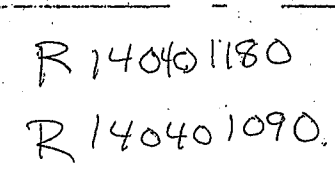


1633 SW COLLEGE ST.

RS03-153715

Z 64



SITE PLAN

$$1'' = 10'$$

RESIDENCE OF DR. & MRS. U. SCOTT PAGE

1633 S.W. COLLEGE ST.
PORTLAND, OREGON

RS. 03. 153715

Z

SEP 8 2003
MICROFILMED

64



CITY OF
PORTLAND, OREGON
OFFICE OF PLANNING AND DEVELOPMENT REVIEW
1900 SW 4th Ave, Suite 5000
Portland, OR 97201



RESIDENTIAL 1 & 2 FAMILY PERMIT

03-153715-000-00-RS

Site Address: 1633 SW COLLEGE ST
1633 SW COLLEGE

Issued: 8/21/03

PROJECT INFORMATION		Occ. Group	Const. Type
Decks, Fences, Retaining Walls	Alteration	U2	V-N
Project Description: REPLACE ELEVATED DECK, EXTEND 2 FEET(COMMENTS)			

APPLICANT	JEFFREY M HUFFMAN	Phone (503) 641-6446
PROPERTY OWNER	U SCOTT PAGE & BARBARA A PAGE	Phone
CONTRACTOR	JEFFREY M HUFFMAN	Phone

Project Details Code Edition IRC - 2003 Zoning Enforcement Agency Portland	Project Details GIS Update File 08/19/03
---	--

PAID
AUG 21 2003
CITY OF PORTLAND

This permit expires 180 days after the date of issuance. Every time, 180 days pass without an approved inspection. If you are not able to obtain an inspection approval within 180 days, you may request a one-time only extension of 180 days by calling 503-823-7388.

BEFORE YOU DO

ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 843-081-0010 through 0014. You may obtain copies of the rules by calling the Center. (Note: the telephone number for the Oregon Utility Notification Center is 1-800-333-7344).

CITY CONTACT

E-Mail:

Phone:

Fax: (503) 823-4172

**INSPECTION REQUEST
PHONE NUMBERS**

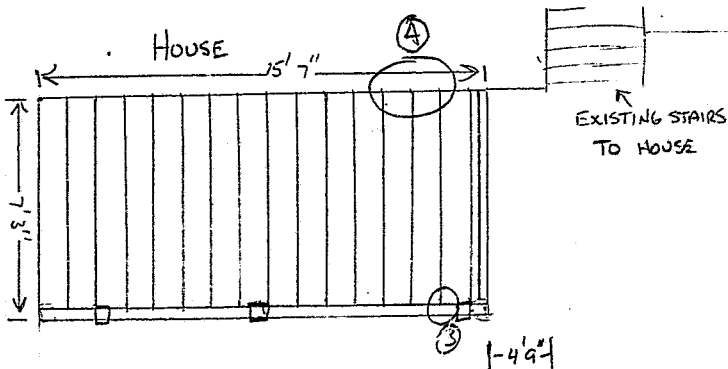
Building/Trade Inspections - Call Before 6:00 AM:

(503) 823-7000

TDD: (503) 823-6868

**IVR Inspection Request
Number:**

2311677



1633 S.W. COLLEGE ST
PORTLAND, OR

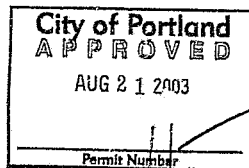


4"x8" Pressure treated beam

2"x8" Pressure treated joists 1' o.c.

6"x6" POSTS PRESSURE TREATED

5/4"x6 TREX DECKING ATTACHED
w/ 2 1/2" SCREWS



HARD COAT
STUCCO
SIDING

1/2" Z METAL

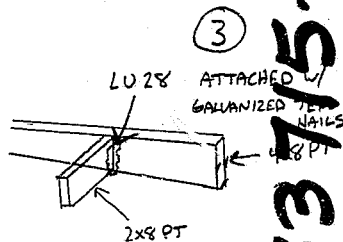
2"x8 LEDGER

2 - 3/8" GALV

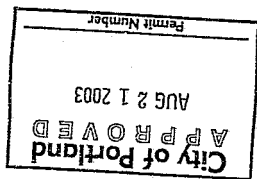
LAG BOLTS INTO
EXISTING RIM

SELF ADHESIVE
RUBBER MEMBRANE

1/2" Z METAL



03.153715.RS



ALUMINUM
RAILING SYSTEM

42"

4" x 8" PT
DF-L

PC46

10" x 6" PT
DF-L

HOUSE

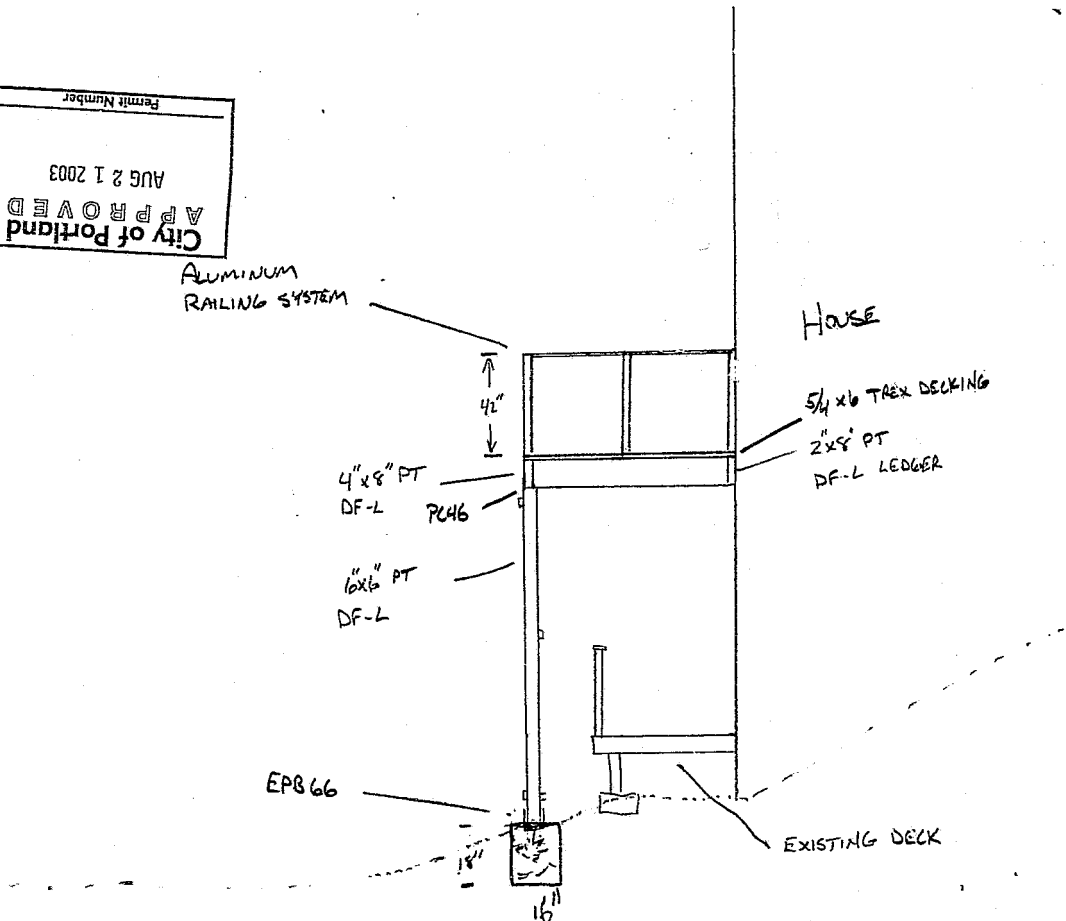
5/4" x 6" TREX DECKING

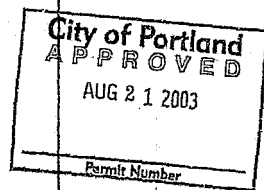
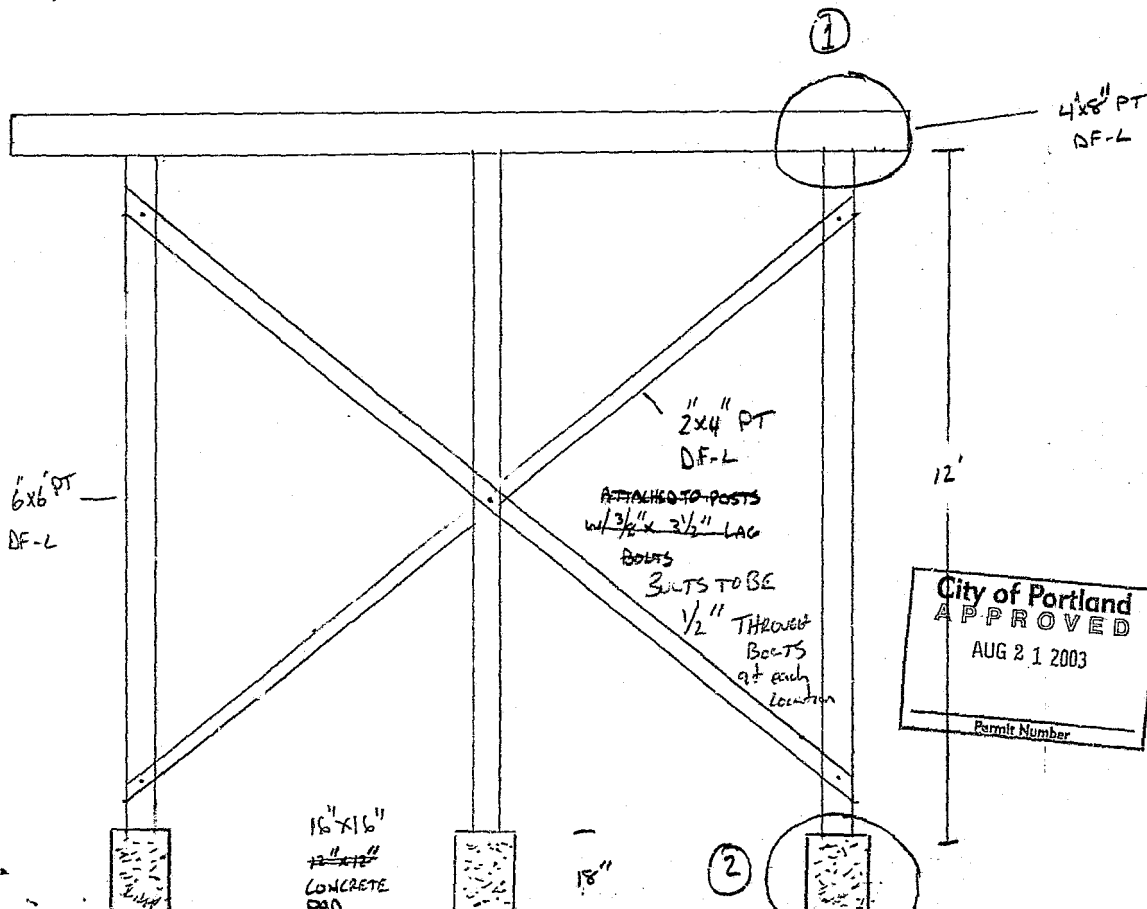
2" x 8" PT
DF-L LEDGER

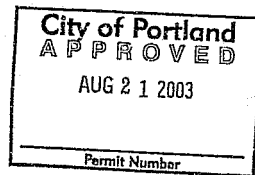
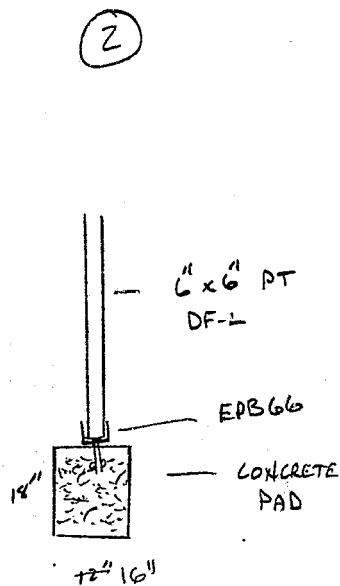
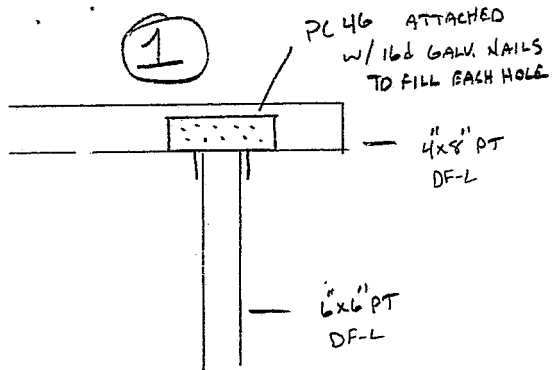
EP866

EXISTING DECK

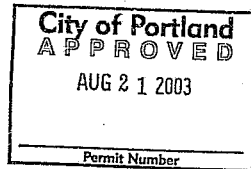
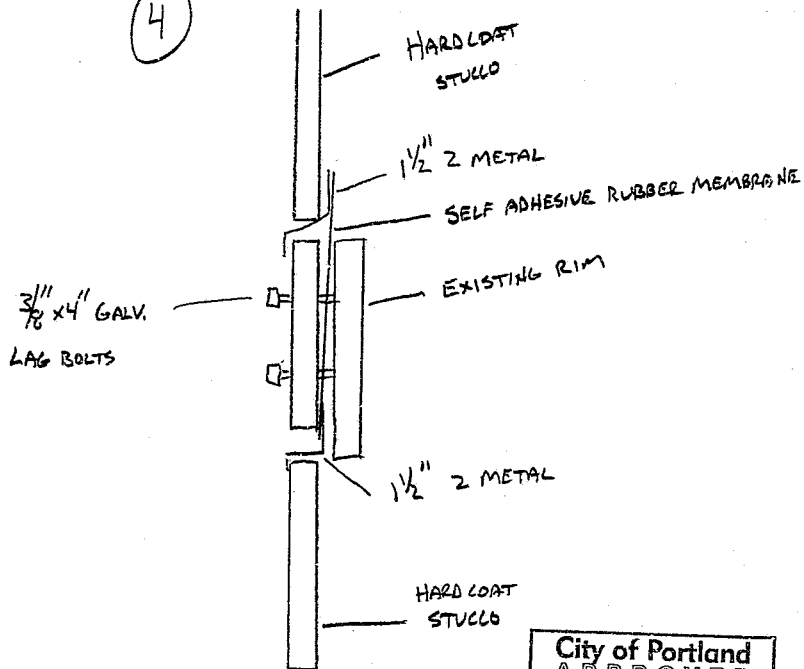
16"







4





WORLD CLASS ALUMINUM RAILINGS

CR # 90841
WA # HANSEA023KD
ID # 95090801
CA # T33890-D24
HI # C22467
NV # 0049453

7/21/03

Proposal # PRH-030721

TO: PARR LBR. - RALEIGH HILLS
4605 SW SCHOLLS FERRY RD
PORTLAND OR 97225

PH #: 503.292.4471

FAX #: 503.297.4063

CONTACT: BRIAN SNUGGS

JOBNAME / PO #: JEFF HUFFMAN

TOTAL LINEAR FEET: 24

DESCRIPTION: PRODUCT ONLY, SERIES 200 FLAT TOP RAIL, 42" RAIL HEIGHT, STANDARD WHITE COLOR, 3/4" PICKET PANELS WITH DIAMOND CAST PANELS, TOP MOUNT INTO FLAT, LEVEL TREX DECKING.

1 DIAMOND CAST PANEL PER SECTION, 5 TOTAL.

MUST HAVE A MINIMUM 3" OF MATERIAL TO ATTACH POST LAG SCREWS INTO.
FREIGHT, TOUCH UP PAINT AND ALL FASTENERS INCLUDED.

TOTAL PRICE: \$

Please feel free to call if you have any questions about this proposal.

Sincerely,
Hansen Architectural Systems

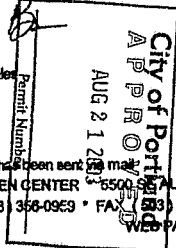
Ty Brown
Dealer Sales

TB/BB

☐ Original has been sent by mail

* HANSEN CENTER 6500 SE ALEXANDER ST * HILLSBORO, OREGON 97123 * USA *

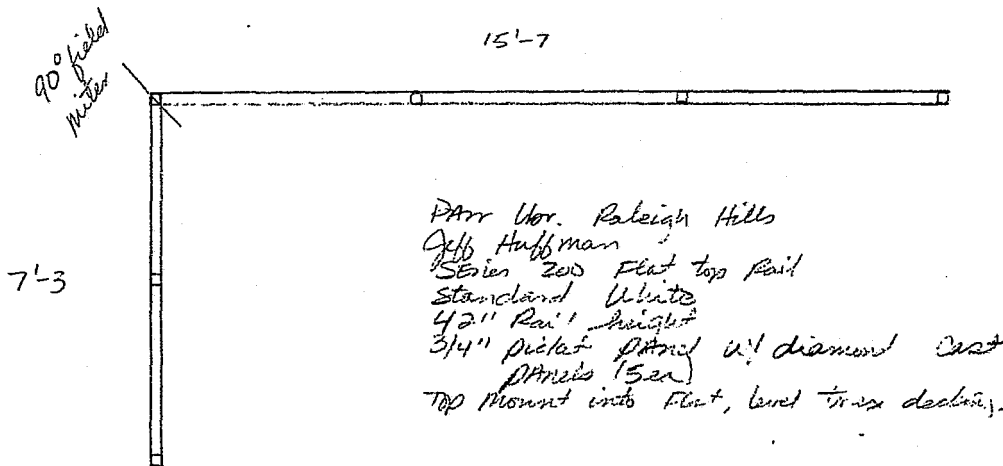
(503) 356-0963 * FAX (503) 356-8478 * E-MAIL: INFO@ALUMINUMRAILING.com

Web PAGE: <http://www.aluminumrailing.com>

Post / Blocking and Railing Layout

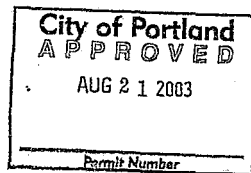
7/21/03

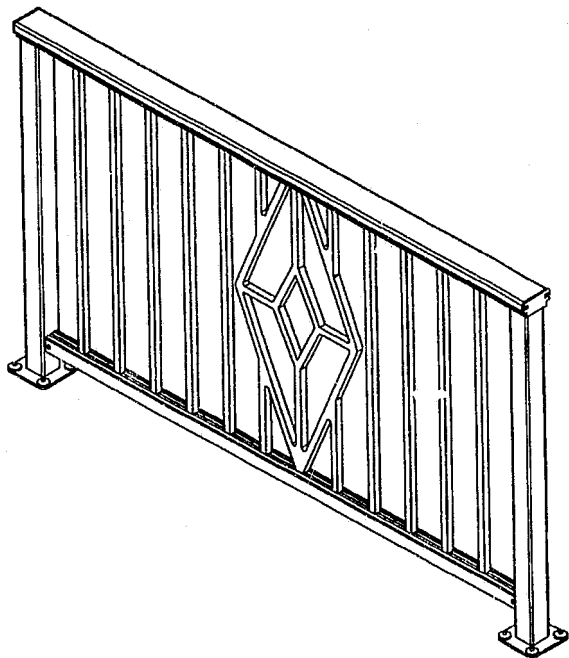
* Must have a minimum 3" of material
to allow post leg screw into



Parr Ubr. Raleigh Hills
Jeff Huffman
Series 200 Flat top Rail
Standard White
42" Rail height
3/4" picket Panel w/ diamond cast
panels (5ea)
Top Mount into Flat, level to top decking.

POOR QUALITY
DOCUMENT





**SERIES 200 PICKET RAILING SYSTEM
WITH DIAMOND CAST PANEL**

E&L Civil Engineering

Hansen Architectural System
5500 SE Alexander ST
Hillsboro, OR 97123

16 May 2003

**SUBj: HANSEN ARCHITECTURAL SYSTEMS GUARDRAIL
ANCHORAGE TO WOOD FRAME CONSTRUCTION
42 INCH HIGH GUARDRAIL RESIDENTIAL APPLICATIONS**

Hansen Architectural Systems standard detail for surface mount installations to wood utilizes four lag screws. For 42 inch high guardrail with a maximum post spacing of 6 feet on center the anchorage shall be in accordance with the attached details based on the railing layout and post location. Calculated anchor loads are based on a 200 lb point load perpendicular and horizontal to the top rail or 20 lbs per foot distributed load on top rail in accordance with UBC Table 16-B lines 9 and 11 and IBC 1607.7.1.

The anchor strength in this detail is adequate to meet the loading and strength requirements of the 1997 Uniform Building Code and the 2000 International Building Code.

If you have any questions please call me at 253-858-0855.

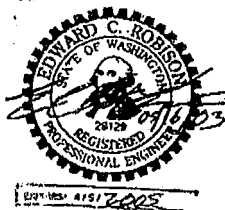
Edward Robison, P.E.

Attachment:

Post Layout and anchorage requirements 2 pages

Calculations 2 pages

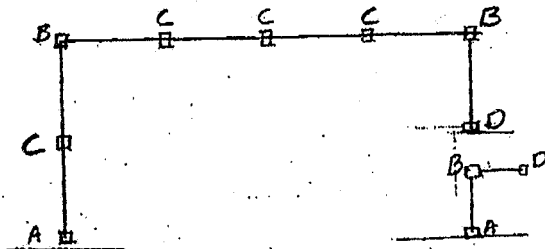
Detail 1 page



4508 Park Lane NW
Gig Harbor, WA 98335

253-858-0855

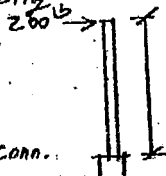
Hansen Architectural Systems
Residential Applications
Post Anchorage - Surface Mount base plate
Screwed to post
Critical post loading



- A - End Post No tie to wall - rail continuous over 2 or more posts - load is distributed by top rail to adjacent post reducing load in post. OR top rail attached to wall
- B - Corner post - Load is resisted by top rail in each direction, reducing load in post
- C - Top rail ties post to adjacent post reducing load in post
- D - End Post No tie to wall - top rail not continuous over adjacent post - No load sharing - No load redistribution
- Critical Post for loading
- 200 lb load @ top rail
- @ post perpendicular to rail.

Critical Elements

1. Post bending
2. Base plate to Post Conn.
3. Base plate to deck Conn.



Post Location A

- Base Plates 1 or 2
- Lag Screws - $\frac{3}{8}$ " dia x 5"
All lumber species

Z.

Post Location B

- Base Plates 1 or 2
- Lag Screws - $\frac{3}{8}$ " dia x 5"
All lumber species

Post Location C

- Base Plates 1 or 2
- Lag Screws - $\frac{3}{8}$ " dia x 5"
All lumber species

Post Location D

- Base Plates (Z) - Must be doubled or $\frac{3}{8}$ " thick
- Lag Screws
Lumber Species with $G \geq 0.49$
Use $\frac{3}{8}$ " x 5" lags
Lumber Species with $0.49 > G \leq 0.41$
Use $\frac{1}{2}$ " x 5" lags
OR $\frac{3}{8}$ " x 6" lags

Alternatively, Attach Post to Wall
at top post w/ #14 x 4" screw.

If Post at location D is tied to stair railing
that is capable of redistributing load post
can be considered as location B

Post design

$$M_{max} = 200 \cdot 42" = 8,400 \text{ in-lb}$$

Post Allowable bending Moment

$$M_{all} = 0.726 \text{ in}^3 \times 19 \text{ ksi} = 13.8 \text{ K-in OK}$$

Base plate to Post Connection

- Connection demonstrated by load testing refer to test report dated 11 Dec 2000
The base plate connection can resist a load exceeding 16,000 in-lb

Check base plate to deck -

Connection depends on deck construction

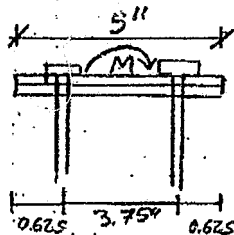
Fastener loads

$$M = 8,400 \text{ in-lb}$$

Bolt tension = T_B

$$T_B = \frac{8,400}{(0.625 \times 3.75)} \times \frac{1}{2 \text{ bolts}}$$

$$T_B = 960 \text{ lbs / bolt}$$



For lag screws req'd size

- 4" embed min $\rightarrow$ 5" lag screw

$$\frac{960}{4} = 240 \text{ lb/in}$$

For exposed use $\rightarrow$ Dry use $W_{lag} = \frac{240}{0.75 \times 1.15} = 280$

Need to use $\frac{1}{2}$ " diameter & 5" lag screws

Blocking to deck

(6) # 12 screws $\rightarrow$ shear strength

$$175 \text{ lb} \times 6 = 1050 \text{ lb - OK}$$

3.

Alternative installations

- for 5" embed of lag screws

$$W_{req} = \frac{960}{5} \times \frac{1}{0.75} \times \frac{1}{1.15} = 225 \text{ lbs/in}$$

G2H1 $\rightarrow$ 3/8" dia.

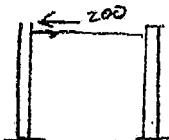
For Corner posts (B)

load redistribution $\rightarrow P_E = \frac{1}{2} P = 100 \text{ lbs}$

- load sharing between 2 posts
of equal stiffness

$$M_c = \frac{1}{2} M_p = 4,200 \text{ lb}$$

*OK for single base plate
per test report dated 11/06/2000



Anchor load = $\frac{1}{2} 280 = 140 \text{ lbs/in} \rightarrow \frac{3}{8}" \text{ lag}$
all woods

For Cont. run (C)

load dist to adjacent posts $\rightarrow \frac{1}{2}$ Center 14 each side

for distributed load = 20 plf $\rightarrow 6'$ spacing = 120#

design for 120 lbs $\rightarrow$

Anchor load =

$$\frac{5,040}{4.375 \times 2} = 576 \text{ lbs}$$

$$M = 120 \times 42 = 5,040$$

$$W_{req} = \frac{576}{4"} \times \frac{1}{0.75} \times \frac{1}{1.15} = 170 \text{ \#/in}$$

- 3/8" Lag w/ 4" embed. All species.

Single base Plate OK

*Single base plate is acceptable for
Base plate moments up to 7,200 lb-in

