HO-CHUNK NATION TRIP REPORT
Assessment of Mold and Moisture Conditions

Final Report

Date:
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Prepared for:
U.S. Department of Housing & Urban Development
Office of Native American Programs

Prepared by:
UIUC/Building Research Council
One East St. Mary’s Road
Champaign, IL 61820

Under sub-contract to:
Magna Systems, Inc.
340 E. Second Street, Suite 409
Los Angeles, CA 90012-4249
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INTRODUCTION

Kate Brown and Bill Rose from the Building Research Council (BRC) at the University of Illinois Urbana-Champaign conducted a site visit at the Ho-Chunk Nation on February 10, 2003. The purpose of the site visit was to provide technical assistance to the Ho-Chunk Housing Authority in assessing mold and moisture conditions in housing units. This is a summary report of activities and issues addressed while on site. A detailed analysis on the findings and recommendations is found in the attached reports, entitled: *Technical Housing Assessment Report: Examining Mold and Moisture Conditions of Homes at the Ho-Chunk Nation.*

BACKGROUND INFORMATION

The Ho-Chunk Nation is located on trust lands in Adams, Clark, Columbia, Crawford, Dane, Eau Claire, Jackson, Juneau, La Crosse, Monroe, Sauk, Shawano, Trempealeau, Vernon, and Wood Counties in the State of Wisconsin. The region’s winter climate consists of cold temperatures and heavy snowfall. The region has many lakes, streams, and rivers along with wetlands and marshes. About 11,871 Native Americans reside on the trust lands in the State of Wisconsin. The housing authority maintains 152 Low Rent homes and 23 Mutual Help homes.

Paul Tysse, Grants writer for the Ho-Chunk Nation Housing Authority (HCHA) requested technical assistance and training on mold and moisture problems impacting their homes.

The homes investigated are all located at the Ho-Chunk Village, Baraboo, WI. The subdivision has 20 Low Rent single-family homes with two, three, or four bedrooms. The homes were built in 1973.

The Ho-Chunk Nation was awarded an Imminent Threat Grant in July of 2002 to address their mold and moisture conditions. The purpose of the site visit was to review some of the rehabilitation/remediation plans undertaken with their grant funds.

**Day 1: Sunday, February 9, 2003**

This was a travel day to the Ho-Chunk Nation in Baraboo, WI.

**Day 2: Monday, February 10, 2003**

On Monday morning, the assessment team met with the following individuals: Hal Beiler, Grants Management Specialist for Eastern/Woodlands Office of Native American Programs, Ken Funmaker, Building Inspector, and Paul Tysse, Grants Writer for the HCHA. The team traveled to the Ho-Chunk Village Subdivision to conduct the on-site inspections. At the site, Steve Eades, Director of Maintenance, joined the team. The Ho-Chunk Nation requested more direct on-site technical assistance and discussion during the inspections. The homes were all unoccupied and remediation/repair work was in process. The main interest and questions focused on whether appropriate remediation
work was being undertaken. During the on-site inspections, other HCHA staff joined the inspection team: Robert Mann, Lands Development Director, and Terry Schilke, Assistant to the Lands Development Director.

The housing authority selected the properties to be inspected. Digital photographs were taken at each site to record conditions. The inspection process involved visual assessment of both interior and exterior conditions including basements and discussions with HCHA staff. Four homes were inspected. The attached *Technical Housing Assessment Report: Examining Mold and Moisture Conditions of Homes at the Ho-Chunk Nation* provides a detailed analysis of findings and recommendations for the homes investigated.

In the afternoon, BRC staff provided training for HCHA staff. Rob Voss, Tribal Sanitarian, Ho-Chunk Nation, Division of Health and Social Services also participated in the training and discussions. Using a Power Point, the BRC team made presentations tailored to address the specific issues identified by the housing authority staff. The presentation covered the following topics:

- What Mold Needs to Grow
- Definition of Moisture Loads and Identification of Sources of Moisture
- Impact of Building Construction and Design on Moisture Sources
- Discussion on the Findings on the Reservation and Strategies to Solve the Problems
- Mold Remediation
- Occupants’ Issues
- Basement
- Site Design

The training session lasted two hours and included good discussion and exchange.

**FINDINGS**

An overview of findings and recommendations for the site visit follows. The *Technical Housing Assessment Report* provides a detailed discussion and analysis of the findings.

1. The overall remediation strategy seems good. The basement walls are treated and painted for moisture resistance. Mold-affected areas of drywall are removed or cleaned. The insulation in the attic was made more uniform and some regrading has been done.

2. The amount of regrading may or may not be sufficient; time will tell. Ideally, there would be a 5% grade for the first 10 feet away from the house, the snow cover prevented the team from determining the slope and extent of the regrading.

3. We were not able to determine if particular care had been taken at the edge of the ceiling insulation, where the ceiling meets the outside wall. Any recurrence of black staining at the ceiling-wall juncture would be an indication that greater care is necessary in placing the ceiling insulation at the outside edge.
PROGRAMMATIC RECOMMENDATIONS

A particular challenge to all housing authorities is the development of a service-delivery system to effectively address mold and moisture conditions in a prompt fashion. This requires a partnership between the housing authority and residents. A system could include training for the maintenance staff on how to implement the technical recommendations and training for residents on their roles and responsibilities as renters and homeowners. In many cases, moisture problems develop, but go unreported and un repaired, which result in significant mold contamination that could have been avoided. Some strategies to address these problems follow:

1. Require attendance at annual homeowner/renter clinics as part of the annual recertification process. These clinics could provide instruction on home maintenance issues, such as identifying and repairing leaks and gutter maintenance.

2. During the annual recertification process, ask the occupants to complete a survey based on Housing Quality Standards (HQS) with additional questions on mold and moisture conditions in their homes. The completion of the survey further engages them in their own home maintenance. Furthermore, the survey responses would provide additional information to the housing authority on any unreported problems, especially leaks and inoperative fans that may contribute to an unsafe, unhealthy home environment.
TECHNICAL HOUSING ASSESSMENT REPORT
EXAMINING MOLD AND MOISTURE CONDITIONS OF HOMES ON THE HO-CHUNK NATION

Executive Summary

Introduction

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Section 2: Ho-Chunk Nation Housing Descriptions

Section 3: Findings

Section 4: Technical Recommendations

Section 5: Discussion of Common Problems

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EXECUTIVE SUMMARY

Paul Tysse requested technical assistance and training on mold and moisture problems impacting homes at the Ho-Chunk Nation. The Ho-Chunk Nation was awarded an Imminent Threat Grant in July of 2002 to address their mold and moisture conditions. The purpose of the site visit was to review some of the rehabilitation/remediation plans undertaken with their grant funds. Four homes were inspected for mold and moisture problems at the Ho-Chunk Nation on February 10, 2003. Bill Rose and Kate Brown from the Building Research Council (BRC) at the University of Illinois Urbana-Champaign conducted the site visit. The homes were all of similar construction and age. Two of the homes needed remediation, one had completed remediation and one was in the process of remediation.

Principal findings from the site visit are listed below.

1. The overall remediation strategy seems good. The basement walls are treated and painted for moisture resistance. Mold-affected areas of drywall are removed or cleaned. The insulation in the attic was made more uniform. Some regrading has been done.

2. The amount of regrading may or may not be sufficient; time will tell. Ideally, there would have been a 5% grade for the first 10 feet away from the house, but the snow cover did not allow us to determine the slope and extent of the regrading.

3. The assessment team could not determine how carefully the insulation is installed at the edge of the ceiling insulation, where the ceiling meets the outside wall. Any recurrence of black staining at the ceiling-wall juncture would be an indication that greater care is necessary in how the ceiling insulation is placed at the outside edge.

This report provides technical recommendations and discussion focusing on these items. Appendix A includes a summary of findings at each inspected home. Appendix B provides a detailed assessment of each home.
INTRODUCTION

Paul Tysse requested technical assistance and training on mold and moisture problems impacting homes at the Ho-Chunk Nation. The Ho-Chunk Nation was awarded an imminent threat grant in July of 2002 to address their mold and moisture conditions. The purpose of the site visit was to review some of the rehabilitation/remediation plans undertaken with their grant funds. Four homes were inspected for mold and moisture problems at the Ho Chunk Nation on February 10, 2003. Bill Rose and Kate Brown from the Building Research Council (BRC) at the University of Illinois Urbana-Champaign conducted the site visit. All the homes were of similar construction and age. Two of the homes were in need of remediation, one had completed remediation and one was in the process of remediation.

SECTION 1 - METHODOLOGY

Visual inspection was primarily used to assess mold and moisture conditions in the homes. The results of the mold and moisture assessments were compiled on a spreadsheet, with broad categories of common moisture problems noted. This data is presented in Appendix A in this report. The findings of each individual house are presented in Appendix B.

Visual Inspection

Housing inspections consisted primarily of visual assessment of mold and moisture conditions. Assessment forms developed for the Chicago Mold and Moisture Project, a HUD Healthy Homes Program, were used to record information. The assessment forms were organized for a room-by-room inspection. All rooms were examined for water damage and evidence of mold. The assessment of kitchens, bathrooms, basements, utility rooms and attics included additional inspections relating to plumbing, localized ventilation, water entry and other moisture source issues.

The exterior of the houses were inspected for rain water/snow melt management, including site grading, roof condition and gutter system.

Digital photographs were taken at each house to visually record notable conditions

SECTION 2 – HOUSING DESCRIPTIONS

The investigated homes investigated are located at the Ho-Chunk Village, Baraboo, WI. The subdivision has 20 Low Rent single-family homes with two, three, or four bedrooms. The homes were built in 1973.
SECTION 3 - FINDINGS

1. Site Drainage

The major problem with the four homes visited was entry of rainwater through cracks in the concrete basement walls. The approach used involved 1) some regrading of the site to create better swale on the uphill side and 2) refinishing the interior with a water-resistant surface treatment. Together, they should provide substantial benefit. However, they may not be sufficient to ensure a fully dry basement.

The team was told that some regrading had been done, but were not able to measure the slope of the soil surface because of snow cover.

The site grading may have to be more substantial for more controlled flow away from the house (Figure 1). As a general rule, the soil should slope away from the house at a 5% grade for the first 10 feet away from the house. That represents a drop of 6 inches in 10 feet.

Currently, the roof rainwater discharge at the base of the downspout deposits the water directly at the foundation (Figure 1). Ideally, a gutter downspout extender would send the water several feet away from the house. Additionally, the induced furnace draft discharge adds to the rainwater discharge at the corner. Landscaping put at the corner may help keep the downspout discharge extender in place. The extenders were often kicked out of place by children or people mowing lawns (Figure 3 on pg 10).

2. Tub Surround Installation

In the inspected homes, the tub and surround were attached to the framing after the insulation and vapor barrier were installed (Figure 2).
However, this practice is often discouraged because the area behind the tub and the surround with no drywall covering. Drywall improves the airtightness of the house and prevents cold air from blowing through the area with no drywall and leading to cold spots, discomfort and energy costs. On the other hand, if the sheathing is tight, the amount of air that may infiltrate may not be a great amount. Although not ideal the practice of not installing the drywall behind the tub is the rule rather than the exception, for most of the country.

3. Edge of Ceiling Insulation

Because the attic insulation was not completed in the units visited, the team could not assess how well the edges are insulated. If the edges do not get well insulated, the units are subject to a high moisture load may produce black stains at the wall ceiling juncture, especially in wet rooms such as bathrooms. If this occurs, the quality of the insulation installation at the edge of the ceiling may require improvement. If this problem appears, some treatment methods are discussed in Mold Prevention and Detection: A Guide for Housing Authorities in Indian Country Prepared for: US Department of Housing And Urban Development www.codetalk.fed.us/MoldDetection.pdf.

SECTION 4 – TECHNICAL RECOMMENDATIONS

The following recommendations are based on the site visit findings:

1. Site Drainage

Create a slope with a minimum fall of 6” in the first 10 feet away from the house. This represents a 5% slope. Provide a swale at the uphill side of the house to ensure rainwater discharge around and away from the house.

2. Tub Surround:

On all tubs and tub surrounds installed against framing, check for cold spots at and near the tub during cold weather. Cold spots would indicate that cold air is entering behind the tub. If a significant cold spot is created near the tub, consider bathtub and surround installation against cement board, which is preferred over drywall for bathroom locations.

3. Edge of Ceiling Insulation

If mold problems reappear at the juncture of the wall and ceiling, consider improving the installation of the insulation on the ceiling at the perimeter of the building.
SECTION 5 – DISCUSSION OF COMMON PROBLEMS

1. Site Drainage

When rain falls on a building site, where should the water go? The roof should be designed and built so that the water that lands on the roof is moved out to the edge of the roof. Some rain falling on a soil surface will percolate downward through the soil—more in sandy soils and less in clayey soils. The rest of the water will move along the soil surface following the slope toward the downhill edge of the site. The best way to prevent mold and moisture problems in houses is to make sure that rainwater moves off the roof, across the site and off the property. Houses with water accumulation in the soil next to the foundation have problems. To avoid this problem, the soil in contact with the foundation should, in a well-managed property, be the driest soil on the site following a rainstorm. Houses with dry foundations (basements, crawl spaces and slabs) are usually dry houses. Keeping the foundation dry is the key to a good indoor environment in most houses. To keep the foundation dry, keep the soil dry next to the foundation dry.

Keeping the soil that touches the foundation dry involves two general rules, together with some specific guidelines.

The first general rule is the rule of concentration - damage is worse where greater quantities of water are concentrated. A valley on a roof acts like a funnel, with the greatest concentration of water at the base of the valley. Gutters also act like funnels that collect water from the edge of the roof and concentrate it in the downspout. On the land, valleys and swales act like collectors or funnels that concentrate the water on the site. If the water management design makes use of funnels (such as valleys, gutters, or swales), then they require maintenance to make sure they work as intended. Damage occurs where a valley, gutter or swale is blocked.

The second general rule is the ground roof rule - treat the soil surface as if it were a low-slope roof surface. Pitch the surface away from the house - the steeper the pitch, the better the drainage. Imagine all the water moving to the low edge of the site, and imagine how best to get it there. Avoid areas near the building that can act as water collectors.

Specific site drainage guidelines include:

- The house should be built on a crown, not in a hole. If there is sufficient exposed foundation, site grading at the house can be improved. If the house hugs the ground, improvements at the foundation are more difficult. There should be a minimum of eight inches of exposed foundation between the ground and the beginning of the siding.

- Identify localized dips and holes immediately adjacent to the foundation, fill with dirt, and tamp the fill material to prevent future settling. Provide sufficient fill material such that drainage occurs away from the foundation.
If the house has no gutters, then the base of the soil around the house serves as a gutter. It should have a surface that helps prevent splash back onto the siding of the house and should be designed with a pitch that effectively moves water away from the house.

Good tamping or compaction of the backfill is very helpful because it helps keep water on the surface where it can be managed by slope. Soil at the outside corners of the foundation, where the downspouts are usually found, can always be tamped because the corner will not collapse inward.

Bushes and other plantings may be very helpful, especially if their root balls soak up a lot of water. Also they can be planted strategically near downspouts so that the downspout extenders are less likely to be kicked off or removed during lawn mowing.

2. Rain Water/Snow Melt Management

Rain water and snow melt from the roof should be collected and distributed away from the foundation with a gutter system. Flashings around chimneys and vents should be watertight.

- Include waterproofing underlayment at the eaves and in valleys as part of re-roofing to help prevent water damage caused by ice dams.

- As part of an effective rain water/snow management system, pitch the gutters to the downspout. Short gutters may be hung level. In hip roof houses, consider using downspouts only on the downhill side and not on the uphill side. In areas with a moderate amount of trees, consider large gutters and downspouts so that leaves and debris can be flushed more easily. Make sure the gutter hangers are solid to prevent sagging gutters.
• Downspouts should be secured to the house. They should never be undersized, and some oversizing never hurts. Fasten elbows and straight sections together with pop rivets—screws that project into the downspout can lead to clogging.

• Direct the water at the base of the downspout away from the foundation of the building. Direct the water past the backfill onto the undisturbed soil, which may be 3’ to 5’ from the edge of the house. If water drains close to the foundation, into the backfill, the water will concentrate next to the foundation—precisely the wrong place for the water to be. The traditional way to discharge the water away from the house involves using downspout extenders (sections of straight downspout) or splash blocks. Both of these are often disturbed when lawns get mowed. Instead, use a notched section of downspout that is hinged to the elbow at the base of the downspout (Figure 3). The soil at the base of the downspout should be sloped away from the house at a minimum of 5% slope. Six inches of fall in the first 10’ away from the house gives a 5% slope.

3. Basements

Heat loss through uninsulated basement walls causes a significant energy penalty in cold climates. Uninsulated foundation walls provide the insulating value a single pane window. While new homes are no longer built with single pane windows, from a thermal standpoint, they are built with insulated basement foundations. However, insulating the interior of basement walls can cause moisture and mold problems, if done incorrectly. Ideally the exterior of the foundation wall should be insulated as this elevates the interior surface temperature and reduces the chance of condensation occurring during the summer. Insulating the interior of the basement wall can trap moisture between the insulation and foundation wall. If the moisture does not dry on the inside of the basement, mold can grow between the insulation and foundation wall. A good reference on the moisture dynamics of basement walls and appropriate insulation systems, both exterior and interior, can be found at www.buildingscience.com under Technical Resources.
## Appendix A: Ho-Chunk Nation

### SITE VISIT SUMMARY

**February 10, 2003**

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<tr>
<th>Inspection Number</th>
<th>Name</th>
<th>Address</th>
<th>Age</th>
<th>Occupancy</th>
<th>Foundation Type</th>
<th>Heat Type</th>
<th>Basement Framing moisture content</th>
<th>Site Drainage Problems</th>
<th>Gutter System Problems</th>
<th>Leaks from Exterior</th>
<th>Wet Basement or Crawlspace Problems</th>
<th>Plumbing Problems</th>
<th>Bathroom Problems</th>
<th>Exhaust Ventilation</th>
<th>Exterior Wall/Ceiling problems</th>
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**MH** = mutual help  
**TK** = Turnkey/Rent to Own  
**LR** = Low Rent  

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Appendix B - Ho-Chunk Technical Assessment Report

**Inspection Number:** 1-1  
**Address:** 104 Little George  
**Model Type:** Ranch  
**Age:** 30 years old  
**Bedrooms:** 2  
**Foundation:** Poured Concrete basement  
**Heat Type:** Forced air gas  
**Construction:** 2X4 wood frame  
**Attic:** Truss construction

**Mold and Moisture Conditions:** The unit was unoccupied. There was unsightly dirt and mold on the basement walls (Figure 2). There was mold growth on the wall surface of closet areas (Figure 3). The bathroom needed rehab.

**Rainwater Management:** The site was sloped by the soil surface at the back of the site going uphill from the back of the building (Figure 4). Regrading the site was done to help prevent water entry problems. There was too much snow cover at the time of the inspection to determine what soil slope was achieved with the regrading (Figure 4). It is too early to tell if this effort will be successful.

**Basement Conditions:** The basement wall on the rear of the building showed water entry through a crack emanating from the window corners, and around the area where the waste plumbing line passes through the basement wall. A sump pump visible in Figure 2 prevented flooding of the basement.

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*Building Research Council*

February 10, 2003
The sump pump discharged into the waste line. In some jurisdictions, this practice is discouraged because of the potential for overload of the wastewater treatment system. A well-designed site discharge may be an effective alternative to the present discharge.

**Wall conditions:** Mold growth was noted in two locations at the interior of a closet. The mold growth should be removed. Because of the small area affected, the treatment may consist of: 1) scrubbing with detergent, priming with a mold-inhibiting primer, and repainting, or 2) removal and replacement of mold-affected drywall. Correcting the site water problem at the location of the affected closet is critical.

**Discussion/Recommendations**

1. Completion of the rehab should greatly improve the habitability of the unit.

2. The regrading should also offer improvement, however, it could not be determined if the improvement will be sufficient.
Inspection Number: 1-2  
Address: 11250 Little George  
Model Type: Ranch  
Age: 30 years old  
Bedrooms: 2  
Foundation: Poured Concrete basement  
Heat Type: Forced air gas  
Construction: 2X4 wood frame  
Attic: Truss frame, some missing insulation

Mold and Moisture Conditions: The unit was unoccupied. Insulation was missing in parts of the attic (Figure 2). There was mold on the ceilings of the bathroom and kitchen (Figures 3 and 4), in areas directly beneath the attic area missing insulation (Figure 3). There was unsightly dirt and mold on the basement walls especially on the cracked wall (Figure 5).

Site Conditions: The site was sloped toward the unit, permitting water to enter through cracks in the basement.

Ceiling Condition: Mold growth on the ceilings of the bathroom and kitchen were a direct consequence of the missing insulation, which left the surfaces cold, leading to condensation. The bathroom vent fan, seen in Figures 2 and 3, could not sufficiently reduce the moisture level.

Discussion/Recommendations:

1. Provide complete and uniform ceiling insulation and avoid leaving cold bridges.

2. Consider regrading and rainwater management as the first line of defense against rainwater entry through basement walls.
Appendix B - Ho-Chunk Technical Assessment Report

Inspection Number: 1-3
Address: 11265 Little George
Model Type: Ranch
Age: 30 years old
Bedrooms: 3
Foundation: Poured Concrete basement
Heat Type: Forced air gas
Construction: 2X4 wood frame
Attic: truss construction

Mold and moisture conditions: The unit was unoccupied. This recently refurbished house showed no signs of problems. Figures 4 and 5 show the rehabbed interior of the basement. Judging by the conditions in similar units that had not been refurbished, the basement and bathroom probably had water problems.

Discussion/conclusions:

1. The unit was returned to very good condition. The work that was done was a good use of building rehab funds.

2. Given the snow cover, it was impossible to determine if the grading of the soil surface was sufficient to avoid future problems. If water begins once again to enter the basement, then regrading and improved rainwater management at the outside of the building would be in order (Figures 2 & 3). The funneling of snow on the roof in Figure 3 could be the source of future water problems of overflowing the gutters or causing ice damming in the attic.
Appendix B - Ho-Chunk Technical Assessment Report

Inspection Number: 1-4
Address: 116 DeCorah
Model Type: Ranch
Age: 30 years old
Bedrooms: 4
Foundation: Poured Concrete basement
Heat Type: Forced air gas
Construction: 2X4 wood frame
Attic: truss-framed

Moisture and Mold Conditions:
The unit was unoccupied. The property was undergoing major rehabilitation. The issues driving the rehab were discussed in previous site visit reports.

Interior finishes were in the process of being redone. The only major sign of deterioration was at a wood sill piece above the brick ledge coping (Figure 2).

Recommendations/Conclusions:
The aim of this site visit report is to review some of the details of rehabilitation. The recommendations here are derived from our experience with other similar units.

Attic insulation. One section in the attic had less insulation than elsewhere (Figure 3). This part of the building had not yet been addressed by rehab. The resulting insulation should be continuous and uniform, especially at the outer edge of the ceiling, where the ceiling meets the outside wall.

The insulation in this attic was a low-density fiberglass blown-in product. By virtue of its low density and its high porosity to air movement this particular product has, on occasion, shown some tendency to lose R-value at low temperatures. This is because the warm air, trapped near the ceiling, can escape upwards from thermal buoyancy during very cold weather. One solution for this problem is to blow a layer of cellulose insulation over the existing product.

Site drainage. The major problem with each of the four homes visited was entry of rainwater through cracks in the concrete basement walls. The approach used to treat this problem involved 1) regrading the site to create better swale on the uphill side and 2) refinishing the interior with a water-resistant surface treatment.

Figure 1- 116 DeCorah
Figure 2- Deteriorated wood sill piece at brick ledge coping.
Figure 3- Discontinuous insulation.
These two approaches should provide substantial benefit. However, they may not be sufficient to ensure a fully dry basement. The site grading may have to be more substantial in order to create a more controlled flow away from the house (Figure 4). As a general rule, the soil should slope away from the house at a 5% grade for the first 10 feet away from the house. That represents a drop of 6 inches in 10 feet.

Additionally, the roof rainwater discharge at the base of the downspout should send the water several feet away from the house rather than directly at the foundation (Figure 4). Here, the induced furnace draft discharge added to the rainwater discharge at the corner. Landscaping may be put at the corner to help keep a downspout discharge extender in place. The extenders are often kicked out of place by children or by people mowing lawns.

**Tub Surround Installation.** The tub and surround were attached to the framing after the insulation and vapor barrier were installed, which is customary. However, this practice is often discouraged, because it leaves the area behind the tub and the surround without drywall covering. Drywall improves the airtightness of the house. Cold air can be blown in through the area with no drywall. This may lead to cold spots, discomfort and high energy costs. On the other hand, if the sheathing is tight, the amount of air that may infiltrate is not great. Although not ideal, the practice of not installing the drywall behind the tub is the rule rather than the exception, for most of the U.S.

The merits and demerits of this practice should be considered and discussed. An alternate installation might include:

- Plan the framing to allow sheetrock behind the tub and surround, at least on the exterior wall.
- Install cement board (Durock) on the entire exterior wall. Green board (moisture resistant-drywall) is often used, but we would recommend cement board instead.
- Install the tub and surround as usual, although we recommend using cement board rather than gypsum/paper products because of the mold resistance of cement board.
- Apply additional cement board over the earlier cement board, to lap the surround seam in the customary fashion.