



MEMORANDUM

To: Board of Trustees
CC: Town Administrator Alisha Reis
From: Mayor's Task Force on Building Code Updates
Date: July 15, 2014
Re: Task Force Recommendations

The Mayor's Task Force on Building Code Updates was seated March 13, 2014, upon the February 18 request of the Board of Trustees to seek the opinion of builders and other trades professionals related to updates to the Town building codes. The Town's building contractor SAFEbuilt has recommended adopting the 2012 International Code Council codes (IBC, IRC, IECC, etc.) and the 2014 International Electrical Code. The Task Force reviewed materials provided by SAFEbuilt, the Nederland Fire Department, Town Staff and others, discussing pros and cons of various parts of the codes before arriving at several recommendations.

The Task Force respectfully submits the following recommendations for the Board's consideration.

Regards,

Ken Bradley
Debbie Davenport
Jeff Fruth
Steven Roszell

Mark Stringfellow
Stephen Taylor
Rich Tillotson

General Issues

General Code Discussion

- **RECOMMENDATION:** Review off-street parking codes for opportunities to remove barriers for mixed-use projects and to encourage car-free living.

- RECOMMENDATION: Review SRU requirements for duplexes and multi-family zoning categories.
- RECOMMENDATION: Review 48-inch frost depth requirement for foundations/footers. Group says the frost depth was once 30 inches and worked well for the area. The substrate in the area provides for good drainage, and frost risk is minimal. Requested more information on the study behind this move to the deeper depth.
 - Group unaware of any foundation issues at 30 inches; at 48 inches, getting to needs for blasting; lots of rock and sturdy ground here; not sure why the Town went to this level
- RECOMMENDATION: Investigate whether possible to provide engineering support for requests contrary to building code, to handle this exception administratively rather than requiring a full variance.
- RECOMMENDATION: Update to the 2008 National Electrical Code (NEC) rather than the 2014 NEC, as the 2008 NEC provides a good level of additional safety without high costs that come with newer codes. Also, the Town's inspectors, SAFEbuilt, are most familiar with the 2008 NEC requirements.
 - Bradley -- 2008 NEC to today changes were the big ones (went to arc fault for general living areas) – don't know that SAFEbuilt is all up on the new changes, even the case with State electrical inspectors and Boulder County inspectors
 - Mostly of concern is the arc fault requirements
 - Might consider updates later, with more knowledge by inspectors, etc.
 - Costs are going up tremendously with new codes – extra \$2K to \$3K in new requirements and not for benefits Bradley can see but recognizes don't know all the changes so far; getting cost-prohibitive to do things
- RECOMMENDATION: Take care with adoption of newer energy efficiency codes (2012), as it becomes a trade-off between relying upon natural and mechanical ventilation. Whole house mechanical ventilation, introduced with the 2012 IECC, comes with its own issues, e.g. failure of the system, rendering the home generally uncomfortable, etc.
 - Look at ways to meet goals but not go to full requirements (e.g. that would trigger whole house ventilation).
- RECOMMENDATION: Offer Town incentives for exceeding efficiency measures required by code in order to encourage higher levels of efficiency without mandating them.
- RECOMMENDATION: Review requirements for water service line materials – could we use plastic instead of copper. Town code requires copper while wells, etc. allow for plastic.
- RECOMMENDATION: Lighting requirements – in the 2012 IECC (energy code), 75 percent of all lighting must not be incandescent. The trigger for compliance should be at new build or 20 percent or more alteration (as referenced in N.M.C. Sec. 18-5, triggering additional building code compliance).
- RECOMMENDATION: Soffit vents should be permitted, with proper screening.

- RECOMMENDATION: The Town had been considering updating to the 2009 ICC Codes, as of 2011, but is now considering a move to the 2012 ICC Codes, based upon advice of SAFEbuilt. Given that there is no significant difference between the 2009 and 2012 codes, the Town should adopt the 2012 codes but not mandate fire sprinkler systems except in commercial building and ERVs.
- RECOMMENDATION: Any building and trades professional who works on a job in Nederland should have a Town business license. All workers on a job (including sub-contractors) should be identified and then have to pull a business license with Town.
- ✓ INFO NEEDED: Question remaining regarding the 2012 code requirement for drywall to be added around floor joists and crawl spaces – how does this impact fire protection? The group referenced the R501.3 (fire protection of floors) deletion in the Windsor code. Supports deletion in Nederland code.

Cost Considerations

- Group discussed on a number of occasions the cost impacts of new code requirements, including sprinkler systems, energy efficiency requirements, etc.
- Taylor proposed the idea of remaining with current code and offering amendments to incorporate certain new codes based upon proven technologies, studies or similar data.

Specific Issues

Affordable Housing Considerations

- RECOMMENDATION: Review Code to promote affordable housing, e.g. minimum size of 750 square feet for units, as well as accessory dwelling units. Recommend change to 500 minimum square feet and maximum of 1,000 square feet (limit size for ADUs, with 2 BD), as long as it is built to building code. (Could consider lack of minimum sizes).
 - Recommend allowing for shared utilities on ADUs (with main home/use) are investigated to reduce the cost of building such housing.
 - Reference Accessory Dwelling Unit codes from Boulder, Portland, and Lyons.
 - These concepts are necessary because the Town doesn't have a lot of land mass and folks need places to live.
- RECOMMENDATION: Explore cabin zoning concept – 800- to 1,200-square foot units being suggested by Norris Design.
- RECOMMENDATION: Review Zoning Code regarding the allowance of efficient building materials, e.g. SIPs panels, recycled shipping containers, and other pre-manufactured options. Include reference to options also for framed building in efficient manner, as well as insulation options to increase energy efficiency.
- RECOMMENDATION: The Town should clarify goals for mixed-use developments related to sustainability and walkability and adjust the code to reflect these goals, e.g. parking and drainage requirements.

Driveway Specifications

- RECOMMENDATION: Changes to N.M.C. Sec. 11-70 Private Driveway Standards:
 - Point 10 – group recommends use of native materials/on-site/other suitable materials for driveway surfacing rather than requiring Class 6 road base (3/4-inch minus), unless no suitable on-site material is available.
 - Points 12 and 13 should be reviewed, appear to be the same
 - Point 13 – recommends change of 6% maximum grade for 50 feet to same for 30 feet for driveway
 - Point 14 – recommends definition of the turning radius, clarifying whether this is inside or outside the turn; recommends it be measured at the centerline of the road and clarify this definition, as an inside measurement of 40 feet would require major excavation and outside might be too tight.
 - Point 16 – recommends definition of historic drainage flows and how/by whom these are identified
 - Point 18 – recommends deletion, as Town routinely does not maintain driveways
- POLICY QUESTION: Should the driveway specifications appear in the new infrastructure construction specs?
 - Look at code related to existing driveway and requirements for standards to fix driveways with major permits (alterations, etc.). How do we deal with properties with steep driveways and still deal with off-street parking and drainage issues, if they want to do additional development on their property?

Hillside Development Requirements

- RECOMMENDATION: Change N.M.C. Sec. 18-2, 106.2.1 to read “licensed architect or engineer of record” instead of “responsible architect”.
- RECOMMENDATION: Change N.M.C. Sec. 18-5 (3), 4 to read that an SRU certificate is required for development of 10,000 s.f. or more, which is the current SRU requirement per N.M.C. Sec. 16-60.
- RECOMMENDATION: Create definition of a “hillside area”.

Ignition-resistant Building Materials

- RECOMMENDATION: Review Boulder County codes for fire mitigation and ignition-resistant materials. Need to address wildfire materials in general, because only vaguely addressed in Town Code.
 - This is standard practice now – Gilpin County has an incentive program for this.
 - Would be nice to offer an incentive for these materials, etc. If you want to do better than requirements, we can offer break on permitting fees, etc.
- RECOMMENDATION: Require rock, cement, metal (or like) wainscoting on buildings and 3 to 4 feet worth of rock around a house.

Marijuana Cultivation

- RECOMMENDATION: Develop standards and limits for marijuana cultivation licensees related to water use, energy use, electrical and building safety, ventilation, chemical byproducts, etc.
 - Suggested requiring licensed cultivators to buy into Xcel alternative energy program, install a water recycling system, LED lights, etc.
 - Could look at including a special charge in the water utility rates for going over a certain gallonage use limit.

Permitting Issues

- RECOMMENDATION: Review requirements for topographical surveys, as well as grading and drainage plans, to streamline permitting requirements related to residential development particularly.
 - Examine the possibility to meet the intent of a site plans without professionally engineered plans – how else can this be done?
- RECOMMENDATION: Create definition of “steep” lots, which would require engineered site plans.
- RECOMMENDATION: Establish Town policy related to asbestos abatement requirements, based upon asbestos inspection reports and landfill acceptance. Review State and current Town requirements for clarity.
- RECOMMENDATION: Draft a comprehensive addendum to the Code that includes all changes to the building code, as well as Firewise, drainage and other related requirements.
- RECOMMENDATION: Set permitting turnaround goal at two weeks.
 - Offer same-day permitting for subcontractors.
- RECOMMENDATION: Offer pre-permit code meetings on commercial and multi-family projects (e.g. with SAFEbuilt) to ask questions (recommended hourly charge for this service).
- RECOMMENDATION: Clarify requirements for design standards, landscaping requirements, and consultant fees.

Sprinklers

- RECOMMENDATION: Encourage installation of residential sprinklers in new homes, but do not mandate their installation.
 - The requirement for residential sprinkler systems was discussed in-depth by the group, which concentrated primarily on the 13R standard for sprinkler system design and installation.
 - Group supports educational info regarding proper use of wood stoves and disposal of ashes, as many fires start due to these issues.
 - The group discussed the average cost per square foot of installing sprinklers in new homes. Costs are much higher in the mountains, where tanks and pumps are often needed to support the system with water pressure, putting

the cost at about \$3 to \$5 per square foot. The group estimated approximately \$15,000 to \$25,000 additional for a building project.

- Fire Department cautioned that sprinklers could assist in saving homes in light of poor building materials in older homes (on permits for additions), low water pressure, steep driveways, and limited firefighting resources. Homes built to new code standards are less at risk.
- RECOMMENDATION: If residential sprinklers are mandated, they should be required only in new construction or at 20 percent or larger footprint alterations/expansions.
- ✓ INFO NEEDED: Additional data on needs for water quantity, pressure, etc. for sprinklers. Need to gather info regarding what other communities are adopting, e.g. for the trigger point for sprinkler installation requirements.

Wildfire Regulations

- ✓ INFO NEEDED: Dirr said the biggest thorn in fire code adoption is maintenance – it's good in the beginning (mitigation) but over time, properties are not well-maintained for defensible space. Local amendments could require maintenance, with inspections by the fire department. The 2012 fire code offers updated wording regarding stronger authority for the fire department to prohibit prescribed burns during unsafe conditions. The Fire District will send amendments to the group offered by local fire departments related to these issues.

Influence of the Comprehensive Plan

The plan encourages infill development in a thoughtful manner, building to the highest feasible standards of energy efficiency and environmental sensitivity.

Specific action items/policies in the Comprehensive Plan related to this effort include:

- Promote a range of desirable and affordable housing options in Nederland, such as through encouraging mixed use development downtown and higher density residential units within walking distance of the town core.
- Encourage the design of new housing to fit the personality and character of Nederland, which is admittedly enigmatic and eclectic. Appropriate scale, context to surrounding properties, harmony with the natural environment, and use of sustainable building practices and materials are all attributes to promote.
- Promote a compact, sustainable land use pattern in Nederland that emphasizes infill and redevelopment of existing developed land, is well-connected and encourages decreased auto-dependence, incorporates green building technologies, and is in harmony with the natural environment and character of the community.
- Require that any proposed land use or development must identify hazardous areas, i.e., floodplains, drainage areas, steep slopes, and geological hazards and with intention to either avoid those areas altogether or in some cases, where feasible, mitigate those hazards.
- Discourage light pollution that interferes with dark skies and the character of town. Exterior lighting should be at a minimum for safety and security. Update and enforce the Municipal Code as it relates to downward indirect lighting in residential and commercial districts.

- Encourage infill development and redevelopment as the primary response to growth in Nederland. Such projects must be careful to consider the context of surrounding properties, which might be rustic, historic, and small in scale.
- Require new construction permits to begin with meetings with Town staff to identify any potential inconsistencies with the *Comprehensive Plan*, *Zoning Code*, and other relevant policy documents prior to formal development review by the Planning Commission.
- Protect natural drainageways, prevent erosion, minimize impacts of storm drainage and flooding on private and public property, and maintain surface water quality by reviewing development within the flood zone and riparian corridors. Consider the use of focused infrastructure improvements where the greatest hazards exist. Encourage the installation of indigenous plant materials, and the removal of dead or diseased trees to improve drainage conditions to prevent erosion throughout Nederland.
- Update the Town Municipal Code to reflect the guidance of the Future Land Use Map, encouraging focused development and redevelopment of mixed use and multi-family housing projects. Update Town development regulations and zoning codes to align with the policies and objectives of this plan, and to provide regular code enforcement.
- Identify incentives for improving energy efficiency (e.g., new windows, solar panels, etc.).
- Explore creative housing concepts to meet the community's affordable housing needs, including small-scale housing (e.g. cabin zoning concepts), accessory dwelling units, multi-generational development, etc. Review the Town zoning code to prepare for changes to allow for such concepts.
- Review Town codes for any barriers to high-efficiency building materials, e.g. pre-manufactured panels, etc.