مؤسسة نجم السلامة لأنظمة الحريق

STAR SAFETY FOR FIRE SYSETEMS EST.

S.S . PROFILE

ALKHOBAR

SilverTower – 8 TH Floor Office #802

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T:0504987341

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Appendix:

Safety Plan

Quality Plane

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1.INTRODUCTION

Is a quality driven General Constriction company and was founded by highly qualified and well experienced Engineers in all disciplines to stand up as an example for good engineering practice.

2. COMPANY INFORMATION

SSGC

was established in 2003 under the name of SSGCContracting Establishment . Within this period, many major milestones was achieved as a proof that the company is very progressive, dynamic and capable to face all challenges. The growth of the company is a result of the dedicated teamwork of our highly skilled, qualified and dedicated staff and workers.

The Company had demonstrated its capabilities by delivering remarkable projects executed on time within the budget and according to the project specifications.

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Name :**STAR SAFETY FOR GENERAL CONT.(SSGC)**

Commercial Registration No. : 2060039824

Office Address : **Alkhoubar**

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3. NATURE OF BUSINESS

3.2.1 CIVIL WORK

- Specialized in factories constriction.
- General Contracting.
- General Construction.
- Steel Structure, Factories &warehouses.
- Industrial Services.
- Civil work.
- Foundation & Construction Engineering

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3.2.2MECHANICAL WORKS:

- HVAC System.
- Plumbing Work..
- Compressed Air.
- Firefighting System.
- Machine Erection.
- Industrial Mechanical Works.
- Machine Installation.
- Medical Gas work

3.2.2 ELECTRICAL WORKS:

- Lighting.
- Lightning Protection & Grounding.
- Fire Alarm Systems..
- Communication & Paging System.
- Power.
- Solar Systems.

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وزارة التجارة والاستثمار
Ministry of Commerce and Investment

شهادة تسجيل فرع مؤسسة

الرقم: ٢٠٥١٠٤٢٣٣٦
التاريخ: ١٤٣١/٠٤/٠٧

اسم التاجر: عبدالله سعد حسن الشهراني — الجنسية: سعودي — تاريخ الميلاد: ١٣٩٠

رقم السجل المدني / بطاقة الأحوال: ٠٠١٠٢٨٣٦٩٨٤٩ — تاريخه: ١٤٠٧/٠٩/١١ — مصدره: خميس مشيط

المركز الرئيسي: الثقبة الخبر الشمالية شارع الملك سلمان ١ ٧٣٩٩

ص.ب: ٠٣١٣١١ — الرمز البريدي: ١٦٥٢٧ — هاتف: ٨٩٠٤٧٨٢ — فاكس:

رقم سجل المركز الرئيسي: ٢٠٦٠٠٣٩٨٢٤

الاسم التجاري للفرع: مؤسسة نجم السلامه لانظمة الحريق

العنوان: الخبر الشمالية / شارع الملك فهد تقاطع ٢٦

ص.ب: ٠١٦٥٢٧ — الرمز البريدي: ٣١٣١١ — هاتف: ٨٦٧٤٠٠٢ — فاكس: ٨٦٧٤٠٠٥

النشاط: استيراد و بيع أجهزة و معدات السلامة و تركيب و صيانة أجهزة و معـــدات الإطفاء و الإنذار من الحريق و تعبئة و صيانة مطفيات الحريق
.....فقط بموجـب الخطاب الصادر من مساعد عام الدفاع المدني لشئون العمليات رقم (٢٤٦٥)في ١٨-٠١-١٤٣٨هـ

رأس المال: ٢٥٠٠٠ — خمسة و عشرون ألف ريال فقط لا غير

اسم المدير أو الوكيل المفوض: عبدالله سعد حسن الشهراني

الجنسيـــــــة: سعودي — تاريخ الميلاد: ١٣٩٠

رقم السجل المدني - الإقامة: ٠٠١٠٢٨٣٦٩٨٤٩ — تاريخه: ١٤٠٧/٠٩/١١ — مصدره: خميس مشيط

سلطات المدير

يشهد مكتب السجل التجاري بمدينة الخبر. بأنه تم تسجيل هذه المؤسسة بسجل مدينة الخبر.

وتنتهي صلاحية الشهادة في ١٤٤٣/٠٤/٠٦ — بموجب الإيصال رقم: ١٣٨١٧٦٩٠ — و تاريخ: ١٤٣٨/٠١/٢٦

الختم

مدير السجل التجاري: نايف صالح الطاسان

التوقيع:

يمكنك التحقق من صحة هذه الشهادة بالدخول على http://v.mci.gov.sa To Verify the information of this certificate visit

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MANPOWER STATUS

A. - OFFICE:

S/N	Category	Quantity	Nationality
1	Chairman	1	Saudi
2	Projects Manager	1	Pakistani
3	Executive manager	1	Egyptian
4	Civil Engineer	2	Egyptian+ Sudanese
5	Mechanical Engineer	2	Filipino+ Egyptian
6	Electrical Engineer	2	Egyptian
7	Estimation Engineer	2	Pakistani
8	Planning Engineer	1	Jordanian
9	Technical Department	2	Pakistani
10	Technical Department	2	Egyptian
11	Accounts Manager	1	Egyptian
12	Purchasing Officer	1	Sudanese
13	Office Secretary	1	Palestinian
14	Office Boy	1	Indian
	Total	20	

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B. –SITE:

S/N	Category	Quantity	Nationality
1	Civil Engineer	2	Indian, Filipino
2	Mechanical Engineer	2	Egyptian , Pakistani
3	Electrical Engineer	2	Egyptian , Pakistani
4.	Mechanical Foreman	4	Pakistani, Egyptian
4.	Electrical Foreman	2	Pakistani
5	Mechanical Helper	4	Indian, pakistani
6	Mechanical worker	8	Indian,Pakistiani, Egyptian
7	Electrical worker	5	Indian,Pakistiani
8	Electrical + mechanical helper	6	Indian,Pakistiani
9	Still worker & carpenter	18	Indian Pakistani, Egyptian
	Total	53	

Grand Total manpower 53

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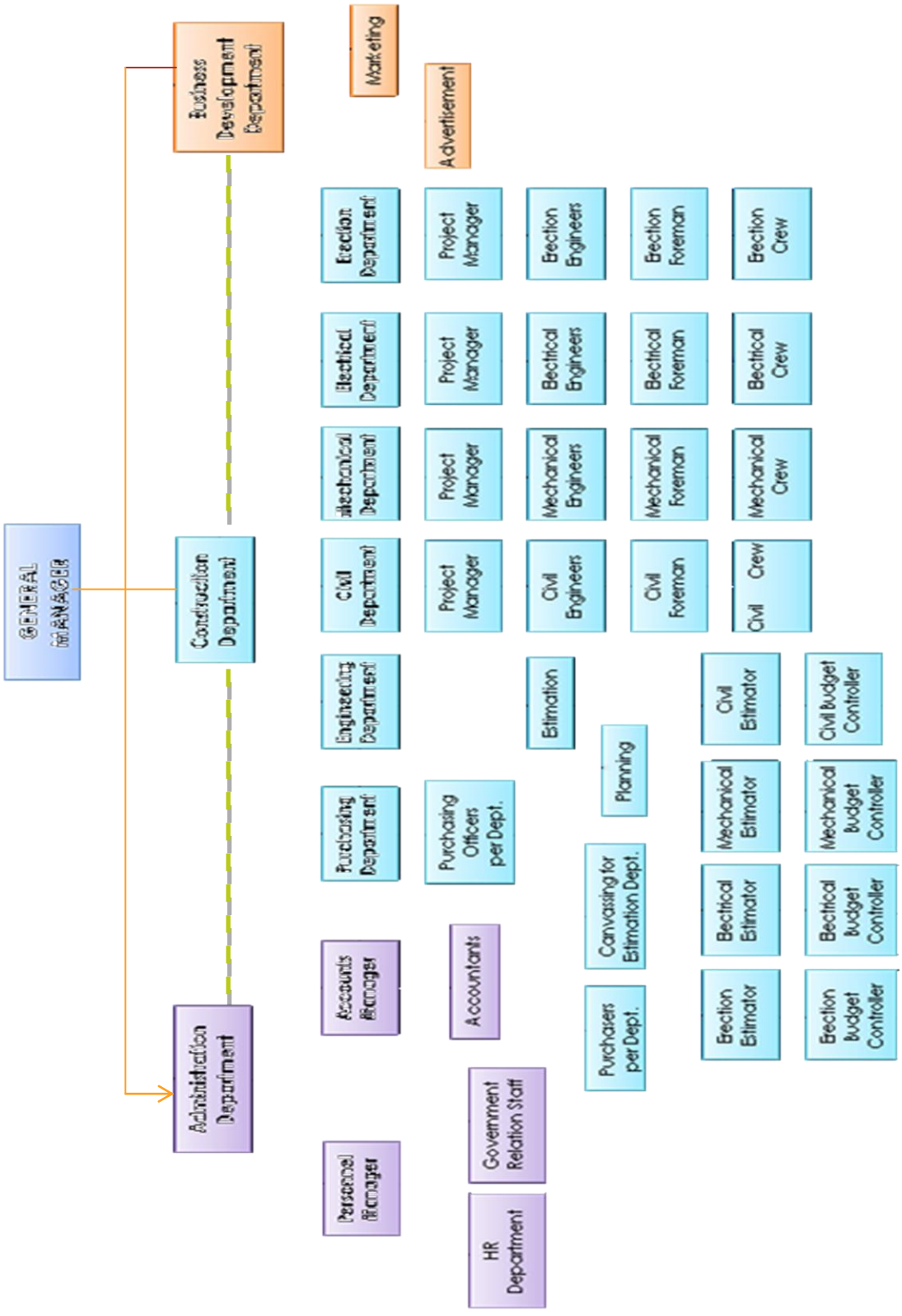
ORGANIZATIONAL CHART .



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ONGOING AND COMPLETED PROJECTS

No	Name of project	Scope of work	Location	Project state
01	AL.GHAD HOTEL 02	Eelectromechanical work	Al-khobar	On Going
02	AL.RASHEED TOWER	Eelectromechanical work	Al-khobar	On Going
03	GULF INTERNATIONA SCHOOL	Eelectromechanical work	Al-khobar	On Going
04	JAZAN MALL	HVAC,FIRE FIGHTING	jazan	On Going
05	COLGATE FACTORY	Eelectromechanical work	1st industrial Area-dammam	On Going
06	ALHAJREE FACTORY	Constriction work	3rd industrial Area-dammam	Done
07	PERFORMANCE MINERALS FACTORY	Constriction work, machine Erection	3rd industrial Area-dammam	Done
08	Electro-Mechanical Works for Aqua Park	Fast Contracting	Bahrain	Done

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9	Fire fitting works or Halliburton – sub contracting	Halliburton Fire fitting	Kouras Riyadh	Done
10	NCCI Company – Mechanical works for all offices – HVAC and fire fitting	NCCI Company HVAC & fire fitting	Dhahran road	Done
11	AL- Jemaah Auto motto	Security system	Dammam Road	Done
12	Live Bird Waiting Building - management building	Civil work	Abha	Done
13	Samar Village Compound	Security systems	Khoubar	Done
14	King Abdul Aziz sea port	HVAC	Dammam	Done
15	King Fahad Hospital Dammam	HVAC	Dammam	Done
16	FLOWSERVE – ABA HUSSAIN	HVAC & Fire fighting	Dammam	Done
17	Amyantet	HVAC &Firefighting	industrial area	
18	Novatel Business park	HVAC & fire fighting	H.way	
19	Bashaer Secondary School	Civil work	Khubar	

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No	Name of project	Scope of work	Location	Project state
20	Hizam Primary School	Civil work	Khubar	
21	NCCI Company	Firefighting &HVAC	Khubar	
22	Al Rashid Factory	Firefighting system	Dammam	

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Steel Structure

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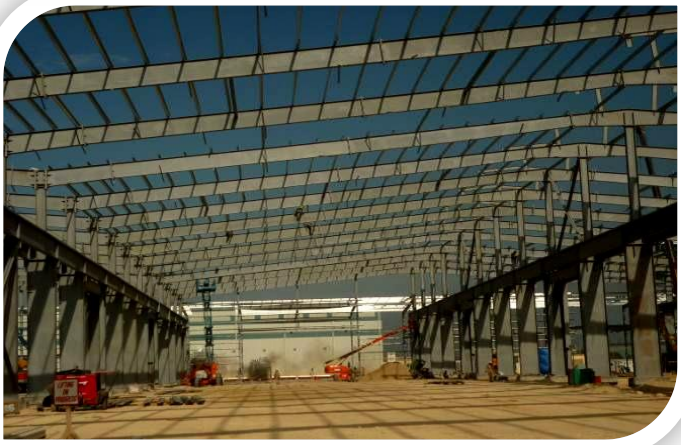

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Water and Sewer Piping

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HVAC, FIRE FIGHTING AND ELECTRICAL

PROJECT PICTURES

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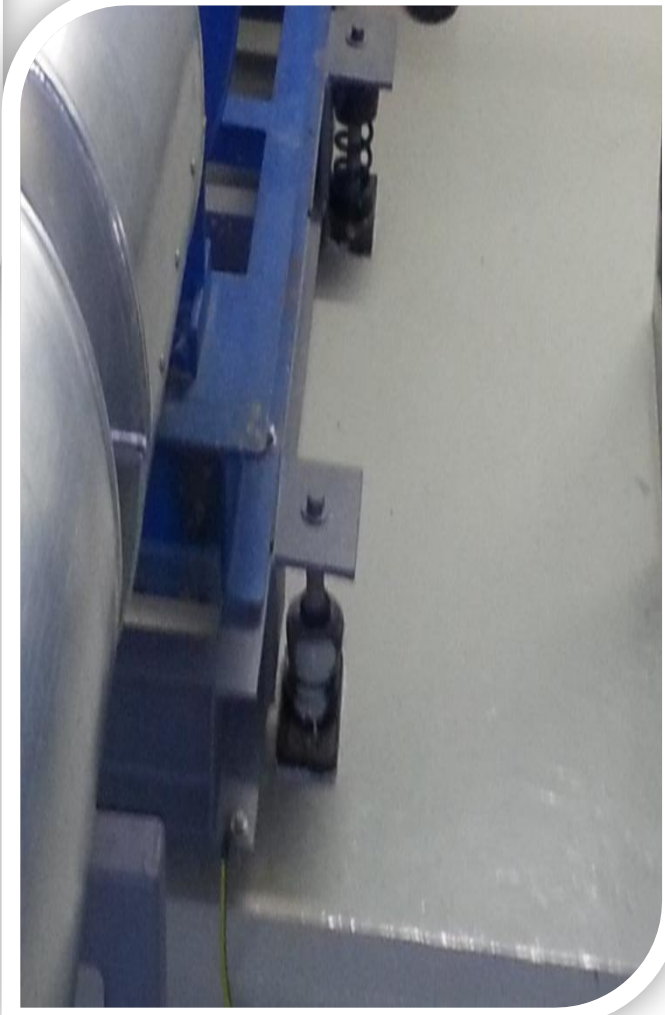

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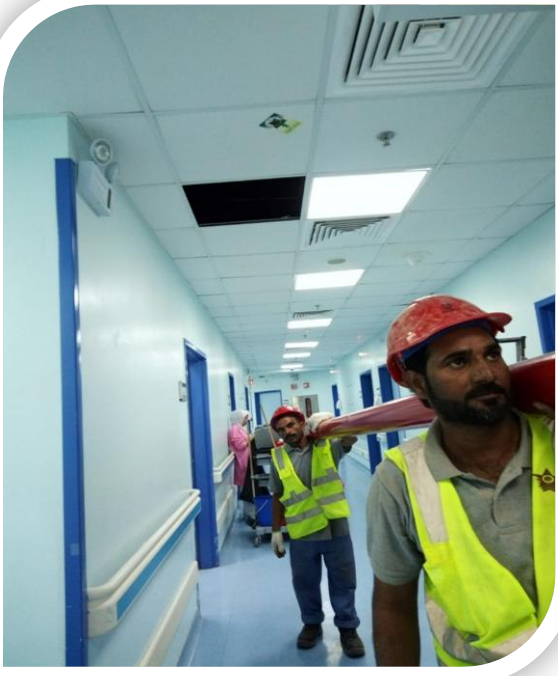

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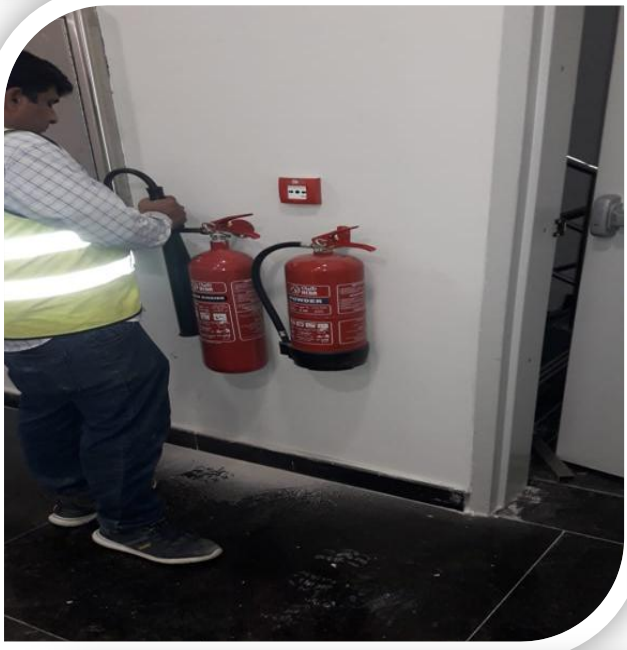

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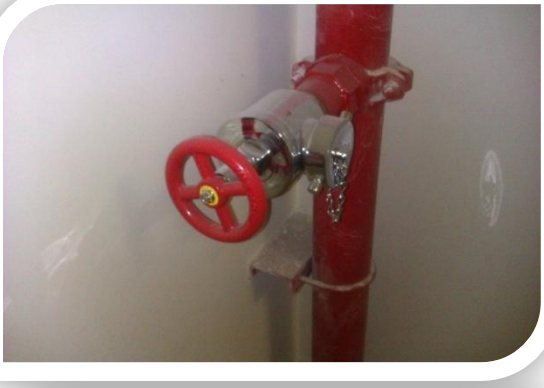

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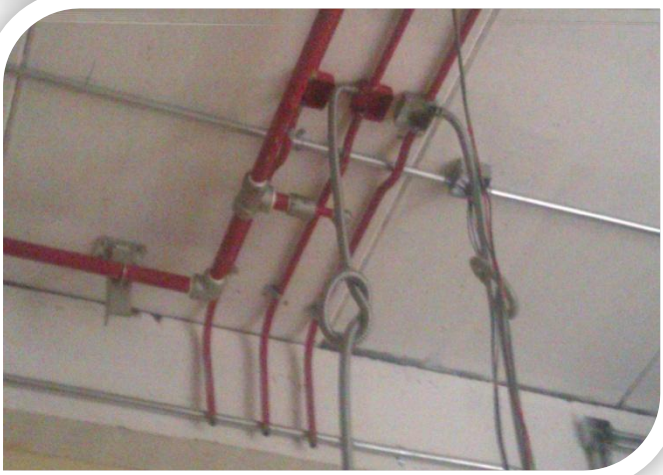

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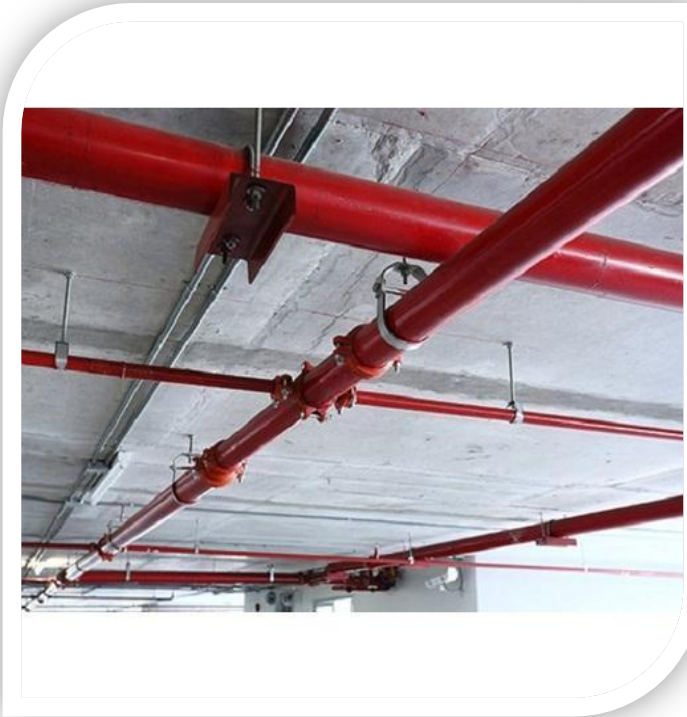

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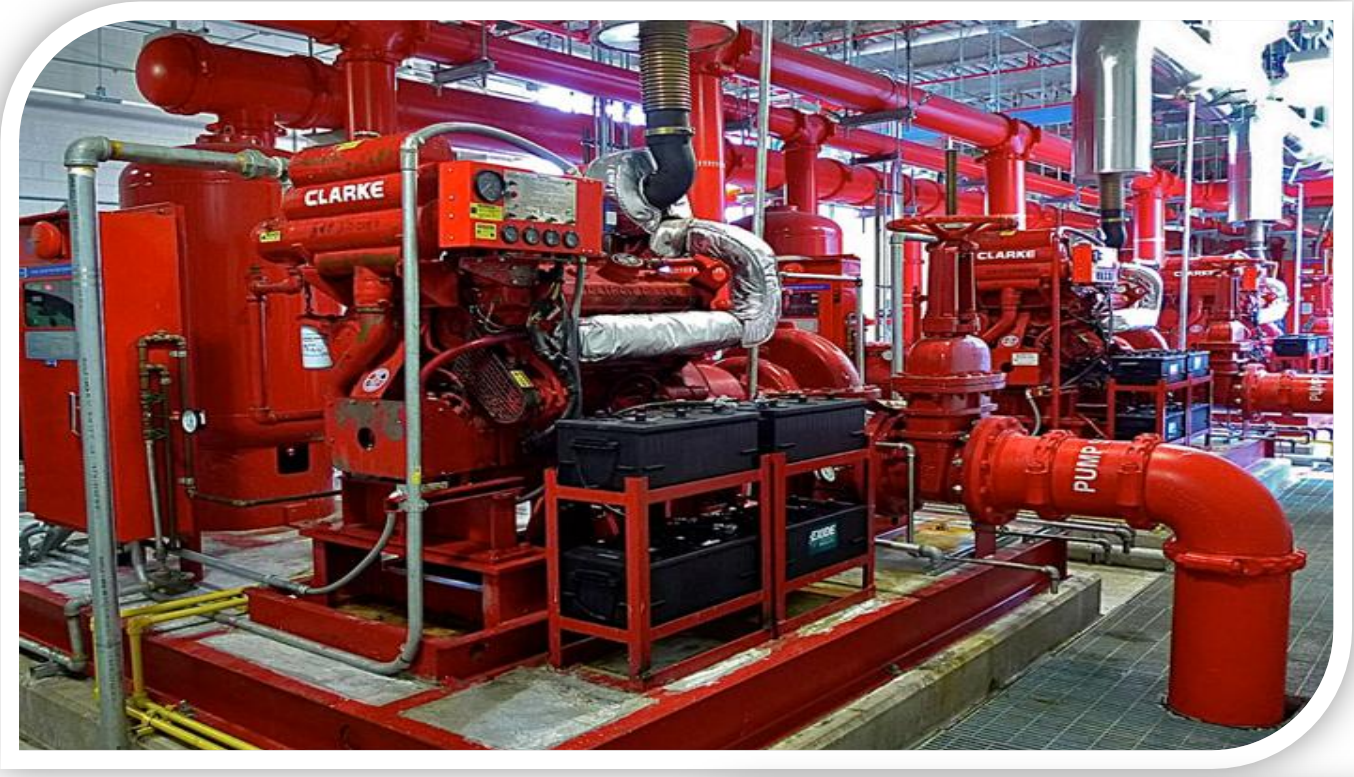

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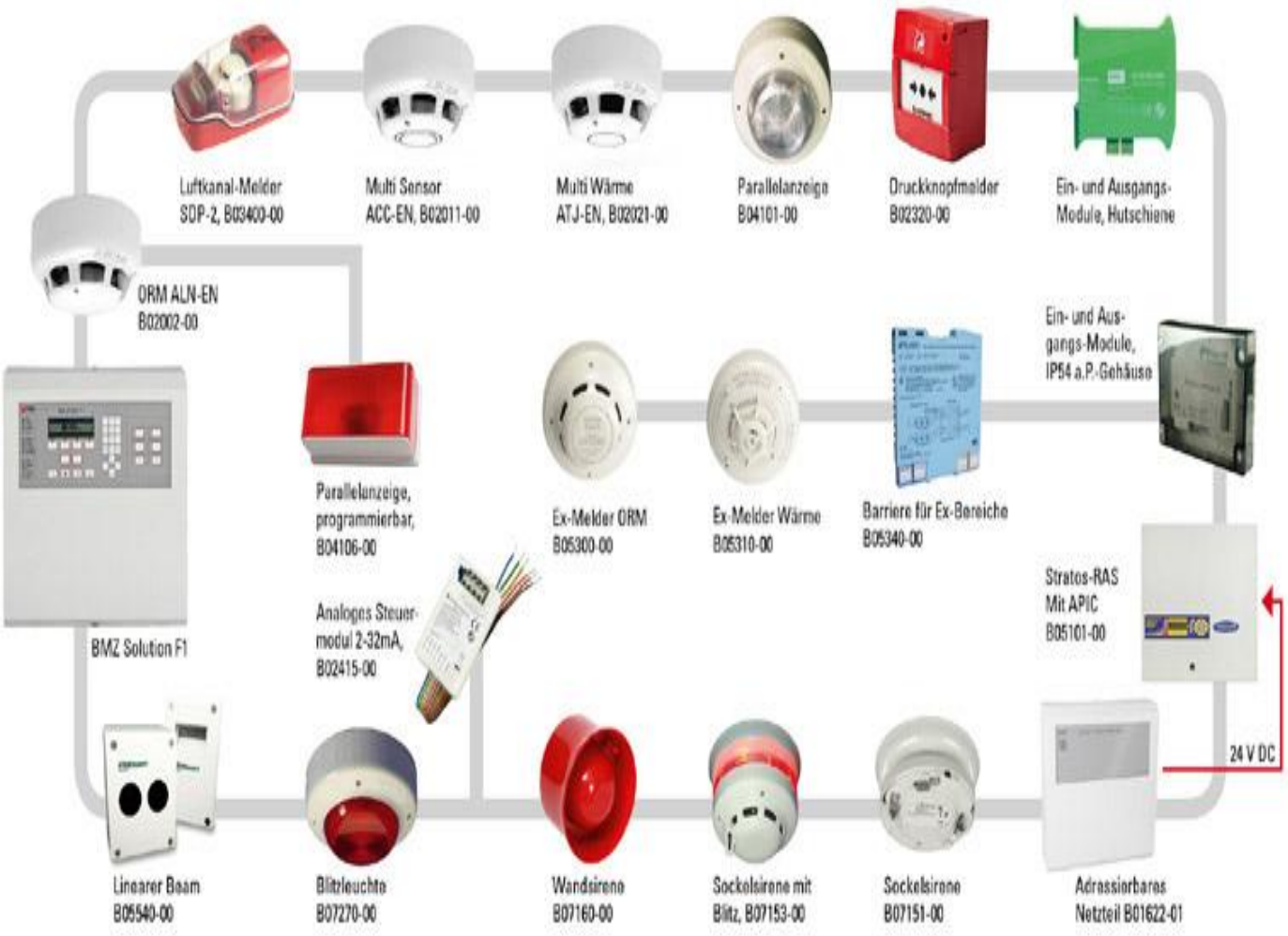

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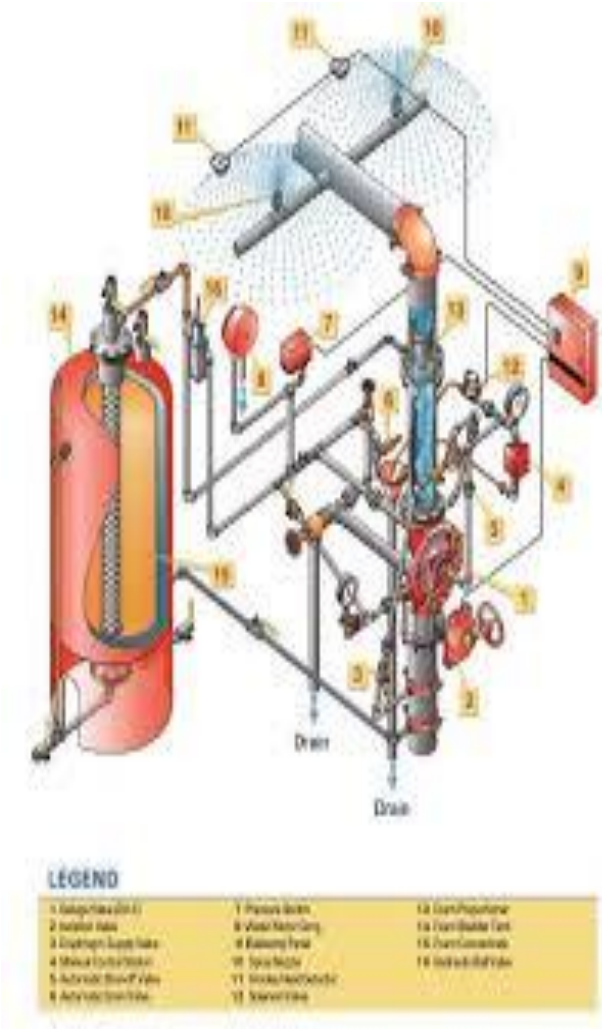

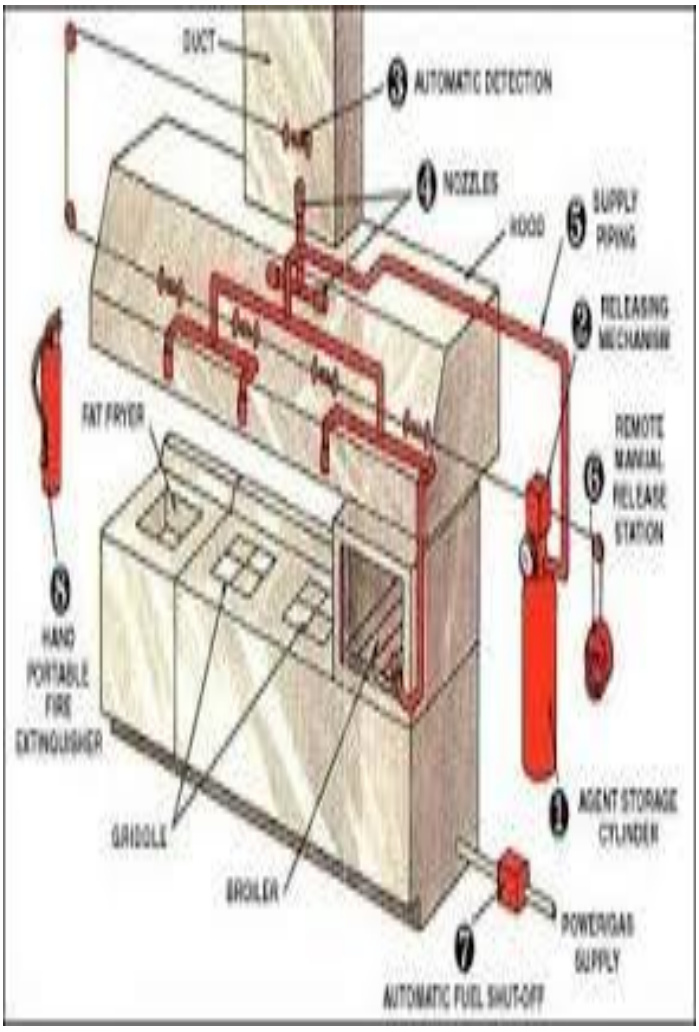

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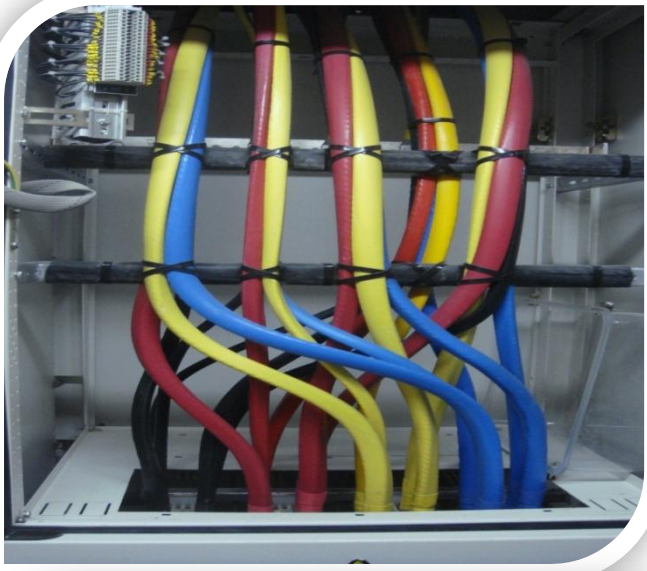

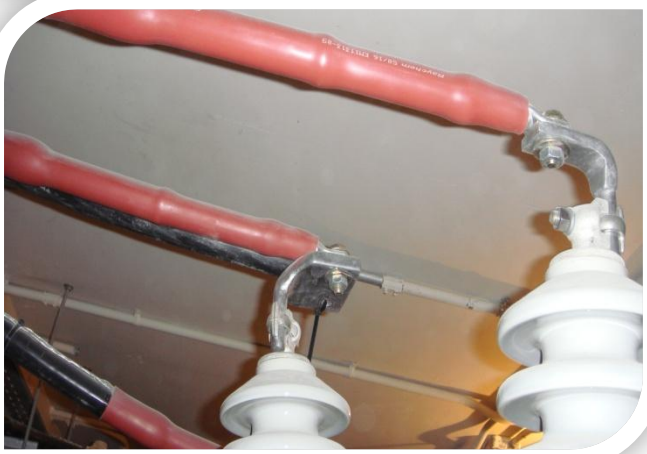

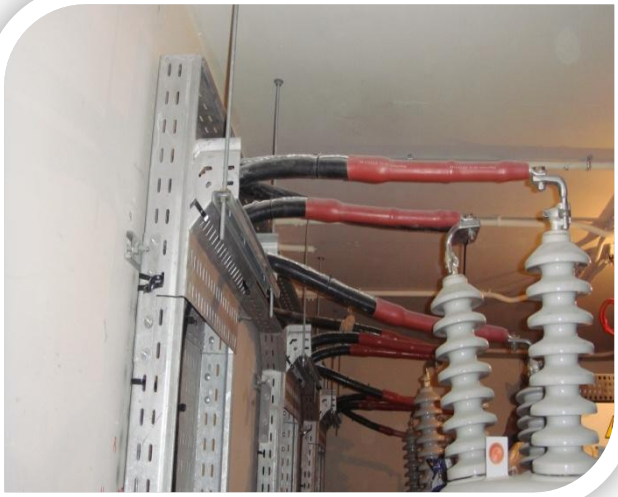

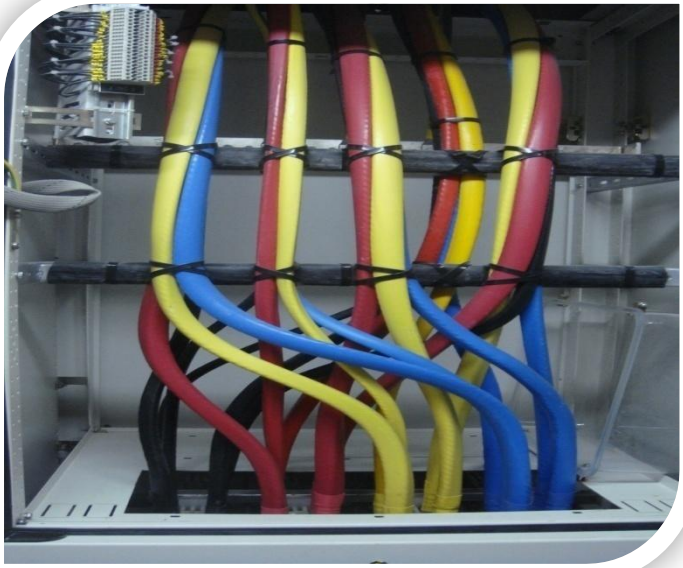

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SSGC

SAFETY PLANE

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1. Emergency Response Procedure

In case of an emergency. Call:

Medical- 997
Police- 999
Fire- 998

- Report all emergencies to Project management personnel immediately after calling.

Jobsite telephone number is:
Project Manager : _____
Site Safety Officer : _____
Engineer : _____
Superintendent : _____

- SBE/Contractor personnel will meet the emergency response team at the main facility entrance and escort the response team to the area of the accident.

- Team assignments to assist with the rescue of a trapped or injured person will be discussed monthly at the Staff Meeting. Assignments will be posted in the trailer and updated in case of changes.

2. Emergency Evacuation Plan

In the event of an emergency, it may be necessary to evacuate the Site. In such a case, notification of the emergency will be verbal, by radio or telephone communication, or by a series of air horn blasts. If personnel are asked to leave the site, they should do so at the nearest exit. Once out of the building, they will meet at a designated area (Area TBD). All subcontractors will be responsible for accounting for their own employees and notifying SBE. When the emergency situation is stabilized, personnel will be notified either verbally, by telephone or by radio communication to return to the site. This procedure could be updated with evolution of the project.

3. Policy Statement:

☐SBE is committed to the safety of its employees, the surrounding community, and the environment. This plan involves the safety standards for the work undertaken by SBE for all Projects. We at SBE welcome all questions and suggestions regarding the safety of our employees and subcontractors and are interested in constantly improving our safety practices. At SBE, our goal is to provide an injury and incident free project for everyone involved. To achieve this goal, it is the responsibility of everyone involved in the project, from labor to management, to dedicate themselves to the principles of safety and teamwork throughout the entire evolution of the project. With this attitude, and continuous safety training, SBE will provide the best possible conditions for its employees, subcontractors, and community that it can. This Safety Plan is intended to identify the safety precautions that will be taken on site. This plan is not proposed to be an all inclusive safety plan.

4. Contractor / Subcontractor Orientation and Responsibilities

☐ All SBE employees and each subcontractor worker will participate in a safety orientation before working at project site. This orientation will be conducted by a trained member of the project staff. A sticker will be issued and attached to the hard hat of the worker signifying that worker has been oriented.

☐All of SBE 's subcontractors at any project will be asked to submit their company's written safety program for review by SBE's site safety person. They will also be asked to review SBE's Site Specific Safety Plan for that particular project and will be required to attend periodic safety meetings / tool box talks.

☐Each subcontractor is responsible for insuring that their company meets the required insurance coverage to work on the site.

5. Record Keeping

☐SBE shall maintain at the project site all safety related correspondence and records. The following items shall be maintained in the SBE /Contractor filing system:

1. Training Records
2. Accident / Incident Reports
3. Crane Certifications and Weekly Checklist for Tower Cranes
4. Inspection Reports / Correction Sign Offs
5. Employee Violations / Subcontractor Citations
6. Weekly Toolbox Talks / Subcontractor Toolbox Talks
7. Safety Meeting Minutes / Correspondence to Subcontractor

8. Local Safety Log
9. Insurance Company Observation Reports
10. Subcontractor Competent Person Log

☐All major subcontractors are required to submit Weekly Toolbox Talks, competent person log, Hazardous Communications Plans with current Material Safety Data Sheet (MSDS) and accident investigation review to SBE.

6. Safety Plan Updates

☐As conditions change at the site, modifications will be made to the site-specific safety plan. These changes will be made to address specific concerns about safety and potential hazards created by new trades and tasks of the evolving project. All changes made to the safety program will be forwarded to SBE's employees and subcontractors.

7. Site Visitor's Access

☐Access to the construction site will be controlled by Contractor. All visitors must check in with the Contractor site office and must wear appropriate Personal Protective Equipment at all times.

10. Management / Employee Responsibilities/Discipline Policy

☐All management personnel at the site shall be responsible for upholding all safety protocol mandated in this manual. These responsibilities shall include, but are not limited to, training individuals in safety practices, monitoring workers during performance of tasks, stopping work when unsafe work practices are noted, and enforcement of safety compliance when needed. Additionally, all unsafe work practices noticed by anyone on the SBE

management team at the project will be promptly addressed.

☐All SBE employees and Subcontractors working at the site will be expected to strictly adhere to the safety policies outlined in this manual. Any employee questioning an unsafe condition or the safety of a task to be performed is encouraged to seek out a management team member for advice and resolution to the problem before initiating that task. Employees are also required to alert to the safety of others and to help ensure the safe work practices of all employees on site.

☐All subcontractors and tiered subcontractors are responsible for the actions of those they supervise, for maintaining safe and healthy working conditions in their areas of responsibility, and for strictly enforcing all authorized safety and health rules and regulations. It is understood that by identification of onsite competent person or persons, the assignment of this responsibility is made.

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Disciplinary Policy

☐Enforcement of the SPCC Disciplinary Policy is a responsibility of all Management Employees. An Employee observed committing a safety violation is to be issued a "Warning Form" by the respective Manager. The Employee is to be given the original of the Warning Form, to be filed on-site.

☐Management Employees are expected to enforce this Program with fairness and equality. This Disciplinary Policy should not be viewed as a "penalty" type process. It should be viewed as a very positive means to remove from our Projects those individuals who will not follow safe work practices and rules.

• Disciplinary actions as a result of a written Warning are as follows:

☐**First Offense:** Employee given Warning.

☐**Second Offense:** If within a 12 month period, the Employee suspended two work days without pay. Suspension to begin upon issuance of Warning, and will include two full work days; exclude any part of actual day Warning is issued.

☐**Third Offense:**

If within a 12 month period, termination

☐This Program is the minimum performance standard. Imminent danger type safety violations can result in immediate termination.

Safety Warning/Non-Compliance of Subcontractors

☐If a subcontractor violates safety requirements, the Safety Warning shall be used to document such Subcontractor violations observed by the project management. The Project Staff shall completed the citation and forward to:

Subcontractor's foreman or superintendent
Subcontractor's Home Office
Sr. Project Manager

☐Should a subcontractor repeatedly fail to comply with project safety requirements after issuance of safety citations, a meeting will be scheduled with the subcontractor Project Manager to address corrective actions.

11. Site Safety Inspections

☐At the site, SBE will have a designated Safety Person. The Safety Person will perform site walks to monitor safety. In addition, the safety person will periodically walk the site with his management team and subcontractors to address specific items concerning safety. Any recorded/documented site safety inspection report will be kept on file at the site.

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Hazard Communications Program

☐SBE has established a comprehensive written Hazardous Communication Program. This program includes:

- ○A chemical inventory list of known substances on site.
- ○Methods the employer will use to inform employees of the hazards of non-routine tasks.
- ○On multi-employer jobsites, such as the Project, the program includes methods by which SBE will use to inform other employers of any precautionary measures to protect their employees.
- ○The methods used to provide other employers with access to material safety data sheets (MSDS).

13. Training/Certification

☐By definition, a competent person, by means of training, knowledge, or experience, can recognize hazardous or potentially hazardous situations in the workplace, and has the authority to stop work to remedy the problem. At the Project site, the Contractor is required to identify their competent persons according to the definition. The Competent Person Form must be completed and on file at the jobsite before any work can begin. The name, company, phone number, emergency contact number will be provided to SBE for each competent person for each company.

☐All subcontractors will also be required to inspect and maintain all of their tools in accordance with manufacturer's guidelines.

14. Jobsite Safety Meetings

☐Weekly job site safety meetings will be conducted by the Contractor's site safety person or assigned to another member of the Contractor management team. Attendance and participation by all employees is mandatory and shall be documented accordingly.

☐ Periodic safety meetings/toolbox talks will be conducted by the Contractor to subcontractors and will be specific to relevant tasks to be performed. These meetings will also be documented and sign-in sheets kept on file.

- Additionally, subcontractors will submit minutes of their own meetings to the Contractor Site Safety Person.

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15. Basic Plans for:

Fall Protection

☐ Employees and subcontractors working 180 cm or more off the next lower working/walking surface shall be protected from falling. This protection could include guardrails, handrails, safety cable, safety nets, personal fall arrest systems, etc. Where handrail, guardrail, or safety cable systems are used for fall protection, the top rail of each system shall be able to withstand 100 kg. of pressure in any direction. The midrail of these systems shall be able to withstand a minimum of 75 kg. of pressure in any direction. Where personal fall arrest systems are used, they must be attached to an anchor point capable of supporting 2500 kgs. All personal fall arrest systems (harnesses and lanyards) shall be inspected daily before each use for damage to webbing, D-rings, etc. If any defects or damage is noticed, the harness and/or lanyard shall be taken out of service. If a harness and/or lanyard is involved in a fall, it shall be taken out of service immediately. All harnesses and lanyards must be matched sets. The use of roof monitors will not be allowed. If at any time throughout the project, additional measures, need to be taken to ensure the safety of employees. SPCC shall take immediate action for that purpose. Possible scenarios shall include, but are not limited to, warning line systems, controlled access zones, and personal fall arrest systems. Fall protection violations require a two day suspension without pay for SBE employees.

Steel Erection

☐All exposures will be protected in this manner until completion of the project or until construction phases (i.e. walls) eliminate their need. All steel erection activities and workers performing them will comply with SBE's 100% fall protection guides for 180 cm and above.

Scaffold Installation

☐All subcontractors erecting scaffold for work on the project shall do so under the direct supervision of the competent person so designated in writing for that contractor. Scaffold components and planking shall be inspected before erection to ensure that all components are in good working condition and not damaged.
Scaffold shall be inspected daily, before use, by the designated competent person to ensure its safety before anyone shall be allowed to access the scaffold. Each scaffold and scaffold component shall be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied to it. Each platform on all working levels of scaffold shall be fully planked or decked between the front uprights and the guardrail supports so as not to have more than a 2.5 cm gap between any members of the decking. All decks/platforms shall be free of debris, tools, materials, etc., for safe access along walkways and to prevent tripping/falling. Toe boards shall be installed appropriately so as to prevent materials from falling onto workers below.

Guardrails shall be installed when the scaffold reaches 180 cm in height. The top rail shall be at 100 cm in height with a midtrial equidistant between the top rail and the walking/working surface. All scaffolds shall be restrained from tipping or displacement by the use guys, ties, and braces to the building. All access to scaffold decks/platforms shall be achieved with ladders that are firmly secured to the scaffold structure. At no time shall workers ascend or descend the scaffold using the components of the scaffold structure.

16. Maintenance of Tools

☐As stated in section 12, all subcontractors will be required to inspect and maintain their own tools in accordance with manufacturer's guidelines. Any tool found by SPCC to be damaged or unsafe shall be tagged or removed from service immediately. All extension cords will be in good condition and free of lacerations that penetrate the sheathing. Any cuts in extension cords will be repaired properly or replaced.

17. Fire Protection/Prevention

☐At the project, SBE shall provide its employees an adequate number of portable fire extinguishers for protection.

☐All subcontractors will be required to provide their employees with adequate fire protection during work at the Project site.

☐All portable fire extinguishers supplied by SBE will be at least of 2A10BC configuration or equivalent.

☐Access to all available firefighting equipment shall be maintained at all times.

• All firefighting equipment shall be periodically inspected and maintained in operating condition.

☐The Project site shall be kept free from debris, trash, weeds, etc., which may become a fire hazard.

☐Smoking shall be prohibited in areas that may constitute a fire hazard and "No Smoking" signs shall be conspicuously posted. Subcontractors will be responsible for posting signs when working with flammable material.

☐Frequent job site inspections shall be conducted to ensure all above-mentioned conditions are met so as to comply with SBE's Fire Prevention Plan.

18. Housekeeping Directive

☐If at anytime it becomes apparent that Housekeeping is not being maintained, SBE will issue housekeeping directives. Subcontractors will be required to clean up their debris within one day of receipt of the directive. If the subcontractor does not comply with the directive within the time frame allotted, the debris will be cleaned up by SPCC forces at the expense of the Subcontractor's account.

☐The Housekeeping Directive provides written notice to Subcontractors requesting they perform the cleanup required by their Subcontracts.

19. Sanitation

☐ Each subcontractor shall provide an adequate supply of drinking water for their employees on site. Containers for dispensing water shall be closed and equipped with a tap. Water shall not be dipped from containers. Paper cups shall be supplied for individual use. If portable toilets shall be added to the site they will accommodate the number of persons. They shall be serviced twice a week.

20. Lockout / Tagout

☐Lockout / tagout is a procedure used to protect employees from injury while working on, maintaining, or making modifications to systems or equipment that has been energized. All contractors will be required to comply with all
construction standards. Cooperative efforts by SBE and Subcontractors at the Project Site will be made to ensure that personnel involved in lockout/tag-out procedure are properly trained. Key elements of lockout/tag-out are proper notification of all personnel of the event, the use of specific locks, identification tags indicating specific information about the energy source and the contractors involved, and procedures to re-energize the system. As stated earlier, anyone not properly trained in these very specific procedures of lockout/tag-out will be trained by the subcontractor or by the Contractor safety personnel or will not be permitted to participate in lockout/tag-out operations. Any system that has been locked and tagged will be inspected as often as needed by the Contractor controlling the lockout to ensure that the proper procedures are being carried out. Anyone caught tampering with a lockout/tag-out system will be terminated and escorted from the site.

21. Stairways and Ladders

☐Stairways, ladders, or ramps will be provided at all points of access where there is a break in elevation of 50 cm or more and where there is no other way to access the next higher or lower elevation.

☐All stairways shall be equipped with handrail and be kept free of debris for access and to prevent trip hazards.

☐All ladders will be used as per their specifications and their intended use by design. All straight ladders used to access upper elevations will extend at least 90 cm above the landing surface and be tied off to prevent displacement.

☐All employees ascending or descending ladders shall do so facing the ladder and shall maintain at least three points of contact at all times. Ropes will be provided at each ladder for pulling up of tools, lunch boxes, etc. Employees shall not carry anything up or down the ladders.

☐ All ladders shall be inspected daily, before use, for damage to the ladder. Any damaged ladder shall be taken out of service.

22. Flammable and Combustible Liquids

☐Flammable and combustible liquids at the Afico 2 Project Site shall be contained and maintained in accordance with Construction standards.

☐All flammable and combustible liquids brought on site by subcontractors shall comply with construction standards and shall meet all labeling and containment criteria set forth by those standards. Proper signage shall be posted on site.

☐Periodic inspections of the site will be conducted to ensure all materials are properly stored in approved containers when not in use. Approved storage cabinets, where required, will be inspected for content and volume. All containers of flammable or combustible liquids, which do not meet the criteria stated above, shall be removed from the site.

23. Control of Gases, Vapors, Fumes & Mists

☐If concentrations of gases, vapors, fumes, & mists are higher than the threshold limit value (TLV), employees shall be protected. When it is feasible, engineering and administrative controls shall be implemented for employee protection. When it is not feasible, appropriate personal protective equipment (PPE) shall be supplied to the employee for their protection. When PPE is to be used for compliance with Threshold Limit Values, the method of PPE shall be approved by a competent person, industrial hygienist, or other technically qualified person. Where respirators are to be used, personnel shall comply with Respiratory Protection Standard.

24. Signs, Signals, & Barricades

SBE is dedicated to the protection of civilians as well as employees. At the Project site, appropriate signs, signals, & barricades shall be installed around the perimeter of the site to insure the safety of all pedestrian & vehicular traffic. The perimeter of the site shall be enclosed by chain link fencing and gates shall be locked after working hours where it is feasible. Danger signs shall be posted appropriately to identify immediate hazards. Caution signs shall be posted to warn against potential hazards or to caution against unsafe practices. When necessary, flagmen will be used to help control or alter traffic flow. All flagmen are required to wear an appropriate colored vest (orange, red or lime green) during operations and their vests shall be of reflective material when

operating at night. All workers on site are expected to obey any and all signs, signals and barricades.

25. Material Handling and Storage

☐Material handling (loading and unloading) at the Project site will be an extensive on-going effort by SBE and subcontractors. Communication between all parties involved will play a major role in our success. Subcontractors, vendors, etc., bringing materials on site, shall contact SBE site supervisor to ensure that material handling is done properly and safely in accordance with construction standards. Storage space and procedures shall also be predetermined and coordinated with SBE management to ensure no materials block or impede other contractors during the construction process. Periodic inspections will be done throughout the site to ensure that all materials are stored properly. Whenever possible, loading and unloading of materials will be monitored by site safety personnel.

26. Confined Space Plan

☐Any and all personnel involved in confined space and permit required confined space work at the Project site shall be properly trained in all aspects of confined space procedures.

☐This training shall include entrant, attendant, or supervisor training. If trained for only one of these positions, then the worker shall not perform any other duties other than the one for which he is trained.

☐Confined space entry equipment shall be supplied by the contractor performing the work and shall meet all safety criteria as established by construction standards. The contractor performing the work must also be trained in the hazards of confined space work, including operating and rescue procedures, the use of respiratory equipment, and communication procedures between entrants and attendants.

☐Contractors performing confined space work shall have a written program developed so that all participating workers are knowledgeable of the procedures.

☐If a confined space is permit required, then the permit shall be supplied by the contractor performing the work. The permit shall be posted at the opening of the confined space, and removed when the work is done. A list of names shall be kept by the attendant of all workers (entrants) entering the confined space.

27. Trenching and Excavation Policy & Procedure

☐Trenches & excavation will be part of the construction process at Edgewater. The safety of all employees involved with these activities will be of paramount importance. All safety standards, related excavations, shall be strictly adhered to. All trenches & excavations at the Project site shall be inspected each day by the competent person of the contractor performing the work. Any changing conditions within the trench or

excavation shall be closely scrutinized by the competent person before any workers will be allowed to enter the trench or excavation, regardless of protective systems for personnel safety. Any trench 120 cm deep or greater shall be accessed by a ladder or ramp. All trenches greater than 150 cm deep shall be provided with an appropriate protective system to safeguard employees working with the trench. The protective systems may include benching, sloping, trench shields, trench boxes, aluminum shores, etc. All forms of shoring protective systems shall be engineered & designed by a registered Professional Engineer. The installation of said protective systems shall be monitored by a competent person trained in trench & excavation safety. Soil conditions and type shall be monitored throughout the excavation process for changing conditions. Should benching or sloping be used for personnel protection, the soil type as determined by a variety of tests shall dictate what the angle of repose shall be. Aside from protection against collapse or cave in within trenches and excavations, fall protection will be addressed during these operations. All trenches & excavations at the Project site outside the perimeter fencing shall be barricaded and/or supplied with an appropriate fall protection system so as to protect employees, subcontractors, and the general Public, from falling. These fall protection systems shall comply with construction standards Fall Protection.

28. Personal Protective Equipment (PPE)

☐PPE at the Project site will be closely monitored for compliance for SBE employees and subcontractors. Hardhats, work boots, safety glasses and High Visibility Clothing will be worn by all SBE personnel and subcontractors while in the confines of the project areas. PPE will be worn by all subcontractors and visitors at all times whenever they are inside the confines of the project. Shorts or cut-offs and tennis shoes are not permitted. Subcontractors are to supply their employees with approved PPE for various activities for their protection per Safety Regulations. All personnel are expected to strictly adhere to this policy. Any employee or subcontractor with willful disregard for SBE's PPE Policy will be disciplined and may be terminated and escorted from the site.

29. Respiratory Protection Plan

☐If respiratory protection is needed at the Project site, the subcontractor shall submit, to SBE a written program in accordance with Respiratory Standard. The program shall be reviewed by SBE safety and shall be monitored during Contractors operation for compliance with the standard.

30. Hearing Protection

☐Should hearing protection be needed at the Project site, SBE will provide its employees appropriately. SBE will also advise subcontractors to supply their employees with appropriate hearing protection.

31. Illumination

☐Construction areas, aisles, stairs, ramps, walkways, corridors, offices, shops, and storage areas where work is in progress, shall be lighted with either natural or artificial illumination. Temporary lighting will be provided by the electrical contractor at each level. The location of temporary lighting will be coordinated with the SBE Site Superintendent. Specific task lighting required above temporary lighting shall be

provided by each subcontractor at the work point needed. Additional lighting for evening and night time hours shall be provided when needed. Light plants shall also be provided when necessary during night work.

32. Motorized Vehicles and Equipment

☐All motorized vehicles and heavy equipment at the Project site will be maintained in good working order. All vital parts of said equipment shall be inspected by the operators daily.

☐When conditions warrant, all vehicles shall be equipped with two headlights and two taillights in operable condition. They shall also have brake lights in operable condition.

☐All vehicles shall be equipped with an adequate audible warning device (horn).

☐Seat belts will be in good condition and will be used at all times during operation of the vehicle / equipment.

- All heavy equipment / material handling equipment shall be equipped with rollover protective structures. In addition, overhead protection shall be installed.

☐Operators of motorized equipment shall operate their equipment in a safe manner with regard to Project vehicular and pedestrian traffic on site. Any reckless or unsafe practices shall be addressed immediately.

☐Anyone operating a motorized vehicle or heavy equipment will need a valid driver's license.

☐Forklift operators must provide an operators certification upon request.

33. Rigging and Hoisting

☐All personnel involved in rigging and signaling of loads for the crane will be required to show evidence of proper training. Personnel without proper evidence of training will not be allowed to rig or signal loads for the crane.

☐All subcontractors will be required to provide their own rigging for the crane. This rigging must be kept in proper operating condition. All rigging materials used by SBE's crane is subject to inspection and removal from site if found in unsatisfactory condition.

34. High Visibility Clothing

☐All SBE employees and subcontractors will wear high visibility clothing while working on the site. SBE High Visibility Clothing consists of neon green, orange safety vests, T-shirts or jackets.

☐All contractors who will be doing work close to any roadway, or next to any traffic areas for equipment or vehicles must wear high visibility clothing

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SSGC

QUALITY PLANE

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Table of Contents

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Introduction

This Quality Plan (QP) is intended to be a single point of reference for guidance on completing the key quality activities on the project as well as documenting the results of the activities. To accomplish these dual goals, the guidance on completing the activities is contained in the main body of the (QP), with the results contained in the appendices.
SBE is committed to quality. The activities summarized in this plan are standard SPCC policies and procedures, which greatly simplifies this QP as the activities are primarily references to standard SBE forms or procedures.
Therefore, for the readers and implementers of this QP, it is important to understand that the main body of the QP is truly for guidance and is written in an instructional format, with the appendices automatically updated as the project progresses and the activity completion recorded.

SBE Team's Quality Statement

"Our Goal for Quality is: To Capture the Essence of the Owners Desire, Combined with Our Pride of Workmanship"

Overview of Quality Activities

A primary focus of SBE for any project is to do work right the first time through planning and on-going construction verification. As part of the planning activities, a key first step is the review of the construction design documents to identify issues that may compromise the constructability of the facility and when we become aware, notify the Owner of issues that may impair the ability of the finished product to achieve the Owner's long-term goals for performance.
The key quality-based activities to be accomplished on this project are:

1. Review of project documents.
2. Detailed document reviews.
3. Pre-construction meetings.
4. Submittal/RFI/Field Report review and management.
5. Sample Construction Program Implementation and Follow up.
6. Pre-installation meetings.
7. On-going construction verification.
8. Testing program implementation.
9. Non-compliance.
10. Punch lists.
11. Close Out Documents.
12. 12-month warranty review.
13. Lessons learned.

The following sections contain guidance on accomplishing these activities.

1. Review of Project Documents

The review of the project documents is an important step in planning the project to achieve the level of quality desired, as the output of this document review are the key activities for the project, including:

☐Submittals
☐Tests
☐Inspections (Verifications)
☐Closeout Documentation

The identification and documentation of these key activities is intended to provide a level of expectation for what is to be accomplished on the project and to enable the identification and early resolution of construction issues.

Project Documents

The project documents that are to be reviewed on this project are:

☐Construction drawings
☐Construction specifications
☐Project contract and the general terms and conditions
☐Front-end document and exhibits
☐SBE past lessons learned
☐RFIs and Field Reports

Documentation of Key Information

For simplicity of documenting the key information and activities SBE utilizes Corecon as its project documentation management system. Within Corecon, the key information and activities for the project are maintained in a series of logs. The typical information collected is summarized on the following pages:

Drawing and Specification Log

Summary information on each drawing page and each specification section is maintained in a log in order to track the history of the project documentation. The following information is collected for each drawing page or specification section:

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Submittal Log

The construction drawings, specifications and front-ends are reviewed to identify all submittals that are required on the project. This information is summarized in a Submittal Log to provide a single source for what is required by the Owner and design team to approve commencement of construction and for specific construction activities. The following information is collected for each submittal:

Sample Construction Log

The Sample Construction Log is a subset of the Submittal Log that provides focus upon the sample construction required, their sequencing and any testing required before ordering of materials or commencing with construction. For the purpose of this project, SPCC will utilize sample construction which is to be accomplished in-place and is intended to remain part of the actual structure.
Maintaining a daily Construction log with project photos will be an important tool to not only ensuring that subcontractors are adhering to the quality measures put in place in the sample construction, but also to maintain an accepted standard between all parties.

Field QC & Test Log

The tests to be accomplished on components, systems, and assemblies are identified and tracked in the Test Log. Creating this Test Log during construction planning allows for adequate preparation, coordination of resources, and conveyance of expectations to enable passing of the tests the first time.

Inspection (Verification) Log

The Inspection (Verification) Log is a subset of the test log and provides a listing of the inspections and verifications to be accomplished relative to quality. These include witnessing of testing, random sampling of construction, verification of material receiving, as well as formal inspections to be accomplished. It is important that the Project Team determines and documents their verification program to be implemented throughout construction as it is these verification activities that help identify and resolve issues early.
The same information is collected as shown in the test log matrix, with the “Verification” or “Inspection” chosen for Category. Creation of the Verification Log during construction planning provides details to all parties how quality is going to be verified for the project.

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Closeout Documentation Log

The Closeout Documentation Log details what information must be provided to the owner in order to closeout the project. This typically includes certifications, warranties, redline drawings, etc. The following information is to be summarized for each closeout document:

SBE Quality Initiatives

As part of the work to be accomplished during the construction document review is the formalization of the planning documents for SBE Quality Initiatives. For this project, these plans include:

☐Water Infiltration Prevention Plan (WIPP)
☐MEP Coordination (MEPC) Plan
☐3rd Party Inspections
☐Potential Leak Component - Real Life Simulation Showers, Water Closets, MPE Chases
☐Visual Inspection
☐House Keeping – Cleanliness is Next to Godliness
☐Floor Finish Verification Interior (Exposed Concrete Floors)
☐Plant Equipment Coordination
☐Electrical Equipment Review
☐QC "Time Outs"
☐Lessons Learned From previous Fiberglass Insulation Projects
☐Door/Hardware Installation

These plans utilize the information gathered in the previous logs

Project Quality Challenges

The challenges to achieving the expected level of quality on this project are summarized below. To overcome these challenges, SBE is implementing this QP that focuses upon the key issues and identifies the need for additional review and coordination. As part of our on-going efforts, these Quality Challenges will be periodically reviewed with the project team to highlight the importance of overcoming the Quality Challenges.

☐Water Infiltration – Skylights, Windows, Doors, Exterior Wall Penetrations
☐Water Testing – Showers, Sinks, Water Heaters, Toilets, Sprinklers, Water lines
☐Anchor Bolt Installation
☐Protection of Finished Product – Concrete Floors
☐Punch List Management
☐Equipment and Material Tracking
☐Equipment and Material Coordination & Protection
☐Field Reports

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☐**Manage Metal Building (keys to success) See Below**

- Waterproofing Detail at Floor Slab and Exterior Doors
- Waterproofing Detail at Roof Curbs and Skylights
- Anchor Bolt Layouts
- Material Tracking Delivery Documentation/Verification
- Shortage Reporting and Material Replacement
- Site lay-down and Storage
- Rigging
- Fall Protection
- Exterior Door Framing and Door Hardware
- Slab protection

2. Detailed Document Reviews

During the document review and construction planning, there are typically systems or assemblies that are identified as complicated and thus require additional review to identify and document constructability and operational issues. This may be due to the identification of missing details in the construction documents, inconsistencies of information, or sheer complexity of a system.

RFIs and field reports will be the main source of plan revision.
Field Reports are received daily through email from the site. Each clarification or change will be entered by field report number, location of the item, to what the item is pertaining, what direction was given from the architect, when it was updated on the drawings, if the field report has been answered clearly or requires further direction, the responsible sub, and finally if that sub has been informed.
Items on the field reports needing to be addressed or corrected, are logged in a QC log. When the item is completed and photo documented, it is marked off in this tab to maintain a log in case the item is revisited later. Each item is entered by field report number, location, item that needs to be fixed, if it was resolved or not, the date or field report number it was resolved/closed, a hyperlink to the picture of the item if needed, the sub responsible, if they were informed, and finally the status of the item.
Once these items are updated on the log and are sent out, the project management team takes the information and updates the drawings, and informs the affected subs of the changes/issues..

5. Sample Construction Program Implementation and Follow-Up

The implementation of the activities detailed in the sample construction log helps define and achieve quality construction. This implementation includes accomplishing the following for each sample construction:
☐Clarifying sample construction details – verify that the sample construction details are clear and concise and that completion of the sample construction as detailed can be

tested (e.g., that all building enclosure penetrations/interfaces are included in the sample construction and that they can be functionally water tested).

☐ Schedule sample construction creation and testing – coordinate the sample construction creation and testing with the required approval entities to obtain early information on potential approval issues so that testing may proceed without delay.

☐Documenting sequencing of sample construction – as crews and personnel change constantly on a project, it is important that the construction sequencing of the sample construction be clearly documented. For example, for the building enclosures, this would include the construction sequencing of the structure, flashing, insulation, caulking, and other components.

• Documenting sample construction issues – any issue/modification/revision identified during the sample construction will be documented using standard project procedures. For key issues, additional information on the impact of avoiding the issue through the sample construction process will be documented to support continued implementation of the SBE Quality Program.

☐Documenting resolution of issues and impact on sequencing – the resolution of the issue, its impact on the sequencing of construction, as well as the impact of any unresolved issue will be documented using standard project procedures.

☐Periodic verification that actual construction implements the sample construction – throughout construction, the actual work will be periodically verified against the sample construction to verify consistency of quality. See the On-Going Construction Verification section on for additional information.

6. Pre-Installation Meetings

Pre-installation meetings (also called first installation meetings) are important to quality as they provide focus on how to actually construct what was approved in the sample construction or shown in the construction documents. The pre-installation meetings to be accomplished on this project are:

Construction Activity	Responsible Sub	Scheduled Date	Actual Date

Typically, SBE facilitates the pre-installation meetings, with the attendees leading the discussion and coming to resolution on any issues. For a generic pre-installation meeting, the following information is reviewed by the attendees:

☐Pre-requisites for accomplishing work
☐Review of Sample Construction
☐Review of construction sequencing
☐Defining precedence of systems (who moves when there is a conflict)
☐Review any test procedures and acceptance requirements

7. On-Going Construction Verification

The on-going verification of construction is the implementation of the Inspection (Verification) Log activities created during the planning for construction. The intent of this verification is to have the subcontractors maintain the level of quality defined in the contract documents through the identification and resolution of issues as early as possible and the minimization of systemic quality issues (e.g., leaking ductwork or leaking building enclosure).

QA/QC Timeout

The QC timeout was a concept that was developed from several site walks.
There are activities such as concrete pours, hanging drywall, setting tile, in wall rough-in, etc.; where a culmination of several small steps are completed to allow for a major step. With many of these activities there are inspections, or some other form of verification required that are cause for pause by all trades. The QA/QC Timeout requires that all construction stop prior to the milestone activity and QC the work in place.
During the construction process, this forces all trades to step back and look at the work focusing on quality. A day will be dedicated to quality for certain activities as they arrive on the schedule. For instance if you have a pour, there will be a day dedicated, likely the day before the pour where all the trades that have work in that slab will be inspecting and signing off their work from a quality standpoint.
With this approach SBE is trying to see a higher standard and establish a new bar. Our goal is to obtain a commitment from our subs that will ensure our success. This will take a tremendous amount of work by the project staff, but that is a challenge that we are up to.

8. Testing Program Implementation

The testing program implementation is simply the execution of the Test Log activities created during the planning for construction, by those identified in the Test Log activities. The intent of these tests is to manage and document the contract required tests and to minimize operational issues at the end of construction by identifying and resolving issues throughout construction.

Within Corecon, upon completion of the test, its status should be either "approved" or "rejected". For those that are rejected, the issues are documented in Corecon through the issues tool and another test is scheduled (through the Test Log in Corecon). This simplifies follow-up and achieves quick resolution of issues.

9. Non-Compliances

An important aspect of a quality program is the documentation and resolution of non-compliances – those items identified during construction that do not meet the requirements of the contract documents for function, fit, or operation. These non-compliances identify the issue, put the responsible party on notice, and track the resolution of the issue.
It is important to understand that non-compliance is positive in nature in that its resolution avoids issues later in construction, including rework and subsequent delays. Therefore, subcontractors should view non-compliance documentation in a positive light of avoiding future issues and they should take the appropriate steps to avoid similar non-compliances on their future work.

10. Punch Lists

The intent of implementing the QP for this project is to minimize the issues identified during the punch list process. This is accomplished through the previously detailed activities, including the detailed document review, use of sample construction, convening pre-installation meetings, on-going construction verification, and the use and resolution of non-compliances.
Therefore, the punch list process for this project is intended to identify and resolve those (few) remaining issues prior to owner acceptance after all self-performed and subcontractor work has been accomplished.
There are five steps in the punch list process for any project:

1. Completion List by Contractor
2. Corrections
3. A/E and Owner punch
4. Corrections
5. Final acceptance

1. Completion List by SBE

The completion list activity by SBE is intended to accomplish a review of the final work product relative to our understanding of the contract documents. This should identify and resolve the majority of most issues that could be brought up by the A/E and Owner, which should significantly reduce the A/E's and Owner's subsequent effort.

2. Corrections

Items identified by the SBE Pre-Punch are fixed to the responsible subcontractor. During these corrections, SBE and the subcontractor will discuss each issue to identify systemic items that the subcontractor needs to resolve (e.g., fix all instances of the issue, not just the instances found).

3. A/E Punch

The A/E Punch is part of the project closeout. For the A/E punch list walk, a representative from each subcontractor is required to be present to repair any items that can be corrected while the walk is in progress.

4. Corrections

Items identified by the A/E are fixed to the responsible subcontractor. During these corrections, SBE and the subcontractor will discuss each issue to identify systemic items that the subcontractor needs to resolve (e.g., fix all instances of the issue, not just the instances found).

5. Final Acceptance

Final Acceptance is obtaining approval for the corrections made. It is important for SBE and the subcontractors are responsive to the items identified to minimize delays.
Ideally, SBE should attempt to avoid move-in by the occupants until all corrections have been made to minimize additional work created by damage from the new occupants.

11. Closeout Documents

The creation and compilation of the closeout documents is accomplished according to the requirements of the contract documents as summarized in the Closeout Documentation Log
These activities are included in the project schedule.

At the 12-month point after owner occupancy (substantial completion) a site visit is accomplished by the Project Leader with the Owner to review the project for items that need repair/replacement under a warranty. This review provides value to the Owner as items are fixed at no cost. However, it also provides value to SBE and the subcontractors as time to identify and resolve issues past the first year is eliminated. The subcontractors and design professionals are not typically required for this review, but are often invited to participate at their option.

12. Lessons Learned

The final activity, as with any quality process, is the identification and documentation of lessons learned. For this project, the lessons learned will be documented via SBE standard Post Mortem Process with input from the Owner, design professionals and subcontractors. The actual lessons learned will be compiled and conveyed to the team via a summary document.