ITEM 9.B.

MOORPARK CITY COUNCIL
AGENDA REPORT

TO: Honorable City Council

FROM: Barry K. Hogan, Deputy City Manager
By: David Lasher, Senior Management Analyst

DATE: October 25, 2007 (CC Meeting of 11/7/2007)

SUBJECT: Consider an Ordinance of the City of Moorpark, California, Amending Specific Chapters of Title 15 of the Municipal Code by Amending Chapters 15.04, 15.08, 15.12, 15.14, 15.16, 15.18, and 15.20; Adopting by Reference and Amending the Current Editions of Certain Model Codes

BACKGROUND

The State of California Health and Safety Code requires all jurisdictions to enforce the most recent editions of various building standards. Although the State requires the enforcement of certain standards, it allows the City to amend these standards in order to address local concerns. The State, however, does limit the City's ability to amend the prescribed building standards to amendments that are reasonably necessary for reasons relating to local climate, geology and topography.

The proposed Ordinance includes such amendments to specific Municipal Code Sections dealing with seismic upgrades and other changes to the building standards to improve public safety with respect especially to earthquakes and fire hazards. The proposed amendments in the Ordinance were developed and recommended by local building officials and engineers in conjunction with the Structural Engineers Association of California (SEAC). SEAC, the City of Los Angeles and the cities of Ventura County as a unified consortium agreed to recommend adoption of these additional amendments (which exceed the 2007 California Building Standards Codes) given unique climatic, geological and/or topographical conditions that impact our local environment.

The State-mandated standards, along with any amendments, must be adopted by January 1, 2008. If the City fails to adopt the attached Ordinance with the recommended amendments to the specified chapters of Title 15, the State-mandated standards will then automatically go into effect, and any local amendments will be lost.

The related and updated 2007 California Building Standards Codes includes updates to the following codes: the 2007 California Building Code (CDC), which is based on the 2006 International Building Code (IBC); the 2007 California Electrical Code (CEC); the 2007 California Mechanical Code; the 2007 California Plumbing Code; the 2007 California Energy Code; the 2007 California Referenced Standards; the 2006 Edition of the International Property Maintenance Code; and the 2007 California Administrative Code.

DISCUSSION

As noted, a consortium of related local government professionals (including the City's own building official), other regional government building officials and engineers and SEAC have recommended a number of amendments above and beyond the new State Building Standards Code that takes effect on January 1, 2008. These local amendments to the City's Building Code have been recommended for specific climatic, geological, or topographical conditions pursuant to Section 17958.5 of the Health and Safety Code of the State of California.

The amendments fall into two categories: amendments to actual building standards and amendments to administrative provisions. Proposed amendments to the actual building standards include changes addressing:

- Design requirements for ceiling suspension systems.
- Requirements for sub-diaphragms and continuity ties.
- Reducing the use and impact of expansive soils and the shrink/swell rates of expansive soils.
- Reducing the impact of storm water drainage during periods of intense rainfall.
- Adding additional restrictions on the design of wood structural panel diaphragms and shear walls.
- Prohibiting the use of wood diaphragms in rotation based on numerous failures (as observed in the 1994 Northridge Earthquake).
- Reducing allowable shear values for shear walls sheathed with lath, plaster or gypsum board.
- Limiting the use of conventional wood frame construction to simple one-story residential buildings.
- Limiting the use of conventional framing braced wall panels to twenty-five feet maximum spacing.
- Requiring that interior braced walls be supported by continuous foundations.
- Limiting the use of stone and masonry anchored veneer when using conventional framing design.

- The establishment of boundaries within the City for structures near hillside brush areas with respect to reducing the potential fire damage and fire spread.
- The requirement for special construction elements for structures near hillside brush areas, again with regard to reducing the threat from wildland fires.

State law requires that the Council direct staff to advertise a public hearing to be held at least fifteen (15) days prior to consideration of second reading of the ordinance. Additionally, if the local jurisdiction has made any substantive changes to the Code, it is required to send those changes to the state. In this amendment, there are substantive changes which are recommended to the structural chapter of the Code.

STAFF RECOMMENDATION

1. Introduce Ordinance No. 2007-____ for first reading, and direct staff to schedule a public hearing and second reading for December 5, 2007.

Attachments: Draft Ordinance

ORDINANCE NO. 2007-_____

AN ORDINANCE OF THE CITY OF MOORPARK CALIFORNIA, AMENDING CHAPTERS 15.04, 15.08, 15.12, 15.14, 15.16, 15.18, AND 15.20 OF TITLE 15 OF THE MOORPARK MUNICIPAL CODE AND ADOPTING BY REFERENCE AND AMENDING THE CURRENT EDITIONS OF CERTAIN MODEL CODES AS FOLLOWS: CALIFORNIA BUILDING CODE, VOLUMES 1, & 2, 2007 EDITION WITH APPENDIX CHAPTER 1 ADMINISTRATION AND APPENDICES B, C, G, I AND J; INCLUDING THE GYPSUM ASSOCIATION FIRE RESISTIVE DESIGN MANUAL, EIGHTEENTH EDITION, GA-600-06; CALIFORNIA ELECTRIC CODE, 2007 EDITION, CALIFORNIA PLUMBING CODE, 2007 EDITION; CALIFORNIA MECHANICAL CODE, 2007 EDITION; CALIFORNIA ENERGY CODE, 2007 EDITION; CALIFORNIA REFERENCED STANDARDS, 2007 EDITION; INTERNATIONAL PROPERTY MAINTENANCE CODE 2006 EDITION; AND THE CALIFORNIA ADMINISTRATIVE CODE, 2007 EDITION

WHEREAS, Government Code Section §50022.1, et seq., provides that ordinances and codes of the Federal, State, or any agency of either of them, may be adopted by reference, provided that prior to such adoption by reference a noticed public hearing has been held; and

WHEREAS, a noticed public hearing has been held by the City Council, at which time all interested persons had the opportunity to appear and be heard on the matter of adopting by reference the current editions of certain model codes, as follows: California Building Code, 2007 Edition, Volumes 1, 2 with Appendix Chapter 1 Administration and Appendices C, I and J ; including the Gypsum Association Fire Resistive Design Manual, Eighteenth Edition, GA-600-06; California Electrical Code, 2007 Edition; California Plumbing Code, 2007 Edition; California Mechanical Code, 2007 Edition; California Energy Code, 2007 Edition; California Referenced Standards, 2007 Edition; International Property Maintenance Code, 2006 Edition; and the California Administrative Code, 2007 Edition; together with amendments thereto;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MOORPARK, CALIFORNIA, DOES ORDAIN AS FOLLOWS:

SECTION 1. That Title 15, Chapters 15.04, 15.08, 15.12, 15.14, 15.16, 15.18, and 15.20 of the Moorpark Municipal Code are amended in their entirety to read as follows;

"CHAPTER 15.04
ADMINISTRATIVE PROVISIONS

15.04.010 ADMINISTRATIVE CODE ADOPTED. Except as hereinafter provided, Appendix Chapter 1 Administration, of the California Building Code 2007 Edition, published by the International Conference of Building Officials, is hereby adopted by reference as the Administrative Code of the City of Moorpark. A copy of the California Building Code, Appendix Chapter 1, 2007 Edition shall be maintained in the Office of the City Clerk of the City of Moorpark and shall be made available for public inspection while this Code is in force.

15.04.020 PERMIT FEES. Section 108.2 of the California Building Code, Appendix Chapter 1, Administration, is hereby amended to read:

Section 108.2 PERMIT FEES. The fee for each permit shall be as set forth in the latest resolution of the City Council of the City of Moorpark relating to permit fees.

15.04.030 PLAN REVIEW FEES. Section 108.7 of the California Building Code, Appendix Chapter 1, Administration, is hereby added:

Section 108.7 PLAN REVIEW FEES. When a plan or other data is required to be submitted by Section 106.1, a plan review fee shall be paid at the time of submitting plans and specifications for review. The plan review fee shall be as set forth in the latest resolution of the City Council of the City of Moorpark relating to plan review fees.

The plan review fees specified in this subsection are separate fees from the permit fees specified in Section 108.2 and are in addition to the permit fees. Where plans are incomplete or changed so as to require additional plan review, an additional plan review fee shall be charged at the same rate as charged upon submittal of plans and specifications.

15.04.040 LIABILITY. Section 104.8 of the California Building Code, Appendix Chapter 1, Administration, is hereby amended to read:

Section 104.8 LIABILITY. The Building Official, or his/her authorized representative charged with the enforcement of this Code and the technical codes, acting in good faith and without malice in the discharge of his duties, shall not thereby render himself/herself personally liable for any damage that may accrue to persons or property

as a result of any act or by reason of any act or omission in the discharge of his/her duties. Any suit brought against the Building Official, agent or employee because of such act or omission performed by him/her in the enforcement of any provision of such Codes or other pertinent laws or ordinances implemented through the enforcement of this Code or enforced by the code enforcement agency shall be defended by this jurisdiction until final termination of such proceedings, and any judgment resulting therefrom shall be assumed by this jurisdiction.

The provisions of this section shall apply if the Building Official or his/her authorized representatives are employees of this jurisdiction and shall also apply if the Building Official or his/her authorized representatives are acting under contract as agents of the jurisdiction.

Such Codes shall not be construed to relieve from or lessen the responsibility of any person owning, operating or controlling any building, structure or building service equipment therein for any damages to persons or property caused by defects, nor shall the code enforcement agency or its parent jurisdiction be held as assuming any such liability by reason of the inspection authorized by this code or any permits or certificates issued under this code.

15.04.050 DISASTER RESPONSE: The City Manager may enter into mutual aid agreements for emergency Building and Safety Services for the purpose of assuring adequate and effective response in the event of earthquake or other unforeseen emergencies.

15.04.060 VIOLATIONS AND PENALTIES. (a) It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy, or maintain any land, building or structure, building service equipment, machine or equipment; or cause or permit the same to be done in violation of this Code or the Technical Codes. Each such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this Code or the Technical Codes is committed, continued, or permitted.

(b) It shall be unlawful for any person to remove, deface, alter, or obstruct from view a posted notice of the Building Official or duly appointed representative when such notice constitutes a stop work order or a warning of substandard or hazardous conditions or prohibits or restricts the occupancy or use of a building, structure, or building service equipment regulated by this Code or the Technical Codes.

(c) Every violation of this Code or the Technical Codes shall be deemed a misdemeanor.

(d) Any person convicted of a misdemeanor shall be punishable by a fine of not more than one thousand dollars ($1,000) or by imprisonment for not more than six (6) months or by both such fine and imprisonment.

CHAPTER 15.08
BUILDING CODE

15.08.010 BUILDING CODE ADOPTED. Except as hereinafter provided, the California Building Code, 2007 Edition, Volumes 1, & 2, including: (1) generic fire-resistive assemblies listed in the Gypsum Association Fire Resistive Design Manual, Eighteenth Edition, GA-600-06 as referenced in Tables 720.1(1), 720.1(2) and 720.1(3).

15.08.020 SUSPENDED CEILINGS, Section 1613.7 is hereby added to Chapter 16 of the 2007 California Building Code to read as follows:

1613.7 Suspended Ceilings. Minimum design and installation standards for suspended ceilings shall be determined in accordance with the requirements of Chapter 25 of this Code and this subsection.

1613.7.1 Scope. This part contains special requirements for suspended ceilings and lighting systems. Provisions of Section 13.5.6 of ASCE 7 shall apply except as modified herein.

1613.7.2 General. The suspended ceilings and lighting systems shall be limited to 6 feet (1828 mm) below the structural deck unless the lateral bracing is designed by a licensed engineer or architect.

1613.7.3 Design and Installation Requirements.

1613.7.3.1 Bracing at Discontinuity. Positive bracing to the structure shall be provided at changes in the ceiling plane elevation or at discontinuities in the ceiling grid system.

1613.7.3.2 Support for Appendages. Cable trays, electrical conduits and piping shall be independently supported and independently braced from the structure.

1613.7.3.3 Sprinkler Heads. All sprinkler heads (drops) except fire-resistance-rated floor/ceiling or roof/ceiling assemblies, shall be designed to allow for free movement of the sprinkler pipes with oversize rings, sleeves or adaptors through the ceiling tile, in accordance with Section 13.5.6.2.2 (e) of ASCE 7 .

Sprinkler heads penetrating fire-resistance-rated floor/ceiling or roof/ceiling assemblies shall comply with Section 712 of this Code.

1613.7.3.4 Perimeter Members. A minimum wall angle size of at least a two-inch (51 mm) horizontal leg shall be used at perimeter walls and interior full height partitions.

The first ceiling tile shall maintain 3/4-inch (19 mm) clear from the finish wall surface. An equivalent alternative detail that will provide sufficient movement due to anticipated lateral building displacement may be used in lieu of the long leg angle subject to the approval of the Superintendent of Building.

1613.7.4 Special Requirements for Means of Egress. Suspended ceiling assemblies located along means of egress serving an occupant load of 30 or more shall comply with the following provisions.

1613.7.4.1 General. Ceiling suspension systems shall be connected and braced with vertical hangers attached directly to the structural deck along the means of egress serving an occupant load of 30 or more and at lobbies accessory to Group A Occupancies. Spacing of vertical hangers shall not exceed 2 feet (610 mm) on center along the entire length of the suspended ceiling assembly located along the means of egress or at the lobby.

1613.7.4.2 Assembly Device. All lay-in panels shall be secured to the suspension ceiling assembly with two hold-down clips minimum for each tile within a 4 foot (1219 mm) radius of the exit lights and exit signs.

1613.7.4.3 Emergency Systems. Independent supports and braces shall be provided for light fixtures required for exit illumination. Power supply for exit illumination shall comply with the requirements of Section 1006.3 of this Code.

1613.7.4.4 Supports for Appendage. Separate support from the structural deck shall be provided for all appendages such as light fixtures, air diffusers, exit signs, and similar elements.

15.08.030 SUB-DIAPHRAGM AND CONTINUITY TIES, Section 1614, 1614.1 and 1614.1.6 are hereby added to Chapter 16 of the 2007 California Building Code to read as follows:

SECTION 1614
MODIFICATION TO ASCE 7.

1614.1 General. The text of ASCE 7 shall be modified as indicated in this Section.

1614.1.6 ASCE 7, 12.11.2.2.3. Modify ASCE 7 Section 12.11.2.3 to read as follows:

12.11.2.2.3 Wood Diaphragms. In wood diaphragms, the continuous ties shall be in addition to the diaphragm sheathing. Anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. The diaphragm sheathing shall not be considered effective as providing ties or struts required by this section.

For wood diaphragms supporting concrete or masonry walls, wood diaphragms shall comply with the following:

1. The spacing of continuous ties shall not exceed 40 feet. Added chords of diaphragms may be used to form sub-diaphragms to transmit the anchorage forces to the main continuous crossties.

2. The maximum diaphragm shear used to determine the depth of the sub-diaphragm shall not exceed 75 percent of the maximum diaphragm shear.

15.08.040 FOUNDATION DESIGN. Section 1805.8.5 is hereby added and TABLE 1805.4.2 is hereby amended to read:

Section 1805.8.5. When buildings are located on expansive soil having an expansion index greater than 50, gutters, downspouts, piping, and/or other non-erosive devices shall be provided to collect and conduct rain water to pervious areas such as yards, open channels, or vegetated areas. Routing rooftop runoff via yard drains to the roadway or the storm water conveyance system shall not be permitted.

Table 1805.4.2—Foundations for stud bearing walls—minimum requirements[1, 10,11,12]

Weighted expansion index	Foundation for slab and raised floor systems[2,5,7]							Concrete slabs		Pre-moisteneing of soils under footings, piers and slabs[5,6]	Restrictions on piers under raised floors
	No. of stories	Stem thickness[8]	Footing width[9]	Footing thickness	All perimeter footings[6]	Interior footings for slab and raised floors[6]	Reinforcement for continuous foundations [3,6]	3-1/2" minimum thickness 4" with E.I. over 51 Reinforcement [4]	Total thickness of sand		
		Depth below natural surface of ground and finish grade									
		Inches									
0-20 Very low non expansive	1	6	12	6	12	12	1-#4 Top and bottom	#4 @ 48" o/c.. each way or	2"	Moistening of ground prior to placing concrete is recommended	Piers allowed for single floor loads only
	2	6	15	7	18	18					
	3	10	18	8	24	24					
21-50 Low	1	6	12	6	15	12	1-#4 Top and bottom	#3 @ 36" o/c.. each way	4"	3% over optimum moisture required to a depth of 18" below lowest adjacent grade. Testing required.	Piers allowed for single floor loads only
	2	8	15	7	18	18					
	3	10	18	8	24	24					
51-90 Medium	1	6	12	8	21	12	1-#4 top and bottom	#3 @ 24" o.c. each way	4"	3% over optimum moisture required to a depth of 18" below lowest adjacent grade. Testing required.	Piers not allowed
	2	8	15	8	21	18					
	3	10	18	8	24	24	#3 bars @ 24" o.c. each way 12" into footing, 36" into slab [10]				
91-130 High	1	6	12	8	27	12	2- #4 Top & bottom	#3 @ 24" o.c. each way	4"	3% over optimum moisture required to a depth of 18" below lowest adjacent grade. Testing required.	Piers not allowed
	2	8	15	8	27	18					
	3	10	18	8	27	24	#3 bars @ 24" o.c. each way 12" into footing, 36" into slab [10]				
Above 130 very high	Special design by a licensed Architect or Engineer required										

FOOTNOTES TO TABLE CBC 1805.4.2

1. Premoistening is required where specified in Table CBC 1805.4.2 in order to achieve maximum and uniform expansion of the soil prior to construction and thus limit structural distress caused by uneven expansion and shrinkage. Other systems, which do not include pre-moistening, may be approved by the Building Official, when such alternatives are shown to provide equivalent safeguards against the adverse effects of expansive soil.

2. Underfloor access crawl holes shall be provided with curbs extending not less than 6 inches above adjacent grade to prevent surface water from entering the foundation area.

3. Reinforcement for continuous foundations shall be placed not less than 3 inches above the bottom of the footing and not less than 3 inches below the top of the stem.

4. Slab reinforcement shall be placed at mid-depth and continue to within two inches of the exterior face of the exterior face of the exterior footing walls.

5. Moisture content of soils shall be maintained until foundations and piers are poured and a vapor barrier is installed. Test shall be taken within 24 hours of each slab pour.

6. Crawl spaces under raised floors need not be pre-moistened except under interior footings. Interior footings which are not enclosed by a continuous perimeter foundation system or equivalent concrete or masonry moisture barrier complying with Section UBC 1806.3 in this ordinance shall be designed and constructed as specified for perimeter footings in table UBC 18-I-C.

7. A grade beam not less than 12 inches by 12 inches in cross-sectional area, reinforced as specified for continuous foundations in Table CBC 1805.4.2, shall be provided at garage door openings.

8. Foundation stem walls which exceed a height of three times the stem thickness above lowest adjacent grade shall be reinforced in accordance with Chapters 18 and 19 in the CBC, or as required by engineering design, whichever is more restrictive.

9. Footing widths may be reduced upon submittal of calculations by a registered civil or structural engineer or licensed architect, but shall be a minimum of 12 inches for one and two-story structures and 15 inches for three-story structures.

10. Bent reinforcing bar between exterior footing and slab shall be omitted when floor is designed as an independent, "floating" slab.

11. Fireplace footings shall be reinforced with a horizontal grid located 3 inches above the bottom of the footing and consisting of not less than No. 4 bars at 12 inches on

center each way. Vertical chimney reinforcing bars shall be hooked under the grid.

12. Underground utility conduits shall be installed prior to foundation inspection and shall extend beyond the foundation so that final connection will not undermine the finished foundation.

15.08.050, PLYWOOD DESIGN, Section 2306.3.1, 2306.4.1 and table 2306.4.1 of the 2007 California Building Code is hereby amended to read as follows:

2306.3.1 Wood structural panel diaphragms. Wood structural panel diaphragms are permitted to resist horizontal forces using the allowable shear capacities set forth in Table 2306.3.1 or 2306.3.2.

2306.4.1. Wood structural panel shear walls. The allowable shear capacities for wood structural panel shear walls shall be in accordance with Table 2306.4.1. These capacities are permitted to be increased 40 percent for wind design. Wood shear walls shall be constructed of wood structural panels manufactured with exterior glue and not less than 4 feet by 8 feet (1219 mm by 2438 mm), except at boundaries and at changes in framing. Wood structural panel thickness for shear walls shall not be less than 3/8-inch thick and studs shall not be spaced at more than 16 inches on center.

The maximum allowable shear value for three-ply plywood resisting seismic forces is 200 pounds per foot (2.92 kn/m). Nails shall be placed not less than ½-inch (12.7 mm) in from the panel edges and not less than 3/8-inch (9.5mm) from the edge of the connecting members for shear greater than 350 pounds per foot (5.11kN/m). Nails shall be placed not less than 3/8-inch (9.5 mm) from panel edges and not less than ¼-inch (6.4 mm) from the edge of the connecting members for shears of 350 pounds per foot (5.11kN/m) or less.

Any wood structural panel sheathing used for diaphragms and shear walls that are part of the seismic-force-resisting system shall be applied directly to framing members.

Exception: Wood structural panel sheathing in a horizontal diaphragm is permitted to be fastened over solid lumber planking or laminated decking, provided the panel joints and lumber planking or laminated decking joints do not coincide.

TABLE 2306.4.1
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE[a] FOR WIND OR SEISMIC LOADING[b, h, l, j, l, m, n]

PANEL GRADE	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	ALLOWABLE SHEAR VALUE FOR SEISMIC FORCES PANELS APPLIED DIRECTLY TO FRAMING					ALLOWABLE SHEAR VALUE FOR WIND FORCES PANELS APPLIED DIRECTLY TO FRAMING				
			NAIL (common or galvanized box) or staple size[k]	Fastener spacing at panel edges (inches)				NAIL (common or galvanized box) or staple size[k]	Fastener spacing at panel edges (inches)			
				6	4	3	2[e]		6	4	3	2[e]
Structural I Sheathing	5/16	1-1/4	6d (2"x0.113" common, 2"x0.099" galvanized box)	150	200	200	200	6d (2"x0.113" common, 2"x0.099" galvanized box)	200	300	390	510
		1	1-1/2 16 Gage	124	184	200	200	1-1/2 16 Gage	165	245	325	415
	3/8	1-3/8	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	200	200	200	200	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	230[d]	360[d]	460[d]	610[d]
		1	1-1/2 16 Gage	116	176	200	200	1-1/2 16 Gage	155	235	310	400
	7/16	1-3/8	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	255[d]	395[d]	505[d]	670[d]	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	255[d]	395[d]	505[d]	670[d]
		1	1-1/2 16 Gage	128	195	259	330	1-1/2 16 Gage	170	260	345	440
	15/32	1-3/8	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	280	430	550	730	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	280	430	550	730
		1	1-1/2 16 Gage	139	210	281	356	1-1/2 16 Gage	185	280	375	475
		1-1/2	10d (3"x0.148" common, 3"x0.128" galvanized box)	340	510	665[f]	870	10d (3"x0.148" common, 3"x0.128" galvanized box)	340	510	665[f]	870
Sheathing, plywood siding[g] except Group 5 Species	5/16 or 1/4[c]	1-1/4	6d (2"x0.113" common, 2"x0.099" galvanized box)	180	200	200	200	6d (2"x0.113" common, 2"x0.099" galvanized box)	180	270	350	450
		1	1-1/2 16 Gage	109	165	200	200	1-1/2 16 Gage	145	220	295	375
	3/8	1-1/4	6d (2"x0.113" common, 2"x0.099" galvanized box)	200	200	200	200	6d (2"x0.113" common, 2"x0.099" galvanized box)	200	300	390	510
		1-3/8	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	200	200	200	200	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	220[d]	320[d]	410[d]	530[d]
		1	1-1/2 16 Gage	105	158	200	200	1-1/2 16 Gage	140	210	280	360
	7/16	1-3/8	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	240[d]	350[d]	450[d]	585[d]	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	240[d]	350[d]	450[d]	585[d]
		1	1-1/2 16 Gage	116	173	233	296	1-1/2 16 Gage	155	230	310	395
	15/32	1-3/8	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	260	380	490	640	8d (2½"x0.131" common, 2½"x0.113" galvanized box)	260	380	490	640
		1-1/2	10d (3"x0.148" common, 3"x0.128" galvanized box)	310	460	600[f]	770	10d (3"x0.148" common, 3"x0.128" galvanized box)	310	460	600[f]	770
		1	1-1/2 16 Gage	128	191	251	323	1-1/2 16 Gage	170	255	335	430
	19/32	1-1/2	10d (3"x0.148" common, 3"x0.128" galvanized box)	340	510	665[f]	870	10d (3"x0.148" common, 3"x0.128" galvanized box)	340	510	665[f]	870
		1	1-3/4 16 Gage	139	210	281	356	1-3/4 16 Gage	185	280	375	475
			Nail Size (galvanized casing)					Nail Size (galvanized casing)				
	5/16[c]	1-1/4	6d (2"x0.099")	140	200	200	200	6d (2"x0.099")	140	210	275	360
	3/8	1-3/8	8d (2½"x0.113")	160	200	200	200	8d (2½"x0.113")	160	240	310	410

FOOTNOTES TO TABLE 2306.4.1

For SI: 1 inch = 25.4 mm, 1 foot = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For staples find shear value from table above for Structural I panels (regardless of actual grade) and multiply value by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species. (3) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = [1-(0.5-SG)], where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.
b. Panel edges backed with 2-inch nominal or thicker framing. Install panels either horizontally or vertically. Space fasteners maximum 6 inches on center along intermediate framing members for 3/8-inch and 7/16-inch panels installed on studs spaced 24 inches on center. For other conditions and panel thickness, space fasteners maximum 12 inches on center on intermediate supports.
c. 3/8-inch panel thickness or siding with a span rating of 16 inches on center is the minimum recommended where applied direct to framing as exterior siding.
d. Except for wood structural panel sheathing used for shear walls that are part of the seismic-force-resisting system, allowable shear values are permitted to be increased to values shown for 15/32-inch sheathing with same nailing provided (a) studs are spaced a maximum of 16 inches on center, or (b) panels are applied with long dimension across studs.
e. Framing at adjoining panel edges shall be 3 inches nominal or wider, and nails shall be staggered where nails are spaced 2 inches on center.
f. Framing at adjoining panel edges shall be 3 inches nominal or wider, and nails shall be staggered where both of the following conditions are met: (1) 10d (3 inches by 0.148 inches) nails having penetration into framing of more than 1-1/2 inches and (2) nails are spaced 3 inches on center.
g. Values apply to all-veneer plywood. Thickness at point of fastening on panel edges governs shear values.
h. Where panels applied on both faces of a wall and nail spacing is less than 6 inches o.c. on either side, panel joints shall be offset to fall on different framing members, or framing shall be 3-inch nominal or thicker at adjoining panel edges and nails on each side shall be staggered.
i. In Seismic Design Category D, E or F, where shear design values exceed 350 pounds per linear foot, all framing members receiving edge nailing from abutting panels shall not be less than a single 3-inch nominal member, or two 2-inch nominal members fastened together in accordance with Section 2306.1 to transfer the design shear value between framing members. Wood structural panel joint and sill plate nailing shall be staggered in all cases. See Section 2305.3.11 for sill plate size and anchorage requirements.
j. Galvanized nails shall be hot dipped or tumbled.
k. Staples shall have a minimum crown width of 7/16-inch and shall be installed with their crowns parallel to the long dimension of the framing members.

l. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.
m. [DSA-SS & OSHPD 1, 2 and 4] Refer to Section 2305.2.4.2, which requires any wood structural panel sheathing used for diaphragms and shear walls that are part of the seismic-force-resisting system to be applied directly to framing members.
n. The maximum allowable shear value for three-ply plywood resisting seismic forces is 200 pounds per foot (2.92 kn/m).

15.08.060, HOLD-DOWN CONNECTORS, Section 2305.3.7.1 is hereby added to Chapter 23 of the 2007 California Building Code to read as follows:

2305.3.7.1 Hold-down connectors. Hold-down connectors shall be designed to resist shear wall overturning moments using approved cyclic load values or 75 percent of the allowable earthquake load values that do not consider cyclic loading of the product. Connector bolts into wood framing require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. Hold-downs shall be re-tightened just prior to covering the wall framing.

15.08.070 RIGID DIAPHRAGMS, Section 2305.2.5 of the 2007 California Building Code is hereby amended to read as follows:

2305.2.5 Rigid Diaphragms. Design of structures with rigid diaphragms shall conform to the structure configuration requirements of Section 12.3.2 of ASCE 7 and the horizontal shear distribution requirements of Section 12.8.4 of ASCE 7.

Wood structural panel diaphragms shall not be considered as transmitting lateral forces by rotation.

Rigid wood diaphragms are permitted to cantilever past the outermost supporting shear wall (or other vertical resisting element) a length, l, of not more than 25 feet (7620 mm) or two-thirds of the diaphragm width, w, whichever is smaller. Figure 2305.2.5(2) illustrates the dimensions of l and w for a cantilevered diaphragm.

Exception: Where calculations demonstrate that the diaphragm deflections can be tolerated, the width is permitted to be increased and the l/w ratio is permitted to be increased to 1.5 where sheathed in compliance with Section 2305.2.4 or 1 where sheathed in compliance with Section 2306.3.4 or 2306.3.5.

15.08.080, SHEAR WALLS SHEATHED WITH OTHER MATERIALS, Section 2306.4.5 of the 2007 California Building Code is amended to read as follows:

2306.4.5 Shear walls sheathed with other materials. Shear wall capacities for walls sheathed with lath, plaster or gypsum board shall be in accordance with Table 2306.4.5. Shear walls sheathed with lath, plaster or gypsum board shall be constructed

in accordance with Chapter 25 and Section 2306.4.5.1. Walls resisting seismic loads shall be subject to the limitations in Section 12.2.1 of ASCE 7. The allowable shear values shown in Table 2306.4.5 for material in Category 1 is limited to 90 pound per foot (1.31 kN/m); materials in Category 2 thru 4 are limited to 30 pound per foot (438 N/m). Shear walls sheathed with lath, plaster or gypsum board shall not be used below the top level in a multi-level building.

Table 2306.4.5 is added to read as follows:

TABLE 2306.4.5
ALLOWABLE SHEAR FOR WIND OR SEISMIC FORCES FOR SHEAR WALLS OF LATH AND PLASTER OR GYPSUM BOARD WOOD FRAMED WALL ASSEMBLIES

TYPE OF MATERIAL	THICKNESS OF MATERIAL	WALL CONSTRUCTION	FASTENER SPACING[b] MAXIMUM (inches)	SHEAR VALUE[a,e] (plf)		MINIMUM FASTENER SIZE[c,d,j,k,l]
				Seismic[l]	Wind	
1. Expanded metal, or woven wire lath and portland cement plaster	7/8"	Unblocked	6	90	180	No. 11 gage, 1-1/2" long, 7/16" head 16 Ga. Galv. Staple, 7/8" legs
2. Gypsum lath, plain or perforated	3/8" lath and 1/2" plaster	Unblocked	5	30	100	No. 13 gage, 1-1/8" long, 19/64" head, plasterboard nail 16 Ga. Galv. Staple, 1-1/8" long 0.120" Nail, min. 3/8" head, 1-1/4" long
3. Gypsum sheathing	1/2" x 2' x 8'	Unblocked	4	30	75	No. 11 gage, 1-3/4" long, 7/16" head, diamond-point, galvanized 16 Ga. Galv. Staple, 1-3/4" long
	1/2" x 4'	Blocked[f] Unblocked	4 7	30 30	175 100	
	5/8" x 4'	Blocked	4" edge/ 7" field	30	200	6d galvanized 0.120" Nail, min. 3/8" head, 1-3/4" long
4. Gypsum board, gypsum veneer base or water-resistant gypsum backing board	1/2"	Unblocked[f]	7	30	75	5d cooler (1-5/8" lx 0.086") or wallboard 0.120" Nail, min. 3/8" head, 1-1/2" long 16 Gage Staple, 1-1/2" long
		Unblocked[f]	4	30	110	
		Unblocked	7	30	100	
		Unblocked	4	30	125	
		Blocked[g]	7	30	125	
		Blocked[g]	4	30	150	

Gypsum board, gypsum veneer base or water-resistant gypsum backing board (cont.)	1/2" (cont.)	Unblocked	8/12[h]	30	60	No. 6- 1-1/4" screws[i]
		Blocked[g]	4/16[h]	30	160	
		Blocked[g]	4/12[h]	30	155	
		Blocked[f, g]	8/12[h]	30	70	
		Blocked[g]	6/12[h]	30	90	
	5/8"	Unblocked[f]	7	30	115	6d cooler (1-7/8" x 0.092") or wallboard 0.120" Nail, min. 3/8" head, 1-3/4" long 16 Gage Staple, 1-1/2" legs, 1-5/8" long
			4	30	145	
		Blocked[g]	7	30	145	
			4	30	175	
		Blocked[g] Two ply	Base ply: 9 Face ply: 7	30	250	Base ply-6d cooler (1-7/8" x 0.092") or wallboard 1-3/4" x 0.120" Nail, min. 3/8" head 1-5/8" 16 Ga. Galv. Staple Face ply-8d ciiker (2-3/8" x 0.113") or wallboard 0.120" Nail, min. 3/8" head, 2-3/8" long 15 Ga. Galv. Staple, 2-1/4" long
		Unblocked	8/12[h]	30	70	No. 6- 1-1/4" screws[i]
		Blocked[g]	8/12[h]	30	90	

Notes to Table 2306.4.5

For SI: 1 inch = 25.4 mm, 1 foot = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. These shear walls shall not be used to resist loads imposed by masonry or concrete construction (see Section 2305.1.5). Values shown are for short-term loading due to wind or seismic loading. Walls resisting seismic loads shall be subject to the limitations in Section 12.2.1 of ASCE 7. Values shown shall be reduced 25 percent for normal loading.
b. Applies to fastening at studs, top and bottom plates and blocking.
c. Alternate fasteners are permitted to be used if their dimensions are not less than the specified dimensions. Drywall screws are permitted to substitute for the 5d (1-5/8 inches by 0.086 inches), and 6d (1-7/8 inches by 0.092 inches)(cooler) nails listed above, and No. 6 1-1/4-inch Type S or W screws for 6d (1-7/8 inches by 0.092 inches)(cooler) nails.
d. For properties of cooler nails, see ASTM C 514.
e. Except as noted, shear values are based on maximum framing spacing of 16 inches on center.
f. Maximum framing spacing of 24 inches on center.
g. All edges are blocked, and edge fastening is provided at all supports and all panel edges.
h. First number denotes fastener spacing at the edges; second number denotes fastener spacing at intermediate framing members.
i. Screws are Type W or S.

j. Staples shall have a minimum crown width of 7/16-inch, measure outside the legs, and shall be installed with their crowns parallel to the long dimension of the framing members.
k. Staples for the attachment of gypsum loath and woven-wire lath shall have a minimum crown width of ¾-inch, measured outside the legs.
l. This construction shall not be used below the top level of wood construction in a multi-level building.

15.08.090, CONVENTIAL CONSTRUCTION, Section 2308 of the 2007 California Building Code is hereby amended to read as follows:

2308.3.4 Braced wall line support. Braced wall lines shall be supported by continuous foundations.

2308.12.1 Number of stories. Structures of conventional light-frame construction shall not exceed one story in height in Seismic Design Category D or E.

2308.12.2 Concrete or masonry. Concrete or masonry walls or masonry veneer shall not extend above the basement.

Exception: Masonry veneer is permitted to be used in the first story above grade plane in Seismic Design Category D, provided the following criteria are met:

1. Type of brace in accordance with Section 2308.9.3 shall be Method 3 and the allowable shear capacity in accordance with Table 2306.4.1 shall be a minimum of 350 plf (5108 N/m).

2. The bracing of the first story shall be located at each end and at least every 25 feet (7620 mm) o.c. but not less than 45 percent of the braced wall line.

3. Hold-down connectors shall be provided at the ends of braced walls for the first floor to foundation with an allowable design of 2,100 pounds (9341 N).

4. Cripple walls shall not be permitted.

5. Anchored masonry and stone wall veneer shall not exceed 5 inches (127 mm) in thickness, shall conform to the requirements of Division 14 and shall not extend more than 5 feet (1524 mm) above the first story finished floor.

2308.12.4 Braced wall line sheathing. Braced wall lines shall be braced by one of the types of sheathing prescribed by Table 2308.12.4 as shown in Figure 2308.9.3. The sum of lengths of braced wall panels at each braced wall line shall conform to Table 2308.12.4. Braced wall panels shall be distributed along the length of the braced wall line and start at not more than 8 feet (2438 mm) from each end of the braced wall line. Panel sheathing joints shall occur over studs or blocking. Sheathing shall be fastened to studs, top and bottom plates and at panel edges occurring over blocking. Wall framing to which sheathing used for bracing is applied shall be nominal 2-inch wide [actual $1^1/_2$-inch (38 mm)] or larger members, spaced a maximum of 16 inches on

center. Nailing shall be minimum 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center, and 12 inches on center along intermediate framing members.

Braced wall panel construction types shall not be mixed within a braced wall line.

Braced wall panels required by Section 2308.12.4 may be eliminated when all of the following requirements are met:

1. One-story detached garage Group U occupancies not more than 25 feet in depth or length.

2. The roof and three enclosing walls are solid sheathed with ½-inch nominal thickness wood structural panels with 8d common nails placed 3/8 inches from panel edges and spaced not more than 6 inches on center along all panel edges and 12 inches on center along intermediate framing members. Wall openings for doors or windows are permitted provided a minimum 4-foot wide wood structural braced panel with minimum height to length ratio of 2 to 1 is provided at each end of the wall line and that the wall line be sheathed for 50 percent of its length.

2308.12.5 Attachment of sheathing. Fastening of braced wall panel sheathing shall not be less than that prescribed in Table 2308.12.4 or Table 2304.9.1. Wall sheathing shall not be attached to framing members by adhesives.

All braced wall panels shall extend to the roof sheathing and shall be attached to parallel roof rafters or blocking above with framing clips (18-gauge minimum) spaced at maximum 24 inches (6096 mm) on center with four 8d nails per leg (total eight 8d nails per clip). Braced wall panels shall be laterally braced at each top corner and at maximum 24-inch (6096 mm) intervals along the top plate of discontinuous vertical framing.

TABLE 2308.12.4
WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E
(Minimum Length of Wall Bracing per each 25 Linear Feet of Braced Wall Line [a])

CONDITION	SHEATHING TYPE[b]	$S_{DS} < 0.50$	$0.50 \leq S_{DS} < 0.75$	$0.75 \leq S_{DS} \leq 1.00$	$S_{DS} > 1.00$
One Story	G-P[c]	10 feet 8 inches	14 feet 8 inches	18 feet 8 inches	25 feet 0 inches
	S-W	5 feet 4 inches	8 feet 0 inches	9 feet 4 inches	12 feet 0 inches

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. Minimum length of panel bracing of one face of the wall for S-W sheathing shall be at least four feet long or both faces of the wall for G-P sheathing shall be at least 8 feet long; h/w ratio shall not exceed

2:1. For S-W panel bracing of the same material on two faces of the wall, the minimum length is permitted to be one-half the tabulated value but the h/w ratio shall not exceed 2:1 and design for uplift is required.

b. G-P = gypsum board, Portland cement plaster or gypsum sheathing boards; S-W = wood structural panels.

c. Nailing as specified below shall occur at all panel edges at studs, at top and bottom plates and, where occurring, at blocking:
For ½-inch gypsum board, 5d (0.113 inch diameter) cooler nails at 7 inches on center;
For 5/8-inch gypsum board, No 11 gage (0.120 inch diameter) cooler nails at 7 inches on center;
For gypsum sheathing board, 1-3/4 inches long by 7/16-inch head, diamond point galvanized nails at 4 inches on center;
For gypsum lath, No. 13 gage (0.092 inch) by 1-1/8 inches long, 19/64-inch head, plasterboard at 5 inches on center;
For Portland cement plaster, No. 11 gage (0.120 inch) by $1^1/_2$ inches long, $^7/_{16}$-inch head at 6 inches on center;

d. S-W sheathing shall be 15/32-inch thick nailed with 8d nails, at 6:6:12.

15.08.100 FIRE HAZARD ZONE REQUIREMENTS. Chapter 36 is hereby added to the California Building Code to read:

CHAPTER 36
FIRE HAZARD ZONE REQUIREMENTS

Section 3601. HIGH FIRE HAZARD AREA DEFINED. For the purpose of this code, certain locations within the incorporated areas of the City of Moorpark shall be classified as High Fire Hazard by the Ventura County Fire Protection District. The High Fire Hazard Area is defined as any area within 500 feet of uncultivated brush, grass, or forest-covered land wherein an authorized representative of said district determines that a potential fire hazard exists due to the presence of such flammable growth.

Section 3602. CONSTRUCTION REQUIREMENT IN HIGH FIRE HAZARD AREAS. The purpose of this Section is to provide a minimum standard for the fire protection of buildings and structures hereafter erected in proximity to areas of the City where concentrations of highly flammable brush, grass, or other combustible growth combined with periods of hot, dry winds create a high fire hazard and where lives and property may thereby be endangered.

Buildings or structures hereafter erected, constructed or moved within or into designated high fire hazard areas shall be one of the Types of Construction as defined in this Code and shall meet the requirements of this Section. Although their installation is encouraged, neither manual nor automatic fire extinguishing systems or similar water spraying devices may be substituted for the fire protection set forth herein.

3602.1 ROOFS. Roof coverings shall be class A, or B as specified in Section 1505 of the California Building Code, except that no wooden shakes or shingles, treated or untreated, shall be permitted.

3602.2 EXTERIOR WALLS. Fire-resistive protection of exterior walls and openings, as determined by location and property, shall be as required by Section 704 in the CBC. Exception: No exterior wall covering of a building shall provide less fire resistance than that afforded by; 7/8-inch exterior cement plaster; 1-inch nominal thickness solid wood siding; ½-inch textured plywood siding having a groove depth of 1/8-inch or less; 7/16-inch hardwood siding 5/8-inch particle board, exterior type 2-M; or 5/8-inch exterior plywood, Texture III, having a groove depth of ¼-inch or less. Fire-retardant treated or untreated wood shingle or shake siding shall not be permitted.

3602.3 UNDERFLOOR AREAS. Where under floor areas are not enclosed by fire-resistive construction conforming to the requirements of Section 3601.2 above, the underside of the floor system shall be fire-protected as set forth in Section 3602.4.

3602.4 PROJECTIONS AND OTHER BUILDING ELEMENTS EXPOSED TO FIRE. Architectural projections such as roof overhangs and offsets, balconies and decks, and other elements of buildings which have combustible structural elements in the horizontal plane, shall be protected with materials approved for l-hour fire-resistive construction on the lower, fire-exposed side and shall have l-hour fire-resistive supporting columns unless the details of construction conform to those for heavy timber as described in Section 602.4 in the CBC.

Exceptions:

1. Combustible structural members in horizontal projections may be unprotected timbers of size 4 inches by 6 inches or larger when used as rafters or as stair, balcony, or deck supports or for similar purposes.

2. Heavy timber roof decking at eaves and rakes may be unprotected provided a fascia of not less than 2-inch nominal thickness and not less in depth than the cut end of the rafter is installed at the roof's edge.

3. Patios, carports, arbors and open latticework sunshades may be constructed of any materials allowed by this Code.

4. Balconies and decks 30 inches or more above grade may have flooring of not less than 2-inch nominal thickness lumber or material of equivalent fire resistance. Such flooring may be spaced not more than ¼-inch apart and need not be fire protected on the underside.

5. Balconies and decks less than 30 inches above grade shall be solidly floored without gaps and shall be fire-protected on the underside as required by this Section. In lieu of

fire protection, such balconies and decks may be enclosed from floor surface to grade in the manner prescribed for exterior walls in Section 3602.2.

6. Combustible exterior columns directly supporting roofs, stairs, balconies, and decks may be size 4 inches by 4 inches or larger. Columns and beams supporting interior floor loads may be size 6 inches by 6 inches or larger.

3602.5 VENTILATION OPENINGS. Attic or foundation ventilation openings or louvers shall not be located at or immediately below, eaves, or rakes, offsets or balconies, or similar exterior overhangs which may be directly exposed to a fire in adjacent hazardous grass or brush areas.

Section 3603. WAIVER OF REQUIREMENTS. The Building Official may waive the requirements of CBC Sec. 3601.1 through 3602.5 above, in whole or in part, for specific construction projects within the High Fire Hazard Area when such waiver is approved by an authorized representative of the Ventura County Fire Protection District, based upon site conditions which justify a reduction in fire resistance.

15.08.110 FOUNDATION INVESTIGATION. Section 1802.4 is hereby amended to read:

Section 1802.4 INVESTIGATION. The classification of soil shall be based on observation and necessary tests of the materials disclosed by borings or excavations made in appropriate locations. Additional studies may be required to evaluate soil strength, the effect of moisture variation on soil bearing capacity, compressibility, liquefaction and expansiveness.

Whenever, in the opinion of the Building Official, the adequacy and stability of a building site cannot be determined by the test borings or excavations required by this Section, he may require a special geologic, hydrologic, seismic, or other investigation and report. Geologic investigations such as those for hillside stability or seismic hazards shall be conducted by California-certified Engineering Geologist.

15.08.120 GRADING ENFORCEMENT BY CITY ENGINEER. The definition of Building Official contained in Section 202 of the Building Code is hereby amended to read:

Section 202 BUILDING OFFICIAL. Is the officer or other designated authority charged with the administration and enforcement of this Code, except Appendix Chapter J, or his/her duly authorized representative. The Authority designated to enforce Appendix Chapter J shall be the City Engineer.

15.08.130 SWIMMING POOLS. CHAPTER 37 is hereby added to the Uniform Building Code to read:

CHAPTER 37
SWIMMING POOLS

Section 3701 DEFINITIONS. For the purpose of this Article certain terms are hereby defined as follows:

"Pool" shall mean any body of water created by artificial means which is designed or used for swimming or immersion purposes by men, women, or children and which has a water depth exceeding 18 inches. The term "pool" shall include swimming pools, spas, hot tubs and above and below ground vinyl-lined pools but does not apply to plumbing fixtures such as bathtubs; nor does it apply to man-made lakes, reservoirs, or farm ponds used primarily for public park purposes, water conservation, irrigation, or watering of livestock.

Section 3702 POOL DESIGN AND CONSTRUCTION.

3702.1 GENERAL. Pool design and construction shall be in accordance with accepted engineering practice, shall be in conformity with applicable provisions of the adopted building, electrical, plumbing, and mechanical codes, and shall be structurally suitable for the soil, topographic, and geologic conditions prevailing at the construction site.

3702.2 EXPANSIVE SOIL DESIGN. Pools constructed at grade shall be designed on the assumption that their construction is to be in an area of moderately expansive soil having an expansion index of 51-9O and an equivalent fluid pressure of not less than 45 pounds per cubic foot (45 p.c.f.). Exception: Where tests indicate that soils at a pool site are non-expansive or have low expansion characteristics from the ground surface to the full depth of the pool, structural design may be based on an equivalent fluid pressures not less than 30 p.c.f.

In highly expansive soils having an expansion index of 91-130, pools shall be designed for not less than 60 p.c.f. equivalent fluid pressure. In very highly expansive soils having an expansion index over 130, pool design shall be subject to special requirements based on a site investigation, soil testing, and engineering analysis by a registered civil engineer to determine appropriate design parameters for the site.

3702.3 HYDROSTATIC UPLIFT. In areas of anticipated high water table, an approved hydrostatic relief system or device shall be installed.

3702.4 THERMAL PROTECTION FOR PLASTIC PIPING. Between the inlet of pool water heating equipment and any plastic water piping connected thereto, a check

valve shall be installed to prevent thermal damage to such piping due to backflow. Exception: When rapid or high-rate filters are employed, a check valve may be omitted.

Between the outlet of pool heating equipment and any plastic water piping connected thereto, not less than 5 feet of approved metal pipe shall be installed for the purpose of dissipating heat.

3702.5 SAFEGUARDING SUCTION DRAINS. Bottom drains and suction intakes in pools and spas shall be covered with grated or other protective devices which cannot be removed except with tools. The slots or openings in these covers shall be of such area, shape, and arrangement as to prevent bathers from being drawn thereto with such force as to constitute a safety hazard.

3702.6 GRAB BARS. Wherever egress from a pool by bathers is restricted by the presence of a vertical wall or other barrier which extends more than 12 inches above the water at the pool's edge, permanent handrail, grab bars, or equivalent device(s) shall be installed within 12 inches of the water surface, capable of being securely grasped and adequate to support the weight of a user of the pool.

Section 3703 DECKS

3703.1 GENERAL. A deck shall be provided around below-grade swimming pools except when special engineering design is furnished which indicates that such deck is not necessary for the purpose of maintaining the structural integrity of the pool and/or for controlling surface water and moisture content in the soil adjacent to the pool. Decks shall not be required for spas and hot tubs.

3703.2 DECK DESIGN AND CONSTRUCTION. Required decks shall be constructed of concrete or other approved impervious material and shall be sloped to provide positive drainage away from the perimeter of the pool. Except as provided below, decks shall have a minimum width of four feet and shall be at least 3 1/2 inches in thickness. Reinforcement shall be #3 bars spaced not over 24 inches on center each way, or equivalent reinforcing,

Approved joints shall be provided in the deck at corners, at maximum 10 foot intervals, and wherever necessary in order to control cracking, to allow for differential movement and to minimize damage to the deck from such movement should it occur. Joints in decks and coping shall be made watertight with an approved permanent resilient sealant.

3703.3 CUTOFF WALLS. At the outer perimeter of pool decks a cutoff wall of approved material shall be installed below-grade to a depth of at least 15 inches so as to form a permanent and effective vertical moisture barrier.

Exceptions:

1. A cutoff wall may be omitted when a deck at least 6 feet wide is installed.

2. Decks less than four feet in width may be installed provided that the required cutoff wall is increased in depth beyond the minimum by an amount directly proportional to the reduction in deck width.

3703.4 PRE-SATURATION, HIGHLY EXPANSIVE SOILS. When the soil below a deck has an expansion index of 91 or greater, it shall be saturated with water to a depth of at least 18 inches prior to installation of the deck.

Section 3704. DRAINAGE AND DISPOSAL

3704.1 SURFACE WATER. Surface water from pool decks shall be collected and conducted through non-erosive devices to a street, storm drain, or other approved watercourse or disposal area.

3704.2 WASTEWATER. Pool waste shall be disposed of in accordance with the requirements of the Health Officer.

3704.3 DRYWELLS. Drywells shall not be employed for pool wastewater disposal except when specifically approved for the purpose and when it has been determined that such installation is not likely to have adverse effects on the structural stability of the pool or other structures on the site. The Building Official may require a percolation test, soils report, and/or geological report to make such a determination.

Section 3705. SPECIAL INSPECTION. Special inspection shall be provided for pneumatically placed concrete (gunite) in swimming pools.

Section 3706. FENCING AND GATES. Any person, firm, or corporation in possession of land either as owner in fee, purchaser under contract, lessee, tenant, licensee or any type of legal estate upon which is situated a pool as defined above shall at all times maintain on the lot or premises a fence or wall not less than five feet in height which completely surrounds such pool or body of water provided, however, that a dwelling or accessory building may be used as a part of such enclosure. Said fence shall be constructed of durable material and shall be designed to withstand a horizontal force of at least 20 pounds per lineal foot at the top of the fence or top of the railing. Openings, holes, or gaps therein shall be no larger than 4 inches wide except for openings closed by doors or gates. Fences shall not have a configuration which provides a ladder-like access to the pool area.

Each gate or door opening through a pool enclosure shall be equipped with a self-closing and self-latching device capable of keeping the gate or door securely closed at all times when not in use.

Exceptions:

1. Doors in Group R, Division 1, 2 and 3 occupancies which form part of a pool enclosure.

2. Gates used primarily for ingress and egress of equipment but not persons to the pool area, and which are kept padlocked when not in use.

Required latching devices shall be installed not less than 60 inches above ground level and on the water side of the gate.

The Building Official may make modifications and accept alternatives to the fencing requirements in individual cases upon a showing of good cause with respect to the height, nature or location of the fence, wall, gates, or latches, or the necessity therefor, provided that protection is not reduced thereby.

CHAPTER 15.12
ELECTRICAL CODE

15.14.010 ELECTRICAL CODE ADOPTED, except as hereinafter provided, the California Electrical Code, 2007 Edition, published by the National Fire Protection Association is hereby adopted by reference as the Electrical Code of the City of Moorpark. A copy of the California Electrical Code, 2007 Edition, shall be maintained in the office of the City Clerk of the City of Moorpark and shall be made available for public inspection while this Code is in force.

15.14.020 ADMINISTRATIVE PROVISIONS DELETED. The Administrative Provisions governing the Electrical Code, including violation and penalty provisions shall be as set forth in Chapter 15.04 of the Municipal Code of the City of Moorpark.

CHAPTER 15.14
PLUMBING CODE

15.14.010 PLUMBING CODE ADOPTED. Except as hereinafter provided, the California Plumbing Code, 2007 Edition, published by the International Association of Plumbing and Mechanical Officials, is hereby adopted by reference as the Plumbing Code of the City of Moorpark. A copy of the California Plumbing Code 2007 Edition shall be maintained in the office of the City Clerk of the City of Moorpark and shall be made available for public inspection while this Code is in force.

15.14.020 ADMINISTRATIVE PROVISIONS. The Administrative provisions governing the Plumbing Code, including violation and penalty provisions shall be as set forth in Chapter 15.04 of the Municipal Code of the City of Moorpark.

15.14.030 Section 202.0 DEFINITIONS is hereby amended to read:

Section 202.0. SEMI-PUBLIC- Semi-public shall be defined as a building, swimming pool or area serving more than one person but not available to the general public.

15.14.030 FLOOR DRAINS REQUIRED is hereby added to the California Plumbing Code to read:

Section 411.1 In restrooms adjacent to semi-public swimming pools, a minimum of one (1) floor drain shall be provided in each restroom for each sex. Floor drains shall be connected to the public sewer in accordance with Section 305.1 of this Code. The traps serving these floor drains shall be installed in accordance with Sections 1006.0 and 1007.0 of this Code.

CHAPTER 15.16
MECHANICAL CODE

15.16.010 MECHANICAL CODE ADOPTED, except as hereinafter provided, The California Mechanical Code, 2007 Edition, published by the International Association of Plumbing and Mechanical Officials, is hereby adopted by reference as the Mechanical Code of the City of Moorpark. A copy of the California Mechanical Code, 2007 Edition shall be maintained in the office of the City Clerk of the City of Moorpark and shall be made available for public inspection while this Code is in force.

15.16.020 ADMINISTRATIVE PROVISIONS. The Administrative Provisions governing the Mechanical Code, including violation and penalty provisions, shall be as set forth in Chapter 15.04 of the Municipal Code of the City of Moorpark.

CHAPTER 15.18
HOUSING CODE

15.18.010 HOUSING CODE. Except as hereinafter provided the International Property Maintenance Code, 2006 Edition, published by the International Conference of Building Officials, is hereby adopted by reference as the Housing Code of the City of Moorpark, A copy of the International Property Maintenance Code, 2006 Edition, shall be maintained in the office of the City Clerk of the City of Moorpark and shall be made available for public inspection while this Code is in force.

15.18.020 SUBSTANDARD BUILDINGS. Section 108 Unsafe Structures and Equipment of the International Property Maintenance Code is amended to read as set forth in Section §17920. 3 of the Health and Safety Code of the State of California. A Copy of Section §17920.3 of the Health and Safety Code of the State of California shall be maintained in the office of the City Clerk of the City of Moorpark and shall be made available for public inspection while this Code is in force.

CHAPTER 15.20
DANGEROUS BUILDINGS

15.20.010 DANGEROUS BUILDING CODE ADOPTED. Excepted as hereinafter provided, the International Property Maintenance Code, 2006 Edition, is adopted as the Dangerous Buildings Code of the City of Moorpark. A copy of the International Property Maintenance Code, 2006 Edition shall be maintained in the office of the City Clerk of the City of Moorpark and shall be made available for public inspection while this Code is in force."

SECTION 2. AMENDMENTS NECESSARY. Pursuant to Section §17958.5 of the Health and Safety Code of the State of California, The City Council of the City of Moorpark hereby finds that the amendments of the California Building Code, 2007 Edition, California Plumbing Code, 2007 Edition, California Mechanical Code, 2007 Edition, and California Electrical Code, 2007 Edition, made by this Ordinance are reasonably necessary due to local climatic, geological, or topographical conditions.

SECTION 3. If any section, subsection, sentence, clause, phrase, part or portion of this Ordinance is for any reason held to be invalid or unconstitutional by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council declares that it would have adopted this Ordinance and each section, subsection, sentence, clause, phrase, part or portion thereof, irrespective of the fact that any one or more section, subsections, sentences, clauses, phrases, parts or portions be declared invalid or unconstitutional.

SECTION 4. This Ordinance shall become effective thirty (30) days after its passage and adoption.

SECTION 5. The City Clerk shall certify to the passage and adoption of this ordinance; shall enter the same in the book of original ordinances of said City; shall make a minute of the passage and adoption thereof in the records of the proceedings of the City Council at which the same is passed and adopted; and shall, within fifteen (15) days after the passage and adoption thereof, cause the same to be published once in the Moorpark Star a newspaper of general circulation, as defined in Section 6008 of the Government Code, for the City of Moorpark, and which is hereby designated for that purpose.

PASSED AND ADOPTED this _____ day of _____, 2007.

_____
Patrick Hunter, Mayor

ATTEST:

_____
Deborah S. Traffenstedt, City Clerk

CHAPTER 15.20
DANGEROUS BUILDINGS

15.20.010 DANGEROUS BUILDING CODE ADOPTED. Excepted as hereinafter provided, the International Property Maintenance Code, 2006 Edition, is adopted as the Dangerous Buildings Code of the City of Moorpark. A copy of the International Property Maintenance Code, 2006 Edition shall be maintained in the office of the City Clerk of the City of Moorpark and shall be made available for public inspection while this Code is in force."

SECTION 2. AMENDMENTS NECESSARY. Pursuant to Section §17958.5 of the Health and Safety Code of the State of California, The City Council of the City of Moorpark hereby finds that the amendments of the California Building Code, 2007 Edition, California Plumbing Code, 2007 Edition, California Mechanical Code, 2007 Edition, and California Electrical Code, 2007 Edition, made by this Ordinance are reasonably necessary due to local climatic, geological, or topographical conditions.

SECTION 3. If any section, subsection, sentence, clause, phrase, part or portion of this Ordinance is for any reason held to be invalid or unconstitutional by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council declares that it would have adopted this Ordinance and each section, subsection, sentence, clause, phrase, part or portion thereof, irrespective of the fact that any one or more section, subsections, sentences, clauses, phrases, parts or portions be declared invalid or unconstitutional.

SECTION 4. This Ordinance shall become effective thirty (30) days after its passage and adoption.

SECTION 5. The City Clerk shall certify to the passage and adoption of this ordinance; shall enter the same in the book of original ordinances of said City; shall make a minute of the passage and adoption thereof in the records of the proceedings of the City Council at which the same is passed and adopted; and shall, within fifteen (15) days after the passage and adoption thereof, cause the same to be published once in the Moorpark Star a newspaper of general circulation, as defined in Section 6008 of the Government Code, for the City of Moorpark, and which is hereby designated for that purpose.

PASSED AND ADOPTED this _____ day of _____, 2007.

_____
Patrick Hunter, Mayor

ATTEST:

_____
Deborah S. Traffenstedt, City Clerk