the region
 2. A Minority-Focused periodical in general circulation throughout the region
 3. A Trade periodical aimed at the MBE/WBE community in general circulation throughout the region
 4. Bidder shall include copies of dated advertisement with his submittal
 - b) Evidence of written notice of contracting opportunities to at least five (5) MBE/WBE firms serving the construction industry at least seven (7) days prior to the bid opening date.
 - c) Copies of quotations submitted by MBE/WBE firms which were not used due to uncompetitive pricing or other factors and/or copies of responses from firms that were contacted indicating that they would not be submitting a bid.
 - d) Documentation of Bidder's utilization of the agencies identified to help locate potential MBE/WBE firms for inclusion on the contract including responses from agencies.
 - e) Failure to submit any of the documentation requested in this section will be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement. "Record of MBE/WBE Solicitation" and other required documentation of Good Faith Efforts are to be submitted with the bid, if participation Goal is not met.



MINORITY BUSINESS ENTERPRISE PROGRAM

Marilyn Clark
Minority Business Enterprise Liaison
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street
Lexington, KY 40507
mclark@lexingtonky.gov
859-258-3323

OUR MISSION: The mission of the Minority Business Enterprise Program is to facilitate the full participation of minority and women owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long term economic viability of Lexington-Fayette Urban County Government.

To that end the city council adopted and implemented resolution 167-91—Disadvantaged Business Enterprise (DBE) 10% Goal Plan in July of 1991. The resolution states in part (a full copy is available in Central Purchasing):

"A Resolution supporting adoption of the administrative plan for a ten percent (10%) Minimum goal for disadvantaged business enterprise participation in Lexington-Fayette Urban County Government construction and professional services contracts; Providing that as part of their bids on LFUCG construction contracts, general Contractors shall make a good faith effort to award at least ten percent (10%) of All subcontracts to disadvantaged business enterprises; providing that divisions of LFUCG shall make a good faith effort to award at least ten percent of their Professional services and other contracts to disadvantaged business enterprises..."

A Disadvantaged Business Enterprise is defined as a business at least 51% owned, operated and managed by a U.S. Citizen of the following groups:

- African-American
- Hispanic-American
- Asian/Pacific Islander
- Native American/Native Alaskan
- Non-Minority Female

We are very happy that you have decided to bid for a contract, request for proposal, submitted a quote or are interested in learning more about how to do business with Lexington-Fayette Urban County Government. We have compiled the list below to help you locate certified minority vendors.

LFUCG—Economic Engine Listings

Marilyn Clark
mclark@lexingtonky.gov
859-258-3323

Commerce Lexington—

Tyrone Tyra, Minority Business Development
tyra@commercelexington.com
859-226-1625

Tri-State Minority Supplier Diversity Council

Sonya Brown
sbrown@tsmsdc.com
502-625-0137

Small Business Development Council

Dee Dee Harbut /UK SBDC
dharbut@uky.edu

Shawn Rogers, UK SBDC
Shawn.rogers@uky.edu

Shiree Mack
smack@uky.edu

Community Ventures Corporation

James Coles
jcoles@cvcky.org
859-231-0054

Kentucky Department of Transportation

Shella Jarvis
Shella.Jarvis@ky.gov
502-564-3601

KPAP

Debbie McKnight
Debbie.McKnight@ky.gov
800-838-3266 or 502-564-4252

Bobbie Carlton
Bobbie.Carlton@ky.gov

Ohio River Valley Women's Business Council

Rea Waldon
rwaldon@gcul.org
513-487-6534

Kentucky Small Business Connect

Tom Back
800-626-2250 or 502-564-2064
<https://secure.kentucky.gov//sbc>

**National Minority Supplier Development Council, Inc.
(NMSDC)**

www.nmsdc.org

22. REQUIRED SUBMITTALS

The following forms must be submitted with your bid at minimum or your bid will be considered non-responsive and rejected:

- Part III – Form of Proposal, P-2
 - Affidavit, P-5 (must be signed and notarized)
 - Bid Schedule, P-7 (original signature)
 - Statement of Qualifications, P-10
 - DBE Subcontractors, P-12
 - List of proposed subcontractors, P-13
 - Non-Collusion/Non-Conflict, P-19
 - Statement of Experience, P-20
 - EEO Agreement, P-22
 - EEO Affirmative Action Policy, P-25
 - Workforce Analysis, P-26
 - Evidence of Insurability Form, P-27 or Certificate of Insurance
 - Debarred Firms, P-28

PART III
FORM OF PROPOSAL
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PART III

Invitation to Bid No. 22-2013

Roof Replacement for the Phoenix Building

1. **FORM OF PROPOSAL**

Place: Lexington, Kentucky

Date: 4/18/13

The following Form of Proposal shall be followed exactly in submitting a proposal for this Work.

This Proposal Submitted by Kalkreuth Roofing and Sheet Metal

2131 Capstone Dr. Lexington, KY 40511

(Name and Address of Bidding Contractor)

(Hereinafter called "Bidder"), organized and existing under the laws of the State of WV
doing business as a corporation
"a corporation," "a partnership", or an "individual" as applicable.

To: Lexington-Fayette Urban County Government
(Hereinafter called "OWNER")
Office of the Director of Purchasing
200 East Main Street, 3rd Floor
Lexington, KY 40507

Gentlemen:

The Bidder, in compliance with your Invitation to Bids for the **Roof Replacement for the Phoenix Building Project** having examined the Plans and Specifications with related documents, having examined the site for proposed Work, and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the lump sum and/or unit prices stated hereinafter. These prices are to cover all expenses incurred in performing the Work required under the Contract Documents, of which this proposal is a part. The OWNER will issue work orders for work to be performed under this Contract.

BIDDER hereby agrees to commence work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within the time provided in the Purchase Order or Work Orders issued by the OWNER. BIDDER further agrees to pay liquidated damages, the sum of \$ 200 for each consecutive calendar day thereafter.

The Bidder hereby acknowledges receipt of the following addenda:

Addendum No. 1 Date 4/2/13

Addendum No. 2 Date 4/4/13

Addendum No. 3 Date 4/9/13

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Insert above the number and the date of any Addendum issued and received. If none has been issued and received, the word "NONE" should be inserted.

2. LEGAL STATUS OF BIDDER

Bidder Kalkreuth Roofing and Sheet Metal

Date 4/18/13

* 1. A corporation duly organized and doing business under the laws of the State of WV, for whom Chad L. McLeish, bearing the official title of VP of Estimating, whose signature is affixed to this Bid/Proposal, is duly authorized to execute contracts.

~~* 2. A Partnership, all of the members of which, with addresses are: (Designate general partners as such)~~

~~* 3. An individual, whose signature is affixed to this Bid/Proposal (please print name)~~

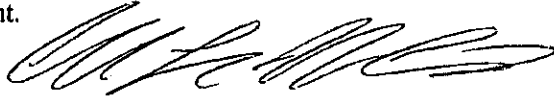
*(The Bidder shall fill out the appropriate form and strike out the other two.)

3. **BIDDERS AFFIDAVIT**

Comes the Affiant, Chad L. McLeish, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Chad L. McLeish and he/she is the individual submitting the bid or is the authorized representative of Kalkreuth Roofing and Sheet Metal, the entity submitting the bid (hereinafter referred to as "Bidder").
2. Bidder will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the bid is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
3. Bidder will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.
4. Bidder has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
5. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.
6. Bidder has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as the "Ethics Act."
7. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.



(Affiant)

STATE OF West Virginia

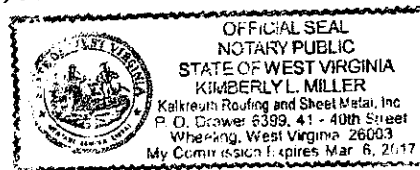
COUNTY OF Ohio

The foregoing instrument was subscribed, sworn to and acknowledged before me by

Chad McLeish on this the 16th day of April,
2013.

My Commission expires: March 6, 2017


NOTARY PUBLIC, STATE AT LARGE



4. BID SCHEDULE - SCHEDULE OF VALUES

The Bidder agrees to perform all the Work described in the Specifications and shown on the Plans for the following lump sum and/or unit prices, if applicable, which shall include the furnishing of all labor, materials, supplies, equipment and/or vehicle usage, services, all items of cost, overhead, taxes (federal, state, local), and profit for the CONTRACTOR and any Subcontractor involved, within the time set forth herein. If unit prices are applicable, Bidder must make the extensions and additions showing the total amount of bid.

The contract, if awarded, will be on the basis of materials and equipment specified in the specifications without consideration of possible substitute or "or equal" items.

Unit prices are solely for the purpose of calculating and negotiating unanticipated, additional work beyond the scope detailed on the plans and specifications. Any additional work by the CONTRACTOR without prior approval from the OWNER shall be at his own expense.

In case of discrepancy, the amount shown in words will govern.

Item No.	Description w/Unit Bid Price Written in Words	Estimated Quantity	Unit	Unit Price	Total Bid Amount
1.	Complete Base Bid Scope of Work One hundred sixty seven thousand three hundred sixty seven _____ Dollars zero _____ Cents (Lump Sum)	1	LS	\$ <u>15.22</u>	\$ <u>167,367.00</u>
2.	Complete Bid Alternate #1 Scope of Work one hundred seventy two thousand two hundred thirty four _____ Dollars zero _____ Cents (Lump Sum)	1	LS	\$ <u>15.67</u>	\$ <u>172,234.00</u>
3.	Complete Bid Alternate #2 Scope of Work Three thousand three hundred eighty five _____ Dollars zero _____ Cents (Lump Sum Deduct)	1	LS	(<u>\$.31</u>)	(<u>\$3,385</u>)

Contract award will be made based on the lump sum base bid or lump sum bid with any combination of bid alternatives selected. Bid alternatives will be added or deducted from the lump sum base bid, if they are accepted, prior to Notice of Award being made.

OWNER reserves the right to accept or reject any bid alternatives or equipment alternatives to the lump sum base bid. Consideration of equipment alternatives of the selected Bidder will be made by OWNER within 60 days after the Effective Date of the Agreement.

If bid alternative is selected by OWNER, the awarded Contract price will include the selected alternative(s).

BID ALTERNATIVE #1: Additional Roof Ply

CONTRACTOR shall include in the cost of bid alternative ALL work associated with providing the scope listed below.

The price of \$ 4,867 shall be added to the contract lump sum base bid if OWNER elects to have CONTRACTOR provide an additional ply of roofing felt, for a total of three plies and the cap sheet, set in modified bitumen over the entire roof area.

BID ALTERNATIVE #2: Credit for Cold Adhered System

The price of \$ 3,385 shall be subtracted from the contract lump sum base bid if OWNER elects to have CONTRACTOR provide a modified bituminous roof system of 3" of insulation, recovery board, 3 ply roofing, smooth surfaced cap sheet, and fibrated coating installed using cold adhesives between plies as required by the approved roofing manufacturer's, in lieu of the hot modified bituminous roof system.

UNIT PRICES

The following List of unit prices is required by the Owner to be completely executed and submitted with each Bidder's Proposal. Each unit price shall include the furnishing of all labor, materials, supplies and services, and shall include all items of cost, overhead and profit for the Contractor and any Sub-Contractors involved, and shall be used uniformly, without modification, for either additions or deductions from the Bid. These unit prices as established shall also be used to determine the equitable adjustment of the Contract Price in connection with changes, or extra work performed under the Contract.

<u>DESCRIPTION OF WORK</u>	<u>UNIT PRICE (INSTALLED)</u>	
1. Wood Cant Strip	<u>1.12</u>	\$/L.F.
2. Wood Blocking 2(2x4)	<u>3.17</u>	\$/L.F.
3. Gypsum Deck Repairs	<u>14.50</u>	\$/S.F.

Submitted by:

Kalkreuth Roofing and Sheet Metal

Firm

2131 Capstone Dr.

Address

Lexington, KY 40511

City, State & Zip

***Bid must be signed:
(original signature)***



Signature of Authorized Company Representative – Title

Chad L. McLeish, VP of Estimating

Representative/s Name (Typed or Printed)

859-231-7663

Area Code – Phone – Extension

859-231-7669

Fax #

cmcleish@krsm.net

E-Mail Address

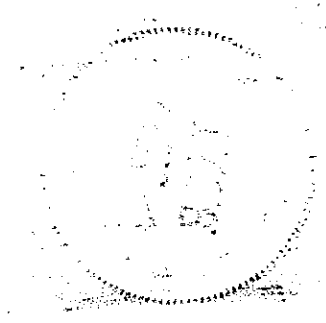
OFFICIAL ADDRESS:

41-40th St

PO Drawer 6399

Wheeling, WV 26003

(Seal if Bid is by Corporation)



By signing this form you agree to ALL terms, conditions, and associated forms in this bid package

5. STATEMENT OF BIDDER'S QUALIFICATIONS

The following statement of the Bidder's qualifications is required to be filled in, executed, and submitted with the Proposal:

- 1. Name of Bidder: Kalkreuth Roofing and Sheet Metal
- 2. Permanent Place of Business: 41 40th St PO Drawer 6399 Wheeling, WV 26003
- 3. When Organized: 1984
- 4. Where Incorporated: 1984
- 5. Construction Plant and Equipment Available for this Project:

N/A

(Attach Separate Sheet If Necessary)

- 6. Financial Condition:

If specifically requested by the OWNER, the apparent low Bidder is required to submit its latest three (3) years audited financial statements to the OWNER'S Division of Central Purchasing within seven (7) calendar days following the bid opening.

- 7. In the event the Contract is awarded to the undersigned, surety bonds will be furnished by:

U.S. Specialty Insurance Company (Surety)

Signed:  (Representative of Surety)

8. The following is a list of similar projects performed by the Bidder: (Attach separate sheet if necessary).

NAME	LOCATION	CONTRACT SUM
LFUCG Chlorine Building	Lexington, KY	\$72,111
LFUCG Detention Ctr Kitchen Roof	Lexington, KY	\$15,800
LFUCG Cooperative Extension Office	Lexington, KY	\$84,600

9. The Bidder has now under contract and bonded the following projects:

NAME	LOCATION	CONTRACT SUM
Bluegrass Community & Technical College	Lexington, KY	\$499,718
Stonewall Elementary School	Lexington, KY	\$776,714
Adair Youth Development Center	Columbia, KY	\$323,864
Franklin County Career Center	Frankfort, KY	\$1,066,288
Pike County Public Library	Pikeville, KY	\$134,048

10. List Key Bidder Personnel who will work on this Project.

NAME	POSITION DESCRIPTION	NO. OF YEARS W/BIDDER
Tim Ginter	Superintendent	1
Stan Gorczyca	Project Manager	25
Travis Allen	Roofing Foreman	4

11. DBE Participation on current bonded projects under contract:

SUBCONTRACTORS (LIST)	PROJECT (SPECIFY TYPE)	DBE	% OF WORK
Steele Blades	Green Roof	WBE	5%
JG Metro Wholesale	New Construction TPO Roofing	MBE	10%

(USE ADDITIONAL SHEETS IF NECESSARY)

12. We acknowledge that, if we are the apparent low Bidder, we will submit to the OWNER within 7 calendar days following the Bid Opening, a sworn statement on the OWNER'S form regarding all current work on hand and under contract, and a statement on the OWNER'S form of the experience of our officers, office management and field management personnel. Additionally, if requested by the OWNER, we will within 7 days following the request submit audited financial statements and loss history for insurance claims for the 3 most recent years (or a lesser period stipulated by the OWNER)—all in accordance with the Bid Documents.

6. LIST OF PROPOSED SUBCONTRACTORS

The following list of proposed subcontractors is required by the OWNER to be executed, completed and submitted with the BIDDER'S FORM OF PROPOSAL. All subcontractors are subject to approval of the Lexington-Fayette Urban County Government. Failure to submit this list completely filled out may be cause for rejection of bid.

BRANCH OF WORK- LIST EACH MAJOR ITEM (e.g., electrical, carpentry, HVAC, etc.)	SUBCONTRACTOR	DBE? Yes/No	% of WORK
1. Lightning Protection	Name: Bluegrass Lightning Consultants, Inc. Address: PO Box 308 Bloomfield, KY 40008	WBE	2%
2. Hardware	Name: Schiller Hardware Address: 1032 Rushwood Ct Lexington, KY 40511	No	<1%
3.	Name: Address:		
4.	Name: Address:		
5.	Name: Address:		
6.	Name: Address:		
7.	Name: Address:		

(Attach additional sheet(s) if necessary.)



7. LFUCG MBE/WBE PARTICIPATION FORM

Bid/RFP/Quote Reference # Roof Replacement Phoenix Bldg/ Bid # 22-2013

The MBE/WBE subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately.

MBE/WBE Company, Name, Address, Phone, Email	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1. JG Metro Wholesale Steve Gumlaw 4521 Bishop Lane Louisville, KY 40218	Roofing Materials	\$18,400	10%
2. 502-458-8701			
3.			
4.			

The undersigned company representative submits the above list of MBE/WBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Kalkreuth Roofing and Sheet Metal

Dave Muntean

Company

Company Representative

4/18/13

Estimator

Date

Title



8. LFUCG MBE/WBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # _____

The substituted MBE/WBE subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project.

SUBSTITUTED MBE/WBE Company Name, Address, Phone, Email	MBE/WBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1.					
2.		N/A			
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title



9. **MBE/WBE QUOTE SUMMARY FORM**

Bid/RFP/Quote Reference # Roof Replacement Phoenix Bldg/ Bid # 22-2013

The undersigned acknowledges that the minority subcontractors listed on this form did submit a quote to participate on this project.

Company Name Kalkreuth Roofing and Sheet Metal	Contact Person Dave Muntean
Address/Phone/Email 2131 Capstone Dr. Lexington, KY 40511 859-231-7663 dmuntean@krsm.net	Bid Package / Bid Date Roof Replacement Phoenix Bldg/ Bid # 22-2013

MBE/WBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female
JG Metro Wholesale	Steve Gumlaw	502-458-8701 work	4/16/13	material purchase	phone mtg	\$18,400	AA

(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Kalkreuth Roofing and Sheet Metal

Dave Muntean

Company

Company Representative

4/18/13

Estimator

Date

Title

P-16



10. LFUCG MBE/WBE SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MBE/WBE vendors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.

Bid/RFP/Quote # Roof Replacement Phoenix Bldg/ Bid # 22-2013
 Total Contract Amount Awarded to Prime Contractor for this Project _____

Project Name/ Contract # Roof Replacement Phoenix Bldg/ Bid # 22-2013		Work Period/ From:	To:
Company Name:		Address:	
Federal Tax ID:		Contact Person:	

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date
			TBD				

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

Company

Company Representative

Date

Title



11. LFUCG STATEMENT OF GOOD FAITH EFFORTS

Bid/RFP/Quote # Roof Replacement Phoenix Bldg/ Bid # 22-2013

By the signature below of an authorized company representative, we certify that we have utilized the following methods to obtain the maximum practicable participation by minority and women owned business enterprises on the project. Please indicate which methods you used by placing an X in the appropriate place.

- Attended LFUCG Central Purchasing Economic Inclusion Outreach Event
- Sponsored Economic Inclusion event to provide networking opportunities
- Requested a list of MBE/WBE subcontractors or suppliers from LFUCG Economic Engine
- Advertised for MBE/WBE subcontractors or suppliers in local or regional newspapers
- Showed evidence of written notice of contracting and/or supplier opportunities to MBE/WBE firms at least seven days prior to the bid opening date
- Provided copies of quotations submitted by MBE/WBE firms which were not used and/or responses from firms indicating they would not be submitting a quote
- Provided plans, specifications, and requirements to interested MBE/WBE subcontractors
- Other
Please list any other methods utilized that aren't covered above.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

<u>Kalkreuth Roofing and Sheet Metal</u>	<u>Dave Muntean</u>
Company	Company Representative
<u>4/18/13</u>	<u>Estimator</u>
Date	Title

12. **AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION, NON-CONFLICT OF INTEREST**

I hereby swear (or affirm) under the penalty for false swearing:

1. That I am the Bidder (if the Bidder is an individual), a partner of the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);
2. That the attached bid has been arrived at by the Bidder independently, and has been submitted without collusion with, and without any agreement, understanding or planned common course of action, with any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition;
3. That the contents of the bid or bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished, with the bid or bids, and will not be communicated to any such person, prior to the official opening of the bid or bids;
4. That the Bidder is legally entitled to enter into the contracts with the Lexington-Fayette Urban County Government, and is not in violation of any prohibited conflict of interest;
5. (Applicable to corporation only) That as a foreign corporation, we are registered with the Secretary of State, Commonwealth of Kentucky, and authorized to do business in the State KY or, that as a domestic corporation, we are in good standing with the Secretary of State, Commonwealth of Kentucky x . Check the statement applicable.
6. This offer is for 60 calendar days from the date this bid is opened. In submitting the above, it is expressly agreed that, upon proper acceptance by the Lexington-Fayette Urban County Government of any or all items bid above, a contract shall thereby be created with respect to the items accepted.
7. That I have fully informed myself regarding the accuracy of the statements made in this statement.
8. That I certify that Subcontractors have not and will not be awarded to any firm(s) that have been debarred from noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

13. STATEMENT OF EXPERIENCE

NAME OF INDIVIDUAL: See Attached

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: See Attached

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: See Attached

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: See Attached

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: See Attached

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

NAME OF INDIVIDUAL: See Attached

POSITION/TITLE: _____

STATEMENT OF EXPERIENCE: _____

* Include all officers, office management's, Affirmative Action officials, and field management personnel. (Attach separate sheets if necessary.)



**Kalkreuth Roofing & Sheet Metal, Inc.
Appendix "C"
Key Personnel**

- **John L. Kalkreuth, President**

MBA - Wheeling Jesuit University

BS - Industrial Engineering - West Virginia University

28+ years experience in roofing, waterproofing and metal fabrication.

- **James J. Hurley, Executive Vice President**

MBA - Wheeling Jesuit University

BS - Industrial Engineering - West Virginia University

AT - Mechanical Engineering - Pennsylvania State University

25+ years experience in roofing, waterproofing and metal fabrication.

- **Patrick E. Hurley, Vice President of Operations**

BS - Business Administration - West Liberty State College

20+ years experience in roofing, waterproofing and metal fabrication.

- **J. David Hesse, Vice President, Maryland Division**

BS - Industrial Engineering - West Virginia University

15+ years experience in all types of roofing systems and waterproofing.

- **Daniel S. Tennant, Sales Manager**

MA - Marshall University

BA - Marshall University

10+ years experience in the construction industry

- **Wesley H. Nickell, Controller**

MBA - Wheeling Jesuit University

BS - Accounting and Economics - WV Wesleyan College

- **William Sokolowski, Estimator**

25+ years experience in all types of roofing systems and waterproofing

Please note that our Project Managers & Foremen average 25 years experience in the roofing industry.

- 10 Estimators

- 15 Proj. Mgrs / 12 Foreman

14. EQUAL OPPORTUNITY AGREEMENT

The Law

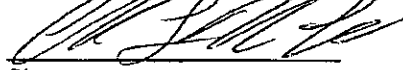
- * Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- * Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and subcontractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- * Section 503 of the Rehabilitation Act of 1973 States:
The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.
- * Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal Contracts.
- * Section 206 (A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:
The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors, and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractor may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped, and aged persons.



Signature

Kalkreuth Roofing and Sheet Metal, Inc.

Name of Business

The Entity (regardless of whether construction contractor, non-construction contractor or supplier) agrees to provide equal opportunity in employment for all qualified persons, to prohibit discrimination in employment because of race, color, creed, national origin, sex or age, and to promote equal employment through a positive, continuing program from itself and each of its sub-contracting agents. This program of equal employment opportunity shall apply to every aspect of its employment policies and practices.

The Kentucky equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any count, city, town, school district, water district, hospital district, or other political subdivision of the state shall include in directly or indirectly publicly funded contracts for supplies, materials, services, or equipment hereinafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

- (1) *The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin;*
- (2) *The contractor will state in all solicitations or advertisements for employees placed by or on behalf of the contractors that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age or national origin;*
- (3) *The contract will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the non-discrimination clauses required by this section; and*
- (4) *The contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of the contractor's commitments under the nondiscrimination clauses.*

The Act further provides:

KRS 45.610. Hiring minorities – Information required

- (1) *For the length of the contract, each contractor shall hire minorities from other sources within the drawing area, should the union with which he has collective bargaining agreements be unwilling to supply sufficient minorities to satisfy the agreed upon goals and timetable.*
- (2) *Each contractor shall, for the length of the contract, furnish such information as required by KRS 45.560 to KRS 45.640 and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with KRS 45.560 to 45.640 and such rules, regulations and orders issued pursuant thereto.*

KRS 45.620. Action against contractor – Hiring of minority contractor or subcontractor

- (1) *If any contractor is found by the department to have engaged in an unlawful practice under this chapter during the course of performing under a contract or subcontract covered under KRS 45.560 to 45.640, the department shall so certify to the contracting agency and such certification shall be binding upon the contracting agency unless it is reversed in the course of judicial review.*
- (2) *If the contractor is found to have committed an unlawful practice under KRS 45.560 to 45.640, the contracting agency may cancel or terminate the contract, conditioned upon a program for future compliance approved by the contracting agency and the department. The contracting agency may declare such a contractor ineligible to bid on further contracts with that agency until such time as the contractor complies in full with the requirements of KRS 45.560 – 45.640.*
- (3) *The equal employment provisions of KRS 45.560 to 45.640 may be met in part by a contractor by subcontracting to a minority contractor or subcontractor. For the provisions of KRS 45.560 to 45.640, a minority contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.*

KRS 45.630 Termination of existing employee not required, when

Any provision of KRS 45.560 to 45.640 notwithstanding, no contractor shall be required to terminate an existing employee upon proof that that employee was employed prior to the date of the contract.

KRS 45.640 Minimum skills

Nothing in KRS 45.560 to 45.640 shall require a contractor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

It is recommended that all of the provisions quoted above to be included as special conditions in each contract. In the case of a contract exceeding \$250,000, the contractor is required to furnish evidence that his work-force in Kentucky is representative of the available work-force in the area from which he draws employees, or to supply an Affirmative Action plan which will achieve such representation during the life of the contract.

15. EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION POLICY

It is the policy of Kalkreuth Roofing and Sheet Metal

to assure that all applicants for employment and all employees are treated on a fair and equitable basis without regard to their race, religion, sex, color, handicap, natural origin or age.

Such action shall include employment, promotion, demotion, recruitment or recruitment advertising, layoff or termination, rates of pay and other forms of compensation, and selection for training, whether apprenticeship and/or on-the-job-training.

Furthermore, this company agrees to make special recruitment efforts to hire the protected class whenever feasible. This company also agrees to adhere to all applicable federal, state, and local laws relating to Equal Employment Opportunity for all individuals.

16. WORKFORCE ANALYSIS FORM

Name of Organization: Kalkreuth Roofing and Sheet Metal

Date: 4 / 18 / 13

Categories	Total		White		Black		Other		Total	
	M	F	M	F	M	F	M	F	M	F
Administrators										
Professionals										
Superintendents										
Supervisors										
Foremen										
Technicians										
Protective Service										
Para-Professionals										
Office/Clerical										
Skilled Craft	180	1	12	0	39	0	231	0	231	1
Service/Maintenance										
Total:										

Prepared By: Mollie Absher

17. EVIDENCE OF INSURABILITY


LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT CONSTRUCTION PROJECT
(Use separate form for each Agency or Brokerage agreeing to provide coverage)

Names Insured: Kalkreuth Roofing and Sheet Metal Employee ID: 55-0647319
 Address: 2131 Capstone Dr Lexington, KY 40511 Phone: 859-231-7663
 Project to be insured: Phoenix Building

In lieu of obtaining certificates of insurance at this time, the undersigned agrees to provide the above Named Insured with the minimum coverage listed below. These are outlined in the Insurance and Risk Management of Part V (Special Conditions), including all requirements, and conditions:

Section Items	Coverage	Minimum Limits and Policy Requirements	Limits Provided To Insured	Name of Insurer	A.M. Best's Code	Rating
SC-3, Section 2, Part 4.1 - see provisions	CGI	\$1,000,000 per occ. And \$2,000,000 aggregate	\$ 1,000,000 per occ	Arch Insurance Co.	11150	A+
SC-3, Section 2, Part 4.1 - see provisions	AUTO	\$2,000,000/per occ.	\$ 1,000,000 per occ \$ 2,000,000 Aggr.	Arch Insurance Co.	11150	A+
SC-3, Section 2, Part 4.1 - see provisions	WC	Statutory w /endorsement as noted	\$ statutory limits	Arch Insurance Co.	11150	A+

Section 2 includes required provisions, statements regarding insurance requirements, and the undersigned agrees to abide by all provisions for the coverage's checked above unless stated otherwise when submitting.

Agency or Brokerage: Arthur J. Gallagher Risk Management Services Name of Authorized Representative: Chad L. Mcleish
Two Pierce Place Title: VP of Estimating
 Street Address: _____ Authorized Signature: 
 City: Itasca IL State: IL Zip: 60143
 Telephone Number: (312) 803-6375 Date: April 16, 2013

NOTE: Authorized signatures may be the agent's if agent has placed insurance through an agency agreement with the insurer. If insurance is brokered, authorized signature must be that of authorized representative of insurer.

18. DEBARRED FIRMS

PROJECT NAME: Phoenix Building Re Roof

BID NUMBER: 22-2013

**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
LEXINGTON, KY**

All prime Contractors shall certify that Subcontractors have not and will not be awarded to any firms that has been debarred for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

All bidders shall complete the attached certification in duplicate and submit both copies to the Owner with the bid proposal. The Owner (grantee) shall transmit one copy to the Lexington-Fayette Urban County Government, Division of Community Development, within fourteen (14) days after bid opening.

The undersigned hereby certifies that the firm of Kalkreuth Roofing and Sheet Metal has not and will not award a subcontract, in connection with any contract award to it as the result of this bid, to any firm that has been debarred for noncompliance with the Federal labor Standards, Title VI of the civil Rights Act of 1964, Executive Order 11246 as amended or any Federal Law.

Kalkreuth Roofing and Sheet Metal
Name of Firm Submitting Bid


Signature of Authorized Official

VP of Estimating
Title

April 16, 2013
Date

19. DEBARMENT CERTIFICATION

All contractors/subcontractors shall complete the following certification and submit it with the bid proposal.

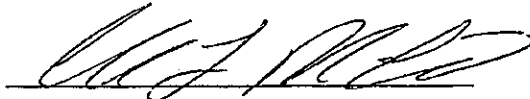
The contractor/subcontractor certifies in accordance with Executive Order 12549 (Debarment and Suspension 2/18/86) that to the best of its knowledge and belief, that it and its principals:

- 1) Are not presently debarred, suspended, proposed for debarment, declared negligible, or voluntarily excluded from covered transactions or contract by any Federal department or agency for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 as amended, Executive Order 11246 as amended or any other Federal law;
 - a) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - b) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(a) of this certification; and
 - c) Have not within a three year period preceding this bid has one or more public (Federal, State or local) transactions or contracts terminated for cause or default.
- 2) Where the contractor is unable to certify to any of the statements in this certification, such prospective contractors shall attach an explanation to this certification form.

Firm Name: Kalkreuth Roofing and Sheet Metal

Project: Phoenix Building Re Roof

Printed Name and Title of Authorized Representative: Chad L. McLeish, VP of Estimating

Signature: 

Date: April 16, 2013

END OF SECTION

Document A310™ – 2010

Conforms with The American Institute of Architects AIA Document 310

Bid Bond

CONTRACTOR:

(Name, legal status and address)

Kalkreuth Roofing & Sheet Metal, Inc.
2131 Capstone Drive
Lexington, KY 40511

SURETY:

(Name, legal status and principal place of business)

U.S. Specialty Insurance Company
13403 Northwest Freeway
Houston, TX 77040

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

OWNER:

(Name, legal status and address)

Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor
Lexington, KY 40507

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

BOND AMOUNT: \$ Five Percent of Bid Amount (5% of Bid Amount)

PROJECT:

(Name, location or address, and Project number, if any)

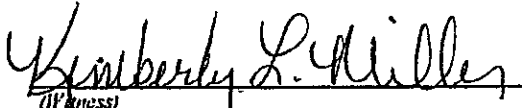
Bid No. 22-2013; Roof Replacement for Phoenix Building

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 18 day of April, 2013



(Witness)

Kalkreuth Roofing & Sheet Metal, Inc.

(Principal)

(Seal)

By: 

(Title) Chad L. McLeish, VP of Estimating

U.S. Specialty Insurance Company

(Surety)

(Seal)

By: 

(Title) Laura Scholze

Attorney-in-Fact

POWER OF ATTORNEY

AMERICAN CONTRACTORS INDEMNITY COMPANY UNITED STATES SURETY COMPANY U.S. SPECIALTY INSURANCE COMPANY

KNOW ALL MEN BY THESE PRESENTS: That American Contractors Indemnity Company, a California corporation, United States Surety Company, a Maryland corporation and U.S. Specialty Insurance Company, a Texas corporation (collectively, the "Companies"), do by these presents make, constitute and appoint:

Douglas Dixon, Laura Scholze, Thomas Whipple, Brian S. McCoog, Courtney Judge

its true and lawful Attorney(s)-in-fact, each in their separate capacity if more than one is named above, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include riders, amendments, and consents of surety, providing the bond penalty does not exceed *******Unlimited***** Dollars (\$ ***unlimited***).**

This Power of Attorney shall expire without further action on December 08, 2016. This Power of Attorney is granted under and by authority of the following resolutions adopted by the Boards of Directors of the Companies:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings, including any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts, and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached.

IN WITNESS WHEREOF, The Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 10th day of December, 2012.

AMERICAN CONTRACTORS INDEMNITY COMPANY UNITED STATES SURETY COMPANY U.S. SPECIALTY INSURANCE COMPANY

Corporate Seals



[Signature]
Daniel P. Aguilar, Vice President

State of California

County of Los Angeles SS:

On 10th day of December, 2012, before me, Vanessa Wright, a notary public, personally appeared Daniel P. Aguilar, Vice President of American Contractors Indemnity Company, United States Surety Company and U.S. Specialty Insurance Company who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal.

Signature *[Signature]* (Seal)



I, Jeannie Lee, Assistant Secretary of American Contractors Indemnity Company, United States Surety Company and U.S. Specialty Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Companies, which is still in full force and effect; furthermore, the resolutions of the Boards of Directors, set out in the Power of Attorney are in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seals of said Companies at Los Angeles, California this 18 day of April, 2013

Corporate Seals



[Signature]
Jeannie Lee, Assistant Secretary

Bond No. Bid
Agency No. 8233



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #1

Bid Number: 22-2013

Date: April 2, 2013

Subject: Roof Replacement for the Phoenix Building

Please address inquiries to:
Sondra Stone, Buyer
(859) 258-3324

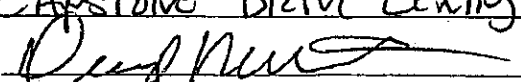
TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarification to the above referenced bid:

- 1) Substitute specification Form of Proposal, 4. BID SCHEDULE, Pages P-7 through P-9, with attached.
- 2) See attached specification 075275 Cold Adhered SBS-Modified Bituminous Roofing.


Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: KALKREUTH Roofing and Sheet Metal
ADDRESS: 2131 CARSTONE DRIVE Lexington Ky 40511
SIGNATURE OF BIDDER: 



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #2

Bid Number: 22-2013

Date: April 4, 2013

Subject: Roof Replacement for the Phoenix Building

Please address inquiries to:
Sondra Stone, Buyer
(859) 258-3324

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarification to the above referenced bid:

- 1) The bid opening has been extended to April 18, 2013, 2:00 pm.
- 2) The Q&A cutoff is now April 5, 2013, 5:00 pm.
- 3) Addendum #3 will follow with further clarifications.
- 4) Pre-bid sign-in sheet is attached.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: KALKREUTH Roofing and sheet metal
ADDRESS: 2131 GAPSTONE DRIVE Lexington KY 40511
SIGNATURE OF BIDDER: David O. Mumford



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #3

Bid Number 22-2013

Date: April 9, 2013

Subject: Roof Replacement for the Phoenix Building

Please address inquiries to:
Sondra Stone, Buyer
(859) 258-3324

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarification to the above referenced bid:

- 1) Base Bid Roof System: Replace Section SBS-Modified Bituminous Roofing 075270 with attached SBS-Modified Bituminous Roofing 075270 – granular cap sheet. Requirement is for SBS modified bituminous roof system of nailed venting base sheet, 3" of insulation, recovery board, 1-ply base sheet adhered in hot asphalt with granular surfaced, 70% reflectance, .140" (min), cap sheet, and fibrated coated flashing, installed using hot bitumen between plys as specified herein and in Section 075270 – granular cap sheet.
- 2) Alternate #1: Include an additional ply of fiberglass-felt and interplay of modified asphalt to the base roof system.
- 3) Alternate #2: Omit the hot modified bituminous roof system specified for the base bid. Include the price for a SBS modified bituminous roof system of nailed venting base sheet, 3" of insulation, recovery board, 1-ply base sheet adhered in cold adhesive with granular surfaced, 70% reflectance, .140" (min), cap sheet, and fibrated coated flashing, installed using cold adhesive between plys as specified herein in revised Section SBS-Modified Bituminous Roofing 075275 Cold Adhered SBS-Modified Bituminous Roofing – granular cap sheet.
- 4) Access to Site for Staging: LFUCG will close the alley to the east of the building, between building and parking lot and allow contractor to use a portion of the parking lot for their staging operations. Storage of materials will also be allowed in this area. Contractor to limit amount of parking area occupied to project related activities. East entrance will be used for exit only, overhead protection is required.
- 5) Hazardous Materials: Attached is the LFUCG report on a.c.m. for the existing roof system.
- 6) Building Height: Seven stories plus a penthouse: building 70 ft+/-, penthouse 14 ft+/-
- 7) Gypsum Deck Repairs: Omit references on construction plans for 25% replacement of roof deck. Include the cost to repair 250 sf of roof decking according to the Gypsum Institutes gypsum deck repair requirements and/or repairs that can be certified to maintain the structural requirements.

200 East Main Street • Lexington, KY 40507 • (859) 425-2255 • www.lexingtonky.gov
HORSE CAPITAL OF THE WORLD

- 8) Concrete Roof Deck: References in the specification for concrete roof deck application is for the existing helipad roof only.
- 9) Overflow Scuppers: Cut three openings in the parapet walls for overflow scuppers, see detail 15/A-2.
- 10) An infrared roof moisture survey from 2010 is attached for information only. The Contractor shall verify all actual measurements and conditions as needed.



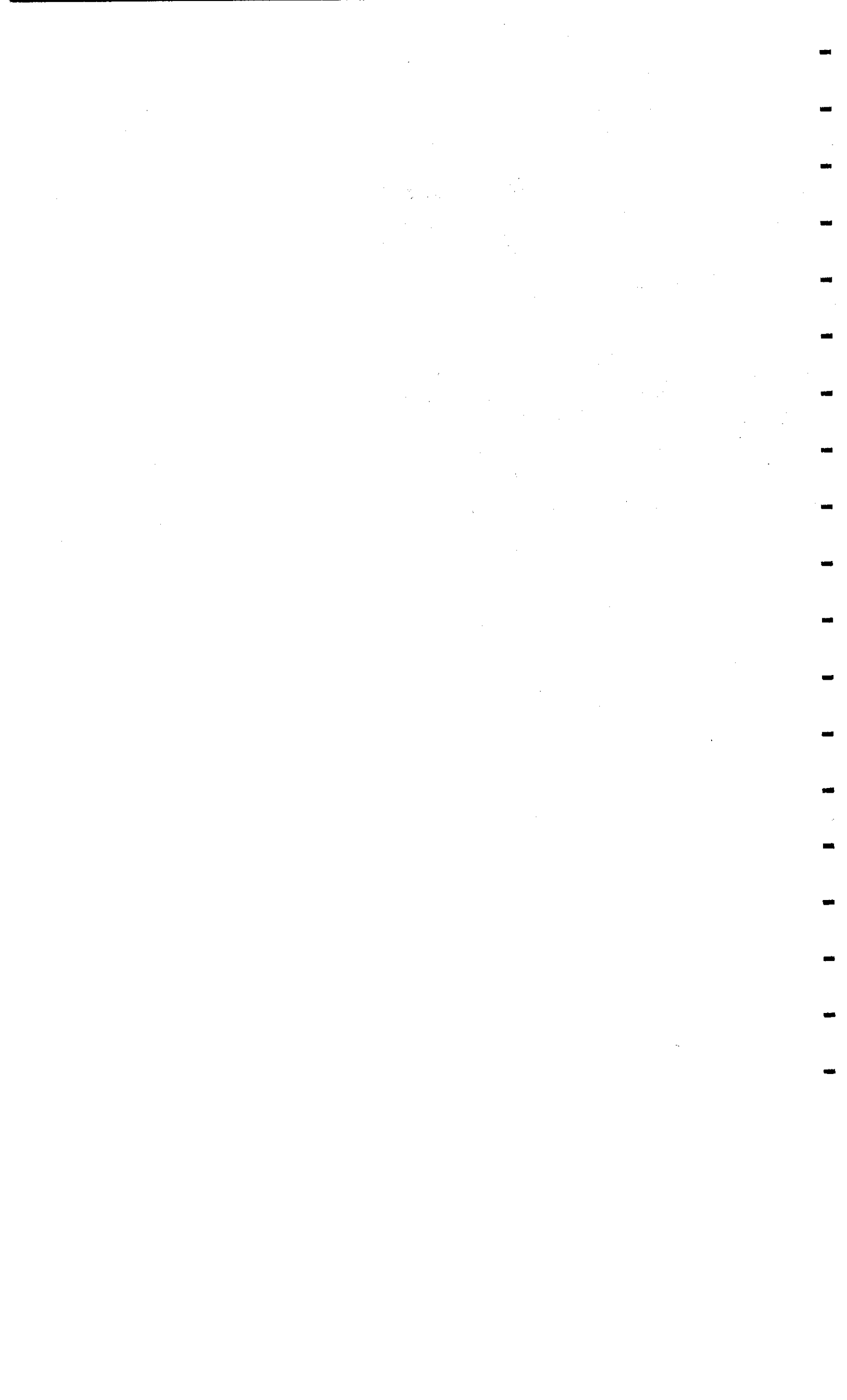
Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: Kalkreuth Roofing and sheet METAL
ADDRESS: 2131 CARSTONE DRIVE LEXINGTON KY 40511
SIGNATURE OF BIDDER: [Handwritten Signature]

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- 11.1. Change Order
- 11.2. Justification for Time Extension
- 11.3. Time Limits

12. Warranty and Guarantee; Tests and Inspections; Correction, Removal or Acceptance of Defective Work

- 12.1. Warranty and Guarantee
- 12.2. Access to Work
- 12.3. Tests and Inspections
- 12.4. OWNER May Stop Work
- 12.5. Correction or Removal of Defective Work
- 12.6. One Year Correction Period
- 12.7. Acceptance of Defective work
- 12.8. OWNER May Correct Defective Work

13. Payments to CONTRACTOR and Completion

- 13.1. Schedule of Values
- 13.2. Application for Progress Payments
- 13.3. CONTRACTOR'S Warranty of Title
- 13.4. Review of Application for Progress Payments
- 13.5. Partial Utilization
- 13.6. Final Inspection
- 13.7. Final Application for Payment
- 13.8. Final Payment and Acceptance
- 13.9. CONTRACTOR'S Continuing Obligation
- 13.10. Waiver of Claims

14. Suspension of Work and Termination

- 14.1. OWNER May Suspend Work
- 14.2. OWNER May Terminate
- 14.3. CONTRACTOR'S Services Terminated
- 14.4. Payment After Termination
- 14.5. CONTRACTOR May Stop or Terminate

15. Miscellaneous

- 15.1. Claims for Injury or Damage
- 15.2. Non-Discrimination in Employment
- 15.3. Temporary Street Closing or Blockage
- 15.4. Percentage of Work Performed by Prime CONTRACTOR
- 15.5. Clean-up
- 15.6. General
- 15.7. Debris Disposal
- 15.8. Close Out Procedures

END OF SECTION

PART IV

GENERAL CONDITIONS

1. DEFINITIONS

Wherever used in these General Conditions or the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

1.1. Addenda

Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bid Documents or the Contract Documents.

1.2. Agreement

The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

1.3. Application for Payment

The form accepted by ARCHITECT which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

1.4. Bid

The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

1.5. Bidder

An individual, partnership, or corporation, who submit a Bid for a prime contract with the OWNER, for the Work described in the proposed Contract Documents.

1.6. Bonds

Bid, performance and payment bonds and other instruments of security.

1.7. Calendar Day

A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

1.8. Change Order

A document recommended by ARCHITECT, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

- 1.9. Contract Documents**
The Advertisement for Bidders, Information for Bidders, Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR'S Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Special Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements.
- 1.10. Contract Unit Price**
The monies payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement. Unit Prices are to be firm for the term of this Contract.
- 1.11. Contract Time**
The number of consecutive calendar days between the date of issuance of the Notice to Proceed and the contract completion date.
- 1.12. CONTRACTOR**
The person, firm or corporation with whom OWNER has entered into the Agreement.
- 1.13. Defective**
An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to ARCHITECT'S recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER).
- 1.14. Drawings**
The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by ARCHITECT and are referred to in the Contract Documents.
- 1.15. Effective Date of the Agreement**
The date indicated in the Agreement on which it becomes effective.
- 1.16. ARCHITECT**
Consultant hired by the Lexington-Fayette Urban County Government Division Department of General Services to represent OWNER on the Project.
- 1.17. Field Order**
A documented order issued by ARCHITECT which orders minor changes in the Work, but which does not involve a change in the Contract Price or the Contract Time.

- 1.18. Giving Notice**
Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.
- 1.19. Laws and Regulations**
Laws, rules, regulations, ordinances, codes and/or orders.
- 1.20. Notice of Award**
The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.
- 1.21. Notice to Proceed**
A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR'S obligations under the Contract Documents.
- 1.22. OWNER**
The Lexington-Fayette Urban County Government, Department of General Services or its authorized representative.
- 1.23. Partial Utilization**
Placing a portion of the Work in service for the purpose for which it is intended (or related purpose) before reaching Completion for all the Work.
- 1.24. Project**
The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
- 1.25. Inspector**
The authorized representative of the ARCHITECT who is assigned to the site or any part thereof.
- 1.26. Shop Drawings**
All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.

- 1.27. Specifications**
Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.
- 1.28. Standard Specifications**
Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.
- 1.29. Subcontractor**
An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.
- 1.30. Special Conditions**
The part of the Contract Documents which amends or supplements these General Conditions.
- 1.31. Supplier**
A manufacturer, fabricator, supplier, distributor, materialman or vendor.
- 1.32. Underground Facilities**
All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.
- 1.33. Unit Price Work**
Not applicable
- 1.34. Work**
The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.
- 1.35. Time Period**
When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by

the law of the applicable jurisdiction, such day will be omitted from the computation.

2. PRELIMINARY MATTERS

2.1. Delivery of Bonds

When the CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER, such Bonds, Insurance Certificate, and Power of Attorney as CONTRACTOR may be required to furnish.

2.2. Copies of Documents

OWNER shall furnish to CONTRACTOR up to three copies (unless otherwise specified in the Special Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

2.3. Commencement of Contract Time; Notice to Proceed

The Contract Time will commence to run on the day specified in the Notice to Proceed.

2.4. Starting the Project

CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

2.5. Before Starting Construction

Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ARCHITECT any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ARCHITECT before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ARCHITECT for failure to report any conflict, error or discrepancy in the Contract Documents, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

2.6. Submittal of Schedules

Within ten days after the effective date of the Agreement (unless otherwise specified) CONTRACTOR shall submit to ARCHITECT for review:

2.6.1. an estimated progress schedule indicating the starting and completion dates of the various stages of the Work;

2.6.2. a preliminary schedule of Shop Drawing submissions; and

2.6.3. a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission.

2.7. Preconstruction Conference

Before CONTRACTOR starts the Work at the proposed site, a conference attended by CONTRACTOR, ARCHITECT, EEO-Affirmative Action Officer, and other appropriate parties will be held to discuss the following issues: (1) The scheduling of the Work to be completed; (2) The procedures for handling shop drawings and other submittals; (3) The processing of applications for payment; (4) The establishment of an understanding among the involved parties in regard to the proposed project; and (5) The establishment of procedures for effectively implementing the LFUCG's 10% minimum DBE goals.

2.8. Finalizing Schedules

At least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ARCHITECT and others as appropriate will be held to finalize the schedules submitted in accordance with paragraph 2.6. The finalized progress schedule will be acceptable to ARCHITECT as providing orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on ARCHITECT responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility thereof. The finalized schedule of Shop Drawing submissions will be acceptable to ARCHITECT as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to ARCHITECT as to form and substance.

3. CONTRACT DOCUMENTS: INTENT, CONFLICTS, AMENDING AND REUSE

3.1. General

The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

3.2. Intent

It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used

to describe Work, materials or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER or CONTRACTOR or ARCHITECT, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to ARCHITECT, or any of ARCHITECT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4. Clarifications and interpretations of the Contract Documents shall be issued by ARCHITECT as provided in paragraph 8.4.

3.3. Conflicts

If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to ARCHITECT in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from ARCHITECT; however, CONTRACTOR shall not be liable to OWNER OR ARCHITECT for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order:

1. Agreement
2. Field and Change Orders
3. Addenda
4. Special Conditions
5. Instruction to Bidders
6. General Conditions
7. Specifications and Drawings

Figure dimension on drawings shall govern over scale dimensions and detailed Drawings shall govern over general Drawings.

3.4. Amending and Supplementing Contract Documents

The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof by means of a Change Order or a Field Order. Contract Price and Contract Time may only be changed by a Change Order.

3.5. Reuse of Documents

Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of the ARCHITECT; and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and ARCHITECT and specific written verification or adaptation by ARCHITECT.

4. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS, REFERENCE POINTS

4.1. Availability of Lands

OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER'S furnishing these lands, rights-of-way or easements entitles CONTRACTOR to an extension of the Contract Time, CONTRACTOR may make a claim therefor as provided in Article 11. ARCHITECT shall determine if the claim is legitimate or not. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2. Physical Conditions

4.2.1. Explorations and Reports

Reference is made to the Special Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by ARCHITECT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.

4.2.2. Existing Structures

Reference is made to the Special Conditions for identification of those drawings of physical conditions in or relating to existing surface and

subsurface structures (except Underground Facilities referred to in paragraph 4.3 which are at or contiguous to the site that have been utilized by ARCHITECT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3. Report of Differing Conditions

If CONTRACTOR believes that:

4.2.3.1. any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2. any physical conditions uncovered or revealed at the site differ materially from that indicated, reflected or referred to in the Contract Documents,

CONTRACTOR shall, promptly after becoming aware thereof and before performing and WORK in connection therewith (except in an emergency) notify OWNER and ARCHITECT in writing about the inaccuracy or difference.

4.2.4. ARCHITECT'S Review

ARCHITECT will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise CONTRACTOR of ARCHITECT'S findings and conclusions.

4.2.5. Possible Document Change

If ARCHITECT concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6. Possible Price and Time Adjustments

In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference.

4.3. **Physical Conditions-Underground Facilities**

4.3.1. Shown or Indicated

The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to OWNER or ARCHITECT by the

owners of such underground facilities or by others. Unless it is otherwise expressly provided in the Special Conditions:

4.3.1.1. OWNER and ARCHITECT shall not be responsible for the accuracy or completeness of any such information or data; and,

4.3.1.2. CONTRACTOR shall have full responsibility for reviewing and checking all such information and data; for locating all underground facilities shown or indicated in the Contract Documents; for coordination of the Work with the owners of such underground facilities during construction; and for the safety and protection thereof and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

4.3.2. Not Shown or Indicated

If an underground facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER and ARCHITECT. ARCHITECT will promptly review the underground facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such underground facility. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any underground facility that was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of.

4.4. **Reference Points [NOT USED]**

OWNER shall provide engineering surveys to establish reference points for construction which in ARCHITECT'S judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ARCHITECT whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by a Registered Land Surveyor.

5. CONTRACTOR'S RESPONSIBILITIES

5.1. Supervision

CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall assure that all CONTRACTOR personnel (including subcontractors, etc.) conduct themselves in a courteous and respectful manner toward the ARCHITECT and the general public. Failure to comply with this condition of the Contract will result in immediate suspension of the Work. Following a review by the Commissioner of Public Works, the Contract may be terminated (see GC section 14). CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

5.2. Superintendence

CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ARCHITECT except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

5.3. Labor

CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER'S written consent given after prior written notice to ARCHITECT.

5.4. Start-Up and Completion of Work

Unless otherwise specified, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

5.5. Materials and Equipment

All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by ARCHITECT, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to ARCHITECT, or any of ARCHITECT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

5.5.1. Not Clearly Specified or Indicated

In all instances where materials specified are obtainable in different sizes, weights, trade grades, qualities or finishes, etc., whose weights, trade grades, qualities or finishes, etc., are not clearly specified or indicated on the Drawings, the CONTRACTOR shall notify the ARCHITECT of all such instances at least five (5) days in advance of receiving the proposals. The ARCHITECT will then determine which size, weight, trade grade, quality, finish, etc., is required.

5.5.2. Coordination of Work

The CONTRACTOR shall see that for his own Work and for the work of each subcontractor, proper templates and patterns necessary for the coordination of the various parts of the Work are prepared. The CONTRACTOR shall furnish or require the Subcontractor to furnish such duplicates as will enable the Subcontractors to fit together and execute fully their respective portions of the Work.

5.6. Adjusting Progress Schedule

CONTRACTOR shall submit to ARCHITECT for acceptance (to the extent indicated in paragraph 2.8) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the Contract Documents applicable thereto.

5.7. Substitutes or "Or-Equal" Items

5.7.1. General

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by OWNER/ARCHITECT if sufficient

information is submitted by CONTRACTOR to allow OWNER/ARCHITECT to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by OWNER/ARCHITECT will include the following. Requests for review of substitute items of material and equipment will not be accepted by OWNER/ARCHITECT from anyone, other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to OWNER/ARCHITECT for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR'S achievement of completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by OWNER/ARCHITECT in evaluating the proposed substitute. OWNER/ARCHITECT may require CONTRACTOR to furnish at CONTRACTOR'S expense additional data about the proposed substitute.

5.7.2. Substitutes

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to OWNER/ARCHITECT, if CONTRACTOR submits sufficient information to allow OWNER/ARCHITECT to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by OWNER/ARCHITECT will be similar to that provided in paragraph 5.7.1 as applied by OWNER/ARCHITECT.

5.7.3. OWNER/ARCHITECT'S Approval

OWNER/ARCHITECT will be allowed a reasonable time within which to evaluate each proposed substitute. OWNER/ARCHITECT will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without OWNER/ARCHITECT'S prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing.

OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a special performance guarantee or other surety with respect to any substitute. OWNER/ARCHITECT will record time required by OWNER/ARCHITECT and OWNER/ARCHITECT'S consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not OWNER/ARCHITECT accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of OWNER/ARCHITECT and OWNER/ARCHITECT'S consultants for evaluating each proposed substitute.

5.8. Subcontractors, Suppliers, and Others

5.8.1. Acceptable to ARCHITECT

CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and ARCHITECT as indicated in paragraph 5.8.2), whether initially or as a substitute, against whom OWNER or ARCHITECT may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

5.8.2. Objection After Due Investigation

If the Contract Documents require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement for acceptance by OWNER and ARCHITECT and if CONTRACTOR has submitted a list thereof, OWNER'S or ARCHITECT'S acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. No acceptance by OWNER or ARCHITECT of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of OWNER or ARCHITECT to reject defective Work.

5.8.3. Contractor Responsible for Acts of Subcontractors

The CONTRACTOR shall perform on the site, and with its own organization, work equivalent to at least fifty (50) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the OWNER

determines that the reduction would be to the advantage of the Urban County Government.

The CONTRACTOR shall, at the time he submits his proposal for the Contract, notify the OWNER in writing of the names of Subcontractors proposed for the Work. He shall not employ any Subcontractor without the prior written approval of the OWNER.

CONTRACTOR shall be fully responsible to OWNER and ARCHITECT for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR'S own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ARCHITECT and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ARCHITECT to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

5.8.4. Division of Specifications

The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

5.8.5. Agreement Between Contractor and Subcontractors

All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ARCHITECT.

5.8.6. Statements and Comments by CONTRACTOR

Neither the CONTRACTOR, his employees, nor his subcontractors shall at any time make any statement or comment as to the project scope, nature, intention, design, or construction method to any third party or parties without the explicit written consent of the OWNER.

Any third party requesting such information shall be referred to the OWNER or his representative.

Should there be any change from the original intent of the Project as a result of any statement or comment by the contractor, his employees or subcontractors, contractor shall be held liable for any change in the scope,

nature, design, or construction method and shall bear the full cost for the previously mentioned changes.

5.9. Patent Fees and Royalties

CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others.

5.10. Permits

Unless otherwise provided in the Special conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

5.11. Laws and Regulations

5.11.1. CONTRACTOR to Comply

CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ARCHITECT shall be responsible for monitoring CONTRACTOR'S compliance with any Laws and Regulations.

5.11.2. Specifications and Drawings at Variance

If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give ARCHITECT prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws, or Regulations, and without such notice to ARCHITECT, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR'S primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

5.12. Taxes

CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work. Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

5.13. Use of Premises

5.13.1. Project Site

CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the staging areas or work site areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or ARCHITECT by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and ARCHITECT harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or ARCHITECT to the extent based on a claim arising out of CONTRACTOR'S performance of the Work.

5.13.2. Clean Up

During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

5.13.3. Loading of Structures

CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

5.14. **Record Drawings**

CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to ARCHITECT for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to ARCHITECT for OWNER.

5.15. **Shop Drawings and Samples**

5.15.1. Shop Drawing Submittals

After checking and verifying all field measurements and after complying with applicable procedures specified, CONTRACTOR shall submit to ARCHITECT for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.8), or for other appropriate action if so indicated in the Special Conditions, five copies (unless otherwise specified) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as ARCHITECT may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable ARCHITECT to review the information as required.

5.15.2. Sample Submittals

CONTRACTOR shall also submit to ARCHITECT for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

5.15.3. Review by CONTRACTOR

Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified

performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

5.15.4. Notice of Variation

At the time of each submission, CONTRACTOR shall give ARCHITECT specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to ARCHITECT for review and approval of each such variation.

5.15.5. ARCHITECT'S Approval

ARCHITECT will review and approve with reasonable promptness Shop Drawings and samples, but ARCHITECT'S review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by ARCHITECT, and shall return the required number of corrected copies of Shop Drawings and submit, as required, new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ARCHITECT on previous submittals.

5.15.6. Responsibility for Errors and Omissions

ARCHITECT'S review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ARCHITECT'S attention to each such variation at the time of submission as required by paragraph 5.15.4 and ARCHITECT has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by ARCHITECT relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 5.15.3.

5.15.7. Cost of Related Work

Where a Shop or sample is required by the Specifications, any related Work performed prior to ARCHITECT'S review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

5.16. Continuing the Work

CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolutions of any disputes or disagreements, except as permitted by paragraph 14.5 or as CONTRACTOR and OWNER may otherwise agree in writing.

5.17. Erosion and Sediment Control

5.17.1. General Environmental Requirements

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall comply with all applicable federal, state, and local environmental regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits.

Any fines or penalties resulting from the failure to comply with the terms of the federal, state or local permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

5.17.2. Stormwater Pollution Prevention

A. The CONTRACTOR shall exercise due care to prevent or minimize any damage to any stream or wetland from pollution by debris, sediment or other material. The operation of equipment and/or materials in a jurisdictional wetland is expressly prohibited. Water that has been used for washing or processing, or that contains oils, sediments or other pollutants shall not be discharged from the job site. Such waters shall be collected and properly disposed of by the CONTRACTOR in accordance with applicable local, state and federal law.

B. The CONTRACTOR is solely responsible for securing all required state and local permits associated with stormwater discharges from the Project including, but not necessarily limited to the KY Notice of Intent to Disturb (NOI) for Coverage of Storm Water Discharges Associated with Construction Activities under the KPDES Storm Water General Permit KYR100000 and the LFUCG, Land Disturbance Permit. Permit application preparation and all required documentation are the responsibility of the CONTRACTOR. The CONTRACTOR is solely responsible for maintaining compliance with the stormwater pollution prevention plan or erosion and sediment control plan and ensuring the following:

- a. That the Stormwater Pollution Prevention Plan (SWPPP) or erosion control plan is current and available for review on site;

- b. That any and all stormwater inspection reports required by the permit are conducted by qualified personnel and are available for review onsite; and
- c. That all best management practices (BMPs) are adequately maintained and effective at controlling erosion and preventing sediment from leaving the site.

C. The CONTRACTOR shall provide the necessary equipment and personnel to perform any and all emergency measures that may be required to contain any spillage or leakage and to remove materials, soils or liquids that become contaminated. The collected spill material shall be properly disposed at the CONTRACTOR'S expense.

D. Upon completion of the work and with the concurrence of the OWNER, the CONTRACTOR must file a Notice of Termination (NOT) of Coverage Under the KPDES General Permit for Storm Water Discharges Associated with Construction Activity with the appropriate local and state authorities.

E. Any fines or penalties resulting from the failure to comply with the terms of the state or local stormwater permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

6. OTHER WORK

6.1. Related Work at Site

OWNER may perform other work related to the Project at the site by OWNER'S own forces, have other work performed by utility owners or let other direct contracts therefore which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work; and, if such performance will involve additional expense to CONTRACTOR or requires additional time, a Change Order to the Contract will be negotiated.

6.2. Other Contractors or Utility Owners

CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ARCHITECT and the others whose work will be affected.

The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

6.3. Delays Caused by Others

If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to ARCHITECT in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR'S failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work except for latent or non-apparent defects and deficiencies in the other work.

6.4. Coordination

If OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Special Conditions, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Special Conditions.

7. OWNER'S RESPONSIBILITIES

7.1. Communications

OWNER shall issue all communications to CONTRACTOR through ARCHITECT.

7.2. Data and Payments

OWNER shall furnish the data required of OWNER under the Contract Documents promptly after they are due.

7.3. Lands, Easements, and Surveys

OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by ARCHITECT in preparing the Drawings and Specifications.

7.4. Change Orders

OWNER is obligated to execute Change Orders as indicated in paragraph 9.4.

7.5. Inspections, Tests and Approvals

OWNER'S responsibility in respect to certain inspections, tests and approvals is set forth in paragraph 13.3.

7.6. Stop or Suspend Work

In connection with OWNER'S right to stop Work or suspend Work, see paragraph 12.4 and 14.1 Paragraph 14.2 deals with OWNER'S rights to terminate services of CONTRACTOR under certain circumstances.

8. ARCHITECT'S STATUS DURING CONSTRUCTION

8.1. OWNER'S Representative

ARCHITECT will be OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of ARCHITECT as OWNER'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and ARCHITECT.

8.2. Visits to Site

ARCHITECT will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ARCHITECT will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ARCHITECT'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations, ARCHITECT will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

8.3. Project Representation

ARCHITECT will provide an Inspector to assist ARCHITECT in observing the performance of the Work. If OWNER designates another agent to represent OWNER at the site who is not ARCHITECT'S agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Special Conditions.

8.4. Clarifications and Interpretations

ARCHITECT will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ARCHITECT may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

8.5. Authorized Variations in Work

ARCHITECT may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order.

8.6. Rejecting Defective Work

ARCHITECT will have authority to disapprove or reject Work which ARCHITECT believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in paragraph 12.3, whether or not the Work is fabricated, installed or completed.

8.7. Shop Drawings

In connection with ARCHITECT'S responsibility for Shop Drawings and samples, see paragraphs 5.15.1 through 5.16 inclusive.

8.8. Change Orders

In connection with ARCHITECT'S responsibilities as to Change Orders, see Articles 10, 11 and 12.

8.9. Payments

In connection with ARCHITECT'S responsibilities with respect to Applications for Payment, etc., see Article 13.

8.10. Determinations for Unit Prices [NOT USED]

ARCHITECT will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR if applicable.

ARCHITECT will review with CONTRACTOR ARCHITECT'S preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise).

8.11. Decision on Disputes

ARCHITECT will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 10 and 11 in respect of changes in the Contract Price or Contract Time will be referred initially to ARCHITECT in writing with a request for a formal decision in accordance with this paragraph, which ARCHITECT will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered to ARCHITECT promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to ARCHITECT within sixty days after such occurrence unless ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim.

8.12. Limitations on ARCHITECT'S Responsibilities

8.12.1. CONTRACTOR, Supplier, or Surety

Neither ARCHITECT'S authority to act under this Article 8 or elsewhere in the Contract Documents nor any decision made by ARCHITECT in good

faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of ARCHITECT to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

8.12.2. To Evaluate the Work

Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives or like "effect" or "import" are used to describe a requirement, direction, review or judgment of ARCHITECT as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign ARCHITECT any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

8.12.3. CONTRACTOR'S Means, Methods, Etc.

ARCHITECT will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and ARCHITECT will not be responsible for CONTRACTOR'S failure to perform or furnish the Work in accordance with the Contract Documents.

8.12.4. Acts of Omissions of CONTRACTOR

ARCHITECT will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9. CHANGES IN THE WORK

9.1. OWNER May Order Change

Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Change Order. Upon receipt of such notice, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

9.2. Claims

Claims for an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Change Order will be settled as provided for in Article 10 or Article 11.

9.3. Work Not in Contract Documents

CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraph 3.4, except in the case of an emergency and except in the case of uncovering Work as provided in paragraph 12.3.4.

9.4. Change Orders

OWNER and CONTRACTOR shall execute appropriate Change Orders covering:

9.4.1. changes in the Work which are ordered by OWNER pursuant to paragraph 9.1, are required because of acceptance of defective Work under paragraph 12.7 or corrective defective Work under paragraph 12.8, or are agreed to by the parties;

9.4.2. changes in the Contract Price or Contract Time which are agreed to by the parties; and

9.4.3. changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by ARCHITECT pursuant to paragraph 8.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and REGULATIONS, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 5.16.

9.5. Notice of Change

If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR'S responsibility, and the amount of each applicable Bond will be adjusted accordingly.

10. CHANGE OF CONTRACT PRICE

10.1. Total Compensation

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

10.2. Claim for Increase or Decrease in Price

The Contract Price may only be changed by a Change Order. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered

by the CONTRACTOR to the ARCHITECT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by CONTRACTOR'S written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of the occurrence of said event.

10.3. Value of Work

The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

10.3.1. Unit Prices

Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 10.9.1. through 10.9.3, inclusive).

10.3.2. Lump Sum

By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 10.6.2.1).

10.3.3. Cost Plus Fee

On the basis of the Cost of the Work (determined as provided in paragraphs 10.4 and 10.5) plus a CONTRACTOR'S fee for overhead and profit (determined as provided in paragraphs 10.6 and 10.7).

10.4. Cost of the Work

The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project; shall include only the following items; and shall not include any of the costs itemized in paragraph 10.5:

10.4.1. Payroll Costs

Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave,

vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays shall be included in the above to the extent authorized by OWNER.

10.4.2. Materials and Equipment Costs

Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

10.4.3. Subcontractor Costs

Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of the ARCHITECT, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR'S Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

10.4.4. Special Consultant Costs

Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

10.4.5. Supplemental Costs

10.4.5.1. The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

10.4.5.2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of

such items used but not consumed which remain the property of CONTRACTOR.

- 10.4.5.3. Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ARCHITECT, and the costs of transportation, loading, unloading, installation, dismantling and removal shall be in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.
- 10.4.5.4. Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.
- 10.4.5.5. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- 10.4.5.6. Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by OWNER), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR'S fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid a fee proportionate to that stated in paragraph 10.6.2 for services.
- 10.4.5.7. The cost of utilities, fuel and sanitary facilities at the site.

10.4.5.8. Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

10.4.5.9. Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by OWNER.

10.5. Not to Be Included in Cost of the Work

The term Cost of the Work shall not include any of the following:

10.5.1. Costs of Officers and Executives

Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR'S principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 or specifically covered by paragraph 10.4.4 - all of which are to be considered administrative costs covered by the CONTRACTOR'S fee.

10.5.2. Principal Office

Expenses of CONTRACTOR'S principal and branch offices other than CONTRACTOR'S office at the site.

10.5.3. Capital Expense

Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.

10.5.4. Bonds and Insurance

Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.4.5.9 above).

10.5.5. Costs Due to Negligence

Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

10.5.6. Other Costs

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

10.6. Contractor's Fee

The CONTRACTOR'S Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

10.6.1. a mutually acceptable fixed fee; or if none can be agreed upon,

10.6.2. a fee based on the following percentages of the various portions of the Cost of the Work:

10.6.2.1. for costs incurred under paragraphs 10.4.1 and 10.4.2, the CONTRACTOR'S fee shall be fifteen percent;

10.6.2.2. for costs incurred under paragraph 10.4.3, the CONTRACTOR'S fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be fifteen percent;

10.6.2.3. no fee shall be payable on the basis of costs itemized under paragraphs 10.4.4, 10.4.5 and 10.5;

10.6.2.4. the amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR'S Fee by an amount equal to ten percent of the net decrease; and

10.6.2.5. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S fee shall be computed on the basis of the net change in accordance with paragraphs 10.6.2.1 through 10.6.2.4, inclusive.

10.7. Itemized Cost Breakdown

Whenever the cost of any Work is to be determined pursuant to paragraph 10.4 or 10.5, CONTRACTOR will submit in form acceptable to ARCHITECT an itemized cost breakdown together with supporting data.

10.8. Cash Allowances

It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to ARCHITECT, CONTRACTOR agrees that:

10.8.1. Materials and Equipment

The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

10.8.2. Other Costs

CONTRACTOR'S costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

10.8.3. Change Order

Prior to final payment, an appropriate Change Order will be issued as recommended by ARCHITECT to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

10.9. Unit Price Work

10.9.1. General

Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ARCHITECT in accordance with Paragraph 8.10.

10.9.2. Overhead and Profit

Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

10.9.3. Claim for Increase in Unit Price

Where the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement and there is no corresponding adjustment with respect to any other item of Work and if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an increase in the Contract Price in accordance with Article 10.

11. CHANGE OF CONTRACT TIME

11.1. Change Order

The Contract Time may only be changed by a Change Order. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered to ARCHITECT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ARCHITECT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by ARCHITECT in accordance with paragraph 8.11. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph 11.1.

11.2. Justification for Time Extensions

The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefore as provided in paragraph 11.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional work as contemplated by Article 6, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.

11.3. Time Limits

All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 11 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.

12. WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

12.1. Warranty and Guarantee

CONTRACTOR warrants and guarantees to OWNER and ARCHITECT that all Work will be in accordance with the Contract Documents and will not be defective. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 12.

12.2. Access to Work

ARCHITECT and ARCHITECT'S representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

12.3. Tests and Inspections

12.3.1. Timely Notice

CONTRACTOR shall give ARCHITECT timely notice of readiness of the Work for all required inspections, tests or approvals.

12.3.2. Requirements and Responsibilities

The ARCHITECT may require such inspection and testing during the course of the Work as he/she deems necessary to ascertain and assure the integrity and acceptable quality of the materials incorporated and the work performed. Inspection presence may be either full-time or intermittent, and neither the presence nor absence at any time of the ARCHITECT or the INSPECTOR shall relieve the CONTRACTOR of sole responsibility for the acceptability and integrity of the Work or any part thereof.

The costs of sampling, testing, and inspection on-site to ascertain acceptability of the Work and materials will be borne by the OWNER except as otherwise provided. The OWNER will select a testing laboratory to perform such sampling and testing. Sampling and/or testing required by the CONTRACTOR or necessitated by failure of Work or materials to meet the above acceptability test shall be at the expense of the CONTRACTOR.

Inspection services may be performed by the employees of the OWNER or by others selected or designated by the OWNER or the ARCHITECT.

Sampling and/or testing required for manufacturing quality and/or process control, for certification that raw mineral materials or manufactured products are the quality specified in the contract, or to assure the acceptability for incorporation into the Work shall be borne by the CONTRACTOR or the material supplier.

Cost for inspection, sampling, testing, and approvals required by the laws or regulations of any public body having competent jurisdiction shall be borne by the CONTRACTOR or the material supplier.

Sampling and testing will be in accord with pertinent codes and regulations and with appropriate standards of the American Society of Testing Materials or other specified standards.

12.3.3. On-Site Construction Test and Other Testing

All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR or by ARCHITECT if so specified).

12.3.4. Covered Work

If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of ARCHITECT, it must, if requested by ARCHITECT, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given ARCHITECT timely notice of CONTRACTOR'S intention to cover the same and ARCHITECT has not acted with reasonable promptness in response to such notice.

12.3.5. CONTRACTOR'S Obligation

Neither observations by ARCHITECT nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.

12.4. OWNER May Stop the Work

If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

12.5. Correction or Removal of Defective Work

If required by ARCHITECT, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by ARCHITECT, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

12.6. One Year Correction Period

If within one year after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER'S written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances

where a particular item of equipment is placed in continuous service before Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Change Order.

12.7. Acceptance of Defective Work

If, instead of requiring correction or removal and replacement of defective Work, OWNER prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER'S evaluation of and determination to accept such defective Work (such costs to be approved by ARCHITECT as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals).

12.8. OWNER May Correct Defective Work

If CONTRACTOR fails within a reasonable time after written notice of ARCHITECT to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by ARCHITECT in accordance with paragraph 12.5, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR'S services related thereto, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER'S representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR in an amount approved as to reasonableness by ARCHITECT, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR'S defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER'S rights and remedies hereunder.

13. PAYMENTS TO CONTRACTOR AND COMPLETION

13.1. Schedule of Values

The schedule of values established as provided in paragraph 2.8 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ARCHITECT. Progress payments on account of Unit Price Work will be based on the number of units completed.

13.2. Application for Progress Payment

At least ten days before each progress payment is scheduled (but not more often than once a month), CONTRACTOR shall submit to ARCHITECT for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER'S interest therein, all of which will be satisfactory to OWNER. OWNER shall, within thirty (30) calendar days of presentation to him of an approved Application for Payment, pay CONTRACTOR the amount approved by ARCHITECT. Monthly progress payments shall be ninety (90) percent of the sum obtained by applying the respective bid unit prices to the approved estimated quantities of work completed by the Contractor during the preceding month. The remaining ten (10) percent will be held by the OWNER, as retainage. At such time as the ARCHITECT deems appropriate - based on the quality of work performed, progress of cleanup, and other pertinent factors - the rate of retainage, or the total amount retained, may be reduced; although, any reduction in retainage, below the ten (10) percent level, is made solely at the ARCHITECT'S discretion. All remaining retainage held will be included in the final payment to the Contractor.

13.3. CONTRACTOR'S Warranty of Title

CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

13.4. Review of Applications for Progress Payment

13.4.1. Submission of Application for Payment

ARCHITECT will, after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ARCHITECT'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

13.4.2. ARCHITECT'S Recommendation

ARCHITECT may refuse to recommend the whole or any part of any payment, if, in ARCHITECT'S opinion, it would be incorrect to make such representations to OWNER. ARCHITECT may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ARCHITECT'S opinion to protect OWNER from loss because:

13.4.2.1. the Work is defective, or completed Work has been damaged requiring correction or replacement;

13.4.2.2. the Contract Price has been reduced by Written Amendment or Change Order;

13.4.2.3. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 12.8; or

13.4.2.4. of ARCHITECT'S actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.2.1 through 14.2.9 inclusive.

13.5. Partial Utilization

OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and has been completed. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER that said part of the Work is complete and request that a Certificate of Completion be issued for that part of the Work.

13.6. Final Inspection

Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ARCHITECT will make a final inspection with CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

13.7. Final Application for Payment

After CONTRACTOR has completed all such corrections to the satisfaction of ARCHITECT and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 5.14) and other documents - all as required by the Contract Documents, and after ARCHITECT has indicated that the Work is acceptable (subject to the provisions of paragraph 13.10), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER'S property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

13.8. Final Payment and Acceptance

13.8.1. ARCHITECT'S Approval

If, on the basis of ARCHITECT'S observation of the Work during construction and final inspection, and ARCHITECT'S review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents, ARCHITECT is satisfied that the Work has been completed and CONTRACTOR'S other obligations under the Contract Documents have been fulfilled, ARCHITECT will, after receipt of the final Application for Payment, indicate in writing ARCHITECT'S recommendation of payment and present the Application to OWNER for payment. Thereupon ARCHITECT will give written notice to OWNER and CONTRACTOR that the Work is acceptable, subject to the provisions of paragraph 13.10. Otherwise, ARCHITECT will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application.

13.8.2. Delay in Completion of Work

If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, OWNER shall, upon receipt of CONTRACTOR'S final Application for Payment and recommendation of ARCHITECT, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is

less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 10 of Part II, Information for Bidders, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ARCHITECT with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

13.9. CONTRACTOR'S Continuing Obligation

CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by ARCHITECT, nor the issuance of a certificate of Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor any correction of defective Work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 13.10).

13.10. Waiver of Claims

The making and acceptance of final payment will constitute:

13.10.1. a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by OWNER of any rights in respect of CONTRACTOR'S continuing obligations under the Contract Documents; and

13.10.2. a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

14. SUSPENSION OF WORK AND TERMINATION

14.1. OWNER May Suspend Work

OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ARCHITECT which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if CONTRACTOR makes an approved claim therefore as provided in Articles 10 and 11.

14.2. OWNER May Terminate

The OWNER may terminate the Work upon the occurrence of any one or more of the following events:

- 14.2.1. if CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;
- 14.2.2. if a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;
- 14.2.3. if CONTRACTOR makes a general assignment for the benefit of creditors;
- 14.2.4. if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR'S creditors;
- 14.2.5. if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;
- 14.2.6. if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.8 as revised from time to time);
- 14.2.7. if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;
- 14.2.8. if CONTRACTOR disregards the authority of ARCHITECT, or
- 14.2.9. if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and use the

same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by ARCHITECT and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

14.2.10. If safety violations are observed and brought to the Contractors attention and Contractor fails to take immediate corrective measures any repeat of similar safety violations, OWNER will order an immediate termination of contract. Note: it is the Contractor's responsibility to know proper safety measures as they pertain to construction and OSHA.

14.2.11. This contract may be canceled by either party thirty (30) days after delivery by canceling party of written notice of intent to cancel to the other contracting party.

14.2.12. This contract may be canceled by the Lexington-Fayette Urban County Government if it is determined that the Bidder has failed to perform under the terms of this agreement, such cancellation to be effective upon receipt of written notice of cancellation by the Bidder.

14.3. CONTRACTOR'S Services Terminated

Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

14.4. Payment After Termination

Upon seven days' written notice to CONTRACTOR, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs).

14.5. CONTRACTOR May Stop Work or Terminate

If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ARCHITECT fails to act on any Application for Payment within sixty days after it is submitted, or OWNER fails for sixty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ARCHITECT, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if ARCHITECT has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and ARCHITECT stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 5.16 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

15. MISCELLANEOUS

15.1. Claims for Injury or Damage

Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 15.1 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

15.2. Non-Discrimination in Employment

The CONTRACTOR shall comply with the following requirements prohibiting discrimination:

15.2.1. That no person (as defined in KRS 344.010) shall bid on Lexington-Fayette Urban County Government construction projects, or bid to furnish materials or supplies to the Lexington-Fayette Urban County Government, if, within six months prior to the time of opening of bids, said person shall have been found, by declaratory judgment action in Fayette Circuit Court, to be presently engaging in an unlawful practice, as hereinafter defined. Such declaratory judgment action may be brought by an aggrieved individual or upon an allegation that an effort at conciliation pursuant to KRS 344.200 has been attempted and failed, by the Lexington-Fayette County Human Rights Commission.

15.2.2. That it is an unlawful practice for an employer:

- 15.2.2.1. to fail or refuse to hire, or to discharge any individual or otherwise to discriminate against an individual, with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, age, or national origin; or
- 15.2.2.2. to limit, segregate or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee because of such individual's sex, race, color, religion, age, or national origin.
- 15.2.3. That it is an unlawful practice for an employer, labor organization, or joint-labor management committee controlling apprenticeship or other training or retraining, including on-the-job training programs to discriminate against an individual because of his race, color, religion, sex, age, or national origin in admission to, or employment in, any program established to provide apprenticeship or other training.
- 15.2.4. That a copy of this Ordinance shall be furnished all suppliers and made a part of all bid specifications.
- 15.2.5. This Ordinance shall take effect after it is signed, published and recorded, as required by law.

15.3. Temporary Street Closing or Blockage

The CONTRACTOR will notify the ARCHITECT at least 72 hours prior to making any temporary street closing or blockage. This will permit orderly notification to all concerned public agencies. Specific details and restrictions on street closure or blockage are contained in the Special Conditions.

15.4. Percentage of Work Performed by prime CONTRACTOR

The CONTRACTOR shall perform on site, and with its own organization, Work equivalent to at least fifty (50%) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the ARCHITECT determines that the reduction would be to the advantage of the OWNER.

15.5. Clean-up

Cleanup shall progress, to the greatest degree practicable, throughout the course of the Work. The Work will not be considered as completed, and final payment will not be made, until the right-of-way and all ground occupied or affected by the

Contractor in connection with the Work has been cleared of all rubbish, equipment, excess materials, temporary structures, and weeds. Rubbish and all waste materials of whatever nature shall be disposed of, off of the project site, in an acceptable manner. All property, both public and private, which has been damaged in the prosecution of the Work, shall be restored in an acceptable manner. All areas shall be draining, and all drainage ways shall be left unobstructed, and in such a condition that drift will not collect or scour be induced.

15.6. General

The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 12.1, 12.3.5, 13.3, and 15.2 and all of the rights and remedies available to OWNER and ARCHITECT thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

15.7 Debris Disposal

For all LFUCG projects any trash, construction demolition debris, yard waste, dirt or debris of any kind that is removed from the project site must be disposed of in accordance with local, state, and federal regulations. The disposal site or facility must be approved in advance by the LFUCG and disposal documentation is required. The Contractor will be responsible for payment of any fines associated with improper disposal of material removed from the project site.

15.8 Close Out Procedures

The CONTRACTOR will coordinate training for OWNER of all major building systems and equipment that are part of the Project.

The CONTRACTOR will distribute three (3) copies of the appropriate O&M Manuals for the installed major building systems and equipment.

The CONTRACTOR shall prepare accurate record drawings that reflect project improvements "as-built" in the field. The CONTRACTOR shall provide three (3) copies of the record drawings to the OWNER.

The CONTRACTOR shall provide an electronic version (AutoCAD) of all construction documents related to the Project at the conclusion of the Project.

END OF SECTION

PART V
SPECIAL CONDITIONS
INDEX

1 RISK MANAGEMENT PROVISIONS –
INSURANCE AND INDEMNIFICATION

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**RISK MANAGEMENT PROVISIONS
INSURANCE AND INDEMNIFICATION**

INDEMNIFICATION AND HOLD HARMLESS PROVISION

- (1) It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "CONTRACTOR") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- (2) CONTRACTOR shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by CONTRACTOR's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the CONTRACTOR; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.
- (3) In the event LFUCG is alleged to be liable based upon the above, CONTRACTOR shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.
- (4) These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.

FINANCIAL RESPONSIBILITY

BIDDER/CONTRACTOR understands and agrees that it shall, prior to final acceptance of its bid and the commencement of any work, demonstrate the ability to assure compliance with the above Indemnity provisions and these other risk management provisions.

INSURANCE REQUIREMENTS

YOUR ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW, AND YOU MAY NEED TO CONFER WITH YOUR INSURANCE AGENTS, BROKERS, OR CARRIERS TO DETERMINE IN ADVANCE OF SUBMISSION OF A RESPONSE THE AVAILABILITY OF THE INSURANCE COVERAGES AND ENDORSEMENTS REQUIRED HEREIN. IF YOU FAIL TO COMPLY WITH THE INSURANCE REQUIREMENTS BELOW, YOU MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Required Insurance Coverage

BIDDER/CONTRACTOR shall procure and maintain for the duration of this contract the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to LFUCG in order to protect LFUCG against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by CONTRACTOR. The cost of such insurance shall be included in any bid:

Coverage	Limits
General Liability (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million aggregate or \$2 million combined single limit
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single, \$1 million per occurrence
Worker's Compensation	Statutory
Employer's Liability	\$500,000.00

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky (DOI). LFUCG shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.
- c. The General Liability Policy shall include a Products and Completed Operations endorsement or Premises and Operations Liability endorsement unless it is deemed not to apply by LFUCG.
- d. LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- e. Said coverage shall be written by insurers acceptable to LFUCG and shall be in a form acceptable to LFUCG. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

Renewals

After insurance has been approved by LFUCG, evidence of renewal of an expiring policy must be submitted to LFUCG, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

Deductibles and Self-Insured Programs

IF YOU INTEND TO SUBMIT A SELF-INSURANCE PLAN IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE RESPONSE DATE.

Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of BIDDER/CONTRACTOR's financial capacity to respond to claims. Any such programs or retentions must provide LFUCG with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage. If BIDDER/CONTRACTOR satisfies any portion of the insurance requirements through deductibles, self-insurance programs, or self-insured retentions, BIDDER/CONTRACTOR agrees to provide Lexington-Fayette Urban County Government, Division of Risk Management, the following data prior to the final acceptance of bid and the commencement of any work:

- a. Latest audited financial statement, including auditor's notes.
- b. Any records of any self-insured trust fund plan or policy and related accounting statements.
- c. Actuarial funding reports or retained losses.
- d. Risk Management Manual or a description of the self-insurance and risk management program.
- e. A claim loss run summary for the previous five (5) years.
- f. Self-Insured Associations will be considered.

Safety and Loss Control

CONTRACTOR shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and LFUCG.

Verification of Coverage

BIDDER/CONTRACTOR agrees to furnish LFUCG with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf prior to final award, and if requested, shall provide LFUCG copies of all insurance policies, including all endorsements.

Right to Review, Audit and Inspect

CONTRACTOR understands and agrees that LFUCG may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

DEFAULT

BIDDER/CONTRACTOR understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default and that LFUCG may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging BIDDER/CONTRACTOR for any such insurance premiums purchased, or suspending or terminating the work.

00380379

PART VI

CONTRACT AGREEMENT

INDEX

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PART VI

CONTRACT AGREEMENT

THIS AGREEMENT, made on the **25th** day of **April, 2013**, by and between **Lexington-Fayette Urban County Government**, acting herein called "OWNER" and **Kalkreuth Roofing and Sheet Metal**, doing business as ~~*(an individual) (a partnership)~~ (a corporation) located in the City of **Lexington**, County of **Fayette**, and State of **Kentucky**, hereinafter called "CONTRACTOR."

WITNESSETH: That the CONTRACTOR and the OWNER in consideration of **One hundred sixty three thousand nine hundred eighty two Dollars and zero Cents (\$163,982.00)** quoted in the proposal by the CONTRACTOR, dated **April 18, 2013**, hereby agree to commence and complete the construction described as follows:

1. SCOPE OF WORK

The CONTRACTOR shall furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, and the Special Conditions of the Contract, the Specifications and Contract Documents therefore as prepared by **Fitzsimons Office of Architecture** for the **Roof Replacement for the Phoenix Building** project.

2. TIME OF COMPLETION

The time period estimated and authorized by the OWNER for the proper execution of the Work by the Contract, in full, is hereby fixed as **ninety (90)** calendar days. The time shall begin ten (10) days after the CONTRACTOR is given the Notice to Proceed with the Work.

3. ISSUANCE OF WORK ORDERS

Notice to begin Work will be given in whole or for part of the Work as determined by the OWNER pending the availability of funds. The order of construction will be as determined by the Architect after consultation with the CONTRACTOR and the OWNER.

4. THE CONTRACT SUM

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Contract, as quoted in the proposal, subject to any additions and deductions, as provided therein.

5. PROGRESS PAYMENTS

The OWNER shall make payments on account of the Contract, as provided in accordance with the General Conditions, as estimated by the Engineer, less the aggregate of previous payments.

6. ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due within ninety (90) days after completion of the Work, provided the Work be then fully completed and the Contract fully accepted.

Before issuance of final certificate, the CONTRACTOR shall submit evidence satisfactory to the Engineer that all payrolls, material bills, and other indebtedness connected with the Work has been paid.

If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR, and the ENGINEER so certifies, the OWNER shall upon certificate of the ENGINEER, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

7. THE CONTRACT DOCUMENTS

The Advertisement for Bids, Information for Bidders, the General Conditions, Performance and Payment Bonds, Contract Agreement, Special Conditions, Technical Specifications, any and all Addenda, and Proposal, and Plan Drawings form the Contract, and they are fully a part of the Contract as if hereto attached or herein repeated.

8. EXTRA WORK

The OWNER, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the Work, the Contract Sum being adjusted accordingly. All such Work shall be executed and paid for in accordance with the General Conditions, which is a part of this Contract.

9. THE FOLLOWING IS AN ENUMERATION OF THE SPECIFICATIONS AND DRAWINGS (CONTRACT DOCUMENTS):

SPECIFICATIONS

SECTION NO.	TITLE	PAGES
I	Advertisement for Bids	AB 1 thru 3
II	Information for Bidders	IB 1 thru 15
III	Form of Proposal	P 1 thru 29
IV	General Conditions	GC 1 thru 51
V	Special Conditions	SC 1 thru 5
VI	Contract Agreement	CA 1 thru 5
VII	Performance and Payment Bonds	PB 1 thru 7
VIII	Addenda	AD 1 thru 1
IX	Technical Specifications	TS 1 THRU 45

TECHNICAL SPECIFICATIONS

DIVISION OF CONSTRUCTION	TITLE	PAGES
Table of Contents		1
Division 1	General Requirements	
010010	Special Requirements	6
Division 2	Existing Conditions	
020700	Selective Demolition	6
Division 7	Thermal and Moisture Protection	
075270	SBS-Modified Bituminous Roofing	15
076200	Sheet Metal Flashing and Trim	4
077200	Roof Accessories	3
079000	Joint Sealants	5
Division 8	Doors and Windows	
081100	Hollow Metal Doors and Frames	3
Division 9	Finishes	
099000	Painting	6

STANDARD DRAWINGS

Plan Drawings	
A-1	Roof Plan
A-2	Roof Replacement Details

IN WITNESSETH WHEREOF, the parties hereto have executed this Contract as of the date and year above written.

(Seal)

Lexington-Fayette Urban County Government.
Lexington, Kentucky
(Owner)

ATTEST:

Meredith Nelson Spatz
Clerk of the Urban County Council

BY: Jim Gray
MAYOR

Rebecca Oester
(Witness)

(Title)

(Seal)

My Commission Expires December 07, 2015

Mollie W. W. W. W.
(Secretary)*

(Contractor)
BY: [Signature]

David O. Munt
(Witness)

Executive Vice President
(Title)

2131 Capstone Dr. Lexington, Ky 40511
(Address and Zip Code)

IMPORTANT: *Strike out any non-applicable terms.

Secretary of the Owner should attest. If the CONTRACTOR is corporation, Secretary should attest. Give proper title of each person-executing Contract.

PART VII

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

a _____, hereinafter
(Corporation, Partnership, or Individual)

called Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

hereinafter called "OWNER" in the penal sum of: _____
Dollars, (\$ _____), for the payment of whereof Principal and Surety bind themselves, their heirs,
executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for
_____ (project name) _____ in accordance with drawings and
specifications prepared by: _____ (the Architect) _____ which Contract is by reference
made a part hereof, and is hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall
promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall
remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

Whenever, Principal shall be, and declared by OWNER to be in default under the Contract, the OWNER
having performed OWNER'S obligations thereunder, the Surety may promptly remedy the default, or shall
promptly:

PART VII

PERFORMANCE AND PAYMENT BONDS

1. PERFORMANCE BOND
2. PAYMENT BOND

IN WITNESS WHEREOF, this instrument is executed in 1 each one of which shall be
(number)
deemed an original, this the 26 day of April, 20 13.

ATTEST:

Way H. Nelson, Sr.
(Principal) Secretary

Kalkreuth Roofing & Sheet Metal, Inc.
Principal

[Signature]
BY: James J. Hurley, Executive Vice President (S)
2131 Capstone Drive
(Address)
Lexington, KY 40511

[Signature]
Witness as to Principal

41-4674 Street
(Address)
Wheeling WV 26003

U.S. Specialty Insurance Company

ATTEST:

N/A
(Surety) Secretary

BY: [Signature]
Surety
Attorney-in-Fact

(Address)
13403 Northwest Freeway, Houston, TX 77040

(SEAL)

[Signature]
Witness as to Surety
2345 York Road
(Address)
Timonium, MD 21093

TITLE: Attorney-In-Fact
Surety

BY: Laura Scholze

TITLE: Courtney Judge, Assistant

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

- (1) Complete the Contract in accordance with its terms and conditions or
- (2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the OWNER elects, upon determination by the OWNER and Surety jointly of the lowest responsible bidder, arrange for a Contract between such bidder and OWNER, and make available as Work progresses (even though there may be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price", as used in this paragraph shall mean the total amount payable by OWNER to Principal under the Contract and any amendments thereto, less the amount properly paid by OWNER to Principal.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators or successors of OWNER.

PART VII

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that

Kalkreuth Roofing & Sheet Metal, Inc.

(Name of CONTRACTOR)

2131 Capstone Drive, Lexington, KY 40511

(Address of CONTRACTOR)

a Corporation, hereinafter
(Corporation, Partnership, or Individual)

called Principal, and U.S. Specialty Insurance Company

(Name of Surety)

13403 Northwest Freeway, Houston, TX 77040

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

hereinafter called "OWNER" in the penal sum of: One Hundred Sixty Three Thousand Nine Hundred Eighty Two and 00/100
Dollars, (\$ 163,982.00), for the payment of whereof Principal and Surety bind themselves, their heirs,
executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for
Bid # 22-2013 **(project name)** Roof Replacement for Phoenix Building in accordance with drawings and
specifications prepared by: (the Architect) which Contract is by reference
made a part hereof, and is hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall
promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall
remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

Whenever, Principal shall be, and declared by OWNER to be in default under the Contract, the OWNER
having performed OWNER'S obligations thereunder, the Surety may promptly remedy the default, or shall
promptly:

- (1) Complete the Contract in accordance with its terms and conditions or
- (2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the OWNER elects, upon determination by the OWNER and Surety jointly of the lowest responsible bidder, arrange for a Contract between such bidder and OWNER, and make available as Work progresses (even though there may be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price", as used in this paragraph shall mean the total amount payable by OWNER to Principal under the Contract and any amendments thereto, less the amount properly paid by OWNER to Principal.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators or successors of OWNER.

IN WITNESS WHEREOF, this instrument is executed in _____ each one of which shall be
(number)
deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal) Secretary

Principal

BY: _____ (s)

(Address)

Witness as to Principal

(Address)

ATTEST:

(Surety) Secretary

Surety

BY: _____
Attorney-in-Fact

(Address)

(SEAL)

Witness as to Surety

(Address)

TITLE: _____
Surety

BY: _____

TITLE: _____

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

PART VII
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENT: that

Kalkreuth Roofing & Sheet Metal, Inc.

(Name of Contractor)

2131 Capstone Drive, Lexington, KY 40511

(Address of Contractor)

a Corporation, hereinafter

(Corporation, Partnership or Individual)

called Principal, and U.S. Specialty Insurance Company

(Name of Surety)

13403 Northwest Freeway, Houston, TX 77040

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto:

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called OWNER, for the use and benefit of claimants as hereinafter defined, in the amount of One Hundred Sixty Three Thousand Nine Hundred Eighty Two and 00/100 Dollars (\$ 163,982.00) the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for Bid #22-2013 Roof **(project name)** Replacement for Phoenix Building in accordance with drawings and specifications prepared by: (the Architect) which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the OWNER, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the Work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the Work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, OWNER, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - (b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against aid improvement, whether or not claim for the amount of such lien be presented under and against this bond.

IN WITNESS WHEREOF, this instrument is executed in 1 counterparts, each one of (number)

which shall be deemed an original, this the 26 day of April, 2013.

ATTEST:

[Signature]
(Principal) Secretary

(SEAL)
[Signature]
(Witness to Principal)
41-40th Street
(Address)
Wheeling, WV 26003

Kalkreuth Roofing & Sheet Metal, Inc.
(Principal)

BY: [Signature] (s)
James J. Harley, Executive Vice President
2131 Capstone Drive
(Address)
Lexington, KY 40511

ATTEST:

N/A
(Surety) Secretary

(SEAL)
[Signature]
Witness as to Surety
2345 York Road
(Address)
Timonium, MD 21093

U.S. Specialty Insurance Company
(Surety)

BY: [Signature]
Laura Scholze (Attorney-in-Fact)
13403 Northwest Freeway
(Address)
Houston, TX 77040

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

END OF SECTION

POWER OF ATTORNEY

AMERICAN CONTRACTORS INDEMNITY COMPANY UNITED STATES SURETY COMPANY U.S. SPECIALTY INSURANCE COMPANY

KNOW ALL MEN BY THESE PRESENTS: That American Contractors Indemnity Company, a California corporation, United States Surety Company, a Maryland corporation and U.S. Specialty Insurance Company, a Texas corporation (collectively, the "Companies"), do by these presents make, constitute and appoint:

Douglas Dixon, Laura Scholze, Thomas Whipple, Brian S. McCoog, Courtney Judge

its true and lawful Attorney(s)-in-fact, each in their separate capacity if more than one is named above, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver **any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include riders, amendments, and consents of surety, providing the bond penalty does not exceed** *****Unlimited***** Dollars (\$ *****unlimited*****).

This Power of Attorney shall expire without further action on December 08, 2016. This Power of Attorney is granted under and by authority of the following resolutions adopted by the Boards of Directors of the Companies:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings, including any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts, and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached.

IN WITNESS WHEREOF, The Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 10th day of December, 2012.

AMERICAN CONTRACTORS INDEMNITY COMPANY UNITED STATES SURETY COMPANY U.S. SPECIALTY INSURANCE COMPANY

Corporate Seals




Daniel P. Aguilar, Vice President

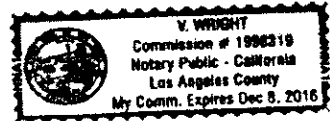
State of California

County of Los Angeles SS:

On 10th day of December, 2012, before me, Vanessa Wright, a notary public, personally appeared Daniel P. Aguilar, Vice President of American Contractors Indemnity Company, United States Surety Company and U.S. Specialty Insurance Company who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal.

Signature  (Seal)



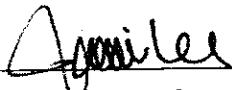
I, Jeannie Lee, Assistant Secretary of American Contractors Indemnity Company, United States Surety Company and U.S. Specialty Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Companies, which is still in full force and effect; furthermore, the resolutions of the Boards of Directors, set out in the Power of Attorney are in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seals of said Companies at Los Angeles, California this 26 day of April, 2013

Corporate Seals

Bond No. 1000974661
Agency No. 8233




Jeannie Lee, Assistant Secretary

PART VII
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENT: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter
(Corporation, Partnership or Individual)

called Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto:

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called OWNER, for the use and benefit of claimants as hereinafter defined, in the amount of _____ Dollars (\$ _____) the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for _____ (project name) in accordance with drawings and specifications prepared by: _____ (the Architect) which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the OWNER, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the Work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the Work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, OWNER, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - (b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against aid improvement, whether or not claim for the amount of such lien be presented under and against this bond.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of
(number)

which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal)

(Principal) Secretary

(SEAL)

BY: _____(s)

(Address)

(Witness to Principal)

(Address)

(Surety)

ATTEST:

BY: _____
(Attorney-in-Fact)

(Surety) Secretary

(SEAL)

Witness as to Surety

(Address)

(Address)

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

END OF SECTION

PB-7

PART VIII

ADDENDA

All addenda issued during the bidding of the Project will be reproduced in the signed Contract Documents, on the pages following this heading sheet.

Addendum Number	Title	Date
1		
2		
3		
4		
5		



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #1

Bid Number: 22-2013

Date: April 2, 2013

Subject: Roof Replacement for the Phoenix Building

Please address inquiries to:
Sondra Stone, Buyer
(859) 258-3324

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarification to the above referenced bid:

- 1) Substitute specification Form of Proposal, 4. BID SCHEDULE, Pages P-7 through P-9, with attached.
- 2) See attached specification 075275 Cold Adhered SBS-Modified Bituminous Roofing.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____

4. BID SCHEDULE – SCHEDULE OF VALUES

The Bidder agrees to perform all the Work described in the Specifications and shown on the Plans for the following lump sum and/or unit prices, if applicable, which shall include the furnishing of all labor, materials, supplies, equipment and/or vehicle usage, services, all items of cost, overhead, taxes (federal, state, local), and profit for the CONTRACTOR and any Subcontractor involved, within the time set forth herein. If unit prices are applicable, Bidder must make the extensions and additions showing the total amount of bid.

The contract, if awarded, will be on the basis of materials and equipment specified in the specifications without consideration of possible substitute or “or equal” items.

Unit prices are solely for the purpose of calculating and negotiating unanticipated, additional work beyond the scope detailed on the plans and specifications. Any additional work by the CONTRACTOR without prior approval from the OWNER shall be at his own expense.

In case of discrepancy, the amount shown in words will govern.

Item No.	Description w/Unit Bid Price Written in Words	Estimated Quantity	Unit	Unit Price	Total Bid Amount
1.	Complete Base Bid Scope of Work _____ Dollars _____ Cents (Lump Sum)	1	LS	\$ _____	\$ _____
2.	Complete Bid Alternate #1 Scope of Work _____ Dollars _____ Cents (Lump Sum)	1	LS	\$ _____	\$ _____
3.	Complete Bid Alternate #2 Scope of Work _____ Dollars _____ Cents (Lump Sum Deduct)	1	LS	(\$ _____)	(\$ _____)

Contract award will be made based on the lump sum base bid or lump sum bid with any combination of bid alternatives selected. Bid alternatives will be added or deducted from the lump sum base bid, if they are accepted, prior to Notice of Award being made.

OWNER reserves the right to accept or reject any bid alternatives or equipment alternatives to the lump sum base bid. Consideration of equipment alternatives of the selected Bidder will be made by OWNER within 60 days after the Effective Date of the Agreement.

If bid alternative is selected by OWNER, the awarded Contract price will include the selected alternative(s).

BID ALTERNATIVE #1: Additional Roof Ply

CONTRACTOR shall include in the cost of bid alternative ALL work associated with providing the scope listed below.

The price of \$ _____ shall be added to the contract lump sum base bid if OWNER elects to have CONTRACTOR provide an additional ply of roofing felt, for a total of three plies and the cap sheet, set in modified bitumen over the entire roof area.

BID ALTERNATIVE #2: Credit for Cold Adhered System

The price of \$ _____ shall be subtracted from the contract lump sum base bid if OWNER elects to have CONTRACTOR provide a modified bituminous roof system of 3" of insulation, recovery board, 3 ply roofing, smooth surfaced cap sheet, and fibrated coating installed using cold adhesives between plies as required by the approved roofing manufacturer's, in lieu of the hot modified bituminous roof system.

UNIT PRICES

The following List of unit prices is required by the Owner to be completely executed and submitted with each Bidder's Proposal. Each unit price shall include the furnishing of all labor, materials, supplies and services, and shall include all items of cost, overhead and profit for the Contractor and any Sub-Contractors involved, and shall be used uniformly, without modification, for either additions or deductions from the Bid. These unit prices as established shall also be used to determine the equitable adjustment of the Contract Price in connection with changes, or extra work performed under the Contract.

<u>DESCRIPTION OF WORK</u>	<u>UNIT PRICE (INSTALLED)</u>
1. Wood Cant Strip	_____ \$/L.F.
2. Wood Blocking 2(2x4)	_____ \$/L.F.
3. Gypsum Deck Repairs	_____ \$/S.F.

Submitted by:

Firm

Address

City, State & Zip

***Bid must be signed:
(original signature)***

Signature of Authorized Company Representative – Title

Representative/s Name (Typed or Printed)

Area Code – Phone – Extension

Fax #

E-Mail Address

OFFICIAL ADDRESS:

_____ (Seal if Bid is by Corporation)

By signing this form you agree to ALL terms, conditions, and associated forms in this bid package

SECTION 075275 - COLD ADHERED SBS-MODIFIED BITUMINOUS ROOFING Alt. #2

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. COLD ADHERED SBS-Modified Bituminous cap sheet with a smooth surface over base ply felts set in cold-applied adhesive over a base sheet applied to the existing gypsum deck, with reflective applied coating.
- B. This Section also includes the following roofing related work:
 - 1. Cleaning of deck surface.
 - 2. Roof insulation, including tapered at drains to improve drainage.
 - 3. New wood cants, blocking and framing.
 - 4. Roof drains, over flow openings and other existing drainage system replacement.
 - 5. Modified flashing of all existing roof details.
 - 6. Traffic pads.
- C. Related Sections: The following Sections contain requirements related to this Section:
 - 1. Division 7 Section "Flashing and Sheet Metal" for metal counter flashings.

1.3 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 1 Specifications Sections.
- B. Product data, including manufacturer's technical product information, installation instructions, and recommendations for each type of roofing product required. Include data substantiating that materials comply with requirements.
 - 1. For adhesives, provide a label on each container indicates compliance with specifications.

1.4 SYSTEM DESCRIPTION

- A. Multi-ply Roofing System: One-ply fiberglass felts, cold adhesive, 3" of polyisocynurate insulation, ½" recover board, one-ply fiberglass felt and modified bituminous cap sheet, with aluminum fibrated coating.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer (Roofer) to perform modified roofing work who has specialized for ten years minimum in installing modified roofing systems similar to that required for this Project and who is acceptable to manufacturer of primary roofing materials and to the owner.
 - 1. Installer Certification:

- a. The installer shall obtain written certification from manufacturer of built-up roofing system certifying that Installer is approved by manufacturer to install specified roofing system. Provide copy of certification for Project representative prior to awarding roofing work.
 - b. The installer shall not have been in bankruptcy during the last ten years.
 - c. The installer shall provide a list of at least five projects available for inspection within 50 mile radius of owner.
 - d. The installer shall provide 24-hour leak response during warranty.
2. Installer's Field Supervision: Require Installer to maintain a part-time supervisor/foreman who is on job site during times that modified roofing work is in progress and who is experienced in installing roofing systems similar to type and scope required for this Project.
- B. Manufacturer Qualifications: Roofing material supplier shall:
1. Be Associate Member in good standing with National Roofing Contractors' Association (NRCA) for at least ten (10) years.
 2. Be nationally recognized in roofing, waterproofing, and moisture survey industry.
 3. Be approved by owner.
 4. Has not been in Bankruptcy or experienced ownership change during the last ten (10) years.
 5. The building owner is desirous of working with a financially strong organization, which has the ability to protect and insulate the building owner from both product liability and warranty claims, relating to roofing that could be brought before the building owner during the course of the roofing warranty period. As financial strength of suppliers are a requirement of the building owner proof of such must be shown. To this end, the following information is required by the building owner.
 - a. The manufacturer must present to the building owner a certificate of insurance for product liability with minimum limits of \$200 million.
 - b. The manufacturer must have a current ratio of 1.8:1 (current assets to current liabilities) and demonstrate such with a financial statement supported by an affidavit from a corporate officer.
 - c. The manufacturer must have a current net worth equivalent to 25% of yearly sales and demonstrate such with a financial statement supported by an affidavit from a corporate officer.
 6. The building owner is a supporter of responsible Health, Safety and Environmental issues and requires all manufacturers to have similar concerns, convictions and commitments. To this end, the primary manufacturers of materials used on building owner roof must submit a formalized Corporate HS & E Policy and demonstrate active participation in such a policy.
 7. It is the owner's intention to insure the quality and performance of the roof system by sourcing of the material from one company. The material manufacturer supplying material for the building owner's roofs must manufacture at least 80% of supplied materials in facilities actually owned or solely leased by said manufacturer. The material manufacturer shall submit verification of the foregoing by affidavit of corporate officer.

8. Provide Owner names of at least 5 qualified applicators.
 9. Employ a Field Technical Services Representative available for monitoring project work on a part-time basis. Representative shall have a minimum ten (10) years experience in built-up roofing systems.
 10. Employ full-time Field Technical Services Representative available for final roof inspection.
 11. Provide Factory Representative to make periodic site visits, report work quality and job progress. Representative to have a minimum of 5 years experience in built-up roofing with said manufacturer.
 12. Provide list of at least 5 projects available for inspection employing same roofing system within 50 mile radius of Owner.
 13. Roof system shall have a ten year positive track record from said manufacturer.
 14. Manufacturer shall have been in business providing complete roofing systems at least as long as warranty length specified.
 15. The presence and activity of the manufacturer's specifier's representative and/or owner's representative shall in no way relieve the contractor of contractual responsibilities or duties.
- C. UL Listing: Provide built-up roofing system and component materials that have been tested for application and slopes indicated and that are listed by UL for Class A external fire exposure.
1. Provide roof-covering materials bearing UL Classification Marking on bundle, package, or container indicating that materials have been produced under UL's Classification and Follow-up Service.
 2. Provide built-up roofing system that can be installed to comply with UL requirements for Fire Classified and Class 60 uplift resistance requirements.
- D. Fire Performance Characteristics: Provide insulation materials that are identical to materials whose fire performance characteristics, per requirements listed in Part 2 of this Section, have been determined from tests by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- E. Preliminary Roofing Conference: As soon as possible after award of built-up roofing work, meet with Installer (Roofer), installers of substrate construction, such as decks, and other work adjoining roof system including penetrating work and rooftop units, Project representative, Owner, and representatives of other entities directly concerned with roofing system performance, including Owner's insurers and test agencies.
1. Review requirements (Contract Documents), submittals, status of coordinating work, availability of materials, and installation facilities and establish preliminary installation schedule. Review requirements for inspections, tests, certifications, forecasted weather conditions, governing regulations, insurance requirements, and proposed installation procedures.
 2. Discuss roofing system protection requirements for construction period extending beyond roofing installation. Discuss possible need for temporary roofing.
 3. Record discussion, including agreement or disagreement on matters of significance; furnish copy of recorded discussions to each participant. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.

- F. Pre-application Roofing Conference: Approximately 2 weeks prior to scheduled commencement of built-up roofing installation and associated work, meet at Project site with Installer, installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in and around roofing that must precede or follow roofing work--including mechanical work, Project representative, Owner, roofing system manufacturer's representative, and other representatives directly concerned with work performance, including Owner's insurers, test agencies, and governing authorities, where applicable.
1. Review foreseeable methods and procedures related to roofing work, including, but not necessarily limited to, the following:
 - a. Tour representative areas of roofing substrates (decks), inspect and discuss condition of substrate, roof drains, curbs, penetrations, and other preparatory work performed by other trades.
 - b. Review structural loading limitations of steel deck and inspect deck for loss of flatness and for required mechanical fastening.
 - c. Review roofing system requirements: drawings, specifications, and other contract documents.
 - d. Review required submittals, both complete and incomplete.
 - e. Review and finalize construction schedule related to roofing work and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - f. Review required inspection, testing, certifying, and material use accounting procedures.
 - g. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing, if it is not a mandatory requirement.
 2. Record (Contractor) discussions of conference, including decisions and agreements or disagreements reached, and furnish a copy for each attendee. If substantial disagreements exist at the conclusion of the conference, determine how disagreements will be resolved and set a date for reconvening the conference.

1.6 REGULATORY REQUIREMENTS

- A. Conform to the Kentucky State Building Code, 2006.
- B. Fire Hazard Classification: UL 790 Class A rated system. All components of the specified system shall have been tested together as a system and shall bear the UL seal of approval and be listed in the most recent issue materials directory.

1.7 PROJECT CONDITIONS

- A. Weather Condition Limitations: Proceed with roofing work only when existing and forecasted weather conditions will permit work to be performed according to manufacturers' recommendations and warranty requirements.
- B. Work shall not commence on any day if there is more than a 30% chance of rain.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 010010 and General Conditions. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Protect as required in section 010010. Store and handle roofing materials to ensure dryness. Store in a dry, well-ventilated, weather-tight place. Unless protected from weather or other moisture sources, do not leave unused felts on the roof overnight or when roofing work is not in progress. Store rolls of felt and other sheet materials on end on pallets or another raised surface. Handle and store materials or equipment in a manner to avoid significant or permanent deck deflection.
- C. Stack insulation on pallets. Keep insulation dry. No wet insulation shall be used. All insulation that becomes wet will be removed and replaced at no cost. Cover all materials with tarps and cut plastic shrouds and wrappers.

1.9 WARRANTY

- A. Special Project Unconditional Warranty: Submit two executed copies of unconditional 2-year Roofing Warranty as required, covering work of this Section, including labor, materials, roofing membrane, composition flashing, roof insulation, any vapor retarders, and roofing accessories, signed and countersigned by Installer (Roofer) and Contractor.
- B. Manufacturer's Warranty: Manufacturer's warranty is to be for twenty years, unconditional with no dollar limit, total roof system as installed under this contract. The warranty agreement shall be signed by authorized representative of the manufacturer.
- C. The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.
- D. Installer to inspect and provide a written report at the end of the second and fifth years.

PART 2 - PRODUCTS

2.1 ROOF INSULATION

- A. Perlite Board (misc. areas): Rigid, noncombustible, perlite/fiber boards of thickness indicated, with r-value of 1.32 at 75 deg F (24 deg C), integrally skinned surfaces, complying with ASTM C 728. Provide in manufacturer's standard sizes.
- B. Tapered insulation, roof drains and crickets: Rigid, noncombustible, perlite/fiber boards of thickness indicated, with r-value of 1.32 at 75 deg F (24 deg C), integrally skinned surfaces, complying with ASTM C 728. Cricketts are to be tapered 1/2" per 12".
- C. Polyisocyanurate Foam Board: Rigid boards of minimum 2.0 pcf density polyisocyanurate-based foam core, permanently bonded to roofing felt facer sheets. Provide in thickness indicated with minimum aged r-value of 20 for 2.7", when conditioned per RIC/PIMA Bulletin No. 281-1.
 - 1. Composite Type: In lieu of bottom felt cover, provide 3/4-inch-thick, integrally bonded course of rigid, perlite- or mineral-fiber

insulation board to form composite board with polyisocyanurate insulation.

2.2 CANTS, BLOCKING AND FRAMING

- A. Wall and curbs
 - 1. Wood Cants: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled.
- B. Wood blocking/framing: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled. For wall framing provide 2x4 stud members at 12" o.c. Provide $\frac{3}{4}$ " exterior-grade marine gray plywood sheathing.

2.3 EXISTING ROOF DECKS

- A. Roof Deck Repairs
 - 1. Immediately notify project representative of any damaged to existing roof decks.

2.4 ADHESIVE AND ADHESIVE MATERIALS:

- A. General: Adhesive and sealant materials recommended by roofing system manufacturer for intended use, identical to materials utilized in approved listed roofing system, and compatible with roofing membrane.
 - 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
 - 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - a. Multipurpose Construction Adhesives: 70 g/L.
 - b. Contact Adhesives: 80 g/L.
 - c. Other Adhesives: 250 g/L.
 - d. Nonmembrane Roof Sealants: 300 g/L.
 - e. Sealant Primers for Nonporous Substrates: 250 g/L.
 - f. Sealant Primers for Porous Substrates: 775 g/L.
- B. Water-Based Asphalt Primer: Water-based, polymer modified, asphalt primer with the following physical properties:
 - 1. Asbestos Content, EPA 600/R13/116: None.
 - 2. Non-Volatile Content, minimum, ASTM D2823: 30 percent.
 - 3. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 65 g/L.
- C. Cold-Applied Adhesive for sheet membrane: One-part, asbestos-free, low-volatile, cold-applied adhesive specially formulated for compatibility and use with specified roofing membranes and flashings, with the following physical properties:
 - 1. Asbestos Content, EPA 600 R13/116: None.
 - 2. Volatile Organic Compounds (VOC), maximum, ASTM D6511: <250 g/L.
 - 3. Nonvolatile Content, minimum, ASTM D6511: 75 percent.
 - 4. Uniformity and Consistency, ASTM D6511: Pass.
- D. Cold-Applied Adhesive for membrane flashing: One-part, cold-applied adhesive specially formulated for compatibility and use with specified roofing membranes and flashings, with the following physical properties:

1. Asbestos Content, EPA 600 R13/116: None.
2. Volatile Organic Compounds (VOC), maximum, ASTM D6511: <250 g/L.
3. Nonvolatile Content, minimum, ASTM D6511: 75 percent.
4. Uniformity and Consistency, ASTM D6511: Pass.

2.5 MEMBRANE AND SHEET MATERIALS:

- A. Membrane Materials, General: Provide combination of base, ply, and cap sheet materials that have been tested in combination and comply with load/strain properties performance requirement in Part 1 of this Section.
- B. Base Sheet: ASTM D4897, Type II, venting, nonperforated, heavyweight, asphalt-impregnated and coated, glass-fiber base sheet with coarse granular surfacing or embossed venting channels on bottom surface.
- C. Base Sheet: ASTM D4601, Type II, nonperforated, asphalt-impregnated and coated glass-fiber sheet dusted with fine mineral surfacing on both sides, with the following properties:
 1. Breaking Strength, minimum, ASTM D146: cross machine direction, 12.2 kN/m (70 lbf/in).
 2. Pliability, 12.7 mm (1/2 inch) radius bend, ASTM D146: No failures.
- D. Membrane Ply Sheet: ASTM D6163, Grade S, Type II or III, glass-fiber-reinforced, COLD ADHERED SBS/SEBS-modified asphalt sheet, or ASTM D6162, Grade S, Type II or III, COLD ADHERED SBS/SEBS-modified asphalt sheet; smooth surfaced; suitable for application method specified, with the following minimum properties:
 1. Tensile Strength at 23 deg. C (73 deg. F), minimum, cross machine direction, ASTM D5147: 21 kN/m (120 lbf/in).
 2. Tear Strength at 23 deg. C (73 deg. F), minimum, cross machine direction, ASTM D5147: 890 N (200 lbf).
 3. Elongation at 23 deg. C (73 deg. F), minimum, cross machine direction, at 5 percent maximum load ASTM D5147: 40 percent.

2.6 FASTENERS:

- A. Roofing Fasteners: Factory-coated steel fasteners and metal or plastic plates, where applicable, meeting requirements of FM Approvals 4470, tested by fastener manufacturer for required pullout strength, and recommended by roofing manufacturer for application.
- B. Accessory Fasteners: Corrosion-resistant fasteners compatible with adjacent materials and recommended for application by manufacturer of component to be fastened.

2.7 COATINGS

- A. Fibrated Aluminum Roof Coating: solvent-based, Energy Star Certified, CRRC listed and California Title 24 Energy Code compliant elastomeric roof coating formulated for use on bituminous roof surfaces, with the following physical properties:
 1. Asbestos Content, EPA/600/R13/116: None.
 2. Non-Volatile Content (by weight), minimum, ASTM D1644: 60 percent.
 3. Volatile Organic Compounds (VOC), ASTM D3960: 400g/L.
 4. Percent Solids (by volume), minimum, ASTM D5201: 14 percent.
 5. Reflectance, minimum, ASTM C1549: 86 percent.
 6. Emissivity, minimum, ASTM C1370: 0.93.
 7. Solar Reflectance Index (SRI), ASTM E1980: 103.

8. Weight, 8.5 lb/gal

2.8 BUILT-UP ROOF MEMBRANE GYPSUM DECK INSULATED FULLY ADHERED

1. Primer: cold adhesive water based primer
2. Insulation: one layer of 3" polyisocyanurate rigid insulation.
3. 1/2" high density wood fiberboard recovery board.
4. Venting Base Sheet: Asphalt-coated, heavyweight, glass-fiber base sheet with granular surfacing and embossed venting channels on bottom surface, complying with ASTM D 4897, Type II.
5. Interplay: cold adhesive, complying with ASTM D6511.
6. Modified Sheet Membrane/Smooth Surfaced: Styrene Butadiene Styrene (COLD ADHERED SBS)-modified asphalt sheets with smooth exposed surface; manufacturer's standard sheet thickness
 - a. Sheet Reinforcing: Composite polyester and glass-fiber mat.
7. Comply with "NRCA Roofing and Waterproofing Manual," Specification Plate No. 57-3--CMBF.
8. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville, Inc.
 - d. Or approved equal

2.9 MODIFIED BITUMEN ROOFING SYSTEM EDGE/PENETRATION MATERIALS

- A. Roofing Cement: cold adhesive, asbestos-free, complying with ASTM D6511
- B. Glass-Fiber Fabric: Minimum 1.5-lb woven glass-fiber sheet impregnated with asphalt, complying with ASTM D 1668.
- C. Pre-formed Edge Strips: Rigid insulation units matching roof insulation, or asphalt-impregnated organic-fiber insulation units, molded to form 3-1/2-by-3-1/2-inch by 45-degree cant strips and 1-5/8-by-18-inch tapered-edge strips to receive roofing ply-sheet courses and lift edges above main roofing surface.

2.10 SHEET METAL ACCESSORY MATERIALS

- A. Coordinate below with Section 076200, "Sheet Metal Flashing and Trim."
- B. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated and with not less than the strength and durability of alloy and temper designated below:
 1. Factory-Painted Aluminum Sheet: ASTM B 209 (ASTM B 209M), 3003-H14, with a minimum thickness of 0.040 inch (1.0 mm), unless otherwise indicated.
- C. Solder for Sheet Metal: Unless indicated otherwise or recommended by metal manufacturer, provide type (ASTM B 32), grade Sn60, for tinning and soldering joints; use rosin flux.

2.11 MISCELLANEOUS MATERIALS

- A. Wood Members, Units: Provide wood pressure treated with waterborne preservatives for above-ground use (AWPB LP-22).
- B. Walkway Protection Boards: Mineral-surfaced, bituminous composition boards, approximately 1/2 inch thick, manufactured specifically for cold

adhesive application on built-up roofing as a protection course for foot traffic.

1. Available Products: Subject to compliance with requirements, products may be incorporated in the Work include, but are not limited to, the following:
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville
- C. Substrate Joint Tape: 6-inch- or 8-inch-wide, coated, glass-fiber joint tape.
- D. Asphalt Primer: Comply with ASTM D 41.
- E. Fasteners: No mechanical fasteners or nails allowed.
- F. Metal Splash Pans: At all downspouts which empty on the roof surface, provide a sheet metal splash pan set in mastic on top of flexible flashing base ply over roof system.

2.12 FABRICATING SHEET METAL ACCESSORIES

- A. SMACNA and NRCA Details: Conform metal work with details shown and with applicable fabrication requirements of Architectural Sheet Metal Manual by SMACNA. Comply with installation details of NRCA Roofing and Waterproofing Manual.
- B. Prefabricate units as indicated or provide standard manufactured units complying with requirements; fabricate from sheet metal indicated or, if not otherwise indicated, from lead-coated copper.
- C. Provide 4-inch-wide flanges set in roofing cement for applying modified roofing system membrane concealed by composition stripping.
- D. Fabricate work with flat-lock soldered joints and seams; except where joint movement is necessary, provide 1-inch-deep interlocking hooked flanges filled with mastic sealant.
- E. Fabricate gravel rings and aggregate divider strips with 1-inch-high standing leg of folded sheet metal, notched from top with 5/8-inch-deep V notches. Space notches 3 inches o.c. where strip intersects flow of water on roof, 6 inches o.c. elsewhere. Fabricate rings to sizes and shapes indicated (but not less than 36 inches square), and fabricate running strips (as shown) in maximum 4-foot lengths for butt-joint installation (with 1/4-inch gaps).
- F. Fabricate penetration sleeves with minimum 8-inch-high stack of diameter 1 inch larger than penetrating element. Counterflashing is specified as work of another section of these specifications.

2.13 ROOF DRAIN ACCESSORIES MATERIALS

- A. Manufacturers: new roof drains to replace existing.
 1. Donovan Manufacturing Co.
 2. Josam Manufacturing Co.
 3. Smith Manufacturing Co.
 4. Zurn Industries, Inc.

- B. The roof drain, size to match existing piping, shall be a molded heavy duty cast iron drain body with a no hub style outlet that can connect directly to drainage pipe of PVC, ABS or cast iron using flexible expansion couplings and clamping ring of epoxy coated cast iron.
- C. Under Deck Clamp - fastens the roof drain securely to the roof deck.
- D. Extension Flange - supports the roof drain from the main deck and permits accurate adjustment of the drain body level with the membrane 1 - 6 inches (25 - 152 mm).
- E. Cast Iron Strainer Dome - of rigid cast iron, epoxy coated, construction 9.5" (241 mm) diameter.
- F. Metal flashing: ASTM B29, four lb. sheet lead

PART 3 - EXECUTION

3.1 INSPECTING SUBSTRATE

- A. Examine substrate surfaces to receive built-up roofing system and associated work and conditions under which roofing will be installed. Do not proceed with roofing until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
 - 1. Verify that flatness and fastening of concrete roof decks comply with the following:
 - a. Top Flanges: No concavity or convexity in excess of 1/16 inch across any three adjacent flanges.
 - b. Side Laps: Properly nested and mechanically fastened at a maximum spacing of 3 feet o.c.
 - c. End Laps: Minimum 2-inch laps located over and fastened to supports.
 - d. Deck secured to each supporting member in every other rib, maximum spacing 12 inches o.c., with puddle welds or approved mechanical fasteners.
 - 2. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch out of plane. Check for proper spacing between adjacent wood panels.
 - 3. Test concrete substrate for excessive moisture before starting roof application.

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Cooperate with inspection and test agencies engaged or required to perform services in connection with installing built-up roofing system.
- B. Protect other work from spillage of built-up roofing materials, and prevent liquid materials from entering or clogging drains and conductors. Replace/restore other work damaged when installing built-up roofing system work.
- C. Coordinate installing insulation, roofing sheets, flashings, stripping, coatings, and surfacing so that insulation and felts are not exposed to precipitation or exposed overnight. Provide cutoffs at end of each day's work to cover exposed felts and insulation with a course of coated felt with joints and edges sealed with roofing cement. Remove cutoffs immediately before resuming work.

- D. Cold Adhesive: Apply adhesive as required by the manufacturer.
- F. Substrate Joint Penetrations: Do not allow to penetrate substrate joints and enter building or damage insulation, vapor retarders, or other construction. Where mopping is applied directly to a substrate, tape joints or, in the case of cold adhesive, hold back 2 inches from both sides of each joint.
- G. Cutoffs: At the end of each day's roofing installation, protect exposed edge of incomplete work, including ply sheets and insulation. Provide temporary covering of two plies of No. 15 roofing felt set in full application of cold adhesive; remove at beginning of the next day's work.

3.3 WOOD BLOCKING

- A. Install new wood blocking to match existing and as needed at perimeter edge and as required to maintain all minimum 8 inch curb flashing heights. Offset all layers and weave corners. Stagger all nailing patterns. Max. spacing 12" o.c. New wood blocking to work with added insulation.
- B. Provide blocking as required by the roof system manufacturer for steep slope as noted over the stair towers.

3.4 INSULATION APPLICATION - GYPSUM DECK

- A. Ensure roof deck is clean and dry.
- B. Mechanically fasten first layer of insulation to wood roof deck with 50 fasteners per 100 sf.
- C. Minimum Total Insulation Thickness: 3" inches, as required to achieve an insulation R value of 20.0 plus the recovery board.
- D. Lay insulation boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof. 1/8" max. spacing between boards. Fill all gaps larger than 1/8" with roof insulation. Smallest filler piece shall be 18" wide. Cut boards to provide proper layout with no boards smaller than 18" wide.
- E. Apply no more insulation than can be sealed with membrane in same day.
- F. Stagger joints on all layers at least six inches.
- G. Firmly butt each insulation board to surrounding boards. Do not jam or deform boards.
- H. Maximum insulation gap: 1/4 inch. Fill insulation board joint gaps larger than 1/4" with roof insulation cut to fit.
- I. Maximum elevation variation between boards at joints: 1/8".
- J. Cut and fit insulation boards where roof deck intersects vertical surfaces. Cut boards 1/4" from vertical surface.

3.5 INSTALLATION OF MODIFIED BITUMEN MEMBRANE:

- A. Primer: Apply primer to substrates where recommended by roofing manufacturer, in application quantities recommended by roofing manufacturer.
 - B. Cold-Applied Adhesive: Apply cold-applied adhesive in application quantities recommended by roofing manufacturer at substrate, between membrane sheets, and as glaze coat where required.
 - C. Membrane Sheets:
 - 1. Number of Plies: 2, minimum, including base sheet and cap sheet, and additional plies as required to meet load/strain properties specified in Part 1 of this Section.
 - 2. Commence the laying of sheets at the low points.
 - 3. Roll sheets into cold-applied adhesive brushing down to firmly embed, free of wrinkles, fish mouths, blisters, bubbles, voids, air pockets or other defects that prevent complete adhesion:
 - 4. Cut to fit closely around pipes, roof drains, bitumen stops, and similar roof projections.
 - 5. Lap sheets shingle fashion starting with starter strips at right angles to slope of roof.
 - 6. Laps for Top Sheet and Base Sheet:
 - a. Base sheet, lapped 75 mm (three inches).
 - b. Use 450 mm (18 inch) starting widths, lap top sheet 475 mm (19 inches).
 - c. Lap end joints of sheet 150 mm (six inches). Stagger end joints in relation to end joints in adjacent and proceeding plies.
 - D. Roofing on Nailable Decks:
 - 1. On poured gypsum, precast gypsum plank, cement-wood fiber plank, wood plank, or plywood decks install one layer of building paper followed by base sheet.
 - a. Apply building paper lapping ends and edges 50 mm (two inches) Lay smoothly without buckles or wrinkles. Staple or nail sufficiently to hold in place until roof membrane is installed.
 - b. One ply of venting base sheet. Lay base sheet down dry on deck, Nail as specified. Lap as specified and seal lap edges with roof cement.
 - E. Roof edges and terminations:
 - 1. Where nailers occur at roof edges under gravel stops or penetrations to receive metal base flashing, apply a continuous strip of underlayment over the nailers before the first ply sheet is applied. Strip shall be installed on top of venting base sheet if any.
 - 2. After membrane is installed, turn the underlayment back over the roofing, and secure in place with cold-applied adhesive before gravel stops or other metal flanges extending out onto the membrane are installed.
 - 3. Where cants occur at vertical surfaces, cut off roofing sheets two inches above top of cant strips, except at prefabricated curbs, scuttles and other roof accessories having integral cants, extend membrane over cant and up vertical surface to top of curb or nailer as shown.
 - 4. Where fascia-cant occurs at roof edges, extend membrane beyond outside cant face and cut off at outside after base flashing is installed.
 - 5. Where reglet occurs at vertical surfaces, extend plies roofing sheets up into reglet the full depth of the reglet.
- 3.6 COMPOSITION FLASHING AND STRIPPING
- A. Install modified bitumen flashing at cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof.

Install two plies of modified bitumen flashing, each set in a continuous coating of roofing cement and extended onto deck 4 inches and 6 inches, respectively. Nail or provide other forms of mechanical anchorage of composition flashing to vertical surfaces as recommended by manufacturer of primary roofing materials. Except where concealed by elastic flashing, apply a heavy coating of roofing cement over composition flashing.

B. At wall flashings:

1. Remove existing base flashing and counterflashing materials to substrate. Remove existing two piece receiver that will not meet height minimums.
2. Prime vertical substrate with cold adhesive at approximate rate of one gallon per 100 sq. ft.
3. Install new roofing 2" beyond top edge of cant.
4. 1-ply modified bitumen flashing in adhesive completely to primed wall, cant and roofing. Remove wrinkles. Extend flashing 4" minimum beyond toe of cant. Address laps and corners. Seal toe with 6" modified bitumen flashing.
5. Mechanically fasten top of flashing to substrate 8" o.c.
6. Aluminize flashings at 125 sq. ft. per gallon.
7. Fabricate and install new reglet mounted counterflashing with 3/4 inch reglet turned back on itself. Receiver shall be one inch deep.
8. Caulk reglet joint as required and tool neatly.

C. At plumbing vents:

1. Remove existing stack flashing.
2. Wedge plumbing vent tight against deck.
3. Install roofing system onto wood blocking.
4. Apply 1/16" uniformly thick layer of cold adhesive to surface receiving metal flange.
5. Fabricate and install plumbing vent flashing from lead. Flange: 4" wide minimum; extend completely around periphery of vent flashing. Set flange into mastic. Neatly dress flange with wood block.
 - a. Pipe outside diameters greater than 2": Bend lead inside pipe 1" minimum with pliers or rubber/plastic mallet; replace cracked lead.
 - b. Pipe outside diameters 2" or less: Cut lead at vent top; fabricate & install integral lead cap.
6. Nail interior portion of flange to wood blocking 3" o.c., staggered.
7. Prime metal flange with cold adhesive primer.
8. Install two plies modified bitumen flashing over primed metal. Stripping plies shall extend two and four inches beyond edge of lead.
9. Aluminize lead.

D. Install composition stripping where metal flanges are set on roofing. Provide not less than one ply of reinforced modified flashing; set each in a continuous coating of roofing cement and extended onto the deck 4 inches and 6 inches, respectively. Except where concealed by aggregate surfacing or elastic flashing, apply a heavy coating of roofing cement over composition stripping.

E. Roof Drains: Fill clamping ring base with a heavy coating of roofing cement. Set lead flashing sheet in a bed of roofing cement on completed

built-up roofing ply sheet courses with lead sheet clamped in roof drain ring and extended 12 inches onto roofing. Cover lead sheet with composition stripping, with plies extended 4 to 6 inches beyond edges of lead sheet. Provide composition stripping of any gravel stop rings.

1. Install tapered edge strip around drain to create 48" x 48" sump. Miter corners. Seal toe of tapered edge to drain rim with reinforcing membrane embedded between alternate courses of cold adhesive.
 2. Install multi-ply roofing into sump and onto drain rim.
 3. Apply 1/16" uniformly thick layer of cold adhesive to surface receiving lead flashing.
 4. Set single piece lead flashing in mastic centered over drain; extend lead 6" beyond drain rim. Neatly dress lead with wood block.
 5. Clamp flashing collar to drain in bed of mastic. If bolts are broken, drill and retap. If ladder clamps are installed, replace clamps.
 6. Neatly cut lead within drain at rim, remove.
 7. Five course lead edge with cold adhesive and reinforcing membrane.
 8. Aluminize area between gravel dam and drain.
- F. Allow for expansion of running metal flashing and edge trim that adjoins roofing.
- G. Counter-Flashings: Counter-flashings, cap flashings, expansion joints, and similar work to be coordinated with built-up roofing work are specified in other sections of these specifications.
- H. Roof Accessories: Miscellaneous sheet metal accessory items, including insulation vents and other devices, and any major items of roof accessories to be coordinated with built-up roofing system work are specified in other sections of these specifications.

3.8 DAILY WATERSTOP/TIE-INS

- A. Envelope insulation with 18" wide #15 ply sheet. Adhere envelope to deck and insulation with cold adhesive. Glaze or seal cutoff with adhesive/sealants.
- B. Install dead-man insulation filler at insulation staggers.
- C. Extend roofing plies at least 12" onto prepared area of adjacent roofing. Embed plies into recommended adhesive. Strip edges with 12" wide modified bitumen sheet embedded completely in alternate uniform courses of adhesive.

3.9 ROOF WALKWAYS

- A. Install roof walkways where indicated.
- B. Set prefabricated planks in solid application of cold-applied adhesive. Maintain 75 mm (three inch) to 150 mm (six-inch) space between planks.

3.10 APPLICATION OF COATING

- A. Apply coating on cap sheet when required to meet solar reflectance performance requirements.

- B. Apply coating to membrane and base flashings according to manufacturer's written instructions by spray or roller.
- C. Provide dry film thickness of minimum 20 mils (0.5 mm).

3.11 FIELD QUALITY CONTROL:

- A. Roofing Inspector: Owner will engage a qualified roofing inspector to perform roof tests and inspections and to prepare test reports.
- C. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
 - 1. Notify Architect and Owner 48 hours in advance of date and time of inspection.
- D. Repair or remove and replace components of roofing work where test results or inspections indicate that they do not comply with specified requirements.
 - 1. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.12 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of acceptance by Owner.
- C. Clean overspray and spillage from adjacent construction. Clean membrane and restore surface to like-new condition meeting solar reflectance requirements.

3.13 MANUFACTURER'S FIELD SERVICE

- A. Provide manufacturer's field services under provisions of Section 010010 and as noted in 1.5 Quality Assurance.
- B. Request site attendance of roofing materials manufacturers during installation of the work is a project requirement.

END OF SECTION 075275



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #2

Bid Number: 22-2013

Date: April 4, 2013

Subject: Roof Replacement for the Phoenix Building

Please address inquiries to:
Sondra Stone, Buyer
(859) 258-3324

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarification to the above referenced bid:

- 1) The bid opening has been extended to April 18, 2013, 2:00 pm.
- 2) The Q&A cutoff is now April 5, 2013, 5:00 pm.
- 3) Addendum #3 will follow with further clarifications.
- 4) Pre-bid sign-in sheet is attached.

Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____



Lexington-Fayette Urban County Government
DEPARTMENT OF FINANCE & ADMINISTRATION

Jim Gray
Mayor

William O'Mara
Commissioner

ADDENDUM #3

Bid Number: 22-2013

Date: April 9, 2013

Subject: Roof Replacement for the Phoenix Building

Please address inquiries to:
Sondra Stone, Buyer
(859) 258-3324

TO ALL PROSPECTIVE BIDDERS:

Please be advised of the following clarification to the above referenced bid:

- 1) Base Bid Roof System: Replace Section SBS-Modified Bituminous Roofing 075270 with attached SBS-Modified Bituminous Roofing 075270 – granular cap sheet. Requirement is for SBS modified bituminous roof system of nailed venting base sheet, 3" of insulation, recovery board, 1-ply base sheet adhered in hot asphalt with granular surfaced, 70% reflectance, .140" (min), cap sheet, and fibrated coated flashing, installed using hot bitumen between plys as specified herein and in Section 075270 – granular cap sheet.
- 2) Alternate #1: Include an additional ply of fiberglass-felt and interplay of modified asphalt to the base roof system.
- 3) Alternate #2: Omit the hot modified bituminous roof system specified for the base bid. Include the price for a SBS modified bituminous roof system of nailed venting base sheet, 3" of insulation, recovery board, 1-ply base sheet adhered in cold adhesive with granular surfaced, 70% reflectance, .140" (min), cap sheet, and fibrated coated flashing, installed using cold adhesive between plys as specified herein in revised Section SBS-Modified Bituminous Roofing 075275 Cold Adhered SBS-Modified Bituminous Roofing – granular cap sheet.
- 4) Access to Site for Staging: LFUCG will close the alley to the east of the building, between building and parking lot and allow contractor to use a portion of the parking lot for their staging operations. Storage of materials will also be allowed in this area. Contractor to limit amount of parking area occupied to project related activities. East entrance will be used for exit only, overhead protection is required.
- 5) Hazardous Materials: Attached is the LFUCG report on a.c.m. for the existing roof system.
- 6) Building Height: Seven stories plus a penthouse: building 70 ft+/-, penthouse 14 ft+/-
- 7) Gypsum Deck Repairs: Omit references on construction plans for 25% replacement of roof deck. Include the cost to repair 250 sf of roof decking according to the Gypsum Institutes gypsum deck repair requirements and/or repairs that can be certified to maintain the structural requirements.

8) Concrete Roof Deck: References in the specification for concrete roof deck application is for the existing helipad roof only.

9) Overflow Scuppers: Cut three openings in the parapet walls for overflow scuppers, see detail 15/A-2.

10) An infrared roof moisture survey from 2010 is attached for information only. The Contractor shall verify all actual measurements and conditions as needed.



Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Bid and specifications are unchanged.
This letter should be signed, attached to and become a part of your Bid.

COMPANY NAME: _____

ADDRESS: _____

SIGNATURE OF BIDDER: _____

SECTION 075270 - SBS-MODIFIED BITUMINOUS ROOFING: Base Bid; Addendum #3

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. SBS-Modified Bituminous cap sheet with a granular surface over fiberglass felt venting base sheet nailed to gypsum deck, 3" of insulation, base sheet set in type III asphalt, recovery board below the cap sheet.
- B. This Section also includes the following roofing related work:
 - 1. Cleaning of deck surface.
 - 2. Roof insulation, including tapered system to improve drainage at drains.
 - 3. Replacing and providing new wood cants, blocking and framing.
 - 4. Removing existing roof system to gypsum deck.
 - 5. Gypsum deck repairs.
 - 6. Parapet and other types of flashing for all existing roof details.
 - 7. Traffic pads.
- C. Related Sections: The following Sections contain requirements related to this Section:
 - 1. Division 7 Section "Flashing and Sheet Metal" for metal counter flashings.

1.3 DEFINITIONS

- A. Thermal Resistivity (r-value) is the reciprocal of thermal conductivity (k-value) which is the rate of heat flow through a homogenous material exactly 1 inch thick. Thermal Resistivity (r-value) is expressed by the temperature difference in degrees F between two parallel surfaces required to cause 1 Btu to flow through 1 sq. ft. of a homogenous material exactly 1 inch thick per hour at the mean temperature indicated.

1.4 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 1 Specifications Sections.
- B. Product data, including manufacturer's technical product information, installation instructions, and recommendations for each type of roofing product required. Include data substantiating that materials comply with requirements.
 - 1. For asphalt, provide a label on each container or certification with each load of bulk, indicating flash point (FP), softening point (SP), and equiviscous temperature (EVT).
- C. Manufacturer's Certification indicating that all bulk bituminous materials delivered to Project comply with required standards. Include

quantity and statistical and descriptive data for each product. Submit certificate with each load before it is used.

1. Include continuous log showing time and temperature for each load of bulk, indicating date obtained from manufacturer, where held, and how transported prior to final heating and application on roof.

1.5 QUALITY ASSURANCE

- A. **Installer Qualifications:** Engage an experienced Installer (Roofer) to perform modified roofing work who has specialized for ten years minimum in installing modified roofing systems similar to that required for this Project and who is acceptable to manufacturer of primary roofing materials and to the owner.

1. **Installer Certification:**

- a. The installer shall obtain written certification from manufacturer of built-up roofing system certifying that Installer is approved by manufacturer to install specified roofing system. Provide copy of certification for Project representative prior to awarding roofing work.
 - b. The installer shall not have been in bankruptcy during the last ten years.
 - c. The installer shall provide a list of at least five projects available for inspection within 50 mile radius of owner.
 - d. The installer shall provide 24-hour leak response during warranty.
2. **Installer's Field Supervision:** Require Installer to maintain a part-time supervisor/foreman who is on job site during times that modified roofing work is in progress and who is experienced in installing roofing systems similar to type and scope required for this Project.

- B. **Manufacturer Qualifications:** Roofing material supplier shall:

1. Be Associate Member in good standing with National Roofing Contractors' Association (NRCA) for at least ten (10) years.
2. Be nationally recognized in roofing, waterproofing, and moisture survey industry.
3. Be approved by owner.
4. Has not been in Bankruptcy or experienced ownership change during the last ten (10) years.
5. The building owner is desirous of working with a financially strong organization, which has the ability to protect and insulate the building owner from both product liability and warranty claims, relating to roofing that could be brought before the building owner during the course of the roofing warranty period. As financial strength of suppliers are a requirement of the building owner proof of such must be shown. To this end, the following information is required by the building owner.
 - a. The manufacturer must present to the building owner a certificate of insurance for product liability with minimum limits of \$200 million.
 - b. The manufacturer must have a current ratio of 1.8:1 (current assets to current liabilities) and demonstrate such with a financial statement supported by an affidavit from a corporate officer.
 - c. The manufacturer must have a current net worth equivalent to 25% of yearly sales and demonstrate such with a financial statement supported by an affidavit from a corporate officer.
6. The building owner is a supporter of responsible Health, Safety

- and Environmental issues and requires all manufacturers to have similar concerns, convictions and commitments. To this end, the primary manufacturers of materials used on building owner roof must submit a formalized Corporate HS & E Policy and demonstrate active participation in such a policy.
7. It is the owner's intention to insure the quality and performance of the roof system by sourcing of the material from one company. The material manufacturer supplying material for the building owner's roofs must manufacture at least 80% of supplied materials in facilities actually owned or solely leased by said manufacturer. The material manufacturer shall submit verification of the foregoing by affidavit of corporate officer.
 8. Provide Owner names of at least 5 qualified applicators.
 9. Employ a Field Technical Services Representative available for monitoring project work on a part-time basis. Representative shall have a minimum ten (10) years experience in built-up roofing systems.
 10. Employ full-time Field Technical Services Representative available for final roof inspection.
 11. Provide Factory Representative to make periodic site visits, report work quality and job progress. Representative to have a minimum of 5 years experience in built-up roofing with said manufacturer.
 12. Provide list of at least 5 projects available for inspection employing same roofing system within 50 mile radius of Owner.
 13. Roof system shall have a ten year positive track record from said manufacturer.
 14. Manufacturer shall have been in business providing complete roofing systems at least as long as warranty length specified.
 15. The presence and activity of the manufacturer's specifier's representative and/or owner's representative shall in no way relieve the contractor of contractual responsibilities or duties.
- C. Insurance Certification: Assist Owner in preparing and submitting roof installation acceptance certification as necessary in connection with fire and extended-coverage insurance on roofing and associated work.
- D. UL Listing: Provide built-up roofing system and component materials that have been tested for application and slopes indicated and that are listed by UL for Class A external fire exposure.
1. Provide roof-covering materials bearing UL Classification Marking on bundle, package, or container indicating that materials have been produced under UL's Classification and Follow-up Service.
 2. Provide built-up roofing system that can be installed to comply with UL requirements for Fire Classified and Class 60 uplift resistance requirements.
- E. Fire Performance Characteristics: Provide insulation materials that are identical to materials whose fire performance characteristics, per requirements listed in Part 2 of this Section, have been determined from tests by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- F. Preliminary Roofing Conference: As soon as possible after award of built-up roofing work, meet with Installer (Roofer), installers of substrate construction, such as decks, and other work adjoining roof system including penetrating work and rooftop units, Project representative, Owner, and representatives of other entities directly

concerned with roofing system performance, including Owner's insurers and test agencies.

1. Review requirements (Contract Documents), submittals, status of coordinating work, availability of materials, and installation facilities and establish preliminary installation schedule. Review requirements for inspections, tests, certifications, forecasted weather conditions, governing regulations, insurance requirements, and proposed installation procedures.
 2. Discuss roofing system protection requirements for construction period extending beyond roofing installation. Discuss possible need for temporary roofing.
 3. Record discussion, including agreement or disagreement on matters of significance; furnish copy of recorded discussions to each participant. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.
- G. Pre-application Roofing Conference: Approximately 2 weeks prior to scheduled commencement of built-up roofing installation and associated work, meet at Project site with Installer, installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in and around roofing that must precede or follow roofing work--including mechanical work, Project representative, Owner, roofing system manufacturer's representative, and other representatives directly concerned with work performance, including Owner's insurers, test agencies, and governing authorities, where applicable.
1. Review foreseeable methods and procedures related to roofing work, including, but not necessarily limited to, the following:
 - a. Tour representative areas of roofing substrates (decks), inspect and discuss condition of substrate, roof drains, curbs, penetrations, and other preparatory work performed by other trades.
 - b. Review structural loading limitations of steel deck and inspect deck for loss of flatness and for required mechanical fastening.
 - c. Review roofing system requirements: drawings, specifications, and other contract documents.
 - d. Review required submittals, both complete and incomplete.
 - e. Review and finalize construction schedule related to roofing work and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - f. Review required inspection, testing, certifying, and material use accounting procedures.
 - g. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing, if it is not a mandatory requirement.
 2. Record (Contractor) discussions of conference, including decisions and agreements or disagreements reached, and furnish a copy for each attendee. If substantial disagreements exist at the conclusion of the conference, determine how disagreements will be resolved and set a date for reconvening the conference.

1.6 REGULATORY REQUIREMENTS

- A. Conform to the Kentucky State Building Code, 2002.
- B. Fire Hazard Classification: UL 790 Class A rated system. All components of the specified system shall have been tested together as a system and

shall bear the UL seal of approval and be listed in the most recent issue materials directory.

1.7 PROJECT CONDITIONS

- A. Weather Condition Limitations: Proceed with roofing work only when existing and forecasted weather conditions will permit work to be performed according to manufacturers' recommendations and warranty requirements.
- B. Work shall not commence on any day if there is more than a 30% chance of rain.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01001. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Protect as required in section 01001. Store and handle roofing materials to ensure dryness. Store in a dry, well-ventilated, weather-tight place. Unless protected from weather or other moisture sources, do not leave unused felts on the roof overnight or when roofing work is not in progress. Store rolls of felt and other sheet materials on end on pallets or another raised surface. Handle and store materials or equipment in a manner to avoid significant or permanent deck deflection.
- C. Stack insulation on pallets. Keep insulation dry. No wet insulation shall be used. All insulation that becomes wet will be removed and replaced at no cost. Cover all materials with tarps and cut plastic shrouds and wrappers.

1.9 WARRANTY

- A. Special Project Unconditional Warranty: Submit two executed copies of unconditional 2-year Roofing Warranty as required, covering work of this Section, including labor, materials, roofing membrane, composition flashing, roof insulation, any vapor retarders, and roofing accessories, signed and countersigned by Installer (Roofer) and Contractor.
- B. Manufacturer's Warranty: Manufacturer's warranty is to be for twenty years, unconditional with no dollar limit, total roof system as installed under this contract. The warranty agreement shall be signed by authorized representative of the manufacturer.
- C. The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.
- D. Installer to inspect and provide a written report at the end of the second and fifth years.

PART 2 - PRODUCTS

2.1 ROOF INSULATION

- A. Perlite Board (misc. areas): Rigid, noncombustible, perlite/fiber boards of thickness indicated, with r-value of 1.32 at 75 deg F

(24 deg C), integrally skinned surfaces, complying with ASTM C 728. Provide in manufacturer's standard sizes.

- B. Tapered insulation, roof drains and crickets: Rigid, noncombustible, perlite/fiber boards of thickness indicated, with r-value of 1.32 at 75 deg F (24 deg C), integrally skinned surfaces, complying with ASTM C 728. Crickets are to be tapered 1/2" per 12".
- C. Polyisocyanurate Foam Board: Rigid boards of minimum 2.0 pcf density polyisocyanurate-based foam core, permanently bonded to roofing felt facer sheets. Provide in thickness indicated with minimum aged r-value of 20 for 2.7", when conditioned per RIC/PIMA Bulletin No. 281-1.
 - 1. Composite Type: In lieu of bottom felt cover, provide 3/4-inch-thick, integrally bonded course of rigid, perlite- or mineral-fiber insulation board to form composite board with polyisocyanurate insulation.

2.2 CANTS, BLOCKING AND FRAMING

- A. Wall and curbs
 - 1. Wood Cants: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled.
- B. Expansion joints
 - 1. Wood Cants: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled.
- C. Wood blocking/framing: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled. For wall framing provide 2x4 stud members at 12" o.c. Provide 3/4" exterior-grade marine gray plywood sheathing.

2.3 EXISTING ROOF DECKS

- A. Roof Deck Repairs
 - 1. Immediately notify project representative of any damaged to existing roof decks.

2.4 MEMBRANE AND SHEET MATERIALS:

- A. Membrane Materials, General: Provide combination of base, ply, and cap sheet materials that have been tested in combination and comply with load/strain properties performance requirement in Part 1 of this Section.
- B. Base Sheet: ASTM D4897, Type II, venting, nonperforated, heavyweight, asphalt-impregnated and coated, glass-fiber base sheet with coarse smooth surfacing or embossed venting channels on bottom surface.
- C. Membrane Ply Sheet: ASTM D6163, Grade S, Type II or III, glass-fiber-reinforced, SBS/SEBS-modified asphalt sheet, or ASTM D6162, Grade S, Type II or III, SBS/SEBS-modified asphalt sheet; granular surfaced; .145" (min); suitable for application method specified, with the following minimum properties:
 - 1. Tensile Strength at 23 deg. C (73 deg. F), minimum, cross machine direction, ASTM D5147: 21 kN/m (120 lbf/in).

2. Tear Strength at 23 deg. C (73 deg. F), minimum, cross machine direction, ASTM D5147: 890 N (200 lbf).
3. Elongation at 23 deg. C (73 deg. F), minimum, cross machine direction, at 5 percent maximum load ASTM D5147: 40 percent.

2.5 FASTENERS:

- A. Roofing Fasteners: Factory-coated steel fasteners and metal or plastic plates, where applicable, meeting requirements of FM Approvals 4470, tested by fastener manufacturer for required pullout strength, and recommended by roofing manufacturer for application.
- B. Accessory Fasteners: Corrosion-resistant fasteners compatible with adjacent materials and recommended for application by manufacturer of component to be fastened.

2.6 COATINGS

- A. Fibrated Aluminum Roof Coating: solvent-based, Energy Star Certified, CRRC listed and California Title 24 Energy Code compliant elastomeric roof coating formulated for use on bituminous roof surfaces, with the following physical properties:
 1. Asbestos Content, EPA/600/R13/116: None.
 2. Non-Volatile Content (by weight), minimum, ASTM D1644: 60 percent.
 3. Volatile Organic Compounds (VOC), ASTM D3960: 400g/L.
 4. Percent Solids (by volume), minimum, ASTM D5201: 14 percent.
 5. Reflectance, minimum, ASTM C1549: 86 percent.
 6. Emissivity, minimum, ASTM C1370: 0.93.
 7. Solar Reflectance Index (SRI), ASTM E1980: 103.
 8. Weight, 8.5 lb/gal

2.7 BUILT-UP ROOF MEMBRANE SYSTEM GYPYSUM DECK INSULATED FULLY ADHERED

1. Nail down venting base sheet per manufacturer's requirements.
2. Insulation: one layer of 3" polyisocyanurate rigid insulation.
3. 1/2" high density wood fiberboard recovery board.
4. Base Sheet: Asphalt-coated, heavyweight, glass-fiber base sheet with smooth surfacing and embossed venting channels on bottom surface, complying with ASTM D 4897, Type II.
5. Interplay: Roofing asphalt, complying with ASTM D 312, Type III.
6. Modified Sheet Membrane/Granular Surfaced: Styrene Butadiene Styrene (SBS)-modified asphalt sheets with granular surface; 145" (min) thickness.
 - a. Sheet Reinforcing: Composite polyester and glass-fiber mat.
7. Comply with "NRCA Roofing and Waterproofing Manual," Specification Plate No. 57-3--CMBF.
8. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville, Inc.
 - d. Or approved equal

2.8 BUILT-UP ROOF MEMBRANE SYSTEM CONCRETE DECK INSULATED FULLY ADHERED

1. Primer: Asphalt cut-back primer, complying with ASTM D 41.
2. Venting Base Sheet: Asphalt-coated, heavyweight, glass-fiber base sheet with smooth surfacing and embossed venting channels on bottom surface, complying with ASTM D 4897, Type II.
4. Interplay: Roofing asphalt, complying with ASTM D 312, Type III.

5. Modified Sheet Membrane/granular surfaced: Styrene Butadiene Styrene (SBS)-modified asphalt sheets with granular surface; 145" (min) thickness.
 - a. Sheet Reinforcing: Composite polyester and glass-fiber mat.
6. Comply with "NRCA Roofing and Waterproofing Manual," Specification Plate No. 57-3--CMBF.
7. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville, Inc.
 - d. Or approved equal

2.9 MODIFIED BITUMEN ROOFING SYSTEM EDGE/PENETRATION MATERIALS

- A. Roofing Cement: Asphalt cement, asbestos-free, complying with ASTM D 4586, Type III.
- B. Glass-Fiber Fabric: Minimum 1.5-lb woven glass-fiber sheet impregnated with asphalt, complying with ASTM D 1668.
- C. Pre-formed Edge Strips: Rigid insulation units matching roof insulation, or asphalt-impregnated organic-fiber insulation units, molded to form 3-1/2-by-3-1/2-inch by 45-degree cant strips and 1-5/8-by-18-inch tapered-edge strips to receive roofing ply-sheet courses and lift edges above main roofing surface.

2.10 SHEET METAL ACCESSORY MATERIALS

- A. Coordinate below with Section 076200, "Sheet Metal Flashing and Trim."

2.11 MISCELLANEOUS MATERIALS

- A. Wood Members, Units: Provide wood pressure treated with waterborne preservatives for above-ground use (AWPB LP-22).
- B. Walkway Protection Boards: Mineral-surfaced, bituminous composition boards, approximately 1/2 inch thick, manufactured specifically for hot bituminous application on built-up roofing as a protection course for foot traffic.
 1. Available Products: Subject to compliance with requirements, products may be incorporated in the Work include, but are not limited to, the following:
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville
- C. Substrate Joint Tape: 6-inch- or 8-inch-wide, coated, glass-fiber joint tape.
- D. Asphalt Primer: Comply with ASTM D 41.
- E. Fasteners: No mechanical fasteners or nails allowed.
- F. Metal Splash Pans: At all downspouts which empty on the roof surface, provide a sheet metal splash pan set in mastic on top of flexible flashing base ply over roof system.

2.12 FABRICATING SHEET METAL ACCESSORIES

- A. SMACNA and NRCA Details: Conform metal work with details shown and with applicable fabrication requirements of Architectural Sheet Metal Manual by SMACNA. Comply with installation details of NRCA Roofing and Waterproofing Manual.
- B. Prefabricate units as indicated or provide standard manufactured units complying with requirements; fabricate from sheet metal indicated or, if not otherwise indicated, from lead-coated copper.
- C. Provide 4-inch-wide flanges set in roofing cement for applying modified roofing system membrane concealed by composition stripping.
- D. Fabricate work with flat-lock soldered joints and seams; except where joint movement is necessary, provide 1-inch-deep interlocking hooked flanges filled with mastic sealant.
- E. Fabricate gravel rings and aggregate divider strips with 1-inch-high standing leg of folded sheet metal, notched from top with 5/8-inch-deep V notches. Space notches 3 inches o.c. where strip intersects flow of water on roof, 6 inches o.c. elsewhere. Fabricate rings to sizes and shapes indicated (but not less than 36 inches square), and fabricate running strips (as shown) in maximum 4-foot lengths for butt-joint installation (with 1/4-inch gaps).
- F. Fabricate penetration sleeves with minimum 8-inch-high stack of diameter 1 inch larger than penetrating element. Counterflashing is specified as work of another section of these specifications.

2.13 ROOF DRAIN ACCESSORIES MATERIALS

- A. Manufacturers: new roof drains to replace existing.
 - 1. Donovan Manufacturing Co.
 - 2. Josam Manufacturing Co.
 - 3. Smith Manufacturing Co.
 - 4. Zurn Industries, Inc.
- B. The roof drain, size to match existing piping, shall be a molded heavy duty cast iron drain body with a no hub style outlet that can connect directly to drainage pipe of PVC, ABS or cast iron using flexible expansion couplings and clamping ring of epoxy coated cast iron.
- C. Under Deck Clamp - fastens the roof drain securely to the roof deck.
- D. Extension Flange - supports the roof drain from the main deck and permits accurate adjustment of the drain body level with the membrane 1 - 6 inches (25 - 152 mm).
- E. Cast Iron Strainer Dome - of rigid cast iron, epoxy coated, construction 9.5" (241 mm) diameter.
- F. Metal flashing: ASTM B29, four lb. sheet lead

PART 3 - EXECUTION

3.1 INSPECTING SUBSTRATE

- A. Examine substrate surfaces to receive built-up roofing system and associated work and conditions under which roofing will be installed. Do not proceed with roofing until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
1. Verify that flatness and fastening of concrete roof decks comply with the following:
 - a. Top Flanges: No concavity or convexity in excess of 1/16 inch across any three adjacent flanges.
 - b. Side Laps: Properly nested and mechanically fastened at a maximum spacing of 3 feet o.c.
 - c. End Laps: Minimum 2-inch laps located over and fastened to supports.
 - d. Deck secured to each supporting member in every other rib, maximum spacing 12 inches o.c., with puddle welds or approved mechanical fasteners.
 2. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch out of plane. Check for proper spacing between adjacent wood panels.
 3. Test concrete substrate for excessive moisture by pouring 1 pint of hot at 400 deg F (204 deg C) or Equiviscous Temperature Method (ETM) on deck at start of each day's work and at start of each roof area or plane. Do not proceed with roofing work if test sample foams or can be easily and cleanly stripped after cooling--then substrate is too wet.

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Cooperate with inspection and test agencies engaged or required to perform services in connection with installing built-up roofing system.
- B. Protect other work from spillage of built-up roofing materials, and prevent liquid materials from entering or clogging drains and conductors. Replace/restore other work damaged when installing built-up roofing system work.
- C. Coordinate installing insulation, roofing sheets, flashings, stripping, coatings, and surfacing so that insulation and felts are not exposed to precipitation or exposed overnight. Provide cutoffs at end of each day's work to cover exposed felts and insulation with a course of coated felt with joints and edges sealed with roofing cement. Remove cutoffs immediately before resuming work.
- D. Asphalt Heating: Heat and apply according to EVT Method as recommended by NRCA. Do not raise temperature above minimum normal fluid-holding temperature necessary to attain EVT more than 1 hour prior to application. Discard that has been held at a temperature exceeding finished blowing temperature (FBT) for more than 3 hours. Determine flash point, FBT and EVT of, either by information from producer or by suitable tests. Determine maximum fire-safe handling temperature and do not exceed that temperature in heating. In no case heat to a temperature higher than 25 deg F (minus 4 deg C) below flash point. For aggregate-surfaced pour coats of, limit application temperature to minimum required for proper aggregate embedment and maximum that will permit retaining a coating of weight required (depends on slope of surface). Keep kettle lid closed except when adding.
- E. Mopping Weights: For interplay mopping, and for other moppings except as otherwise indicated, apply between plies at the rate of 36 lb. of asphalt per roof square (plus or minus 20 percent on a total-job average basis).

- F. Substrate Joint Penetrations: Do not allow to penetrate substrate joints and enter building or damage insulation, vapor retarders, or other construction. Where mopping is applied directly to a substrate, tape joints or, in the case of steep asphalt, hold mopping back 2 inches from both sides of each joint.
- G. Cutoffs: At the end of each day's roofing installation, protect exposed edge of incomplete work, including ply sheets and insulation. Provide temporary covering of two plies of No. 15 roofing felt set in full moppings of hot; remove at beginning of the next day's work. Glaze-coat areas of completed organic ply sheets that cannot be flood-coated and aggregate-surfaced before the end of each day's work.

3.3 WOOD BLOCKING

- A. Install new wood blocking to match and replace existing at perimeter edge and as required to maintain all minimum 8 inch curb flashing heights. Offset all layers and weave corners. Stagger all nailing patterns. Max. spacing 12" o.c. New wood blocking to work with tapered insulation system.

3.4 HEATING

- A. Using low burner flames during initial melt-downs.
- B. Circulate asphalt after initial meltdown.
- C. Asphalt heating: Use low burner flames during initial melt-downs, circulate asphalt after initial melt-down.
 - 1. Maximum temperature: 525°F.
 - 2. EVT: 400°- 430°F.
 - 3. Kettle: Free of contaminants (coal tar pitch).

3.5 GYPSUM DECK REPAIRS

- A. Repairs of the gypsum deck area to be made according to Gypsum Institute requirements for repairs to gypsum plank roof decks. Structural integrity of the deck shall be maintained.

3.6 INSULATION APPLICATION - GYPSUM DECK

- A. Ensure roof deck is clean and dry.
- B. Mechanically fasten first layer of insulation to gypsum roof deck with 50 fasteners per 100 sf.
- C. Minimum Total Insulation Thickness: 3" inches, as required to achieve an insulation R value of 24.0 plus the recovery board.
- D. Lay insulation boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof. 1/8" max. spacing between boards. Fill all gaps larger than 1/8" with roof insulation. Smallest filler piece shall be 18" wide. Cut boards to provide proper layout with no boards smaller than 18" wide.
- E. Apply no more insulation than can be sealed with membrane in same day.
- F. Stagger joints on all layers at least six inches.

- G. Firmly butt each insulation board to surrounding boards. Do not jam or deform boards.
- H. Maximum insulation gap: 1/4 inch. Fill insulation board joint gaps larger than 1/4" with roof insulation cut to fit.
- I. Maximum elevation variation between boards at joints: 1/8".
- J. Cut and fit insulation boards where roof deck intersects vertical surfaces. Cut boards 1/4" from vertical surface.

3.7 ROOF MEMBRANE INSTALLATION

- A. Shingling Plies: Except as otherwise indicated, install membrane with ply sheets shingled uniformly to achieve required amount of membrane thickness throughout. Shingle in proper direction to shed water on each large area of roofing where slope is significant (over 1/4" per foot).
- B. Equiviscous Temperature at Point of Application: No more than 25°F (14°C) from rating indicated on container label.
- C. Cant Strips/Tapered-Edge Strips: Except as otherwise shown, install preformed 45-degree insulation cant strips at junctures of modified roofing system membrane with vertical surface. Provide preformed, tapered-edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
- D. Venting Base Ply Concrete Deck: Install two-ply Type IV fiberglass felt applied directly to the primed concrete deck.
 - 1. Lay two plies fiberglass base sheets, in Type III asphalt directly to deck. Lap sides 2" (50 mm); lap ends 19" (150 mm).
 - 2. Extend base ply and membrane felts up cant strips and minimum of 2" (50 mm) onto vertical surfaces.
 - 3. Cover with Type III asphalt at 20lb/sq and glaze coat roof.
- E. Interply Sheets: Install the number and type(s) of ply sheets (felts) indicated, lapped (shingled) amount specified to form a continuous, uniform membrane with continuous moppings between sheets so that ply sheet does not touch ply sheet. As ply-sheet membrane is laid up, glaze-coat top surface with a 20-lb mopping per square of same .
 - 1. Mop base of membrane to base ply.
 - 2. Apply roofing membrane in 2 plies of fiberglass ply sheets over fiberglass ply laid on deck surface, mopped with 36 lb/square of per ply. Overlap each sheet 27-1/3". Lay sheets to ensure water will flow over or parallel to exposed edges.
 - 3. Use 13", 26", 39" wide plies to start and finish roof membrane along roof edges and terminations.
 - 4. Overlap previous day's work 24".
 - 5. Lap ply sheet ends 6". Stagger end laps 12" min.
 - 6. Apply felts smooth, free from air pockets, wrinkles, fish-mouths, lap joints, or tears.
 - 7. Install two plies membrane and glaze coat for cut-off at end of day's operation. Glaze felts exposed at end of working day. Remove cut-off before resuming roofing.
 - 8. Mop and seal two additional plies around roof penetrations.
- F. Top Sheet: Install one lapped course of modified bitumenous membrane sheet.

1. Torch-apply to substrate by heating membrane in accordance with manufacturer's recommendation to achieve continuous edge flow and complete bond. Overlap sides minimum 3 inches and end laps minimum 6 inches.
2. Extend modified bitumenous sheet to 2 inches above top edge of cant strip and terminate.
3. Nail edges of roofing membrane to wood blocking at perimeter edges of roof prior to installing metal gravel stops/fascias. Space nails at minimum 8 inches on center.

3.8 DAILY WATERSTOP/TIE-INS

- A. Envelope insulation with 18" wide #15 ply sheet. Adhere envelope to deck and insulation with steep asphalt. Glaze cut-off with steep asphalt.
- B. Install dead-man insulation filler at insulation staggers.
- C. Extend roofing plies at least 12" onto prepared area of adjacent roofing. Embed plies into recommended adhesive. Strip edges with 12" wide modified bitumen sheet embedded completely in alternate uniform courses of adhesive.

3.9 COMPOSITION FLASHING AND STRIPPING

- A. Install modified bitumen flashing at cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof. Install two plies of modified bitumen flashing, each set in a continuous coating of roofing cement and extended onto deck 4 inches and 6 inches, respectively. Nail or provide other forms of mechanical anchorage of composition flashing to vertical surfaces as recommended by manufacturer of primary roofing materials. Except where concealed by elastic flashing, apply a heavy coating of roofing cement over composition flashing.
- B. At wall flashings:
 1. Remove existing base flashing and counterflashing materials to substrate. Remove existing two piece receiver that will not meet height minimums.
 2. Prime vertical substrate with asphalt at approximate rate of one gallon per 100 sq. ft.
 3. Install new roofing 2" beyond top edge of cant.
 4. Mop 1-ply modified bitumen flashing in adhesive completely to primed wall, cant and roofing. Remove wrinkles. Extend flashing 4" minimum beyond toe of cant. Address laps and corners. Seal toe with 6" modified bitumen flashing.
 5. Mechanically fasten top of flashing to substrate 8" o.c.
 6. Aluminize flashings at 125 sq. ft. per gallon.
 7. Provide re-manufactured reglet/flashing system and install new reglet mounted counterflashing with 3/4 inch reglet turned back on itself. Receiver shall be one inch deep.
 8. Caulk reglet joint as required and tool neatly.
- C. At plumbing vents:
 1. Remove existing stack flashing.
 2. Wedge plumbing vent tight against deck.
 3. Install roofing system onto wood blocking.
 4. Apply 1/16" uniformly thick layer of asphalt mastic to surface receiving metal flange.
 5. Fabricate and install plumbing vent flashing from lead. Flange:

- 4" wide minimum; extend completely around periphery of vent flashing. Set flange into mastic. Neatly dress flange with wood block.
- a. Pipe outside diameters greater than 2": Bend lead inside pipe 1" minimum with pliers or rubber/plastic mallet; replace cracked lead.
 - b. Pipe outside diameters 2" or less: Cut lead at vent top; fabricate & install integral lead cap.
6. Nail interior portion of flange to wood blocking 3" o.c., staggered.
 7. Prime metal flange with asphalt primer.
 8. Install two plies modified bitumen flashing over primed metal. Stripping plies shall extend two and four inches beyond edge of lead.
 9. Aluminize lead.
- D. Install composition stripping where metal flanges are set on roofing. Provide not less than one ply of reinforced modified flashing; set each in a continuous coating of roofing cement and extended onto the deck 4 inches and 6 inches, respectively. Except where concealed by aggregate surfacing or elastic flashing, apply a heavy coating of roofing cement over composition stripping.
- E. Roof Drains: Fill clamping ring base with a heavy coating of roofing cement. Set lead flashing sheet in a bed of roofing cement on completed built-up roofing ply sheet courses with lead sheet clamped in roof drain ring and extended 12 inches onto roofing. Cover lead sheet with composition stripping, with plies extended 4 to 6 inches beyond edges of lead sheet. Provide composition stripping of any gravel stop rings.
1. Install tapered edge strip around drain to create 48" x 48" sump. Miter corners. Seal toe of tapered edge to drain rim with reinforcing membrane embedded between alternate courses of asphalt mastic.
 2. Install multi-ply roofing into sump and onto drain rim.
 3. Apply 1/16" uniformly thick layer of asphalt mastic to surface receiving lead flashing.
 4. Set single piece lead flashing in mastic centered over drain; extend lead 6" beyond drain rim. Neatly dress lead with wood block.
 5. Clamp flashing collar to drain in bed of mastic. If bolts are broken, drill and retap. If ladder clamps are installed, replace clamps.
 6. Neatly cut lead within drain at rim, remove.
 7. Five course lead edge with asphalt mastic and reinforcing membrane.
 8. Aluminize area between gravel dam and drain.
- F. Allow for expansion of running metal flashing and edge trim that adjoins roofing.
- G. Counter-Flashings: Counter-flashings, cap flashings, expansion joints, and similar work to be coordinated with built-up roofing work are specified in other sections of these specifications.
- H. Roof Accessories: Miscellaneous sheet metal accessory items, including insulation vents and other devices, and any major items of roof accessories to be coordinated with built-up roofing system work are specified in other sections of these specifications.

3.10 ROOF WALKWAYS

- A. Membrane Reinforcement: Prior to applying aggregate surfacing on roof membrane, and in pattern shown for walkways, and extended 6 inches beyond either side of walkways, install one additional ply of modified bituminous sheet roofing set in mopping of hot .
- B. Cap Sheet Walkways: In pathways and widths as indicated, install a cap sheet course, set in a minimum mopping of same use in ply-sheet courses. Confine mopping to surface under cap sheets. Cut sheets in 10-foot maximum lengths, and install by mop-and-flop method where possible, with butt joints.
 - 1. Color Change: Provide cap sheet of color contrasting with roofing surface as selected by Project representative from available sources.

3.11 PROTECTING ROOFING

- A. Upon completing roofing, including associated work, institute appropriate procedures for surveillance and protection of roofing during remainder of construction period. At end of construction period, or at a time when remaining construction will in no way affect or endanger roofing, inspect roofing and prepare a written report with copies to Project representative and Owner describing nature and extent of deterioration or damage found.
- B. Repair or replace, as required, deteriorated or defective work found at time of above inspection to a condition free of damage and deterioration at time of Substantial Completion and according to requirements of specified warranty.

3.12 FIELD QUALITY CONTROL

- A. Field inspection will be performed under provisions of Section 01001 and as noted in 1.07 Quality Assurance.
- B. Correct identified defects or irregularities.

3.13 MANUFACTURER'S FIELD SERVICE

- A. Provide manufacturer's field services under provisions of Section 010010 and as noted in 1.06 Quality Assurance.
- B. Request site attendance of roofing materials manufacturers during installation of the work is a project requirement.

END OF SECTION 075270

SECTION 075275 - COLD ADHERED SBS-MODIFIED BITUMINOUS ROOFING: Alternate #2;
Addendum #3

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Cold adhered SBS-Modified bituminous cap sheet with a granular surface over fiberglass felt venting base sheet nailed to gypsum deck, 3" of insulation, base sheet set in type IV asphalt, recovery board below the cap sheet.
- B. This Section also includes the following roofing related work:
 - 1. Cleaning of deck surface.
 - 2. Roof insulation, including tapered at drains to improve drainage.
 - 3. New wood cants, blocking and framing.
 - 4. Roof drains, over flow openings and other existing drainage system replacement.
 - 5. Modified flashing of all existing roof details.
 - 6. Traffic pads.
- C. Related Sections: The following Sections contain requirements related to this Section:
 - 1. Division 7 Section "Flashing and Sheet Metal" for metal counter flashings.

1.3 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 1 Specifications Sections.
- B. Product data, including manufacturer's technical product information, installation instructions, and recommendations for each type of roofing product required. Include data substantiating that materials comply with requirements.
 - 1. For adhesives, provide a label on each container indicates compliance with specifications.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer (Roofer) to perform modified roofing work who has specialized for ten years minimum in installing modified roofing systems similar to that required for this Project and who is acceptable to manufacturer of primary roofing materials and to the owner.
 - 1. Installer Certification:
 - a. The installer shall obtain written certification from manufacturer of built-up roofing system certifying that Installer is approved by manufacturer to install specified roofing system. Provide copy of certification for Project representative prior to awarding roofing work.

- b. The installer shall not have been in bankruptcy during the last ten years.
 - c. The installer shall provide a list of at least five projects available for inspection within 50 mile radius of owner.
 - d. The installer shall provide 24-hour leak response during warranty.
2. Installer's Field Supervision: Require Installer to maintain a part-time supervisor/foreman who is on job site during times that modified roofing work is in progress and who is experienced in installing roofing systems similar to type and scope required for this Project.
- B. Manufacturer Qualifications: Roofing material supplier shall:
1. Be Associate Member in good standing with National Roofing Contractors' Association (NRCA) for at least ten (10) years.
 2. Be nationally recognized in roofing, waterproofing, and moisture survey industry.
 3. Be approved by owner.
 4. Has not been in Bankruptcy or experienced ownership change during the last ten (10) years.
 5. The building owner is desirous of working with a financially strong organization, which has the ability to protect and insulate the building owner from both product liability and warranty claims, relating to roofing that could be brought before the building owner during the course of the roofing warranty period. As financial strength of suppliers are a requirement of the building owner proof of such must be shown. To this end, the following information is required by the building owner.
 - a. The manufacturer must present to the building owner a certificate of insurance for product liability with minimum limits of \$200 million.
 - b. The manufacturer must have a current ratio of 1.8:1 (current assets to current liabilities) and demonstrate such with a financial statement supported by an affidavit from a corporate officer.
 - c. The manufacturer must have a current net worth equivalent to 25% of yearly sales and demonstrate such with a financial statement supported by an affidavit from a corporate officer.
 6. The building owner is a supporter of responsible Health, Safety and Environmental issues and requires all manufacturers to have similar concerns, convictions and commitments. To this end, the primary manufacturers of materials used on building owner roof must submit a formalized Corporate HS & E Policy and demonstrate active participation in such a policy.
 7. It is the owner's intention to insure the quality and performance of the roof system by sourcing of the material from one company. The material manufacturer supplying material for the building owner's roofs must manufacture at least 80% of supplied materials in facilities actually owned or solely leased by said manufacturer. The material manufacturer shall submit verification of the foregoing by affidavit of corporate officer.
 8. Provide Owner names of at least 5 qualified applicators.
 9. Employ a Field Technical Services Representative available for monitoring project work on a part-time basis. Representative shall have a minimum ten (10) years experience in built-up roofing systems.
 10. Employ full-time Field Technical Services Representative

- available for final roof inspection.
11. Provide Factory Representative to make periodic site visits, report work quality and job progress. Representative to have a minimum of 5 years experience in built-up roofing with said manufacturer.
 12. Provide list of at least 5 projects available for inspection employing same roofing system within 50 mile radius of Owner.
 13. Roof system shall have a ten year positive track record from said manufacturer.
 14. Manufacturer shall have been in business providing complete roofing systems at least as long as warranty length specified.
 15. The presence and activity of the manufacturer's specifier's representative and/or owner's representative shall in no way relieve the contractor of contractual responsibilities or duties.
- C. UL Listing: Provide built-up roofing system and component materials that have been tested for application and slopes indicated and that are listed by UL for Class A external fire exposure.
1. Provide roof-covering materials bearing UL Classification Marking on bundle, package, or container indicating that materials have been produced under UL's Classification and Follow-up Service.
 2. Provide built-up roofing system that can be installed to comply with UL requirements for Fire Classified and Class 60 uplift resistance requirements.
- D. Fire Performance Characteristics: Provide insulation materials that are identical to materials whose fire performance characteristics, per requirements listed in Part 2 of this Section, have been determined from tests by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- E. Preliminary Roofing Conference: As soon as possible after award of built-up roofing work, meet with Installer (Roofer), installers of substrate construction, such as decks, and other work adjoining roof system including penetrating work and rooftop units, Project representative, Owner, and representatives of other entities directly concerned with roofing system performance, including Owner's insurers and test agencies.
1. Review requirements (Contract Documents), submittals, status of coordinating work, availability of materials, and installation facilities and establish preliminary installation schedule. Review requirements for inspections, tests, certifications, forecasted weather conditions, governing regulations, insurance requirements, and proposed installation procedures.
 2. Discuss roofing system protection requirements for construction period extending beyond roofing installation. Discuss possible need for temporary roofing.
 3. Record discussion, including agreement or disagreement on matters of significance; furnish copy of recorded discussions to each participant. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.
- F. Pre-application Roofing Conference: Approximately 2 weeks prior to scheduled commencement of built-up roofing installation and associated work, meet at Project site with Installer, installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in and around roofing that must precede or follow roofing work--including

mechanical work, Project representative, Owner, roofing system manufacturer's representative, and other representatives directly concerned with work performance, including Owner's insurers, test agencies, and governing authorities, where applicable.

1. Review foreseeable methods and procedures related to roofing work, including, but not necessarily limited to, the following:
 - a. Tour representative areas of roofing substrates (decks), inspect and discuss condition of substrate, roof drains, curbs, penetrations, and other preparatory work performed by other trades.
 - b. Review structural loading limitations of steel deck and inspect deck for loss of flatness and for required mechanical fastening.
 - c. Review roofing system requirements: drawings, specifications, and other contract documents.
 - d. Review required submittals, both complete and incomplete.
 - e. Review and finalize construction schedule related to roofing work and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - f. Review required inspection, testing, certifying, and material use accounting procedures.
 - g. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing, if it is not a mandatory requirement.
2. Record (Contractor) discussions of conference, including decisions and agreements or disagreements reached, and furnish a copy for each attendee. If substantial disagreements exist at the conclusion of the conference, determine how disagreements will be resolved and set a date for reconvening the conference.

1.5 REGULATORY REQUIREMENTS

- A. Conform to the Kentucky State Building Code, 2006.
- B. Fire Hazard Classification: UL 790 Class A rated system. All components of the specified system shall have been tested together as a system and shall bear the UL seal of approval and be listed in the most recent issue materials directory.

1.6 PROJECT CONDITIONS

- A. Weather Condition Limitations: Proceed with roofing work only when existing and forecasted weather conditions will permit work to be performed according to manufacturers' recommendations and warranty requirements.
- B. Work shall not commence on any day if there is more than a 30% chance of rain.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 010010 and General Conditions. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Protect as required in section 010010. Store and handle roofing materials to ensure dryness. Store in a dry, well-ventilated, weather-tight place. Unless protected from weather or other moisture sources, do not leave unused felts on the roof overnight or when roofing work is

not in progress. Store rolls of felt and other sheet materials on end on pallets or another raised surface. Handle and store materials or equipment in a manner to avoid significant or permanent deck deflection.

- C. Stack insulation on pallets. Keep insulation dry. No wet insulation shall be used. All insulation that becomes wet will be removed and replaced at no cost. Cover all materials with tarps and cut plastic shrouds and wrappers.

1.8 WARRANTY

- A. Special Project Unconditional Warranty: Submit two executed copies of unconditional 2-year Roofing Warranty as required, covering work of this Section, including labor, materials, roofing membrane, composition flashing, roof insulation, any vapor retarders, and roofing accessories, signed and countersigned by Installer (Roofer) and Contractor.
- B. Manufacturer's Warranty: Manufacturer's warranty is to be for twenty years, unconditional with no dollar limit, total roof system as installed under this contract. The warranty agreement shall be signed by authorized representative of the manufacturer.
- C. The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.
- D. Installer to inspect and provide a written report at the end of the second and fifth years.

PART 2 - PRODUCTS

2.1 ROOF INSULATION

- A. Perlite Board (misc. areas): Rigid, noncombustible, perlite/fiber boards of thickness indicated, with r-value of 1.32 at 75 deg F (24 deg C), integrally skinned surfaces, complying with ASTM C 728. Provide in manufacturer's standard sizes.
- B. Tapered insulation, roof drains and crickets: Rigid, noncombustible, perlite/fiber boards of thickness indicated, with r-value of 1.32 at 75 deg F (24 deg C), integrally skinned surfaces, complying with ASTM C 728. Crickets are to be tapered 1/2" per 12".
- C. Polyisocyanurate Foam Board: Rigid boards of minimum 2.0 pcf density polyisocyanurate-based foam core, permanently bonded to roofing felt facer sheets. Provide in thickness indicated with minimum aged r-value of 20 for 2.7", when conditioned per RIC/PIMA Bulletin No. 281-1.
 - 1. Composite Type: In lieu of bottom felt cover, provide 3/4-inch-thick, integrally bonded course of rigid, perlite- or mineral-fiber insulation board to form composite board with polyisocyanurate insulation.

2.2 CANTS, BLOCKING AND FRAMING

- A. Wall and curbs
 - 1. Wood Cants: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled.

- B. Wood blocking/framing: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled. For wall framing provide 2x4 stud members at 12" o.c. Provide $\frac{3}{4}$ " exterior-grade marine gray plywood sheathing.

2.3 EXISTING ROOF DECKS

- A. Roof Deck Repairs
 - 1. Immediately notify project representative of any damaged to existing roof decks.

2.4 ADHESIVE AND ADHESIVE MATERIALS:

- A. General: Adhesive and sealant materials recommended by roofing system manufacturer for intended use, identical to materials utilized in approved listed roofing system, and compatible with roofing membrane.
 - 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
 - 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - a. Multipurpose Construction Adhesives: 70 g/L.
 - b. Contact Adhesives: 80 g/L.
 - c. Other Adhesives: 250 g/L.
 - d. Nonmembrane Roof Sealants: 300 g/L.
 - e. Sealant Primers for Nonporous Substrates: 250 g/L.
 - f. Sealant Primers for Porous Substrates: 775 g/L.
- B. Water-Based Asphalt Primer: Water-based, polymer modified, asphalt primer with the following physical properties:
 - 1. Asbestos Content, EPA 600/R13/116: None.
 - 2. Non-Volatile Content, minimum, ASTM D2823: 30 percent.
 - 3. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 65 g/L.
- C. Cold-Applied Adhesive for sheet membrane: One-part, asbestos-free, low-volatile, cold-applied adhesive specially formulated for compatibility and use with specified roofing membranes and flashings, with the following physical properties:
 - 1. Asbestos Content, EPA 600 R13/116: None.
 - 2. Volatile Organic Compounds (VOC), maximum, ASTM D6511: <250 g/L.
 - 3. Nonvolatile Content, minimum, ASTM D6511: 75 percent.
 - 4. Uniformity and Consistency, ASTM D6511: Pass.
- D. Cold-Applied Adhesive for membrane flashing: One-part, cold-applied adhesive specially formulated for compatibility and use with specified roofing membranes and flashings, with the following physical properties:
 - 1. Asbestos Content, EPA 600 R13/116: None.
 - 2. Volatile Organic Compounds (VOC), maximum, ASTM D6511: <250 g/L.
 - 3. Nonvolatile Content, minimum, ASTM D6511: 75 percent.
 - 4. Uniformity and Consistency, ASTM D6511: Pass.

2.5 MEMBRANE AND SHEET MATERIALS:

- A. Membrane Materials, General: Provide combination of base, ply, and cap sheet materials that have been tested in combination and comply with load/strain properties performance requirement in Part 1 of this Section.

- B. Base Sheet: ASTM D4897, Type II, venting, nonperforated, heavyweight, asphalt-impregnated and coated, glass-fiber base sheet with coarse granular surfacing or embossed venting channels on bottom surface.
- C. Base Sheet: ASTM D4601, Type II, nonperforated, asphalt-impregnated and coated glass-fiber sheet dusted with fine mineral surfacing on both sides, with the following properties:
 - 1. Breaking Strength, minimum, ASTM D146: cross machine direction, 12.2 kN/m (70 lbf/in).
 - 2. Pliability, 12.7 mm (1/2 inch) radius bend, ASTM D146: No failures.
- D. Membrane Ply Sheet: ASTM D6163, Grade S, Type II or III, glass-fiber-reinforced, COLD ADHERED SBS/SEBS-modified asphalt sheet, or ASTM D6162, Grade S, Type II or III, COLD ADHERED SBS/SEBS-modified asphalt sheet; granular surfaced; 145" (min) thickness; suitable for application method specified, with the following minimum properties:
 - 1. Tensile Strength at 23 deg. C (73 deg. F), minimum, cross machine direction, ASTM D5147: 21 kN/m (120 lbf/in).
 - 2. Tear Strength at 23 deg. C (73 deg. F), minimum, cross machine direction, ASTM D5147: 890 N (200 lbf).
 - 3. Elongation at 23 deg. C (73 deg. F), minimum, cross machine direction, at 5 percent maximum load ASTM D5147: 40 percent.

2.6 FASTENERS:

- A. Roofing Fasteners: Factory-coated steel fasteners and metal or plastic plates, where applicable, meeting requirements of FM Approvals 4470, tested by fastener manufacturer for required pullout strength, and recommended by roofing manufacturer for application.
- B. Accessory Fasteners: Corrosion-resistant fasteners compatible with adjacent materials and recommended for application by manufacturer of component to be fastened.

2.7 COATINGS

- A. Fibrated Aluminum Roof Coating: solvent-based, Energy Star Certified, CRRC listed and California Title 24 Energy Code compliant elastomeric roof coating formulated for use on bituminous roof surfaces, with the following physical properties:
 - 1. Asbestos Content, EPA/600/R13/116: None.
 - 2. Non-Volatile Content (by weight), minimum, ASTM D1644: 60 percent.
 - 3. Volatile Organic Compounds (VOC), ASTM D3960: 400g/L.
 - 4. Percent Solids (by volume), minimum, ASTM D5201: 14 percent.
 - 5. Reflectance, minimum, ASTM C1549: 86 percent.
 - 6. Emissivity, minimum, ASTM C1370: 0.93.
 - 7. Solar Reflectance Index (SRI), ASTM E1980: 103.
 - 8. Weight, 8.5 lb/gal

2.8 BUILT-UP ROOF MEMBRANE GYPSUM DECK INSULATED FULLY ADHERED

- 1. Primer: cold adhesive water based primer
- 2. Insulation: one layer of 3" polyisocyanurate rigid insulation.
- 3. 1/2" high density wood fiberboard recovery board.
- 4. Venting Base Sheet: Asphalt-coated, heavyweight, glass-fiber base sheet with granular surfacing and embossed venting channels on bottom surface, complying with ASTM D 4897, Type II.
- 5. Interplay: cold adhesive, complying with ASTM D6511.

6. Modified Sheet Membrane/Granular Surfaced: Styrene Butadiene Styrene (COLD ADHERED SBS)-modified asphalt sheets with granular exposed surface; manufacturer's standard sheet thickness
 - a. Sheet Reinforcing: Composite polyester and glass-fiber mat.
7. Comply with "NRCA Roofing and Waterproofing Manual," Specification Plate No. 57-3--CMBF.
8. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville, Inc.
 - d. Or approved equal

2.9 MODIFIED BITUMEN ROOFING SYSTEM EDGE/PENETRATION MATERIALS

- A. Roofing Cement: cold adhesive, asbestos-free, complying with ASTM D6511
- B. Glass-Fiber Fabric: Minimum 1.5-lb woven glass-fiber sheet impregnated with asphalt, complying with ASTM D 1668.
- C. Pre-formed Edge Strips: Rigid insulation units matching roof insulation, or asphalt-impregnated organic-fiber insulation units, molded to form 3-1/2-by-3-1/2-inch by 45-degree cant strips and 1-5/8-by-18-inch tapered-edge strips to receive roofing ply-sheet courses and lift edges above main roofing surface.

2.10 SHEET METAL ACCESSORY MATERIALS

- A. Coordinate below with Section 076200, "Sheet Metal Flashing and Trim."
- B. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated and with not less than the strength and durability of alloy and temper designated below:
 1. Factory-Painted Aluminum Sheet: ASTM B 209 (ASTM B 209M), 3003-H14, with a minimum thickness of 0.040 inch (1.0 mm), unless otherwise indicated.
- C. Solder for Sheet Metal: Unless indicated otherwise or recommended by metal manufacturer, provide type (ASTM B 32), grade Sn60, for tinning and soldering joints; use rosin flux.

2.11 MISCELLANEOUS MATERIALS

- A. Wood Members, Units: Provide wood pressure treated with waterborne preservatives for above-ground use (AWPB LP-22).
- B. Walkway Protection Boards: Mineral-surfaced, bituminous composition boards, approximately 1/2 inch thick, manufactured specifically for cold adhesive application on built-up roofing as a protection course for foot traffic.
 1. Available Products: Subject to compliance with requirements, products may be incorporated in the Work include, but are not limited to, the following:
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville

- C. Substrate Joint Tape: 6-inch- or 8-inch-wide, coated, glass-fiber joint tape.
- D. Asphalt Primer: Comply with ASTM D 41.
- E. Fasteners: No mechanical fasteners or nails allowed.
- F. Metal Splash Pans: At all downspouts which empty on the roof surface, provide a sheet metal splash pan set in mastic on top of flexible flashing base ply over roof system.

2.12 FABRICATING SHEET METAL ACCESSORIES

- A. SMACNA and NRCA Details: Conform metal work with details shown and with applicable fabrication requirements of Architectural Sheet Metal Manual by SMACNA. Comply with installation details of NRCA Roofing and Waterproofing Manual.
- B. Prefabricate units as indicated or provide standard manufactured units complying with requirements; fabricate from sheet metal indicated or, if not otherwise indicated, from lead-coated copper.
- C. Provide 4-inch-wide flanges set in roofing cement for applying modified roofing system membrane concealed by composition stripping.
- D. Fabricate work with flat-lock soldered joints and seams; except where joint movement is necessary, provide 1-inch-deep interlocking hooked flanges filled with mastic sealant.
- E. Fabricate gravel rings and aggregate divider strips with 1-inch-high standing leg of folded sheet metal, notched from top with 5/8-inch-deep V notches. Space notches 3 inches o.c. where strip intersects flow of water on roof, 6 inches o.c. elsewhere. Fabricate rings to sizes and shapes indicated (but not less than 36 inches square), and fabricate running strips (as shown) in maximum 4-foot lengths for butt-joint installation (with 1/4-inch gaps).
- F. Fabricate penetration sleeves with minimum 8-inch-high stack of diameter 1 inch larger than penetrating element. Counterflashing is specified as work of another section of these specifications.

2.13 ROOF DRAIN ACCESSORIES MATERIALS

- A. Manufacturers: new roof drains to replace existing.
 - 1. Donovan Manufacturing Co.
 - 2. Josam Manufacturing Co.
 - 3. Smith Manufacturing Co.
 - 4. Zurn Industries, Inc.
- B. The roof drain, size to match existing piping, shall be a molded heavy duty cast iron drain body with a no hub style outlet that can connect directly to drainage pipe of PVC, ABS or cast iron using flexible expansion couplings and clamping ring of epoxy coated cast iron.
- C. Under Deck Clamp - fastens the roof drain securely to the roof deck.
- D. Extension Flange - supports the roof drain from the main deck and permits accurate adjustment of the drain body level with the membrane 1 - 6 inches (25 - 152 mm).

- E. Cast Iron Strainer Dome - of rigid cast iron, epoxy coated, construction 9.5" (241 mm) diameter.
- F. Metal flashing: ASTM B29, four lb. sheet lead

PART 3 - EXECUTION

3.1 INSPECTING SUBSTRATE

- A. Examine substrate surfaces to receive built-up roofing system and associated work and conditions under which roofing will be installed. Do not proceed with roofing until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
 - 1. Verify that flatness and fastening of concrete roof decks comply with the following:
 - a. Top Flanges: No concavity or convexity in excess of 1/16 inch across any three adjacent flanges.
 - b. Side Laps: Properly nested and mechanically fastened at a maximum spacing of 3 feet o.c.
 - c. End Laps: Minimum 2-inch laps located over and fastened to supports.
 - d. Deck secured to each supporting member in every other rib, maximum spacing 12 inches o.c., with puddle welds or approved mechanical fasteners.
 - 2. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch out of plane. Check for proper spacing between adjacent wood panels.
 - 3. Test concrete substrate for excessive moisture before starting roof application.

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Cooperate with inspection and test agencies engaged or required to perform services in connection with installing built-up roofing system.
- B. Protect other work from spillage of built-up roofing materials, and prevent liquid materials from entering or clogging drains and conductors. Replace/restore other work damaged when installing built-up roofing system work.
- C. Coordinate installing insulation, roofing sheets, flashings, stripping, coatings, and surfacing so that insulation and felts are not exposed to precipitation or exposed overnight. Provide cutoffs at end of each day's work to cover exposed felts and insulation with a course of coated felt with joints and edges sealed with roofing cement. Remove cutoffs immediately before resuming work.
- D. Cold Adhesive: Apply adhesive as required by the manufacturer.
- F. Substrate Joint Penetrations: Do not allow to penetrate substrate joints and enter building or damage insulation, vapor retarders, or other construction. Where mopping is applied directly to a substrate, tape joints or, in the case of cold adhesive, hold back 2 inches from both sides of each joint.
- G. Cutoffs: At the end of each day's roofing installation, protect exposed edge of incomplete work, including ply sheets and insulation. Provide temporary covering of two plies of No. 15 roofing felt set in full application of cold adhesive; remove at beginning of the next day's work.

3.3 WOOD BLOCKING

- A. Install new wood blocking to match existing and as needed at perimeter edge and as required to maintain all minimum 8 inch curb flashing heights. Offset all layers and weave corners. Stagger all nailing patterns. Max. spacing 12" o.c. New wood blocking to work with added insulation.
- B. Provide blocking as required by the roof system manufacturer for steep slope as noted over the stair towers.

3.4 INSULATION APPLICATION - GYPSUM DECK

- A. Ensure roof deck is clean and dry.
- B. Mechanically fasten first layer of insulation to wood roof deck with 50 fasteners per 100 sf.
- C. Minimum Total Insulation Thickness: 3" inches, as required to achieve an insulation R value of 20.0 plus the recovery board.
- D. Lay insulation boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof. 1/8" max. spacing between boards. Fill all gaps larger than 1/8" with roof insulation. Smallest filler piece shall be 18" wide. Cut boards to provide proper layout with no boards smaller than 18" wide.
- E. Apply no more insulation than can be sealed with membrane in same day.
- F. Stagger joints on all layers at least six inches.
- G. Firmly butt each insulation board to surrounding boards. Do not jam or deform boards.
- H. Maximum insulation gap: 1/4 inch. Fill insulation board joint gaps larger than 1/4" with roof insulation cut to fit.
- I. Maximum elevation variation between boards at joints: 1/8".
- J. Cut and fit insulation boards where roof deck intersects vertical surfaces. Cut boards 1/4" from vertical surface.

3.5 INSTALLATION OF MODIFIED BITUMEN MEMBRANE:

- A. Primer: Apply primer to substrates where recommended by roofing manufacturer, in application quantities recommended by roofing manufacturer.
- B. Cold-Applied Adhesive: Apply cold-applied adhesive in application quantities recommended by roofing manufacturer at substrate, between membrane sheets, and as glaze coat where required.
- C. Membrane Sheets:
 - 1. Number of Plies: 2, minimum, including base sheet and cap sheet, and additional plies as required to meet load/strain properties specified in Part 1 of this Section.
 - 2. Commence the laying of sheets at the low points.

3. Roll sheets into cold-applied adhesive brushing down to firmly embed, free of wrinkles, fish mouths, blisters, bubbles, voids, air pockets or other defects that prevent complete adhesion:
 4. Cut to fit closely around pipes, roof drains, bitumen stops, and similar roof projections.
 5. Lap sheets shingle fashion starting with starter strips at right angles to slope of roof.
 6. Laps for Top Sheet and Base Sheet:
 - a. Base sheet, lapped 75 mm (three inches).
 - b. Use 450 mm (18 inch) starting widths, lap top sheet 475 mm (19 inches).
 - c. Lap end joints of sheet 150 mm (six inches). Stagger end joints in relation to end joints in adjacent and proceeding plies.
- D. Roofing on Nailable Decks:
1. On poured gypsum, precast gypsum plank, cement-wood fiber plank, wood plank, or plywood decks install one layer of building paper followed by base sheet.
 - a. Apply building paper lapping ends and edges 50 mm (two inches) Lay smoothly without buckles or wrinkles. Staple or nail sufficiently to hold in place until roof membrane is installed.
 - b. One ply of venting base sheet. Lay base sheet down dry on deck, Nail as specified. Lap as specified and seal lap edges with roof cement.
- E. Roof edges and terminations:
1. Where nailers occur at roof edges under gravel stops or penetrations to receive metal base flashing, apply a continuous strip of underlayment over the nailers before the first ply sheet is applied. Strip shall be installed on top of venting base sheet if any.
 2. After membrane is installed, turn the underlayment back over the roofing, and secure in place with cold-applied adhesive before gravel stops or other metal flanges extending out onto the membrane are installed.
 3. Where cants occur at vertical surfaces, cut off roofing sheets two inches above top of cant strips, except at prefabricated curbs, scuttles and other roof accessories having integral cants, extend membrane over cant and up vertical surface to top of curb or nailer as shown.
 4. Where fascia-cant occurs at roof edges, extend membrane beyond outside cant face and cut off at outside after base flashing is installed.
 5. Where reglet occurs at vertical surfaces, extend plies roofing sheets up into reglet the full depth of the reglet.

3.6 COMPOSITION FLASHING AND STRIPPING

- A. Install modified bitumen flashing at cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof. Install two plies of modified bitumen flashing, each set in a continuous coating of roofing cement and extended onto deck 4 inches and 6 inches, respectively. Nail or provide other forms of mechanical anchorage of composition flashing to vertical surfaces as recommended by manufacturer of primary roofing materials. Except where concealed by elastic flashing, apply a heavy coating of roofing cement over composition flashing.
- B. At wall flashings:
1. Remove existing base flashing and counterflashing materials to substrate. Remove existing two piece receiver that will not meet height minimums.
 2. Prime vertical substrate with cold adhesive at approximate rate of one gallon per 100 sq. ft.

3. Install new roofing 2" beyond top edge of cant.
4. 1-ply modified bitumen flashing in adhesive completely to primed wall, cant and roofing. Remove wrinkles. Extend flashing 4" minimum beyond toe of cant. Address laps and corners. Seal toe with 6" modified bitumen flashing.
5. Mechanically fasten top of flashing to substrate 8" o.c.
6. Aluminize flashings at 125 sq. ft. per gallon.
7. Fabricate and install new reglet mounted counterflashing with 3/4 inch reglet turned back on itself. Receiver shall be one inch deep.
8. Caulk reglet joint as required and tool neatly.

C. At plumbing vents:

1. Remove existing stack flashing.
2. Wedge plumbing vent tight against deck.
3. Install roofing system onto wood blocking.
4. Apply 1/16" uniformly thick layer of cold adhesive to surface receiving metal flange.
5. Fabricate and install plumbing vent flashing from lead. Flange: 4" wide minimum; extend completely around periphery of vent flashing. Set flange into mastic. Neatly dress flange with wood block.
 - a. Pipe outside diameters greater than 2": Bend lead inside pipe 1" minimum with pliers or rubber/plastic mallet; replace cracked lead.
 - b. Pipe outside diameters 2" or less: Cut lead at vent top; fabricate & install integral lead cap.
6. Nail interior portion of flange to wood blocking 3" o.c., staggered.
7. Prime metal flange with cold adhesive primer.
8. Install two plies modified bitumen flashing over primed metal. Stripping plies shall extend two and four inches beyond edge of lead.
9. Aluminize lead.

- D. Install composition stripping where metal flanges are set on roofing. Provide not less than one ply of reinforced modified flashing; set each in a continuous coating of roofing cement and extended onto the deck 4 inches and 6 inches, respectively. Except where concealed by aggregate surfacing or elastic flashing, apply a heavy coating of roofing cement over composition stripping.

- E. Roof Drains: Fill clamping ring base with a heavy coating of roofing cement. Set lead flashing sheet in a bed of roofing cement on completed built-up roofing ply sheet courses with lead sheet clamped in roof drain ring and extended 12 inches onto roofing. Cover lead sheet with composition stripping, with plies extended 4 to 6 inches beyond edges of lead sheet. Provide composition stripping of any gravel stop rings.
1. Install tapered edge strip around drain to create 48" x 48" sump. Miter corners. Seal toe of tapered edge to drain rim with reinforcing membrane embedded between alternate courses of cold adhesive.
 2. Install multi-ply roofing into sump and onto drain rim.
 3. Apply 1/16" uniformly thick layer of cold adhesive to surface receiving lead flashing.
 4. Set single piece lead flashing in mastic centered over drain; extend lead 6" beyond drain rim. Neatly dress lead with wood block.
 5. Clamp flashing collar to drain in bed of mastic. If bolts are

broken, drill and retap. If ladder clamps are installed, replace clamps.

6. Neatly cut lead within drain at rim, remove.
7. Five course lead edge with cold adhesive and reinforcing membrane.
8. Aluminize area between gravel dam and drain.

- F. Allow for expansion of running metal flashing and edge trim that adjoins roofing.
- G. Counter-Flashings: Counter-flashings, cap flashings, expansion joints, and similar work to be coordinated with built-up roofing work are specified in other sections of these specifications.
- H. Roof Accessories: Miscellaneous sheet metal accessory items, including insulation vents and other devices, and any major items of roof accessories to be coordinated with built-up roofing system work are specified in other sections of these specifications.

3.8 DAILY WATERSTOP/TIE-INS

- A. Envelope insulation with 18" wide #15 ply sheet. Adhere envelope to deck and insulation with cold adhesive. Glaze or seal cutoff with adhesive/sealants.
- B. Install dead-man insulation filler at insulation staggers.
- C. Extend roofing plies at least 12" onto prepared area of adjacent roofing. Embed plies into recommended adhesive. Strip edges with 12" wide modified bitumen sheet embedded completely in alternate uniform courses of adhesive.

3.9 ROOF WALKWAYS

- A. Install roof walkways where indicated.
- B. Set prefabricated planks in solid application of cold-applied adhesive. Maintain 75 mm (three inch) to 150 mm (six-inch) space between planks.

3.10 APPLICATION OF COATING

- A. Apply coating to membrane and base flashings according to manufacturer's written instructions by spray or roller.
- B. Provide dry film thickness of minimum 20 mils (0.5 mm).

3.11 FIELD QUALITY CONTROL:

- A. Roofing Inspector: Owner will engage a qualified roofing inspector to perform roof tests and inspections and to prepare test reports.
- C. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
 1. Notify Architect and Owner 48 hours in advance of date and time of inspection.
- D. Repair or remove and replace components of roofing work where test results or inspections indicate that they do not comply with specified requirements.

1. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.12 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of acceptance by Owner.
- C. Clean overspray and spillage from adjacent construction. Clean membrane and restore surface to like-new condition meeting solar reflectance requirements.

3.13 MANUFACTURER'S FIELD SERVICE

- A. Provide manufacturer's field services under provisions of Section 010010 and as noted in 1.5 Quality Assurance.
- B. Request site attendance of roofing materials manufacturers during installation of the work is a project requirement.

END OF SECTION 075275



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January 16, 2013

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1555 Old Frankfort Pike
Lexington, KY 40504

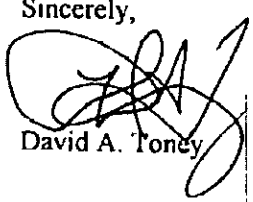
RE: PLM Bulk Sample Analysis: **Asbestos Roof Sampling – Phoenix Building –**
101 E. Vine Street – Lexington, KY

Dear Mr. Kelsey,

Please find outlined in the following report the result(s) for PLM bulk samples(s) collected by our laboratory on January 11, 2013. The samples were analyzed for asbestos content by polarized light microscopy (PLM) coupled with the dispersion staining technique according to the "Method of the Determination of Asbestos in Bulk Building Materials", R.L. Perkins and B.W. Harvey (EPA/600/R-93/116). The samples were analyzed on January 16, 2013.

If you have any questions regarding this report, feel free to contact me at (859) 254-1093.

Sincerely,

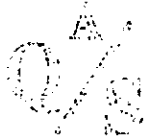

David A. Toney

Q/S

PLM BULK SAMPLE ANALYSIS RESULTS

CLIENT: Lexington Fayette Urban Co. Govt. - Facilities Management
PROJECT: Asbestos Roof Sampling - Phoenix Building - 101 E. Vine Street - Lexington, KY

SAMPLE #	MATERIAL DESCRIPTION / LOCATION	ASBESTOS CONTENT
PB-1	Roof Core	NAD
PB-2	Roof Core	NAD
PB-3	Roof Core	NAD
PB-4	Roof Core	NAD
PB-5	Roof Core	NAD
PB-6	Roof Core	NAD
PB-7	Flashing Tar @ Roof Parameter	NAD
PB-8	Flashing Tar @ Roof Parameter	NAD
PB-9	Flashing Tar @ Roof Parameter	NAD



PLM BULK SAMPLE ANALYSIS RESULTS

CLIENT: Lexington Fayette Urban Co. Govt. - Facilities Management
PROJECT: Asbestos Roof Sampling - Phoenix Building - 101 E. Vine Street - Lexington, KY

PB-10	Flashing Tar @ Roof Parameter	NAD
PB-11	Flashing Tar @ Roof Parameter	NAD
PB-12	Flashing Tar @ Roof Parameter	NAD
PB-13	Tar Patching	NAD
PB-14	Tar Patching	NAD
PB-15	Tar Patching	NAD
PB-16	Tar Patching	NAD
PB-17	Tar Patching	NAD
PB-18	Tar Patching	NAD
PB-19	Tar @ Vent Penetration	NAD

A
Q/S

PLM BULK SAMPLE ANALYSIS RESULTS

CLIENT: Lexington Fayette Urban Co. Govt. - Facilities Management
PROJECT: Asbestos Roof Sampling - Phoenix Building - 101 E. Vine Street - Lexington, KY

PB-20	Tar @ Vent Penetration	NAD
PB-21	Tar @ Vent Penetration	NAD
PB-22	Tar @ Vent Penetration	NAD
PB-23	Tar @ Vent Penetration	NAD
PB-24	Tar @ Vent Penetration	NAD
PB-25	Rolled Roofing on Concrete Slab	NAD
PB-26	Rolled Roofing on Concrete Slab	NAD
PB-27	Rolled Roofing on Concrete Slab	NAD
PB-28	Rolled Roofing on Concrete Slab	NAD
PB-29	Rolled Roofing on Concrete Slab	NAD

A/S

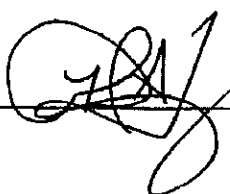
PLM BULK SAMPLE ANALYSIS RESULTS

CLIENT: Lexington Fayette Urban Co. Govt. - Facilities Management
PROJECT: Asbestos Roof Sampling - Phoenix Building - 101 E. Vine Street - Lexington, KY

PB-30	Rolled Roofing on Concrete Slab	NAD
-------	---------------------------------	-----

NAD = No Asbestos Detected

Analyst: David A. Toney, _____




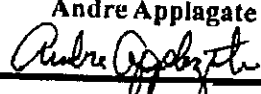
CHAIN OF CUSTODY FORM
QUALITY ASSURANCE SPECIALISTS, INC.
 431 SOUTH BROADWAY – SUITE 122
 LEXINGTON, KY 40508
 PHONE: 859-254-1093
 EMAIL : qas@cssiky.com

CLIENT : LFUCG **DIVISION to INVOICE : Facilities Management**
PHONE : 859-537-1079 **FAX : 859-258-3925** **EMAIL : skelsey@lexingtonky.gov**



PROJECT NAME : Asbestos Roof Sampling – Phoenix Building **PROJECT LOCATION : 101 E. Vine St. - Lexington, KY**

W. O. # : **ANALYSIS TYPE : TEM Bulk** **TOTAL SAMPLES : 30 PLM**
DATE SAMPLED : 01-11-13 **SAMPLED BY : Dave Toney** **DUE DATE / TAT : ASAP**



SAMPLE ID #	SAMPLE LOCATION / DESCRIPTION	RESULTS
PB-1	Roof Core	PLM
PB-2	Roof Core	"
PB-3	Roof Core	"
PB-4	Roof Core	"
PB-5	Roof Core	"
PB-6	Roof Core	"
PB-7	Flashing Tar @ Roof Parameter	"
PB-8	Flashing Tar @ Roof Parameter	"
PB-9	Flashing Tar @ Roof Parameter	"
PB-10	Flashing Tar @ Roof Parameter	"

RELINQUISHED BY	RECEIVED BY	DATE / TIME RECEIVED
David A. Toney 	Andre Applagate 	01/11/13

CHAIN OF CUSTODY FORM
QUALITY ASSURANCE SPECIALISTS, INC.
 431 SOUTH BROADWAY – SUITE 122
 LEXINGTON, KY 40508
 PHONE: 859-254-1093
 EMAIL : qas@cssiky.com

CLIENT : LFUCG		DIVISION to INVOICE : Facilities Management	
PHONE : 859-537-1079		FAX : 859-258-3925	EMAIL : skelsey@lexingtonky.gov
PROJECT NAME : Asbestos Roof Sampling – Phoenix Building		PROJECT LOCATION : 101 E. Vine St. - Lexington, KY	
W. O. # :	ANALYSIS TYPE : TEM Bulk	TOTAL SAMPLES : 30 PLM	
DATE SAMPLED : 01-11-13	SAMPLED BY : Dave Toney	DUE DATE / TAT : ASAP	
SAMPLE ID #	SAMPLE LOCATION / DESCRIPTION	RESULTS	
PB-11	Flashing Tar @ Roof Parameter	PLM	
PB-12	Flashing Tar @ Roof Parameter	"	
PB-13	Tar Patching	"	
PB-14	Tar Patching	"	
PB-15	Tar Patching	"	
PB-16	Tar Patching	"	
PB-17	Tar Patching	"	
PB-18	Tar Patching	"	
PB-19	Tar @ Vent Penetration	"	
PB-20	Tar @ Vent Penetration	"	
RELINQUISHED BY	RECEIVED BY	DATE / TIME RECEIVED	
David A. Toney 	Andre Applagate 	01/11/13	

CHAIN OF CUSTODY FORM
QUALITY ASSURANCE SPECIALISTS, INC.
 431 SOUTH BROADWAY - SUITE 122
 LEXINGTON, KY 40508
 PHONE: 859-254-1093
 EMAIL: qas@cssiky.com

CLIENT : LFUCG		DIVISION to INVOICE : Facilities Management	
PHONE : 859-537-1079		FAX : 859-258-3925	
EMAIL : skelsey@lexingtonky.gov			
PROJECT NAME : Asbestos Roof Sampling - Phoenix Building		PROJECT LOCATION : 101 E. Vine St. - Lexington, KY	
W. O. # :		ANALYSIS TYPE : TEM Bulk	
		TOTAL SAMPLES : 30 PLM	
DATE SAMPLED : 01-11-13		SAMPLED BY : Dave Toney	
		DUE DATE / TAT : ASAP	
SAMPLE ID #	SAMPLE LOCATION / DESCRIPTION	RESULTS	
PB-21	Tar @ Vent Penetration	PLM	
PB-22	Tar @ Vent Penetration	"	
PB-23	Tar @ Vent Penetration	"	
PB-24	Tar @ Vent Penetration	"	
PB-25	Rolled Roofing on Concrete Slab	"	
PB-26	Rolled Roofing on Concrete Slab	"	
PB-27	Rolled Roofing on Concrete Slab	"	
PB-28	Rolled Roofing on Concrete Slab	"	
PB-29	Rolled Roofing on Concrete Slab	"	
PB-30	Rolled Roofing on Concrete Slab	"	
RELINQUISHED BY		RECEIVED BY	
David A. Toney 		Andre Applagate 	
		DATE / TIME RECEIVED	
		01/11/13	

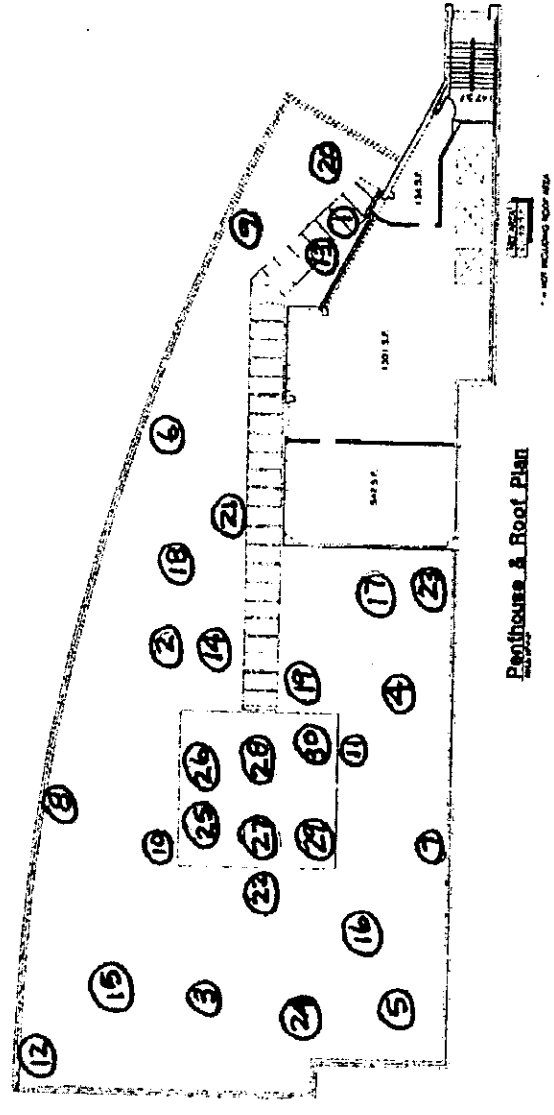
LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
 DIVISION OF BUILDING MAINTENANCE & CONSTRUCTION
 1554 OLD FRANKFORT PIKE
 LEXINGTON, KY 40504
 PHONE (606)258-9820 FAX (606)258-9825



As-Built
 Penthouse Building
 101 East One Street

Floor Plan

DATE: 11/11/03
 DRAWN BY: J. H. HARRIS
 CHECKED BY: J. H. HARRIS
 SCALE: AS SHOWN
 SHEET NO. A-8



Penthouse & Roof Plan

SAMPLE LOCATION DRAWING

PEARCE-BLACKBURN ROOFING

Roofing and Sheet Metal

309 Blue Sky Parkway

Lexington, KY 40509

Phone (859)263-5137

Fax (859)263-5139

Infrared Survey

PHOENIX BUILDING
101 East Vine Street
Lexington, KY

PEARCE-BLACKBURN ROOFING

Roofing and Sheet Metal

309 Blue Sky Parkway

Lexington, KY 40509

Phone (859)263-5137

Fax (859)263-5139

SUMMARY PAGE

An INFRARED ROOF MOISTURE SURVEY was completed on the Phoenix Building in Lexington, KY on 6/21/10. The total square footage of the roof areas surveyed is approximately 11,238 square feet.

In the course of the survey, six areas of wet insulation were detected, totaling 3,741 square feet or approximately 33.29% of the roof area surveyed. The wet areas were marked on the surface of the roof in blue paint and have been plotted on the drawing, which is included in this report.

Six thermograms were taken in order to document a representative sample of the wet areas that were detected. These images have been included with this report and are accompanied by corresponding visual light photos and a brief description of the wet areas. The drawing in this report denotes the location of the thermograms and wet areas detected in the survey. A breakdown of the areas of wet insulation is included as well.

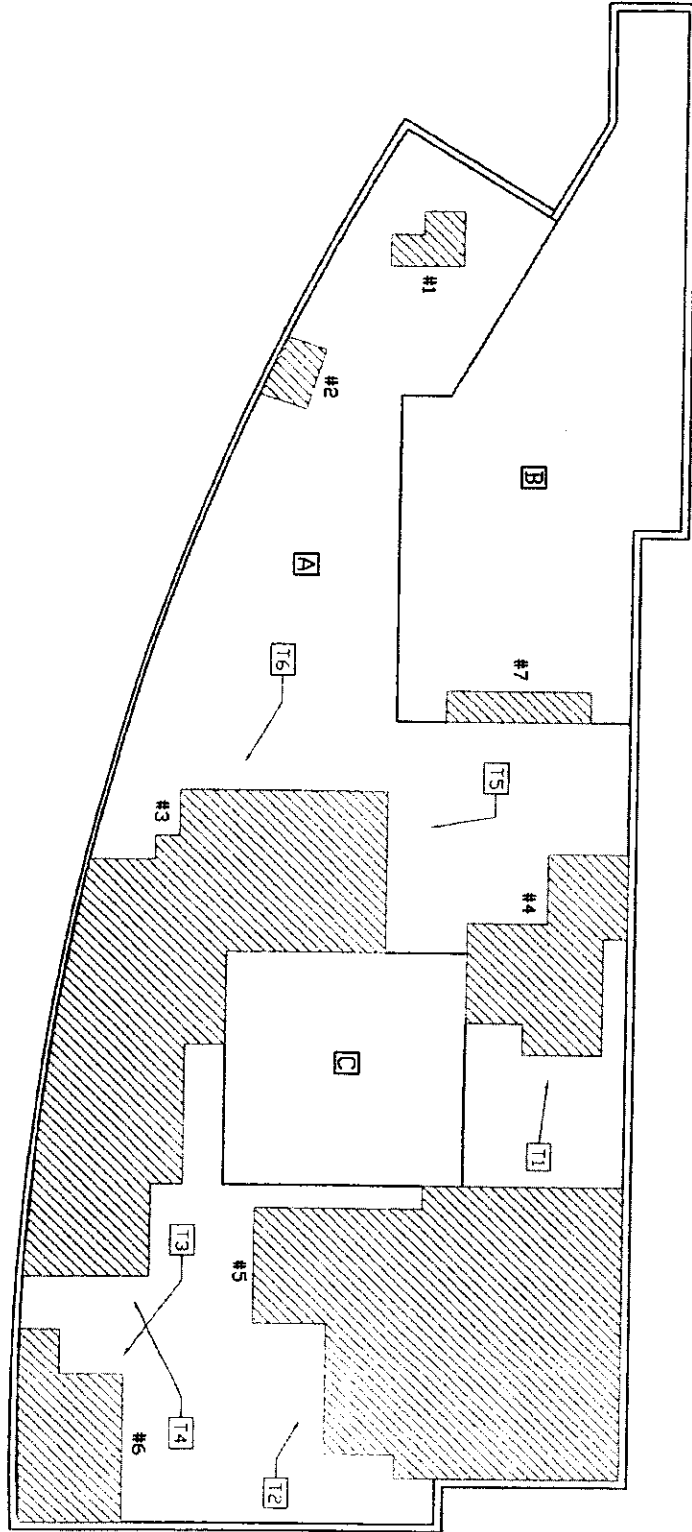
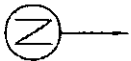
BREAKDOWN OF WET INSULATION

Roof Section	Sq. Ft. Surveyed	Wet Areas	Sq. Ft. Wet	% Wet
A	8,227	1	51	
		2	44	
		3	1,460	
		4	357	
		5	1,478	
		6	279	
			3,669	44.60%
B	2,111	7	72	3.41%
C	900	no wet	0	0.00%
Total	11,238		13,741	33.29%

LEGEND

 WET AREA

 THERMOGRAM



BUILDING LOCATION:
 Phoenix Building
 Lexington, KY.

DATE:
 6/21/10

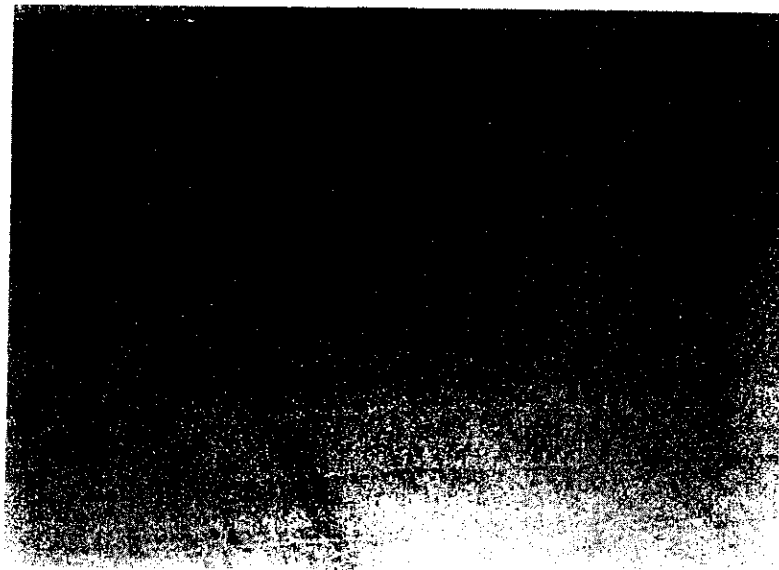
**Infrared
 Diagnostics,
 Inc.**

1238 Cooper Drive
 LEXINGTON, KY. 40502
 (859) 321-3935

COST ESTIMATE FOR ROOF REPLACEMENT

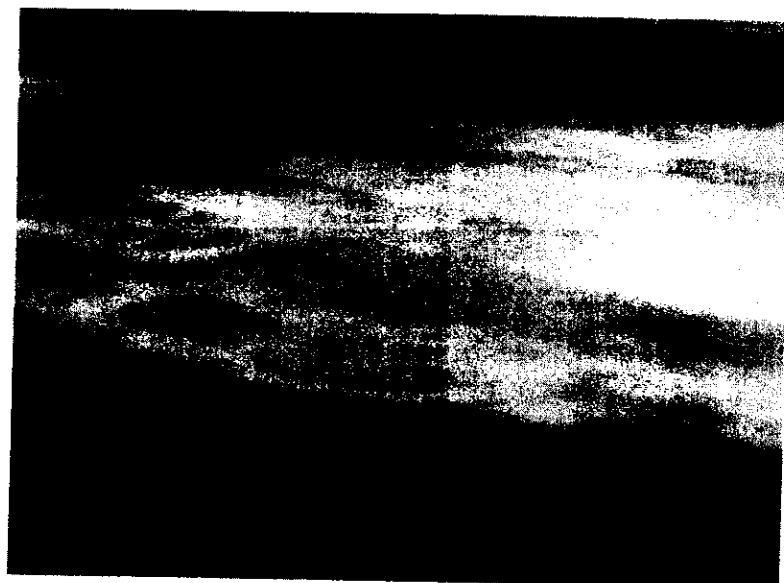
Roof Section	Cost Estimate
A	\$150,000.00
B	\$ 42,500.00
C	\$ 16,800.00

Thermogram #1



Roof Section A, Wet Area #4; The brighter areas appearing on the surface of the roof depict sub-surface moisture. Varying degrees of moisture content are visible in this infrared image.

Thermogram #2



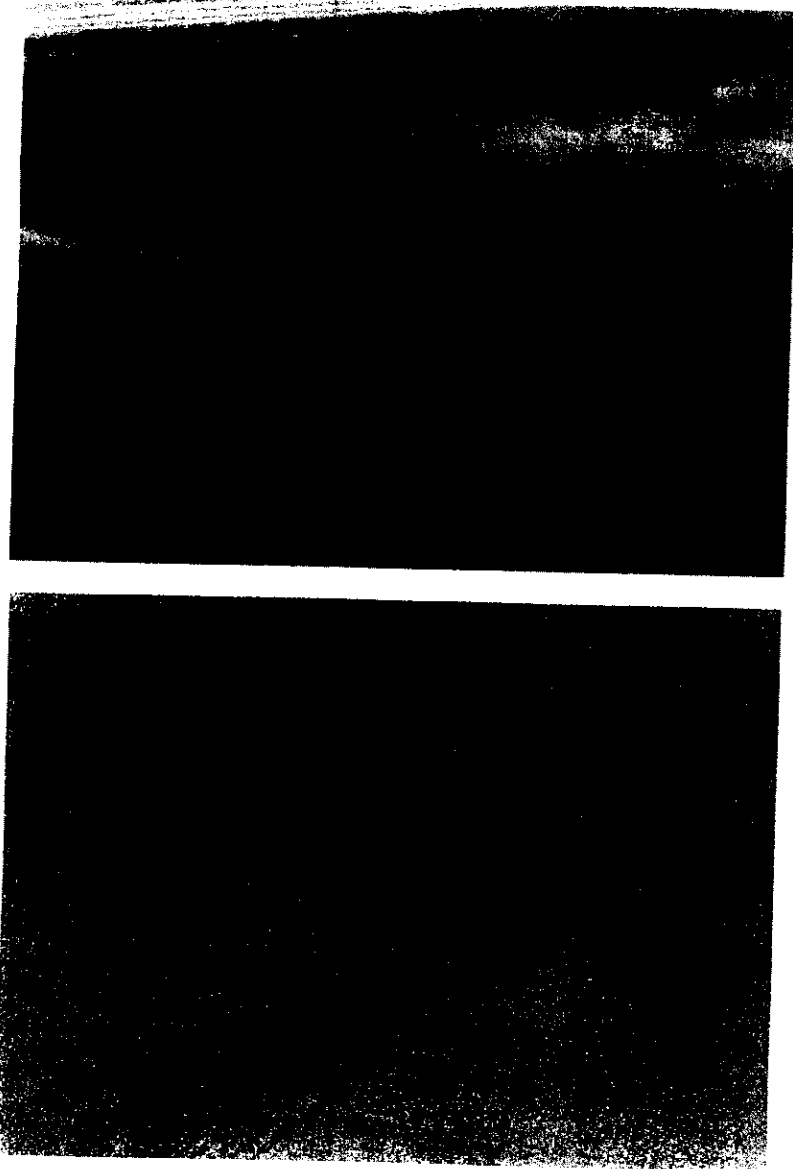
Roof Section A, Wet Area #5; A clear difference between wet and dry insulation is visible in this infrared image. This wet area was detected in the northeast corner of the building.

Thermogram #3



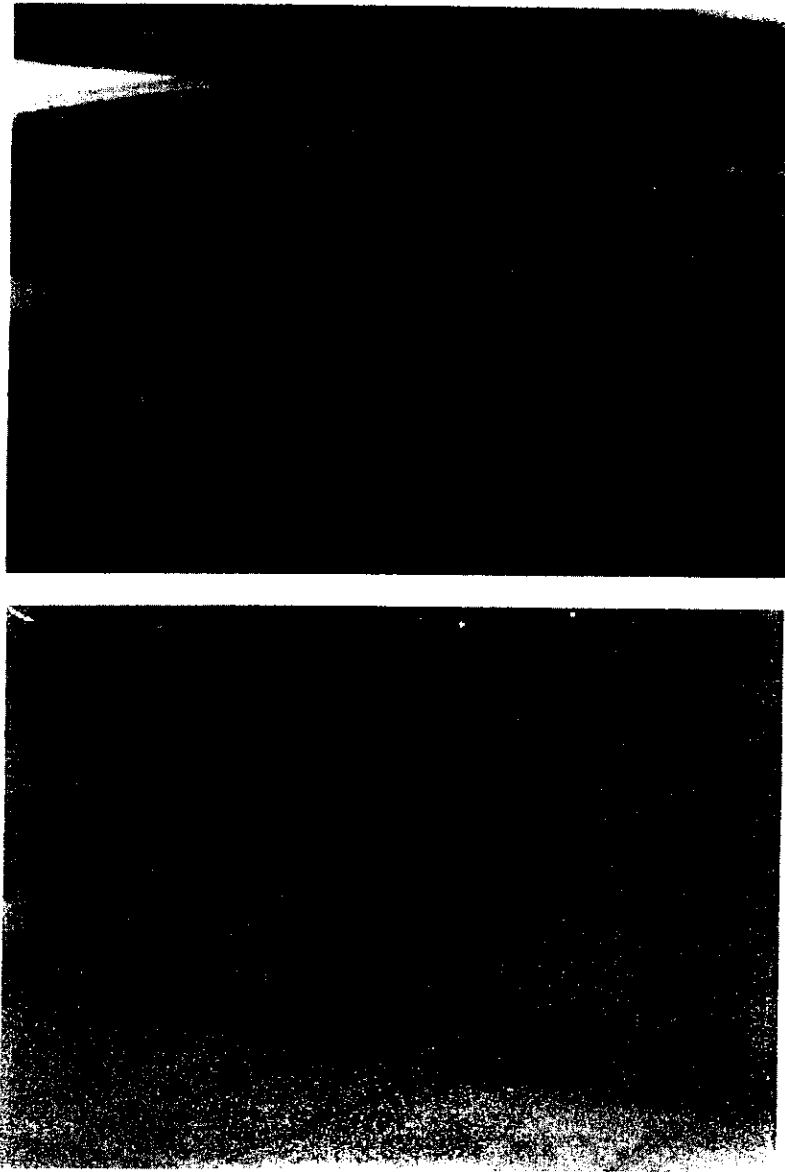
Roof Section A, Wet Area #6; This wet area was detected in the southeast corner of the building. Sub-surface moisture is migrating out into the field of the roof from the brightest, or most saturated insulation.

Thermogram #4



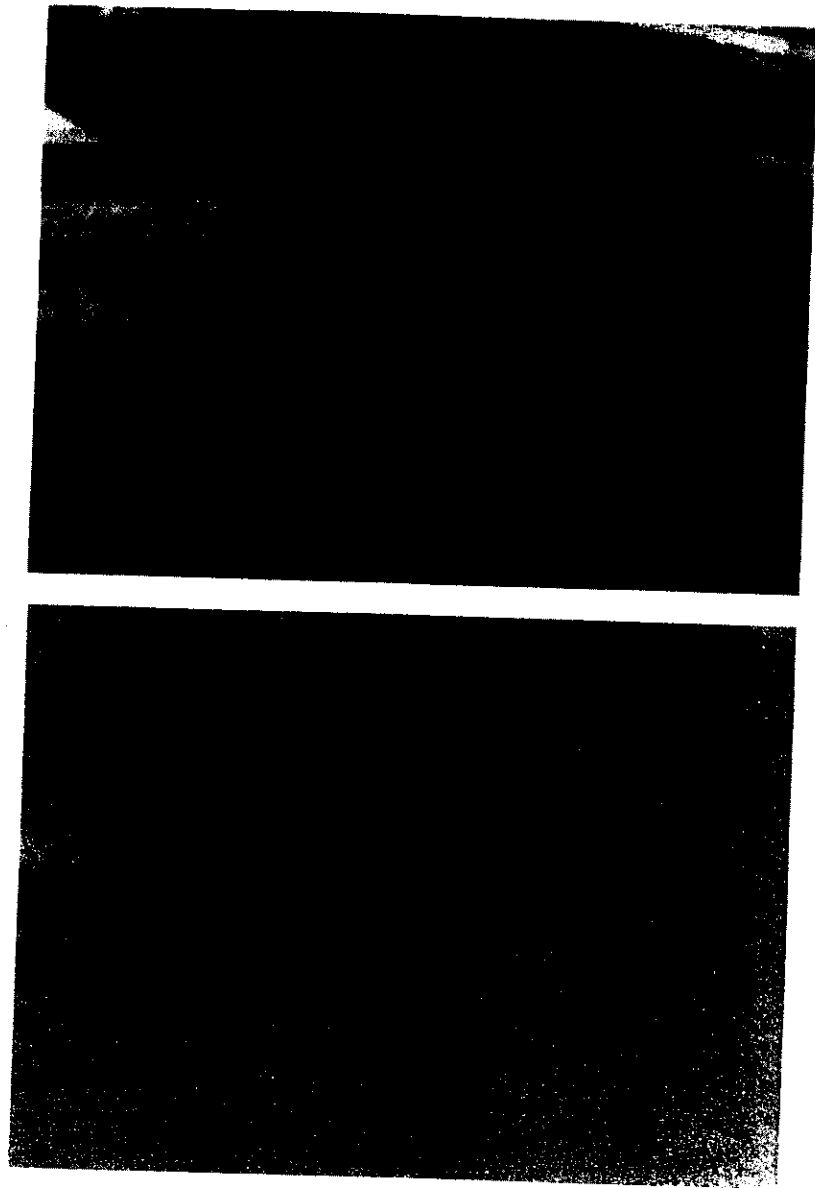
Roof Section A, Wet Area #3; Varying degrees of sub-surface moisture content are visible in this infrared image. The brightest areas represent the highest degree of moisture.

Thermogram #5



Roof Section A, Wet Area #3; This wet area was detected along the south roof edge near the center of the building. Sub-surface moisture from several areas of saturated insulation has migrated out and merged together to form this one large wet area.

Thermogram #6



Roof Section A, Wet Area #3; A distinct difference between wet and dry insulation is visible in this infrared image.

Technical Specifications Contents

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SECTION 010010 - Special Requirements

1.1 SECTION INCLUDES:

This Section includes information which supplements the General Conditions:

1. Scope
2. Time for Completion
3. Liquidated damages
4. Ordering Materials
5. Storage of Materials
6. Protection of Existing Facilities
7. Project Closeout and Record Drawings.
8. Access to Site and Building
9. Temporary Parking
10. Owner Occupancy
11. Interruption and Protection of Utilities
12. Progress Meetings
13. Work by Owner
14. Field Office
15. Telephone Service
16. Staging and Storage
17. Sanitary Facilities
18. Utilities
19. Final Cleaning
20. Substantial Completion, Final Inspections and Subsequent Inspections

1. SCOPE

- A. Project Description: The construction documents cover the roof removal and replacement of the Phoenix Building roof including the penthouse roof. The existing two roof systems are to be removed to existing gypsum deck and flashings removed from parapet walls. Base bid to include 10% gypsum roof deck repairs, and all new wood blocking in existing locations, base sheet shall be set in hot bitumen, insulation, 3", installed, followed by 1/2" recovery board, second base ply and modified bituminous smooth surface cap sheet set in hot bitumen. Entire roof to be coated with aluminized coating. Lighting rod system is to be repaired and certified. Man door to roof is to be replaced with new frame, sill and threshold.
- B. Bidders, subcontractors and suppliers, before submitting proposals, shall visit and examine the site to satisfy themselves as to the nature and scope of the existing conditions at the site. The submission of a proposal will be construed as evidence that a visit and examination have been made. Later claims for labor equipment, or materials required for difficulties encountered which could have been foreseen had such an examination been made will not be recognized.
- C. The Work under this contract does not include any items marked N.I.C. on the Drawings (Not In Contract).
- D. It shall be the responsibility of all Contractors and Subcontractors to carefully examine all Drawings, Specifications and Contract Documents pertaining to all phases of the construction in order that Contractor and Subcontractor may foresee all requirements for coordination of their work. Submission of a bid shall be construed as evidence that such an examination has been made. Claims based on unforeseen requirements will not be considered.
- E. Should any error or inconsistency appear in Drawings or Specifications, the Contractor, before proceeding with the work, must make mention of the same to the Project representative for proper adjustment, and in no case proceed

with the work in uncertainty or with insufficient drawings.

- F. The Contractor and each Subcontractor shall be responsible for verification of all measurements at the building before ordering any materials or doing any work. No extra charge or compensation shall be allowed due to differences between actual dimensions and dimensions indicated on the Drawings. Any such discrepancy in dimensions which may be found shall be submitted to the Project representative for his consideration before the Contractor proceeds with the work in the affected areas.

2. **TIMES FOR COMPLETION:**

- A. Substantial Completion: Subject to the conditions of the General Conditions, the total work to be done under this Construction Contract shall be commenced at the time stipulated in the Work Order (10 days after work order date) to the Contractor and shall be substantially completed within: **60 calendar days** for entire project.
- B. The date of Substantial Completion, to be determined, shall be the date certified by the Project representative when the work is sufficiently complete, in accordance with the Contract Documents, so the Owner may conditionally accept, and beneficially occupy and use, all of the facilities provided under this Construction Contract.
- C. Final Completion: Subject to the conditions of the General Conditions, the total work to be done under this Construction Contract shall be fully completed within thirty (30) consecutive calendar days after the Date of Substantial Completion.
- D. The Date of Final Completion shall be the date that the work is complete and all Contract requirements have been fulfilled by the Contractor.

3. **LIQUIDATED DAMAGES**

- A. It is mutually understood and agreed by and between the parties to this contract, in execution of same, that time is of the essence in performing their obligations and duties hereunder. In the event that the Contractor fails to substantially complete work to be performed under this contract by and at applicable completion time bid in the proposal, including any extension of time granted under General Conditions, Contractor shall pay to Owner set liquidated damages in the amount of two hundred dollars (\$200) per calendar day because of delay in substantially completing such work and for liquidated damages, such as Owner's increased overhead and cost of additional administration and not as a penalty, for each and every calendar day, that Contractor shall be in default. Upon reaching substantial completion as defined under the General Conditions of the Contract, liquidated damages to reach substantial completion as defined under the General Conditions of the Contract, liquidated damages to reach substantial completion will end. In the event that the Contractor fails to reach final completion of the work as defined in the General Conditions of the Contract, the Contractor will pay to the Owner set liquidated damages in the amount of two hundred dollars (\$200 per calendar day, until final completion has been reached.
- B. Owner shall have the right to deduct liquidated damages from money otherwise due or to become due to Contractor, or to sue, for and recover compensation for damages for non-performance of this contract at time stipulated herein.

4. **ORDERING MATERIALS**

- A. Immediately following Award of Contract for this work, Contractor shall determine source of supply for all materials and length of time required for their delivery, including materials of subcontractors, and order shall be placed for such materials based on the project schedule.
- B. If, for any reason, any item specified will not be available when needed and Contractor can show that he has made a reasonably persistent effort to obtain item in question, the Project representative is to be notified in writing within 15 days after Contract is signed; otherwise the Contractor will not be excused for delays in securing materials specified and will be held accountable if completion of building is thereby delayed.

5. **STORAGE OF MATERIALS**

- A. Each Contractor providing materials and equipment shall be responsible for the proper and adequate storage of his materials and equipment, and for the removal of same upon completion of his work. Storage of materials at the site shall be confined to areas within Contract Limits or as otherwise designated by the Owner at the Pre-Construction Conference. Coordinate with Project representative. Storage will be limited to the site.

6. **PROTECTION OF EXISTING FACILITIES**

- A. The General Contractor shall repair and/or replace, at no expense to the Owner, any sections of existing roads, streets, sidewalks, curbs, grassed areas, shrubs, trees, utilities, buildings, automobiles, trucks and other structures or vehicles damaged by reason of work performed under this Contract or incidental thereto, whether by his own forces or by his subcontractors or his material suppliers.

Care should be taken by the Contractor to protect from injury any persons and vehicles that will use the building during construction. The Contractor, at the Construction Conference will outline his proposed procedures of construction, determine degrees of potential dangers and outline protective measures he will take during various construction phases.

- B. Exterior Enclosures. Provide temporary protection at all entries when working over the entrance. Protect shall include scaffolding covered in secured plywood.
- C. Security. Provide security to protect work and existing facilities from unauthorized entry, vandalism or theft. Verify with Owner the schedule for opening and closing the building.

7. **PROJECT CLOSEOUT AND RECORD DRAWINGS**

- A. The Owner will furnish one (1) set of prints which the Contractor shall keep on file in the field office. The Contractor shall record on these prints from day to day as the work progresses, all changes and deviations from the contract Drawing, with special emphasis on the exact location of all work concealed from view by offset distances to surface improvements such as building corners, curbs, etc. Entries and notations shall be neat, legible and permanent. These prints shall be delivered to the Project representative upon completion of this project. Approval of final payment will be contingent upon compliance with these provisions.
- B. Provide a minimum of three (3) bound final installation, training, operation, maintenance and repair manuals to be turned over to the LFUCG's

Project Manager and approved for content by the Owner prior to acceptance of substantial completion.

C. Manuals provided must be of sufficient detail to enable customer to install, calibrate, train, operate, maintain, service and repair every system, subsystem, and/or piece of equipment installed on or as part of this contract. Manual must contain:

1. Project Title, Project number, Location, dates of submittals, names of Design Consultant, Engineer, Contractor, and Contractor's Subs. Provide phone numbers and addresses for Contractor and Subs.
2. An Equipment Index that includes vendors name, address, and telephone number for all equipment purchased on the project.
3. Emergency instructions with phone numbers and names of contact persons on warranty items.
4. All manuals in binders shall be original copies provided by the manufacturer. At minimum these binders must include:

Installation manuals	Calibration manuals
Training manuals	Repair manuals
Service Manual	Parts list
Reviewed shop drawings	

5. Included in the front of the "Operation and Maintenance Manual" shall be a copy of the Interior and Exterior Finish plan and Schedule listing all finish materials, the manufacturer, the finish color, and the manufacturer's paint number.

D. Submission of final set of record drawings.

1. The Contractor, on copies of the Contract Documents provided by the LFUCG, shall submit a Record Set of Drawings indicating all deviations of construction as originally specified in the contract documents. These Record Drawings will compile information from the General Contractor as well as all sub-contractors. The Contractor shall provide a qualified representative to update the Record Set of Drawings as construction progresses.
2. Approval of the final payment request will be contingent upon compliance with these provisions. The Contractor's Record Set of Drawings shall be delivered to the Design Consultant at their completion so that the Design Consultant may make any changes on the original contract drawings.

8. ACCESS TO SITE AND BUILDING

- A. Building is seven stories to the main roof and the penthouse roof is 14 feet higher. Contact the project representative for arrangements to visit the building.

9. TEMPORARY PARKING

- A. Parking is limited to building users. Owner will make arrangement for the use of designated parking spaces to be determined at the pre-construction

meeting.

10. OWNER OCCUPANCY:

- A. The site will be occupied during construction.
- B. The contractor shall confine his operations, including delivery and unloading of materials and equipment, to the areas within the designated Contract Limits. Placement of kettle shall be considered to allow best ventilation.

11. INTERRUPTION AND PROTECTION OF UTILITIES:

- A. Utilities on the site are not to be interrupted without 48 hour notice to the Owner.
- B. The contractor shall protect all utilities during construction.

12. PROGRESS MEETINGS

- A. With the express purpose of expediting construction and providing the opportunity for cooperation of affected parties, meetings may be called which shall be attended by representatives of: Project Manager LFUCG; the Project representative and Consultants; the General Contractor; all Subcontractors. Meetings will be held on site. The frequency of meeting shall be once a month for a formal meeting.

13. WORK BY OWNER

- A. The Owner will be rebuilding the cooling tower under a separate project. The flashing of the cooling tower curb shall be coordinated with repairs to the tower. Contractor is responsible for scheduling roof work with the cooling tower contractor.

14. FIELD OFFICE

- A. Field office is not required.

15. TELEPHONE SERVICE

- A. Contractor to arrange for and provide direct on-site communication by telephone during the construction of this project. Cellular phone is acceptable.

16. STAGING AND STORAGE AREA

- A. All staging and storage is to occur within the site limits.

17. SANITARY FACILITIES

- A. Restroom facilities are to be provided by the contractor for his workers and subcontractors. Drinking water shall be provided from an approved safe source, so piped or transported as to be kept clean and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains.

18. UTILITIES

- A. The owner will provide utility connections for electric and water. Contractor is responsible for any damage to existing utility systems.

19. FINAL CLEANING:

- A. Execute prior to final inspection. Clean building according to general conditions final cleaning. The intent is to clean and vacuum the entire building to keep dirt from being drawn into the HVAC system.
- B. Clean debris from site, roofs, gutters, downspouts and drainage systems.
- C. Remove waste and surplus materials, rubbish and construction facilities from the site.

20. SUBSTANTIAL COMPLETION, FINAL INSPECTION & SUBSEQUENT INSPECTIONS:

- A. In as much as all parties with and intend to prosecute the work in a diligent and good faith manner, and to complete the work in a timely fashion, the Contractor shall notify the Project representative when the Contractor believes he has attained Substantial Completion. Notification shall be made at least five (5) calendar days prior to the date set to the Substantial Completion inspection. The Contractor shall comply with the prerequisite requirements for Substantial Completion as set forth in General Conditions.
- B. Upon receipt of the Contractor's request, the Project representative will either proceed with inspection or advise Contractor of prerequisites not fulfilled. Following initial inspection, the Project representative will either prepare a certificate of substantial completion, or advise the Contractor of work which must be performed prior to issuance of the certificate of substantial completion. The Project representative will repeat the inspection when requested and assure that the work has been substantially completed. Results of the completed inspection will form the initial "punch list" for final acceptance.
- C. The Project representative will re-inspect the work upon the receipt of the Contractor's notice that he believes in good faith that except for those items whose completion has been delayed due to circumstances that are acceptable to the Project representative, the work has been completed, including punch list items from earlier inspections. Punch List shall be completed within 30 working days or Liquidated Damages can be assessed. Upon completion of re-inspection, the Project representative will either recommend final acceptance and final payment, or will advise the Contractor of work not completed or obligations not fulfilled as required for final acceptance by issuance of another punch list. The project representative will inspect for punch list completion only twice.
- D. The Contractor, upon completion of all outstanding items set forth on the punch list, shall notify the Project representative of the completion of the work. The Project representative shall verify completion of the work by an on-site inspection.

END OF SECTION 010010 - Special Requirements

SECTION 02070 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Removing existing roof systems, two, down to the gypsum decking.
 - 2. Removing hollow metal door frame, salvaging the hardware.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section 010010 "Summary of Work" for use of the building requirements.

1.3 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property.
- B. Remove and Salvage: Items indicated to be removed and salvaged remain the Owner's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and deliver to Owner's designated storage area.
- C. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations or in locations indicated.
- D. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Architect, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.

1.4 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.

1.5 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections, for information only, unless otherwise indicated.
- B. Schedule of selective demolition activities indicating the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
 2. Coordination for shutoff, capping, and continuation of utility services.
- C. Inventory of items to be removed and salvaged.
- D. Record drawings at Project closeout according to Division 1 Section "Contract Closeout."
1. Identify and accurately locate capped utilities and other subsurface structural, electrical, or mechanical conditions.
- 1.6 QUALITY ASSURANCE
- A. Demolition Firm Qualifications: Engage an experienced (min. five years experience) firm that has successfully completed selective demolition Work similar to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Pre-demolition Conference: Conduct conference at Project site prior to beginning the work.
- D. Architect is to review qualifications of tradesmen. Architect is to be notified when demolition is to start.
- 1.7 PROJECT CONDITIONS
- A. Owner assumes no responsibility for actual condition of buildings to be selectively demolished.
1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Asbestos: It is not expected that asbestos will be encountered in the Work. If any materials suspected of containing asbestos are encountered, do not disturb the materials. Immediately stop all work. Remove workmen from the area. Immediately notify the Architect and the Owner.
- C. Storage or sale of removed items or materials on-site will not be permitted.
- 1.8 SCHEDULING
- A. Arrange selective demolition schedule so as not to interfere with Owner's on-site operations.
- 1.9 WARRANTY
- A. Existing Special Warranty: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
 - 1. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 2. Use materials whose installed performance equal or surpasses that of existing materials.
 - 3. As noted in other sections this is a historic structure and the work shall comply with the Department of Interior's Standards for Rehabilitation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect.
- E. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

- A. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving building to be selectively demolished.
 - 1. Arrange to shut off indicated utilities with Owner.
- B. Utility Requirements: All Utility work to be performed by a Master Electrician, licensed in the State of KY. Types of work include but are not limited to shutting off, disconnecting, removing, and sealing or capping utility services. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.
- C. Roof Drainage: Existing system to remain in operation at all times. Make provisions for temporary drainage during construction.

3.3 PREPARATION

- A. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with selective demolition operations.

- B. Employ a certified, licensed exterminator to treat building and to control rodents and vermin before and during selective demolition operations.
 - C. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - D. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.
 - 1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 2. Install metal stud or 2x4 framed walls with 3/4" plywood either side for temporary interior partitions.
 - 3. Protect existing site improvements, appurtenances, and landscaping to remain.
 - 4. Provide temporary weather protection, during interval between demolition and removal of existing construction, on exterior surfaces and new construction to ensure that no water leakage or damage occurs to structure or interior areas.
 - 5. Protect walls, ceilings, floors, and other existing finish work that are to remain and are exposed during selective demolition operations.
 - 6. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - F. Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of building to be selectively demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.
- 3.4 POLLUTION CONTROLS
- A. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.
 - 1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
 - B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level.
 - C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before start of selective demolition.

3.5 SELECTIVE DEMOLITION

- A. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition work above each floor or tier before disturbing supporting members on lower levels.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 5. Maintain adequate ventilation when using cutting torches.
 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 8. Locate selective demolition equipment throughout the structure and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly. On-site storage or sale of removed items is prohibited.
 10. Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.
- B. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain, using power-driven masonry saw or hand tools; do not use power-driven impact tools.
- C. Remove existing stone masonry at foundation by hand. Stack stones on site with the original exteriors facing out. Salvage for reuse.
- C. Remove no more existing roofing than can be covered in one day by new roofing. See applicable Division-7 Section for new roofing requirements.

3.6 PATCHING AND REPAIRS

- A. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.
- B. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- C. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.

- D. Patch and repair floor and wall surfaces in the new space where demolished walls or partitions extend one finished area into another. Provide a flush and even surface of uniform color and appearance.
 - 1. Closely match texture and finish of existing adjacent surface.
 - 2. Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 3. Where patching smooth painted surfaces, extend final paint coat over entire unbroken surface containing the patch after the surface has received primer and second coat.
 - 4. Inspect and test patched areas to demonstrate integrity of the installation, where feasible.
- E. Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site. Remove debris daily from the site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them. The disposal of any materials removed by the contractor must be in compliance with all building codes, local, city, state and federal requirements.

3.8 CLEANING

- A. Sweep the building broom clean on completion of selective demolition operation.

3.9 SELECTIVE DEMOLITION SCHEDULE

- A. Remove the following:
 - 1. Roof, flashing, roof accessories for all roof areas.
 - 2. Man door frame.
 - 3. Electric wiring and conduit, leaving two outlets powered.
 - 4. Wood blocking not associated with the roof but attached to parapet.
 - 5. Misc. anchors, wiring and conduit that has been abandoned but still attached to parapet wall.

END OF SECTION 020700

SECTION 075270 - SBS-MODIFIED BITUMENOUS ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. SBS-Modified Bituminous cap sheet with a smooth surface over fiberglass felts, 2-plys, set in type IV asphalt over a base sheet, insulation, recovery board attached to gypsum deck with reflective applied top coating.
- B. This Section also includes the following roofing related work:
 - 1. Cleaning of deck surface.
 - 2. Roof insulation, including tapered system to improve drainage at drains.
 - 3. Replacing and providing new wood cants, blocking and framing.
 - 4. Removing existing roof system to gypsum deck.
 - 5. Gypsum deck repairs.
 - 6. Parapet and other types of flashing for all existing roof details.
 - 7. Traffic pads.
- C. Related Sections: The following Sections contain requirements related to this Section:
 - 1. Division 7 Section "Flashing and Sheet Metal" for metal counter flashings.

1.3 DEFINITIONS

- A. Thermal Resistivity (r-value) is the reciprocal of thermal conductivity (k-value) which is the rate of heat flow through a homogenous material exactly 1 inch thick. Thermal Resistivity (r-value) is expressed by the temperature difference in degrees F between two parallel surfaces required to cause 1 Btu to flow through 1 sq. ft. of a homogenous material exactly 1 inch thick per hour at the mean temperature indicated.

1.4 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 1 Specifications Sections.
- B. Product data, including manufacturer's technical product information, installation instructions, and recommendations for each type of roofing product required. Include data substantiating that materials comply with requirements.
 - 1. For asphalt, provide a label on each container or certification with each load of bulk, indicating flash point (FP), softening point (SP), and equiviscous temperature (EVT).
- C. Manufacturer's Certification indicating that all bulk bituminous materials delivered to Project comply with required standards. Include

quantity and statistical and descriptive data for each product. Submit certificate with each load before it is used.

1. Include continuous log showing time and temperature for each load of bulk, indicating date obtained from manufacturer, where held, and how transported prior to final heating and application on roof.

1.5 SYSTEM DESCRIPTION

- A. Multi-ply Roofing System: One-ply fiberglass felts, type IV asphalt (type VI on high slopes) with a SBS - modified bituminous roof smooth surface membrane system, insulation, perlite recovery board. Two-ply vapor retarder on existing structural clay tile roof deck.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer (Roofer) to perform modified roofing work who has specialized for ten years minimum in installing modified roofing systems similar to that required for this Project and who is acceptable to manufacturer of primary roofing materials and to the owner.

1. Installer Certification:

- a. The installer shall obtain written certification from manufacturer of built-up roofing system certifying that Installer is approved by manufacturer to install specified roofing system. Provide copy of certification for Project representative prior to awarding roofing work.
- b. The installer shall not have been in bankruptcy during the last ten years.
- c. The installer shall provide a list of at least five projects available for inspection within 50 mile radius of owner.
- d. The installer shall provide 24-hour leak response during warranty.

2. Installer's Field Supervision: Require Installer to maintain a part-time supervisor/foreman who is on job site during times that modified roofing work is in progress and who is experienced in installing roofing systems similar to type and scope required for this Project.

- B. Manufacturer Qualifications: Roofing material supplier shall:

1. Be Associate Member in good standing with National Roofing Contractors' Association (NRCA) for at least ten (10) years.
2. Be nationally recognized in roofing, waterproofing, and moisture survey industry.
3. Be approved by owner.
4. Has not been in Bankruptcy or experienced ownership change during the last ten (10) years.
5. The building owner is desirous of working with a financially strong organization, which has the ability to protect and insulate the building owner from both product liability and warranty claims, relating to roofing that could be brought before the building owner during the course of the roofing warranty period. As financial strength of suppliers are a requirement of the building owner proof of such must be shown. To this end, the following information is required by the building owner.
 - a. The manufacturer must present to the building owner a certificate of insurance for product liability with minimum limits of \$200 million.
 - b. The manufacturer must have a current ratio of 1.8:1 (current assets to current liabilities) and demonstrate such with a financial statement supported by an affidavit

- from a corporate officer.
- c. The manufacturer must have a current net worth equivalent to 25% of yearly sales and demonstrate such with a financial statement supported by an affidavit from a corporate officer.
6. The building owner is a supporter of responsible Health, Safety and Environmental issues and requires all manufacturers to have similar concerns, convictions and commitments. To this end, the primary manufacturers of materials used on building owner roof must submit a formalized Corporate HS & E Policy and demonstrate active participation in such a policy.
 7. It is the owner's intention to insure the quality and performance of the roof system by sourcing of the material from one company. The material manufacturer supplying material for the building owner's roofs must manufacture at least 80% of supplied materials in facilities actually owned or solely leased by said manufacturer. The material manufacturer shall submit verification of the foregoing by affidavit of corporate officer.
 8. Provide Owner names of at least 5 qualified applicators.
 9. Employ a Field Technical Services Representative available for monitoring project work on a part-time basis. Representative shall have a minimum ten (10) years experience in built-up roofing systems.
 10. Employ full-time Field Technical Services Representative available for final roof inspection.
 11. Provide Factory Representative to make periodic site visits, report work quality and job progress. Representative to have a minimum of 5 years experience in built-up roofing with said manufacturer.
 12. Provide list of at least 5 projects available for inspection employing same roofing system within 50 mile radius of Owner.
 13. Roof system shall have a ten year positive track record from said manufacturer.
 14. Manufacturer shall have been in business providing complete roofing systems at least as long as warranty length specified.
 15. The presence and activity of the manufacturer's specifier's representative and/or owner's representative shall in no way relieve the contractor of contractual responsibilities or duties.
- C. Insurance Certification: Assist Owner in preparing and submitting roof installation acceptance certification as necessary in connection with fire and extended-coverage insurance on roofing and associated work.
- D. UL Listing: Provide built-up roofing system and component materials that have been tested for application and slopes indicated and that are listed by UL for Class A external fire exposure.
1. Provide roof-covering materials bearing UL Classification Marking on bundle, package, or container indicating that materials have been produced under UL's Classification and Follow-up Service.
 2. Provide built-up roofing system that can be installed to comply with UL requirements for Fire Classified and Class 60 uplift resistance requirements.
- E. Fire Performance Characteristics: Provide insulation materials that are identical to materials whose fire performance characteristics, per requirements listed in Part 2 of this Section, have been determined from tests by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

- F. Preliminary Roofing Conference: As soon as possible after award of built-up roofing work, meet with Installer (Roofer), installers of substrate construction, such as decks, and other work adjoining roof system including penetrating work and rooftop units, Project representative, Owner, and representatives of other entities directly concerned with roofing system performance, including Owner's insurers and test agencies.
1. Review requirements (Contract Documents), submittals, status of coordinating work, availability of materials, and installation facilities and establish preliminary installation schedule. Review requirements for inspections, tests, certifications, forecasted weather conditions, governing regulations, insurance requirements, and proposed installation procedures.
 2. Discuss roofing system protection requirements for construction period extending beyond roofing installation. Discuss possible need for temporary roofing.
 3. Record discussion, including agreement or disagreement on matters of significance; furnish copy of recorded discussions to each participant. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.
- G. Pre-application Roofing Conference: Approximately 2 weeks prior to scheduled commencement of built-up roofing installation and associated work, meet at Project site with Installer, installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in and around roofing that must precede or follow roofing work--including mechanical work, Project representative, Owner, roofing system manufacturer's representative, and other representatives directly concerned with work performance, including Owner's insurers, test agencies, and governing authorities, where applicable.
1. Review foreseeable methods and procedures related to roofing work, including, but not necessarily limited to, the following:
 - a. Tour representative areas of roofing substrates (decks), inspect and discuss condition of substrate, roof drains, curbs, penetrations, and other preparatory work performed by other trades.
 - b. Review structural loading limitations of steel deck and inspect deck for loss of flatness and for required mechanical fastening.
 - c. Review roofing system requirements: drawings, specifications, and other contract documents.
 - d. Review required submittals, both complete and incomplete.
 - e. Review and finalize construction schedule related to roofing work and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - f. Review required inspection, testing, certifying, and material use accounting procedures.
 - g. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing, if it is not a mandatory requirement.
 2. Record (Contractor) discussions of conference, including decisions and agreements or disagreements reached, and furnish a copy for each attendee. If substantial disagreements exist at the conclusion of the conference, determine how disagreements will be resolved and set a date for reconvening the conference.

1.7 REGULATORY REQUIREMENTS

- A. Conform to the Kentucky State Building Code, 2002.
- B. Fire Hazard Classification: UL 790 Class A rated system. All components of the specified system shall have been tested together as a system and shall bear the UL seal of approval and be listed in the most recent issue materials directory.

1.8 PROJECT CONDITIONS

- A. Weather Condition Limitations: Proceed with roofing work only when existing and forecasted weather conditions will permit work to be performed according to manufacturers' recommendations and warranty requirements.
- B. Work shall not commence on any day if there is more than a 30% chance of rain.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01001. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Protect as required in section 01001. Store and handle roofing materials to ensure dryness. Store in a dry, well-ventilated, weather-tight place. Unless protected from weather or other moisture sources, do not leave unused felts on the roof overnight or when roofing work is not in progress. Store rolls of felt and other sheet materials on end on pallets or another raised surface. Handle and store materials or equipment in a manner to avoid significant or permanent deck deflection.
- C. Stack insulation on pallets. Keep insulation dry. No wet insulation shall be used. All insulation that becomes wet will be removed and replaced at no cost. Cover all materials with tarps and cut plastic shrouds and wrappers.

1.10 WARRANTY

- A. Special Project Unconditional Warranty: Submit two executed copies of unconditional 2-year Roofing Warranty as required, covering work of this Section, including labor, materials, roofing membrane, composition flashing, roof insulation, any vapor retarders, and roofing accessories, signed and countersigned by Installer (Roofer) and Contractor.
- B. Manufacturer's Warranty: Manufacturer's warranty is to be for twenty years, unconditional with no dollar limit, total roof system as installed under this contract. The warranty agreement shall be signed by authorized representative of the manufacturer.
- C. The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.
- D. Installer to inspect and provide a written report at the end of the second and fifth years.

PART 2 - PRODUCTS

2.1 ROOF INSULATION

- A. Perlite Board (misc. areas): Rigid, noncombustible, perlite/fiber boards of thickness indicated, with r-value of 1.32 at 75 deg F (24 deg C), integrally skinned surfaces, complying with ASTM C 728. Provide in manufacturer's standard sizes.
- B. Tapered insulation, roof drains and crickets: Rigid, noncombustible, perlite/fiber boards of thickness indicated, with r-value of 1.32 at 75 deg F (24 deg C), integrally skinned surfaces, complying with ASTM C 728. Cricketts are to be tapered 1/2" per 12".
- C. Polyisocyanurate Foam Board: Rigid boards of minimum 2.0 pcf density polyisocyanurate-based foam core, permanently bonded to roofing felt facer sheets. Provide in thickness indicated with minimum aged r-value of 20 for 2.7", when conditioned per RIC/PIMA Bulletin No. 281-1.
 - 1. Composite Type: In lieu of bottom felt cover, provide 3/4-inch-thick, integrally bonded course of rigid, perlite- or mineral-fiber insulation board to form composite board with polyisocyanurate insulation.

2.2 CANTS, BLOCKING AND FRAMING

- A. Wall and curbs
 - 1. Wood Cants: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled.
- B. Expansion joints
 - 1. Wood Cants: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled.
- C. Wood blocking/framing: Southern pine, #2, no warping, pressure-treated with copper chromated arsenate (CCA) to meet AWPB, LP-22, 0.40 retention labeled. For wall framing provide 2x4 stud members at 12" o.c. Provide 3/4" exterior-grade marine gray plywood sheathing.

2.3 EXISTING ROOF DECKS

- A. Roof Deck Repairs
 - 1. Immediately notify project representative of any damaged to existing roof decks.

2.4 MEMBRANE AND SHEET MATERIALS:

- A. Membrane Materials, General: Provide combination of base, ply, and cap sheet materials that have been tested in combination and comply with load/strain properties performance requirement in Part 1 of this Section.
- B. Base Sheet: ASTM D4897, Type II, venting, nonperforated, heavyweight, asphalt-impregnated and coated, glass-fiber base sheet with coarse granular surfacing or embossed venting channels on bottom surface.
- C. Base Sheet: ASTM D4601, Type II, nonperforated, asphalt-impregnated and coated glass-fiber sheet dusted with fine mineral surfacing on both sides, with the following properties:

1. Breaking Strength, minimum, ASTM D146: cross machine direction, 12.2 kN/m (70 lbf/in).
 2. Pliability, 12.7 mm (1/2 inch) radius bend, ASTM D146: No failures.
- D. Membrane Ply Sheet: ASTM D6163, Grade S, Type II or III, glass-fiber-reinforced, SBS/SEBS-modified asphalt sheet, or ASTM D6162, Grade S, Type II or III, SBS/SEBS-modified asphalt sheet; smooth surfaced; suitable for application method specified, with the following minimum properties:
1. Tensile Strength at 23 deg. C (73 deg. F), minimum, cross machine direction, ASTM D5147: 21 kN/m (120 lbf/in).
 2. Tear Strength at 23 deg. C (73 deg. F), minimum, cross machine direction, ASTM D5147: 890 N (200 lbf).
 3. Elongation at 23 deg. C (73 deg. F), minimum, cross machine direction, at 5 percent maximum load ASTM D5147: 40 percent.
- 2.5 FASTENERS:
- A. Roofing Fasteners: Factory-coated steel fasteners and metal or plastic plates, where applicable, meeting requirements of FM Approvals 4470, tested by fastener manufacturer for required pullout strength, and recommended by roofing manufacturer for application.
- B. Accessory Fasteners: Corrosion-resistant fasteners compatible with adjacent materials and recommended for application by manufacturer of component to be fastened.
- 2.6 COATINGS
- A. Fibrated Aluminum Roof Coating: solvent-based, Energy Star Certified, CRRC listed and California Title 24 Energy Code compliant elastomeric roof coating formulated for use on bituminous roof surfaces, with the following physical properties:
1. Asbestos Content, EPA/600/R13/116: None.
 2. Non-Volatile Content (by weight), minimum, ASTM D1644: 60 percent.
 3. Volatile Organic Compounds (VOC), ASTM D3960: 400g/L.
 4. Percent Solids (by volume), minimum, ASTM D5201: 14 percent.
 5. Reflectance, minimum, ASTM C1549: 86 percent.
 6. Emissivity, minimum, ASTM C1370: 0.93.
 7. Solar Reflectance Index (SRI), ASTM E1980: 103.
 8. Weight, 8.5 lb/gal
- 2.7 BUILT-UP ROOF MEMBRANE SYSTEM GYPYSUM DECK INSULATED FULLY ADHERED
1. Nail down base sheet per manufacturer's requirements.
 2. Insulation: one layer of 3" polyisocyanurate rigid insulation.
 3. 1/2" high density wood fiberboard recovery board.
 4. Venting Base Sheet: Asphalt-coated, heavyweight, glass-fiber base sheet with granular surfacing and embossed venting channels on bottom surface, complying with ASTM D 4897, Type II.
 5. Interplay: Roofing asphalt, complying with ASTM D 312, Type III.
 6. Modified Sheet Membrane/Smooth Surfaced: Styrene Butadiene Styrene (SBS)-modified asphalt sheets with smooth surface; manufacturer's standard sheet thickness.
 - a. Sheet Reinforcing: Composite polyester and glass-fiber mat.
 7. Comply with "NRCA Roofing and Waterproofing Manual," Specification Plate No. 57-3--CMBF.
 8. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville, Inc.

d. Or approved equal

2.8 BUILT-UP ROOF MEMBRANE SYSTEM CONCRETE DECK INSULATED FULLY ADHERED

1. Primer: Asphalt cut-back primer, complying with ASTM D 41.
2. Venting Base Sheet: Asphalt-coated, heavyweight, glass-fiber base sheet with granular surfacing and embossed venting channels on bottom surface, complying with ASTM D 4897, Type II.
4. Interplay: Roofing asphalt, complying with ASTM D 312, Type III.
5. Modified Sheet Membrane/smooth surfaced: Styrene Butadiene Styrene (SBS)-modified asphalt sheets with smooth surface; manufacturer's standard sheet thickness.
 - a. Sheet Reinforcing: Composite polyester and glass-fiber mat.
6. Comply with "NRCA Roofing and Waterproofing Manual," Specification Plate No. 57-3--CMBF.
7. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville, Inc.
 - d. Or approved equal

2.9 MODIFIED BITUMEN ROOFING SYSTEM EDGE/PENETRATION MATERIALS

- A. Roofing Cement: Asphalt cement, asbestos-free, complying with ASTM D 4586, Type III.
- B. Glass-Fiber Fabric: Minimum 1.5-lb woven glass-fiber sheet impregnated with asphalt, complying with ASTM D 1668.
- C. Pre-formed Edge Strips: Rigid insulation units matching roof insulation, or asphalt-impregnated organic-fiber insulation units, molded to form 3-1/2-by-3-1/2-inch by 45-degree cant strips and 1-5/8-by-18-inch tapered-edge strips to receive roofing ply-sheet courses and lift edges above main roofing surface.

2.10 SHEET METAL ACCESSORY MATERIALS

- A. Coordinate below with Section 076200, "Sheet Metal Flashing and Trim."

2.11 MISCELLANEOUS MATERIALS

- A. Wood Members, Units: Provide wood pressure treated with waterborne preservatives for above-ground use (AWPB LP-22).
- B. Walkway Protection Boards: Mineral-surfaced, bitumenous composition boards, approximately 1/2 inch thick, manufactured specifically for hot bitumenous application on built-up roofing as a protection course for foot traffic.
 1. Available Products: Subject to compliance with requirements, products may be incorporated in the Work include, but are not limited to, the following:
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Tremco
 - b. Siplast
 - c. Johns-Manville
- C. Substrate Joint Tape: 6-inch- or 8-inch-wide, coated, glass-fiber joint tape.

- D. Asphalt Primer: Comply with ASTM D 41.
- E. Fasteners: No mechanical fasteners or nails allowed.
- F. Metal Splash Pans: At all downspouts which empty on the roof surface, provide a sheet metal splash pan set in mastic on top of flexible flashing base ply over roof system.

2.12 FABRICATING SHEET METAL ACCESSORIES

- A. SMACNA and NRCA Details: Conform metal work with details shown and with applicable fabrication requirements of Architectural Sheet Metal Manual by SMACNA. Comply with installation details of NRCA Roofing and Waterproofing Manual.
- B. Prefabricate units as indicated or provide standard manufactured units complying with requirements; fabricate from sheet metal indicated or, if not otherwise indicated, from lead-coated copper.
- C. Provide 4-inch-wide flanges set in roofing cement for applying modified roofing system membrane concealed by composition stripping.
- D. Fabricate work with flat-lock soldered joints and seams; except where joint movement is necessary, provide 1-inch-deep interlocking hooked flanges filled with mastic sealant.
- E. Fabricate gravel rings and aggregate divider strips with 1-inch-high standing leg of folded sheet metal, notched from top with 5/8-inch-deep V notches. Space notches 3 inches o.c. where strip intersects flow of water on roof, 6 inches o.c. elsewhere. Fabricate rings to sizes and shapes indicated (but not less than 36 inches square), and fabricate running strips (as shown) in maximum 4-foot lengths for butt-joint installation (with 1/4-inch gaps).
- F. Fabricate penetration sleeves with minimum 8-inch-high stack of diameter 1 inch larger than penetrating element. Counterflashing is specified as work of another section of these specifications.

2.13 ROOF DRAIN ACCESSORIES MATERIALS

- A. Manufacturers: new roof drains to replace existing.
 - 1. Donovan Manufacturing Co.
 - 2. Josam Manufacturing Co.
 - 3. Smith Manufacturing Co.
 - 4. Zurn Industries, Inc.
- B. The roof drain, size to match existing piping, shall be a molded heavy duty cast iron drain body with a no hub style outlet that can connect directly to drainage pipe of PVC, ABS or cast iron using flexible expansion couplings and clamping ring of epoxy coated cast iron.
- C. Under Deck Clamp - fastens the roof drain securely to the roof deck.
- D. Extension Flange - supports the roof drain from the main deck and permits accurate adjustment of the drain body level with the membrane 1 - 6 inches (25 - 152 mm).
- E. Cast Iron Strainer Dome - of rigid cast iron, epoxy coated, construction 9.5" (241 mm) diameter.

- F. Metal flashing: ASTM B29, four lb. sheet lead

PART 3 - EXECUTION

3.1 INSPECTING SUBSTRATE

- A. Examine substrate surfaces to receive built-up roofing system and associated work and conditions under which roofing will be installed. Do not proceed with roofing until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
1. Verify that flatness and fastening of concrete roof decks comply with the following:
 - a. Top Flanges: No concavity or convexity in excess of 1/16 inch across any three adjacent flanges.
 - b. Side Laps: Properly nested and mechanically fastened at a maximum spacing of 3 feet o.c.
 - c. End Laps: Minimum 2-inch laps located over and fastened to supports.
 - d. Deck secured to each supporting member in every other rib, maximum spacing 12 inches o.c., with puddle welds or approved mechanical fasteners.
 2. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch out of plane. Check for proper spacing between adjacent wood panels.
 3. Test concrete substrate for excessive moisture by pouring 1 pint of hot at 400 deg F (204 deg C) or Equiviscous Temperature Method (ETM) on deck at start of each day's work and at start of each roof area or plane. Do not proceed with roofing work if test sample foams or can be easily and cleanly stripped after cooling--then substrate is too wet.

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Cooperate with inspection and test agencies engaged or required to perform services in connection with installing built-up roofing system.
- B. Protect other work from spillage of built-up roofing materials, and prevent liquid materials from entering or clogging drains and conductors. Replace/restore other work damaged when installing built-up roofing system work.
- C. Coordinate installing insulation, roofing sheets, flashings, stripping, coatings, and surfacing so that insulation and felts are not exposed to precipitation or exposed overnight. Provide cutoffs at end of each day's work to cover exposed felts and insulation with a course of coated felt with joints and edges sealed with roofing cement. Remove cutoffs immediately before resuming work.
- D. Asphalt Heating: Heat and apply according to EVT Method as recommended by NRCA. Do not raise temperature above minimum normal fluid-holding temperature necessary to attain EVT more than 1 hour prior to application. Discard that has been held at a temperature exceeding finished blowing temperature (FBT) for more than 3 hours. Determine flash point, FBT and EVT of, either by information from producer or by suitable tests. Determine maximum fire-safe handling temperature and do not exceed that temperature in heating. In no case heat to a temperature higher than 25 deg F (minus 4 deg C) below flash point. For aggregate-surfaced pour coats of, limit application temperature to minimum required for proper aggregate embedment and maximum that will

permit retaining a coating of weight required (depends on slope of surface). Keep kettle lid closed except when adding.

- E. Mopping Weights: For interplay mopping, and for other moppings except as otherwise indicated, apply between plies at the rate of 36 lb. of asphalt per roof square (plus or minus 20 percent on a total-job average basis).
- F. Substrate Joint Penetrations: Do not allow to penetrate substrate joints and enter building or damage insulation, vapor retarders, or other construction. Where mopping is applied directly to a substrate, tape joints or, in the case of steep asphalt, hold mopping back 2 inches from both sides of each joint.
- G. Cutoffs: At the end of each day's roofing installation, protect exposed edge of incomplete work, including ply sheets and insulation. Provide temporary covering of two plies of No. 15 roofing felt set in full moppings of hot; remove at beginning of the next day's work. Glaze-coat areas of completed organic ply sheets that cannot be flood-coated and aggregate-surfaced before the end of each day's work.

3.3 WOOD BLOCKING

- A. Install new wood blocking to match and replace existing at perimeter edge and as required to maintain all minimum 8 inch curb flashing heights. Offset all layers and weave corners. Stagger all nailing patterns. Max. spacing 12" o.c. New wood blocking to work with tapered insulation system.

3.4 HEATING

- A. Using low burner flames during initial melt-downs.
- B. Circulate asphalt after initial meltdown.
- C. Asphalt heating: Use low burner flames during initial melt-downs, circulate asphalt after initial melt-down.
 - 1. Maximum temperature: 525°F.
 - 2. EVT: 400°- 430°F.
 - 3. Kettle: Free of contaminants (coal tar pitch).

3.5 GYPSUM DECK REPAIRS

- A. Repairs of the gypsum deck area to be made according to Gypsum Institute requirements for repairs to gypsum plank roof decks. Structural integrity of the deck shall be maintained.

3.6 INSULATION APPLICATION - GYPSUM DECK

- A. Ensure roof deck is clean and dry.
- B. Mechanically fasten first layer of insulation to gypsum roof deck with 50 fasteners per 100 sf.
- C. Minimum Total Insulation Thickness: 3" inches, as required to achieve an insulation R value of 24.0 plus the recovery board.
- D. Lay insulation boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof. 1/8" max. spacing between boards. Fill

all gaps larger than 1/8" with roof insulation. Smallest filler piece shall be 18" wide. Cut boards to provide proper layout with no boards smaller than 18" wide.

- E. Apply no more insulation than can be sealed with membrane in same day.
- F. Stagger joints on all layers at least six inches.
- G. Firmly butt each insulation board to surrounding boards. Do not jam or deform boards.
- H. Maximum insulation gap: 1/4 inch. Fill insulation board joint gaps larger than 1/4" with roof insulation cut to fit.
- I. Maximum elevation variation between boards at joints: 1/8".
- J. Cut and fit insulation boards where roof deck intersects vertical surfaces. Cut boards 1/4" from vertical surface.

3.7 ROOF MEMBRANE INSTALLATION

- A. Shingling Plies: Except as otherwise indicated, install membrane with ply sheets shingled uniformly to achieve required amount of membrane thickness throughout. Shingle in proper direction to shed water on each large area of roofing where slope is significant (over 1/4" per foot).
- B. Equiviscous Temperature at Point of Application: No more than 25°F (14°C) from rating indicated on container label.
- C. Cant Strips/Tapered-Edge Strips: Except as otherwise shown, install preformed 45-degree insulation cant strips at junctures of modified roofing system membrane with vertical surface. Provide preformed, tapered-edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
- D. Venting Base Ply Concrete Deck: Install two-ply Type IV fiberglass felt applied directly to the primed concrete deck.
 - 1. Lay two plies fiberglass base sheets, in Type III asphalt directly to deck. Lap sides 2" (50 mm); lap ends 19" (150 mm).
 - 2. Extend base ply and membrane felts up cant strips and minimum of 2" (50 mm) onto vertical surfaces.
 - 3. Cover with Type III asphalt at 20lb/sq and glaze coat roof.
- E. Interply Sheets: Install the number and type(s) of ply sheets (felts) indicated, lapped (shingled) amount specified to form a continuous, uniform membrane with continuous moppings between sheets so that ply sheet does not touch ply sheet. As ply-sheet membrane is laid up, glaze-coat top surface with a 20-lb mopping per square of same.
 - 1. Mop base of membrane to base ply.
 - 2. Apply roofing membrane in 2 plies of fiberglass ply sheets over fiberglass ply laid on deck surface, mopped with 36 lb/square of per ply. Overlap each sheet 27-1/3". Lay sheets to ensure water will flow over or parallel to exposed edges.
 - 3. Use 13", 26", 39" wide plies to start and finish roof membrane along roof edges and terminations.
 - 4. Overlap previous day's work 24".
 - 5. Lap ply sheet ends 6". Stagger end laps 12" min.
 - 6. Apply felts smooth, free from air pockets, wrinkles, fish-mouths, lap joints, or tears.
 - 7. Install two plies membrane and glaze coat for cut-off at end of

day's operation. Glaze felts exposed at end of working day. Remove cut-off before resuming roofing.

8. Mop and seal two additional plies around roof penetrations.
- F. Top Sheet: Install one lapped course of modified bitumenous membrane sheet.
1. Torch-apply to substrate by heating membrane in accordance with manufacturer's recommendation to achieve continuous edge flow and complete bond. Overlap sides minimum 3 inches and end laps minimum 6 inches.
 2. Extend modified bitumenous sheet to 2 inches above top edge of cant strip and terminate.
 3. Nail edges of roofing membrane to wood blocking at perimeter edges of roof prior to installing metal gravel stops/fascias. Space nails at minimum 8 inches on center.

3.8 DAILY WATERSTOP/TIE-INS

- A. Envelope insulation with 18" wide #15 ply sheet. Adhere envelope to deck and insulation with steep asphalt. Glaze cut-off with steep asphalt.
- B. Install dead-man insulation filler at insulation staggers.
- C. Extend roofing plies at least 12" onto prepared area of adjacent roofing. Embed plies into recommended adhesive. Strip edges with 12" wide modified bitumen sheet embedded completely in alternate uniform courses of adhesive.

3.9 COMPOSITION FLASHING AND STRIPPING

- A. Install modified bitumen flashing at cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof. Install two plies of modified bitumen flashing, each set in a continuous coating of roofing cement and extended onto deck 4 inches and 6 inches, respectively. Nail or provide other forms of mechanical anchorage of composition flashing to vertical surfaces as recommended by manufacturer of primary roofing materials. Except where concealed by elastic flashing, apply a heavy coating of roofing cement over composition flashing.
- B. At wall flashings:
 1. Remove existing base flashing and counterflashing materials to substrate. Remove existing two piece receiver that will not meet height minimums.
 2. Prime vertical substrate with asphalt at approximate rate of one gallon per 100 sq. ft.
 3. Install new roofing 2" beyond top edge of cant.
 4. Mop 1-ply modified bitumen flashing in adhesive completely to primed wall, cant and roofing. Remove wrinkles. Extend flashing 4" minimum beyond toe of cant. Address laps and corners. Seal toe with 6" modified bitumen flashing.
 5. Mechanically fasten top of flashing to substrate 8" o.c.
 6. Aluminize flashings at 125 sq. ft. per gallon.
 7. Provide re-manufactured reglet/flashing system and install new reglet mounted counterflashing with 3/4 inch reglet turned back on itself. Receiver shall be one inch deep.
 8. Caulk reglet joint as required and tool neatly.
- C. At plumbing vents:

1. Remove existing stack flashing.
 2. Wedge plumbing vent tight against deck.
 3. Install roofing system onto wood blocking.
 4. Apply 1/16" uniformly thick layer of asphalt mastic to surface receiving metal flange.
 5. Fabricate and install plumbing vent flashing from lead. Flange: 4" wide minimum; extend completely around periphery of vent flashing. Set flange into mastic. Neatly dress flange with wood block.
 - a. Pipe outside diameters greater than 2": Bend lead inside pipe 1" minimum with pliers or rubber/plastic mallet; replace cracked lead.
 - b. Pipe outside diameters 2" or less: Cut lead at vent top; fabricate & install integral lead cap.
 6. Nail interior portion of flange to wood blocking 3" o.c., staggered.
 7. Prime metal flange with asphalt primer.
 8. Install two plies modified bitumen flashing over primed metal. Stripping plies shall extend two and four inches beyond edge of lead.
 9. Aluminize lead.
- D. Install composition stripping where metal flanges are set on roofing. Provide not less than one ply of reinforced modified flashing; set each in a continuous coating of roofing cement and extended onto the deck 4 inches and 6 inches, respectively. Except where concealed by aggregate surfacing or elastic flashing, apply a heavy coating of roofing cement over composition stripping.
- E. Roof Drains: Fill clamping ring base with a heavy coating of roofing cement. Set lead flashing sheet in a bed of roofing cement on completed built-up roofing ply sheet courses with lead sheet clamped in roof drain ring and extended 12 inches onto roofing. Cover lead sheet with composition stripping, with plies extended 4 to 6 inches beyond edges of lead sheet. Provide composition stripping of any gravel stop rings.
 1. Install tapered edge strip around drain to create 48" x 48" sump. Miter corners. Seal toe of tapered edge to drain rim with reinforcing membrane embedded between alternate courses of asphalt mastic.
 2. Install multi-ply roofing into sump and onto drain rim.
 3. Apply 1/16" uniformly thick layer of asphalt mastic to surface receiving lead flashing.
 4. Set single piece lead flashing in mastic centered over drain; extend lead 6" beyond drain rim. Neatly dress lead with wood block.
 5. Clamp flashing collar to drain in bed of mastic. If bolts are broken, drill and retap. If ladder clamps are installed, replace clamps.
 6. Neatly cut lead within drain at rim, remove.
 7. Five course lead edge with asphalt mastic and reinforcing membrane.
 8. Aluminize area between gravel dam and drain.
- F. Allow for expansion of running metal flashing and edge trim that adjoins roofing.
- G. Counter-Flashings: Counter-flashings, cap flashings, expansion joints, and similar work to be coordinated with built-up roofing work are specified in other sections of these specifications.

- H. Roof Accessories: Miscellaneous sheet metal accessory items, including insulation vents and other devices, and any major items of roof accessories to be coordinated with built-up roofing system work are specified in other sections of these specifications.

3.10 ROOF WALKWAYS

- A. Membrane Reinforcement: Prior to applying aggregate surfacing on roof membrane, and in pattern shown for walkways, and extended 6 inches beyond either side of walkways, install one additional ply of modified bituminous sheet roofing set in mopping of hot .
- B. Cap Sheet Walkways: In pathways and widths as indicated, install a cap sheet course, set in a minimum mopping of same use in ply-sheet courses. Confine mopping to surface under cap sheets. Cut sheets in 10-foot maximum lengths, and install by mop-and-flop method where possible, with butt joints.
 - 1. Color Change: Provide cap sheet of color contrasting with roofing surface as selected by Project representative from available sources.

3.11 PROTECTING ROOFING

- A. Upon completing roofing, including associated work, institute appropriate procedures for surveillance and protection of roofing during remainder of construction period. At end of construction period, or at a time when remaining construction will in no way affect or endanger roofing, inspect roofing and prepare a written report with copies to Project representative and Owner describing nature and extent of deterioration or damage found.
- B. Repair or replace, as required, deteriorated or defective work found at time of above inspection to a condition free of damage and deterioration at time of Substantial Completion and according to requirements of specified warranty.

3.12 FIELD QUALITY CONTROL

- A. Field inspection will be performed under provisions of Section 01001 and as noted in 1.07 Quality Assurance.
- B. Correct identified defects or irregularities.

3.13 MANUFACTURER'S FIELD SERVICE

- A. Provide manufacturer's field services under provisions of Section 010010 and as noted in 1.06 Quality Assurance.
- B. Request site attendance of roofing materials manufacturers during installation of the work is a project requirement.

END OF SECTION 075270

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Roof flashing conditions for roof edges, expansion joints, mechanical equipment, sleeve flashing and other roof details.
 2. Counterflashings over flexible base flashings.
 3. Pre-fabricated stainless steel reglet and flashing system, designed to be installed on pre-cast concrete parapets and limited clearance locations.
 4. Flashing collar, HVAC curb heavy gauge, high zinc content, galvanized steel coping between HVAC roof curb and cooling tower drainage system.
 5. Flashing related to the roofing of the helipad.
- B. Related Sections: The following Sections contain requirements that relate to this section:
1. Section 07900: Joint Sealers.

1.3 REFERENCES

- A. AISI (American Iron and Steel Institute) - Stainless Steel - Uses in Architecture.
- B. ANSI/ASTM B32 - Solder Metal.
- C. ASTM A525 - Steel Sheet, Zinc Coated, (Galvanized) by the Hot-Dip Process.
- D. ASTM D226 - Asphalt-Saturated Organic Felt used in Roofing and Waterproofing.
- E. FS SS-C-153 - Cement, Bituminous, Plastic.
- F. NAAMM - Metal Finishes Handbook.
- G. NRCA (National Roofing Contractors Association) - Roofing Manual.
- H. SMACNA - Sheet Metal and Air Conditioning Contractors National Association.

1.4 SUBMITTALS

- A. Submit product data under provisions of Section 01001. Describe material profile, jointing pattern, jointing details, fastening methods, and installation details. The majority of the details are to match existing. Use salvaged sections for profiles.

PART 2 - PRODUCTS

2.1 SHEET MATERIALS

- A. Stainless-Steel Sheet: ASTM A 167, Type 304, soft annealed, with No. 2D finish, except where harder temper is required for forming or performance; minimum 0.0187 inch (0.5 mm) thick, unless otherwise indicated.
- B. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated and with not less than the strength and durability of alloy and temper designated below:
1. Factory-Painted Aluminum Sheet: ASTM B 209 (ASTM B 209M), 3003-H14, with a minimum thickness of 0.040 inch (1.0 mm), unless otherwise indicated.
- C. Galvanized Steel Sheet: ASTM A 526, G 90 (ASTM A 526M, Z 275), commercial quality, or ASTM A 527, G 90 (ASTM A 527M, Z 275), lock-forming quality, hot-dip galvanized steel sheet with 0.20 percent copper, mill phosphatized where indicated for painting; not less than 0.0396 inch (1.0 mm) thick, 0.0635 (1.61 mm) for cooling tower, unless otherwise indicated.
- D. Metal Drip Edge: Brake-formed sheet metal with at least a 2-inch (50-mm) roof deck flange and a 1-1/2-inch (38-mm) fascia flange with a 3/8-inch (9.6-mm) drip at lower edge. Furnish the following material in lengths of 8 or 10 feet (2.5 to 3 m). Material: Aluminum
- E. Vent Pipe Flashing: Lead conforming to ASTM B 749, Type L51121, at least 1/16 inch (1.6 mm) thick, unless otherwise indicated. Provide lead sleeve sized to slip over and turn down into pipe, soldered to skirt at slope of roof extending at least 4 inches (100 mm) from pipe onto roof.

2.2 ACCESSORIES

- A. Fastener: For aluminum; aluminum with soft neoprene washers at exposed fasteners. Finish exposed fasteners same as flashing metal. For galvanized steel - gal. steel with neoprene washers.
- B. Underlayment: ASTM D266; No. 30 asphalt saturated roofing felt.
- C. Metal Primer: As required by manufacturer's specifications.
- D. Protective Backing Paint: Bituminous.
- E. Slip Sheet: Rosin sized building paper.
- F. Sealant: Type specified in Section 07900.
- G. Bedding Compound: Rubber-asphalt type as recommended by manufacturer.
- H. Asphalt primer: quick dry primer ASTM D-41.
- I. Reglets: Provide with offset top flange for embedment in masonry mortar joint.
- J. Protective Backing Paint: Zinc chromate alkyd.

2.3 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest practical lengths.
- C. Hem exposed edges on underside 1/2" (13 mm); miter and seam corners.
- D. Fabricate corners from one piece with minimum 18" long legs; solder for rigidity, seal with sealant.
- E. Fabricate vertical faces with bottom edge formed outward 1/4" and hemmed to form drip.
- F. Fabricate flashings to allow toe to extend 6" over roofing. Return and brake edges.
- G. Cooling tower collar to be fabricated in sections of galvanized steel to allow installation and removal. Sections are to have lapped detail to allow sealant strip and sheet metal screws attach the sections. Provide shop drawings for proposed details.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
- B. Verify membrane termination and base flashings are in place, sealed, and secure.
- C. Beginning of installation means acceptance of existing conditions.

3.2 PREPARATION

- A. Field measure site conditions prior to fabricating work. Provide shop drawings indicating all field conditions for cooling tower flashing.
- B. Install starter and edge strips, and cleats before starting installation.
- C. Install reglets true to lines and levels. Seal top of reglets with sealant.
- D. Insert flashings into reglets to form tight fit. Secure in place with wedges at maximum 16" on center. Pack remaining spaces with lead wool. Seal flashings into reglets with sealant.
- E. Secure flashings in place using concealed fasteners.
- F. Apply plastic cement compound between metal flashings and flexible flashings.
- G. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

- H. Solder metal joints watertight for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.

3.3 INSTALLATION

- A. Conform to drawing details SMACNA and NRCA manuals. New details to be compatible with existing details. Most of the details will match the original.
- B. Flashing: Install metal flashing and trim as indicated and according to details and recommendations of the "Asphalt Roofing" section of "The NRCA Steep Roofing Manual" and ARMA's "Residential Asphalt Roofing Manual."
- C. Pre-fabricated Sheet Metal Flashing and Trim: Install sheet metal flashing and trim according to the manufacturer's instructions and modified to work with existing conditions.
- D. Sheet Metal Flashing and Trim: Unless otherwise indicated, install sheet metal flashing and trim to comply with performance requirements, manufacturer's installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weatherproof.
 - 1. Expansion Provisions: Provide for thermal expansion of exposed sheet metal work. Space movement joints at maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped or bayonet-type expansion provisions in work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).
 - 2. Counterflashings: Coordinate installation of counterflashings with installation of assemblies to be protected by counterflashing. Install counterflashing in reglets or receivers. Secure in a waterproof manner by means of snap-in installation and sealant, lead wedges and sealant, interlocking folded seam, or blind rivets and sealant. Lap counterflashing joints a minimum of 2 inches (50 mm) and bed with sealant.
 - 3. Cooling tower collar shall be installed along with the rebuilding of the existing cooling tower. Owner and HVAC contractor shall coordinate details.
- E. Cooling Tower Flashing: Coordinate custom flashing with HVAC cooling tower rehabilitation. HVAC contractor will assist with flashing cooling tower grating. Heavy gauge galvanized steel, soldered seams, formed to fit into tower recess.

END OF SECTION 076200

SECTION 077200 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Lighting rod system per NFPA-780 and UL96-A base on reusing wiring, add missing rods, repair connections and recertification of finished system.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 7 Section for roofing types and roofing accessories included as part of roofing Work.
 - 2. Division 7 Section "Flashing and Sheet Metal" for metal flashing, valleys, gutters, and downspouts.

1.3 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 1 Specification Sections.
- B. Product data for each type of product specified. Submit manufacturer's detailed technical product data, installation instructions and recommendations, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.
- C. Shop drawings showing fabrication and installation of each roof accessory specified including fully dimensioned plans, elevations, sections, details of components, and attachments to other units of Work. Also show layout, anchorage details, rough-in requirements, and conditions on the roof or for other accessories.
- D. Samples for initial selection purposes in the form of manufacturer's color charts showing full range of colors, textures, shapes, and sizes available for each type of roof accessory indicated.
- E. Samples for verification purposes in full-size units or representative section of each type of roof accessory indicated for each color, texture, shape, and sizes specified.
- F. Coordination Drawings: Submit coordination drawings for items interfacing with or supporting mechanical or electrical equipment, ductwork, piping, or conduit. Indicate dimensions and locations of items provided under this Section, together with relationships and methods of attachment to adjacent construction and to mechanical or electrical items.

1.4 QUALITY ASSURANCE

- A. Heat-and-Smoke Vent Compliance: Provide units that have been tested, listed, or approved as follows:
 - 1. Construction/Operation: UL-listed.
 - 2. Construction/Operation: FM-approved.
 - 3. Fire Resistance of Lids: UL Class A rating.
- B. Standards: Comply with the following:
 - 1. SMACNA "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap-flashing to coordinate with type of roofing indicated.
 - 2. NRCA "Roofing and Waterproofing Manual" details for installation of units.
 - 3. NFPA 204M for smoke-and-heat vent design constraints, operation, and location.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Lightning rods and equipment, class II materials:
 - a. East Coast Lightning Equipment
 - b. Sabre Industries, Inc.
 - c. Johnson Brothers Metal Forming Co.
 - d. Maxwell Lightning Protection Co.

2.2 MATERIALS, GENERAL

- A. Aluminum Sheets: ASTM B 209 for Alclad alloy 3005H25 or alloy and temper required to suit forming operations with mill finish, unless indicated otherwise.
- B. Extruded Aluminum: ASTM B 221 alloy 6063-T52 or alloy and temper required to suit structural and finish requirements. Mill finish, unless indicated otherwise.

2.3 FINISHES

- A. General: Comply with NAAMM "Metal Finishes Manual" for recommendations on applying and designating finishes.
- B. Finish designations prefixed by AA conform to the system for designating aluminum finishes established by the Aluminum Association.
- C. Class I, Clear-Anodized Finish: AA-C22A41 (Chemical Finish: etched, medium matte; Anodic Coating: Class I Architectural, clear film thicker than 0.7 mil) complying with AAMA 607.1.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with manufacturer's instructions and recommendations. Coordinate with installation of roof deck and other substrates to receive accessory units, vapor barriers, roof insulation, roofing and flashing, as required, to ensure that each element of the Work performs properly and that combined elements are waterproof and weathertight.

Anchor units securely to supporting structural substrates, adequate to withstand lateral and thermal stresses, as well as inward and outward loading pressures.

1. Except as otherwise indicated, install roof accessory items according to construction details of NRCA "Roofing and Waterproofing Manual."
 - B. Isolation: Where metal surfaces of units are to be installed in contact with incompatible metal or corrosive substrates, including wood, apply bituminous coating on concealed metal surfaces, or provide other permanent separation.
 - C. Flange Seals: Unless otherwise indicated, set flanges of accessory units in a thick bed of roofing cement to form a seal.
 - D. Operational Units: Test operate units with operable components. Clean and lubricate joints and hardware. Adjust for proper operation.
 - E. Existing System: Test existing system, devise repair plan, submit to architect, repair connections, replace bad wiring, replace missing rods, and certify the system
- 3.2 CLEANING AND PROTECTION
- A. Clean exposed metal and plastic surfaces according to manufacturer's instructions. Touch up damaged metal coatings.

END OF SECTION 077200

SECTION 079000 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes joint sealants for the following locations:
 - 2. Exterior joints in vertical surfaces horizontal surfaces as indicated below:
 - a. Sealant and backing at all locations where two different materials joint and where a gap in materials creates a potential water problem or visual crack.
 - b. Sealant and backing required at construction control joints, expansion joints as referenced on plans. All joints between materials of different expansions and contraction rates.
 - c. Sealant at roof flashing and other work related to roof project.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 7 Section Sheet Metal Flashing and Trim
 - 2. Division 9 Section "Painting."

1.3 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.
- B. Provide joint sealants for interior applications that have been produced and installed to establish and maintain airtight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data from manufacturers for each joint sealant product required.
 - 1. Certification by joint sealant manufacturer that sealants plus the primers and cleaners required for sealant installation shall contain no volatile organic compounds.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and

extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

- B. Conform to Sealant and Waterproofers Institute requirements for materials and installation.
- C. Product Testing: Provide comprehensive test data for each type of joint sealant based on tests conducted by a qualified independent testing laboratory on current product formulations within a 24-month period preceding date of Contractor's submittal of test results to Architect.
 - 1. Test elastomeric sealants for compliance with requirements specified by reference to ASTM C 920. Include test results for hardness, stain resistance, adhesion and cohesion under cyclic movement (per ASTM C 719), low-temperature flexibility, modulus of elasticity at 100 percent strain, effects of heat aging, and effects of accelerated weathering.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.7 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer.
 - 2. When joint substrates are wet.
- B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.
- C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.8 SEQUENCING AND SCHEDULING

- A. Sequence installation of joint sealants to occur not less than 21 nor more than 30 days after completion of waterproofing, unless otherwise indicated.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as

demonstrated by sealant manufacturer based on testing and field experience.

- B. Colors: Provide color of exposed joint sealants to comply with the following:
 - 1. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

2.2 ELASTOMERIC JOINT SEALANTS

- A. Exterior sealant, except paving joints, shall be Sonolastic NP-I by Sonneborn, Dymetric by Tremco, Synthacalk GC-5 by Pecora, or approved equal.
- B. Joint fillers and back-up materials, solvents, primers, bond breakers, and cleaners shall be as recommended by sealant manufacturer for various conditions encountered and shall be non-bituminous material.

2.3 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from pre-construction joint sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.
- C. Masking Tape: Non-staining, non-absorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

- B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on pre-construction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
 - 1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - a. Install joint backing to achieve a neck dimension no greater than 1/3 the joint width.
 - b. Do not leave gaps between ends of joint fillers.
 - c. Do not stretch, twist, puncture, or tear joint fillers.
 - d. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.
 - 2. Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.
- D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.
- E. Tooling of Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
 - 1. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

- A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that and installations with repaired areas are indistinguishable from original work.

END OF SECTION 079000

SECTION 081100 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.
- B. Door Schedule: one existing man-door to be replaced at roof level, door to be painted, hinges, lockset to be reused, new threshold and sill to be installed.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Non-rated and fire-rated rolled steel doors, panels and frames.
- B. Relates Sections: The following Sections contain requirements that relate to this section
 - 1. Section 099000: Painting (Field painting of doors and frames).

1.3 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01001.
- B. Indicate frame configuration, anchor types and spacings, location of cutouts for hardware, reinforcement, and finish.
- C. Indicate door elevations, internal reinforcement, closure method, and cut outs for glazing.
- D. Submit manufacturer's installation instructions under provisions of Section 01001.

1.4 QUALITY ASSURANCE

- A. Conform to requirements of SDI-100.
- B. Fire rated door, panel and frame construction to conform to ASTM E152, NFPA 252 and UL 10B.
- C. Installed frame and door assembly to conform to NFPA 80 for fire rated class indicated in Schedule and on the Drawings.

1.5 REGULATORY REQUIREMENTS

- A. Conform to applicable code for fire rated frames and doors.

1.6 DELIVERY, STORAGE AND PROTECTION

- A. Protect products under provisions of Section 010000.
- B. Protect doors and frames with resilient packaging sealed with heat shrunk plastic.
- C. Break seal on-site to permit ventilation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Steelcraft, Inc.
- B. Fenestra
- C. Amweld Building Products, Inc.
- D. CECO
- E. Metal Products Inc.
- F. Substitutions: Under provisions of Section 010000.

2.2 DOORS AND FRAMES

- A. Exterior Doors: SDI-100 Grade II, Model 1.

2.3 DOOR CORE

- A. Core: Polystyrene insulation or steel channel grid.
- B. Insulated door insulation value of R-7.

2.4 ACCESSORIES

- A. Rubber Silencers Resilient rubber, 3 on strike side.

2.5 PROTECTIVE COATINGS

- A. Bituminous Coating: Fibered asphalt emulsion.
- B. Primer: Zinc chromate type.

2.6 FABRICATION

- A. Fabricate frames to fit existing conditions.
- B. Reinforce frames wider than 48 inches (1 200 mm) with roll formed steel channels fitted tightly into frame head, flush with top.
- C. Prepare frame for silencers. Provide three single rubber silencers for single doors and mullions of double doors on strike side, and two single silencers on frame head at double doors without mullions.
- D. Close top edge of exterior door flush with inverted steel channel closure. Seal joints watertight.
- E. Galvanize all components of the door and frame. Galvanize the top and bottom cap inserts and all stiffeners or reinforcements. Touch up all welded areas, patched or repaired areas.

2.7 FINISH

- A. Exterior Units: 0.60 oz/sq ft galvanized.
- B. Primer: Baked on.
- C. Finish: Site applied. See Section 099000 - Painting.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install frames in accordance with SDI-105.
- B. Install roll-formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.

3.2 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.3 ADJUSTING AND CLEANING

- A. Adjust hardware for smooth and balanced door movement.

3.4 SCHEDULE: Replace door and frame, reusing hardware at roof level. Provide new precast sill and back-stop al. threshold, weather-stripping.

END OF SECTION 081100

SECTION 099000 PAINTING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This section includes the following:
 - 1. Surface preparation, all preparation required to make all painted surfaces ready to paint, including sealants and sanding of surfaces.
 - 2. Painting of exposed metal flashing, curbs, and other roof related accessories and work.
 - 3. Paint of replaced door.
- B. Related Work under this section to include:
 - 1. Painting of ferrous metal, related to roof work, roof hatch, other roof accessories
 - 2. Painting of all exposed steel structural members, including mechanical equipment supports and exterior metal.
 - 3. Painting of mechanical and electrical work, all pipes to be painted where exposed in mechanical spaces.

1.03 REGULATORY REQUIREMENTS

- A. Conform to the Kentucky Building Code for flame/fuel/smoke rating requirements for finishes.

1.04 SUBMITTALS

- A. Submit product data under provisions of Section 01001, Submissions.
- B. Provide product data on all finishing products and special coating.
- C. Submit manufacturer's application instructions under provisions of Section 01001.

1.05 DEFINITIONS

- A. Conform to ANSI/ASTM D16 for interpretation of terms used in this Section.

1.06 QUALITY ASSURANCE

- A. Product Manufacturer: Company specializing in manufacturing quality paint and finish products with 5 years experience.
- B. Applicator: Company specializing in commercial painting and finishing with 5 years documented experience.

1.07 FIELD SAMPLES

- A. Provide samples under provisions of Section 01001.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 01001.
- B. Store and protect products under provisions of Section 01001.
- C. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.
- D. Container labeling to include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing.
- E. Store paint materials at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in well ventilated area, unless required otherwise by manufacturer's instructions.
- F. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.09 ENVIRONMENTAL REQUIREMENTS

- A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45 degrees F for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is above 50 percent, unless required otherwise by manufacturer's instructions.
- C. Minimum Application Temperatures for Latex Paints: 45 degrees F (7 degrees C) for interiors; 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.
- D. Minimum Application Temperature for Varnish and Epoxy Finishes: 65 degrees F (18 degrees C) for interior or exterior, unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.10 EXTRA STOCK

- A. Provide a one gallon container of each color and surface texture to Owner.
- B. Label each container with color, texture, room locations, and indicate if wall or trim paint in addition to the manufacturer's label.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS - PAINT

- A. Benjamin Moore Paints Product: exterior and interior alkyd enamels and all latex enamels
- B. Ferrell-Calhoun Product: same
- C. Porter Paint: same
- D. Substitutions: Under provisions of Section 01001.

2.02 ACCEPTABLE MANUFACTURERS - PRIMER-SEALERS

- A. Benjamin Moore Product: Latex Primer-Sealer
- B. Ferrell-Calhoun
- C. Porter Paint
- D. Substitutions: Under provisions of Section 01001.

2.03 MATERIALS

- A. Coatings: Ready mixed, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
- B. Coatings: Good flow and brushing properties; capable of drying or curing free of streaks or sags.
- C. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.
- D. All surfaces shall be painted with materials from the same manufacturer from primer through finish coat.

2.04 FINISHES

- A. Refer to roof plan to see the roof accessories to be painted, roof hatch, HVAC curbs, exhaust fan curbs,

PART 3 EXECUTION

3.01 INSPECTION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Plaster and Gypsum Wallboard: 12 percent.
 - 2. Masonry, Concrete, and Concrete Unit Masonry: 12%
 - 3. Interior Located Wood: 15 percent, measured in accordance with ASTM D2016.
 - 4. Concrete Floors: 7 percent.
- D. Beginning of installation means acceptance of existing surfaces.

3.02 PREPARATION

- A. Remove electrical plates, hardware, light fixture trim, and fittings prior to preparing surfaces or finishing.
- B. Correct minor defects and clean surfaces which affect work of this Section.

- D. Aluminum Surfaces Scheduled for Paint Finish: Remove surface contamination by steam or high pressure water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately following cleaning.
- E. Asphalt, Creosote, or Bituminous Surfaces Scheduled for Paint Finish: Remove foreign particles to permit adhesion of finishing materials. Apply latex based sealer or primer.
- F. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.
- G. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- H. Uncoated Steel and Iron Surfaces: Remove grease, scale, dirt, and rust. Where heavy coatings of scale are evident, remove by wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.
- I. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

3.03 PROTECTION

- A. Protect elements surrounding the work of this Section from damage or disfiguration.
- B. Repair damage to other surfaces caused by work of this section.
- C. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.
- D. Remove empty paint containers from site.

3.04 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry.
- C. Apply each coat to uniform finish.
- D. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
- E. Sand lightly between coats to achieve required finish.
- F. Allow applied coat to dry before next coat is applied.
- G. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- H. Prime back surfaces of interior and exterior woodwork with primer paint.
- I. Prime back surfaces of interior woodwork scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with mineral

spirits.

- J. After prime and first finish coat, Owners representative to inspect color. If contractor applies final finish coat, before Owners representative reviews first finish coat, the contractor will be required to repaint at no cost to the Owner.

3.05 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Paint shop primed equipment, including all new steel pipe hand railings and guard screens. Minimum of two additional coats required.
- B. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- C. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports which occur in rooms and areas receiving paint.
- D. Paint exposed conduit and electrical equipment occurring in finished areas.
- E. Color code equipment, piping, conduit, and exposed ductwork in accordance with requirements indicated. Color band and identify with flow- arrows, names, and numbering.
- F. Replace electrical plates, hardware, light fixture trim, and fittings removed prior to finishing.

3.06 CLEANING

- A. As Work proceeds, promptly remove paint where spilled, splashed, or spattered.
- B. During progress of Work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.
- C. Collect cotton waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

3.07 SCHEDULE - SHOP PRIMED ITEMS FOR SITE FINISHING

- A. Metal Fabrications (Section 05500): Exposed surfaces of lintels, roof ladders, roof exhaust hoods, etc.
- B. Metal Stairs Section 05510: Exposed surfaces of stringers, exposed vertical risers, hand-railings and guard railings.

3.08 SCHEDULE - EXTERIOR SURFACES

- A. Wood - Painted
 - 1. One coat alkyd primer sealer.
 - 2. Two coats alkyd enamel, semi-gloss.
- B. Concrete, Cement Plaster
 - 1. One coat block primer.
 - 2. Two coats latex, satin finish
- C. Steel - Unprimed
 - 1. One coat zinc chromate primer.

- 2. Two coats alkyd enamel, semi-gloss
- D. Steel - Shop Primed
 - 1. Touch-up with zinc chromate primer.
 - 2. Two coats alkyd enamel, semi-gloss.
- E. Steel - Galvanized
 - 1. One coat zinc chromate primer.
 - 2. Two coats alkyd enamel, semi-gloss.

3.09 SCHEDULE - COLORS

- A. Color Schedule to be submitted by Owners representative prior to prime coating procedures.

END OF SECTION 099000

Construction Plans Roof Replacement

Phoenix Building
101 East Vine Street
Lexington, KY

General Services
200 East Main St.
Lexington, KY 40507
425-2824 phone



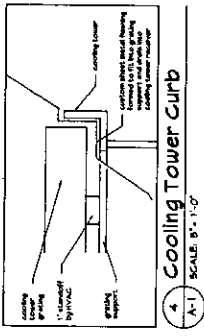
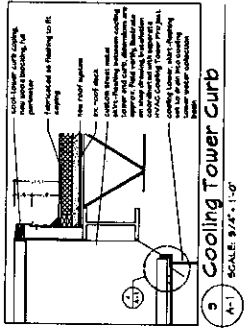
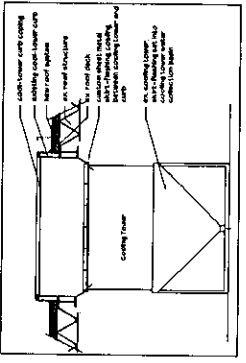
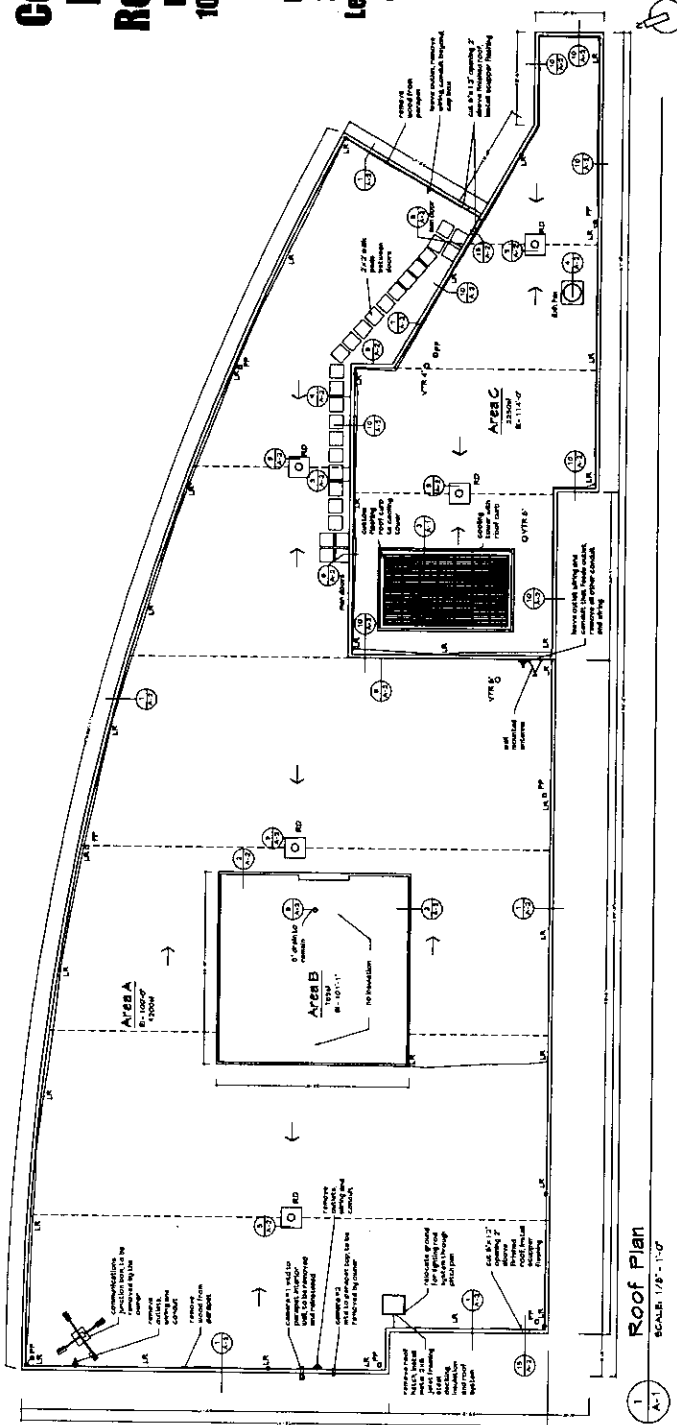
FITZSIMONS OFFICE OF ARCHITECTURE, INC.
112 WEST THIRD STREET
LEXINGTON, KY 40502
TEL 503-273-0330
FAX 503-270-3203

Phoenix Building
101 East Vine St
Lexington, Kentucky

Date	3/21/83
Drawn	JTB
Checked	JTB
Approved	JTB
Scale	AS SHOWN

Roof Plan

A-1



Existing Roof Notes

1. Existing roof is built on top of concrete slab.
2. Existing roof is built on top of concrete slab.
3. Existing roof is built on top of concrete slab.
4. Existing roof is built on top of concrete slab.

Replacement Roof Notes

1. Replace existing roof with new roof.
2. Replace existing roof with new roof.
3. Replace existing roof with new roof.
4. Replace existing roof with new roof.

A Roof Notes

1. All roof areas shall be waterproofed.
2. All roof areas shall be waterproofed.
3. All roof areas shall be waterproofed.
4. All roof areas shall be waterproofed.

B Roof Notes

1. All roof areas shall be waterproofed.
2. All roof areas shall be waterproofed.
3. All roof areas shall be waterproofed.
4. All roof areas shall be waterproofed.

C Roof Notes

1. All roof areas shall be waterproofed.
2. All roof areas shall be waterproofed.
3. All roof areas shall be waterproofed.
4. All roof areas shall be waterproofed.

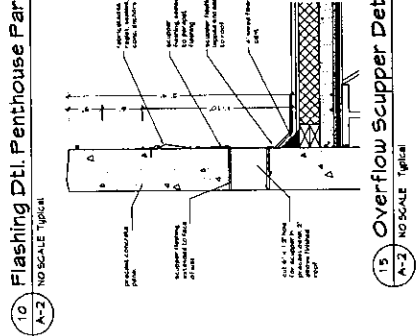
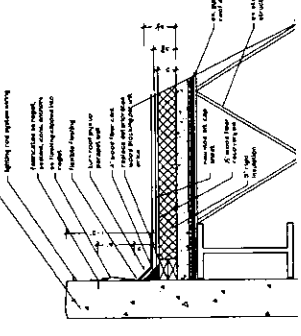
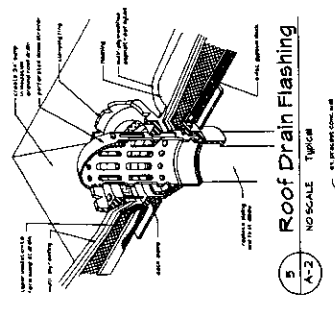
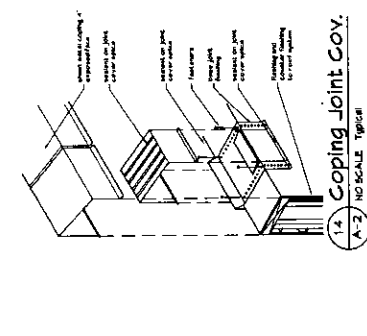
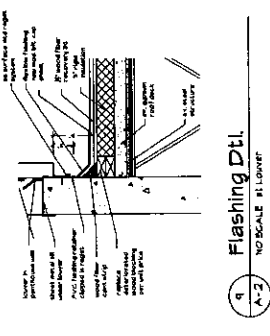
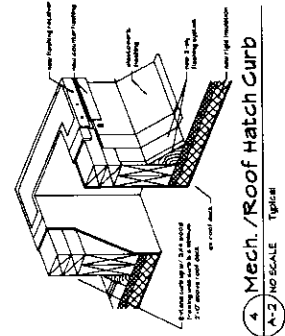
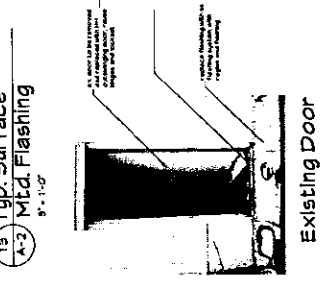
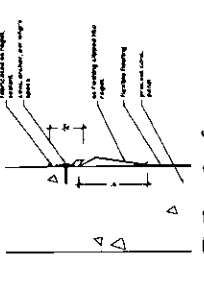
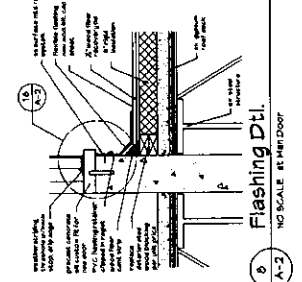
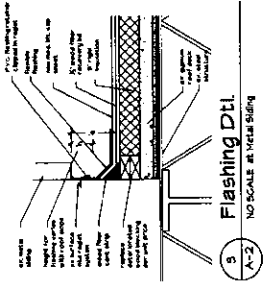
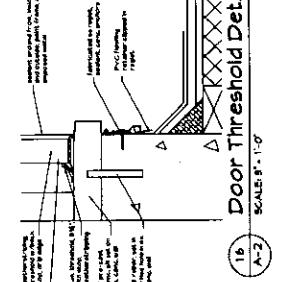
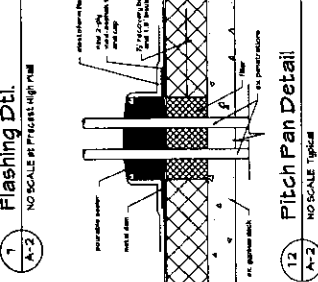
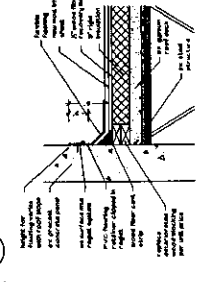
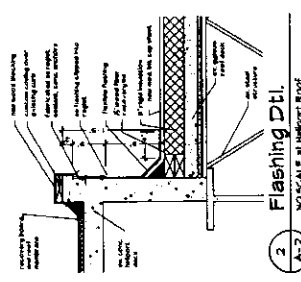
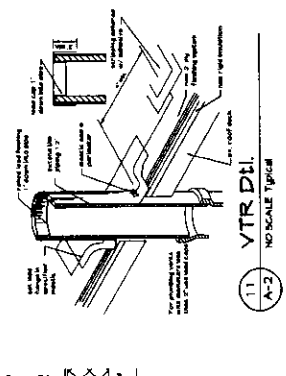
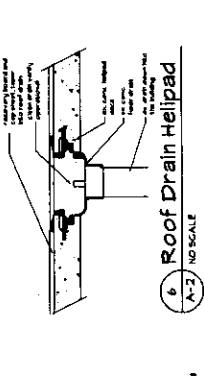
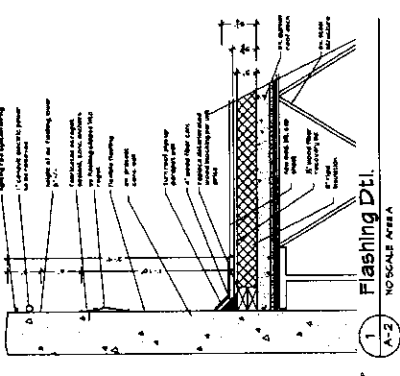
Lighting Rod System

Lighting rods shall be installed in all roof areas. The rods shall be installed in all roof areas. The rods shall be installed in all roof areas.

Drawings
A-1 Roof Plan and Details
A-2 Roof Details

Legend

VR - vent through roof (Detail 11/A2)
PR - pitch pipe (Detail 12/A2)
L.R. - lightning rod (Detail 13/A2)
C - four-pipe curbs





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
05/20/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER 1-312-704-0100 Arthur J. Gallagher Risk Management Services, Inc. 300 South Riverside Plaza Suite 1900 Chicago, IL 60606	CONTACT NAME: Certificate Issuance Team PHONE (A/C No, Ext): FAX (A/C No): 312-803-7443
	E-MAIL ADDRESS: chi_certificates@ajg.com
INSURED Kalkreuth Roofing & Sheet Metal, Inc. 2131 Capstone Drive Lexington, KY 40511	INSURER(S) AFFORDING COVERAGE
	INSURER A: ARCH INS CO NAIC # 11150
	INSURER B: NATIONAL UNION FIRE INS CO OF PITTS 19445
	INSURER C:
	INSURER D: INSURER E: INSURER F:

COVERAGES **CERTIFICATE NUMBER:** 33658122 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

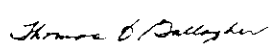
INSR LTR	TYPE OF INSURANCE	ADDITIONAL SUBROGATION RIGHTS	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> 5,000,000 All Projects GEN'L AGGREGATE LIMIT APPLIES PER POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC	X	ZAGLB9168600	05/01/13	05/01/14	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMPIOP AGG \$ 2,000,000 \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS		ZACAT9150300	05/01/13	05/01/14	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Physical Damage \$ 1,000 Comp/Col
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10,000		498-9357	05/01/13	05/01/14	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> N/A	ZAWCI9295100	05/01/13	05/01/14	<input checked="" type="checkbox"/> WC STATUTORY LIMITS OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

RE: Phoenix Building.
 LFUCG is included as Additional Insured on the General Liability policy, as per the attached.

CERTIFICATE HOLDER

CANCELLATION

LFUCG 200 E Main St Lexington, KY 40507 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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ACORD 25 (2010/05)
 Prajuchi
 33658122

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
LFUCG	
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.