# CONTRACTOR'S PRECONSTRUCTION SAFETY HANDBOOK September 2012

# ENVIRONMENTAL HEALTH & SAFETY



# SAN FRANCISCO VA MEDICAL CENTER

**Contractor Responsibilities** 

Contractors are responsible for complying with Medical Center safety policies, Federal, State and municipal laws, codes and regulations such as OSHA, EPA & Safety Officer Intervention Authority

VA Facility Safety Officer has intervention authority to immediately halt construction activities should an individual(s) be placed in imminent danger or a serious threat to the loss of facilities or a serious threat to the environment.

# **Table of Contents**

EMERGENCY INFORMATION	4
Important Telephone Number	4
Reporting Injuries	4
GENERAL REQUIREMENTS	5
General VA San Francisco Safety Policies	5
Housekeeping	5
Material Safety Data Sheet	6
Noise	6
Fire Safety	6
Personal Protection	7
Smoking	7
Stairways and Corridor Egress	7
Tool (Powered and Non-powered	7
Trash, Waste, and Scrap Disposal	8
Training Documentation	8
Biohazards/Infectious Material	8
CONSTRUCTION SAFETY & HAZARD COMMUNICATION REQUIREMENT	9
Asbestos	9
Barricades and Opening Protection	10
Permit-Required Confined Spaces	10
Excavation Safety	11
Hot Work Permits	11
Fall Protection	12
Hazardous Materials	12
Scaffolding	13
ENVIRONMENTAL REQUIREMENTS	14
Air Emissions	14
Fugitive Dust Emission Abatement	14
Combustion Sources	14
Hazardous Material Spills	14
Hazardous Waste	15
Storm Drains	15
Waste Management	16
Listing of Medical Center Safety Policies	17
Daily Construction Checklist (Attachment A)	18
Permit for Cutting & Welding Work Portable Gas or ARC	19
Equipment (Attachment B)	

# **EMERGENCY INFORMATION**

Contractors must abide by all emergency, fire alarms and evacuation procedures as established by the San Francisco VA Medical Center. Any alarm activated by the contractor must be reported immediately and a representative must be available to address the incident. In the event of an emergency, the contractor should report the incident to VA Police at 2222 or Engineering at 2009.

#### Important Telephone Numbers

All Emergencies – 2222

Environmental Health and Safety – 4839

**Engineering Service - 2009** 

#### **Reporting Injuries**

Injuries sustained by employees of a general contractor or its sub-contractors must be immediately reported to Environmental Health and Safety (EH&S). Within 24 hours of an incident, the contractor shall furnish EH&S with a copy of any accident/incident report that is generated on the medical center. Such reports must include a medical description of injury (if applicable) and action taken to prevent recurrence. If a person is seriously injured, the contractor will keep the medical center informed of that person's condition through the Contracting Officer Representative (COR)/Project Engineer.

# GENERAL REQUIREMENTS

# **GENERAL VA SAN FRANCISCO SAFETY POLICIES:**

- Acquire and wear ID badge at all times on site
- Protect patients and VA personnel in occupied areas from the hazards of dust, noise, construction debris and material associated with a construction environment.
- Adhere sticky mats at points of exiting (construction-side of door) into adjacent occupied spaces. Sheets will be peeled off before becoming soiled.



- Security is paramount. Access to construction sites shall be secured at all times to prevent people (veterans, visitors and staff) from wandering into the work areas that may be hazardous. Penthouse/attic, mechanical room and roof access doors shall not be propped open and left unattended.
- <u>Hard Hat Guidance</u>: It's discretionary depending on the work activity at any particular time.
- Signs must be posted where necessary to advise employees, patients, and visitors of the hazardous location and the protective measures to be taken.
- Alcoholic beverages/firearms are prohibited.
- Workers shall carry verification card
- Weekly Safety inspections:
  - a. Conduct by prime contractor's superintendent
  - b. Submit a written outcome to COR within a day after inspection.
  - c. Note all deficiencies found and list corrected date or planned date for resolving each item.
- Projects involving offending odors, excessive noise, or other irritating environmental agents may require work during "off-hours".
- Contractor must maintain all required permits and licenses for the job. Such permits and licenses must be available at the job site for inspection/audit.
- EH&S has the right to immediately stop the contractor's work activities if it is deemed immediately dangerous life and health to the contractor or employees.

#### HOUSEKEEPING

• The contractor shall keep the work area, specifically walking and working surfaces, clean and free from debris and trash, which could cause slipping and tripping hazards. Tools and materials shall be kept and stored in an orderly fashion and locked.



Page 6 of 20

#### MATERIAL SAFETY DATA SHEETS

Material Safety Data Sheets (MSDS) on all material used on the project must be submitted to EH&S for review and approved prior to the start of the project. Products containing carcinogens, asbestos, and lead cannot be brought on-site.

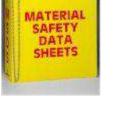
#### NOISE

The contractor shall keep the work area as guiet as • possible. If power activated tools, nail guns, or other such devices must be used to accomplish the work, the contractor shall notify the COR, Project Engineer and advise the type of equipment to be used and the duration of the work to be done. At times it will become necessary for the contractor to stop work immediately when advised by the COR Project Engineer, or EH&S that the work is adversely affecting patients, employees, or the surrounding neighborhood.

# **FIRE SAFETY**

- Fire alarms must remain operational at construction sites involving occupied buildings. In the event that the alarm system must be deactivated for more than four hours, an Interim Life Safety Measure must be followed whenever construction activities or other maintenance/repair activities temporarily impact the normal level of life safety for the building(s) involved.
- The Contractor must notify the COR approval to shutdown the fire alarm • system will be given only with sufficient prior notice where there is a demonstrated need, and the occupants of the building are not exposed to undue risk. A fire watch is required whenever the medical center fire alarm system is put out of service for more than four hours. VA Police are responsible for providing surveillance.
- Temporary protective coverings used on fire protection devices during . renovations shall be removed promptly when work has been completed in the area.
- **Fire Extinguisher Inspection:** 
  - (1) Contractor's fire extinguishers will be inspected in accordance of NFPA 10.
  - (2) For *Monthly* inspections the inspector needs to ensure that:

(a)The extinguisher is located in the correct designated area.









(b)There is nothing obstructing the extinguisher's access or visibility.

(c)The operating instructions on the faceplate are legible.
(d)Safety seals and or tamper indicators are not broken or missing.
(e)There is no physical damage, corrosion, leaks, or clogged hoses/nozzles.

#### PERSONAL PROTECTION



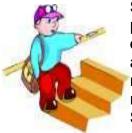
All required personal protective equipment (PPE) will be provided by the contractor to his/her employees. Its use is mandatory and enforcement is the responsibility of the contractor. The contractor supervisor shall ensure that employees wear appropriate clothing that provides adequate protection from normal hazards associated with the job. PPE includes head, eye, and hearing, hand, respiratory, and fall protection equipment. All PPE used must meet ANSI or, Fed /OSHA, Cal/OSHA standards.

#### SMOKING

• In accordance with the VA Medical Center policy, there is no smoking inside all buildings. This includes open stairwell landings, penthouse and roof access. Smoking is in designated outside smoking shelters.



# STAIRWAYS AND CORRIDOR EGRESS



Stairwells, elevator lobbies, and corridors are intended to provide a safe means for occupants to exit the building and emergency personnel to access the scene. The exit corridors of all areas are required to be kept clear and unblocked at all times, regardless of their width. All carts, supplies, ladders, tools, etc. must be kept out of the corridor or stairway when not in use. Some projects may require construction occupying part of the corridor width. When this occurs, it is extremely important that the remaining corridor be clear. If an entire corridor or exit must be blocked off for a project, the contractor must get approval from the COR.

# **TOOLS (POWERED OR NON-POWERED)**

Power tools shall be maintained in a safe working condition. Designed safety features such as guards and interlocks shall NOT be removed or dis-abled. Tools shall be tied off when used overhead. Tools powered by gasoline shall not be used inside VA Medical Center buildings.



# TRASH, WASTE, AND SCRAP DISPOSAL

- All trash, waste, and scrap must be wetted and disposed of each day in proper containers supplied by the contractor. All hazardous waste storage and disposal is to be coordinated through COR.
- Take measures to protect adjacent areas to the construction area from dirt, dust, and debris. Debris shall not be allowed to accumulate within or around the work area.
- The worksite and surrounding area, especially stairways, corridors, and walkways, must be kept clear of obstructions, waste, and dust which may create tripping, slip-ping, or egress hazards.

## TRAINING DOCUMENTATION

- Contractors and sub-contractors working at VASF Medical Center must have completed 30 hours OSHA Construction Safety course for all superintendants, supervisors & foremen prime, subs at all levels and 10 hours OSHA Construction Safety course for all trade person working at all levels as required by Cal/OSHA and Federal OSHA and fully meet the qualification requirements to complete the assigned work.
- Contractors must keep current training records for each employee assigned to perform work under this contract. Documentation of required training for all contractor personnel must be made available for ex-amination by EH&S, if requested. All necessary personal protective equipment will be provided by the above contractor and the employees have been/will be trained in its proper use.

# **BIOHAZARDS/ INFECTIOUS MATERIALS**

- Contractors may need to access or contact biological materials that are potentially hazardous. Examples of these include: work on sewer lines, sumps, drain traps, or areas containing infectious waste.
- Any Contractor working on equipment or building systems that are known or suspected of being contaminated with human blood or other biological materials, must complete an OSHA required Blood borne Pathogens training program for the recognition and control of these hazards.
- Other Contractors who are not directly working with biological materials, but may encounter these materials, shall train employees to be aware of any potential biological hazard appropriate for the work being performed.







# CONSTRUCTION SAFETY AND HAZARD COMMUNICATION REQUIREMENT

# ASBESTOS

- Due to the age of many of our buildings, many still contain asbestos containing materials (ACM). Primary ACM uses in the medical center include floor tile, mastic, piping, and HVAC insulation. The medical center has performed comprehensive asbestos survey and has identified accessible ACM. Some areas contain damaged asbestos and should not be accessed without prior abatement.
- The most common type of ACM insulation you may encounter includes thermal system insulation (TSI) and floor tile. ACM TSI is generally covered with a cloth wrap or lagging and the asbestos substrate generally



appears white in color. DO NOT SAND, DRILL, GOUGE OR OTHERWISE DISTURB THIS TYPE OF INSULATION. Contractors disturbing or releasing asbestos containing materials will be liable for all damages and clean up costs.

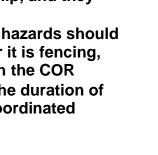
- In most cases where disturbance of asbestos is likely or necessary, it has been addressed in the contract. If not, please contact the Project Engineer (COTR) to make necessary arrangements for abatement.
- Asbestos insulation has been identified on elbows between fiberglass piping insulation as patching materials among the fiberglass insulation. Fiberglass insulation used in this facility is usually yellow or pink in color, wrapped either by cloth or paper lagging.
  - a. To protect and ensure all your employees are aware that asbestos containing materials have been used in the construction of this facility, you are required to have them review this section and complete the awareness statement included. See attachment F, part II. Once this document has been signed by all employees, forward to the COR for documentation.
  - b. Prior to performing work above any ceiling or starting in a new area, consult with the COR concerning existing conditions of ACM.

# **BARRICADES AND OPENING PROTECTION**

- Barricades and warning signs are required around all construction sites. In addition, adequate protection must be given to excavations, holes, or openings in floors or roofs, elevated platforms, and around overhead work to protect people from falling objects.
- Unless the general area is protected, barricades must be erected before any excavation, and ex-tended as the excavation progresses. Barricaded areas which contain an opening or hole for access must be protected during working hours and must be secured at the end of each day.
- All holes or openings through floors or decking at all elevations must be immediately covered or barricaded. Material or equipment must never be stored in an excavation cover or inside an excavated area.
- Hole covers must be secured or cleated so they CANNOT slip, and they must extend adequately beyond the edge of the hole.
- Barricades shall not create a trip hazard. Any potential trip hazards should be clearly marked. The type of barricading system, whether it is fencing, caution tape, or some other means, must be discussed with the COR
- Warning signs should be placed on barricades/fences for the duration of the construction project. Warning sign verbiage shall be coordinated through the Project Engineer.

#### PERMIT-REQUIRED CONFINED SPACES

- Contractors performing work on this facility will follow all requirements outlined in OSHA Standards for working in confined spaces. There are numerous permits required for confined spaces on this facility. These spaces have been identified. Some spaces have been posted, but the majority has not due to their configuration. A complete listing of these areas the Engineering Service is located in and Environmental Health and Safety.
- Confined spaces are areas which are large enough to be entered but have limited egress/exit potential and are not designed for permanent human occupancy. If you encounter any space which meets this definition or if it is a suspected confined space, please contact the COR for a listing of these spaces.
- Complete an initial Confined Space Checklist Form (see attachment H) to ensure that a confined space is safe for entry (no atmospheric or recognized serious safety or health hazards) without the need for a permit.







If a hazard is identified, the Confined Space Permit Form must be completed.

- a. Contractors shall have a trained confined space entry supervisor, entrant, and attendant and provide the documentation of training to the COR.
- b. Contractors performing work in confined spaces are responsible for compliance with all applicable standards and regulations.
- c. SFVAMC reserves the right to not allow a contractor into a SFVAMC confined space who: does not have proper equipment, does not have a permit, has not provided documentation of being confined space trained, or is working unsafely in or around a SFVAMC confined space.

# **EXCAVATION SAFETY**

Excavation and trenching shall comply with all applicable regulations, including Trenching and Excavation Requirements. The contractor is responsible for providing a "Competent Person" at every excavation site. This individual must be capable of identifying existing and predictable hazards in the excavation area and determining the suitability of equipment or materials used for support systems, shield systems, and other protective systems.



# HOT WORK PERMITS

• Any hot work operations including: cutting, welding, thermal welding, brazing, soldering, grinding, thermal spraying, thawing pipes, or any other similar activity will require a Hot Work Permit to be obtained by the contractor from the COR. See attachment B for the Hot Work Permit. The contractor will be responsible for conforming to all Medical Center policies and procedures concerning Hot Work Permits as outlined below:



- Prior to the performance of hot work in patient-occupied buildings, a request for Hot Work Permit will be made to the COR
- Environmental Health and Safety, also the contractors' supervisor will inspect the area and ensure that the requirements of NFPA 241 and OSHA Standards have been satisfied. The Hot Work Permit will be granted and will be posted in the immediate area of the work.
- The Hot Work Permit will apply only to the location identified on the permit. If additional areas involve hot work, additional permits must be requested.

- Upon completion of all hot work, the COR will be notified by the responsible individual to perform a re-inspection of the area.
- In all other areas not occupied by patients, the supervisor will inspect the hot work area for compliance with NFPA 241 and OSHA standards. Copies of the request and permit are available from the Engineering Service.

# FALL PROTECTION

• Safety harnesses must be worn and tied off to independent lifelines when working from elevated areas. Every employee issued a safety harness shall be instructed by his/her supervisor (qualified) in the proper method of wearing, using, and securing it to an approved anchorage point.

# HAZARDOUS MATERIALS

Use of any hazardous material is subject to the prior approval of EH&S with notification to the Project Engineer. EH&S reserves the right to require substitution of materials planned for use. Hazardous materials being used for the project must be properly stored in secondary containment for the duration of the project. Approved chemical storage cabinets should be used and all applicable fire and building codes shall be followed.

• Flammable liquids in quantities less than fifty-five (55) gallon drums are to be kept in "safety" cans that have been properly labeled as to their contents. Drums and tanks of fifty-five (55) gallons or more must be labeled, grounded, equipped with

(25) feet away from exterior building walls, smoking, welding, burning, or other heat sources.

- Gas cylinders must be securely held upright. Fasten them with an approved restraint device to rigid structures so they will not fall or be knocked over. Gas cylinders to be secured at both 1/3 and 2/3 height or in another approved manner. For earthquake safety, all cylinders should be double strapped. Locate cylinders away from pedestrian traffic areas. Make sure they are in well ventilated locations, at least twenty (20) feet from highly combustible material. Keep cylinders out of the direct sun and do not allow them to be heated.
- Read the labels on the materials you use and be aware of their hazardous properties. Take all appropriate precautions advised on the container





labels or MSDSs. Before using odorous chemical compounds or products such as glues, epoxies, paints, thinners, advise the Project Engineer. If the compound will cause problems for building occupants, you may be asked to limit or suspend work until further notice.

## SCAFFOLDING

 All scaffolding shall be erected and maintained in compliance with applicable OSHA standards, and the manufacturer' s specifications. Each scaffold must be erected and dismantled by licensed scaffolding contractors. Inspection of scaffolding must be made by a competent person assigned by the contractor for the work to be performed.



• All scaffold platforms must be equipped with standard fortytwo (42)-inch high handrails and mid-rail, rigidly secured and completely decked with safety plank or manufactured

scaffold decking. Rigidly secured four (4)-inch high toe-boards must be used on all scaffolding. Scaffolds must be tied off to the building or structure at proper intervals.

# ENVIRONMENTAL REQUIREMENTS

# **AIR EMISSIONS**

• Any operation or procedure involving the release of significant quantities of dust, vapors, fumes, or mist shall be approved by EH&S prior to start of work. Examples are large applications of floor, wall or roof coatings, spray applications, cement cutting, sandblasting, etc.

## FUGITIVE DUST EMISSION ABATEMENT

- All Contractors must reduce the amount of fugitive dust (particulate matter) emitted into the ambient air as a result of construction activities in accordance with applicable National Emissions Standards for Hazardous Air Pollutant (NESHAP) requirements and Bay Area Air Quality Management District standards.
- Any operation or procedure involving the release of significant quantities of dust, vapors, fumes, or mist shall be approved by the COR prior to start of work.

Examples include: large applications of floor, wall or roof coatings, spray applications, cement cutting, sandblasting, demolition activities, etc.

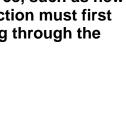
#### **COMBUSTION SOURCES**

 If any project involves the installation of a combustion source, such as new stationary generator, boiler, burner, or incinerator, construction must first be coordinated through EH&S GEMS program for permitting through the regulatory agency (BAAQMD).

#### HAZARDOUS MATERIAL SPILLS

- The contractor must report any hazardous material spills immediately to the COR and take immediate action to contain the spill. Regulatory agencies require containment and remediation of all spills of hazardous materials, including fuels and oil.
- Contractors who spill any such substances on the Medical Center property are responsible for clean-up coordinated through EH&S. Clean-up of the

contaminated area must be performed to the regulatory accepted level based on testing. Testing and disposal will be coordinated through EH&S and paid for by the contractor.





#### HAZARDOUS WASTE

• The contractor shall comply with all federal, state and local regulations pertaining to the management of hazardous waste, as well as VA Medical Center requirements. Hazardous waste must be handled and accumulated on-site in a safe manner and by properly trained contractor personnel.



- Fluorescent lamps are to be removed from fixtures with care and placed in special cartons and dis-posed of properly. Do not dispose of lamps in regular trash containers. Contact EH&S for further instructions.
- Asbestos containing materials removed under abatement contracts may be considered hazardous waste. It is the responsibility of the general and abatement contractors to dispose of them properly and coordinate through EH&S.
- Lead-based paint removed from structures is considered hazardous waste and must be disposed of properly and coordinated through EH&S.
- Hazardous waste generated on-site shall not be transported off-campus without proper manifests and signatures. Hazardous waste will be transported and disposed of in accordance with all applicable Federal, State, and local regulations.
- All hazardous and non-hazardous waste generated from abatement projects MUST be properly manifested per EPA/DOT regulations and signed by a designated EH&S staff member. Contractors are required to furnish EH&S with documentation of proper disposal whenever the contract calls for disposal of hazardous waste, including spills.
- Only representatives from EH&S are authorized to sign hazardous waste disposal manifests from waste generated on the medical center.

#### STORM DRAINS

 No hazardous, toxic liquid or solid material(s) shall be discharged to the storm drain and/or sanitary sewer system. Contractors performing planned work that will create potential runoffs from water blasting, wet method surface removal, etc., must consult with EH&S to ensure proper protection of the drainage system and adequate product collection procedures.



• Care must be taken to locate chemical storage and transfer areas to prevent the possibility of accidental spillage of chemical products.

#### WASTE MANAGEMENT

- Contractors are required to supply and use their own debris boxes. Contractors are prohibited from using Medical Center dumpsters for any of their own waste. Contractors shall recycle construction and demolition debris to the greatest extent possible using a certified recycling hauler.
- Contractors shall also provide a report to the COR, as requested, on the waste debris amounts that are generated and that are recycled.

# LISTING OF MEDICAL CENTER SAFETY POLICIES

- 1. MCM-001ES-02- HAZARD COMMUNICATION PROGRAM
- 2. MCM-001ES-03- ASBESTOS MANAGEMENT PROGRAM
- 3. MCM-001ES-05- PERSONAL PROTECTIVE EQUIPMENT
- 4. MCM-001ES-10- FALL PROTECTION
- 5. MCM-001ES-11- HAZARDOUS MATERIALS AND WASTE MANAGEMENT PLAN
- 6. MCM-001ES-19- ENVIRONMENTAL HEALTH SAFETY DURING CONSTRUCTION ACTIVITIES
- 7. MCM-001ES-21- PERMIT-REQUIRED CONFINED SPACE ENTRY PROGRAM
- 8. MCM-001ES-23- ASBESTOS EXPOSURE ASSESSMENTS
- 9. MCM-001ES-25- HAZARDOUS MATERIALS SPILL RESPONSE POLICY
- 10. MCM-001ES-29- FIRE PREVENTION MANAGEMENT PROGRAM

# **VAMC San Francisco**

# DAILY CONSTRUCTION CHECKLIST

(Keep this filed with other project documentation.)

		Yes	No
1.	All exits and pathways are clear and unobstructed.		
2.	All fire extinguishers are in place and operational.		
3.	All fire protection systems are operational.		
4.	All manual pull stations are clear and unobstructed.		
5.	All debris/trash is removed from the previous day.		
6.	All materiel is maintained in an orderly manner.		
7.	All flammable liquids are stored properly/outside the work area except what is being used that day.		
8.	Are all electrical extension cords GFCI protected?		
9.	Is temporary electrical wiring in compliance with the National Electric Code?		
10.	Are Lockout/Tag-out procedures being followed?		
11.	Are Hot-work operations permitted?		
12.	Are construction area partitions airtight and in good condition?		
13.	Are "No Smoking" signs in place?		
14.	Is access to the site restricted?		

**Note:** If you answered "NO" to any of the above questions, please give detailed information and corrective action(s) taken in the Comments portion.

Comments:


Construction Foreman Date

	VA MEDICAL CENT	ER SAN FRANC	CISCO
	PERMIT FOR CUT WITH PORTABLE GA	-	-
DATE:	BUILDING/LOCATION:	P	ROJECT NAME:
WORK TO BE DONE:			
SPECIAL PRECAUTIONS:			
	OR, HEAT DETECTOR AND		ANY WELDING ACTIVITY TO THE GENERAL AREA WHERE
PROJECT MANAGER (COTF	R) NAME:		SIGNATURE:
IS FIRE WATCH REQUIRED	)? YES / NO		
DURATION:	PERMIT EXPI	<b>RES</b> : DATE:	TIME:
The location where this work is to be done has been examined, necessary precautions taken, and permission is granted for this work (See other side)			
	SIGNED:		
welding and cutting)	(Cont	ractor Individual re	sponsible for authorizing
TIME STARTED:		TIME COMPLETE	D:
WELDER'S NAME:		SIGNATURE:	
EH&S SIGNATURE:		DATE: _	
	FINAL	_ CHECK-UP	
			read (including floors above and work was completed and were
	SIGNED:(Contr		
	(Conti	ractors)	

	ATTENTION			
shall i	e approving any cutting and welding permit, the Building Maintenance Supervisor or Work Leader inspect the work area and confirm that precautions have been taken to prevent fire in accordance NFPA 51B.			
wich	PRECAUTIONS			
	Cutting and welding equipment in good repair			
	WITHIN 35 FEET OF WORK			
	Floors swept clean of combustibles			
	Combustible floors wet down, covered with damp sand, metal or other shields			
	No combustible material or flammable liquids			
	Combustible and flammable liquids protected with covers, guards or metal shields.			
	All wall and floor openings covered			
	Covers suspended beneath work to collect sparks			
	WORK ON WALLS OR CEILINGS			
	Construction noncombustible and without combustible covering			
	Combustibles moved away from opposite side of wall			
	WORK ON ENCLOSED EQUIPMENT (Tanks, containers, ducts, dust collectors, etc)			
	Equipment cleaned of all combustibles			
	Containers purged of flammable vapors			
FIRE WATCH				
	To be provided during and 30 minutes after operation			
	Supplied with readily available extinguishing equipment			
	Trained in use of equipment and in sounding fire alarm			
	FINAL CHECK-UP			
	To be made 30 minutes after completion of any operations unless fire watch is provided			
	SIGNED:			
1	(Contractors)			