

PERKA
HYBRID BUILDINGS

Reference Guide

STRONG. ★ Affordable. ★ Flexible. ★ Easy.

FIND IT FAST...

MEET OUR FOUNDER

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Edouard C. Thevenot

“ET”
Mr. Positive

Born in 1936 to an “old school”, extremely hard working dad, and a shrewd but very loving mom, Ed Thevenot quickly knew he wanted to be a “business man”. Since his first sale of 2 packets of garden seeds at 12 years old, he specialized in sales and marketing. In 1960 he picked up Napoleon Hill’s “Think and Grow Rich” book and successfully promoted all kinds of products: from pots and pans, to computer courses, to recreational vehicles, to building materials.

With his entrepreneurial fire burning, he jumped into the building industry in 1971, promoting and marketing pre-engineered Quonsets in the Province of Quebec. Within a few short years, his dynamic personality, hard driving work ethic, and unswerving dedication to his men, led him to a Vice-President of Marketing position for the head office of the Miracle Span group of companies. In 1980, he decided he was a better entrepreneur than employee, and created his own line of buildings – the cutting edge, hybrid design of Perka (Wood and Steel) Buildings.

In 1995, he was frustrated with inadequate insulating materials as he tried to construct more energy efficient buildings. So in response, “ET” created (P2000) Insulation Systems and offers P2000™ as an insulation solution for Perka Buildings. He went through several manufacturers

looking for the right formula of high-quality product, dedicated service and a creative, entrepreneurial spirit to match his own. Despite occasional thoughts of retirement, he just could not quit, and ET found his winning formula. ET is the brain child behind the marketing engines that have maintained steady sales, in both buildings and insulation, for over 40 years. His experience, fearless risk taking, and “work horse” habits helped him foresee market trends that enabled his team to respond quickly with assurance and success.

Unfortunately ET is no longer with us, but he has left behind an experienced, skilled, highly energized and passionately dedicated team; including two more generations of the Thevenot family, and several brothers and sisters of other mothers and fathers!

Introduction to PERKA PERK\$ -- Affordable Value

Just a few of the Value added “Perka Perks” that are included in every Perka Building!

1. Wood is NOT a conductor of hot or cold and energy costs are rising through the roof! **You Save MONEY!**

2. Perka clips are Pre-Welded on! **You Save TIME!**

3. Wood girts allow for easier door and window installations. Screw Gun and Screws are easier than a blowtorch or welder. You can install openings wherever and whenever you want. **FLEXIBLE & you Save TIME & MONEY!**

4. The wood purlins and girts are typically spaced at 24” centers, making the interior ready to be finished. **EASY to work with, and SAVES money!**

5. Also with steel purlins, Tek screws and washers are used to attach metal and in 5 years or so they may work loose and leak. Wood will not leak because it swells to seal holes. **EASY, Maintenance free.**

6. It is easier finding carpenters to put up Perka hybrid buildings and they are typically more creative! Steel erectors are limited with choices and cost more. **EASY, and you Save MONEY!**

7. In the event of wind up-lift, snow, ice loads or fire, you’ll never lose a whole building. You may lose a bay but that’s it! If a fire breaks out in an all steel building, because the metal twists and bends, the steel purlins pull the other frames in, collapsing the whole building. Perka Buildings have purlins and girts in wood that burn up and allow the roof section to collapse but not the whole structure. **AND** this actually vents the heat and the Perka steel frame remains untouched. The frame survives and after the clean up, the building will be ready for new wood purlins and girts to be replaced and the new exterior to be put on. **A safer, better investment.**

8. Perka steel frames can have wider and longer bay spacings than wood buildings. **FLEXIBLE & Practical**



9. Since Perka steel frames have longer and wider bays = fewer columns and this means less foundation “holes” than wood (pole) buildings. And columns sitting on piers are always better than wood poles in the ground. In most cases, poles actually do not meet codes. **STRONG.**

10. Design **flexibility**; get the building you want and need, not one that *might* work for you. If you need anything - **ASK!** (ie. Inside width and height can be made to the inch and the length is limitless.)

11. We have our own engineers, draftsmen and detailers who check and recheck all our designs for **OPTIMUM** efficiency and accuracy. **YOU GET QUALITY FRAMES THAT WILL FIT TOGETHER!**

12. You get typical building anchor bolt plans in approximately 5 days, engineered data drawings in 7-10 days and the building delivered in 4-6 weeks. If you need it sooner, we will work something out with you. **FAST NEIGHBORLY SERVICE!**

13. Exterior choices are unlimited. By turning the wood purlins to a vertical position you can virtually add **ANY** finish you want. Just like a roof/wall in your house! You can have the nicest looking building in your area - with **STEEL** inside! Instead of looking like a “shed” it can look just like your house or existing business. **EASY TO WORK WITH AND FINISH!**

14. We have an easy to read and nicely detailed assembly guide made with the “Do-it-yourselfer” or carpenter builder in mind. **EASY TO PUT UP!**

Perka Perks pər-kəh pər-k(s)

noun

-- A inherently and intentionally designed building feature that adds equity, time saving, simplicity, cosmetic and appeal value without having to actually spend an expected or market valued monetary cost for said appreciation or benefit. (especially as it pertains to DIY - do-it-yourselfers)

- representing something that adds appeal, appreciation, functionality, practicality, purpose, value.
- brings joy and happiness to owner of final product, who feel “Perk’d up”!

Competitor Caution Points



Here are GREAT Reasons NOT to Buy an ALL STEEL Building.

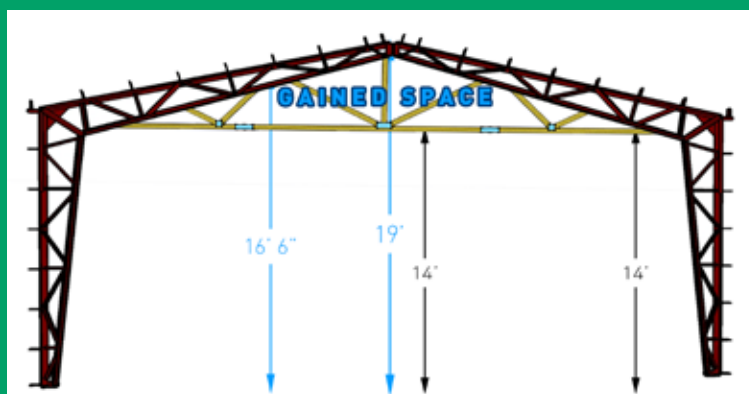
1. It is one of the building types most susceptible to collapse in case of fire. Fire Department will normally not even enter the building.
2. Bolts are used instead of tek screws to apply the purlins and girts. So excess snow or ice levels, or excess wind up-lift causes the building to stretch, twist, and could collapse down as the bolts resist.
3. By using 26 gauge sheeting, and the low roof pitch, they generally require the use of caulking which eventually dries out, shrinks, cracks and results in roof leaks.
4. By using 26 gauge or 24 gauge sheeting, with purlins on 48" O.C. (or more), the allowable uniform load is much less compared to purlins with 24" O.C. or less spacings.
5. A tek screw is used to fasten steel sheeting to steel purlin (vs. steel/wood), resulting in potential for up to 100% leaking as steel will not absorb any moisture.
6. The plate steel type frame is very wobbly or flexing during the erecting stage and requires very careful extra bracing during construction.
7. To finish the inside with drywall or plywood, requires the application of strapping as the girts can be 48" to 84" O.C. You're actually building another building inside to finish.
8. The fixed connection at base of columns uses 10-15% more concrete in piers and is a less forgiving construction design, providing an overall limiting design safety factor.
9. Most all steel building manufacturer/suppliers offer only a ONE YEAR warranty.
10. Typical application of insulation is a squeezed fiberglass option – offering a much reduced actual R- value and absolutely no reflective protection from radiant heat, unless covered with foil.

Here are GREAT Buy a

Reasons NOT to

WOOD (Pole) Building.

1. The purlins are applied horizontally, not vertically, causing a potentially wavy roof system.
2. The wave of the roof stretches the metal causing screws or nails to pull out.
3. Trusses being 4', 6' or 8' O.C. makes for a good landing pad for the birds to perch themselves on and make a mess of the inside of the building.
4. With wood trusses, there are limitations to head room if and when needed.
5. Columns are typically not engineered causing much less security with high winds and snow.
6. With columns 6' to 8' O.C., there is no chance to enter in the side of the building with a 10' or 12' door or wider.
7. Frame assembly and erection typically requires extensive bracing and/or tie downs to prevent collapse until purlins are installed and metal is on roof.
8. Under fire, opening the roof to rid the excess heat will help but usually entire building is lost.
9. Non-engineered columns can collapse due to heavy uplift wind, snow/ice loads or fire.



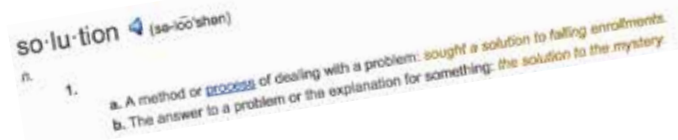
Here is an example of the expansive head room the Perka Frames provide in a 40' wide, 14' tall building.

WHY A PERKA HYBRID BUILDING FRAME?

It is a SOLUTION.

1) SOLUTION TO POSSIBLE COLLAPSE UNDER SNOW-RAIN-ICE-WIND-OR-FIRE.

"You may lose a Bay, but not a Building"



2) SOLUTION TO INSIDE FINISH:

- A) Purlin & Girt Clips typically every 24" with wood.
- B) Welded Clips to bottom cord for easy drop ceiling applications available.

3) SOLUTION TO EASE INSTALLATION:

- A) Step by Step Assembly Guide
- B) Easier to get Carpenters/Sheet Metal Workers than Steel Erectors
- C) Workman's Compensation Insurance is usually less for Carpenters/Sheet Metal Workers, than for Steel Erectors.
- D) All clips are **pre-welded**, everything else is screwed or uses "nuts & bolts"
(Like an Erector Set)



4) SOLUTION TO MEET ALL CODES "WHEREVER YOU ARE!"

- A) Independent Outside Engineers, available to Stamp/Wet Seal all drawings
- B) Anchor Bolt Layout provided with all frame purchases with frame reactions for foundation.

5) SOLUTION TO ACCESSORY TAKE OFF AND SERVICE

- A) Estimates for sheeting, Trim, Screws, Perka Board can be done with a few keystrokes.
- B) Pricing Calculator can price an entire building package in less than 15 minutes
- C) Typical, standard speedy four to six week delivery turnaround
- D) Approval Drawings typically in a week, and Stamped Engineered Drawings can follow in just days.

6) SOLUTION TO LEAK PROBLEMS

- A) Wood Girts and Purlins with a 1 1/2 #10 screw with washer - (Leak Proof)
- B) Use only Channel Drain Sheeting
- C) On 1.75/12 roof pitch, can use double overlap or OSB layer
- D) NEVER use caulking as it dries, shrinks and eventually leaks!

7) (Optional) SOLUTION TO ENERGY EFFICIENCY

- A) Vapor Barrier, Radiant Blocker, consistent "P-Value", No Squeezing, No Condensation, No Dripping, No Sagging,... And it is lightweight and easy to install...
- B) Available in multiple sizes and thicknesses

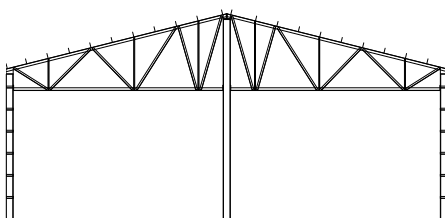
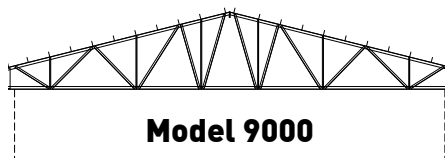
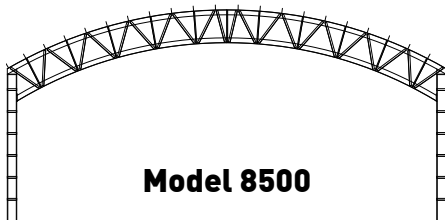
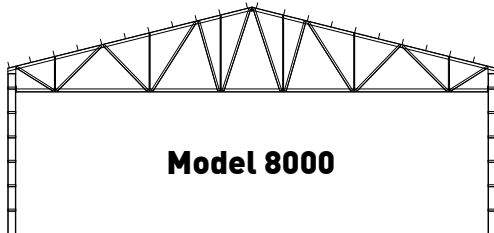
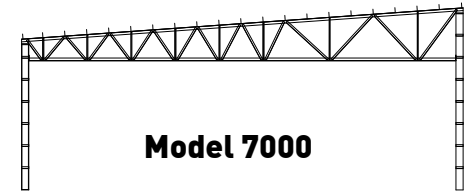
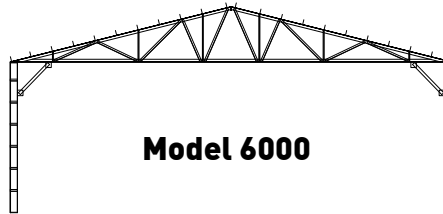
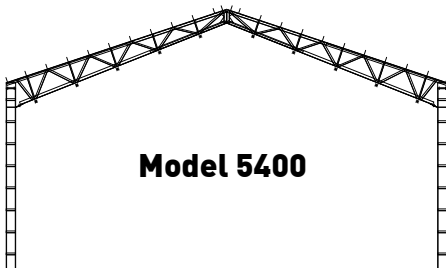
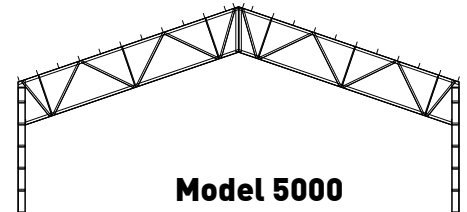
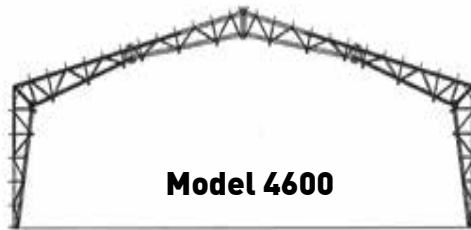
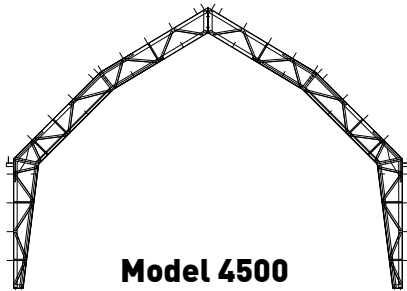
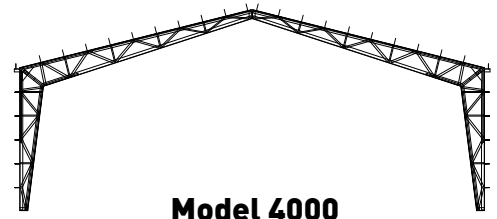
Gold Key of Excellence



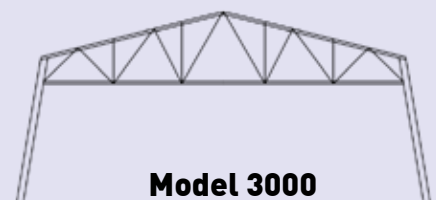
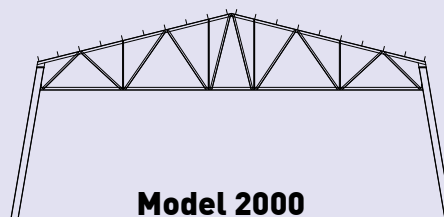
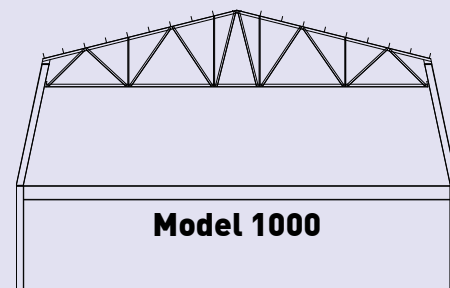
Perka has been selected by it's peers on a multitude of occasions, as worthy of receiving the Rural Builder and National Frame Building Association's GOLD KEY OF EXCELLENCE AWARD. This honor is given to the top 10% of the industry's suppliers as voted by contractors on **QUALITY** and **SERVICE**.

PERKA STANDARD FRAME PROFILES

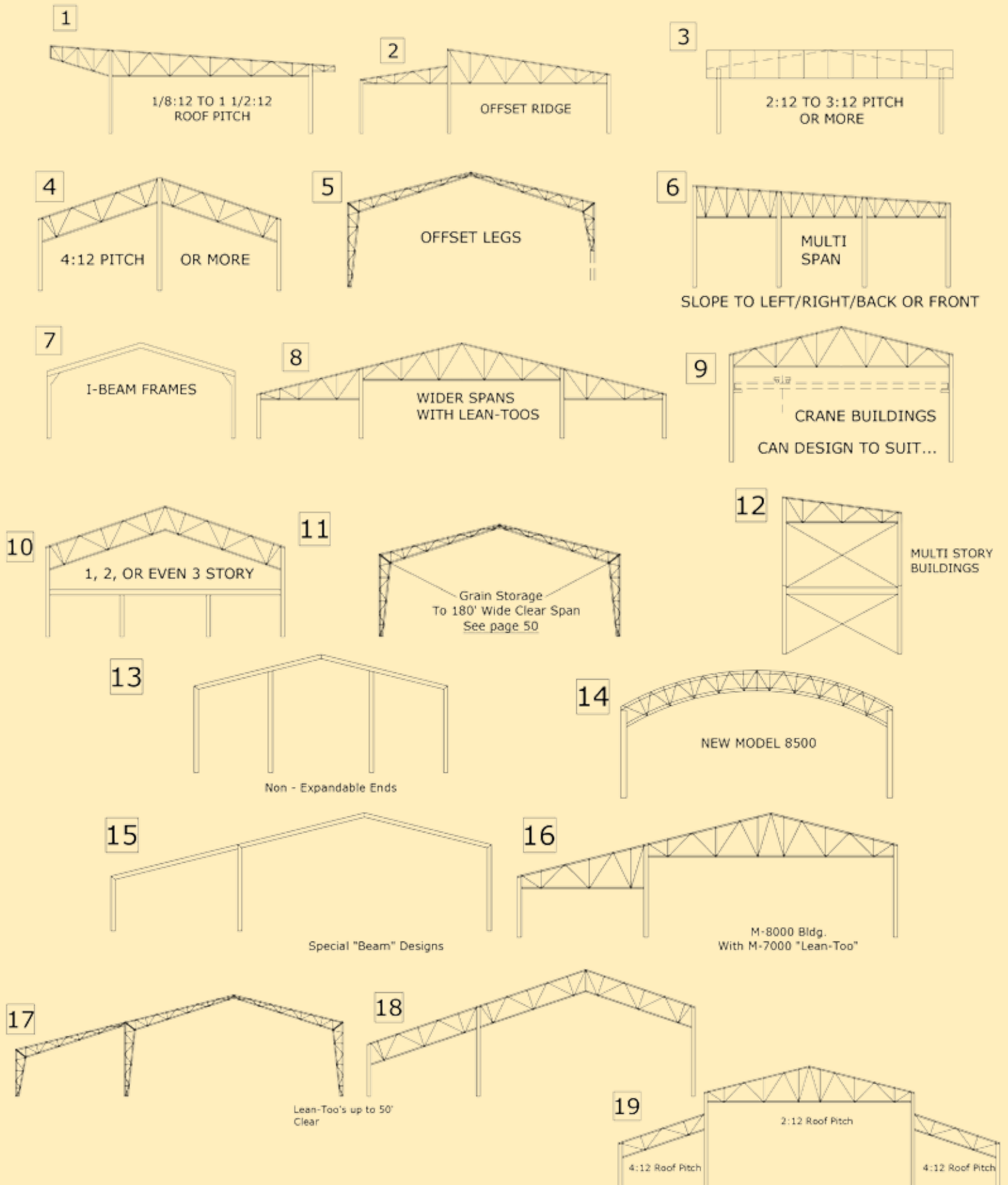
- Perka has 11+ "Standard" Frame Pre-Designs.
- Models can be combined to optimize solution.
- Models can be easily modified to meet individualized circumstances.
- We can add or remove clips to make adaptations EASY!
- Custom Frame Options are available



LESSER USED FRAME MODELS



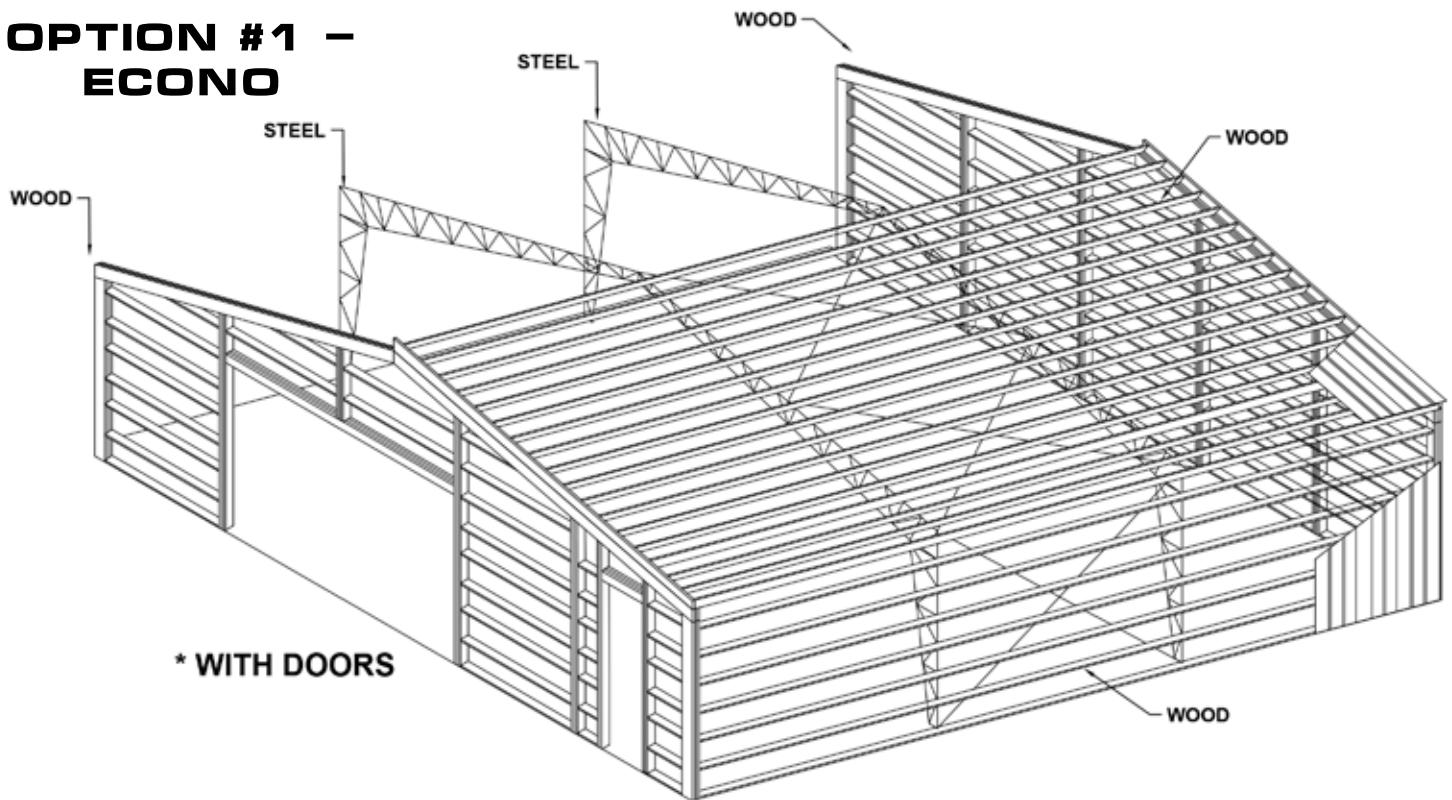
NOTHING IS IMPOSSIBLE



Let your IMAGINATION Go, We Can Make it Happen!

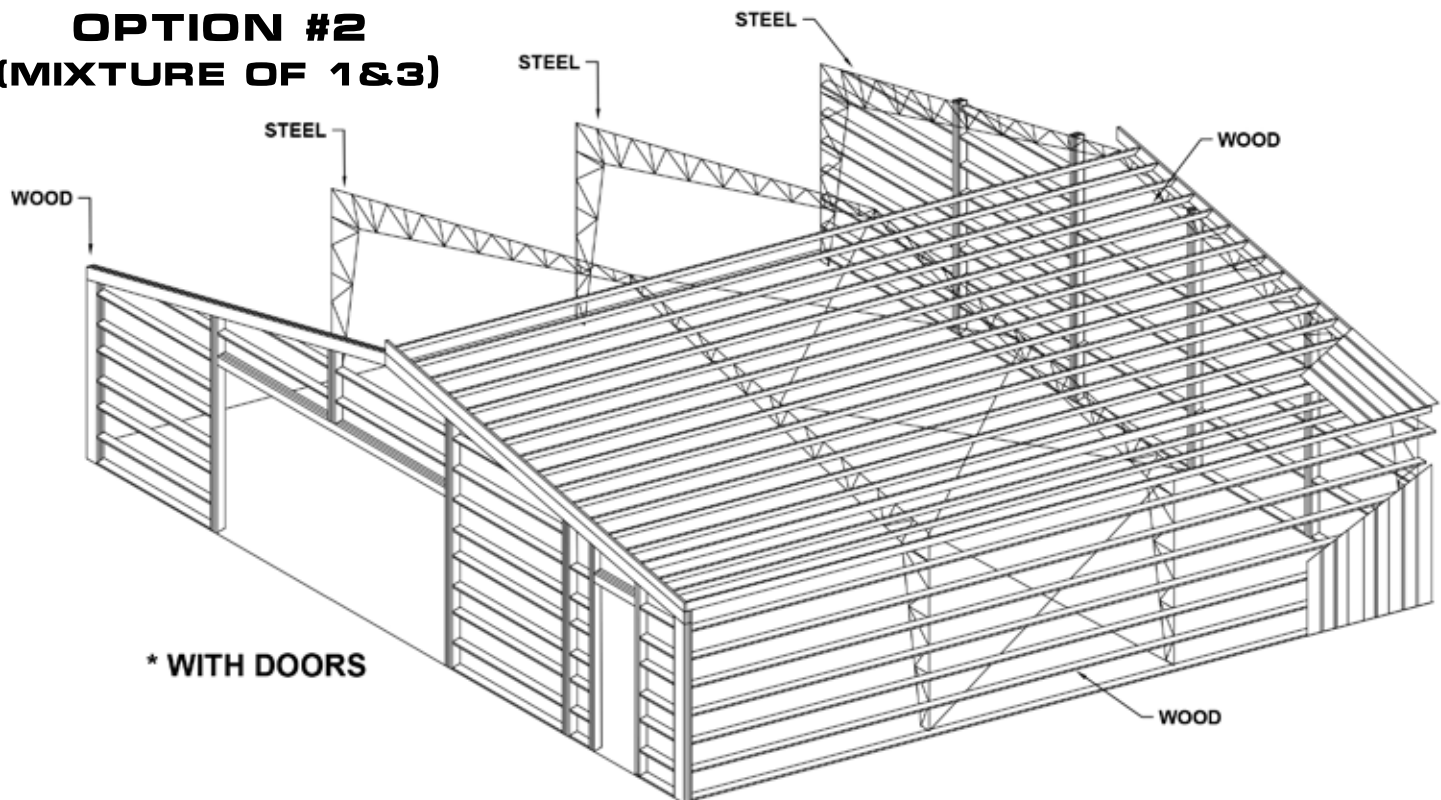
FRAME END WALL OPTIONS 1 & 2

OPTION #1 - ECONO



STEEL FRAME: * 2 LOAD BEARING WOOD END FRAMES
 * WOOD END POST (NOT TO EXCEED 10')
 * WOOD PURLINS & GIRTS

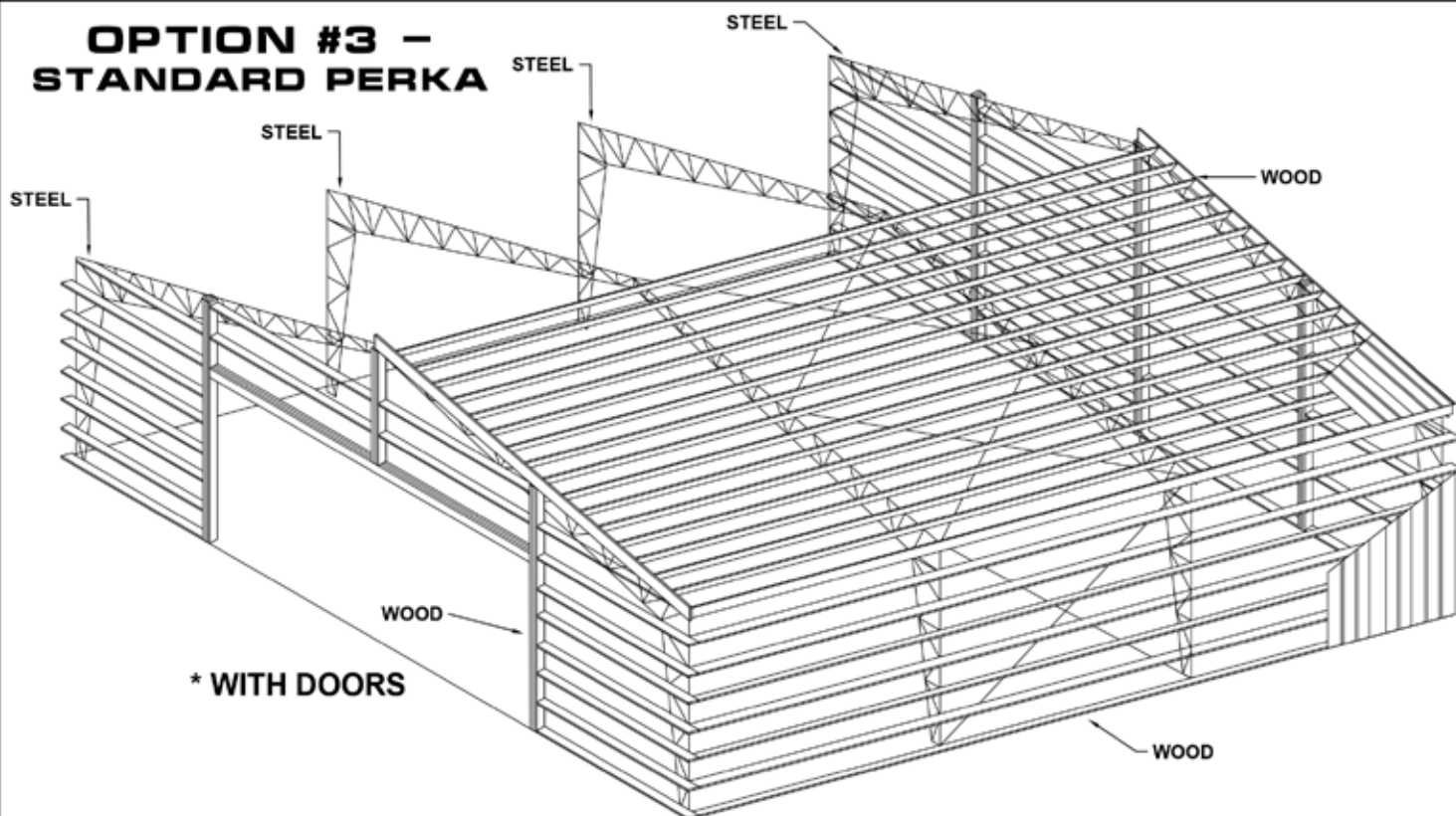
OPTION #2 (MIXTURE OF 1&3)



STEEL FRAME: * 1 LOAD BEARING WOOD END FRAME
 * WOOD END POST (NOT TO EXCEED 10')
 * WOOD PURLINS & GIRTS

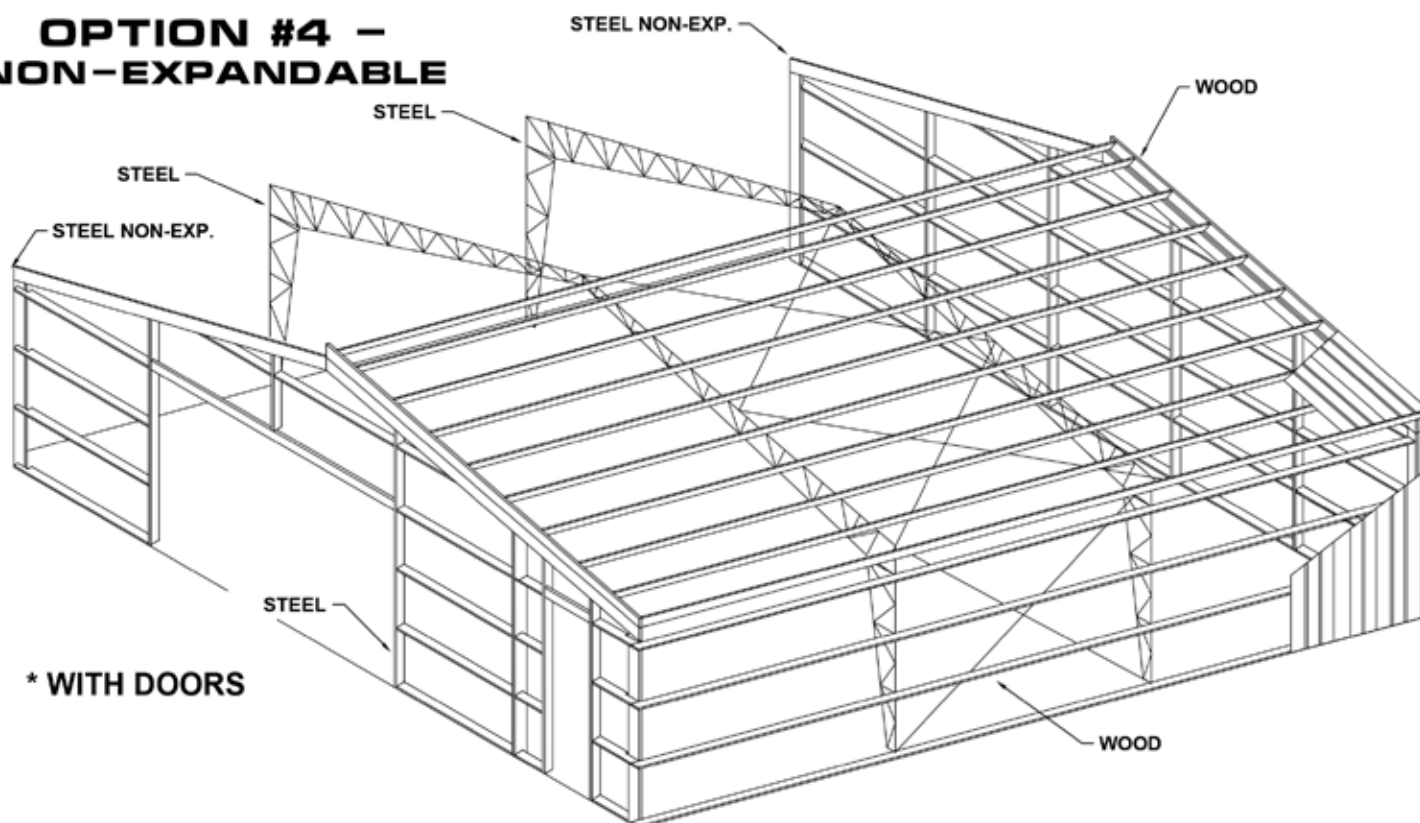
FRAME END WALL OPTIONS 3 & 4

OPTION #3 - STANDARD PERKA



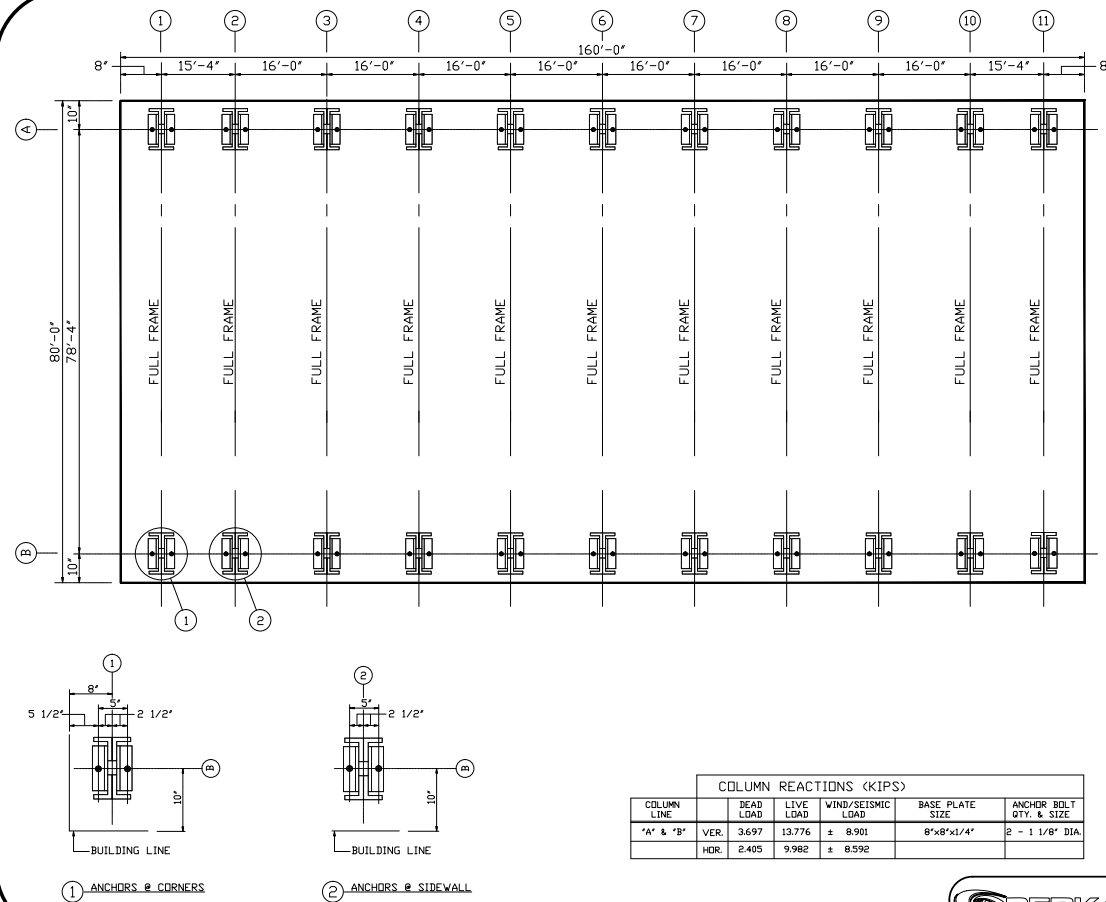
STEEL FRAME: * EXPANDABLE STEEL END FRAMES
 * WOOD END POST (NOT TO EXCEED 16')
 * WOOD PURLINS & GIRTS

OPTION #4 - NON-EXPANDABLE



STEEL FRAME: * STEEL NON-EXPANDABLE END FRAMES
 * STEEL END POST
 * WOOD PURLINS & GIRTS

ANCHOR BOLT LAYOUT EXAMPLE



For Your Approval

If all looks correct
Please Sign, Date, & Return

Signed: _____
Dated: _____

NOTE:
WINDBRACE RODS TO BE LOCATED
IN BAYS BETWEEN COLUMN LINES
② & ③, ⑤ & ⑥, ⑧ & ⑨.

GENERAL NOTES:

- THIS IS AN ANCHOR BOLT LAYOUT ONLY.
- THE OWNER IS RESPONSIBLE FOR THE FOUNDATION TO COMPLY WITH LOCAL BUILDING CODES.
- FOUNDATION DESIGN SHALL BE BASED ON THE COLUMN REACTIONS INDICATED AND THE SOIL BEARING CAPACITY.
- FOUNDATION AND EMBEDDED ITEMS (BY OTHERS) MUST BE LEVEL, SQUARE, AND ACCURATE TO ASSURE PROPER STEEL FRAME ASSEMBLY.
- ANCHOR BOLTS (BY OTHERS) TO BE 1/2" DIA. GRADE A307 UNLESS OTHERWISE NOTED AND SHALL HAVE PROPER EMBEDMENT AND COVER.
- DESIGN DATA:
 - LIVE LOAD = 80 psf
 - HOURLY WIND PRESSURE = N/A
 - WIND SPEED/EXPOSURE = 90 mph/"B"
 - DEAD LOAD = 4
 - COLLATERAL DEAD LOAD = N/A
 - GROUND SNOW LOAD = N/A
- THIS BUILDING FRAME HAS BEEN DESIGNED IN ACCORDANCE WITH 2006 INTERNATIONAL BUILDING CODE.
- ON ALL SINGLE ANGLE FRAMES, THE "OPEN" FACE OF ALL FRAMES, SHOULD BE FACING IN THE SAME DIRECTION. THE LAST FRAME WILL BE IN THE OPPOSITE DIRECTION.
- UNLESS OTHERWISE SPECIFICALLY NOTED, THE DIMENSIONS SHOWN HEREIN ARE FOR THE BUILDING FRAMES WITHOUT ANY INSULATION MATERIAL APPLIED TO THE OUTSIDE OF THE STRUCTURE. IF YOU ARE TO INSTALL ANY MATERIAL, TO THE OUTSIDE, PLEASE MAKE SURE YOU ADD THE APPROPRIATE THICKNESS TO THE SLAB DIMENSIONS.

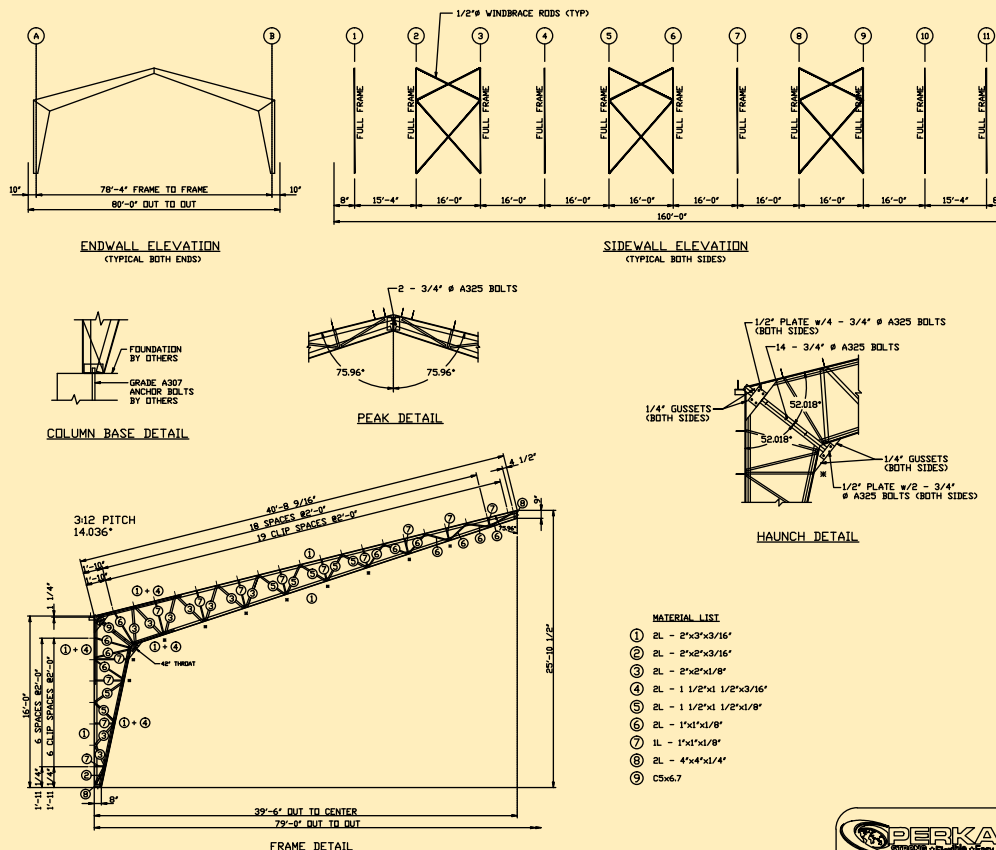
COLUMN REACTIONS (KIPS)					
COLUMN LINE	DEAD LOAD	LIVE LOAD	WIND/SEISMIC LOAD	BASE PLATE SIZE	ANCHOR BOLT QTY. & SIZE
"A" & "B"	VER. 3.697	13.776	± 8.901	8"x8"x1/4"	2 - 1 1/8" DIA.
	HOR. 2.405	9.982	± 8.592		

STRUCTURES
COLORADO

ANCHOR BOLT LAYOUT

DATE	APPROVED BY	DATE	APPROVED BY
12/10/14		12/10/14	
M4000 (312 PITCH) 80"x16"x160" R21 LL R16' BAYS			
CAD DRAWING NUMBER 3079-AB.DWG		PROJECT NUMBER FD-3079	

ENGINEERED DRAWING EXAMPLE



GENERAL NOTES:

- THIS BUILDING FRAME HAS BEEN DESIGNED IN ACCORDANCE WITH THE 1997 UNIFORM BUILDING CODE.
- STRUCTURAL STEEL SHAPES AND PLATES SHALL BE ASTM-A36 (Fy = 36 ksi) ALL STRUCTURAL COLUMN AND BEAM STEEL TO BE ASTM-A572 (Fy = 50 ksi) AND ALL LIGHT GAGE CHANNEL MEMBERS ARE TO BE Fy = 57 ksi.
- ALL BOLTS TO BE GRADE A325 AND SHALL BE TIGHTENED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" TURN OF NUT TIGHTENING OR EQUAL.
- ALL WELDS TO BE IN ACCORDANCE WITH AWS D11.92.
- FOUNDATION AND EMBEDDED ITEMS (BY OTHERS) MUST BE LEVEL, SQUARE, AND ACCURATE TO ASSURE PROPER STEEL FRAME ASSEMBLY.
- WIND AND BOTTOM CHORD BRACING ARE PART OF THE STRUCTURAL SYSTEM AND MUST NOT BE REMOVED OR ALTERED IN ANY WAY.
- THE ERECTOR SHALL BE RESPONSIBLE FOR BUILDING IN CONFORMANCE TO THESE DRAWINGS, DETAILS, AND ASSEMBLY GUIDE.
- FRAME OR FRAMES DESIGNED FOR BAY SPACING AS NOTED IN DETAILS ABOVE.
- DESIGN DATA:
 - LIVE LOAD = 21 psf
 - WIND SPEED/EXP. = 90 mph/"B"
 - DEAD LOAD = 4 psf
 - + steel











STRUCTURES
COLORADO

ENGINEERING DRAWING

DATE	APPROVED BY	DATE	APPROVED BY
12/10/14		12/10/14	
M4000 (312 PITCH) 80"x16"x160" R21 LL R16' BAYS			
CAD DRAWING NUMBER FD-3079-FD.DWG		PROJECT NUMBER FD-3079	



BUILDING FRAMES COMPARISON

	MODEL 4000	MODEL 4500	MODEL 4600	MODEL 5000	MODEL 5400	MODEL 6000	MODEL 7000	MODEL 8000	MODEL 8500	MODEL 9000	MODEL 10000	
FEATURES												
	Discount Factor	-20%	BASE	-28%	+3%	+3%	-8%	+2%	BASE	+20%	CALL	CALL
	Available Widths	20' - 180'	20' - 100'	46' - 64'	20' - 100'	20' - 100'	20' - 100'	20' - 100'	20' - 100'	20' - 100'	20' - 100'	No Limit
	Typical Roof Pitch	2-8:12	-	3-4:12	4:12	4:12	2-3:12	1/8 -1.5:12	1-2:12	Curved	2:12	1.5:12
	Typical Column Base	8" - 14"	6" - 12"	8" -14"	6" - 18"	8" - 14"	6" - 12"	6" - 18"	6" - 16"	6" - 18"	-	6" - 12"
	Flush Girts	NO/Optional	NO	NO	YES	YES	YES	YES	YES	YES	YES	YES
	Typical Wood Purlin Spacing	12" - 24"	12" - 24"	12" - 24"	12" - 24"	12" - 24"	12" - 24"	12" - 24"	12" - 24"	12" - 24"	12" - 24"	12" - 24"
	Typical Steel Purlin Spacing	18" - 72"	18" - 72"	18" - 72"	18" - 72"	18" - 72"	18" - 72"	18" - 72"	18" - 72"	18" - 72"	18" - 72"	18" - 72"
	Typical Wood Girt Spacing	24" - 48"	24" - 48"	24" - 48"	24" - 48"	24" - 48"	24" - 48"	24" - 48"	24" - 48"	24" - 48"	24" - 48"	24" - 48"
	Typical Steel Girt Spacing	48" - 75"	48" - 75"	48" - 75"	48" - 75"	48" - 75"	48" - 75"	48" - 75"	48" - 75"	48" - 75"	48" - 75"	48" - 75"
	Base Height Measurement	Eave	2nd Hip	Eave	UT	UT	UT	UT	UT	UT	UT	UT
Approx. Haunch Depth	18" - 72"	18" - 72"	18" - 72"	8% Max 8'	18" - 72"	5" - 12"	8% Max 8'	12" -48"	8% Max 8'	12" - 48"	-	
Ease of Interior Finish	8/10	8/10	8/10	9/10	9/10	8/10	9/10	10/10	8/10	9/10	10/10	
Ease of Insulating (P2000)	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	
Type of Bolts Used	A-325	A-325	A-325	A-325	A-325	A-325	A-325	A-325	A-325	A-325	A-325	
Distinguishing Feature 1	Econo	Gambrel	Econo	High Pitch	Narrow Prof	Econo	Retrofit	Classy	Arch	Roof Only	Ctr Post	
Distinguishing Feature 2	Hd Room	Flexible	O/S Girts	St. Leg	Flush Girts	Knee Brace	Flat Roof	Easy	Curve	Flexible	Economic	
Distinguishing Feature 3	Wide Span	Unique	Inexpensive	Spacious	Straight Leg	High Pitch	Flexible	Wide Span	Special	Retrofit	All Purpose	
Distinguishing Feature 4	Tapered Col	Attractive	Flexible	Head Room	Head Room	Flush Girts	Low Pitch	Flush Girts	Unique	Economic	Inexpensive	
Typical Use 1	Storage	Hay Barn	Cold Storage	Greenhouse	Riding Arena	MiniStorage	Motels	Office	Office	ReRoof	Warehouse	
Typical Use 2	Implement	Offices	Machine Shop	Airplanes	Shop	Shop	Store Front	Unit Bldg	Church	Joists	Manufactg	
Typical Use 3	Garage/Shed	Horse Stalls	Agri-Bldg	Arenas	Storage	Commercial	Additions	Residential	School	Block Bldg	Plant	
Typical Use 4	Arenas	Cattle Barn	Riding Arena	Commercial	Hanger	Residential	Strip Mall	Warehouse	Gym	Concrete Bldg	Convention Ctr	
Typical Use 5	Warehouse	Residential	Implement	Truck Bays	Truck Bays	Storage	Boat Storage	Plant	Showroom	Underground	Stalls	
Typical Use 6	Hangars	Lofts	Warehouse	Manufac.	Warehouse	Ag Bldg	Dealership	Schools	Hall	Mtpl. Storage	Malls	
Typical Use 7	Ag Bldg	Pony Barn	Shop	Ag Bldg	Ag Bldg	Workshop	Lean-to	Church	Acoustic	Retrofits	Industrial	
Typical Use 8	*** Anything Your Mind Can Imagine! ***											

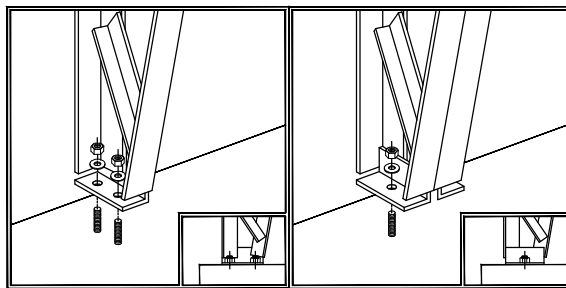
800.467.3752

www.PEERKABUILDINGS.com


PEERKA
STEEL SOLUTIONS


SNAP SHOT 4000 SERIES ASSEMBLY

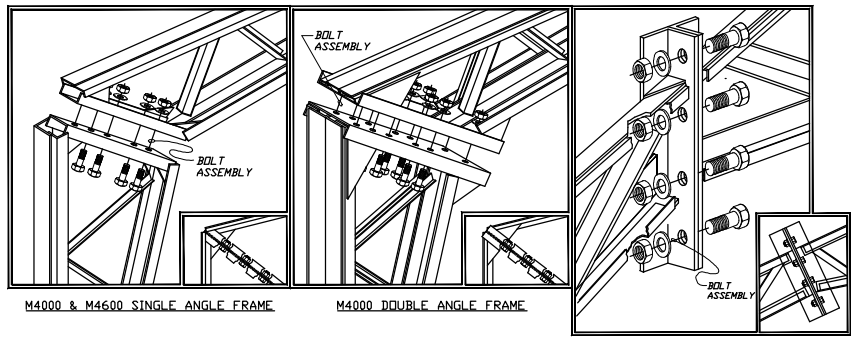
M4000 & M4600 ANCHOR BOLT ATTACHMENT



M4000 & M4600 SINGLE ANGLE FRAME

M4000 DOUBLE ANGLE FRAME

M4000 & M4600 HAUNCH OR EAVE CONNECTION

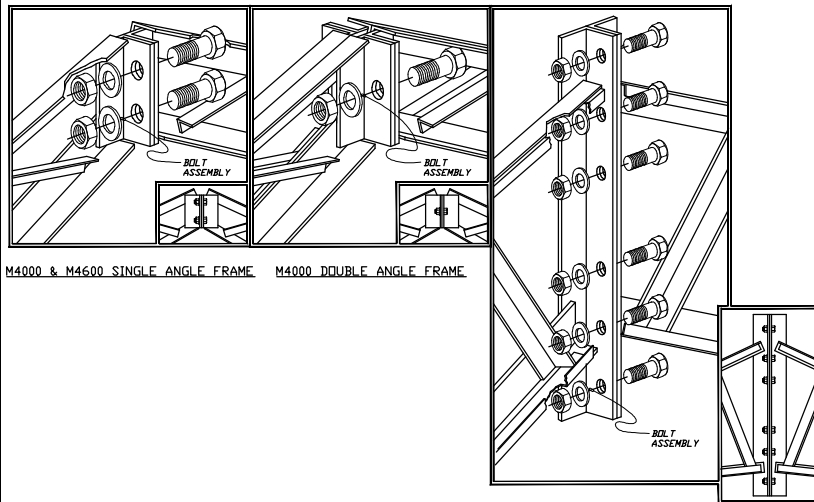


M4000 & M4600 SINGLE ANGLE FRAME

M4000 DOUBLE ANGLE FRAME

M4600 SINGLE ANGLE MID CONN. FRAME

M4000 & M4600 TRUSS PEAK CONNECTION

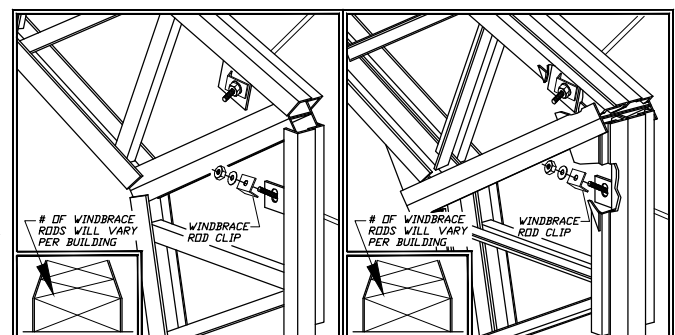


M4000 & M4600 SINGLE ANGLE FRAME

M4000 DOUBLE ANGLE FRAME

M4600 SINGLE ANGLE MID CONN. FRAME

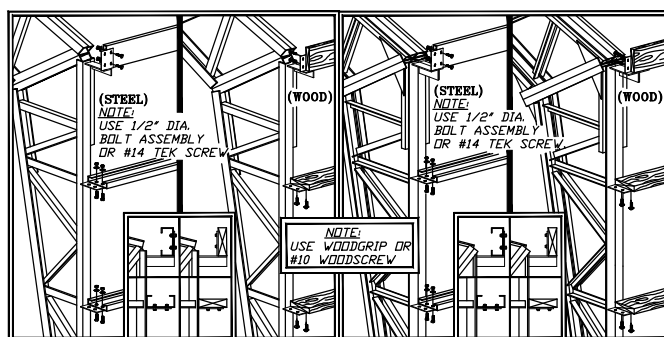
WINDBRACE ROD ATTACHMENT



M4000 & M4600 SINGLE ANGLE FRAME

M4000 DOUBLE ANGLE FRAME

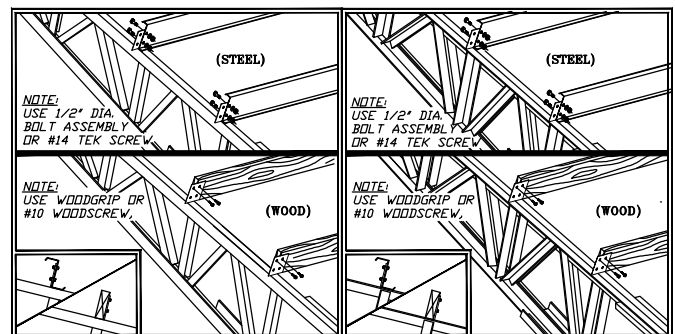
GIRT ATTACHMENT



M4000 & M4600 SINGLE ANGLE FRAME

M4000 DOUBLE ANGLE FRAME

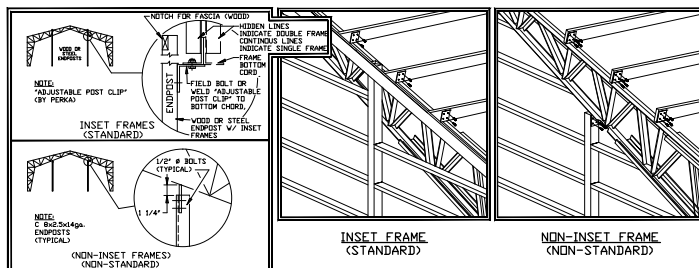
PURLIN ATTACHMENT



M4000 & M4600 SINGLE ANGLE FRAME

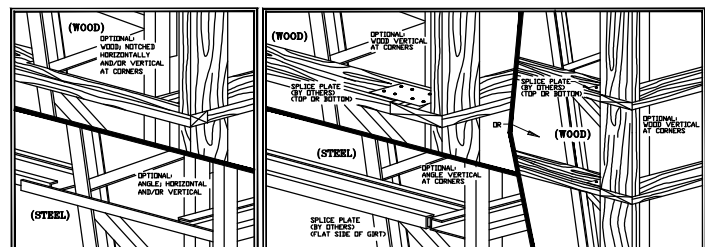
M4000 DOUBLE ANGLE FRAME

ENDPOST DETAIL

INSET FRAME
(STANDARD)NON-INSET FRAME
(NON-STANDARD)

M4000 & M4600

CORNER DETAIL



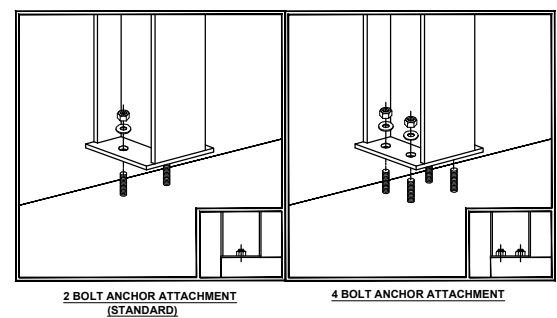
M4000 & M4600 SINGLE OR DOUBLE ANGLE FRAME

M4000 & M4600

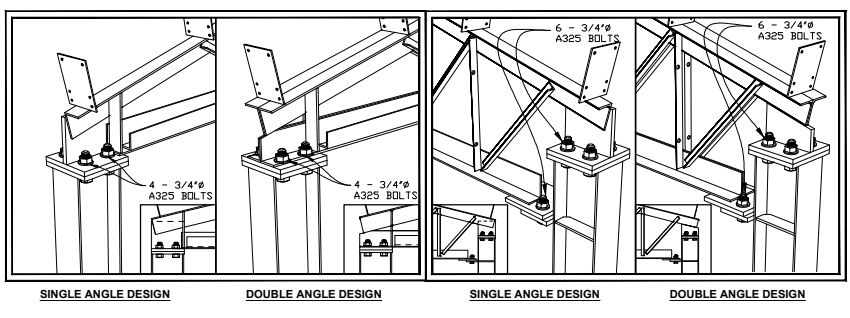
FOR A MORE DETAILED VIEW, CHECK OUT THE M4000 ASSEMBLY GUIDE.

SNAP SHOT STRAIGHT LEG SERIES ASSEMBLY

WIDE FLANGE COLUMN ANCHOR BOLT ATTACHMENT



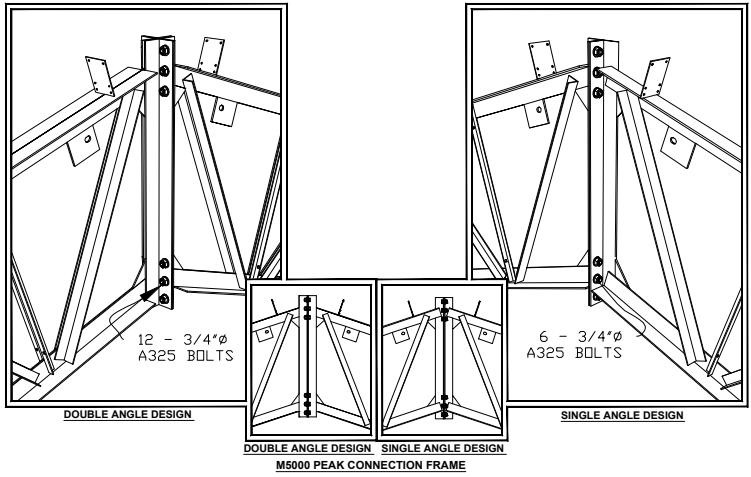
HAUNCH OR EAVE CONNECTIONS



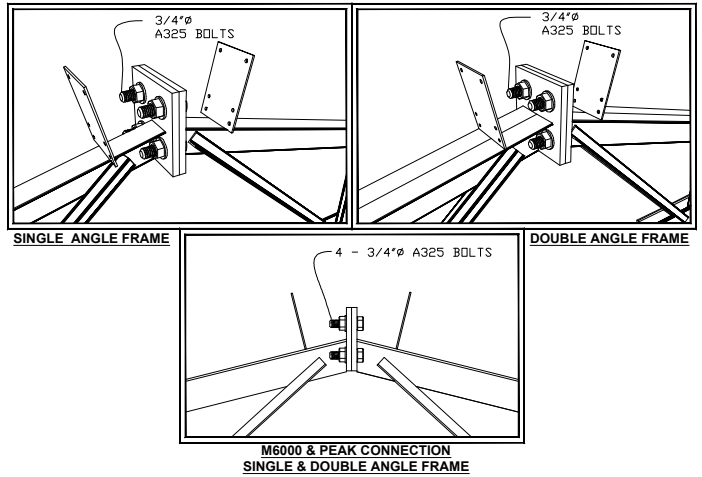
M6000

TYPICAL M8000, M5000 & M7000

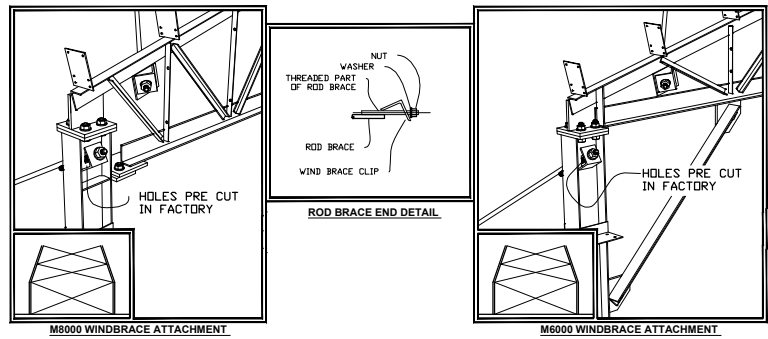
TRUSS PEAK CONNECTION



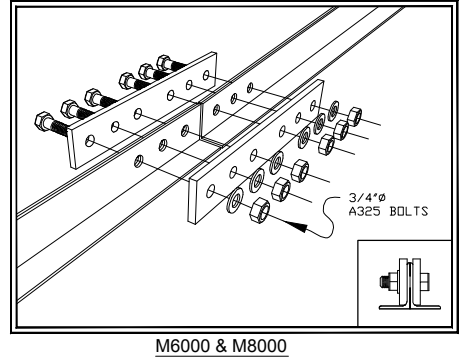
TRUSS PEAK CONNECTION



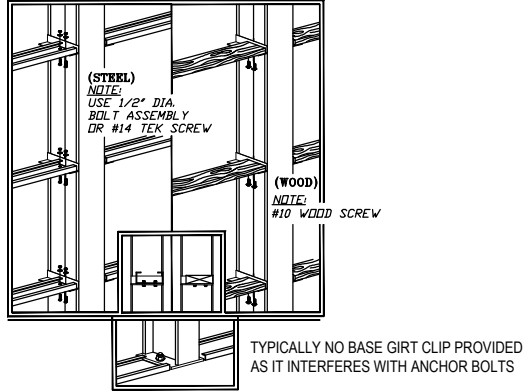
WIDE FLANGE FRAME WINDBRACE ROD ATTACHMENT



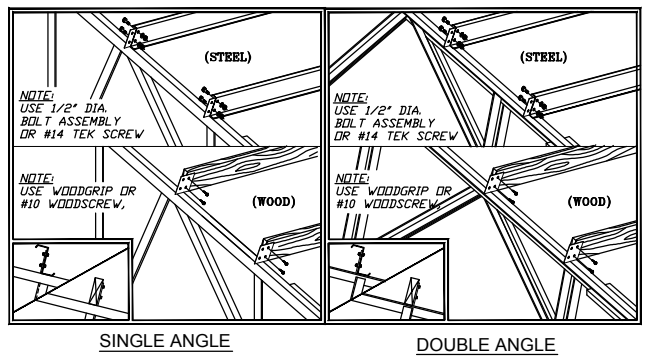
BOTTOM CHORD SPLICE DETAIL



GIRT ATTACHMENT

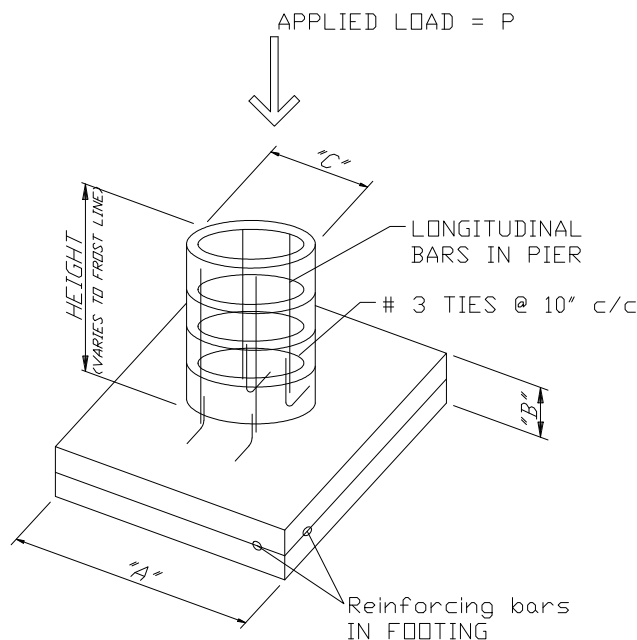


PURLIN ATTACHMENT



FOUNDATION BASICS

WHAT DOES A TYPICAL FOUNDATION LOOK LIKE?



NOTES:

- 1) Applied load is total load resulting from column plus any additional load such as wall load
- 2) Soil bearing capacity = 4000 psf.
- 3) Concrete Strength = 3000 psi.
- 4) Steel: ASTM A615 Grade 40 or it's equivalent CSA G30.12 Grade 300
- 5) Local architect or Engineer should verify and adjust design to suit local soil conditions.

APPLIED LOAD "P" (Kips)	DIMENSIONS			LONGITUDINAL BARS IN PIER	CROSS SECTION	REINFORCING BARS IN FOOTING
	"A"	"B"	"C"			
32.9	3'-0"	11"	12"	4 @ # 5		6 @ # 4
44.8	3'-6"	11"	12"	4 @ # 5		8 @ # 4
58.3	4'-0"	12"	14"	6 @ # 5		10 @ # 4
73.8	4'-6"	12"	14"	8 @ # 5		11 @ # 4

DO THE PIERS HAVE TO BE TIED TOGETHER FROM SIDE TO SIDE?

This depends on your foundation style design which is dependent on your horizontal column reactions, soil conditions, adjacent obstructions and budget.

Most of Perka's Models (10000, 8000, 7000, 6000 & 5000) will have relatively low horizontal forces (more commonly known as the "outward kick"). In these buildings the likely hood of needing to have the columns tied are less. We say only less, because in some extreme cases tie rods could be "used" to minimize the size of the piers...

Perka's Models 2000, 3000, 4000, 4500, 4600, 5000 & 5400 will have more significant horizontal forces especially in wider frame sizes. Tying the columns from side to side may be part of the foundation design to reduce the pier sizes, and in some cases where adjacent obstructions exist, it may be the only way to resist the forces exerted.

All this to say that while the columns DO NOT necessarily have to be tied from side to side, this may either be the only way to resist outward kick, or at the very least keep the pier size smaller and therefore less expensive (budget).

Bottom line is as long as the foundation design resistance (with or without tie rods) meets or exceeds the foundation reactions (as noted on Perka Anchor Bolt Layouts), then all is well!!

TYPES OF CONNECTIONS

A "fixed connection" in a foundation pier design relates to the connection at the base of a frame where the pier and not the column needs to resist rotation, horizontal AND vertical stresses. To do this the concrete needs to be larger in both length, height and base than its normal counterpart. Consequently the columns do not need to be as strong as they might have to be in another foundation design alternative. While this makes the frame lighter and less expensive, it can be questioned if it might "cheat" the frames capacities regarding other important matters.

A pin connection, as its name would indicate, is designed to allow for a free rotation (like on a pin) thereby causing the column to have to withstand all of the rotation and more of the horizontal and vertical stresses. Though this requires smaller foundations, less concrete and smaller or fewer anchor bolts, it usually requires that the columns be larger.

Perka Building Frames typically uses Pinned Connections. Since this typically requires larger columns, this actually makes for an overall stronger frame, able to resist and withstand stronger forces and stresses from such things as heavier wind loads from storms, exaggerated snow and ice loads and even extensive heat from fire. So even if an overall building system using fixed connections with rigid or plate beam designs ends up costing a little less, you do end up losing out on some of the extra security you might otherwise get by the benefits of using a pinned connection. As the saying goes: "You can only get what you pay for!"

GETTING EQUAL BIDS - POINTS TO COMPARE

WIND LOAD. Have the builder specify this value in lbs./square feet. As a good benchmark, use 12 lbs./square feet. A building should handle this pressure acting on the total building area facing the wind. Be careful about wind loads expressed in miles-per-hour, because engineers must make a number of assumptions to convert wind speed to actual wall pressure.

ROOF SNOW LOAD. Ask what each company's engineers uses for a roof (not ground) snow load, which can vary greatly based on geography. All companies calculate roof snow load – perhaps differently – based on ground snow load maps developed by the American Society of Civil Engineers (ASCE). For example, assuming a standard 3/12 roof slope, an absolute minimum roof snow load in snowy areas is 20 lbs./square feet. Regionally, roof snow loads range from 5 to 10 lbs./square feet in lower Midwest. You should also discuss the topography of the building site with each company, as well as surrounding structures because they can have an impact on snow drifting on the roof.

COMPONENT DEFLECTION. By definition, is the amount of component movement when under load. Excessive deflection can be cosmetically unpleasing, such as roof sagging, or it can impede building use making it difficult to open doors and windows. Excessive deflection generally isn't a concern as long as proper wind and snow loads have been prescribed. The major exception being when exterior walls and rafters are to be covered with drywall, because excessive deflection can cause seams to open up. Normally, engineers try to limit deflection

to the unsupported length of a member divided by 180. This means, for example, that the deflection of a 90-in. long member would be limited to ½ inch movement. For all walls and ceilings with attached drywall or plaster, and for all floors, limit component deflection to the unsupported length of the member divided by 360.

WOOD TREATMENT. For major structural components exposed to the ground or the outside elements, find out whether the waterborne preservation treatments (ACA, ACZA or CCA) have the value of 0.40 or 0.60 lbs./cu.feet. This can be highly variable, depending on the treatment process used and the type of wood used, since every board or column won't absorb these copper and arsenic preservatives equally. The 0.40 treated wood is adequate for most applications, but a minimum treatment level of 0.60 is required for any structural member embedded in the ground.

WARRANTIES. Always dig into the specific fine print of warranties and other component details to make sure you're comparing apples to apples. Check exterior siding details (base metal thickness and tensile strength, how much zinc used) and finishes (types of paint, rust protection). When soliciting bids, make sure you hold the builders to the specifications you desire. Don't just jump at the lowest bid without examining every aspect of all bids, from builder reputation and warranty to quality components and construction timeliness.

7 THINGS YOU NEED TO KNOW BEFORE YOU BUY

1. What are the building details?
2. What are actual building dimensions?
3. What Job Site Assurance will you have?
4. Where will your materials come from?
5. What codes and loads is your building designed to meet?
6. Will it be simple and easy? From order process to building install.
7. Who are you? Why?



**Ask your consultant for a copy of the full report
"Top 7 Things You Need to Know Before You Buy"!**

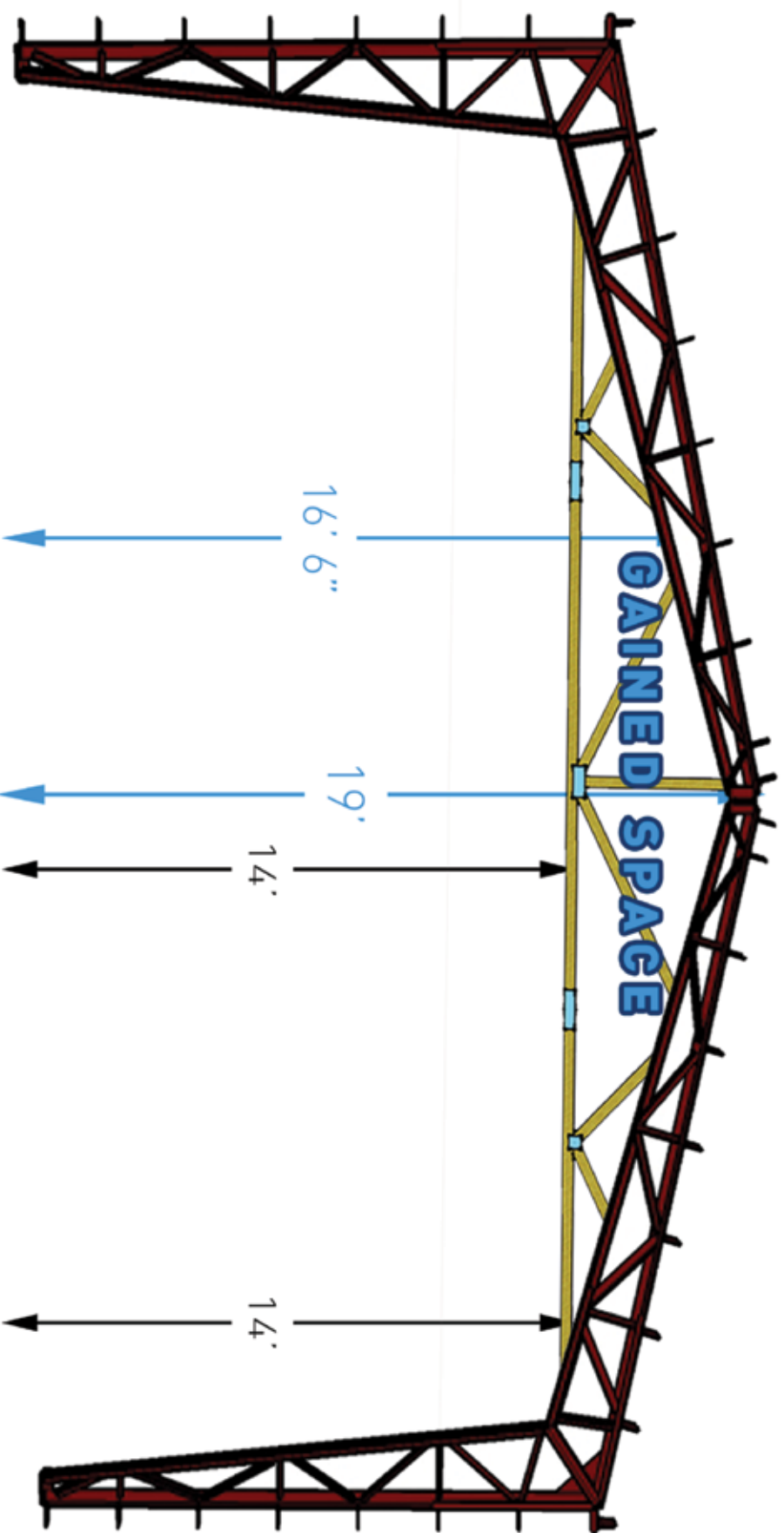


WE STAND BEHIND OUR FRAMES!

16

40'w x 14'h Eave Comparison

Perka Hybrid vs Typical Wood Construction



For more information, diagrams, and pictures of Our Frame Models, go to <http://frames.perkabuildings.com>

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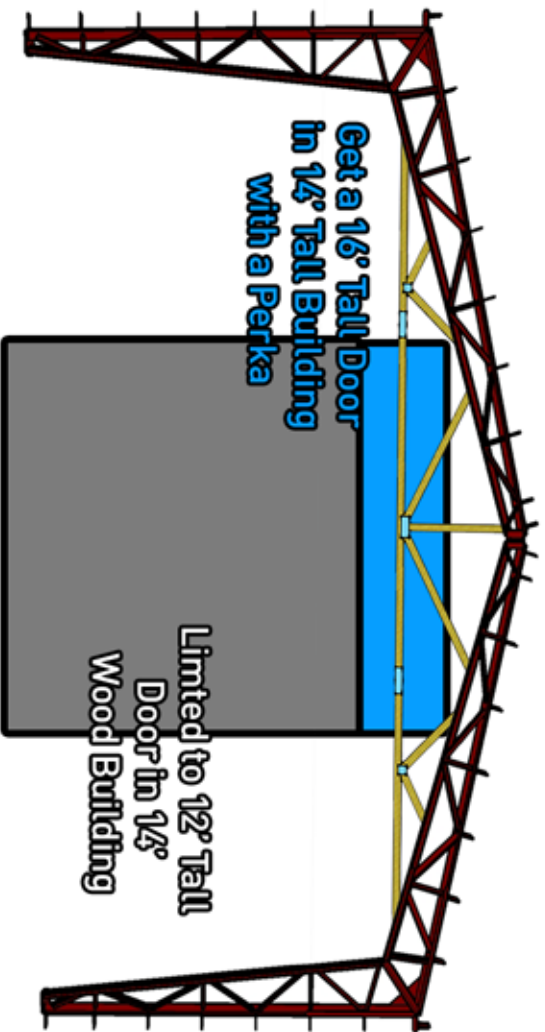
[www.PERKABUILDINGS.COM](http://www.perkabuildings.com)



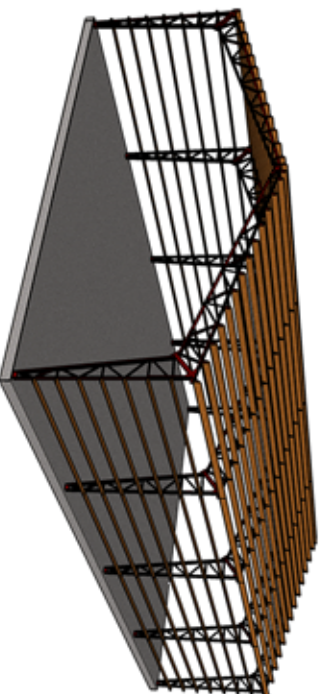
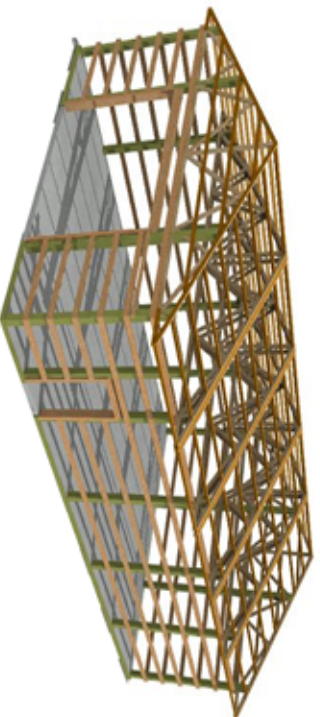
PERKA
STEEL SOLUTIONS



Perka Hybrid vs Typical Wood Construction



OVERHEAD DOORS TYPICALLY NEED 2' OF CLEARANCE; OUR NO BOTTOM CORD DESIGN ALLOWS YOU TO GET A DOOR 2' TALLER THAN YOUR SIDE WALL HEIGHT



FRAMES TYPICALLY ON LARGE SPACINGS, (15' - 16') AS OPPOSED TO EVERY COUPLE OF FEET, ONE OF MANY PERKA ADVANTAGES OVER WOOD

POLE vs STEEL



It's a No Brainer



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