Nilsson & Watts Associates

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Phone: 704/669-5833

July 26, 1985

Mr. Al Richardson, Town Manager
Town of Black Mountain
225 W. State Street
Black Mountain, N.C. 28711

Re: Old A&P Building
106 Montreat Road

Dear Mr. Richardson,

During the past 2 weeks I have made several inspection trips to the referenced building. I have inspected the interior, exterior, roof and basement. Following is a list of my findings including estimates for repair of deficient items.

Building description: The subject building is a one story masonary building with a basement under the rear half. The building size is approximately 115' 4" wide X 90' 4" deep. The floors are concrete and the roof system is wood rafters over steel beams and joists.

Exterior: The exterior brick walls are generally in good condition. 1. Several isolated cracks were noted on the South wall that are probably due to temperature stresses. These are not signigicant to the structure. 2. On the North wall several horizontal cracks were noted. These appear to be the result of some settlement of that wall in the vicinity of the small creek which runs under the building. Upon examining the culvert there I noted that the stream does not flow through the culvert, but goes underground. Most likely this stream has undermined the culvert and the building wall somewhat, causing the observed settlement. The settlement magnitude is estimated at 1". It is possible to rechannel the stream thru the culvert, rebuild the culvert headwall and catchbasin and arrest the building settlement by cement grouting or other means. A cost estimate for this work is $8,000.00. 3. The brick on the West wall is in good condition except that a settlement crack was noted near the northwest corner. The sidewalk in this area has settled, also causing the front canopy post support to settle approximately 2". The fill dirt under the walk has apparently settled, causing this problem. I believe that further settlement here is unlikely and I recommend that the sidewalk be replaced and the canopy post at the proper height. The cost estimate for this work is $700.00.

4. The brick on the rear has bulged out at the main floor level approximately 1" to 1.5". Upon investigation it was discovered that the rear masonry wall was not properly tied to the main floor bar joists. The reason for the movement is not clear at this time but the rear wall does require a positive tie to the main floor system. This can be accomplished with through bolts fastened to the concrete slab as shown on the attached sketch. I doubt that the wall can be moved back into place, but any future movement should not occur. A cost estimate for this work is $2,000.00.

*No sketch was ever found in the records.

Basement: The basement floor slab appears to be in good condition. The steel columns, beams, and bar joists supporting the main floor are also in good condition.

1. The inside rear basement wall shows the evidence of movement previously stated.

2. The center foundation wall forming the front wall of the basement has a horizontal crack along its length at mid-height. This indicates that the fill behind it has settled, causing a slight displacement of the wall, hence the crack. I doubt that the wall will displace any further, but I [illegible] recommend that the wall be filled with cement grout and reinforcing steel at 4' intervals to help stabilize it. The cost for this work is estimated at $1,500.00.

Main floor: The floor is concrete.

1. The front half of the floor is a slab poured on earth fill. As noted above, some settlement of the fill under the slab has occurred. I noted a slight depression in the slab in the area approximately 10'-15' to the west of the center foundation wall, confirming that the fill had settled.

2. Approximately 15' form the North wall, there is a large crack in the floor running east-west, which indicates signigicant settlement of the fill near the North wall.

3. The concrete deck over the bar joists has several large cracks running in the east-west direction. These are most probably shrinkage cracks, and are not structurally significant, but are unsightly. The exact load carrying capacity of the suspended slab was not determined at this time, but a live load of 50 PSF may be safely carried. Further analysis would have to be done before a higher capacity could be confirmed.

4. Any recommendation on the noted cracks and depression in the floor would be dependent on the use and loading of the floor in those areas.

Roof system

1. The roof framing is wood rafters over steel "bowstring" trusses and steel beams. All of these members appear in good condition. The ceiling insulation is approximately 3" thick fiberglass installed over the existing acoustic ceiling. It needs to be upgraded.

2. The roofing membrane is built up tar and gravel over a wood roof deck. This roofing is in good condition throughout except for the front canopy. The canopy has no gravel and the

membrane has bubbled in several areas. This roof may be patched and should last at least 5 years. The cost estimate is $500.00 for this work.

In conclusion, we state that the building is in reasonable condition for its age. The structural problems are repairable, and I would be happy to assist you with any further analysis or cost estimates.

Sincerely,

J. N. Nilsson
P.E. #5272

NORTH CAROLINA PROFESSIONAL SEAL 5272 ENGINEER J. N. NILSSON