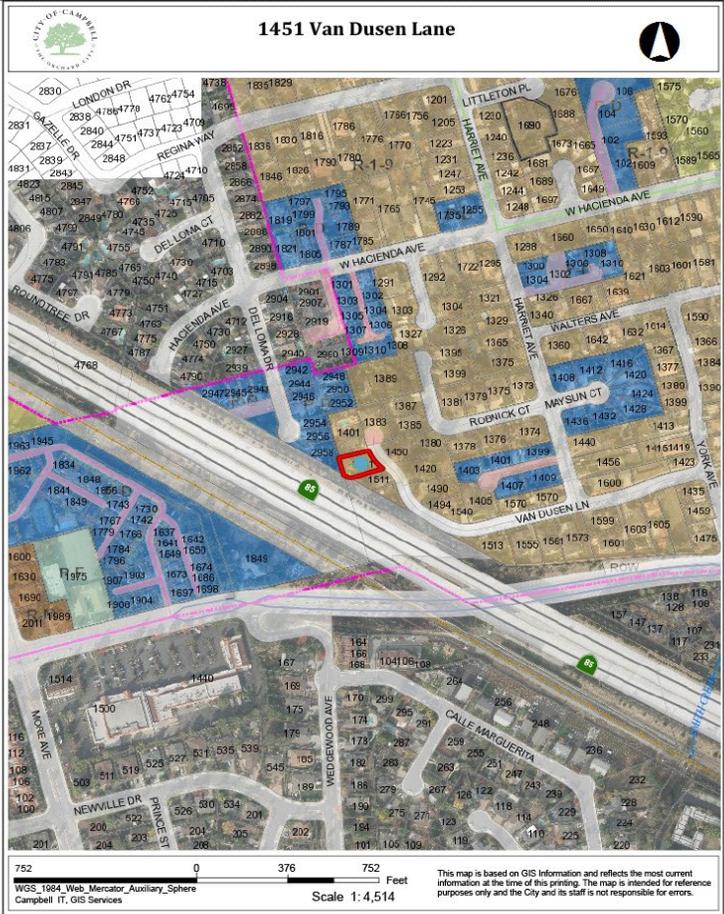


Location of Proposed Project



CITY OF CAMPBELL
 City of Campbell
 70 North First Street
 Campbell, CA 95008 -1423

Project Image



Courtesy Notice

Dear Campbell Resident,

March 21, 2023

We are notifying you that the Planning Division of the Community Development Department of the City of Campbell has received an application for the following project:

Project Address: 1451 Van Dusen Lane

Zoning | Area Plan: R-1-9 | STANP

Neighborhood Association(s): N/A

Council District: 5

File No.: PLN-2023-53

APN: 403-19-100

Applicant: Heather Harrington Design

Property Owner: David and Megan King

Project Planner: Tracy Tam, Associate Planner

Email Contact: tracyt@campbellca.gov

Phone Contact: (408) 871-5103

Project Description:

To allow an approximately 524 addition to add an attached two-car garage to an existing single-family residence.

If you would like to find out more information regarding the proposed project, please view the project plans using the QR code below or contact the Project Planner. The City will send you another notice before the City makes a decision regarding approval of the project.

Before a decision is reached you will receive a formal notice providing another opportunity for public comment.

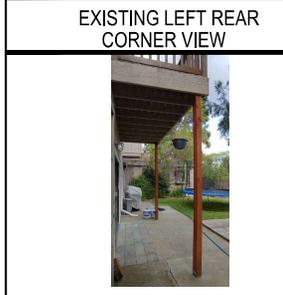


- City of Campbell -
Community Development Department
70 N. First Street, Campbell CA 95008
(408)866-2140 | planning@campbellca.gov

Note: Applications may change after initial application submittal. To view the project plans, please scan the QR code.

**Asistencia en Español disponible,
Simplemente marque (408) 866-2140 y pida traducción en Español





PROJECT NOTES

The project shall comply with the submitted "Waste Management Plan".

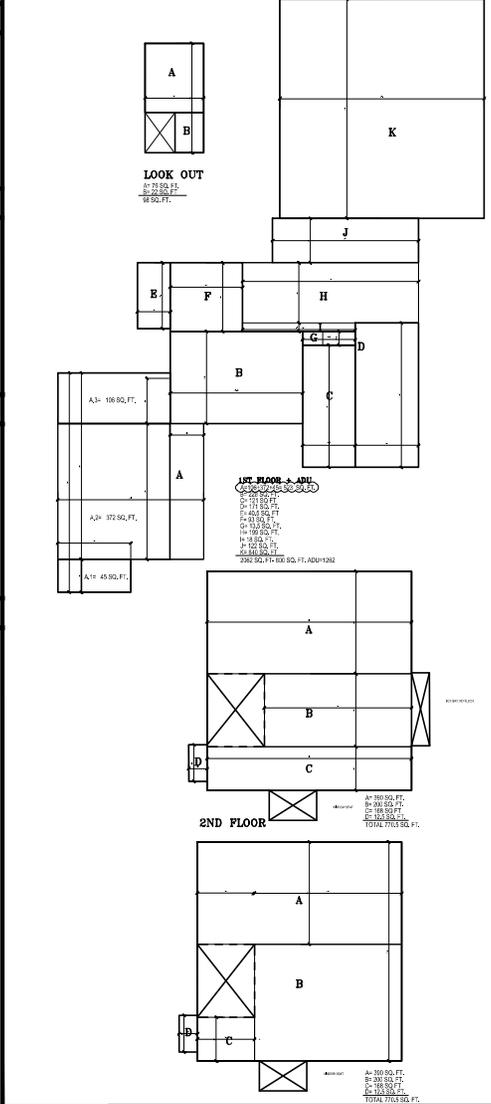
Service Providers: San Jose Water Company, Pacific Gas and Electric, West Valley Sanitation District, and West Valley Collection and Recycling.

No Products may be used that exceeds California's maximum limits on Volatile Organic Compounds (VOC).

Construction Hours are limited to 8 AM to 5 PM Monday thru Friday and 9am to 4pm Saturday, No constructions Sundays and holidays.

No fire sprinklers required.

AREA PLAN



PROJECT DESCRIPTION

The project consists of a single car garage (524 sq. ft.) addition to the existing house.

| CODES | DATA |
|---|---|
| 2019 California Building Code, Vol 1 & 2 2019 California Residential Code 2019 California Plumbing Code 2019 California Mechanical Code 2019 California Electrical Code 2019 California Energy Code 2019 California Fire Code 2019 California Existing Building Code 2019 California Historical Building Code 2019 California Green Building Standards 2019 California Fire Code 2019 International Existing Building Code | documentation of Seismic Zone (D2), Wind Design Speed (100 exposure B), Soil Bearing Capacity (1500 psf min), Average Winter Design Temp (40-50F), Average Summer Design Temp, (53-86F), Termitte Level (Heavy), Floor Load (40/10), Bedroom Floor Level (30/10), and Roof Load (20/10) |

PROJECT DATA

APN# 403-19-100

LOT AREA= 7996 SQ. FT.

CONSTRUCTION TYPE: V-B

OCCUPANCY GROUP: R-1

ZONING: R1-8

FLOOD PLANE MAP 06085C0238 SHOWS MINIMAL FLOOD HAZARD

1 BEDROOM ADU: 800 SQ. FT.
 MAIN HOUSE: 2901 SQ. FT.
 PROPOSED GARAGE: 524 SQ. FT.

BUILDING COVERAGE: 2585 SQ FT (2799 SQ FT ALLOWABLE)

FAR: 3424 SQ. FT 42.8% (3598 SQ FT)

LANDSCAPING COVERAGE: 3758 SF 47%

PAVING COVERAGE: 18%

IMPERVIOUS COVERAGE: 35%

PROPOSED GARAGE HEIGHT: 12'-11"

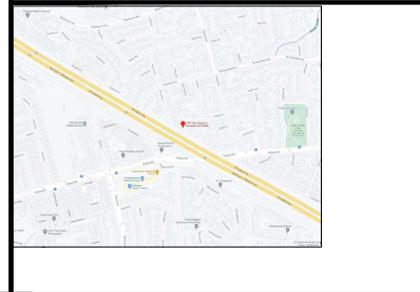
PARKING OFF STREET: 3 SPACES

| | EXISTING | PROPOSED |
|------------------------|----------|----------|
| MAIN HOUSE: | 2901 | 2901 |
| 1st FLOOR(MAIN HOUSE): | 1262 | 1262 |
| ATTACHED ADU: | 800 | 800 |
| 2ND FLOOR: | 770.5 | 770.5 |
| 3RD FLOOR (ATTIC) | 770.5 | 770.5 |
| LOOKOUT TOWER: | 98 | 98 |
| PROPOSED GARAGE | 0 | 524 |

GENERAL NOTES

- The contractor shall furnish all materials, labor and equipment required for the full performance of the work herein, unless specifically noted otherwise. All work shall be performed in a good and workman-like manner and conform to all pertinent regulations and instructions.
- Before starting any portion of work, the Contractor shall verify any and all existing conditions as shown on the drawings against the actual existing conditions at the site. Any discrepancies shall be brought to the attention of the Designer. If the Contractor proceeds with the work without verifying existing conditions and discovers after the work has started any discrepancies, he shall proceed to perform whatever work is required to correct the discrepancies and bring about the proper execution of the project to the satisfaction of the Designer, at no extra cost to the owner.
- The Contractor shall be responsible for cutting, fitting and patching as required to make the several parts fit together properly.
- All work shall be in accordance with all applicable Local or State codes and regulations.
- All material, equipment and products shall be installed in accordance with the respective manufacturer's latest printed instructions.
- All dimensions are fresh unless otherwise noted.
- Do not scale the drawings. All dimensional discrepancies shall be brought to the attention of the Designer as soon as they are discovered.
- No extra compensation shall be allowed for extra work resulting from lack of coordination between trades or failure of the Contractor to verify locations and measurements on the job.
- The Contractor is responsible for obtaining separate permits for electrical, mechanical, plumbing, grading, or other permits as may be required by the local authorities. Issuance of a building permit based on these Drawings does not constitute granting of these separate permits.
- The Contractor shall be responsible for coordinating with the Structural Engineer for any site visits or special testing as needed to complete all structural work as directed by the Structural Engineer.
- The Contractor shall be responsible for forwarding all shop drawings to the designer for review and approval. No fabrication shall commence until both designer and owner have reviewed and approved by signature all shop drawings.

VACINITY MAP



INDEX

| | |
|------|---|
| A1.1 | General Notes |
| A1.2 | Site Plan |
| SUT | Civil Survey |
| A2.1 | Proposed Main Floor Plan (Garage), Elevations |
| AS.1 | Elevations |
| A2.2 | Elevations |
| ME | Mechanical Electrical |
| S1.0 | Structural Specifications |
| S1.1 | Structural Design Criteria |
| S2.0 | Foundation Plan |
| S2.1 | Ceiling Framing Plan |
| S2.2 | Roof Framing Plan |
| S3.0 | Sections |
| S4.0 | Foundation Details |
| S5.0 | Framing Details |
| WSV1 | SIMPSON Details |
| WSV2 | SIMPSON Details |
| CG 1 | BLUE PRINT FOR A/C FAN BAY |
| CG 2 | CAL GREEN CHECKLIST |
| CG 2 | CAL GREEN CHECKLIST |

PROJECT INFO.

Owners:
 Megan and David King
 1451 Van Duesen Lane
 Campbell CA 95008

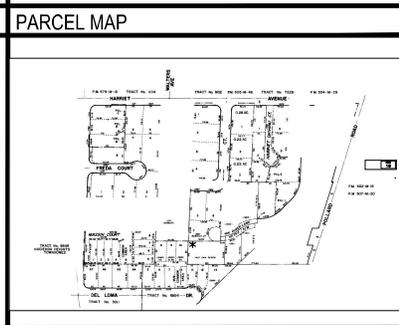
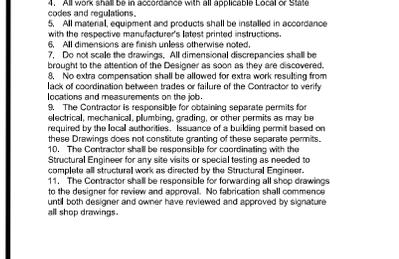
Designer:
 Heather Harrington
 15705 Poppy Lane
 Monte Sereno, California 95030
 ph: (408) 656-2511

Structural Engineer:
 Robert Steuer
 R.C.E. 37251
 1133 Fairview Ave
 San Jose CA 95125
 408 981-8844

Title 24 Documents:

REVISION

| NO. | REVISION | BY |
|-----|----------|----|
| 1 | 10/15/21 | HH |



Waste Management Statement

Construction wash-out water from concrete, mortar, tile, taping, and painting shall be done in a portable containment pool or in a lined evaporative pit. Wash-out shall not enter the storm water system.

Trash piles shall not be located in the front yard or visible from the street. Trash piles shall not contain: paints, solvents, glues, taping compound, food products, or easily recycle-able discards such as bottles, cans, plastics, or paper. Remaining trash shall be limited to concrete, wood, drywall, roofing, and assorted metals and shall be covered with a waterproof tarp. Trash shall be separated at an approved bay area disposal site such as Goodwings Recycling. All trash is to be quickly hauled off site. Retain the receipt and keep with the permit documents, proof of recycle and disposal of the job site trash will be checked periodically and prior to final inspection.

Or call:
 West Valley Collection and Recycling (408) 283-9250 will deliver a roll-off debris box and sort the trash off site.

HEATHER HARRINGTON
 15705 POPPY LANE
 MONTE SERENO, CA 95030
 PH/FAX (408) 656-2511

KING RESIDENCE
 1451 VAN DUSEN LANE
 CAMPBELL CA
 A.P.N. 403-19-100

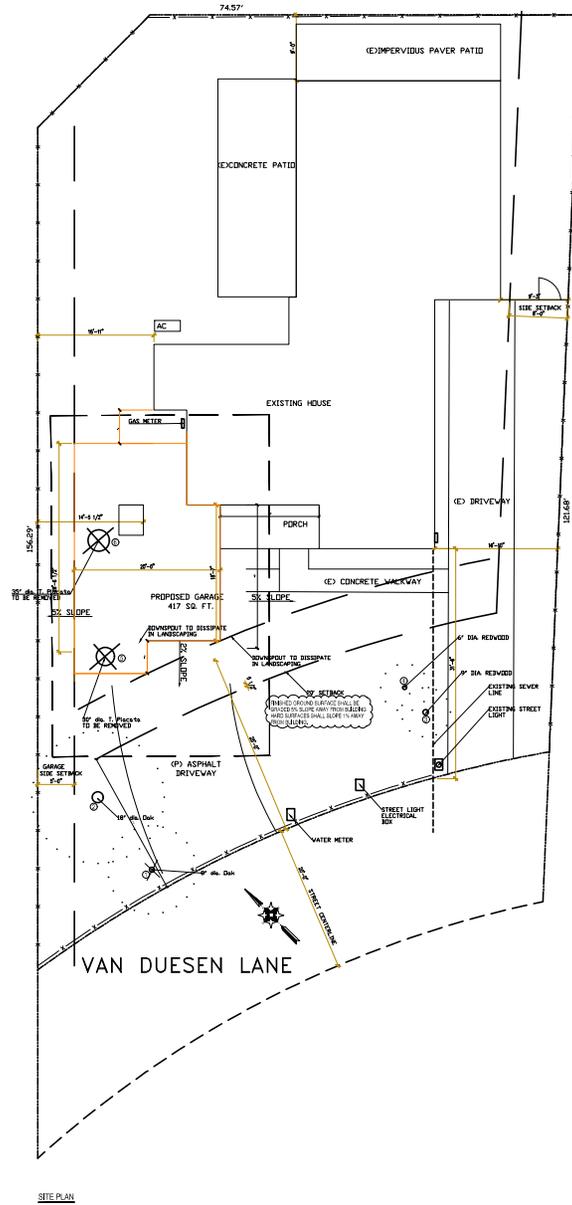
SITE PLAN GENERAL INFO

SHEET

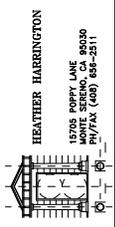
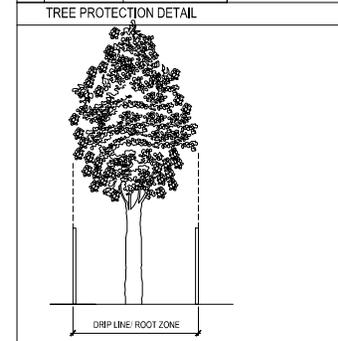
A1.1

DATE: 6/8/2021

SITE IMPROVEMENT PLAN 1/8"=1'-0"



| TREE INVENTORY | | |
|----------------|----------------|---------------|
| # | TREE SPECIES | REMARKS |
| 1 | 8" OAK | TO REMAIN |
| 2 | 18" OAK | TO REMAIN |
| 3 | 9" REDWOOD | TO REMAIN |
| 4 | 6" REDWOOD | TO REMAIN |
| 5 | 30" T. PLACATA | TO BE REMOVED |
| 6 | 35" T. PLACATA | TO BE REMOVED |



KING RESIDENCE
 1451 VAN DUESEN LANE
 CAMPBELL CA
 A.P.N. 403-19-100

| REVISION | BY |
|----------|----|
| 1 | HH |

SITE PLAN

SHEET
 A1.2

DATE: 6/8/2021



LEA & BRAZE ENGINEERING,
 INC. ENGINEERS & LAND SURVEYORS
 1000 CENTRAL EXPY WEST
 HAYWARD, CALIFORNIA 94545
 (510) 887-1686
 WWW.LEABRAZE.COM

1451 VAN DUSEN LANE
 CAMPBELL
 CALIFORNIA

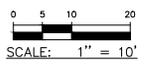
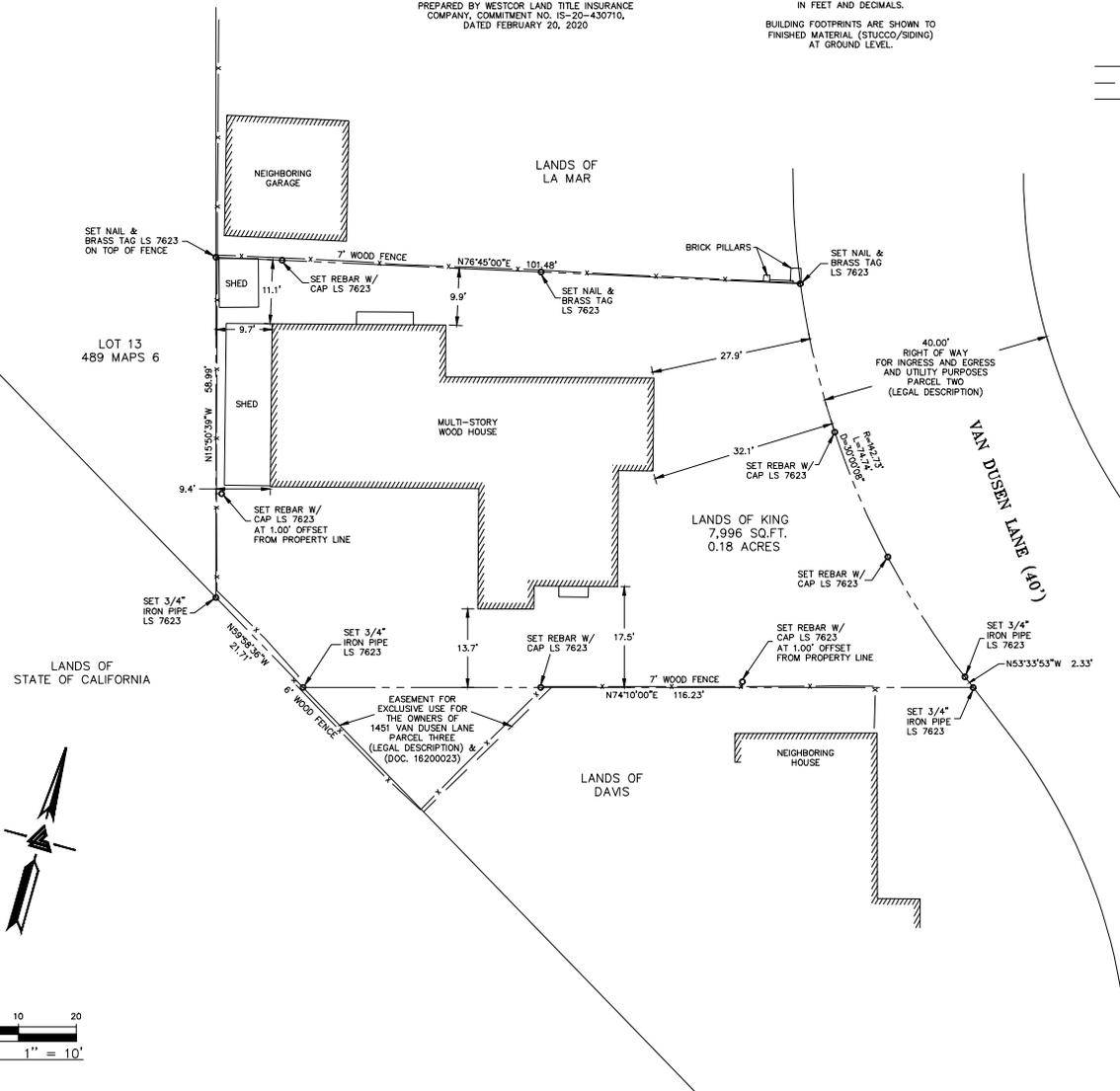
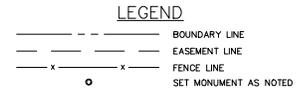
BOUNDARY AND
 HOUSE LOCATION
 SURVEY

| ADDED SET MONS | MT |
|----------------|---------|
| 6-8-20 | |
| REVISIONS | BY |
| | |
| JOB NO: | 2200548 |
| DATE: | 6-3-20 |
| SCALE: | 1"=10' |
| FIELD BY: | DR |
| DRAWN BY: | MT |
| SHEET NO: | |

SU1
 1 OF 1 SHEETS

EASEMENT NOTE
 EASEMENTS SHOWN ARE PER TITLE REPORT
 PREPARED BY WESTCOR LAND TITLE INSURANCE
 COMPANY, COMMITMENT NO. IS-20-430710,
 DATED FEBRUARY 20, 2020

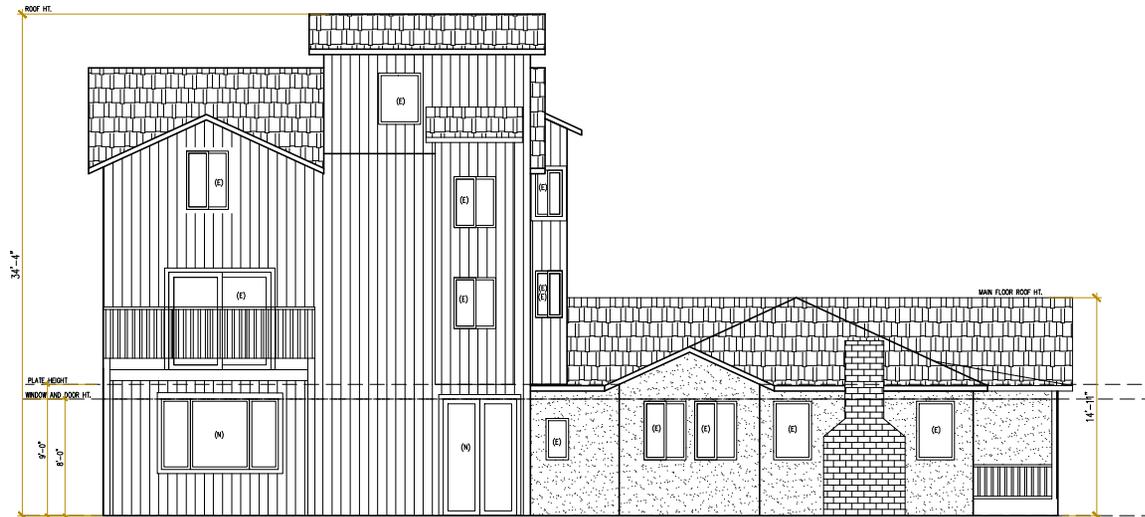
NOTES
 ALL DISTANCES AND DIMENSIONS ARE
 IN FEET AND DECIMALS.
 BUILDING FOOTPRINTS ARE SHOWN TO
 FINISHED MATERIAL (STUCCO/SIDING)
 AT GROUND LEVEL.





PROPOSED LEFT SIDE ELEVATION

SCALE: 1/4" = 1'-0"



EXISTING LEFT SIDE ELEVATION

SCALE: 1/4" = 1'-0"



HEATHER HARRINGTON
 15256 POPPY LANE
 MONTE SERENO, CA 95030
 PH/TAX (408) 686-2511

KING RESIDENCE
 1451 VAN DUESEN LANE
 CAMPBELL CA
 A.P.N. 403-19-100

| NO | REVISION | BY |
|----|----------|----|
| | | |

SECTIONS
 SHEET
A3.2

DATE: 6/8/2021

STRUCTURAL SPECIFICATIONS

- A. GENERAL**
- All construction shall conform to the requirements of the 2019 California Building Code and all other state and local building codes in effect at the time of construction.
- B. FOUNDATIONS**
- All excavations shall be made as near as possible to the neat lines as required by the structure.
- C. CONCRETE**
- All concrete shall comply with the following requirements:

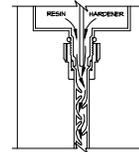
| | |
|----------|--|
| Location | Ultimate Compressive Strength (at 28 days) |
| Footings | 2500 psi |
| Slabs | 2500 psi |
 - Concrete shall be machine mixed and delivered in accordance with ASTM C-94.
 - Concrete shall not be dropped freely where reinforcing bars may cause segregation, nor shall it be dropped freely for more than five feet.
- D. STEEL REINFORCEMENT**
- All steel reinforcement bars shall be deformed.
 - Reinforcing bars shall be Grade 40 conforming to ASTM 615.
 - All bars shall be continuous around corners and lapped 30 diameters unless noted otherwise.
 - Hold reinforcement in its true horizontal and vertical position with devices sufficiently numerous to prevent displacement.
- E. ANCHOR BOLTS**
- All anchor bolts shall be 5/8" dia. with 3"x3"x1/4" plate washers with a minimum 7" embedment into concrete.
 - All anchor bolts shall conform to ASTM A307.
 - All holdown threaded rods shall conform to ASTM A307.
- F. FRAMING**
- All sawn lumber shall be Douglas Fir-Larch west coast graded in accordance with the "Standard Grading Rules for West Coast Lumber No. 16" or M.P.A. Grading Rules for Western Lumber."
 - All sawn lumber shall have grades in accordance with the following:
 - Lumber in contact with concrete shall be Douglas Fir No. 1 pressure treated per ANPA G1 using water borne preservative per ANPA P5.
 - Structural wood members shall have a moisture content limitation of less than 19 percent per NDS-2012 section 4.1.4.
 - General Framing:

| | |
|------------------|----------|
| Rafters - | DF No. 1 |
| Ridge boards - | DF No. 1 |
| Ceiling joists - | DF No. 1 |
| Studs - | DF No. 2 |
| Posts - | DF No. 1 |
| Beams - | DF No. 1 |
| Headers - | DF No. 1 |
| Blocking - | DF No. 2 |
- I. PLYWOOD**
- All plywood shall be APA grade stamped.
 - Roof sheathing shall be 1/2" CDX, T&G plywood, glued and nailed w/ 10d at 6" o.c. (E) & 12" o.c. (F).
 - Shear wall panels shall be 1/2" CDX plywood per shear wall schedule.
- J. NAILING**
- Minimum standard nailing of each board or member at all points shall conform to Table No. 2304.10.1 of the 2019 California Building Code.
 - Common wire nails shall be used through unless noted otherwise.
 - Pre-drilled wood members if required to prevent the wood members from splitting.
- K. METAL CONNECTORS**
- All metal connectors shown on the drawings are to be Simpson Strong-Tie or equal as specified on Simpson Catalog CC-2021.
 - Any metal connectors exposed to the weather shall be hot dipped galvanized.
- L. CONNECTORS IN CONTACT WITH PRESSURE TREATED MATERIAL**
- All metal anchors, fasteners, connectors, etc. that will be in contact with pressure treated lumber must be hot-dipped galvanized or other approved corrosion resistant material.

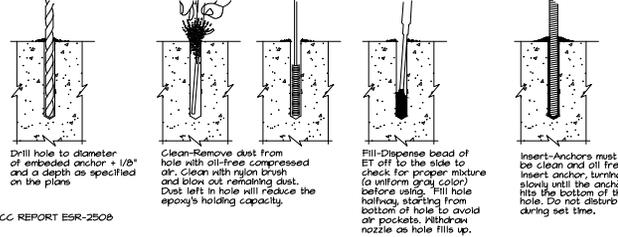
EPOXY SPECIFICATIONS

Epoxy Preparation

- Insert cartridge into dispensing tool.
- Remove plugs from cartridge and attach a mixing nozzle. Before injecting, check that nozzle is free of gelled or hardened material.
- Dispense bead of Set - 20 epoxy off to the side to check for proper mixture (a uniform gray color) before using.
- Tighten retaining nut on nozzle. DO NOT OVER-TIGHTEN.
- Caution: Epoxy will start to harden in the mixing nozzle after 1-5 minutes. Epoxy will harden faster as the air temperature increases. Replace nozzle to avoid blowouts.
- If using a pneumatic dispensing tool, air pressure must be regulated at 80-100 psi.
- A partially cartridge may be stored up to one year for future use. Store at a temperature above 45°F.



Installation Into CONCRETE



SHEAR WALL SCHEDULE

| TYPE | PLYWOOD | NAILING | FRAMING CLIPS (spacing / number) | | SILL NAILING | ANCHOR BOLTS | HOLDOWNS |
|------|----------|------------------------------|----------------------------------|------------------|----------------|-------------------------|------------------------------|
| ① | 1/2" CDX | 10d @ 4" o.c. E & 12" o.c. F | A35 24" o.c. | LTP4 24" o.c. | 16d 8" o.c. | SDS 1/4 X 6 16" o.c. | 5/8" dia. @ 48" o.c. HDU2 |
| ② | MSWH2XB | — | 2 | 2 | — | — | (2) - Simpson 1" MSWH A.B. |

| REVISIONS | BY |
|-----------|----|
| 10-1-22 | rs |
| | |
| | |
| | |

ROBERT W. STEUER - CIVIL ENGINEER
 R.C.E. 37251
 1133 FAIRVIEW AVENUE
 SAN JOSE, CALIFORNIA 95125
 (408)-981-5844



GARAGE ADDITION
KING RESIDENCE
 1451 VAN DUSEN LANE
 CAMPBELL, CALIFORNIA 95008

STRUCTURAL SPECIFICATIONS

| | |
|-------|---------|
| DATE | 10-1-22 |
| DRAWN | rs |
| JOB | 14-21 |
| SHEET | S1.0 |

SEISMIC DESIGN CRITERIA:

1. SITE: 1415 VAN DUSEN LANE
CAMPBELL, CA 95008
- LATITUDE: 37.2660444°
LONGITUDE: -121.981813°
2. DESIGN CODE REFERENCE DOCUMENT ASCE 1-16
3. SEISMIC RISK CATEGORY II
4. SITE CLASS D
5. SEISMIC DESIGN CATEGORY E
6. SEISMIC IMPORTANCE FACTOR: I = 1.0
7. MAPPED ACCELERATION PARAMETERS:
S_s = 2.263 g
S₁ = 0.814 g
8. SITE COEFFICIENTS:
F_a = 1.2
F_v = null
9. ADJUSTED MAXIMUM CONSIDERED EARTHQUAKE SPECTRAL RESPONSE ACCELERATION PARAMETERS:
S_M = F_a X S_s = 1.2 X 2.263 g = 2.716 g
S_{M1} = null
10. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
S_D = 2/3 X S_M = 2/3 X 2.716 = 1.811 g
S_{D1} = null
11. SEISMIC DESIGN COEFFICIENTS: R = 6.5, FOR WOOD SHEAR WALL
12. SEISMIC RESPONSE COEFFICIENT:
$$C_s = \frac{S_D}{\left(\frac{R}{W}\right)} = \frac{1.811}{\left(\frac{6.5}{1.0}\right)} = 0.274$$
13. ULTIMATE SEISMIC BASE SHEAR:
V = C_sW = 0.274 W
14. ALLOWABLE WORKING STRESS SEISMIC BASE SHEAR:
V = 0.7V = 0.7 X 0.274 W = 0.192 W

WIND DESIGN CRITERIA:

1. SITE: 1415 VAN DUSEN LANE
CAMPBELL, CA 95008
2. EXPOSURE CATEGORY B
3. BASIC WIND SPEED (ULTIMATE) V_u = 95 MPH, (Figure 26.5-1B ASCE 7-16)
4. RISK CATEGORY: II
5. MEAN ROOF HEIGHT: h_r = 11.0'
6. EAVE HEIGHT: h_e = 8.5'
7. ADJUSTMENT FACTOR FOR BUILDING HEIGHT: λ = 1.0
8. TOPOGRAPHIC FACTOR: K_{zt} = 1.0
9. LRFD SIMPLIFIED DESIGN WIND PRESSURE: P_{s30}
(Figure 28.5-1 ASCE 7-16)
W 5.5 : 12 ROOF PITCH - ANGLE = 24.62°
- | LRFD HORIZONTAL PRESSURE, PSF | | | |
|-------------------------------|-----|------|-----|
| A | B | C | D |
| 18.1 | 2.4 | 13.0 | 2.6 |
10. NET WIND DESIGN PRESSURE: P_w
P_w = λ K_{zt} | P_{s30}
P_w = 1.0 X 1.0 X 1.0 X P_{s30}
9. LRFD MINIMUM DESIGN WIND PRESSURE:
(Section 28.5.4 ASCE 7-16)
- | LRFD HORIZONTAL PRESSURE, PSF | | | |
|-------------------------------|-----|------|-----|
| A | B | C | D |
| 16.0 | 8.0 | 16.0 | 8.0 |

FOUNDATION DESIGN CRITERIA:

- W/ Inorganic silt and clay soil, ML / CL
- ALLOWABLE BEARING PRESSURE = 1500 P.S.F. (CBC Chapter 18 Table 1806.2)

| REVISIONS | BY |
|-----------|----|
| 10-1-22 | rs |
| | |
| | |
| | |
| | |

ROBERT W. STEUER - CIVIL ENGINEER
R.C.E. 37251
1133 FAIRVIEW AVENUE
SAN JOSE, CALIFORNIA 95125
(408)-981-3844



GARAGE ADDITION
KING RESIDENCE
1451 VAN DUSEN LANE
CAMPBELL, CALIFORNIA 95008

STRUCTURAL DESIGN CRITERIA

DATE: 10-1-22

DRAWN: rs

JOB: 14-21

SHEET

S1.1

LEGEND

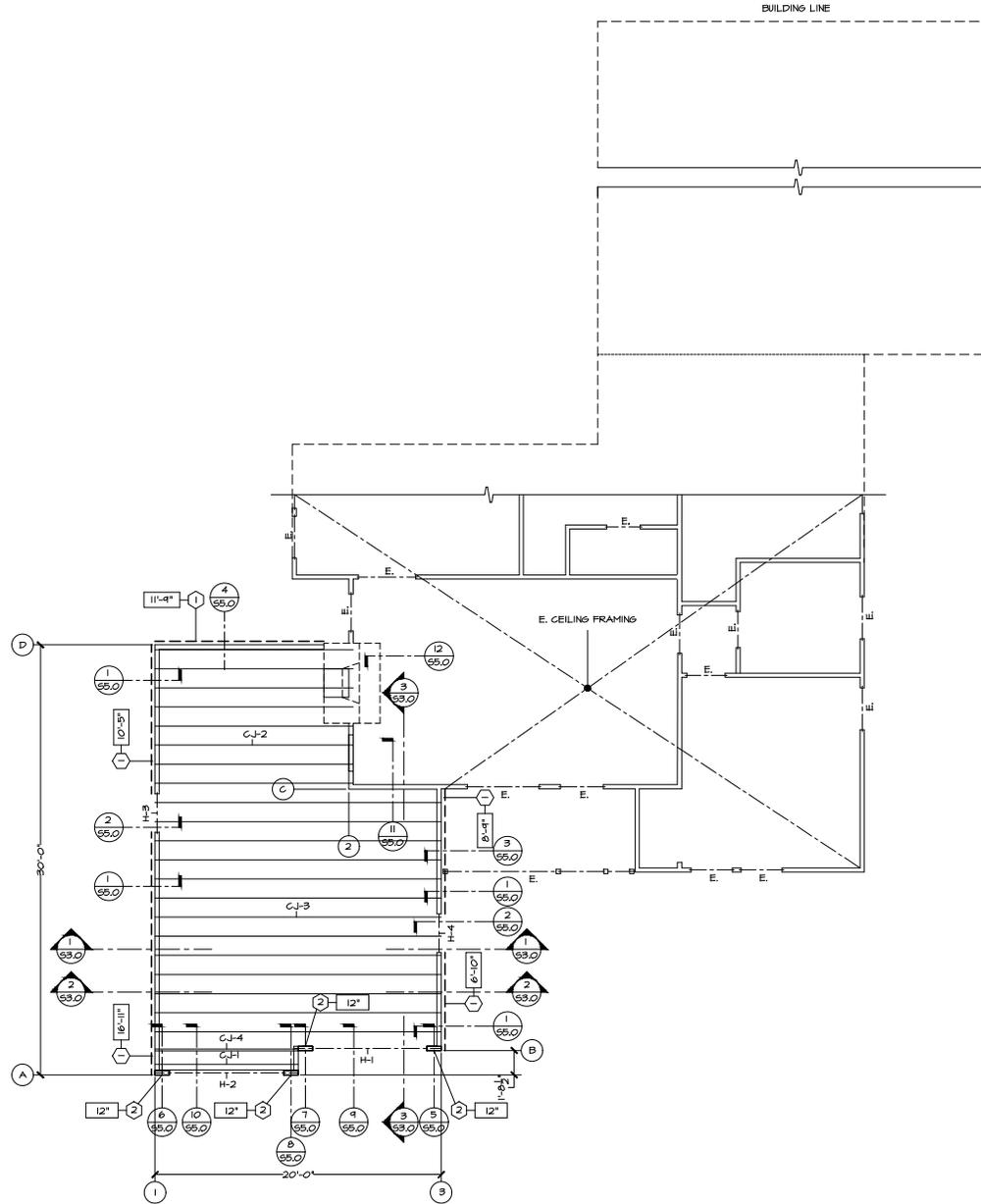
- ===== WALLS
- ①-6'-0" SHEAR WALL PER SHEAR WALL SCHEDULE
W/ SHEAR WALL TYPE AND LENGTH
- ②-12" MSWH STRONGWALL PER SHEAR WALL SCHEDULE
WITH STRONGWALL LENGTH
- C-1 CEILING JOIST NUMBER PER STRUCTURAL CALCULATIONS
AND CEILING JOIST SCHEDULE
- H-1 HEADER NUMBER PER STRUCTURAL CALCULATIONS
AND CEILING JOIST SCHEDULE
- ①-55.0 DETAIL
- ①-53.0 SECTION
- ① WALL LINE NUMBER PER
STRUCTURAL CALCULATIONS

CEILING JOIST SCHEDULE

| MEMBER NO. | SIZE |
|------------|-----------------|
| CJ-1 | 2X6 @ 16" o.c. |
| CJ-2 | 2X6 @ 16" o.c. |
| CJ-3 | 2X10 @ 16" o.c. |
| CJ-4 | (2) - 2X10 |

HEADER SCHEDULE

| MEMBER NO. | SIZE | TRIMMER | KING |
|------------|------|-----------|---------|
| H1 | 4X10 | MSWH 12XB | — |
| H2 | 4X10 | MSWH 12XB | — |
| H3 | 4X10 | (2)-2X4 | (1)-2X4 |
| H3 | 4X10 | (2)-2X4 | (1)-2X4 |



CEILING FRAMING PLAN

SCALE - 1/4" = 1'-0"



| REVISIONS | BY |
|-----------|----|
| 10-1-22 | RS |
| | |
| | |
| | |
| | |

ROBERT W. STEUER - CIVIL ENGINEER
 R.C.E. 37251
 1133 FAIRVIEW AVENUE
 SAN JOSE, CALIFORNIA 95125
 (408)-981-8844



GARAGE ADDITION
KING RESIDENCE
 1451 VAN DUSEN LANE
 CAMPBELL, CALIFORNIA 95008

CEILING FRAMING PLAN

| | |
|--------|--------------|
| DATE: | 10-1-22 |
| SCALE: | 1/4" = 1'-0" |
| DRAWN: | RS |
| JOB: | 14-21 |
| SHEET: | S2.1 |

LEGEND

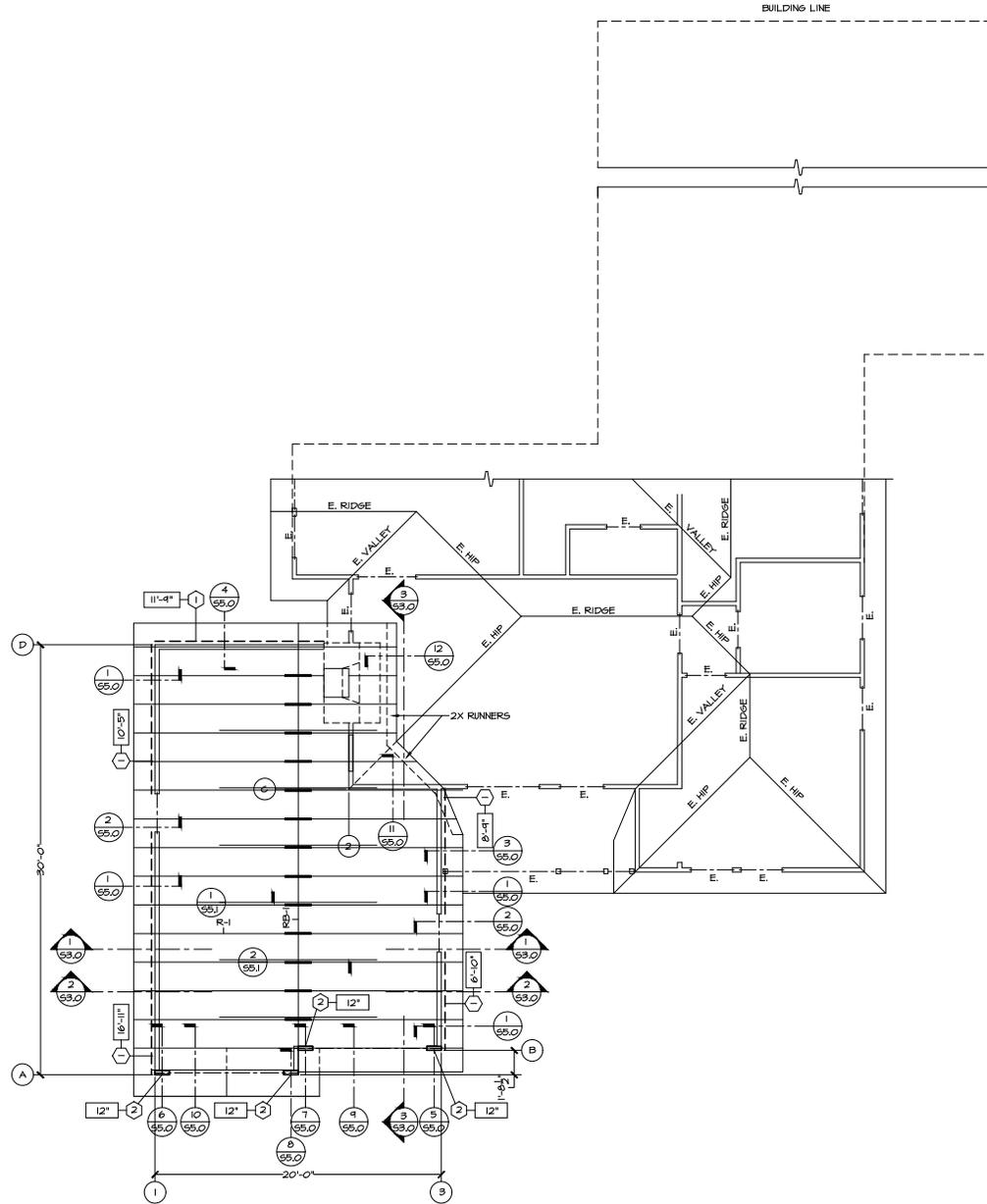
- ===== WALLS
- ①-6'-0" SHEAR WALL PER SHEAR WALL SCHEDULE
W/ SHEAR WALL TYPE AND LENGTH
- ②-12" NSM STRONGWALL PER SHEAR WALL SCHEDULE
WITH STRONGWALL LENGTH
- R-1 RAFTER NUMBER PER STRUCTURAL CALCULATIONS
AND RAFTER SCHEDULE
- ①-55.0 DETAIL
- ①-53.0 SECTION
- ① WALL LINE NUMBER PER
STRUCTURAL CALCULATIONS

RAFTER SCHEDULE

| MEMBER NO. | SIZE |
|------------|----------------|
| R-1 | 2x6 @ 24" o.c. |

RIDGE BOARD SCHEDULE

| MEMBER NO. | SIZE |
|------------|------|
| R-1 | 2x8 |



ROOF FRAMING PLAN

SCALE - 1/4" = 1'-0"



| REVISIONS | BY |
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| 10-1-22 | RS |
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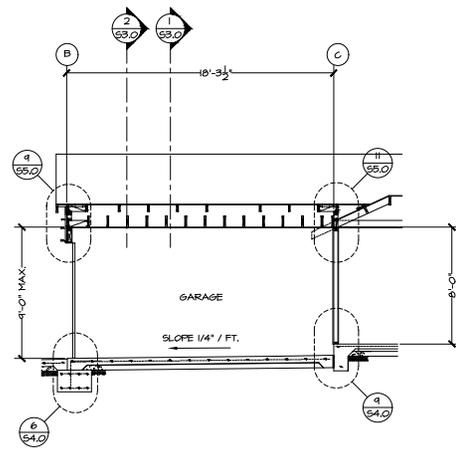
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 (408)-981-8844



GARAGE ADDITION
KING RESIDENCE
 1451 VAN DUSEN LANE
 CAMPBELL, CALIFORNIA 95008

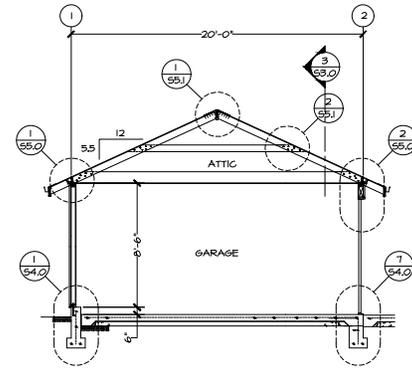
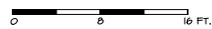
ROOF FRAMING PLAN

| | |
|--------|--------------|
| DATE: | 10-1-22 |
| SCALE: | 1/4" = 1'-0" |
| DRAWN: | RS |
| JOB: | 14-21 |
| SHEET: | S2.2 |



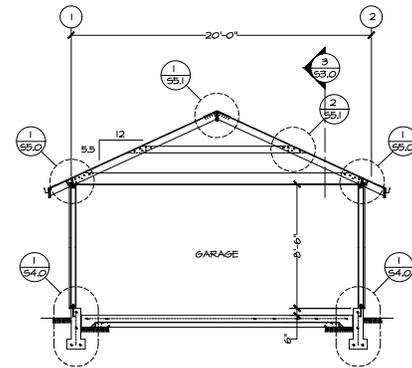
SECTION 3

SCALE - 1/4" = 1'-0"



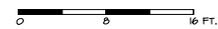
SECTION 1

SCALE - 1/4" = 1'-0"



SECTION 2

SCALE - 1/4" = 1'-0"



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| 10-1-22 | RS |
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GARAGE ADDITION
KING RESIDENCE
 1451 VAN DUSEN LANE
 CAMPBELL, CALIFORNIA 95008

SECTIONS

DATE: 10-1-22

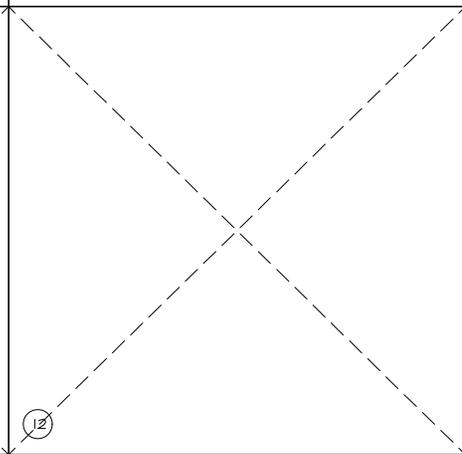
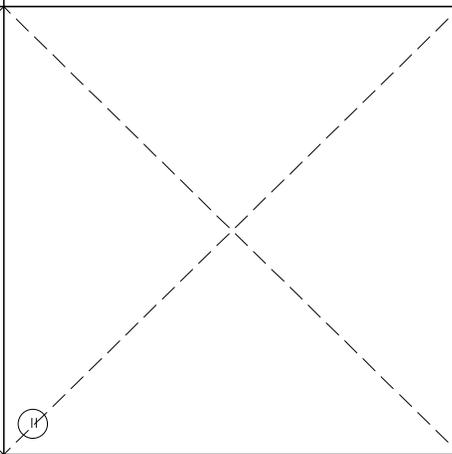
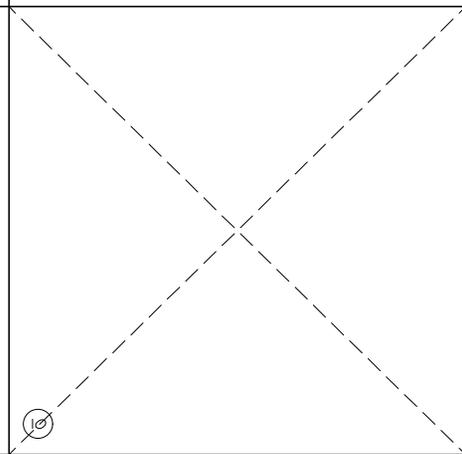
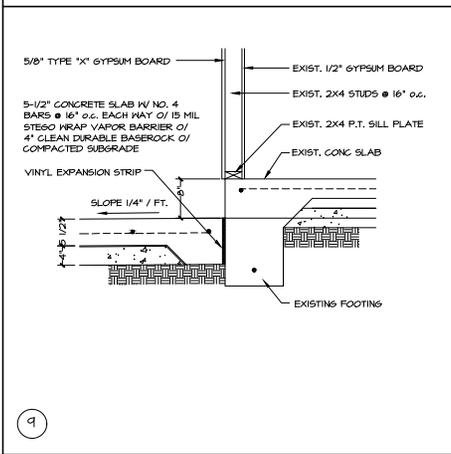
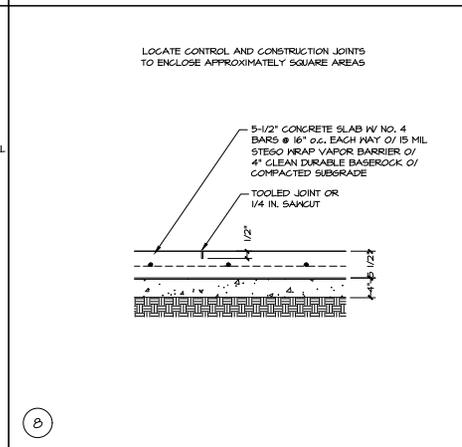
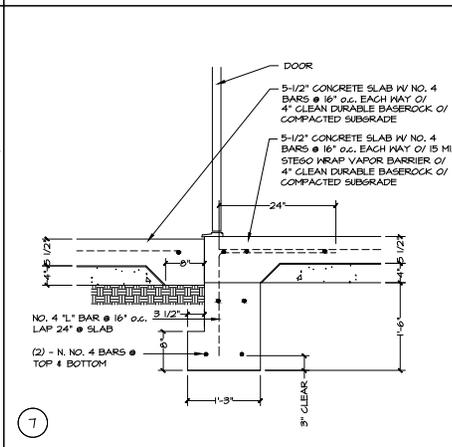
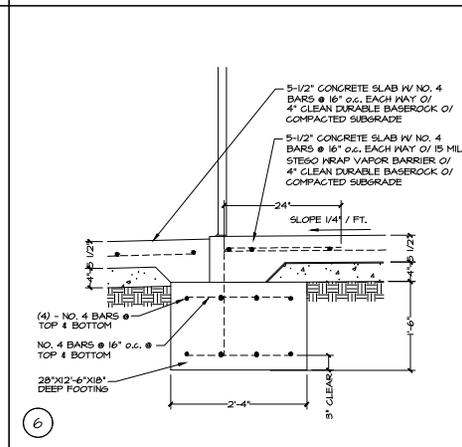
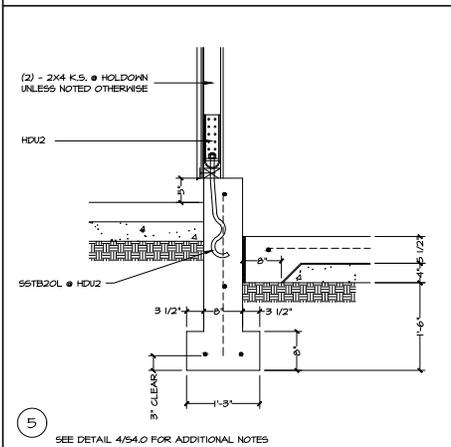
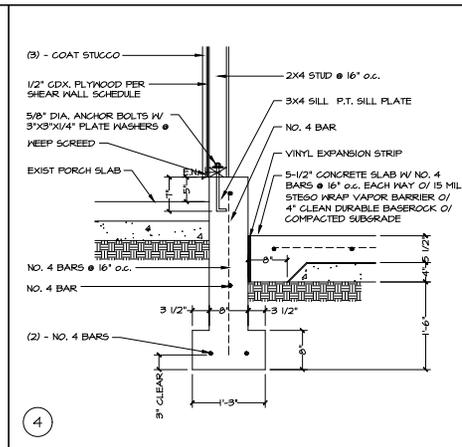
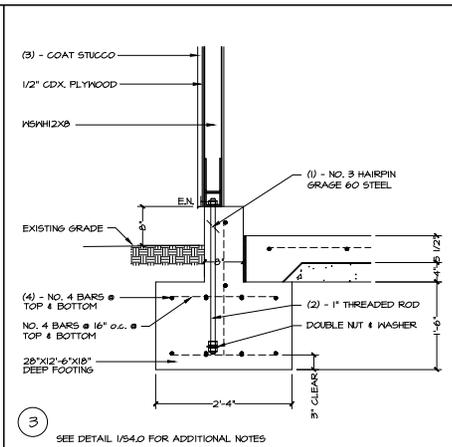
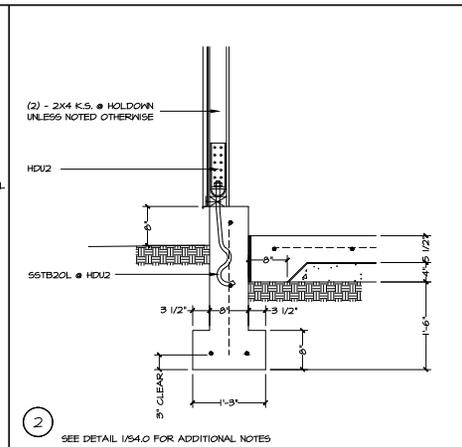
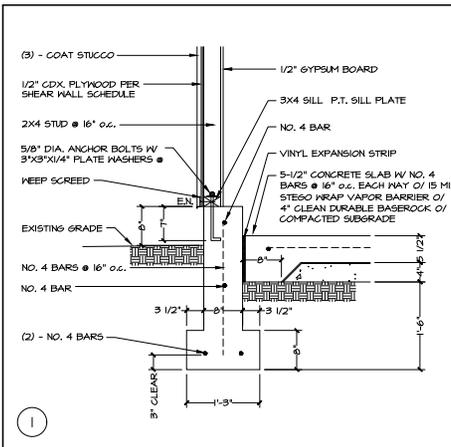
SCALE: 1/4" = 1'-0"

DRAWN: RS

JOB: 14-21

SHEET

S3.0



| REVISIONS | BY |
|-----------|----|
| 10-1-22 | rs |
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 SAN JOSE, CALIFORNIA 95125
 (408)-981-2844

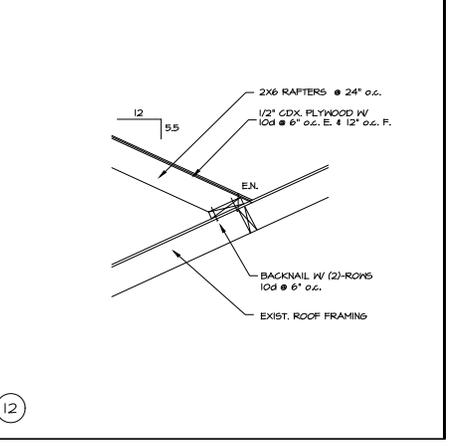
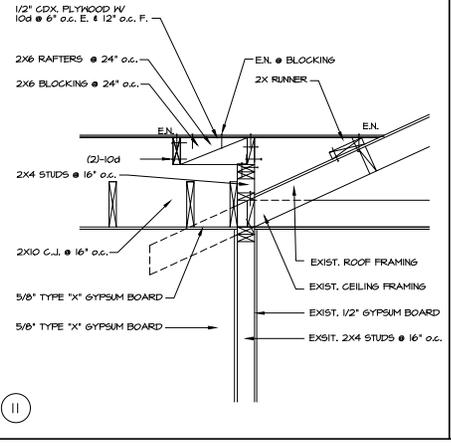
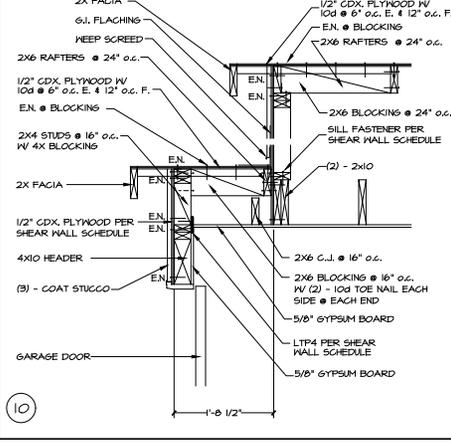
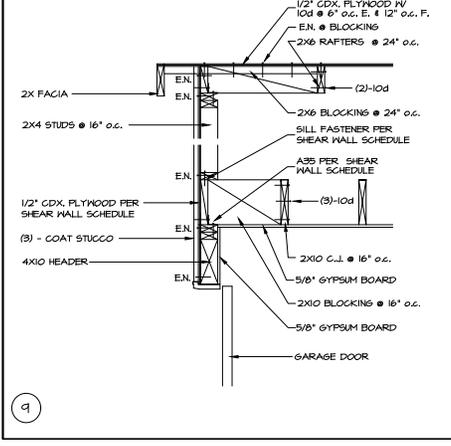
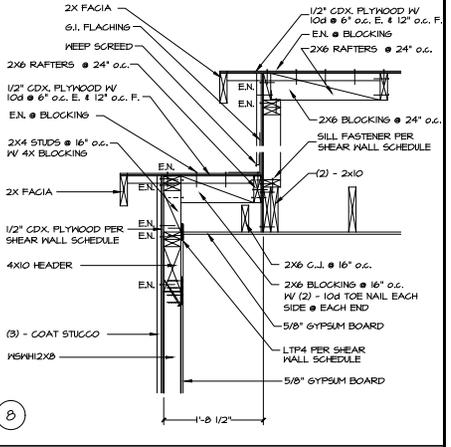
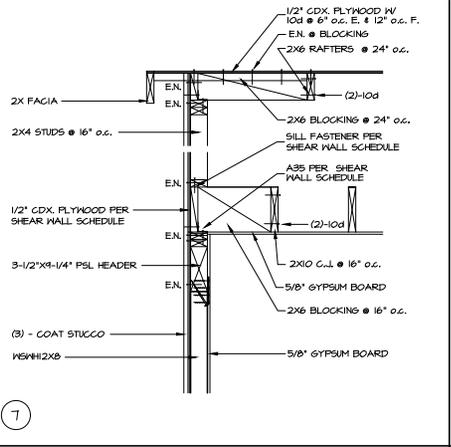
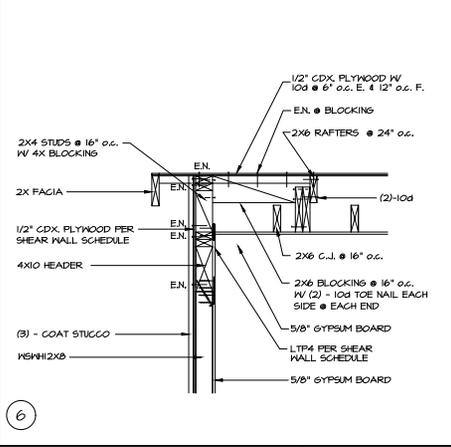
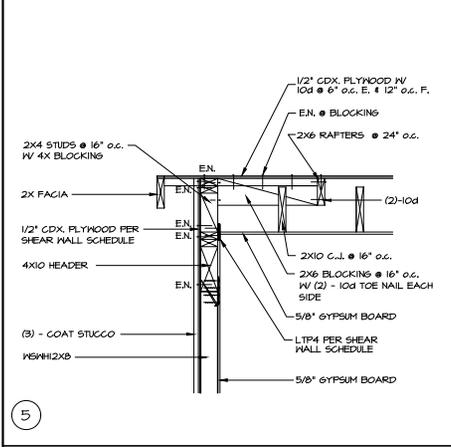
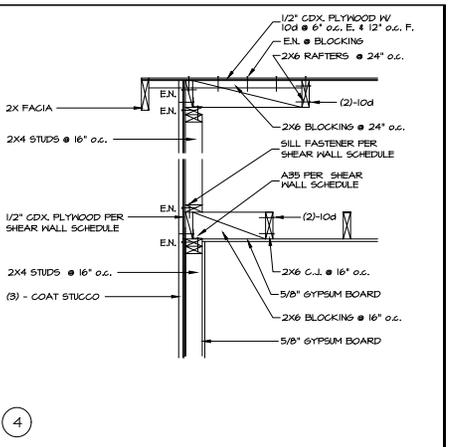
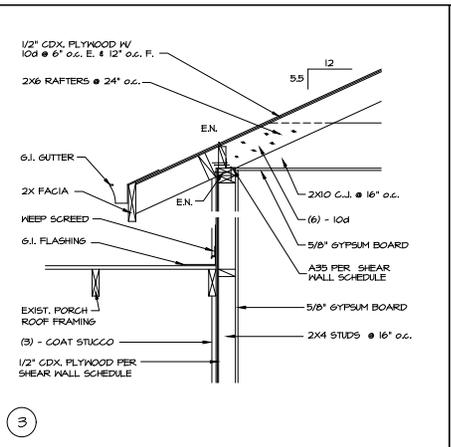
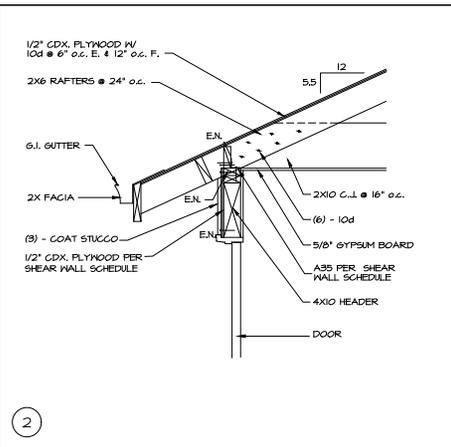
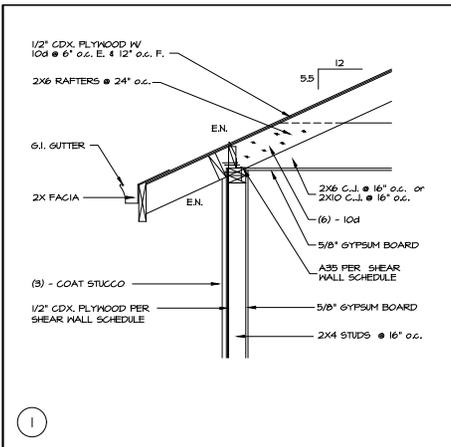
REGISTERED PROFESSIONAL ENGINEER
 No. C 37251
 Exp. 6-30-24
 CIVIL
 STATE OF CALIFORNIA

GARAGE ADDITION
KING RESIDENCE
 1451 VAN DUSEN LANE
 CAMPBELL, CALIFORNIA 95008

FOUNDATION DETAILS

| | |
|-------|------------|
| DATE | 10-1-22 |
| SCALE | 1" = 1'-0" |
| DRAWN | rs |
| JOB | 14-21 |
| SHEET | |
| | |

S4.0



| REVISIONS | BY |
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| 10-1-22 | rs |
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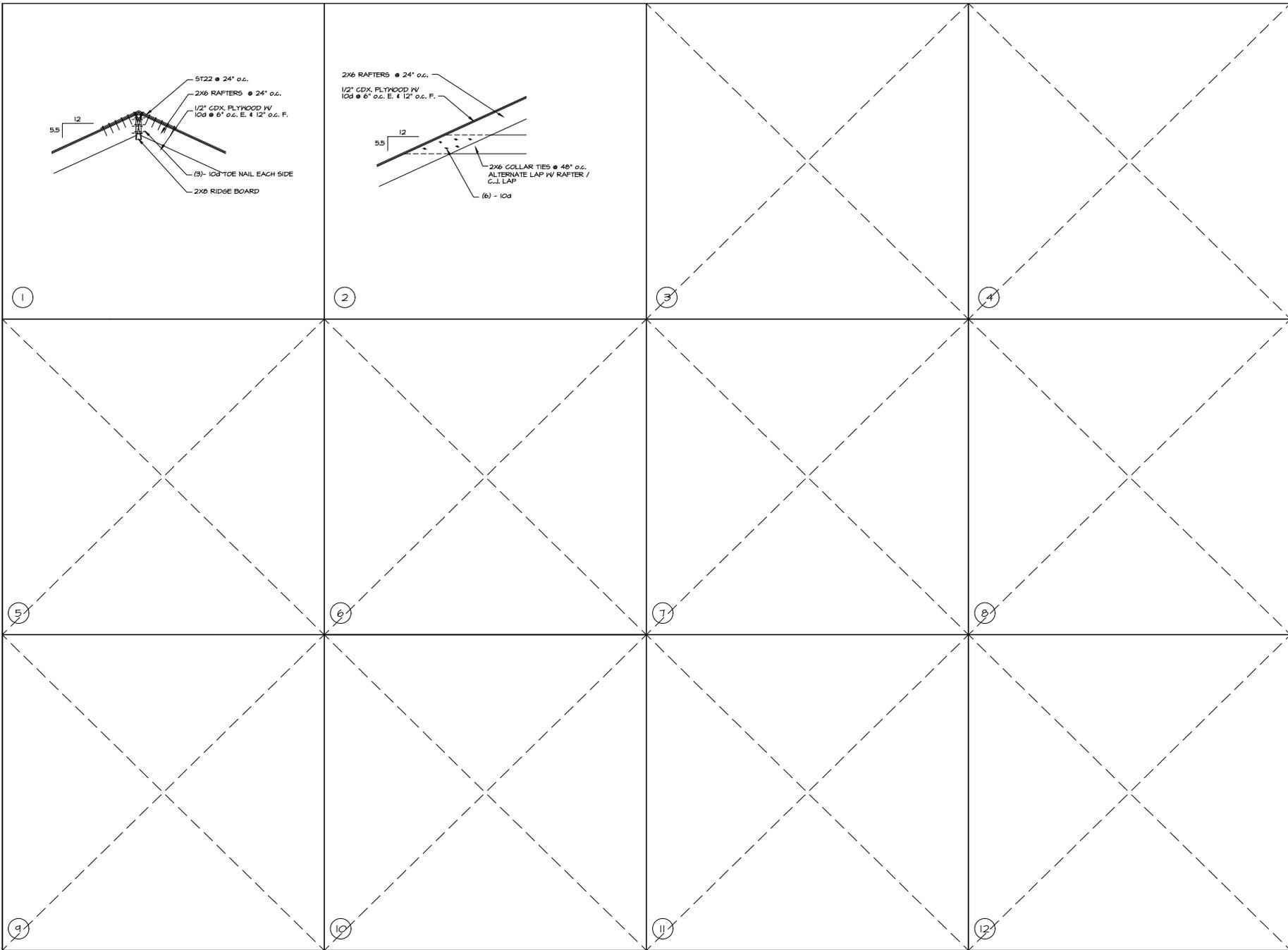
ROBERT W. STEUER - CIVIL ENGINEER
 R.C.E. 37251
 1133 FAIRVIEW AVENUE
 SAN JOSE, CALIFORNIA 95129
 (408)-981-2844

REGISTERED PROFESSIONAL ENGINEER
 NO. C 37251
 Exp. 6-30-24
 CIVIL
 STATE OF CALIFORNIA

GARAGE ADDITION
KING RESIDENCE
 1451 VAN DUSEN LANE
 CAMPBELL, CALIFORNIA 95008

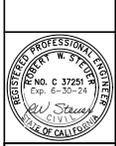
FRAMING DETAILS

DATE: 10-1-22
 SCALE: 1" = 1'-0"
 DRAWN: rs
 JOB: 19-22
 SHEET
S5.0



| REVISIONS | BY |
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| 0-1-22 | RS |
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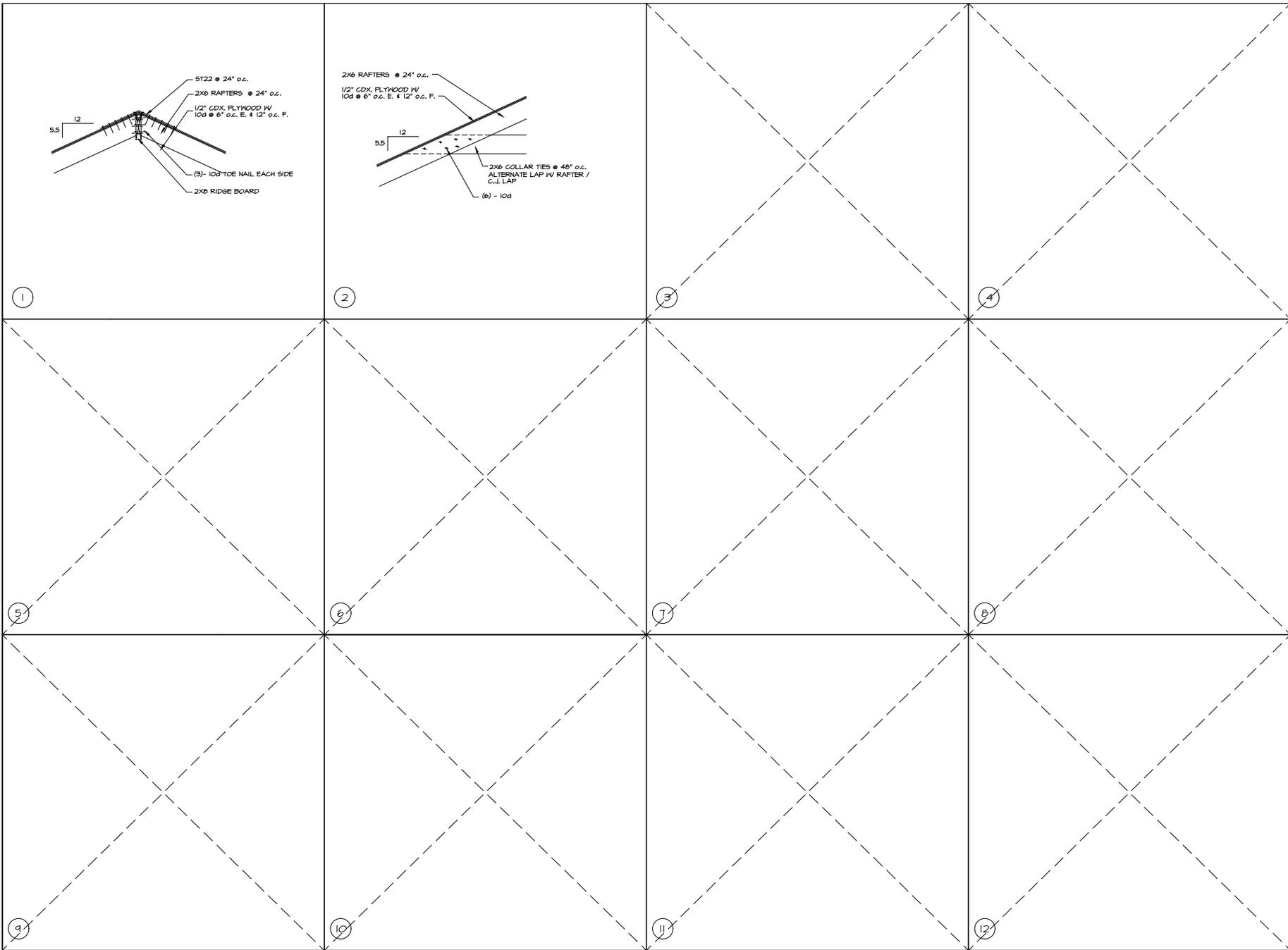
ROBERT W. STEUER - CIVIL ENGINEER
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 SAN JOSE, CALIFORNIA 95125
 (408)-981-3844



GARAGE ADDITION
KING RESIDENCE
 1451 VAN DUSEN LANE
 CAMPBELL, CALIFORNIA 95008

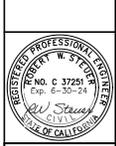
FRAMING DETAILS

DATE: 10-1-22
 SCALE: 1" = 1'-0"
 DRAWN: RS
 JOB: 14-21
 SHEET
S5.1



| REVISIONS | BY |
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| 0-1-22 | RS |
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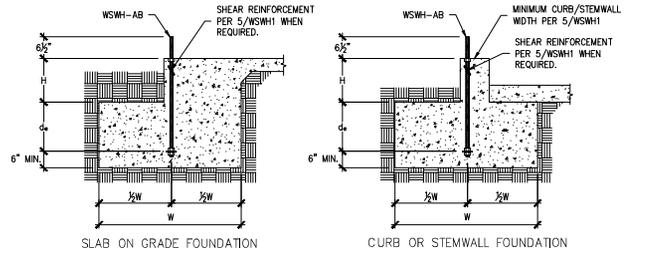
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1133 FAIRVIEW AVENUE
SAN JOSE, CALIFORNIA 95125
(408)-981-3844



GARAGE ADDITION
KING RESIDENCE
1451 VAN DUSEN LANE
CAMPBELL, CALIFORNIA 95008

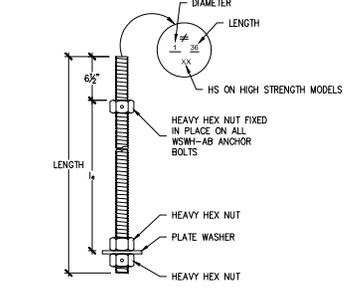
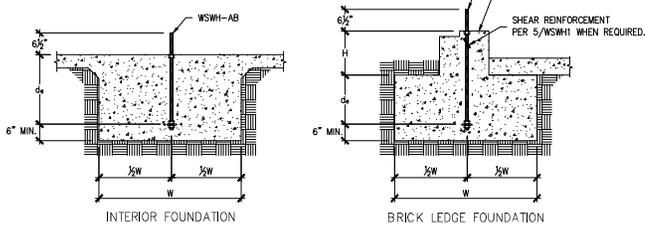
FRAMING DETAILS

DATE: 10-1-22
SCALE: 1" = 1'-0"
DRAWN: RS
JOB: 14-21
SHEET
S5.1

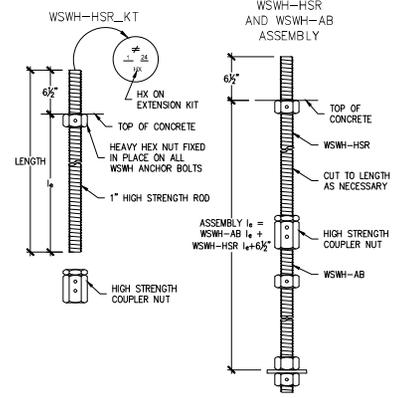


NOTES:
 1. SEE 2/WSWH1 FOR DIMENSIONS AND ADDITIONAL NOTES.
 2. SEE 5/WSWH1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
 3. MAXIMUM H = l_d OR SEE 3/WSWH1 AND 4/WSWH1 FOR l_d .

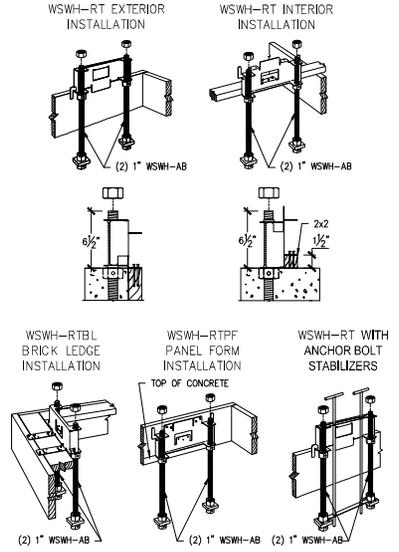
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



| WSWH PANEL MODEL | MODEL NO. | DIAMETER | LENGTH | L |
|---------------------------|---------------|----------|--------------------|--------------------|
| WSWH1 | WSWH-AB1x24 | 1" | 24" | 15 $\frac{1}{2}$ " |
| | WSWH-AB1x24HS | 1" | 24" | 15 $\frac{1}{2}$ " |
| | WSWH-AB1x30 | 1" | 30" | 21 $\frac{1}{2}$ " |
| | WSWH-AB1x30HS | 1" | 30" | 21 $\frac{1}{2}$ " |
| WSWH12, WSWH18 AND WSWH24 | WSWH-AB1x36 | 1" | 36" | 27 $\frac{1}{2}$ " |
| | WSWH-AB1x36HS | 1" | 36" | 27 $\frac{1}{2}$ " |
| | WSWH-AB1x42 | 1" | 42" | 33 $\frac{1}{2}$ " |
| | WSWH-AB1x42HS | 1" | 42" | 33 $\frac{1}{2}$ " |
| WSWH-AB1x48 | 1" | 48" | 39 $\frac{1}{2}$ " | |
| WSWH-AB1x48HS | 1" | 48" | 39 $\frac{1}{2}$ " | |



| WSWH PANEL MODEL | MODEL NO. | DIAMETER | LENGTH | L |
|---------------------------|----------------|----------|--------|--------------------|
| WSWH12, WSWH18 AND WSWH24 | WSWH-HSR1x24KT | 1" | 24" | 17 $\frac{1}{2}$ " |
| | WSWH-HSR1x36KT | 1" | 36" | 23 $\frac{1}{2}$ " |

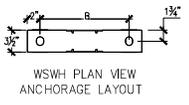
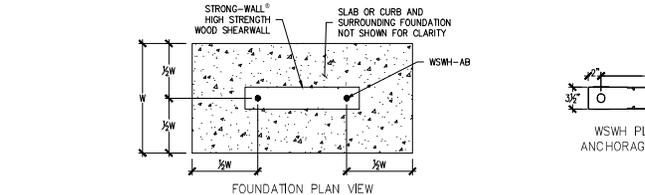


STRONG-WALL® WSWH ANCHORAGE – TYPICAL SECTIONS 1

WSWH ANCHOR BOLTS 3

WSWH ANCHOR BOLT EXTENSION 4

WSWH ANCHOR BOLT TEMPLATES 6



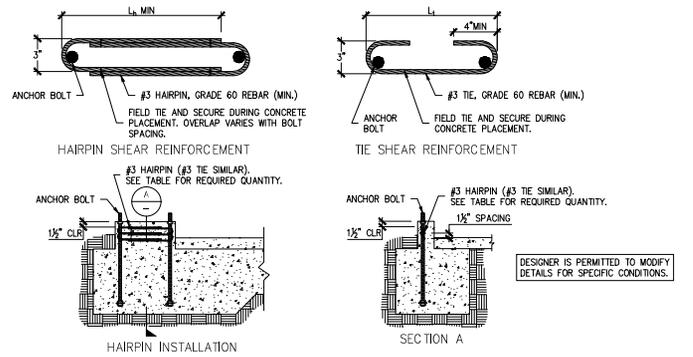
| ANCHOR BOLT LAYOUT | |
|---|---|
| STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODEL NO. | DISTANCE FROM CENTER TO CENTER OF WSWH-AB, E. (in.) |
| WSWH12 | 8 $\frac{1}{2}$ |
| WSWH18 | 14 |
| WSWH24 | 20 |

NOTES:
 1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D, ACI 318-14 CHAPTER 17 AND ACI 318-19 CHAPTER 17 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
 2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSWH-AB ANCHOR BOLT, STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A193 GRADE B7).
 3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C-F, DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3, ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-19 SECTION 17.0.3.3.
 4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
 5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE DESIGNER MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
 6. REFER TO 1/WSWH1 FOR l_d .

| WSWH ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE | | | | |
|--|--------------------|-----------------|----------------------------|---------|
| DESIGN CRITERIA | CONCRETE CONDITION | ANCHOR STRENGTH | WSWH-AB1 ANCHOR BOLT | |
| | | | ASD ALLOWABLE UPLIFT (lb.) | W (in.) |
| SEISMIC | CRACKED | STANDARD | 16,000 | 33 |
| | | HIGH STRENGTH | 17,100 | 35 |
| | | STANDARD | 34,100 | 62 |
| | UNCRACKED | STANDARD | 15,700 | 28 |
| | | HIGH STRENGTH | 17,100 | 30 |
| | | STANDARD | 33,500 | 45 |
| WIND | CRACKED | STANDARD | 11,400 | 24 |
| | | HIGH STRENGTH | 17,100 | 32 |
| | | STANDARD | 27,300 | 42 |
| | UNCRACKED | STANDARD | 12,500 | 22 |
| | | HIGH STRENGTH | 26,400 | 36 |
| | | STANDARD | 36,800 | 44 |

| WSWH ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE | | | | |
|--|--------------------|-----------------|----------------------------|---------|
| DESIGN CRITERIA | CONCRETE CONDITION | ANCHOR STRENGTH | WSWH-AB1 ANCHOR BOLT | |
| | | | ASD ALLOWABLE UPLIFT (lb.) | W (in.) |
| SEISMIC | CRACKED | STANDARD | 16,000 | 31 |
| | | HIGH STRENGTH | 17,100 | 33 |
| | | STANDARD | 33,900 | 49 |
| | UNCRACKED | STANDARD | 16,300 | 27 |
| | | HIGH STRENGTH | 17,100 | 28 |
| | | STANDARD | 34,000 | 43 |
| WIND | CRACKED | STANDARD | 10,200 | 21 |
| | | HIGH STRENGTH | 17,100 | 30 |
| | | STANDARD | 20,000 | 33 |
| | UNCRACKED | STANDARD | 12,800 | 21 |
| | | HIGH STRENGTH | 28,900 | 36 |
| | | STANDARD | 36,800 | 42 |

| WSWH ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE | | | | |
|--|--------------------|-----------------|----------------------------|---------|
| DESIGN CRITERIA | CONCRETE CONDITION | ANCHOR STRENGTH | WSWH-AB1 ANCHOR BOLT | |
| | | | ASD ALLOWABLE UPLIFT (lb.) | W (in.) |
| SEISMIC | CRACKED | STANDARD | 16,000 | 27 |
| | | HIGH STRENGTH | 17,100 | 29 |
| | | STANDARD | 34,700 | 44 |
| | UNCRACKED | STANDARD | 15,700 | 23 |
| | | HIGH STRENGTH | 17,100 | 25 |
| | | STANDARD | 33,900 | 38 |
| WIND | CRACKED | STANDARD | 11,600 | 20 |
| | | HIGH STRENGTH | 17,100 | 26 |
| | | STANDARD | 24,400 | 36 |
| | UNCRACKED | STANDARD | 12,400 | 18 |
| | | HIGH STRENGTH | 27,700 | 30 |
| | | STANDARD | 36,800 | 37 |



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

| STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL SHEAR ANCHORAGE | | | | | | |
|---|------------------|------------------------------|--------------------------------|------------------------------|-----------------------------------|-----------|
| MODEL | L OR L (in.) | SHEAR REINFORCEMENT | MIN. CURB/STEMWALL WIDTH (in.) | SHEAR REINFORCEMENT | ASD ALLOWABLE SHEAR LOAD, V (lb.) | |
| | | | | | MIN. CURB/STEMWALL WIDTH (in.) | UNCRACKED |
| WSWH12 | 10 $\frac{1}{2}$ | (1) #3 TIE | 6 | SEE NOTE 7 | 6 | 1,080 |
| WSWH18 | 15 | (2) #3 HAIRPINS ^A | 6 | (1) #3 HAIRPIN | 6 | 770 |
| WSWH24 | 19 | (2) #3 HAIRPINS ^B | 6 | (2) #3 HAIRPINS ^B | 6 | 770 |

NOTES:
 1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-19, ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
 2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
 3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F, DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC SHEAR REINFORCEMENT DESIGNS CONFORM TO ACI 318-19, SECTION 17.10.6.3, ACI 318-14, SECTION 17.2.3.5.3
 4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B.
 5. ADDITIONAL TIES MAY BE REQUIRED AT GARAGE CURB OR STEMWALL INSTALLATIONS BELOW ANCHOR REINFORCEMENT PER DESIGNER.
 6. USE (1) #3 HAIRPIN FOR WSWH18 WHEN STANDARD STRENGTH ANCHOR IS USED.
 7. USE (1) #3 TIE FOR WSWH12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
 8. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSWH SHEAR ANCHORAGE SOLUTIONS.
 9. CONCRETE EDGE DISTANCE FOR ANCHORS MUST COMPLY WITH ACI 318-19 SECTION 17.9.2, ACI 318-14 SECTION 17.7.2 AND ACI 318-11 SECTION D.8.2.
 10. THE DESIGNER MAY SPECIFY ALTERNATE SHEAR ANCHORAGE.

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI 2

STRONG-WALL® WSWH SHEAR ANCHORAGE SCHEDULE AND DETAILS 5

REVISIONS

| NO. | DATE | REVISIONS |
|-----|------------|--------------------------|
| 1 | 02/08/2021 | FIRST RELEASE - 2018 IBC |
| 2 | 03/16/2021 | 2021 IBC REVISIONS |
| 3 | 04/28/2022 | ADDED WSWH18 MODELS |

STRONG-WALL® WSWH ANCHORAGE DETAILS ENGINEERED DESIGNS

STRONG-TIE® Strong-Tie Co. Inc.
 5505 W. Lin Position Blvd.
 Denver, CO 80249
 Tel: (800) 999-0099
 Website: www.strongtie.com

THIS IS NO EQUAL

NAME: _____ DATE: 04-28-2022
 SCALE: _____ N.T.S.
 CHECKED: _____
 SHEET: _____
 WSWH1
 OF SHEETS
 JOB NO. _____

FRESH CONCRETE AND MORTAR APPLICATION

BEST MANAGEMENT PRACTICES FOR:

- Masons and bricklayers
- Sidewalk construction crews
- Patio construction workers
- Construction inspectors
- General contractors
- Home builders
- Developers

- When cleaning up after driveway or sidewalk construction, wash fines onto dirt areas, not down the driveway or into the street or storm drain.
- Place bag hales or other erosion controls down-slope to capture runoff carrying mortar or cement before it reaches the storm drain.

GENERAL BUSINESS PRACTICES

- Both at your yard and the construction site, always store both dry and wet materials under cover, protected from rainfall and runoff. Protecting materials from wind.
- Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from lawns, storm drains, rainfall, and runoff.
- Wash out concrete mixers only in designated wash-out areas in your yard, where the water will flow into containment ponds or sump pits. Whenever possible, recycle washout by pumping back into mixers for reuse. Never dispose of washout into the street, storm drains, drainage ditches, or streams.

STORM DRAIN POLLUTION FROM MASONRY AND PAVING

Fresh concrete and cement-related mortars that wash into lakes, streams, or creeks are toxic to fish and the aquatic environment. Disposing of these materials to the storm drains or creeks causes serious problems and is prohibited by law.

DURING CONSTRUCTION

- Don't mix up more fresh concrete or cement than you will use in a day.
- Set up and operate small mixers on tarps or heavy plastic drop cloths.

LANDSCAPING, GARDENING, AND POOL MAINTENANCE

BEST MANAGEMENT PRACTICES FOR THE:

- Landscapers
- Gardeners
- Swimming pool/spa service and repair workers
- General contractors
- Home builders
- Developers

GENERAL BUSINESS PRACTICES

- Protect stockpiles and landscaping materials from wind and rain by storing them under tarps or secured plastic sheeting.
- Store pesticides, fertilizers, and other chemicals indoors or in a shed or storage cabinet.
- Schedule grading and excavation projects for dry weather.
- Use temporary check dams or ditches to divert runoff away from storm drains.
- Protect storm drains with hay bales or other erosion controls.
- Revegetation is an excellent form of erosion control for any site.

POOL/FOUNTAIN/SPA MAINTENANCE

- Never discharge pool or spa water to a street or storm drain.

OR

- When emptying a pool or spa, let chlorine dissipate for a few days, and then recycle/reuse water by draining it gradually onto a landscaped area.

- Contact the local sewage treatment authority. You may be able to discharge to the sanitary sewer by running a hose to a utility sink or sewer pipe cleanout junction.
- Do not use copper-based algaecides unless absolutely necessary. Control algae with chlorine or other alternatives to copper-based pool chemicals. Copper is a powerful herbicide. Sewage treatment technology cannot remove all of the metals that enter a treatment plant.

LANDSCAPING/GARDEN MAINTENANCE

BEST MANAGEMENT PRACTICES FOR THE:

- Use up pesticides. Rinse containers, and use rinse water as product. Dispose of rinsed containers in the trash.
- Dispose of unused pesticide as hazardous waste.
- Collect lawn and garden clippings, pruning waste, and tree trimmings. Chip if necessary, and compost.
- In communities with curbside yard waste recycling, leave clippings and pruning waste for pickup in approved bags or containers. Or, take to a landfill that composts yard waste.
- Do not place yard waste in gutters.
- Do not blow or rake leaves, etc. into the street.

STORM DRAIN POLLUTION FROM LANDSCAPING AND SWIMMING POOL MAINTENANCE

Many landscaping activities decompose soils and increase the likelihood that earth and garden chemicals will runoff into the storm drains during irrigation or when it rains. Swimming pool water containing chlorine and copper-based algaecides should never be discharged to storm drains. These chemicals are toxic to aquatic life.

HEAVY EQUIPMENT OPERATION

BEST MANAGEMENT PRACTICES FOR THE:

- Vehicle and equipment operators
- Site supervisors
- General contractors
- Home builders
- Developers

SITE PLANNING AND PREVENTIVE VEHICLE MAINTENANCE

- Designate one area of the construction site, well away from streams or storm drain inlets, for auto and equipment parking, refueling, and routine vehicle and equipment maintenance.
- Maintain all vehicles and heavy equipment. Inspect frequently for leaks.
- Perform major maintenance, repair jobs, vehicle and equipment washing off site.
- If you must drain and replace motor oil, radiator coolant, or other fluids on site, use drip pans or drop cloths to catch drips and spills. Collect all spent fluids, store in separate containers, and recycle whenever possible.
- Do not use diesel oil to lubricate equipment or parts.
- Clean up spills immediately when they happen.

- Never hose down dirty pavement or impermeable surfaces where fluids have spilled. Use dry cleaning method (absorbent materials, cat litter, and/or rags) whenever possible. If you must use water, use just enough to keep the dust down.
- Sweep up spilled dry materials immediately. Never attempt to wash them away with water or bury them. Use as little water as possible for dust control.
- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- Report significant spills to the appropriate spill response agencies immediately.

STORM DRAIN POLLUTION FROM HEAVY EQUIPMENT ON THE CONSTRUCTION SITE

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze or other fluids on the construction site are common sources of storm water pollution. Prevent spills and leaks by inspecting equipment from runoff channels, and by watching for leaks and other maintenance problems. Remove construction equipment from the site as soon as possible.

PAINTING AND APPLICATION OF SOLVENTS AND ADHESIVES

BEST MANAGEMENT PRACTICES FOR THE: PAINTING/CLEANUP

- Painters
- Vehicle and
- Plasterers
- Graphic artists
- Dry wall crews
- Floor covering installers
- General contractors
- Home builders
- Developers

- Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.

- For water based paints, paint out brushes to the extent possible, and rinse to the sanitary sewer.

Keep all liquid paint products and wastes away from the gutter, street, and storm drains. Liquid residues from paints, thinners, solvents, glues and cleaning fluids are hazardous wastes. When they are thoroughly dry, empty paint cans, spent brushes, rags, and drop cloths may be disposed of as trash.

- For oil based paints, paint out brushes to the extent possible, filter and reuse thinners and solvents. Dispose of excess liquids and residue as hazardous waste.

WHAT CAN YOU DO?

- Recycle/reuse leftover paints whenever possible.
- Recycle excess water-based paint, or use up. Dispose of excess liquid, including sludges, as hazardous waste.
- Reuse leftover oil-based paint. Dispose of excess liquid, including sludges, as hazardous waste.

PAINT REMOVAL

- Chemical paint stripping residue is a hazardous waste.
- Chips and dust from marine paints or paints containing lead or tributyl tin are hazardous wastes. Dry sweep and dispose of appropriately.
- Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up and disposed as trash.
- When stripping or cleaning building exteriors with high-pressure water, block storm drains. Wash water onto a dirt area and guide into soil. Or, check with the local wastewater treatment authority to find out if you can collect (pump or vacuum) building washing water and dispose to the sanitary sewer.

STORM DRAIN POLLUTION FROM PAINTS, SOLVENTS, AND ADHESIVES

All paints, solvents, and adhesives contain chemicals that are harmful to the wildlife in our creeks and Bay. Toxic chemicals may come from liquid or solid products or from cleaning residues or rags. It is especially important not to clean brushes in an area where paint residue can flow to a gutter, street, or storm drain.

ORDINANCE OF THE CITY OF CAMPBELL ESTABLISHING REQUIREMENTS FOR STORM WATER POLLUTION CONTROL

A. Criminal Penalties. Any person who violates any provision of this article shall be guilty of a misdemeanor and upon conviction thereof shall be punishable by imprisonment for a term not to exceed six (6) months or by a fine not to exceed \$1000 or by both. Each and every violation of this chapter shall constitute a separate offense. Every day each such violation continues shall be an additional offense.

B. Civil Penalties. Any person who violates any provision of this chapter shall be civilly liable to the City of Campbell in a sum not to exceed \$1000 per day for each day in which the violation occurs. Each and every violation of this chapter shall constitute a separate offense. Every day each violation continues shall be an additional offense.

C. Civil Liability. Any person who violates any provision of this chapter shall be civilly liable to the City of Campbell for all costs, including attorneys fees, associated with the investigation and remediation of environmental conditions caused by the discharge of pollutants into the Municipal Storm Drain System or a Watercourse in violation of this chapter.

D. Remedies Cumulative. The remedies provided for in this chapter are cumulative and not exclusive and shall be in addition to any and all other remedies available to the City of Campbell under State and Federal Law.

Blueprint for a Clean Bay
BEST MANAGEMENT PRACTICES FOR THE CONSTRUCTION INDUSTRY.
 SANTA CLARA VALLEY NONPOINT SOURCE POLLUTION CONTROL PROGRAM

EARTH MOVING ACTIVITIES

BEST MANAGEMENT PRACTICES FOR THE:

- Bulldozers, backhoes, and grading machine operators
- Dump truck drivers
- Site supervisors
- General contractors
- Home builders
- Developers

DETECTING CONTAMINATED SOIL OR GROUNDWATER

As you know, contaminated groundwater is a common problem in the Santa Clara Valley. It is essential that all contractors and subcontractors involved in excavation and grading know what to look for in detecting contaminated soil or groundwater, and test ponded groundwater before pumping. See Blueprint for a Clean Bay, a construction best management practices guide available from the Santa Clara Valley Nonpoint Source Pollution Control Program, for details.

WATCH FOR ANY OF THESE CONDITIONS:

- Unusual soil conditions, discoloration, or odor
- Abandoned underground tanks
- Abandoned wells
- Buried barrels, debris, or trash

STORM DRAIN POLLUTION FROM EARTH-MOVING ACTIVITIES

Soil excavation and grading operations loosen large amounts of soil that can flow or blow into storm drains if handled improperly. Soil erodes due to a combination of decreased soil stability, increased runoff, and increased flow velocity. Some of the most effective erosion control practices reduce the amount of runoff crossing a site and slow the flow with check dams or roughened ground surfaces.

GENERAL BUSINESS PRACTICES

- Schedule excavation and grading work for dry weather.
- Perform major equipment repairs away from the job-site.
- When refueling or vehicle/equipment maintenance must be done on site, designate a location away from storm drains.
- Do not use diesel oil to lubricate equipment or parts.

DURING CONSTRUCTION

- Avoid paving and seal coating in wet weather, or when rain is forecast before fresh pavement will have time to cure.
- Cover and seal catch basins and manholes when applying seal coat, slurry seal, fog seal, etc.
- Use check dams, ditches, or berms to divert runoff around excavations.

ROADWORK AND PAVING

BEST MANAGEMENT PRACTICES FOR THE:

- Road Crews
- Driveway/sidewalk/parking lot construction crews
- Seal coat contractors
- Operators of grading equipment paving machines dump trucks concrete mixers
- Construction inspectors
- General contractors
- Developers

WHAT CAN YOU DO?

- Develop and implement erosion/sediment control plans for embankments.
- Schedule excavation and grading work for dry weather.
- Check for and repair leaking equipment.
- Perform major equipment repairs in designated areas at your yard, away from the construction site.
- When refueling or vehicle/equipment maintenance must be done on site, designate a location away from storm drains and creeks.
- Do not use diesel oil to lubricate equipment or parts.
- Recycle used oil, concrete, broken asphalt, etc. whenever possible.

DURING CONSTRUCTION

- Avoid paving and seal coating in wet weather, or when rain is forecast before fresh pavement will have time to cure.
- Cover and seal catch basins and manholes when applying seal coat, slurry seal, fog seal, etc.
- Use check dams, ditches, or berms to divert runoff around excavations.

GENERAL CONSTRUCTION AND SITE SUPERVISION

BEST MANAGEMENT PRACTICES FOR THE:

- Construction industry

WHAT CAN YOU DO?

- Designate one area of the site for auto parking, vehicle refueling, and routine equipment maintenance. The designated area should be well away from streams or storm drain inlets, and bermed if necessary. Make major repairs off-site.
- Keep materials out of the rain-prone runoff contamination at the source. Cover exposed piles of soil of construction materials with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.
- Keep pollutants off exposed surfaces. Place trash cans and recycling receptacles around the site to minimize litter.
- Clean up leaks, drips, and other spills immediately so they do not contaminate soil or groundwater or leave residue on paved surfaces.
- Never hose down "dirty" pavement or surfaces where materials have spilled. Use dry cleanup methods whenever possible. If you must use water, use just enough to keep the dust down.
- Cover and maintain dumpsters. Check frequently for leaks. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. Never clean a dumpster by hosing it down on the construction site.
- Make sure portable toilets are in good working order. Check frequently for leaks.

ASPHALT/CONCRETE REMOVAL

- Avoid creating excess dust when breaking asphalt or concrete.
- After breaking up pavement, be sure to remove all chunks and pieces.
- Make sure broken pavement does not come in contact with rainfall or runoff.
- Shovel or vacuum saw cut slurry and remove from the site. Cover or barricade storm drain during saw-cutting if necessary.
- Never hose down streets to clean up tracked dirt.

STORM DRAIN POLLUTION FROM ROADWORK

Road paving, surfacing, and pavement removal happens right in the street, where there are numerous opportunities for storm drain contamination by asphalt, saw cut slurry, or excavated material. Extra planning is required to store and dispose of materials properly and guard against pollution of storm drains and creeks.

MATERIALS/WASTE/HANDLING

BEST MANAGEMENT PRACTICES FOR THE:

- Practice Source Reduction—minimize waste when you order materials. Order only the amount you need to finish the job.
- Use recyclable materials whenever possible.
- Dispose of all wastes properly. Many construction materials and wastes, including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and cleaned vegetation can be recycled. (See the references list of recyclers at the back of Blueprint for a Clean Bay.) Materials that cannot be recycled must be taken to an appropriate landfill or disposed of as hazardous waste. Never bury waste materials or leave them in the street or near a creek or stream bed.

BEST MANAGEMENT PRACTICES FOR STORM WATER POLLUTION PREVENTION

BEST MANAGEMENT PRACTICES FOR THE:

- Practice Source Reduction—minimize waste when you order materials. Order only the amount you need to finish the job.
- Use recyclable materials whenever possible.
- Dispose of all wastes properly. Many construction materials and wastes, including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and cleaned vegetation can be recycled. (See the references list of recyclers at the back of Blueprint for a Clean Bay.) Materials that cannot be recycled must be taken to an appropriate landfill or disposed of as hazardous waste. Never bury waste materials or leave them in the street or near a creek or stream bed.

STORM DRAIN POLLUTION FROM CONSTRUCTION ACTIVITIES

Construction sites are common sources of storm water pollution. Materials and wastes that blow or wash into a storm drain, gutter or street have a direct impact on local creeks and the Bay. As a contractor, site supervisor, owner or operator of a site, you may be responsible for any environmental damage caused by your subcontractors or employees.

Spill Response Agencies

1. Dial 911
2. Santa Clara Valley Water District Environmental Compliance Division (650) 937-0710
3. Governor's Office of Emergency Services Warning Center (800) 852-7550 (24 hours).

Local Pollution Control Agencies

- Santa Clara County Office of Toxics and Solid Waste Management (408) 441-1195
- Santa Clara Valley Water District (408) 927-0710
- San Jose/Santa Clara Water Pollution Control Plant (408) 945-3300
- Serving Campbell, Cupertino, Los Gatos, Milpitas, Monte Sereno, San Jose, Santa Clara and Saratoga
- Sunnyvale Water Pollution Control Plant (408) 730-7270
- Palo Alto Regional Water Quality Control Plant (415) 329-2598
- Serving East Palo Alto, Los Altos, Los Altos Hills, Mountain View, Palo Alto, and Stanford

Note: The property owner and the contractor share ultimate responsibility for the activities that occur on a construction site. Owner and contractor may be held responsible for any environmental damage caused by the subcontractors or employees.

| | |
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| Drawn By: | 07/01/03 |
| Checked By: | |
| Designed By: | |
| Date: | 07/01/03 |
| Revision: | |
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BLUEPRINT FOR A CLEAN BAY
 PLAN FOR THE IMPROVEMENT OF ENCROACHMENT PERMIT NO.



SCALE: N.T.S.
 SHEET: OF



2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

| SECTION | REVISION | DATE | DESCRIPTION |
|---------|----------|------|---|
| 1 | | | MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "base reactive organic gas (ROG) mixture" per weight of compound added, expressed as a percentage of a given 1.0% ROG. |
| 2 | | | Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701. |
| 3 | | | MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood. |
| 4 | | | PRODUCT-WEIGHTED MIR (PWMI). The sum of all weighted MIR for all ingredients in a product subject to this article. The PWMI is the total product reactively expressed to hundreds of a gram of ozone formed per gram of product (excluding container and packaging). |
| 5 | | | Note: PWMI is calculated according to equations found in CCR, Title 17, Section 94821 (a). |
| 6 | | | REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere. |
| 7 | | | VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94506(a). |
| 8 | | | 4.503 FINISH APPLIQUES. Any installed gas fireplace shall be a direct-vent sealed combustion type. Any installed add-on or pellet stove shall comply with U.S. EPA Clean Air Act Source Performance Standards (CAPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances. |
| 9 | | | 4.504 POLLUTANT CONTROL. 4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, ducts on the construction site and until final stop of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet material or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system. |
| 10 | | | 4.504.2 FINISH MATERIAL. Pollutant Control. Finish materials shall comply with the section. |
| 11 | | | 4.504.3 Adhesives, Sealants and Caulks. Adhesives, sealant and caulk used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply: 1. Adhesive, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules unless otherwise specified in Section 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1163 prohibition on the use of certain toxic compounds (chlorine, ethylene dichloride, methylene chloride, perchloroethylene and isocyanates), except for aerosol products, as specified in Subsection 2 below. 2. Aerosol adhesives, and smaller unit size of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not contain more than 18 fluid ounces) shall comply with adhesive VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with section 94507. |
| 12 | | | 4.504.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the AIA Architectural Supplement Control Measures, as shown in Table 4.504.3, unless more stringent local limits are in effect. Table 4.504.3 shall be determined by the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subdivisions 4.51.1, 4.51.2, and 4.51.3 of the California Air Resources Board, Suggested Control Measures, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply. |
| 13 | | | 4.504.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94502(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94502(a)(1) and (f) of California Code of Regulations, Title 17, commencing with Section 94502, and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limit of Regulation 8, Rule 46. |
| 14 | | | 4.504.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following: 1. Manufacturer's product specification. 2. Field verification of on-site product containers. |
| 15 | | | TABLE 4.504.1 - ADHESIVE VOC LIMIT (Less Water and Less Exempt Compounds in Grams per Liter) |
| 16 | | | ARCHITECTURAL APPLICATIONS |
| 17 | | | INDOOR CARPET ADHESIVES |
| 18 | | | CARPET PAD ADHESIVES |
| 19 | | | OUTDOOR CARPET ADHESIVES |
| 20 | | | WOOD FLOORING ADHESIVES |
| 21 | | | RUBBER FLOOR ADHESIVES |
| 22 | | | SUBFLOOR ADHESIVES |
| 23 | | | CERAMIC TILE ADHESIVES |
| 24 | | | VCT & ASPHALT TILE ADHESIVES |
| 25 | | | DRYWALL & PANEL ADHESIVES |
| 26 | | | COVE BASE ADHESIVES |
| 27 | | | MULTIPURPOSE CONSTRUCTION ADHESIVE |
| 28 | | | STRUCTURAL GLAZING ADHESIVES |
| 29 | | | SINGLE PLY ROOF MEMBRANE ADHESIVES |
| 30 | | | OTHER ADHESIVES NOT LISTED |
| 31 | | | SPECIAL APPLICATIONS |
| 32 | | | PVC WELDING |
| 33 | | | CPVC WELDING |
| 34 | | | ABS WELDING |
| 35 | | | PLASTIC CEMENT WELDING |
| 36 | | | ADHESIVE PRIMER FOR PLASTIC |
| 37 | | | CONTACT ADHESIVE |
| 38 | | | SPECIAL PURPOSE CONTACT ADHESIVE |
| 39 | | | STRUCTURAL WOOD MEMBER ADHESIVE |
| 40 | | | TOP & TRIM ADHESIVE |
| 41 | | | SUBSTRATE SPECIFIC APPLICATIONS |
| 42 | | | METAL TO METAL |
| 43 | | | PLASTIC FOAM |
| 44 | | | POROUS MATERIAL (EXCEPT WOOD) |
| 45 | | | WOOD |
| 46 | | | FIBERGLASS |
| 47 | | | 1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED. 2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168. |

| TABLE 4.504.2 - SEALANT VOC LIMIT (Less Water and Less Exempt Compounds in Grams per Liter) | |
|---|-----------|
| SEALANTS | VOC LIMIT |
| ARCHITECTURAL | 250 |
| MARINE DECK | 760 |
| NONMEMBRANE ROOF | 300 |
| ROADWAY | 250 |
| SINGLE PLY ROOF MEMBRANE | 450 |
| OTHER | 450 |
| SEALANT PRIMERS | |
| ARCHITECTURAL | 250 |
| NON POROUS | 250 |
| POROUS | 770 |
| MICROFILL BITUMINOUS | 550 |
| MARINE DECK | 760 |
| OTHER | 760 |

| TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS (1) | |
|--|-----------|
| COATING CATEGORY | VOC LIMIT |
| FLAT COATINGS | 50 |
| NONFLAT COATINGS | 100 |
| NONFLAT-HIGH GLOSS COATINGS | 150 |
| SPECIALTY COATINGS | |
| ALUMINUM ROOF COATINGS | 400 |
| BASEMENT SPECIALTY COATINGS | 400 |
| BITUMINOUS ROOF COATINGS | 350 |
| BITUMINOUS ROOF PRIMERS | 350 |
| BOND BREAKERS | 350 |
| CONCRETE CURING COMPOUNDS | 350 |
| CONCRETE/TEMPERARY SEALERS | 100 |
| DRIVWAY SEALERS | 50 |
| DRY FLOOR COATINGS | 100 |
| FAUX FINISHING COATINGS | 350 |
| FIRE RESISTIVE COATINGS | 350 |
| FLOOR COATINGS | 100 |
| FORM RELEASE COMPOUNDS | 250 |
| GRAPHIC ARTS COATINGS (SIGN PAINTS) | 400 |
| HIGH TEMPERATURE COATINGS | 420 |
| INDUSTRIAL MAINTENANCE COATINGS | 250 |
| LOW SOLIDS COATINGS | 120 |
| MAGNESITE CEMENT COATINGS | 400 |
| MASSTIC TEXTURE COATINGS | 100 |
| METALLIC PIGMENTED COATINGS | 500 |
| MULTICOAT COATINGS | 250 |
| PRETREATMENT WASH PRIMERS | 420 |
| PRIMERS, SEALERS, & UNDERCOATERS | 100 |
| REACTIVE PENETRATING SEALERS | 350 |
| RECYCLED COATINGS | 250 |
| ROOF COATINGS | 50 |
| RUST PREVENTATIVE COATINGS | 250 |
| SHELLAC | 730 |
| CLEAR | 550 |
| OPALQUE | 100 |
| STONE CONSOLIDANTS | 450 |
| SWIMMING POOL COATINGS | 340 |
| TRAFFIC MARKING COATINGS | 100 |
| TUB & TILE REFINISH COATINGS | 420 |
| WATERPROOFING MEMBRANES | 250 |
| WOOD COATINGS | 275 |
| WOOD PRESERVATIVES | 350 |
| ZINC-RICH PRIMERS | 340 |
| 1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS. 2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THIS TABLE. 3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD. | |

| TABLE 4.504.5 - FORMALDEHYDE EMISSIONS LIMITS | |
|---|---------------|
| PRODUCT | CURRENT LIMIT |
| HARDWOOD PLYWOOD VENEER CORE | 0.05 |
| HARDWOOD PLYWOOD COMPOSITE CORE | 0.05 |
| PARTICLE BOARD | 0.09 |
| MEDIUM DENSITY FIBERBOARD | 0.15 |
| THIN MEDIUM DENSITY FIBERBOARD | 0.11 |
| 1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOODS AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 9120 THROUGH 9120.12. 2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (3.18 MM). | |

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the testing and product requirements of at least one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01500).
3. GREENLAB 10 at the Gold Level.
4. Scientific Certifications Systems Indoor Advantage Gold.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label Plus Program.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESIDENT FLOORING SYSTEMS. When resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall comply with the following:

1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01500), verified as a CHPS Low Emission Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
2. Products certified under the Floor Covering Institute (FCI) FloorCovering program.
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorCovering program.
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01500).

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the walls or ceiling of the building shall meet the requirements for formaldehyde as specified in AIA/CES Air Toxics Control Measure for Composite Wood (17 CCR 91200 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5.

1. Product labeled and installed as meeting the Composite Wood products regulation (see CCR, Title 17, Section 91200, et seq.).
2. Other wood products installed as meeting the 0.05 ppm HCHO standard of the Engineered Wood Association, the Australian AS/NZS 2599, European EN 339 standards, and Canadian CSA C24 (09), CAN-110 and CSA 1028 standards.
3. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall be installed per provisions of the California Building Standards Code.

4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground forms required to have a vapor retarder by the California Building Code, Chapter 19 shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-to-6 inch (101.6 mm) thick base of 1/2 inch (12.7 mm) or larger dense aggregate shall be installed with a vapor barrier in direct contact with concrete and a concrete tie design, which will address bleeding, shrinkage, and curing, shall be used. For additional information, see American Concrete Institute, ACI 308.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor materials shall not be enclosed when the framing members require 11 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
2. Moisture readings shall be taken at a spot 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with moisture content acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans shall be controlled by a humidity sensor.
3. Humidity controls shall be capable of adjusting between a relative humidity range less than or equal to 60% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.
4. A humidity control may be a separate component to the exhaust fan and is not required to be integrated (i.e., built-in).

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or bidet/hot tub combination.
2. Lighting integral to bathroom exhaust fans shall comply with the California Energy Code.

4.507 ENVIRONMENTAL COMFORT

4.507.1 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual 2 - 2011 (Residential Load Calculations), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual 0 - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual 8 - 2014 (Residential Equipment Selection) or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system's functionality are acceptable.

CHAPTER 7 INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs approved by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION (HCD). When required by the enforcing agency, its owner or the responsible entity using the homeowner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other qualifications or qualifications acceptable to the enforcing agency, the following qualifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party experiential training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

4.504.5.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label Plus Program.

4.504.5.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESIDENT FLOORING SYSTEMS. When resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall comply with the following:

1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01500), verified as a CHPS Low Emission Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
2. Products certified under the Floor Covering Institute (FCI) FloorCovering program.
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorCovering program.
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01500).

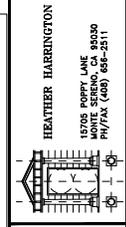
4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the walls or ceiling of the building shall meet the requirements for formaldehyde as specified in AIA/CES Air Toxics Control Measure for Composite Wood (17 CCR 91200 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5.

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and installed as meeting the Composite Wood products regulation (see CCR, Title 17, Section 91200, et seq.).
4. Other wood products installed as meeting the 0.05 ppm HCHO standard of the Engineered Wood Association, the Australian AS/NZS 2599, European EN 339 standards, and Canadian CSA C24 (09), CAN-110 and CSA 1028 standards.
5. Other methods acceptable to the enforcing agency.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other writings acceptable to the enforcing agency which demonstrate substantial compliance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checks.



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SECTIONS

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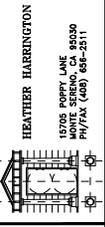
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DATE: 6/8/2021

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2019 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN CODE). DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.



2019 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)



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SECTIONS

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| 101 | CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL | 101 | 101 |
| 101 | 301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklist contained in this code. Voluntary green building measures are also included in the application checklist and may be included at the design and construction of structures covered by the code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7. | 101 | 101 |
| 101 | 301.1.1 Additions and alterations. [P]CD The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to interior within the specific area of the addition or alteration. | 101 | 101 |
| 101 | Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Code Section 1101.11.1, et seq., for the definition of a noncompliant plumbing fixture. Types of residential buildings affected and other important alterations are: | 101 | 101 |
| 101 | 301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [P]CD The provisions of individual sections of this Code may apply to low-rise residential buildings, high-rise residential buildings, or both. Individual sections will be designated by letters to indicate where the section applies specifically to low-rise only (L), high-rise only (H), where the section applies to both low-rise and high-rise buildings, no letter will be used. | 101 | 101 |
| 101 | SECTION 302 MIXED OCCUPANCY BUILDINGS | 101 | 101 |
| 101 | 302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy. | 101 | 101 |
| 101 | ABBREVIATION DEFINITIONS: BCC Department of Building and Community Development BSC California Building Standards Commission CDS-SS Division of the State Architect, Structural Safety OSPP Office of Statewide Health Planning and Development LP Law Firm HR High Rise M Additions and Alterations N | 101 | 101 |
| 101 | CHAPTER 4 RESIDENTIAL MANDATORY MEASURES DIVISION 4.1 PLANNING AND DESIGN SECTION 4.102 DEFINITIONS 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference): FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar porous material and to collect or channel off-water from a surface. WATTLERS. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for sediment and metal control. 4.106 SITE DEVELOPMENT 4.106.1 General. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion control shall comply with the following: 4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more shall comply with the following requirements. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and related runoff to the site: 1. Retention basins of sufficient size shall be utilized to retain storm water on the site. 2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be treated by use of a barrier system, wattle or other method approved by the enforcing agency. 3. Compliance with a certified enacted storm water management ordinance. Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil. (Website: http://www.waterresources.ca.gov/waterresourcescontrolboard/construction.html) 4.106.3 GRASSING AND PAVING. Construction shall include how the grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to: 1. Seales. 2. Water collection and disposal systems. 3. French drains. 4. Water retention gardens. 5. Other water measures which keep surface water away from buildings and all groundwater recharge. Exception: Additions and alterations not altering the drainage path. 4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. Exceptions: 1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions: 1.1 Where there is no commercial power supply. 1.2 Where there is evidence substantiating that meeting the requirements of either the local utility infrastructure design requirements on the utility side of the meter or on to increase the utility side on to the homeowner or the developer by more than \$600.00 per dwelling unit. 2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities. 4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed roadway to accommodate a standard 2000-watt branch circuit. The roadway shall not be less than trade size 1 (nominal 1-inch inside diameter). The roadway shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction shall include a 40-ampere minimum dedicated branch circuit and space(s) reserved for a minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. 4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The roadway termination location shall be permanently and visibly marked as "EV CAPABLE". 4.106.4.1.2 New multifamily dwellings. If residential parking is available, ten (10) percent of the total number of parking spaces are available that provide capacity for electric vehicle charging. The electric vehicle charging spaces (EV spaces) available of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number. Note: 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are permitted for use. 4.106.4.1.3 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The roadway termination location shall be permanently and visibly marked as "EV CAPABLE". 4.106.4.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following: 1. The minimum length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2730 mm). 4.106.4.3 Single EV space required. Where a single EV space is required, the EV space shall be designed in accordance with Section 4.106.4.2.3. 4.106.4.3.1 Multiple EV spaces required. Where multiple EV spaces are required, the EV space shall be designed in accordance with Section 4.106.4.2.3. 4.106.4.3.2 Identification. The service panel or sub-panel shall be identified in accordance with Section 4.106.4.2.3. 4.106.4.3.3 Accessible EV spaces. In addition to the requirements in Section 4.106.4.2, EV spaces for homeowners and EV chargers, when installed, shall comply with the accessibility provisions for EV charging stations in the California Building Code, Chapter 11B. 4.106.4.3.4 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following: 1. The minimum length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2730 mm). 3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle, a 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). a. Surface slope on this EV space and the aisle shall not exceed 1" unit vertical in 48 units horizontal (2.08 percent) across in any direction. 4.106.4.3.5 Signage. Each EV space shall be marked with a trade size 1 (nominal 1-inch inside diameter) roadway shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction shall include a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. 4.106.4.4 Multiple EV spaces required. Construction documents shall indicate the necessary termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on ampacity of future EVSE, necessary methods, wiring schematics and electrical load calculations to verify the electrical panel service capacity and electrical system, including any on-site distribution transformers, have sufficient capacity to simultaneously charge all EVs at all required EV spaces at full rated ampacity of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Required ampacity and related components that are identified to be installed underground, enclosed in raceway or in concealed areas and space shall be installed at the time of final construction. 4.106.4.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. 4.106.4.5 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of EV spaces. Note: 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are permitted for use. 4.106.4.5.1 Number of required EV spaces. The number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.5.1. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number. | | |

| TOTAL NUMBER OF PARKING SPACES | NUMBER OF REQUIRED EV SPACES |
|--------------------------------|------------------------------|
| 0-9 | 0 |
| 10-25 | 1 |
| 26-50 | 2 |
| 51-75 | 4 |
| 76-100 | 7 |
| 101-200 | 10 |
| 201 and over | 6 percent of total |

| | | | |
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| 101 | 4.106.4.2.1 Electric Vehicle Charging Stations (EVCS) When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following criteria: 1. The EV spaces shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space. 2. The EV spaces shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building. Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.1 and Section 4.106.4.2.2, Item 3. Note: Electric vehicle charging stations serving public use are required to comply with the California Building Code, Chapter 11B. 4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following: 1. The minimum length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2730 mm). 3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle, a 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). a. Surface slope on this EV space and the aisle shall not exceed 1" unit vertical in 48 units horizontal (2.08 percent) across in any direction. 4.106.4.3 Single EV space required. Where a single EV space is required, the EV space shall be designed in accordance with Section 4.106.4.2.3. 4.106.4.3.1 Multiple EV spaces required. Where multiple EV spaces are required, the EV space shall be designed in accordance with Section 4.106.4.2.3. 4.106.4.3.2 Identification. The service panel or sub-panel shall be identified in accordance with Section 4.106.4.2.3. 4.106.4.3.3 Accessible EV spaces. In addition to the requirements in Section 4.106.4.2, EV spaces for homeowners and EV chargers, when installed, shall comply with the accessibility provisions for EV charging stations in the California Building Code, Chapter 11B. 4.106.4.3.4 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following: 1. The minimum length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2730 mm). 3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle, a 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). a. Surface slope on this EV space and the aisle shall not exceed 1" unit vertical in 48 units horizontal (2.08 percent) across in any direction. 4.106.4.3.5 Signage. Each EV space shall be marked with a trade size 1 (nominal 1-inch inside diameter) roadway shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction shall include a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. 4.106.4.4 Multiple EV spaces required. Construction documents shall indicate the necessary termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on ampacity of future EVSE, necessary methods, wiring schematics and electrical load calculations to verify the electrical panel service capacity and electrical system, including any on-site distribution transformers, have sufficient capacity to simultaneously charge all EVs at all required EV spaces at full rated ampacity of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Required ampacity and related components that are identified to be installed underground, enclosed in raceway or in concealed areas and space shall be installed at the time of final construction. 4.106.4.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. 4.106.4.5 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of EV spaces. Note: 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are permitted for use. 4.106.4.5.1 Number of required EV spaces. The number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.5.1. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number. | 101 | 101 |
| 101 | DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION 4.303 INDOOR WATER USE 4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.1.4. Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Code Section 1101.1.1, et seq., for the definition of a noncompliant plumbing fixture. Types of residential buildings affected and other important alterations are: 4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type Toilets. 4.303.1.2 Urinals. The effective flush volume of dual flush urinals differs as the composite, average flush volume of the effective flush volume of dual flush urinals shall not exceed 0.125 gallons per flush. The effective flush volume of other urinals shall not exceed 0.5 gallons per flush. 4.303.1.3 Showerheads. 4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type Toilets. 4.303.1.3.2 Multiple Showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a showerhead. 4.303.1.4 Faucets. 4.303.1.4.1 Residential/Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 80 psi. The maximum flow rate of residential lavatory faucets shall not be less than 0.5 gallons per minute at 20 psi. 4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 80 psi. 4.303.1.5 Mixing Faucets. Mixing faucets when installed in residential buildings shall not deliver more than 0.2 gallons per minute. 4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 80 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 80 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 80 psi. Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction. 4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code. NOTE: THIS TABLE COMPLETES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER. | 101 | 101 |
| 101 | TABLE: MAXIMUM FIXTURE WATER USE FIXTURE TYPE FLOW RATE SHOWER HEADS (RESIDENTIAL) 1.8 GPM @ 80 PSI LAVATORY FAUCETS (RESIDENTIAL) MAX. 1.2 GPM @ 80 PSI MIN. 0.5 GPM @ 20 PSI LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS 0.5 GPM @ 60 PSI KITCHEN FAUCETS 1.8 GPM @ 60 PSI MIXING FAUCETS 0.2 GAL/CYCLE WATER CLOSET 1.28 GAL/FLUSH URINALS 0.125 GAL/FLUSH 4.304 OUTDOOR WATER USE 4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance (MWELO) or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. NOTES: 1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code Regulations, Title 23, Chapter 7, Division 2, MWELO and supporting documents, including water budget calculator, are available at: http://www.water.ca.gov/ | 101 | 101 |
| 101 | DIVISION 4.2 ENERGY EFFICIENCY 4.201 GENERAL 4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards. | 101 | 101 |

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| 101 | DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY 4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE 4.406.1 ROBERT PROOFING. Ambient spaces around pipes, electric cables, conduits or other openings in noncommon areas of exterior walls shall be protected against the penetration of moisture by sealing such openings with cement mortar, concrete masonry or a similar membrane according to the enforcing agency. 4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING 4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for a minimum of 60 percent of the non-hazardous construction and demolition waste as accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance. Exceptions: 1. Excavated soil and land-clearing debris. 2. Alternative waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with the item do not exist or are not located reasonably close to the project. 3. The enforcing agency may make exceptions to the requirements of this section when isolated projects are located in areas beyond the local boundaries of the diversion facility. 4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency. 1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse or the project or salvage for future use or sale. 2. Specify if construction and demolition waste materials shall be sorted on-site (source separated) or bulk mixed (single stream). 3. Identify diversion facilities where the construction and demolition waste material collected will be sent. 4. Identify construction methods employed to reduce the amount of construction and demolition waste generated. 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both. 4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste materials diverted from the landfill complies with Section 4.408.1. Note: The owner or contractor may make the determination if the construction and demolition waste materials will be stream via the enforcing agency. 4.408.4 WASTE STREAM REDUCTION ALTERNATIVE (WRA). Projects that generate a total combined weight of construction and demolition waste described in 4.408.1, shall not exceed 4.4 lbs./sq. ft. of the building area shall meet the minimum 60% construction waste reduction in Section 4.408.1. 4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste described in 4.408.1, shall not exceed 3 pounds per square foot of the building area, shall meet the minimum 60% construction waste reduction in Section 4.408.1. 4.408.5 CONSTRUCTION. The information shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5. Section 4.408.3 or Section 4.408.4. NOTE: 1. Sample forms found in "A Guide to the California Building Standards Code Residential Code" (located at www.building.ca.gov/CAD-Codes) shall be used to assist in documenting compliance with this section. 2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recovery (CDRR) website: http://www.cdr.ca.gov/ 4.410 BUILDING MAINTENANCE AND OPERATION 4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media accessible to the enforcing agency which includes all of the following shall be placed in the building: 1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure. 2. Operation and maintenance instructions for the following: a. Equipment and appliances, including water saving devices, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment. b. Roof and yard drainage, including gutters and downspouts. c. Landscape irrigation systems, including condensers and air filters. d. Water reuse systems. 3. Information on utility water and waste recovery programs on methods to further reduce resource consumption, including recycle programs and locations. 4. Public transportation and/or carpool options available in the area. 5. Educational materials on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in their space. 6. Information about water-conserving landscape and irrigation design and controllers which conserve water. 7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. 8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. 9. Information about safe energy and incentive programs available. 10. A copy of all special inspection verifications required by the enforcing agency or this code. 4.410.2 RECYCLING BY OCCUPANTS. When 5 or more multifamily dwelling units are constructed on a building site, provide easily accessible areas that serve all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastic, organic waste, and metal, or other a locally certified recycling ordinance, or more restrictive. Exception: Rural jurisdictions that meet and apply for an exemption in Public Resources Code Section 43062.6 (WQA) if any, are not required to comply with the organic waste portion of this section. | 101 | 101 |
| 101 | DIVISION 4.5 ENVIRONMENTAL QUALITY SECTION 4.501 GENERAL 4.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and harmful to the comfort and well-being of a building's residents, occupants and neighbors. SECTION 4.502 DEFINITIONS 4.502.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference): ADIRPBER PRODUCTS. Adirpber products include whiteboard, aluminum, panel substrates and door cores, not including furniture, floors and equipment (PPE) not considered base building elements. COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardwood, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), title 17, Section 01300. DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws air for combustion from the outside atmosphere and discharges all the gaseous by the outside atmosphere. | 101 | 101 |

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A GUIDE TO INDICATE AREAS OF COMPLIANCE WITH THE CITY OF PALM SPRINGS GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIATIONS BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE ADAPTED BY THE END USER TO MEET THOSE JURISDICTIONAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.