

**City of Portland, Maine – Building or Use Permit Application** 389 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

Location of Construction: 659-687 Warren Ave		Owner: Turner Barket Assoc.		Phone:	
Owner Address: One India St Ptld, ME 04101		Lessee/Buyer's Name:		Phone:	
Contractor Name: Dahlgren Construction		Address: 412 U.S. Rt 1 Yarmouth, ME		Phone: 846-3505	
Past Use: Retail/Offices		Proposed Use: Same		PERMIT FEE: \$ 520.00	
Proposed Project Description: Reroof structure		COST OF WORK: \$ 100,000.00		INSPECTION: Use Group: <i>M/B</i> Type: <i>2C</i>	
Permit Taken By: Mary Gresik		Date Applied For: 23 September 1997		Signature: <i>[Signature]</i> Date:	

Permit No: 971044  
**PERMIT ISSUED**  
 SEP 25 1997  
**CITY OF PORTLAND**

Zone: *B-4* CBL: 315-A-001  
 Zoning Approval: *[Signature]* 9/24/97  
**Special Zone or Reviews:**  
 Shoreland  
 Wetland  
 Flood Zone  
 Subdivision  
 Site Plan maj  minor  mm

**Zoning Appeal**  
 Variance  
 Miscellaneous  
 Conditional Use  
 Interpretation  
 Approved  
 Denied

**Historic Preservation**  
 Not in District or Landmark  
 Does Not Require Review  
 Requires Review

**Action:**  
 Approved  
 Approved with Conditions  
 Denied  
 Date: 9/24/97  
*[Signature]*

CEO DISTRICT  7  
*[Signature]*

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

PERMIT ISSUED WITH REQUIREMENTS

**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provisions of the code(s) applicable to such permit

SIGNATURE OF APPLICANT: *[Signature]* Steve Dunn ADDRESS: XXX DATE: 23 September 1997 PHONE:

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE PHONE:

White-Permit Desk Green-Assessor's Canary-D.P.W. Pink-Public File Ivory Card-Inspector

**City of Portland, Maine – Building or Use Permit Application** 389 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

Location of Construction: 639-687 Warren Ave		Owner: Turner Market Assoc.		Phone:		Permit No <b>971044</b>	
Owner Address: One India St Pld, ME 04101		Lessee/Buyer's Name:		Phone:		BusinessName:	
Contractor Name: Dehlgren Construction		Address: 412 U.S. Rt 1 Yarmouth, ME		Phone: 846-3505		Permit Issued	
Past Use: Retail/Offices		Proposed Use: Same		COST OF WORK: \$ 100,000.00		PERMIT FEE: \$ 520.00	
Proposed Project Description: Reroof structure				FIRE DEPT. <input type="checkbox"/> Approved <input type="checkbox"/> Denied		INSPECTION: Use Group: Type:	
				Signature: <i>[Signature]</i>		Signature: <i>[Signature]</i>	
Proposed Project Description: Reroof structure				PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)			
				Action: Approved <input type="checkbox"/>		Approved with Conditions: <input type="checkbox"/>	
Permit Taken By: Mary Greeik		Date Applied For: 23 September 1997					

**PERMIT ISSUED**  
SEP 25 1997  
**CITY OF PORTLAND**

Zone: CBL: 315-A-001  
Zoning Approval:  
**Special Zone or Reviews:**  
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**Zoning Appeal**  
 Variance  
 Miscellaneous  
 Conditional Use  
 Interpretation  
 Approved  
 Denied

**Historic Preservation**  
 Not in District or Landmark  
 Does Not Require Review  
 Requires Review

**Action:**  
 Approved  
 Approved with Conditions  
 Denied  
Date: 9/29/97

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**PERMIT ISSUED WITH REQUIREMENTS**

**CERTIFICATION**

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*Steve Dann*  
SIGNATURE OF APPLICANT **Steve Dann** ADDRESS: DATE: 23 September 1997 PHONE:

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE PHONE:

CEO DISTRICT

COMMENTS

10/30 Work appears completed per plan (DC)

Inspection Record

Type	Date
Foundation: _____	_____
Framing: _____	_____
Plumbing: _____	_____
Final: _____	_____
Other: _____	_____

# BUILDING PERMIT REPORT

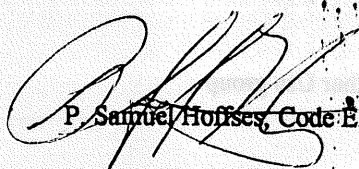
DATE: 25 / Sept / 97 ADDRESS: 659-687 Warren Ave  
REASON FOR PERMIT: Re-roof structure  
BUILDING OWNER: Tanner Barker Assoc  
CONTRACTOR: Dahlgren Co ST  
PERMIT APPLICANT: Steve Dunn APPROVAL: X/ ~~DELETED~~  
USE GROUP M/B BOCA 1996 CONSTRUCTION TYPE 2C

## CONDITION(S) OF APPROVAL

1. This permit does not excuse the applicant from meeting applicable State and Federal rules and laws.
2. Before concrete for foundation is placed, approvals from the Development Review Coordinator and Inspection Services must be obtained. (A 24 hour notice is required prior to inspection)
3. Precaution must be taken to protect concrete from freezing.
4. It is strongly recommended that a registered land surveyor check all foundation forms before concrete is placed. This is done to verify that the proper setbacks are maintained.
5. Private garages located beneath habitable rooms in occupancies in Use Group R-1, R-2, R-3 or I-1 shall be separated from adjacent interior spaces by fire partitions and floor/ceiling assembly which are constructed with not less than 1-hour fire resisting rating. Private garages attached side-by-side to rooms in the above occupancies shall be completely separated from the interior spaces and the attic area by means of 1/2 inch gypsum board or the equivalent applied to the garage means of 1/2 inch gypsum board or the equivalent applied to the garage side. (Chapter 4 Section 407.0 of the BOCA/1996)
6. All chimneys and vents shall be installed and maintained as per Chapter 12 of the City's Mechanical Code. (The BOCA National Mechanical Code/1993) U.L. 103.
7. Sound transmission control in residential building shall be done in accordance with Chapter 12 section 1214.0 of the city's building code.
8. Guardrail & Handrails A guardrail system is a system of building components located near the open sides of elevated walking surfaces for the purpose of minimizing the possibility of an accidental fall from the walking surface to the lower level. Minimum height all Use Groups 42" , except Use Group R which is 36". In occupancies in Use Group A, B, H-4, I-1, I-2 M and R and public garages and open parking structures, open guards shall have balusters or be of solid material such that a sphere with a diameter of 4" cannot pass through any opening. Guards shall not have an ornamental pattern that would provide a ladder effect.
9. Headroom in habitable space is a minimum of 7'6".
10. Stair construction in Use Group R-3 & R-4 is a minimum of 10" tread and 7 3/4" maximum rise. All other Use group minimum 11" tread. 7" maximum rise.
11. The minimum headroom in all parts of a stairway shall not be less than 80 inches.
12. Every sleeping room below the fourth story in buildings of use Groups R and I-1 shall have at least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside without the use of special knowledge or separate tools. Where windows are provided as means of egress or rescue they shall have a sill height not more than 44 inches (1118mm) above the floor. All egress or rescue windows from sleeping rooms shall have a minimum net clear opening height dimension of 24 inches (610mm). The minimum net clear opening width dimension shall be 20 inches (508mm), and a minimum net clear opening of 5.7 sq. ft.
13. Each apartment shall have access to two (2) separate, remote and approved means of egress. A single exit is acceptable when it exits directly from the apartment to the building exterior with no communications to other apartment units.
14. All vertical openings shall be enclosed with construction having a fire rating of at least one (1) hour, including fire doors with self closer's.
15. The boiler shall be protected by enclosing with (1) hour fire-rated construction including fire doors and ceiling, or by providing automatic extinguishment.
16. All single and multiple station smoke detectors shall be of an approved type and shall be installed in accordance with the provisions of the City's Building Code Chapter 9, Section 19, 920.3.2 (BOCA National Building Code/1996), and NFPA 101 Chapter 18 & 19. (Smoke detectors shall be installed and maintained at the following locations):
  - In the immediate vicinity of bedrooms
  - In all bedrooms
  - In each story within a dwelling unit, including basements

In addition to the required AC primary power source, required smoke detectors in occupancies in Use Groups R-2, R-3 and I-1 shall receive power from a battery when the AC primary power source is interrupted. (Interconnection is required)

- 17. A portable fire extinguisher shall be located as per NFPA #10. They shall bear the label of an approved agency and be of an approved type.
- 18. The Fire Alarm System shall be maintained to NFPA #72 Standard,
- 19. The Sprinkler System shall maintained to NFPA #13 Standard.
- 20. All exit signs, lights, and means of egress lighting shall be done in accordance with Chapter 10 Section & Subsections 1023. & 1024. Of the City's building code. (The BOCA National Building Code/1996)
- 21. **No construction or demolition work shall begin until you have obtained permits for dumpsters or containers. A work Stop Order shall be issued if this requirement is not met.**
- 22. Section 25-135 of the Municipal Code for the City of Portland states, "No person or utility shall be granted a permit to excavate or open any street or sidewalk from the time of November 15 of each year to April 15 of the following year".
- 23. The builder of a facility to which Section 4594-C of the Maine State Human Rights Act Title 5 MRSA refers, shall obtain a certification from a design professional that the plans commencing construction of the facility, the builder shall submit the certification to the Division of Inspection Services.
- 24. This permit does not excuse the applicant from obtaining any license which may be needed from the City Clerk's office.
- 25. Ventilation shall meet the requirements of Chapter 12 Sections 1210. of the City's Building Code.
- 26. All electrical and plumbing permits must be obtained by a Master Licensed holders of their trade.
- 27. All requirements must be met before a final Certificate of Occupancy is issued.
- 28. All building elements shall meet the fastening schedule as per Table 2305.2 of the City's Building Code. (The BOCA National Building Code/1996).
- 29. Ventilation of spaces within a building shall be done in accordance with the City's Mechanical Code (The BOCA National Mechanical Code/1993).
- 30. *This permit is being issued with the requirement that the registered professional engineer review of the proposed project is followed.*
- 31. \_\_\_\_\_
- 32. \_\_\_\_\_
- 33. \_\_\_\_\_
- 34. \_\_\_\_\_

  
P. Samuel Hoffses, Code Enforcement  
cc: Lt. McDougall, PFD  
Marge Schmuckal

**ALEXANDER HUTCHEON** ASSOCIATES  
ENGINEERS

519 CONGRESS STREET  
PORTLAND, MAINE 04101  
TELEPHONE 207 774-0484

September 19, 1997

Mr. Steve Dunn  
Dahlgren Construction Company  
20 U.S. Route One  
Yarmouth, Maine 04098

Re: Roof capacity; Value House Building, Portland, Maine

Dear Steve:

At your request, I have reviewed the framing plans for the former Value House Building, 659 to 687 Warren Avenue, Portland, Maine, to determine whether the existing framing can support new steel roof panels, installed over the existing roof system, on a plywood substrate.

As shown on the enclosed calculation sheets 1, 2 and 3, the steel purlins are adequate for this additional load, the original dead load, and the currently-required 42 psf. snow load.

It is my opinion that the 2.06 per cent increase in the load to the frames is within the acceptable margin of variation between the required section and the section which was actually provided.

Your questions and comments regarding this report are welcome.

Very truly yours,

ALEXANDER HUTCHEON Associates,  
Engineers

*Alexander Hutcheon*

Alexander Hutcheon, P.E.  
President



Enclosures: Calculation sheets 1, 2 and 3  
Steel Span "Cold Formed Section" Properties Table

DAHLGREN CONSTRUCTION

ALEXANDER HUTCHEON ASSOCIATES

ENGINEERS

SHY. 1 OF 3  
9/19/97

519 CONGRESS ST.  
PORTLAND, MAINE 04101  
TEL 207-774-0484

CAPACITY OF ROOF FRAMING: VALUE HOUSE BUILDING  
STEEL SPAN BUILDING, 1970

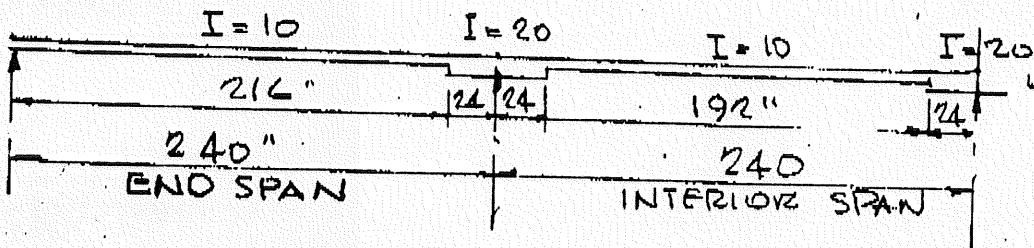
ROOF PURLINS: 8" DEEP x 14 GA., COLD-FORMED  
DESIGNATION 4 Z 21.97;  
WEIGHT = 3.406 LBS. PER FT.  
I = 10.0 ; S = 2.48  
50,000 KSI YIELD;  $F_b = .6(50,000) = 30,000$  PSI  
SPAN = 20'; SPACING = 4 FT.  
OVERLAPPED 2' EACH SIDE OF BEAMS

SEE ATTACHED  
STEEL SPAN "COLD  
FORMED SECTIONS"

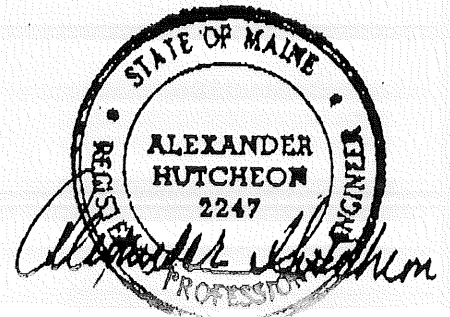
ROOF LOAD: SNOW 42 PSF.  
DEAD:

ROOF SHEETS	1.09 PSF
PLYWOOD	1.50
NEW SHEETS	1.09
INSULATION	3.00
COLLATERAL	<u>2.00</u>
	8.69 PSF.

CHECK BENDING STRESS: AS FULLY CONTINUOUS BEAM, WITH 2' OVERLAP



SEE NEXT SHY. FOR CARRY OVER FACTORS  
STIFFNESS FACTORS  
FIXED END MOMENTS AT UNIT LOAD  
MOMENT DISTRIBUTION



# DAHLGREN CONSTRUCTION

ALEXANDER HUTCHEON ASSOCIATES

ENGINEERS  
 517. 2nd Fl  
 9/19/97

519 CONGRESS ST.  
 PORTLAND, MAINE 04101  
 TEL 207-774-0444

## MOMENT DISTRIBUTION, CONTINUOUS PURLINS

HEWLITT-PACKARD HP-41 CK "VARY I" PROGRAM

	1	2	3	4	5
	240"	240"	240"	240"	240"
C.O. FACTORS	.5714	.4941	.5635	.5635	.4941
K	.1744	.2016	.2121	.2121	.2016
ΣK	-	.4137	.4242	.4137	-
DF = K/ΣK	1.0	.4873	.5127	.5127	.4873
FEM: UNIT LOAD	-4444	-5586	-5190	-5190	-5586
	+4444	+193	-203	-	-203
	-95	-2539	-	+114	+114
	+95	+1237	-1302	-	-
	-611	-54	-	+734	+734
	+611	+26	-28	-	-
	0	-6723	-6723	-4342	-4342
REACTION	120	120	120	120	120
Δ <sub>R</sub>	-28	+28	+9.92	-9.92	-9.92
FINAL R	92	148	129.92	110.08	110.08

LENGTH=? (1ST SPA)  
 240.0000  
 NO. SEGS=?  
 20.0000  
 UNIF W? 1/0  
 1.0000  
 I EA. SEG? 1/0  
 0.0000  
 IX=?  
 20.0000  
 NO. I CONST?  
 2.0000  
 IX=?  
 10.0000  
 NO. I CONST?  
 16.0000  
 IX=?  
 20.0000  
 NO. I CONST?  
 2.0000  
 FAB=-5,190.0000  
 FBA=-5,190.0000  
 KAB=0.2121  
 KBA=0.2121  
 COFAB=0.5635  
 COFBA=0.5635

$M^+, 1 \text{ TO } 2$   
 $V = 0 @ 92" \text{ FROM } ①$   
 $M^+ = 92(92) - 1(92)^2(.5)$   
 $= 4232 \text{ "}/\text{UNIT LOAD}$

$M_{216}^-, 1 \text{ TO } 2 : M = 92(216) - 1(216)^2(.5) = -3456 \text{ "}/\text{LB.}$

$M_{24}^-, 2 \text{ TO } 3 : M = 120(24) - 1(24)^2(.5) - 6723 = 4131 \text{ "}/\text{LB.}$

PURLIN LOAD :  $4(42 + 8.69) + 3.41 = 206.17 \text{ #}/\text{FT.} = 17.18 \text{ #}/\text{W}$

$M_{MAX}^- = 17.18(6723) = 115,507 \text{ #}/\text{LB}$   
 $S = 2(2.48) = 4.96$   
 $f_b = 115,507 / 4.96 = 23,287 \text{ PSI} < 30,000 \text{ PSI OK}$

$M_{MAX}^- \text{ AT } 24" = 17.18(4131) = 70,971 \text{ "}/\text{#}$   
 $S = 2.48$   
 $f_b = 70,971 / 2.48 = 28,617 < 30,000 \text{ OK}$

$M_{MAX}^+, 1 \text{ TO } 2 = 4232(17.18) = 72,706 \text{ "}/\text{#}$   
 $S = 2.48$   
 $f_b = 72,706 / 2.48 = 29,317$

LENGTH=? (END SPA)  
 240.0000  
 NO. SEGS=?  
 20.0000  
 UNIF W? 1/0  
 1.0000  
 I EA. SEG? 1/0  
 0.0000  
 IX=?  
 10.0000  
 NO. I CONST?  
 18.0000  
 IX=?  
 20.0000  
 NO. I CONST?  
 2.0000  
 FAB=-4,444.3300  
 FBA=-5,585.5147  
 KAB=0.1744  
 KBA=0.2016  
 COFAB=0.5714  
 COFBA=0.4941



'97-09-22 06:29 A HUTCHEON ASSOCS.

DAHLGREN CONSTRUCTION  
VALUE HOUSE BUILDING

ALEXANDER HUTCHEON ASSOCIATES

ENGINEERS

SHT. 3 of 3

9/19/97

519 CONGRESS ST.  
PORTLAND, MAINE 04101  
TEL. 207-774-0484

M<sup>+</sup> SPAN 2-3: V=0 AT 129.92" FROM 2

$$M^+ = 129.92(129.92) - 1(129.92)^2 = 6723$$

$$= 1716.6$$

$$f_b = 1716.6(17.18)/2.48 = 11892 \text{ PSI.}, < 30,000$$

INCREASE TO FRAMES:

ORIG. PURLIN LOAD:	ROOF SHEETS	1.09
	INSULATION	3.00
	COLLATERAL	<u>2.00</u>
		5.09

$$4(42 + 5.09) + 3.41 = 202.0 \text{ PLF.}$$

$$\text{NEW PURLIN LOAD} = 206.17 \text{ PLF}$$

$$\text{INCR.} = \frac{206.17 - 202}{202} = 0.206 = 2.06\%$$

THIS IS WITHIN ACCEPTABLE DESIGN CRITERIA.

MOMENT DISTRIBUTION, CONTINUOUS PURLINS  
HEWLETT-PACKARD HP-41CK "VARY I" PROGRAM

	1	2	3	4	5			
	240"	240"	240"	240"				
C.O. FACTORS	.5714	.4941	.5635	.5635	.4941	.5714		
K	.1744	.2016	.2121	.2121	.2016	.1744		
ΣK	-	.4137	.4242	.4137	-	-		
DF = K/ΣK	1.0	.4873	.5127	.5127	.4873	1.0		
FEM: UNIT LOAD	+4444	-5586	-5190	-5190	-5586	-4444		
	+4444	+193	-203	-	-203	+193	+4444	
	-95	-2539	-	+114	+114	-	-2539	-95
	+95	+1237	-1302	-	-	-1302	+1237	+95
	-611	-54	-	+734	+734	-	-54	-611
	+611	+26	-28	-	-	-28	+26	+611
	0	-6723	-6723	-4342	-4342	-6723	-6723	0
REACTION	120	120	120	120	120	120	120	120
Δ <sub>R</sub>	-28	+28	+9.92	-9.92	-9.92	+9.92	+28	-28
FINAL R	92	148	129.92	110.08	110.08	129.92	148	92

LENGTH=? (AST SP,  
240.0000  
NO. SEGMS=?  
28.0000  
UNIF W? 1/0  
1.0000  
I EA. SEG? 1/0  
0.0000  
IX=?  
28.0000  
NO. I CONST?  
2.0000  
IX=?  
10.0000  
NO. I CONST?  
16.0000  
IX=?  
28.0000  
NO. I CONST?  
2.0000  
FBA=-5,198.0000  
FBA=-5,198.0000  
KRB=0.2121  
KRB=0.2121  
COFAB=0.5635  
COFBA=0.5635

LENGTH=? (END SPA,  
240.0000  
NO. SEGMS=?  
28.0000  
UNIF W? 1/0  
1.0000  
I EA. SEG? 1/0  
0.0000  
IX=?  
18.0000  
NO. I CONST?  
18.0000  
IX=?  
28.0000  
NO. I CONST?  
2.0000  
FBA=-4,444.3300  
FBA=-5,585.5147  
KRB=0.1744  
KRB=0.2016  
COFAB=0.5714  
COFBA=0.4941

$M^+$ , 1 to 2  $V=0$  @ 92" FROM ①  
 $M^+ = 92(92) - 1(92)^2(.5)$   
 $= 4232 \text{ "}/\text{UNIT LOAD}$

$M^+$ , 1 to 2:  $M = 92(216) - 1(216)^2(.5) = -3456 \text{ "}/\text{LB.}$






$M^-$ , 2 to 3  $M = 120(24) - 1(24)^2(.5) - 6723 = 4131 \text{ "}/\text{LB.}$

PURLIN LOAD:  $4(42 + 8.69) + 3.41 = 206.17 \text{ #}/\text{FT.} = 17.18 \text{ #}/\text{IN}$

$M^-_{\text{MAX}} = 17.18(6723) = 115,507 \text{ #}/\text{LB}$   
 $S = 2(2.48) = 4.96$   
 $f_b = 115,507 / 4.96 = 23,287 \text{ PSI} < 30,000 \text{ PSI OK}$

$M^-_{\text{MAX AT 24}} = 17.18(4131) = 70,971 \text{ "}/\text{LB}$   
 $S = 2.48$   
 $f_b = 70,971 / 2.48 = 28,617 < 30,000 \text{ OK}$

$M^+_{\text{MAX, 1 TO 2}} = 4232(17.18) = 72,706 \text{ "}/\text{LB}$   
 $f_b = 72,706 / 2.48 = 29,317 < 30,000 \text{ PSI OK}$

SHAPE:					
DESIGNATION:	C8x3.4	S18x6.8	6Z	4Z	3Z
NOMINAL GAGE:	14	14	16	14	13
THICKNESS (In.)	0.0715	0.0715	0.0585	0.0715	0.0865
AREA (in. <sup>2</sup> )	1.001	2.002	0.819	1.001	1.211
DEPTH (In.)	8"	8"	8"	8"	8"
FLANGE WIDTH (In.)	2.5	5.0	2.5	2.5	2.5
I <sub>x</sub> (In. <sup>4</sup> )	9.64	19.28	7.95	10.00	12.25
S <sub>x</sub> (In. <sup>3</sup> )	2.41	4.82	1.93	2.48	3.06
r <sub>x</sub> (In.)	3.10	3.10	3.12	3.16	3.18
I <sub>y</sub> (In. <sup>4</sup> )	0.83	2.65	—	—	—
r <sub>y</sub> (In.)	0.91	1.15	—	—	—
I <sub>yc</sub> (In. <sup>4</sup> )	0.42	—	—	—	—
Q	0.63	0.63	—	—	—
ALLOWABLE MOM'T (k-ft.)	6.02	12.04	4.84	6.20	7.66

SEPTEMBER 1, 1977

Subject  
to change  
without notice



COLD-FORMED SECTIONS