



JOHNSTONE SUPPLY

3015 S. Kilson Drive / Santa Ana CA 92707
(714) 556-4822 FAX (714) 662-2328
Order Desk (800) 494-4822

23211 Del Lago Dr. / Laguna Hills, CA 92653
(949) 951-4822 FAX (949) 855-6558
www.johnstoneoc.com

February 7, 2012

Attn: Jason Kwak
City of Santa Ana
Planning & Building Agency
20 Civic Center Dr.
Santa Ana, CA 92702

Re: Plan Check # 10174195 520 E. Dyer Rd., Santa Ana, CA

Dear Mr. Kwak:

Johnstone Supply has occupied the 12,000 sq. ft. facility at 3015 S. Kilson since 1989 and we plan to relocate the same operations to the 16,334 sq. ft. facility at 520 E. Dyer Rd. Sales are wholesale only to holders of a C-20 state contractor's license and average 60 sales/day of which about 60% are will-called. Occupancy loads in the various areas of the new facility will be:

Will Call # 101	3 employees, 6 customers/hour
Sales # 103	1 employee
Sales #104/105	2 employees
Office #106	1 employee
Office #108	storage
Office #109	spare—1 future employee
Office #110	1 employee
Lunchroom #112	for use of employees only on breaks/lunch
Warehouse # 119	2 employees
Warehouse # 120	utilized for bulky slow moving stock. Rarely staffed.

We anticipate our occupancy load will increase slightly over that we currently experience to 16-20 employees and visitors.

Sincerely,

Kathleen Graw
Finance & Operations



Planning & Building Agency
 Building Safety Division
 20 Civic Center Plaza
 P.O. Box 1988 (M-19)
 Santa Ana, CA 92702
 (714) 647-5800
 www.santa-ana.org

TENANT IMPROVEMENT PLAN CHECK COMMENTS

PLAN CHECK NO:	10174195	
PROJECT ADDRESS:	520 E Dyer Rd	
PLAN CHECK ENGINEER:	Kwak, Jason	TEL: 714 647-5866
		FAX: 714 647-5897
TYPE OF CONSTRUCTION:	V B, SPK	
OCCUPANCY CLASSIFICATION(S):	B, S-1	
PLAN CHECK DATES:		REMARKS/RECHECK ITEMS:
APPLICATION	1/19/2012	
INITIAL REVIEW	1/24/2012	
EXPIRATION	7/17/2012	
RECHECKS:	1.	PROJECT APPLICANT CONTACT PERSON: Rhoads Martin
	2.	
	3.	
VALUATION:	\$176,000.00	TEL: (714)241-1141
		FAX: (714)241-0847
		EMAIL: Rmartin@martincommercialgroup.com
FLOOD ZONE:	X-0602320278J	

**APPLICABLE CODE: 2010 CALIFORNIA BUILDING CODE (CBC) WITH
 CITY OF SANTA ANA AMENDMENTS**

1. All items noted on this plan check report must be addressed. If you feel that an item is not applicable to your project, note "N/A" and discuss the reason with the plan checker.
2. Please indicate the sheet number and detail to the right of each correction, or note the number on the plans where the correction is made. Resubmit marked original, calculations and this correction sheet. A separate sheet for response may be used.
3. Resubmit 3 corrected sets of plans.
4. Meetings between the project applicant/designer and the plan reviewer shall be by appointment only. Please call (714) 647-5866 for an appointment.

5. Please return marked up set of drawings with corrections.
6. CBC Sections A107, All drawings and supporting documents shall be prepared, wet stamped and signed by a California licensed architect or registered civil engineer. Sign documents in title block
7. Include address and telephone number of the responsible designer, and date of signing of drawings.
See sheet A1 and title block
8. This review does not include mechanical, plumbing, fire sprinkler system, or electrical work. Separate plans, applications, fees, plan checks, and permits are required for mechanical, plumbing, fire sprinkler systems, and electrical work. Call 647-5800 for information.
9. **The applicant shall obtain clearances/approvals for the following prior to building permit issuance:**
 - Planning Division approval on the corrected/final set of drawings (647-5804.) Previously approved plans should be submitted to expedite the process.
 - Fire Department approval on the corrected/final sets of drawings (647-5839 or 647-5700)
 - Police Department approval on the corrected/final set of drawings (647-5840)
 - Public Works Agency approval (647-5039)
 - Proof of Worker's Compensation Insurance shall be required at the time of permit issuance
10. Provide a wall legend indicating whether the wall is:
 - Existing, new, or to be removed
 - A fire-resistive assemblyExisting exterior "shell" walls are tilt-up concrete or 8" masonry, Refer to Wall Type Schedule on sheet A3
11. Note on the floor plan the use and occupancy load of each room and/or area. Relate each use to a CBC Table item. Note occupant loads which are the greater number based on CBC Section 1004 and Table 1004.1.1 or the actual number of occupants. See Occupancy / Use Summary diagram and schedule on sheet A3 and letter of occupancy from tenant.
12. CBC Section 1008.1.8, Note on drawing: "Exit doors shall be openable from the inside without the use of a key or any special knowledge or effort." Note 16, sheet A3.
13. Tactile exit signs shall be required at the following locations: Symbol legend and locations indicated on sheet A3.
 - Each grade-level exterior exit door shall be identified by a tactile exit with the word "EXIT."
 - Each exit access door from an interior room or area to a corridor or hallway, which is required to have a visual exit sign, shall be identified by a tactile exit sign with the words "EXIT ROUTE."
14. Provide international symbol of accessibility at main entry doors. Noted on sheet A3.
15. It is the project designer's/property owner's responsibility to show compliance on the drawings with all applicable Federal and State Accessibility Standards. Refer to Disabled Access Compliance note on sheet A1.

16. Drawings submitted to the Building Division for review shall provide the following information to insure compliance with CBC Section 1134B/Chapter 11B:

- | | | |
|---|----------|---|
| - An accessible entrance | Complies | Project is in full compliance as indicated on drawings. |
| - An accessible route to the altered area | Complies | |
| - Accessible restrooms | Complies | |
| - Accessible telephone (if any) | N/A | |
| - Accessible drinking fountains, and | Complies | |
| - Parking, signage and alarms | Complies | |

17. Priority shall be given to those elements that will provide the greatest access in the above order. Complies

18. Valuation of proposed project is calculated as \$_____. A minimum of 20% of valuation of construction is required to be spent towards providing disabled access in the priority order noted in the immediate previous item as noted in CBC Section 1134B. Revise the drawings to show compliance. Show both existing elements and how they will be upgraded to current standards. Refer to Disabled Access Compliance note on sheet A1.

19. If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36" wide, complying with the CBC Section 1133B.8.5. See enlarged parking detail, sheet A1

Detectable Warning Product Approval. Only approved Division of the State Architect, Access Compliance (DSA/AC) approved detectable warning products and directional surfaces shall be installed in accordance with CBC Section 1133B.8.5. See enlarged parking detail, sheet A1

20. CBC Section 1129B.3, Item 3. Parking spaces must be located so that the disabled are not compelled to walk or wheel behind parked cars other than their own. See enlarged parking detail, sheet A1

21. Show/note ventilation requirements on the plans in accordance with the CBC and California Mechanical Code (CMC) requirements for each type of use.

Note on drawings:

- All enclosed portions of buildings customarily occupied by human beings shall be provided with natural ventilation by means of openable exterior openings readily controllable by building occupants, with an area not less than 4% of the floor area being ventilated. CBC Section 1203 and 2010 California Mechanical Code Section 402. See note #3 on sheet A4. openable exterior openings apply to commercial buildings?
- Provide mechanical ventilation for each area/room in accordance with the 2010 California Mechanical Code. Note #2 on sheet A4

22. **This building is subject to the State of California Energy Conservation Regulations:**

- The permit applicant shall be responsible for obtaining an energy plan check from a consultant who is qualified to perform an energy efficiency analysis in accordance with the California Code of Regulations (CCR,) Title 24, Par 6, 2010 California Energy Code. The plan check consultant must sign documentation certifying that a thorough, competent review has been performed on behalf of the Enforcement Agency. (see attached T24-01 form)

The corrected/final ARCHITECTURAL drawings shall have the required energy efficiency compliance documentation with completed signature blocks filed on the full-size plans.

see added sheets A11 & A12

23. Revise occupancy classification for warehouse to S-1 on cover sheet. Revised as noted, sheet A1
24. Clarify the use the of display area (given an occupancy classification of warehouse on the plans). Provide clear description of use to clarify that it will not be used as a retail space with a occupant load factor of 30 sf per occupant versus the 500 sf per occupant. Refer to Occupancy/Use Summary on sheet A3, refer to occupancy letter from tenant.
25. Verify roof parapet screening with Planning Division. Verified and approved
26. Provide a plumbing fixture calculation per the 2010 CPC. Verify the proposed number of restroom fixtures complies with the CPC. Refer to Plumbing fixture calculation on sheet A3
27. New door in door schedule and new structural for new opening in adjacent warehouse building is missing. There is only one new opening in the existing wall for access to Electrical Room. The other door was shown as new in error. See updated demo plan sheet A2 and floor plans A3

CITY OF SANTA ANA

BUILDING PERMIT WORKSHEET

PLEASE PRINT

1/14/09:forms/Bldg.App.Worksheet

PROJECT ADDRESS: 520 E. Dyer Rd.		SUITE:		SAPIN # 10174195	
USE OF BUILDING: RESIDENTIAL COMMERCIAL INDUSTRIAL OTHER				2012-101100	
NATURE OF WORK: NEW ADD ALTER/T.I. DEMO REROOF REPAIR SIGN MISC				MASTER ID#	
NEW/ADDITION/ALTERATION:					
1ST FL. _____ SF		BASEMENT: YES/NO _____ SF		NO. OF STORIES: _____	
2ND FL. _____ SF		PATIO/ENCL. PATIO: _____ SF		BLDG. HEIGHT: _____	
TOTAL OF OTHER FLS: _____ SF		RES. REMODEL: _____ SF		PROPOSED USE: _____	
GARAGE/CARPORT: _____ SF		ALTER(T.I.): 4532 SF			
JOB DESCRIPTION (non-residential projects see reverse side of this application): remove existing restrooms/plumbing construct 2,532 sq. ft. offices and handicap restrooms inside existing 16,334 sq. ft. ind. building. Add roof screen, (2) skylights and full ht wall separating 2,000 sq. ft. warehouse will call area. Add handicap parking and entry access. Underground electrical and phone service					
BUILDING OWNER'S NAME: Add (2) roof mtd A/C MARTIN ENTERPRISES 820#ea ← units			PHONE NO: (714) 241-1141		
ADDRESS: 1495 E. Warner Ave		CITY: Santa Ana		STATE: CA	ZIP: 92705
TENANT'S NAME (Comm/Ind): Johnstone Supply			PHONE NO: 714 360-1010		
CONTRACTOR'S NAME: Martin Builders Inc.		STATE CONTR. #: 235033	LICENSE CLASS: B-1	PHONE NO: (714) 241-1141	
ADDRESS: 1495 E. Warner Ave		CITY: Santa Ana		STATE: CA	ZIP: 92705
WORKERS COMP. POLICY#: 1962102-2012	EXP. DATE: 1/1/2013	INSURANCE COMPANY: State Fund		SANTA ANA BUS. LIC. #: 103310	
ARCHITECT/ENGINEER:		STATE LICENSE #:		PHONE NO:	
ADDRESS:		CITY:		STATE:	ZIP:
CONTACT NAME: Rhoads Martin			PHONE NO: (714) 241-1141		
E-MAIL ADDRESS: rmartin@martincommercialgroup.com			FAX NO: (714) 241-0847		

OFFICE USE ONLY: **(C)** OR SPC (CIRCLE ONE) 4 HRS PER JK BLDG. FEE \$ _____

OCC. GROUP: _____ RECEIPT #: 58669 P/C FEE PD \$ 1625.57

TYPE OF CONSTR: _____ VALUATION: \$ 176,000 SUBMITTAL DATE: 1-19-12

FIRE SPKR: YES / NO A/C: YES / NO FLOOD ZONE: X PROCESSED JULIE

RES. DEV. FEE: YES / NO PRIOR DWELLING UNIT: YES / NO COMMENTS: _____

PLANNING OK TO CHECK & DATE _____ BLDG. DEPT. APPROVAL & DATE _____

PLNG CONDITIONS: _____

STAFF 4/1/12 114-24169

PLEASE CHECK ALL THAT APPLY TO YOUR PROJECT

JOB DESCRIPTION CHECKLIST:

- | | |
|--|---|
| <input type="checkbox"/> Additional square footage | <input type="checkbox"/> Partition walls |
| <input type="checkbox"/> Awnings | <input type="checkbox"/> Rated corridors |
| <input type="checkbox"/> Canopy | <input type="checkbox"/> Rated shafts |
| <input type="checkbox"/> Ceiling work | <input checked="" type="checkbox"/> Roof mounted equipment |
| <input type="checkbox"/> Change of occupancy (use) | <input type="checkbox"/> Security bars |
| <input type="checkbox"/> Disabled accessible (H/C) restrooms | <input type="checkbox"/> Screening for equipment |
| <input type="checkbox"/> Dust collector | <input type="checkbox"/> Skylights |
| <input type="checkbox"/> Elevator shaft | <input type="checkbox"/> Stairs |
| <input type="checkbox"/> Exterior doors or windows | <input type="checkbox"/> Storefront/facade improvements |
| <input type="checkbox"/> Equipment pads | <input type="checkbox"/> Storage racks or shelving over 5'-9" |
| <input type="checkbox"/> Interior demo | <input type="checkbox"/> Walk-in coolers |
| <input type="checkbox"/> Kitchen equipment | |

ITEMS REQUIRING SEPARATE BUILDING PERMIT APPLICATIONS:

- Block wall
- Card readers
- Complete demo
- Fence
- Fire signaling system
- Fire sprinklers
- Flagpole
- Lawn sprinkler system
- Light Standards
- Parking lot repaving
- Parking lot restriping
- Pedestrian protection
- Pool/Spa
- Signs
- Spray booth
- Temporary power pole
- Trash enclosure



Planning & Building Agency
 Permits & Plan Check Section
 20 Civic Center Plaza
 P.O. Box 1988 (M-19)
 Santa Ana, CA 92702
 (714) 647-5800
 www.santa-ana.org

ACCELERATED PLAN CHECK REQUEST

HO18: 07-01-11

Project Address: 520 E Dyer Rd

Misc. Receipt: 58669 Processed By: J Plan Checked By: _____

Cost: \$117.70 per hour for each discipline. The plan checker will estimate the number of hours for review. This fee is in addition to the regular plan check fee.

Type of Plan Check: Building 10174195 Electrical _____
 Est. Hrs. 4 Actual 4^{hr} Est. Hrs. _____ Actual _____
 Plumbing _____ Mechanical _____
 Est. Hrs. _____ Actual _____ Est. Hrs. _____ Actual _____

Owner/Representative Signature: [Signature]
 Print Name: H. RHODS MARTINEZ Date: 1/19/2012
 Telephone Number: (714) 241-1141 Fax Number: (714) 241-0847

**An accelerated plan check review will not include the following:
 Fire, Police, Public Works, Planning or Landscaping Plan Check**

Revisions: If requesting an "accelerated revision", the cost will be \$207.25 per hour in addition to the accelerated fee of \$117.70 per hour (total \$324.95).

INTERNAL USE ONLY

Name (Last, First, Initial)		Employee #	Division
From (Date & Time)	To (Date & Time)	Total Hours Worked	_____ Comp Time Requested _____ Overtime Requested
Employee Signature:		Date:	
AUTHORIZED _____ _____ Comp time _____ Overtime		APPROVALS _____ Division Manager Date _____ Executive Director Date	
Immediate Supervisor	Date		

FEE CHECKLIST WORKSHEET

Received by: _____

[Signature]

SAPIN #: _____

10174195

FEE TYPE

REQUIRED

Yes No

Plan Check Fee	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Disability Fee	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SMIP Fee	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Res. Dev. Fee	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire Facility Fee	<input type="checkbox"/>	<input checked="" type="checkbox"/>
School Distr. Fee	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Microfilm	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FCWP Surcharge	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CALCULATION AREA

COST/SQ FT X TOTAL SQ FT = VALUATION

Contract = 176,000

4532 x 35 ⁹⁰/₁₀₀ = 162,699

Counter computations/valuation \$ _____

Plan checker computation/final valuation \$ _____

CITY OF SANTA ANA PLAN CHECK - CHECKLIST

JOB ADDRESS: 520 E Dyer Rd
 TRACKING #: 10174195 DATE: 1-19-12

FOR PLANCHECK STATUS CALL (714) 647-5800

PLEASE INITIAL EACH ITEM BELOW

- WJ 1. I agree to pay a plancheck fee established for this project with the understanding that this payment is not a guarantee that a permit will be issued and that this fee is not refundable once a plancheck has commenced.
- WJ 2. I understand that I may request an "Accelerated Plancheck" at an additional cost to me. This plancheck will be performed by an in-house plan checker with the intention of reducing plancheck time for the Building & Safety Division.
- WJ 3. I understand that the project valuation (from which plancheck and permit fees are calculated) will be reviewed during the plancheck process and that said valuation shall be adjusted up or down in accordance with established fee computation regulations.
- WJ 4. I understand that I shall submit separate plans, applications and plancheck fees for the following when plan check is required:
 - a. Electrical Plans - 2 complete sets
 - b. Plumbing Plans - 3 complete sets
 - c. Mechanical Plans - 2 complete sets
 - d. Grading Plans - 3 complete sets
- WJ 5. I understand that I shall visit the Public Works Department to verify whether a field inspection of the property is required. I understand that prior to the issuance of the Building permit I am required to obtain Public Works Agency approval if my project valuation exceeds \$30,000 or has added plumbing fixtures, or added bedrooms, or exceeds 500 sq.ft.

AGREED TO BY APPLICANT OR AGENT
 Applicant's Signature [Signature]

Print Name H. RUDAS MARR Address 195 E. WHEEL
SANTA ANA, CA.
 Telephone Number (714) 241-0241 Fax (714) 241-0241

FOR OFFICE USE ONLY: "Checklist of items discussed" APPROVALS & FEES REQUIRED: Y/N

- | | | |
|--|---|--|
| 1. <input checked="" type="checkbox"/> Planning Department | 7. <input type="checkbox"/> Title 24 (Energy) | 14. <input checked="" type="checkbox"/> Constr. Act. Req. |
| 2. <input checked="" type="checkbox"/> Public Works Agency | 8. <input checked="" type="checkbox"/> Title 24 (Disabled Access) | 15. <input type="checkbox"/> Res. Dev. Fees |
| 3. <input checked="" type="checkbox"/> Fire Department | 9. <input checked="" type="checkbox"/> Roof Mounted Equip. | 16. <input checked="" type="checkbox"/> SMIP |
| 4. <input checked="" type="checkbox"/> Police Department | 10. <input checked="" type="checkbox"/> List of Subcontr. | 17. <input checked="" type="checkbox"/> Microfilming |
| 5. <input type="checkbox"/> School District | 11. <input checked="" type="checkbox"/> Bldg. Pmt. Info. | 18. <input checked="" type="checkbox"/> Const. Debris Recyc. |
| 6. <input type="checkbox"/> Health Department | 12. <input type="checkbox"/> Summary of Appr. Req. | 19. <input checked="" type="checkbox"/> FCWP Surcharge |
| | 13. <input checked="" type="checkbox"/> FY Information | 20. <input checked="" type="checkbox"/> LOA/Owner-Builder Ver. |

PERMIT TECHNICIAN [Signature]



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 Building Safety Division
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21. Show/note ventilation requirements on the plans in accordance with the CBC and California Mechanical Code (CMC) requirements for each type of use.

Note on drawings:

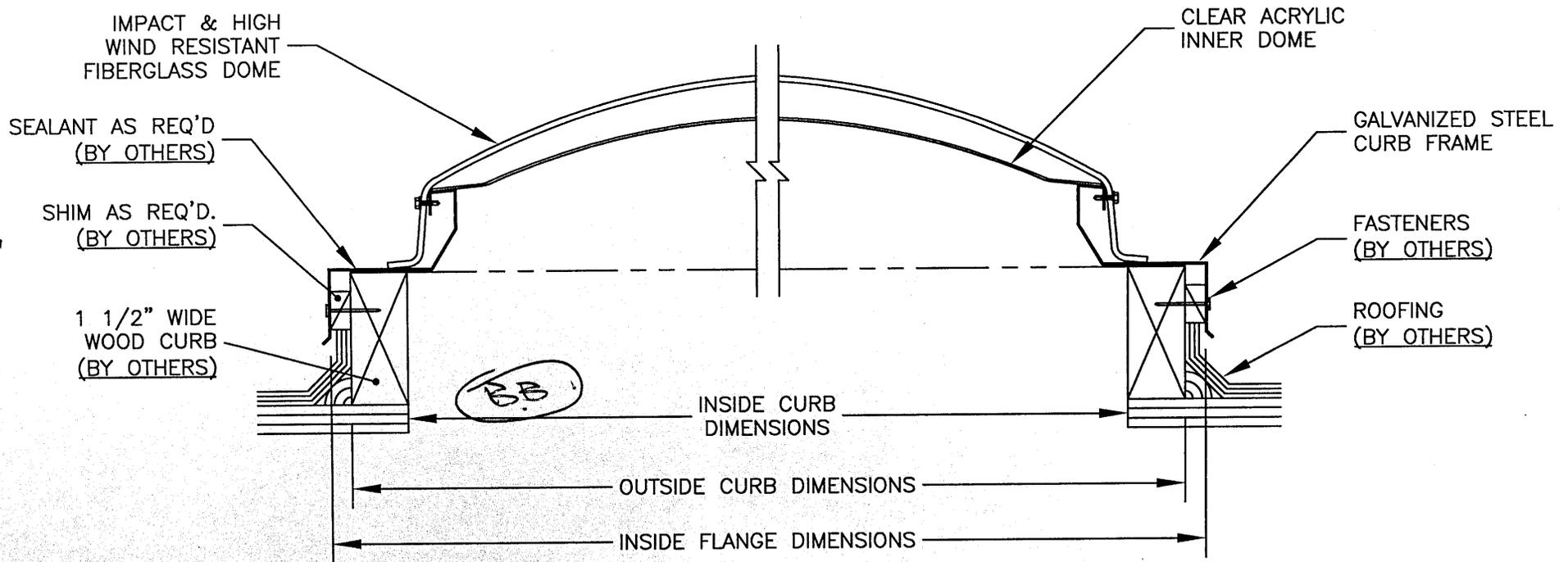
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27. New door in door schedule and new structural for new opening in adjacent warehouse building is missing.

ER 10174195



CURB MOUNTED SKYLIGHT

MODEL: H48XX-SS-CM-2-FTH-IR-HW-MF
N.T.S.

SS - GALVANIZED STEEL FRAME FTH - FIBERGLASS TRANSLUCENT HIGH MF - MILL FINISH
CM - CURB MOUNTED IR - IMPACT RESISTANT
2 - DOUBLE GLAZED HW - HIGH WIND

MODEL NUMBER	INSIDE CURB DIMENSIONS	QTY
RECTANGULAR		
H4848-SS-CM	48"x48"	
H4896-SS-CM	48"x96"	

DOME MATERIAL TESTED IN CONFORMANCE WITH:

*OSHA FALL PROTECTION-MEETS OSHA STANDARD 29 CFR 1926.502
HIGH WIND RESISTANT-DOME OF THIS UNIT HAS EXCEEDED 90MPH UP-LIFT IN TESTING
BURN RATE-CLASSIFIED AS CC1 MATERIAL

*FALL PROTECTION TESTING HAS BEEN PERFORMED ON BRISTOLITE'S 48" x 96" DOMES



Bristolite® Skylights

401 East Goetz Avenue
Santa Ana, California 92707

© 714.540.8950 / FAX 714.540.5415

CUSTOMER :

PROJECT :

PREPARED BY :

SUBMITTAL DATE :

JOB NO :

ARCHITECT :

BUILDING ENERGY ANALYSIS REPORT

PROJECT:

Johnstone Supply
520 Dyer Rd
Santa Ana, CA

Project Designer:

Martin Builders, Inc.
1495 East Warner
Santa Ana, ca
714 241 1141

Report Prepared by:

Hunter Dion
Hunter Dion Engr
714-501-3466

10179195
JK

RECEIVED
JAN 24 2012
City of Santa Ana

Job Number:**Date:**

1/19/2012

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2008 Building Energy Efficiency Standards.

This program developed by EnergySoft, LLC – www.energysoft.com.

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PERFORMANCE CERTIFICATE OF COMPLIANCE		(Part 1 of 3)	PERF-1C
Project Name <i>Johnstone Supply</i>			Date <i>1/19/2012</i>
Project Address <i>520 Dyer Rd Santa Ana</i>		Climate Zone <i>CA Climate Zone 08</i>	Total Cond. Floor Area <i>4,300</i>
			Addition Floor Area <i>0</i>
GENERAL INFORMATION			
Building Type:		<input checked="" type="checkbox"/> Nonresidential	<input type="checkbox"/> High-Rise Residential
		<input type="checkbox"/> Relocatable - indicate	<input type="checkbox"/> specific climate zone
			<input type="checkbox"/> Hotel/Motel Guest Room
			<input type="checkbox"/> all climates
Phase of Construction:		<input type="checkbox"/> New Construction	<input type="checkbox"/> Addition
			<input checked="" type="checkbox"/> Alteration
STATEMENT OF COMPLIANCE			
This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a Building using the performance compliance approach.			
The documentation author hereby certifies that the documentation is accurate and complete.			
Documentation Author		Signature <i>H. Dion</i>	
Name <i>Hunter Dion</i>		Date <i>1/19/2012</i>	
Company <i>Hunter Dion Engr</i>		Phone	
Address <i>714-501-3466</i>		City/State/Zip	
The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:			
ENV. LTG. MECH.			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.
Principal Envelope Designer		Signature	
Name		Date	
Company <i>Martin Builders, Inc.</i>		License #	
Address <i>1495 East Warner</i>		Phone <i>714 241 1141</i>	
City/State/Zip <i>Santa Ana, ca</i>			
Principal Mechanical Designer		Signature	
Name		Date	
Company <i>Sorensen Air Systems</i>		License #	
Address		Phone <i>714 719 1579</i>	
City/State/Zip <i>Brea, CA</i>			
Principal Lighting Designer		Signature	
Name		Date	
Company <i>Lighting Compliance Not In The Scope Of This Submittal</i>		License #	
Address		Phone	
City/State/Zip			
INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)			
<input checked="" type="checkbox"/>	ENV-1C	Certificate of Compliance. Required on plans.	<input checked="" type="checkbox"/> MECH-1C
<input type="checkbox"/>	LTG-1C	Certificate of Compliance. Required on plans.	<input checked="" type="checkbox"/> MECH-2C
<input type="checkbox"/>	LTG-2C	Lighting Controls Credit Worksheet.	<input checked="" type="checkbox"/> MECH-3C
<input type="checkbox"/>	LTG-3C	Indoor Lighting Power Allowance.	<input checked="" type="checkbox"/> MECH-5C
			Certificate of Compliance. Required on plans.
			Air/Water Side/Service Hot Water & Pool Requirements.
			Mechanical Ventilation and Reheat.
			Mechanical Equipment Details.
EnergyPro 5.1 by EnergySoft User Number: 5470 RunCode: 2012-01-19T20:31:23 ID: Page 3 of 18			

PERFORMANCE CERTIFICATE OF COMPLIANCE

(Part 2 of 3)

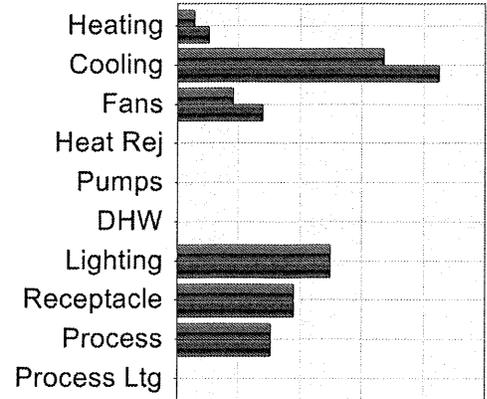
PERF-1C

Project Name
Johnstone Supply

Date
1/19/2012

ANNUAL TDV ENERGY USE SUMMARY (kBtu/sqft-yr)

Energy Component	Standard Design	Proposed Design	Compliance Margin
Space Heating	25.64	13.80	11.84
Space Cooling	212.03	167.50	44.53
Indoor Fans	69.17	45.93	23.24
Heat Rejection	0.00	0.00	0.00
Pumps & Misc.	0.00	0.00	0.00
Domestic Hot Water	0.00	0.00	0.00
Lighting	124.52	124.52	0.00
Receptacle	94.36	94.36	0.00
Process	76.39	76.39	0.00
Process Lighting	0.00	0.00	0.00
TOTALS	602.11	522.51	79.61



Percent better than Standard: 13.2% (15.1% excluding process)

BUILDING COMPLIES

GENERAL INFORMATION

Building Orientation	(N) 0 deg	Conditioned Floor Area	4,300 sqft.
Number of Stories	1	Unconditioned Floor Area	9,400 sqft.
Number of Systems	2	Conditioned Footprint Area	4,300 sqft.
Number of Zones	3	Natural Gas Available On Site	Yes

	Orientation	Gross Area	Glazing Area	Glazing Ratio
Front Elevation	(N)	3,600 sqft.	84 sqft.	2.3 %
Left Elevation	(E)	1,440 sqft.	0 sqft.	0.0 %
Rear Elevation	(S)	0 sqft.	0 sqft.	0.0 %
Right Elevation	(W)	2,160 sqft.	0 sqft.	0.0 %
Total		7,200 sqft.	84 sqft.	1.2 %
Roof		4,300 sqft.	0 sqft.	0.0 %

	Standard	Proposed	Prescriptive Values for Comparison only. See LTG-1C for allowed LPD.
Prescriptive Lighting Power Density	1.321 W/sqft.	1.321 W/sqft.	
Prescriptive Envelope TDV Energy	143,374	175,566	

Remarks:

Standard Building (Compliance)

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST

(Part 1 of 3)

ENV-1C

Project Name Johnstone Supply			Date 1/19/2012
Project Address 520 Dyer Rd Santa Ana	Climate Zone 8	Total Cond. Floor Area 4,300	Addition Floor Area 0

GENERAL INFORMATION

Building Type:	<input checked="" type="checkbox"/> Nonresidential	<input type="checkbox"/> High-Rise Residential	<input type="checkbox"/> Hotel/Motel Guest Room
	<input type="checkbox"/> Schools (Public School)	<input type="checkbox"/> Relocatable Public School Bldg.	<input checked="" type="checkbox"/> Conditioned Spaces
	<input type="checkbox"/> Unconditioned Spaces		
<input type="checkbox"/> Skylight Area for Large Enclosed Space ≥ 8000 ft ² (If checked include the ENV-4C with submittal)			
Phase of Construction:	<input type="checkbox"/> New Construction	<input type="checkbox"/> Addition	<input checked="" type="checkbox"/> Alteration
Approach of Compliance:	<input type="checkbox"/> Component	<input checked="" type="checkbox"/> Overall Envelope	<input type="checkbox"/> Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees:	<i>0 deg</i>		

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS

INSULATION

Tag/ID	Assembly Type	Area (ft ²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R- Value	Exterior Furring ³	Interior R- Value	Interior Furring ³	Joint Appendix 4	Condition Status	Pass	Fail ²
1	Slab	2,400	(N)	0.730	None					4.4.7-A1	Existing	<input type="checkbox"/>	<input type="checkbox"/>
2	Roof	2,400	(N)	0.048	R-19					4.2.1-A16	Altered	<input type="checkbox"/>	<input type="checkbox"/>
3	Demising	500	(N)	0.217	R-13					4.3.3-A3	New	<input type="checkbox"/>	<input type="checkbox"/>
4	Wall	1,080	(W)	0.086	None			13.0	Wood	4.3.6-D5	Altered	<input type="checkbox"/>	<input type="checkbox"/>
5	Wall	900	(N)	0.086	None			13.0	Wood	4.3.6-D5	Altered	<input type="checkbox"/>	<input type="checkbox"/>
6	Wall	1,080	(W)	0.820	None					4.3.6-D5	Existing	<input type="checkbox"/>	<input type="checkbox"/>
7	Wall	900	(N)	0.820	None					4.3.6-D5	Existing	<input type="checkbox"/>	<input type="checkbox"/>
8	Slab	1,900	(N)	0.730	None					4.4.7-A1	Existing	<input type="checkbox"/>	<input type="checkbox"/>
9	Roof	1,900	(N)	0.048	R-19					4.2.1-A16	Altered	<input type="checkbox"/>	<input type="checkbox"/>
10	Demising	900	(N)	0.217	R-13					4.3.3-A3	New	<input type="checkbox"/>	<input type="checkbox"/>

- See Instructions in the Nonresidential Compliance Manual, page 3-96.
- If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance.

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft ²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Conditions Status	Pass	Fail ²
1	Window	84	(N)	1.190	Default	0.680	Default	<input type="checkbox"/>	Existing	<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

- See Instructions in the Nonresidential Compliance Manual, page 3-96.
- If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST

(Part 1 of 3)

ENV-1C

Project Name <i>Johnstone Supply</i>			Date <i>1/19/2012</i>
Project Address <i>520 Dyer Rd Santa Ana</i>	Climate Zone <i>8</i>	Total Cond. Floor Area <i>4,300</i>	Addition Floor Area <i>0</i>

GENERAL INFORMATION

Building Type:	<input checked="" type="checkbox"/> Nonresidential	<input type="checkbox"/> High-Rise Residential	<input type="checkbox"/> Hotel/Motel Guest Room
<input type="checkbox"/> Schools (Public School)	<input type="checkbox"/> Relocatable Public School Bldg.	<input checked="" type="checkbox"/> Conditioned Spaces	<input type="checkbox"/> Unconditioned Spaces
<input type="checkbox"/> Skylight Area for Large Enclosed Space ≥ 8000 ft ² (If checked include the ENV-4C with submittal)			
Phase of Construction:	<input type="checkbox"/> New Construction	<input type="checkbox"/> Addition	<input checked="" type="checkbox"/> Alteration
Approach of Compliance:	<input type="checkbox"/> Component	<input checked="" type="checkbox"/> Overall Envelope	<input type="checkbox"/> Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees:	<i>0 deg</i>		

FIELD INSPECTION ENERGY CHECKLIST

OPAQUE SURFACE DETAILS					INSULATION								
Tag/ID	Assembly Type	Area (ft ²)	Orientation N, E, S, W	U-Factor	Cavity R-Value	Exterior R-Value	Exterior Furring ³	Interior R-Value	Interior Furring ³	Joint Appendix 4	Condition Status	Pass	Fail ²
11	Wall	720	(E)	0.086	None			13.0	Wood	4.3.6-D5	Altered	<input type="checkbox"/>	<input type="checkbox"/>
12	Wall	816	(N)	0.086	None			13.0	Wood	4.3.6-D5	Altered	<input type="checkbox"/>	<input type="checkbox"/>
13	Wall	720	(E)	0.820	None					4.3.6-D5	Existing	<input type="checkbox"/>	<input type="checkbox"/>
14	Wall	900	(N)	0.820	None					4.3.6-D5	Existing	<input type="checkbox"/>	<input type="checkbox"/>
												<input type="checkbox"/>	<input type="checkbox"/>
												<input type="checkbox"/>	<input type="checkbox"/>
												<input type="checkbox"/>	<input type="checkbox"/>
												<input type="checkbox"/>	<input type="checkbox"/>
												<input type="checkbox"/>	<input type="checkbox"/>
												<input type="checkbox"/>	<input type="checkbox"/>
												<input type="checkbox"/>	<input type="checkbox"/>

1. See Instructions in the Nonresidential Compliance Manual, page 3-96.
 2. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance.

FENESTRATION SURFACE DETAILS

Tag/ID	Fenestration Type	Area (ft ²)	Orientation N, E, S, W	Max U-Factor	U-Factor Source	Max (R)SHGC	SHGC Source	Overhang	Conditions Status	Pass	Fail ²
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
								<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

1. See Instructions in the Nonresidential Compliance Manual, page 3-96.
 2. If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST

(Part 1 of 4)

MECH-1C

Project Name <i>Johnstone Supply</i>			Date <i>1/19/2012</i>
Project Address <i>520 Dyer Rd Santa Ana</i>	Climate Zone <i>8</i>	Total Cond. Floor Area <i>4,300</i>	Addition Floor Area <i>0</i>

GENERAL INFORMATION

Building Type:	<input checked="" type="checkbox"/> Nonresidential	<input type="checkbox"/> High-Rise Residential	<input type="checkbox"/> Hotel/Motel Guest Room
	<input type="checkbox"/> Schools (Public School)	<input type="checkbox"/> Relocatable Public School Bldg.	<input checked="" type="checkbox"/> Conditioned Spaces <input type="checkbox"/> Unconditioned Spaces (affidavit)
Phase of Construction:	<input type="checkbox"/> New Construction	<input type="checkbox"/> Addition	<input checked="" type="checkbox"/> Alteration
Approach of Compliance:	<input type="checkbox"/> Component	<input type="checkbox"/> Overall Envelope TDV Energy	<input type="checkbox"/> Unconditioned (file affidavit)
Front Orientation: N, E, S, W or in Degrees:	<i>0 deg</i>		

HVAC SYSTEM DETAILS

FIELD INSPECTION ENERGY CHECKLIST

Equipment ²	Inspection Criteria	Meets Criteria or Requirements	
		Pass	Fail – Describe Reason ²
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	<i>office area</i>	<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type ³ :	<i>Packaged DX</i>	<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems	<i>1</i>	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity ¹	<i>55,000 Btu/hr</i>	<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency ¹	<i>80% AFUE</i>	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity ¹	<i>56,500 Btu/hr</i>	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency ¹	<i>13.0 SEER / 11.3 EER</i>	<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value	<i>Attic, Ceiling Ins, unvented / 6.0</i>	<input type="checkbox"/>	<input type="checkbox"/>
When duct testing is required, submit MECH-4A & MECH-4-HERS	<i>No</i>	<input type="checkbox"/>	<input type="checkbox"/>
Economizer	<i>No Economizer</i>	<input type="checkbox"/>	<input type="checkbox"/>
Thermostat	<i>Setback Required</i>	<input type="checkbox"/>	<input type="checkbox"/>
Fan Control	<i>Constant Volume</i>	<input type="checkbox"/>	<input type="checkbox"/>

FIELD INSPECTION ENERGY CHECKLIST

Equipment ²	Inspection Criteria	Meets Criteria or Requirements	
		Pass	Fail – Describe Reason ²
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	<i>will call-display</i>	<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type ³ :	<i>Packaged DX</i>	<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems	<i>1</i>	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity ¹	<i>55,000 Btu/hr</i>	<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency ¹	<i>80% AFUE</i>	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity ¹	<i>56,500 Btu/hr</i>	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency ¹	<i>13.0 SEER / 11.3 EER</i>	<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value	<i>Conditioned / 4.2</i>	<input type="checkbox"/>	<input type="checkbox"/>
When duct testing is required, submit MECH-4A & MECH-4-HERS	<i>No</i>	<input type="checkbox"/>	<input type="checkbox"/>
Economizer	<i>No Economizer</i>	<input type="checkbox"/>	<input type="checkbox"/>
Thermostat	<i>Setback Required</i>	<input type="checkbox"/>	<input type="checkbox"/>
Fan Control	<i>Constant Volume</i>	<input type="checkbox"/>	<input type="checkbox"/>

1. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.
2. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form. Compliance fails if a Fail box is checked.
3. Indicate Equipment Type: Gas (Pkg or, Split), VAV, HP (Pkg or split), Hydronic, PTAC, or other.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 3 of 4) MECH-1C

Project Name *Johnstone Supply* Date *1/19/2012*

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and listed all equipment that requires an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Building Departments:

Systems Acceptance: Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

Systems Acceptance: Before occupancy permit is granted. All newly installed HVAC equipment must be tested using the Acceptance Requirements.

The MECH-1C form is not considered a completed form and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for **ALL** newly installed equipment. In addition a Certificate of Acceptance forms shall be submitted to the building department that certifies plans, specifications, installation, certificates, and operating and maintenance information meet the requirements of §10-103(b) and Title-24 Part 6. The building inspector must receive the properly filled out and signed forms before the building can receive final occupancy.

TEST DESCRIPTION		MECH-2A	MECH-3A	MECH-4A	MECH-5A	MECH-6A	MECH-7A	MECH-8A	MECH-9A	MECH-10A	MECH-11A
Equipment Requiring Testing or Verification	Qty.	Outdoor Ventilation For VAV & CAV	Constant Volume & Single-Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation DCV	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
<i>GOODMAN CPG 5-ton</i>	<i>2</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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AIR SYSTEM REQUIREMENTS

(Part 1 of 2)

MECH-2C

Project Name

Johnstone Supply

Date

1/19/2012

Item or System Tags (i.e. AC-1, RTU-1, HP-1)	Indicate Air Systems Type (Central, Single Zone, Package, VAV, or etc...)		
		office area	will call-display
Number of Systems		1	1

MANDATORY MEASURES	Indicate Page Reference on Plans or Schedule and indicate the applicable exception(s)		
	T-24 Sections		
Heating Equipment Efficiency	112(a)	80% AFUE	80% AFUE
Cooling Equipment Efficiency	112(a)	13.0 SEER / 11.3 EER	13.0 SEER / 11.3 EER
HVAC Heat Pump Thermostat	112(b), 112(c)	n/a	n/a
Furnace Controls/Thermostat	112(c), 115(a)	n/a	n/a
Natural Ventilation	121(b)	Yes	Yes
Mechanical Ventilation	121(b)	360 cfm	285 cfm
VAV Minimum Position Control	121(c)	No	No
Demand Control Ventilation	121(c)	No	No
Time Control	122(e)	Programmable Switch	Programmable Switch
Setback and Setup Control	122(e)	Setback Required	Setback Required
Outdoor Damper Control	122(f)	Auto	Auto
Isolation Zones	122(g)	n/a	n/a
Pipe Insulation	123		
Duct Location/ R-value	124	Attic, Ceiling Ins, unvented / 6.0	Conditioned / 4.2

PRESCRIPTIVE MEASURES			
Calculated Design Heating Load	144(a & b)	n/a	n/a
Proposed Heating Capacity	144(a & b)	55,000 Btu/hr	55,000 Btu/hr
Calculated Design Cooling Load	144(a & b)	n/a	n/a
Proposed Cooling Capacity	144(a & b)	44,496 Btu/hr	44,284 Btu/hr
Fan Control	144(c)	Constant Volume	Constant Volume
DP Sensor Location	144(c)		
Supply Pressure Reset (DDC only)	144(c)	Yes	Yes
Simultaneous Heat/Cool	144(d)	No	No
Economizer	144(e)	No Economizer	No Economizer
Heat Air Supply Reset	144(f)	Constant Temp	Constant Temp
Cool Air Supply Reset	144(f)	Constant Temp	Constant Temp
Electric Resistance Heating ¹	144(g)		
Air Cooled Chiller Limitation	144(i)		
Duct Leakage Sealing. If Yes, a MECH-4-A must be submitted	144(k)	No	No

1. Total installed capacity (MBtu/hr) of all electric heat on this project exclusive of electric auxiliary heat for heat pumps. If electric heat is used explain which exception(s) to §144(g) apply.

MECHANICAL EQUIPMENT DETAILS

(Part 1 of 2)

MECH-5C

Project Name
Johnstone Supply

Date
1/19/2012

CHILLER AND TOWER SUMMARY

Equipment Name	Type	Qty.	Efficiency	Tons	PUMPS			
					Qty.	GPM	BHP	Pump Control

DHW / BOILER SUMMARY

System Name	Type	Distribution	Qty.	Rated Input	Vol. (Gals.)	Energy Factor or RE	Standby Loss or Pilot	Tank Ext. R-Value	Status

MULTI-FAMILY CENTRAL WATER HEATING DETAILS

Hot Water Pump				Hot Water Piping Length (ft)			
Control	Qty.	HP	Type	In Plenum	Outside	Buried	Add ½" Insulation
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

CENTRAL SYSTEM RATINGS

System Name	Type	Qty.	HEATING			COOLING		Status
			Output	Aux. kW	Efficiency	Output	Efficiency	
GOODMAN CPG 5-ton	Packaged DX	2	55,000	0.0	80% AFUE	56,500	13.0 SEER / 11.3 EER	New

CENTRAL SYSTEM FAN SUMMARY

System Name	Fan Type	Economizer Type	SUPPLY FAN		RETURN FAN	
			CFM	BHP	CFM	BHP
GOODMAN CPG 5-ton	Constant Volume	No Economizer	2,000	0.40	none	

ENVELOPE MANDATORY MEASURES: NONRESIDENTIAL**ENV-MM**

Project Name

Johnstone Supply

Date

*1/19/2012***DESCRIPTION****Building Envelope Measures:**

- §118(a): Installed insulating material shall have been certified by the manufacturer to comply with the California Quality Standards for insulating material, Title 20 Chapter 4, Article 3.
- §118(c): All Insulating Materials shall be installed in compliance with the flame spread rating and smoke density requirements of Sections 2602 and 707 of Title 24, Part 2.
- §118(f): The opaque portions of framed demising walls in nonresidential buildings shall have insulation with an installed R-value of no less than R-13 between framing members.
- §117(a): All Exterior Joints and openings in the building that are observable sources of air leakage shall be caulked, gasketed, weatherstripped or otherwise sealed.
- §116(a) 1: Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft.² of window area, 0.3 cfm/ft.² of door area for residential doors, 0.3 cfm/ft.² of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft.² for nonresidential double doors (swinging).
- §116(a) 2: Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor.
- §116(a) 3: Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration, or the applicable default SHGC.
- §116(b): Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the building, and shall be weatherstripped (except for unframed glass doors and fire doors).

MECHANICAL MANDATORY MEASURES: NONRESIDENTIAL**MECH-MM**

Project Name

Johnstone Supply

Date

*1/19/2012***Equipment and System Efficiencies**

- §111: Any appliance for which there is a California standard established in the Appliance Efficiency Regulations will comply with the applicable standard.
- §115(a): Fan type central furnaces shall not have a pilot light.
- §123: Piping, except that conveying fluids at temperatures between 60 and 105 degrees Fahrenheit, or within HVAC equipment, shall be insulated in accordance with Standards Section 123.
- §124: Air handling duct systems shall be installed and insulated in compliance with Sections 601, 602, 603, 604, and 605 of the CMC Standards.

Controls

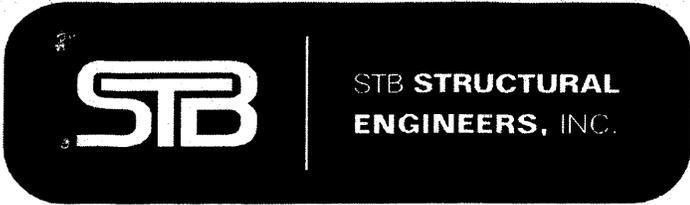
- §122(e): Each space conditioning system shall be installed with one of the following:
- 1A. Each space conditioning system serving building types such as offices and manufacturing facilities (and all others not explicitly exempt from the requirements of Section 112 (d)) shall be installed with an automatic time switch with an accessible manual override that allows operation of the system during off-hours for up to 4 hours. The time switch shall be capable of programming different schedules for weekdays and weekends and have program backup capabilities that prevent the loss of the device's program and time setting for at least 10 hours if power is interrupted; or
 - 1B. An occupancy sensor to control the operating period of the system; or
 - 1C. A 4-hour timer that can be manually operated to control the operating period of the system.
2. Each space conditioning system shall be installed with controls that temporarily restart and temporarily operate the system as required to maintain a setback heating and/or a setup cooling thermostat setpoint.
- §122(g): Each space conditioning system serving multiple zones with a combined conditioned floor area more than 25,000 square feet shall be provided with isolation zones. Each zone: shall not exceed 25,000 square feet; shall be provided with isolation devices, such as valves or dampers that allow the supply of heating or cooling to be setback or shut off independently of other isolation areas; and shall be controlled by a time control device as described above.
- §122(c): Thermostats shall have numeric setpoints in degrees Fahrenheit (F) and adjustable setpoint stops accessible only to authorized personnel.
- §122(b): Heat pumps shall be installed with controls to prevent electric resistance supplementary heater operation when the heating load can be met by the heat pump alone
- §122(a&b): Each space conditioning system shall be controlled by an individual thermostat that responds to temperature within the zone. Where used to control heating, the control shall be adjustable down to 55 degrees F or lower. For cooling, the control shall be adjustable up to 85 degrees F or higher. Where used for both heating and cooling, the control shall be capable of providing a deadband of at least 5 degrees F within which the supply of heating and cooling is shut off or reduced to a minimum.

Ventilation

- §121(e): Controls shall be provided to allow outside air dampers or devices to be operated at the ventilation rates as specified on these plans.
- §122(f): All gravity ventilating systems shall be provided with automatic or readily accessible manually operated dampers in all openings to the outside, except for combustion air openings.
- §121(f): Ventilation System Acceptance. Before an occupancy permit is granted for a newly constructed building or space, or a new ventilating system serving a building or space is operated for normal use, all ventilation systems serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance

Service Water Heating Systems

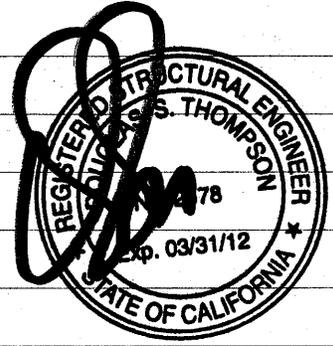
- §113(c) Installation
3. Temperature controls for public lavatories. The controls shall limit the outlet Temperature to 110° F.
 2. Circulating service water-heating systems shall have a control capable of automatically turning off the circulating pump when hot water is not required.



Project: 520 E. Dyer
520 E. Dyer Rd. **Project No.** 11-067
Santa Ana, CA 92707 **Designed By:** MDT 1/12
Client: Martin Builders Inc. **Reviewed By:** _____ DATE
DATE

CALCULATION TABLE OF CONTENTS

Page	Subject
D	Design Loads
R	Roof Framing
W	Wall Panels (Out of Plane)
G	General / Miscellaneous



JAN 12 2012

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STRUCTURAL DESIGN CRITERIA

CODE: 2009 INTERNATIONAL BUILDING CODE AND THE 2010 CALIFORNIA BUILDING CODE

RECEIVED
 JAN 19 2012
 City of Santa Ana

10174195



STRUCTURAL
ENGINEERS, INC.

PROJECT: E20 E. DYER

CLIENT: _____ STB JOB NO. _____

BY: MDT DATE: _____ SHEET NO. 21 OF _____

DESIGN LOADS AND CRITERIA :

DESIGN TO CONFORM TO THE:

INTERNATIONAL BUILDING CODE

2009 EDITION

----- **NON-PANELIZED ROOF** -----

CAP SHEET ROOFING	:	2.0	PSF
RE-ROOF	:	0.0	
PLYWOOD SHEATHING	:	1.8	
JOISTS	:	1.9	
BEAMS	:	2.3	
BAT INSULATION	:	0.5	
SPRINKLERS	:	1.5	
GYP BOARD @ UNDERSIDE	:	0.0	
CEILING	:	3.5	
MISCELLANEOUS	:	0.5	

TOTAL DEAD LOAD : 14.0 PSF

TOTAL LIVE LOAD : 20.0 PSF (REDUCIBLE)

TOTAL DESIGN LOAD : 34.0 PSF

----- **DEFLECTION CRITERIA FOR ROOF FRAMING MEMBERS** -----

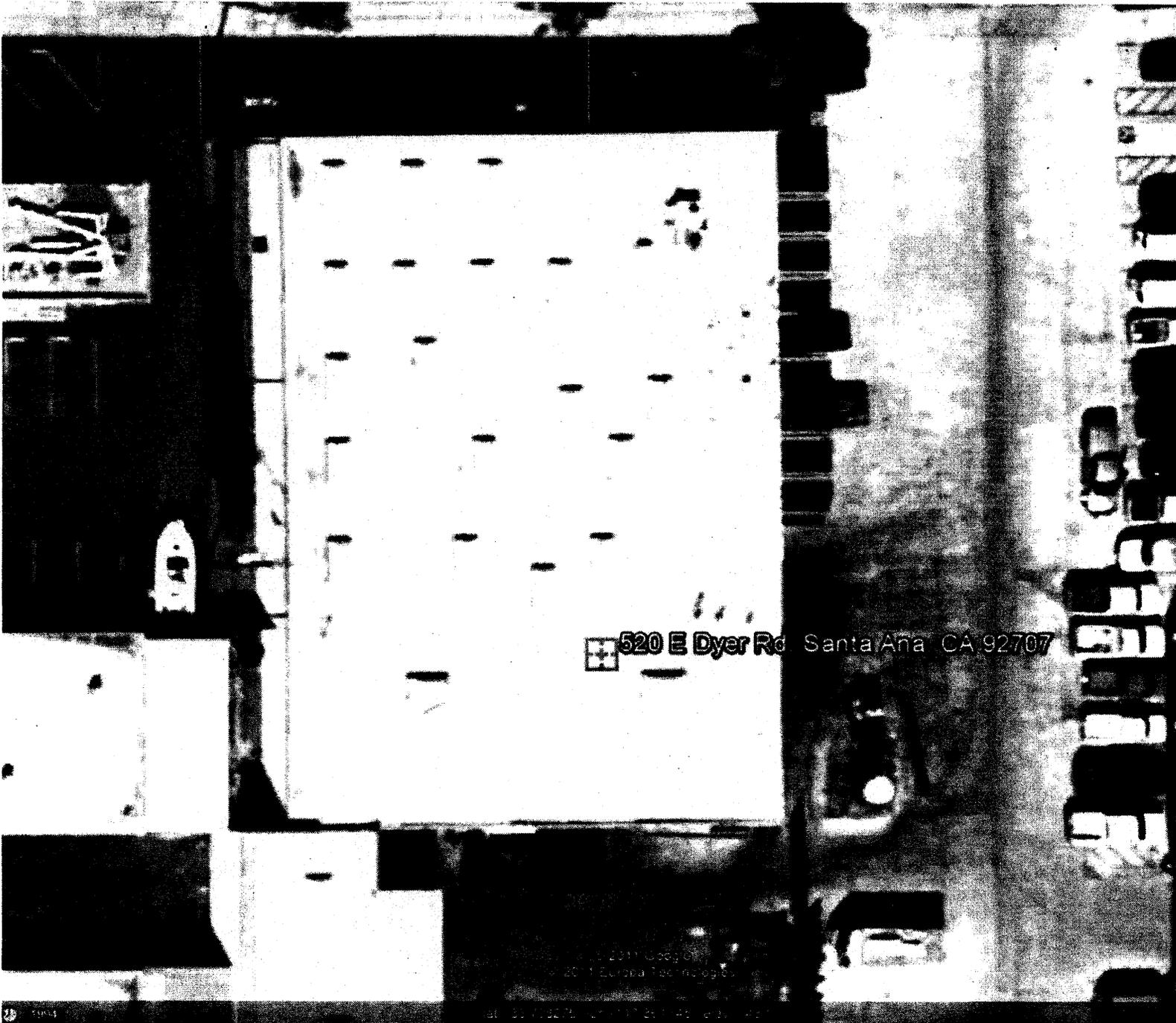
ALLOWABLE TOTAL LOAD DEFLECTION : L/ 120

ALLOWABLE LIVE LOAD DEFLECTION : L/ 180

REVIEWED BY _____ DATE _____

FILE : K:\EXCEL\work\NONPANEL.dwg

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520 E Dyer Rd Santa Ana CA 92707

LAT = 33.708275
LON = -117.861145

D2

Conterminous 48 States
 2009 International Building Code
 Latitude = 33.708275
 Longitude = -117.861145
 Spectral Response Accelerations Ss and S1
 Ss and S1 = Mapped Spectral Acceleration Values
 Site Class B - $F_a = 1.0$, $F_v = 1.0$
 Data are based on a 0.01 deg grid spacing
 Period Sa
 (sec) (g)
 0.2 1.513 (Ss, Site Class B)
 1.0 0.531 (S1, Site Class B)

Conterminous 48 States
 2009 International Building Code
 Latitude = 33.708275
 Longitude = -117.861145
 Spectral Response Accelerations SMs and SM1
 $SMs = F_a \times Ss$ and $SM1 = F_v \times S1$
 Site Class D - $F_a = 1.0$, $F_v = 1.5$

Period Sa
 (sec) (g)
 0.2 1.513 (SMs, Site Class D)
 1.0 0.796 (SM1, Site Class D)

Conterminous 48 States
 2009 International Building Code
 Latitude = 33.708275
 Longitude = -117.861145
 Design Spectral Response Accelerations SDs and SD1
 $SDs = 2/3 \times SMs$ and $SD1 = 2/3 \times SM1$
 Site Class D - $F_a = 1.0$, $F_v = 1.5$

Period Sa
 (sec) (g)
 0.2 1.009 (SDs, Site Class D)



STB STRUCTURAL
ENGINEERS, INC.

PROJECT: 520 E. Dyer

CLIENT: Martin Builders Inc.

STB JOB NO. 11-067

BY: MDT DATE: 1/12

SHEET NO. 21 OF

Sawn Lumber/ GLB Analysis:

Member Size: 2-2x10

Grade = No. 1

Fv = 180 psi

Fb = 1000 psi

E = 1,700,000 psi

Point Load:

Location a (ft) = 6.0

Point Load:

Location a (ft) = 14.0

Partial Uniform Load:

Location a (ft) = 0.0

Location b (ft) = 0.0

2005 NDS

SPAN (ft) = 20.00

Uniform Load:

wDL (#/ft) = 23

wTL (#/ft) = 63

PDL (#) = 70

PTL (#) = 190

PDL (#) = 70

PTL (#) = 190

wDL (#/ft) = 0

wTL (#/ft) = 0

SPAN (ft) = 20.00

Uniform Load:

wDL (#/ft) = 23

wTL (#/ft) = 63

PDL (#) = 215

PTL (#) = 215

PDL (#) = 0

PTL (#) = 0

wDL (#/ft) = 0

wTL (#/ft) = 0

R1 = 820 #

R2 = 820 #

V@ d = 771 #

Mmax = 4,290 ft-#

Cd = 1.25

Cf = 1.10

fv = 42 psi < F'v = Fv Cd = 225 psi OK

fb = 1,203 psi < F'b = Fb Cd Cf = 1,375 psi OK

Deflection Criteria:

Total Load L/ 180

Live Load L/ 240

Δ DL = 0.34 in = L/ 705

Δ LL = 0.59 in = L/ 407

Δ TL = 0.93 in = L/ 258

Use 2-2x10

R1 = 806 #

R2 = 677 #

V@ d = 757 #

Mmax = 3,614 ft-#

Cd = 1.25

Cf = 1.10

fv = 41 psi < F'v = Fv Cd = 225 psi OK

fb = 1,014 psi < F'b = Fb Cd Cf = 1,375 psi OK

Deflection Criteria:

Total Load L/ 180

Live Load L/ 240

Δ DL = 0.35 in = L/ 677

Δ LL = 0.43 in = L/ 561

Δ TL = 0.78 in = L/ 307

Use 2-2x10

REVIEWED BY DATE

FILE : K:\EXCEL\wood_beam_sawn_glb.xls

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STB STRUCTURAL
ENGINEERS, INC.

PROJECT: 520 E. Dyer

CLIENT: Martin Builders Inc.

STB JOB NO. 11-067

BY: MDT DATE: 1/12

SHEET NO. **R2** OF

Mech'I Unit Anchorage at Roof

v : 1.1/mje

2009 International Building Code

Unit Weight, $W_p = 850$ lbs. $a_p = 1.0$
 Width, $W = 3.3$ ft. $R_p = 1.5$
 Length, $L = 5.8$ ft. $S_{DS} = 1.009$
 Height to C.M., $H = 3.0$ ft. $l_p = 1.00$

Anchorage :

$F_p = (0.4 a_p S_{DS} l_p) / R_p (1 + 2 z/h) W_p = 686$ lb
 $F_p (\text{min}) = 0.3 S_{DS} l_p W_p = 257$ lb
 $F_p (\text{max}) = 1.6 S_{DS} l_p W_p = 1372$ lb
 $F_p (\text{required}) = 686$ lb
 Anchorage Force = $0.7 \times F_p = 480$ lb
 $T = C = F_p \times H / (W/2) = 216$ lb
 $P_D = W_p / 4 = 213$ lb
 Net Uplift $T_s = 4$ lb

$V_s (\text{per screw}) = F_p / 8 = 60$ lb
 $R = \sqrt{T_s^2 + V_s^2} = 60$ lb
 $\alpha = 3.7^\circ$

For 4 - 3/8" dia. Lag Screws w/ 3" Min. Embed

$W'p = 1.6 \times 2.75" \times 305 = 1342$ lb
 $Z' = 1.6 \times 130 = 208$ lb

$$Z'_\alpha = \frac{(W'p)Z'}{(W'p)\cos^2\alpha + Z'\sin^2\alpha} = 263 \text{ lb.} > 60 \text{ lb. O.K.}$$

Use 3/8" dia. Lag Screw w/ 3" Min. Embed
 Min. 2 Ea. Side (8 total)

REVIEWED BY _____ DATE _____
 FILE : K:\EXCEL\general\EQUIPMENT_ANCHORAGE_2006IBC.xls

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STB STRUCTURAL
ENGINEERS, INC.

PROJECT: 520 E. Dyer

CLIENT: Martin Builders Inc.

STB JOB NO. 11-067

BY: MDT DATE: 1/12

SHEET NO. **W1** OF

REINFORCING AT NEW OPENING IN EXISTING WALL:

2006 IBC

v:1.0/cmh

(Assumptions: Wall takes all vertical load. Wall spans vertically between added reinforcing.)

NEW OPENING:

- W = 3 ft.
- Lw = 4 ft.
- Lc = 20 ft.
- L1 = 4 ft.
- h1 = 7 ft.
- h2 = 0 ft.
- h3 = 1 ft.

Concrete Wall

- thick t = 5.5 in.
- Wall Wt = 145 psf
- Ww = 66.5 psf
- Deflection Max L / 150

LOADING:

- Wind**
- Exposure = C
 - Height Coeff. = 1.29
 - lw = 1.0
 - MWFRS = 14.5
 - W = 18.7 psf
 - Wu = 1.6W = 29.9 psf
- Seismic**
- Sds = 1.113
 - le = 1.0

$F_p = 0.4 S_{ds} l_e W_w = 0.445 W_w$ (Fp min = 0.10 Ww)
 $F_{pu} = 29.6$ psf

CONCRETE PANEL OVER OPENING:

- Wall Span: Vertical
- Lu = 13 ft.
 - Fp = 29.6 plf
 - Wu = 29.9 plf (GOVERNS)
 - Vu = 0.19 k
 - Mu = 0.63 k-ft

- fc = 2000 psi
- fy = 40 ksi
- b = 12 in.
- t = 5.5 in.
- d = 2.5 in.

Vertical Reinforcing

- # 4 bars @ 14 " o/c
- (As = 0.17 in²)
- øVc = 2.01 k > Vu O.K.
- øMn = 1.20 k-ft > Mu O.K.
- (E) 5.5" Concrete Wall O.K**

ADDED REINFORCING:

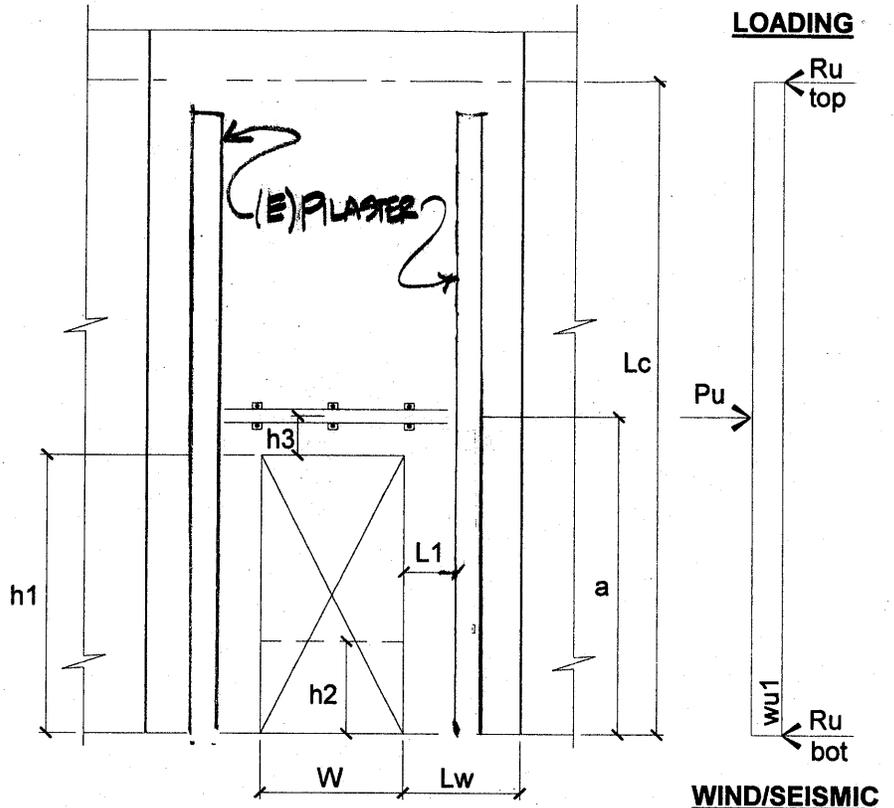
- HORZ. TUBE:** L = 11 ft.
- wu wind = 299 plf
 - wu seis = 192 plf

- Size: **HSS3X3X1/4**
- Zx = 2.48 in³ lx = 3.0 in⁴
 - øMn = 0.9 x Fy x Z = 8.6 k-ft > Mu max O.K.

- Deflection: Δ wind = 0.79 in. = L/168 < L/150 OK
 Δ seismic = 0.51 in. = L/261 < L/150 OK

	Wind	Seismic
Ru =	1.65 k	1.06 k
Mu max =	4.5 k-ft	2.9 k-ft

USE HSS3X3X1/4 HORZ.



REVIEWED BY _____ DATE _____

FILE : K:\EXCEL\concrete_Panel Reinf_2.xls

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PROFIS Anchor 2.2.4

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Company:
Specifier:
Address:
Phone | Fax: - | -
E-Mail:

Page: 1
Project:
Sub-Project | Pos. No.:
Date: 1/11/2012

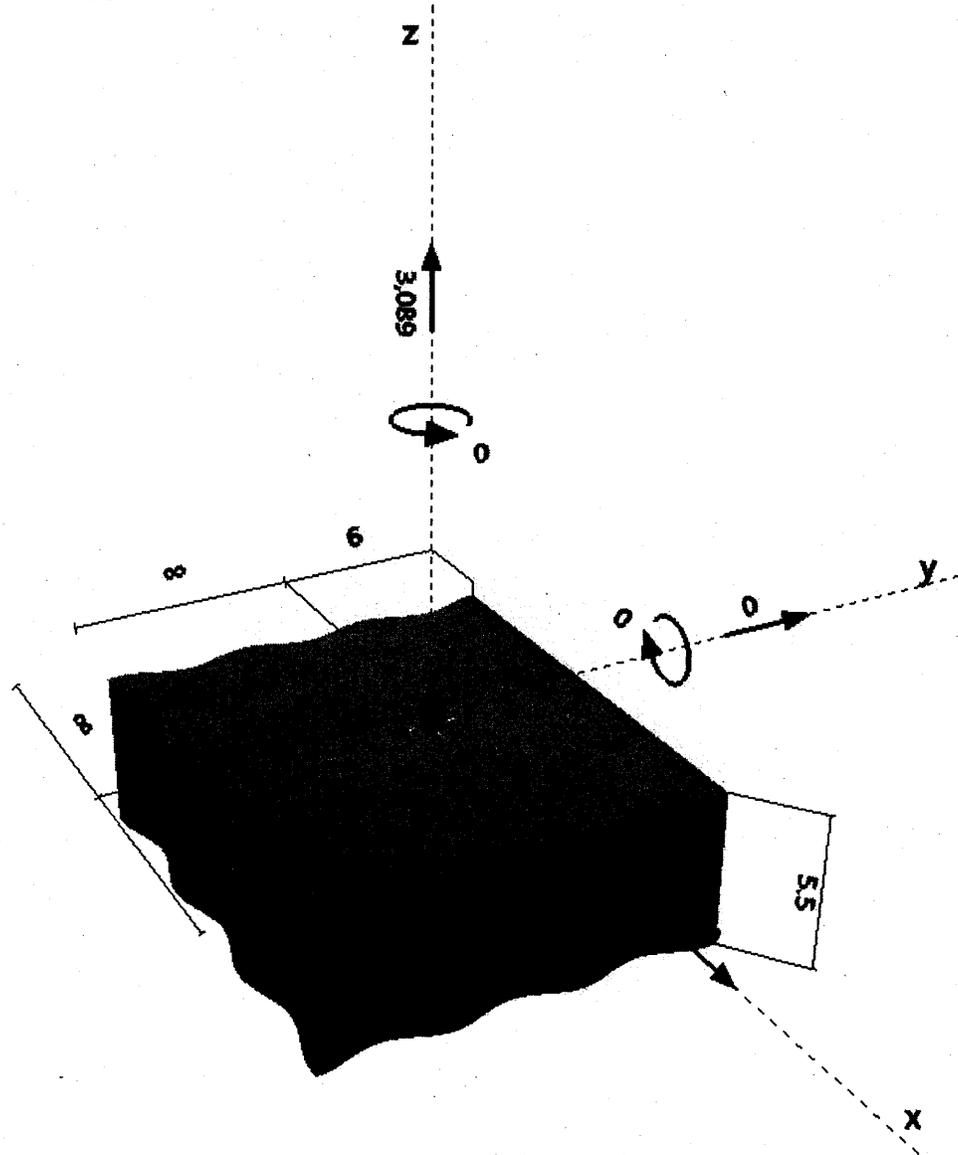
Specifier's comments:

1. Input data

Anchor type and diameter:	Kwik Bolt TZ - CS, 5/8 (3 1/8)
Effective embedment depth:	$h_{ef} = 3.125$ in., $h_{nom} = 3.875$ in.
Material:	Carbon Steel
Evaluation Service Report:	ESR 1917
Issued Valid:	5/1/2011 5/1/2013
Proof:	design method ACI 318 / AC 193
Stand-off installation:	- (Recommended plate thickness: not calculated)
Profile:	no profile
Base material:	cracked concrete, 3000, $f'_c = 3000$ psi; $h = 5.500$ in.
Reinforcement:	tension: condition B, shear: condition B; no supplemental splitting reinforcement present edge reinforcement: none or < No. 4 bar
Seismic loads (cat. C, D, E, or F):	no



Geometry [in.] & Loading [lb, in.-lb]



G4



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PROFIS Anchor 2.2.4

Company:
 Specifier:
 Address:
 Phone | Fax: - | -
 E-Mail:

Page: 3
 Project:
 Sub-Project | Pos. No.:
 Date: 1/11/2012

Concrete Breakout Strength

Equations

$$N_{cb} = \left(\frac{A_{Nc}}{A_{Nc0}} \right) \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \quad \text{ACI 318-08 Eq. (D-4)}$$

$$\phi N_{cb} \geq N_{ua} \quad \text{ACI 318-08 Eq. (D-1)}$$

A_{Nc} see ACI 318-08, Part D.5.2.1, Fig. RD.5.2.1(b)

$$A_{Nc0} = 9 h_{ef}^2 \quad \text{ACI 318-08 Eq. (D-6)}$$

$$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e_N}{3 h_{ef}}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-9)}$$

$$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{C_{a,min}}{1.5 h_{ef}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-11)}$$

$$\psi_{cp,N} = \text{MAX} \left(\frac{C_{a,min}}{C_{ac}}, \frac{1.5 h_{ef}}{C_{ac}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-13)}$$

$$N_b = k_c \lambda \sqrt{f_c} h_{ef}^{1.5} \quad \text{ACI 318-08 Eq. (D-7)}$$

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$C_{a,min}$ [in.]	$\psi_{c,N}$	C_{ac} [in.]	k_c	λ
3.125	0.000	0.000	6.000	1.000	6.500	17	1
f_c [psi]							
3000							

Calculations

A_{Nc} [in. ²]	A_{Nc0} [in. ²]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [lb]
87.89	87.89	1.000	1.000	1.000	1.000	5144

Results

N_{cb} [lb]	$\phi_{concrete}$	ϕN_{cb} [lb]	N_{ua} [lb]
5144	0.650	3343	3089

65



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PROFIS Anchor 2.2.4

Company:		Page:	4
Specifier:		Project:	
Address:		Sub-Project / Pos. No.:	
Phone / Fax:	- -	Date:	1/11/2012
E-Mail:			

4. Shear load

Proof	Load V_u [lb]	Capacity ϕV_n [lb]	Utilization β_v [%] = $V_u / \phi V_n$	Status
Steel Strength*	N/A	N/A	N/A	N/A
Steel failure (with lever arm)*	N/A	N/A	N/A	N/A
Pryout Strength**	N/A	N/A	N/A	N/A
Concrete edge failure in direction**	N/A	N/A	N/A	N/A

* anchor having the highest loading **anchor group (relevant anchors)

5. Warnings

- Condition A applies when supplementary reinforcement is used. The Φ factor is increased for non-steel Design Strengths except Pullout Strength and Pryout strength. Condition B applies when supplementary reinforcement is not used and for Pullout Strength and Pryout Strength. Refer to ACI 318, Part D.4.4(c).
- Refer to the manufacturer's product literature for cleaning and installation instructions.
- Checking the transfer of loads into the base material and the shear resistance are required in accordance with ACI318 or the relevant standard!
- The anchor plate is assumed to be sufficiently stiff in order to be not deformed when subjected to the actions!

Fastening meets the design criteria!



STB STRUCTURAL ENGINEERS, INC.

Project: 520 E. Dyer
520 E. Dyer Rd. Project No. 11-067
Santa Ana, CA 92707 Designed By: MDT 1/12
 Client: Martin Builders Inc. Reviewed By: _____ DATE _____
 _____ DATE _____

CALCULATION TABLE OF CONTENTS

Page	Subject
D	Design Loads
R	Roof Framing
W	Wall Panels (Out of Plane)
G	General / Miscellaneous



2012

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STRUCTURAL DESIGN CRITERIA

CODE: 2009 INTERNATIONAL BUILDING CODE AND THE 2010 CALIFORNIA BUILDING CODE

RECEIVED
 FEB 08 2012
 City of Santa Ana

10174195



STRUCTURAL ENGINEERS, INC.

PROJECT: E20 E. DYER

CLIENT: _____ STB JOB NO. _____

BY: MDT DATE: _____ SHEET NO. 01 OF _____

DESIGN LOADS AND CRITERIA :

DESIGN TO CONFORM TO THE: INTERNATIONAL BUILDING CODE 2009 EDITION

----- **NON-PANELIZED ROOF** -----

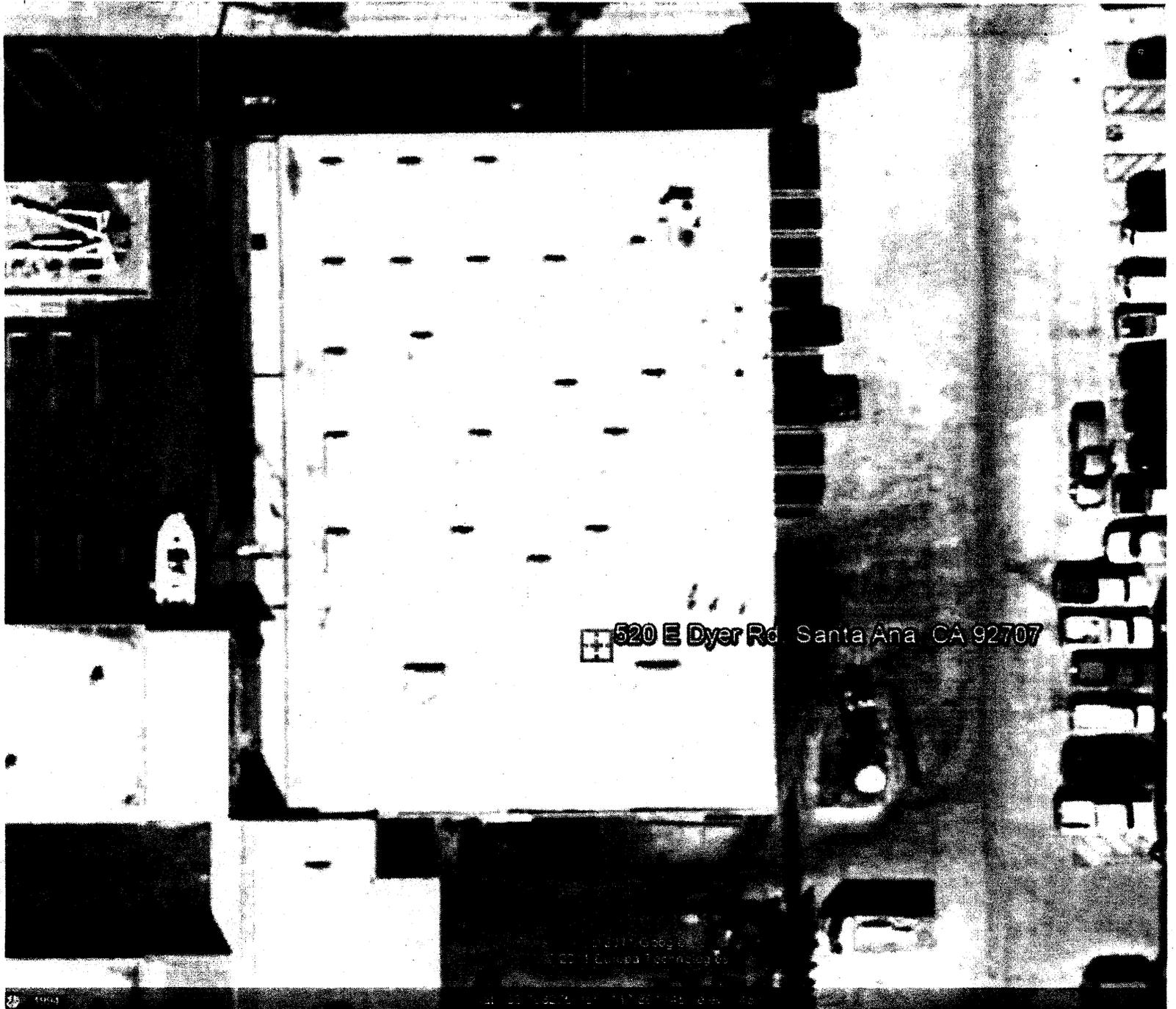
CAP SHEET ROOFING	:	2.0	PSF
RE-ROOF	:	0.0	
PLYWOOD SHEATHING	:	1.8	
JOISTS	:	1.9	
BEAMS	:	2.3	
BAT INSULATION	:	0.5	
SPRINKLERS	:	1.5	
GYP BOARD @ UNDERSIDE	:	0.0	
CEILING	:	3.5	
MISCELLANEOUS	:	0.5	
TOTAL DEAD LOAD :		<u>14.0</u>	PSF
TOTAL LIVE LOAD :		<u>20.0</u>	PSF (REDUCIBLE)
TOTAL DESIGN LOAD :		<u>34.0</u>	PSF

----- **DEFLECTION CRITERIA FOR ROOF FRAMING MEMBERS** -----

ALLOWABLE TOTAL LOAD DEFLECTION	:	L/	120
ALLOWABLE LIVE LOAD DEFLECTION	:	L/	180

REVIEWED BY _____ DATE _____
FILE : K:\EXCEL\work\NONPANEL.JOB

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520 E Dyer Rd Santa Ana CA 92707

LAT = 33.708275
LON = -117.861145

D2

Conterminous 48 States
 2009 International Building Code
 Latitude = 33.708275
 Longitude = -117.861145
 Spectral Response Accelerations Ss and S1
 Ss and S1 = Mapped Spectral Acceleration Values
 Site Class B - Fa = 1.0 ,Fv = 1.0
 Data are based on a 0.01 deg grid spacing

Period	Sa
(sec)	(g)
0.2	1.513 (Ss, Site Class B)
1.0	0.531 (S1, Site Class B)

Conterminous 48 States
 2009 International Building Code
 Latitude = 33.708275
 Longitude = -117.861145
 Spectral Response Accelerations SMs and SM1
 SMs = Fa x Ss and SM1 = Fv x S1
 Site Class D - Fa = 1.0 ,Fv = 1.5

Period	Sa
(sec)	(g)
0.2	1.513 (SMs, Site Class D)
1.0	0.796 (SM1, Site Class D)

Conterminous 48 States
 2009 International Building Code
 Latitude = 33.708275
 Longitude = -117.861145
 Design Spectral Response Accelerations SDs and SD1
 SDs = 2/3 x SMs and SD1 = 2/3 x SM1
 Site Class D - Fa = 1.0 ,Fv = 1.5

Period	Sa
(sec)	(g)
0.2	1.009 (SDs, Site Class D)



STB STRUCTURAL
ENGINEERS, INC.

PROJECT: 520 E. Dyer

CLIENT: Martin Builders Inc.

STB JOB NO. 11-067

BY: MDT DATE: 1/12

SHEET NO. **P1** OF

Sawn Lumber/ GLB Analysis:

2005 NDS

v:4.1/dst/cmh

[REDACTED]

SPAN (ft) = 20.00

R1 = 820 #

A = 27.8 in²

Member Size: 2-2x10

R2 = 820 #

Sx = 42.8 in³

Grade = No.1

Uniform Load:

V@ d = 771 #

Ix = 198 in⁴

Fv = 180 psi

wDL (#/ft) = 23

Mmax = 4,290 ft-#

Fb = 1000 psi

wTL (#/ft) = 63

Cd = 1.25 Cf = 1.10

E = 1,700,000 psi

fv = 42 psi < F'v = Fv Cd = 225 psi OK

fb = 1,203 psi < F'b = Fb Cd Cf = 1,375 psi OK

Point Load:

PDL (#) = 70

Deflection Criteria:

Total Load L/ 180

Location a (ft) = 6.0

PTL (#) = 190

Live Load L/ 240

Point Load:

Location a (ft) = 14.0

PDL (#) = 70

Δ DL = 0.34 in = L/ 705

Partial Uniform Load:

Location a (ft) = 0.0

wDL (#/ft) = 0

Δ LL = 0.59 in = L/ 407

Location b (ft) = 0.0

wTL (#/ft) = 0

Δ TL = 0.93 in = L/ 258

Use 2-2x10

[REDACTED]

SPAN (ft) = 20.00

R1 = 806 #

A = 27.8 in²

Member Size: 2-2x10

R2 = 677 #

Sx = 42.8 in³

Grade = No.1

Uniform Load:

V@ d = 757 #

Ix = 198 in⁴

Fv = 180 psi

wDL (#/ft) = 23

Mmax = 3,614 ft-#

Fb = 1000 psi

wTL (#/ft) = 63

Cd = 1.25 Cf = 1.10

E = 1,700,000 psi

fv = 41 psi < F'v = Fv Cd = 225 psi OK

fb = 1,014 psi < F'b = Fb Cd Cf = 1,375 psi OK

Point Load:

PDL (#) = 215

Deflection Criteria:

Total Load L/ 180

Location a (ft) = 4.0

PTL (#) = 215

Live Load L/ 240

Point Load:

Location a (ft) = 0.0

PDL (#) = 0

Δ DL = 0.35 in = L/ 677

Partial Uniform Load:

Location a (ft) = 0.0

wDL (#/ft) = 0

Δ LL = 0.43 in = L/ 561

Location b (ft) = 0.0

wTL (#/ft) = 0

Δ TL = 0.78 in = L/ 307

Use 2-2x10

REVIEWED BY _____ DATE _____

FILE : K:\EXCEL\wood_beam_sawn_glb.xls

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STB STRUCTURAL
ENGINEERS, INC.

PROJECT: 520 E. Dyer

CLIENT: Martin Builders Inc.

STB JOB NO. 11-067

BY: MDT DATE: 1/12

SHEET NO. R2 OF

Mech'l Unit Anchorage at Roof

v : 1.1/mje

2009 International Building Code

Unit Weight, $W_p = 850$ lbs. $a_p = 1.0$
 Width, $W = 3.3$ ft. $R_p = 1.5$
 Length, $L = 5.8$ ft. $S_{DS} = 1.009$
 Height to C.M., $H = 3.0$ ft. $l_p = 1.00$

Anchorage :

$F_p = (0.4 a_p S_{DS} l_p) / R_p (1 + 2 z/h) W_p = 686$ lb
 F_p (min) = $0.3 S_{DS} l_p W_p = 257$ lb
 F_p (max) = $1.6 S_{DS} l_p W_p = 1372$ lb
 F_p (required) = 686 lb
 Anchorage Force = $0.7 \times F_p = 480$ lb
 $T = C = F_p \times H / (W/2) = 216$ lb
 $P_D = W_p / 4 = 213$ lb
 Net Uplift $T_s = 4$ lb

V_s (per screw) = $F_p / 8 = 60$ lb
 $R = \sqrt{T_s^2 + V_s^2} = 60$ lb
 $\alpha = 3.7^\circ$

For 4 - 3/8" dia. Lag Screws w/ 3" Min. Embed

$W'p = 1.6 \times 2.75" \times 305 = 1342$ lb
 $Z' = 1.6 \times 130 = 208$ lb

$$Z_\alpha = \frac{(W'p)Z'}{(W'p)\cos^2\alpha + Z' \sin^2\alpha} = 263 \text{ lb.} > 60 \text{ lb. O.K.}$$

Use 3/8" dia. Lag Screw w/ 3" Min. Embed
 Min. 2 Ea. Side (8 total)

REVIEWED BY _____ DATE _____
 FILE : K:\EXCEL\general_EQUIPMENT_ANCHORAGE_2009IBC.xls

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STB STRUCTURAL
ENGINEERS, INC.

PROJECT: 520 E. Dyer

CLIENT: Martin Builders Inc.

STB JOB NO. 11-067

BY: MDT DATE: 1/12

SHEET NO. **W1** OF

REINFORCING AT NEW OPENING IN EXISTING WALL:

2006 IBC

v:1.0/cmh

(Assumptions: Wall takes all vertical load. Wall spans vertically between added reinforcing.)

NEW OPENING:

- W = 3 ft.
- Lw = 4 ft.
- Lc = 20 ft.
- L1 = 4 ft.
- h1 = 7 ft.
- h2 = 0 ft.
- h3 = 1 ft.

Concrete Wall

- thick t = 5.5 in.
- Wall Wt = 145 psf
- Ww = 66.5 psf
- Deflection Max L / 150

LOADING:

- Wind**
- Exposure = C
 - Height Coeff. = 1.29
 - lw = 1.0
 - MWFRS = 14.5
 - W = 18.7 psf
 - Wu = 1.6W = 29.9 psf

Seismic

- Sds = 1.113
- le = 1.0
- Fp = 0.4 Sds le Ww = 0.445 Ww (Fp min = 0.10 Ww)
- Fpu = 29.6 psf

CONCRETE PANEL OVER OPENING:

- Wall Span: Vertical
- Lu = 13 ft.
 - Fp = 29.6 plf
 - Wu = 29.9 plf (GOVERNS)
 - Vu = 0.19 k
 - Mu = 0.63 k-ft

- f'c = 2000 psi
- fy = 40 ksi
- b = 12 in.
- t = 5.5 in.
- d = 2.5 in.

Vertical Reinforcing

- # 4 bars @ 14" o/c
- (As = 0.17 in²)
- øVc = 2.01 k > Vu O.K.
- øMn = 1.20 k-ft > Mu O.K.
- (E) 5.5" Concrete Wall O.K**

ADDED REINFORCING:

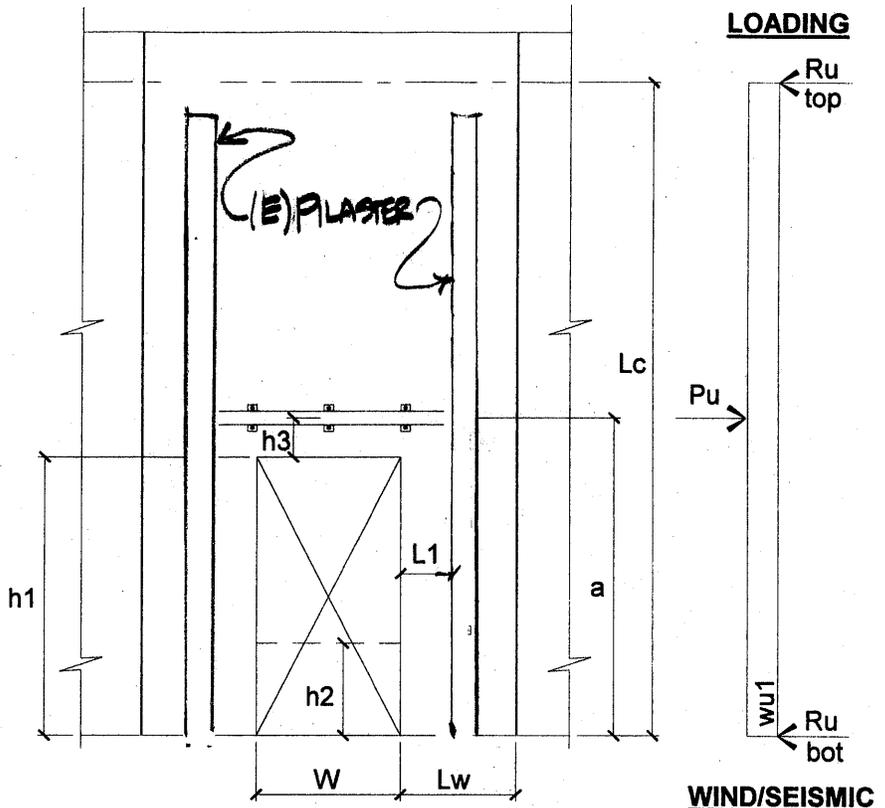
- HORZ. TUBE:** L = 11 ft.
- wu wind = 299 plf
 - wu seis = 192 plf

- Size: **HSS3X3X1/4**
- Zx = 2.48 in³ lx = 3.0 in⁴
 - øMn = 0.9 x Fy x Z = 8.6 k-ft > Mu max O.K.

- Deflection:**
- Δ wind = 0.79 in. = L/168 < L/150 OK
 - Δ seismic = 0.51 in. = L/261 < L/150 OK

	Wind	Seismic
Ru =	1.65 k	1.06 k
Mu max =	4.5 k-ft	2.9 k-ft

USE HSS3X3X1/4 HORZ.



REVIEWED BY _____ DATE _____

FILE : K:\XCEL\concrete_Panel Reinf_2.xls

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STB STRUCTURAL
ENGINEERS, INC.

PROJECT: 520 E. DYER

CLIENT:

STB JOB NO. 11-007

BY: MD

DATE:

SHEET NO. 91 OF

NEW ROOF SCREEN/PARAPET EXTEN.

WIND: $V_{35} = 85$ MPH

EXPOSURE = C

$$q_p = 0.00256 \times 0.98 \times 1.0 \times 0.85 \times 85^2 \times 1.0$$

$$q_p = 13.84 \text{ PSF}$$

$$G_{Cp} = 2.52 \quad C_{e2} = 0$$

$$P_i = 13.84 \times (1.55 - 0) = 21.5 \text{ PSF}$$

$$P_w = 21.5 \text{ PSF} \times 6'0" = 129 \text{ PLF}$$

$$P_{wu} = 1.0 \times 129 = 206 \text{ PLF}$$

$$M_u = 206 \times 6^2 / 2 = 3707 \text{ #}$$

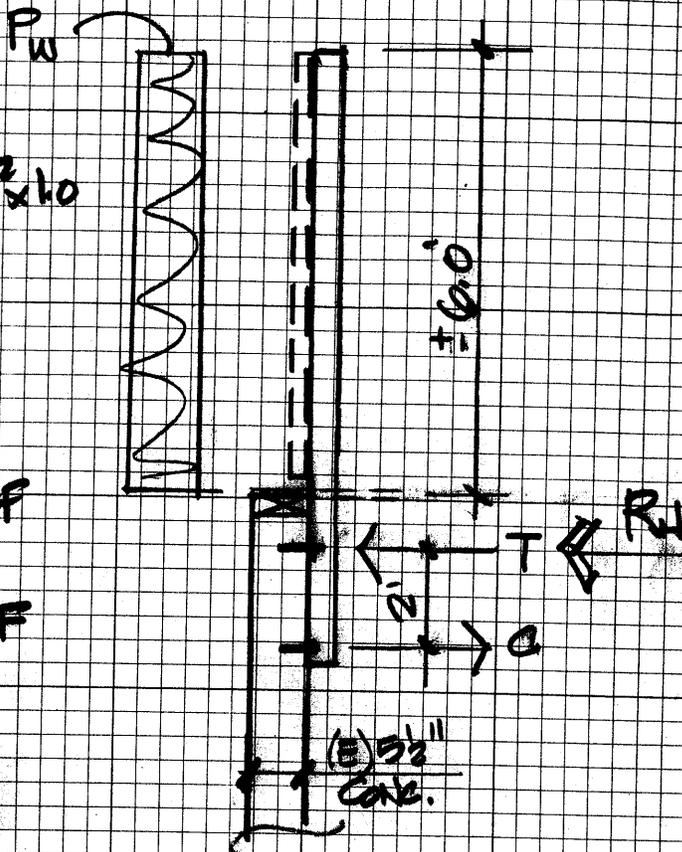
$$T_u = 3707 \text{ #} / 2 = 1853 \text{ #}$$

$$R_u = V_u + T_u = 206 \times 6 + 1853 = 3089 \text{ #}$$

$$M_{ASD} = \frac{3707 \text{ #}}{1.6} = 2317 \text{ #}$$

$$f_b = \frac{2317 \times 12}{2.28} = 12.2 \text{ KSI} < 21.6 \text{ @}$$

$$\Delta = \frac{129 \times 5.5^3 \times 1728 \times (4 \times 2 + 3 \times 5.5)}{24 \times 29 \times 10^6 \times 7.75} = 0.17" = L/392 \text{ @}$$



HSS 4x4x1/4:
I_x = 7.8
S_x = 3.9

USE L5x3x3/8 @ 6'0"
ALT. HSS 4x4x1/4

REVIEWED BY _____ DATE _____ THESE CALCULATIONS CONTAIN INFORMATION PROPRIETARY TO STB STRUCTURAL ENGINEERS, INC. THIS DOCUMENT OR ITS CONTENTS MAY NOT BE REPRODUCED OR DISCLOSED TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF STB STRUCTURAL ENGINEERS, INC. © 2010 ALL RIGHTS RESERVED.

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PROFIS Anchor 2.2.4

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Specifier:
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Phone | Fax: - | -
E-Mail:

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Sub-Project | Pos. No.:
Date: 1/11/2012

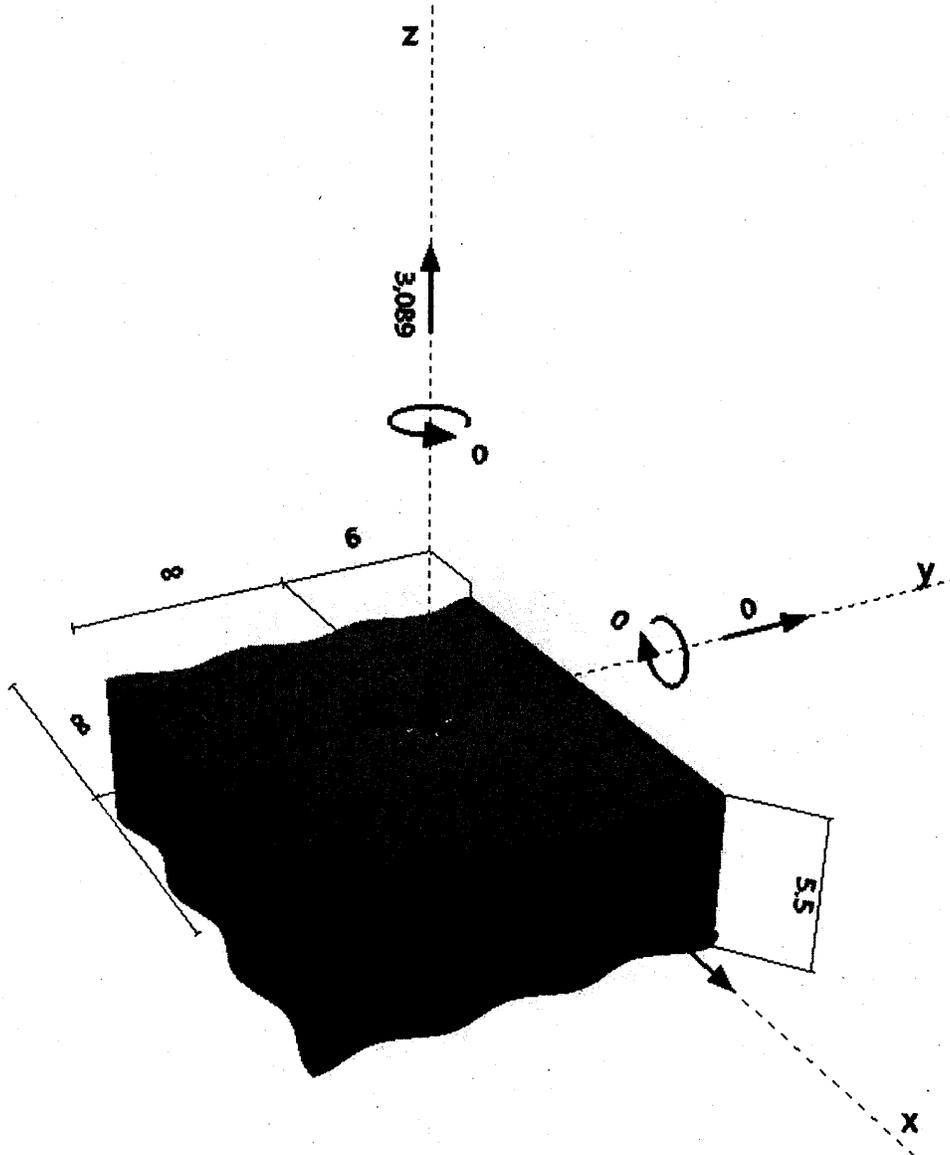
Specifier's comments:

1. Input data

Anchor type and diameter:	Kwik Bolt TZ - CS, 5/8 (3 1/8)
Effective embedment depth:	$h_{ef} = 3.125$ in., $h_{nom} = 3.875$ in.
Material:	Carbon Steel
Evaluation Service Report:	ESR 1917
Issued Valid:	5/1/2011 5/1/2013
Proof:	design method ACI 318 / AC 193
Stand-off installation:	- (Recommended plate thickness: not calculated)
Profile:	no profile
Base material:	cracked concrete, 3000, $f'_c = 3000$ psi; $h = 5.500$ in.
Reinforcement:	tension: condition B, shear: condition B; no supplemental splitting reinforcement present edge reinforcement: none or < No. 4 bar
Seismic loads (cat. C, D, E, or F):	no



Geometry [in.] & Loading [lb, in.-lb]



G4



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PROFIS Anchor 2.2.4

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Concrete Breakout Strength

Equations

$$N_{cb} = \left(\frac{A_{Nc}}{A_{Nc0}} \right) \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \quad \text{ACI 318-08 Eq. (D-4)}$$

$$\phi N_{cb} \geq N_{us} \quad \text{ACI 318-08 Eq. (D-1)}$$

$$A_{Nc} \text{ see ACI 318-08, Part D.5.2.1, Fig. RD.5.2.1(b)}$$

$$A_{Nc0} = 9 h_{ef}^2 \quad \text{ACI 318-08 Eq. (D-6)}$$

$$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e_N}{3 h_{ef}}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-9)}$$

$$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{C_{a,min}}{1.5 h_{ef}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-11)}$$

$$\psi_{cp,N} = \text{MAX} \left(\frac{C_{ac,min}}{C_{ac}}, \frac{1.5 h_{ef}}{C_{ac}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-13)}$$

$$N_b = k_c \lambda \sqrt{f_c} h_{ef}^{1.5} \quad \text{ACI 318-08 Eq. (D-7)}$$

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$C_{a,min}$ [in.]	$\psi_{c,N}$	C_{ac} [in.]	k_c	λ
3.125	0.000	0.000	6.000	1.000	6.500	17	1
f_c [psi]							
3000							

Calculations

A_{Nc} [in. ²]	A_{Nc0} [in. ²]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [lb]
87.89	87.89	1.000	1.000	1.000	1.000	5144

Results

N_{cb} [lb]	$\phi_{concrete}$	ϕN_{cb} [lb]	N_{us} [lb]
5144	0.650	3343	3089

65



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PROFIS Anchor 2.2.4

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4. Shear load

Proof	Load V_{un} [lb]	Capacity ϕV_n [lb]	Utilization β_v [%] = $V_{un} / \phi V_n$	Status
Steel Strength*	N/A	N/A	N/A	N/A
Steel failure (with lever arm)*	N/A	N/A	N/A	N/A
Pryout Strength**	N/A	N/A	N/A	N/A
Concrete edge failure in direction**	N/A	N/A	N/A	N/A

* anchor having the highest loading **anchor group (relevant anchors)

5. Warnings

- Condition A applies when supplementary reinforcement is used. The Φ factor is increased for non-steel Design Strengths except Pullout Strength and Pryout strength. Condition B applies when supplementary reinforcement is not used and for Pullout Strength and Pryout Strength. Refer to ACI 318, Part D.4.4(c).
- Refer to the manufacturer's product literature for cleaning and installation instructions.
- Checking the transfer of loads into the base material and the shear resistance are required in accordance with ACI318 or the relevant standard!
- The anchor plate is assumed to be sufficiently stiff in order to be not deformed when subjected to the actions!

Fastening meets the design criteria!

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PROFIS Anchor 2.2.4

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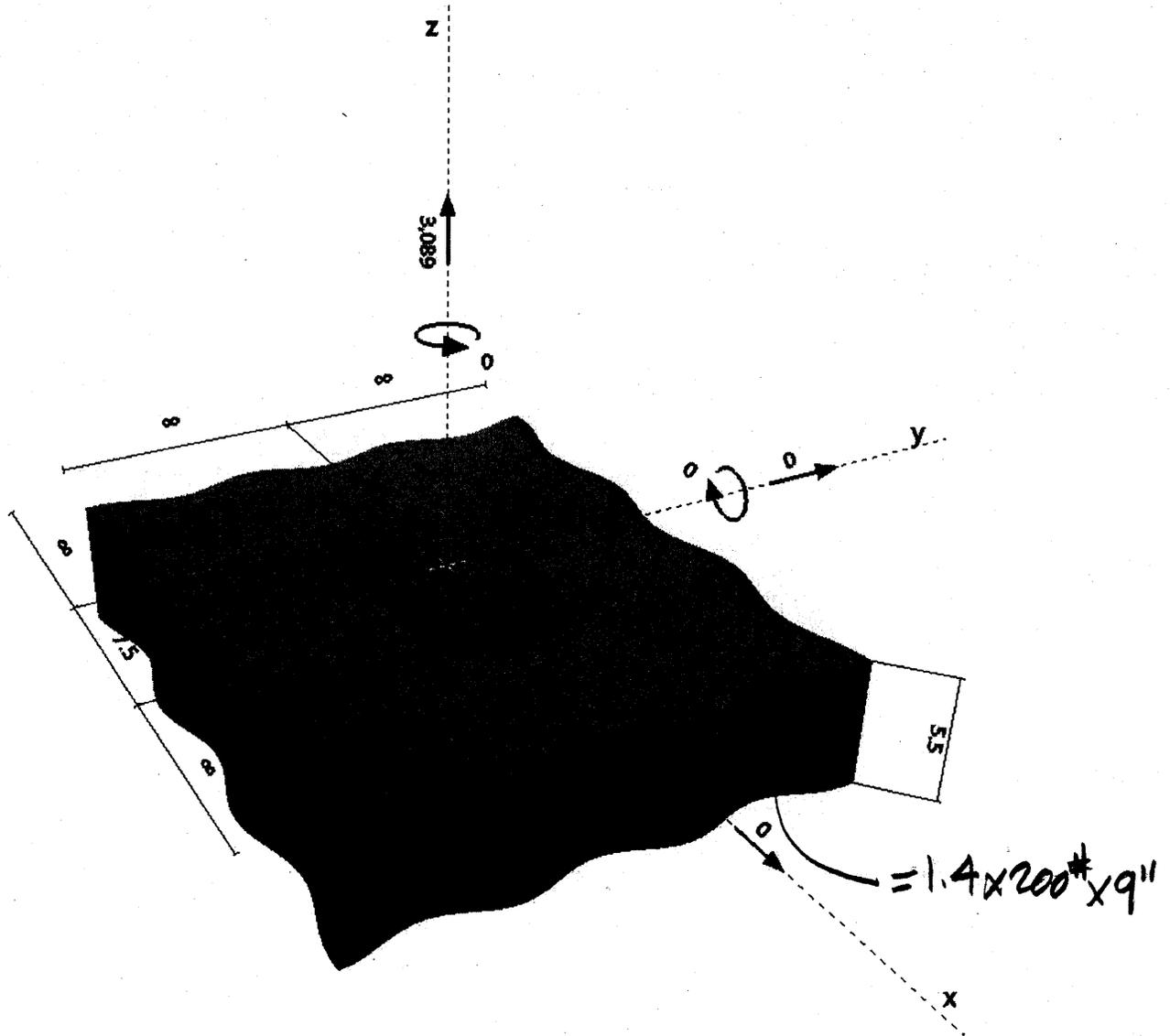
Specifier's comments:

1. Input data

Anchor type and diameter:	Kwik Bolt TZ - CS, 5/8 (3 1/8)
Effective embedment depth:	$h_{ef} = 3.125$ in., $h_{nom} = 3.875$ in.
Material:	Carbon Steel
Evaluation Service Report:	ESR 1917
Issued Valid:	5/1/2011 5/1/2013
Proof:	design method ACI 318 / AC 193
Stand-off installation:	$e_s = 0.000$ in. (no stand-off); $t = 0.500$ in.
Anchor plate:	$l_x \times l_y \times t = 10.000 \times 6.000 \times 0.500$ in. (Recommended plate thickness: not calculated)
Profile	no profile
Base material:	cracked concrete, 2500, $f'_c = 2500$ psi; $h = 5.500$ in.
Reinforcement:	tension: condition B, shear: condition B; no supplemental splitting reinforcement present
Seismic loads (cat. C, D, E, or F):	no



Geometry [in.] & Loading [lb, in.-lb]



GB



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PROFIS Anchor 2.2.4

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 Specifier:
 Address:
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Concrete Breakout Strength

Equations

$$N_{cbg} = \left(\frac{A_{Nc}}{A_{Nc0}} \right) \psi_{ec,N} \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \quad \text{ACI 318-08 Eq. (D-5)}$$

$$\phi N_{cbg} \geq N_{ua} \quad \text{ACI 318-08 Eq. (D-1)}$$

$$A_{Nc} \text{ see ACI 318-08, Part D.5.2.1, Fig. RD.5.2.1(b)}$$

$$A_{Nc0} = 9 h_{ef}^2 \quad \text{ACI 318-08 Eq. (D-6)}$$

$$\psi_{ec,N} = \left(\frac{1}{1 + \frac{2 e_N}{3 h_{ef}}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-9)}$$

$$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{C_{a,min}}{1.5 h_{ef}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-11)}$$

$$\psi_{cp,N} = \text{MAX} \left(\frac{C_{a,min}}{C_{ac}}, \frac{1.5 h_{ef}}{C_{ac}} \right) \leq 1.0 \quad \text{ACI 318-08 Eq. (D-13)}$$

$$N_b = k_c \lambda \sqrt{f_c} h_{ef}^{1.5} \quad \text{ACI 318-08 Eq. (D-7)}$$

Variables

h_{ef} [in.]	$e_{c1,N}$ [in.]	$e_{c2,N}$ [in.]	$C_{a,min}$ [in.]	$\psi_{c,N}$	C_{ac} [in.]	k_c	λ
3.125	0.000	0.000	3936.969	1.000	6.500	17	1
f_c [psi]							
2500							

Calculations

A_{Nc} [in. ²]	A_{Nc0} [in. ²]	$\psi_{ec1,N}$	$\psi_{ec2,N}$	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [lb]
158.20	87.89	1.000	1.000	1.000	1.000	4696

Results

N_{cbg} [lb]	$\phi_{concrete}$	ϕN_{cbg} [lb]	N_{ua} [lb]
8452	0.650	5494	3996

GA



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PROFIS Anchor 2.2.4

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Sub-Project I Pos. No.:

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E-Mail:

4. Shear load

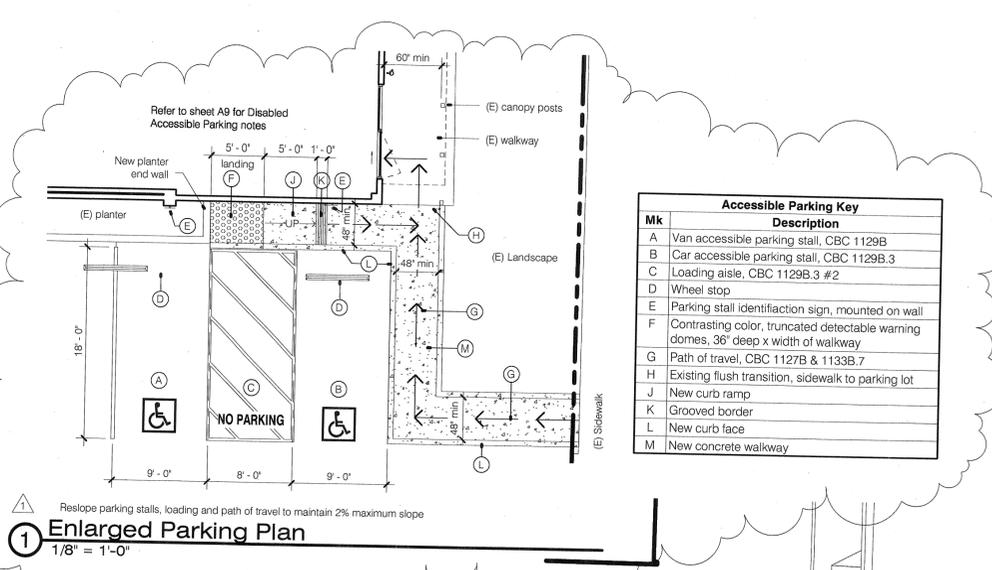
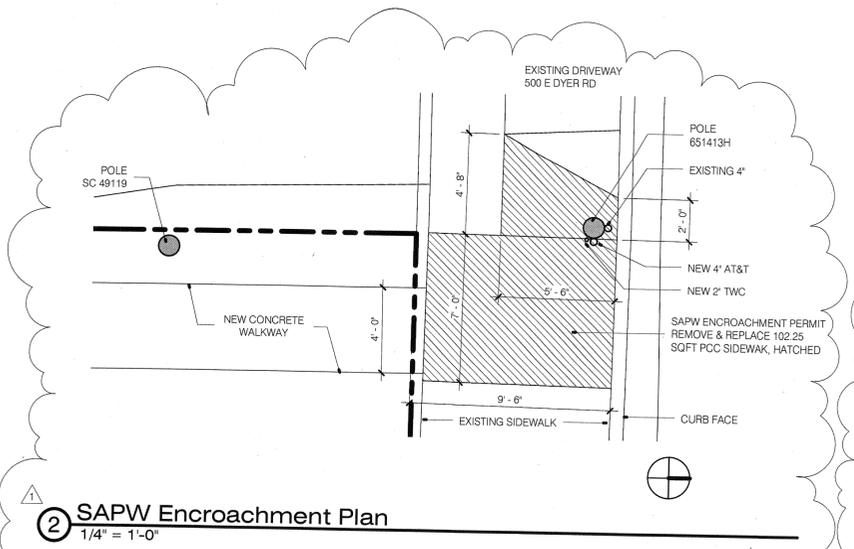
Proof	Load V_w [lb]	Capacity ϕV_n [lb]	Utilization β_v [%] = $V_w / \phi V_n$	Status
Steel Strength*	N/A	N/A	N/A	N/A
Steel failure (with lever arm)*	N/A	N/A	N/A	N/A
Pryout Strength**	N/A	N/A	N/A	N/A
Concrete edge failure in direction**	N/A	N/A	N/A	N/A

* anchor having the highest loading **anchor group (relevant anchors)

5. Warnings

- Condition A applies when supplementary reinforcement is used. The Φ factor is increased for non-steel Design Strengths except Pullout Strength and Pryout strength. Condition B applies when supplementary reinforcement is not used and for Pullout Strength and Pryout Strength. Refer to ACI 318, Part D.4.4(c).
- Refer to the manufacturer's product literature for cleaning and installation instructions.
- Checking the transfer of loads into the base material and the shear resistance are required in accordance with ACI318 or the relevant standard!
- The anchor plate is assumed to be sufficiently stiff in order to be not deformed when subjected to the actions!

Fastening meets the design criteria!



Mk	Description
A	Van accessible parking stall, CBC 1129B
B	Car accessible parking stall, CBC 1129B.3
C	Loading aisle, CBC 1129B.3 #2
D	Wheel stop
E	Parking stall identification sign, mounted on wall
F	Contrasting color, truncated detectable warning domes, 36" deep x width of walkway
G	Path of travel, CBC 1127B & 1133B.7
H	Existing flush transition, sidewalk to parking lot
J	New curb ramp
K	Grooved border
L	New curb face
M	New concrete walkway

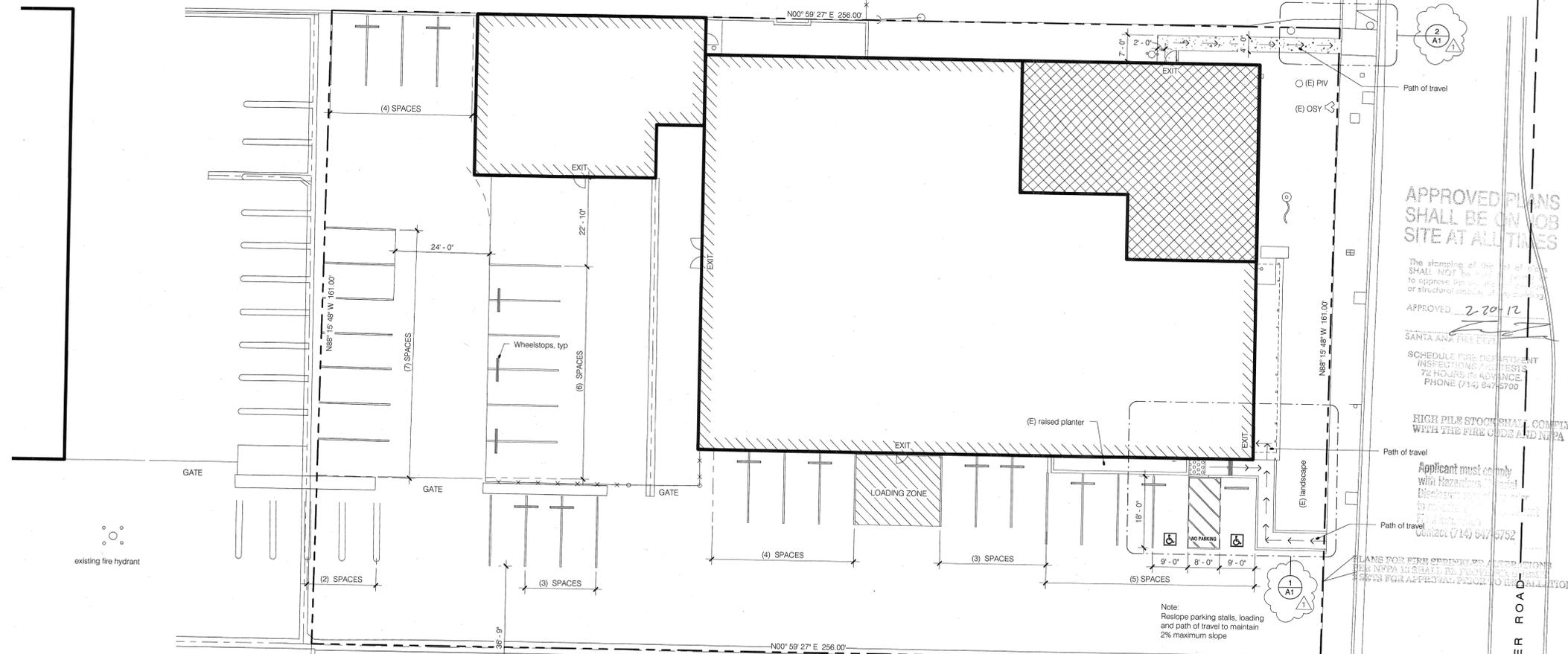
Sheet List - Architectural	
A1	Existing Site Plan
A2	Existing / Demolition Floor Plan
A3	Floor Plan
A4	Reflected Ceiling Plan
A5	Roof Plan
A6	Restroom Plans and Details
A7	Door & Window Schedules, Casework Elevations
A8	Details
A9	Disabled Access Requirements
A10	Security Notes
A11	Title 24 Forms 1 of 2 (copy of M-1A)
A12	Title 24 Forms 2 of 2 (copy of M-1B)

Sheet List - Structural	
S-1	Roof Framing Plan
S-2	General Notes and Details
S-3	Sections and Details

Sheet List - Electrical	
E1	Site Plan, Fixture Schedule, Single Line & Panel Schedule
E2	Lighting Plan
E3	Power Plan
E4	Title 24

Sheet List - Mechanical	
M-1	HVAC Notes and Details
M-1A	Title 24 Forms 1 of 2
M-1B	Title 24 Forms 2 of 2
M-2	HVAC Plan

Sheet List - Plumbing	
P-1	Plumbing Notes, Details and Schedules
P-2	Plumbing Plan
P-3	Enlarged Plumbing Plans



APPROVED PLANS SHALL BE ON JOB SITE AT ALL TIMES

The storming of the site of this project shall not be approved until the applicant has provided a copy of the approved plans to the Santa Ana Fire Department for review and approval. SCHEDULE FOR DEPARTMENT INSPECTIONS AND TESTS: 72 HOURS IN ADVANCE. PHONE (714) 847-5700

HIGH PILE STORAGE SHALL COMPLY WITH THE FIRE CODE AND NFPA

Applicant must comply with Hazardous Waste Disposal Regulations (Title 23, California Code of Regulations) and provide a copy of the permit to the Santa Ana Fire Department (714) 847-5752

PLANS FOR FIRE SPRINKLER SYSTEMS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA FIRE SPRINKLER CODE AND NFPA 13. PLANS SHALL BE PROVIDED TO THE SANTA ANA FIRE DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION.

RECEIVED
FEB 08 2012
City of Santa Ana

PROJECT DATA:
Owner: Martin Enterprises
1495 E. Warner Ave.
Santa Ana, CA 92705
(714) 241-1141
Contractor/Designer: Martin Builders Inc. Lic# 235033
PO BOX 15532
Santa Ana, CA 92735
(714) 241-1141
Attn: Rhoads Martin
martin@martincommercialgroup.com

Project Address: 520 East Dyer Road, Santa Ana, CA
AP No.: 411-042-23

Legal Description: Parcel 1 in the city of Santa Ana, County of Orange, State of California as shown on Parcel Map filed in Book 94 Page 49 of Parcel Maps

Scope of work: Interior tenant improvements, New 2,532 SF offices / ADA restrooms, roof equipment & screening, wall separating warehouse area, underground electrical and electrical room

Building Codes: All new construction shall comply with the 2010 edition of the California Building Code (CBC) and CA Title 24 Accessibility Requirements, 2010 editions of the CPC, CEC and CMC

Construction: Type V-B with automatic fire sprinklers, 1-story

Floor Area:
Overall Building Total 16,334 sf
Warehouse 13,802 sf
Office 2,532 sf (16%)

Occupancy: S-1 / B (no separation required) Table 508.4

Occupant Load: Table 1004.1.1
13,802 / 500 = 27 Warehouse
2,532 / 100 = 25 Office
Total = 52

Parking: 16,334 / 1000 * 2 = 33 spaces required
31 standard + 2 accessible spaces = 33 provided

Disabled Access Compliance: Contractor shall verify or provide that all existing conditions and new construction is in full compliance with applicable Federal and State Accessibility Standards and Codes.

Fire Department Note: Fire sprinkler monitoring provided under contract with Security of Los Angeles, Inc. (SOLA)

APPROVED PLANNING DIVISION
MASTER I.D. 2012-101100
G.P. Sub Zone M-1
PLANNER W014 DATE 1/18/12
TRANSFERRED BY DATE
PLANNING INSPECTION REQUIRED
ROUGH FINAL NONE X
NAME (714)

RETAIN PLANS FOR FUTURE REVISIONS. SUBJECT TO ITEMS CHECKED AND CONDITIONS BELOW:
 INTERIOR TI ONLY
 NO EXTERIOR ALTERATIONS/MODIFICATIONS
 ALL MATERIALS TO MATCH EXISTING
 SCREENING REQUIRED
 SUBMIT LANDSCAPE PLANS

CONDITIONS: Interior TI, new 2532 sq ft office / ADA restrooms, roof equip & screen, wall separating warehouse & under-
ground elect equip & elect room

ARCHITECTURAL STRUCTURAL
APPROVED FOR CONSTRUCTION
SEPARATE PERMITS ARE REQUIRED FOR ELECTRICAL, MECHANICAL & MECHANICAL PLANS. This set of plans and specifications must be kept on the job site at all times and it is intended to make any changes or alterations on same without written permission from the City of Santa Ana.
The acceptance of this plan and specifications SHALL NOT be held to permit nor be an approval of the violation of any provisions of ANY City Ordinance or State Law.
CITY OF SANTA ANA
Date Issued 2-2-12

PERMIT TYPE:	BLDG/ ELECT PLBG
PERMIT#:	MECH GRADING
OCC. GROUP:	10174 145
CONSTR. TYPE:	VER E.S.
CODE EDITION:	2010 CBC
FLOOD ZONE:	X
FLOOD ZONE CERTIF. REQ'D:	YES NO
MICROFILM:	YES NO
RADIANT BARRIER @ ROOF:	YES NO
RESIDENTIAL DEV. FEE:	YES NO
SCHOOL DISTRICT:	YES NO

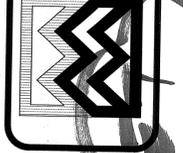
Subject To The Following Approvals:

- Planning Department
- Fire Department
- Police Department
- Public Works Agency
- Grading Permit
- County of Orange Health Department
- Cal/OSHA

SCALE 1/16" = 1'-0"

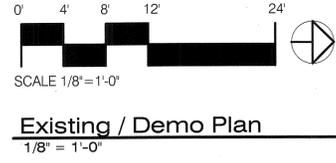
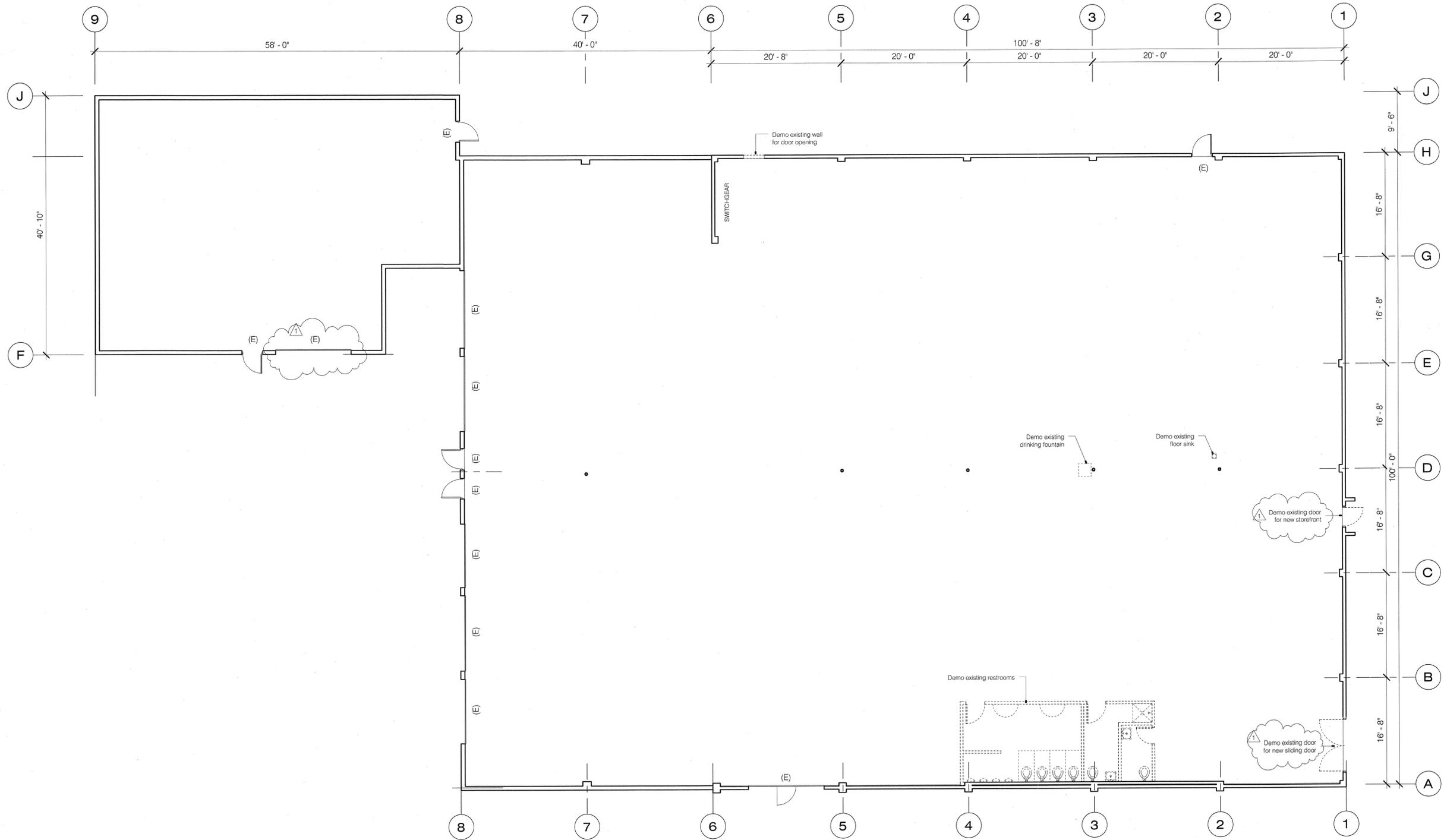
Revision Date		
No.	Date	Description
1	02/08/12	Plan Check #1

PLANS PREPARED UNDER THE DIRECTION OF MARTIN BUILDERS, INC.
1495 East Warner Santa Ana 92705
MARTIN BUILDERS INC. General Contractors (714) 241-1141
F. Rhoads Martin Jr., RMP Lic # 235033



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Existing / Demo Plan

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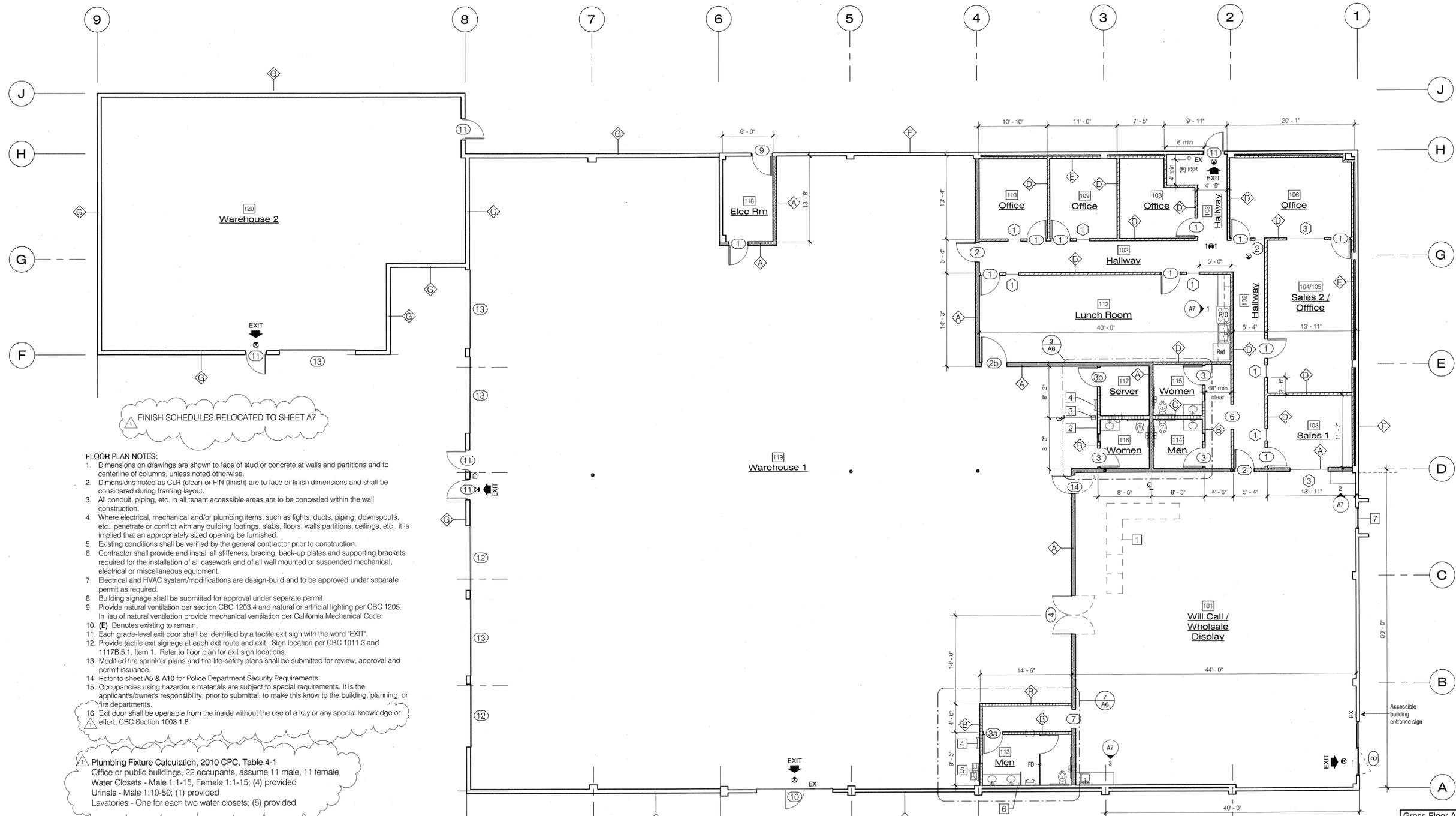
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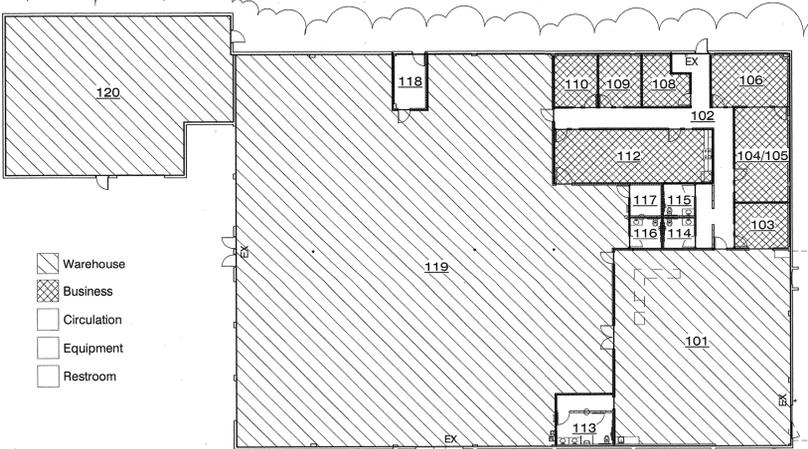
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- FLOOR PLAN NOTES:**
- Dimensions on drawings are shown to face of stud or concrete at walls and partitions and to centerline of columns, unless noted otherwise.
 - Dimensions noted as CLR (clear) or FIN (finish) are to face of finish dimensions and shall be considered during framing layout.
 - All conduit, piping, etc. in all tenant accessible areas are to be concealed within the wall construction.
 - Where electrical, mechanical and/or plumbing items, such as lights, ducts, piping, downspouts, etc., penetrate or conflict with any building footings, slabs, floors, walls, partitions, ceilings, etc., it is implied that an appropriately sized opening be furnished.
 - Existing conditions shall be verified by the general contractor prior to construction.
 - Contractor shall provide and install all stiffeners, bracing, back-up plates and supporting brackets required for the installation of all casework and of all wall mounted or suspended mechanical, electrical or miscellaneous equipment.
 - Electrical and HVAC system/modifications are design-build and to be approved under separate permit as required.
 - Building signage shall be submitted for approval under separate permit.
 - Provide natural ventilation per section CBC 1203.4 and natural or artificial lighting per CBC 1205. In lieu of natural ventilation provide mechanical ventilation per California Mechanical Code.
 - (E) Denotes existing to remain.
 - Each grade-level exit door shall be identified by a tactile exit sign with the word "EXIT".
 - Provide tactile exit signage at each exit route and exit. Sign location per CBC 1011.3 and 1117B.5.1, Item 1. Refer to floor plan for exit sign locations.
 - Modified fire sprinkler plans and fire-life-safety plans shall be submitted for review, approval and permit issuance.
 - Refer to sheet A5 & A10 for Police Department Security Requirements.
 - Occupancies using hazardous materials are subject to special requirements. It is the applicant's/owner's responsibility, prior to submittal, to make this known to the building, planning, or fire departments.
 - Exit door shall be openable from the inside without the use of a key or any special knowledge or effort, CBC Section 1008.1.8.

Plumbing Fixture Calculation, 2010 CPC, Table 4-1
 Office or public buildings, 22 occupants, assume 11 male, 11 female
 Water Closets - Male 1:1-15, Female 1:1-15; (4) provided
 Urinals - Male 1:10-50; (1) provided
 Lavatories - One for each two water closets; (5) provided



Occupancy / Use Summary
 3/64" = 1'-0"

Occupancy Summary - By Space						
Number	Group	Function / Use	Area	OLF	Load	Actual
101	S1	Warehouse	2215 SF	500	4	9
102	B	Circulation	573 SF	0		
103	B	Business	169 SF	100	2	1
104/105	B	Business	338 SF	100	3	2
106	B	Business	266 SF	100	3	1
108	B	Business	140 SF	100	1	1
109	B	Business	147 SF	100	1	1
110	B	Business	150 SF	100	1	1
112	B	Business	554 SF	100	6	4
113	S1	Restroom	192 SF	0		
114	B	Restroom	70 SF	0		
115	B	Restroom	70 SF	0		
116	S1	Restroom	70 SF	0		
117	S1	Equipment	70 SF	0		
118	S1	Equipment	117 SF	0		
119	S1	Warehouse	8692 SF	500	17	2
120	S1	Warehouse	2097 SF	500	4	0
					44	22

Refer to letter describing actual occupancy conditions by space, from tenant.

Wall Type Schedule			
Mark	Description	Detail	Stud Height
A	6" light gauge metal studs, 600S125-30, at 24" o/c	5 / A8	Full height, 20'-0" max
B	3 5/8" light gauge metal studs, 362S125-30, at 24" o/c	4 / A8	9'-6"
C	6" light gauge metal studs, 600S125-30, at 24" o/c	4 / A8	9'-6"
D	3 5/8" light gauge metal studs, 362S125-30, at 24" o/c	4 / A8	10'-6"
E	3 5/8" light gauge metal studs, 362S125-30, at 24" o/c	4 / A8	10'-6"
F	Existing exterior concrete tilt-up wall to remain		
G	Existing exterior masonry wall to remain		

Symbol Legend

- 1 Keyed Note Tag, see Keyed Note Schedule on this sheet
- A Wall Tag, see Wall Type Schedule on this sheet
- 1 Door Tag, see Door Schedule on sheet A7
- 1 Window Tag, see Window Schedule on sheet A7
- ⊗ Illuminated exit sign, refer to Electrical drawings
- EX ER Indicates location of tactile EXIT or EXIT ROUTE sign, mount on wall adjacent to door, +60" above finish floor, as required by CBC 1011.3 and comply with 1117B.5.1, Item 1

Gross Floor Area (SF)	
Warehouse 1	11591
Office	2532
Warehouse 2	2211
	16334

Keyed Note Schedule		
Mark	Description	Detail
1	Transaction counter by tenant, provide 36" wide min x 34" high max. area for accessible transactions	
2	4Wx7H 3/4" plywood phone board	
3	Floor sink w/ hose bib above for HVAC condensate & phone ground	
4	Access ladder for water heater located above ceiling	
5	Drinking fountain, refer to sheet A6	
6	Hose bibb under countertop	
7	Infill existing door opening with new storefront w/ tempered glass	

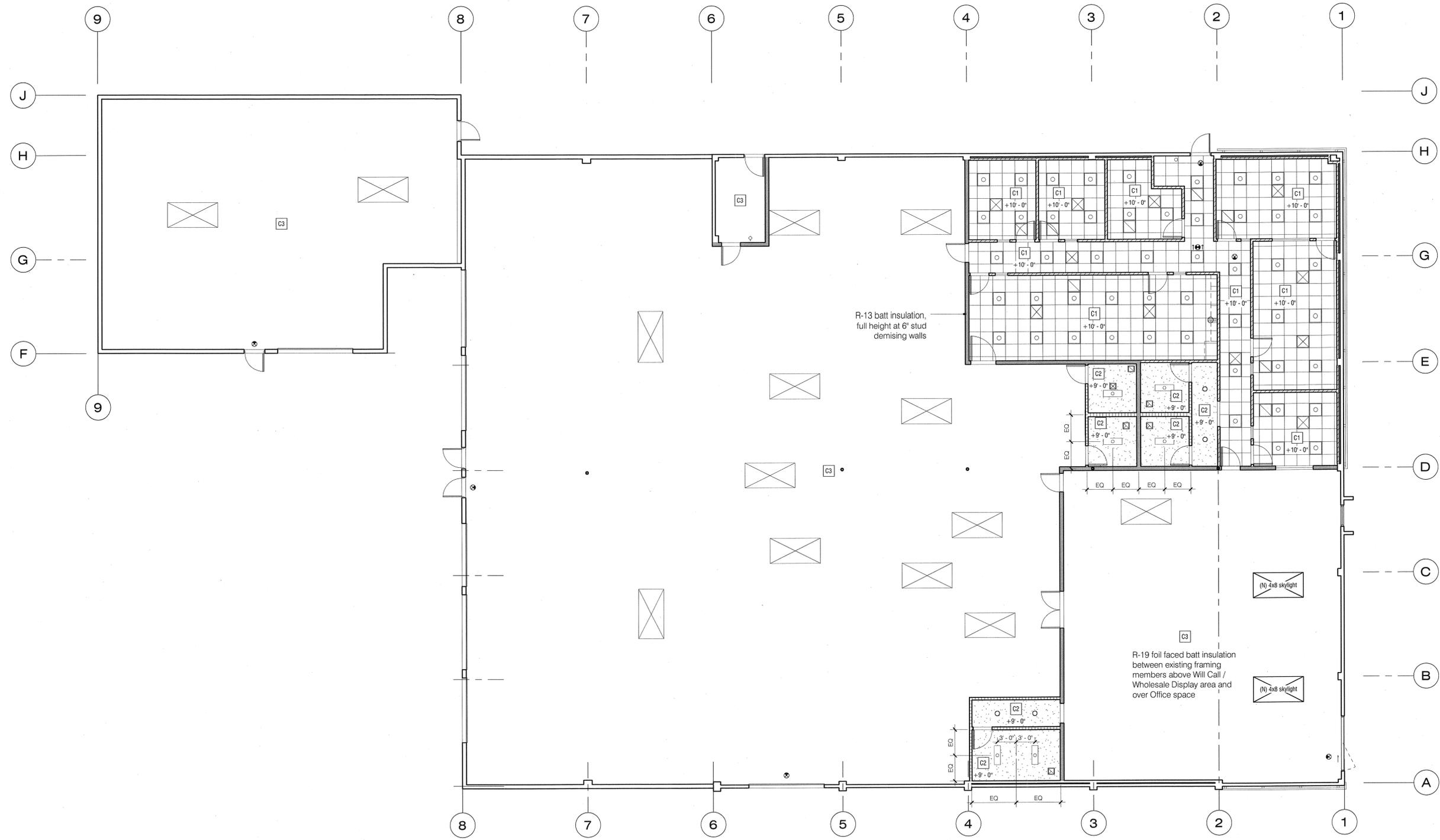


Floor Plan
 1/8" = 1'-0"

Revision Date		
No.	Date	Description
1	02/08/12	Plan Check #1

1495 East Warner Santa Ana 92705
 MARTIN BUILDERS INC. General Contractors (714) 241-1141
 PLANS PREPARED UNDER THE DIRECTION OF MARTIN BUILDERS, INC.
 H. R. Rhoads Martin Jr., PWS Lic # 28003

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- NOTES:**
1. Provide means of egress from all occupied parts of the building with at least 1 foot candle of light at the floor level, per CBC Section 1006, refer to Electrical drawings.
 2. Provide mechanical ventilation for each area/room in accordance with 2010 California Mechanical Code.
 3. All enclosed portions of buildings customarily occupied by human beings shall be provided with natural ventilation by means of operable exterior openings readily controllable by building occupants, with an area not less than 4% of the floor area being ventilated. CBC Section 1203 and 2010 California Mechanical Code Section 402.
 4. Exit illumination and illuminated exit sign requirements shall be installed in accordance with CBC Section 1011. Refer to Electrical drawings.
 5. Artificial light shall be provided that is adequate to provide an average illumination of 10 foot candles (107 lux) over the area of the room at a height of 30 inches above the floor level, CBC Section 1205.3. Refer to Electrical drawings.
 6. Suspended ceiling system shall comply with ICC Report Number 1308.

Ceiling Legend

- | | | | |
|--|---|--|--|
| | 2x2 drop in fluorescent fixture, refer to Electrical drawings | | Supply air register, refer to Mechanical drawings |
| | 1x3 surface mounted fluorescent fixture, refer to Electrical drawings | | Return air register, refer to Mechanical drawings |
| | Recessed can fixture, refer to Electrical drawings | | Exhaust air register, refer to Mechanical drawings |
| | Wall mounted fixture, refer to Electrical drawings | | Ceiling Tag, see Ceiling Schedule Ceiling height |
| | Illuminated exit sign, refer to Electrical drawings | | +10'-0" |

Ceiling Schedule	
Type Mark	Description
C1	New 2x2 suspended t-bar ceiling with 2x2 lay-in panels, Armstrong Dune
C2	Gypboard over metal stud ceiling joist
C3	Exposed existing roof structure above



Ceiling Plan
1/8" = 1'-0"

Revision Date		
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1	02/08/12	Plan Check #1

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Revision Date		
No.	Date	Description

PLANS PREPARED UNDER THE
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H. H. HARRIS, MARTIN JR., R.E.D. Lic # 236033

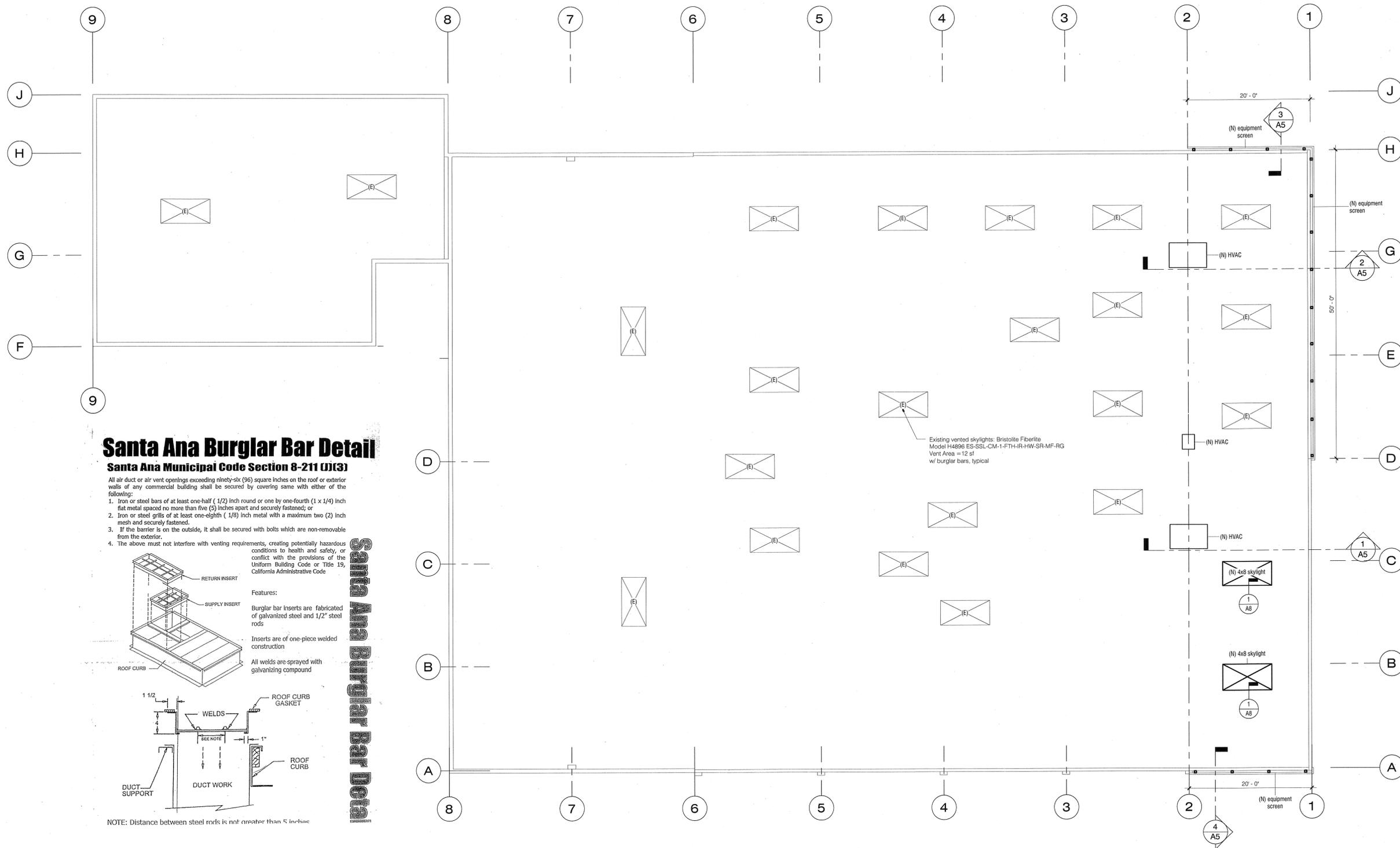
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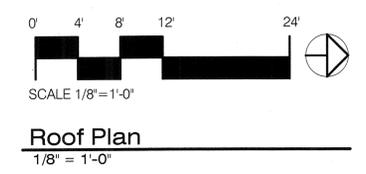
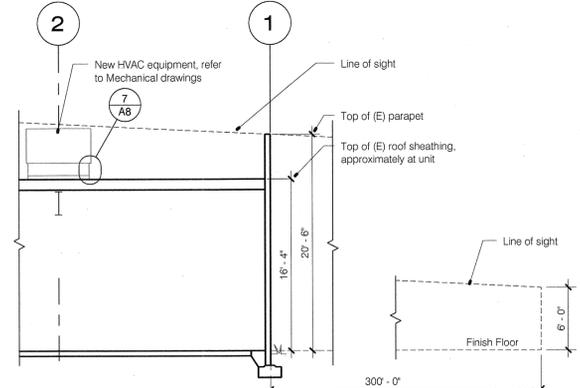
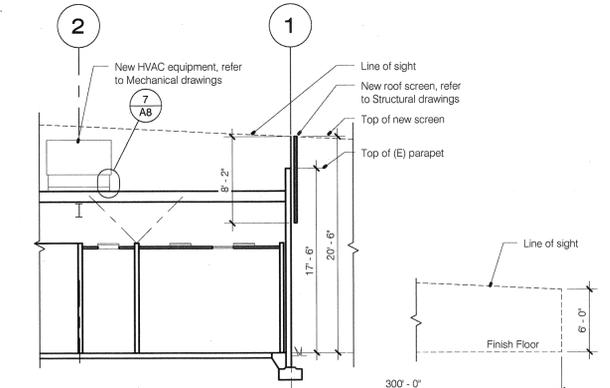
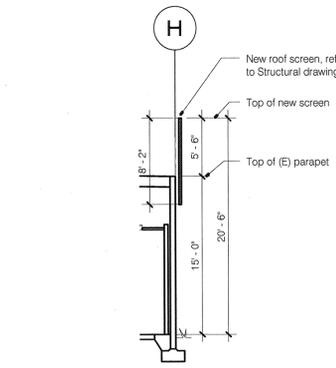
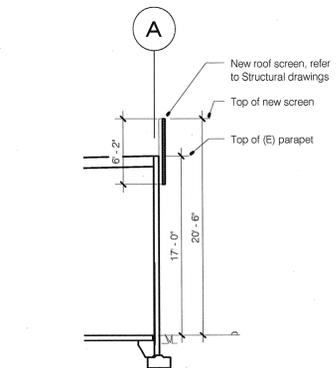
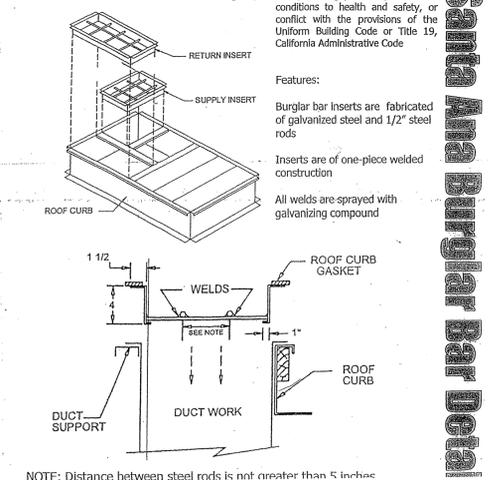


Santa Ana Burglar Bar Detail

Santa Ana Municipal Code Section 8-211 (J)(3)

All air duct or air vent openings exceeding ninety-six (96) square inches on the roof or exterior walls of any commercial building shall be secured by covering same with either of the following:

1. Iron or steel bars of at least one-half (1/2) inch round or one by one-fourth (1 x 1/4) inch flat metal spaced no more than five (5) inches apart and securely fastened; or
2. Iron or steel grills of at least one-eighth (1/8) inch metal with a maximum two (2) inch mesh and securely fastened.
3. If the barrier is on the outside, it shall be secured with bolts which are non-removable from the exterior.
4. The above must not interfere with venting requirements, creating potentially hazardous conditions to health and safety, or conflict with the provisions of the Uniform Building Code or Title 19, California Administrative Code



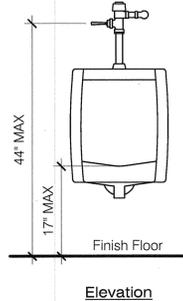
1115B.2.1.1 - Accessible Urinals

1115B.2.1.1.1 Urinals shall be floor mounted or wall hung. Where one or more wall hung urinals are provided, at least one with a rim projecting a minimum of 14 inches from the wall and a maximum of 17 inches from the wall and a maximum of 17 inches above the floor shall be provided.

1115B.2.1.1.2 Flush controls shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist and shall be mounted no more than 44" above the floor. The force required to activate controls shall be no greater than 5 lb. Electronic automatic flushing controls are acceptable and preferable.

1115B.9.4 - Urinals

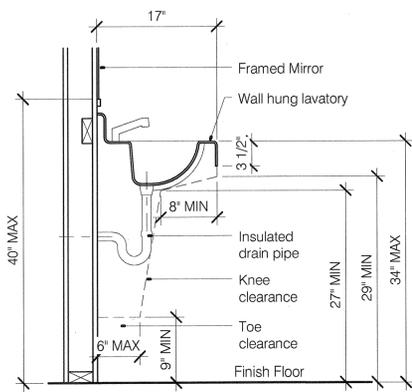
Where urinals are provided, at least one shall have a clear floor space 30 inches by 48 inches in front of the urinal to allow forward approach. This clear space shall comply with Section 1118B.4.



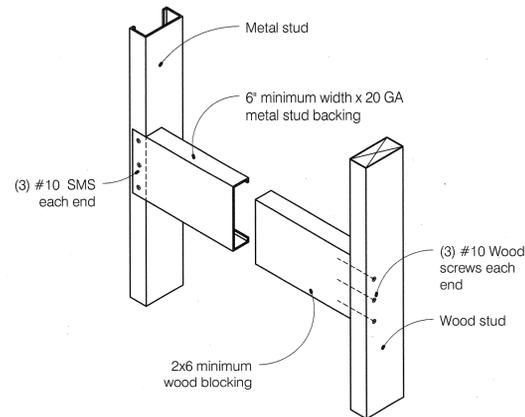
8 Urinal
3/4" = 1'-0"

1115B.4.3 Accessible lavatories. Lavatories required to be accessible shall comply with this subsection. The requirements of this subsection shall apply to lavatory fixtures, vanities and built-in lavatories.

- Faucet controls and operating mechanisms shall be operable with one hand in accordance with this chapter and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 lb. Lever-operated, push-type and electronically controlled mechanisms (preferable) are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.
- Lavatories, when located adjacent to a side wall or partition, shall be a minimum of 18 inches to the centerline of the fixture. All lavatories that are designated to be accessible shall be a minimum 17 inches in horizontal depth and mounted with the rim or counter edge no higher than 34 inches above the finished floor and with vertical clearance measured from the bottom of the apron or the outside bottom edge of the lavatory of 29 inches reducing to 27 inches at a point located 8 inches back from the front edge. In addition, a minimum 9-inch-high toe clearance must be provided extending back toward the wall to a distance no more than 6 inches from the back wall. The toe clearance space must be free of equipment or obstructions.
- A clear floor space 30 inches by 48 inches complying with Section 1118B.4 shall be provided in front of a lavatory to allow forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19 inches into knee space underneath the lavatory. See Figure 11B-1D, Knee Clearance.
- Hot water and drain pipes accessible under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under the lavatories.



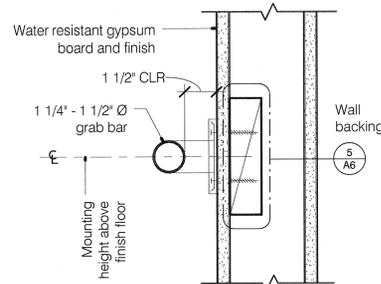
9 Lavatory - Section
1" = 1'-0"



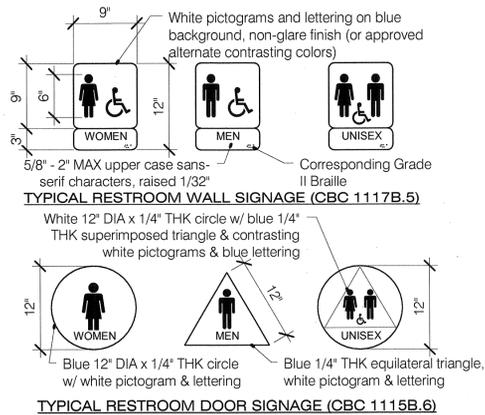
5 Stud Wall Backing
1 1/2" = 1'-0"

1115B.7 Grab bars, tub and shower seats. All grab bars, tub and shower seats shall comply with this section.

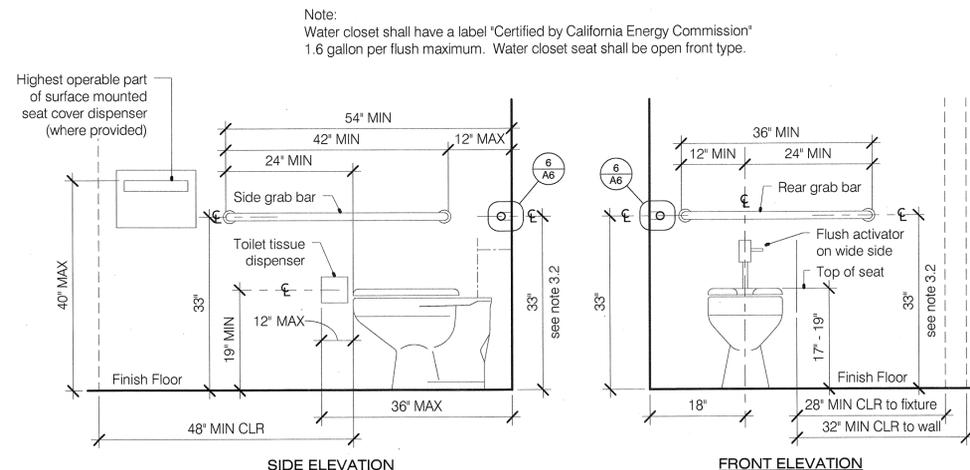
- 1115B.7.1 Diameter or width.** The diameter or width of the gripping surfaces of a grab bar shall be 1 1/4 inches to 1 1/2 inches or the shape shall provide an equivalent gripping surface. If grab bars are mounted adjacent to a wall, the space between the wall and the grab bars shall be 1 1/2 inches. See Figure 11B-1C.
- 1115B.7.2 Structural strength.** The structural strength of grab bars, tub and shower seats, fasteners and mounting devices shall meet the following specifications:
 - Bending stress in a grab bar or seat induced by the maximum bending moment from the application of a 250-pound point load shall be less than the allowable stress for the material of the grab bar or seat.
 - Shear stress induced in a grab bar or seat by the application of a 250-pound point load shall be less than the allowable shear stress for the material of the grab bar or seat, and its mounting brackets or other support is considered to be fully restrained, then direct and torsional shear stresses shall not exceed the allowable shear stress.
 - Shear force induced in a fastener or mounting device from the application of a 250-pound point load shall be less than the allowable lateral load of either the fastener or mounting device or the supporting structure, whichever is the smaller allowable load.
 - Tensile force induced in a fastener by a direct tension force of a 250-pound point load, plus the maximum moment from the application of a 250-pound point load, shall be less than the allowable withdrawal load between the fastener and supporting structure.
 - Grab bars shall not rotate within their fittings.
- 1115B.7.3 Surfaces.** A grab bar and any wall or other surface adjacent to it shall be free of any sharp or abrasive elements. Edges shall have a minimum radius of 1/8 inch.



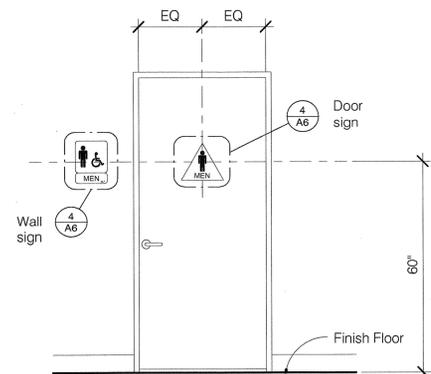
6 Grab Bar
3" = 1'-0"



4 Restroom Door Signs
1" = 1'-0"



2 Water Closet - Tank Type
3/4" = 1'-0"



1 Restroom Door Elevation
1/2" = 1'-0"

- 1115B.4.1 Accessible water closets.** Water closets required to be accessible shall comply with this subsection:
 - The centerline of the water closet fixture shall be 18 inches from the side wall or partition. On the other side of the water closet, provide a minimum of 28 inches wide clear floor space if the water closet is adjacent to a fixture or a minimum of 32 inches wide clear floor space if the water closet is adjacent to a wall or partition. This clear floor space shall extend from the rear wall to the front of the water closet.
 - A minimum of 60 inches wide and 48 inches deep clear floor space shall be provided in front of the water closet.
 - Grab bars for water closets not located within a compartment shall comply with Section 1115B.7 and shall be provided on the side wall closest to the water closet and on the rear wall. Grab bars for water closets located within an accessible compartment shall comply with Section 1115B.7 and shall be provided on the side wall closest to the water closet and on the rear wall. Grab bars for water closets located within ambulatory accessible compartments shall comply with Section 1115B.7 and shall be provided on both sides of the compartment. Grab bars shall not project more than 3 inches into the required clear floor space.

- 3.1 Side wall.** The side grab bar shall be 42 inches long minimum, located 12 inches maximum from the rear wall and extend 54" minimum from the rear wall with the front end positioned 24 inches minimum in front of the water closet. The side grab bar shall be securely attached and centered 33 inches above and parallel to the floor.
- 3.2 Rear wall.** The rear grab bar shall be 36 inches long minimum and extend from the centerline of the water closet 12 inches minimum on one side and 24 inches minimum on the other side. The rear grab bar shall be securely attached and centered 33 inches above and parallel to the floor, except that where a tank-type toilet is used which obstructs placement at 33 inches, the grab bar may be as high as 36 inches and the space between the grab bar and the top of the tank shall be 1-1/2 inches minimum.
- The height of accessible water closets shall be a minimum of 17 inches and a maximum of 19 inches measured to the top of a maximum 2 inch high toilet seat.
- Controls shall be operated with one hand and shall not require tight grasping, pinching or twisting. Controls for the flush valves shall be mounted on the wide side of toilet areas, no more than 44 inches above the floor. The force required to activate controls shall be no greater than 5 pounds-force (lb).

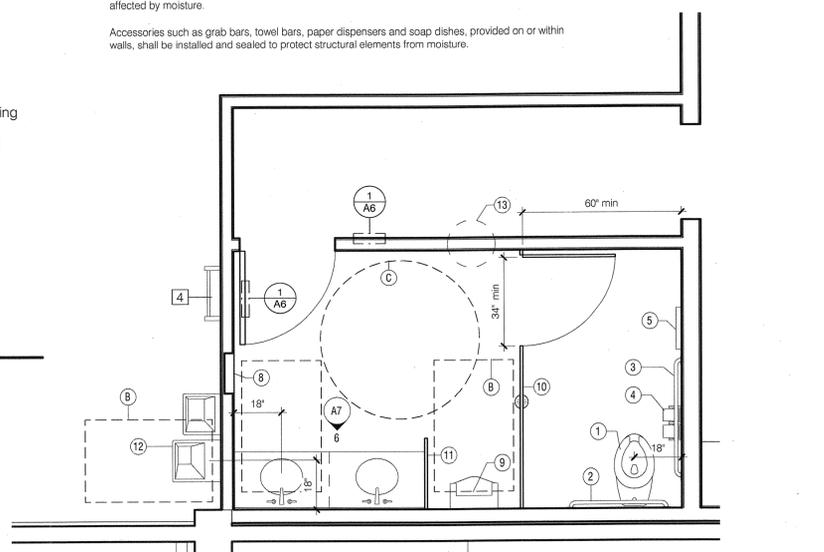
2 Water Closet - Tank Type
3/4" = 1'-0"

No.	Item	Description	Mfr	Model	Detail
1	ADA compliant water closet	Commercial Flushometer Toilet	TOTO	CT705EL	2 / A6
2	Grab bar - Rear	36" long, 1 1/4" Diameter Stainless Steel Grab Bars with Snap Flange	Bobrick Washroom Equipment, Inc.	B-5806 Series	6 / A6
3	Grab bar - Side	42" long, 1 1/4" Diameter Stainless Steel Grab Bars with Snap Flange	Bobrick Washroom Equipment, Inc.	B-5806 Series	6 / A6
4	Toilet Tissue Dispenser	Double Roll, Wall Mounted	Bobrick, or equal	B-2740	
5	Seat cover Dispenser	Surface mounted	Bobrick, or equal	B-4221	
6	ADA compliant lavatory	Front approach base cabinet, granite countertop w/ undercounter lavatory and compliant faucet	Kohler, or equal		4 / A7
7	Mirror	Bottom edge of the reflecting surface 40 inches maximum above the finish floor CBC 1115B.8.1.1	Bobrick, or equal		
8	Hand towel dispenser & receptacle	Fully recessed	Bobrick, or equal		
9	ADA compliant Urinal	Wall mounted urinal	Kohler, or equal		8 / A6
10	Stall Partition w/ Door	6" high, floor mounted, 34" min width at 90 degrees w/ automatic closing device, both sides of door shall have latch hardware complying with CBC 1115B.3.1.4.4.5.	Bobrick, or equal		
11	Urinal Partition	Wall mounted	Bobrick, or equal		
12	Accessible Drinking Fountain	New hi-toe drinking fountain, equipment and installation shall comply with note section entitled "Accessible drinking fountains" on sheet A10			
13	Water heater	Water heater mounted above restroom ceiling			5 / A8
A	Fixture clearance, water closet	60"W x 48"D, CBC 1115B.4.1.2			
B	Fixture clearance, lavatory	30"W x 18"D, CBC 1115B.4.3.3			
C	Turning circle	60" dia x 27" high			

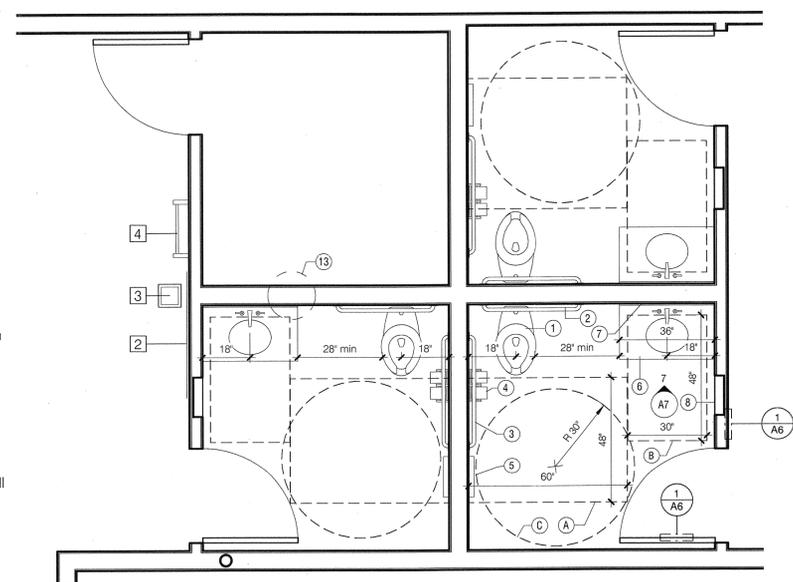
1210.1 Floors and wall base finish materials. In other than dwelling units, toilet, bathing and shower room floor finish materials shall have a smooth, hard, nonabsorbent surface. The intersections of such floors with walls shall have a smooth, hard, nonabsorbent vertical base that extends upward onto the walls at least 4 inches (102 mm).

1210.2 Walls and partitions. Walls and partitions within 2 feet (610 mm) of urinals and water closets shall have a smooth, hard, nonabsorbent surface, to a height of 4 feet (1219 mm) above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by moisture.

Accessories such as grab bars, towel bars, paper dispensers and soap dishes, provided on or within walls, shall be installed and sealed to protect structural elements from moisture.



7 Enlarged Restroom Plan
3/8" = 1'-0"



3 Enlarged Restroom Plan
3/8" = 1'-0"

For additional restroom notes and requirements, refer to sheet A9

For additional restroom notes and requirements, refer to sheet A9

Revision Date		
No.	Date	Description

PLANS PREPARED UNDER THE DIRECTION OF MARTIN BUILDERS, INC.
H. Rhoads Martin, Jr., RMC, LIC# 235033
General Contractors
1495 East Warner Santa Ana 92705 (714) 241-1141
MARTIN BUILDERS INC.

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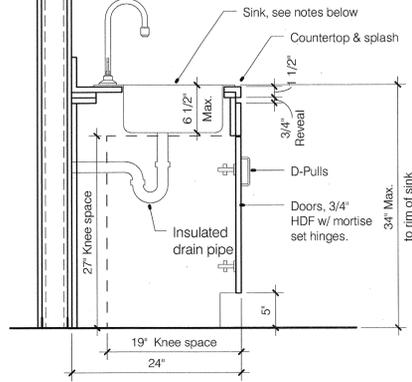
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1115B.4.7 Accessible sinks.

2. **Noncommercial kitchen and counter bar sinks.** A clear floor space at least 30 inches by 48 inches (762 mm by 1219 mm) complying with Section 1118B.4 shall be provided in front of a sink to allow forward approach. The clear floor space shall be on an accessible route and shall extend a maximum of 19 inches (485 mm) underneath the sink (see Figure 11B-1D).

Each accessible sink shall be a maximum of 6 1/2 inches (165 mm) deep. Sinks shall be mounted with the counter or rim no higher than 34 inches (865 mm) above the finish floor. Knee clearance that is at least 27 inches (685 mm) high, 30 inches (762 mm) wide and 19 inches (485 mm) deep shall be provided underneath sinks. Hot water and drain pipes exposed under sinks shall be insulated or otherwise configured so as to protect against contact. There shall be no sharp or abrasive surfaces under sinks.

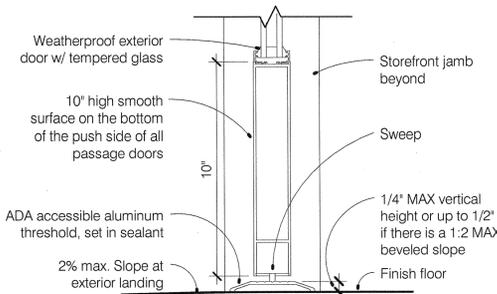
Kitchen and counter bar sinks located in common use areas shall have faucet controls and operating mechanisms operable with one hand in accordance with this chapter and shall not require tight grasping, pinching or twisting of the wrist. The force required to activate controls shall be no greater than 5 lb (22.2 N). Lever-operated, push-type and electronically controlled mechanisms are examples of acceptable designs.



4 Forward Approach Sink

1" = 1'-0"

1133B.2.4.1 **Thresholds.** The floor or landing shall not be more than 1/2 inch (12.7 mm) lower than the threshold of the doorway. Change in level between 1/4 inch (6 mm) and 1/2 inch (12.7 mm) shall be beveled with a slope no greater than one unit vertical to 2 units horizontal (50-percent slope). Change in level greater than 1/2 inch (12.7 mm) shall be accomplished by means of a ramp. See Section 1133B.5.1.



5 Door Threshold - Exterior

3" = 1'-0"

Room Finish Schedule						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
101	Will Call / Wholesale Display	CE-1	WB-1	PT-1	Open	
102	Hallway	CE-1	WB-1	PT-1	T-BAR	
103	Sales 1	CP-1	WB-1	PT-1	T-BAR	
104/105	Sales 2 / Office	CP-1	WB-1	PT-1	T-BAR	
106	Office	CP-1	WB-1	PT-1	T-BAR	
108	Office	CP-1	WB-1	PT-1	T-BAR	
109	Office	CP-1	WB-1	PT-1	T-BAR	
110	Office	CP-1	WB-1	PT-1	T-BAR	
112	Lunch Room	CE-1	WB-1	PT-1	T-BAR	
113	Men	CE-1	CT-2	PT-1	PT-2	
114	Men	CE-1	CT-2	PT-1	PT-2	
115	Women	CE-1	CT-2	PT-1	PT-2	
116	Women	CE-1	CT-2	PT-1	PT-2	
117	Server	CF-1	N/A	PT-1	PT-2	
118	Elec Rm	CF-1	N/A	PT-1	Open	
119	Warehouse 1	CF-1	N/A	PT-1	Open	
120	Warehouse 2	CF-1	N/A	PT-1	Open	

Note: Contractor shall verify that all materials installed in this project comply with CBC and accessibility requirements for slip resistance, surface material transitions and flame spread ratings.

Material Schedule					
Mark	Material	Manufacturer	Model / Color / Style	Size	Comments
CE-1	Concrete Topping	Concrete Wave (949)933-9536	Troweled on Cement Topping		
CF-1	Concrete Floor		Smooth and seal existing concrete slab		
CP-1	Carpet Flooring		TBD		
CT-1	Ceramic Tile - Floor	Daltile	TBD	TBD	
CT-2	Ceramic Tile - Wainscott	Daltile	TBD	TBD	
PT-1	Paint - Walls	Dunn Edwards	TBD		
PT-2	Paint - Ceiling	Dunn Edwards	TBD		
VCT-1	VCT - Vinyl Floor Tile		TBD		
WB-1	Wall Base	Berke Mercer	Topset rubber coved base, color: TBD	4" high	

Egress Doors Requirements:
 1008.1.3 **Door opening force.** The force for pushing or pulling open interior swinging egress doors, other than fire doors, shall not exceed 5 pounds (22 N). For other swinging doors, as well as sliding and folding doors, the door latch shall release when subjected to a 15-pound (67 N) force. The door shall be set in motion when subjected to a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a 15-pound (67 N) force.

1008.1.5 **Floor elevation.** There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

1008.1.7 **Thresholds.** Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height for sliding doors serving dwelling units or 1/2 inch (12.7 mm) for other doors. Raised thresholds and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope no greater than one unit vertical in two units horizontal (50-percent slope).

1008.1.9 **Door operations.** Except as specifically permitted by this section egress doors shall be readily operable from the egress side without the use of a key or special knowledge or effort.

1008.1.9.1 **Hardware.** Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11A or Chapter 11B shall not require tight grasping, tight pinching or twisting of the wrist to operate.

1008.1.9.2 **Hardware height.** Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.
Exception: Access doors or gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1370 mm) maximum above the finished floor or ground, provided the self-latching devices are not also self-locking devices operated by means of a key, electronic opener or integral combination lock.

1008.1.9.3 **Locks and latches.** Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

- Places of detention or restraint.
- In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
 - The locking device is readily distinguishable as locked.
 - A readily visible durable sign is posted on the egress side on or adjacent to the door stating: **THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED.** The sign shall be in letters 1 inch (25 mm) high on a contrasting background.
 - The use of the key-operated locking device is revocable by the building official for due cause.

3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.

4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are operable from the inside without the use of a key or tool.

5. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

1008.1.9.4 **Bolt locks.** Manually operated flush bolts or surface bolts are not permitted.

Exceptions:

- On doors not required for egress in individual dwelling units or sleeping units.
- Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.

1008.1.9.5 **Unlatching.** The unlatching of any door or leaf shall not require more than one operation.

Exceptions:

- Where manually operated bolt locks are permitted by Section 1008.1.8.4.
- Doors with automatic flush bolts as permitted by Section 1008.1.8.3, Exception 3.
- Doors from individual dwelling units and sleeping units of Group R occupancies as permitted by Section 1008.1.8.3, Exception 4.

1008.2 **Gates.** Gates serving the means of egress system shall comply with the requirements of this section. Gates used as a component in a means of egress shall conform to the applicable requirements for doors.

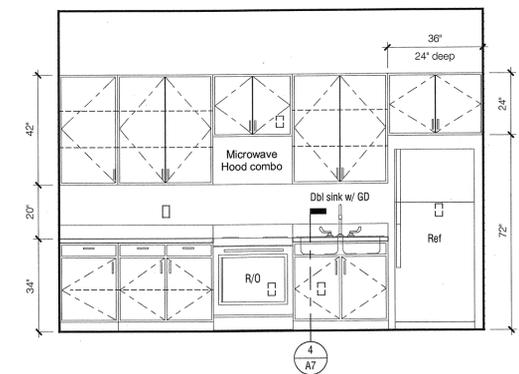
Window Schedule							
Mark	Count	Type	Width	Height	Head	Glazing	Comments
1	6	Fixed, Timely prefinished steel	2'-0"	7'-0"	7'-0"	1/4" clear, tempered safety glass	
2	1	Fixed, Timely prefinished steel	1'-6"	7'-0"	7'-0"	1/4" clear, tempered safety glass	
3	2	Fixed, Timely prefinished steel	6'-0"	7'-0"	7'-0"	1/4" clear, tempered safety glass	

Door Schedule							
Mark	Count	Width	Height	Door	Frame	Hardware	Comments
1	10	3'-0"	7'-0"	Solid Core	Timely prefinished steel	Lever & Lockset	
2	2	3'-0"	7'-0"	Solid Core	Timely prefinished steel	Lever & Privacy	24" w x 30" h wire glass lite
2b	1	4'-0"	7'-0"	Solid Core	Timely prefinished steel	Lever & Privacy	
3	3	3'-0"	7'-0"	Solid Core	Timely prefinished steel	Lever, Privacy & closer	
3a	1	3'-0"	7'-0"	Solid Core	Timely prefinished steel	Push/Pull & closer	
3b	1	3'-0"	7'-0"	Solid Core	Timely prefinished steel	Lever & Lockset	
4	1	6'-0"	7'-0"	Double acting pair doors	Timely prefinished steel	-	Restaurant style door with polycarbonate lite
6	1	4'-0"	7'-0"	-	-	-	Cased opening
7	1	3'-0"	7'-0"	-	-	-	Cased opening
8	1	8'-6 1/2"	7'-6 1/4"	Automatic single sliding door w/ breakaway panel	Prefinished Aluminum	-	Horton Automatics, Profiler Series 2000 Linear Drive, Type 110, Single Slide SX-O
9	1	3'-0"	7'-0"	Hollow Metal	Hollow Metal	Lever & Mortise, key to SCE	24" square louvered vent
10	1	12'-0"	12'-0"	(E)	(E)	-	Overhead door w/ 3'-0"x6'-8" exit door in existing opening
11	5	3'-0"	7'-0"	(E)	(E)	-	Existing door to remain
12	2	10'-0"	12'-0"	(E)	(E)	-	Existing overhead door to remain
13	4	12'-0"	12'-0"	(E)	(E)	-	Existing overhead door to remain

Door hardware shall comply with existing and disabled access requirements. (Lever type doors shall be polycarbonate etc.) (CBC 1008.1.8 and 1133B.5.1)

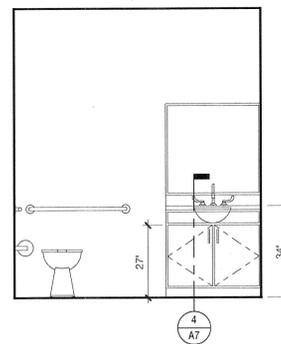
All exit doors shall not be provided with a latch or lock, unless it is panic hardware. CBC 1008.1.9

Landings or floor level at doors shall not be less than 1/2 inch below the threshold. Raised thresholds and floor level changes greater than 1/4 inch at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal. CBC 108.1.6



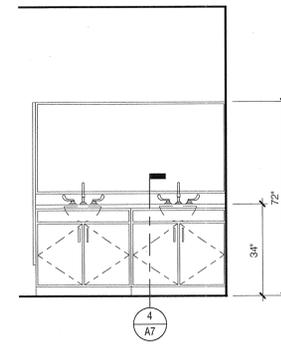
1 Lunch Room

3/8" = 1'-0"



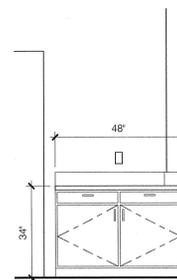
7 Typical Restroom

3/8" = 1'-0"



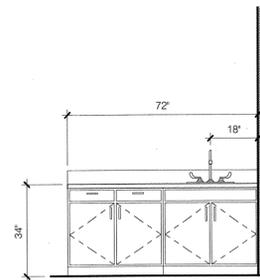
6 113 - Men Restroom

3/8" = 1'-0"



2 Will Call

3/8" = 1'-0"



3 Will Call

3/8" = 1'-0"

Revision Date

No.	Date	Description

PLANS PREPARED UNDER THE DIRECTION OF MARTIN BUILDERS, INC.
 F. Rhoads Martin, Jr., RMD, License # 235033

1495 East Warner Santa Ana 92705
 MARTIN BUILDERS INC. General Contractors (714) 241-1141



Johnstone Supply
 520 East Dyer Road, Santa Ana, California

Issue Date 01/20/2012

Print Date 2/8/2012 4:46:15 AM

Sheet Number

A7

1133B.1.1.1 Entrances and exterior ground floor exit doors.
1133B.1.1.1.1 All entrances and exterior ground floor exit doors to buildings and facilities shall be made accessible to persons with disabilities. Such entrances shall be connected by an accessible route (complying with Section 1114B.1.2) to public transportation stops, to accessible parking and passenger loading zones and to public streets or side-walks, if available. Entrances shall be connected by an accessible route to all accessible spaces or elements within the building or facility. Doorways shall have a minimum clear opening of 32 inches (813 mm) with the door open 90 degrees, measured between the face of the door and the opposite stop (see Figure 11 B-5B). Openings more than 24 inches (610 mm) in depth shall comply with Section 1119B.1.

1133B.1.1.1.2 Temporary restrictions. During periods of partial or restricted use of a building or facility, the entrances used for primary access shall be accessible to and usable by persons with disabilities.

1133B.1.1.1.3 Recessed doormats. Recessed doormats shall be adequately anchored to prevent interference with wheelchair traffic.

1133B.1.1.1.4 Gates. All gates, including ticket gates, shall meet all applicable specifications for doors.

1133B.2 Doors.
1133B.2.1 **Type of lock or latch.** See Chapter 10, Section 1008.1.8.
1133B.2.2 **Width and height.** Every required exit doorway shall be of a size as to permit the installation of a door not less than 3 feet (914 mm) in width and not less than 6 feet 8 inches (2032 mm) in height.
When installed in exit doorways, exit doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the exitway is not less than 32 inches (813 mm) measured between the face of the door and the opposite stop (see Figure J1B-5B). In computing the exit width the net dimension of the exitway shall be used.
Exception: Doors not requiring full user passage, such as shallow closets, may have the clear opening reduced to 20 inches (510 mm) minimum.
1133B.2.3 **Hinged doors.** For hinged doors, the opening width shall be measured with the door positioned at an angle of 90 degrees from its closed position.
1133B.2.3.1 **Pairs of doors.** Where a pair of doors is utilized, at least one of the doors shall provide a clear, unobstructed opening width of 32 inches (813 mm) with the leaf positioned at an angle of 90 degrees from its closed position.
1133B.2.4 **Floor level at doors.** Regardless of the occupant load, there shall be a floor or landing on each side of a door.
1133B.2.4.2 **Maneuvering clearances at doors.** Minimum maneuvering clearances at doors shall be as shown in Figures 11B-26A, 11B-26B and 11B-26C. The floor or ground area within the required clearances shall be level and clear.
The level area shall have a length in the direction of door swing of at least 60 inches (1524 mm) and the length opposite the direction of door swing of 48 inches (1219 mm) as measured at right angles to the plane of the door in its closed position.
Exception: The length opposite the direction of door swing shall be a minimum of 44 inches (1118 mm) where the door has no closer and approach to the door by a person in a wheelchair can be made from the latch side, or if the door has neither latch nor closer and approach can be made from the hinge side. See Figures 11B-26A and 11 B-26B.
1133B.2.4.3 The width of the level area on the side to which the door swings shall extend 24 inches (610 mm) past the strike edge of the door for exterior doors and 18 inches (457 mm) past the strike edge for interior doors.
Twenty-four inches (610 mm) is preferred for strike-side clearance.

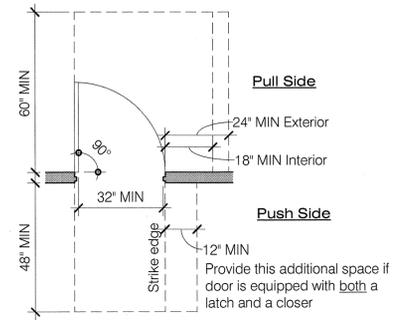
1133B.2.5 Closer-effort to operate doors. Maximum effort to operate doors shall not exceed 5 lbf (22.2 N) for exterior and interior doors, such pull or push effort being applied at right angles to hinged doors and at the center plane of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate administrative authority, not to exceed 15 lbf (66.72 N).

1133B.2.5.1 Door closer. If the door has a closer, then the sweep period of the closer shall be adjusted so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

1133B.2.5.2 Hand-activated door opening hardware, handles, pulls, latches, locks and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, light pinching or twisting of the wrist to operate. Hardware shall be centered between 30 inches (762 mm) and 44 inches (1118 mm) above the floor. Latching and locking doors that are hand-activated and which are in a path of travel shall be operable by lever-type hardware, panic bars, push-pull activating bars, U-shaped handles or other hardware designed to provide passage. Locked exit doors shall operate as above in egress direction.

1133B.2.5.3 Recessed doors. Where the plane of the doorway is offset 8 or more inches (205 mm) from any obstruction within 18 inches (455 mm) measured lateral on the latch side, the door shall be provided with maneuvering clearance for front approach. Figure 11B-33(a).

1133B.2.6 Smooth surface. The bottom 10 inches (254 mm) of all doors except automatic and sliding shall have a smooth, uninterrupted surface to allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10-inch (254 mm) high smooth panel shall be installed on the push side of the door, which will allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition.

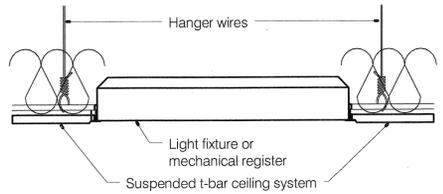


9 Door Requirements and Maneuvering Clearances
3/8" = 1'-0"

10 Suspended Ceiling Fixtures
1 1/2" = 1'-0"

11 Suspended T-Bar Ceiling
1 1/2" = 1'-0"

- LIGHTING FIXTURES**
- Heavy-duty ceiling systems as defined in ASTM C635 & C636 shall be used for the support of lighting fixtures.
 - All lighting fixtures shall be positively attached to the suspended ceiling system. The attachment device shall have a capacity of 100 percent of the lighting fixture weight acting in any direction.
 - When intermediate systems are used, No. 12 gage (2.7 mm) hangers shall be attached to the grid members within 3 inches (76 mm) of each corner of each fixture. Tandem fixtures may utilize common wires.
 - When heavy-duty systems are used, supplemental hangers are not required if a 48-inch (1219 mm) modular hanger pattern is followed. When cross runners are used without supplemental hangers to support lighting fixtures, these cross runners shall provide the same carrying capacity as the main tees, supplementary. No. 12 gage hanger wires shall be attached to the grid members within 3 inches of each corner of each fixture supported by a cross tee.
 - Light fixtures weighing less than 10 pounds shall have one, No. 12 gage hanger wire connected from the fixture housing to the structure above. This wire may be slack. Supplementary hanger wires are not required.
 - Lighting fixtures weighing less than 56 pounds (25.4 kg) shall have, in addition to the requirements outlined above, two No. 12 gage (2.7 mm) hangers connected from the fixture housing to the structure above. These wires may be slack.
 - Lighting fixtures weighing 56 pounds (25.4 kg) or more shall be supported directly from the structure above by approved hangers.
 - Pendant-hung lighting fixtures shall be supported directly from the structure above with No. 9 gage (3.8 mm) wire or approved alternate support without using the ceiling suspension system for direct support.
- MECHANICAL SERVICES**
- Ceiling-mounted air terminals or services weighing less than 20 pounds (9.07 kg) shall be positively attached to the ceiling suspension main runners or to cross runners with the same carrying capacity as the main runners.
 - Terminals or services weighing 20 pounds (9.07 kg), but not more than 56 pounds (25.4 kg), in addition to the above, shall have two No. 12 gage (2.7 mm) hangers connected from the terminal or service to the ceiling system hangers or to the structure above. These wires may be slack.
 - Terminals or services weighing more than 56 pounds (25.4 kg) shall be supported directly from the structure above by approved hangers.



Note: Suspended ceilings shall be designed to seismic category D

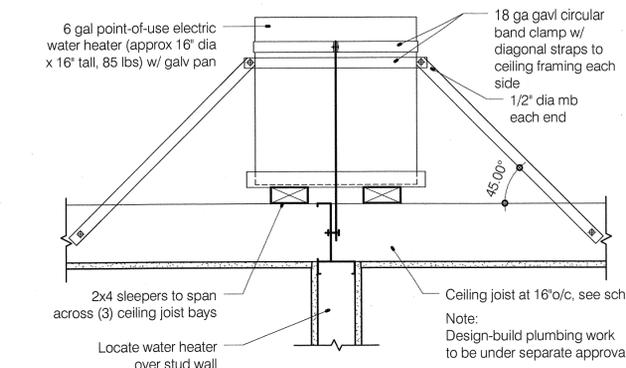
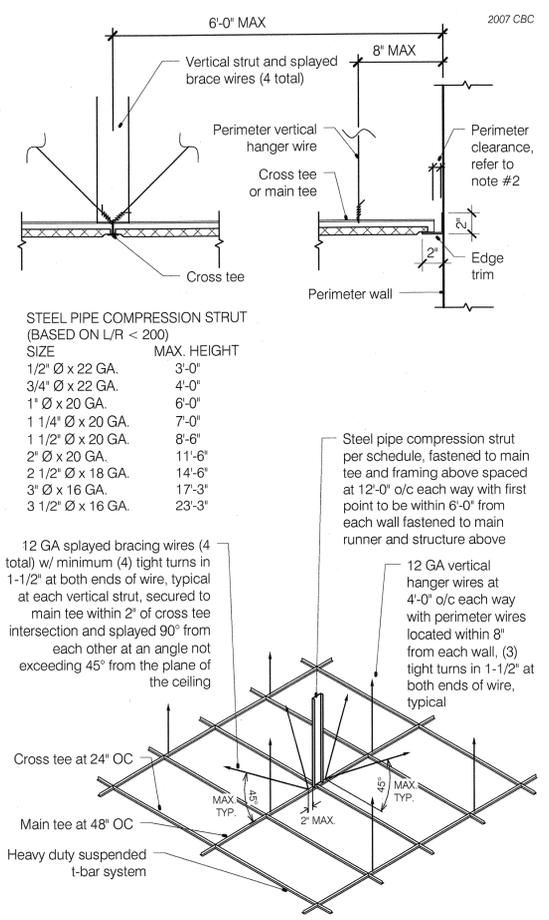
2006 International Building Code
Suspended Acoustical Ceilings

803.9.1.1 Suspended Acoustical Ceilings. Suspended acoustical ceiling systems shall be designed and installed in accordance with the provisions of ASTM C635 & ASTM C636 and shall conform to ASCE 7-05, section 13.5.6 requirements.

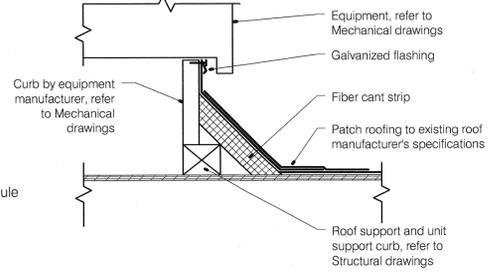
Seismic Forces. Suspended ceilings shall be designed to meet the force requirements of section 1621. The weight of the ceiling, W_p , shall include the ceiling grid and panels; light fixtures if attached to, clipped to, or laterally supported by the ceiling grid; and other components that are laterally supported by the ceiling. W shall not be less than 4 pounds per square foot (192 N/m²). The seismic force, F_p , shall be transmitted through the ceiling attachments to the building structural elements or the ceiling-structure boundary.

IBC Seismic Design Category D, E or F.
Suspended ceilings in seismic design category D, E or F shall be designed and installed in accordance with CISC recommendations for areas subject to severe activity, and the following:

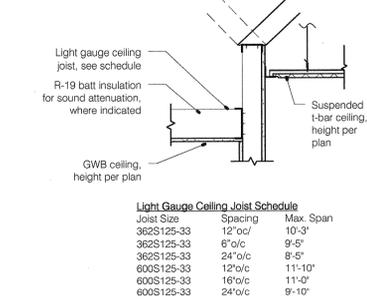
- A heavy-duty t-bar grid system shall be used.
- The width of the perimeter supporting closure angle shall be not less than 2 inches (51 mm) in each orthogonal horizontal direction, one end of the ceiling grid shall be attached to the closure angle, the other end in each horizontal direction shall have a 0.75 inch (19.1 mm) clearance from the wall and shall rest upon and be free to slide on a closure angle.
- For ceiling areas exceeding 1,000 square feet (93 m²) horizontal restraint of the ceiling to the structure shall be provided. The horizontal restraints shall be designed to minimize diaphragm loads.
Exception: Rigid braces may be used instead of diagonal splay wires. Braces and attachments to the structure above shall be adequate to limit relative lateral deflections at point of attachment of ceiling grid to less than 0.25 inch (6.4 mm) for the loads prescribed.
- For ceiling areas exceeding 2,500 square feet (232 m²), a seismic separation joint or full height partition shall be provided unless analyses are performed that demonstrate ceiling system penetrations and closure angles provide sufficient clearance to accommodate the additional movement.
- Except where rigid braces are used to limit lateral deflections, sprinkler heads and other penetrations shall have a 2 inch (51 mm) movement of at least 1 inch (25 mm) in all horizontal directions. Alternatively, a swing joint that can accommodate 1 inch (25 mm) of ceiling movement in all horizontal directions shall be provided at the top of the sprinkler head extension.
- Changes in ceiling plane elevation shall be provided with positive bracing.
- Cable trays and electrical conduits shall be independently supported and braced independently of the ceiling.



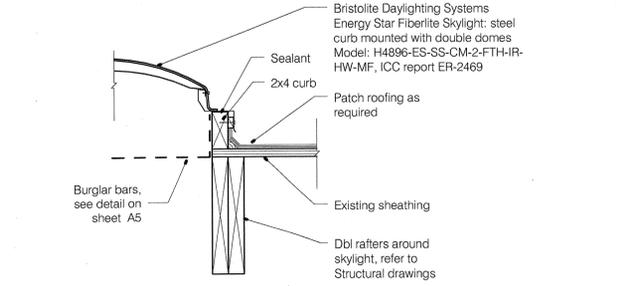
6 Ceiling Mounted Water Heater
1 1/2" = 1'-0"



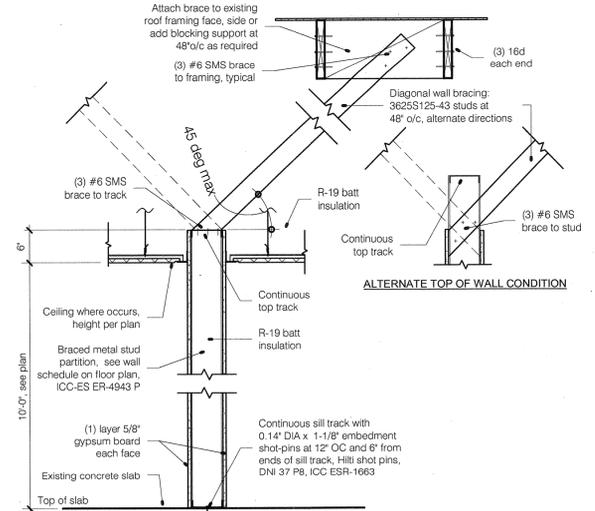
7 Equipment Curb
1 1/2" = 1'-0"



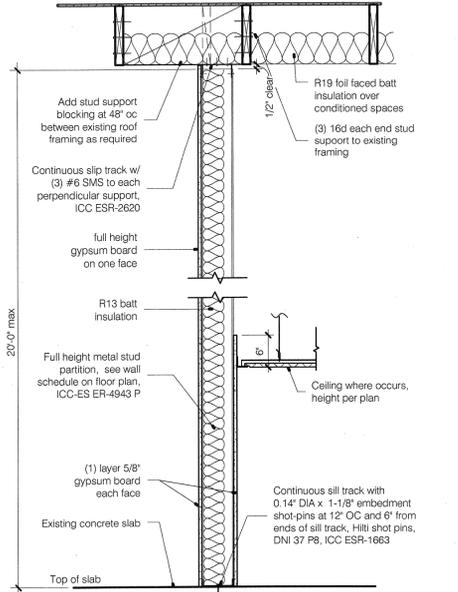
3 GWB Ceiling
3/4" = 1'-0"



1 Skylight
1 1/2" = 1'-0"



4 Braced Partition
3/4" = 1'-0"



5 Full Height Partition
3/4" = 1'-0"

DISABLED ACCESSIBLE ENTRANCES

1133B.1.1 Entrances

1133B.1.1.1

All entrances and exterior ground-floor exit doors to buildings and facilities shall be made accessible to persons with disabilities. Doorways shall have a minimum clear opening of 32 inches with the door open 90 degrees, measure between the face of the door and the opposite stop. Recessed door openings more than 8 inches in depth shall comply with Sections 1133B.2.5.3.

1133B.1.1.1.4 Gates.

All gates, including ticket gates, shall meet all applicable specifications for doors.

1133B.2.3.3 Revolving doors.

Revolving doors shall not be used as required entrance for persons with disabilities.

1133B.2.2 Width and height.

Every required exit doorway shall be of a size as to permit the installation of a door not less than 3 feet in width and not less than 6 feet 6 inches in height. When installed in exit doorways, exit doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the exitway is not less than 32 inches. In computing the exit width required by Section 1005, the net dimension of the exitway shall be used.

1117B.5.8 Entrance signs.

All building and facility entrances that are accessible to and usable by persons with disabilities shall be identified with at least one standard sign and with additional directional signs, as required, to be visible to persons along approaching pedestrian ways.

1117B.5.7 Mounting location and height.

Mounting height shall be 60 inches above the finish floor to the center line of the sign. Mounting location shall be determined so that a person may approach within 3 inches of signage without encountering protruding objects or standing within the swing of the door.

1133B.2.6 Smooth surface.

The bottom 10 inches of all doors except automatic and sliding shall have a smooth, uninterrupted surface to allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10-inch high smooth panel shall be installed on the push side of the door, which will allow the door to be opened by a wheelchair footrest without creating a trap or

1133B.2.4.4

The space between two consecutive door openings in a vestibule, serving other than a required exit stairway shall provide a minimum of 48 inches of clear space from any door opening into such vestibule when the door is positioned at an angle of 90 degrees from its closed position. Doors in a series shall swing either in the same direction or away from the space between the doors.

1133B.2.5 Closer-effort to operate doors.

Maximum effort to operate doors shall not exceed 5 pounds for exterior doors and interior doors, such pull or push effort being applied at right angles to hinged doors and at the center plan of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate administrative authority, not to exceed 15 pounds.

1133B.2.4.1 Thresholds.

The floor or landing shall not be more than 1/2 inch lower than the threshold of the doorway. Change in level between 1/4 inch and 1/2 inch shall be beveled with a slope no greater than 1 unit vertical to 2 units horizontal (50% slope). Change in level greater than 1/2 inch shall be accomplished by means of a ramp.

1133B.2.5.2 Door Hardware

Hand-activated door opening hardware shall be centered between 30 inches and 44 inches above the floor. Latching and locking doors that are hand-activated and which are in a path of travel shall be operable with a single effort by lever-type hardware, panic bars, push-pull activating bars or other hardware designed to provide passage without requiring the ability to grasp the opening hardware.

1133B.2.4 Floor level at doors.

Regardless of the occupant load, there shall be floor or landing on each side of a door.

100B.1.4 Landings.

Landings shall be level except that exterior landings may have a slope not to exceed 1/4 unit vertical in 12 units horizontal (2% slope).

1133B.2.4.2 Maneuvering clearances at doors.

Minimum maneuvering clearances at doors shall be as shown in Figure 11B-26A and 11B-26B. The floor or ground area within the required clearances shall be level and clear. The level area shall have a length in the direction of door swing of at least 60 inches and the length opposite the direction of door swing of 48 inches as measured at right angles as measured at right angles to the plane of the door in its closed position.

1133B.2.4.3

The width of the level area on the side to which the door swings shall extend 24 inches past the strike edge of the door for exterior doors and 18 inches past the strike edge for interior doors.

DISABLED ACCESSIBLE EXTERIOR ROUTES TRAVEL

Site Development, Existing Buildings.

Site development shall be designated to provide access to the primary entrance and access to normal paths of travel in existing buildings. (1134B.2.1)

The accessible route of travel shall be the most practical direct route between accessible building entrances, accessible site facilities and the accessible entrance to the site.

1. Path of travel from public transportation point of arrival.
2. Accessible routes of travel between buildings.
3. Accessible parking.
4. Ramps.
5. Primary entrances.
6. Accessible path of travel within buildings.
7. Accessible sanitary facilities.
8. Accessible drinking fountains/telephones (when provided).
9. Accessible features per specific occupancy requirements.
10. Accessible special features, i.e., ATMs, point of sale machines, etc.

1127B.3 Signs.

At every primary public entrance and at every major junction along or leading to an accessible route of travel, there shall be a sign displaying the international symbol of accessibility. Signs shall indicate the direction to accessible building entrances and facilities and shall comply with requirements found in Section 1117B.5.

WALKWAYS/WALKING SURFACES

Walks and sidewalks shall not have cross slopes exceeding 1/4 inch per foot (2% slope). Slopes along the path of travel shall not exceed 5% unless designated as a pedestrian ramp in accordance with CBC Section 1133B.5. For curb ramps refer to CBC Section 1127B.5.

Walks and sidewalks shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding 1/2 inch, and shall be a minimum of 48 inches in width. Surfaces shall be slip resistant. Refer to CBC Sections 1124B and 1133B.7 for additional requirements.

WALKWAYS/WALKING SURFACES

Abrupt changes in level, except between a walk or sidewalk and an adjacent street or driveway, exceeding 4 inches in a vertical dimension, such as at planters or fountains located in or adjacent to walks, sidewalks or other pedestrian ways, shall be identified by curbs projecting at least 6 inches in height above the walk or sidewalk surface to warn the blind of potential drop-off. CBC Section 1133B.8.1

Any obstruction that overhangs a pedestrian's way shall be a minimum of 80 inches above the walking surface as measured from the bottom of the obstruction. CBC Section 1133B.8.2.

Walks, sidewalks, and pedestrian ways shall be free of gratings whenever possible. Grid openings in gratings shall be limited to 1/2 inch in the direction of traffic flow. CBC Section 1133B.7.2

Detectable Warnings. A curb ramp shall have a detectable warning that extends the full width and depth of the curb ramp inside the grooved border when the ramp slope is less than 1 unit vertical to 15 units horizontal (6.7% slope).

Detectable Warning Product Approval. Only approved Division of the State Architect, Access Compliance (DSA/AC) approved detectable warning products and directional surfaces shall be installed in accordance with CBC Section 1133B.8.5

The detectable warning shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light. The material used to provide contrast shall be an integral part of the walking surface.

Detectable warnings at hazardous vehicular areas.

If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and the vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36" wide. CBC Section 1133B.8.5.

1115B.4.6 Accessible drinking fountains.

Where drinking fountains are provided, they shall comply with this section:

2. **Clearances.** Wall- and post-mounted cantilevered drinking fountains shall be a minimum of 18 inches (457 mm) and a maximum of 19 inches (483 mm) in depth and shall have a clear knee space between the bottom of the apron and the floor or ground not less than 27 inches (686 mm) in height, 30 inches (762 mm) in width, and 8 inches (203 mm) in depth. The depth measurements being taken from the front edge of the fountain back toward the wall or mounting post. The knee clearance space must be free of equipment or obstructions. Additionally, there shall be toe clearance of 9 inches (229 mm) in height above the floor and 17 inches (432 mm) in depth from the front edge of the fountain. The toe clearance space must be free of equipment or obstructions. A clear floor space at least 30 inches (762 mm) by 48 inches (1219 mm) complying with Section 1119B.4 shall be provided in front of the drinking fountain to allow forward approach. A side approach drinking fountain is not acceptable.

3. **Alcoves.** All drinking fountains shall be located completely within alcoves or otherwise positioned so as not to encroach into pedestrian ways. The alcove in which the drinking fountain is located shall not be less than 32 inches (813 mm) in width and 18 inches (457 mm) in depth. See Figure 11B-3 of this code. Additionally, alcoves shall comply with Section 1118B.4, Item 2. Protruding objects located in alcoves or otherwise positioned so as to limit encroachment into pedestrian ways are permitted to project 4 inches (102 mm) into walks, halls, corridors, passageways or aisles.

4. The bubbler shall be activated by a manually operated system complying with Section 1117B.6, Item 4 that is front mounted or side mounted and located within 6 inches (152 mm) of the front edge of the fountain or an electronically controlled device (preferably). The bubbler outlet orifice shall be located within 6 inches (152 mm) of the front edge of the drinking fountain and within 36 inches (914 mm) of the floor. The water stream from the bubbler shall be substantially parallel to the front edge of the drinking fountain.

5. The spout shall provide a flow of water at least 4 inches (102 mm) high so as to allow the insertion of a cup or glass under the flow of water. On an accessible drinking fountain with a round or oval bowl, the spout must be positioned so the flow of water is within 3 inches (75 mm) of the front edge of the fountain.

DISABLED ACCESSIBLE SINGLE-ACCOMMODATION SANITARY FACILITIES

1203 Ventilation.

toilet rooms shall be provided with a fully openable exterior window with an area not less than 4% of the floor area being ventilated or be mechanically ventilated in accordance with the 2007 California Mechanical Code Chapter 4.

1115B.3.2 and 1115B.4 Single-accommodation toilet facilities.

There shall be sufficient space in the toilet room for a wheelchair measuring 30 inches wide by 48 inches long to enter the room and permit the door to close. There shall be in the room a clear floor space of at least 60 inches in diameter, or a T-shaped space complying with Figure 11B-12(a) and (b). No door shall encroach into this space for more than 12 inches except for the panel door to any water closet compartment if there is one. (See Figure 11B-1A). The water closet shall be located in a space which provides a minimum 28-inch wide clear space from a fixture or a minimum 32-inch wide clear space from the centerline of the water closet to the wall. A minimum 48 inches by 60 inches of clear space shall be provided in front of the water closet. All doors, fixtures and controls shall be on an accessible route. The minimum clear width of an accessible route shall be 36 inches except at doors (see Section 1133B.2). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Figure 11B-5E. (See also Figure 11B-1A).

1115B.4 Grab Bars.

1115B.4.1 Location. Grab bars located on each side, and the back of the accessible toilet stall or compartment, shall be securely attached 33 inches above and parallel to the floor, except that where a tank-type toilet is used which obstructs placement at 33 inches, the grab bar may be as high as 36 inches. Grab bars shall be at least 42 inches along with the front end positioned 24 inches in front of the water closet stool. Grab bars at the back shall not be less than 36 inches long. See Figures 11B-1A, 11B-1B, and 11B-1C.

1115B.7 Diameter or width.

The diameter or width of the gripping surfaces of a grab bar shall be 1 1/4" inches to 1 1/2" inches or the shape shall provide an equivalent gripping surface. If grab bars are mounted adjacent to a wall, the space between the wall and the grab bars shall be 1 1/2 inches. See Figure 11B-1C

Grab bars shall not rotate within their fittings.

1115B.4.3 Lavatory Fixtures.

The requirements of this subsection shall apply to lavatory fixtures, vanities and built-in lavatories.

A clear floor space 30 inches by 48 inches complying with Section 1118B.4 shall be provided in front of a lavatory to allow a forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19 inches into knee and toe space underneath the lavatory.

1115B.8.1 Mirrors. Mirrors shall be mounted from the bottom edge of the reflecting surface no higher than 40 inches from the floor.

1115B.8.3 Towel, sanitary napkins, waste receptacles.

Where towel, sanitary napkins, waste receptacles, and other similar dispensing and disposal fixtures are provided, at least one of each type shall be located with all operable parts, including coin slots, within 40 inches from the finished floor.

1115B.8.4 Toilet tissue dispensers.

Toilet tissue dispensers shall be located on the wall within 12 inches of the front edge of the toilet seat. Dispensers that control delivery or that do not permit continuous paper flow shall not be used. See Figure 11B-1A

1115B.3.2 Item 5 Interior surfaces.

Toilet room floors shall have a smooth, hard nonabsorbent surface such as portland cement, concrete, ceramic tile or other approved material which extends upward onto the walls at least 5 inches (at least 6 inches per CBC 1210.1). Walls within water closet compartments and walls within 24 inches of the front and sides of urinals shall be similarly finished to a height of 48 inches and, except for structural elements, the materials used in such walls shall be a type which is not adversely affected by moisture.

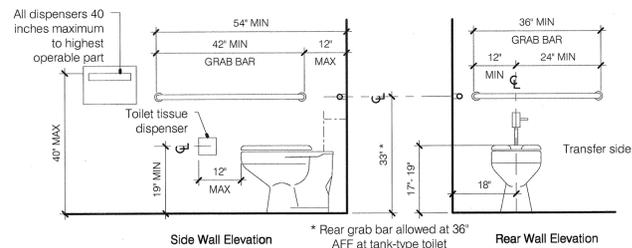


Figure 11B-1A Toilet Wall Elevations

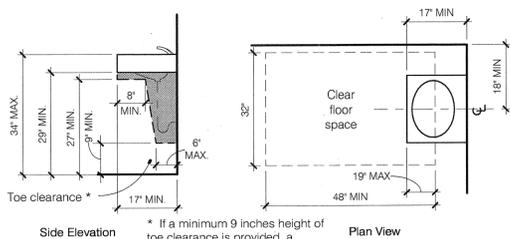


Figure 11B-1D Knee Clearance

DISABLED ACCESSIBLE PARKING

SECTION 1129B-ACCESSIBLE PARKING

1129B.1 General.

Each lot or parking structure where parking is provided for the public as clients, guest or employees, shall provide accessible parking as required by this section. Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance. In parking facilities that do not serve a particular building, accessible parking shall be located on the shortest accessible route of travel to an accessible pedestrian entrance of the parking facility. In buildings with multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances. Table 11B-6 established the number of accessible parking spaces required.

1129B.3 Parking Space Size.

Accessible parking spaces shall be located as near as practical to a primary entrance and shall be sized as follows:

1. Dimensions.

Where single spaces are provided, they shall be 14 feet wide and outlined to provide a 9-foot parking area and a 5-foot loading and unloading access aisle on the passenger side of the vehicle. When more than one space is provided in lieu of a 14-foot wide space for each parking space, two spaces can be provided within a 23-foot-wide area lined to provide a 9-foot parking area on each side of a loading and unloading access aisle in the center. The minimum length of each parking space shall be 18 feet. The words NO PARKING shall be painted on the ground within each five-foot loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches high and located so that it is visible to traffic enforcement officials. See Figure 11B-18A.

2. Van Space(s).

One in every eight accessible spaces, but not less than one, shall be served by an access aisle 96 inches wide minimum and shall be designated van accessible as required by Section 1129B.5. All such spaces may be grouped on one level of a parking structure. The words NO PARKING shall be painted on the ground within each five-foot loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches high and located so that it is visible to traffic enforcement officials. See Figure 11B-18B.

3. Arrangement of parking space.

In each parking area, a bumper or curb shall be provided and located to prevent encroachment of cars over the required width of walkways. Also, the space shall be so located that person with disabilities are not compelled to wheel or walk behind parked cars other than their own. Pedestrian ways which are accessible to persons with disabilities shall be provided from each such parking space to related facilities, including curb cuts or ramps as needed. Ramps shall not encroach into any parking space.

4. Surface slopes of accessible parking spaces shall be the minimum possible and shall not exceed 1 unit vertical to 50 units horizontal (2% slope) in any direction.

1129B.4 Identification of Parking Spaces for Off-Street Parking Facilities. Each parking space reserved for persons with disabilities shall be identified by a reletterized sign permanently posted immediately adjacent to and visible from each stall or space consisting of a profile view of a wheelchair with occupant in white on dark blue background. The sign shall not be smaller than 70 square inches in area and, when in a path of travel, shall be posted at a minimum height of 60 inches from the bottom of the sign to the parking space finished grade. Signs may also be centered on wall at the interior end of the parking space. An additional sign or additional language below the symbol of accessibility shall state "Minimum Fine \$250". Spaces complying with Section 1129B.3, Item 2 shall have an additional sign stating "Van-Accessible" mounted below the symbol of accessibility. Signs identifying accessible parking spaces shall be located so they cannot be obscured by a vehicle parked in the space.

An additional sign shall also be posted in a conspicuous place at each entrance to off-street parking facilities, or immediately adjacent to and visible from each stall or space. The sign shall not be less than 17 inches by 22 inches in size with lettering not less than 1 inch in height, which clearly and conspicuously states the following: "Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or license plates issued for persons with disabilities may be towed away at owner's expense. Towed vehicles may be reclaimed by telephoning The Santa Ana Police Department at (714) 245-8665. CVC 22658a."

In addition to the above requirements, the surface of each accessible parking surface shall have a surface identification duplicating either of the following schemes:

1. By outlined or painting the stall or space in blue and outlining on the ground in the stall or space in white or suitable contrasting color a profile view depicting a wheelchair with occupant.
2. By utilizing a profile view of a wheelchair with occupant in white on blue background. The profile view shall be located so that it is visible to a traffic enforcement officer when a vehicle is properly parked in the space and shall be 36 inches high by 36 inches wide. See Figure 11B-18A through 11B-18C.

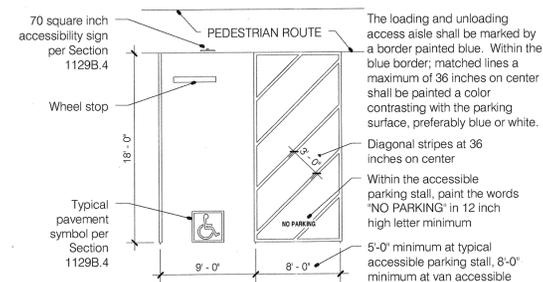


Figure 11B-18B Single Parking Stalls

1127B.5 Curb ramps.

1. **General.** Curb ramps shall be constructed at each corner of street intersections and where a pedestrian way crosses a curb. Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes. The preferred and recommended location for curb ramps is in the center of the grooved border of each street corner. Where it is necessary to locate a curb ramp in the center of the curb return and the street surfaces are marked to identify pedestrian crosswalks, the lower end of the curb ramp shall terminate within such crosswalk areas. See Figure 11B-20C, Case E and Figure 11B-22.

2. **Width of curb ramps.** Curb ramps shall be a minimum of 4 feet (1219 mm) in width and shall lie, generally, in a single sloped plane, with a minimum of surface warping and cross slope.

3. **Slope of curb ramps.** The slope of curb ramps shall not exceed one unit vertical in 12 units horizontal (8.33-percent slope). The slope shall be measured as shown in Figure 11B-20E. Transitions from ramps to walks, gutters or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed one unit vertical in 20 units horizontal (5-percent slope) within 4 feet (1219 mm) of bottom of the curb ramp. The slope of the flared sides of curb ramps shall not exceed one unit vertical in 10 units horizontal (10-percent slope).

4. **Level landing.** A level landing 4 feet (1219 mm) deep shall be provided at the upper end of each curb ramp over its full width to permit safe egress from the ramp surface, or the slope of the flared or tiered sides of the curb ramp shall not exceed one unit vertical in 12 units horizontal (8.33-percent slope).

5. **Finish.** The surface of each curb ramp and its flared sides shall comply with Section 1124B, Ground and Floor Surfaces, and shall be of contrasting finish from that of the adjacent sidewalk.

6. **Border.** All curb ramps shall have a grooved border 12 inches (305 mm) wide at the level surface of the sidewalk along the top and each side approximately 3/4 inch (19 mm) on center. All curb ramps constructed between the face of the curb and the street shall have a grooved border at the level surface of the sidewalk. See Figures 11B-19A and 11B-19B.

7. **Detectable warnings.** Curb ramps shall have a detectable warning that extends the full width and depth of the curb ramp, excluding the flared sides, inside the grooved border. Detectable warnings shall be slip-resistant and consist of raised truncated domes with a diameter of nominal 0.9 inch (22.9 mm) at the base tapering to 0.45 inch (11.4 mm) at the top, a height of nominal 0.2 inch (5.08 mm) and a center-to-center spacing of nominal 2.35 inches (59.7 mm) in compliance with Figure 11B-23A. "Normal" here shall be in accordance with Sections 12-1A and 5-102, State Referenced Standards Code. The detectable warning shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light. The material used to provide contrast shall be an integral part of the walking surface. The domes may be constructed in a variety of methods, including cast in place or stamped, or may be part of a prefabricated surface treatment.

8. **Obstructions.** Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.

Revision Date		
No.	Date	Description

PLANS PREPARED UNDER THE DIRECTION OF MARTIN BUILDERS, INC.

1495
East Warner
Santa Ana
92705
02705

MARTIN BUILDERS INC.
 General Contractors (714) 241-1141

Johnstone Supply
520 East Dyer Road, Santa Ana, California

Issue Date 01/20/2012
 Print Date 2/8/2012 4:46:17 AM
 Sheet Number **A9**

DIVISION 3 BUILDING SECURITY REGULATIONS

Sec. 8-200. Application and enforcement. The provisions of this security ordinance shall apply to all activities for which a building permit is required. Additions, alterations and repairs. Fifty (50) percent more of the building's current valuation. When additions, alterations or repairs within any twelve-month period exceed fifty (50) percent of the value of any existing building or structure, each building or structure shall be made to conform to the requirements for new buildings or structures. All applicable state and local fire codes must be adhered to. No portion of this division shall supersede any local, state or federal laws, regulations or codes. (Ord. No. NS-1424, § 1, 6-5-78; Ord. No. NS-1794, § 1, 10-14-85)

Sec. 8-201. Definitions of technical terms.

The following terms used in this division shall have the meanings indicated below: Approved means certified as meeting the requirements of this division by the enforcing authority or his authorized agents, or by other officials designated by the enforcing authority to give approval on a particular matter dealt with by the provisions of this division with regard to a given material, mode of construction, piece of equipment or device. Auxiliary locking device is a secondary locking system added to the primary locking system to provide additional security.

Bolt is a metal bar, which, when actuated, is projected (or "thrown") either horizontally or vertically into a retaining member, such as a strike plate, to prevent a door from moving or opening.

Bolt projection (or bolt throw) is the distance from the edge of the door, at the bolt center line, to the farthest point on the bolt in the projected position, when subjected to end pressure.

Burglary resistant glazing means those materials as defined in Underwriters Laboratories Bulletin 972.

Commercial or industrial building is a building, or portion thereof, used for a purpose other than dwelling.

Component, as distinguished from a part, is a subassembly which combines with other components to make up a total assembly. For example, the primary components of a door assembly include: Door, lock, hinges, jamb/wall, jamb/strike and wall.

Cylinder is the subassembly of a lock containing the cylinder core, tumblers mechanism and the keyway. A double cylinder lock is one which has a key-actuated cylinder on both the exterior and interior of the door.

Cylinder core or cylinder plug is the central part of a cylinder containing the keyway, which is rotated by the key to operate the lock mechanism.

Cylinder guard is a hardened metal ring or plate surrounding the otherwise exposed portion of a cylinder lock to resist cutting, drilling, prying, pulling, or wrenching with common tools. Deadbolt is a lock bolt which does not have a spring action as opposed to a latch bolt, which does. The bolt must be actuated by a key and/or a knob or thumb turn and when projected becomes locked against return by end pressure.

Dead latch is a spring actuated latch bolt having a beveled end and incorporating a plunger which, when depressed, automatically locks the projected latch bolt against return by end pressure.

Door assembly means a unit composed of a group of parts or components which make up a closure for a passageway through a wall. For the purposes of this division, a door assembly consists of the following parts: Doors, hinges, locking device or devices; operation contracts (such as handles, knobs, push plates); miscellaneous hardware and closures; the frame, including the head, threshold, and jamb; plus the anchorage devices to the surrounding wall and a portion of the surrounding wall extending thirty-six (36) inches from each side of the jambs and sixteen (16) inches above the head.

Door stops are the projections along the top and sides of a door jamb which check the door's swinging action.

Double cylinder deadbolt is a deadbolt which can be activated only by a key from either the interior or exterior of the building.

Dwelling is a building or portion thereof designated exclusively for residential occupancy, including single-family and multiple-family dwellings.

Flushbolt is a normal manual, key, turn operated or automatic releasing metal throwbolt, normally used on inactive door(s) that is attached to the top and bottom of the door and engages in the head and threshold of the frame.

Fully tempered glass means those materials meeting or exceeding ANSI Standard Z97.1-Safety Glazing.

Inactive leaf or door means either leaf or door of a pair of doors which has no surface mounted hardware and which receives and holds the latch or bolt of the primary locking system.

Jamb is the vertical members of a door frame to which the door is secured.

Jamb/strike means that component of a door assembly which receives and holds secure the extended lock bolt, the strike and jamb used together are considered a unit.

Jamb/wall is that component of a door assembly in which a door is attached and secured; the wall and jamb used together are considered a unit.

Key-in-knob is a lockset having the key cylinder and other lock mechanisms contained in the knob.

Latch or latch bolt is a beveled, spring-actuated bolt, which may or may not have a deadlocking device.

Lock or lockset is a keyed device (complete with cylinder, latch or deadbolt mechanism, and trim such as knobs, levers, thumb turns, escutcheons, etc.) for securing a door in a closed position against forced entry.

Locked indicator is a device indicating whether the lock set (deadbolt, etc.) is locked or open.

Locking device is a part of a window or sliding door assembly which is intended to prevent movement of the movable sash or door.

Minimum maintained means measurable light level at furthest point from lighting source at ground level.

Multiple-family dwelling is a building or portion thereof designed for occupancy by one (1) or more persons living independently of each other, including hotels, motels, apartments, duplexes, town houses, and condominiums.

Panic hardware is a latching device on a door assembly for use when emergency egress is required due to a fire or other threat to life safety. Such devices are designed so that they will facilitate the safe egress of people in case of an emergency when a pressure not to exceed fifteen (15) pounds is applied to the releasing device in the direction of exit travel.

Such releasing devices are bars or panels extending not less than two-thirds (2/3) of the width of the door and placed at heights suitable for the service required, not less than thirty (30) nor more than forty-four (44) inches above the floor.

Part, as distinguished from component, is a unit (or subassembly) which combines with other units to make up a component.

Primary locking device is the single locking system on a door or window unit whose function is to prevent unauthorized intrusion.

Private dwelling or single-family dwelling is a building designed exclusively for occupancy by one (1) family.

Rail is the horizontal members of a sash frame. A meeting rail is one which mates with a rail of another sash or framing member of the window frame when the sash is in the closed position.

Sash is an assembly of stiles, rails, and, sometimes, muntins assembled into a single frame which supports the glazing material. A fixed sash is one which is not intended to be opened. A movable sash is intended to be opened.

Sill is the lowest horizontal member of a window frame.

Single cylinder deadbolt is a deadbolt lock which is activated from the exterior by a key and from the interior by a knob, thumb-turn, lever or similar mechanism.

Solid core door means a door composed of solid wood or compressed wood equal in strength to solid wood construction.

Stile is a vertical framing member of a window or door. A meeting stile is one which mates with a stile of another sash, or a vertical framing member of a door or window frame when the sash is in the closed position.

Strike is a metal plate attached to or mortised into a door jamb to receive and to hold a projected latch bolt and/or deadbolt in order to secure the door to the jamb.

Swing door means a door hinged at the stile or at the head and threshold.

UL listed means tested and listed by Underwriters Laboratories, Inc.

Vandal resistant cover is a protective cover constructed of either acrylic, polycarbonate or wire mesh which totally encloses the light source. The wire mesh must have a maximum 1/4-inch mesh. The polycarbonate and acrylic must have a minimum 1/2-inch thickness. The purpose of the cover is to discourage the willful destruction of the light source.

Visibility corridor is an opening of at least a ten-inch square and shall be located a minimum of thirty-six (36) inches, and not to exceed fifty (50) inches above ground level.

Window assembly is a unit composed of a group of parts or components which make up a closure for an opening in a wall or roof (including the anchorage) to control light, air, and other elements.

Window frame is that part of a window which surrounds and supports the sashes and is attached to the surrounding wall. The members include side jambs (vertical), head jamb (upper, horizontal), sill and mullions. (Ord. No. NS-1424, § 1, 6-5-78; Ord. No. NS-1436, § 1, 8-21-78; Ord. No. 1794, § 2, 10-14-85)

Sec. 8-202. Definition of "enforcing authority".

As used in this division, the term "enforcing authority" shall mean the building official and his authorized representatives. (Ord. No. NS-1424, § 1, 6-5-78; Ord. No. NS-1794, § 3, 10-14-85; Ord. No. NS-1900, § 6, 6-1-87)

Sec. 8-203. Enforcement.

The enforcing authority is hereby empowered and directed to administer and enforce the provisions of this division relating to physical security requirements for buildings in the City of Santa Ana. Plans and specifications for proposed construction must be approved by the enforcing authority in accordance with the provisions of this division. No building permit is to be finally approved or utility release given unless the applicant for said permit or release has satisfied the enforcing authority that applicant has complied with this division. (Ord. No. NS-1794, § 4, 10-14-85)

Sec. 8-204. Violations and penalties.

Sec. 8-200. Application and enforcement. The provisions of this security ordinance shall apply to all activities for which a building permit is required. Additions, alterations and repairs. Fifty (50) percent more of the building's current valuation. When additions, alterations or repairs within any twelve-month period exceed fifty (50) percent of the value of any existing building or structure, each building or structure shall be made to conform to the requirements for new buildings or structures. All applicable state and local fire codes must be adhered to. No portion of this division shall supersede any local, state or federal laws, regulations or codes. (Ord. No. NS-1424, § 1, 6-5-78)

Sec. 8-205. Alternate materials and methods of construction.

Materials, methods of construction or structural design limitations provided for in this division are to be used unless an exception is granted.

The use of any material or method of construction not specifically prescribed by this division may be allowed, provided any such alternate method or material has been approved by the enforcing authority prior to use.

Further, other sound methods of structural design or analysis not specifically provided for in this division may be allowed provided such alternate has been approved by the enforcing authority prior to use.

The enforcing authority may approve any such alternate provided that they find the proposed design to be satisfactory and the material and method of work offered is for the purpose intended, at least equivalent to that prescribed in this division in quality, strength, effectiveness, crime resistance, durability and safety. (Ord. No. NS-1424, § 1, 6-5-78)

Sec. 8-206. Appeals.

The Uniform Code appeals board shall have the power and be required to hear appeals regarding determination of the suitability of alternate materials and methods of construction, and to provide for reasonable interpretation of the provisions of this division in the event of a dispute. (Ord. No. NS-1424, § 1, 6-5-78; Ord. No. NS-1596, § 3, 9-8-81)

Cross reference(s)—Uniform Code appeals board established, § 4-250

Sec. 8-207. Keying requirements.

Upon occupancy by the owner or proprietor, each single unit in a tract or commercial development, constructed under the same general plan, shall have locks using combinations which interchange free from locks used in all other separate dwellings, proprietorships or similar distinct occupancies within such tract or commercial development. Every applicant must provide the enforcing authority with written confirmation of compliance with the above requirements. (Ord. No. NS-1424, § 1, 6-5-78)

Sec. 8-208. Garage-type doors.

(a) Garage-type doors, which are either rolling overhead, solid overhead, swinging, sliding, or accordion style doors shall conform to the following standards:

(1) Wood doors shall have panels a minimum of five-sixteenths (5/16) inch in thickness with the locking hardware being attached to the support framing.

(2) Aluminum doors shall be a minimum thickness of .0215 inches and riveted together a minimum of eighteen (18) inches on center along the outside seams. There shall be a full width horizontal beam attached to the main door structure which meet the pilot, or pedestrian access door, door framing within three (3) inches of the strike area of the pilot or pedestrian access door.

(3) Fiberglass doors shall have panels a minimum of six (6) ounces per square foot from the exterior to the interior of seven (7) feet. Panels above seven (7) feet and panels in residential structures have a density of not less than five (5) ounces per square foot.

(b) Where sliding or accordion doors are utilized, they shall be equipped with guide tracks which shall be designed so that the door cannot be removed from the track when in the closed and locked position.

(c) Doors utilizing a cylinder lock shall have a minimum five (5) pin tumbler operation with the bolt or locking bar extending into the receiving guide a minimum of one (1) inch.

(d) Pedestrian access doors contained in garage type doors shall comply to the standards set forth in section 8-211 (b) or (c).

(e) Pedestrian access doors shall comply with the tests as set forth in section 8-212 (Tests).

(f) Louvered windows shall not be used when any portion of the window is less than twelve (12) feet vertically or six (6) feet horizontally from an accessible surface or any adjoining roof, balcony, landing, stair, tread, platform or similar structure. (Ord. No. NS-1424, § 1, 6-5-78)

Sec. 8-211. Special commercial building provisions.

(a) Swinging exterior glass doors, wood or metal doors with glass panels, solid wood or metal doors shall be constructed or protected as follows: (electronic sliding doors are prohibited)

(1) Wood doors shall be of solid core construction with a minimum thickness of one and three-fourths (1 3/4) inches. Hollow metal doors shall be constructed of a minimum equivalent to sixteen (16) U.S. gauge steel and have sufficient reinforcement to maintain the designed thickness of the door when any locking device is installed; such reinforcement being able to restrict collapsing of the door around the locking device.

(2) Except when double cylinder deadbolts are utilized or safety glazing is required by Chapter 54 of the Uniform Building Code, any glazing installed within forty (40) inches of any door locking mechanism shall be constructed or protected as follows:

a. Fully tempered glass or rated burglary resistant glazing; or

b. Iron or steel grills of at least one-eighth (1/8) inch mesh secured with nonremovable bolts; or

c. The glazing shall be covered with iron or steel bars of at least one-half (1/2) inch round or one (1) inch by one-fourth (1/4) inch flat metal, spaced not more than five (5) inches apart and secured with nonremovable bolts.

(3) All air duct or air vent openings exceeding ninety-six (96) square inches on the roof or exterior walls of any commercial building shall be secured by covering same with either of the following:

(a) All exterior double doors shall be equipped as follows:

(1) The inactive leaf of double doors shall be equipped with automatic releasing metal flushbolts having a minimum embedment of five-eighths (5/8) inch into the header and threshold of the door frame or by panic hardware which contains a minimum of two (2) locking points, one (1) located at the header the other at the threshold of each door.

(2) Double doors shall have a full length astragal, constructed of steel a minimum of .125 inch thick which will cover the opening between the doors. The astragal shall be a minimum of two (2) inches wide, and extend a minimum of one (1) inch beyond the edge of the door to which it is attached.

(3) Aluminum frame swinging doors shall conform to the following:

(1) The jamb on all aluminum frame swinging doors shall be so constructed or protected to withstand one thousand six hundred (1,600) pounds of pressure in both a vertical distance of three (3) inches and a horizontal distance of one (1) inch each side of the strike, so as to prevent violation of the strike.

(2) Aluminum frame swinging doors shall be equipped with a two-point locking mechanism consisting of deadbolt having a minimum bolt projection of one and one-half (1 1/2) inches, or a hook shaped or similar bolt that engages the strike sufficiently to prevent spreading and a metal automatic releasing threshold bolt having a minimum embedment of five-eighths (5/8) inch into the floor. The deadbolt lock shall have a minimum of five (5) pin tumblers, and a cylinder guard and shall be equipped with a locked indicator.

(e) Panic hardware, whenever required by the Uniform Building Code or Title 24, California Administrative Code, shall be equipped and installed as follows:

(1) Panic hardware shall contain a minimum of two (2) locking points on each door, one (1) located at the header, the other at the threshold of the door, or

(2) On single doors, panic hardware may have one (1) locking point which is not to be located at either the top or bottom rails of the door frame. The door shall have an astragal constructed of steel .125 inch thick which shall be attached with nonremovable bolts to the outside of the door. The astragal shall extend a minimum of six (6) inches vertically above and below the latch of the panic hardware. The astragal shall be a minimum of two (2) inches wide and extend a minimum of one (1) inch beyond the edge of the door to which it is attached.

(3) Double doors containing panic hardware shall have a full length astragal constructed of steel, attached to the doors at their meeting point which will close the opening between them, but not interfere with the operation of either door.

(4) Installation and construction of frames and jambs for exterior swinging doors shall be as follows:

(1) Door jambs shall be installed with solid backing in such a manner that no voids exist between the strike side of the jamb and the frame opening for a vertical distance of six (6) inches each side of the strike. Finger joints are prohibited.

(2) In wood framing, horizontal blocking shall be placed between studs at door lock height for three (3) stud spaces each side of the door openings. Trimmers shall be full length from the heads to the floor with solid backing against sole plates.

(3) In multiple occupancy office buildings all entrance doors to individual office suites shall meet the construction and locking requirements for exterior doors.

(h) In multiple occupancy buildings, interior walls dividing the individual suites shall not end at the false ceiling but shall continue to the real roof.

(i) Exterior transoms or windows shall be deemed accessible if less than twelve (12) feet above ground or adjacent to any pedestrian walkway. Accessible windows and transoms shall be constructed of steel, or equivalent, attached with screws.

(j) Establishments having specific type inventories shall be protected by the following alarm service:

a. Jewelry store—Manufacturing, wholesale or retail.

b. Any establishment manufacturing, storing or selling firearms and ammunition.

c. Establishments selling or storing wholesale liquor, tobacco or drugs.

d. Facilities selling or storing fur.

f. Banks, savings and loan institutions and credit unions.

(2) Silent alarm system not requiring a central station hookup or supervised service:

a. Liquor stores.

b. Pawnshops.

c. Establishments manufacturing, storing or selling electronic equipment.

d. Establishments dealing in coins and stamps.

e. Establishments manufacturing, storing or selling industrial tool supplies.

f. Establishments manufacturing, storing or selling cameras.

(3) Local or audible alarm system:

a. Antique dealers.

b. Art galleries.

c. Service stations.

d. Food markets.

(4) Nothing in this subsection shall preclude the use of an alarm system providing a higher level of security than that which is required. (Ord. No. NS-1424, § 1, 6-5-78; Ord. No. NS-1502, § 1, 10-1-79; Ord. No. NS-1794, § 7, 10-14-85)

(c) All exterior double doors shall be equipped as follows:

(1) The inactive leaf of double doors shall be equipped with automatic releasing metal flushbolts having a minimum embedment of five-eighths (5/8) inch into the header and threshold of the door frame or by panic hardware which contains a minimum of two (2) locking points, one (1) located at the header the other at the threshold of each door.

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(j) Establishments having specific type inventories shall be protected by the following alarm service:

a. Jewelry store—Manufacturing, wholesale or retail.

b. Any establishment manufacturing, storing or selling firearms and ammunition.

c. Establishments selling or storing wholesale liquor, tobacco or drugs.

d. Facilities selling or storing fur.

f. Banks, savings and loan institutions and credit unions.

(2) Silent alarm system not requiring a central station hookup or supervised service:

a. Liquor stores.

b. Pawnshops.

c. Establishments manufacturing, storing or selling electronic equipment.

d. Establishments dealing in coins and stamps.

e. Establishments manufacturing, storing or selling industrial tool supplies.

f. Establishments manufacturing, storing or selling cameras.

(3) Local or audible alarm system:

a. Antique dealers.

b. Art galleries.

c. Service stations.

d. Food markets.

(4) Nothing in this subsection shall preclude the use of an alarm system providing a higher level of security than that which is required. (Ord. No. NS-1424, § 1, 6-5-78; Ord. No. NS-1502, § 1, 10-1-79; Ord. No. NS-1794, § 7, 10-14-85)

(n) Interior night lighting shall be maintained in those areas that are visible from the street through floor lights only.

(o) All exterior block wall fencing shall have intervals providing visibility corridors which will allow visibility of the interior from outside the wall, and these visibility corridors shall be placed at regular intervals. This applies only to block walls visible from the street.

(p) In multiple occupancy buildings, interior walls dividing the individual suites shall not end at the false ceiling but shall continue to the real roof.

(q) In multiple occupancy office buildings all entrance doors to individual office suites shall meet the construction and locking requirements for exterior doors.

(r) In multiple occupancy buildings, interior walls dividing the individual suites shall not end at the false ceiling but shall continue to the real roof.

(s) Exterior transoms or windows shall be deemed accessible if less than twelve (12) feet above ground or adjacent to any pedestrian walkway. Accessible windows and transoms shall be constructed of steel, or equivalent, attached with screws.

(t) All exterior doors shall be equipped with a lighting device which shall provide a minimum maintained one (1) footcandle of light at ground level during hours of darkness. Lighting devices shall be protected by vandal resistant covers.

(u) All parking lots, and access thereto, providing more than ten (10) parking spaces and for use by the general public, shall be provided with a minimum maintained one (1) footcandle of light on the parking surface from dusk until the termination of business every operating day. At all other hours of darkness, a minimum maintained 25 footcandles of light shall be provided at ground level.

(v) Exterior lighting shall not shine away from subject property.

(w) Interior night lighting shall be maintained in those areas that are visible from the street through ground floors only.

(x) All exterior block wall fencing shall have intervals providing visibility corridors which will allow visibility of the interior from outside the wall, and these visibility corridors shall be placed at regular intervals. This applies only to block walls visible from the street.

(y) Passenger elevators, the interiors of which are not completely visible when the car door is open, shall have mirrors so placed as to make visible the whole of the elevator interior to prospective passengers outside the elevator.

(z) When access to or within a commercial complex is unduly difficult because of secured openings or where immediate access is necessary for life saving or fire fighting purposes, a key override is to be installed in an accessible location. The key override shall be mastered to both the fire department and police department keys.

(1) Any structure four (4) stories in height or greater will have a repeater installed in its roof.

(2) Establishments having specific type inventories shall be protected by the following alarm service:

a. Jewelry store—Manufacturing, wholesale or retail.

b. Any establishment manufacturing, storing or selling firearms and ammunition.

c. Establishments selling or storing wholesale liquor, tobacco or drugs.

d. Facilities selling or storing fur.

f. Banks, savings and loan institutions and credit unions.

(2) Silent alarm system not requiring a central station hookup or supervised service:

a. Liquor stores.

b. Pawnshops.

c. Establishments manufacturing, storing or selling electronic equipment.

d. Establishments dealing in coins and stamps.

e. Establishments manufacturing, storing or selling industrial tool supplies.

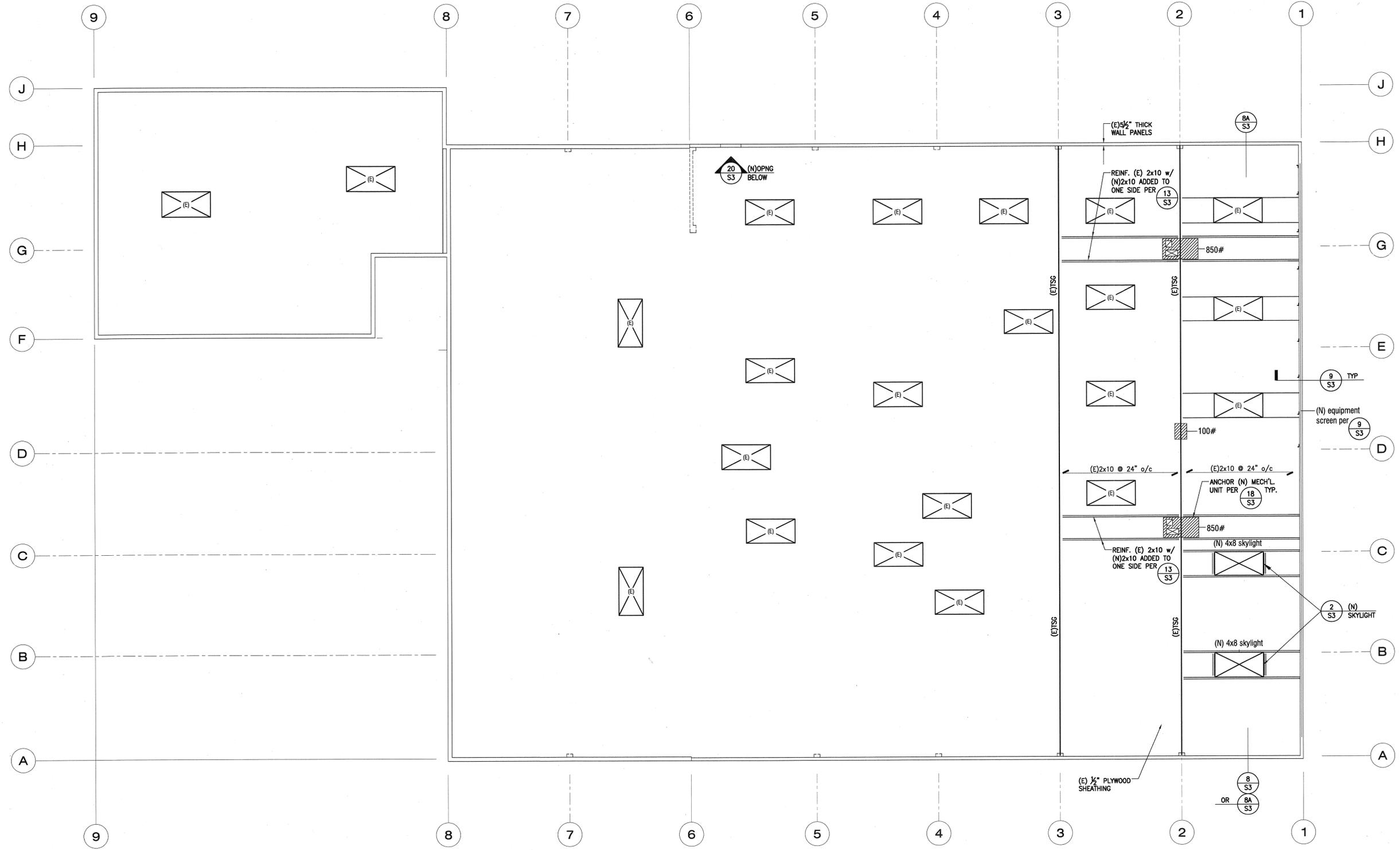
f. Establishments manufacturing, storing or selling cameras.

(3) Local or audible alarm system:

a. Antique dealers.

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 JOB NUMBER: 11-067

Revision Date		
No.	Date	Description

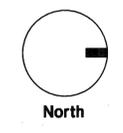


ROOF FRAMING NOTES:

- SEE SHEET S-2 FOR GENERAL NOTES AND TYPICAL DETAILS.
- DESIGNATES (N) MECHANICAL UNIT SIZE. SEE MECHANICAL FOR LOCATION. SEE PLAN FOR MAXIMUM WEIGHT SEE (17 S3) FOR FRAMING AROUND DUCT OPENINGS.
- ROOF DESIGN LOADS:**
 ROOFING = 4.0 PSF
 SHEATHING = 1.8
 JOIST = 1.9
 TSG = 2.3
 CEILING/MISC. = 4.0
 D.L. = 14.0 PSF
 L.L. = 20.0 PSF (REDUCIBLE)

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 MARTIN BUILDERS INC. General Contractors
 (714) 241-1141

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 Johnstone Supply
 520 East Dyer Road, Santa Ana, California



ROOF FRAMING PLAN

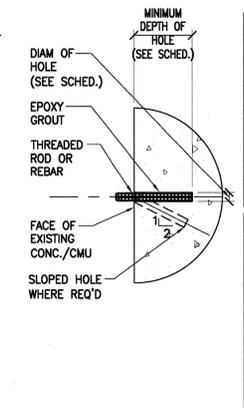
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S-1

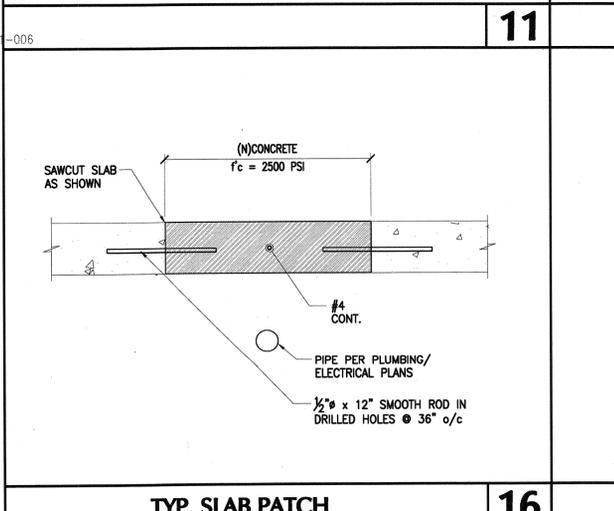
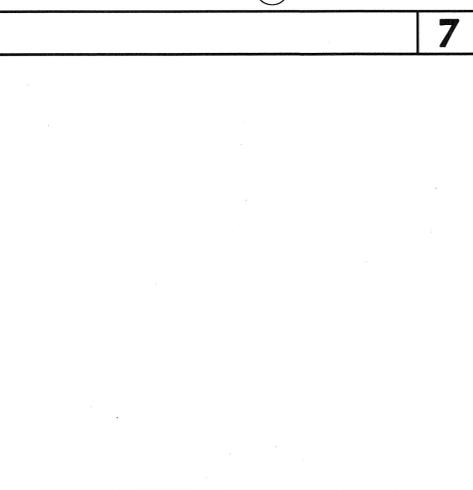
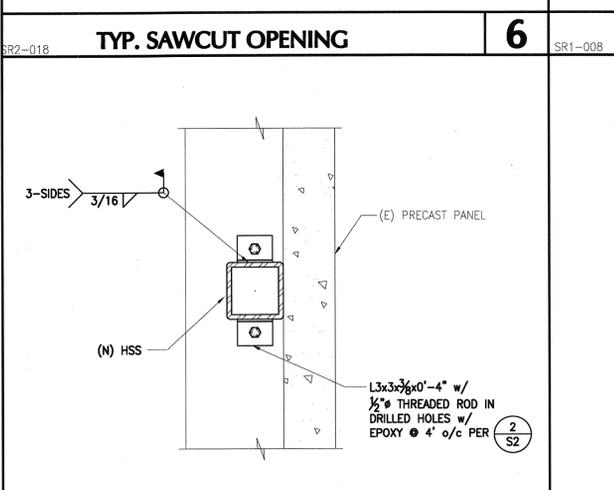
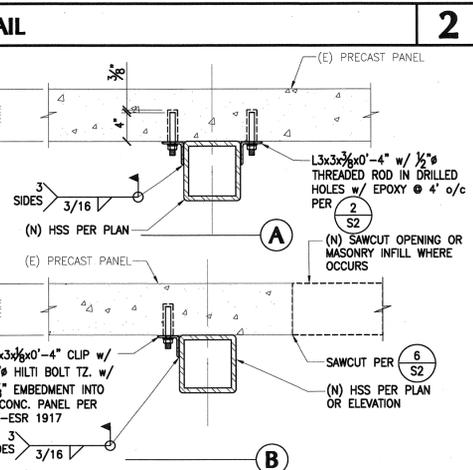
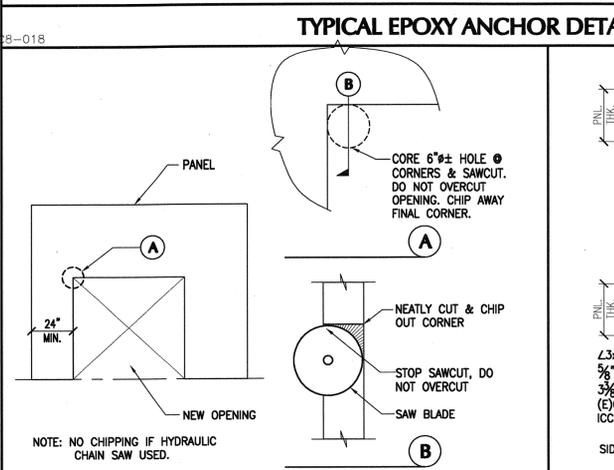
- PROCEDURE**
- EPOXY SHALL NOT BE USED UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS OR WITH PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
 - THREADED ROD OR DOWELS EMBEDDED IN EPOXY SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
 - CORRECT IMPLEMENTATION OF THE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION SHALL BE VERIFIED BY A SPECIAL INSPECTOR.
 - ONLY NON-REBAR-CUTTING DRILL BITS SHALL BE USED TO DRILL HOLES IN EXISTING CONCRETE AND/OR CMU.
 - THREADED ROD OR DOWEL EMBEDMENT SHALL BE VERIFIED AND DOCUMENTED BY A SPECIAL INSPECTOR
 - EPOXY SHALL BE:

EPOXY IN CONCRETE		EPOXY IN MASONRY	
EPOXY	ICC#	EPOXY	ICC#
HILTI HIT-HY 150 MAX-SD	ESR-3013	SIMPSON SET	ESR-1772
SIMPSON SET-XP	ESR-2508	HILTI HIT HY 150 MAX	ESR-1967
HILTI HIT-RE 500-SD	ESR-2322	USP CIA-GEL 7000	ESR-1702
POWERS PE1000+	ESR-2583	HILTI HIT-HY150	ESR-2678
 - DRILL HOLES SHALL BE CLEAN OF CONCRETE DUST AND DEBRIS USING EITHER A NYLON BRUSH AND A VACUUM OR A NYLON BRUSH AND OIL-FREE COMPRESSED AIR. A BLOW-OUT BULB MAY BE USED IF A VACUUM OR COMPRESSED AIR IS NOT AVAILABLE. CLEANLINESS OF DRILL HOLES SHALL BE VERIFIED AND DOCUMENTED BY SPECIAL INSPECTOR.
 - PLACE EPOXY IN HOLE WITH CAULKING GUN OR SIMILAR EQUIPMENT, STARTING AT BOTTOM, FILL HOLE APPROXIMATELY 2/3 FULL
 - COAT ROD OR REBAR WITH THE SAME EPOXY AND INSERT INTO HOLE.
 - EPOXY FOR CMU SHALL ONLY BE USED IN SOLID GROUTED CMU WALLS.



ROD HOLE SIZE		
ROD SIZE	BIT DIAM.	MIN. DEPTH
3/8"	7/16"	3 1/2"
1/2"	9/16"	4 1/4"
5/8"	1 1/16"	5"
3/4"	1 3/16"	6 1/4"
7/8"	1 5/16"	7 3/4"
1"	1 1/8"	9"

REBAR HOLE SIZE		
REBAR SIZE	BIT DIAM.	MIN. DEPTH
#3	1/2"	3 1/2"
#4	5/8"	4 1/4"
#5	3/4"	5"
#6	7/8"	6 1/4"
#7	1"	7 3/4"
#8	1 1/8"	9"



- STRUCTURAL STEEL**
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION, WHICH INCLUDES THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, THE CODE OF STANDARD PRACTICE AND THE AWS STRUCTURAL WELDING CODE.
 - UNLESS NOTED OTHERWISE ON PLANS, STRUCTURAL SHAPES SHALL BE: ASTM A36 MINIMUM FOR: ANGLES AND CHANNELS. ASTM A36/A572 (Fy=50 ksi) DUAL STEEL, A572 (Fy=50 ksi), OR A992 (Fy=50 ksi) FOR: WIDE FLANGE AND WT MEMBERS, WIDE FLANGE MEMBERS IN BRACED FRAMES AND MOMENT FRAMES SHALL BE ASTM A992.
 - STRUCTURAL PLATES AND BARS SHALL BE ASTM A36.
 - VERTICAL PIPE COLUMNS SHALL CONFORM TO A.S.T.M. A 53-B (TYPE E OR S) OR A501. DIAGONAL PIPE SECTIONS SHALL CONFORM TO A.S.T.M. A-501.
 - TUBE COLUMNS SHALL CONFORM TO A.S.T.M. A-500 GRADE B.
 - ALL BOLTS FOR STEEL MEMBERS SHALL CONFORM TO A.S.T.M. A-307 UNLESS OTHERWISE NOTED.
 - WELDING SHALL BE BY THE ELECTRIC SHIELDED ARC PROCESS, DONE BY A CERTIFIED WELDER APPROVED BY THE BUILDING DEPARTMENT.
 - ALL WELDING SHALL BE ACCOMPLISHED USING THE SHIELDED METAL ARC WELDING PROCESS (SMAW) WITH E70XX ELECTRODES OR THE SUBMERGED ARC WELDING PROCESS (SAW) WITH E70-EXXX ELECTRODES OR THE FLUX-CORED ARC WELDING PROCESS (FCAW) WITH E70T-4 ELECTRODES. E70T-4 ELECTRODES SHALL NOT BE USED. E70T-4, -10, -13, -14, -6S ELECTRODES SHALL NOT BE USED. LOW HYDROGEN ELECTRODES SHALL BE USED AND KEPT DRY, AND PARENT METALS SHALL BE PRE-HEATED IN ACCORDANCE WITH AWS STANDARDS. WELDING SHALL BE PERFORMED BY A BUILDING DEPARTMENT APPROVED CERTIFIED WELDER. WELDERS SHALL HAVE LIGHT GAUGE STEEL CERTIFICATION WHEN WELDING LIGHT GAUGE STEEL.
 - FULL PENETRATION WELDED MOMENT CONNECTIONS AT MOMENT FRAMES, BRACED FRAMES, AND ALL FULL PENETRATION FIELD WELDS SHALL HAVE ULTRASONIC TESTING FOR COMPLIANCE WITH IBC SECTION 1704.3 AND AWS D1.1. WELD FILLER MATERIALS FOR THESE CONNECTIONS ARE TO HAVE A RATED TOUGHNESS OF 20 FT. LBS. AT 0°F PER CHARPY V-NOTCH TEST. ULTRASONIC TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY THAT HAS BEEN INSPECTED BY THE NATIONAL STANDARDS TESTING INSPECTION SHALL BE QUALIFIED BY ASNT BUREAU OF RECOMMENDED PRACTICE SNT-TC-1A. PROVIDE PROPER SURFACE PREPARATION AND BACKUP PLATES AS REQUIRED PER AISC AND AWS. ALL BACKING BARS AND RUNOFF TABS SHALL BE REMOVED (EXCEPT ON HSS) AND SHALL MEET THE REQUIREMENTS OF AWS D1.1.
 - WHERE FINISH IS ATTACHED TO STRUCTURAL STEEL PROVIDE 1/2\"/>

- STRUCTURAL TESTS & INSPECTIONS REQ'D FOR THIS PROJECT**
- REFER TO SECTIONS 109 AND 1704 OF THE 2009 INTERNATIONAL BUILDING CODE FOR AMPLIFICATION OF THE FOLLOWING REQUIREMENTS: ALL CERTIFIED SPECIAL INSPECTORS MUST SUBMIT FINAL REPORTS AS SOON AS TESTS AND INSPECTIONS ARE PERFORMED. REPORTS SHALL BE DISTRIBUTED TO THE OWNER, CONTRACTOR, ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT AS REQUIRED. ALL TEST AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY EMPLOYED BY THE OWNER OR AGENT OF THE OWNER AND NOT THE CONTRACTOR PER IBC SECTION 1704.

TEST/INSPECTION REQ'D FOR THIS PROJECT (YES/NO)	INSPECTION FREQUENCY
A. CLASSIFICATION AND TESTING OF COMPACTED FILL INCLUDING UTILITY TRENCHES.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
B. MATERIALS, DENSITIES, AND LIFT THICKNESS OF COMPACTED FILL WITH DEPTHS GREATER THAN 12", INCLUDING UTILITY TRENCHES.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
C. VISUAL EXAMINATION & APPROVAL OF ALL FOUNDATION EXCAVATIONS AND MATERIALS BELOW FOOTINGS.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
D. EXPANSION INDEX EVALUATION OF PAD.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
E. PILE FOUNDATIONS	
1) MATERIALS, SIZES AND LENGTHS.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
2) CAPACITIES OF TEST PILES.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
3) PILE LOCATIONS & PLUMBNESS.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
F. PIER FOUNDATIONS (CAISSONS)	
1) DRILLING OPERATIONS.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
2) PLACEMENT LOCATIONS, PLUMBNESS, PIER DIAMETERS, BELL DIAMETERS, LENGTHS, & END BEARING CAPACITIES.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
G. CONCRETE	
A. TEST SPECIMENS, SLUMP, AIR CONTENT, TEMPERATURE FOR CONCRETE OVER 2500 PSI EXCEPT SLAB-ON-GRADE.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
B. CONCRETE PLACEMENT.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
C. USE OF DESIGN MIX.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
D. SHAPE, LOCATION, AND DIMENSIONS OF FORMWORK.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
E. PNEUMATICALLY PLACED CONCRETE-GUNITED & SHOTCRETE (TEST SPECIMENS, PLACING OF CONCRETE).	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
F. VISUAL INSPECTION OF BOLTS AND EMBEDDED PLATES INSTALLED IN CONCRETE (DURING INSTALLATION & PLACING OF CONCRETE).	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
G. PRESTRESSED (POST-TENSIONED) CONCRETE	
1) CONCRETE STRENGTH PRIOR TO TENDON STRESSING AND SHORING/FORM REMOVAL.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
H. REINFORCING STEEL	
A. SIZE, GRADE, TYPE, AND PLACING OF REINFORCING.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
B. PLACING & STRESSING OF TENDONS.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
C. SAMPLING & TESTING OF STEEL (MILL REPORTS & IDENTIFICATION OF STEEL).	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
I. WELDING	
A. SPECIAL INSPECTOR VERIFICATION OF MATERIALS, QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS PRIOR TO START OF WORK.	NO <input type="checkbox"/> NO <input type="checkbox"/>
B. VISUAL INSPECTION OF ALL STRUCTURAL WELDING (EXCEPT AS LISTED IN ITEM C.)	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
C. VISUAL INSPECTION OF SINGLE PASS FILLET WELDS NOT EXCEEDING 3/8" INCH, FLOOR & ROOF DECK WELDING, WELDED STUDS, SHEET METAL, COLD FORMED STEEL FRAMING, STAIRS AND RAILING SYSTEMS, AS ALLOWED PER IBC SECTION 1704.3 EXCEPTIONS.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
D. VISUAL INSPECTION OF WELDING OF REINFORCING STEEL.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
E. VERIFY WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
F. NON-DESTRUCTIVE TESTING OF FULL PENETRATION WELDS IN MATERIALS EXCEEDING 1/4" THICK.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
J. BOLTING	
A. VISUAL INSPECTION OF HIGH STRENGTH BOLTING.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
B. VISUAL INSPECTION OF EXPANSION BOLTS IN CONCRETE OR MASONRY	CONTINUOUS <input type="checkbox"/> YES <input type="checkbox"/>
C. VISUAL INSPECTION OF INSTALLATION OF EPOXY ANCHORED BOLTS, RODS, OR REBAR	CONTINUOUS <input type="checkbox"/> YES <input type="checkbox"/>
D. HIGH STRENGTH BOLTS, NUTS & WASHERS (CERTIFICATE OF COMPLIANCE)	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
K. INSULATING CONCRETE FILL	
A. VISUAL INSPECTION OF THICKNESS & COMPRESSIVE STRENGTH	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
L. STRUCTURAL STEEL	
A. MILL REPORTS & IDENTIFICATION OF STEEL (AFFIDAVIT OF COMPLIANCE).	NO <input type="checkbox"/> NO <input type="checkbox"/>
B. SAMPLING & TESTING.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
C. STEEL FRAME JOINT DETAILS AND MEMBER LOCATIONS.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
M. COLD-FORMED STEEL	
A. WELDING ELEMENTS OF SEISMIC-FORCE-RESISTING SYSTEM.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
B. SCREWS, BOLTS, ANCHORS AND OTHER TYPES OF FASTENERS FOR COMPONENTS OF SEISMIC-FORCE-RESISTING SYSTEM.	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
N. WOOD	
A. FIELD GLUING OF SEISMIC-FORCE-RESISTING ELEMENTS.	CONTINUOUS <input type="checkbox"/> NO <input type="checkbox"/>
B. NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF SEISMIC-FORCE-RESISTING ELEMENTS WHERE SHEATHING NAILING IS 4 INCHES ON CENTER OR LESS. (INCLUDES: ROOF, FLOOR, AND WALL SHEATHING, GRADES, THICKNESSES, AND NAILING. BOLTING/SCREWING TO HOLD-DOWNS, POSTS, MEMBERS, BRACES, AND "STRUTS".)	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
C. HIGH-LOAD DIAPHRAGMS: VISUAL INSPECTION OF SHEATHING GRADE, THICKNESS AND PLACEMENT, FRAMING MEMBER SIZE AT PANEL EDGES, NAIL DIAMETER AND LENGTH, NAIL SPACINGS AND EDGE MARGINS, AND ROWS OF NAILS	PERIODIC <input type="checkbox"/> NO <input type="checkbox"/>
O. APPROVED FABRICATORS (MUST SUBMIT CERTIFICATION OF COMPLIANCE)	
A. FOR ALL OFFSITE FABRICATION SUCH AS STRUCTURAL STEEL, GLU-LAMS AND OTHER PREFABRICATED WOOD ELEMENTS, PRECAST CONCRETE, SHOP WELDING, ETC.	NO <input type="checkbox"/> NO <input type="checkbox"/>
P. JOB SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION. COPIES OF TEST RESULTS SHALL BE FURNISHED TO THE STRUCTURAL ENGINEER IN ADDITION TO OTHER NORMAL DISTRIBUTIONS.	
NOTE: IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SEE THAT THESE TESTS AND INSPECTIONS ARE PERFORMED.	

- GENERAL NOTES**
- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ARCHITECT OR ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY.
 - NOTES & DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
 - ALL MATERIAL & WORKMANSHIP SHALL CONFORM TO THE 2009 INTERNATIONAL BUILDING CODE AND THE 2010 CALIFORNIA BUILDING CODE.
 - THE DESIGN, ADEQUACY & SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, FORMS ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION TO INSURE THE STABILITY OF THE STRUCTURE PRIOR TO THE APPLICATION OF ALL WALLS, ROOF & FLOOR SHEATHING AND FINISH MATERIALS. HE SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE APPLICATION OF THE AFOREMENTIONED MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH OSHA REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, THE ADDITION OF ANCHOR BOLTS AND/OR TEMPORARY BRACING TO INSURE COLUMN STABILITY DURING CONSTRUCTION. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
 - THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR SITE SAFETY. ANY FABRICATOR AND ERECTOR SHALL REVIEW THE CONTRACT DOCUMENTS AND IF THE STRUCTURE, AS SHOWN ON THOSE DOCUMENTS, IS IN CONFLICT WITH THE REQUIREMENTS OF ANY SAFETY REGULATION, THE FABRICATOR SHALL NOTIFY THE STRUCTURAL ENGINEER (STB) PRIOR TO COMMENCING SHOP DRAWING PRODUCTION. IF THE FABRICATOR AND/OR ERECTOR FAIL TO NOTIFY STB, AS STATED ABOVE, THEY SHALL BECOME RESPONSIBLE FOR ALL COSTS FOR CORRECTING SUCH CONFLICTS WITH THE REQUIREMENTS OF ANY AND ALL SAFETY REGULATIONS.
 - VIBRATIONAL EFFECTS OF MECHANICAL EQUIPMENT HAVE NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.
 - ALL EXPANSION JOINTS IN THE BUILDING SHALL CONTINUE THEIR FULL WIDTH THROUGH ALL STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED OTHERWISE. FOR EXPANSION JOINT LOCATIONS SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS.
 - THE STRUCTURAL ENGINEER REQUIRES 5 TO 10 WORKING DAYS FROM WHEN THE SHOP DRAWINGS ARE RECEIVED UNTIL THE TIME THEY ARE SENT OUT OF THE OFFICE. THE TIME FOR PROCESSING MAY VARY FURTHER, DEPENDING UPON THE VOLUME OF DRAWINGS RECEIVED AT ONE TIME. CONTRACTOR SHALL FURNISH ONE PRINTED COPY FOR THE STRUCTURAL ENGINEER'S RECORDS IN ADDITION TO OTHER COPIES.
 - FOR ROOF ELEVATIONS, AND SIZE AND LOCATION OF MECHANICAL UNITS AND ETC., REFER TO THE ARCHITECTURAL AND MECHANICAL DRAWINGS, UNLESS NOTED OTHERWISE.
 - DESIGN CRITERIA:
 - DEAD AND LIVE LOADS
SEE FRAMING PLANS
 - SNOW LOADS
GROUND SNOW LOAD, Pg=0
 - OCCUPANCY CATEGORY: II
 - WIND LOADS:
BASIC WIND SPEED, V₅₀ = 85 MPH
WIND IMPORTANCE FACTOR, I = 1.0
WIND EXPOSURE = C
INTERNAL PRESSURE COEFFICIENT = ±0.18
COMPONENTS AND CLADDING WIND PRESSURE = 21.5 PSF
 - SEISMIC DESIGN CRITERIA:
SEISMIC IMPORTANCE FACTOR, I = 1.0
SEISMIC DESIGN CATEGORY: D
SITE CLASS: D
- S_s = 1.513 F_o = 1.0 S_{ds} = 1.009
S_i = 0.531 F_v = 1.5 S_{d1} = 0.531
- ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE
- ABBREVIATIONS**
(SEE ARCH'L AND OTHER STANDARDS FOR ADD'L)
- | | | | |
|----------|-----------------------------|--------|-----------------------------------|
| ALT. | = ALTERNATE | M.B. | = MACHINE BOLT |
| B | = BOTTOM | N.T.S | = NOT TO SCALE |
| N.S | = NEAR SIDE | | |
| B.P. | = BASE PLATE | OPP. | = OPPOSITE ON CENTER |
| BM. | = BEAM | | |
| C. | = CAMBER | o/c | = ON CENTER |
| C.J. | = CONSTRUCTION JOINT | OWJ | = OPEN WEB JOIST |
| CL. | = CENTER LINE | | |
| CONC. | = CONCRETE | R | = PLATE |
| CONT. | = CONTINUOUS | FIL | = PLASTER |
| CTSK. | = COUNTER SUNK | P.J. | = PANEL JOINT |
| D. | = DEPTH | P.W.J. | = WOOD 'I' JOIST |
| E.F. | = EACH FACE | PTDF. | = PRESSURE TREATED DOUGLAS FIR |
| E.W. | = EACH WAY | | |
| EXP. | = EXPANSION | P/T | = POST-TENSIONED (CONCRETE) |
| E.J. | = EXPANSION JOINT | | |
| F.O.C. | = FACE OF CONCRETE | S.D.S | = SELF DRILLING SCREW |
| F.O.M. | = FACE OF MASONRY | SIM. | = SIMILAR |
| F.O.S. | = FACE OF STUD | S.M.S. | = SHEET METAL SCREW (SAME AS SDS) |
| F.S. | = FAR SIDE | S.P.C. | = STANDARD PIPE COLUMN |
| GLB | = GLUE-LAMINATED BEAM | STL. | = STEEL |
| GRD. BM. | = GRADE BEAM | | |
| HDR. | = HEADER | T.O.F. | = TOP OF FOOTING |
| HGR. | = HANGER | T.O.S. | = TOP OF STEEL |
| H.R. | = HARDROCK (CONCRETE) | T.O.W. | = TOP OF WALL |
| HSS | = HOLLOW STRUCTURAL SECTION | TS. | = TUBE STEEL |
| K. | = KIPS | TYP. | = TYPICAL |
| K.P. | = KING POST | U.N.O | = UNLESS NOTED OTHERWISE |
| LLV. | = LONG LEG VERTICAL | V.I.F. | = VERIFY IN FIELD |
| LLH. | = LONG LEG HORIZONTAL | W.S. | = WOOD SCREW |
| L.T. WT. | = LIGHT WEIGHT (CONCRETE) | (E) | = EXISTING (CONSTRUCTION) |
| | | (N) | = NEW (CONSTRUCTION) |

STB STRUCTURAL ENGINEERS, INC.

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JOB NUMBER: 11-067 PROJECT ENGINEER: MDT

STB STRUCTURAL ENGINEERS
S. THOMPSON
3/31/12
FEB 8 2012

Revision Date

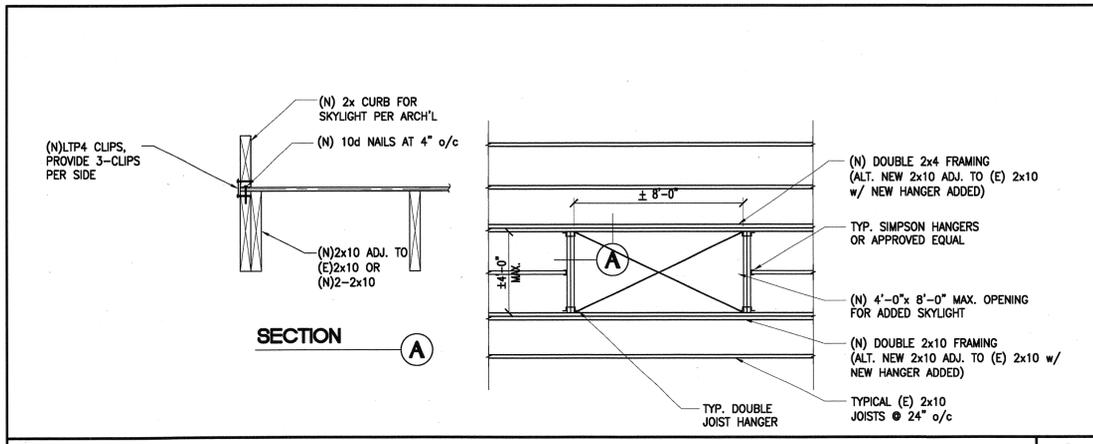
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1495 East Warner Santa Ana 92705
MARTIN BUILDERS INC. General Contractors (714) 241-1141

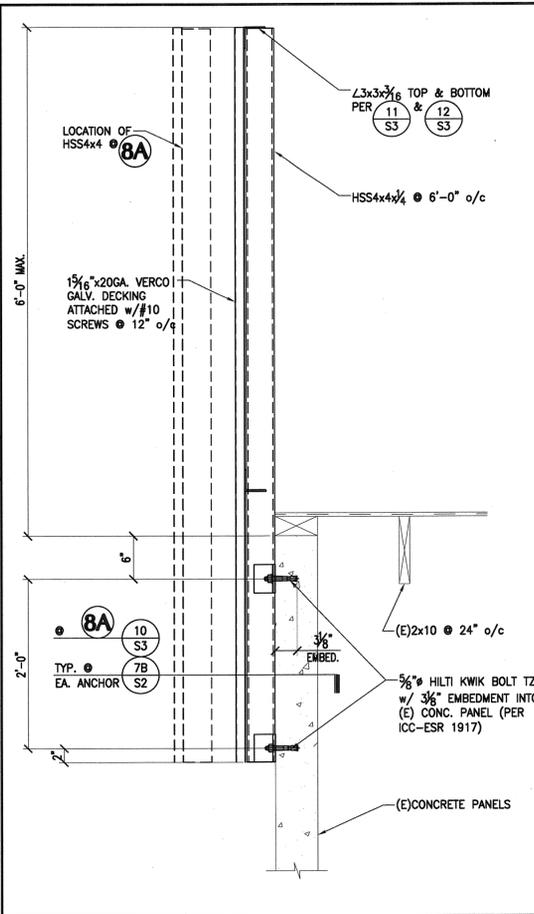
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520 East Dyer Road, Santa Ana, California

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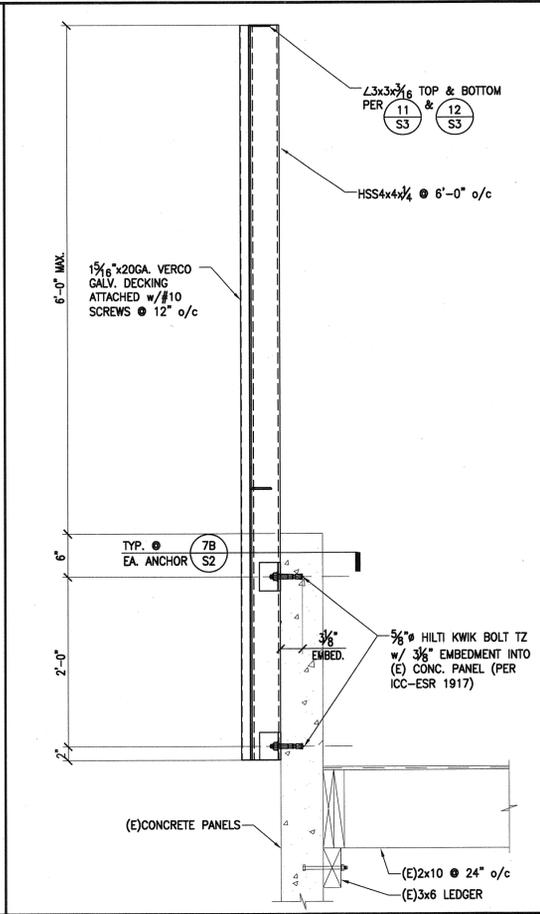
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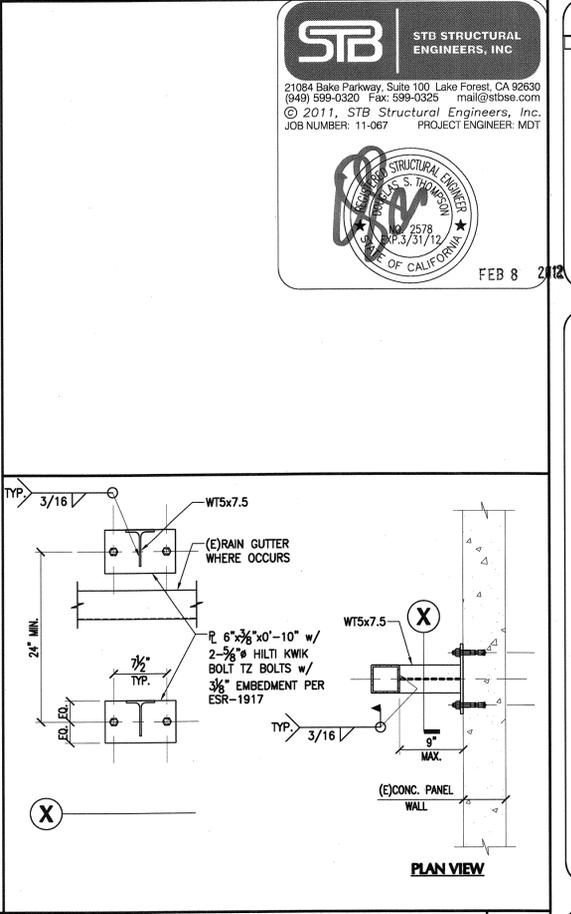
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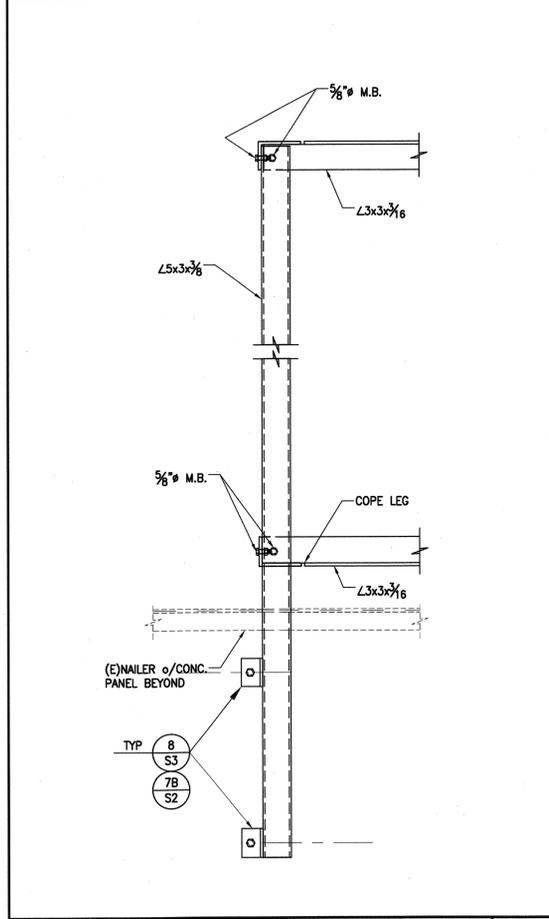
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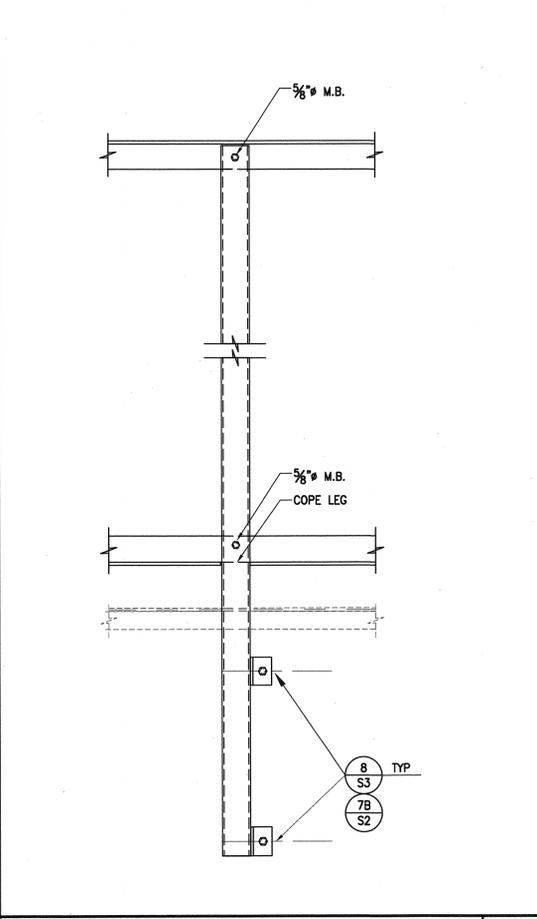
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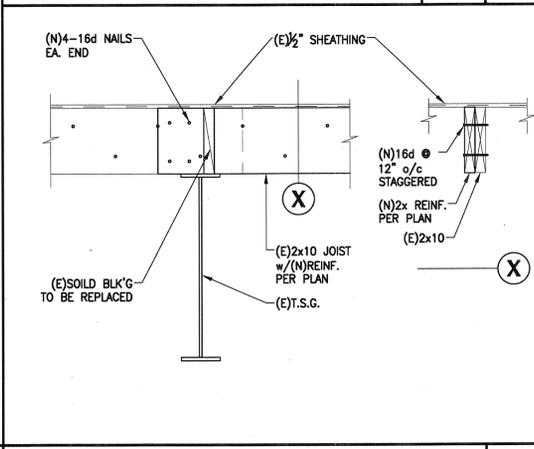
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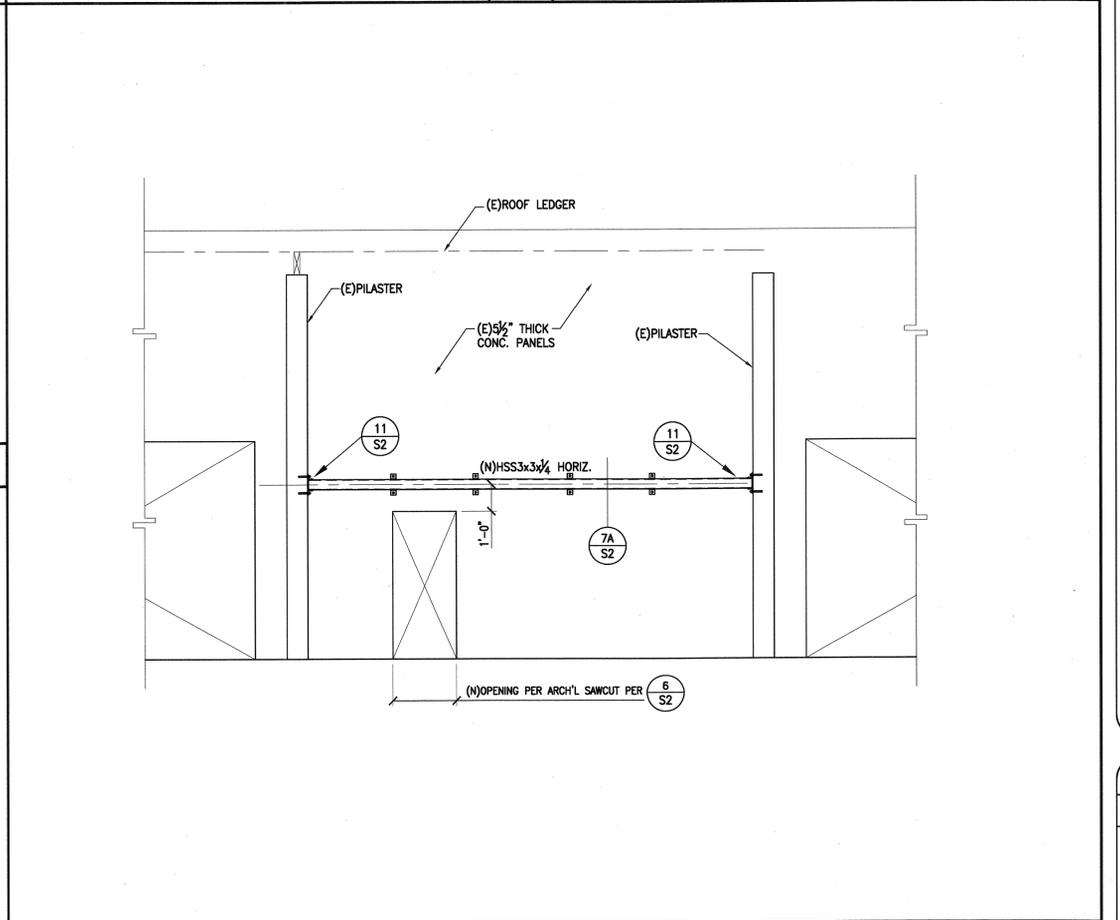
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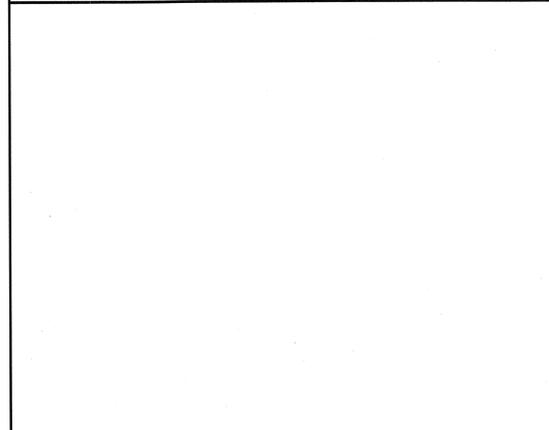
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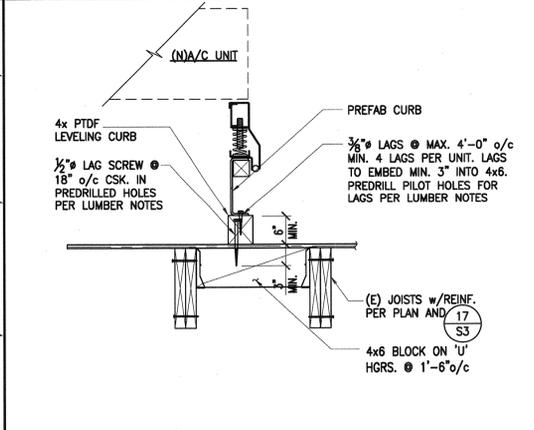
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16



17 TYPICAL FRAMING @ A/C DUCT OPENINGS



18

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REGISTERED PROFESSIONAL ENGINEER
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 No. 31712
 STATE OF CALIFORNIA
 FEB 8 2012

Revision Date		
No.	Date	Description

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DISABLED ACCESSIBLE ENTRANCES

1133B.1.1 Entrances

1133B.1.1.1

All entrances and exterior ground-floor exit doors to buildings and facilities shall be made accessible to persons with disabilities. Doorways shall have a minimum clear opening of 32 inches with the door open 90 degrees, measure between the face of the door and the opposite stop. Recessed door openings more than 6 inches in depth shall comply with Sections 1133B.2.5.3.

1133B.1.1.1.4 Gates.

All gates, including ticket gates, shall meet all applicable specifications for doors.

1133B.2.3.3 Revolving doors.

Revolving doors shall not be used as required entrance for persons with disabilities.

1133B.2.2 Width and height.

Every required exit doorway shall be of a size as to permit the installation of a door not less than 3 feet in width and not less than 6 feet 6 inches in height. When installed in exit doorways, exit doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the exitway is not less than 32 inches. In computing the exit width required by Section 1005, the net dimension of the exitway shall be used.

1117B.5.6 Entrance signs.

All building and facility entrances that are accessible to and usable by persons with disabilities shall be identified with at least one standard sign and with additional directional signs, as required, to be visible to persons along approaching pedestrian ways.

1117B.5.7 Mounting location and height.

Mounting height shall be 60 inches above the finish floor to the center line of the sign. Mounting location shall be determined so that a person may approach within 3 inches of signage without encountering protruding objects or standing within the swing of the door.

1133B.2.6 Smooth surface.

The bottom 10 inches of all doors except automatic and sliding shall have a smooth, uninterrupted surface to allow the door to be opened by a wheelchair footrest without creating a trap or hazardous condition. Where narrow frame doors are used, a 10-inch high smooth panel shall be installed on the push side of the door, which will allow the door to be opened by a wheelchair footrest without creating a trap or

1133B.2.4.4

The space between two consecutive door openings in a vestibule, serving other than a required exit doorway shall provide a minimum of 48 inches of clear space from any door opening into such vestibule when the door is positioned at an angle of 90 degrees from its closed position. Doors in a series shall swing either in the same direction or away from the space between the doors.

1133B.2.5 Closer-effort to operate doors.

Maximum effort to operate doors shall not exceed 5 pounds for exterior doors and interior doors, such pull or push effort being applied at right angles to hinged doors and at the center plan of sliding or folding doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the door may be increased to the minimum allowable by the appropriate administrative authority, not to exceed 15 pounds.

1133B.2.4.1 Thresholds.

The floor or landing shall not be more than 1/2 inch lower than the threshold of the doorway. Change in level between 1/4 inch and 1/2 inch shall be beveled with a slope no greater than 1 unit vertical to 2 units horizontal (50% slope). Change in level greater than 1/2 inch shall be accomplished by means of a ramp.

1133B.2.5.2 Door Hardware

Hand-activated door opening hardware shall be centered between 30 inches and 44 inches above the floor. Latching and locking doors that are hand-activated and which are in a path of travel shall be operable with a single effort by lever-type hardware, panic bars, push-pull activating bars or other hardware designed to provide passage without requiring the ability to grasp the opening hardware.

1133B.2.4 Floor level at doors.

Regardless of the occupant load, there shall be floor or landing on each side of a door.

1008.1.4 Landings.

Landings shall be level except that exterior landings may have a slope not to exceed 1/4 unit vertical in 12 units horizontal (2% slope).

1133B.2.4.2 Maneuvering clearances at doors.

Minimum maneuvering clearances at doors shall be as shown in Figure 11B-26A and 11B-26B. The floor or ground area within the required clearances shall be level and clear. The level area shall have a length in the direction of door swing of at least 60 inches and the length opposite the direction of door swing of 48 inches as measured at right angles as measured at right angles to the plane of the door in its closed position.

1133B.2.4.3

The width of the level area on the side to which the door swings shall extend 24 inches past the strike edge of the door for exterior doors and 18 inches past the strike edge for interior doors.

DISABLED ACCESSIBLE EXTERIOR ROUTES TRAVEL

Site Development, Existing Buildings.

Site development shall be designated to provide to the primary entrance and access to normal paths of travel in existing buildings. (1134B.2.1)

The accessible route of travel shall be the most practical direct route between accessible building entrances, accessible site facilities and the accessible entrance to the site.

1. Path of travel from public transportation point of arrival.
2. Accessible routes of travel between buildings.
3. Accessible parking.
4. Ramps.
5. Primary entrances.
6. Accessible path of travel within buildings.
7. Accessible sanitary facilities.
8. Accessible drinking fountains/telephones (when provided).
9. Accessible features per specific occupancy requirements.
10. Accessible special features, i.e., ATMs, point of sale machines, etc.

1127B.3 Signs.

At every primary public entrance and at every major junction along or leading to an accessible route of travel, there shall be a sign displaying the international symbol of accessibility. Signs shall indicate the direction to accessible building entrances and facilities and shall comply with requirements found in Section 1117B.5.

WALKWAYS/WALKING SURFACES

Walks and sidewalks shall not have cross slopes exceeding 1/4 inch per foot (2% slope). Slopes along the path of travel shall not exceed 5% unless designated as a pedestrian ramp in accordance with CBC Section 1133B.5. For curb ramps refer to CBC Section 1127B.5.

Walks and sidewalks shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding 1/2 inch, and shall be a minimum of 48 inches in width. Surfaces shall be slip resistant. Refer to CBC Sections 1124B and 1133B.7 for additional requirements.

WALKWAYS/WALKING SURFACES

Abrupt changes in level, except between a walk or sidewalk and an adjacent street or driveway, exceeding 4 inches in a vertical dimension, such as at planters or fountains located in or adjacent to walks, sidewalks or other pedestrian ways, shall be identified by curbs projecting at least 6 inches in height above the walk or sidewalk surface to warn the blind of potential drop-off. CBC Section 1133B.8.1

Any obstruction that overhangs a pedestrian's way shall be a minimum of 80 inches above the walking surface as measured from the bottom of the obstruction. CBC Section 1133B.8.2.

Walks, sidewalks, and pedestrian ways shall be free of gratings whenever possible. Grid openings in gratings shall be limited to 1/2 inch in the direction of traffic flow. CBC Section 1133B.7.2

Detectable Warnings. A curb ramp shall have a detectable warning that extends the full width and depth of the curb ramp inside the grooved border when the ramp slope is less than 1 unit vertical to 15 units horizontal (6.7% slope).

Detectable Warning Product Approval. Only approved Division of the State Architect, Access Compliance (DSA/AC) approved detectable warning products and directional surfaces shall be installed in accordance with CBC Section 1133B.8.5

The detectable warning shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light. The material used to provide contrast shall be an integral part of the walking surface.

Detectable warnings at hazardous vehicular areas.

If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and the vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36" wide. CBC Section 1133B.8.5.

1115B.4.6 Accessible drinking fountains.

Where drinking fountains are provided, they shall comply with this section:

1. **Clearances.** Wall- and post-mounted cantilevered drinking fountains shall be a minimum of 18 inches (457 mm) and a maximum of 19 inches (483 mm) in depth and shall have a clear knee space between the bottom of the apron and the floor or ground not less than 27 inches (686 mm) in height, 30 inches (762 mm) in width, and 8 inches (203 mm) in depth, the depth measurements being taken from the front edge of the fountain back toward the wall or mounting post. The knee clearance space must be free of equipment or obstructions. Additionally, there shall be toe clearance of 9 inches (229 mm) in height above the floor and 17 inches (432 mm) in depth from the front edge of the fountain. The toe clearance space must be free of equipment or obstructions. A clear floor space at least 30 inches (762 mm) by 48 inches (1219 mm) complying with Section 1118B.4 shall be provided in front of the drinking fountain to allow forward approach. A side approach drinking fountain is not acceptable.
2. **Alcoves.** All drinking fountains shall be located completely within alcoves or otherwise positioned so as not to encroach into pedestrian ways. The alcove in which the drinking fountain is located shall not be less than 32 inches (813 mm) in width and 18 inches (457 mm) in depth. See Figure 11B-3 of this code. Additionally, alcoves shall comply with Section 1118B.4, Item 2. Protruding objects located in alcoves or otherwise positioned so as to limit encroachment into pedestrian ways are permitted to project 4 inches (102 mm) into walks, halls, corridors, passageways or aisles.
3. **The bubbler shall be activated by a manually operated system complying with Section 1117B.6, Item 4 that is front mounted or side mounted and located within 6 inches (152 mm) of the front edge of the fountain or an electronically controlled device (preferably). The bubbler outlet orifice shall be located within 6 inches (152 mm) of the front edge of the drinking fountain and within 36 inches (914 mm) of the floor. The water stream from the bubbler shall be substantially parallel to the front edge of the drinking fountain.**
4. **The spout shall provide a flow of water at least 4 inches (102 mm) high so as to allow the insertion of a cup or glass under the flow of water. On an accessible drinking fountain with a round or oval bowl, the spout must be positioned so the flow of water is within 3 inches (75 mm) of the front edge of the fountain.**

DISABLED ACCESSIBLE SINGLE-ACCOMMODATION SANITARY FACILITIES

1203 Ventilation.

Toilet rooms shall be provided with a fully operable exterior window with an area not less than 4% of the floor area being ventilated or be mechanically ventilated in accordance with the 2007 California Mechanical Code Chapter 4.

1115B.3.2 and 1115B.4 Single-accommodation toilet facilities.

There shall be sufficient space in the toilet room for a wheelchair measuring 30 inches wide by 48 inches long to enter the room and permit the door to close. There shall be in the room a clear floor space of at least 60 inches in diameter, or a T-shaped space complying with Figure 11B-12(a) and (b). No door shall encroach into this space for more than 12 inches except for the panel door to any water closet compartment if there is one. (See Figure 11B-1A). The water closet shall be located in a space which provides a minimum 28-inch wide clear space from a fixture or a minimum 32-inch wide clear space from the centerline of the water closet to the wall. A minimum 48 inches by 60 inches of clear space shall be provided in front of the water closet. All doors, fixtures and controls shall be on an accessible route. The minimum clear width of an accessible route shall be 36 inches except at doors (see Section 1133B.2). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Figure 11B-5E. (See also Figure 11B-1A).

1115B.4 Grab Bars.

1115B.4.1 Location. Grab bars located on each side, or one side and the back of the accessible toilet stall or compartment, shall be securely attached 33 inches above and parallel to the floor, except that where a tank-type toilet is used which obstructs placement at 33 inches, the grab bar may be as high as 36 inches. Grab bars shall be at least 42 inches along with the front end positioned 24 inches in front of the water closet stool. Grab bars at the back shall not be less than 36 inches long. See Figures 11B-1A, 11B-1B, and 11B-1C.

1115B.7 Diameter or width.

The diameter or width of the gripping surfaces of a grab bar shall be 1 1/4 inches to 1 1/2 inches or the shape shall provide an equivalent gripping surface. If grab bars are mounted adjacent to a wall, the space between the wall and the grab bars shall be 1 1/2 inches. See Figure 11B-1C

Grab bars shall not rotate within their fittings.

1115B.4.3 Lavatory Fixtures.

The requirements of this subsection shall apply to lavatory fixtures, vanities and built-in lavatories.

A clear floor space 30 inches by 48 inches complying with Section 1118B.4 shall be provided in front of a lavatory to allow a forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19 inches into knee and toe space underneath the lavatory.

1115B.8.1 Mirrors. Mirrors shall be mounted from the bottom edge of the reflecting surface no higher than 40 inches from the floor.

1115B.8.3 Towel, sanitary napkins, waste receptacles.

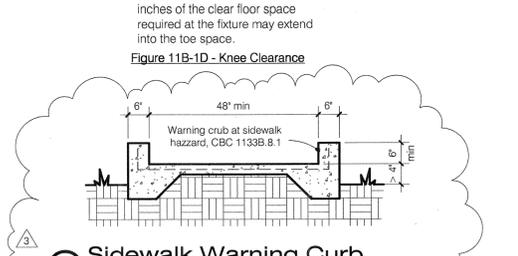
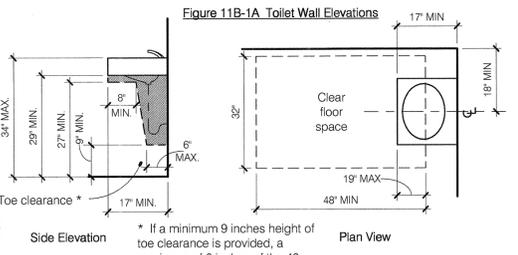
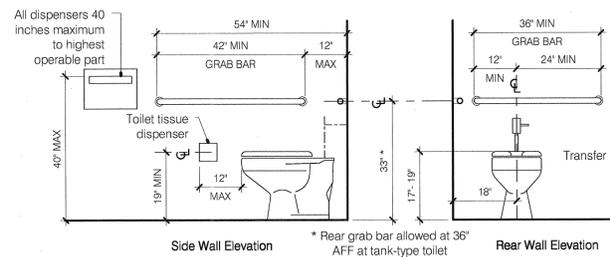
Where towel, sanitary napkins, waste receptacles, and other similar dispensing and disposal fixtures are provided, at least one of each type shall be located with all operable parts, including coin slots, within 40 inches from the finished floor.

1115B.8.4 Toilet tissue dispensers.

Toilet tissue dispensers shall be located on the wall within 12 inches of the front edge of the toilet seat. Dispensers that control delivery or that do not permit continuous paper flow shall not be used. See Figure 11B-1A

1115B.3.2 Item 5 Interior surfaces.

Toilet room floors shall have a smooth, hard nonabsorbent surface such as portland cement, concrete, ceramic tile or other approved material which extends upward onto the walls at least 5 inches (at least 6 inches per CBC 1210.1). Walls within water closet compartments and walls within 24 inches of the front and sides of urinals shall be similarly finished to a height of 48 inches and, except for structural elements, the materials used in such walls shall be a type which is not adversely affected by moisture.



DISABLED ACCESSIBLE PARKING

SECTION 1129B-ACCESSIBLE PARKING

1129B.1 General.

Each lot or parking structure where parking is provided for the public as clients, guest or employees, shall provide accessible parking as required by this section. Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance. In parking facilities that do not serve a particular building, accessible parking shall be located on the shortest accessible route of travel to an accessible pedestrian entrance of the parking facility. In buildings with multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances. Table 11B-6 established the number of accessible parking spaces required.

1129B.3 Parking Space Size.

Accessible parking spaces shall be located as near as practical to a primary entrance and shall be sized as follows:

1. **Dimensions.** Where single spaces are provided, they shall be 14 feet wide and outlined to provide a 9-foot parking area and a 5-foot loading and unloading access aisle on the passenger side of the vehicle. When more than one space is provided in lieu of provided a 14-foot wide space for each parking space, two spaces can be provided within a 23-foot-wide area lined to provide a 9-foot parking area on each side of a loading and unloading access aisle in the center. The minimum length of each parking space shall be 18 feet. The words NO PARKING shall be painted on the ground within each five-foot loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches high and located so that it is visible to traffic enforcement officials. See Figure 11B-18A.
2. **Van Space(s).** One in every eight accessible spaces, but not less than one, shall be served by an access aisle 96 inches wide minimum and shall be designated van accessible as required by Section 129B.5. All such spaces may be grouped on one level of a parking structure. The words NO PARKING shall be painted on the ground within each five-foot loading and unloading access aisle. This notice shall be painted in white letters no less than 12 inches high and located so that it is visible to traffic enforcement officials. See Figure 11B-18B.
3. **Arrangement of parking space.** In each parking area, a bumper or curb shall be provided and located to prevent encroachment of cars over the required width of walkways. Also, the space shall be so located that person with disabilities are not compelled to wheel or walk behind parked cars other than their own. Pedestrian ways which are accessible to persons with disabilities shall be provided from each such parking space to related facilities, including curb cuts or ramps as needed. Ramps shall not encroach into any parking space.
4. **Surface slopes of accessible parking spaces** shall be the minimum possible and shall not exceed 1 unit vertical to 50 units horizontal (2% slope) in any direction.

1129B.4 Identification of Parking Spaces for Off-Street Parking Facilities. Each parking space reserved for persons with disabilities shall be identified by a reflectorized sign permanently posted immediately adjacent to and visible from each stall or space consisting of a profile view of a wheelchair with occupant in white on dark blue background. The sign shall not be smaller than 70 square inches in area and when in a path of travel, shall be posted at a minimum height of 80 inches from the bottom of the sign to the parking space finished grade. Signs may also be centered on wall at the interior end of the parking space. An additional sign or additional language below the symbol of accessibility shall state "Minimum Fine \$250". Spaces complying with Section 1129B.3, Item 2 shall have an additional sign stating "Van-Accessible" mounted below the symbol of accessibility. Signs identifying accessible parking spaces shall be located so they cannot be obscured by a vehicle parked in the space.

An additional sign shall also be posted in a conspicuous place at each entrance to off-street parking facilities, or immediately adjacent to and visible from each stall or space. The sign shall not be less than 17 inches by 22 inches in size with lettering not less than 1 inch in height, which clearly and conspicuously states the following: "Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or license plates issued for persons with disabilities may be towed away at owner's expense. Towed vehicles may be reclaimed by telephoning The Santa Ana Police Department at (714) 245-8665. CVC 22658a."

In addition to the above requirements, the surface of each accessible parking space shall have a surface identification duplicating either of the following schemes:

1. By outlining or painting the stall or space in blue and outlining on the ground in the stall or space in white or suitable contrasting color a profile view depicting a wheelchair with occupant, or
2. By outlining a profile view of a wheelchair with occupant in white on blue background. The profile view shall be located so that it is visible to a traffic enforcement officer when a vehicle is properly parked in the space and shall be 36 inches high by 36 inches wide. See Figure 11B-18A through 11B-18C.

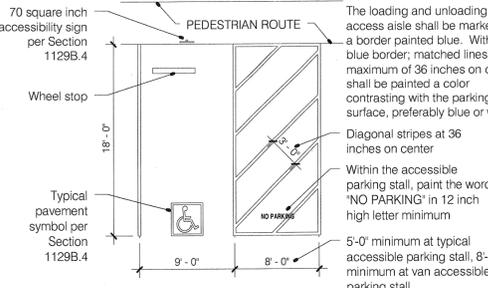
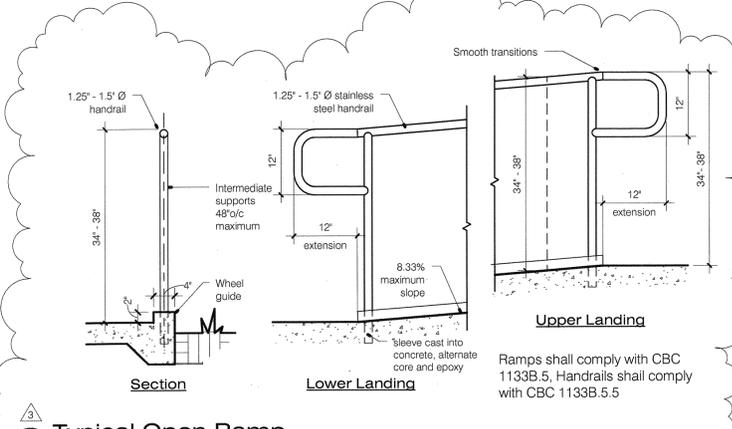


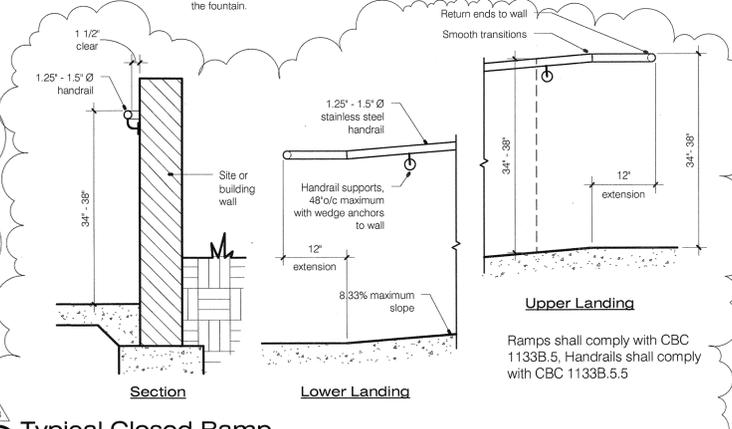
Figure 11B-18B Single Parking Stalls

1127B.5 Curb ramps.

1. **General.** Curb ramps shall be constructed at each corner of street intersections and where a pedestrian way crosses a curb. Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes. The preferred and recommended location for curb ramps is in the center of the crosswalk of each street corner. Where it is necessary to locate a curb ramp in the center of the curb return and the street surfaces are marked to identify pedestrian crosswalks, the lower end of the curb ramp shall terminate within such crosswalk areas. See Figure J1B-20C, Case 2 and Figure J1B-22.
2. **Width of curb ramps.** Curb ramps shall be a minimum of 4 feet (1219 mm) in width and shall lie, generally, in a single sloped plane, with a minimum of surface warping and cross slope.
3. **Slope of curb ramps.** The slope of curb ramps shall not exceed one unit vertical in 12 units horizontal (8.33-percent slope). The slope shall be measured as shown in Figure J1B-20E. Transitions from ramps to walks, gutters or streets shall be flush and free of abrupt change. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed one unit vertical in 20 units horizontal (5-percent slope) within 4 feet (1219 mm) of bottom of the curb ramp. The slope of the flared or flared sides of curb ramps shall not exceed one unit vertical in 10 units horizontal (10-percent slope).
4. **Level landing.** A level landing 4 feet (1219 mm) deep shall be provided at the upper end of each curb ramp over its full width of the walking surface, or the slope of the flared or flared sides of the curb ramp shall not exceed one unit vertical in 12 units horizontal (8.33-percent slope).
5. **Finish.** The surface of each curb ramp and its flared sides shall comply with Section 1124B, Ground and Floor Surfaces, and shall be of contrasting finish from that of the adjacent sidewalk.
6. **Border.** All curb ramps shall have a grooved border 12 inches (305 mm) wide at the level surface of the sidewalk along the top and each side approximately 3/4 inch (19 mm) on center. All curb ramps constructed between the face of the curb and the street shall have a grooved border at the level surface of the sidewalk. See Figures J1B-19A and J1B-19B.
7. **Detectable warnings.** Curb ramps shall have a detectable warning that extends the full width and depth of the curb ramp, excluding the flared sides, inside the grooved border. Detectable warnings shall be slip-resistant and consist of raised truncated domes with a diameter of nominal 0.9 inch (22.9 mm) at the base tapering to 0.45 inch (11.4 mm) at the top, a height of nominal 0.2 inch (5.08 mm) and a center-to-center spacing of nominal 2.35 inches (59.7 mm) in compliance with Figure 11B-23A. "Nominal" here shall be in accordance with Sections 12-1A and B-102, State Referenced Standards Code. The detectable warning shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light. The material used to provide contrast shall be an integral part of the walking surface. The domes may be constructed in a variety of methods, including cast in place or stamped, or may be part of a prefabricated surface treatment.
8. **Obstructions.** Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.



4 Typical Open Ramp 3/4" = 1'-0"



5 Typical Closed Ramp 3/4" = 1'-0"

Revision Date		
No.	Date	Description
3	04/06/12	Ramp & Sidewalk

1495 East Warner Santa Ana 92705 (714) 241-1414

PLANS PREPARED UNDER THE DIRECTION OF MARTIN BUILDERS, INC. H. Roads Martin, Jr., P.E. Lic # 25603

MARTIN BUILDERS, INC. General Contractors

Johnstone Supply 520 East Dyer Road, Santa Ana, California

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JN A/A/12