

**CITY OF SACRAMENTO**  
1231 I Street, Sacramento, CA 95814

**Permit No: 9906971**  
**Insp Area: 2**

**Site Address: 6279 SURFSIDE WY SAC**  
Parcel No: 030-0790-002

**Sub-Type: NSFR**  
**Housing (Y/N): N**

CONTRACTOR

OWNER  
CHRISTINA CAIRE  
1320 LYNETTE WY  
SACRAMENTO CA 95831

ARCHITECT

**Nature of Work: SFR 2400 SQ FT W/ATT GARAGE/STORAGE/DECKS&CARPORT**

**CONSTRUCTION LENDING AGENCY:** I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name \_\_\_\_\_ Lender's Address \_\_\_\_\_

**LICENSED CONTRACTORS DECLARATION:** I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class \_\_\_\_\_ License Number \_\_\_\_\_ Date \_\_\_\_\_ Contractor Signature \_\_\_\_\_

**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00):

I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

I am exempt under Sec. \_\_\_\_\_ B & PC for this reason: \_\_\_\_\_  
Date 8/27/99 Owner Signature Christina Caire

**IN ISSUING THIS BUILDING PERMIT,** the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 8/27/99 Applicant/Agent Signature Christina Caire

**WORKER'S COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier \_\_\_\_\_ Policy Number \_\_\_\_\_ Exp Date \_\_\_\_\_

(This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 8/27/99 Applicant Signature Christina Caire

**WARNING:** FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

**THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.**

# SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

## SCHOOL DISTRICT DEVELOPMENT FEES

|   |  |
|---|--|
| PROPERTY OWNER'S NAME <u>CHRISTINA CAIZE</u>  |  |
| OWNER'S ADDRESS <u>1320 LYNETTE WAY, SAC 95831</u>  |  |
| PROJECT ADDRESS <u>6279 Surfside Way</u>  |  |
| PARCEL NUMBER <u>2300790 002 000</u>  | LOT NUMBER   |
| SUBDIVISION NAME  |  |
| NUMBER OF UNITS <u>1</u>  |  |
| APPLICANT'S SIGNATURE <u>Christina Caize</u>  |  |
| TITLE OF APPLICANT <u>OWNER - BUILDER</u>   |  |
| DATE <u>6/30/99</u>   | TELEPHONE NUMBER <u>916 399 9127</u>                     |
| PLAN IDENTIFICATION NUMBER <u>1906971R</u>  |  |
| BUILDING TYPE (CHECK ONE)   |  |
| <input checked="" type="checkbox"/> RESIDENTIAL <input type="checkbox"/> APARTMENT/CONDOMINIUM <input type="checkbox"/> COMMERCIAL/INDUSTRIAL   |  |
| SQUARE FEET OF CHARGEABLE BUILDING AREA <u>2400 SF</u>  |  |
| SIGNATURE <u>Paula A. Jensen</u>  |  |
| TITLE <u>Bldg Tech</u>  | DATE <u>6/30/99</u>                                      |
| DISTRICT CERTIFICATION NUMBER <u>10013</u>  |  |
| EXEMPT  | COMMENTS   |
| RESIDENTIAL / APARTMENT / ETC.  | <u>2400</u> SQ. FT. X \$ <u>1.72</u> = \$ <u>4128.00</u> |
| COMMERCIAL / INDUSTRIAL   | _____ SQ. FT. X \$ _____ = \$ _____                      |
| OTHER FEE _____ TYPE _____  | _____ SQ. FT. X \$ _____ = \$ _____                      |
| TOTAL FEES COLLECTED..... \$ <u>4128.00</u>   |  |
| <p><i>This certification covers only the amount of square footage indicated above. Any additions or corrections to the square footage for this project will require an amendment to the Certificate of Compliance.</i></p> <p><i>As the authorized school district official, I hereby certify that the requirements of Government Code Section 65995 and any other authorized requirements have been complied with by the above signed applicant.</i></p> |  |
| SIGNATURE _____   |  |
| TITLE _____   | DATE <u>7/21/99</u>                                      |

91a certcomp

**Distribution:** Original--School District; 1st Copy--School District; 2nd Copy--Building Department; 3rd Copy--Applicant

# City of Sacramento Development Services Division Planning and Zoning Information Request

Project Address: 6279 SURFSIDE WAY - SAC, CA 95831

Assessor's Parcel Number: 030 0790 002 000

PREVIOUS USE

Current Land Use: VACANT LAND

Description of Request/Proposed Use: NEW CONSTRUCTION OF  
RESIDENCE

IS THIS A CHANGE OF USE? NO

Zoning Designation: R-1

Prior Applications for Project Site (P#, Z#, DRPS#): \_\_\_\_\_

Comments: ~~IRREGULAR~~

IRREGULAR Lot Check  
w/ Planning to define  
rear setback.

Setbacks lot coverage - OK

Are There Any Planning Issues?: (Circle One) YES  NO

STAFF Site Plan Check Required? (Circle One) YES  NO

FIELD INSPECTION REQUIRED (Circle one) YES  NO

Design Review/ Preservation Required?: (Circle One) YES  NO

Planning Review by/Date: W. Tibour 6/30/99

333

**ELEVATION CERTIFICATE**  
**FEDERAL EMERGENCY MANAGEMENT AGENCY**  
**NATIONAL FLOOD INSURANCE PROGRAM**

O.M.B. No. 3067-007  
 Expires July 31, 1999

ATTENTION: Use of this certificate does not provide a waiver of the flood insurance purchase requirement. This form is used only to provide elevation information necessary to ensure compliance with applicable community floodplain management ordinances, to determine the proper insurance premium rate, and/or to support a request for a Letter of Map Amendment or Revision (LOMA or LOMR). You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of this form.

Instructions for completing this form can be found on the following pages.

|   |                                  |
|---|----------------------------------|
| <b>SECTION A PROPERTY INFORMATION</b>   | <b>FOR INSURANCE COMPANY USE</b> |
| BUILDING OWNER'S NAME<br><del>Russell</del> <del>Hudson</del> <b>CHRIS CAIRE</b>  | POLICY NUMBER                    |
| STREET ADDRESS (Including Apt., Unit, Suite and/or Bldg. Number) OR P.O. ROUTE AND BOX NUMBER<br><b>6279 Surfside Way, SA</b> | COMPANY NAIC NUMBER              |
| OTHER DESCRIPTION (Lot and Block Numbers, etc.)<br><b>APN 030-0790-002</b>  |                                  |
| CITY<br><b>SACRAMENTO,</b>  | STATE<br><b>CA</b>               |
|   | ZIP CODE<br><b>95831</b>         |

**SECTION B FLOOD INSURANCE RATE MAP (FIRM) INFORMATION**

Provide the following from the proper FIRM (See Instructions):

|                                      |                              |                       |  |                           |  |
|--------------------------------------|------------------------------|-----------------------|--|---------------------------|--|
| 1. COMMUNITY NUMBER<br><b>060266</b> | 2. PANEL NUMBER<br><b>00</b> | 3. SUFFIX<br><b>F</b> | 4. DATE OF FIRM INDEX<br><b>July 6, 1998</b> | 5. FIRM ZONE<br><b>AE</b> | 6. BASE FLOOD ELEVATION<br>(in AO Zones, use depth)<br><b>19</b> |
|--------------------------------------|------------------------------|-----------------------|--|---------------------------|--|

7. Indicate the elevation datum system used on the FIRM for Base Flood Elevations (BFE):  NGVD '29  Other (describe on back)
8. For Zones A or V, where no BFE is provided on the FIRM, and the community has established a BFE for this building site, indicate the community's BFE:  feet NGVD (or other FIRM datum—see Section B, Item 7).

**SECTION C BUILDING ELEVATION INFORMATION**

1. Using the Elevation Certificate Instructions, indicate the diagram number from the diagrams found on Pages 5 and 6 that best describes the subject building's reference level   1  .
- 2(a). FIRM Zones A1-A30, AE, AH, and A (with BFE). The top of the reference level floor from the selected diagram is at an elevation of  feet NGVD (or other FIRM datum—see Section B, Item 7).
- (b). FIRM Zones V1-V30, VE, and V (with BFE). The bottom of the lowest horizontal structural member of the reference level from the selected diagram, is at an elevation of  feet NGVD (or other FIRM datum—see Section B, Item 7).
- (c). FIRM Zone A (without BFE). The floor used as the reference level from the selected diagram is  feet above  or below  (check one) the highest grade adjacent to the building.
- (d). FIRM Zone AO. The floor used as the reference level from the selected diagram is  feet above  or below  (check one) the highest grade adjacent to the building. If no flood depth number is available, is the building's lowest floor (reference level) elevated in accordance with the community's floodplain management ordinance?  Yes  No  Unknown
3. Indicate the elevation datum system used in determining the above reference level elevations:  NGVD '29  Other (describe under Comments on Page 2). (NOTE: If the elevation datum used in measuring the elevations is different than that used on the FIRM [see Section B, Item 7], then convert the elevations to the datum system used on the FIRM and show the conversion equation under Comments on Page 2.)
4. Elevation reference mark used appears on FIRM:  Yes  No (See Instructions on Page 4)
5. The reference level elevation is based on:  actual construction  construction drawings  
(NOTE: Use of construction drawings is only valid if the building does not yet have the reference level floor in place, in which case this certificate will only be valid for the building during the course of construction. A post-construction Elevation Certificate will be required once construction is complete.)
6. The elevation of the lowest grade immediately adjacent to the building is:  feet NGVD (or other FIRM datum—see Section B, Item 7).

**SECTION D COMMUNITY INFORMATION**

1. If the community official responsible for verifying building elevations specifies that the reference level indicated in Section C, Item 1 is not the "lowest floor" as defined in the community's floodplain management ordinance, the elevation of the building's "lowest floor" as defined by the ordinance is:  feet NGVD (or other FIRM datum—see Section B, Item 7).
2. Date of the start of construction or substantial improvement \_\_\_\_\_

OWNER-BUILDER VERIFICATION

ATTENTION PROPERTY OWNER

An owner-builder building permit has been applied for in your name and bearing your signature.

Please complete and return this information in the envelope provided at your earliest opportunity to avoid unnecessary delay in processing and issuing your building permit. No building permit will be issued until this verification is received.

1. I personally plan to provide the major labor and materials for construction of the proposed improvement (yes or no) YES
2. I (have/have not) \_\_\_\_\_ signed an application for a building permit for the proposed work.
3. I have contracted with the following person (firm) to provide the proposed construction:

Name Russ Hudson Address 1320 LYNETTE WAY  
City SACRAMENTO, CA Telephone 916 399 9127  
Contractors License No. N/A 947-6006

4. I plan to provide portions of the work, but I have hired the following person to coordinate, supervise, and provide the major work.

Name N/A Address \_\_\_\_\_  
City \_\_\_\_\_ Telephone \_\_\_\_\_  
Contractors License No. \_\_\_\_\_

5. I will provide some of the work but I have contracted (hired) the following to provide the work indicated:

| Name       | Address | Phone | Type of Work |
|------------|---------|-------|--------------|
| <u>N/A</u> |         |       |              |
|            |         |       |              |
|            |         |       |              |
|            |         |       |              |
|            |         |       |              |
|            |         |       |              |
|            |         |       |              |

Signed [Signature]  
Job Address 6079 Surfside Way Date 8/26/99  
Permit No.: \_\_\_\_\_

RECORDING REQUESTED BY  
FIRST AMERICAN TITLE INS. CO.  
AND WHEN RECORDED MAIL TO:  
CHRISTINA L. CAIRE

1320 Lynette Way  
Sacramento, CA 95831

File # 9906971R

Recorded in the County of Sacramento  
John Dark, Clerk/Recorder



7.00

199902110966 2:26pm 02/11/99

504 30004632 03 22  
R02 1 02 DTT Paid 7.00 0.00 0.00 0.00 0.00  
0.00 0.00

Space Above This Line for Recorder's Use Only

A.P.N.: 030-0790-002

Order No.: 982490

Escrow No.: 982490ME

### GRANT DEED

THE UNDERSIGNED GRANTOR(S) DECLARE(S) THAT DOCUMENTARY TRANSFER TAX IS: COUNTY \$126.50  
[ X ] computed on full value of property conveyed, or  
[ ] computed on full value less value of liens or encumbrances remaining at time of sale,  
[ ] unincorporated area; [ X ] City of SACRAMENTO - \$316.25, and

FOR A VALUABLE CONSIDERATION, Receipt of which is hereby acknowledged,

**MARIE ZAMPATHAS, SUCCESSOR TRUSTEE OF THE MANUEL AND MARIE ZAMPATHAS REVOCABLE TRUST ESTABLISHED APRIL 3, 1981**

hereby GRANT(S) to  
**CHRISTINA L. CAIRE, a Married Woman as her Sole and Separate Property**

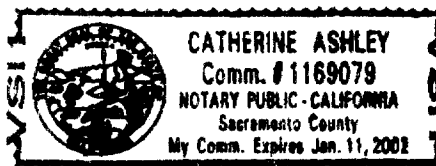
the following described property in the City of **SACRAMENTO**, County of Sacramento State of California:

Lot 2, as shown on the "Plat of Granger's Dairy Unit No. 2", recorded in Book 120 of Maps, Map No. 12, records of said County.

EXCEPTING THEREFROM all minerals, oil, gas and other hydrocarbon substances lying below a depth of 500 feet from the surface of said land without the right of surface entry, as reserved in the Deed recorded April 17, 1978 in Book 780417 of Official Records at page 955.

*Marie Zampathas, Trustee*  
MARIE ZAMPATHAS, TRUSTEE

Document Date: February 8, 1999



STATE OF CALIFORNIA  
COUNTY OF SACRAMENTO

ISS

On 2-8-99 before me, CATHERINE ASHLEY

personally appeared MARIE ZAMPATHAS

personally known to me or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument

WITNESS my hand and official seal.

Signature

RECEIVED

JUL 02 1999

This area for official notarial seal

Building Inspection Division

Mail Tax Statements to: SAME AS ABOVE or Address Noted Below

(2)

# SKY ENGINEERING, INC.

11-30-99

RE: 6279 Surfside  
shear wall on line D

MR Russ Hudson

Dear Russ

I understand that due to construction of the stairway from the garage upstairs, the shear wall at the rear of the garage on the east side was reduced by approximately 2'-0" in length.

Utilizing the same shear railing and HD's. The shorter shear panel meets Building Code and has my approval



Sincerely

Tim Sullivan  
Dan T. Sullivan



**WALLACE • KUHL & ASSOCIATES INC.**  
 GEOTECHNICAL ENGINEERING • CONSTRUCTION TESTING

3050 Industrial Blvd.  
 PO Box 1137  
 West Sacramento  
 California 95691  
 916-372-1434

|   |  |  |         |  |           |        |  |         |  |  |       |    |
|---|--|--|---------|--|-----------|--------|--|---------|--|--|-------|----|
| DATE  |  |  |         | JOB NO   |           |        | WEATHER                                    |         |  | TEMP. ° at                             |       | AM |
|   |  |  |         |  |           |        |  |         |  | ° at                                   |       | PM |
| PROJECT                                       |  |  |         |  |           |        | Technician I <input type="checkbox"/>      |         |  | Staff E/G <input type="checkbox"/>     |       |    |
| LOCATION                                      |  |  |         |  |           |        | Technician II <input type="checkbox"/>     |         |  | Project E/G <input type="checkbox"/>   |       |    |
| TYPE OF WORK                                  |  |  |         |  |           |        | Technician III <input type="checkbox"/>    |         |  | Senior E/G <input type="checkbox"/>    |       |    |
| inside 50 mi. radius <input type="checkbox"/> |  |  |         | Outside 50 mi. radius <input type="checkbox"/> |           |        | Nuclear Densities <input type="checkbox"/> |         |  | Principal E/G <input type="checkbox"/> |       |    |
| PERSONNEL                                     |  |  | REG HRS | OT HRS   | TOTAL HRS | TRAVEL | ON JOB                                     | VEHICLE |  |  | MILES |    |
|   |  |  |         |  |           |        |  |         |  |  |       |    |
|   |  |  |         |  |           |        |  |         |  |  |       |    |
|   |  |  |         |  |           |        |  |         |  |  |       |    |

OBSERVATIONS

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**FIELD REPORT** Signed \_\_\_\_\_



# SKY ENGINEERING, INC.

11-15-99

TO WHOM IT MAY CONCERN  
RE 6279 Sunfside Way

I have checked the project for the items on C/P by Ron Yassi (SP?) written on 11/2/99. The following is my reply and has my approval

- ① The anchor bolts in the mis located HD's may be ~~grout~~ epoxied. Please note Simpson data on epoxy
- ② Slean on line E at west side to be made continuous by 1bd nails diagonally driven @ 6" oc from both sides of intersecting wall.
- ③ HD SA @ storage room # 5 can be anchored with  $5/8" \phi$  Bolt - see Simpson page 15 which allows  $5/8" \phi$  OR  $3/4" \phi$
- ⑤ Slean plywood width of 16" is allowed by IRC sect. 2315.5.3 if all edges are nailed

If you have questions re these issues please call me.

Sincerely

D.J. Sullivan



2420 K STREET, #250 • SACRAMENTO, CA 95816 •  
PHONE: 916.492.2450 • FAX: 916.492.2460

**Loads for Threaded Rod Anchors in Concrete**

| Stud Dia. (in) | Drill Bit Dia. (in) | Embed. Depth (in) | Spacing (in) | Edge Dist (in) | Tension Loads (lbs)    |                             |                         |                |                | Shear Loads (lbs)       |                |                |                |                |  |  |
|----------------|---------------------|-------------------|--------------|----------------|------------------------|-----------------------------|-------------------------|----------------|----------------|-------------------------|----------------|----------------|----------------|----------------|--|--|
|                |                     |                   |              |                | Based on Bond Strength |                             | Based on Steel Strength |                |                | Based on Steel Strength |                |                |                |                |  |  |
|                |                     |                   |              |                | f'c ≥ 2000 psi         |                             | A307 (SAE 1018)         |                |                | A193 GR B7 (SAE 4140)   |                | F593 (A304SS)  |                | f'c ≥ 2000 psi |  |  |
|                |                     |                   |              |                | Ultimate Load          | Allowable Load <sup>5</sup> | Allowable Load          | Allowable Load | Allowable Load | Allowable Load          | Allowable Load | Allowable Load | Allowable Load | Allowable Load |  |  |
|                |                     | 3                 | 6            | 5              | 8776                   | 2195                        | 2105                    | 4535           | 3630           | 1085                    | 2340           | 1870           |                |                |  |  |
|                |                     | 4 1/2             | 7 1/2        | 6 3/8          | 15368                  | 3840                        | 3750                    | 8080           | 6470           | 1930                    | 4160           | 3330           |                |                |  |  |
|                |                     | 5                 | 8            | 7              | 22876                  | 5720                        | 5875                    | 12660          | 10130          | 3025                    | 6520           | 5220           |                |                |  |  |
|                |                     | 6 3/4             | 12           | 10 1/8         | 35460                  | 8865                        | 8460                    | 18230          | 12400          | 4360                    | 9400           | 6385           |                |                |  |  |
|                |                     | 7                 | 13 3/4       | 11 5/8         | 43596                  | 10900                       | 11500                   | 24785          | 16860          | 5925                    | 12770          | 8685           |                |                |  |  |
|                |                     | 9                 | 15 3/4       | 13 1/2         | 47332                  | 11835                       | 15025                   | 32380          | 22020          | 7740                    | 16880          | 11345          |                |                |  |  |

SEE NOTES PAGE 10

**Loads for ASTM A615 Grade 40 and 60 Rebar Dowels in Concrete**

| Rebar Dia. | Drill Bit Dia. (in) | Minimum Embed. Depth (in) | Spacing (in) | Edge Dist (in) | Allowable Tension Load (lbs) f'c = 2000 psi | Allowable Tension and Shear Loads <sup>5</sup> Based on Steel Strength (lbs) ASTM A615 Grade 40 f'c ≥ 2000 psi | Allowable Tension and Shear Loads <sup>5</sup> Based on Steel Strength (lbs) ASTM A615 Grade 60 f'c ≥ 2000 psi |
|------------|---------------------|---------------------------|--------------|----------------|---|--|--|
| #4         | 1/2                 | 4                         | 7            | 6 3/4          | 3840  | 4000   | 4800   |
| #5         | 3/4                 | 5                         | 8 3/4        | 7 1/2          | 5720  | 6200   | 7440   |
| #6         | 7/8                 | 6 3/4                     | 12           | 10 1/8         | 8865  | 8800   | 10560  |
| #7         | 1                   | 7 3/4                     | 13 5/8       | 11 5/8         | 10900                                       | 12000  | 14400  |
| #8         | 1 1/8               | 9                         | 15 3/4       | 13 1/2         | 11835                                       | 15800  | 18960  |
| #9         | 1 1/4               | 10                        | 17 1/2       | 15 1/4         | 11835                                       | 20000  | 24000  |
| #10        | 1 1/2               | 12                        | 26           | 16             | 11835                                       | 25400  | 30480  |
| #11        | 1 5/8               | 14                        | 32           | 18             | 11835                                       | 31200  | 37440  |

- 1. Allowable loads for bond strength are based upon a factor of safety of 4 on the average ultimate load. They may not be increased for load duration. Allowable load must be the lesser of the bond or steel strength.
- 2. Refer to page 19 for load adjustment factors.
- 3. See Temperature Sensitivity Curve for appropriate reduction factor when concrete temperatures exceed 72 °F.
- 4. The anchors cannot be used to resist pullout forces in overhead and wall installations unless proper consideration is given to fire conditions.
- 5. Allowable shear load values for rebar are limited to the allowable steel strength.

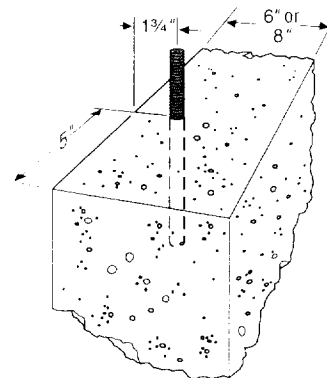
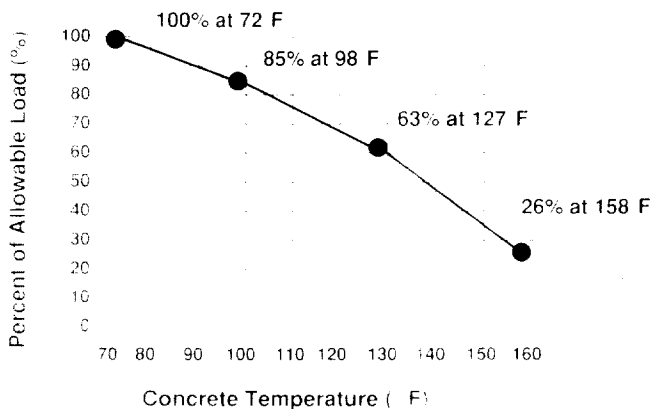
**Tension Loads for Threaded Rod Anchors in Concrete Foundation Stemwall Installation**

| Bolt Dia. (in) | Edge (in) | W (in) | Embed. (in) | Allowable Tension Load f'c = 2000 psi |                |
|----------------|-----------|--------|-------------|---------------------------------------|----------------|
|                |           |        |             | Avg Ult                               | Allowable Load |
| 5/8            | 1 3/4     | 6      | 9 1/2       | 10720                                 | 2680           |
| 5/8            | 1 3/4     | 6      | 12          | 16160                                 | 4040           |
| 7/8            | 1 3/4     | 8      | 12 1/2      | 17000                                 | 4250           |
| 7/8            | 1 3/4     | 8      | 15 1/2      | 23340                                 | 5835           |

**Set and Cure Schedule**

| Base Material Temperature | 40°F   | 60°F   | 80°F   | 100°F  |
|---------------------------|--------|--------|--------|--------|
| Set Time                  | 18 hrs | 6 hrs  | 4 hrs  | 4 hrs  |
| Cure Time                 | 72 hrs | 24 hrs | 24 hrs | 17 hrs |

**Temperature Sensitivity Curve for ET Adhesive**



Edge and end distances for threaded rod in concrete foundation stemwall corner installation

# HDA/HD HOLDOWNS



Transfer tension loads from the top chord to the bottom chord of a truss or rafter. Use HDA/HD holdowns for all applications to transfer loads from a top chord to a bottom chord. As an alternative, use a strap tie ensuring proper end-to-end connection. HDA/HD holdowns are available in a variety of sizes to meet the needs of the world market.

HDA/HD20A holdowns and HD14A's seat design allows for easy installation and attachment. A nominal width of 3 1/2" allows for use with 2x4s and 2x6s. HDA/HD14A and HD14A provides an easy-to-use design for installation on 2x4s.

### HDA SPECIAL FEATURES

- Single piece, one-sided design results in easy installation.
- Load Transfer Plate eliminates the need for additional fasteners.
- Available in several materials.

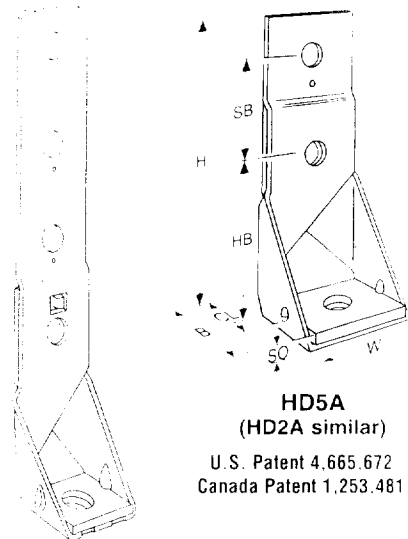
### MATERIAL

**FINISH** HD2A - HD14A - HD14A - galvanized; HD20A - galvanized; HD10A - galvanized; HD6A - HD8A - HD14A - HD15 - HD20A - galvanized.

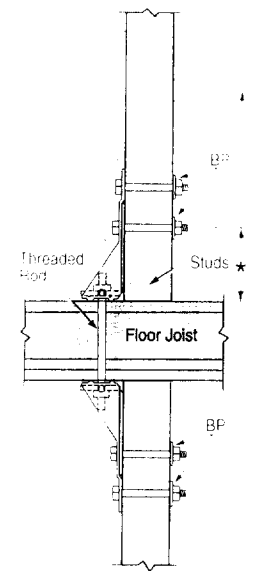
### INSTALLATION

- For all applications, use a steel tie rod between the anchor bolt and the anchor nut.
- Bolt hole spacing a maximum of 12" to a maximum length of 18" for the hold-down per 1997 NDS (page 4.5.1.1).
- Standard washers are required between the hold-down and anchor nut. HD15 bolts and HD14 stud bolt nuts against the wood. The Load Transfer Plate is an integral part of the HDA and anchor nut washer is required with the wood plates.
- See SSTD Anchor Bolts, Simpson's Anchor Bolts and Additional Anchorage Designs for anchorage options. Design engineer may specify alternate anchorage calculated to meet the code requirements for a specific job.
- Update in which member to maintain a minimum distance of seven bolt diameters from the end of the member. For HDA's and HD15 and HD14, the minimum required distance is automatically maintained when end of wood member is flush with the bottom of the hold-down.
- To tie double Lx members together, the designer must determine the fasteners required to bind members together and apart without splitting.
- For holdowns installed on the mudsill, anchor nut should be "finger-tight plus 1/2" to 1" turn with a wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut, which may lead to premature anchor bolt failure.
- Stud bolts should be snugly tightened (1997 NDS, page 8.1.2.4).

**CODES:** BOCA - CBC; SBCO - NFR-393; NFR-469; IBC - 2003; IRC R2401.6; BR-24158 and BR-25293.



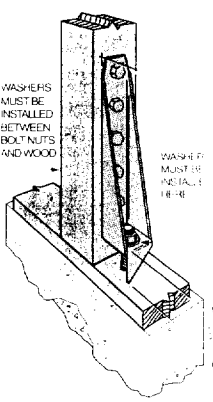
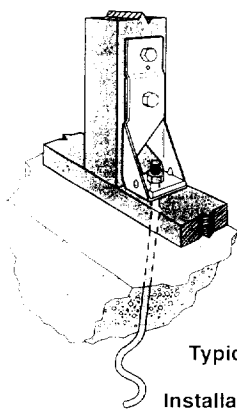
**HD5A**  
(HD2A similar)  
U.S. Patent 4,665,672  
Canada Patent 1,253,481



**Typical HD5A Tie between Floors**

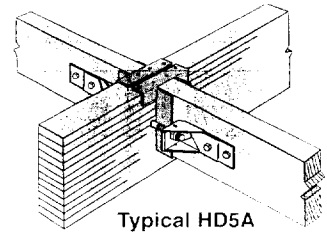
To achieve table loads, the minimum bolt end distance is seven bolt diameters. This distance is designed into hold-downs. Bolt end distance may be increased, provided the anchor nut is not over-torqued, which could split the stud. Deflection values may be higher.

**HD10A**  
HD6A, HD8A  
HD14A and  
HD20A similar)



**Typical HD5A Holddown Installation with SSTB anchor bolt.**  
Washers are not required at the base.

**Typical HD15 Holddown Installation**



**Typical HD5A Purlin Anchor Installation**

| Model No | Material |         | Dimensions |    |       |       |   |    |    |                            | Fasteners |           |         | Allowable Loads <sup>10,9,11</sup> (133)                |      |       |      |       |       | Holdown <sup>12</sup> Deflection at Highest Allowable Design Load |
|----------|----------|---------|------------|----|-------|-------|---|----|----|----------------------------|-----------|-----------|---------|---|------|-------|------|-------|-------|---|
|          | Base Ga  | Body Ga | HB         | SB | W     | H     | B | SO | CL | Anchor Dia <sup>9,10</sup> | Stud Qty  | Bolts Dia | Avg UII | Length of Bolt <sup>2,3,4</sup> in Vertical Wood Member |      |       |      |       |       |   |
|          |          |         |            |    |       |       |   |    |    |                            |           |           |         | 1 1/2   | 2    | 2 1/2 | 3    | 3 1/2 | 5 1/2 |   |
| HD14A    | 30       | 30      | 4          | 4  | 4 1/2 | 8     | 4 | 2  | 10 | 1/2                        | 2         | 1/2       | 12150   | 1555  | 2055 | 2565  | 2775 | 2775  | 2760  | 0.058   |
| HD8A     | 30       | 30      | 3          | 3  | 3 1/2 | 4     | 3 | 2  | 6  | 1/2                        | 2         | 1/2       | 20767   | 1870  | 2485 | 3095  | 3705 | 4010  | 3980  | 0.067   |
| HD6A     | 30       | 30      | 5          | 3  | 3 1/2 | 4 1/2 | 3 | 2  | 6  | 1/2                        | 2         | 1/2       | 27333   | 2275  | 2980 | 3685  | 4405 | 5105  | 5510  | 0.041   |
| HD8A     | 30       | 30      | 6          | 3  | 3 1/2 | 4 1/2 | 3 | 2  | 6  | 1/2                        | 3         | 1/2       | 28667   | 3220  | 4350 | 5415  | 6465 | 7460  | 7910  | 0.111   |
| HD14A    | 30       | 30      | 6          | 3  | 3 1/2 | 4 1/2 | 3 | 2  | 6  | 1/2                        | 4         | 1/2       | 28667   | 3945  | 5540 | 6935  | 8310 | 9540  | 9900  | 0.269   |
| HD15A    | 30       | 30      | 4          | 3  | 4     | 4 1/2 | 3 | 2  | 6  | 1/2                        | 4         | 1/2       | 38167   | —   | —    | —     | —    | 11080 | 13380 | 0.215   |
| HD20A    | 30       | 30      | 4          | 4  | 4 1/2 | 4 1/2 | 3 | 2  | 6  | 1/2                        | 4         | 1/2       | 51333   | —   | —    | —     | —    | 11080 | 13380 | 0.250   |
| HD20A    | 30       | 30      | 4          | 4  | 4 1/2 | 4 1/2 | 4 | 2  | 6  | 1/2                        | 5         | 1/2       | 55333   | —   | —    | —     | —    | —     | 15305 | 0.082   |

<sup>1</sup> See NDS (page 4.5.1.1) for required minimum distance from the end of the member. For HDA's and HD15 and HD14, the minimum required distance is automatically maintained when end of wood member is flush with the bottom of the hold-down.

<sup>2</sup> For holdowns installed on the mudsill, anchor nut should be "finger-tight plus 1/2" to 1" turn with a wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut, which may lead to premature anchor bolt failure.

<sup>3</sup> Stud bolts should be snugly tightened (1997 NDS, page 8.1.2.4).

<sup>4</sup> For holdowns installed on the mudsill, anchor nut should be "finger-tight plus 1/2" to 1" turn with a wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut, which may lead to premature anchor bolt failure.

<sup>5</sup> See SSTD Anchor Bolts, Simpson's Anchor Bolts and Additional Anchorage Designs for anchorage options. Design engineer may specify alternate anchorage calculated to meet the code requirements for a specific job.

<sup>6</sup> Update in which member to maintain a minimum distance of seven bolt diameters from the end of the member. For HDA's and HD15 and HD14, the minimum required distance is automatically maintained when end of wood member is flush with the bottom of the hold-down.

<sup>7</sup> To tie double Lx members together, the designer must determine the fasteners required to bind members together and apart without splitting.

<sup>8</sup> For holdowns installed on the mudsill, anchor nut should be "finger-tight plus 1/2" to 1" turn with a wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut, which may lead to premature anchor bolt failure.

<sup>9</sup> Stud bolts should be snugly tightened (1997 NDS, page 8.1.2.4).

<sup>10</sup> Full tension loads apply when HD5A is used with a 3/8" anchor bolt.

<sup>11</sup> See pgs 4, 5 for testing and other important information.

<sup>12</sup> Deflection at Highest Allowable Design Load: The deflection of a hold-down measured between the anchor bolt and the strap portion of the hold-down when loaded to the highest allowable load listed in the data table. This movement is static, due to the hold-down deformation under a static load test conducted on a steel joist.