Code Violations in New Home Construction

A Joint Research Study

by


DRAFT 6.0

April 2006
Executive Summary

In January 2006 the International Code Council (ICC) and National Association of Home Builders (NAHB) surveyed code officials across the US to determine the most prevalent code violations in new home construction. The purpose was to generate findings that will help stakeholders build better and safer homes, and arm consumers with key information as they make important home-buying decisions. The effort represents a continuation of a broad annual survey of code officials that ICC undertakes each spring as part of Building Safety Week.

ICC emailed invitations to code officials and invited them to take the survey online. A pretest was run to ensure no problems occurred. Then we took "opt-in" lists of ICC members, including those who took the 2005 Building Safety week survey, and sent out 6,265 emails. 4,895 emails went through successfully, and ultimately 1,260 respondents completed the survey, representing a response rate of 26%. This response rate compares favorably to previous ICC efforts, and by marketing research industry standards represents a strong showing.

The study focuses on measuring the extent of code violations in new home construction, including custom build homes, tract housing, condominiums and conversions. Respondents from jurisdictions of various sizes were invited to take part in a 10 minute survey online hosted by ICC. The survey ran from January 5 to January 27, 2006.

Background

The home building industry has seen a dramatic increase in construction defect litigation over the past decade. Initially, major construction defect litigation was for the most part limited to a few states and mostly condominium or town home projects, however, today communities of detached single-family homes are experiencing an incidence of construction defect litigation nearly as high as attached projects and this litigation trend is national in scope.

Litigation is an inefficient means for resolving construction defect disputes. While efforts are under way to try and change the way disputes are resolved, such as Notice and Opportunity to Repair legislation, more needs to be done to address the underlying causes of construction defect disputes. Consequently, NAHB, ICC and the ICC Foundation conducted this survey to identify the most prominent building code violations cited by code officials in the course of their inspections of new homes.

NAHB members are committed to building quality, affordable homes and the members of the ICC are committed to protecting the health, safety, and welfare of people by creating better buildings and stronger communities. Builders and code officials, and ultimately consumers, will benefit from this focus on quality construction.

Goals of the survey include:

- Explore ways to improve building safety throughout the United States
- Provide builders with another tool to help them continue building quality, affordable homes for their customers
- Minimize construction defect lawsuits
• Make builders more attractive to insurers by identifying those areas within the design and construction process that most often result in building code violations
• Form the basis for focusing public awareness and training
• Provide clearer guidance for manufacturers in the preparation of their specifications and building designers in the preparation of their design documents

Respondent Profile

Broadly speaking, the typical respondent in our study is a code official employed by a city or town with a population under 50,000. Breaking the numbers down further, the respondent profile includes mainly building officials (48%) or building inspectors (27%), although a significant number of plan reviewers (8%) took part in our study. Fire officials (4%) and fire officials (3%) represent smaller segments, with 11% falling under "other" job titles - with a number or people echoing this comment: " (I am a) one man show here except for fire (inspection)."

We received input from jurisdictions of all sizes. Most (56%) respondents work for jurisdictions with less than 50,000 population, with 21% reporting from mid-size jurisdictions of from 50,000 to 150,000 people. We received 8% of responses from large jurisdictions – with 1 million or more people. The majority of respondents work at the city, town or township level (over 73%), while 18% represent counties and 8% states. 16 total respondents, or about 1% of the total, work at the federal level. Several respondents represent tribes are act in the capacity of consultants to various jurisdictions.

Key Findings

• Respondents indicate violations occur in new homes of all types, from manufactured homes to custom high end homes. Some officials (from 9 to 15% depending on type of home) find violations in 100% of new homes.
• Flashings – officials say the predominant problem area for flashings centered on roofs and windows (44% each) and chimneys (41%). Respondents predominantly cite installation problems (78%) as the root cause of these violations, with 16% indicating a combination of flaws in products and installation as the cause.
• Grading and site drainage violations center on “grading” (62%) and “downspouts and drainage” (60%) officials say, with backfilling violations (48%) occurring frequently.
• Foundation-related code violations stem from improper reinforcement or support of rebar (55%), improper anchor bolts (53%), and incorrect installation (38% each).
• Wall-related framing problems occur as a result of studs cut or notched to an impermissible depth (77%), missing fire-blocking (75%) and missing hold-downs, straps, etc. (59%).
• Floors suffer from “notches in areas not permitted” in 71% of cases, and “sheathing nails missing joist(s)” (45%) and missing anchor bolts (71%).
• Officials say roof coverage violations center on lack of nails or too much force applies: “missing nails or fasteners” occurs 60% of the time and “over-driving of nails through shingles” in 52% of cases.

• “Bracing not installed” predominates truss-related violations in 80% of the time, say respondents. With “impermissible alteration (of trusses) leading to additional load” occurring in 65% of cases. Improperly connections to wall plate occur 62% of the time.

• Window- or door-related code violations have to do with “improper flashing” in 57% of cases and “inadequate fire rating” 22% of the time.

• The most common handrail-related code violations cites stem from “improper height or spacing” (76%), “missing handrails” and “improper graspable surface” (64% each).

• Guardrails suffer from “opening(s) too large” in 69% of occurrences, “height criteria not met” (60%), “not properly fastened or installed” (49%), or simply “missing” (45%).

• The most common stair-related code violations seen are “stair rise and run violations,” say 84% of officials, with 67% indicating “stair headroom” violations as next most prevalent.

We gave officials an opportunity to give examples of problems they see in new home construction. These help to illustrate the percentages cited above, and lend insight into the challenges the industry faces in order to mitigate the number of violations.

We asked about causal factors in these violations. Contractors appear to bear the brunt of the responsibility, with 77% of officials agreeing strongly that “contractor’s lack of code knowledge” causes “a large number of violations.” A “lack of coordination between trades” and that “workers ignore manufacturer’s installation instructions” are seen by respondents as contributors to violations. 70% indicate that “cost-cutting shortcuts” are a problem too. While 24% believe “inadequate manufacturer’s installation instructions” are behind violations, 47% agree this rarely or never causes violations.

Conclusions [this section to be critiqued by Dom and NAHB]

Respondents find violations occur frequently in new homes of all types. It is apparent that the range of violations on key home structural and safety components is broad. Officials cite example after example of problems that potentially impact the integrity of the structure and safety of its occupants. In the opinion of officials, responsibility appears to lie at the feet of workers and contractors, who either fail to follow manufacturer instructions, engage in sub-standard work or fail to include critically important components, such as flashing. What is most important in these findings is that the problems are identified and that pragmatic steps are taken by industry leaders to address the situation and provide a roadmap for improving the climate in new home construction. NAHB, ICC and ICC Foundation are committed to supporting the construction trade and providing guidance and programs that promote building the world’s finest and safest structures. It is with this in mind that we take the lessons learned from this survey and proactively move forward toward favorable solutions.
Flashings – the predominant problem area for flashings centered on roofs and windows (44% each) and chimneys (41%). Wood decks, brick veneers and doors were cited by respondents as having relatively frequent problems. When asked for specific examples, respondents commonly cited “missing flashing” as the problem, with “incorrect installation” occurring about as frequently. “Chimney flashing not counter-flashed, or only caulked against the brick,” cited one official as an example.

We looked at the data from the standpoint of jurisdictional size. We found statistical variance in a few instances. For example, flashing violations for roofing were cited in only 39% of cases in smaller jurisdictions, compared to about 50% of cases in mid-size, large and major jurisdictions. With siding, wood decks and veneers, other discrepancies are evident – for example, siding violations were cited by 1 in 5 respondents from smaller jurisdictions, but only 1 in 6 from mid-size jurisdictions. On the whole, the data appear to be generally consistent across all jurisdictional sizes, as the following chart shows (note yellow highlights were statistically significant variations occur):

| Where are flashing violations on the home most apparent? Select all that apply. N=1193 | Jurisdictional Population |
|---|---|---|---|---|
| | Total | Under 50,000 | 50,000 to 149,999 | 150,000 to 999,999 | 1,000,000 or more |
| Base | 1251 | 697 | 259 | 189 | 94 |
| Doors | 24% | 23% | 23% | 28% | 20% |
| Windows | 45% | 43% | 47% | 48% | 45% |
| Chimney | 41% | 40% | 44% | 37% | 45% |
| Siding | 19% | 20% B | 13% AC | 22% B | 17% |
| Roof | 44% | 39% BC d | 51% A | 50% A | 49% a |
| Wood Deck | 37% | 43% BC D | 32% AD | 31% Ad | 20% ABc |
| Brick Veneer | 26% | 25% C | 25% d | 33% Ab | 24% |
| Other | 5% | 5% | 5% | 7% | 6% |

Note on highlighted figures: The letters represent a “significant” difference, meaning that given the sample size the difference between a set of numbers is too large to be explained by chance. The upper case represents a 95% confidence level (the standard level) and lower case represents a 90% confidence level.
Respondents predominantly cite installation mistakes (78%) as the root cause of these violations, with 16% indicating a combination of flaws in products and installation as the problem. Interestingly,

<table>
<thead>
<tr>
<th>Are most flashing violations you see related to problems with products, installation or both? N=1191</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products</td>
</tr>
<tr>
<td>Installation</td>
</tr>
<tr>
<td>Both</td>
</tr>
<tr>
<td>Products</td>
</tr>
</tbody>
</table>
Grading and Site Drainage

Grading and site drainage violations center on “grading” (62%) and “downspouts and drainage controls” (60%), with backfilling violations (48%) also occurring frequently. Looking at the data more closely, we find that there are some differences between major jurisdictions and smaller jurisdictions with respect to the incidence of soil condition violations (25% for major jurisdictions, but only 14% for smaller jurisdictions) and sidewalks (12% for major jurisdictions, but only 4% for smaller ones).

On the whole, the incidence of violations is consistent across jurisdictional sizes. We asked for an explanation as to the conditions that lead to these violations. The entire list is available at the end of this document (see Appendix .0 below).

“Failure to divert water away from the house,” is perhaps the most commonly cited example, with “negative grade” at the home allowing for “ponding” of water a common example given of the cause and effect.

<table>
<thead>
<tr>
<th>Please select the three grading and site drainage violations you see most often.</th>
<th>N = 1260</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grading</td>
<td>62%</td>
</tr>
<tr>
<td>Downspouts/ drainage controls</td>
<td>60%</td>
</tr>
<tr>
<td>Backfilling</td>
<td>48%</td>
</tr>
<tr>
<td>Grade too high</td>
<td>42%</td>
</tr>
<tr>
<td>Soil conditions</td>
<td>18%</td>
</tr>
<tr>
<td>Driveways</td>
<td>15%</td>
</tr>
<tr>
<td>Sidewalks</td>
<td>7%</td>
</tr>
<tr>
<td>Stoops</td>
<td>5%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>5%</td>
</tr>
</tbody>
</table>
Foundations

Foundation-related code violations stem from improper reinforcement or support of rebar (55%), improper anchor bolts (53%), and incorrect installation (38% each).

<table>
<thead>
<tr>
<th>Please select the three most common foundation-related code violations you see. N=1132</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper reinforcement or support of rebar</td>
</tr>
<tr>
<td>Improper anchor bolts</td>
</tr>
<tr>
<td>Incorrect drain installation</td>
</tr>
<tr>
<td>Incorrect footing depth</td>
</tr>
<tr>
<td>Missing vapor barrier</td>
</tr>
<tr>
<td>Improper foundation size</td>
</tr>
<tr>
<td>Other (please specify)</td>
</tr>
<tr>
<td>Incorrect fasteners</td>
</tr>
</tbody>
</table>
### Wall-Related Framing Violations

Please select the three most common wall-related framing violations you see. N=1208

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stud cut or notched to an impermissible depth</td>
<td>77%</td>
</tr>
<tr>
<td>Missing fire-blocking</td>
<td>75%</td>
</tr>
<tr>
<td>Missing hold-downs, straps, etc.</td>
<td>59%</td>
</tr>
<tr>
<td>Installation of sheathing</td>
<td>31%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>11%</td>
</tr>
<tr>
<td>Improper spacing</td>
<td>10%</td>
</tr>
<tr>
<td>Missing studs</td>
<td>9%</td>
</tr>
</tbody>
</table>
## Floor-related Framing Violations

Please select the three most common floor-related framing violations you see.

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notches in areas not permitted</td>
<td>71%</td>
</tr>
<tr>
<td>Sheathing nails missing joist</td>
<td>45%</td>
</tr>
<tr>
<td>Missing anchor bolts</td>
<td>34%</td>
</tr>
<tr>
<td>Inadequate splices</td>
<td>27%</td>
</tr>
<tr>
<td>Wrong joist size</td>
<td>22%</td>
</tr>
<tr>
<td>Improperly installed sheathing</td>
<td>18%</td>
</tr>
<tr>
<td>Wrong joist grade</td>
<td>12%</td>
</tr>
<tr>
<td>Other</td>
<td>11%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>8%</td>
</tr>
</tbody>
</table>
Truss-related Violations

Please select the three most common truss-related violations you see.

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracing not installed</td>
<td>74%</td>
</tr>
<tr>
<td>Impermissible alteration leading to additional load</td>
<td>60%</td>
</tr>
<tr>
<td>Improperly connected to wall plate</td>
<td>57%</td>
</tr>
<tr>
<td>Specific truss not approved</td>
<td>21%</td>
</tr>
<tr>
<td>Metal plates not secured</td>
<td>20%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>12%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>8%</td>
</tr>
</tbody>
</table>
Roof Coverage Violations

Please select the three most common roof coverage violations you see.

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing nails or fasteners</td>
<td>49%</td>
</tr>
<tr>
<td>Over-driving of nails through shingles</td>
<td>43%</td>
</tr>
<tr>
<td>Absence of felt, or incorrect type</td>
<td>35%</td>
</tr>
<tr>
<td>Inadequate overlap of tiles, shingles or asphalt</td>
<td>27%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>17%</td>
</tr>
<tr>
<td>Improper materials</td>
<td>13%</td>
</tr>
<tr>
<td>Improper course spacing</td>
<td>13%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>13%</td>
</tr>
<tr>
<td>Broken roof tiles</td>
<td>9%</td>
</tr>
<tr>
<td>Product not approved or listed</td>
<td>8%</td>
</tr>
</tbody>
</table>
Window- or Door-related Code Violations

Please select the **single** most common window- or door-related code violation you see

<table>
<thead>
<tr>
<th>Code Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper flashing</td>
<td>57%</td>
</tr>
<tr>
<td>Inadequate fire rating</td>
<td>22%</td>
</tr>
<tr>
<td>Egress</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
</tr>
<tr>
<td>Safety Glazing</td>
<td>6%</td>
</tr>
<tr>
<td>Footings</td>
<td>1%</td>
</tr>
</tbody>
</table>
Handrail-related Code Violations

Please select the three most common handrail-related code violations you see:

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper height or spacing</td>
<td>71%</td>
</tr>
<tr>
<td>Missing handrails</td>
<td>60%</td>
</tr>
<tr>
<td>Improper graspable surface</td>
<td>60%</td>
</tr>
<tr>
<td>Not properly fastened or installed</td>
<td>44%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>9%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>6%</td>
</tr>
</tbody>
</table>
Guardrail-related Code Violations

Please select the three most common guardrail-related code violations you see

- Guardrail opening too large: 69%
- Height criteria not met: 60%
- Not properly fastened or installed: 49%
- Missing guardrail: 45%
- Improper placing: 21%
- Not Applicable: 8%
- Other (please specify): 3%
Stair-related Code Violations

Please select the three most common stair-related code violations you see.

- Stair rise and run violations: 78%
- Stair headroom: 63%
- Stair geometry issues: 36%
- Improper stair tread: 35%
- Improper stair construction: 31%
- Not Applicable: 7%
- Other (please specify): 5%
Using the scale of 1 to 5 below, please rate how often you feel each of the following result in code violations.

<table>
<thead>
<tr>
<th></th>
<th>Never causes violations</th>
<th>Causes a large number of violations</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>0% 1% 9% 1% 0%</td>
<td>7% 13% 38% 4% 4% 9%</td>
<td>23% 26% 25% 13% 17% 19%</td>
</tr>
</tbody>
</table>

**Q29**

In your experience, what percent of each type of new home would you estimate have code violations? Enter a number for each between 0 and 100. Please leave blank answer choices for which you have no experience or do not know the answer.
Here are the results of the pretest...
Invites sent: 249
Invites delivered: 195
Percent of addresses that are "good": 78%
Number of response after seven hours: 22
Response rate so far: 11%
Percent of respondents completing the survey: 91%

Grading would include a whole range of violations relative to grading, which could include, but not limited to slope, elevation, swales, compaction, material properties, drainage, etc. Of course, grade too high is specific to the finish grade being higher than allowed in relation to adjacent structures.

==Appendices==

Appendix 1.0

Flashing

Where on the home are flashing violations most apparent?

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>44%</td>
</tr>
<tr>
<td>Roofing</td>
<td>44%</td>
</tr>
<tr>
<td>Chimney</td>
<td>41%</td>
</tr>
<tr>
<td>Wood Deck</td>
<td>37%</td>
</tr>
<tr>
<td>Brick Veneer</td>
<td>26%</td>
</tr>
<tr>
<td>Doors</td>
<td>24%</td>
</tr>
<tr>
<td>Siding</td>
<td>19%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
</tbody>
</table>

Aluminum flashing between concrete and wood

At electric meter
At low roof/high roof wall intersections
Concrete porches
EDPM used as flashing - tucked into mortar joint
EFIS
EFIS systems
EIFS and stucco
Electrical

Exterior Plaster/Stucco
Flat deck to pitch roof connections
Floor slab at adjacent grade
Foundation- Terminal Shield
Framing
Hanging gutters and down spouts
Higher end homes, really not a problem.
HVAC panning, draft stopping in walls

Survey of Common Code Violations
I have had no problems
Joint between siding or brick and foundation at op
Lathing penetrations
Only occasionally, but could be any of above
Other wall penetrations.
OVER GARAGE DOORS AND OTHER
CUSTOM OPENINGS
Parapets on roofs.
Perimeter insulation
Permits not required=UCC
Plumbing
Porch roofs and overhangs
Porches and stoops
POURED CONCRETE PORCH
Roof siding transitions
Roof top windows, Exhaust fans
Skylights

Stucco
Stucco
Stucco
Stucco lath
Stucco to wood
Trade penetrations e.g., plumbing, electrical, etc
Valleys and at intersections of vertical and roof c
Water table
We do not conduct home inspections
Weep screed
Weep screed at the base of exterior lath.
Wood frame wall with concrete abutting at higher l
Wood leders attached to hose for deck support
Appendix 2.0

Are most flashing violations you see related to problems with products, installation or both?

- Products: 1%
- Installation: 78%
- Both: 16%
- Not Applicable: 5%

Please give an example of a common flashing violation that you see.

A COMMON VIOLATION FOR FLASHING IS IN REROOFING APPLICATIONS, THE ROOFER USES ROOFING TAR

A new deck is added to an existing home and not flashed under the door between deck and house.

A reglet is not provided typically and the flashing is caulked to the surface of the substrate.

After the cricket is built, the flashing is not of size to cover the area of cricket/valley.

All types it isn’t just one.

- Aluminum flashing against ACQ
- Aluminum flashing between concrete and PT wood
- Aluminum flashing fastened with galvanized nails and copper flashing fastened w/ al. or galv. nails.
- Aluminum in contact with treated wood
- Around a chimney
- Around chimney's and vent pipes to bath rooms.
- Around the chimney
- Around windows in walls that are to be stuccoed.
- As stated above I often see aluminum flashing installed between concrete and the structure.
- At chimney and above brick and siding intersections.
- At roof where a wall is above, often flashing is not interwoven with shingles

At shed roof connection to second story wall.

Around window and door openings. At side walls/roof

At the application of Styrofoam build out details around windows, proper materials to eliminate water

At the cricket no flashing was installed

At the termination of a stucco system and an exterior balconies rim joist.

At the transition between siding and veneer, not all manufacturers indicate that flashing is require

At the wall to roof intersection

Base flashing at brick veneer installed incorrectly, head flashing at windows & doors not installed

Base flashing of roof not sufficiently extended up the parapet to terminate beneath the cap flashing.

Bent incorrectly, not installed far enough up a wall section, one part application instead of two

Between deck ledger,

Between the existing home and the treated deck there needs to be a Z bend flashing.

BIG PROBLEM is inappropriate flashing material in contact with treated wood, along with no flashing

Bottom Kraft needs to be between the stucco and the stucco paper and it is usually behind the paper.
Brick flashing not being installed properly.
Deck flashing, missing under door at ledger board.
Brick layer are not installing it or they are just piecing it in with scrap metal.
Brick veneer & garage door openings
Brick veneer chimneys that are being placed on the roof decking in residential.
Builders thinking that 'house wrap' is flashing material.
Chimney flashing not counter flashed or only caulked against the brick.
Chimney flashing not cut into brick or stone
Chimney most leaking complaints - woods decks most common - valley in cold areas most misunderstood
Chimney not flashed since roof is completed prior to the chimney being built.
Chimney not properly flash
Chimney step flashing not properly manufactured and installed at corners.
Chimney to roof flashing is not properly installed
Chimneys
Chimneys that are placed in a position to catch water
Chimneys windows
Chimneys, corners and seats.
Chimneys, valleys. Decks attached to the housing unit. And almost always for brick veneer and around
Code req. Step flashing and the installer is not aware or has a diff. of opinion.
Common sense approach as to water flow and what is needed to stop intrusion
Composite walls where mortar is allowed to fall on the flashing between the block and brick
Concrete bottom seal flashings and headers at garage doors.
Concrete slabs for entries being placed in direct contact to the boxing and framing.
Concrete stoops being poured directly against siding or other wood products.

Continuously lapping, at the intersection with parapet walls
Contractor adds new deck to single family home but does not install flashing at siding/ledger board
Contractor installing flashing around chimney without counter flashing
Contractors do not follow the manufactures recommendations, or fail to use the correct materials.
Contractors generally forget to install it more so on windows than doors.
Corners not properly lapped
Counter flashing improperly installed
Counter flashing.
Counter flashings are not used where brick veneer meets siding
Damaged flashing
Deck are attached directly to exterior without flashing allowing water to weep into screw holes
Deck attachment to house.
Deck attachment.
Deck flashing at the house wall
Deck flashing is not installed in a manner that provides a barrier preventing water from ledger.
Deck flashing on ACQ framing - requires copper
Deck ledger
Deck ledger attached on top of exterior finish material and roof eave edge gaps
Deck ledger attached with flashing improperly installed or completely missing.
Lacks design standards.
Deck ledger flashing missing or not installed properly.
Deck ledger is installed to structure without clearance from wall finish
Deck ledger plate fasteners not covered, permitting water to follow fastener into the untreated wood
Deck ledgers; architectural horizontal trim changes in siding covered without counter flashing.
Deck roof attached structures, deck plates attached to structure, valleys of roofs and chimney
Deck to house connection
Deck to main structure transition, over the ledger
Decks
Decks attached directly to the siding with no flashing
Decks on a home
Decks the type of flashing
Decks with no flashing along ledger board
Delamination
Depending on roof line formation and the direction of weather, insufficient (height) flashing is app
Dilapidated porches, pealing paint, decayed wood frames on windows
Dimensions, location and/or non-existent
Do not have enough dimensions that code requires
Do not use step flashing and use non-approved product
Don't properly lap flashing with building paper at windows and doors or roof to wall intersections.
Door sills, and window head flashing.
Doors and windows not wrapped properly
Doors and windows that have plastic mounting strips are installed without flashing.
No drip caps.
Drip edge and window
Drip edge overlap
Drip edge, windows, and chimney
Drip flashing on roof edge over gutters not installed.
Either improper material or improper installation
Either no flashing or flashing that is too small for the correct application or not enough overlap
Either not installed at all, or not lapped properly
Either the wrong material or no flashing at all.

EQUIPMENT ROOF LEAKS. CONDUITS, GAS PIPES LINE OPENINGS STC, ARE CREATED AT THE METAL FLASHING
Extended exposure leading to degradation in materials. Too many fasteners penetrating material.
Exterior doors, basement metal window bucks, using ice shield in lieu of metal flashing for brick
Failing to flash around windows. Generally installing windows without flashing at sill
Failure to adequately lap & secure flashing at its juncture with more flashing
Failure to apply flashing and failure to install correctly
Failure to flash and counter flash where needed
Failure to flash around windows. Failure to flash above lintels.
Failure to flash correctly under exterior doors.
Failure to flash on the roof correctly resulting in leakage on the inside
Failure to flash, or to properly flash roofs, chimneys, and siding in remodels.
Failure to follow manufacturers’ installation instructions
Failure to install all weather barriers in a shingle lap fashion, regardless of underlying layers.
Failure to install flashing at all
Failure to install flashing properly over windows an at deck connections
Failure to install it
Failure to install through-wall flashing (and weep holes) at the base course of brick veneer and at
Failure to properly flash an entrance platform where it abuts the building.
Failure to provide adequate/effective flashing around openings w/ regard to stucco installations
Failure to provide flashing
Failure to provide flashing at lintels above windows. Improper installation of counter flashing.
Failure to provide flashing at the base of masonry veneer
Failure to step flash and inadequate flashing for deck.
Fastening and laps
Fiber Cement Siding to Horizontal Band/Trim Board. And above any window or door w/ wood brick mold
First story roof to wall of second story, flashing, counter flashing.
Flash not tucked properly
Flash (sheet metal) around the chimney that was poorly sealed or peeling away from the structure
Flashing above windows. Step flashings or finish flashing on roof.
Flashing and counter flashing at parapets and roof junctures.
Flashing and weep holes not installed as required for brick veneer.
Flashing around chimneys
Flashing around chimneys failing and water intrusion into dwellings.
Flashing around doors and windows not correctly performed with stucco and masonry exterior walls
Flashing around fireplaces
Flashing around masonry chimneys, lack of head flashing about doors and windows exposed to the wet
Flashing around the chimney
Flashing around the chimney, brick veneer, wrong type of flashing material on deck ledgers
Flashing around upper portion of windows prior to the lath or siding is being installed incorrectly.
Flashing around windows
Flashing around windows. Wall to roof flashing. Weep screed installation.
Flashing at brick ledger improbably installed or not installed

Flashing at decks and patio doors incorrectly installed.
Flashing at decks level with, not above, the drainage from the deck. Water enters behind the siding
Flashing at doors and windows is ripped, torn or installed without proper lap.
Flashing at porch slab and band sill
Flashing at the drip edge on roofing, around venting through the roof area.
Flashing at the starter course on the brick and on brick dormers located on the roof.
Flashing behind gutter often missing
Flashing behind siding with out an exit flashing
Flashing between ledger on house and deck missing or not properly installed
Flashing does not allow water to exit building envelope
Flashing does not meet requirement of being heavy enough (Thick)
Flashing ends short of the edge of the window/door; or is not installed.
Flashing for a deck attached to the house.
Flashing for chimneys and vents on reroofing jobs.
Flashing improperly done. Mostly with shingles.
Flashing improperly installed leaving gaps/openings for water penetration.
Flashing improperly installed on roofs, due to lack of adequate fasteners.
Flashing improperly installed where ledger board attaches to dwelling.
Flashing in valleys between levels, around chimneys, and vent stacks.
Flashing installed around chimneys
Flashing installed improperly, not well fixed, not the right size and overlapping.
Flashing installed incorrectly
Flashing installed under sheathing.
Flashing is forgotten between the house and the deck, or nailed in the valley.
Flashing is installed after chimneys are completed and not set properly into the mortar joints.
Flashing is just not being installed as required in a lot of the cases by owner/builders.
Flashing is missing
Flashing is missing at deck ledgers
Flashing is not installed at all or is improperly installed.
Flashing is not installed behind/under the weather barrier.
Flashing is not large enough or installed properly
Flashing is not secure before roofing is put on
Flashing is penetrated with fasteners, aluminum in direct contact with PT wood
Flashing is placed on roof after shingles have been installed
Flashing is putting backward so the water is going back to the building.
Flashing laid in place but no fastening. Mix of Alum. & Copper flashing (dis-similar metals)
Flashing Material Incompatible with ACQ Wood
Flashing may be installed improperly where a lower roof ties into a wall and at window sills.
Flashing missing over doors and windows. Also, valley flashing not properly installed.
Flashing not applied in correct places, materials not suitable for the application being used.
FLASHING NOT BE CUT BACK INTO BRICK VENEER FLASHING NOT INSTALLED, AT ALL
Flashing not being installed or installed not in accordance to manufacturer’s specs.
Flashing not being properly installed over or behind ledger boards for decks.
Flashing not compatible with pressure treated lumber on deck attachments to residences
Flashing not correctly attached to brick face
Flashing not correctly 'shingle-lapped' and interlaced with lath paper around windows and doors.
FLASHING NOT INSTALL PROPER IN BRICK VENEER CONSTRUCTION
Flashing not installed
Flashing not installed
Flashing not installed
Flashing not installed
Flashing not installed against house where deck meets with the structure.
Flashing not installed and wrong type of flashing
Flashing not installed at all vertical terminations (roofs)
Flashing not installed between the house and the deck or above a door.
Flashing not installed correctly or not at all.
Flashing not installed or flashing is part of a product and is not sufficient
Flashing not installed or improperly nailed.
Flashing not installed when deck is attached to house.
Flashing not installed, flashing is not put in behind the wall covering as it should be.
Flashing not installed.
Flashing not lapped properly around windows and step flashing not installed properly at chimneys
Flashing not overlapped by siding, simply butted
Flashing not overlapped properly.
Flashing not properly installed
Flashing not properly installed at roof around chimney
Flashing not properly secured or caulked
Flashing not stepped properly on pitched roofs abutting structure. No flashing on decks abutting sill
Flashing not terminated properly or counter flashed
Flashing omitted.
Flashing on bi-level roof where fascia meets roof
Flashing on decks problems can’t use the aluminum with the new treated wood
Flashings on raked roof not installed correctly and minimum 1 1/2 inch gap not maintained.
Flashings on windows (doors) are not overlapped properly.
Flashings placed in a fashion that allows moisture to weep behind the flashing.
Flashings relating to stucco work.
Flashings removed from chimney and not replaced when reroofing. Improper valley flashing.
Flashings separated from structure.
Flashings terminating behind siding. Flashing missing at concrete pad/siding.
Flashings that is to short. Flashing that has not been installed.
Flashings made on the job are not tucked up behind the siding far enough and not diverting water off.
Flashings not properly layered in weather board fashion particularly around openings.
Framing contractors didn't know flashing was required for decks attached to homes.
From porch roof to wall and roof to parapet.
Gaps at perpendicular seams.
Gaps between separate runs. Inadequate fastening.
Gaps in flashings, especially at corners, above brick veneer.
Gas line installations with no shut off valves.
Haphazardly installed.
Have not had any violations in 2005.
Haven't seen step-flashing yet and drip edge not nailed to code.
Holes.
House wrap at top of windows installed UNDER top of window flashing. Window corners w/ vert, splice.
House wrap behind a window top nailing flange last piece of step flashing at a roof to wall intersection.
House wrap is generally being placed behind the tops of windows and doors.
House wrap not properly lapped over brick flashing.

House wrap under the flashing for an area where an exterior wall abuts a roof area.
I am happy to say that with the multiple units we have just completed there were no violations.
I have had no problems and new home construction is limited because I work in Villages.
I have not had any flashing violations.
I have not seen flashing violations myself.
I only do plans checks and inspections for fire sprinkler and fire alarm systems.
I rarely see one.
I see various instances of shingles being mortared into brick lines rather than flashing.
Ice guard-Non-existent step flashing at valleys or chimneys.
Improper application of window & door flashing. Flashing missing for brick veneer & wood decks.
Improper attachment, Improper sealing.
IMPROPER ATTACHMENTS OR UNDERSIZED.
Improper flashing around windows. Poor workmanship at eves/facing in wrong direction.
Improper flashing at bay window on brick veneer.
Improper flashing installation and caulking at horizontal siding joint.
Improper flashing installation on valleys.
Improper flashing installations at chimneys.
Improper flashing not cut into the stone work. No counter flashing or caulking use in place of flashing.
Improper flashing of an exterior deck/entrance which is attached to a residence.
Improper flashing of brick around doors and windows, flashing at brick/siding joints, flashing at roof.
Improper flashing techniques at openings, failure to properly flash roof eave/wall intersections.
Improper head flashing for windows and doors
Improper inst. of flashing. Deck ledger and house, allowing water to continue down behind siding
Improper installation
Improper installation
Improper installation
Improper installation - lack of knowledge of water travel paths
Improper installation around chimney
Improper installation at wall intersections w/roofs, chimneys, any type penetration and also, window.
Improper installation in that lapping was reversed which would allow water to run under or behind.
Improper installation including not following the manufactures instructions around windows and decks
Improper installation of flashing
Improper installation of flashing around roof penetrations, or any vertical to horizontal transition
Improper installation of flashing at outside bottom of interior wall.
Improper installation of flashing of brick veneer at foundation wall; lack of flashing; unapproved f
Improper installation of flashing or not installing the required flashing
Improper installation of flashing. Improper drainage plane. Missing flashing.
Improper installation of most products. Not sealing the top a flashing to sheathing terminating.
Improper installation of so-called self-flashing windows
Improper installation of step flashing on chimneys
Improper installation of step-flashing on roofs and not using the correct material for the job
Improper installation of vinyl windows in homes were some type of house wrap is used.

Improper installation or in some cases the lack flashing
Improper installation or no flashing install
Improper installations of plumbing stack 'boot flashing' units. Shingles over bottom flashing.
Improper integration of the flashing material with the weatherproofing material.
Improper lap under shingle course above flashing.
Improper lapping of materials.
Improper Lapping. Use of improper materials in exposed horizontal applications.
Improper materials for the use. Galvanic action with the new wood treatment materials
Improper materials used with non CCA decking and joists, improper flashing around windows
Improper method of flashing to masonry
Improper placement of flashing material on roof.
Improper placement of size or inadequate caulking used to close seams.
Improper positioning
Improper sealing, gaps
Improper sequencing of the flashing material
Improper 'shingling' of the weather barrier and flashing.
Improper step flashing around chimney that results in leak
Improper step flashing installations.
Improper step flashing.
Improper use and installation of Z flashing
Improper valley flashing material. Improper flashing techniques around fenestrations
Improper width and overlaps.
Improper width of window flashing materials.
Improper width of valley flashing for clay tiles.
Improper window and door installation. As to shim space between frame and buck.
Improper window flashing
Improper window wrap.
Improper window/door facings
Improper, or non-existent, flashing at deck ledgers and at top of windows where required
Improperly applied flashing materials
Improperly applied step flashing at siding/roof juncture. Lack of pan flashing on windows.
Improperly flashed chimneys where masonry meets house and/or roof. Omitted flashings where required
Improperly flashed doors, windows, chimneys or roof to wall assemblies with new installations.
Improperly flashed windows & doors
IMPROPERLY INST. OR NO INST. AT ALL
Improperly installed and caulking not done properly
Improperly installed flashing around and particular above doors and windows
Improperly installed flashing around windows using wrong materials or no flashing at all.
Improperly installed flashing, lack of adequate overlap.
Improperly installed j channel around windows and doors
Improperly installed or not installed at all
Improperly installed step flashing, not sized correctly.
Improperly installed.
Improperly placed with vertical surfaces or cut to improper size for the slope of the roof
Improperly sealed and attached
In proper use or application of products.
Inadequate cricket at roof valley ending in chimney.
Inadequate flashing of building-deck and chimney-roof interfaces
Inadequate or missing flashing at deck ledgers
Inadequate or poorly installed flashing on any sort of roof penetration. Product used may be fine but
Inadequate, or non flashing on masonry veneer walls.

Incomplete flashing and not stepped when needed. Fastening inadequate.
Incomplete flashings at inside/outside corners.
Incomplete installation, typically with the flashing connections
Incorrect install or no counter flashing
Incorrect installation around doors and windows
Incorrect installation of step flashing, undersized counter-flashing at deck to house transition.
Incorrect installation practices and workmanship
Incorrect lapping
Incorrect step flashing or no cricketts behind chimneys
Incorrect valley flashing (incorrect width)
Incorrect ice dam flashing under shingles (none put in)
Incorrectly done where deck meets house
Installation is incorrect. Lapped the wrong way and/or no diverter at the end.
Installation is usually done very poorly in which the exposed surface is at risk of damage.
Installation of counter flashing
Installation of roof vents
Installed improperly
Installed reversed of how it should be, not installed at all
Installer just plain doesn't install it.
Installer not familiar with the product
Installer use to short of a piece
Installers do not have the correct knowledge in good flashings practices.
Installers do not know how to install
INSTALLERS OF ROOF SKYLITES HOME OWNERS INSTALLATION FOR WOOD DECKS
Installing the correct flashing around windows and decks
Insufficient overlap of sections
Insufficient size/coverage around chimneys and @ decks
Insufficient width of flashing.
Intersection at parapet walls
Inverted overlap wrong fastening material
cedar/copper
IT IS MOSTLY WHEN HOMEOWNERS ARE
DOING THEIR OWN WORK.
It's not installed at all.
It's not installed properly to conceal seams or
openings and could cause damage to
framing below.
Just not following the areas specified by the
2003 IRC for brick veneer
Kick out flashing
Kick out flashing on the roofs
Kick-out flashing not utilized where upper
roofs meet walls.
Lack flashing at sills and angle irons.
Lack of
LACK OF
Lack of acceptable flashing materials at roof
valleys and eaves.
Lack of cement where required, lack of
skilled labor.
Lack of continuity. Substandard materials.
Inadequate fastening.
Lack of counter flashing at windows... lack of
flashing at deck edges abutting buildings
Lack of counter flashing or kick out flashing
Lack of counter flashing.
Lack of counter flashing; lack of effective
crickets and flashing around chimneys.
Lack of experience and knowledge of proper
flashing installation
Lack of fasteners, sealant, and improper
installation.
Lack of flashing
Lack of flashing
Lack of flashing
Lack of flashing
Lack of flashing above windows and doors.
Lack of flashing around brick mold Garage
doors etc. Aluminum used with treated
lumber
Lack of flashing around windows

LACK OF FLASHING AT DECK LEDGER
BOARDS
Lack of flashing at joints between dissimilar
materials at siding.
Lack of flashing at joist support ledger bolted
to house
Lack of flashing at window heads.
Lack of flashing behind and over deck
ledgers. Most installers side up to and
around ledger.
Lack of flashing deck / siding. Contractor
using caulk only.
Lack of flashing over doors and windows
wrong materials behind ledger of ACQ
lumber
Lack of flashing where required
Lack of flashing, wrong application and
wrong size
Lack of flashing.
Lack of installation
Lack of installation or improper placement.
Lack of knowledge on installation.
Lack of knowledge on the installer’s side of
installation and use. Inexperience in training.
Lack of knowledge to do a leak free flashing
Lack of or not properly installed on roof
Lack of quality workmanship of installation
Lack of step flashing in the proper locations,
also the lack of flashing on roof rip off jobs.
Lack of through the wall flashing for brick
veneer
Lack of through wall flashing above openings
allowing moisture to be trapped in the wall
cavity.
Lack of use, improper placement and
attachment
Lack of, improper joints that leak, no seam
sealer or proper bending of joints
Lack of.
Lap mistakes, punctures through membrane
Lapp in wrong direction or penetrations not
sealed properly
Lapped wrong way or no flashing present
Lapping
Lapping flashings in the wrong direction.
Laps on top are not layered properly
Lath and Brick Tie inspections fail often for
failure to flash doors and windows.
Ledger attachment to rim joist without
flashing
Location and material
Lower and upper roof intersection / vapor
barrier wrapped inside window.
Lower corners of windows are not properly
flashed to return water to the exterior of the
siding
Lower window flashing installed under the
weatherproof barrier
Many contractors believe that the nailing
flange on windows acts as a proper flashing,
however from
Many decks, porches or entries may have no
flashing or improper materials such as
aluminum to treat
Many use the self flashing types but do not
install them correctly in relation to the type of
siding
Masonry flashing missing especially at
lintels, flashings clogged with mortar,
Material and seal coverage not sufficient
Material not compatible with new treated
lumber. Flashing around window and door
openings.
Membrane deck coatings without flashing at
vertical wall intersection, or flashing not
extended properly
Metal flashing installed behind ledger board
instead of on top. I recommend ice & water
shield behind
Metal roofing installed improperly
Meter bases installed before the EFIS and no
flashing installed around it
Minimal fasteners, missing flashing & wrong
material installed
Mis-installed at roof mainly with a tile roof
assembly.
Missed installation from the builder
Missing
Missing
Missing
Missing
Missing
Missing
Missing
Missing at cantilevered deck joist, wall to roof
joints, roof penetrations
Missing flashing
Missing flashing or improper sealing of
flashing
Missing flashing. Not sealed properly.
Missing head flashing at vinyl sided walls
with wood brick mold trim.
Missing improperly installed flashing for brick
on wood installations.
Missing or incomplete loose torn or damaged
signs of water penetration
Missing or mis-installed
Missing roof flash at side walls, chimney
flash not 'let in' but caulked
Missing, Improper Coverage, Wrong Material
Moisture block flashing paper installed from
the top down instead of from the bottom up.
Mortar back drop into cavity
Most are at windows at the top
Most builders use ice & water shield as their
flashing, without adding flashing above the
ledger.
Most common flashing not installed and
when installed wrong type
Most flashing for chimneys is not truly
counter flashed and cut into the masonry.
Most often not properly installed, ie; gaps at
edges, etc.
Most product are not installed to specs.
Mostly flashing pulling away at chimneys.
MOSTLY IMPROPER INSTALLATION OR
MISSING INSTALLATION.
Mostly missing on veneers
Must are not installed.
N/A
Nailed improperly. No flashing caps
Nailed too close to the seam
Nailing flange not continuous around corners
of windows.
Nailing pattern to insure a tight fit around
chimneys. Flashing width used on building
are short.
Nails through the flashing. Using off the shelf flashing instead of the type recommended by the manufacturer. Never countered
No base flashing or improper base flashing on brick veneer walls.
No counter flashing at chimneys brick flashing not installed in ship lap fashion (Tyvek) behind flash
No counter flashing over flashing attached to parapets by reglets.
No Cricket when required.
No cut-in counter flashing at brick veneer.
No deck flashing at the band member
No drip cap over door casings
No drip cap over doors and windows, no flashing between structure and connected deck.
No end dams
No flashing
No flashing above doors and windows. No kick out flashing where roof ends at a wall
No flashing above doors non-self-flashed doors
No flashing above entry doors and garage doors
No flashing around windows and doors.
Using vinyl siding as flashing for decks, not installing z fl
No flashing at all between the foundation and the brick or stone. Masonry contractors complain!
No flashing at all!
No flashing at concrete porches placed against wood frame construction.
No flashing at deck ledger.
No flashing at exterior doors. Many tradesmen don’t understand why and how flashing is installed.
NO flashing at first course no flashing at connection of deck to wall no flashing above windows
No flashing at roof to wall areas. No counter flashing
No flashing at Roof/Wall intersections, no flashing at top of windows
No flashing at wall openings and exterior deck to wall intersections.
No flashing at windows on homeowner projects when siding is installed before window installation.
No flashing being installed
No flashing below required weep holes
No flashing between brick and deck ledger or siding and roof--baby tins not big enough
No flashing between concrete slab and house
No flashing between deck ledger board and house band board. No flashing around windows and doors.
NO FLASHING BETWEEN HOUSE SIDING AND DECK
No flashing between stucco and brick. No window flashing. No flashing on top of foundation
No flashing in masonry walls at lintel areas above windows
No flashing in valleys.
No flashing installed @ deck ledger.
No flashing installed above windows and doors on brick veneer.
No flashing installed at all
No flashing installed at all.
No flashing installed at brick ledge or lintels or wrong product used for flashing.
No flashing installed at the base of masonry walls. No weep holes installed at the flashing.
No flashing installed at the deck ledger. The house wrap over top of the window sill flashing.
No flashing installed or improper installation
No flashing installed.
No flashing on ledger board on attached decks
No flashing on windows
No flashing or flashing installed on top of the shingles or siding.
No flashing or improper flashing where porch roof ties into main structure
No flashing or insufficiently installed
No flashing over ledger boards for decks attached directly to band board
No flashing over top of doors and windows, or over deck ledgers
No flashing placed
No flashing present on brick mold windows and doors.
No flashing provided at top of window.
No flashing used at deck ledger.
No flashing used for decks.
No flashing used in connection with waterproof membrane behind masonry exterior veneers
No flashing used,
No flashing was required behind brick
No flashing, improperly installed
No flashings on roof penetrations of pipe, wiring, vents etc.
No ice shield and overlap also around skylights
No kick out flashing at base of wall/roof
No kick-out flashing on roofs, inadequate ledger board flashing, some window flashing but getting be
No kick-out flashing where roofs intersect with walls.
No paper behind brick veneer, no allowance for water seepage.
No shingles installed on a roof where the 2nd story wall meets the 1st story roof.
No step flashing
No step flashing on Chimney's and at different roof elevations.
No step flashing used around the chimney, ice shields not installed, no vapor barrier behind siding
No turn outs at bottom of stucco.
No weep screed or not a proper height
No weep screens in the stucco stop
No window drip cap
None
NONE IN PLACE

None installed
None or very limited overlap used. Flashings do not extend far enough to conform to field condition
None provided at wood deck connection to building wall. Single strip of flashing provided where ste
Non-existent around chimneys through floor penetrations
Not applicable
Not applied correctly
Not being installed
Not being installed
Not being installed per manufacturer’s information
NOT CAULKED, WRONG GAGE, SHORT
Not counter flashed or cut into masonry
Not cutting flashing into chimney masonry and not properly flashing under siding at roof lines.
Not cutting in regget properly
Not doing flashing
Not enough overlap at chimney.
Not enough overlap, or nonexistent
Not far enough under the siding
Not flashed right
Not flashing above windows / doors.
Not flashing between the deck and house.
Not flashing where railings and ledgers frame into the walls
Not flashing windows because they are 'self-flashing and deck-to-house connections.
Not following manufacture recommendation
Not following manufacturer's installation instructions.
Not following manufactures installation specs.
Not having a correct span for the type of wood used for decks.
Not in place or on the job site.
Not in place.
Not installed
Not installed
Not installed
Not installed
Not installed and / or bent and mutilated
Not installed at all
Not installed correctly at 2nd story wall to lower roof and at valleys. Walls to porch single slope
Not installed or contractor doesn't place it there
Not installed or not installed correctly
Not installed or not installed properly.
Not installed per manufacturer's literature.
Not installed per mfg instructions
Not installed properly
Not installed properly
Not installed properly around the windows - leaks inside
Not installed properly under eves
Not installed properly.
Not installed under siding at wall to roof on re-roof. Installer then places 1 x 4 to cover
Not installed where required
NOT INSTALLED, NOT SPECIFIC TO PRODUCT, NOT RELIEF CUT INTO CHIMNEYS, DOESN'T FULLY PROTECT APPLICANT
Not installed. Not installing
Not installing counter flashing
NOT INSTALLING IT NOT PROPER SIZE NOT EXTENDING IT THE FULL LENGTH OF VALLEY OR CRICKET
NOT INSTALLING IT ON ALL SIDES OF THE WINDOW
Not lapped over right
Not lapping one layer over the other sufficiently
Not nailed correctly, not imbedded right
Not nailed properly to a substrate. Insufficient fasteners and length of fastener.
Not overlapping in correct direction, missing flashing, and not extending flashing far enough.
Not placed properly and not sealed properly.
Not present
Not proper coverage
Not proper laps

Not properly applied
Not properly attached to the chimney area with roof shingles under the flashing
Not properly fastened
Not properly installed
NOT PROPERLY INSTALLED AND ALLOWING RAINWATER RUNOFF INTO THE STRUCTURE.
Not properly installed and sealed
Not properly installed caps and collars
Not properly installed in horizontal adjacent to vertical applications.
Not properly installed or omitted
Not properly installed to manufactures specifications
Not properly sealed or nailed
Not properly seated or loose
Not reading the installation procedures. Not placing the products accordingly with code provisions.
Not sealed
Not sealed properly
Not stepping the roof flashing. Flashing not getting out from behind siding or finish.
Not there
Not there- NOT installed
Not there, improper fit, poorly installed, damaged
Not using a flashing above an added wood casing surround @ a window or door.
Not using it at all and relaying on caulking only.
Not using the proper flashing for the roof materials. Creating an improper seal.
Not using the proper flashing for the roof Old vent a flashing on shed type roofs
Old, worn out its useful life
Omission
Omission of diverter flashing or various roof flashings
Omission of flashing
Omitting flashing on top of windows
On commercial buildings
On piers
On stucco finishes and acrylic stucco finishes, flashing around windows and doors not per mfr. spec.
On the chimney to the roof.
On the vinyl windows the flashing trim has holes in it to attach to the wood frame allowing water to
On windows-Not following manufactures specs. On decks-they flash behind the ledger but don't counter
One is people won't use flashing where needed or not enough.
Only installed on bottom
Open valley flashing does not meet width requirements of 24', IRC 905.2.8.2.
Overlapping
Overlapping flashing does not extend past the drip edge of the next piece.
Parapet walls
Perimeter insulation is not cover. Window flashing does not overlap stucco paper
Placement of flashing too short from the edge.
Placing the flashing between the brick and the base of the brick. Although required, this is poor co
Plumbing risers
Poor flashing methods
Poor installation
Poor Installation
Poor installation. Products not intend for the location used.
Poor workmanship
Poor workmanship
Poor workmanship and lack of knowledge are the top reasons for failure
Poor workmanship, not understanding the importance of flashing. Thinking the nailing flange is flash
Poor workmanship/improper sequence of installation steps

Porches being poured over weep screeds and trapped water behind the porch bet. The porch and stucco.
Pouring concrete decks against siding.
Flashing and counter flashing at windows.
Product used without the ICC listing approval. Product installation incorrect and poor construction,
Products not being installed to manufacturer specs and just poor workmanship
Proper lapping of sisal craft paper around windows
Proper placement of proprietary self adhesive materials around window openings.
Proper width and type of flashing material used is not correct.
PVC penetrations at the floor or ceiling, roof flashings where a change in direction or at valleys
Quite often they are not installed prior to roofing. The flashings are then installed afterwards an
Railings not built to code.
Re-roof jobs side wall flashing that require counter flashing
Reroofing is especially problematic
Reverse laps, short laps, and improper use of products, not installed per manufactures specs
Reversed application of flashing around the windows.
Roof
Roof areas and chimneys
Roof edge
Roof flashing at change in roof pitches and chimneys
Roof jack not property lapped. Flashing and counter flashing at roof to wall intersection missing.
Roof penetrations for plumbing and exhaust vents
Roof shingles
Roof shingles touching b-vents
Roof to wall flashing not installed far enough behind the existing siding.
Roof to wall on the exterior of building paper, or over stucco on re-roofs.
Roof to wall or deck to siding.
ROOF TO WALLS, DECK TO WALLS.
Roof/wall intersection, water is not directed to the outside of the exterior cladding.
Roofers choosing not to replace existing flashing on re-roofing jobs.
Roofing
Roofing contractors using one piece of 3’ flashing, run it from top of rake to bottom.
Roofing materials used as flashing, step flashing not directed on top of siding.
Roof-to-wall
See the flashing put on last over the paper.
Self-flashing windows being placed under sheathing with out additional flashing. No flashing @ doors.
Sequence of installation and caulking of joints.
Sequencing of flashing at windows. Improper valleys laps. Installers do not know proper use of new p.
Short on material for the weather in the northeast.
Side wall meeting roof.
Siding butt jointed w/o flashing behind the joint and no moisture relief to bottom course.
Siding not installed properly, shingles not installed properly around chimney.
Siding used as trim around windows not properly sealed.
Siding—deck
Sill plate with brick veneer and steel lintels.
Since, as a Fire Marshal, I deal with fire and life safety issues, I usually differ these issues to
Sloppy work. Inadequate overlaps and gaps.
Soldered joints in a galvanized flashing that crack during installation.
Splicing w/o proper overlap, not installed to manufacturer’s recommendations.

Step flashing
Step flashing (tin shingles) at the dormers.
Counter flashing at the rollock for brick Head flashing.
Step flashing and crickets missing at chimneys. No flashing at decks.
Windows missing Z flashing.
Step flashing at roof to wall juncture and chimney flashing.
Step flashing covered by brick work @ roof line instead of on the outside & counter flashed.
Step flashing improperly installed.
Step flashing improperly installed on chimneys, etc.
Step flashing is installed incorrectly or roof flashing is installed with not enough overlay.
Step flashing not done correction especially at transitions to siding, corners, other roofs; chimney.
Step flashing not done properly. No flashing at the brick ledge.
Step flashing not let into brick.
Step flashing not overlapping enough to prevent water from backing up under flashing/roofing material.
Step flashing omitted from around a chimney and replaced with plastic cement only.
Step flashing on roofs and around windows and doors at top corners on siding.
Stepped flashing not installed at slopes parallel to wall.
Stucco wall where it meets with a lower level roof.
That the weather resistive barrier does not overlap the top of the step or head wall flashing.
The bell area of the chimney incorrectly flashed allows water to seep in by the fireplace.
The building envelope not properly flashed over top of windows.
The city does not have any problem with flashing violations.
The common error is neglecting to flash along the porch stoop prior to pouring concrete. This allows
the connection of a deck to the home to be far the biggest problem I have found.
The counter flashing covering the step flashing on the side of a wall will not be cut into the wall.
The flashing is either missing or incomplete. The flashing is short and leaves the very end unprotected.
The flashing not installed correctly with asphalt shingles; adhesive not used.
The installer fails to install flashing around doors and windows.
The interface between the wall and wood deck or porch.
The lack of diverter flashing and wall to roof corners of a wall.
The lack of flashing and improper installation.
The lack of flashings installed above windows and doors.
THE LACK OF INSTALLING FLASHING OR IMPROPERLY INSTALLED FLASHING
The lack of knowledge to install all types and applications of flashing the correct way.
The lack of sill flashing for openings in brick veneer and siding. Proper edge flashing at the roof.
THE LEAD ON THE CHIMNEY IS NOT FLASHED PROPERLY
The most common flashing violation I see pertains to roof flashing.
The most common is the use of aluminum flashing with pressure treated wood.
The most common problem we see improper flashing at the deck.
The use of flashing to act both as flashing and to cover larger than acceptable gaps in sheathing
They are not installed the right way. They are not overlapping enough.
They do not even install
They do not take the time to properly seal valley flashings...

They don't flash over windows or doors
They forget to install flashing
They forget to install it.
Thresholds at exterior doors.
Thru-wall flashing at grade for brick veneer.
Tile roofs at rake and facia. Ridge boards also not being flashed. Above doors and windows with stucco
Too short along roof intersections
Top of exterior wood trimmed doors, counter flashing for masonry chimneys
Top paper above window placed under side-vertical paper
Total lack of it
Totally improper window/door flashing, using nailing flanges for flashing and no flashing at other w
Transition between deck attachment to the home and the siding
Trying to use a light grade of polyethylene instead of an approved material.
Turn back flashing not installed properly
Typically where an exterior wall, possibly second story, terminates into a lower level roof.
Tyvec Tape and Duct Tape used as window flashing & no caulking behind nail flange
Unapproved flashing being used. Not to code
Under siding, at the connection points of roofs and where the two meet.
Use of caulk in place of flashing, no flashing, too short of a return, exposed fastener/penetrations
Use of improper material, material not properly applied
Uses 'Duct Tape' around windows and doors.
Has never seen flashing used for decks.
Using Aluminum Flashing at deck/brick veneer intersections.
Using aluminum instead of approved vinyl or galvanized components
Using galvanized nails with aluminum flashing
Using PE plastic in lieu of PVC where required
Using thin alum in contact with masonry to wood. Differential movement will split the alum. Quickly.
Using wrong flashing
Usually when the homeowner does his own reroof.
Usually, an absence of flashing but most common problem is incorrect installation at joints
Valley flashing too narrow
     VALLEY FLASHING, PATIO COVER
     ATTACHED TO HOUSE, OR ROOM
     ADDITION
Valleys terminating at a wall require special care lack of flashing at roof and wall intersections
Varies with each job.
Vertical wall to roof flashing and flashing around windows
Very bad around the chimney.
Very rare
Vinyl or aluminum windows set in CMU openings with no sills designed to shed water. No flanges.
Vinyl siding around windows. Using proper flashing material with pressure treated wood
Wall roof connection where flashing is installed over existing siding, not behind.
We do not conduct home inspections
We see a lot of violations with installers of windows and doors not installing per manufactures spec
We see railings of decks solidly mounted to the structure, but then not carefully detailed to prevent
Weatherboard fashion relating to Z-flash around doors and windows
Weep screed ending above level of sole plate
Weep screed for exterior plaster walls without the required clearance to grade.
Weep screed installation at the base of a wall in exterior stucco wall applications.

Weep screeds at base of stucco wall coverings not properly installed.
Weep screeds at the foundation above grade requires 4’ and 2’ at walk areas this is missed
When attaching deck to residence, flashing is not pushed up wall far enough to prevent water damage.
Where deck meets house
Where decks or stairs attach to a wall.
Where required for brick veneers
     WHERE ROOFING SHINGLES MEET A WALL
Where roofs meet brick veneer
Where the roof ply and the facia should meet, there in most cases seams’ to be a gap of 1-1/4’
Where two roofs meet
Window buck attachment. Masonry at garage door overhead. Foundation at bottom of wall.
Window flanges - no flashing over flanges, using house wrap as flashing, & house wrap w/no tape.
Window flanges not taped or counter flashed ditto for door headers.
Window flashing -lower behind stucco lsth.
Skylight- hop mop skylight installed on a pitched roof
Window flashing missing or cut short, No step flashing or one long I bend
Window flashing not installed.
Window flashing not properly inner laced, the side flashing not tucked under the top.
Window flashing under stucco.
Window flashings not lapped over dry-in.
Window flashings not 'shingled' properly or behind stucco paper at bottom. Improper roof flashings
Window tops/caps---Under siding over decks
Window using the flange as the flashing.
Windows
Windows and doors installation with out a Building Permit
Windows and doors installed over house wrap (Tyvek) improperly - water is directed right to the inte
Windows and doors not properly flashed causing water and wind leakage, chimneys not properly on reroof
Windows have improperly installed or no flashing at all. Flashing is damaged during installation or
Windows incorrectly flashed at top and sides
Windows installed in a one-coat stucco environment
Windows installed with flange over T1-11 siding.
Windows leak, etc.
Windows not flashed properly
Windows not flashed, doors not flashed, weeps and flashing not in brickwork.
Windows that are not self flashing
Windows with a fin installed in an oversize opening,
Windows/flashing put on incorrectly. Also, some do not realize wood doors require flashing
With brick veneer-1.roofs @wall intersections, 2.flashings @ windows,
3.flashings @ brick ledge
Wood deck on sleepers over modified roof at adjacent doors and windows.
Wood decks are rarely flashed properly.
Installers are unaware of new products that make it easier
Wood decks attached directly to the structure without flashing
Workman overlap incorrectly on occasion, and not correctly formed

Worn or installed incorrectly
WRAP UNDER FLASHING NO WEEP HOLES IN BRICK.
Wrong gage. Wrong material used.
Wrong gauge material and material improperly installed (channels water towards window or chimney)
Wrong height or width, length of overlap between sections.
Wrong material or improper installation
Wrong material used for flashing in some cases not following the manufacturers specifications
Wrong material used in contact with PT lumber. Forgotten over doors/windows
Wrong materials for the applications, improperly attached.
Wrong materials or attempting to utilize material of insufficient size.
Wrong nailing/securing of decks improper clearances to combustibles for woodstoves
Wrong size used.
Wrong type of material used, and not adhered to surface properly.
Wrong type or deleted altogether
Wrong type or installation
Z-flashing at horizontal brick to wood and **required u flashing** at seconds (frame) inspection
Z-flashing will not be installed between two vertical pieces of t-111
Appendix 3.0
Grading and Site Drainage

Please select the three grading and site drainage violations you see most often.

N = 1260
Grading 57%
Downspouts/ drainage controls 55%
Backfilling 44%
Grade too high 38%
Soil conditions 17%
Driveways 14%
Not Applicable 8%
Sidewalks 7%
Stoops 5%
Other (please specify) 5%

Actual Conditions just not in conformance w/ plan
Area around garage
Back-slope toward structure
Building pad too low relative to street/ road
Bulkheads
Concentrated discharge (sump pumps)
Compaction to low
Contrary to approved grading plan
Crawl space drainage - Footing drain disbursements
Cross-lot drainage
Decorative curbing or mow strips or planter strips
Densification of materials
Discharge of sumps next to foundations
Distance from slopes
Drainage device usage
Drainage through neighbor's property.
Elevations set to high or to low for new house
Engineering handles most drainage issues
Erosion control
Fall away from basement walls
Fill soil, expansive soils and soils reports
Final grade vs. septic system
Final grading and seeding.

Finish elevation too low in comparison to street
Finish grade not high enough to allow for drainage
Fire access grades
Foundation elevation
Foundation Perimeter Drain System
Grade certificate required before C of O,
Grade to low and no swales
Grading does not slope away from the structure.
Grading does not take water away from building
Home set to deep, into seasonal ground water
Improper slope away from foundation
Inadequate slope from dwelling and bad drainage
Insufficient berm at top of slopes
Lack of 2% slope away from building
Lack of ground cover
Lack of proper erosion control
Lack of proper swales between houses.
Landscaping
Landscaping impacting finish grades
Landscaping/mulch too high on siding or masonry
Local and site conditions not considered
Low spots in grading dumping onto another or stand
Maintain designed lot drainage through out const.
Negative grade at foundation
Newly developed lot drains to adjacent (existing) lot
No drainage control between sloping lots
No major problems
No runoff protection on the site
Not falling away 6' in first 10'.
Not pitching away from the building
Not proper slope from home
Not reading approved grading plans
Not pitched away
On site retention not provided

Our engineer handles it no problem
Overall poor lot conditions
Planters
Please see my comments in the next question.
Retaining Walls
Retention ponds
Roof drainage within 5’ from the foundation
Standing water around houses
Sump pumps draining to surface grade.
SUMP PUMP DISCHARGE
Swimming pools placed in swale
The city’s engineer handles all site plans and
The slope away from the house.
Unpermitted grading
Water entrapment behind bulkheads

Appendix 4.0

Please give an example …
Please explain what conditions are leading to these violations (i.e., negative grade at house leading to water ponding against foundation wall).

Lots adjacent to new home divert their water towards the new home- #2 inadequate side lot line swale #3 failure to make grade nearest the house slope away from the foundation
*downspouts design not directing water away from foundations *insufficient grade extending away from structure *lack of or improper footer drains
0 lot lines and installing retaining walls along property lines.
EXCAVATING CONTRACTOR WILL
ESTABLISH, IN ERROR, THE SUBGRADE ELEVATION FOR THE FOOTINGS AND WALL OF A STRUCTURE. 2 EXCAVATOR WILL NOT FOLLOW PLAN DETAIL FOR POSITIVE DRAINAGE AWAY FROM STRUCTURE
The floor elevation is frequently to low on slab on grade houses. This makes it difficult to acheive proper drainage away from the house when the land is not very level.

Failure to install proper erosion control measures prior to site grading.
Failure to slope away from foundation wall a minimum of 6'/foot (5%).
Grade not properly completed
Homeowner changes grade
Drainage trapped by sidewalks.
Improper slope at sidewalks, or no slope.
Downspouts drain into areas that are improperly drained. Such as number 1.
Grading plans not required on a single family building permit nor for land development.
Residential constructors are not cognizant of the compaction process.
Improper grading.
Downspouts and sump discharges not properly terminated.
not instaled according to plans not graded in accordance with approved grading plan
not graded in accordance to approved grading plan and to high up around the perimeter of the house.
Back fill in the garage areas with minimal to no compaction. Final grading is too close to the bottom edge of the siding. Drainage away from house.
Slope of back fill
Steep drive ways without proper culverts
Excavating too much initially and back filling with saturated material. Mis-cuts. disturbing the water table and natural flow of subsurface water.
Sump pump discharge located in area that doesn't facilitate proper discharge.
Landscaping companies changing final grade after C of O issuance. 3. Poor master grading plan for subdivision.
GRADING TOO FLAT NEGATIVE GRADE HOUSES SET TO LOW 2% SLOPE AWAY FROM FOUNDATION
Slope is wrong
downspouts installed improperly,
backfill is spoils and will not retain or drain.
addition built into an existing higher grade
additions final backfilling
adjacent lots, back to back, one grade higher that the other causing lower lo to flood in heavy rain.
Failure to install proper underground drainlines to handle run off from down spouts.
After backfilling, the grade around the foundation always settles because the builder has not properly compacted the fill.
After grading, ground does not slope away from home, instead it slopes back to house.
Contractors do not tie in gutters to foundation drains.
After the CO has been issued the owner or landscaper changes the approved grade to cause ponding and negative flow.
After the subdivision is completed the regrading of individual lots.
After-the-fact (post final inspection) landscaping installations/alterations

Again on residential. We have seen side entry garages that are backfalling into garage when drive is poured.
A lot of backfilling is done improperly, so settlement occurs after a few years.
AS you state, negative grade is the most common due to settlement, Junk in backfill.
At current time we require a proposed Topography and a 'as built' topography.
Attention to detail.
Back fill above waterproofing, Insufficient slope, Negative slope
Back fill too soon. Downspout exits too close to structure. Grading past damp-proofing level. (machine)
Back fill not tapered away from foundation
Back pitching towards house; grading too high at foundation.
Backfill not properly slop
backfill around foundation not high enough
Backfill around the home settles with first good rain and down spouts dump right into house- new ordinance for down spout tubing here.
backfill before CMU is braced
backfill before first floor deck is framed leading to cracked foundation walls
Backfill is above the floor level or weep hole in the brick. Driveway grade causes water to run in the garage.
Backfill next to foundation wall is not compacted. Final grade is completed without compaction of backfill next to foundation wall. Final grading is not done around stoops and under decks.
Backfill not compacted as it is placed against the foundation.
Backfill not properly compacted creating settlement after time. Engineered swales around homes being modified after final inspections
backfill on new foundations
Backfill settling at foundations after one or two years; resulting in ponding at the foundation wall.
backfill so high it covers lower portion of siding.
backfilling before the foundation is stabilized with floor diaphragm
backfilling- contractors wishing to backfill with material that was removed from hole.
Backfilling foundation before foundation has first floor deck on
backfilling to high along foundation
backfilling with clay soil
Backfilling without compacting, settling over time causes negative grade.
backfilling-without soils engineer soil conditions-heavy red clay soils present-
heaving Stoops-fill too high contractor flashes wood and pours stoops against
flashing therefore wood rot may occur
Bad seal at sidewalk foundation junctions , improper grade pooling water against
foundation
BASEMENT LEAKS
Basically it's because contractors/developers are trying to utilize every possible parcel of land available without proper drainage studies.

Because most new development is on sloping lots, the violation most common is that the final grading is not done when the house is completed.

Bringing the extra dirt from excavation of walks and driveway and piling on top of pads and placing in swales between lots. Creates conditions mentioned above.

Builders raising elevations of home sites after development plan and site elevations approved. This creates drainage problems on surrounding sites and driveway/sidewalks too steep
Builder cuts corners with sitework subcontractor who uses too little, or wrong fill material or poorly grades finish elevations. This results in washouts or severe settlement after rains.

Builders do not want to spend the money in concrete to get the foundation up high enough or spend the money on dirt around the house.

Builder not taking flat lot a into account
Builders are not aware of New Jersey Code and many other Towns are not enforcing it, but the state officials made it clear what they wanted.
Builders are not using best management practices to keep runoff out of the street and storm water system
builders are unaware of foundation heights relative to sidewalks and curbs until the problem presents itself.
Builders at not placing the foundation at the correct elevation causing driveways to be too steep and required drainage swales being impossible to install correctly.
Builders backfilling without adequate bracing, or loads applied to wall. Downspouts and leaders too short - do not lead far enough away from house. Too many contractors are not aware of what soil con.
Builders did not provide proper elevations for any type of runoff.

building garages on floating slabs are big problem, and grading of landscaping round house, planting trees to close to houses and later penetrating masonry foundations.

Building houses on stepped lots, thenhouses with ponding water and driveways too low garages having water coming into house.

Building on steep slopes amd in granite bedrock.

Carelessness
carelessness - drainage onto adjoining properties, no compaction so driveways settle, and dirt up on siding
Carelessness of contractor / subcontractor changes due to field conditions and lack of familiarity with existing grades, etc.

Cities or Townships should have professional engineering reviews performed prior to construction.

City of Mesa has alot of carports (open on 2 sides) converting to garages. One of the
common violations is the 6’ separation
between wood (siding) and soil, because
grade was set up for a slab on grade
comment above in particular!, and not
draining away from house
Concrete flat work after homes have been
finaled being done by landscape workers
are too high against homes as well as
planting area soils.
Conditions where the grade conflicts with
ADA requirements.
Construction debris dumped in porch
foundations Negative grade at house Rain
conductor discharges of only elbow type ‘B’
used instead of also type‘A’ for side
discharge.
Contractors in a rush to form the foundation,
before their grading is complete. Downspouts
not installed.
Contractor not backfilling all low areas under
homes. Landscaper installing beds against
home and causing water to pond.
Contractor not knowing or caring.
Contractor not paying close attention to the
slope of area.
contractor not taking responsibility for
drainage issues
Contractor placing the house at improper
elevation on the lot
contractor tries to lose basement dirt on the
lot -fills in drainage way backfill at house
settles leaving negative grade towards hose
Contractors and homeowners alike do not take
into consideration that the bushes they plant
will grow and cause drainage problems.
contractors don't know what they are doing
Contractors fail to grade so that water drains
away from the structure and grades so that
the water drains onto neighboring property
contractors failure to address the soil and
drainage problems during construction and
after the final grade.
contractors in a hurry
contractor's negligence/education
Contractors not grading correctly
Cracked foundations and differential
settlement
Curb grade is higher than house foundation.
Depth of footing (monolithic)does not meet
the code. Failure to backfill against
monolithic forms. Failure to conduct water
away from termite treated area.
Descending driveways from sloped lot
exceed the 5’ grade slope away from
structure with no provision for drainage (ie.
French drain).
Designed landscapes after certificate of
occupancy has been issued.
desire to to quickly backfill, failure to check
the civil/site drawings for elevations, finish
grading for aesthetics not drainage
deviation from approved plan that requires
draining through landscaped areas via
natural swales, by installing catch basins and
piping runoff to curb cores, without city
approvals.
difficulty of appreciation of how water acts
do not have many issues pertaining to or
associated with grading/drainage violations.
do not inspect grade and drainage issues
Does not follow grading plans
Don't back fill with proper material. Most set
home to high out of the ground because they
don't want to haul fill away, forget to extend
downspouts away from building
Down spouts and drainage controls not
installed properly
down spouts are not leading far enough
away creating ponding by foundations, soil is
of poor grade for back filling which creates
the ponding near the foundation
Down spouts not connected to piping in
ground and grade too level or pitched toward
house.
Down spouts not using property length of
extensions away from the foundation wall.
downspout extension may need installed, backfilling poorly installed causing the grading next to the foundation to hold water. downspouts and footer drains and grade slop from house Downspouts and footing drains not required to terminate into storm drain. Downspouts are not installed to the storm drains, that cause runoff problems with neighbors and become a public nuisance. Downspouts are not properly run away from foundation Downspouts being aimed to trouble prone areas Downspouts do not have proper extentions on them to carry water away from structure. Reverse pitch on driveways along side of house. Concrete has dropped (sunk). Downspouts do not lead away from building, soil conditions are not considered in drainage plan, building is backfilled with inappropriate material Downspouts do not move water far enough away from foundation. Poor grading allows water to enter into foundation walls. Downspouts draining across sidewalks (safety) Forceing walkouts creating water runoff issues erosion, and back fill settling, excess stormwater runoff to adj property downspouts leading water to driveway or sidewalk causing ice build up and run off to street downspouts left to drian straight down and not taken way from structure,grading nnot take away from stricture Downspouts not being properly directed away from the house, grades that settle after time, thus producing reverse grades due to lack of compaction or improper fill being used. Downspouts not directing water away from the foundation. grade to high against foundation and yard not properly graded to allow runoff Downspouts not drained properly. Grading not sloped properly. Backfilling not enough - settles too much later. Downspouts not draining away from house, driveways not sloped away from house, not enough slope and grading from foundation. downspouts not extended far enough cause water ponding around foundations. backfilling and improper grading leads to erosion and drainage problems. Downspouts not piped to seepage bed. Downspouts not properly install and the grading not properly completed. Downspouts not taken far enough away from house and draining on to lot next door. Negative slope toward home. Downspouts run into dry well that was improperly sized based on soil drainage characteristics. Downspouts simply dump at footing. Soils to close to siding downspouts that drain too close to foundation leading to water infiltration into basement or crawl space negative grade around foundation downspouts that terminate at the foundation. downspouts, gutters drainage from one parcel of land to other Drainage of lot effects adjoining lot Drainage on to the lot next to new job site Drainage onto neighboring property Drainage swales from downspouts leading off site and onto another property. Soil conditions being such that very little percolation taking place, causing surface storm-water flows that were unplanned Drainage systems not draining away from building causing erosion near foundation. Draining towards the house instead of away.
driveways sloped towards garage without drains. Drainage not diverted away from foundations.

Driveways are too steep. Downspouts run to grade but grade does not fall away from house.

Driveways pitched toward dwellings and garages and settling around foundations.

Driveways running on to side walks and roads.

Driveways to low allowing water to pocket in some areas.

Driveways with lack of design in the swell to prevent water to advance to the structure.

Due to the geographic area we are restricted by a 100 year flood plain that in comprises over 30% of the Villages residential land.

Dumping water on neighbor's property.

Either backfill not placed properly or little or no grade away from structure.

elbows missing on downspouts, allowing water to decay soil. landscaping retaining water or blocking the flow.

Elevations are not set properly, too much fill or grading is not accurate and caused drainage to flow improperly, other structures/objects obstructing flow.

Erosion control is always a problem.

erosion control, site drainage

Erosion control. Grading to prevent water from going into house.

Even with the proper grading without the final grade - settling of backfill is still a problem.

Larger roof areas without drainage control will be a continued problem w/grades.

Exactly, negative grade at house. Also lack of compacting the backfill around the foundation, which leads to settling which in turn leads to ponding of water.

Excavators are usually on to other projects, owner can’t get them back for a final grade.

expansive soil here requires extensive soil conditioning. extremely important to have no ponding near the structure.

Expansive soils, roof drainage not being properly routed to an approved location and ponding at foundations.

Expansive soils. Accessibility for commercial sidewalk slopes. Drip screed covered.

Failure of contractor to grade lot to conform with subdivision grading plan or attending to grading principles of drainage.

Failure to account for actual site condition in the design.

Failure to account for settlement at or near foundation.

failure to compact backfill, short leads on downspouts

failure to follow approved construction documents, lines and grades plans

failure to keep water flow away from structure

Failure to plan for grading at the beginning of a project.

Failure to properly settle/compact soil before final grade

Failure to provide appropriate grade around the entire home.

Failure to remove unsuitable soil from site and then reuse as backfill material.

Failure to keep water on one's own property and allowing it to run off into neighbor's property

Filling gutter line w/concrete to create a smooth entry flooding street, sidewalks raised then sloped toward adjacent yard, downspouts landing in an improper grade.

FIN. GRADE TO PRESS. TREATED MATERIAL CLOSE.

final finish grading not sloped correct

Final grades are not sloping from residential backyards towards the front yards. With subsequent heavy rains, ponding issues occur in backyards.

Final grading done poorly.

Final grading fails to compensate for settlement especially from the foundation to about 5 feet.

Final grading not completed in the field as per the approved grading plan. Also, no
common sense when placing the
downspouts.
Final inspection prior to loam & seeding.
Settling beneath bulkhead enclosure.
Final lot grading to divert water away from
foundation walls
Finish elevation too low in comparison to
street
finish grade done without adequate
compaction causing excessive settling and
poor drainage, blocks and or tile not in,
sidewalks set in to high causing ponding
between foundation wall and walk.
Finish grade not sloped away from the
building.
Flat lots - 6 in 10 requirement not met. Roof
drainage not installed where soils conditions
require gutters and downspouts.
flat or negative grade along foundation
flat to negative grade leading to house.
flat work not taking into account drainage
from existing areas.
Flatwork and landscaping added after final
inspection.
Footing drain not installed properly, clay
does not drain well in this area.
Foundation backfill settlement
Foundation drains a not installed properly. As
mentioned above the proper slope away from
the home is not enough. The soil conditions
a very different from lot to lot and backfilling
has is a problem.
foundation elevation not check at start of job
and final grade not finish to code
requirements
foundation elevations to low leading to
ponding in crawl space
Foundation not exposed for 6' above grade
Foundation too low
Foundation wall not poured to correct
elevation.
Frozen dirt used for backfill during winter,
non compaction of soil
Gading is not sloped properly.Slopes toward
garages under
Generally the grade around a structure is too
high and not sloped away from the
foundation or to drain inlets.
GOOD EXAMPLE! negative grade at house
leading to water ponding against foundation
wall
GRAD TOO HIGH.
Grade abutting the house wall is too high &
does not provide the 8 inches of foundation
wall above grade. Also not enough slope
away from the building as well as ponding at
various spots on the site.
Grade being to flat.
Grade changes from new to existing houses
Grade flat at foundation - not sloped
grade gets finished topped w/ topsoil and
results in contact of soils and wood
grade height not maintained
grade is generally close to framing or non
treated lumber
grade is left too high at top of foundation (not
within 6 inches of top of foundation)
Grade is not really finished because of the
lag between the contractor and the
landscaper.
Grade is too high next to the building during
backfilling. Some times covering up the
Mechanical equipment drains or exhaust
vents for the dryer.
Grade less than 8' below sill plates.
Driveways graded to steep.
grade levels to high resulting in diversion of
water to adjacent property, ponding in
downspout areas.
Grade must match approved site plan
grade not 6' in 10' not going to a storm water
system. Group III soil water ponding in yards.
Landscapers/home owners creating negative
grades.
grade not corrected after settling,
downspouts are not terminated 5' from wall,
backfilling at walk out basement doors is not
sufficient to run water away during heavy rain

ICC/NAHB/ICC Foundation
Survey of Common Code Violations
Grade not properly sloped away from building. Soil eroding from the property. Grade not sloped away from house, hills in area directing large amounts of water toward home, backfill not compacted Grade or sidewalk back pitched. Grade between foundation and walk or driveway too low. Grade sloped away from home, down spots not having splash blocks and extensions, ditch line grading problems. Grade sloped toward structure, runoff routed to close to foundation, grade lower at origination than at termination of runoff route. Grade sloping toward house. Grade starts to close to siding, Grade is not sloped away from foundation enough and no tip out's or splash blocks below downspout's. Grade to close to the siding and not pitching away from the house. Grade to high and insufficient slope. Grade to high at foundation walls and voids created with backfill material being to recky. Also lack of backfill being tampted. Grade to high not have required clearance for untreated wood products. Backfilling with wet soils cracking foundation walls. Not grading for proper fall away from house causing water to pond at walls.
GRADE TO HIGH, BUILDERS WANT HOUSE HIGHER THAN EXISTING GRADE. Grade to low at waal line allowing ponding. Not enough grade slope away from foundation. No roof gutters or down spouts. Downspout extensions not installed. Grade too close to siding. Grade too high. Grade too high at structure, do not have minimum six inches from soil to untreated wood. Grade too high to brick, grade not matching final drainage surveys. GRADE TOO HIGH, NOT ENOUGH CLEARANCE FROM GRADE TO FRAMING; TRASH & DEBRI IN THE BACKFILL. grade towards house, grade too high, or down spouts not taken to approved disposal. Grades slope toward house after backfill has settled. Grade to close to OSB sheathing. Grades too high result in wicking after the landscaper fills-in. Grade-usually when individuals want to locate a new building at the top of a hill Fire access roads allow 10% However current day Fire Engines are capable of negotiating higher grades. Grading and down spout violations are the most common and are addressed at final inspection before occupancy is issued. Grading and site plans not detailed enough. Grading at the yard from rear to front after fencing or pool construction where the fill to be removed is not taken off site or incorrectly graded because of the wishes of the home owner. Grading away from home but grading water to side or rear of lot and not to street or other means of discharge. Grading conditions from no soil test. Down spouts with no proper angle, flow of land going in wrong direction after grading. Grading in general is not considered to the extent necessary at planning and excavation time. Grading incorrectly done or home owner changes. Grading is not sloping away from house a 3’ min. pad surrounds the house but does not slope. Grading lots too level and creating ponding water around the home. Sometimes the rough grade will work but the final grade with mulch, grass and other landscaping the grade no longer works. Grading not complete before final and backfilling too early. Grading not done at proper time making footing coverage incorrect and or incorrect siding clearance. Grading not flowing towards the front.
grading not pitched from house enough where land pitches toward house
Grading not properly diverted away from the foundation
grading occurs too high with the dirt too close to the siding.
Grading pitch toward the foundation. Field installers cannot read a site plan/grading elevations.
Grading so water drains to neighboring properties. Backfill placed too high at foundations.
Grading that diverts water to adjacent property. Expansive soils that are not compacted properly
Grading to another property instead of to public drainage.
Grading too high, inadequate swale, negative grade at house.
Grading where the residence is close to a property line and there is an elevation change to the adjacent property.
Grading which will not allow rain water to move away from structure.
Ground slope back to house, ponding water, gutters draining by slab, insf. drainage between lots
Hatchway bulk heads @ finish grade. swails not maintained, yard drainage not maintained
High ground water table in area, builders are reluctant to set houses at proper elevation and finish grade is not established or maintained when landscape contractors finish
high shrink/swell soils
homeowners landscaping next to house without consideration of positive drainage away from house
Homeowners using dedicated drainage easments with no regard to others properties affected by the one drainage easement. Poor locations of structures too small to be code regulated.
homes built close to property line (3 to 5 ft) leave little room for proper slope away from
the foundation. Often creates non-compliance with soils report requirement of 1:12 slope for 10 feet.
Homes not being 'set up' high enough to allow for proper grading.
Homes that are built on steep slopes making proper grading difficult.
Honestly- stupidity and indifference to items the customer probably will not notice until too late.
house elevation to low - cannot get positive drainage away from it. - poor backfill material
House foundations and grading not high enough to allowing grading to curb
HOUSE IS NOT RAISED UP HIGH ENOUGH POOR GRADING
house not positioned correctly to allow the best chance for storm drainage to flow away from the structure.
house started too low on site
Houses are being built to quickly for the proper settlement of the backfill and inspections are needed right away for the property to be sold. No one going back after a spring thaw to redo site grade
Houses are being designed with first floor elevations too low.
Houses are set to close to grade, and water is not directed around the building, but at the structure. Swales need to be constructed to direct the water to the street or an approved drainage location
Houses being built so close to each other and lack of supervision
Houses too close to properly grade.
I only do plans checks and inspections for fire sprinkler and fire alarm systems.
 Improper grading.
Improper backfill by contractor's.
Improper Backfill Material, Either no french type drainage systems being utilized or improper systems
Improper backfill materials create settling close to structure.
Improper backfill materials or lack of perimeter drains.
Improper backfill, not taking time to properly bed drainage in
improper backfilling, against foundation wall leads to soil settling and grade then drains against foundation, instead of away from, downspout drains often slope towards the foundation.
Improper backfilling, improper grading to allow water to flow away from structure
improper clearance from siding materials due to poor grade planning before landscaping is completed and the proper use of grading to protect adjoining properties.
Improper compaction
Improper compaction around and over structures (foundations, utilities, stoops).
Improper materials used in backfill - trash, rubble, scrap lumber, etc.
Improper compaction at backfill around the house and no coordination between builders on site grading of the lots
Improper compaction grade not accounting for flat work, blocking flow
Improper compaction of backfill along with not grading the entire site properly causing settling around foundation and later creating water collection areas at foundation.
Improper compaction of fill next to the house.
Improper compaction or improper fill materials used for the situation.
Improper compliance with IRC Section R403.1.7.3.
improper cut and fill practices
Improper design and lay out of the building based on the elevations of the property. Not meeting the minimum grade slope requirement of the code.
improper drainage after 10' from house wall
Improper drainage, exterior grade higher than interior crawl space grade, grade onto adjacent property.
improper drawings showing existing grade and purposed grade.
improper fall due to waterproofing being placed to low or basement slab poured to close to existing grade.
Improper fill compaction, grades/slopes in the negative, garbage/construction waste in drainage tranches
Improper finish grading at foundation wall
Storm water not discharged appropriately
Improper finished grading due to topography of the existing site
Improper foundation elevations
Improper grade and installation
Improper grade away from structure
Improper grade not sloping away from structure like code requires, weep holes missing, down spouts not installed properly
Improper grade on all three site drainage violations.
Improper grade, no gutters at eave...
improper grades and steep terrain where it makes it nearly impossible to get good drainage
Improper grading around structure foundation and lack of minimum clearances to stucco weep-screed.
improper grading at house elevation too low or high
Improper grading at house leading to ponding and improper drainage
Improper grading away from dwelling. Not backfilling to meet frost depth.
Improper grading of backfill. No control of water distribution at down spouts.
Improper grading of property. Settling of soils no compaction
Improper grading or landscaping leading to water flow toward neighbor or structure. Poor soils conditions outside the pad resulting in extensive vertical movement resulting in damage and drainage issue
Improper grading resulting in water retention, but improper installation of site drainag in which the corrugated underground is missing filtering process.
improper grading to allow water to drain away from house.

**IMPROPER GRADING, DOWN SPOUTS NOT EXTENDED FAR ENOUGH FROM HOUSE**

improper gutter routing leading to large amount of water either being dumped onto the foundation or causing the septic tank failure (septic tank failure is what I see the most) due to improper drain

Improper landscaping after CO issued

**IMPROPER MAINTENANCE OF DOWNSPOUTS**

improper material or backfill prior to masonry cure

Improper or inaccurate elevation measurements

Improper or no compaction of backfill.

Downspout not properly extended to approved location.

Improper perimeter drains. No rain gutters or downspouts installed

Improper pitch

Improper placement of backfill on sloping lots, poor grading techniques

Improper separation from wood siding and top of foundation. Improper or no compaction of backfill 5’ extensions missing

Improper slope away from dwelling. Outside grade higher than crawl space grade

Improper slope away from structure Lack of compaction for backfill Slope and direction for roof drains

Improper slope away from structure, etc.

Improper slope away from the structure

Improper slope from buildings. Contractor trying to make walk out basement home on a lot that was not graded for it, leaving home in a bowl.

Improper slope from structure, downspouts not terminating 1 foot from structure, sidewalks not sloping

Improper slopes away from foundation, downspouts directed too close to property line, swimming pools placed in drainage swale.

Improper sloping away from structure, improper drainage from subfloor area to exterior of building.

Improper soil compaction, negative grades.

Improper soil conditions grading not according to code or plans

Improperly installed soil erosion controls that lead to soil erosion. Improper grading causing ponding at the house, resulting in interior water damage.

Improperly poured concrete

In Alaska during the freeze/thaw cycles ponding due to catchch basins not properly draining roadways along curbs are a problem with this type of climate the cause significant ponding along curbs.

In many cases roof runoff causes water to stand near foundation walls due to not having positive drainage away from the house

In soil

In the county, we dont require grading plan for any addition, patio, landscaping, pools that disturb the drainage flow at the back and sides. not following the soils report recommendation, no qaa.

Inability to remove water from building foundation naturally.

Inadequate amount of foundation wall showing between the grade level (sod or walk) and the lowest point of the wall cladding (brick or siding).

Inadequate control of storm water runoff from roof drains leads to wet foundations. Our expansive soils require a good drainage system and control of ground water.

Inadequate initial height of foundations with respect to curbs/gutters.

inadequate slope

Inadequate slope away from foundation and backfill to high against foundation.

inadequate slope away from the structure inadequate wood to earth separation
inadequate slope from foundation to street
uninformed homeowners and contractors
inadequate slope of grade away from
structure.
Inadequate sloping away from house. Piping
or extension of downspouts away from
foundations. Inappropriate erosion controls
during construction.
Inadequate storm water control measures,
properties draining to neighboring properties
or on to the public way.
Inadequate compaction of back fill.
landscaping contractor flatens out slop next
to foundation, lays sod and waters, 2 months
later back fill next to house has settled 4 to 6
inches.
Inappropriate backfill being placed against
unbrace poured concrete walls, producing
cracks
inappropriate backfill material and grading so
as to shed water to neighboring properties
inattention to proper slope away from
building
Incompetent contractor or owner.
incomplete landscaping installation leads to
grade instability
Incorrect downspout placement. Negative
grade, causes bad septic problems and poor
drainage.
incorrect grade
Incorrect grading at building foundations.
Roof water runoff poorly designed.
Incorrect grading, not in accordance with
plans, basically ignoring both horizontal and
vertical controls specified on drawings. Field
changes that are not coordinated with the
designer.
incorrect starting heights lead to house too
low relative to site
inexperience of 'builder' and grading
contractor. Not considering the surrounding
conditions of the area around the lot
inexperience personal for the grading of the
project and elevations incorrect on site plans.
inexperienced housing contractors. Not
knowing how to set a house on a lot. We do
not require licenced building contractors in
this whole area because of the NAHB and
MOBA!
Inexperienced site personnel.
Infiltration tests are taken in dead of dry
season, not wet season and poor soils
conditions related to slow or no infiltration
ability of soil.
inproper grading
Inproper grading leading to water seepage.
Foundation walls not parged properly after
demolition of adjoining property.
inproper or non-existant soil reports leading
to improper drainage control issues
inproper soil using fill instead of soil
downspouts drainage into neighbors property
INSTALLATION OF LADSCAPING CURB
AROUND HOUSE THAT CONTAINS RAIN
WATER RUN OFF.
Installation error
Installing flatwork prior to establishing proper
final grade.
incompetent care in setting final grades (as
shown on approved plans) around house.
incompetent clearence from grade to bottom
plate negative or inadequate grading
incompetent clearance from grade to frame
construction; reverse grades at house wall;
backfill before foundation walls braced
incompetent grade away from home, floor slab
too low.
incompetent/inadequate foundation drains
inward slope toward the property
It is usually because negative grade at the
house.
just ponding on site
KNOWLEDGE AND EXPERIENCE OF
CONTRACTOR.
lack of adequate compaction in excavated
areas and drainage systems set to flat.
Lack of attention to overall grading effects of
many properties concentrating drain onto an
adjoining property
Lack of backfill compaction and settling of soil
Lack of compaction and negative drainage over highly expansive soils
Lack of compaction, improper grade after lawn sprinkler installation.
Lack of contractor following up on final grade, on his punch list items.
Lack of forthought in setting house in relation to final grade
Lack of guttering, too short of splash block on downspout, negative slope to the house, no foundation drain system in place
Lack of knowledge on the builders part on how to correctly grade for homes. Lack of sustainable green measure to address the problem in a permanent nature.
Lack of knowledge regarding proper grading and slopes
Lack of knowlege of grading requirments lack of planning at the grading stage. Lack of policy and procedure of Building Department
lack of planning by the contractors lack of planning, site crew drainage designs. Topo maps absent from plans.
Lack of planning to meet code grade and elevation requirements
Lack of proper backfill compaction.
Lack of proper compaction and contractors are rushing jobs due to a lack of manpower.
Lack of proper compaction when backfilling around foundation which causes settlement leading to ponding around foundation. Grade too high and close to sill.
Lack of proper erosion controls.
Lack of proper lot prep creates drainage issues and water moving to create problems on adjacent lots.
lack of proper slope away from house, pitched in sidewalks, driveways, causing negative grade at foundation, lack of gutter extensions, stoops that settle against the foundation causing damage.
Lack of proper survey. Plans do not reflect true site conditions.
lack of slope away from structure
lack of supervision in respect to following the grading plan
Lack of training/skill... poor workmanship
Lack of understanding for a need to have grade slope away from the foundation.
lack or inadequate perimter drainage in poor soils
Lack site grading or proper slope causing water to pond against foundation and causing erosion or flooding.
Landspace after final grade aproval.
Landscape raising grade to cause violation Landscapeators mounding their finish material so you have negative grade away from structure
Landsaping after fact brings grade too high landscaping alters planned drainage Landsaping being placed after the final inspection Landsaping contractors unaware of building code requirements placing mulch and soil in built up areas directly against house or reconfiguring existing drainage. landsaping slopes to house Landsaping too close to untreated wood landsaping usually tries to hide the foundation. grading and berms many times places the water draining toward the house or up against the wood siding. 99.9 % of these problems occur after final occ. lazy contractors Lazy landsaping! leads to water against foundation wall Less than 6 inches separation from top of foundation to grade. little to no grade from home to adjoining yard LOTS ARE TO SMALL FOR ADEQUATE PERMEABLE FOR DRAINAGE AND ARE RUNNING OVER INTO NEIBORS LOTS. Lots draining to one another, downspouts adjacent to window wells, not grading to approved engineered grading plans.
Lots improperly graded, sidewalks placed on grade not recessed, swales are filled or not sloped properly
Lots not graded according to survey or site plans allowing water to pond before getting to the drainage easement. Backfill material settlement causing negative grade at house. Low compaction at foundation edges, which leads to ponding water several months after CO issue.
Making sure the addition or house is not built in the water table or have the ability to drain water away from foundation.
Maintenance of property by property owners material backfilled not suitable material and any structure placed (stoop) over the backfilled area settles
minimum grading and setbacks at side yards with no real room to effectively get water off lots.
Minimum slopes / grades Lack of quality control methods for compaction.
Incompatible fill materials where applicable. Misunderstanding as to the purpose of sloping grade away from the structure.
Moisture under the house
Monolithic slab finished floor elevations too close to finished exterior grade, nowhere to go with drainage. Driveways at same grade as top of floor slab, no allowance for drainage.
Most are caused by lack of good planning prior to setting the house foundation elevations.
Most people don’t understand their are retention codes
most problems occur in zero lot line of small PUD lots. Future landscape alters original grade
mostly grading the pitch towards building
Mostly negative grade near the house.
Commonly caused by landscapers performing work after final inspection.
mostly negative grading
Mostly no splash guards

Mostly not enough slop to grade from building.
mostly same as above
Mulch and dirt to high next to house foundation
narrow lots without area to grade away from home. Short foundation walls, frost coverage and exposer.
NEG GRADE; NEG SLOPE ON DRIVE; IMPROPER FILL
NEG. GRADES: POOR SITE
PREPARATION SO GRAVITY DRAINAGE DOESN'T WORK, POORLY
ENGINEERED CATCH BASIN/RETENTION BASINS
neg. grading creating ponding. and grading not to the master plan
negative at house
Negative drainage and ponding in specific areas of the yards
Negative drainage and required on-lot ponding.
Negative drainage around permanent structures should not occur if proper design and constr practices are maintained, along with adequate inspection and enforcement.
negative grade
negative grade
negative grade
negative grade
negative grade
negative grade
negative grade
negative grade - ponding of water against house backfilling to create drainage problems on site and on adjacent site lack of control for run off at downspouts along with negative grading
negative grade & ponding as a result
Negative grade (reverse slope); insufficient grade or slope away from house; downspout leader not diverted away from house or not properly connected to boot or underground drain
negative grade against foundation walls, downspouts not carried away from structure
negative grade allowing foundation wall ponding, lack of splash devices and improper compaction of backfill
negative grade and lack of downspouts leading to severe degradation of foundation and wood components
Negative grade and ponding due to inadequate drain system
negative grade and poor soil conditions leading to ponding in crawlspace
negative grade and settlement
Negative grade around the home, too short of downspout extensions and general lack of attention to detail
negative grade at foundation(s) walls and driveways
Negative grade at foundation, drainage not properly carried away from foundations
Negative grade at home, driveways and walks draining into steps or yard.
Negative grade at house
negative grade at house
negative grade at house
Negative grade at house
negative grade at house
negative grade at house
Negative grade at house
Negative grade at house and failure to install control to direct drainage away from house at downspouts
Negative grade at house and lack of gutters/downspouts create water ponding against foundation wall. Turf establishment not complete leads to erosion.
Negative grade at house and lack of proper drainage in yard.
Negative grade at house due to initial construction grade not back filled and graded.
Negative grade at house is #1. Along with grade starting too close to top of foundation. Negative grade at house leading to ponding.

negative grade at house leading to water ponding against foundation wall
negative grade at house leading to water ponding against foundation wall
negative grade at house leading to water ponding against foundation wall
negative grade at house leading to water ponding against foundation wall. Back filling without compaction causing settlement.
Negative grade at house leading to water ponding against foundation wall. Diverting water on to neighbors property. No downspouts to divert water away from foundations.
negative grade at house leading to water ponding against foundation wall
negative grade at house leading to water ponding against foundation wall; downspout incorrectly installed (angle or direction); grade too high above slab line
negative grade at house leading to water ponding against foundation wall).
Negative grade at house leading to water ponding against foundation wall. Rocks in backfill material placed next to utility lines. Downspouts terminating where water will not drain away from building.
negative grade at house leading to water ponding against house or going into basement, sometimes ponding against a neighboring house
Negative grade at house leads to water ponding against foundation wall. Also, leads to water accumulation in crawl spaces.
Negative grade at house most often
negative grade at house or water being shed to neighboring buildings
negative grade at house ponding next to foundation wall grade not steep enough to 10 feet away
negative grade at house results in ponding, grade too high resulting in not enough block exposed.
negative grade at house, downspout next to window well
negative grade at house, downspouts not run out properly/far enough away, landscaping trapping water between sidewalk and foundation causing wet soil conditions and infiltration into bsmts/crawl space
negative grade at house, improper backfilling, and improperly placed downspouts or lack of needed backsplashes.
Negative grade at house, improper slab placement
negative grade at house, poor compaction and grades too high to scimp on concrete.
negative grade at house, sidewalk grade too high -- holds water
negative grade at house. This condition also tends to occur after backfilled soil has settled (i.e. clay soils) inadequate % grades along lot lines and within swales leads to ponding and grade saturation
Negative grade at house; back filling with unsuitable materials; footing and downspout drains not being run independently; roof and footing drains not directed to a proper point of dispersion.
negative grade at the house, not enough slope from fence line
negative grade causing water under house
Negative grade Downspouts not connected to drywells Drainage Capacity not meeting min. requirements Backfilling with unacceptable material
negative grade due to settling of backfill.
Negative grade exterior of building. Crawl space grading improper.
negative grade from street to house, floor level too low
Negative grade is a contributor, Contractor negligence, soil settlement over short period of time
Negative grade is most commonly found and needs to be readjusted.
Negative grade is the greatest cause
Negative grade largely due to size and shape of lots.

Negative grade leading to ponding against foundation, water trapped between house and sidewalks or driveway, unprotected swales or downspout drainage paths.
Negative grade leads to ponding
negative grade next to the foundation, generally from the advanced settlement as a result of foundation backfill
Negative grade on downspouts
Negative grade on driveways causing water to run into garage
negative grade or to slight a grade change for proper drainage
Negative grade Ponding on stucco and wicking up wall
negative grade to house
negative grade to house --- developer, landscape company and contractors not working together
Negative grade toward house, positive grade toward neighbor's driveway
Negative grade towards the dwelling and leaving flat or ending conditions
Negative grade, bad slopes, clay soil.
Negative grade, improper compaction
negative grade, improper backfill, not in lifts
negative grade, low driveway, downspout extensions not installed or improper location of downspouts
Negative grade, no gutters, short leadouts, no compaction of backfill.
negative grade, vinyl siding down to low and mulch to high, no leaders on the down spouts
Negative grade, water does not flow away, or to a drain
Negative grade; poor soil conditions (tight soils) in this area
negative grade; settlement, planting beds/landscaping
negative gradeing, downspout termanation
negative grades
negative grades and improperly drainage away from the home.
NEGATIVE GRADES AND PITCH
negative grades are the biggest problems
negative grading
negative grading
negative grading around foundation
Negative grading at foundation, grade too high from foundation to street
Negative grading at house compounded by downspouts deadending at the foundation without splash blocks.
Negative grading at house, engineered elevations incorrect.
Negative grading that comes from poor backfilling
negative grading toward house, lack of downspout extensions, no splash blocks
negative grading, berm up landscaping material next to foundation, etc.
negative grading, grading adjacent to driveway's sloping towards the drive.
Negative grading, proper backfilling - not compacted
Negative grading. Ommision of downspout extensions.
negative grade leading to ponding
negative or insufficient grading away from house
Negative or no grading at all causing ponding water around structure.
Negative pitch in driveway, grade pitched toward foundation
negative/flat grade
NEGATIVE GRAD AT BUILDING
negative grade i agree and also downspots not extended far enough
Negative grade on final inspections Backfilling to soon
Negative grading that tends to hold and contain water. Excessive grades on driveways that if left alone would create an excessive slope for parking cars or entering the garages.
neglected gutter maintenance and volunteer tree growth.

New landscaping for a new house that the owner or contractor back fill with a lot of soil without proper drainage design
No compaction of grd-work/broken walks & drives.PIP Fdn-early bkfill=fractioned walls.Grading:Supt/Contr.onlylook@immediate site area;not overall master grd plan.Long term effect.
No compaction, leading to settlement around the foundation and the resulting water ponding.
No consderation to merging neighbors yards
No consideration for their neighbor. Water flows away from their house toward neighbors.
No downspout drain pipe, Grade too high on up hill side
no downspout extension
no drainage plan in place. drainage plan not followed.
No fall away from foundation no getting drainage away from buildings, or keeping water on the same lot
No grade or reverse grade.
No landing, stairs immediately at outside of door. Driveways with little or no slope away from the garage door opening.
No plan for proven drainage. Improper placement of DI's. Landscaping goes in with no regard to drainage.
no positive fall away from foundation
NO POSTIVE DRAINAGE ALSO NEW HOMEOWNER NEED TO KNOW THE IMPORTANCE
no removal of storm water; lack of proper grade angle
No roof drainage system installed at all.
Failure to extend downspouts away from the foundation. Negative grade at foundations. Bulkheads set too low/grade too high.
No slope
No slope away from structure. If no storm water system is available then the home
Survey of Common Code Violations

- Owner can discharge the water to the lawn in one and two family dwellings. No soil report - Plan checker did not look at grading carefully - Site drainage including downspout always not included in the contractor bid......
- No swell between homes, violation of angle of repose (45% from foundation bottom) usually around retention area, excessive aggregate in foundation back fill.
- No thought process for run off water
- No where to go with it grade
- Non Compaction
- Non-qualified individuals trying to conduct drainage without proper layout to ensure positive drainage.
- Normally, builder unwilling to build up pad to obtain proper flows away from house. not applicable
- not being aware or contractors not concerned. Also not allowing for finished landscaping and then it becomes a problem when it is installed.
- Not compacting backfill, not grading to plans, clay conditions in the area not compacting the backfill against house usually the trenches for utilities
- Not considering grade between residences when making initial cuts/fills. Grading/slope issues seem to be an afterthought rather than integral to initial lot planning.
- Not controlling the excessive amount of water from a roof allowing it to puddle at the foundation Not enough attention is given to to grade or sloppy grade work.
- not enough extension from down spouts
- Not enough slope away from building. Not enough slope, Nothing installed to carry water away from house
- Not establishing 6' below slab in the first 10' Having inadequate clearance on dryer vents not extending downspout far enough away from foundation
- Not following approved grading plan.
- Not routing downspouts to proper approved location.
- not following code or drawings
- Not following final grade plans, Proper cut-out at garage and not following top of foundation set by our engineer
- not following site plans
- Not following the official survey
- Not following the plans, or plans are wrong
- Not following the subdivision drainage plan.
- Not grading according to plan and grading that allows cross lot drainage Not Grading correctly to divert water from house
- Not having proper fall away from home. not knowing the code requirements
- Not looking at grading plans to start with. No grade at house.
- not moving water away from foundation not paying attention to grading around structure. Leaving low spots or grading the wrong way.
- Not pitched from house, downspout drainage not carried away for house
- Not proper compaction around foundation leading to settlement and water infiltrating into crawl space or basement. Simple noncompliance with grading plans Gutter downspouts terminating at foundation not proper grade, proper type of soil and erosion control not in place not properly backfilled, soil settles and ponds water @ foundation, elevation incorrectly established for sidewalk/driveway then retains water @ foundation
- Not properly graded or discharging storm water to proper means. not properly grading not properly grading surface at building. Not providing positive drainage away from the structure during construction and after CofO
- Not reading plans. Skipping compaction requirements. Lack of active participation with appropriate engineer of record.
Not removing excess dirt at end of construction.

**NOT SLOPED 5’ FROM FOUNDATION**
Not sloped away from house
Not thinking thru existing site with proposed improvement.
Not using clean backfill mat.
Not using good fill dirt or not using clean sand around plumbing.

old site plans with poor (outdated) water control plans and the builder having little options
Omission of G&D plan in landscape planning. Poor pad construction planning.
Ignorance of drainage or retention requirements

On home additions sometimes the grade ends up too high because of the original grade of the lot and has to be regraded
Our City has a storm water maintenance permit along with the building permit. Before a C.O. not only for the home, the grade under and around the home and lot must meet the storm water requirements.
Our jurisdiction sits on a plain and grading with the correct percentage of slope is critical or the stormwater will not flow.
outside of your example, extensions being added to the downspouts which are directed onto adjacent properties or not extended at all away from the foundation.
Owner unaware of what he is doing.

**OWNER WANTING A NICE FLAT YARD AND BASEMENTS TO LOW FOR THE AREA**
Owners after occupancy have landscapers modify the site and this creates many problems.
People always wanting to be higher than the next house
People not checking with the local building department.

perimeter lot grades incorrect, settling of backfill, other improvements installed to create ponding issues ie sidewalks, landscaping, driveways placing large stones, no compaction in lifts, pitch back towards house, too much pitch away from house creating water run off to adjoining property, shallow areas under decks
ponding
Ponding ponding
Ponding against foundation ponding against foundation, dryrot
Ponding around the structures. Improper backfilling and compaction, first rain down-pour and the backfill is gone. Expansive soils being ignored or overlooked by the builder or project designer.

Ponding at downspouts leading to water ponding against foundation wall-no splash block provided. Light top soils that drain off into storm drain system with first heavy rain(new subdivision ponding between two lots and in rear of lot.
Ponding from negative grades, failure to compact backfill resulting in lower grades when fill compacts naturally, driveways that slope toward the garage causing water flow into the garage.
Ponding next to foundation. ponding on "High sides of walks and drives.
Ponding water against house.
Ponds @ the foundation Backfill not compacted in trenches and excavations near the foundation Final grade not set with planting material in mind
poor attention to detail by finish graders.
Poor attention to laying out the formwork and existing grade. When the existing factors create issues, there is a hesitancy to correct the problem with installation of driveway crots properly tied i
Poor backfill materials. Graded too high on house foundation.
Poor backfilling and incorrect form work
Poor compaction of backfill leading to negative grading.
Poor controls on grading.
Poor design
Poor drainage from gutters to dry well on zero lot lines water stating still between homes
Poor excavation controls and resulting negative grade
Poor fill material available
Poor final grading near structure; normally must be done by hand or with bobcat or other small dozer. Therefore, can’t properly grade away from building.
Poor final grading results in ponding water, improper drainage
Poor foundation waterproofing, and negative grading at foundation walls
Poor grade or soil control causing water to accumulate under the structure.
Poor grade work
Poor grading for a complete drainage plan
Poor grading for proper drainage away from the house. Incorrect drainage to an adjacent site
Poor installation
Poor lots with ponding in locations or excessive slopes with use of non code retaining walls or terracing.
Poor maintenance
Poor maintenance, the pace at which to get the job done and trying to get the best price for not so good work.
Poor or inadequate grading practices of sub contractor personell performing work.
Poor planning
Poor planning
Poor planning of elevations for: walkways, flower beds, garage floors and breezeways
Poor planning related to finished elevations and the site
Poor roof drainage, omission of gutter systems
Poor rough grading.

Poor site design on high density developments
Poor site planning during design Cuts/fills creating excess 2:1 slopes
Poor soil condition and garbage next to the foundation. I have also seen improper house elevations that create to much or to little slope for water control.
Poor soil conditions, non-supported foundations at the time of backfill- (the carpenters union will not allow framing on a foundation that is not backfilled), failure to jet the fill and compact it
Poor training of contractors' employees. You could say that the large developers do not care as much about certain issues. The proof of this is that the same mistakes are constantly repeated.
Poor workmanship, lack of supervision.
Poor workmanship. Contractor too eager to get his money and run to the next job.
Poor backfilling.
Poor construction practices
Pouring foundation too high or low and then changing grade to account for mistake.
Attempt to eliminate gutters or downspout terminations too close to foundation. Precisely the example given.
Premature backfilling
Pressure against foundation wall causing cracks, water leaking in on basement floors
Probably the number one problem is improper grading at the foundation. Pitched towards the house rather than away.
Production homes with 10’ separation with walls between and long runs from back yard draining to front hard to maintain slope. Not compacting backfill material near home especially in utility trenches
Production, production, production!!!!!!
Proper grade sloping away from structure not maintained
Providing a positive grade away from the foundation. Winter conditions we don’t require a finished grade as long as there is
positive grade. Also failure to get good compaction when backfilling.

regrading negatively impacting neighbors

Required retention areas on single family home sites.

Reverse grade and grade starts to high to begin with. Contractors don't know how to deal with it.

Reverse grading, causing ponding at house end. No splash relief at leader pipe terminations, which again, causes some ponding at the foundation. Real attention to the soils conditions escape most.

same as example given

same as i.e. example and piping to downstouts get damage or pulled loose during backfill

Same as your comment water Pooling

San Francisco code requires all drainage from roofs or ground to be directed to a sewer or storm drain

Settlement and landscaping

settlement around house creates negative grade

settlement from poorly compacted backfill

settlement ponding

Settlement, lack of compaction and use of expansive clay soils for backfill.

settling after the construction is completed settling along foundation

Settling around foundation walls cause a backpitch towards the house. Improper downspout extensions prevent proper watershed.

settling encourages ponding. Also, sidewalks damming of water prohibiting action of swale

Settling of backfill and sump discharge lead to recycling of same storm water.

settling of soil, excessive rain causes back flow to the foundation walls neighbors filling in a common swale

sever settling of backfill, elevation of structure too low for surrounding grade conditions, practice of adding to street surfaces by public works departments in repaving.

Shallow rock under soils, improper compaction of trenches, insufficient grade separation between slab and street.

Shedding water onto adjacent properties shoddy workmanship.

shrubs at front of house downspouts flowing up hill general contours of surrounding areas sidewalks and driveways creating dams

Sidewalks and driveways on site that block the flow of drainage as they are to high with no way for the runoff to drain as designed by the grading plan.

sidewalks and driveways places to high which causes the grade to be to close to sill plate.

Sidewalks at driveways that don't satisfy slopes for accessibility per ICC/ANSI 117.1.

sidewalks block the flow to the street sidewalks higher than grade next to house causing water ponding; downspouts not directed away from house far enough;

sidewalks poured too high, negative grade; ponding at drive sidewalks put in after final which create nuisance to adjoining homeowner, or sloped back towards home without proper flashing.

Lack of leaders to convey storm drainage to front of houses. Grade

Site being back graded to the foundation

Site contractor not following approved site plans. Settling of soils after placement.

Site contractors are unaware of grading requirements in the code. Contractors in a hurry and just push it in without compacting and settlement occurs

Site grading finish work that doesn't take entire site into consideration to properly remove water from the house foundation.

site landscaping affecting drainage toward house

sites graded to rear and front yards; water ponding in easements.
slabs are poured too low. Closing in carports with inadequate slope of existing driveway for drainage.  
slabs below street level n hilly sites  
Slope away from building and foundation drainage  
Slope away from house not adequate  
Slope away from house, driveways too steep slope of grade  
sloped back to house. downspouts not discharging 12' away or grade not established at final  
sloping lots with min. setbacks  
Sloping lot conditions without appropriate grading to remove the water from the structure  
sloppy final grading  
soil condition , not letting the water out and away from foundation wall; not applying sealant or french drain to allow water to move away from wall  
SOIL CONDITIONS  
Soil conditions too wet to work soil so it slopes away from foundation at final inspection.  
Soil conditions, compaction, stabilization  
Soil conditions-improper compaction or bearing capacity of soil. Improper lifts of backfill, no compaction of backfill, improper material used for backfill.  
soil placed too high against the foundation, insufficient clearance to siding (inadequate extension of the foundation), no slope or negative slope of grade at the foundation.  
Soil too close to the bottom of the siding.  
Soils conditions for area /contain high Sulfate levels. Stoops not installed for final. Minimal grade level distances from flashing and negative grade back to foundations  
silos not set up for drainage controls, no compaction, spaces too narrow on retaining walls  
Some common sense issues.  
Some soil conditions or low lying areas where drainage is a problem or not possible.  

Sorry landscapers. Negative grading to accommodate an owner not wishing to have a slope. Failure to plan for the next lot.  
Splash blocks improperly installed -grading to close to untreated sheathing and siding and soil not properly compacted during backfill allowing settlement ro backpitch grade and cause leaking basements  
Standing water at the foundation or in crawl space.  
steep lots  
Stoops not being filled with proper fill. Grade too high, blocking weep holes, also effecting sill plates.  
Stoops not installed and driveways do not match approved plans.  
stoops-back fall Downspouarts-not far enough from building Drainage-improper elevations  
Subdivision is approved by zoning without consideration for drainage/flood control. Final inspection being called for before they are finished with grading.  
Such things as premature backfilling, not compacting soil and not placing all the drainage controls in seem to stem from poor workmanship and avoiding legitimate expenses to do the job properly.  
Sump pumps and downspouts discharged onto adjoining properties.  
surrounding flat topography, desire to have flat driveway slopes so foundation elevation above curb & grade are kept at a minimum  
Surrounding grade pitched toward the house Swales leading away from foundation with no outlet or left to pond, Roof drain tile left to drain to unstable soil causing erosion.  
Negative drainage at gas meter bases & heat pumps near foundation.  
swales not properly cut from the rear of the house to the front. Also screen blocks in cmu fences for drainage installed to high thus allowing water to pond against the block wall.  
swales not properly graded. Grading inconsistant with approved subdivision grading plans.
Swells not properly installed to control water within a site. Downspouts not installed or improperly installed.
temporary backfills not seeded
The above situation is common and the finished grade is often to close to the bottom of the siding/sheathing.
The builder does not follow the grading and drainage plan when onsite retention is needed. Swimming pools are added after the C of O for the house and the onsite retention is compromised.
The building of ‘Hillside’ homes
The City of Rock Island has a grading and drainage/stormwater ordinance, so these issues are handled almost immediately.
The condition that I have found to occur in most of the grading violations is that the contractor does not complete a positive drainage away from the structure. The second violation would be that the contractor sets initial grade wrong, ie adjacent property not taken into consideration.
The contractors are not spending the ‘time’ to make grading & backfilling right the first time they attempt. They don’t like to waste time tamping around the foundation.
The creation of small lot subdivisions with 3-4 foot sideyards
The example above is the most common but most of the time this is due to improper lot drainage.
The example is appropriate. Also, commercial buildings with downspouts that empty onto handicap access areas and by stairwells.
The example is my most common violation. Negative grad at house leading to water ponding against foundation wall.
The excavator backfills the foundation to high. When the sod installer comes to install the topsoil and sod, he is to close the bottom of the siding.
the excavator doesn’t get the foundation above soil line around home
The final grade has not provided enough slope away from buildings. Downspouts are too close to building. Final grade only leaves a couple inches from siding.
The grading is not being done right. The initial lot has a lot to do with the final grade if you are building on a hill for example, not getting a neg grade from the house.
The lack of proper compaction with fill material. The contractor backfills and grades per the code and the plans and within thirty days the soils settle, creating a negative slope.
The largest cause is not putting the house close enough to original grade to try and save hauling away excess material.
The leading cause of drainage problems that I see is lack of or improper soil compaction.
The listed above are most common.
The minimum code slope away from wall soon disappears after settling of the soil around a basement foundation Drives sometimes do not have adequate pitch away from the building, no min slope in code.
The Pad begins flat but after excavation for plumbing etc. the grade becomes incorrect.
The problems are with the site contractor backfilling with unacceptable material rather than clean gravel.
The wrong materials used for back fill -- will not drain. Graded toward building.
Downspouts connected to foundation drain which is not connected to anything.
they alway forget to extended out 12'.
They do not grade properly around the house to promote adequate drainage away from the structure
They don’t seem to get it on grading around a building foundation. Not 6’ in 10’.
to achieve positive fall, grade too close to unprotected framing, not tamping backfill causing settlement after customer moves in.
Too much dirt in the fill.
Too much house, too little lot.
too often the finish grade is too high and the landscaping crews trap excessive mulch/planting materials between the house, and the sidewalks trapping the flow of water. Trying to exceed the angle of repose to accomodate grade differences between lots. It appears that costs are trying to be avoided to install retention walls
Trying to get final inspections before work is completed. Using weather as a factor for poor planing. Grade land has enough fall that it is hard to keep from washing out.
typical negative gading.
uncompacted fills; grading in sensitive habitats
Unconsolidated (compacted) backfill.
Downspouts not properly connected to off-site drainage and not able to handle storm flows. Grading not sloped away from structure or to adjacent property.
uncontrolled backfill operation, incomplete compaction of backfill material allowing settling at foundation perimeter
Unsafe under storm conditions
Unscroupelous contractor; takes advantage of ignorance of clients in relation to construction.
Unskilled labor or do not want to spend the money to do it correctly.
using a soil not suitable for drainage
Using heavy clay soils for backfill and then having improper drainage around perimeter of foundation
Using wet backfill, covering water shutoffs, overall grading around home. Improper soil erosion controls.
very bad grading
Waiting until the house is finished to provide approved drainage. Thus allowing the soil under the footr to become flooded.
waste
Water commonly directed into an area. Sheet flow is prefered to avoid a focused flow of water which leads to increased erosion. Also, outflow pipes from detention ponds not installed at proper level
water flow onto street causes icing water directed to neighbor erosion
water is not being directed away from the home, alot of yard work is done in a hurry and you end-up with poor drainage.
water is ponding near the house
Water migration to adjacent properties
water not being directed away from the home
Water ponding against foundation wall. The grade too high and the runoff on the adjacent property.
water ponding against house.
water ponding against the crawlspace and water in the crawlspace
Water ponding at foundation wall, grading above waterproofing ie brick, and not compacting backfill causing settling and water to go toward the house foundation.
water ponding at foundation, lack of dirt against block foundation
Water ponding in the back setbacks.
Water ponding in the yard or against the house.
water ponding or erosion caused by improper grade away from structure
Water running from one property to another due to changes in grade because of new landscaping or fencing
WE (building official, engineering, zoning,) have over the years, found that we needed to have control over site conditions.We get a class 2 survey plot plan,foundation as-built,and a final asbuilt.
we are a beach, mostly keeping water off adjoining lots. 6 in clearence grade to siding
We are in a vacation area, homes build are built in places that are very extreme.
We do not conduct home inspections
WE have found that the elevation of new buildings do not necessarily have these problems. In fact the drainage causes
problems to adjacent properties since the new buildings are higher for FEMA regs. We have highly expansive clay soil, which can cause cracks in the building. The backfill is not properly compacted and graded away from the structure to minimise water getting under the footing. Weather conditions in this region final grade not completed yet. weather, not measure correct grade for even distribution of cement
What you said
When backfilling the contractor is not compacting the fill prior to installing sidewalk, porches, etc. Not extending downspouts adequately or terminating in the ground and not to daylight. When backfilling, sometimes there is no compaction and the grade settles afterwards. When landscaping including sprinkler systems are installed after the job is finaled and C/O issued.

Wood earth separation Negative grade Rear yard does not drain to storm drain
Workmanship
Workmanship and ignorance
workmanship errors
Wrong grading causing ponding areas.
yes negative grades, driveways too high (house set wrong)
YES TO ABOVE.
Yes to example above. Also creation of dam effect to neighbors yard.
Yes, the grades are not sloped away from the structures.
Yes. All the condition examples you mentioned are appropriate.
your example is very common. also downspouts where not extended to run away from the foundation. basements where the backfill material and/or perimeter drainage system is poorly or incorrectly insta
your exsample is correct
Q10 Please select the three most common foundation-related code violations you see.

<table>
<thead>
<tr>
<th>Code Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect footing depth</td>
<td>14%</td>
</tr>
<tr>
<td>Incorrect drain installation</td>
<td>14%</td>
</tr>
<tr>
<td>Incorrect fasteners for use below grade to attach plywood</td>
<td>3%</td>
</tr>
<tr>
<td>Improper reinforcement or support of rebar</td>
<td>21%</td>
</tr>
<tr>
<td>Improper anchor bolts</td>
<td>20%</td>
</tr>
<tr>
<td>Improper foundation size</td>
<td>7%</td>
</tr>
<tr>
<td>Missing vapor barrier</td>
<td>11%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>4%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>6%</td>
</tr>
</tbody>
</table>

12 inches into undisturbed soil
Aggregate size in ICF foundation walls
All of the above
Anchor bolt installation
Anchor bolt spacing at plate splices,
Anchor bolts placed at studs
Anchors not spaced right, or within 12' of corner
Attachment to existing foundations
Backfill too early or without bracing
Backfilling too quickly
Backfilling too soon.
Beam cave-ins
Black dirt under footings instead of clay
Bottom of footing not clean.
Braced wall panel hold downs improperly installed
Bridging
Broken areas
Cities engineer handles all drainage concerns
Clearances
Cold weather protection
Collapsing foundations
Concrete placed prior to inspection
CONNECTION BETWEEN EXISTING & NEW FOUNDATION
Continuous laps on reinforcement
Contractor or owner unaware of drainage issues
Corner bars and bar splices; tying of laps
Cracking due to premature backfill placement
Damaged or missing post tension cables
Damp-proof submittal vs. waterproof where red's
Debris and loose soil in footings
Debris in trench
Deviation from plans
Drain not connected to storm system
ELECTRICAL GROUNDING
Engineering of poor soil conditions
Excessive Water present upon inspection
Failure of foundation piers
Failure to have hardware in place
Failure to properly space anchor bolts
Failure to read approved plans and apply
Footer step-downs poorly poured.
Footing width, missing point load footings.
Footings not properly sloped
Foundation wall bearing on footer;
inadequate project
Foundation walls hanging over footings
Foundations are out of square with the house.
Frost lips on the foundation causing a lifting
Frozen mortar and concrete.
Hold down bolts improperly set
Hold downs improperly installed causing spalling
Hold down type and placement
Hold downs exposed improper installation
Hold downs for lateral wind applications
Hold downs improperly installed
Holes in vapor barrier
Improper anchor bolt placement and loose nuts
Improper anchor strap spacing.
IMPROPER BOLT SPACING
Improper brick ledges
Improper compaction
Improper damp-proofing
Improper footing projection from foundation wall
Improper footing width
Improper hold down application; or sizing.
Improper installation and size of rebar.
Improper installation of hold downs
Improper insulation
Improper perforated drain laid outside foundation
Improper place anchor bolts
Improper reinforcement placement
Improper slump of concrete. Too much water added.
Improper soil conditions Frozen/saturated sub grade
Improper spacing of anchor bolts
Improper spacing of anchor bolts
IMPROPER USE OF ANCHOR STRAPS
Improper waterproofing
Inadequate footing projection (less than 2')
Inadequate foundation waterproofing/damp proofing
Inadequate rebar clearances to forms and earth
Inadequate slab depth
Inadequate soils
Incorrect fasteners being used with treated wood.
Incorrect fasteners for strap to non cca treated
Incorrect installation of damp and water proofing
Incorrect lap splices and vertical dowel length
Incorrect location on the lot

Incorrect plumbing pass throughs.
Incorrect reinforcement at jumps.
Incorrect reinforcing steel and layout
Incorrect soils
Improper anchor bolt spacing
Improper clearances from soil
Insufficient foundation vents.
Insufficient overlap of reinforcing steel
Insufficient tie to existing footings (doweling/ke
Insufficient Waterproofing
Insulation
Insulating compact for the footing has been done
Jumps in elevation between house and garage (2')
Lack of a footer at all.
Lack of consolidation of concrete causing honeycomb
Lack of D-1 awareness as it relates to foundation
Lack of damp proofing
Lack of proper waterproofing
Lack of quality plan review
Lack of water barrier on outside surface
Lack of waterproofing
Location of foundation according to site plan
Location of hold downs in shear areas
LRP at front of garages too small for IRC req.
Main problems are waterproofing and drainage system
Misaligned/ off-sets of wall over the footing
Mislocated pier footings
Misplaced anchor bolts and not following eng. sp
Missing damp proofing
Missing footings
Missing foundation support locations
Missing mortar and loose brick
Missing nuts on bolts
Missing post tension cables
Missing required steel and protect copper
Missing soil treatment for wood boring organisms
Missing washers on anchor bolts
Most is plumbing issues with in the foundation
Most try to install rebar after pouring
Mud on steel
Nailing of sill straps per mfg.
No access to foundation forms
No major problems.
No reinforcement of block basement walls.
No ‘seat’ in slab/footing for CMU wall
No soil poisoning or termite protection
None engineered foundations on expansive soils
Not bracing the foundation properly before back filling
Not built per plan
Not cleaning out footings and trying to use water
Not cleaning the footing, allowing water ponding
Not curing properly
Not filling all the joints with mortar
Not following design engineers prints for rebar
Not following the details on the plans.
Not prepared for cold weather concrete
Not ready for inspection
Not removing grass or vegetation
Not to plans.
Not verifying the lowest opening /floor elevations
Oil and/or mud on rebar
Organic debris not removed
Out of square foundations (wall doesn't fit)
Over excavation for footings
Perimeter insulation not provided properly
Poor application of damp proofing
Poor application of foundation coating.
Poor or improper water/damp proofing
Poor sealant and the foundation
Poor workmanship
Pouring concrete in wet conditions.
Pouring in improper weather conditions- wet soil
Quality control on slump

REBAR CLEARNACE TO FORM, OIL ON REBAR
Rebar in contact with the soil
Rebar too close to earth
Rebar touching underground plumbing
Reinforcement not placed in the correct location
Revisions made in the field w/o plan approval
Seismic connections
Seldom see violations
Setbacks from ascending / descending slopes.
Sill plate over cut or notched, wrong size
Slab edge and foundation wall insulation
Sleeping of sewer and water pipe thru foundation w
Soft or loose /wet soil
Soil bearing pressure
Soil conditions
Soil conditions
Soil conditions are not checked for each site.
Soil conditions supporting foundations
Soil conditions, frozen ground (winter conditions)
Soil issues
Soil not compacted. 95% / 2000psi
Soil not properly compacted for foundation.
Soils reports.
Spalling at hold downs
Step footings not poured as continues footings.
Stepped footers not continuous
The rebar have sprayed with oil
Their not deep enough/width, properly flash
To much h20 in trench footings
TOP OF THE FOUNDATION WALL NOT LEVEL
Trying to use cut nails instead of anchor bolts
User ground improperly installed (vapor barrier)
Vapor barrier not lapped and sealed
Vegetation in crawl
Water infiltration and damp proofing misapplication
Waterproofing foundation walls
Waterproofing not sufficient
We do not conduct home inspections
We do not inspect foundations
We use City of Wichita basement standard.
Few problems

Weep devices and termite stops
weep screed too close to grade
Wrongly placed HD bolts.
Appendix 5.0

Please select the three most common wall-related framing violations you see.

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stud cut or notched to an impermissible depth</td>
<td>74%</td>
</tr>
<tr>
<td>Missing fire-blocking</td>
<td>72%</td>
</tr>
<tr>
<td>Missing hold-downs, straps, etc.</td>
<td>57%</td>
</tr>
<tr>
<td>Installation of sheathing</td>
<td>30%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>10%</td>
</tr>
<tr>
<td>Improper spacing</td>
<td>9%</td>
</tr>
<tr>
<td>Missing studs</td>
<td>8%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>4%</td>
</tr>
<tr>
<td>Improper corner framing</td>
<td></td>
</tr>
<tr>
<td>3 stud corners not in; bearing under girders</td>
<td></td>
</tr>
<tr>
<td>Absence of wood protection from concrete</td>
<td></td>
</tr>
<tr>
<td>ALL of the above are common!</td>
<td></td>
</tr>
<tr>
<td>Alternate bracing improperly applied/not used</td>
<td></td>
</tr>
<tr>
<td>Anchor straps incorrectly embedded in fdn. wall.</td>
<td></td>
</tr>
<tr>
<td>Barrow wall bracing compliance</td>
<td></td>
</tr>
<tr>
<td>Beam support on raked ceiling/roof assemblies</td>
<td></td>
</tr>
<tr>
<td>Bearing continuity</td>
<td></td>
</tr>
<tr>
<td>Blocking seams on shear walls</td>
<td></td>
</tr>
<tr>
<td>Connection of header to pole barn column</td>
<td></td>
</tr>
<tr>
<td>Continuous load path not maintained</td>
<td></td>
</tr>
<tr>
<td>Corner nailing and missed sheathing nails</td>
<td></td>
</tr>
<tr>
<td>Corner studs missing and nailing</td>
<td></td>
</tr>
<tr>
<td>Critical load path not continuous, supports missed</td>
<td></td>
</tr>
<tr>
<td>Diaphragm nailing of roof sheathing and drags</td>
<td></td>
</tr>
<tr>
<td>Direct bearing to foundation from girders</td>
<td></td>
</tr>
<tr>
<td>Double top plate installation and tall walls</td>
<td></td>
</tr>
<tr>
<td>Double top plate notched for ac lines</td>
<td></td>
</tr>
<tr>
<td>Double top plate splice spacing</td>
<td></td>
</tr>
<tr>
<td>DOUBLED STUDS FOR DRAIN PIPE INSTALLATION.</td>
<td></td>
</tr>
<tr>
<td>Drilling of engineered products</td>
<td></td>
</tr>
<tr>
<td>Earthquake bracing not installed or not installed</td>
<td></td>
</tr>
<tr>
<td>Engineered top plate splice detail ignored</td>
<td></td>
</tr>
<tr>
<td>Exterior nailing</td>
<td></td>
</tr>
<tr>
<td>Failure to continue shearwalls to roof sheathing</td>
<td></td>
</tr>
<tr>
<td>Failure to read, interpret, follow approved plans</td>
<td></td>
</tr>
<tr>
<td>Fasteners for treated wood</td>
<td></td>
</tr>
<tr>
<td>Field change = excessive span length</td>
<td></td>
</tr>
<tr>
<td>Field installed components for trusses not done</td>
<td></td>
</tr>
<tr>
<td>FIRE STOPPING</td>
<td></td>
</tr>
<tr>
<td>Fire/draft caulking of penetrations</td>
<td></td>
</tr>
<tr>
<td>Firestopping holes in top and bottom plates.</td>
<td></td>
</tr>
<tr>
<td>Firewall installation, inadequate headers</td>
<td></td>
</tr>
<tr>
<td>Foundation anchor straps improperly installed</td>
<td></td>
</tr>
<tr>
<td>Framing details missing on plans, headers, supports</td>
<td></td>
</tr>
<tr>
<td>Gable end blocking and plywood joint blocking</td>
<td></td>
</tr>
<tr>
<td>Gable end wall stud size incorrect for height</td>
<td></td>
</tr>
<tr>
<td>Hardware placed in the wrong location</td>
<td></td>
</tr>
<tr>
<td>Headers</td>
<td></td>
</tr>
<tr>
<td>Headers not per approved plans</td>
<td></td>
</tr>
<tr>
<td>Headers not per single story construction area of open</td>
<td></td>
</tr>
<tr>
<td>Hinged and tall wall construction framed improper</td>
<td></td>
</tr>
<tr>
<td>Hips, ridges and valleys; rafters not adjacent</td>
<td></td>
</tr>
<tr>
<td>Holes drilled in framing for piping.</td>
<td></td>
</tr>
<tr>
<td>Improper bearing</td>
<td></td>
</tr>
<tr>
<td>Improper bracing</td>
<td></td>
</tr>
<tr>
<td>Improper corner framing</td>
<td></td>
</tr>
</tbody>
</table>

Survey of Common Code Violations
improper fastening or nailing
Improper fire resistive rating
Improper header size and jack stud installation.
Improper Header Support
improper length to width ratio
improper load transfer
Improper loading to foundation
improper nailing
improper nailing and spacing of BWP's
improper plate laps
IMPROPER REPAIR OF CUT PLATES
improper size
Improper stud bearing, toenailing, infills
Improper wind sheathing/bracing
inadequate nailing
loose anchor bolt nuts
lumber grade incorrect
Micro-lams drilled or notched improperly
Missing 4x's called out on plans
missing jack studs
Missing jack-studs/full studs @ point loads.
missing nailing at corner and intersecting walls
missing or non-conf. nails in metal hangers
missing studs under bearing points
missing termite shields
Misunderstanding of IRC section 602 Narrow wall
most construction in Miami is CBS.
nail guards for plumbing
Nailing
Nailing
nailing not correct
nailing of sheathing
no moisture vapor barrier
no shield plates for plumbing pipes
no support bottom plate, header size
not adding extra studs under girders
not built according to approved plans
not enough nails
NOT ENOUGH STUDS UNDER GIRDERS AND BEAMS
not posting point loads to the foundation
notching and boring

incorrect headers for snow load
incorrect quantity of cripple studs
Incorrect spacing and installation of anchor strap
Incorrect wind bracing
installations not complying w/U.L. listings
insufficient bracing
insufficient bracing
Insufficient nailing, nails miss studs.
interlocking top plates
King & jack studs are not cut to fit tight.
Lack of plates to protect pipes.
lack of supports for beams
lack of workmanship
LOAD PATH NOT CONTINUOUS

Notching of wall plates
notching/boring of floor joists & roof struct.
NOY ENOUGH NAILS AT CORNERS AND WALL INTERSECTIONS
nuts missing from foundation bolts
over driven fasteners
over driven fasteners and hold down placement
over penetration of power-driven nails
Plans and specs with not enough detail
point loads / double studs missing
Poor installation of hold-downs
re:manufacturer re
poor nailing of fire blocks ie 1 nail each side
Poorly secured wall furring strips
posting under beams to foundation
sealing of penetrations in top plates.
draftstops
Shear panel sizes.
shear panels missing not nailed correctly
shear wall connection to sill plate
SHEAR WALL NAILING INCOMPLETE,
HOLDOWNS NOT INSTAL
Sheathing edges not blocked
shields on plumbing or electrical
Short jack studs
short walls not properly braced
slender stud
Stud spacing under windows improper
Stud/post requirements at hold-downs for lateral. Substitution of species of lumber taking point loads to foundation through floors. Tall walls not framed properly. TGI floor joist are cut and notched during mech. Top plate laps and splices. Top plates cut out for plumbing pipes. Topplates. Trusses, cut members, bearing, etc. Undersized headers over wide spans. Un-supported lower top plate. Untreated base plate in contact with concrete. Use of only 1 jack below headers over 6 feet on BW. Wall bracing. Wall bracing. Walls not connected properly (panelized systems). We do not conduct home inspections. Wet Wood. Wrong headers and trimmers. Wrong plating/studs for Braced Wall requirements. You name it...
Appendix _0
Floor-related Framing Violations

Please select the three most common floor-related framing violations you see.

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notches in areas not permitted</td>
<td>71%</td>
</tr>
<tr>
<td>Sheathing nails missing joist</td>
<td>45%</td>
</tr>
<tr>
<td>Missing anchor bolts</td>
<td>34%</td>
</tr>
<tr>
<td>Inadequate splices</td>
<td>27%</td>
</tr>
<tr>
<td>Wrong joist size</td>
<td>22%</td>
</tr>
<tr>
<td>Improperly installed sheathing</td>
<td>18%</td>
</tr>
<tr>
<td>Wrong joist grade</td>
<td>12%</td>
</tr>
<tr>
<td>Other</td>
<td>11%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>8%</td>
</tr>
<tr>
<td>Addition of a second sill plat, notches around all of the above</td>
<td></td>
</tr>
<tr>
<td>ALL of the above are common!</td>
<td></td>
</tr>
<tr>
<td>allowed to be exposed to rain for a long period</td>
<td></td>
</tr>
<tr>
<td>anchor bolts not tightened</td>
<td></td>
</tr>
<tr>
<td>attachment/anchoring of floor joists</td>
<td></td>
</tr>
<tr>
<td>Attic platforms</td>
<td></td>
</tr>
<tr>
<td>Beam &amp; header sizing. Engineered wood products.</td>
<td></td>
</tr>
<tr>
<td>bearing surface</td>
<td></td>
</tr>
<tr>
<td>Blocking</td>
<td></td>
</tr>
<tr>
<td>blocking load to the foundation</td>
<td></td>
</tr>
<tr>
<td>blocking under point loads</td>
<td></td>
</tr>
<tr>
<td>blocking/bridging not provided</td>
<td></td>
</tr>
<tr>
<td>bored hole loc. size</td>
<td></td>
</tr>
<tr>
<td>boring holes in excess</td>
<td></td>
</tr>
<tr>
<td>bridging/bridging not installed</td>
<td></td>
</tr>
<tr>
<td>Bridging;wrong nail size used and cracked</td>
<td></td>
</tr>
<tr>
<td>Change in I-joist brand from that spec'd on plans.</td>
<td></td>
</tr>
<tr>
<td>clearance from dirt to joist or girder</td>
<td></td>
</tr>
<tr>
<td>cross supports between joists and lack of fire blo</td>
<td></td>
</tr>
<tr>
<td>cutting or notching engineered wood trusses.</td>
<td></td>
</tr>
<tr>
<td>Damaged joists due to plumbing, hvac, etc.</td>
<td></td>
</tr>
<tr>
<td>Damaged, wrong bearing, upside down floor trusses</td>
<td></td>
</tr>
<tr>
<td>doubles missing and install details missing</td>
<td></td>
</tr>
</tbody>
</table>

draft stopping
draftstoppingt
drilled holes too close to bottom of joist
engineered joist not according to design
engineered trusses not installed properly
exposure to weather
failure to comply w/ joist manu. requirements
failure to follow indicated structural details
fastener spacing
fastening
floor assembly damaged by water or drywall stacks
floor to wall connections
Floor truss or I-joists not installed properly.
floor trusses with damaged top cords from hvac ect
framing brackets improperly installed or missing
framing headouts at trade penetrations
Girders ends against concrete
hangars missing where req’d
hanger nailing and proper bearing
Hangers
hangers not nailed properly
headers at openings
I JOIST SQUASH BLOCKING
I-Joist destruction & missing squash blocks
i-joists altered
i-joists cut by plumbing or HVAC contractors
I-joists specified different than product used
improper baring
Improper bearing points
Improper drilling and notching of pre-fab members
Improper fastener type
Improper fire resistive rating
Improper floor truss bearing
Improper framing at floor holes
Improper girder size; blocking load path not in
Improper hangers
Improper headers at floor openings
Improper installation of engineered I joist
Improper installation of i joists
Improper joist bearing
Improper joist spacing
Improper nailing to sill plates
Improper panel span rating
Improper spacing of floor joists
Improper stair opening framing
Improper TJI's installed per plans
Improper use and notching of I joists
Inadequate bearing
Inadequate joist/block nailing
Inadequate nailing
Inadequate support - missing joist hangars
Incorrect boring & notching of I-joist
Incorrect installation/ nailing off strapping
Incorrect tension strapping/nailing from 2nd story
Incorrect trimmer joist sizes
Installation of engineered joist
Insufficient bearing length
Insufficient bearing points
Joist hangers
Joist hangers not installed per listing
Joist not positioned for load transfer
Joist ot header connect requies hangar
Joists drilled too large
Joists not having enough bearing rest
Joists not properly attached to sill plates
Lack of blocking
Lack of continuity for shear transfers
Lack of cross bracing.
lack of glue

Lack of hangers or block9nd at bearing points
Lack of joist hangers; inadequate nailing.
Lack of ventilation
Lacking joist hangers; perimeter joist nailing
ledger attachment
Loadbearing point blocking and jack studs
missing
Missed floor to sheathing nailing
Missed nailing of joists to outside plates or sill
Missing 3x plates called out on plans.
Missing adequate support at floor framing
Missing blocking above girders
MISSING BLOCKING AND SUPPORTS
Missing blocking under point loads.
Missing blocking/bridging
Missing bracing
Missing double joists
Missing hangers
Missing joist
Missing joist hangers
Missing joists where multibles are required
Missing nailing of joist and rim
Missing or inadequate hanger nailing
Missing or undersized shear straps 2nd floor
Missing squash blocks
Missing strapping and bridging
Missing/ removed fire stopping above carry'g beam

Most floors in Miami are concrete.
Nailing of floor diaphragm (sheathing).
nailing, hole locations, blocking
Nails over-penetrated.
none
None or improper support
Not doubled up under load bearing walls.
Not enough screws and glue
Not following manufacturers requirements
Not following TJI instructions.
Not per plan
Not using material approved on plans.
Offset bearing points. Point loads not blocked
Open web installed backwards / upside down
over driven fasteners
over sized borings
overhanging joists & flr truss not const to specs
oversized holes or holes in wrong locations!!!
overstreach span
plywood or osb de-laming due to standing water
poorly installed joist hangers
Product change, poor weather control
rain-damaged sheathing
Sill place seal
smoke and fire blocks. Strapping spacing and placement of tji’s - following prints
Stacking loads through interior bearing walls
Straps specified on plans not installed.
substitutions of engineered lumber not called out
support for crawl access opening
support of floor joists
There isn't a lot of problems with floor joists.
truss joists used wrong
We do not conduct home inspections
wrong fastener type
Wrong joist spacing
Appendix

Truss-related Violations

Please select the three most common truss-related violations you see.

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracing not installed</td>
<td>74%</td>
</tr>
<tr>
<td>Impermissible alteration leading to additional load</td>
<td>60%</td>
</tr>
<tr>
<td>Improperly connected to wall plate</td>
<td>57%</td>
</tr>
<tr>
<td>Specific truss not approved</td>
<td>21%</td>
</tr>
<tr>
<td>Metal plates not secured</td>
<td>20%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>12%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>8%</td>
</tr>
</tbody>
</table>

Alertation on pre-engineered trusses
- all of the above
- ALL of the above are common!
- altering the design

Attic access @ 22' x 30' when 16' o.c. spacing is used...
- bearing on wall not at the truss panel point!
- bearing points location
- bearing support

BRACING BRACING BRACING, NEEDS TO BE DONE PROPERLY
- bracing not connected properly to wall diaphragm
- Bracing not installed as per engineering
- bracing not installed per sealed design

BRACING NOT INSTALLED PROPERLY
- bracing not to engineered spec.
- bracing, cut truss

Broken truss
- Broken trusses
- broken trusses and not tied together
- builder not following truss layout and calcs

Care and handling of trusses before installation.
- changing truss mfg. after submittals due to costs
- Clear Span Truss resting on interior partition.

Cut or drilled floor trusses
- Cut or notched trusses
- cut, notch or holes drill

Cutting, Drilling and broken trusses

Cutting, notching, and boring engineered wood.
- cutting and repairing without design detail
- cutting into truss by outside trades (elec., plumb)
- Cutting of engineered truss
- cutting of truss, and metal plates
- cutting or altering
- cutting or notching of a truss
- cutting/boring
damage
- Damaged / Altered
- damaged and poor installation
- damaged truss
- damaged truss due to transportation
- damaged trusses
- Damaged trusses do not have an engineered repair
- damaged trusses from stacking prior to installation
- damaged trusses installed
- damaged trusses not repaired

Damaged trusses not repaired according to engineer
- Damaged trusses with field repairs
- drilled or notched
- drilling of bottom chord
- each truss not stamped
- Engineered sealed drawings not submitted.
- engineered truss from out of the area, being used.

Excessive loading/Reactions not addressed
excessive warping due to exposure to elements
failure to follow mfg instructions
Failure to provide complete set of truss diagrams
field alterations without engineering approval
field cut structural members
field cutting compromising truss.
Field cutting of engineered products
Field repairs without engineer approval.
Full support under girder trusses
Girder (multi ply) trusses not nailed correctly
girder nailing pattern not followed
girder truss bearing not accommodated over windows
Girder truss fastening to each other not followed.
girder trusses (2 or 3 not nailed/bolted together
handling of trusses
hangers
hangers nailed wrong
h-straps are not adequate for uplift. h-2.5 413lbs
hurricane straps not installed
I had no problems I explain ahead of time
Impermissible alteration / modified and cut
IMPROPER HANGER AND/OR NAILS
USUALLY IN GIRDER AT
improper repair of damaged truss
improper repair to broken members
improper size strapping for uplift
improperly nailed girder trusses
inadequate bearing surface
Inadequate nailing of girder trusses and hangers
improper handling
Installation not per design
installed backwards
installed backwards
insufficient truss data provided for inspection
Intermixing of non-system materials
Job site fixes
lack of quality plan review
Lack of studs/posts to carry point loads
Location of bearing points
Mis handling on delivery & installation.
missed strapping or bearing blocks
missing clips / blocking
Missing State of Michigan approval
Missing trusses and Broken trusses
modification made to truss with out engineers revi
Modified truss’s.
modifying trusses on site/ cutting trusses
nailing/bolting of multiple girder trusses/
nails missing on hangers and bracing of roof truss
no tie down on girder trusses
no wind bracing
none
non-engineered fix
Not approved by Designer of Record
not fastening multiple member girders together
not following prints (details) ect.
not having engineered drawings
not installed per spec by engineer
not installed per truss schedule
not installed properly
Not sitting flush on header
Not to plans.
Not understanding imposed loads @ headers.
notched for plumbing; unengineered repairs
notched or cut truss members and damaged trusses
notching / cutting
ON REMODELS ROOF NOT ATTACHED TO BUILDING.
overspan of spacing for trusses
Poor truss plan - unspecific code req. (bot chd LL)
prints not on site for installation instructions
proper hardware for wind loads
proper nailing of multi ply trusses
properly prepared/ designed drawings not provided
quality control with manufactures!
Repairing broken or damaged trusses
Rough handling
Split wood
Strapping
straps too far from lintel pour to side of truss
temporary bracing during erection & incorrect lift
do they modify the trusses
truss altered without design professional approval
truss being field altered
truss blocking, improper overframing on trusses
truss calcs are deferred, so getting them in time is
truss damage due to improper site storage/handling
truss damaged by nailing
truss desing not at site
truss information not on site
Truss not designed for drag force/equipment
Truss over builds that do not transfer loads evenly
truss paperwork not on site
Truss specs not on site for inspection
Trusses cut or damaged during handling.
Trusses cut or notched
trusses installed backwards-reversed
trusses installed in the wrong orientation
trusses installed in wrong location per set
diagram
trusses not per engineered layout
Trusses not placed in the correct locations
trusses placed in wrong locations
trusses rolled to wrong locations
Trusses with cracked boards or broken in places
unauthorized modification
unapproved alteration
unapproved field alteration or repair
unapproved field modified - often by other trade
unapproved field repairs
unconfirmed truss repair
Unrepaired damage to trusses
Uplift brackets not installed
Uplift loads not per correct category (B / C)
Use of proper hangers and brackets for attachment
We do not conduct home inspections
We request eng. drawings on about everything.
Who designs load requirements. Eng or truss company
wrong brace patterns
Wrong code, wrong snow load
Wrong connectors for hangers, Missing details
wrong nails used in truss straps
Appendix C.0
Roof Coverage Violations

Please select the three most common roof coverage violations you see.

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing nails or fasteners</td>
<td>49%</td>
</tr>
<tr>
<td>Over-driving of nails through shingles</td>
<td>43%</td>
</tr>
<tr>
<td>Absence of felt, or incorrect type</td>
<td>35%</td>
</tr>
<tr>
<td>Inadequate overlap of tiles, shingles or asphalt</td>
<td>27%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>17%</td>
</tr>
<tr>
<td>Improper materials</td>
<td>13%</td>
</tr>
<tr>
<td>Improper course spacing</td>
<td>13%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>13%</td>
</tr>
<tr>
<td>Broken roof tiles</td>
<td>9%</td>
</tr>
<tr>
<td>Product not approved or listed</td>
<td>8%</td>
</tr>
</tbody>
</table>

- absence of ice guard on rakes
- absence of ice guard
- absence of protection requirements in cold areas
- applying materials over wet sheathing
- Asphalt shingles installed on a low slope roof.
- Asphalt shingles on inadequate slope.
- City of Mesa does not inspect roofing material.
- Decking not secured
- Drip edge going up the gable should be over the face
- Exposed fasteners
- exposed fasteners on flashings
- Exposed nails in shingles
- Failure to place felt in the valleys as specified.
- Failure to replace bad sheathing.
- felt < 4:12 19’ lap
- first row bottom and edge missing and missing nail
- flashing
- flashing
- Flashing
- flashing
- Flashing
- Ice & water not 3’ behind heated wall
- Ice & weather shield
- Ice and water
- Ice block material not installed
- Ice dam flashing
- Ice dam not provided at edge of roof
- Ice dam protection missing
- Ice dam protection not installed
- Ice guard not installed
- Ice shield missing
- Ice shield missing
- Ice shield missing
- ice shield no doing proper coverage
- ice shields missing
- Ice shields not installed
improper / inadequate flashing of penetrations
improper crimp standing seam metal
Improper drain inst'l'n, inadequate flashings.
Improper fasteners.
Improper Flashing
improper flashing

IMPROPER FLASHING
Improper flashing details at abutting walls.
improper flashing in valleys
improper flashing, improper ice dam protection
Improper ice/water shield.
improper installation of felt
Improper installation of ice and water guard
Improper installation of ice guard, roof vents
Improper installation of ice shield
Improper installation of ice shield
Improper installation of tar floodcote
improper installation, laps and end joints located
Improper instlation in the valleys.
Improper nail placement
improper nailing - shingles not laying flat
improper or miss installed underlayment for tile
Improper or non-use of ice barrier
Improper overlap over flashing
Improper slope for material, Valley termination
improper starter row, nails not flush imped adherence
Improper type of fasterns
Improper type roofing on low pitched roof.
Improper valley installations.
improper valley underlayment
Improper valleys
improperly installed membrane roofing (PVC)
inadequate ventilation, wrong fasteners
incorrect and/or missing flashing
Incorrect or missing flashing at walls or chimneys
Incorrect starter course
incorrectly designed & installed ice/water shield

improper or inadequately flashing-chimneys, valleys
installation of drip edge, ice/water shield
INSTALLING WHEN WET
insufficient roof pitch for roof type
Lack of flasings, ice guard and attic ventilation.
Lack of hand tabbing
lack of ice & water material
Lack of proper B-vent clearance
last course missing, skylights not secured
Membrane roofing at eaves and valleys not put on.
Missed inspections! Working without permits!
missing cap
Missing drip edge per manufacturers instructions
Missing drip-edge and flashing
missing flashing
missing flashings
missing ice & snow shield
missing ice and water protection, ventilation prob
Missing Ice Dam Protection (Northern Indiana)
Missing ice dam shield
Missing ice protection
missing ice shield
Missing ice shield or width
missing ice/water shield
missing mastic at edges
Missing required ice-shield
missing roof edge flashing
missing roof jacks at plumbing vents
missing vents
missing vents/ no drip edge
modified base sheets ‘never’ fastened properly
more layers than code allows
My region does not perform roof inspections
nails not properly sized
nails, staples not set far enough into sheathing
missing ice/frost barriers
no gaps at sheathing edges
No Ice Shield
No ice shield applied.
NO ICE/WATER SHIELD
no or not enough ice and water protection
no overflow drains
no permit
NO USE OF ICE DAM MATERIAL
No valley flashing
Noncompliance with ICC low slope roof requirements
not covering in a timely fashion, leaving exposed
not enough ice and water eave protection
not enough ice shield
not enough ventilation; water/ice shield not insta
not flashed properly
not following manufacturer's instructions
not hand tabbed, product not approved for wind spe
not inspected
not installed per manuf instructions
Not installed per manufacturer's specs.
not nailed per manufacturers instruction
Not providing the correct # of fasteners in high w
not tarred in at eaves
omission of ice barrier
Our jurisdiction does not inspect roofing.
over driven nails in sheathing.
poor workmanship
product not recommended for low slope
roof covered without inspection
Roof covered without sheathing inspection
roof deck spacing
Roof felts run vertically

roof sheeting tobe minimum of 5/8' plywood for 24'
Roof ventilation, Not folowing manufacture's instru
Roofing at undesirable time of year
roofing felt not flat before installing shingles
sealing penetrations
shiners (Florida)
SHINGLES - DON'T SEAL DOWN PROPERLY
Shingles applied contrary to product specs.
slope too low for asphalt shingles.
SLOPPY INSTALLATION OVERALL
Smearing and damaging shingles during application
STAPLES
step flashing and end wall flashing.
step flashing not being used on asphalt shingles
These are things that are hard to inspect.
too low pitch application, voids warranty
tooooooooo many layers
under driving of nails
under-driving nails
Use of ice guard on eaves
using to short of nail
valley shingle 'lacing' installation
Valleys not covered with adequate material
We do not conduct home inspections
we do not inspect covering. Framing & Sheathing
wind clips at eaves.
Winter applications not sealing properly workmanship
WRONG COVERING FOR ROOF PITCH
Appendix _0
Window- or Door-related Code Violations

Please select the single most common window- or door-related code violation you see

<table>
<thead>
<tr>
<th>Code Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper flashing</td>
<td>57%</td>
</tr>
<tr>
<td>Inadequate fire rating</td>
<td>22%</td>
</tr>
<tr>
<td>Egress</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
</tr>
<tr>
<td>Safety Glazing</td>
<td>6%</td>
</tr>
<tr>
<td>Footings</td>
<td>1%</td>
</tr>
</tbody>
</table>

secondary egress too small and not temp'rd
where rqd
3 ft. door to house does not self close.
absense of safety glazing
ATTACHMENTS
Bed room window egress dementions
Bedroom egress not 5.7 ft.sq.
Bedroom rescue/egress size.
BEDROOM WINDOW TOO SMALL
Bedroom windows not meeting minimum
openings.
buck spacing too large
compliance with energy provisions
deficient sizing
do not comply with egress requirements
Door size for egress or accessibility
door to window clearence
Doors not properly aligned =gaps & latch
problems
egress
egress not met.
egress size
egress size issues with some window
manufactures
egress window problems
egress window sized improperly
egress window sizing
egress windows are incorrect
egress windows at basement area
egress windows not the right size
Egress windows that don't meet code

emergency egress
emergency egress opening for windows.
energy code violations for windows
energy rating wrong
failure to meet egress size
Failure to provide egress windows where
required.
Failure to recognize need for tempered glass
Fasteners missing or not installed properly
fire rating
garage, personnel door not rated or self-
closing
Glass not tempered where required.
Glazing
glazing hazardous location
Glazing not tempered in required areas
Glazing- tempered issues
hardware not rated for door
hardware prevents egress
headers
height to threshold
high wind ratings
hole not prep right
improper anchoring of window and door
frames
improper caiking
improper door between garage and living
area.
improper door hardware to meet exiting
requirement
improper egress opening size
Improper egress size
improper egress window size for sleeping room
improper emergency egress
improper emergency egress size
improper escape size
improper fasteners
Improper fastening
Improper fastening, products
improper glazing in hazardous locations.
IMPROPER HEADER SIZE
Improper installation
improper installation
improper installation (structural and flashing)
Improper installation / not squared into opening
Improper installation of Unit products
Improper install, not following manuf. instr
improper location of tempered units
improper NFSR label for energy efficient window
improper or lack of insulation around windows
Improper rough buck attachment/Wind compliance
Improper sill installation
improper size
Improper size
improper size (egress)
Improper size for bedroom emergency egress
improper size of egress
Improper size, tempered glass
improper U-value
improper u-value & improper flashing
inadequate attachment spacing
inadequate headers
inadequate size
inadequate size for egress
Inadequate size for egress reqmnts
Inadequate size for emergency escape
incorrect DP rating for windzone
Incorrect egress size
incorrect hardware

incorrect installation.
icorrect size for egress required rooms.
icorrect U- factor
Incorrect U value
incorrect U-value based on compliance statement
improperly secured with nail spacing and caulking
install as per manufacturers instructions and insul
installation
installation out of square
Installation with out Building Permit
Insufficient fastner Building Permit
insulation/sealing
lack of emergency egress
lack of self closing doors at garage/house seperat
Lack of tempered glazing in ext. walls @ tubs
Light & Ventilation/Egress
Location of temp. glass
Missing 5.7sf window for fire
Missing fasteners
Missing fasteners
missing weather-stripping-doors
no header installed
No safety glazing where required.
noncompliance with energy code
non-compliant u-factor (windows)
non-safety glazing too close to doors
non-tempered glass in hazardous location
non-tempered installed where tempered required
not correctly fastened to house
Not egress compliant
not egress compliant
not fastened correctly, tapcons etc
not fastened per manufacturers specs.
Not flashed per mfr’s. instructions.
Not in accordance with product approvals
Not installed per listed specs
not installed per manufacturers instructions
not labeled
Not meeting the light & vent. area or egress
not properly insulated and sealed
not properly sized for the application
Not rated for proper wind loads
not sealed at wall joint
not sealed properly for energy
Not tempered where required.
Not using tempered glass when needed.
Not using temper glass where it is required
out of plumb
pool barrier
Poor installation which affects performance
removing window stickers prior to energy inspecti
required safety glazing installed
rqd. safety glazing
Safety / tempered glazing locations.
Safety Galzing not used where needed
safety glass in proper locations
Safety glass within 2 feet
safety glass, energy rating
Safety glazing
safety Glazing
safety glassing
safety glassing
safety glassing
safety glassing
safety glazing as required in areas
safety glazing due to location
Safety glazing not installed in hazardous location
Safety glazing not installed in required location.
Safety glazing violation
safety glazing violations
safety glazing where required
Safety glazing where required, <18' & baths, doors
safety tempered locations
safyt glazing
self closer at gar door.
sel closing to garage
sill height.
size concerning egress requirements
size of replacement emergency escape windows
sizing
sizing for egress
sizing of egress components
sleeping room egress window violations
some headers under sized or installed flat
Temper glass or flashing
temper requirements
tempered
Tempered glass in hazardous locations
Tempered glass missing in required locations
tempered glass must be over tub.
tempered glass not installed at required locations
Tempered glass not installed next to doors/ stairs
tempered glass not installed or in the wrong local
Tempered glass not used where required
Tempered glass requirements
tempered glass requirements
tempered glass requirements
tempered glass requirements
tempered glass where required
TEMPERED OVER TUBS AND SHOWERS
Tempered window in hazardous locations
TEMPERED WINDOWS AND EMERGENCY EGRESS
tempered windows not installed where required
tempering the wrong sizes
to small
too small for Type B units
Too small header in load bearing walls over window
undersized egress windows
undersized egress/rescue window openings
untempered glass
U-value or no poly seal
u-value wrong
very poor quality of windows
We do not conduct home inspections
Weep holes, egress size, and tempered glass
What do you mean be footings here??
window - hazardous location glazing

ICC/NAHB/ICC Foundation
Survey of Common Code Violations
Window size different than specified
windows - inadequate size for egress regs
windows aren't tempered were applicable
Windows do not meet egress requirements.
windows not having safety glazing within tub
space
Windows/ doors not shimmed or blocked
properly.
Wrong egress window size.
wrong emergency egress size
WRONG HEADERS INSTALLED
wrong location or omission of safety glazing
wrong size door, too small
Wrong size of windows
Wrong size window or not low enough for
escape
wrong U value
Wrong U-Factor and SHGC
wrong window-not egress size or not tempered
Please select the three most common handrail-related code violations you see

| 01 | Not properly fastened or installed | 1 | 44% | 0% | 0% | 18% |
| 02 | Missing handrails | 2 | 36% | 29% | 0% | 24% |
| 03 | Improper graspable surface | 3 | 10% | 52% | 11% | 24% |
| 04 | Improper height or spacing | 4 | 4% | 18% | 78% | 28% |
| 05 | Not Applicable | 5 | 6% | 0% | 1% | 2% |
| 06 | Other (please specify) | 6 | 1% | 2% | 10% | 4% |

12' extension on commercial
4' spacing of verticals
Accessibility returns
accessible handrail extensions
accessible terminations
balluster spacing
cannot hold required load
Closer than 1 1/2 inches to a wall
closed ends/turns not provided
Continuous rail
continuation
Continuity
continuity along winders and terminations.
continuous
continuous at different levels and landings
continuous length of stairway
does not continue, gaps on stairs
does not extend past top/bottom
end not returned to wall or newel post
ends don't return
Ends not curved
Ends not returned
ends not returned
ends not returned
ends not returned
ends not returned
ends not returned into adj. wall
ends not returned or blocked off
extensions missing
extensions past wall.
Exterior handrails for decks, not graspable.
failure to extend at top & bottom
Failure to return to wall or newel post
Handrail ends not returned
Handrail not returning to wall
handrail wall returns
Handrails not continuous
Handrails not turned back to wall
handrails that do not run the full length of stair
Improper end termination
Improper lateral force (too weak).
Improper length
Improper length of handrail
improper location
improper returns
improper spacing from the wall
Improper termination at ends
improper termination
Inadequate finger space to wall or finish trim
incorrect spacing between spindels
Insufficient handrail length
intermediate openings too large
intermediate rail spacing
interruption of rail at locations other than qualification
lack of 1.5' clearance to side wall
lacking ballusters
length, top to bottom
location
material too light to meet load requirements.
Missing End Returns
missing returns
no return at ends of handrails
no returns
no returns and ends
no returns at the ends
no returns or newells
no returns to wall
no returns to wall
No returns to wall.
non compliant ADA extensions
non-continuous where required
none
not a continuous handrail from top to bottom
NOT CONTINUOUS TOP TO BOTTEM
Not continues around landings
not continuous
not continuous
not continuous
NOT CONTINUOUS
not continuous
not continuous
not continuous
Not continuous.
Not designed.
Not extended
Not extended to bottom riser
NOT EXTENDING FAR ENOUGH AT BOTTOM OF STEPS
Not extending far enough up or down.
not full length of stairway
not returned
Not returned
Not returned into wall.
not returned to wall --not extended @ top, bottom
Not returned to wall or ending in newel post
not returned to wall or ground
not returned to wall or guard

Not returned to wall to prevent snagging
Not returned to walls correctly.
Not returned.
not returning to wall
Not terminating at a newel post or wall
Not turned back to wall at ends.
Rail not continuous
required extension past tread - termination
returns
returns
returns
seldom observe violations
Sharp corners & edges of railing
spindle spacing
spindle spacing
terminates before bottom nosing
terminations either unsafe or not handicap
too big a distance between rails
too wide guard spacing
TOOLOW
top and bottom terminations improper
Trying to use a guardrail as a handrail
We do not conduct home inspections
weak. unable to withstand lateral load.
width of stair casing for proper access
Appendix

Please select the three most common guardrail-related code violations you see

- Guardrail opening too large 27%
- Improper placing 8%
- Not properly fastened or installed 19%
- Missing guardrail 18%
- Height criteria not met 24%
- Not Applicable 3%
- Other (please specify) 1%

Q24 -7 Other (please specify)

152.79.205.38
6' triangle shape at rise and run
68.46.114.4
building code conflict with Life Safety climbability issues
Design loads.
design of pickets
Does not meet strength requirements.
fastening & use of ornamental or ladder-type
gap between deck and bottom plate
Guardrail is not sturdy enough
Guardrail strength
'Guards' still being called 'guardrails'
I'm a PLANS EXAMINER not an Inspector!
improper material
IMPROPER SPACING OF BALUSTER
improper termination of railing/guard
Inadequate strength
inadequate structural strength
inproper spacing
intermediates not spaced properly
Lack of design/attachment details
Lack of lateral strength.
ladder effect
lateral strength
Load requirements inadequate

lower edge at stair treds openings
Lower rail not at proper height.
Meeting 200psf rule
Meeting structural lateral support base connection
meets historic district requirement(too low).
no guards at all on basement stair sides
no intermediate rail
not installed where req'd for rooftop mech. equip.
not structurally sound
seldom observe violations
strength is not adequate
Unapproved materials
We do not conduct home inspections
We need to ban cable rails
weak
Will not support required loads

ICC/NAHB/ICC Foundation
Survey of Common Code Violations
Please select the three most common stair-related code violations you see.

- 01 Improper stair construction: 12%
- 02 Stair rise and run violations: 31%
- 03 Stair geometry issues: 14%
- 04 Stair headroom: 25%
- 05 Improper stair tread: 14%
- 06 Not Applicable: 3%
- 07 Other (please specify): 2%

Q25 - Other

All above
All of the above
All the above
Blocking along stringer, landing as req'd
Consistent steps
Exterior stairs and landings not correct.
Failure to provide/meet nosing requirements
Fire blocking at cavities and dead air spaces
Fire protection under stairs.
Floor finishes affecting finished rises on top & bottom
Guardrail/handrail issues
Hand rails
Handrails do not continue
HBA convince PA legislator to amend ICC IRC to ame
I'm a PLANS EXAMINER not an Inspector!
Improper fire rating of enclosure
Improper illumination requirements
Improper landing size
Improper landings
IMPROPER SUPPORT OF STAIR HORSES
Improper treads specifically on winding stairs
Improper winders. (Number 1 violation.)
Improperly marked top and bottom tread for disabled
Improperly sized landings
Inadequate connection to floor system
Inadequate tread fastening/support

Insufficient stringer support
Insufficient tread depth on winding stairs
Lack of disabled access compliance
Lack of firestopping at stringers
Lack of handrails
Landing area too close to walls
Landing requirements at egress doors
Landings
Landings at base of stairs too small.
Landings to small
Layout not per plans - plans deficient
Missing doors at top/bottom where required
Missing gyp board on bottom of stair, storage non compliant with ADA
Not code approved glazing at stair ways
Not consistent riser height
Not drywalling underside for fire safety
Not installed per manufacture’s instructions
Not planning for floor finish in rough
Not properly attached at top
Open riser
Open risers
Open risers
Open risers greater than 4'
Open rises
Pa State code adobted 8.25/9 into law
Rise and run being different at top/bottom step
Riser height not uniform with the other risers
Risers not within 3/8” overall
Stair rise on decks not backed when required
Stair stringers in contact with concrete.
Stair width and landing width
Stringer spacing not corresponding with plans
Stringers hung from damaged scrap wood
STRIPING FOR THE VISUALLY IMPAIRED
too narrow
top step not in line with the rest
Uneven riser dimensions.

uniform steps
We do not conduct home inspections
width for egress...
Width of stair not to code
winder dimensions
winder geometry
winders
Windows without safety glazing in stairwells.
## Using the scale of 1 to 5 below, please rate how often you feel each of the following result in code violations.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Never causes violations</strong></td>
<td>0%</td>
<td>1%</td>
<td>9%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>4%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Causes a large number of violations</td>
<td>2%</td>
<td>9%</td>
<td>7%</td>
<td>13%</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>2%</td>
<td>9%</td>
<td>7%</td>
<td>13%</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>4%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
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</tr>
<tr>
<td></td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Q29
In your experience, what percent of each type of new home would you estimate have code violations? Enter a number for each between 0 and 100. Please leave blank answer choices for which you have no experience or do not know the answer. (Please do not enter percent signs or decimal points.)
Appendix _0
Survey Questionnaire

[Programmer: use embedded password to ID each response]

**Code Violations Survey:**
An assessment of common defects in new housing construction

*Sponsored by International Code Council and the National Association of Home Builders*

10. Please take a few minutes to carefully review and answer the questions contained in this survey. Your individual responses are confidential. Please skip any questions that do not apply to you.

20. Where on the home are flashing violations most apparent? (Select all that apply.) [rotate]
   1. Doors
   2. Windows
   3. Chimney
   4. Siding
   5. Roof
   6. Wood Deck
   7. Brick Veneer
   8. Other (please specify) ____________________

30. Are most flashing violations you see related to problems with products, installation or both?
   1. Products
   2. Installation
   3. Both [this will needed cleaning after fielding]

40. Please give an example of a common flashing violation that you see.
   __________________________________________________

50. Please select the three grading and site drainage violations you see most often. [rotate]
   1. Grade too high
   2. Grading
   3. Backfilling
   4. Soil conditions
5. Downspouts/drainage controls
6. Driveways
7. Sidewalks
8. Stoops
9. Other (prompt and specify) ________________

60. Please select the three most common foundation-related code violations you see.
[rotate]
1. Incorrect footing depth
2. Incorrect drain installation
3. Incorrect fasteners for use below grade to attach plywood (i.e., wood foundations)
4. Improper reinforcement or support of rebar
5. Improper anchor bolts
6. Improper foundation size
7. Missing vapor barrier
8. Other (please specify) ________________

70. Please select the three most common wall-related framing violations you see.
[rotate]
1. Stud cut or notched to an impermissible depth
2. Missing fire-blocking
3. Missing studs
4. Missing hold-downs, straps, etc.
5. Improper spacing
6. Installation of sheathing
7. Other (please specify) ________________

80. Please explain what conditions are leading to these violations (i.e., negative grade at house leading to water ponding against foundation wall).
__________________________________________________________________________

90. Please select the three most common floor-related framing violations you see.
[rotate]
1. Notches in areas not permitted
2. Missing anchor bolts
3. Improperly installed sheathing
4. Sheathing nails missing joist
5. Wrong joist size
6. Wrong joist grade
7. Inadequate splices
8. Other (please specify) ________________
100. Please select the three most common truss-related violations you see. [rotate ]
   1. Improperly connected to wall plate
   2. Impermissible alteration leading to additional load
   3. Specific truss not approved
   4. Bracing not installed
   5. Metal plates not secured
   6. Other (please specify) __________________

110. Please select the three most common roof coverage violations you see. [rotate ]
   1. Absence of felt, or incorrect type
   2. Over-driving of nails through shingles
   3. Broken roof tiles
   4. Inadequate overlap of tiles, shingles or asphalt
   5. Improper materials
   6. Improper course spacing
   7. Missing nails or fasteners
   8. Product not approved or listed
   9. Other (please specify) __________________

120. Please select the single most common window- or door-related code violation you see. [rotate ]
   1. Inadequate fire rating
   2. Footings
   3. Improper flashing
   4. Other (please specify) __________________

130. Please select the three most common handrail-related code violations you see. [rotate ]
   1. Not properly fastened or installed
   2. Missing handrails
   3. Improper graspable surface
   4. Improper height or spacing
   5. Other (please specify) __________________

140. Please select the three most common guardrail-related code violations you see. [rotate ]
   1. Guardrail opening too large
   2. Improper placing
   3. Not properly fastened or installed
   4. Missing guardrail
5. Other (please specify) ________________

150. Please select the three most common stair-related code violations you see.
[rotate ]
1. Improper stair construction
2. Stair rise and run violations
3. Stair geometry issues
4. Stair headroom
5. Improper stair tread
6. Other (please specify) ________________

170. Using the scale of 1 to 5 below, please rate how often you feel each of the following result in code violations. [1 represents 'Never causes violations' and five represents 'Causes a large number of violations'; rotate list ]
1. A lack of coordination between trades
2. One trade's work is damaged by another
3. Inadequate manufacturers' installation instructions
4. Workers ignore manufacturers' installation instructions
5. Contractor's lack of code knowledge
6. Cost-cutting shortcuts

160. In your experience, what percent of each type of new home would you estimate have code violations? Please leave the spaces blank for home types that you do not have experience with.
1. starter-level tract homes ___
2. mover-upper-level production homes ___
3. custom high-end homes ___
4. apartments, townhouses, condominiums ___
5. change of occupancy condominiums, loft apartments ___
6. manufactured homes ___

180. Which of the following choices best describes your department's level of authority?
1. City level
2. County level
3. State level
4. Federal level
5. Other (please specify) ____________
190. Which of the following choices best describes your position at your building department? (Select one.)
   1. Building Official
   2. Building Inspector
   3. Plan Reviewer
   4. Fire Inspector
   5. Fire Official
   6. Other (please specify) ____________

200. What is the approximate population of the jurisdiction in which you work?
   1. Under 50,000
   2. 50,000 to 149,999
   3. 150,000 to 999,999
   4. 1,000,000 or more

210. What is your office zip code? _________

220. Great. That concludes our survey. Thank you for your time!

CLICK HERE if you would like to proceed to the ICC Web site.
Appendix_.0

Email Invitation to Participate in Survey

From: Dominic Sims
Sent: Wednesday, January 11, 2006 8:14 AM
To: Duncan Millar
Subject: ICC/NAHB Survey on Code Violations

Dear Duncan,

The International Code Council, in conjunction with the National Association of Home Builders, invites you to participate in a survey concerning code violations common to new home construction. This is part of our ongoing 2005 Building Department Research Project.

We need your valuable insight into this topic, so please take a few minutes to answer the important questions contained in this survey. We will be pleased to share with you an Executive Summary of the survey's results as a way of thanking you for your time.

To take the survey, please CLICK HERE.
(or visit http://www.surveysoftware.net/hostcr/CodeViolations.htm and enter in the password 99961)

The survey...
• Takes only about 7 minutes to complete
• Is completely confidential
• Ends January 27th, so please don’t delay!

Please reply to this email if you have any questions or comments. We value your privacy and will not sell or rent your personal information to anyone.

We appreciate your help with our research.

Thank You,

Dominic Sims CBO
Deputy Chief Operating Officer
International Code Council, Inc
900 Montclair Road
Birmingham, AL 35213-1206
USA
To opt out of future ICC research communications, please reply to this message with "UNSUBSCRIBE" in the subject line.
Email Reminder to Participate in Survey

From: Dominic Sims [survey-code@iccsafe.org]
Sent: Monday, January 23, 2006 9:53 AM
To: Duncan Millar
Subject: January 27 Deadline

Dear Duncan,

This is a friendly reminder that the last day to participate in our survey is this Friday. All participants will be sent an Executive Summary of the survey’s results.

The survey...
• Concerns code violations common to new home construction
• Takes only about 7 minutes to complete
• Is completely confidential
• Ends January 27th, so please hurry!

To take the survey, please CLICK THIS LINK.
(or visit http://www.surveysoftware.net/hostcr/CodeViolations.htm and enter in the password 99980)

We appreciate your help with our research.

Thank You,

Dominic Sims
CBO
Deputy Chief Operating Officer
International Code Council, Inc
900 Montclair Road
Birmingham, AL 35213-1206
USA

PS Please reply to this email if you have any questions or comments. We value your privacy and will not sell or rent your personal information to anyone. ICC and its affiliates and subsidiaries respect your right to privacy. If you no longer wish to receive e-mail from us, please visit here.
Pretest
Here are the results of the pretest...
Invites sent: 249
Invites delivered: 195
Percent of addresses that are "good": 78%
Number of response after seven hours: 22
Response rate so far: 11%
Percent of respondents completing the survey: 91%

We mailed the remaining 5,970 addresses this morning and 4,700 didn't bounce. We now have 525 completed surveys.