

Message from the President-Western Wood Truss Association of Alberta

Hello WWTA-AB Members,

2021 is coming to an end and many interesting things happened at WWTA-AB again this year. First, your Board welcomed a new Board member Manfred Schmold (Zytech Building Systems) and me, as your new President. We are very grateful for these new roles and are committed to continue the great work done by our predecessors and our Executive Director, Dave Pasolli.

While restrictions have made it difficult to meet in person, our association has been able to return to providing in person services to members such as Plant Quality Control Audits. In the background Dave Pasolli continues to engage with various stakeholders in the building industry – Both Provincially and Nationally.

The Board has received a report from a steering committee that has been meeting during 2021. This committee has been collecting information from the building industry and member companies. During 2022, the board will be reviewing the report and will be using the information to focus WWTA-AB on our member's and the building industry needs.

Planning for an in-person AGM in Edmonton this April is underway. My hope is that we can all meet in person at this event.

Best wishes to you and your families and for a successful 2022.



Derek Foss

President, WWTA-AB

If you have an idea for a commentary or would like to submit your own commentary for a future newsletter please let me know at [dave@wwta.ab.ca](mailto:dave@wwta.ab.ca)

### Economic Update

November housing starts in Alberta were up 54% compared to the same month in 2020 and are up 35% year-to-date. The biggest gains came from Calgary where monthly starts were 2192 compared to 952 last year. All other areas were down slightly with the exception of Lethbridge, but starts have been stronger across all areas year-to-date.

Housing Starts Alberta						
	Nov-21	Nov-20	% Change	YTD 2021	YTD 2020	% Change
Alberta	3414	2214	54.20%	27973	20603	35.77%
Edmonton	972	1003	-3.09%	11486	10126	13.43%
Calgary	2192	952	130.25%	13862	8395	65.12%
Red Deer	17	19	-10.53%	186	158	17.72%
Grande Prairie	15	17	-11.76%	123	111	10.81%
Lethbridge	55	36	52.78%	596	459	29.85%
Wood Buffalo	5	9	-44.44%	76	52	46.15%
Canada	24905	21328	16.77%	226293	184197	22.85%

The trend in housing starts or Seasonally Adjusted Annual Rate (SAAR) was 267,365 units in November, up from 264,583 units in October, according to Canada Mortgage and Housing Corporation (CMHC). This trend measure is a six-month moving average of the monthly seasonally adjusted annual rates (SAAR) of housing starts.

“The six-month trend in housing starts was higher from October to November, with total starts rebounding from their declines in prior months,” said Bob Dugan, CMHC’s chief economist. “For SAAR housing starts in Canada’s urban areas, there was a slight decrease in single-detached starts, while multi-family starts experienced a large increase in November, resulting in higher overall starts for the month. On a trend and monthly SAAR basis, the level of housing starts activity in Canada remains high in historical terms. Among Vancouver, Toronto and Montreal, Vancouver was the only negative market, while Toronto had a significant gain in total SAAR starts in November, due to the multi-family segment more than doubling from the prior month.”

For the full report go to: <https://www.cmhc-schl.gc.ca/en/media-newsroom/news-releases/2021/canadian-housing-starts-trend-higher-november>

### Inflation and the CPI

The inflation rate in Alberta averaged 1.7% between January 2014 and December 2020, which is just below the Bank of Canada’s target of 2%. As such, we have gotten used to low inflation. The pandemic has, as with so many other things, disrupted this pattern. Driven by supply chain disruptions, swelling demand as economies rapidly reopen, the release of pent-up savings and stimulus-heavy monetary policy, expanded demand chasing constrained supply has been pushing prices up around the world.

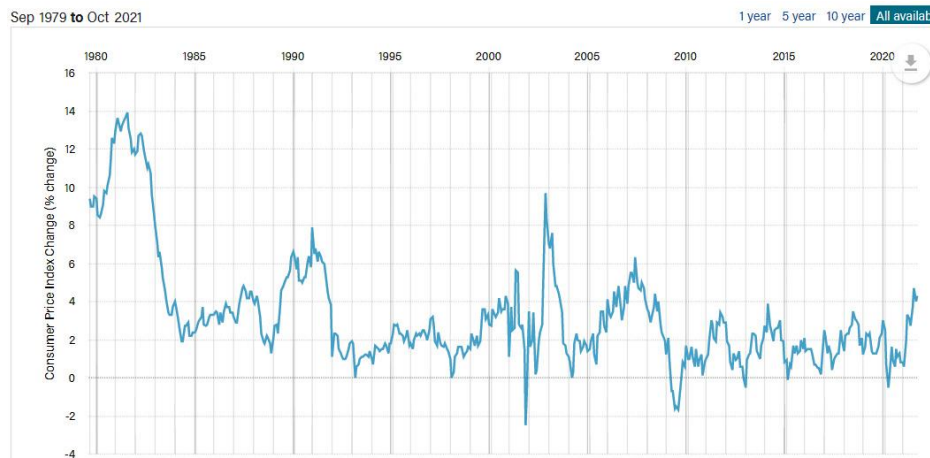
# Western Wood Truss Association of Alberta December 2021

Alberta's inflation rate has been above 4% since August with rates expected to stay around this level for the next few months and then falling enough to average 3% in 2022 and 2.5% in 2023. The Bank of Canada's October Monetary Policy Report indicated that it expects the national inflation rate to average 3.4% in 2022 followed by 2.3% in 2023. The unusually high level of uncertainty in play at the moment means these estimates may turn out to be low. Either way, the forecast assumes higher-than-normal inflation and rising interest rates to help keep it from growing further.

The Consumer Price Index (CPI) is an index that is often used to measure inflation by tracking the changes over time in the prices paid by consumers for a basket of goods and services. ... As such, the CPI is an economic indicator most frequently used for identifying periods of inflation (or deflation).

For a good explanation of CPI check out the video from Statistics Canada:  
<https://www.statcan.gc.ca/en/sc/video/cpi>

On a year-over-year basis, Albertans paid 4.3% more in October 2021 for the goods and services that comprise the Consumer Price Index (CPI) than in the same month a year ago, while the national average CPI was up 4.7%. In Alberta, nearly all commodity categories increased, with Energy (+32.7%) and Transportation (+11.8%) increasing the most.



*Alberta CPI History*

Oh, remember the 1980's and the interest rates we had to pay. I personally remember having a car loan in 1986 at 18%.

The Federal Government has given orders to the Bank of Canada to keep inflation at 2%. To achieve the inflation target, the Bank adjusts (raises or lowers) its key policy rate. Doing so encourages financial institutions to increase interest rates on their loans and mortgages, discouraging borrowing and spending and thereby easing the upward pressure on prices. This is the main tool that the government has to keep inflation in check, but

they do not really have much control over what people pay for things, just the cost of borrowing.

The CPI basket is divided into 8 weighted components. Food; Shelter; Household operations; Clothing and footwear; Transportation; Health and personal care; Recreation, and Alcoholic beverages, tobacco products and recreational cannabis.

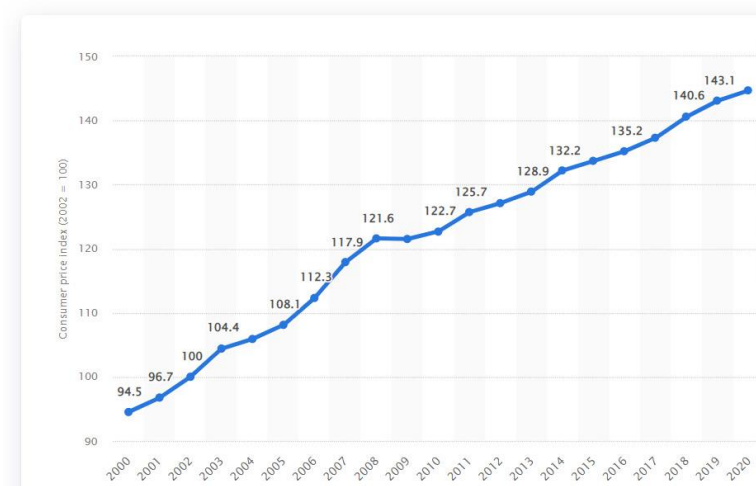
Three of the eight major components saw unprecedented growth in their basket weights, led by shelter, already the highest-weighted major component, which grew to 29.78% as a share of the basket, from 26.92% in 2017. The share of the household operations grew to 15.21% and alcoholic beverages, tobacco products and recreational cannabis was up at 4.86%. Four of the major components declined in basket share, with the transportation component shrinking the most. It fell to 15.34% from 19.72% (because people traveled less in 2020).

A large majority of Canadians, or 63.5 per cent, say they lack confidence that inflation will return to more normal levels, according to a survey by Nanos Research Group. While the cost of housing, food, and transportation are on the minds of most Canadians, sometimes they fail to realize the largest bill they pay every month is income tax.

As opposed to looking at year over year percentage increases look at what the compounding effect has been over the last 20 years.

The following chart shows what the CPI Basket cost has been from 2000 to 2020. We paid 143.1 for the same basket of goods that was 94.5 in 2000. Compounding adds up.

Consumer Price Index in Alberta from 2000 to 2020



So if the government wants to keep inflation around 2% the biggest component they have to reduce is shelter and the way to do that is raise interest rates. I would expect that the transportation portion of the CPI will also increase as people travel more and the Carbon Tax continues to rise in the future. Supply chain issues will continue to raise the price of

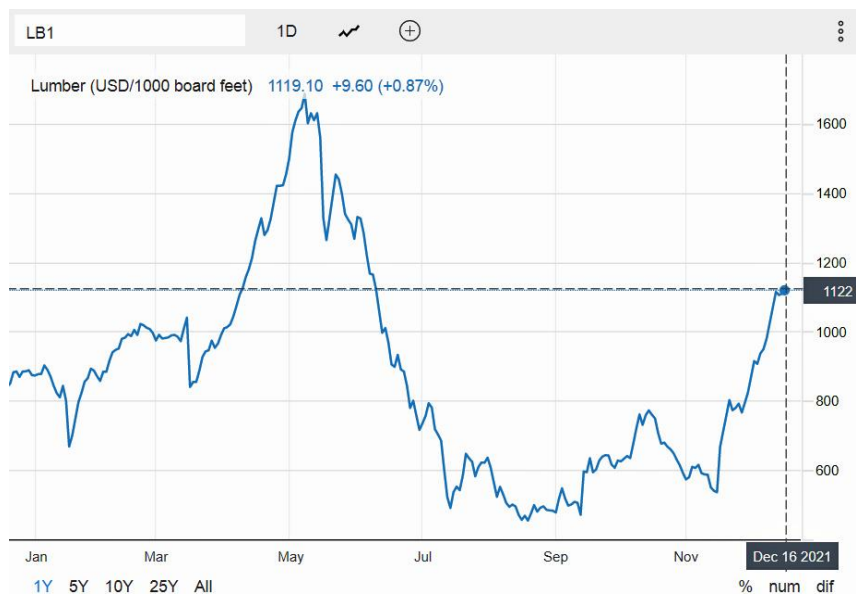
other goods like food and clothing, which the government has little control over. Alcohol and tobacco will continue to increase as there is little resistance to increasing taxes on these.

Good luck to the Prime Minister and Chrystia Freeland on keeping inflation at 2%.  
“When I think about the biggest, most important economic policy this government, if re-elected, would move forward, you’ll forgive me if I don’t think about monetary policy.”- Justin Trudeau-August 2021.

## Lumber

Lumber pricing is continuing its roller coaster ride in December.

Chicago lumber futures traded just above \$1,100 per thousand board feet, close to levels not seen since the beginning of June, amid supply disruption due to labor shortage and recent flooding in Canada, and as the US has doubled its tariffs on soft lumber. Meanwhile, low borrowing costs continue to fuel the demand for houses and unseasonably warm temperatures in the US had enabled homebuilders to keep up their activity, sustaining the demand for materials such as lumber. In the United States, sawmills are facing a labor shortage as workers are unwilling to work in such dangerous conditions at low wages. In Canada, recent floods have affected the transportation system, delaying or making it impossible to ship lumber to the US.



In addition to the flooding problems, labour shortages, and tariffs, there appears to be another issue emerging that they could make a TLC reality show about-Hording.



Exacerbating this issue is construction companies that are hoarding materials to avoid shortages, said Vanessa Miller, a partner at international law firm Foley & Lardner.

“This is actually creating the same type of shortages that we saw early on in the pandemic,” she told Insider, noting the infamous toilet paper stockpiling the US saw last year despite the lack of an actual shortage.

If the lumber supply chain was functioning properly, the price increases would not be so dramatic, Miller added.

## Quality Control

### Lumber Substitution

With the wild lumber market we saw this past year and I expect that it is going to continue in 2022 I thought I would do a quick article on lumber substitution. Thanks to Chris Cordogiannis from MiTek Canada for his assistance.

First of all, all lumber must be graded by NLGA rules, which means that you must see NLGA on the stamp. Only agencies that are accredited by the Canadian Lumber Standards Accreditation Board can grade lumber to NLGA rules in Canada. So the stamp must have both the accreditation agency and NLGA on it. The stamp must also have the species (SPF) below.

The stamp below has the accrediting agency (AFPA), NLGA, the species (SPF) and the grade (2).



Top and bottom chords shall be No 2 or better and 2x3 webs also have to be No. 2 or better. There is nothing in TPIC that specifically permits substitution of a higher-stress grade of the same size and species, but the allowable properties of the substitute lumber must be equal to or greater than the material it is replacing.

**Mixing species lumber that is not MSR can be tricky and should NOT be done without re-running the truss design with the actual species you are going to use.**

When it comes to MSR the values of bending, compression parallel, tension, and stiffness are governed by the grade (not the species) and there is no difference between D Fir MSR and SPF MSR for these properties. Because a machine is assessing strength properties during production, Machine Evaluated Lumber (MEL) and Machine Stress Rated Lumber (MSR) grading automatically adjusts to changes in the internal quality of lumber. Shear and compression perpendicular are governed by species. D Fir is stronger than SPF for these properties. Therefore D Fir can be substituted for SPF, but not the other way around.

Grade	Bending at extreme fibre, fb	Modulus of elasticity, E	Tension parallel to grain ft	Compression parallel to grain, fc	Compression Perp to grain, fcp
SPF #2	11.8	9500	5.5	11.5	5.3
D Fir L #2	10	1100	5.8	14	7
Hem-Fir #2	11	11000	6.2	14.8	4.6
1650-1.5E MSR	23.9	10300	11.4	18.1	5.3
1950-1.7E MSR	28.2	11700	15.4	19.3	5.3
2100-1.8E MSR	30.4	12400	17.7	19.9	6.5
2400-2.0E MSR	34.7	13800	21.6	21.1	6.5

Another factor that must be taken into account is that fastener spacing is a function of species, not grade. Fastener spacing in D Fir boards is stricter than in SPF. If comparing a substitution, careful consideration should be given to ensure that the min. D Fir fastener spacing and end/edge distances are not exceeded in the D Fir boards. So, for example, in a multi-ply girder truss if you are substituting D Fir for SPF this should be reviewed by the truss designer.

I don't see it too often but once in a while a mill may offer other MSR grades that have a different E value, and you have to be careful with these. For example there is a grade of 1650 fb-1.3E that does have a lower modulus of elasticity than the common 1650-1.5E. So when checking the grade also look at the E value as well.



*MSR 2100fb-1.8E Stamp with CMSA and NLGA stamp*

As I have been seeing more D Fir MSR purchased because of lack of availability of SPF MSR you should also be aware of some of the other issues that come along with D Fir. Mainly that it is heavier and may have a higher moisture content than SPF. This may affect the shipping weight, as well as, freeze more in the winter time.

I also see more checking and shake in D Fir than you would normally get with SPF. The picture below shows a piece of D Fir 2250 that was split from end to end, an expensive 20' piece of firewood.



### Test

In the grade stamp in the picture below could you use this piece of lumber where the shop drawing specifies SPF for a bottom chord? (Answer at the end of the newsletter)





For more information on lumber check out module #107 Lumber Grade and Quality and #201 Lumber Picking on [www.trustrainingonline.com](http://www.trustrainingonline.com).

If you have any ideas for a quality control topic that you would like to see just let me know, I am going to run out of my own ideas at some point.

## Health and Safety Toolbox

Similarly to the Quality topic the WWTA would like to give you a monthly item you can discuss when doing your Safety Toolbox meeting. This month we are going to focus on your workers right to know.

When I have reviewed COR audits in the past there is sometimes a discrepancy that stands out between what the employer thinks their workers know and what they actually know.

In question 5.2 of the Partnerships Audit Instrument it asks “Does the orientation process cover OHS rights, and critical health and safety information prior to starting regular duties?” If the company has a good orientation process this question is often a positive response.

Then in question 1.6 it asks “Do employees understand their individual OHS rights?” and when they are questioned quite often they cannot answer positively. So it is always a good idea to reinforce these rights to ensure that they do understand.



### 1. Know about health and safety

You have the right to know about workplace hazards and have access to health and safety information at the work site.

Your employer has the responsibility to make you aware of your rights and duties under the OHS legislation. Your employer must also provide you information about hazards at the work site, controls used to eliminate or control the hazards and any relevant work practices and procedures.

If hazardous products (such as dangerous substances or chemicals) are used in the workplace, your employer must provide you with appropriate labels and safety data sheets. Your employer must also make sure you are appropriately trained on how to handle hazardous materials. Additional training is required for how to safely use equipment, and how to select and use personal protective equipment.

Your employer must make sure you have the skills and training needed to do your work safely. Playing your part within the internal responsibility system, you must participate in the training and apply your learning at the job.

## **2. Participate in Health and Safety**

You have the right to be involved in health and safety discussions and participate in decision making on matters that affect your health and safety at work. Your employer is required to respond to health and safety issues raised by workers.

If your workplace has a health and safety committee (HSC) or health and safety (HS) representative, they bring work site parties together to work on activities such as preventing, identifying and controlling hazards, investigating health and safety incidents, and responding to reports of dangerous work.

If your workplace does not have an HSC or HS representative, your employer must still involve affected workers when assessing hazards at the workplace and implementing control measures.

## **3. Refuse dangerous work**

Workers may refuse to undertake tasks or assignments that they are either unable or not prepared to do in a healthy and safe manner. You have the right to refuse dangerous work if you have reasonable grounds to believe that there is a dangerous condition at the work site, or that the work is dangerous to you or any other person. Health and safety hazards that are not normal for the job, or normal hazards that are not properly controlled, are considered dangerous conditions that could trigger a work refusal.

If you determine you need to refuse to do particular work, you must promptly report the refusal and the reasons for it to your employer, supervisor or another designated person. Your employer is required to look into and eliminate the danger if it exists.

While you refuse to do particular work you believe is dangerous, your employer must continue to pay you the same wages and benefits. Your employer can assign you to other work until the problem has been investigated and fixed, and your employer can assign someone else to do the refused work if they determine that no dangerous condition exists. When reassigning the work, the employer must advise

other workers (in writing) of the refusal, reason for it and make those workers aware of their own right to refuse the work.

Unless the dangerous condition is fixed immediately, your employer must prepare a written report of your refusal to work, the employer's investigation and any actions taken. Your employer must provide you a copy of the report. Your employer must also provide a copy of the report to the HSC or HS representative, if one exists. The report cannot contain any personal information about the worker who refused to work.

If your employer does not agree that there is a danger, or if you can't agree on a way to fix the problem, consider consulting with the HSC or HS representative if there is one.

For training of new workers you can check out modules #101-103 at [www.trustrainingonline.com](http://www.trustrainingonline.com).

### Changes to the OHS Act

There is a new you-tube video on the changes to the OHS act at: <https://www.youtube.com/watch?v=uPHOHupOJ3Q>

For more information check out the Worker's guide to occupational health and safety at the OHS Pubstore.

The Alberta Government has a new format OHS eNews you can subscribe to with all kinds of good material at: <https://ohs-pubstore.labour.alberta.ca/>

### News and Events

This month I am including some of the notes that our TPIC representative David Klassen, P.Eng. took from the latest TPIC meeting October 14, 2021. They have been edited for the newsletter.

**The information is for informational purposes only and should not be construed as professional advice or opinion. The writer has made reasonable efforts to ensure that the information provided is accurate at the time of writing. The content is provided "as is" and the writer makes no representations, warranties (express or implied), guarantees or assurances of any kind as to the accuracy, currency or completeness of the information provided. Use of the content is at your own risk.**

#### CSA O86-24 (reported by TPIC rep on CSA committees)

- Work ongoing, no new topics

**NBCC Update (reported by TPIC rep on NBCC committees)**

- Expect publication in 1<sup>st</sup> quarter of 2022.
- Clause change from part 9 committee would require all trusses to be sealed. Alberta could address via Standata.
- Will need to adjust TPIC 2019 to align with new code when published.

**Task Group Reports:**

- Group Tear-out
  - Work in progress, no update to report.
- Moment Splices
  - Waiting to see which direction our US counterparts (TPI) are going with their research.
- Web Bracing
  - Work in progress, no update to report.
- Vibration
  - Discussion on attic truss requirement for max room width of 22d unless vibration has been checked. A simplified approach but seems to align with calculations when considering the chord to be partially fixed (not pinned).
- Appendix C & (6.7.4.2(3)) - BOLTED LAMINATIONS
  - Work in progress, no update to report.
- Canadian National Master Specs
  - No activity from NRC to report.
- Website
  - Work on going, moving supporting documents onto a goggle drive site.
- Technical Bulletins format review
  - Bulletin 4 has been uploaded.
  - Bulletin 7 has been uploaded.
  - Bulletin 9 needs to be loaded to website.
- Plating Sliders to eliminate CLB
  - Final review underway for approval.
- TPIC 2014 Manual translation
  - Has been uploaded to website.
- TPIC 2019 Manual translation
  - Work in progress.
- Compression perp to grain at joints
  - TPI has continued to review the topic with some additional concerns being raised.
  - TPIC waiting to review information to determine how to proceed.
- Bottom chord bracing with drywall
  - Reviewing use in both part 9 & 4.
  - Mitek had a letter allowing drywall but their letter expired, looking forward to an update that is consistent across our industry.
- HDG of truss after manufacturing
  - Work in progress, no update to report.



- Plate in Breeze
  - Work in progress, no update to report.
- Design responsibilities
  - Work in progress, no update to report.
- Truss design drawings for website
  - Work in progress, no update to report.
- Bracing Party walls in the attic space
  - Work in progress, no update to report.
- Commentary for TPIC Manual
  - Have not begun project.
  
- Design considerations of long cantilevers
  - Task group is working on a technical bulletin to address:
    - Bracing
    - Wind considerations for Part 9
    - Load conditions
- Connection details
  - Minimum chord size for nailing of open jacks to top chord.
  - Task group working on a nailing chart based on chord size and roof slope.
  - Will provide information in the form of technical bulletin.
- Review ANSI/TPI 3
  - Bracing of top chords under piggyback trusses.
  - Task group reviewing details to make recommendations.
- Leg Down Extensions
  - Task group is reviewing a document published by Mitek to address the detail.
  - Will use the information and further research to develop a technical bulletin.
- Interior bearing requirements for trusses over 40'
  - Work in progress, no update to report.

#### **Ineffective Teeth in finger joints**

- Reviewed TPIC G.4.1.2.
- Will need to revise wording to properly reflect the intent.

#### **CSA S520 - High Wind Safety for Low-Rise Residential and Small Buildings**

- Open for public review, won't be a requirement but is looking towards climate change and more stringent requirements by the insurance industry.
- 5.0 kPa uplift with ceiling finishes (attic), 5.9kPa for interior without finishes (rafter) 8.2 for porch.
- Bracing details included.

#### **New Business:**

- Ground snow loads for 1995 Farm Building Code

- Debate if the 1995 GSL or current GSL should be used, general consensus was to use the GSL coinciding with the code i.e. 1995 Farm Building code should use the 1995 NBCC GSL values.
- Will provide a position statement to provide clarity for specifiers.
- Roller press reduction factor for floor trusses (S347)
  - Will be brought up at tomorrow's executive meeting to request funding for testing.

If you have anything that you would like to be put on the TPIC agenda please forward it to me at: [dave@wwta.ab.ca](mailto:dave@wwta.ab.ca).

## 2022 AGM

As new variants of Covid pop up it is becoming tricky to plan our April 1, 2022 AGM please give your feedback on attending the meeting at:  
<https://www.surveymonkey.com/r/K57ZHR6>

## Virtual Meetings

One day we will get back to meeting in a room I hope, but in the meantime if you have any topics you would like the WWTA to hold a virtual meeting on please let me know.

## WWTA Online Training

If you have not yet taken a look at the WWTA online training program I would encourage you to, as no doubt you will be hiring new workers in the near future and it is a good method to get them productive earlier and safer. If you want an overview of the program go to the WWTA website at: <http://www.wwta.ab.ca/truss-training-online.html>

### Did You Know?

The answer to the test question is NO, not because of the species, but because it is #3 lumber and the minimum that can be used in a truss bottom chord is #2.