Mike Shadid Foundation Consulting Inc.

5/17/10

Hi Dave & Mike

Hope all is going well.

6 pages to follow

Thanks for you Business

Mike

Dave you mailed the Original back to me after signing. Let me know address to send it

W329 N4730 Lakeland Dr. • Nashotah, Wisconsin 53058 • (414) 379-1265 • Fax: (262) 369-0855

Please sign Copy & return to me.

FOUNDATION INSPECTION REPORT

MIKE SHADID FOUNDATION CONSULTING INC.
W329 N4730 LAKELAND DRIVE, NASHOTAH, WI 53058
Telephone 414-379-1265 Fax 262-367-2062

INSPECTION ADDRESS: 4123 N 95th St. Wauwatosa WI
CLIENT: Dave Behrens **PRESENT:** __Y ✓N

This report is limited to an impartial opinion, which is not a warranty. It does not address latent or concealed defects that may occur in the future that are not evident at the time of this inspection. The report is limited to the components of the foundation that were visible to the inspector on the date of the inspection and his opinion of their condition at the time of the inspection.

(X) **CLIENT ACCEPTANCE:** _____ **DATE:** 2/4/10
Type of inspection (Full) / Partial

SITE INFORMATION

TYPE OF FOUNDATION: ✓ Block __ Brick __ Poured Concrete __ Fieldstone __ Other _____
DETAILS: ✓ Sump pump __ Palmer Valve ✓ Drain Tiles __ Paneled _____ Floor - (Bare/Carpet/Tiled/Painted)
HISTORY: Obtained from __ Owner __ Realtor Age ? Years Owned ? No History ✓
Directions: N = North S = South E = East W = West

Date of Last Painting: Many Years. (Walls painted for cosmetic purposes only or to prevent seepage and dampness).

Date Wall Coverings Installed: N/A
Were Cracks Patched Before Painting and Wall Coverings Installed? None observed
Dates intersecting walls, doors built: N/A
Is space present between firing strips and wall? N/A

History: Water in blocks 3 locations on west wall. These areas have had floor broken bleeders probably drilled in block cores. See page 4#6

INSPECTOR CANNOT VERIFY SEEPAGE HISTORY

Inspector Seepage Observations: Seepage At:
__ Cracks in floor ✓ High on wall ✓ Low on wall __ Above wall __ Windows __ Cove
__ Old water stains __ Signs of repetitive on going seepage; __ Water Stained / Rotted Wood __ Loose or missing tiles __ Efflorescence Walls / floor __ Stained / Deteriorated Wall Coverings __ Possible mold
__ Paint deterioration ✓ Water stains floor / walls ✓ Water in block cores below floor at times.
– See page __ 4 #9, ✓ 5 #11 Low stains west wall. High stains North, south & west walls.

Inspector Structural Condition Observations:
Signs of movement on __ Wall coverings __ Intersecting walls __ Door frames __ Stairs
__ Windows __ Ceilings __ Exterior Corners __ I-Beam __ Cracks Tuckpointed or caulked under paint
__ Recracking __ Recent Appearing paint __ Intersecting walls built to conform to off plumb foundation walls.
All walls

Inspector cannot properly inspect covered walls:
Wall Cracks indicate:
✓ Normal Settlement
__ Differential Settlement
✓ Lateral Displacement All walls see page 3#4B
__ Green Mortar Cracks 4#6 & 4#10A & 4#10B.

Floor cracks indicate: ✓ Normal shrinkage __ Settlement of structure __ Hydrostatic pressure
__ Tipped floor

CONDITIONS THAT MIGHT BE CONTRIBUTING TO THE PROBLEM

✓ Surface water entering wall ✓ Foundation cracks __ Concrete pitches to wall __ Roots in drain tile at crock
✓ Poor grading along wall __ Iron Ocher in drain tile __ Storm drain broken __ Mineral build-up in drain tile
✓ Downspouts not extended ✓ Possible drain tile blockage __ Gutters need cleaning / Repair
__ Sump pump not properly set ✓ Sump pump not working __ Palmer Valve stuck / missing
__ Poor soil below footings __ Dry Soil __ High water table __ Trees ✓ Heavy clay soil ✓ Frost
– See page ✓ 3 #2, ✓ 3 #3, __ 3 #4a, ✓ 3 #4b, __ 4 #5, ✓ 4 #6, __ 4 #7, __ 4 #8, __ 4 #9, ✓ 4 #10a, ✓ 4 #10b
Downspout extenders crushed
Short downspout - very low area
north wall.

©msfc, inc. 2003

FOUNDATION INSPECTION REPORT

FOUNDATION PLAN

Depth of ground _____

Wall Height _____

Courses 11

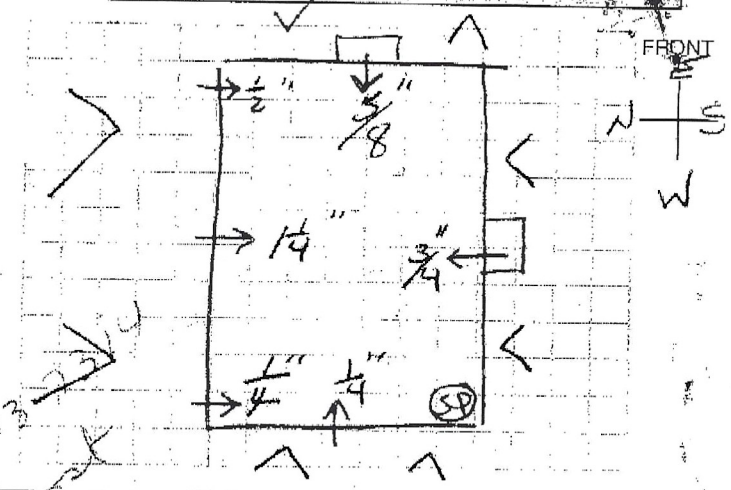
Thickness _____

Moisture Today (YES) NO

Floor / Walls

Floor Concrete

Other: West wall.



>= Water flow direction

→ = Direction top of wall off plumb over bottom.

Ⓟ = Plumb.

OBSERVATIONS

CONDITION AND CRACKS (Numbers Below Indicate Course Crack is Over)

Wall	Green Mortar	Horizontal	Stepped	Sheared	Vertical	Displaced
NORTH		✓ 8 & 10	✓		N	Yes
SOUTH		✓ 5 & 9	✓			Yes.
EAST		✓ 6th	✓			Yes.
WEST		✓ 6, 9, 10	✓			Yes

See page 3 #4B & 4 #10A & 4 #10B.

RECOMMENDATIONS: Check mark (✓) indicates recommendations and or options.

✓ Regrade exterior, repair, replace lengthen downspouts. Clean, repair and or replace gutters as necessary. Water must flow away from wall(s). extend downspouts. Downspout north wall at N/E corner turn to east run past front of house.

___ Mudjack or replace concrete pitch away from wall(s).

✓ Replace sump pump/adjust sump pump float level.

~~Open palmer valve~~

✓ Run adequate dehumidification equipment. Keep doors and closets open for air circulation.

No guarantee on above modifications.

✓ Have drain tile test completed to determine condition. Replace drain tiles as necessary if hampered. See page 4 #6 Cost #500 - #600 Cost of repairs

___ Replace interior drain tiles as follows required #30 - #100 ft. Cost of entire perimeter

___ Test remainder of drain tiles. Replace as necessary if hampered.

___ Excavate damp proof exterior wall if guarantee against wet wall is required.

___ Monitor Cracks on _____

Reinforce with appropriate steel braces at 32" to 48" intervals if future movement or guarantee is required at this time.

✓ Structural engineer could authorize reinforcement without excavation for permit SEE PAGE 4 #10A

✓ Reinforce North & South wall 15-16 Braces each

Cost wall 9-10 braces. Displacement appears less than 1" from as built position.

Cost #250 - #300 each installed.

✓ Excavate, repair, reinforce West wall see page 3 #3. #6000 - #7500 Displacement appears more than 1" from as built position.

___ Before walls are covered, painted or patched take professionally dated pictures for resale.

- Cost to remove & replace A/C #500 - #700.
- North wall displaced less than 1" from constructed position evidence no Center 1¼" off plumb at N/E corner wall is ½" off plumb 1¼ - ½ = wall displaced ¾" thus OK to leave without excavating

©msfc, inc. 2003

GENERAL NOTES

All foundations in northern climates are subjected to soil and water pressures, soil movement, uneven soil conditions, frost and adverse condition. Floor cracks are often caused by shrinkage. Basements may be perfectly dry during a long dry spell and then damp during wet weather. With one basement inspection, future performance of the basement cannot be predicted or guaranteed.

The single most important factor to prevent basement problems is to keep surface run off water away from basement walls.

Make sure disclaimer page is provided with report for date and signature.

(1) FLOODS

Water entry during a flood is not generally considered a reason for foundation repairs. Repairs are required if seepage occurs on a repetitive basis under normal conditions or if structural damage is present.

(2) EXTERIOR FACTORS

Gutters, downspouts and grade of perimeter must direct surface water away from the walls if they are to stay dry. It is normal for foundation walls to become damp and leak if water is allowed to pond next to walls. Remove obstructions that prevent water from running away from walls. Remove mulch and stones around walls. Add brown planting or blended soil approximately (2/3" clay - 1/3" top soil). Taper 1/2" to 1" per foot for 5-6 feet from walls. Stand treated wood, tin or aluminum **against** bricks or siding before raising grade as necessary.

Water stains high on walls suggests surface water is running down exterior wall surface and absorbing into the exterior surface before reaching drain tiles. This condition can often be eliminated by diverting surface water away from walls.

Exterior modifications cannot guarantee seepage prevention but are often implemented successfully prior to contractor repairs.

(3) MAJOR EXCAVATION - EXTERIOR WALL

If above grade modifications do not prevent seepage or guarantee is required. If walls are wet high up, or walls require straightening before reinforcing, foundation repair contractors would perform the following repairs.

Excavate walls to footings
Remove debris & spoilage from premises
Straighten wall best as possible
Patch exterior cracks
Damp proof exterior wall surface
Clean bleeders
Test interior drain tiles, repair or replace if hampered (extra cost)
See if municipality requires sump pump installation - install sump if required
Install exterior drain tiles
Backfill minimum 80% stones (Use limestone if roots are present)
Surface grade and gutters should divert water away from walls

Contractor should provide warranty again seepage through walls.
Walls should be reinforced if structural warranty is required.

(4) REINFORCEMENT

If a wall is cracked, the cause of movement should be determined using a combination of history and observation.

(4A) GREEN MORTAR CRACKS

One possible cause of these cracks can be the wall was struck by backfill at time of construction causing green mortar cracks, which are defined as short intermittent cracks on both sides of a horizontal mortar joint. The upper wall is often plumb, lower wall leans in from backfill pressure. Lack of wide step cracks at ends of cracks and hairline width of cracks suggests wall has been stable since mortar hardened. Reinforcement is optional.

(4B) HORIZONTAL CRACKS

If a wall is horizontally cracked with step or shear cracks in the corners, it may be considered unstable if wall is more than 1/2" off plumb. These walls may require reinforcement to prevent further movement. Cause of this condition is lateral earth pressure in excess of bearing capacity, which is frost and water in clay soil next to walls.

No seepage warranty provided if walls are reinforced. Seepage warranty provided if drain tile systems are installed.

©msfc, inc. 2003

(5) SETTLEMENT

Soil under footings can compact or wash away, causing uneven settlement of structure. Vertical or step cracks result. All structures settle a minor amount. Uneven or differential settlement should be prevented if movement has affected support of upper structure.

(6) INTERIOR DRAIN TILE REPAIRS

Interior drain tile systems are successfully employed when upper walls are dry and free of cracks and seepage occurs from cove, floor wall joint, bottom 1-2 courses of blocks or floor cracks. This type of seepage is generally not prevented by diverting surface water from perimeter.

If seepage occurs from floor cracks, contractor should break floor at crack. If stones are not present, drain tile laterals connecting to perimeter tiles or sump pump may be required.

This type of system will not prevent wet walls or prevent soil pressure from displacing walls.

Municipalities may require sump pump installations if significant interior drain tile footage is repaired.

Contractor should test interior and exterior drain tiles before repairing. At times, areas of new drain tiles and weep holes in blocks can prevent seepage in isolated areas.

If guarantee is required, contractor would break floor approximately 18" wide, remove debris, drill weep holes in blocks, flush block cores, install drain tiles under floor, install sump pump if required.

(7) SUMP PUMP

The sump pump empties the drain tile system. If it's operation is interrupted or if it cannot keep up with the quantity of water present, leakage can occur from floor wall joints or floor cracks.

Sump pump level must be set so water does not cover drain tiles. If water covers the drain tiles, seepage and dampness can occur at floor wall joints or cracks.

Resetting the sump pump properly does not guarantee prevention of seepage or dampness.

Each sump pump should have separate discharge line.

After sump is reset, conditions can be monitored or a drain tile inspection could be done to provide further information.

Interior and exterior drain tiles can be tested to provide further information on cause of seepage and recommend repair, if needed.

(8) PALMER VALVE

The palmer valve is a one way gate valve that separates drain tiles from sanitary sewer laterals. It's purpose is to protect drain tile system in the event a sewer back-up occurs. If this valve is stuck shut it can cause seepage from floor edge and cracks. If it is broken, it cannot be repaired.

If broken, options include monitoring the condition. If sewer back-ups occur, drain tiles can become clogged and require replacement. A plumber can disable palmer valve lateral and install a sump pump to protect drain tile system. After the palmer valve is opened, the basement can be monitored for future seepage. If seepage continues or immediate information regarding drain tile condition is required, a contractor can test interior and exterior drain tiles. Repair or replace tiles if they are found hampered or guarantee is required.

(9) MOLD

Some types of mold have been identified as potential indoor pollutants. Occupants' health may be adversely affected. Mold may be a result of water penetration, excess humidity or dampness. Current recommendations are to remove it from the premises. Some professionals recommend testing mold for type to determine proper removal method.

(10 - A) REINFORCEMENT

Some municipalities require structural engineer approval to reinforce a displaced wall if it is displaced more than 1 inch from original wall construction position if it is not excavated before reinforcing.

(10-B)

Seepage at bottom of wall after braces installed on top of floor would require new longer braces at extra cost, if interior drain tiles require replacing in the future.

©msfc, inc. 2003

FOUNDATION INSPECTION REPORT

3/16/20

Reinspection

Property located at
4123 N 95th St
Wauwatosa Wi

Contractor installed steel beams on all walls properly after my initial inspection.

Mike Shadid Foundation Consulting Inc.

Mike Shadid

©msfc, inc. 2003