SEG
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January 27, 2011

Mr. David G. Bartelt
Division of State Facilities
Roofing Project Manager
P.O. Box 7866
Madison, WI 53707-7866

e-mail – No hard copy to follow

Re: Chapman Hall Roof Replacement
University of Wisconsin – Milwaukee
Milwaukee, Wisconsin
DSF Project No. 00000
SEG Project No. 11806

Dear Dave:

This letter represents the Design Development (Designer – Drafter Report) phase for the above referenced project.

Project Title
Chapman Hall Roof Replacement
University of Wisconsin – Milwaukee
Milwaukee, Wisconsin
DSF Project No. 00000

Roof Area Size – Low Sloped Areas

Roof Area A	870 SF
Roof Area C	3575 SF
Roof Area E	696 SF
Roof Area F	451 SF
Roof Area G	96 SF
Total	5688 Square Feet

Roof Area Size – Steep Sloped Areas

Roof Area B	8000 SF

Roof Area Size – Copper Dormers, Copper Roofs and Related large flashing pans

Roof Area D	600 SF
Roof Area H	100 SF
Roof Areas I, J, K, L	400 SF
Misc. Flashings	500 SF
Total	1600 SF

Existing Components - Low sloped
Aggregate surfacing
Coal – Tar Built-up Roof Membrane
¾ inch perlite insulation – mechanically attached R = 2.08
Light weight concrete deck
Two (2) unused vents

Total Average R = 2.08

Copper counterflashing receivers can be reused, counter flashing and edge metal will require replacement.

No lightening protection system on roof.

Existing Components - Steep sloped
Architectural laminated asphalt shingles
Underlayment
Wood deck
Existing gutters are deteriorated and displaced due to ice. Downspouts and conductor heads are in good condition. Counter flashings and flashings will require replacement

No ventilation is present under the roof covering. Limiting most asphalt shingle manufacturer's warranties.

New Work – Low sloped
Remove and dispose of existing roofing system
Fully adhered 60 mil EPDM
1-1/2 inch polyisocyanurate insulation mechanically attached, R = 9. Provide sumps to existing drains. Existing deck has slope to outside edges.
Reuse existing built-in receiver, provide new copper counter flashing
Two (2) unused vents to be removed and new decking installed

The existing conditions do not allow for increased insulation or tapered insulation without significantly altering historic features of the building.

The flashing heights will be below minimums required by the manufacturer to issue a warranty on all portions of the roof.

New Work – Steep sloped
Remove and dispose of existing shingles
Synthetic underlayment
Ice Dam Flashing at eave, valleys copper to shingle transitions, end walls, etc
Wood deck
Refuse existing copper ridge cap, provide new copper flashings

New Work – Copper Roofing and Flashings
16 oz copper flat lock seam roof panels
Red rosin paper
Ice dam flashing material
Wood deck

Estimated construction cost:

Low Sloped roof areas	$ 75,000
Steep sloped roof areas	$ 80,000
Copper Dormers	$ 30,000
Cooper Roof Areas	$ 50,000
Copper gutters	$ 30,000
Total Replacement	$265,000

It was noted during our tour of the facility that portions of the masonry were also in a deteriorated condition and should be addressed.

Photos of typical existing conditions

Low Flashing Height on Low Sloped Roof Area

Curb to Be Removed on Low Sloped Area

Dormer with Copper Roofing and Shingle Sidewalls

Deteriorated Wood Windows

Ice Behind Existing Gutters

Large Copper Flashing

Large Copper Flashing

Please let us know how you wish to proceed with this project. It would be possible to replace the steep roof areas and dormer roofs prior to replacement of the low sloped roof areas.

If you have any questions, comments or concerns please feel free to contact me.

Sincerely,
Specialty Engineering Group LLC

Russell P. Mohns

Russell P. Mohns, P.E.
Principal / Project Engineer

Electronic CC: Dan Walker, UW-Milwaukee