SOUTHERN NEVADA
PROPOSED AMENDMENTS

TO THE

2011 NATIONAL ELECTRICAL CODE

ELECTRICAL CODE COMMITTEE
SEPTEMBER 12, 2012

PREFACE

This document was developed by the Southern Nevada Building Officials' Electrical Code Committee and presents recommended amendments to the 2011 *National Electrical Code* (NEC) as published by the National Fire Protection Association (NFPA).

Participation in the 2012 Electrical Code Committee was open to all interested parties. However, voting on amendment proposals was limited to one vote each for the seven Southern Nevada municipalities (Clark County, Henderson, Las Vegas, North Las Vegas, Boulder City, Pahrump, and Mesquite), the Clark County School District, and three industry representatives. All Electrical Code Committee proceedings were conducted in accordance with Robert's Rules of Order.

The recommended amendments contained herein are not code unless adopted and codified by governmental jurisdictions. These amendments are not intended to prevent the use of any material or method of construction not specifically prescribed herein, provided any alternates have been approved and their use authorized by the Building Official. This document may be copied and used in whole or in part without permission or approval from the organizations listed on the cover page.

Tracking List of Proposed Amendments				
2011 NEC Amendments - Electrical Committee				
No.	**Code Section**	**Issue**	**Proposed By**	**Status/Notes**
2	250.118(5,6)--NEC	Flexible & liquidtight metal conduit as equipment grounding conductor	Dennis Hunt	Passed
4	310.15(B)(3)(c)	Ambient Temp. Adjustment Factors	Dennis Hunt	Passed
5	600.4(C)NEC	Electric Signs - Markings	Dennis Hunt	Passed
7	800.24 fpn#1	Communication Circuits-Execution of Work	Dennis Hunt	Passed
10	110.12(C)	Mechanical Execution of Work-Abandoned conductors	Valarie Loper	Passed
11	110.12(D)	Reuse used equipment	Dennis Hunt	Passed
12	110.26(C)(2)	Entrance/Egress Large Equipment	Valarie Loper	Passed
13	110.33(A)(1)	Entrance and Access to Large Equipment	Valarie Loper	Passed
14	210.8(B)(9)	Ground Fault Circuit Interruptor	Valarie Loper	Passed
15	210.52(A)(2)(2)	Outlets at Fixed Wall Panels	Dennis Hunt	Passed
17	210.52(B)(3)	Kitchen countertop receptacle	Dennis Hunt	Passed
18	100 - (from proposal 10)	Definition - Conductors, Abandoned	Valarie Loper	Passed
19	210.23(E)	Permissible Loads - Dwelling Branch Circuits	Dennis Hunt	Passed
20	210.52(F)	Dwelling Unit Receptacle Outlets	Dennis Hunt	Passed
21	210.70(A)(1)	Lighting Outlets Required - Habitable Rooms	Dennis Hunt	Passed
22	210.70(A)(2)(a)	Lighting Outlets Required - Additional Locations	Dennis Hunt	Passed
23	210.70(A)(2)(b)	Lighting Outlets Required - Additional Locations	Dennis Hunt	Passed
24	210.70(A)(2)(d)	Lighting Outlets Required	Dennis Hunt	Passed
26	220.84(C)(5)	Multifamily Dwelling - Feeder & Service Calculation	Dennis Hunt	Passed
27	225.32	Other Structures Supplied by Feeder/Branch Circuit - Location	Dennis Hunt	Passed
28	230.11	Location of Customer Owned Service Lateral or Drop	Dennis Hunt	Passed
29	230.7O	Service Equipment-Disconnecting Means-General	Dennis Hunt	Passed
30	230.202	Service-Entrance Conductors (Exceeding 600 Volts)	Dennis Hunt	Passed
31	230.205(A)	Disconnecting Means	Dennis Hunt	Passed
32	230.205(C)	Disconnecting Means-Remote Control	Dennis Hunt	Passed
33	240.6(B)&(C)	Adjustable Trip Circuit Breaker	Dennis Hunt	Passed
34	240.86	Circuit Breaker-Series Rated	Dennis Hunt	Passed
35	210.52(A)(2)	Wall Space-Exclusion	D. Wadswrth	Passed
36	250.32(A)	Grounding Electrode-Separate Building	Dennis Hunt	Passed
37	250.5o	Grounding Electrode System	Dennis Hunt	Passed
38	250.52(A)(5)	Rod Electrodes	Dennis Hunt	Passed
39	250.53(A)&(B)	Rod Electrodes & Spacing	Dennis Hunt	Passed
40	250.53(D&E)	Supplemental Electrode	Dennis Hunt	Passed
41	250.53(G&H)	Rod, Pipe, Plate Electrodes	Dennis Hunt	Passed
43	250.94	Bonding for Other Systems	Dennis Hunt	Passed
44	250.120(D)	Equipment Grounding Conductor	Dennis Hunt	Passed
45	314.24	Depth of Boxes	Dennis Hunt	Passed

46	352.10(F)	Rigid PVC - Insulation Temperature Limitations	Dennis Hunt	Passed
47	358.12	EMT - Uses Not Permitted	Dennis Hunt	Passed
48	514.11(A)	Motor Fuel Dispensing Facilities - Circuit Disconnects	Dennis Hunt	Passed
49	600.41(D)	Neon Tubing - Protection	Dennis Hunt	Passed
50	680.42(B)	Outdoor Installations Spas and Hot Tubs - Bonding	Dennis Hunt	Passed
51	682	Natural and Artificially Made Bodies of Water	Dennis Hunt	Passed
53	700.1	Emergency Systems	Dennis Hunt	Passed
54	700.10(D)	Emergency Systems - Circuit Wiring - Fire Protection	Dennis Hunt	Passed
55	700.10(D)(2)	Emergency Systems - Circuit Wiring - Fire Prot. -Feeder Cir. Equip	Dennis Hunt	Passed
56	700.12	Emergency Systems - Sources of Power - General Requirement	Dennis Hunt	Passed
57	700.12(B)(7)	Emergency Systems - Sources of Power - Generator Set	Dennis Hunt	Passed

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 02 _____

COMMITTEE: 2011 NEC

CODE SECTION: 250.118 (5 & 6) Types of Equipment Grounding Conductors

PROPONENT: Dennis Hunt

PROPOSAL: Revise section 250.118, delete items 5 & 6.

REVISE AS FOLLOWS:

250.118 Types of Equipment Grounding Conductors.

The equipment grounding conductor run with or enclosing the circuit conductors shall be one or more or a combination of the following:

(1) A copper, aluminum, or copper-clad aluminum conductor. This conductor shall be solid or stranded; insulated, covered, or bare; and in the form of a wire or a busbar of any shape.

(2) Rigid metal conduit.

(3) Intermediate metal conduit.

(4) Electrical metallic tubing.

~~(5) Listed flexible metal conduit meeting all the following conditions:~~

~~*a*. The conduit is terminated in listed fittings.~~

~~*b*. The circuit conductors contained in the conduit are protected by the overcurrent devices rated at 20 amperes or less.~~

~~*c*. The combined length of the flexible metal conduit and flexible metallic tubing and liquidtight flexible metal conduit in the same ground fault current path does not exceed 1.8m (6ft.)~~

~~*d*. If used to connect equipment where flexibility is necessary to minimize the transmission of vibration from equipment or to provide flexibility for equipment that requires movement after installation, an equipment grounding conductor shall be installed.~~

~~(6) Listed liquidtight flexible metal conduit meeting all the following conditions:~~

~~a. The conduit is terminated in listed fittings.~~

~~b. For metric designators 12(3/8") through 16(1/2"), the circuit conductors contained in the conduit are protected by overcurrent devices rated at 20 amperes or less.~~

~~c. For metric designators 21 through 35 (trade sizes 3/4 through 1-1/4), the circuit conductors contained in the conduit are protected by overcurrent devices rated not more than 60 amperes and there is no flexible metal conduit, flexible metallic tubing, or liquidtight flexible metal conduit in trade sizes metric designators 12 through 16 (trade sizes 3/8 through ½) in the ground-fault current path.~~

~~d. The combined length of flexible metal conduit and flexible metallic tubing and liquidtight flexible metal conduit in the same ground-fault current path does not exceed 1.8m (6ft).~~

~~e. If used to connect equipment where flexibility is necessary to minimize the transmission of vibration from equipment or to provide flexibility for equipment that requires movement after installation, an equipment grounding conductor shall be installed.~~

~~(7)~~(5) Flexible metallic tubing where the tubing is terminated in listed fittings and meeting the following conditions:

a. The circuit conductors contained in the tubing are protected by overcurrent devices rated at 20 amperes or less.
b. The combined length of flexible metal conduit and flexible metallic tubing and liquidtight flexible metal conduit in the same ground-fault current path does not exceed 1.8m (6ft).

~~(8)~~ (6) Armor of Type AC cable as provided in 320.108.

~~(9)~~ (7) The copper sheath of mineral-insulated, metal-sheathed cable.

~~(10)~~ (8) Type MC cable that provides an effective ground-fault current path in accordance with one or more of the following:

a. It contains an insulated or uninsulated equipment grounding conductor in compliance with 250.118(1)

b. The combined metallic sheath and uninsulated equipment grounding/binding conductor of interlocked metal tape-type MC cable that is listed and identified as an equipment grounding conductor

~~(11)~~ (9) Cable trays as permitted in 392.10 and 392.60.

~~(12)~~ (10) Cablebus framework as permitted in 370.3.

~~(13)~~ (11) Other listed electrically continuous metal raceways and listed auxiliary gutters.

~~(14)~~ (12) Surface metal raceways listed for grounding.

Informational Note: For effective ground-fault current path, see 250.2 Definition.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- **X Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Properties in the Las Vegas area are constantly undergoing remodeling and alterations. Flexible wiring methods are subject to physical damage by multiple trade groups and have proven to be broken loose at their connections.

The MGM fire was a case where flex was pulled out of the connector, cut the insulation of the conductors, but had no ground continuity to cause a breaker to trip. An equipment grounding conductor in the flex would have prevented the fire, the loss of life, and the property damage. **http://www.clarkcountynv.gov/Depts/fire/Documents/MGM_FIREInvestigationReport1980.pdf**

COST IMPACT: Minimal cost increase.

COMMITTEE ACTION:

Boulder City,	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
						1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 04 _____

COMMITTEE: 2011 NEC

CODE SECTION: 310.15(B)(3)(c) Circular Raceways Exposed to Sunlight on Rooftops

PROPONENT: Dennis Hunt

PROPOSAL: Revise code section 310.15(B) (3) (c)

REVISE AS FOLLOWS:

(c) *Circular Raceways Exposed to Sunlight on Rooftops*. Where conductors or cables are installed in circular raceways exposed to direct sunlight on or above rooftops, ~~the adjustments shown in Table 310.15(B)(3)(c) shall be added to the outdoor temperature to determine the applicable ambient temperature for application of the correction factors in Table 310.15(B)(2)(a) or Table 310.52(B)(2)(b).~~ one of the following conditions shall be met:

(1) All conductors shall have an insulation rating of 90 degree C and the conduits shall be installed at least 3 ½" above the roof surface.

(2) The adjustments shown in Table 310.15(B)(3)(c) shall be added to the outdoor temperature to determine the applicable ambient temperature for application of the correction factors in Table 310.15(B)(2)(a) or Table 310.15(B)(2)(b).

Informational Note: One source for the average ambient temperatures in various locations is the ASHRAE Handbook—*Fundamentals*.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

The inclusion of 310.15(B)(3)(c)(1) allows an application that complies with base code and is easily installed and inspected.

COST IMPACT: None.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 05 _____

COMMITTEE: 2011 NEC

CODE SECTION: 600.4(C) Visibility

PROPONENT: Dennis Hunt

PROPOSAL: One UL label is to be made visible after installation

REVISE AS FOLLOWS:

(C) Visibility. The markings required in 600.4(A) and listing labels shall not be required to be visible after installation but shall be permanently applied in a location visible during servicing. At least one label must be visible at the time of inspection.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Signs typically are not accessible for interior inspection. UL labels inside are not visible for inspection.

COST IMPACT: None.

COMMITTEE ACTION:

Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
						1	2	3
	P		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 07 _____

COMMITTEE: ____ 2011 NEC_____

CODE SECTION: ___ 800.24 Mechanical Execution of Work_____

PROPONENT: ____ Dennis Hunt ____

PROPOSAL: Add section (A) to Section 800.24

800.24 Mechanical Execution of Work. Communications circuits and equipment shall be installed in a neat an workman like manner. Cables installed exposed on the surface of ceilings and sidewalls shall be supported by the building structure in such a manner that the cable will not be damaged by normal building use. Such cables shall be secured by hardware, including straps, staples, cable ties, hangers, or similar fittings designed and installed so as not to damage the cable. The installation shall also conform to 300.4(D) and 300.11.

(A) Low voltage cabling installed in a concealed space of a Type I or Type II building shall be non-combustible (plenum rated), or installed in a metal raceway. Cables installed without raceways shall be installed per the manufacturer's installation instructions.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- **Address errata to the code**

Required for correlation with the IBC Southern Nevada Amendments. Section 717.5.
Required to provide for consistency in regional interpretation and application of the codes.

COST IMPACT: None

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 10 _____

COMMITTEE: _____2011 NEC _____

CODE SECTION: ____110.12 _____

PROPONENT: ___Valarie Loper_____

PROPOSAL: ***Add a new Subsection (C) to Section 110.12, as follows:***

REVISE AS FOLLOWS:

110.12 Mechanical Execution of Work.

(C) Abandoned Conductors and Cables. For those structures regulated by the Building or Swimming Pool Code, no electrical conductors or cables shall be abandoned in place. Such conductors or cables shall be removed from the building or structure unless otherwise approved by the Building Official or designated representative based upon consideration of safety and combustibility.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This language correlates with articles 725.25, 800.25, 820.25, 645.5(F) and 760.25 which require that abandoned cables that are accessible to be removed. This will also improve safety since abandoned conductors and cables present many safety and fire risks. Conductors or cables left abandoned represent a safety hazard since they may inadvertently be re-energized. Due to the local high level of tenant turnover and the changes in technology which result in entire system change outs which leave abandoned systems behind, the accumulation of cables becomes more and more confusing when subsequent remodels add to the existing system.

Most importantly, excessive wiring across T-bar ceilings can cause the ceiling to fail, and adds to the fire load and smoke hazard within a structure. It has been calculated and verified that 1000 Cat

6a cables each 200 feet long would be about a 90,000,000 BTU fuel load. A cord of oak is about a 20,000,000 BTU fuel load. A cord of wood is 4' w x 4' h x 8'l.

COST IMPACT:
Labor cost to remove abandoned wiring

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
p	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**

RESULT: passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 11 _____

COMMITTEE: 2011 NEC

CODE SECTION: 110.12

PROPONENT: Dennis Hunt

PROPOSAL: Add a new Subsection (D) to Section 110.12 as follows:

110.12 Mechanical Execution of Work.

(D) Used Materials and Equipment. The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the building official. Equipment used in temporary installations, such as power poles, generators, etc. are allowed to be re-used provided they are properly maintained and approved.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This amendment is necessary to correlate with the Section 104.9.1 of the 2012 IBC, Section 104.9.1. Requiring prior permission allows us to inspect used equipment to make sure it is serviceable and safe prior to being installed. Wear and tear of equipment is evident in this local climate and normally used equipment is not adequate for present use. Often, used equipment has been damaged or the listing requirements of the equipment have been violated. Energizing used equipment may become a life safety matter. Machinery and control panels often get moved to new locations, and we can give prior approval to re-use.

COST IMPACT: Represents a savings if used equipment is adequate for re-use.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 12 _____

COMMITTEE: 2011 NEC

CODE SECTION: **110.26(C)(2) Large Equipment**

PROPONENT: Valarie Loper

PROPOSAL: ***Revise Section 110.26 (C) (2), as follows:***

REVISE AS FOLLOWS:
(2) Large Equipment. For equipment rated 1200 amperes or more and over 1.8 m (6ft) wide that contains overcurrent devices, switching devices, or control devices, there shall be one entrance to and egress from the required working space not less than 610 mm (24 in.) wide and 2.0 m (6 ½ ft) high at each end of the working space. When more than one entrance is required by this section both entrances shall open to the exterior of the building or into an approved means of egress that is not under the control of an individual tenant.

A single entrance to and egress from the required working space shall be permitted where either of the conditions in 110.26(C)(2)(a) or (C)(2)(b) is met.

The remainder of this section remains unchanged.

JUSTIFICATION: (check all that apply)
- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

In Electrical service equipment rooms with large services, two exits are required. There have been situations where one of the required exit doors opened into a tenant space and the tenant padlocked the door to keep people out of their space. This is to correlate with the Means of Egress requirements of section 1003.6 of the 2012 IBC. The means of egress is to be clear of obstacles and cannot have locked exit access doors. Obstruction of the egress presents a life safety hazard to anyone in the electrical room.

COST IMPACT: Design issue no cost impact

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 13 _____

COMMITTEE: _____2011 NEC_____

CODE SECTION: ___110.33(A)(1)_____

PROPONENT: ____Valarie Loper_____

PROPOSAL: ***Revise Section 110.33 (A) (1), Large Equipment, as follows:***

REVISE AS FOLLOWS:
110.33 Entrance to Enclosures and Access to Working Space.

(1) Large Equipment. On switchboard and control panels exceeding 1.8 m (6 ft) in width, there shall be one entrance at each end of the equipment. When more than one entrance is required by this section, each entrance shall open to the exterior of the building or into an approved common means of egress. A single entrance to the required working space shall be permitted where either of the conditions in 110.33 (A)(1)(a) or (A)(1)(b) is met.

(a) *Unobstructed Exit*. Where the location permits a continuous and unobstructed way of exit travel, a single entrance to the working space shall be permitted.

(b) *Extra Working Space*. Where the depth of the working space is twice that required by 110.34(A), a single entrance shall be permitted. It shall be located so that the distance from the equipment to the nearest edge of the entrance is not less than the minimum clear distance specified in Table 110.34(A) for equipment operating at that voltage and in that condition.

The remainder of this section remains unchanged.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

In Electrical service equipment rooms with large services, two exits are required. We had situations where one of the required exit doors opened into a tenant space and the tenant padlocked the door to keep people out of their space. This is to correlate with the Means of Egress requirements of section 1003.6 of the 2012 IBC.

The means of egress is to be clear of obstacles and cannot have locked exit access doors. Obstruction of the egress presents a life safety hazard to anyone in the electrical room.

COST IMPACT: Design issue no cost impact

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**F**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 14 _____

COMMITTEE: _____2011 NEC_____

CODE SECTION: ___210.8 (B) _____

PROPONENT: ____Valarie Loper_____

PROPOSAL: ***Add a new Subsection (9) to Section 210.8 (B) Other Than Dwelling Units as follows:***

REVISE AS FOLLOWS:

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel
(B) Other Than Dwelling Units.
(9) Food and/or beverage serving areas regulated by the Health District.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This amendment is for correlation with the Southern Nevada Health District requirements. The requirement was originally for commercial bars, since many had stainless steel countertops with blenders and other appliances located on them and therefore present a shock hazard. It was determined that the same shock hazard exists at buffet lines, coffee shops, juice sales, etc., so all were included as "food and /or beverage serving areas".

COST IMPACT: Cost of GFCI receptacle

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
p	**p**	**p**	**p**	**p**	**p**	**p**	**p**	**p**	

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____15_____

COMMITTEE: 2011 NEC

CODE SECTION: 210.52(A)(2)(2) Wall Space

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 210.52(A)(2)(2), as follows:

REVISE AS FOLLOWS: (2) The space occupied by fixed panels in exterior walls, excluding sliding panels. Where panels consist of multiple sliding panels only the first panel in each direction may be excluded.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **o Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Designs of homes in Southern Nevada are often extremely unique and the model codes do not anticipate these unique designs, some having openable sliding glass panels or multiple moving panels spanning up to 60 feet. These movable walls need to meet the code requirements of any other exterior wall. The NEC does not address multiple moving or sliding panels. This resulted in a lack of receptacles in rooms where the walls are normally closed the majority of the year. This is a hazard due to excessive extension cord use. These unique design features are more prevalent in Southern Nevada.

COST IMPACT: The addition of a floor outlet in the slab

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
p	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #: 17

COMMITTEE: 2011 NEC

CODE SECTION: 210.52(B)(3) Kitchen Receptacle Requirements

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 210.52(B)(3), as follows:

REVISE AS FOLLOWS: (3) Kitchen Receptacle Requirements. Receptacles installed in a kitchen to serve countertop surfaces shall be limited to five (5) duplex receptacles on a circuit. They shall be supplied by not fewer than two small-appliance branch circuits, either or both of which shall also be permitted to supply receptacle outlets in the same kitchen or in other rooms specified in 210.52(B)(1). Additional small-appliance branch circuits shall be permitted to supply receptacle outlets in the kitchen and other rooms specified in 210.52(B)(1). No small-appliance branch circuit shall serve more than one kitchen.

Exception: Receptacles installed to provide power for electric ignition systems or clock timers for gas-fired ranges, ovens or counter-mounted cooking units.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- **O Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

The number of outlets was limited due to local consumer complaints of circuits being overloaded. Ten outlets on the 2 required appliance circuits are normally adequate for typical tract homes.

COST IMPACT: May need an additional appliance circuit

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
p	**p**	**p**	**p**	**p**	**p**		**f**	**p**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 18 _____

COMMITTEE: _____NEC 2011_____

CODE SECTION: ____Article 100_____

PROPONENT: _____Valarie Loper _____

PROPOSAL: Add new definition to article 100

REVISE AS FOLLOWS: Conductors, Abandoned
Installed conductors or cables that are not terminated at both ends at a connector or other equipment and not identified for future use with a tag.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This language correlates with articles 725.25, 800.25, 820.25, 645.5(F) and 760.25 which require that abandoned cables that are accessible to be removed. This will also improve safety since abandoned conductors and cables present many safety and fire risks. Conductors or cables left abandoned represent a safety hazard since they may inadvertently be re-energized. Due to the local high level of tenant turnover and the changes in technology which result in entire system change outs which leave abandoned systems behind, the accumulation of cables becomes more and more confusing when subsequent remodels add to the existing system.

COST IMPACT: Labor cost to remove old systems or to tag systems appropriately

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #: 19

COMMITTEE: 2011 NEC

CODE SECTION: 210.23

PROPONENT: Dennis Hunt

PROPOSAL: Add a new Subsection (E) to Section 210.23, as follows:
(E) Dwelling Branch Circuits

(1) Maximum Number (15-ampere). The maximum number of outlets on a 15-ampere, 125 volt (nominal) luminaire circuit shall be twelve (12) and shall not contain general purpose receptacle outlets.

Exception No. 1: Dedicated branch circuits feeding only IC rated recessed luminaires and/or low wattage energy efficient luminaires may use Article 220.14(D) for computing the maximum number of luminaire outlets.

Exception No. 2: In branch circuits serving smoke detectors the smoke detector outlets need not be counted with other luminaire outlets.

Exception No. 3: As an alternate, receptacles may be included at the discretion of the Building Official subject to approved circuited plans including maximum 5% voltage drop at 80% of overcurrent device rating.

(2) Maximum Number (20-ampere). The maximum number of outlets on a 20 ampere, 125-volt (nominal) circuit used exclusively for receptacles, for luminaire outlets or for any combination of receptacles and luminaire outlets shall be twelve (12).

Exception No. 1: Dedicated branch circuits feeding only IC rated recessed luminaires and/or low wattage energy efficient luminaires may use Article 220.14(D) for computing the maximum number of luminaire outlets.

Exception No. 2: In branch circuits serving smoke detectors the smoke detectors need not be counted with the other luminaire and/or receptacle outlets.

(3) Individual Branch Circuits. The following fastened-in-place appliances are required to have a separate minimum 20-ampere circuit: dishwasher, trash compactor and microwave oven. The required laundry circuit may serve one (1) additional outlet in the laundry area.

JUSTIFICATION: (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

The NEC requires that circuits be designed to not exceed 80% of capacity. A 15 ampere circuit, therefore, should not consume more than 12 amperes (most vacuums, toaster ovens, blow dryers use 1500W @ 120V=12.5A). 12 outlets on a circuit has proven to be a reliable limitation. Receptacles add unknown and uncontrolled load and jeopardize the lighting of the dwelling unit to unwanted failures. Modern homes have many additional loads that were not anticipated in the past, and may cause significant additional loading. This requirement limits the loading risk on any particular circuit. This geographical area has a high ambient temperature, putting additional stress on the ampacity allowed for conductors. Typically in Southern Nevada, all branch circuits originate from the service panel located at the front corner of the garage. #14 AWG with 12A of load is limited to 50 ft to not exceed the 3% voltage drop, whereas #12 AWG with the same 12A load can extend 80 ft. Here in the valley, we lose 25' to 30' just getting out of the garage, and would exceed the voltage drop before reaching the receptacles. The addition of many electronic loads in concentrated areas of the home may defeat the diversification of load assumed in the NEC and damage the equipment due to the voltage drop. These requirements provide load diversity within the dwelling units; it has worked well for the last two decades and eliminated the need for detailed, circuited residential plans and the need for plan checkers to verify the balanced loads at the plans check stage.

The Exception #1 was made for recessed luminaires because it was for permanent light fixtures with a maximum wattage rating. We added the low wattage energy efficient luminaires that we expect to be used more often in the future.

For Exception #2, Smoke detectors add no appreciable load. Smoke detectors are defined as an outlet by the NEC and were being counted as part of the 12 outlets allowed.

The NEC requires individual circuits for fastened-in-place appliances that use more than 50% of the circuit [210.23(A)(2)]. This is an item that assists the contractors to identify the appliances listed above that generally require more than 10 amperes and need an individual circuit. Rather than determining at final inspection when the appliances are installed, we require it to be installed as an individual circuit and verify it on the rough inspection.

COST IMPACT: Additional cost of larger conductors

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**F**	**P**		**F**	**P**	**F**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #: 20

COMMITTEE: 2011 NEC

CODE SECTION: 210.52(F) Laundry Areas

PROPONENT: Dennis Hunt

PROPOSAL: Add a new exception No. 3 to Section 210.52(F), as follows:

REVISE AS FOLLOWS: ***Exception No. 3:*** *In structures more than four (4) stories in height where the configuration of a laundry area is such that only an electrically heated stackable type washer/dryer unit utilizing 208 volt or 240 volt power can be accommodated, the receptacle may be considered as meeting the laundry circuit requirement.*

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This was added to allow the elimination of the 120 volt laundry outlet in situations where it would never be needed. It saves unnecessary wiring and especially benefits load calculations on the building electrical service size. This item was brought to the committee from our local design professionals for unique designs of condominiums incorporating stackable washers & dryers in very confined spaces.

COST IMPACT: Savings of the cost of an additional circuit, and the increased service size.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
p	**p**	**p**	**p**	**p**	**p**		**p**	**p**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 21 _____

COMMITTEE: 2011 NEC

CODE SECTION: 210.70(A)(1)

PROPONENT: Dennis Hunt

PROPOSAL: Revise Item (1) in Section 210.70(A), as follows:

REVISE AS FOLLOWS: (1) Habitable Rooms. At least one wall switch-controlled lighting outlet shall be installed in every habitable room and bathroom. Unless prohibited by structural design, a wall switch shall be located within 1.8 m (6 ft) of the point of entry, and shall not be located behind an active door in the fully open position. Doors capable of being fixed in place are not to be considered active doors.

The remainder of this section remains unchanged

JUSTIFICATION: (Check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Switch locations were addressed to provide safe access to them without stumbling through dark rooms. This language provides additional clarity to assist with consistency of enforcement and uniformity of switch installations. This provides additional life safety, and prevents falling accidents in residential occupancies by providing adequate illumination.

COST IMPACT: No impact

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**		**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 22 _____

COMMITTEE: 2011 NEC

CODE SECTION: 210.70(A)(2)(a)

PROPONENT: Dennis Hunt

PROPOSAL: Revise item (a) in Section 210.70(A)(2):

REVISE AS FOLLOWS:

210.70 Lighting Outlets Required.

(2) Additional Locations. Additional lighting outlets shall be installed in accordance with (A)(2)(a), (A)(2)(b) and (A)(2)(c).

(a) At least one wall switch-controlled lighting outlet shall be installed in hallways, stairways, attached garages, and detached garages with electric power. Hallways of 3.0 m (10 ft) or more in length shall have wall switches at every end. There shall be a wall switch within 1.8 m (6 ft) of each bedroom door unless prohibited by structural design.

The remaining section is without change.

JUSTIFICATION: (Check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Switch locations were addressed to provide safe access to them without stumbling through dark rooms. This language provides additional clarity to assist enforcement and uniformity of switch installations. This provides additional life safety, and prevents falling accidents in residential occupancies by providing adequate illumination.

COST IMPACT: Increase in cost.

COMMITTEE ACTION:

Pahrump	Boulder		Henderson		North	CC	Industry

	City	Clark County		Las Vegas	Las Vegas	School District	1	2	3
P		**P**		**P**	**P**		**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 23 ____

COMMITTEE: 2011 NEC

CODE SECTION: 210.70(A)(2)(b)

PROPONENT: Dennis Hunt

PROPOSAL: Revise item (b) in Section 210.70(A)(2):

REVISE AS FOLLOWS:
210.70 Lighting Outlets Required.

(2) Additional Locations. Additional lighting outlets shall be installed in accordance with (A)(2)(a), (A)(2)(b) and (A)(2)(c).

(b) For dwelling units, attached garages, and detached garages with electric power, at least one wall-switch controlled lighting outlet shall be installed to provide illumination on the exterior side of outdoor entrances or exits with grade level access. A vehicle door shall not be considered as an outdoor entrance or exit. At least one wall switch that controls an interior lighting outlet shall be located at each keyed exterior entry. This switch shall be located within 1.8 m (6 ft) of the latching jamb side, unless prohibited by structural design, and not behind an active door in the fully open position. Doors capable of being fixed in place are not to be considered active doors.

JUSTIFICATION: (Check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- **Address errata to the code**

Switch locations were addressed to provide safe access to them without stumbling through dark rooms. This language provides additional clarity to assist enforcement and uniformity of switch installations. This provides additional life safety, and prevents falling accidents in residential occupancies by providing adequate illumination.

COST IMPACT: Increase in cost.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**		**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 24 _____

COMMITTEE: 2011 NEC

CODE SECTION: 210.70(A)(2)

PROPONENT: Dennis Hunt

PROPOSAL: Add a new Subsection (d) to Section 210.70(A)(2) and revise as follows:

REVISE AS FOLLOWS:

210.70 Lighting Outlets Required. Lighting outlets shall be installed where specified in 210.70(A), (B), and (C).

(A) Dwelling Units. In dwelling units, lighting outlets shall be installed in accordance with 210.70(A)(1), (A)(2), and (A)(3).

(1) Habitable Rooms. At least one wall switch-controlled lighting outlet shall be installed in every habitable room and bathroom.

Exception No. 1: In other than kitchens and bathrooms, one or more receptacles controlled by a wall switch shall be permitted in liew of lighting outlets.
Exception No. 2: Lighting outlets shall be permitted to be controlled by occupancy sensors that are (1) in addition to wall switches or (2) located at a customary wall switch location and equipped with a manual override that will allow the sensor to function as a wall switch.

(2) Additional Locations. Additional lighting outlets shall be installed in accordance with (A)(2)(a), (A)(2)(b), ~~and~~ (A)(2)(c), and (A)(2)(d).

(a) At least one wall switch-controlled lighting outlet shall be installed in hallways, stairways, attached garages, and detached garages with electric power.
(b) For dwelling units, attached garages, and detached garages with electric power, at least one wall switch-controlled lighting outlet shall be installed to provide illumination on the exterior side of outdoor entrances or exits with grade level access. A vehicle door in a garage shall not be considered as an outdoor entrance or exit.

(c) Where one or more lighting outlet(s) are installed for interior stairways, there shall be a wall switch at each floor level, and landing level that includes an entryway, to control the lighting outlet(s) where the stairway between floor levels has six risers or more.

(d)All walk-in closets or storage areas of 1.86 sq. m (20 square feet) or more in floor area shall contain a luminaire controlled by a wall switch within 6 feet of each entrance.

Exception to (A)(2)(a), (A)(2)(b), ~~and~~ (A)(2)(c), and (A)(2)(d): In hallways, in stairways, and at outdoor entrances, remote, central, or automatic control of lighting shall be permitted.

JUSTIFICATION: (Check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Lights are required for safety where items on the floor could provide a tripping hazard. The floor area requirement was specified to clarify that an area smaller than 20 sq ft would have adequate illumination from lighting outside the space, whereas larger areas need interior lighting. This provides uniformity with inspectors and local jurisdictions.

COST IMPACT: Cost increase.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

AMENDMENT #:____ 26 _____

COMMITTEE: 2011 NEC

CODE SECTION: 220.84(C)(5) Calculated Loads

PROPONENT: Dennis Hunt

PROPOSAL: ***Delete item (5) in Section 220.84(C), in its entirety and add Section (D)***

REVISE AS FOLLOWS:

~~(5) The larger of the air-conditioning load or the fixed electric space-heating load~~

(D) Heating and Air Conditioning Load. The largest of the following six selections (load in kVA) shall be included:

(1) 100 percent of the nameplate rating(s) of the air conditioning and cooling.

(2) 100 percent of the nameplate rating(s) of the heat pump when the heat pump is used without any supplemental electric heating.

(3) 100 percent of the nameplate ratings of electric thermal storage and other heating systems where the usual load is expected to be continuous at the full nameplate value. Systems qualifying under this selection shall not be calculated under any other selection in 220.84(D).

(4) 100 percent of the nameplate rating(s) of the heat pump compressor and 65 percent of the supplemental electric heating for central electric space heating systems. If the heat pump compressor is prevented from operating at the same time as the supplementary heat, it does not need to be added to the supplementary heat for the total central space heating load.

(5) 65 percent of the nameplate rating(s) of electric space heating if less than four separately controlled units.

(6) 40 percent of the nameplate rating(s) of electric space heating if four or more separately controlled units.

JUSTIFICATION: (**Check all that apply**)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

The air conditioning load was removed from a load calculation which has a demand factor, and was put into a new section which requires calculations at 100%. The climate conditions here require nearly constant use of air conditioning. In previous code cycles we never allowed an alternate load calculation on multi-family dwellings. In 2005, we accepted it as per the NEC, with the minor modification that the AC load be taken at 100% due to local conditions.

COST IMPACT: May affect service size.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**		**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

AMENDMENT #:_____ 27 _____

COMMITTEE: 2011 NEC

CODE SECTION: 225.32

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 225.32 with Exception 4, in its entirety and add below text.

REVISE AS FOLLOWS:

225.32 Location. The disconnecting means shall be installed ~~either inside or outside of the building or structure served or where the conductors pass through the building or structure. The disconnecting means shall be at a readily accessible location nearest the point of entrance of the conductors~~ as described in 230.70 of these amendments. For the purposes of this section, the requirements in 230.6 shall be utilized.

Exception No. 1: *For installations under single management, where documented safe switching procedures are established and maintained for disconnection, and where the installation is monitored by qualified individuals, the disconnecting means shall be permitted to be located elsewhere on the premises.*

Exception No. 2: *For buildings or other structures qualifying under the provisions of Article 685, the disconnecting means shall be permitted to be located elsewhere on the premises.*

Exception No. 3: *For towers or poles used as lighting standards, the disconnecting means shall be permitted to be located elsewhere on the premises.*

~~***Exception No. 4:*** *For poles or similar structures used only for support of signs installed in accordance with Article 600, the disconnecting means shall be permitted to be located elsewhere on the premises.*~~

Exception No. 4: *For accessory buildings to one and two-family dwellings the disconnecting means may be installed either inside or on the exterior of the accessory structure.*

JUSTIFICATION: Feeders to additional buildings must have their disconnecting means installed as if they were services. Especially for special use major projects, we need the disconnecting means to be readily accessible. This will correlate with the Fire code access requirements for the building disconnecting means.

(Check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- **X Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

COST IMPACT: Minimal amount increase.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 28 _____

COMMITTEE: 2011 NEC

CODE SECTION: 230.11

PROPONENT: Dennis Hunt

PROPOSAL: Add a new Section 230.11 as follows:
230.11 Location of Customer Owned Service Lateral or Drop. All conductors shall traverse only the property to be served except through recorded power easements.

JUSTIFICATION: Due to our high current demand and often high voltage demands, we commonly see customer owned services. We cannot allow them to cross property lines to install or repair those conductors. Due to local lot configurations and reclassification of property ownerships, we need this requirement to correlate with other NEC requirements. This requirement supports language from other public utility service requirements.
(Check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- **X Code correlation**
- **X Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

COST IMPACT: No cost increase.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 29 _____

COMMITTEE: 2011 NEC

CODE SECTION: 230.70

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 230.70, in its entirety.

REVISE AS FOLLOWS:

230.70 General. Means shall be provided to disconnect all ungrounded service entrance conductors to a building or structure.

(A) Location. The service disconnecting means shall be installed in accordance with 230.70(A)(1), (2), (3), (4) and (5).

(1**) Exterior of the Building.** The service disconnecting means shall be installed in a readily accessible exterior location and within 3.7 m (12 ft.) of the building or structure. Where the distance is greater than 3.7 m (12 ft.) from the building or structure the service disconnecting means shall be considered as a separate structure.

Exception No1: *A fire pump and its associated electrical equipment.*

(2**) Electrical Equipment Room.** The service disconnecting means may be installed within a dedicated electrical equipment room with a readily accessible direct access on the exterior of a building or structure. Such rooms shall be separated from all other rooms or spaces within the building by a minimum of one (1) hour fire resistive construction and shall have approved Fire Department access.

FPN: A recessed 3200 series Knox Box may serve as the approved Fire Department access in some jurisdictions.

(3**) Bathrooms.** Service disconnecting means shall not be installed in bathrooms.

(4**) Remote Control.** Where a remote control device(s), required by another code such as in a fire command center, is used to actuate the service disconnecting means, the service disconnecting means shall be located in accordance with 230.70(A)(1) or (2). The remote control device shall be supervised by a local signaling service that causes an audible signal and illumination of an amber visual signal at the Fire Command Center and at each auxiliary location required for the Life Safety System.

(5**) Emergency Systems, Information Technology Equipment and Uninterruptible Power Supplies (UPS).** Emergency Systems driven by prime movers and UPS Systems shall have separate disconnecting means with separate identification. Information Technology Equipment rooms complying with Article 645.2 shall be permitted to have their disconnecting means installed per article 645.10 and 645.11 if identified at the same location as the "Service Disconnect."

(B) Marking. Each service disconnecting means shall be marked with a sign(s). When located in a dedicated electrical room the exterior door(s) providing access to the disconnecting means located in a dedicated electrical room shall be permanently marked with a sign(s). Each sign shall

be a minimum 0.093sq.m (1 sq. foot), colored yellow with 25.4mm (1 inch) high, 6.35 mm (¼ inch) stroke raised or engraved letters and/or numbers indicating the address or unit it serves and be identified as the "Electrical Service Disconnect(s)" and/or "Electrical Service Disconnect(s) Inside." Emergency Systems disconnects shall be permanently marked with sign(s), identified as "Emergency Electrical Disconnect(s)" and/or "Main Emergency Electrical Disconnect(s) Inside." When the service disconnecting means is located inside a dedicated electrical room and it is not the first service disconnect encountered or there are multiple service disconnects there shall be a directional 75mm (3inch) wide painted yellow stripe on the floor from the entry door(s) to each service disconnect. Other durable means of identification may be used with prior approval by The Authority Having Jurisdiction.

Exception: *One and two family dwelling units and their associated accessory structures.*

(C) Suitable for Use. Each service disconnecting means shall be suitable for the prevailing conditions. Service equipment installed in hazardous (classified) locations shall comply with the requirements of Articles 500 through 517.

JUSTIFICATION: Service conductors have no overcurrent protection ahead of the service. Any fault of the conductor will continue to arc and burn. It is necessary to keep the service conductors outside the building or in a rated room, separating a fire from the rest of the building. This language provides additional safety for first responders when they need to access a disconnecting means during a fire or other emergency. This language was developed with the assistance of representatives from the Fire Departments in the Valley.

Marking or labeling is required by code, but the weather conditions here in Southern Nevada require special attention to durability. This correlates with the requirements for service disconnect locations and allows first responders to easily and quickly identify and locate the disconnecting means.

The Fire Department will normally report directly to the fire command center and control the power from that location. In the past, we have found that the shunt trip failed to operate. Due to the importance of this system working properly, we added supervision to the circuit to ensure that any failures would be found and repaired before an emergency situation occurred. This language correlates with International Building and Fire Codes.

(Check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- **X Code correlation**
- o **Consistent with State or local laws**
- **X Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

COST IMPACT: The cost of labels suitable for our environment.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 30 _____

COMMITTEE: 2011 NEC

CODE SECTION: 230.202

PROPONENT: Dennis Hunt

PROPOSAL: Add a new Subsection (C) to Section 230.202.

REVISE AS FOLLOWS:
(C) Conductors Considered Outside the Building. Service-entrance conductors shall be installed in accordance with Article 230.6.

JUSTIFICATION: High voltage conductors without overcurrent protection, installed within buildings, need to be encased in concrete for fire protection. Service conductors over 600 volts are a common occurrence in Southern Nevada.

(Check all that apply)

Geologic, Geographic, Topographic, Climatic

- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

COST IMPACT: None if installed below slab as a normal occurrence.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 31 _____

COMMITTEE: 2011 NEC

CODE SECTION: 230.205(A)

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 230.205(A)

REVISE AS FOLLOWS:
(A) Location. The service disconnecting means shall be located in accordance with 230.70. For either overhead or underground primary distribution systems on private property, under single management with a Life Safety System, Fire Command Center and 24 hour on-site qualified maintenance personnel, the service disconnect shall be permitted to be located in a location that is not readily accessible, if the disconnecting means can be operated by mechanical linkage from a readily accessible point, or electronically in accordance with 230.205 (C), where applicable. The main electrical room is not required to be located on the exterior of the building or other structure.

JUSTIFICATION: (check all that apply)
- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This was added to allow major projects to install their service equipment in rooms that do not open to the outside or are not at grade level, due to structural problems. This language is necessary due to the types of construction prevalent in Southern Nevada.

COST IMPACT: Savings of the cost of submitting requests for alternate methods, or requiring alterations of the construction plans.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3

P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 32 _____

COMMITTEE: 2011NEC

CODE SECTION: 230.205(C)

PROPONENT: Dennis Hunt

PROPOSAL: Revise 230.205(C)

REVISE AS FOLLOWS:
(C) Remote Control. For multi-building, industrial installations under single management, the service disconnecting means shall be permitted to be located at a separate building or structure. In such cases, the service disconnecting means shall be permitted to be electrically operated by a readily accessible device. The remote control device shall be supervised by a local signaling device that causes an audible signal and the illumination of an amber visual signal at the Fire Command Center and at each auxiliary location required for the Life Safety System.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

The fire department will normally report directly to the fire command center and control the power from that location. In the past, we have found that the shunt trip failed to operate. Due to the importance of this system working properly, we added supervision to the circuit to ensure that any failures would be found and repaired before an emergency situation occurred. This language correlates with Building and Fire Codes.

COST IMPACT: Increased cost for signal circuit as required in the Fire Command Center by the IBC

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3

P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 33 _____

COMMITTEE: 2011 NEC

CODE SECTION: 240.6(B) & (C)

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 240.6(B) and delete subsection (C).

REVISE AS FOLLOWS: (B) Adjustable-Trip Circuit Breakers. The rating of adjustable-trip circuit breakers having external means for adjusting the current setting (long-time pickup setting), ~~not meeting the requirements of 240.6(C),~~ shall be the maximum setting possible.

~~**(C) Restricted Access Adjustable Trip Circuit Breakers.** A circuit breaker(s) that has restricted access to the adjusting means shall be permitted to have an ampere rating(s) that is equal to the adjusted current setting (long-time pickup setting). Restricted access shall be defined as located behind one of the following:~~

~~(1) Removable and sealable covers over the adjusting means~~
~~(2) Bolted equipment enclosure doors~~
~~(3) Locked doors accessible only to qualified personnel~~

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Due to the ability of service personnel to adjust the circuit breakers above their initial setting, this language was deleted in order to insure that the conductors are sized to meet the maximum current setting. Due to the prevalence of local installations with large current ratings, this is necessary language to prevent overloaded conductors and fires.

COST IMPACT: Conductor sizing may be increased to meet maximum setting or may be substituted with non-adjustable trip.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 34 ____

COMMITTEE: 2011 NEC

CODE SECTION: 240.86

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 240.86

REVISE AS FOLLOWS: 240.86 Series Ratings. Where a circuit breaker is used on a circuit having an available fault current higher than the marked interrupting rating by being connected on the load side of an acceptable overcurrent device having a higher rating, the circuit breaker shall meet the requirements specified in (A) or (B), and (C). All of the information including manufacturers and part numbers of each component making up the series combination rating shall be provided on the submittal drawings for plans examination and permit. Only those manufacturers and part numbers shall be permitted for the installation.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This required information is necessary to be listed on the plans for the inspector to be able to verify compliance that all components are part of the listed system. This was a multi-jurisdictional request from both the plans examiners and field inspectors to insure that components of series-rated systems were installed per the approved design.

COST IMPACT: None.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las	CC School	Industry		
							1	2	3

					Vegas	District			
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE PROPOSAL FORM –2012

AMENDMENT #:_____ 35 _____

COMMITTEE: 2011 NEC

CODE SECTION: 210.52(A)(2)

PROPONENT: David Wadsworth

PROPOSAL: Revise Section 210.52(A)(2)

REVISE AS FOLLOWS:

At the end of section 210.52(A)(2), add the following:

(2) Wall Space. As used in this section, a wall space shall include the following:

(1) Any space 600mm (2 ft.) or more in width (including space measured around corners) and unbroken along the floor line by doorways and similar opening, fireplaces, and fixed cabinets

(2) The space occupied by fixed panels in exterior walls, excluding sliding panels

(3) The space afforded by fixed room dividers, such as freestanding bar-type counters or railings

Exception:
As used in this section, wall space shall not include the following:

(1) The space behind operable doors

(2) Entries, hallways, and similar areas less than 5 ft wide in bedrooms

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Frequently, there are walls where most, if not all, of the wall space is behind an operable door, and receptacles in those spaces would serve no practical purpose.
Also, inside bedrooms there are often vestibule and hall areas where receptacles would serve no practical purpose.

COST IMPACT: Savings of unnecessary receptacles

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 36 _____

COMMITTEE: 2011 NEC

CODE SECTION: 250.32(A)

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 250.32(A)

REVISE AS FOLLOWS: (A) Grounding Electrode. For the purposes of this section all buildings or structures not joined by a continuous concrete foundation or footing and roof shall be considered as separate buildings or structures. Building(s) or structure(s) supplied by feeder(s) or branch circuit(s) shall have a grounding electrode system installed in accordance with Part III of Article 250. The grounding electrode conductor(s) shall be connected in accordance with 250.32 (B) or (C). Where there is no existing grounding electrode, the grounding electrode(s) required in 250.50 shall be installed.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- **X Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This was for clarification of what is considered as a separate building and for correlation with the building code. The building code considers a continuous roof structure as a single building, whereas the electrical system requires a continuous equipotential grounding system (such as a concrete foundation or footing) to maintain electrical grounding continuity.

COST IMPACT: Possibly the cost of an electrode if it had been interpreted as not a separate building.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3

P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 37 **_____**

COMMITTEE: 2011 NEC

CODE SECTION: **250.50 Grounding Electrode System**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 250.50
REVISE AS FOLLOWS: 250.50 Grounding Electrode System. All grounding electrodes as described in 250.52(A)(1) through (A)(7) that are present at each building or structure served shall be bonded together to form the grounding electrode system. Where none of these grounding electrodes exist, one or more of the grounding electrodes specified in 250.52(A)(4) through (A)(~~8~~)(7) shall be installed and used. The concrete-encased electrode described in Article 250.52(A)(3) shall be required for new buildings and structures that are supplied with electrical power and have concrete foundations or footings.

Exception: Concrete-encased electrodes of existing buildings or structures shall not be required to be part of the grounding electrode system where the steel reinforcing bars or rods are not accessible for use without disturbing the concrete.

JUSTIFICATION: : (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Concrete-encased electrodes are necessary due to the Southern Nevada soil conditions. This correlates with the requirements for this type of grounding electrode and provides for the grounding of accessory buildings.

COST IMPACT: None, concrete encased electrode required in open foundation by code.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3

P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 38 _____

COMMITTEE: 2011 NEC

CODE SECTION: **250.52(A)(5) Rod Electrodes**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Item (5) of Section 250.52(A), in its entirety

REVISE AS FOLLOWS: **(5) Rod Electrodes.** Rod electrodes shall not be less than 2.44 m (8 ft) in length and shall consist of stainless steel and copper or zinc coated steel and shall be at least 15.875mm (5/8 in.)in diameter, unless listed.

SECTION: **250.52 (A) (7)**

PROPOSAL: ***Delete Item (7) of Section 250.52(A), in its entirety and renumber the subsequent items sequentially, as follows:***

~~**(7) Plate Electrodes.**~~ *This entire item is deleted*
~~**(8)**~~ **(7)** Other Local Metal Underground Systems or Structures.

The remainder of this section remains unchanged

JUSTIFICATION: : (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This section was re-written, eliminating references to pipe (galvanized conduit) and plate electrodes which will not withstand the soil conditions here. Pipe and plate electrodes were also deleted in 250.53.

COST IMPACT: No increase in cost.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:____39_____

COMMITTEE: 2011 NEC

CODE SECTION: **250.53(A) & (B) Rod Electrodes & Spacing**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 250.53(A) & (B) , as follows

REVISE AS FOLLOWS:

250.53 Grounding Electrode System Installation

Informational Note: See 547.9 and 547.10 for special grounding and bonding requirements for agricultural buildings.

(A) Rod~~, Pipe, and Plate~~ Electrodes. Rod~~, pipe, and plate~~ electrodes shall meet the requirements of 250.53(A)(1) through (A)(3).

(1) Below Permanent Moisture Level. If practicable, rod, ~~pipe, and plate~~ electrodes shall be embedded below permanent moisture level. Rod, ~~pipe, and plate~~ electrodes shall be free from nonconductive coatings such as paint or enamel.

(2) Supplemental Electrode Required. A single rod, ~~pipe, or plate~~ electrode shall be supplemented by an additional electrode of a type specified in 250.52(A)(2) through (A)~~(8)~~ (7). The supplemental electrode shall be permitted to be bonded to one of the following:
(1) Rod~~, pipe or plate~~ electrode
(2) Grounding electrode conductor
(3) Grounded service-entrance conductor
(4) Nonflexible grounded service raceway
(5) Any grounded service enclosure

Exception: If a single rod~~, pipe, or plate~~ grounding electrode has a resistance to earth of 25 ohms or less, the supplemental electrode shall not be required.

(3) Supplemental Electrode. If multiple rod~~, pipe, or plate~~ electrodes are installed to meet the requirements of this section, they shall not be less than 1.8 m (6 ft) apart.

Informational Note: The paralleling efficiency of rods is increased by spacing them twice the length of the longest rod.

Continued

(B) Electrode Spacing. Where more than one of the electrodes of the type specified in 250.52(A)(5) ~~or (A)(7)~~ are used, each electrode of one grounding system (including that used for strike termination devices) shall not be less than 1.83 m (6 ft) from any other electrode of another

grounding system. Two or more grounding electrodes that are bonded together shall be considered a single grounding electrode system.

JUSTIFICATION:
(check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

COST IMPACT: None.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

Steering Committee Recommendations: Concur

AMENDMENT #:_____ 40 _____

COMMITTEE: 2011 NEC

CODE SECTION: **250.53(D) & (E) Supplemental Electrode**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 250.53(D)(2)
REVISE AS FOLLOWS: (2) Supplemental Electrode Required. A metal underground water pipe shall be supplemented by an additional electrode of a type specified in 250.52(A)(2) through (A)~~(8)~~(7). If the supplemental electrode is of the rod~~, pipe, or plate~~ type, it shall comply with 250.53(A). The supplemental electrode shall be bonded to one of the following:

(1) Grounding electrode conductor
(2) Grounded service- entrance conductor
(3) Nonflexible grounded service raceway
(4) Any grounded service enclosure
(5) As provided by 250.32(B)

Exception: *The supplemental electrode shall be permitted to be bonded to the interior metal water piping at any convenient point as specified in 250.68(C)(1), Exception.*

SECTION: **250.53 (E) Supplemental Electrode Bonding Connection Size.**

PROPOSAL: **Revise Section 250.53(E)**
REVISE AS FOLLOWS: (E) Supplemental Electrode Bonding Connection Size. Where the supplemental electrode is a rod~~, pipe, or plate~~ electrode, that portion of the bonding jumper that is the sole connection to the supplemental grounding electrode shall not be required to be larger than 6 AWG copper wire or 4 AWG aluminum wire.

JUSTIFICATION: (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This section was re-written, eliminating references to pipe (galvanized conduit) and plate electrodes which will not withstand the soil conditions here. Pipe and plate electrodes were also deleted in 250.52 and 250.53.

COST IMPACT: None.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 41 _____

COMMITTEE: 2011 NEC

CODE SECTION: **250.53(G) & (H) Rod, Pipe, Plate Electrodes**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 250.53(G) & Delete (H) of Section 250.53, in its entirety

REVISE AS FOLLOWS: (G) Rod ~~and Pipe~~ Electrodes. The electrode shall be installed such that at least 2.44 m (8 ft) of length is in contact with the soil. It shall be driven to a depth of not less than 2.44 m (8 ft) except that, where rock bottom is encountered, the electrode shall be driven at an oblique angle not to exceed 45 degrees from the vertical or, where rock bottom is encountered at an angle up to 45 degrees, the electrode shall be permitted to be buried in a trench that is at least 750 mm (30 in.) deep. The upper end of the electrode shall be flush with or below ground level unless the aboveground end and the grounding electrode conductor attachment are protected against physical damage as specified in 250.10.

~~**(H) Plate Electrode.** Plate electrodes shall be installed not less than 750 mm (30 in.) below the surface of the earth.~~

JUSTIFICATION:
(check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This section was re-written, eliminating references to pipe (galvanized conduit) and plate electrodes which will not withstand the soil conditions here. Pipe and plate electrodes were also deleted in 250.52 and 250.53.

COST IMPACT: None.

COMMITTEE ACTION:

Pahrump	Boulder		Henderson		North	CC	Industry

	City	Clark County		Las Vegas	Las Vegas	School District	1	2	3
P	**P**	**P**	**P**	**p**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 43 _____

COMMITTEE: 2011 NEC

CODE SECTION: **250.94 Bonding for Other Systems**

PROPONENT: Dennis Hunt

PROPOSAL: Add new Items (7) & (8) to Section 250.94

REVISE AS FOLLOWS: **(7)** A set of listed terminals shall be permitted to be connected to the concrete-encased electrode as defined in Article 250.52(A)(3).

(8) A set of listed terminals shall be permitted to be connected to the concrete-encased electrode conductor as defined in Article 250.24(D), 250.30(A)(3), 250.30(A)(4), 250.30(B)(1) and 250.32(E).

JUSTIFICATION:
Criteria:
(check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- **X Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

The code requires a separate grounding terminal block outside the service panel for low voltage systems. We added that it could be connected to the grounding electrode or grounding electrode conductor for clarification of code intent. Standard practice here is to connect to the concrete-encased electrode with an additional clamp. This amendment allows the use of listed equipment that was not available when the 2008 NEC was published. This correlates with the local code requirement for a concrete-encased electrode, with the low voltage terminals in the same location as we have used in the past. This allows utility providers to access the bonding connection without endangering personnel.

COST IMPACT: None, terminals located in a different location

COMMITTEE ACTION:

Pahrump	Boulder		Henderson		North	CC	Industry

	City	Clark County		Las Vegas	Las Vegas	School District	1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 44 _____

COMMITTEE: 2011 NEC

CODE SECTION: **250.120(D) Equipment Grounding Conductor**

PROPONENT: Dennis Hunt

PROPOSAL: Add a new Subsection (D) to Section 250.120

REVISE AS FOLLOWS: (D) Equipment Grounding Conductor. All raceways installed on roofs shall contain an equipment grounding conductor sized per Table 250.122 installed with the circuit conductors.

Exception No. 1: *Low voltage, communication and similar type systems unless required elsewhere in the Code.*

Exception No. 2: *As permitted by Article 250.86 for short sections of metal enclosures or raceways.*

JUSTIFICATION:

Criteria: (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Due to the Southern Nevada climate conditions, many raceways/conduits installed on rooftops experience dramatic temperature changes which could create a failed connection at the fittings.. It is not safe to rely on the raceway as our equipment grounding conductor.

COST IMPACT: Additional cost of an equipment grounding conductor

COMMITTEE ACTION:

Pahrump	Boulder		Henderson		North	CC	Industry

	City	Clark County		Las Vegas	Las Vegas	School District	1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

AMENDMENT #:_____ 45 _____

COMMITTEE: 2011 NEC

CODE SECTION: **314.24 Depth of Boxes**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 314.24

REVISE AS FOLLOWS: 314.24 Minimum Depth of Boxes for Outlets, Devices, and Utilization Equipment. Outlet and device boxes shall have sufficient depth to allow equipment installed within them to be mounted properly and without likelihood of damage to conductors within the box. All boxes for outlets, devices, utilization equipment or junction boxes less than 200 mm (8 inches) in any dimension, shall have no more than two extension boxes or one extension box and one plaster ring.

Exception: *Listed unit(s) or assembly(s).*

JUSTIFICATION:
Criteria: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

The local propensity for frequent remodels and the additions of walls and other structural components made it common for the addition of extension after extension on boxes. Stacking of outlet boxes makes it unsafe to reach into the depth of the boxes to make splices or perform other necessary work, and resulted in damaged wire by not providing adequate access to the point of conduit entry into the box. The wording was adjusted in this code cycle for clarification of code intent.

COST IMPACT: Minimal, boxes need to be located properly

COMMITTEE ACTION:

Pahrump	Boulder		Henderson		North	CC	Industry

	City	Clark County		Las Vegas	Las Vegas	School District	1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 46_____

COMMITTEE: 2011 NEC

CODE SECTION: **352.10(F) Exposed.**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 352.10(F)

Revise as follows:

(F) Exposed. PVC conduit shall be permitted for exposed work. PVC conduit used exposed in areas of physical damage shall be Schedule 80 and listed as sunlight resistant ~~identified for such use~~.

Informational Note: PVC Conduit, Type Schedule 80, is identified for areas of physical damage.

JUSTIFICATION:
Criteria: (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Due to the high number of hours of UV exposure, as well as the intensity of the UV levels in Southern Nevada, rigid non-metallic conduit must be suitable for our environmental conditions.

COST IMPACT: Minor difference between Sch. 40 and Sch. 80

COMMITTEE ACTION:

Pahrump	Boulder		Henderson		North	CC	Industry

	City	Clark County		Las Vegas	Las Vegas	School District	1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 47 _____

COMMITTEE: 2011 NEC

CODE SECTION: **358.12 EMT - Uses Not Permitted**

PROPONENT: Dennis Hunt

PROPOSAL: Add new items (7), (8) and (9) to Section 358.12
Add items (7), (8) and (9) as follows:

(7) Embedded within concrete or masonry in contact with the earth
(8) Underground installations
(9) Within earth fills

JUSTIFICATION:
Criteria: (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Due to local soil conditions, electrical metallic tubing (which is only provided with an enamel coating on the inside) will deteriorate rapidly.

COST IMPACT: Little or no impact

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 48 _____

COMMITTEE: 2011 NEC

CODE SECTION: **514.11(A)**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 514.11 (A) Circuit Disconnects-General

REVISE AS FOLLOWS: (A) General. Each circuit leading to or through dispensing equipment, including all associated power, communications, data, and video circuits, and equipment for remote pumping systems, shall be provided with a clearly identified and readily accessible switch or other approved means, located remote from the dispensing devices, to disconnect simultaneously from the source of supply, all conductors of the circuits, including the grounded conductor, if any. Single-pole breakers utilizing handle ties shall not be permitted. The switch shall be a momentary contact type. The disconnect station sign shall be 0.093 sq. m (1 ft square), colored yellow and have black, 25.4 mm (1 inch) high, 6.35 mm (¼ inch) stroke permanent lettering describing it as "Emergency Pump Shutoff".

JUSTIFICATION:

Criteria: (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- **X Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

This describes the signage required due to local environmental conditions and Fire Department coordination, and that it applies to all service stations.

COST IMPACT: The cost of signage

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 49 _____

COMMITTEE: 2011 NEC

CODE SECTION: **600.41(D)**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 600.41(D)

REVISE AS FOLLOWS: (D) Protection. Field-installed skeleton tubing shall not be subject to physical damage. Where the tubing is readily accessible to other than qualified persons, field-installed skeleton tubing shall be provided with suitable guards or protected by other approved means. Installations less than 2.44 m (8 ft.) above finished grade or floor level shall be considered as readily accessible.

JUSTIFICATION:
Criteria: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Southern Nevada has such a large degree of lighting in use even in locations accessible to the public, that protection was needed for their safety. The 2008 NEC now includes our original amendment, but did not give a specific height. This amendment provides clear direction to local installers.

COST IMPACT: Increase in cost.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 50 _____

COMMITTEE: 2011 NEC

CODE SECTION: **680.42(B) Bonding**

PROPONENT: Dennis Hunt

PROPOSAL: Add Exception No. 2 to Section 680.42(B)

REVISE AS FOLLOWS: 680.42(B) Bonding.
Bonding by metal-to-metal mounting on a common frame or base shall be permitted. ~~The metal bands or hoops used to secure wooden staves shall not be required to be bonded as required in 680.26~~

Exception No. 1: The metal bands or hoops used to secure wooden staves shall not be required to be bonded as required in 680.26.

Exception No. 2: A listed self-contained spa or hot tub that meets all of the following conditions shall not be required to have equipotential bonding of perimeter surfaces installed as required in 680.26(B)(2):

(1) Is installed in accordance with manufacturer's instructions on or above grade.
(2) The vertical measurement from all permanent surfaces within 30 horizontal inches (76 cm) of the spa to the top rim of the spa is greater than 28 inches (71 cm).

JUSTIFICATION:
Criteria: (check all that apply)
- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- **X Address errata to the code**

The NEC failed to provide an exception for self-contained spas until after the 2011 version was published. Many do not have access to the TIA, making it necessary to include it in the amendments for everyone to be aware of it.

COST IMPACT: It will save unnecessary damage to existing slabs.

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____ 51 _____

COMMITTEE: 2011 NEC

CODE SECTION: **Article 682 Natural and Artificially Made Bodies of Water**

PROPONENT: Dennis Hunt

PROPOSAL: Delete Article 682 in its entirety

JUSTIFICATION:
Criteria: (check all that apply)

- **X Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- o **Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

In discussion with some code officials we are unable to enforce the requirements of this code as written, due to conflicts of establishing the Electrical Datum Plane.

COST IMPACT: None

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:___ 53 ____

COMMITTEE: 2011 NEC

CODE SECTION: **700.1 Scope**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 700.1
REVISE AS FOLLOWS: 700.1 Scope. For the purposes of this section, items considered as meeting the requirements for high rise applications (i.e. buildings with an occupied floor located more than 17 m (55 ft) above the lowest level of fire department vehicle access) to be placed on the emergency distribution system may include: Emergency illumination, exit signage, electric fire pumps, fire jockey or makeup pumps, fire alarm equipment, smoke control equipment, one elevator per bank of elevators, cooling and heating equipment for emergency electrical rooms and elevator machine rooms, FAA required obstruction lighting, battery chargers for emergency generating equipment, heating equipment for freeze protection of fire sprinkler systems, telecommunications equipment (i.e. for 911 applications) fire command center loads such as monitoring and display equipment and other equipment approved by the Authority Having Jurisdiction that will enhance the survivability of life safety systems.

The provisions of this article apply to the electrical safety of the installation, operation, and maintenance of emergency systems consisting of circuits and equipment intended to supply, distribute, and control electricity for illumination, power, or both, to required facilities when the normal electrical supply or system is interrupted.

JUSTIFICATION:

(check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- **X Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**
- o **Address errata to the code**

Southern Nevada has a large number of high rise buildings or high occupancy buildings that are designed with very complex and unique emergency electrical systems. Emergency electrical systems are typically sized to handle the total load and need to be allowed to share the same raceways. We needed to be able to classify them as emergency systems to allow combined wiring methods.

COST IMPACT: Savings of not having multiple systems

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:____ 54 **____**

COMMITTEE: 2011 NEC

CODE SECTION: **700.10(D) Fire Protection**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 700.10(D)

REVISE AS FOLLOWS: (D) Fire Protection. Emergency systems shall meet the additional requirements in (D)(1) through (D)(3) in ~~assembly~~ any ~~occupancies~~ occupancy(s) of 300 or more ~~for not less than 1000~~ persons or in buildings with an occupied floor located more than 17 m (55 ft) above the lowest level of fire department vehicle access. ~~above 23 m (75 ft) in height with any of the following occupancy classes: assembly, educational, residential, detention and correctional, business, and mercantile.~~

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- **X Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- o **Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- o **Makes consistency in regional interpretation and code application**

This defines the 55 foot height or over 300 person occupancy as the triggers to qualify for the need of emergency systems. The emergency systems are required to be in a dedicated room. This correlates with the Southern Nevada amendments to the IBC, and this correlates with the ability of emergency response to safely evacuate the building.

COST IMPACT: Additional requirements of emergency systems in smaller buildings

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**p**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____55_____

COMMITTEE: 2011 NEC

CODE SECTION: **700.10(D)(2) Feeder-Circuit Equipment**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 700.10(D)(2) and add a new exception
REVISE AS FOLLOWS: (2) Feeder-Circuit Equipment. Equipment for feeder circuits (including transfer switches, transformers, and panelboards) shall be located either in spaces fully protected by approved automatic fire suppression systems (including sprinklers, carbon dioxide systems) or in spaces with a 2-hour fire resistance rating. This equipment shall meet one of the following requirements:

1. Be rated NEMA 3R
2. Be located in room(s) dedicated to this equipment
3. Be separated from normal power equipment by double the working clearance required by Table 110.26(A) or Table 110.34(A) in any direction

Exception: *System components described in Article 701 may occupy the same space as emergency systems.*

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**

Separation of the two electrical systems is required to provide a higher level of reliability for our life safety electrical systems due to the unique type of occupancies in this area.

COST IMPACT: None, separation implemented in the design

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:_____56_____

COMMITTEE: 2011 NEC

CODE SECTION: **700.12 General Requirements**

PROPONENT: Dennis Hunt

PROPOSAL: Revise Section 700.12

REVISE AS FOLLOWS: 700.12 General Requirements. Current supply shall be such that, in the event of failure of the normal supply to, or within the building or group of buildings concerned, emergency lighting, emergency power, or both shall be available within the time required for the application but not to exceed 10 seconds. The supply system for emergency purposes, in addition to the normal services to the building and meeting the general requirements of this section, shall be one or more of the types of systems described in 700.12(A) through (E). Unit equipment in accordance with 700.12(F) shall satisfy the applicable requirements of this article.

In selecting an emergency source of power, consideration shall be given to the occupancy and the type of service to be rendered, whether of minimum duration, as for evacuation of a theater, or longer duration, as for supplying emergency power and lighting due to an indefinite period of current failure from trouble either inside or outside the building.

Equipment shall be designed and located so as to minimize the hazards that might cause complete failure due to flooding, fires, icing, and vandalism.

Equipment for sources of power as described in 700.12(A) through 700.12(E) ~~where located within assembly occupancies for greater than 1000 persons or in buildings above 23 m (75 ft) in height~~ shall meet the following additional requirements in any occupancy(s) of 300 or more persons or in buildings with an occupied floor located more than 17m (55 ft) above the lowest level of fire department vehicle access. ~~with any of the following occupancy classes assembly, educational, residential, detention and correctional, business, and mercantile~~ This equipment shall be installed ~~either~~ in spaces fully protected by approved automatic fire suppression systems (sprinklers, carbon dioxide systems, and so forth) or in spaces protected by a fire-rated assembly listed to achieve a minimum fire rating of one-hour ~~with a 1-hour fire rating.~~.

Informational Note No. 1: For the definition of *Occupancy Classification*, see Section 6.1 of NFPA *101*-2009, *Life Safety Code*.

Informational Note No. 2: Assignment of degree of reliability of the recognized emergency supply system depends on the careful evaluation of the variables at each particular installation. For further information, see ANSI/IEEE 493-2007, *Recommended Practice for the Design of Reliable Industrial and Commercial Power Systems.*

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- **X Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**

The language in the NEC is too vague for the variety of buildings being constructed in this area. In order to address the many questions from installers and designers, this language was extensively re-written to clarify the intent of the code and to provide consistency in code interpretation and enforcement for both inspectors and industry.

COST IMPACT: None

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3
P		**P**		**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur

SOUTHERN NEVADA CODE AMENDMENT FORM –2012

AMENDMENT #:___57____

COMMITTEE: 2011 NEC

CODE SECTION: **700.12(B)(7) Location**

PROPONENT: Dennis Hunt

PROPOSAL: Add a new Subsection 7 to Section 700.12(B)
REVISE AS FOLLOWS: **(7) Location.** The emergency generator shall not be located more than 17 m (55 ft) above the lowest level of fire department vehicle access. When the generator set is located inside a building it shall be located in a room dedicated to the Emergency Power Supply System. This room shall be separate from the interior of the building by a minimum of two-hour resistive construction or shall be in room(s) fully protected by approved automatic fire suppression systems. Unless otherwise required by Building Codes openings for generator cooling and exhaust shall not be required to be fire-resistive construction.

When a generator set is located within 1.5 m (5 ft) of a building it shall be separated from the building with a rated separation wall equal to the highest fire rating within the building that has no openings. It shall be installed within an approved enclosure and protected from physical damage.

When a generator set is located more than 1.5 m (5 ft) from a building it shall be installed within an approved enclosure and protected from physical damage.

JUSTIFICATION: (check all that apply)

- o **Geologic, Geographic, Topographic, Climatic**
- o **Code correlation**
- o **Consistent with State or local laws**
- o **Addresses special use and occupancy**
- o **Correlation of national model code with other national model codes**
- **X Clarify intent of code**
- **X Address unique designs or systems not anticipated in code**
- **X Makes consistency in regional interpretation and code application**

The language in the NEC is too vague for the variety of buildings being constructed in this area. In order to address the many questions from installers and designers, this language was extensively re-written to clarify the intent of the code and to provide consistency in code interpretation and enforcement for both inspectors and industry.

COST IMPACT: Negligible

COMMITTEE ACTION:

Pahrump	Boulder City	Clark County	Henderson	Las Vegas	North Las Vegas	CC School District	Industry		
							1	2	3

P		**P**		**P**	**P**	**P**	**P**	**P**	**P**

RESULT: Passed

STEERING COMMITTEE RECOMMENDATIONS: Concur