

# The TGIF CHRONICLES

For Friday, April 16, 2004

Volume 2 – Issue 11

The following have been nominated this week that will receive this week's newsletter.

Randy Gee, Project Manager, Edenvale Restoration, Whistler, BC  
Bruce McIntyre, Branch Manager, Edenvale Restoration, Burnaby, BC  
Jon Merritt, Project Manager, Canstar Restorations, Port Coquitlam, BC

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If you know of anyone who should become a member of this elite group, then please email their name, title, company, and city to [integral@shaw.ca](mailto:integral@shaw.ca)

We hope every one got Easter eggs last weekend, enjoyed the good weather, and spent time with their family.

If you did not receive an Easter egg let our esteem Executive Editor, Sir Richard, know. Email him at [rcollis@uab.ca](mailto:rcollis@uab.ca) and give him your address so that he can get a egg, or maybe a bird, or something to you.

## ANOTHER DRY YEAR

Well here it is only April 16<sup>th</sup> and the fire season is upon us already, usually we have another month before it really gets started. Grant Molsberry, Fire Chief for Columbia Valley informs me that the snow shed is low and the conditions are very dry. Fire service, and fire departments across the providence have been put on notification.

## SLIGHT ADJUSTMENT IN APPEARANCE

From:

### INTEGRAL PROPERTY SERVICES

**LOSS APPRAISERS    LOSS CONSULTANTS    LOSS MANAGERS**

To:

### INTEGRAL PROPERTY LOSS SERVICES

**APPRAISERS                      CONSULTANTS                      MANAGERS**

Same great people! Same great service! Ask your local adjuster or underwriter!

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## **CONFINED SPACES**

### **OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION**

On January 14<sup>th</sup>, 1993, the Occupational Safety and Health Administration (OSHA) published the Final Rule on Permit-Required Confined Spaces. This new regulation includes guidelines for safe entry into confined spaces and maintaining an effective permit system.

OSHA defines a confined space as one that –

1. Is large enough and so configured that an employee can bodily enter and perform assigned work.
2. Has limited or restricted means for entry or exit.
3. Is not designed for continuous employee occupancy.

The term “confined space” has a wide application and covers situations:

- A) Where there might be a deficiency of oxygen or where an existing safe atmosphere could become deficient;
- B) Where toxic or flammable gases, vapours or fumes may be present or could arise;
- C) Where disturbance of sludge or deposits could release such vapours;
- D) Where an oxygen rich atmosphere might be present or could develop.

Thus a “confined space” is not necessarily an obviously enclosed space such as a tank or boiler entered through a manhole, but a duct, shaft, even a closed room or an open ditch must be considered as a “confined space”, if any of the situations listed above apply. A small ill ventilated room which would not normally be a confined space, could become a confined space if toxic vapours are being released such as applications of cleaners or adhesives.

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## **CRAWL SPACES**

Crawl spaces are associated with perimeter foundations or post and pier foundations. A perimeter foundation has the appearance of a continuous concrete wall above grade with openings to allow air into the crawl space. Pier and post foundations involve the use of concrete piers at regular intervals with

posts extending off the pier to a floor system above. A post and pier system will have a skirting extending to earth to give the house a finished appearance.

Behind either of these exterior walls lies the transitional zone between the soil and the house above. The following will aid in a better understanding of the crawl space and its elements, design and the areas where problems can occur

The Uniform Building Code (UBC) sets out several rules based on generations of experience. These rules apply to all crawl spaces.

All crawl spaces must have an entry 20" x 24". In order to move about in a crawl space, the Code requires a minimum of 18" of clearance below the large 2" X'S 8", 10" or 12" boards called joists. There must be 12" below the large beams called girders.

To provide for ventilation and air circulation, the crawl space must have openings or vents in a ratio of one square foot for each 150 square feet of floor above. These openings are covered with a 1/4-inch screen mesh. A vapor barrier must cover the soil in a crawl space, which is simply plastic sheeting. Last, the Code requires wood and earth to be separated by 6".

Any discussion of the Uniform Building Code must be prefaced with the understanding that the standards in the code are minimum standards. The code makes no effort to establish maximum standards; hence one must realize that compliance with the Uniform Building Code may not be adequate because of unique characteristics in each home.

A house constructed on soil which allows for good migration of water such as a sandy formation at the top of a hill may be well served by a crawl space 18" deep where the water evaporating into the air and being carried out through the vents is minimal. Conversely the same house at the bottom of a hill or a house with a reverse slope (soil sloping toward the house rather than away) may be burdened with substantially more water coming from the soil into the air in the crawl space and the minimum clearance and vent openings may not keep the crawl space dry.

Similarly, a home built thirty years ago would not have a crawl space with insulation and the addition of insulation will require an increase in air circulation to keep the moisture held by the insulation at a safe level

## **VAPOUR BARRIER**

A vapor barrier is durable plastic sheeting placed over the ground once all the wood debris has been removed. It functions by causing water rising from the soil to collect in beads on the underside of the plastic and fall back into the soil. This reduces the relative humidity of the air in the crawl space and hence the moisture

content of the construction lumber above. Once moisture has penetrated the vapour barrier or has accumulated on the surface of the sheet, it has been compromised and needs to be replaced to ensure a proper atmosphere.

## **VENT SCREENS**

The code contains an unusual provision on the venting of crawl spaces; code enforcement officials are allowed to deviate from the standards if they believe conditions are such that the ventilation standard is too great. The result of this discretion has been tremendous variation in crawl space ventilation around the community. The critical question is: Does the crawl space ventilation keep the crawl space dry enough to prevent deterioration?

In considering vent screens the critical concept is net free area. Simply, net free area is calculated by using length times width less the obstruction created by the wire mesh and louver. It is never useful to install louvers over a screen mesh and it is very common to see 1/8-inch screen mesh. The use of 1/8-inch mesh and louvers is never acceptable because the reduction in free area is too great to allow the vent to perform. Vents are located near corners to eliminate inactive air spaces and cross ventilation is essential to positive movement of air by outside breeze or convection.

The minimum clearance between joist and earth has two functions. The first enables a worker to move about in the crawl space and the second and most important is that the clearance between joist and earth limits the cubic volume of air in the crawl space

## **ODOURS**

Many people are allergic to mold and mildew. Poor or not enough ventilation usually causes odors generated in crawl spaces. Depending on the amount of growth of mildew and other molds and fungi, the area should be first treated by a specialist. Different soil conditions and compositions can also be the cause of a "bad" smell! In a crawl space the first line of defense is a plastic cover or vapor barrier.

Ventilation will always help to combat smell and odor. For such crawl spaces humidity sensors, which will find dry fresh air, have been developed. At the same time humidity levels and wood moisture content are reduced. Wet insulation will dry out and HVAC ducts will sweat less in the summer! The sensor facilitates longer cycles of ventilation without harming the structure! Power fans not properly controlled can make matters worse by pulling hot humid air into the crawl space during the summer months. An inside humidistat is one of the worst offenders. You might as well put the fans on switch and start them in the spring and stop them in the fall!

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## OFFICES, MEDICAL AND PUBLIC BUILDING GROUP

**Office buildings** are buildings designed for general commercial occupancy, including administrative government and corporate uses, and are normally subdivided into relatively small units. If part of an office building has some other occupancy, such as a bank or store on the first floor, that portion can be found in its appropriate section. For light shed office structures, see Sheds and Farm Buildings Group. For office apartments, see Dwellings, Multiples, Motels Group.

**Atrium** and vestibule entries or lobbies are glassed structures which usually abut or are underneath elevated buildings. For prefabricated greenhouse structures, see Sheds and Farm Buildings Group or Schools and Classrooms Group.

**Mechanical penthouses** shelter the building's elevator and other mechanical equipment. For finished penthouses, i.e., those containing roof apartments, restaurants, etc., use the proper occupancy cost.

**Parking-level floors** are intermediate and ground-level parking facilities found underneath elevated buildings and include all framing, ramps and stairs necessary.

**Basements** include finish compatible with the type of basement, including stairs and ramps as necessary and must be refined for size, shape and height. Add elevator stops from the refinement section.

**Mezzanines** do not include exterior wall or heating which are included in the building cost refinement for wall height. Elevator stops can be added from the refinement section.

**Banks, branch and central offices**, include savings and loan and credit union occupancies where the design is of a bank type. Where such uses are made of ordinary store or office buildings, the store or office costs should be used, adding for any extra features. While a branch bank tends to be a single purpose, low-rise neighborhood facility, the central or main bank facility may be more office building in character, where high-rise administrative office floors should be priced as such.

**Minibanks** are small walk- or drive-up facilities, typically between 500 and 2,000 square feet in size. Costs include vaults, but do not include banking fixtures or equipment, vault doors, or safe deposit boxes. Drive-up windows, night depositories, and surveillance systems commensurate with the quality, are included.

**Medical office buildings** are designed for medical and/or dental services with examination and outpatient treatment, and include private and public clinics.

**Dental clinics** are small, standalone facilities and will generally have a greater amount of plumbing and partitions.

**Dispensaries** or infirmaries are designed for emergency, urgent care, first aid and medical treatment, usually having no facilities for surgery or a minimum of such facilities.

**General hospital** costs include fixed equipment (Group I) but not Groups II and III equipment, whether installed or classed as personal property.

#### **HOSPITAL EQUIPMENT**

**Group I** equipment is permanent equipment, installed in or attached to the building, part of the general contract, and included in calculator costs.

**Group II** equipment is equipment often installed and becoming part of the real property, but typically not part of the general contract, such as autoclaves, permanent surgical lights, imaging equipment, etc.

**Group III** equipment is movable personal property such as furniture, fixtures, instruments, etc.

Group II and III equipment is not included in costs.

**Outpatient centers** are freestanding, specialty treatment centers for ambulatory outpatient or same day surgery facilities and include all clinical surgery, diagnostic, lab, administrative and public areas commensurate with the quality level. Operating rooms on average represent 2.5% of the total floor area. Cost includes fixed equipment only. This category will also include specialized imaging and radiation treatment, and diagnostic centers for cancer, diabetes, and eye and kidney diseases, etc. Extremely small vault-type imaging equipment buildings only, are not included, where reported costs have been 50% to 100% greater.

**Convalescent hospitals** lack facilities for surgical care and treatment, and include so-called skilled nursing homes, rest homes, and sanitariums and like buildings of hospital-type construction, giving full nursing care. Treatment and therapy rooms commensurate with the quality are included. Retirement living facilities are found in Apartments, Clubs, Hotels Group or Dwellings, Multiples, Motels Group. Group care homes are found in Apartments, Clubs, Hotels Group.

**Veterinary hospitals** are designed for the medical and surgical care and treatment of small animals. Costs do not include cages and runs or open shelters, which should be priced separately.

**Kennels** have limited examination and treatment facilities and are predominantly for the boarding of small animals. The better qualities include the large public animal control facilities and the high-cost "pet hotels." Costs include the cages and enclosed runs.

**Governmental buildings** include major city halls or town centers, courthouses, etc., but do not include typical office or service buildings, which should be priced under the proper section this or another group.

**Community service buildings** are mixed-use structures, typically found in rural communities, and are generally smaller and utilitarian in scope. The lower qualities are generally composed of public safety facilities, volunteer fire, limited office and council meeting rooms and/or small libraries, etc. The better qualities will have a large proportion of well-finished, full-service facilities and will merge into the government occupancy.

**Fire stations, staffed**, are emergency service buildings designed with engine storage, dormitory, and light kitchen facilities.

**Volunteer stations** are primarily for vehicular/apparatus storage only, with minimum office and meeting room facilities commensurate with the quality. The good quality may also include restroom and kitchenette facilities. If part of a station has some other occupancy, such as a library or social hall, that portion can be found in its appropriate section, or see community service buildings above.

**Jails, correctional facilities** or detention centers include the jail hardware; i.e., cell blocks and locking equipment, for which average costs are given. The full range of facilities, for minimum to maximum security, is included, commensurate with the quality of the entire prison plant.

**Police stations** are basically law enforcement facilities with limited numbers of jail holding cells. Sally port facilities commensurate with the quality are included. Costs do not include any service equipment for kitchen, laundry or recreation.

**Public libraries** or media/resource centers include the basic construction of the building, including most items found in the general contract, but not furnishings and fixtures such as counters, kitchenette, seating or book stacks which are not considered built-in and permanently attached under the general building contract. For school and university libraries, see Schools and Classrooms Group.

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We leave you with this thought

**“Be kind to your children. They’re the ones who pick your nursing home.”**

Have a great weekend!

**Executive Editor**  
**Sir Richard**

**Publisher**  
**IPS**

**Editor**  
**The Old Man**