

Building Better

A First Nations National Building Officers Association publication

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An Integrated Approach to Improving Housing Conditions

By John Kiedrowski, Project Manager

The last few years have seen increasing interest in improving housing conditions in First Nations. Programs and other ideas have been put forward, yet little has changed. Many homes require major renovations and, in some cases, structural repairs. There is an urgent need to address the problems of “disposable housing” in First Nations communities, for the health, welfare and finances of all residents. While the First Nations are the authority having jurisdiction to ensure homes are built to code standards, there is a need to build capacity. Capacity development ranges from educating the Band Council and home builders on the importance of building to code, to understanding the long-term financial implications of repairing homes.

To address poor housing conditions, several non-profit organizations have been established. These associations are geared towards improving the quality of housing and living in First Nations. Each association has its own preferred legal structure (e.g., corporation bylaws), mandate, membership, projects and funding sources. Whether it is the management of the lands, budgeting and administration, infrastructure or housing, these organizations work



independently of each other, but all share the goal of improving housing conditions. While these groups have been effective working on their own projects, there may now be a need to integrate these various associations' housing-related projects.

An Integrated Model

An integrated approach would offer an improved framework, which could then be used to target specific housing programs and activities. In the area of housing, integration typically refers to removing “silos” and improving coordination of services. Integration is commonly understood to be a process or a strategy to achieve specific outcomes. In an integrated system, organizations from across the housing continuum would work together so that services are complementary and coordinated.

The Key Associations

An integrated model can exist if one considers the mandate of some of the various organizations working in First Nations Housing.

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President's Message

Community comprehensive planning (CCP) is used to help define the direction the community wishes to go. It sets the stage for development well into the future, defines the community's values and outlines how to preserve a way of life. It links the whole community towards one common goal.

Building permits ensure that community development falls in line with the community strategic plan by ensuring that before any development, all potential impacts are studied and addressed.

Once a CCP has been agreed on, a means to review, enforce and maintain it also has to be developed. One of these strategies is a building-permit system. FNNBOA has been advocating the implementation of a Building Approval Process (BAP) to ensure that all houses built in our communities have a means to ensure quality control. However, better-built homes are only one advantage of implementation. BAPs not only provide for quality control through monitoring by certified inspectors, they also:

- enable the preservation of heritage sites and ecological reserves
- define good building sites
- ensure the separation of industrial, commercial developments from residential developments
- ensure the eligibility of applicants
- provide an enforcement mechanism to code compliance
- ensure the capacity of existing infrastructure to meet development needs
- help to define qualifications of builders and contractors

Although a few communities have a defining policy to set lot sizes and track

land allotment, most allow members unrestricted claims of ownership. These sites are often marked only by ribbons and can encompass 160 acres based

on treaty allotment (40 acres for children of household heads). Complicating this issue was the issuance of certificates of possession (CPs) to returning war veterans who were given their own land back. This loss of available land restricts the band's ability to develop housing in a sustainable manner that allows municipal services to each household. Capital allocations to increase access to municipal services have not increased with the needs of the communities, and bands are often forced to use individual water/sewer systems. The failure of private sewage systems in handling effluent often means that sewage is discharged directly into the environment, further restricting the land base to meet the community's needs. This loss of access to good building sites is one of the reasons that homes are built on flood plains, swampy areas or areas with high water tables leading to premature deterioration of the home.

The biggest factor for premature deterioration of homes, however, is the lack of code enforcement. Many studies have shown that homes in FN communities are undergoing major renovations after just five years. The failure of builders and contractors to build to code is a major economic factor that burdens the band with repairs to existing houses, thus diminishing the band's ability to



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About This Issue ...

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build new homes. Bands with good housing programs have set in motion several key components of a BAP, which include:

- Designation of lands for residential use
- Involvement of all departments impacted by development (including Lands, Membership, Community Infrastructure)
- Approval of budgets and time frames
- A ready supply of engineered plans complying to building-code standards
- Reviews of engineered plans for compliance to band specification
- An approved prequalification process for housing contractors to ensure competency
- An inspection system that monitors the following:
 - Approval of site location
 - Code compliance inspection by certified Inspectors
 - Specification compliance inspection
 - Quality control inspection by technical services
 - Progress inspections based on contractual stages

Realizing the goals and aspirations of the community is an ongoing process. To meet future needs, some bands have developed Comprehensive Community Plans. These documents recognize that current housing needs will increase and that future developments must conform to *Community Values* while meeting community needs now and in the future. Governance by by-laws and resolutions helps to stabilize development and control construction through consultation with the community. Several reports have focused on this specific issue. The Report of the Royal Commission on Aboriginal Peoples (2003) pointed out that while homes funded by the federal government must meet the national building code, no policies or procedures were provided on how this can be accomplished. In 2003, the Office of the Auditor General raised concerns that homes in First Nations communities were not being built to code. The 20th Report of the Standing Committee on Public Accounts (2003) considered these findings. The committee recommended developing systems, procedures and practices to strengthen the inspection and certification systems on

reserves to ensure that federally subsidized units do effectively comply with the National Building Code.

There is general agreement that since 1983, the Band Chief and Council are responsible for ensuring that all housing units on reserve meet the national building code. As part of this compliance framework, the Band Chief and Council must hire “qualified” inspectors at various stages in the construction of homes. This responsibility is mentioned in the various financing agreements (comprehensive agreements), in order to extend the useful life of houses, protect the health and safety of occupants and ensure that operating costs are reasonable.

To further support this position, the First Nations National Building Officers Association (FNNBOA) has given several presentations on how the Band Chief and Council are the authority having jurisdiction (AHJ), and what “legal” responsibilities exist regarding the building and inspection of homes.

If you are interested in a presentation on building permit systems, or want to participate in a pilot or feasibility study on implementing a BAP in your community, please contact:

- Bud Jobin, (780) 961-7639, or by cell at (780) 523-8357 or;
- John Kiedrowski, (613) 724-3857 or by cell (613) 851-2056



ACTC Deck Design and Construction Guide—An interview with author Glen Hartz

In April 2010, Glen Hartz submitted a draft Deck Design and Construction Guide, through Agency Chiefs Tribal Council, for review by fellow technicians and inspectors. The guide amalgamates code requirements and best practices in a manual targeting contractors within ACTC. FNNBOA congratulates Glen on a well-done manual that will benefit the First Nations within ACTC. FNNBOA had an opportunity to discuss the development of this guide and what the future holds.

FNNBOA: Tell us a little about yourself.

Glen: I'm a civil-engineering technologist with roughly 30 years of intensive involvement in the private engineering-consulting design and construction supervision/inspection fields. I have worked as the manager of technical services for two different tribal councils (currently Agency Chiefs Tribal Council) and formerly for the Battleford (Treaty 6) Tribal Council – about 14 years in total. FNNBOA: Why was this manual necessary?

Glen: Most builders struggle when it comes to erecting good outdoor decks, guards and handrails, stairs and landings, especially incorporating properly supported roofs over these exterior structures. While almost all housing projects were provided with their own layout, design and material size selection by way of competent blueprints, deck design/ layouts are not normally provided as part of this. Without blueprints, the builder is left to design the exterior decks and associated components. Most framers understand standard house construction framing practices, including beams and columns, but only through following competent plans and drawings provided to them. Builders and contractors are not normally trained to design and create layout drawings of exterior deck framing and/or proper support for extended roof systems above decks. My objective for preparing the booklet is to educate and promote good building practices.

FNNBOA: Who does it target?

Glen: Journeymen carpenters and other trained professionals with experience and knowledge of house framing construction – it is not intended for do-it-yourselfers. In fact, I made sure to keep the tone of the manual somewhat difficult for an untrained layperson to compre-

hend. I purposely threw in a pre-measured amount of technical/engineering jargon to dissuade amateurs so that they see that designing/building a deck is a complicated task and is over his/her own capability. Owning a saw, drill or hammer doesn't qualify someone to design wood structures or build them. Often, untrained people end up building a mess, wasting money or creating a monstrosity that will eventually collapse and injure or kill someone.

FNNBOA: How has the response been?

Glen: So far I have received little feedback, but I am seeing somewhat better-built decks out there. Word of mouth is everything, and we as building officials have the duty to educate the public concerning proper building standards, and to promote better building practices every day that we are out there, builder-by-builder and house-by-house. Professional building officials have a profound duty to take the time and effort to explain good design and proper construction practices.

FNNBOA: What's next?

Glen: I hope to issue a revised Deck Design and Construction Guide in a year or so, which will include a special chapter on extended roofs over decks and Code requirements pertaining to below-frost foundations. Most important, it will include several illustrations of different design/layouts of common deck types. One great improvement that could be made to this Guide is to add illustrations and bind it in a decent book cover. I intend to do just that when I retire in a few years (or sooner, like this winter when I'm housebound in -40 weather). I am also working on, or thinking of starting, some other guides relating to our building-construction good practices and Code requirements.

By the way...thanks for your support for our Saskatchewan Chapter of FNNBOA, allowing us to get an associate membership in HRAI. I really do think it's time that our building officers take a big step forward into ventilation certification. We at ACTC believe that our biggest challenge for ensuring that ventilation systems are properly designed and installed in today's houses, is two-fold. There are too many mechanical system designers and

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Eagle's Eye on Housing: Mould Awareness Materials for First Nations Communities

As part of the health-promotion campaign, the Environmental Public Health Division, in collaboration with the Public Affairs, Consultation and Communications Branch marketing group, developed a number of mould awareness materials for First Nations communities.

The goal of the campaign is to provide First Nations audiences with information to address mould and improve health. The objectives are to increase:

- Awareness of the relationship between prolonged exposure to residential mould and the risks to personal and family health;
- Knowledge of how to identify mould;
- Knowledge of simple things that can be done to prevent mould; and
- Knowledge of what can be done if a problem is found (remediation)

The mould materials developed are:

- A video with four short modules;
- A corresponding booklet;
- A poster to promote the video and booklet in communities; and
- A web banner/button to promote the video and booklet on the Health Canada website and stakeholders websites (e.g., INAC, CMHC)

The video shows an Environmental Health Officer working closely with a First Nations family to raise their awareness of simple things they can do to identify and prevent mould, as well as what to do if they find mould. The booklet contains all the information presented in the videos to reinforce the message for First Nations community members.

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installers who simply do not have the knowledge, skill and even sometimes the commitment and desire to properly meet all provisions of NBC Section 9.32. As well, many building officials lack a full understanding of NBC 9.32. or 9.33. requirements. Through ACTC, and with support from CMHC, our regional chapter members will be taking the Mechanical Ventilation Installation

These materials have been distributed to all the regional offices, which will in turn make them available to communities. Feedback from regional offices has been positive, and the response from communities is also expected to be positive.



The booklet and video are available at:

<http://www.healthcanada.gc.ca/mould>

The video has also been posted at:

<http://www.youtube.com/santecanada#p/c/FODA0243683A5039>

For more information, or if you would like a copy of the booklet and videos or the poster please contact:

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course based on NBC 2005 and CSA F-326 Standard “Residential Mechanical Ventilation Requirements.” The technical manual deals with all aspects of residential mechanical ventilation. The course includes a house as a system, principles and installation and commissioning of mechanical ventilation systems with or without heat recovery. The course covers the R2000 Standard (2001 edition) as well as basic ventilation system design.

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First Nations Associations Focusing on Some Segment of Housing

Organization	Mandate
National Aboriginal Lands Managers Association (NALMA)	Provide a working environment which will be comfortable to all First Nations Lands Managers, to network on land related issues, and at the same time create a system that will assist First Nations interests in various land-management functions.
Aboriginal Financial Officers Association of Canada (AFOA)	Contribute to Aboriginal social and economic prosperity by building a professional, educated workforce that supports effective governance and administration.
First Nations National Building Officers Association (FNNBOA)	Provide services (i.e., plans review, inspections, recommending repairs, technical advocacy and advisory role) for buildings in First Nations/Aboriginal communities.
First Nations National Housing Managers Association (FNNHMA)	Promote and enhance the professional development of Housing Managers
Aboriginal Firefighters Association of Canada (AFAC)	Ensure homes meet the Fire Code Act, promote fire safety and education in homes

These organizations play an integrated role in improving First Nations housing.

Before homes are built, NALMA ensures that lands, environment and resources are properly managed. Managers work with the communities to ensure that lands are surveyed before infrastructure is developed. Band administrators (AFOA) are responsible for allocating financial resources for housing. FNNBOA is currently working with communities to ensure they build their homes in accordance with building codes and other construction standards. The First Nations Building Officer provides inspection services as well as seminars to Chief in Council on building codes, and to those living in Band-built homes on how occupants need to maintain those homes. FNNBOA also provides training to the inspectors as well as those individuals and contractors building the homes.

Working with FNNBOA is the FNNHMA. The FNNHMA works with housing managers. The FNNMHA provides training, as well as information on how to manage housing portfolios within the communities.

The focus is ensuring that homes are maintained by occupants. These organizations all work together on a continuum in the building and maintaining homes. Finally,

the fire fighters (full time and volunteers), through AFAC, ensure that the homes have fire-protection services (e.g, fire hydrants). These individuals also work in the community to educate home owners about fire safety.

The Integrated Model

An integrated model for improving housing in First Nations involves collaboration, to help build capacity and to make most effective use of limited resources. Equally important is strong linkage among the members of the association to improve the overall well-being of the community.

The varying degrees of integration among all the associations are displayed in Figure 1 (page 7). The four sets of circles represent different points on a continuum of integration. As indicated by the horizontal line at the bottom of the diagram, the level of integration increases as one moves from left to right.

The circle on the extreme left depicts minimal linkages. The associations are working independently of one another. In many cases, associations are unaware of each other's mandates or projects. Community leaders and others may also be unaware of the overall mandate of some or all of these associations, making it difficult for

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them to draw upon the information provided.

The second circle from the left depicts associations that have some limited collaboration. There is an acknowledgement that all agencies need to work together to understand how to improve housing conditions.

The third circle from the left depicts associations that are increasingly committed to a collaborative approach, realizing independent action on their part is insufficient. The associations maintain their own projects, but also exchange information and support each other. At this point, the associations realize the need for interconnectedness, including informal and some formal arrangements for exchange of information and ideas for improving housing conditions.

The circle on the extreme right depicts a strong linkage or interconnected network among the associations. Such arrangements include a memorandum of understanding among participating organizations covering information sharing, possible coordination of projects, working on joint projects and making presentations. The associations acknowledge that it would be a challenge for each group to work alone in trying to change housing conditions on First Nations communities.

An Integrated Model

While the ultimate objective of the integration model will be circle 4, a lot of work is required to get to that stage:

Coordination of Activities – Groups need to ensure that all partners are aware of each others’ activities. This will also help to develop and coordinate resources, foster trust, align philosophies and assist with the policies and procedures communities need to improve housing.

Collaboration – Organizations need to collaborate on various projects. It is important that all these groups understand and are aware of the projects they are working on. The groups

may want to exchange, for example, their strategic plans or projects for a given year. Exchange of organizational plans or linkage to each others’ websites is also useful.

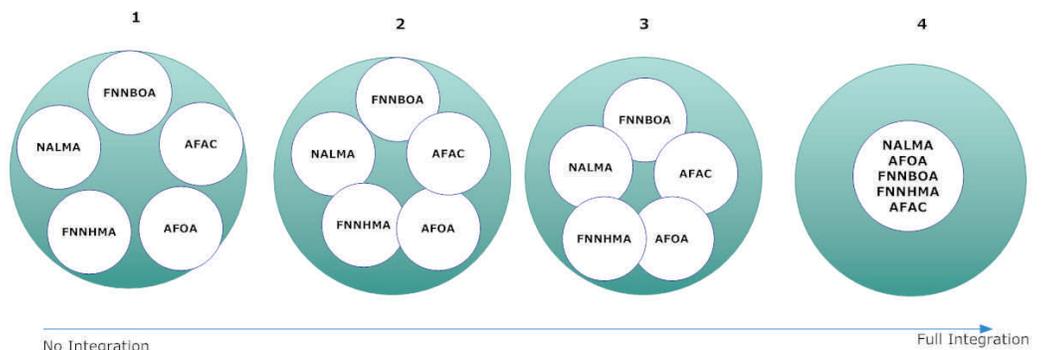
Commitment – Individuals working in these areas need to support the integrated model and work with others. An integrated approach is best to meet the demands of improving housing conditions. It is also the most effective way to use scarce resources.

Support from Communities – The end goal is to improve housing, and First Nations communities must show their commitment to change. All these organizations have limited resources to help advance the improvement of housing conditions. Communities need to provide support by paying for various individual or community memberships. Where associations can offer training or services, the communities should consider paying for these services. This will include the required training for those working in the various sectors.

Resources – For many of these associations, the executive are volunteers. Additional resources will be needed to develop training modules as well as to provide training to their members and others.

While this is just a brief overview of an integrated model to improve housing conditions, several associations are working on this cause. An integrated approach may be the best way to move forward, given the expertise that exists within the organizations. It is also a better use of limited resources. Finally, the integrated model approach can help individual organizations build on each others’ work, which will be beneficial to the communities they serve.

Figure 1 Integration Continuum For Improving First Nations Housing



Universal Design



Universal Design is defined as: “The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.” The concept is an evolving design philosophy.

Universal Design is about creating an attractive, stylish space that everyone, regardless of age, size, or ability, can live in or visit. A home with Universal Design makes it easier for residents to live in, and for guests to visit now and in the future, even as everybody's needs and abilities change.

Home Features and Products Using Universal Design

The parts of a home that work well for everyone are Universal Design features. Incorporating them into your home in the pre-construction stage often adds little cost and is usually much cheaper than remodeling a house with traditional design features.

Having Universal Design features and products in a home makes good sense and can be so attractive that no one notices them—except for how easy they are to use.

Essential Universal Design features include:

- No-step entry: At least one [step-free entrance into your home](#)—either through the front, back, or garage door—lets everyone, even those who use a wheelchair, enter the home easily and safely.

- Single-floor living: Having a [bedroom](#), [kitchen](#), full [bathroom](#) with plenty of maneuvering room, and an entertainment area on the same floor makes life convenient for all families.
- Wide doorways and hallways: With your home's [doorways](#) at least 36 inches wide, you can easily move large pieces of furniture or appliances through your home. Similarly, [hallways](#) that are 42 inches wide and free of hazards or steps let everyone and everything move in, out, and around easily.
- Reachable controls and switches: Anyone—even a person in a wheelchair—can reach [light switches](#) that are from 42-48 inches above the floor, thermostats no higher than 48 inches off the floor, and [electrical outlets](#) 18-24 inches off the floor.
- Easy-to-use handles and switches: [Lever-style door handles](#) and [faucets](#), and [rocker light switches](#), make opening doors, turning on water, and lighting a room easier for people of every age and ability.

There are many other universal design features and products that many people put into their homes, including:

- Raised front-loading clothes washers, dryers, and [dishwashers](#)
- [Side-by-side refrigerators](#)
- Easy-access [kitchen storage](#) (adjustable-height cupboards and lazy Susans)
- Low or no-threshold stall [showers](#) with built-in benches or seats
- Non-slip [floors, bathtubs, and showers](#)
- Raised, [comfort-level toilets](#)
- Multi-level kitchen [countertops](#) with open space underneath, so the cook can work while seated
- Windows that require minimal effort to open and close
- A [covered entryway](#) to protect you and your visitors from rain and snow
- Task [lighting](#) directed to specific surfaces or areas
- Easy-to-grasp D-shaped [cabinet pulls](#)

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