

**E Z CORNERS METAL ANGLE**

**FRAMING ACCESSORY**

By Drago Blazevic

CMHC Project Officers: Ken Rauch

This project was carried out with the assistance of a grant from Canada Mortgage and Housing Corporation under the terms of the Housing Technology Incentives Program (CMHC CR File 6521-10/95). The views expressed are those of the authors and do not represent the official views of the Corporation.

NOTE: LE RÉSUMÉ EN FRANÇAIS SUIT IMMÉDIATEMENT LE RÉSUMÉ EN ANGLAIS.



**EZ CORNERS  
METAL ANGLE FRAMING ACCESSORY**  
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March 29, 1996.

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**This project was authored by Paul Skerry Associates Ltd. Architects for the Inventor D. Blazevic**

## **ABSTRACT**

This project ,and the product ,is a result of an idea conceived at the working level in the construction industry.

For some 23 years , D. Blazevic (referred to as the Author) worked in the construction industry as a carpenter erecting buildings with wood primary structures or with wood components. These buildings were built at all times of the year and under a variety of working conditions.

During the process of constructing these buildings the Author noticed that a great deal of the framing lumber used in the construction of these buildings was not necessary from a structural point of view, but was only being used for secondary blocking and edge nailing supports. The labor involved in placing this extra lumber and the material involved seemed wasteful and expensive.

In addition, the framing contractors were often called back to the completed projects to rectify any deficiencies caused by shrinkage or structural movement of the basic wood structure or building components. Quite often this cracking and warping was caused by wood elements which were not installed as part of the primary structure but as blocking or nailing supports.

Call backs were common in buildings with wood components, where the wood was not kiln dried or not of a specified moisture content when erected.

The idea was simple, eliminate unnecessary framing lumber by substitution of a sheet metal angle or other shape which would be versatile, not subject to shrinkage ,economical and easy to install.

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## **EXECUTIVE SUMMARY**

The inventor (Mr. D. Blazevic) of the "E Z Corners " framing accessory" herein called " The System" approached us in the summer of 1995 to help him with development of his idea for a wood framing accessory.

At that point an application had been made for a patent to protect the idea , and an application had been made to CMHC for a Housing and Technology Incentives Program grant.

The application for a patent seemed promising, as the patent office had reviewed the material submitted to their office and had written an abstract indicating that a patent was possible on the range of the ideas submitted for review.

The application for a Housing and Technology Incentives Program Grant was successful, and CMHC indicated preliminary support for the idea.

A series of meetings were set up to further explore the ideas for the framing accessories suggested by the inventor, and to review the preliminary documentation generated by the work to date.

As a result of the above, work was begun in the summer of 1995 to further develop the ideas of the inventor and to set up a testing protocol which would generate data sufficient to manufacture and market the ideas as a framing accessory or series of framing accessories under the trade name "E Z Corners".

At the end of the preliminary analysis of the suggested shapes ( metal angles and composites) it was decided that the simple " L" shape , and the "L" shape in combination with a standard steel stud would be the most useful and practical shapes to try to develop and test.

The testing protocol chosen, was to manufacture a prototype "E Z Corner" and after cursory examination and testing, manufacture a preliminary section and do an actual installation on a project under construction.

As a result of the testing protocol being an actual field installation in a real project, it was decided that the installation would be allowed to go through a complete heating season before the final inspections and compiling of the final report. This would insure the securing of the most realistic performance data with respect the systems ability to accept shrinkage and structural movement.

## RÉSUMÉ

L'inventeur (M. D. Blazevic) de l'accessoire d'assemblage d'ossature appelé «*E Z Corners*» a communiqué avec la SCHL au cours de l'été de 1995 pour lui demander de l'aider à mettre au point son idée d'accessoire d'assemblage pour ossature de bois.

À cette époque, M. Blazevic avait déjà fait une demande de brevet pour protéger son idée et il avait sollicité une subvention de la SCHL dans le cadre de son Programme d'encouragement à la technologie du bâtiment résidentiel.

La demande de brevet semblait prometteuse puisque que le Bureau des brevets, après avoir pris connaissance de la documentation qui lui avait été soumise, avait rédigé un abrégé indiquant qu'il était possible de breveter les idées présentées.

La demande de subvention faite aux termes du Programme d'encouragement à la technologie du bâtiment résidentiel a été acceptée et la SCHL a manifesté un appui préliminaire à l'égard de l'idée.

Une série de réunions ont été organisées afin d'explorer plus à fond les idées d'accessoire d'assemblage proposées par l'inventeur et de passer en revue les données produites jusque là.

Par la suite, durant l'été de 1995, nous avons entrepris la mise au point des idées de M. Blazevic et nous avons rédigé un protocole d'essai devant servir à produire suffisamment de données pour permettre la fabrication et la commercialisation d'un accessoire d'assemblage ou d'une série d'accessoires d'assemblage regroupés sous le nom de commerce «*E Z Corners*».

Au terme d'une première analyse des formes suggérées (cornières métalliques et éléments composites), nous avons décidé que la forme « L » simple et la forme «L» conjuguée avec un poteau métallique standard seraient les plus utiles et les plus pratiques à concevoir et à mettre à l'essai.

Le protocole d'essai choisi comportait la fabrication d'un prototype d'*E Z Corner* et, après examen et essai superficiels, la construction d'une première section en vue de réaliser une installation réelle sur un chantier de construction.

Comme l'essai était mené en conditions réelles sur un chantier, nous avons décidé de laisser l'installation en place pendant toute une saison de chauffe avant de procéder aux inspections finales et de rédiger le rapport définitif. Ainsi, nous nous assurons d'obtenir les données de performance les plus réalistes possible en ce qui concerne la tolérance du produit au retrait et au mouvement structural.

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## **BACKGROUND STATEMENT**

The basic premise of the invention is that construction efficiency can be increased by means of the "E Z Corners" framing accessory.

Generally it was hoped that increased labor productivity and more efficient use of materials could be demonstrated by the use of this invention.

The basic need for this invention would span all construction activity which employs wood frame technology.

The benefits would be as follows:

- A.** To the suppliers of wood framing materials through the increased use and efficiency of wood framing components.
- B.** To the labor contractors employing wood framing techniques through increased productivity.
- C.** To the owners of buildings who would benefit through more cost effective buildings and increased energy efficiency.
- D.** To the mechanical and electrical sub trades who would have an easier time running their sub-systems due to decreased requirement for wood frame penetrations.
- E.** To the owners of buildings who would require less call backs for deficiencies due to shrinkage and warping of wood frame components.



## **SPECIFIC OBJECTIVES OF THIS PROJECT**

The specific objectives of this project are as follows:

1. To review the documents provided by the inventor and to determine best how to proceed in the development of the "E Z Corners" project,
2. To make a preliminary determination as to which of the inventors shapes are practical and worth developing as a prototype section.
3. Designing the initial dimensional requirements of the prototype sections.
4. Manufacturing a prototype section for testing.
5. Installing the selected prototype in an actual construction project.
6. Analysis of the actual installation labor and material savings.
7. Measurement of the performance of the invention against conventional construction.
8. Provide conclusions as to the merits and viability of the invention in today's marketplace.

## **DESCRIPTION OF THE SYSTEM “E Z CORNERS”**

The system consists of two components:

1. A 25 gauge galvanized steel angle (roll formed) designed for screw attachment measuring 1 3/4" x 1 1/4" x 96" (45mm x 32mm x 2400mm). See detail 8 Appendix.
2. A pair of 25 gauge galvanized steel angles spot welded to the sides of a standard steel stud 1 1/4" x varies (32mm). See detail 6 Appendix.

### **Note:**

Other sections described in the original patent application such as the “T” sections were abandoned early in the prototype development stage ( see **description of work** section of this report).

## DESCRIPTION OF WORK

1. The reference material developed by the inventor in his application for a patent registration, and in the application for a Housing and Technology Incentives Program Grant, was compiled in a binder and used as a basic reference for this report.
2. A number of meetings were held with the Inventor to insure that the nature of the invention and its projected uses was completely understood.
3. The invention was a simple device to assist in the construction of wood frame buildings and building components.
4. The original sections suggested by the Inventor were studied and a number of changes were made to the scope of the work:
  - A. The "T" sections were discontinued from the development process because they were not thought to offer any advantage over the simple "L" shape. Also the original idea for the "T" section was to add strength to the basic section and provide an alignment tab for the installation. However, an examination of the shape from a structural point of view determined that the rolled metal shapes have no structural values (either for axial loading due to buckling or to bending resistance due to sectional shape) by themselves. Any structural values developed by the sections are due to their attachment or association with the framing member. Also, the back flange developed in the "T" section would present some installation problems at the base plate and the top plate interface.
  - B. The double "T" sections were discontinued from the development process due to their complexity and fabrication costs. This function requiring a steel framing member with legs to receive the drywall panels can be best achieved by spot welding a standard "L" section to the sides of a standard steel stud.
5. The basic "L" angle was selected for prototype development and some sections were manufactured from 28 Gauge galvanized steel. These sections were examined by the carpenters and determined to be too flimsy. The sections were not strong enough to transport and store without buckling, nor could they properly receive the drywall panels and offer enough bending resistance to insure screw penetration.

6. The prototype sections were remanufactured using 25 gauge galvanized steel and the surface of the steel was dimpled to assist in screw penetration. These sections were examined by the Carpenters and Installers and approved for installation.
7. A project slated for construction in the appropriate time frame was selected for installation of the "L" shapes. The following criteria was used in the selection process of the appropriate project:
  - A. A project was selected that was in the wood framing phase of construction during the late summer and fall season and would be heated during the winter months during the installation of the drywall panels. This would subject the construction to maximum shrinkage during the construction period prior to occupancy and provide data as to the performance of the system to accept structural shrinkage.
  - B. The project would be primarily of wood frame construction.
  - C. The project would be constructed conventionally and with partial use of the "E Z Corners" system to facilitate comparisons.
  - D. The project would be in Halifax for ease of periodic inspections.
  - E. The project would be large enough to warrant the attention of the local authorities.
  - F. The project would be financed through a conventional Mortgage with CMHC loan guarantees.
8. The project selected was a large four storey wood frame project of 120 apartments with an underground parking garage (reinforced concrete structure). This project is located in Clayton Park West , Halifax N.S. See drawing No.2 in the Appendix.
9. The building design was reviewed and an apartment was selected for the installation of "E Z Corners" on the North East corner ,second level from the top floor. See drawing No. 2 in the Appendix.

10. The selected apartment layout "Type G1" is similar to the adjacent Unit, which was constructed using the conventional system of solid wood frame blocking. The "E Z Corners " were installed in a variety of locations illustrated on Drawing 4 Appendix, including interior corners, exterior wall and partition intersections, wall and ceiling intersections, and mechanical bulkheads. Care was exercised during the installation to allow a working tolerance of  $\frac{1}{4}$ " (6mm) at the top and bottom of all angles in those installations where the supporting member is expected to shrink. These details are illustrated in Drawings 5,6 and 7 in the Appendix.
11. The installation of the "E Z Corners" was examined before the installation of the drywall panels. This phase of the work was documented and photographed. See drawings 10,11, 12,13,14,15, and 16 Appendix.
12. The local office of CMHC was advised by letter of the project and invited to visit the construction site and inspect the work in progress. The local Municipal Building Inspector was advised by letter of the work in progress and also invited to inspect the work in progress and make any comments. See letters to local authorities in Appendix.
13. The installation was examined again after the drywall was completed, and before painting. The corners were examined and tested with an application of a lateral force of about 50 lbs. (220 N ) to the inside mid section of the finished wall. The results of this test were the same for both the conventionally framed unit and the unit framed with the "E Z Corners".
14. During and after the installation was completed in November 1995, the trades persons involved were questioned on their experience installing the system. Their comments were very positive. See appendix for letters written by relevant trades persons.
15. The project was allowed to weather a complete heating season and in March 1996 was examined for signs of deformation, screw popping, corner cracking, or any signs of problems associated with shrinkage or drying. There were none.
16. The data collected was then prepared for presentation in a Final Report to CMHC, and project potential cost savings and other relevant data was tabulated.

## ANALYSIS OF COLLECTED DATA

### COSTS

The type "G1" apartment unit used for the prototype installation of the "E Z Corners" angles was assumed to be a fairly typical residential wood frame installation and unit costs were generated that were average and assumed to be general for all comparable construction.

Reference is made to Drawing 4 in the Appendix

G-1 Unit type		1156 sq.ft.	107.5 sq.m
(2 x 6) 38mm x 140mm studs			
studs saved	14 @ \$ 3.75	+\$ 53.00	
(2 x 4) 38mm x 89mm studs			
studs saved	105 @ \$ 2.69	+\$ 282.00	
E Z Corners			
used	93 @ \$ 2.00	-\$ 186.00	
Labor (estimated)			
saved	10 hr @ \$25.00	+\$ 250.00	
<b>Total Estimated Cost Savings</b>	~	<b>\$ 400.00</b>	
<b>Projected Unit Cost Savings</b>	~	<b>\$ 0.35 sq.ft.</b>	<b>\$ 3.72 sq.m.</b>

### PERFORMANCE CHARACTERISTICS E Z CORNERS

1. The E Z Corners system of sheet metal angles used as a wood framing accessory is a simple device to eliminate the use of framing lumber for blocking and nailing. The system can be manufactured by any sheet metal fabricator and is easily shipped and stored. The shapes fit together to form a solid and compact mass during shipping and storage.
2. The basic "L" shape has a wide variety of applications from the forming of all frame corners, bulkheads, ceiling supports, etc.; to assist in the secure support of gypsum board panels.

2. The system assists in the insulating of the cavity in frame walls, in that the cavity spaces to be insulated are less obstructed by framing members. This feature also makes the vapor barrier, mechanical and electrical systems easier to install.
3. The system eliminates some of the possibility of cracking of wall finishes by eliminating lumber components which may be subject to warping and shrinkage.
4. The system saves construction labor in that it is easy and quick to install and may be installed by the drywall trade after the framing carpenters are finished.
5. The system can be installed to allow differential movement between the wall surface and the ceiling , which could assist in the masking of the affects of truss lift.
6. The system can be added to standard steel studs to become a framing accessory for steel stud construction.

## COMMENTARY AND CONCLUSION

Generally the E Z Corners system is a very simple idea and is manufactured as a simple sheet metal shape. The sheet metal shapes by themselves do not have any real structural values, and derive their strength from their combination with structural studs of steel or wood.

The design of the system required a shape that is easy to manufacture, ship, store, receive the screw fasteners, and rigid enough to withstand construction conditions; yet light enough to make job site modifications easy using conventional hand tools. The testing program involved actual prototype construction in two different gauges, the 25 gauge prototype being selected as best meeting the above criteria.

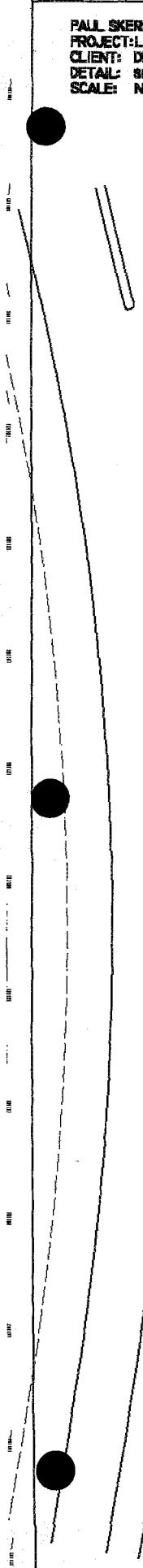
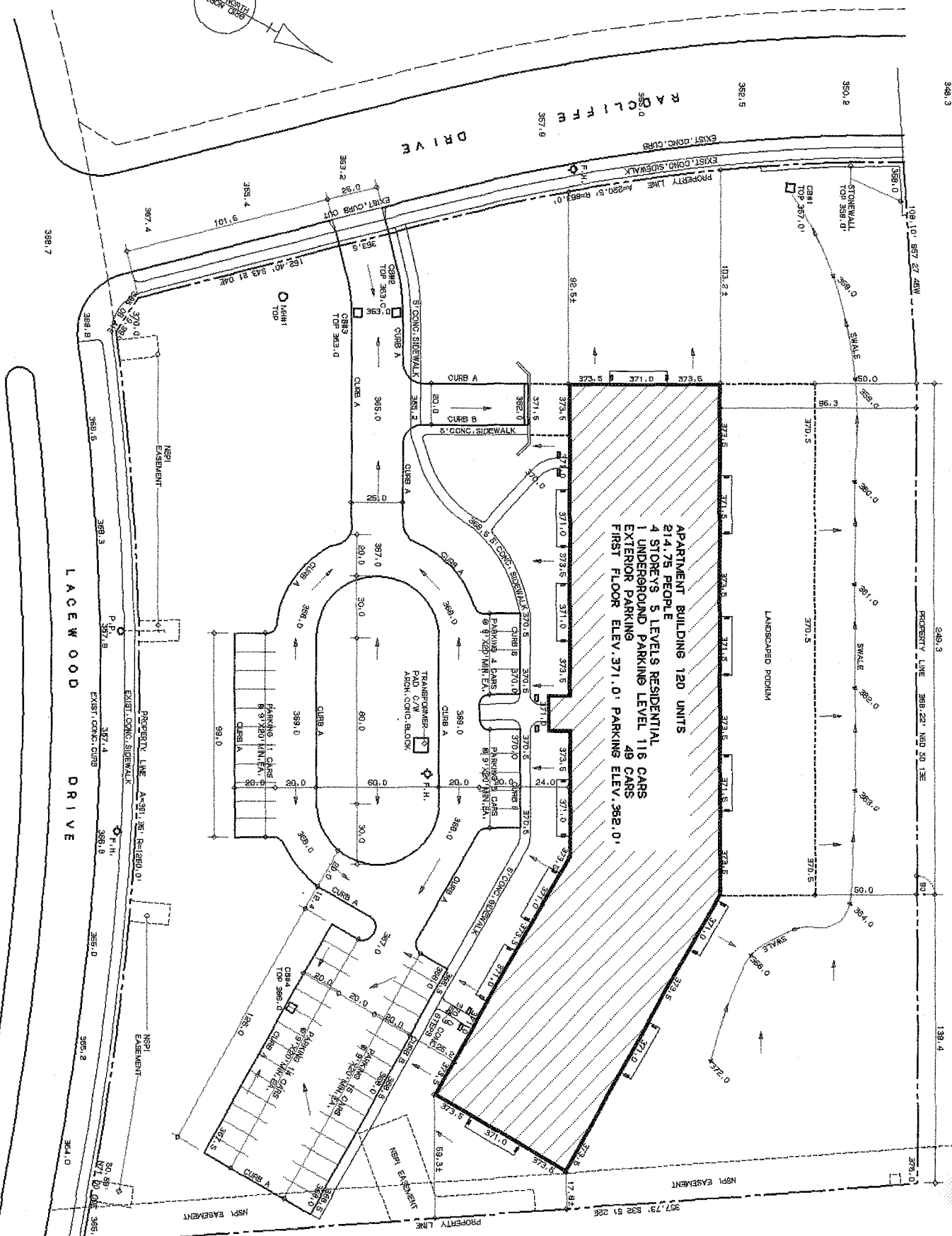
The testing protocol chosen was an actual construction project which satisfied the selection criteria set out in the description of work section of this report. This testing allowed a realistic analysis of the practical merits of this system and its possible cost savings.

The system has been proven as potentially beneficial to the construction industry by this study. Beyond the scope of this study would be the setting up of a manufacturing and sales distribution system with a retail price strategy.

The system was shown to save approximately **\$0.37/ sq.ft. or \$ 3.72/ sq.m.** over conventional construction practice and offer some attractive advantages.

Although the regional office of CMHC and the local Municipal Building Inspector were formally invited to participate in the project, neither responded with any formal queries or communications to the Author .





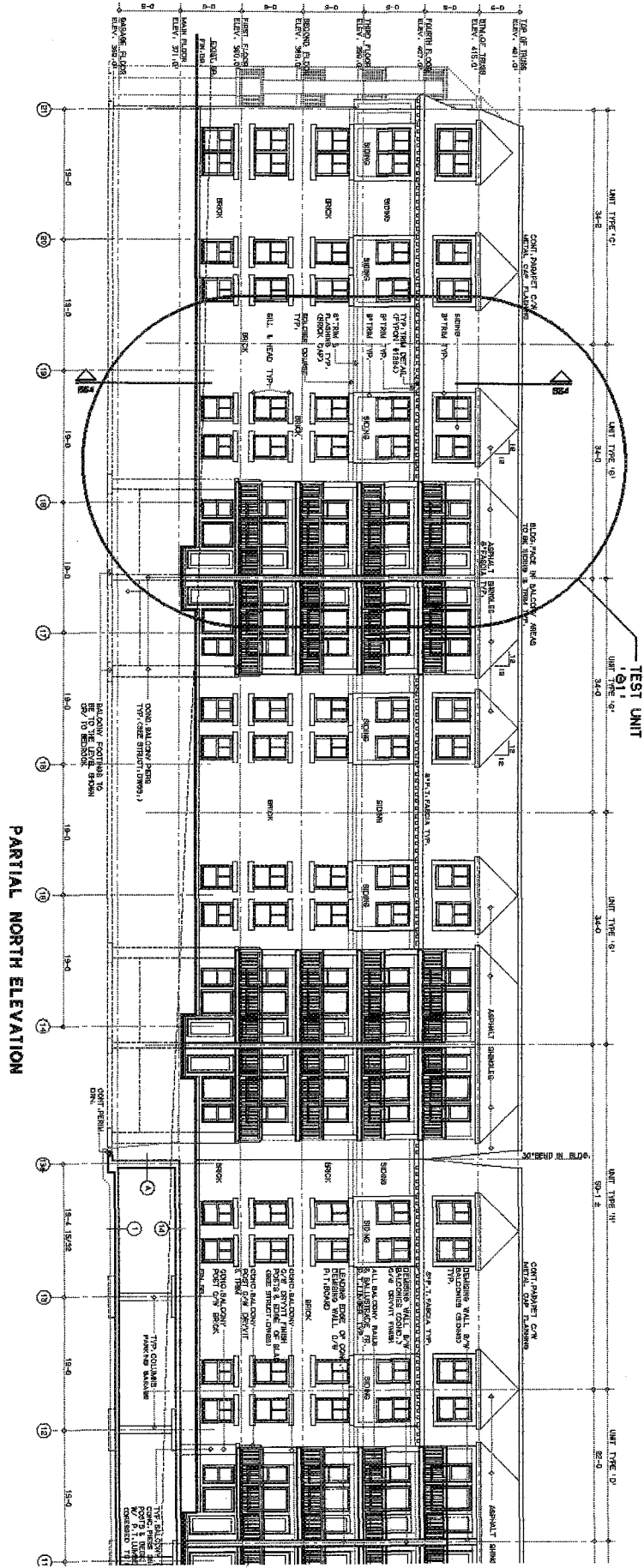
PAUL SKERRY ASSOCIATES LIMITED  
PROJECT: L-SHAPED METAL ANGLES  
CLIENT: DRAGO BLAZEVIC  
DETAIL: PARTIAL FLOOR PLAN BLOCK 'A' CLAYTON PARK  
SCALE: N.T.S.

ARCHITECTS

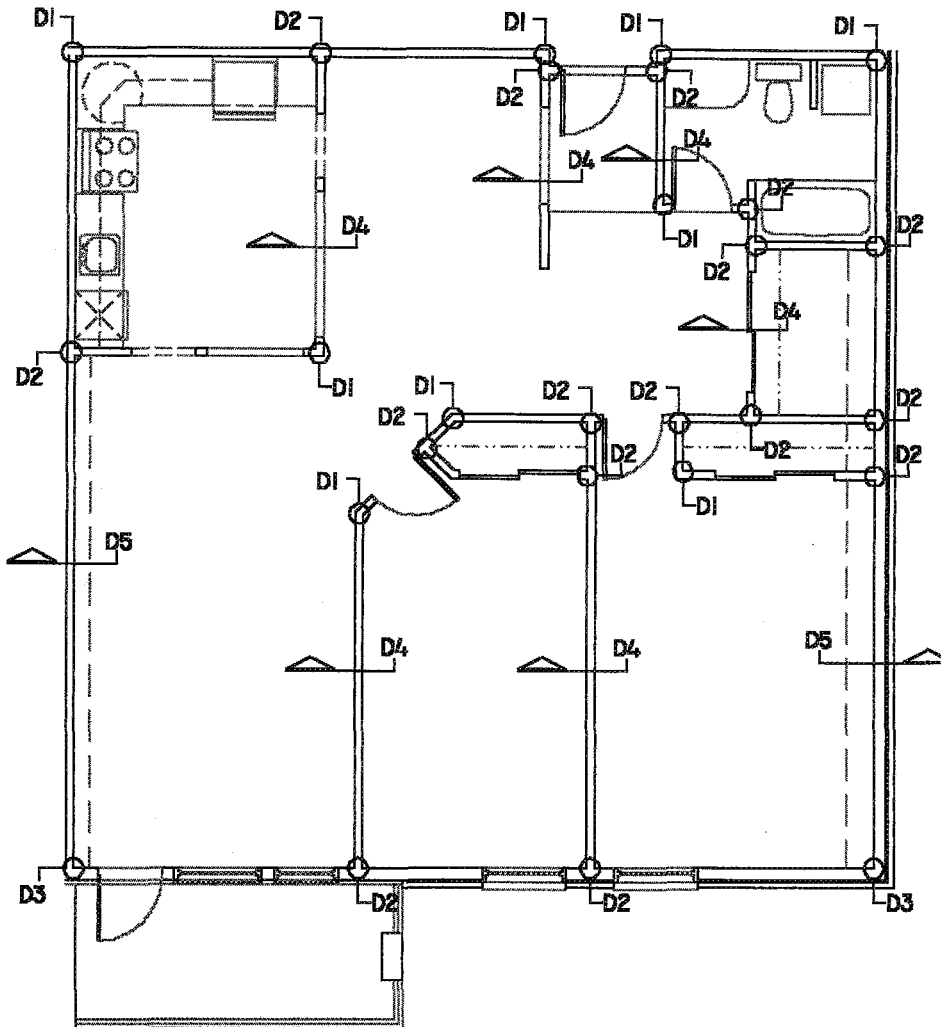
JOB No.: 2439

No.: 2





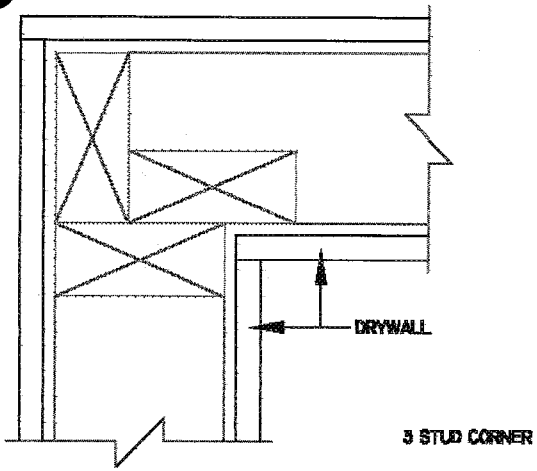
PARTIAL NORTH ELEVATION



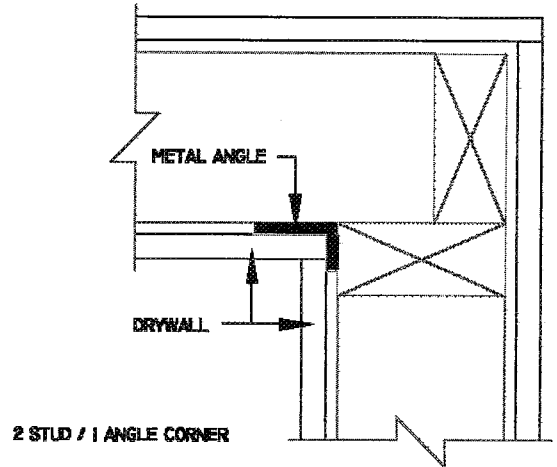
TEST UNIT  
(G1 UNIT BLOCK 'A' CLAYTON PARK)

TOTAL STUDS SAVED 61 (WALLS)  
TOTAL METAL ANGLES USED 43 (WALLS)  
TOTAL STUDS SAVED 18 (CEILING)  
TOTAL METAL ANGLES USED 18 (CEILING)  
TOTAL STUDS SAVED 40 (BULKHEAD)  
TOTAL METAL ANGLES USED 32 (BULKHEAD)

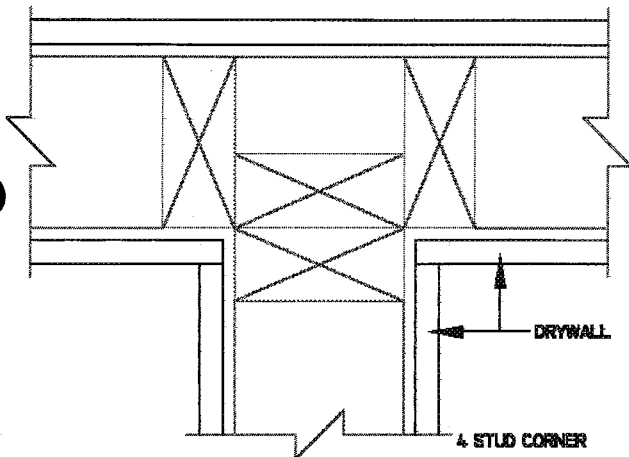
TOTAL STUDS SAVED 119  
TOTAL METAL ANGLES USED 93



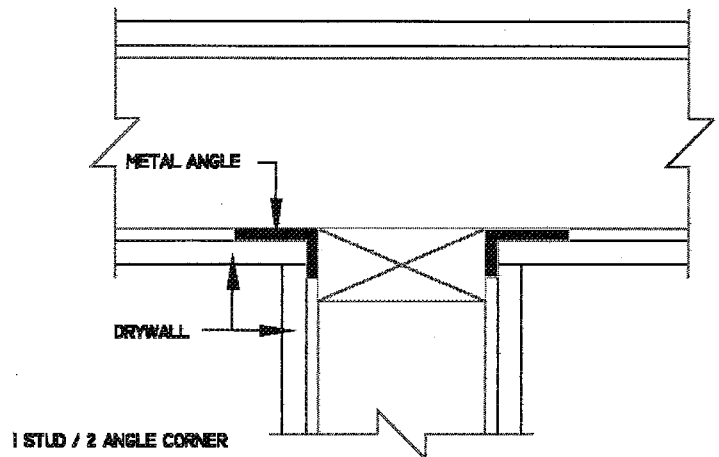
CONVENTIONAL WOOD FRAMING  
DETAIL 1 (D1)



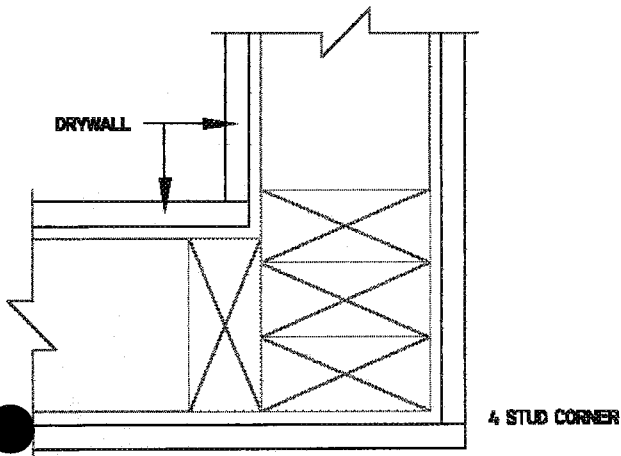
WOOD FRAMING / METAL ANGLE  
DETAIL 1 (D1)



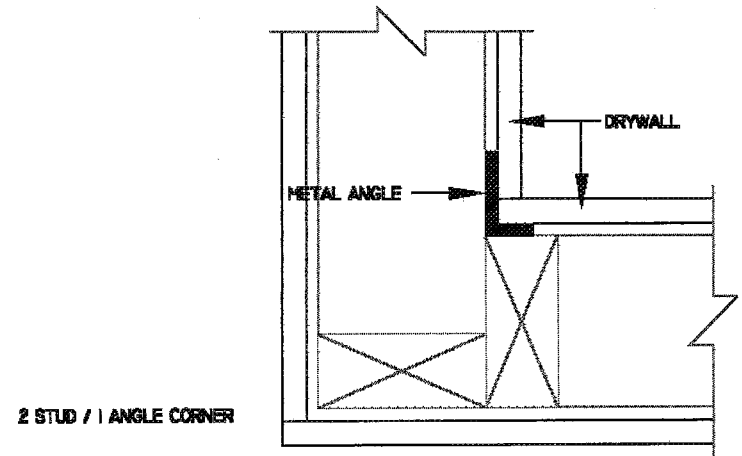
CONVENTIONAL WOOD FRAMING  
DETAIL 2 (D2)



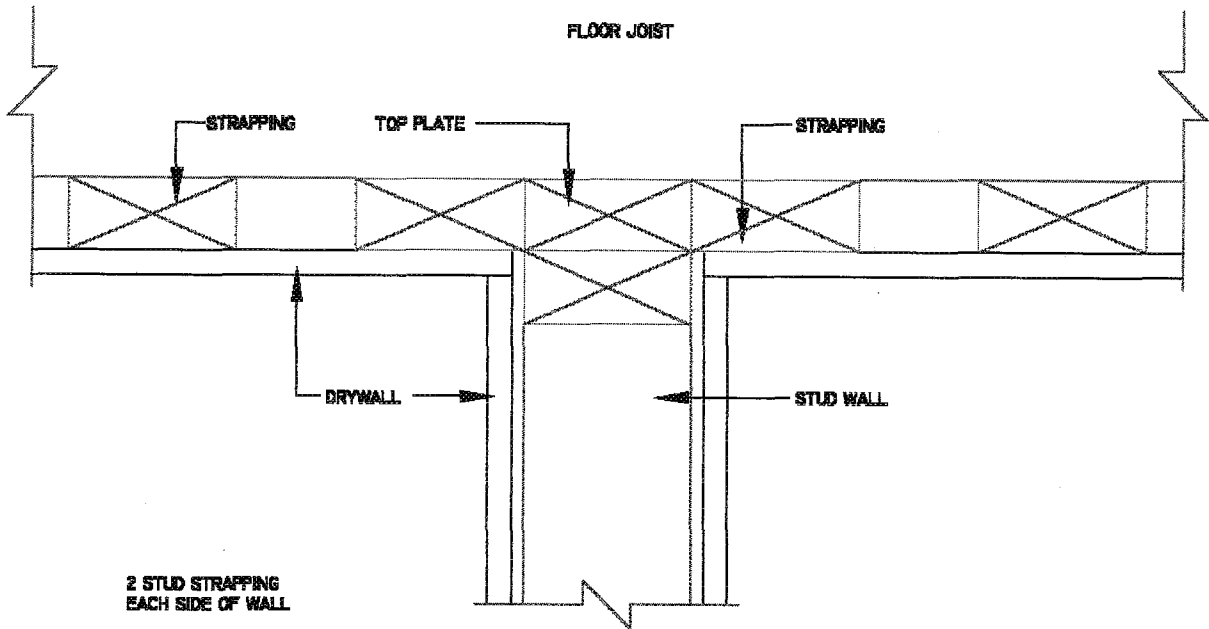
WOOD FRAMING / METAL ANGLE  
DETAIL 2 (D2)



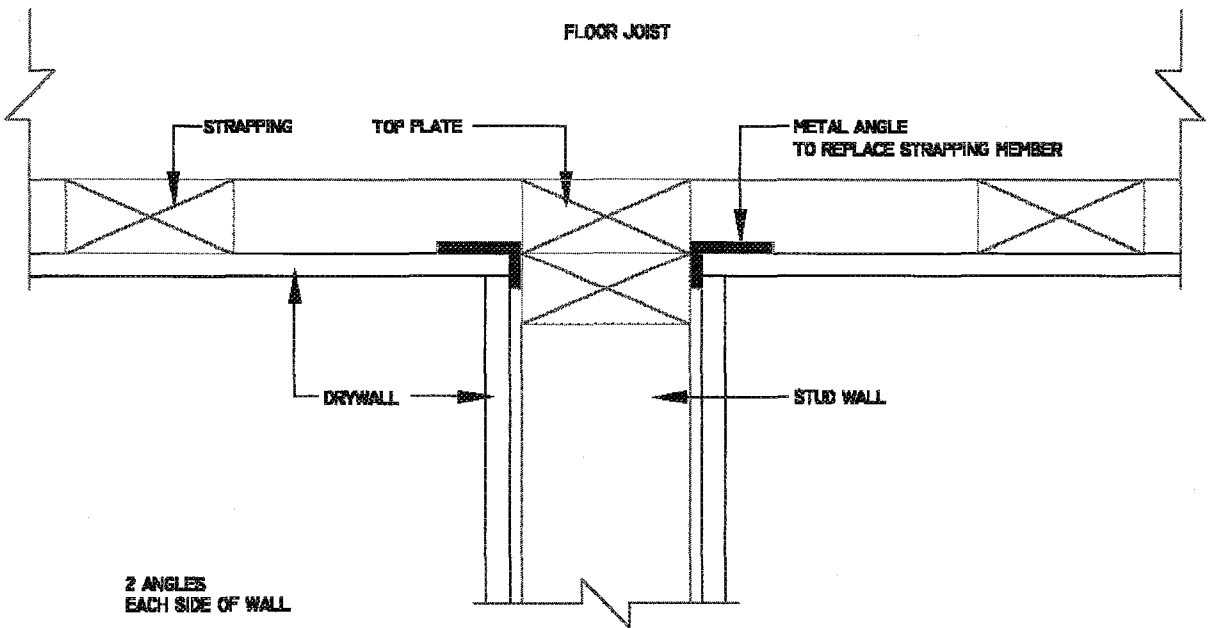
CONVENTIONAL WOOD FRAMING  
DETAIL 3 (D3)



WOOD FRAMING / METAL ANGLE  
DETAIL 3 (D3)



CONVENTIONAL WOOD FRAMING - WALL TO CEILING  
DETAIL 4 (D4)



WOOD FRAMING \ METAL ANGLE - WALL TO CEILING  
DETAIL 4 (D4)

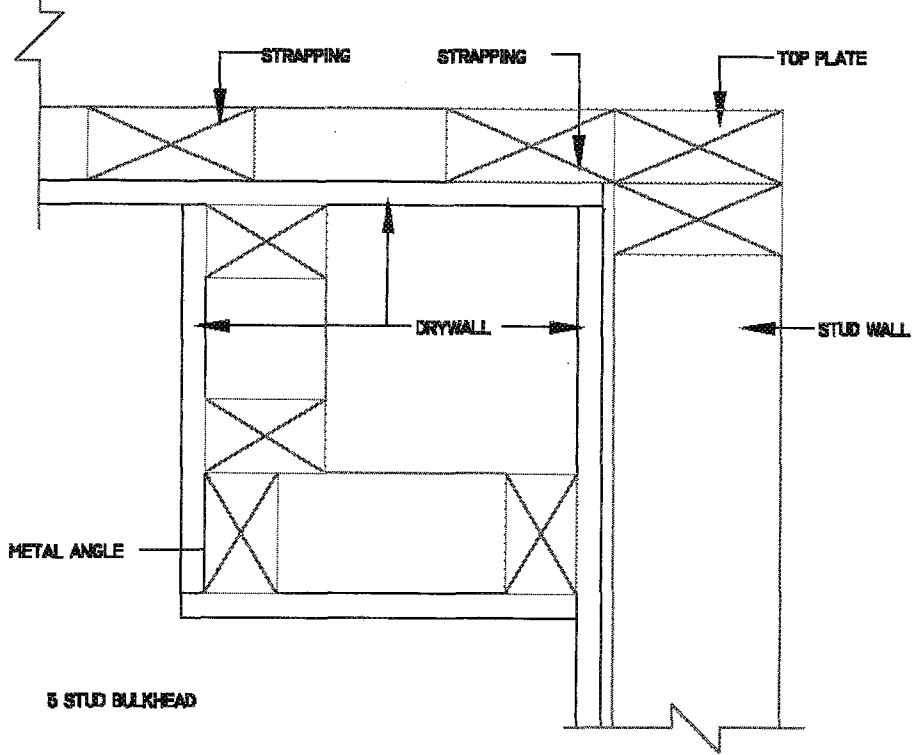
PALL SKERRY ASSOCIATES LIMITED  
PROJECT: L SHAPED METAL ANGLES  
CLIENT: DRAGO BLAZEVIC  
DETAIL: D4, D5  
SCALE: N.T.S.

ARCHITECTS

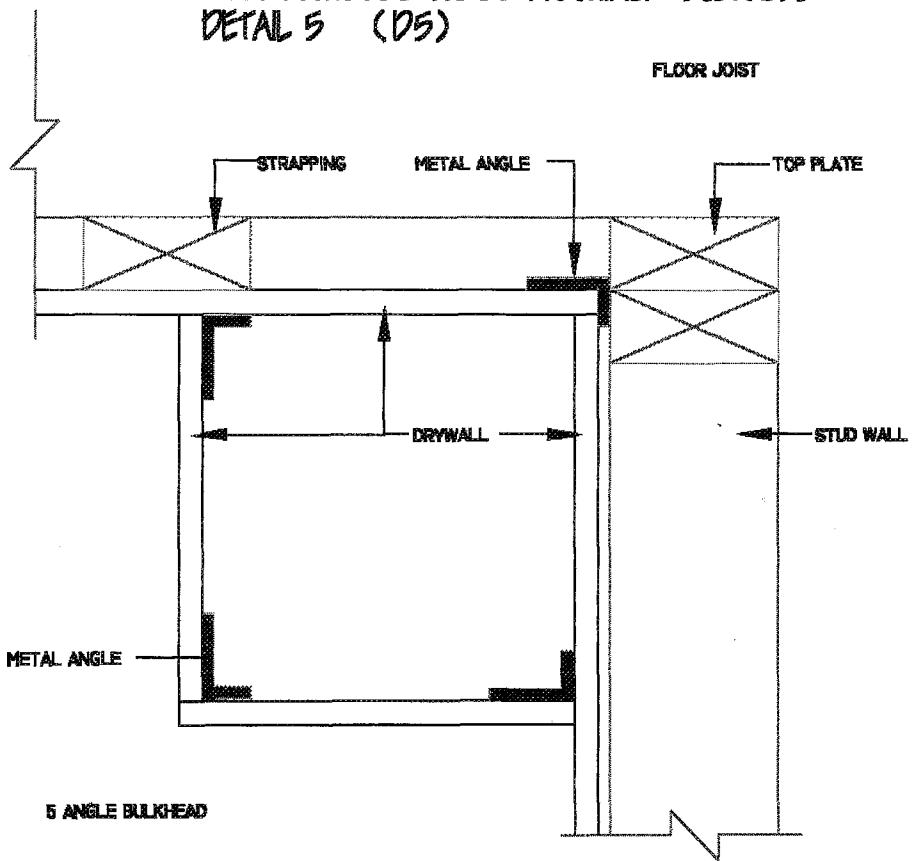
JOB No.: 2439

FLOOR JOIST

No.: 7



CONVENTIONAL WOOD FRAMING - BULKHEAD  
DETAIL 5 (D5)



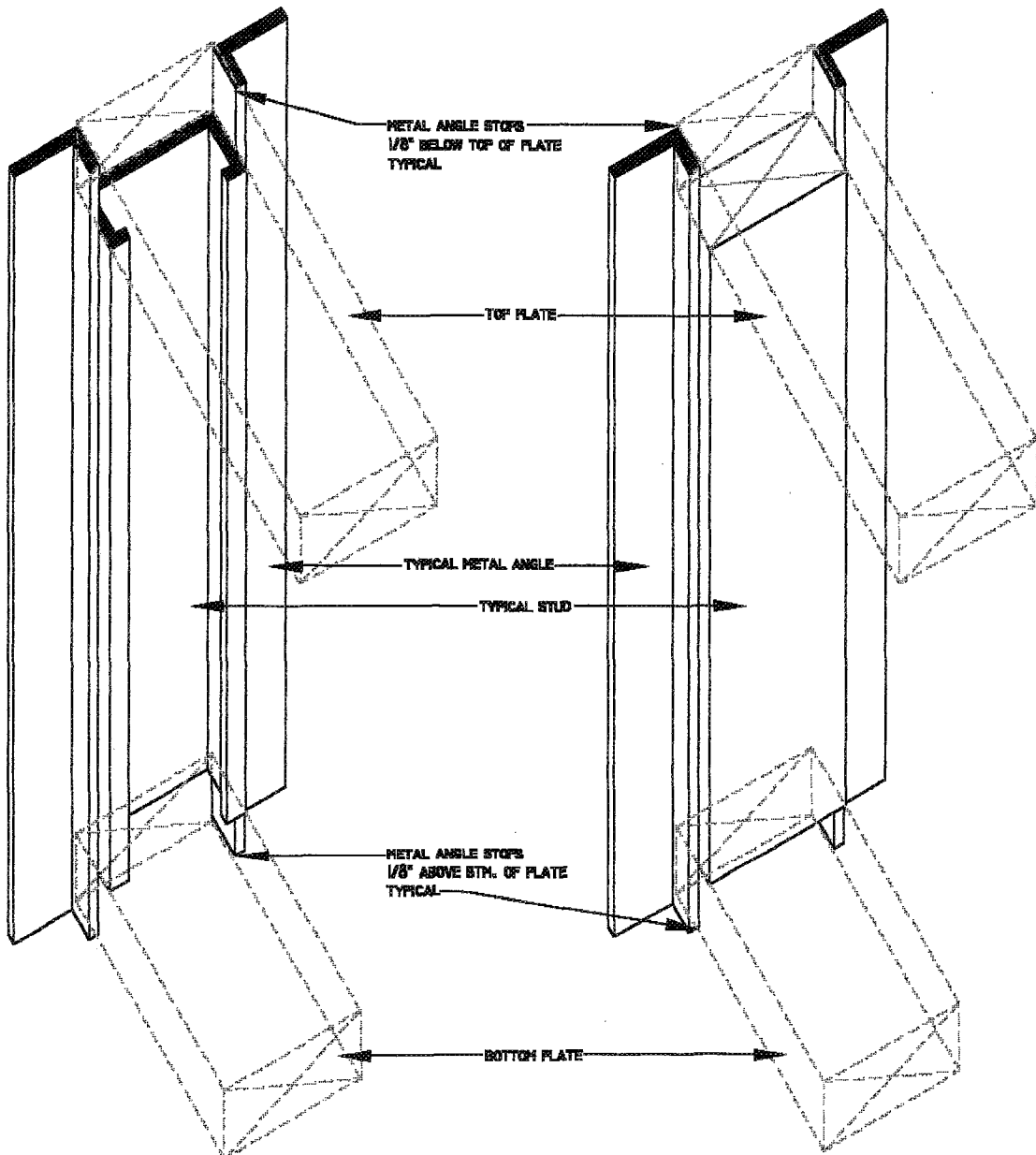
METAL ANGLE - BULKHEAD  
DETAIL 5 (D5)

PALL SKERRY ASSOCIATES LIMITED  
PROJECT: L SHAPED METAL ANGLES  
CLIENT: DRAGO BLAZEVIC  
DETAIL: D6,D7  
SCALE: N.T.S.

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JOB No.: 2639

No.: 8



TYPICAL STEEL STUD \ METAL ANGLE  
DETAIL 6 (D6)

TYPICAL WOOD STUD \ METAL ANGLE  
DETAIL 7 (D7)

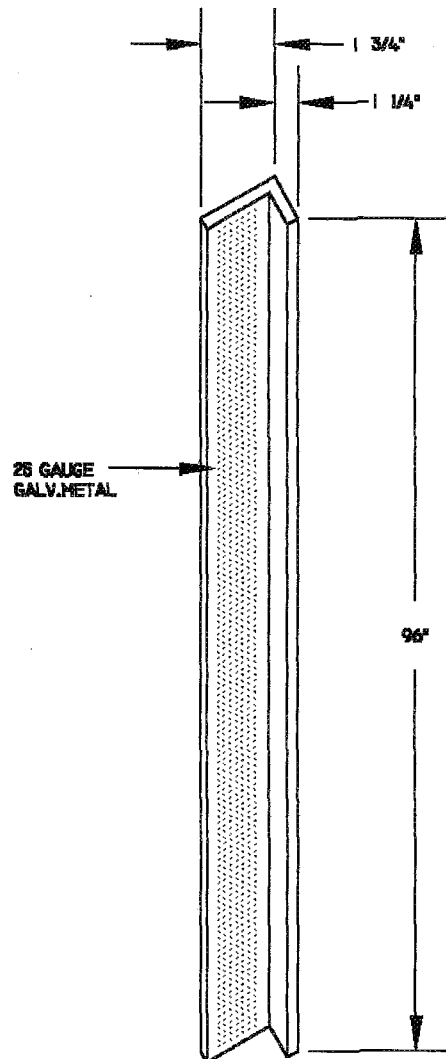


PALL SKERRY ASSOCIATES LIMITED  
PROJECT: L SHAPED METAL ANGLES  
CLIENT: DRAGO BLAZEVIC  
DETAIL: D8  
SCALE: N.T.S.

ARCHITECTS

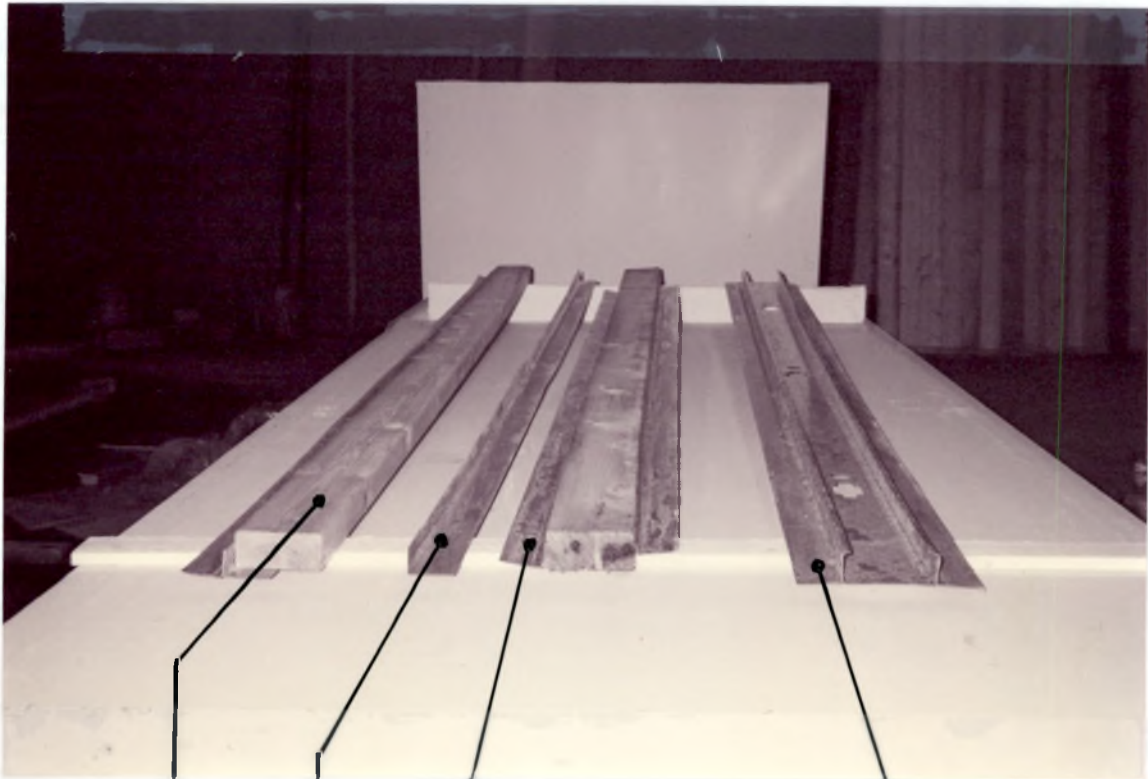
JOB No.: 2639

No.: 9



TYPICAL METAL ANGLE DETAIL  
DETAIL 8 (D8)

PHOTO SHOWING 4 SECTIONS PREPARED FOR TESTING.



STANDARD "L" SECTIONS  
SPOT WELDED TO STANDARD  
STEEL STUD.

STANDARD "L" SECTIONS MAILED TO  
STANDARD WOOD STUD.

STANDARD "L" SECTION.

STANDARD "T" SECTION (DISCONTINUED)

PHOTO SHOWING "L" SECTION  
INSTALLED @ INTERIOR PARTITION INTERSECTION.



STEEL "L"  
INSTALLED BOTH  
SIDES OF WOOD  
STUD.

DETAIL ALLOWS  
CONTINUOUS  
INSTALLATION OF  
ACOUSTIC  
INSULATION.

TYPICAL INTERIOR PARTITION.  
2" x 4" (48 x 89mm)

# PHOTO SHOWING "L" SECTIONS USED AT INTERIOR PARTITION INTERSECTIONS



DETAILED TO TERMINATE JUST BELOW TOP OF TOP PLATE.

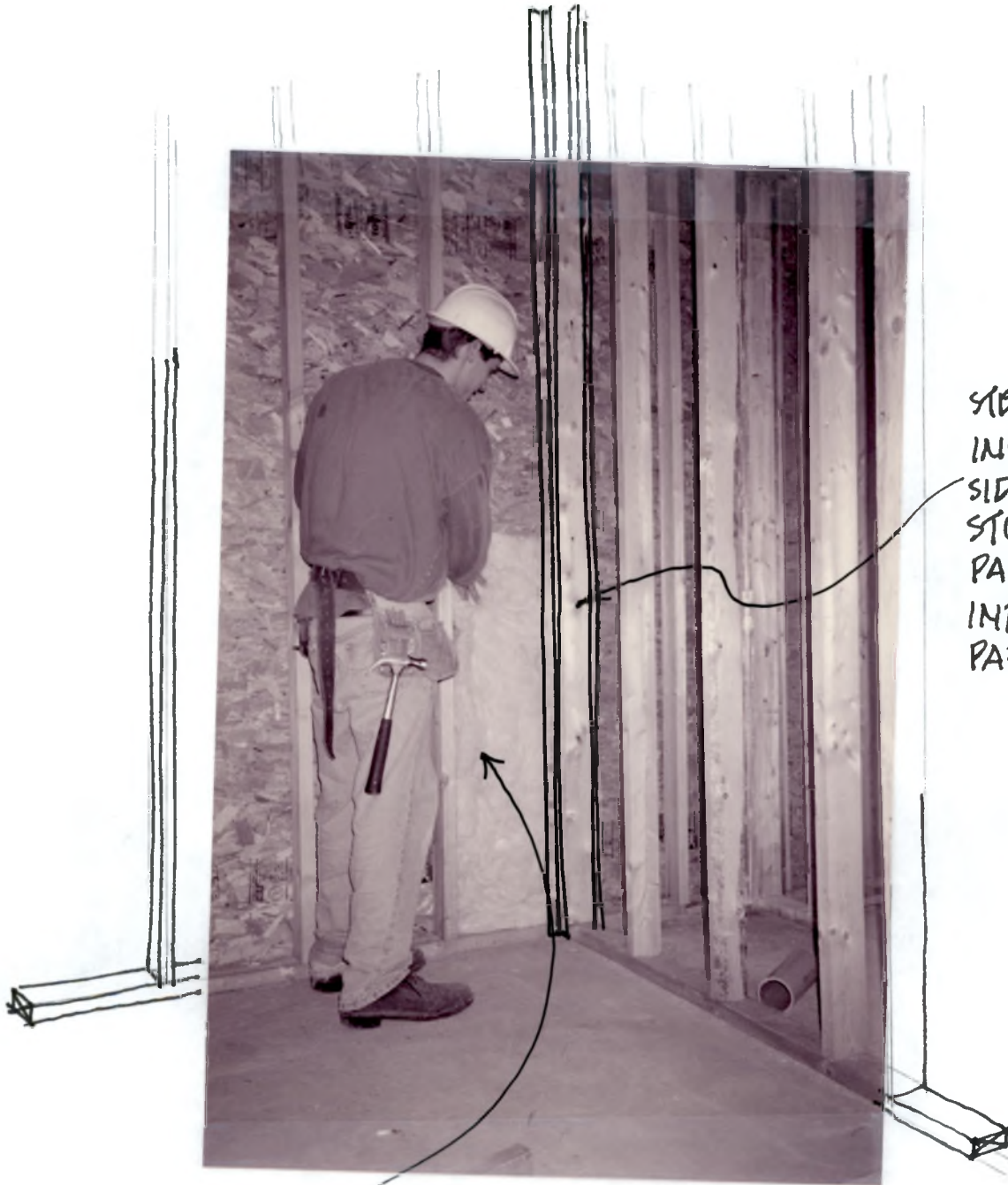
STEEL "L" INSTALLED BOTH SIDES OF WOOD STUD.

NOTE EASE OF WIRING AT WALL INTERSECTION.

DETAILED TO TERMINATE JUST ABOVE BOTTOM OF BOTTOM PLATE.



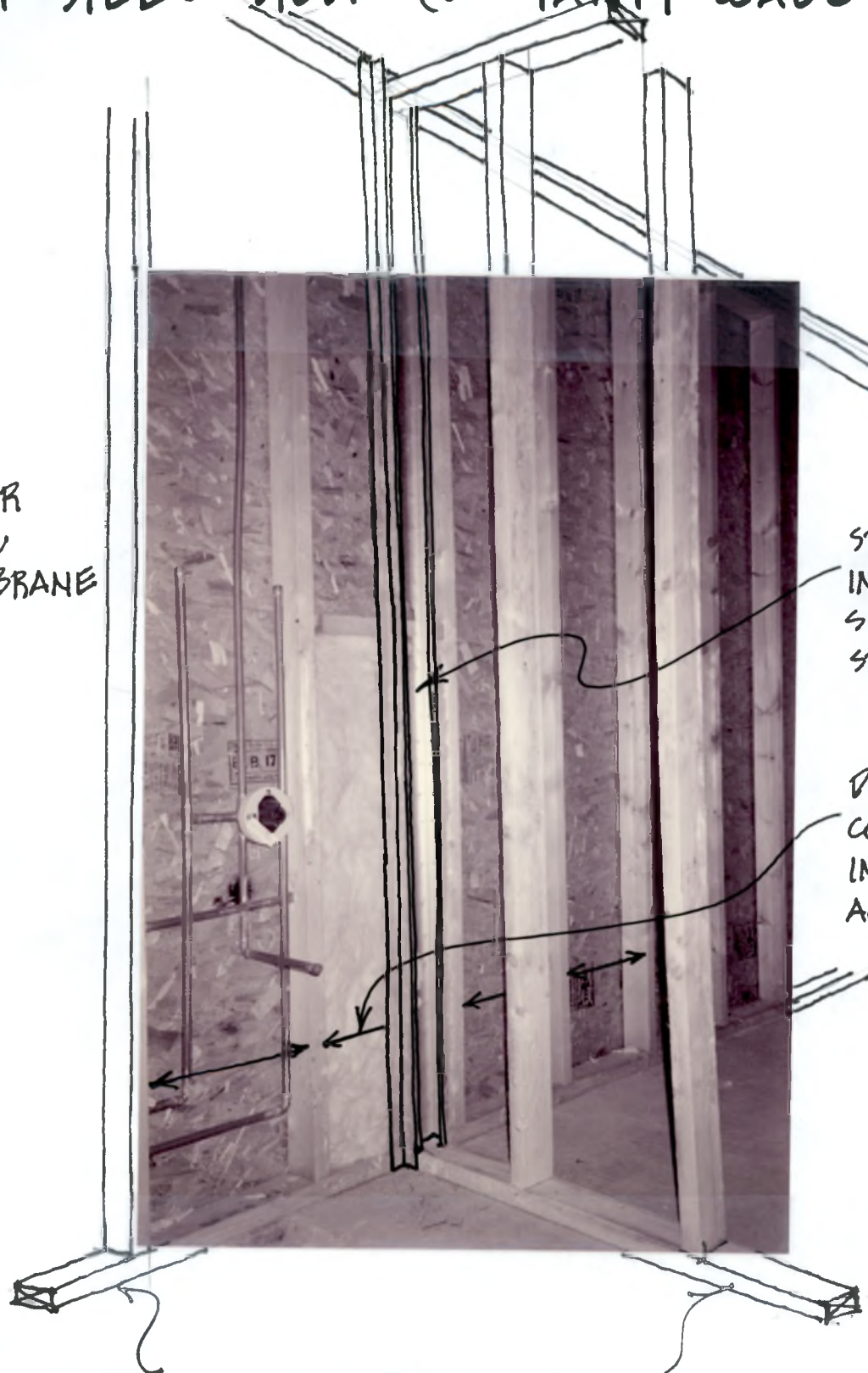
PHOTO SHOWING "U" SECTIONS IN COMBINATION WITH WOOD STUDS @ PARTY WALL.



STEEL "U"  
INSTALLED BOTH  
SIDES OF WOOD  
STUD AT  
PARTY WALL &  
INTERIOR  
PARTITION.

WORKER DEMONSTRATES EASE  
OF INSTALLING ACOUSTIC  
INSULATION.

PHOTO SHOWING "L" SECTIONS IN COMBINATION WITH STEEL STUD. @ PARTY WALL



SHEAR WALL MEMBRANE

STEEL "L" INSTALLED BOTH SIDES OF STEEL STUD.

DETAILS ALLOW CONTINUOUS INSTALLATION OF ACOUSTIC INSULATION

TYPICAL INTERIOR PARTITIONS  
2" x 4" (38" x 89MM)

USE OF STEEL STUD ELIMINATES WARPING AND SHRINKAGE OF WOOD STUD.



PHOTO DETAIL SHOWING "L" SECTION  
INSTALLED @ OUTSIDE WALL - PARTITION



STEEL "L"  
INSTALLED BOTH  
SIDES OF WOOD  
STUD AT OUTSIDE  
WALL - INTERIOR  
PARTITION.

CONTINUOUS VAPOUR  
BARRIER  
INSTALLED ACROSS  
END. OF PARTITION

INSULATION. INSTALLED  
CONTINUOUSLY BEHIND  
STEEL "L"

OUTSIDE WALL 2" x 6" (38 x 140 MM)

INTERIOR PARTITION. 2" x 4" (38 x 89 MM)

PHOTO SHOWING "L" SECTIONS USED AT CEILING  
TO PROVIDE CONTINUOUS SUPPORT TO DRYWALL.

STEEL "L" INSTALLED AT CEILING  
TO SUPPORT EDGE OF DRYWALL.

WOOD STRAPPING @ CEILING



TYPICAL INTERIOR PARTITIONS.





**ARCHITECTS**

5514 LIVINGSTONE PLACE  
HALIFAX N.S. B3K 2B9

November 30, 1995

Mr. Randy Anstey  
Canada Mortgage and Housing Corporation  
P.O. Box 9315, Station A  
Halifax Shopping Centre  
Tower 1, Suite 300  
Halifax, Nova Scotia  
B3K 5W9

RE: C.M.H.C. Housing Technology Incentives Program  
T & L Shape Metal Corners

Dear Bernie:

We have a client who has been given a Housing Technology Grant from C.M.H.C. to develop and test a framing accessory which will simplify wood framing techniques, save lumber, reduce thermal bridging, and decrease cracking and nail/screw popping due to lumber shrinkage.

This framing accessory is basically a metal angle designed to facilitate the forming of corner supports for the drywall system. This device is being used and tested in some of the unit framing at the Steve Hanias Site, Block A Clayton Park West, at the corner of Lacewood & Radcliffe Drive.

The device is installed in a number of units on the 4th and 5th floor on the North West Wing.

We ask you to be aware of this testing program and invite your office to participate in the data collection now underway.

Yours truly,

Paul F. Skerry  
Architect, NSAA



**ARCHITECTS**

5514 LIVINGSTONE PLACE  
HALIFAX N.S. B3K 2B9

November 30, 1995

Mr. Bernie Duggan  
Building Inspection  
City of Halifax  
P.O. Box 1749  
Halifax, Nova Scotia  
B3J 3A5

RE: C.M.H.C. Housing Technology Incentives Program  
T & L Shape Metal Corners

Dear Bernie:

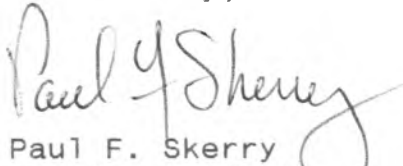
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This framing accessory is basically a metal angle designed to facilitate the forming of corner supports for the drywall system. This device is being used and tested in some of the unit framing at the Steve Hantias Site, Block A Clayton Park West, at the corner of Lacewood & Radcliffe Drive.

The device is installed in a number of units on the 4th and 5th floor on the North West Wing.

We ask you to be aware of this testing program and invite your comments.

Yours truly,

  
Paul F. Skerry  
Architect, NSAA

To Who it may concern:

**Prepared from hand written letter by Mr. Philip Burke**

My name is Philip Burke, and I am a Carpenter.

I recently installed "easy corners" (metal angle bars) for Hantias and Sons. Ltd. in their apartment building at 294 Radcliffe Drive, Clayton Park West, Halifax N.S.

The "Easy Corners" are much more efficient than the wooden corners I've worked with. In comparing them there are several reasons for this.

One reason is when using solid wooden corners you have to work in a confined area, sometimes around pipes and electrical wires, making it awkward. But when using the 'Easy Corners' you eliminate this problem.

All work is done on the outside wall by putting 2 nails in the top and bottom plates, and 4-5 nails in between. This is 65% faster than when installing wooden corners.

Also, another reason is when installing partition boxes on exterior walls, you have to insulate right away where using "Easy Corners" there is plenty of room to insulate after they are installed.

Yours Truly

Philip Burke

**Prepared from a handwritten letter by Mr. Gerald MacKay**

Mackay's Home Craft Ltd.  
Site 105, Comp. 33  
RR1 Bedford, N.S.  
B4A 2W9

Phone: 1-902-835-6519

To Whom it may concern: C.M.H.C.

I Gerard MacKay have been a drywall foreman for Steve Hantias at his 120 Unit Apartment Building.

I have seen the E-Z metal product used on the corners and are pleased to report success with this product.

It managed very well with the drywall screws, and when drywall is in place is very durable. We won't have shrinkage "that's for sure" and after about a month, to me no cracks have appeared from settling.

I think this product will also eliminate truss uplift in the future.

Thank You

Gerald Mackay