# Table of Contents

## IIPP Injury, Illness & Prevention Program

- XL Construction Corporation Safety Policy ............................................................. 1-7
- Responsibilities ........................................................................................................ 1-8
  - Corporate Health and Safety Director ................................................................. 1-8
  - Safety Engineer ...................................................................................................... 1-9
  - Jobsite Safety Coordinator (JSC) ........................................................................ 1-9
  - General Superintendent ....................................................................................... 1-10
  - Project Superintendent ....................................................................................... 1-11
  - Project Manager/Estimator ............................................................................... 1-12
  - Project Engineer and Project Coordinator ......................................................... 1-12
  - Project Foreman .................................................................................................. 1-12
  - XL Construction Employees ............................................................................. 1-13
- XL’s Code Of Safe Work Practices ......................................................................... 1-14
  - All Employees: ..................................................................................................... 1-14
  - Carpenters: .......................................................................................................... 1-19
  - Laborers: .............................................................................................................. 1-20
  - Cement Masons: .................................................................................................. 1-21
  - Office Employees ................................................................................................ 1-23
- Disciplinary Process ................................................................................................. 1-25
  - Safety Violation Warning .................................................................................... 1-27
- Safety Incentives / Recognition ............................................................................... 1-28
- Communication ....................................................................................................... 1-29
  - Employee’s Safety Suggestion ............................................................................ 1-30
- Hazard Assessment .................................................................................................. 1-31
  - Daily Jobsite Safety Inspection Checklist ............................................................ 1-32
  - Management Safety Audit .................................................................................... 1-34
- Correction of Unsafe Conditions or Acts ................................................................. 1-36
- Jobsite Weekly Safety Meetings ............................................................................ 1-37
  - Jobsite Weekly Safety Meeting ........................................................................... 1-38
  - Jobsite Weekly Safety Meeting Sign-In ............................................................... 1-39
- Injury/Illness Response, Investigation and Reporting ............................................. 1-40
  - Serious .................................................................................................................. 1-40
  - Supervisors Report of Injury ............................................................................... 1-42
  - Non-Serious ......................................................................................................... 1-43
  - Sample of Employee’s Claim for Worker’s Compensation Benefits .................. 1-45
Table of Contents

Authorization for Medical Treatment ........................................................ 1-46
Copy of Facts For Injured Worker’s Pamphlet ............................................ 1-47
Non-Injury Incident Response, Investigation and Reporting .................... 1-48
Non-Injury Incident Report ................................................................. 1-49
Employee Safety Training and Instruction .............................................. 1-50
Record Keeping .................................................................................. 1-52
New Employee Safety Orientation .......................................................... 1-53
Employee Record of Safety Training ...................................................... 1-54

New Field Employee Information — Safety
Welcome to XL Construction .................................................................... 2-6
Contact Information ................................................................................ 2-7
Safety at XL Construction ....................................................................... 2-8
Drug Testing Policy ................................................................................ 2-8
Heat Illness .............................................................................................. 2-9
Hazard Communication Program ............................................................. 2-9
Other Safety Procedures ......................................................................... 2-9
Disciplinary Process .............................................................................. 2-10
XL’s Code Of Safe Work Practices ........................................................... 2-11
   All Employees: .................................................................................. 2-11
   Carpenters: ....................................................................................... 2-16
   Laborers: .......................................................................................... 2-17
   Cement Masons: ............................................................................... 2-18
XL Construction Motor Vehicle Policies .................................................. 2-20
   Use of Company Owned Vehicles ....................................................... 2-20
   Use of Personal Vehicles for Company Business .................................. 2-22
Weekly Payroll Process ........................................................................... 2-24
Dispatch Procedure ................................................................................ 2-24
   Currently Working – Project Coming to an End .................................. 2-24
   Not Working ...................................................................................... 2-25
My XL Jobsite Information ..................................................................... 2-26
Required Forms to Complete ................................................................... 2-28
   Receipt of XL Construction’s New Field Employee Information Handbook 2-29

Subcontractor Safety Program — SSP
Letter to Subcontractors ......................................................................... 3-6
Requirements Prior to Field Activities ..................................................... 3-7
General Requirements ............................................................................ 3-9
## Safety Procedures

### Employee Protection
- New Hire Employee Onboarding .......................................................... 4-5
- Field Employee Stretch and Flex .............................................................. 4-7
- Personal Protective Equipment ................................................................. 4-16
- PPE Hazard Assessment Form ................................................................. 4-23

### Noise Exposure and Hearing Conservation
- First Aid / CPR. .................................................................................... 4-29
- Bloodborne Pathogens Summary ............................................................ 4-32
- Bloodborne Pathogens Exposure Control Plan ........................................ 4-33
- Vaccination Declination Form ................................................................. 4-40
- Post-Exposure Evaluation and Follow Up Checklist .................................. 4-41

### Equipment
- Hand and Power Tools ........................................................................... 4-42
- Ladder Safety ......................................................................................... 4-50
- Welding, Cutting and Hot Work. ............................................................... 4-55
  - Hot Work Permit .................................................................................. 4-67
- Compressed Gas Cylinders ..................................................................... 4-68
- Fire Extinguisher Protection ................................................................... 4-71
- Aerial Lift .................................................................................................. 4-74
- Forklifts .................................................................................................... 4-76
- Crane Safety ............................................................................................. 4-82
  - Crane Hoisting and Rigging Checklist ................................................... 4-93
- Material Off-loading and Rigging Procedures .......................................... 4-97

### Hazardous Material
- Hazard Communications Program ......................................................... 4-99
- Pressure and Fire Retardant Treated Woods ......................................... 4-106
- Air Monitoring for Operating Gas Powered Equipment Indoors ............ 4-107
  - Daily Air Monitoring Log .................................................................... 4-110
- Mold Policy ............................................................................................. 4-111
- Lead Exposure Program ......................................................................... 4-112
<table>
<thead>
<tr>
<th>Table of Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL Construction Lead Exposure Training Record</td>
<td>4-124</td>
</tr>
<tr>
<td>XL Construction Lead Medical Surveillance Record</td>
<td>4-125</td>
</tr>
<tr>
<td>XL Construction Removal of Employee From Lead Related Work</td>
<td>4-126</td>
</tr>
<tr>
<td>Asbestos Awareness</td>
<td>4-128</td>
</tr>
<tr>
<td>Respiratory Protection Program</td>
<td>4-130</td>
</tr>
<tr>
<td>XL Construction Worksite-Specific Respiratory Protection Plan</td>
<td>4-136</td>
</tr>
<tr>
<td>XL Construction Respirator Training Program Attendance Roster</td>
<td>4-138</td>
</tr>
<tr>
<td>XL Construction Respirator Medical Evaluation Questionnaire</td>
<td>4-139</td>
</tr>
<tr>
<td>XL Construction Weekly Respirator Inspection Checklist</td>
<td>4-144</td>
</tr>
<tr>
<td>Electrical</td>
<td>4-145</td>
</tr>
<tr>
<td>Electrical Safety Program</td>
<td>4-145</td>
</tr>
<tr>
<td>Assured Grounding Program</td>
<td>4-154</td>
</tr>
<tr>
<td>Lock Out/Tag Out</td>
<td>4-156</td>
</tr>
<tr>
<td>Equipment Isolation Steps</td>
<td>4-160</td>
</tr>
<tr>
<td>Isolation Log</td>
<td>4-161</td>
</tr>
<tr>
<td>Annual Audit of the Control of Hazardous Energy Program</td>
<td>4-166</td>
</tr>
<tr>
<td>Energized Electrical Work Policy</td>
<td>4-169</td>
</tr>
<tr>
<td>Energized Electrical Work Permit</td>
<td>4-172</td>
</tr>
<tr>
<td>Safety Inspections</td>
<td>4-175</td>
</tr>
<tr>
<td>Cal-OSHA Permit Requirement</td>
<td>4-175</td>
</tr>
<tr>
<td>Daily Job Hazard Analysis (JHA).</td>
<td>4-178</td>
</tr>
<tr>
<td>Job Hazard Analysis Worksheet</td>
<td>4-180</td>
</tr>
<tr>
<td>Near Miss Policy</td>
<td>4-181</td>
</tr>
<tr>
<td>Near Miss Hazard Report</td>
<td>4-182</td>
</tr>
<tr>
<td>Cal-OSHA Jobsite Inspections</td>
<td>4-183</td>
</tr>
<tr>
<td>Project Hazards</td>
<td>4-185</td>
</tr>
<tr>
<td>Cal-OSHA Heat Illness Prevention</td>
<td>4-185</td>
</tr>
<tr>
<td>Training</td>
<td>4-188</td>
</tr>
<tr>
<td>Silica Exposure Control Program</td>
<td>4-190</td>
</tr>
<tr>
<td>General</td>
<td>4-190</td>
</tr>
<tr>
<td>Trenching and Excavations</td>
<td>4-193</td>
</tr>
<tr>
<td>Scaffold Safety Policy</td>
<td>4-206</td>
</tr>
<tr>
<td>Daily Scaffold Inspection Checklist</td>
<td>4-212</td>
</tr>
<tr>
<td>Fall Protection Plan</td>
<td>4-215</td>
</tr>
<tr>
<td>Roof Fall Protection Plan</td>
<td>4-226</td>
</tr>
<tr>
<td>Jobsite Fall Protection Plan</td>
<td>4-233</td>
</tr>
<tr>
<td>Process Systems and Highly Hazardous Chemicals</td>
<td>4-238</td>
</tr>
</tbody>
</table>
Confined Space Program................................................................. 4-240
XL Confined Space Entry Permit ....................................................... 4-255

Safety Program — Pre-Task
Caissons/Piles .................................................................................. 5-11
  Pre-Task Meeting Checklist ........................................................... 5-11
  Controlled Access Zone / Fall Protection: ...................................... 5-13
Concrete, Cutting, Coring Operations .................................................. 5-14
  Pre-Task Meeting Checklist ........................................................... 5-14
  Concrete, Cutting, Coring Operations .......................................... 5-15
  Pre-Task Meeting Checklist ........................................................... 5-15
  General Requirements: ................................................................. 5-15
  Building Documents & Utility Location: ....................................... 5-15
  Equipment, PPE & Training: ......................................................... 5-16
  Public & Employee Safety: ............................................................ 5-17
  Additional Considerations: ............................................................ 5-18
Concrete Placement ........................................................................... 5-19
  Pre-Task Meeting Checklist ........................................................... 5-19
  Concrete Placement ...................................................................... 5-20
  Pre-Task Meeting Checklist ........................................................... 5-20
  General: ......................................................................................... 5-20
  “Tailgate” Pour .............................................................................. 5-20
  Pump Truck Pour .......................................................................... 5-21
Concrete Tilt-Up Panel .................................................................... 5-23
  Pre-Task Meeting Checklist ........................................................... 5-23
  General: ......................................................................................... 5-24
  Crew Designation ........................................................................ 5-24
  Crane: ............................................................................................ 5-25
  Rigging: ......................................................................................... 5-25
  Inserts: .......................................................................................... 5-26
  Bracing: ......................................................................................... 5-26
  Additional Considerations: ............................................................ 5-26
Confined Space Work ..................................................................... 5-28
  Pre-Task Meeting Checklist ........................................................... 5-28
  Definition ....................................................................................... 5-29
  Procedure ...................................................................................... 5-29
  Permit ............................................................................................ 5-29
  Training .......................................................................................... 5-30
# Table of Contents

- Environmental Testing ................................................................. 5-30
- Ventilation .................................................................................. 5-31
- Personal Protective Equipment ....................................................... 5-31
- Respiratory protection: ................................................................. 5-31
- Electrical Lighting ......................................................................... 5-32
- Communications ........................................................................... 5-32
- Fire Protection .............................................................................. 5-32
- Lock-Out and Tag-Out Procedures .................................................. 5-33
- Other Items Discussed ..................................................................... 5-33

Pre-Erection Cranes .......................................................................... 5-34

Pre-Task Meeting Checklist ................................................................. 5-34

Operation: ....................................................................................... 5-36

Tower Cranes: .................................................................................. 5-37

Crane Operations Near Power Lines: ................................................... 5-37

Personnel Platforms: ....................................................................... 5-37

Crew Briefing (Safety Task Assignment & Job Hazard Analysis) ......... 5-39

Pre-Task Meeting Checklist ................................................................. 5-39

Job Hazard Analysis .......................................................................... 5-40

Activity Hazard Analysis / Daily Crew Briefings ................................. 5-40

Demolition ......................................................................................... 5-43

Pre-Task Meeting Checklist ................................................................. 5-43

Demolition Checklist: ....................................................................... 5-44

Hotwork Electrical ............................................................................. 5-47

Pre-Task Meeting Checklist ................................................................. 5-47

Checklist: .......................................................................................... 5-48

Building Documents & Utility Location ............................................... 5-49

Equipment, PPE & Training................................................................. 5-50

Public & Employee Safety .................................................................. 5-50

Pre-Hoisting of Equipment ................................................................. 5-51

Pre-Task Meeting Checklist ................................................................. 5-51

Equipment ......................................................................................... 5-52

Excavation/Trenches ........................................................................ 5-54

Pre-Task Meeting Checklist ................................................................. 5-54

Excavations/ Trenches ....................................................................... 5-55

Fall Protection - Excavations/Trenches ................................................. 5-57

Attachment ......................................................................................... 5-59

Excavations & Soils Disturbance Permit (ESD) ...................................... 5-63

Fall Protection ..................................................................................... 5-66
### Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Task Checklist</td>
<td>5-94</td>
</tr>
<tr>
<td>General Checklist</td>
<td>5-94</td>
</tr>
<tr>
<td>Scaffolding</td>
<td>5-96</td>
</tr>
<tr>
<td>Cutting of Block</td>
<td>5-97</td>
</tr>
<tr>
<td>New Job Start-Up Checklist</td>
<td>5-98</td>
</tr>
<tr>
<td>Safety Items</td>
<td>5-98</td>
</tr>
<tr>
<td>PRE-ACTIVITY SURVEYS</td>
<td>5-98</td>
</tr>
<tr>
<td>SAFETY &amp; ENVIRONMENTAL PERMITS</td>
<td>5-99</td>
</tr>
<tr>
<td>OTHER</td>
<td>5-99</td>
</tr>
<tr>
<td>New Contractor Site Checklist</td>
<td>5-101</td>
</tr>
<tr>
<td>Coatings and Paintings</td>
<td>5-104</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-104</td>
</tr>
<tr>
<td>Coatings and Paintings Checklist:</td>
<td>5-105</td>
</tr>
<tr>
<td>Pressureized Piping Pre Task Testing</td>
<td>5-108</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-108</td>
</tr>
<tr>
<td>Notification and communication</td>
<td>5-108</td>
</tr>
<tr>
<td>Description of Piping systems to be Tested</td>
<td>5-109</td>
</tr>
<tr>
<td>Preparation for Testing</td>
<td>5-110</td>
</tr>
<tr>
<td>Testing</td>
<td>5-111</td>
</tr>
<tr>
<td>Public Protection</td>
<td>5-113</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-113</td>
</tr>
<tr>
<td>Pedestrian Checklist</td>
<td>5-114</td>
</tr>
<tr>
<td>Vehicular</td>
<td>5-114</td>
</tr>
<tr>
<td>Rolling Scaffolds</td>
<td>5-115</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-115</td>
</tr>
<tr>
<td>Rolling Scaffolds Checklist</td>
<td>5-115</td>
</tr>
<tr>
<td>Roofing Installation</td>
<td>5-118</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-118</td>
</tr>
<tr>
<td>Checklist</td>
<td>5-119</td>
</tr>
<tr>
<td>Fall Protection</td>
<td>5-120</td>
</tr>
<tr>
<td>Pre-Erection Steel and Decking.</td>
<td>5-123</td>
</tr>
<tr>
<td>Checklist</td>
<td>5-124</td>
</tr>
<tr>
<td>Preliminary Subcontractor Requirements:</td>
<td>5-124</td>
</tr>
<tr>
<td>Cranes &amp; Other Equipment</td>
<td>5-125</td>
</tr>
<tr>
<td>Erection</td>
<td>5-125</td>
</tr>
<tr>
<td>Decking</td>
<td>5-126</td>
</tr>
<tr>
<td>Other</td>
<td>5-127</td>
</tr>
</tbody>
</table>
# Table of Contents

- Railings and Access ................................................................. 5-127
- Safety Cable Systems Inspections ............................................. 5-129
- Perimeter & Interior Cable Systems ........................................... 5-129
- General Requirements (all cable systems): ............................... 5-129
- Supporting Posts / Uprights ....................................................... 5-129
- Specific Location Requirements/Corrections: Attachment A ........... 5-131
- Subcontractor Injury Prevention Program .................................. 5-135
- Injury Review Meeting Checklist .............................................. 5-135
- Checklist .................................................................................. 5-136
- Supported Frame Scaffold .......................................................... 5-137
  - Pre-Task Meeting Checklist .................................................. 5-137
  - and ......................................................................................... 5-137
  - Supported Frame Scaffold User Training Requirements ............. 5-137
  - Checklist ................................................................................ 5-138
- Erection and Use of Suspended Scaffolds .................................... 5-149
  - Pre-Task Meeting Checklist .................................................. 5-149
  - Preliminary .............................................................................. 5-150
  - The Erector ............................................................................... 5-150
  - The User .................................................................................. 5-152
- Traffic Control/Flagging ............................................................... 5-154
  - Pre-Task Meeting Checklist .................................................. 5-154
  - Traffic Flagger/Work Zone Pre-Task Checklist ......................... 5-154
  - Traffic Plan Consideration ..................................................... 5-155
- Flagging Instruction Hand Book ................................................ 5-157
  - Characteristic of a Flagger ..................................................... 5-157
  - High Visibility Clothing ......................................................... 5-157
  - Flagger Equipment ................................................................... 5-158
  - Work Zone Layout and Flagger Station .................................... 5-158
  - Hand-Signaling Procedures ..................................................... 5-159
  - Method of One-Lane, Two-Way Traffic Control ....................... 5-159
  - A Demonstration of Proper Flagger Methodology and Operations 5-160
  - Emergency Situations ............................................................ 5-160
  - Methods of Dealing with Hostile Drivers ................................ 5-161
    - Lane Closure on Low-Volume, Two Lane Road .................... 5-165
- Trench Plate ............................................................................ 5-168
  - Pre-Task Checklist ................................................................. 5-168
  - Checklist ................................................................................ 5-168
  - Public Vehicular Safety ........................................................... 5-169
# Table of Contents

- Pedestrian/ bicycle safety: ................................................................. 5-170
- Utility Start-Up and Tie-In ................................................................. 5-171
  - Pre-Task Meeting Checklist ........................................................... 5-171
  - Checklist ....................................................................................... 5-171
- Restricted Area Ventilation ................................................................. 5-173
  - Pre-Task Meeting Checklist ........................................................... 5-173
  - Ventilation Hazard to Address ......................................................... 5-174
  - Mechanical Ventilation Method ....................................................... 5-174
- Ventilation Plan - Site Specific ......................................................... 5-176
  - Specific Precaution- Lead. ............................................................... 5-176
  - Welding Fumes- General ................................................................. 5-177
  - Epoxy and Urethane Painting- Roller Application .......................... 5-178
  - Combustion Engines ....................................................................... 5-178
  - Silica Dust ....................................................................................... 5-178

## Safety Trainings

- Annual Training Courses Offered ....................................................... 6-4
  - Trench and Excavation Competency ............................................... 6-4
  - Scaffold Competency ................................................................. 6-4
  - CPR and First Aid ................................................................. 6-4
  - Hazard Communication ................................................................. 6-4
  - Respiratory Protection ................................................................. 6-4
  - Federal OSHA 10 and 30 Hour Construction Outreach Training ....... 6-5
  - Click Safety – On-Line Training ....................................................... 6-5
  - CLICKSAFETY Process ................................................................. 6-5
  - How to use CLICKSAFETY (Employee) ........................................ 6-6
  - ClickSafety Course Catalog .......................................................... 6-7
  - XL Construction Online SSP Training Program Instructions ............ 6-10
  - ClickSafety Subcontractor Notification Letter .................................. 6-12

## Index

Index ........................................................................................................... Index-1
Illness and Injury Prevention Program
Excerpt from Safety Program Manual
IIPP Injury, Illness & Prevention Program

XL Construction Corporation Safety Policy ............................................................. 1-7
Responsibilities ........................................................................................................ 1-8
  Corporate Health and Safety Director ................................................................. 1-8
  Safety Engineer ..................................................................................................... 1-9
  Jobsite Safety Coordinator (JSC) ......................................................................... 1-9
  General Superintendent ....................................................................................... 1-10
  Project Superintendent ......................................................................................... 1-11
  Project Manager/Estimator ................................................................................. 1-12
  Project Engineer and Project Coordinator .......................................................... 1-12
  Project Foreman ................................................................................................... 1-12
  XL Construction Employees ............................................................................... 1-13
XL’s Code Of Safe Work Practices ......................................................................... 1-14
  All Employees: ................................................................................................... 1-14
  Carpenters: ......................................................................................................... 1-19
  Laborers: ............................................................................................................. 1-20
  Cement Masons: ................................................................................................ 1-21
  Office Employees ................................................................................................ 1-23
Disciplinary Process ................................................................................................. 1-25
  Safety Violation Warning .................................................................................... 1-27
Safety Incentives / Recognition ............................................................................. 1-28
Communication ....................................................................................................... 1-29
  Employee’s Safety Suggestion .......................................................................... 1-30
Hazard Assessment ................................................................................................. 1-31
  Daily Jobsite Safety Inspection Checklist .......................................................... 1-32
  Management Safety Audit .................................................................................... 1-34
Correction of Unsafe Conditions or Acts ............................................................... 1-36
Jobsite Weekly Safety Meetings ............................................................................. 1-37
  Jobsite Weekly Safety Meeting ......................................................................... 1-38
  Jobsite Weekly Safety Meeting Sign-In ............................................................... 1-39
Injury/Illness Response, Investigation and Reporting .............................................. 1-40
  Serious ............................................................................................................... 1-40
  Supervisors Report of Injury .............................................................................. 1-42
  Non-Serious ....................................................................................................... 1-43
  Sample of Employee’s Claim for Worker’s Compensation Benefits .................. 1-45
  Authorization for Medical Treatment ................................................................. 1-46
  Copy of Facts For Injured Worker’s Pamphlet .................................................... 1-47
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Injury Incident Response, Investigation and Reporting</td>
<td>1-48</td>
</tr>
<tr>
<td>Non-Injury Incident Report</td>
<td>1-49</td>
</tr>
<tr>
<td>Employee Safety Training and Instruction</td>
<td>1-50</td>
</tr>
<tr>
<td>Record Keeping</td>
<td>1-52</td>
</tr>
<tr>
<td>New Employee Safety Orientation</td>
<td>1-53</td>
</tr>
<tr>
<td>Employee Record of Safety Training</td>
<td>1-54</td>
</tr>
</tbody>
</table>
XL Construction Corporation Safety Policy

It is the policy of XL Construction Corporation to establish, promote and maintain a safe and healthful workplace environment for its employees, its subcontract employees, the employees of its customers and members of the general public. Accordingly, and as required by state law, XL Construction has created and implemented this Injury and Illness Prevention Program.

The objectives of this program include:

1. The elimination of workplace injuries.
2. The elimination of incidents, which hold the potential to cause personal injury, property or environmental damage.
3. Achieving and maintaining support for this program at all levels of our organization.
4. Continued recognition of Health and Safety as a part of our corporate culture.
5. Motivating, educating and training appropriate personnel in the requirements of this program.
6. Making safety an integral part of all construction project planning. Complying with established Health and Safety standards and regulations.
7. Assisting our Subcontractors in management and implementation of safety on our construction projects.
Responsibilities

XL Construction Corporation has designated the President as the person responsible for the overall authority and implementation of the Injury and Illness Prevention Program, as well as ancillary Health, Safety and Environmental Programs contained in this manual.

All of these Managers and Supervisors are responsible for implementing the provisions of this IIPP and other programs contained in this manual on each construction project or individual work area.

Corporate Health and Safety Director

The XL Construction Health and Safety Director is responsible for oversight of all company endeavors related to employee health and safety. In addition, the Health and Safety Director oversees and directs activities, policies and procedures, as they are applicable to environmental compliance and overall business risk management.

In addition, the Health and Safety Director will:

1. Assist individual projects with implementation of company safety program elements.
2. Maintain the company’s Injury and Illness Prevention Plan.
3. Develop and maintain policies, procedures and practices that promote environmental compliance on individual projects.
4. Keep the principles of XL Construction Corporation informed of program changes and overall program effectiveness.
5. Be responsible for internal management of workers compensation claims.
6. Develop, monitor and maintain the company’s Vehicle Safety Program.
7. Manage personnel assigned to the safety department.
8. Maintain a working knowledge of laws and regulations applicable to the Environmental, Health and Safety Field.
9. Maintain certifications of expertise appropriate to the position.
10. Serve as custodian of all applicable record keeping and documentation relating to the company’s safety program.
11. Schedule and conduct company-wide safety meetings on a regular basis. Provide training for Managers and Field Supervisors in their safety responsibilities.
12. Assist in the procurement of outside consultation by environmental, health and safety experts when appropriate.
13. Provide assistance and recommendation to Project Managers, Estimators and Superintendents with job hazard analysis, employee training in new or unusually hazardous work, on the use of new substances or equipment, etc.

14. Investigate all workplace injuries, illnesses or accidents involving property damage.

Safety Engineer

The XL Construction Safety Engineer supports the Health and Safety Director in the implementation of all aspects of this IIPP as well as supplementary safety programs.

In addition, the Safety Engineer will:

1. Periodically and as needed, conduct, participate and/or otherwise attend jobsite weekly “all-hands” safety meetings.

2. Conduct, participate and/or otherwise attend jobsite “pre-task” safety planning meetings.

3. Conduct periodic inspections of construction projects for the purpose of identifying and correcting unsafe conditions or practices.

4. Assist with and conduct periodic safety related training to all employees.

5. Investigate accidents and injuries to determine cause and necessary corrections.

6. Perform other safety related activities as assigned by the Health and Safety Director.

Jobsite Safety Coordinator (JSC)

The XL Construction JSC supports the project superintendent in implementing XL Construction Safety Program elements on individual projects. The JSC reports to the Project Superintendent on a daily basis and the Corporate Safety Director for training and annual performance reviews. JSC are to perform all responsibilities in a professional and ethical manner at all times.

In addition, the JSC will:


2. Plan and assist in leading Weekly “All Hands” Safety Meetings.

3. Understand basic construction practices.

4. Keep jobsite OSHA manual up to date.

5. Maintain jobsite Safety Record Binder.

6. Plan and/or participate in Pre-Task meetings for High Hazard work.

8. Assist in the administration of “On-Line” safety training when required, or can manually conduct SSP orientation.


11. Investigate and document all jobsite injuries or incidents.

12. Able to construct, install and maintain: (or successfully delegate)
   - Standard handrails
   - Toe-boards
   - Cable handrails
   - Floor and roof opening protection
   - Basic fall protection systems
   - Safety related signage

13. Perform other safety related activities as assigned by XL’s Corporate Safety Director or XL Safety Engineer.

14. Maintain adequate supply of safety equipment/PPE for the project.

15. Attend Quarterly Safety Breakfasts, bi-monthly Foreman and JSC meetings.

**General Superintendent**

The General Superintendent is responsible for maintaining a working knowledge of the XL Construction IIPP, providing continuous input to the IIPP and other safety programs, policy and procedures.

In addition, the General Superintendent will:

1. Ensure that XL Construction Project Superintendents implement and enforce the safe work practices as set forth in this IIPP.

2. Periodically conduct inspections of XL Construction projects for the purpose of identifying and correcting both unsafe conditions and unsafe acts by others.

3. Assist XL Construction Project Superintendents in the pre-planning of high hazard events.
4. Assist XL Construction Project Superintendents in the implementation of subcontractor safety requirements.

5. Approve any, non standard or live work proposed by the project team.

Project Superintendent

The Project Superintendent, including any acting Superintendent, holds explicit responsibility and authority for the implementation and enforcement of all aspects of XL Construction Health and Safety programs on any project.

The Project Superintendent is responsible for implementing the XL Construction Injury and Illness Prevention Program, as well as any other specific programs, policies and or procedures deemed necessary for the health and safety of those employed at the construction project site. The Project Superintendent will keep a copy of XL's Safety Program Manual on each project. This Safety Manual will be readily available if project location(s) is transitory. The Project Superintendent will keep his / her Safety Manual up-to-date and ensure that changes, additions and or supplements are applied to the Safety Manual in a timely manner.

In addition, the Project Superintendent will:

1. Make available all necessary Personal Protective Equipment (PPE), job safety material, and first aid equipment as needed.

2. Maintain current American Red Cross, or equivalent training in both Basic First Aid and CPR.

3. Instruct Foremen and Trades Persons (whether XL or Subcontractor) that safe practices are to be followed and safe conditions maintained throughout the project.

4. Establish and maintain methods of safety communication with all XL Construction Employees and Subcontractor Supervisors.

5. Investigate all injuries and review them at weekly safety meetings with all project site personnel.

6. Implement and enforce safety requirements applying to Subcontractors as set forth in the XL Construction “Subcontractor Safety Program (SSP)”.

7. Notify the Safety Director of the need for, and assist with the procurement of, any applicable regulatory safety and environmental permits.

8. Post on the project all necessary emergency contact and regulatory employment information.
**Project Manager/Estimator**

Each XL Construction Project Manager/Estimator will maintain familiarity with both the requirements contained in this manual, and with basic regulatory requirements for Environmental, Health and Safety in the construction industry.

Adequate safety budgets will be provided for each construction project to maintain a consistent safety program, to meet contractual obligations, and to sequence work in a manner that best provides a safe and environmentally compliant work site. Project Managers/Estimators will initiate the procurement of surveys that may identify hazardous materials, contaminated soils or other similar conditions of the building or project site.

Project Managers/Estimators will ensure that all contractors bidding work are informed of XL Construction general and specific safety requirements. In addition, Project Managers / Estimators will exercise reasonable care to select only those contractors for the purposes of bidding, that exhibit evidence of active, viable participation in the workplace Health and Safety efforts.

**Project Engineer and Project Coordinator**

Project Engineers and Project Coordinators will maintain familiarity with, support and assist each project in meeting the requirements of the XL Construction IIPP and other safety programs contained in this manual.

Project Engineers and Project Coordinators will assist in the procurement of any necessary insurance information or certificates for subcontracted work on the project.

**Project Foreman**

The Project Foreman will provide safety leadership and motivation to those working under his/her direction. He/she will ensure that the individuals they supervise have been given a copy of the XL Construction “New Employee Information Safety Booklet “the Foreman will further ensure that new employees read, understand and acknowledge receipt of the booklet.

In addition, the Project Foreman will:

1. Assign employee tasks based on the individuals, skill, experience and physical condition.
2. Use reasonable care to rotate employees who are engaged in tasks that apply repetitive stress to limbs, back and joints.
3. Use specific safety reminders with those working under their supervision no less than twice daily.
4. Investigate every injury that occurs under their supervision and report the injury without delay to the Superintendent.

5. Participate in weekly “all-hands” safety meetings.

6. Maintain current American Red Cross, or equivalent training in Basic First Aid and CPR.

**XL Construction Employees**

XL Construction Employees hold the responsibility of adherence to all aspects of the XL Construction Safety Program including those specific policies, practices and procedures contained in this IIPP.

In addition, XL Construction Employees will:

1. Come to work adequately rested and prepared to engage their employment duties in an alert, safe and professional manner.

2. Exhibit conduct and/or exercise judgment in the course of their work consistent with all safety practices as posted, instructed or otherwise disseminated to avoid injuries to themselves and endangerment to others.

3. Report any unsafe acts by others to their Supervisor or company Health and Safety Director.

4. Report any unsafe condition, which they may observe in the workplace, to their Supervisor or the Health and Safety Director.

5. Report all injuries arising out of their employment, no matter how minor, to their Supervisor immediately.
XL’s Code Of Safe Work Practices

All Employees:

1. All XL employees will follow these safety practices and conduct their work in a safe manner at all times. Non-compliance with these safety rules may result in dismissal.

2. Employees will correct safety hazards within their authority or notify their Foreman or Superintendent of the hazard. While the hazard exists, employees will warn others in the area who may be effected by the hazard.

3. Employees will attend regularly scheduled safety meetings and will receive injury and illness prevention instructions at these meetings.

4. Any employee known to be under the influence of illicit drugs, alcohol and/or other intoxicating substances will not be allowed on the job while in such condition. Employees found to be under the influence will be subject to dismissal.

5. Horseplay, scuffling and other similar behaviors often lead to injury and are prohibited at all times.

6. No employee will work while his/her ability or alertness is so impaired by fatigue, illness or any other reason that might cause the employee or others to be injured. Contact your Supervisor if you are unable to report to work for any reason.

7. Employees will report all injuries or suspected injuries promptly to their Foreman or Superintendent so arrangements can be made for medical treatment and/or first aid. Modified work may be available if medically required.

8. Employees will wear appropriate clothing for construction work.
   - Shirt with sleeves
   - Full-length pants
   - Acceptable work boots.
   - Yellow safety vest when exposed to vehicular traffic, motorized construction equipment or any other time deemed appropriate by jobsite supervision.

9. Jewelry (rings, bracelets, neck chains, etc.) should not be worn by Tradesmen working in the field.

10. Hard hats will be worn at all times on site unless otherwise directed by the Superintendent. Baseball caps may not be worn underneath hard hats at any time.

11. Safety Glasses are required to be worn by all personnel on site at all times.
12. Additional personal protective equipment such as face shield, ear plugs, gloves, knee pads, foot protection, respirators, back belts and fall protection will be provided for your protection. Note: Foot protection (foot guards) is required for any worker using pneumatic or electric hammer for breaking concrete, pavement or hard soil; or using a jumping compactor, or similar device where crushing injury to the feet is possible.

Face shields attached to hard hat will be required, in addition to safety glasses, anytime a worker is engaged in demolition work above the shoulders. This includes pulling down ceiling components, HVAC components and other fastened items that may suddenly come loose or cause debris to fall onto or at the worker. Face shields, in addition to safety glasses, will be required when a worker is cutting metal materials with a powered miter (chop) saw, where the saw is setup at or above the waist level of the worker.

13. Keep personal protective equipment (PPE) in good condition and report loss or damage to your Supervisor. Personal Protective Equipment (PPE) - shall be provided for you on the jobsite. To obtain new or additional PPE, ask your Supervisor or obtain the required equipment from XL's Shop/Equipment yard. Refer to XL's “Personal Protective Equipment”procedure for further information.

14. Maintain awareness of work going on around you. Keep clear of suspended loads and traffic whenever possible.

15. No job requires running. Walk – don’t run!

16. Follow all health and safety precautions on the containers of chemicals that you use.

17. If additional product information is needed ask your Supervisor to provide a Material Safety Data Sheet (MSDS) on the product and to review the information with you to ensure proper safety precautions are taken. Refer to XL’s “Hazard Communication Plan” for further information.

18. Good ventilation is required for most chemical products we use in construction. Eye and hand protection, an approved respirator, as well as other safety equipment may be required.

19. Do not enter existing manholes, underground vaults, tanks or other confined spaces with limited access or no ventilation, unless your Supervisor has determined it is safe to do so, and confined space procedures are followed.

20. Do not enter newly constructed confined spaces with any hazardous chemical products until your Supervisor has determined that it is safe to do so.

21. Do not enter a trench or other such excavation that is more than five (5) feet in depth unless it has been properly shored, sloped or benched to prevent cave-in.
22. Make certain that all guardrails, floor and roof opening covers are in place and secured before starting work in your area. Immediately correct or report any of these hazards to your Supervisor.

23. If you have to remove a guardrail, roof or floor opening cover, you must replace and secure it before you leave the immediate area.

24. Never stand or sit on a roof skylight.

25. When railings are not practical and potential falls are greater than six (6) feet, the use of a safety harness with shock-absorbing lanyard is required.

26. Always inspect your safety harness and lanyard before each use. Tie off to something substantial that won’t break if you fall. Fall arrest system anchorage points must be rated to a minimum of 5,000 pounds, with only one worker per each 5,000 pound anchorage point.

27. Always inspect ladders for damage or excessive wear before each use. Place all ladders on firm level surfaces before climbing up.

28. Damaged ladders will not be used. Don’t try and fix them. Take the ladder out of service and notify your Supervisor.

29. Always set-up extension type ladders so that the top extends beyond the landing at least three feet. The ladder needs to be tied off at the top with rope or heavy wire.

30. Do not attempt to carry tools, buckets, etc. up or down a ladder. Both hands should be free to hold on while ascending or descending. Use a rope to raise or lower tools from elevated areas.

31. Avoid short cuts such as jumping down or over. Use stairs, ladders, ramps and walkways.

32. Don’t work off the cap, top two steps or backside of a ladder. Move the ladder rather than over reaching for that last bit of work. If you must lean out while working from a ladder, a harness and lanyard will be required.

33. Never work above exposed vertical rebar or stakes; make sure they are capped or otherwise guarded to prevent your impalement if you fall. Fall protection above exposed rebar is required at six (6) feet or greater working height.

34. Get help when lifting heavy objects. Bend your knees and keep your back straight. Do not reach and twist for a load instead of repositioning your feet.

35. Inspect all hand tools prior to use. Tools with split, broken or loose handles or other safety defects will not be used.

36. Never point an air hose at another individual or use it to clean clothing. Compressed air hose connections must utilize whip-checks or tie-wire.
37. Pressure will be released at the tool prior to disconnection of the hose from the compressor.

38. Only authorized and trained employees may operate equipment or machinery.

39. Guards and other protective devices will be in place and properly adjusted before using equipment and machinery.

40. Damaged or missing parts to any scaffold or shoring system will be repaired prior to use.

41. Scaffold use requires the scaffold to have a good footing, proper bracing, and a fully planked deck prior to anyone climbing on the scaffold. Railings may be required if the scaffold is above six (6) feet or work is above exposed rebar or stakes. Refer to XL's “Scaffold Safety Policy” procedure for further information.

42. You must possess a valid State Motor Vehicle License to drive any XL Construction vehicle. You must also possess a valid license and current insurance on file in the Main Office if you drive any vehicle for official XL Construction business.

43. All employees operating XL Construction Vehicles and/or private vehicles for company business will wear seat belts.

**Forklift Use** - All XL Forklifts will be inspected daily before use. Each Forklift contains an inspection booklet to identify items to be inspected. Ask your Supervisor to review the inspection process with you.

**Training Cards/Certification:** XL employees must have a valid safety training card when operating Forklifts, Scissor-lifts, or Ariel boom-type lifts. Refer to XL's “Forklift and Aerial Lift” procedures for further information.

Ask your Supervisor about required training before operating these pieces of equipment.

44. Only the operator will be on moving equipment such as forklifts and loaders. No riders are allowed at any time.

45. All equipment, elevated loads and load lines will be kept no less than ten (10) feet away from energized high voltage lines at all times.

46. Equipment that requires an operator will not be left unattended while a load is suspended in the air.

47. Operate equipment only within the rated capacity and at safe speeds.

48. Never disconnect back-up alarms on XL or rental equipment. Report defective back-up alarms to your Supervisor.
49. Ground Fault Interrupter Circuits will be tested prior to plugging into a temporary power box.

50. Power cords must be inspected before use. Damaged cords (exposed inner wires or splices, missing ground prongs) will be removed from service. Report damaged electrical power cords to your Supervisor.

51. Never work with any electrical power tool while standing in water. Keep connections out of water as well. No employee will ever be permitted to work on any energized “hot” electrical equipment. This includes battery systems of any kind used for emergency power.

52. Keep your work area clean. Stack materials out of the foot traffic and place debris in appropriate containers.

53. Pull or bend over protruding nails in used lumber to prevent puncture injuries.

54. Clean up spilled water, oil or grease immediately to prevent slip and fall injuries.

55. Powder actuated loads such as Hilti or Remmington will not be left lying on the floor. Dispose of spent loads by placing them in the XL provided approved containers.

56. Do not block stairs or aisle with scaffolds or debris any longer than absolutely necessary.

57. Fuel cans and other flammable and/or combustible items will be removed from areas where heat from welding, cutting, or grinding may cause a fire.

58. A 10-pound (minimum) dry chemical fire extinguisher will be immediately available in any work area where gasoline, acetylene, propane or other flammable liquids, gases or other flammable products are being used.

59. All gasoline will be stored in self-closing safety cans. Gasoline will not be used for cleaning purposes.

60. Never smoke when handling flammable liquids.

61. Know where the fire extinguishers are located in your work area.

62. Know evacuation and/or escape routes.

63. It is your responsibility to bring to the attention of your Supervisor any unsafe condition or work practice.

64. Gloves shall be worn at all times while performing any of the following tasks:

   Placing and finishing of concrete; building or stripping formwork; demolition of any type; grinding or burning with torches; handling metal, aluminum, duct work, uni-strut, metal door frames, metal studs, glass, rebar, steel or rough lumber; welding; rigging; handling hot or cold objects; and installing safety cable.
Carpenters:

1. Safety glasses and hard hats are mandatory on the jobsite.

2. Select the correct tool for the job and take time to set up your work properly.

3. Learn the correct use of hand and power tools before using. Ask your Supervisor if you are not sure. Do not use dangerous short-cuts such as cutting a board while resting it on your foot.

4. Do not use damaged power or hand tools. Report all defective equipment to your Supervisor.

5. Safety glasses are mandatory; additional protection, such as a face shield is required for grinding, cutting metal studs with a chop saw above waist high, use of a rescue saw, and other similar operations.

6. Make sure guards are in place on all power tools and never defeat the guard by wedging it up. Anyone found using a skill saw with a guard missing or wedged up will be dismissed.

7. Wear appropriate goggles when using a gas cutting torch.

8. Know the correct gas pressure to be used for cutting, check to see that the regulators are working properly and that the set is equipped with a fire extinguisher. A fire extinguisher must be within 25 feet of the work at all times.

9. Store Compressed gas cylinders in an upright position, caps on, and secure from falling. Never tie off cylinders to a guardrail or guardrail system.

10. Fuel gases (such as Acetylene and Propane) and oxidizers (oxygen) will be separated by at least 20 feet when not in use, or in storage.

11. Do not lift portable electric tools by their power cords; use a rope instead.

12. Before using powder-actuated tools, make sure you know the safety rules, possess a training card and always wear eye and hearing protection. Pick up all spilled/used loads off the floor and place them in the approved XL provided disposal container. You are responsible for assuring that warning signs are posted.

13. Never shoot a powder actuated tool too close to the edge of any material. Follow the load chart when you arm the tool.

14. Unload powder-actuated tools when not in use and secure them in their case.

15. You are responsible for the safety conditions in your immediate area. If something is unsafe, fix it. If you can’t fix it immediately, inform your Supervisor and warn others in the area about the hazard.

16. Ask your Supervisor about specific or additional training you may need for your work.
17. Become familiar with project’s specific safety requirements as described in the “Jobsite Safety Records Binder” Tab 2-Project Specific Requirements.

**Laborers:**

1. Safety glasses and hard hats are mandatory on the jobsite.

2. Sand blasting requires the use of an airline fed sand blasting helmet. A face shield, in addition to safety glasses or goggles, is required for all grinding, and chemical handling operations.

3. Use additional face and eye protection, such as a face shield, for all overhead work.

4. Pavement breakers, jackhammers and other tools with crushing or penetrating action require the use of foot guards.

5. Compressed air hoses will be disconnected only after the pressure has been discharged.

6. Secure each compressed air hose connection with a whip check, prior to use.

7. Employees engaged in heavy lifting will wear a back or lifting belt. This requirement includes the use of this safety device in positioning of concrete pump hoses, vibrators or rodding concrete.

8. Wear kneepads, rubber boots, rubber gloves and back belts when working with concrete.

9. Wear a safety vest if your work exposes you to vehicular traffic; a safety vest is required for any work on a street or roadway. Warning signs and traffic cones will be used when working on public streets.

10. Wear cutting torch goggles when using a cutting torch.

11. No torch cutting is allowed on any tank, vessel or drum.

12. Know the correct gas pressure to be used for cutting, check to see that the regulators are working properly and that the set is equipped with a fire extinguisher. A fire extinguisher must be within 25 feet of the work.

13. Store compressed gas cylinders in an upright position, caps on, and secure from falling. Never tie off cylinders to a guardrail or guardrail system.

14. Fuel gases (such as Acetylene and Propane) and oxidizers (oxygen), and oxygen cylinders, when not in use, or in storage, will be separated by a minimum distance of 20 feet or by a half-hour rated firewall at least five (5) feet in height.

15. Do not throw debris, materials or other objects from a building until proper precautions (a spotter or barricades) are taken to protect others from falling objects.
16. Always clinch or pull nails from lumber when stripping formwork to prevent nail puncture injuries.

17. Wear suitable gloves when handling rough materials, chemical products, and/or hot and cold items.

18. All grinders will have guards in place.

19. You are responsible for the safety conditions in your immediate area. If something is unsafe, fix it. If you can’t fix it immediately, inform your Supervisor and warn others in the area about the hazard.

20. Ask your Supervisor about specific or additional training you may need for your work.

21. Become familiar with project’s specific safety requirements as described in the “Jobsite Safety Records Binder” Tab 2-Project Specific Requirements.

Cement Masons:

1. Safety glasses and hard hats are mandatory on the jobsite.

2. Rubber over-boots are required for employees placing concrete.

3. Approved knee-pads and back support belts will be worn when needed for concrete work.

4. Always practice proper lifting technique for heavy lifts – USE YOUR LEGS and KEEP YOUR BACK STRAIGHT. Get help when needed.

5. Rubber gloves are required for concrete work. Check with your Supervisor for the correct glove for your task (i.e. long rubber gloves for handling wet concrete). Wet concrete should be cleaned from skin and clothing as soon as possible.

6. Wear a safety vest when your work exposes you to vehicular and other motorized traffic, such as automobiles, tractors, backhoes, dump trucks, graders and concrete trucks.

7. Never stand in the blind spot of any backing equipment – be sure the driver/operator sees you.

8. Make sure all back-up alarms are in working condition. Report to your Supervisor any concrete trucks without back-up alarms.

9. Be sure all screed stakes are capped with protective caps at all times.

10. Be sure that all protruding re-bar ends in the work area are properly capped with protective caps.
11. Never take down a hand-rail or remove an opening cover without first checking with your Supervisor.

12. While working near the edge of a building, such as an elevated deck pour, you will wear a safety harness and be tied-off to a secure anchorage point.

13. Always check the work area for electrical lines, distribution panels, switch-gear and/or other sources of electricity before using aluminum handled Bull-float, Fresno or other tool. If electrical hazards are present, only fiberglass handles will be used.

14. Any work involving the grinding of concrete will require the use of an approved dust mask, or other respiratory protective device depending on the duration of the work and ventilation conditions. Review with XL's Safety Department the planned respiration protective device that is to be used before starting work.

15. Do not leave fuel cans unattended in a building, unless work on the same floor is actively in progress and the building is not enclosed. Only OSHA approved, self-closing, metal fuel cans will be used.

16. If you see an unsafe condition (defective equipment, etc.) or practice, notify your Supervisor promptly.

17. Always inspect hose sections for excess old material inside, tears, bulges and/or defective clamps before use when working with a concrete pump service.

18. Always alert the pump operator immediately if you suspect the pump hose has become blocked or clogged.

19. Excess concrete or concrete slurry should never be allowed to flow into storm drains, creeks or waterways.

20. When operating a concrete vibrator, always be aware of personnel working next to you as well as the location of the power cord.

21. Always read “Warnings” and “Cautions” printed on the containers of chemicals used for concrete work, such as Curing Compound, Form Release and Acids used for etching or cleaning. For more information, ask your Supervisor for a copy of the Material Safety Data Sheet for the products you use.

22. Always check with your Supervisor before using a Power Trowel, Soft-Cut Saw, Jumping-Jack Compactor, Vibratory Plate Compactor, or Re-Bar Bender. Verify that training has been provided prior to working with these tools.

23. When working with a compressor, always discharge the pressure before disconnecting and hose couple.

24. While under pressure, all twist compressor hose connections must be secured with a “Whip-check” or tie-wire.
Office Employees

1. Employees will attend the monthly Together Meetings and will participate in learning about a variety of safety related topics by taking a safety quiz.

2. Employees shall wear appropriate attire, including footwear, as deemed appropriate for each job title. Employees who will be traveling to or working on jobsites during the workday must not wear open toed shoes, flip flops or heels.

3. Employees will report all injuries or suspected injuries that occurred while in the Main Office to their Supervisor, Department Head or a member of the Safety Department so that arrangements can be made for medical treatment and/or first aid. Modified work may be available if medically necessary.

4. When lifting heavy objects, bend your knees and keep your back straight. Lift by straightening your legs. Let your leg muscles, not your back muscles do the work. Do not reach and twist for a load instead of repositioning your feet. Utility cars are available for the moving of heavy loads throughout the office. Employees shall get help when lifting heavy objects.

5. Employees must not smoke within 25 feet of the perimeter of the Main Office.

6. Employees must know their evacuation and escape routes from their work area in the Main Office.

7. Employees will always use a stepladder or step stool to reach anything above shoulder level. Stepladders and step stools shall be sturdy and not have any broken rungs or legs. Chairs, Boxes or other ladder substitutes are not permitted.

8. Employees shall not lean back excessively, bend or twist in chairs, which might cause over-balance and a fall.

9. Employees shall secure all electrical cords and wires away from walkways. When necessary to run a cord along the floor in a walking area, it must be taped down securely or inserted through rubber protectors to prevent a tripping hazard.

10. Employees shall never open more than one drawer or door at a time on a filing cabinet/bookcase to prevent it from toppling over. All drawers and doors shall be returned to the closed position after use to prevent bumping and tripping.

11. Filing cabinets and bookcases shall be placed where their use will not interfere with traffic patterns. Cabinets taller than 64 inches shall be secured to the wall to prevent them from toppling over. When filling a four-drawer filing cabinet the second drawer from the bottom shall be filled first to weight the bottom and prevent tipping.

12. All electrical equipment shall be plugged into appropriate wall receptacles or into an extension of only one cord of similar size or capacity. Three-pronged plugs should be used to ensure continuity of grounding.
13. When employees use paper cutters they shall exercise caution with the blade. When finished with using the paper cutter, employees shall store it with the blade fully drawn and fastened securely to prevent cutting hazards.

14. Employees shall have access to a first aid kit in the Main Office. First Aid kits are located in the Shop and with the Safety Department. Employees shall utilize the kits for injuries that require it in order to prevent an injury from become worse than it was initially.

15. Only trained and certified AED users may administer assistance in the case of an emergency requiring the use of this machine. All certified employees will be listed on the front of the AED cabinet at all times.

16. Employees should familiarize themselves with locations of fire extinguisher throughout the office and know that they are designated with a red sign above them on the walls. In the event of a small fire, only trained workers may attempt to put out a fire with the extinguishers.

17. In the event of a power outage, employees shall attempt to shut down any equipment that can be done so safely prior to leaving the premises. The Office Manager and Shop Manager will advise employees of any other actions that may need to be taken.
Disciplinary Process

Purpose

The purpose of the process is to establish a firm but fair disciplinary action policy to enforce XL’s safety policies and procedures.

Responsibilities

It is the responsibility of each and every person employed by XL Construction to work in a safe and efficient manner. The Safety Program provides guidelines and procedures to help insure that safe work practices are observed. In the event that any employee violates provisions of the XL Construction safety systems or works in a manner that threatens his own health and safety or the health and safety of the employees around him, he will be subject to disciplinary action, up to and including termination of employment.

The Corporate Safety Director, General Superintendents, Project Managers, Project Superintendents, Foreman and Safety Engineers are all responsible for enforcing XL’s safety policies and procedures and for issuing disciplinary action as required by this section of the safety manual.

XL is committed to safety and senior management holds all supervisory staff responsible and accountable for safety within their respective areas.

Inspections by XL Consultants or insurance representatives that indicate violations, or showing an overall lack of commitment to XL safety goals shall be treated with the same level of disciplinary actions as those performed by an XL employee.

Procedures

Employees who fail to comply with the Code of Safe Work Practices as contained in this IIPP, or any additional program promoting employee health and safety will be subject to disciplinary action up to and including termination. Supervisors will follow the disciplinary procedures as follows:

■ The first offense will result in a verbal warning. The offending employee is to be informed that they are being issued a verbal warning and informed why. Proper procedures will be discussed to clarify the situation and allow the employee to correct their behavior. The Supervisor providing this verbal warning will inform the Project Superintendent on the jobsite that this warning has been issued so that the Superintendent may make a written record of the warning.

■ The second offense will result in a written reprimand and additional training. The reprimand will be written on the standard Safety Violation Warning form and will describe the unsafe activity or behavior that needs correction. Refer to the section of the Safety Program that was violated (when applicable). The employee must sign the warning form. The warning will become a part of the employee’s employment records.
The third offense will result in the termination of the offending employee or another written reprimand (using the standard form) with punitive layoff, the duration of which will be decided at the time of the disciplinary action and is to be weighed by the severity of the offense. The employee must sign the warning form. The warning will become a part of the employee's employment records.

Any Employee committing 3 offenses within a 12 Month period of time or time will be terminated.

In the case of serious safety violations such as bypassing guarding or other unsafe activities that put the violator or other employees at serious risk of injury, the Superintendent or member of the safety department may move the violator directly to the second or third warning level. If the violator’s actions put him or others at risk of death or dismemberment the Superintendents or member of the safety department may terminate him with no further warning, as XL has a ZERO Tolerance Policy for these types of violations.
Safety Violation Warning


Complete this form following a second safety violation warning.

**XL Construction or subcontractor** — complete all appropriate sections and have the employee sign the form. Send original to XL Safety Department; retain copy in jobsite safety file. Fax to subcontractor office if applicable.

Employees Name: ____________________________  Date: _____________

Employer: _________________________________________________________________________

Project Name: ____________________________________________  Project No.: ___________

CC: _________________________________________________________ File No.: ______________

Describe Safety Violation:

__________________________  __________________________
Sent Via Fax To: ___________________________ Fax:  __________________________

Company: ___________________________  Contact:  __________________________

__________________________  __________________________
XL Construction Supervisor Signature  Employee Signature
Safety Incentives / Recognition

XL Construction will acknowledge an employee’s compliance and active participation with XL Construction’s Injury and Illness Prevention Program. XL Construction will include safety program participation as a criteria in the annual performance review of each employee.

In addition, XL Construction utilizes two additional specific safety incentive programs:

1. XL Incentive Program – Awards points to XL Construction employees for the following:
   - No job site accidents
   - Completing Specific Safety Training
   - Renewal of Existing Training Certification
   - Completing a year of employment with no work related injury or illness.

2. Site Specific Safety Incentives – prize raffle held at weekly “all-hands” safety meetings each week there are no injuries.
Communication

To achieve optimal effectiveness of this IIPP and other Health and Safety Programs, XL Construction will use the following methods to facilitate a continuous flow of health and safety information between managers, field supervisors, support staff and crafts persons:

1. Distribution of this IIPP Manual to every foreman, superintendent, project manager, and management level employee.

2. New worker orientation, including discussion of specific health and safety related polices, procedures and practices.


4. Weekly “all-hands” jobsite safety meetings with mandatory attendance requirement. Topics discussed and personnel in attendance are documented.

5. Monthly management safety meetings.

6. Posted regulatory and company specific safety rules/regulations and information at each construction project and at the XL Construction main office.

7. “Employee Safety Suggestion” form allowing and empowering all employees to actively participate in identifying, evaluating and correcting unsafe conditions while remaining anonymous.
Employee’s Safety Suggestion

This form has been created to allow employees to report safety hazards anonymously and without fear of reprimand or reprisal. Go to https://www.insidexl.net/document/SAFETY_FORM_84v1.

To: □ XL Project Superintendent _____________________________________
    □ XL Safety Department  ________________________________________

Date: __________

Project: __________________________________________   Project No: __________   File No: 1400

CC: _______________________________________________________________________________

Unsafe Practice or Condition:

Suggested Correction:

Safety Director’s Response:

(Optional) Signature: __________________________________________    Date: _______________

Rev. 12/08
Hazard Assessment

Daily safety inspections are required on each XL Construction jobsite and constitute the primary means for identifying and correcting unsafe conditions or unsafe acts by Employees.

All personnel are responsible for continuous, ongoing inspections of their workplace. When discovered, potentially hazardous conditions will be corrected immediately or a report will be filed initiating corrective action.

Each Superintendent or acting Superintendent will ensure that a “Daily Jobsite Inspection Checklist” form is completed each day and placed in the jobsite safety file for the duration of the project. If deficiencies are identified, the Superintendent will initiate correction.

Periodic and unscheduled Safety Audits will be conducted by management on each project. Management audits of jobsite safety program compliance will be documented on the “Management Safety Audit” form. A copy of the audit will be kept in the jobsite safety file, while the original will be maintained in the safety department office.

When a new technique or new equipment is introduced on the jobsite, the Health and Safety Director and / or the Safety Engineer will review / investigate the process or equipment to evaluate any potential hazards and / or training required.

More frequent, or special inspections will be conducted when:

1. New substances, processes, and / or equipment are introduced to the work area, which have the potential to present additional hazards.

2. New or previously unidentified hazards are recognized.

3. An injury or illness has occurred on the jobsite.

4. Conditions warrant a greater level of monitoring.

5. New or transferred workers are assigned to tasks for which they have little or no previous experience or training.
## Daily Jobsite Safety Inspection Checklist

Date: ________________   Project: _________________________________________________   Project No: _____________
Superintendent: _____________________________   Foreman: __________________________   File No.: ________________
Inspection Performed by: _____________________   CC: _______________________________________________________

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERSONAL PROTECTIVE EQUIPMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Hard Hats</td>
<td>✓</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>Exceptions noted on 3/28/07</td>
</tr>
<tr>
<td>2. Eye Protection</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>3. Ear Protection</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>4. Respirators/Dustmasks</td>
<td>□</td>
<td>□</td>
<td>✓</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>5. Proper Clothing</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>6. Footwear</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>7. Fall Protection</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>HOUSEKEEPING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Exits and Stairs Clear</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>9. Piling and Stacking</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>10. Debris Removal</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>11. Nails Bent or Removed</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>LADDERS &amp; STAIRS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Ladder Condition</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>13. Ladder Use</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>14. Ladder 3’ Above Landing</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>15. Ladder Secured</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>16. Stairs</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>RAILINGS/COVERS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Perimeter</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>18. Floor/Roof Opening</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>19. Stairs/Ramps</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>20. Walkways</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>21. Elevator Door Openings</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>22. Toe Boards</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>FIRE PROTECTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Extinguishers</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>24. Flammable Material Storage</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>25. Welding/Cutting Equipment</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

Page 1 of 2
<table>
<thead>
<tr>
<th>ITEM</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOOLS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Condition</td>
<td></td>
<td></td>
<td></td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>27. Guarded Properly</td>
<td></td>
<td></td>
<td></td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>28. Power Cords</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>SITE &amp; PUBLIC PROTECTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Excavation/Trenches</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>30. Earthmoving Equipment</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>31. Forklifts/Cranes</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>32. Scissor/JLG</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>33. Barricades</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>34. Signs</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>35. Impalement Protection</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>FIRST AID</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Trained Personnel</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>37. Kits/Supplies</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>38. Sanitation/Water</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>SCAFFOLDS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. Railings</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>40. Tied to Building</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>41. Planks and Platforms</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>42. Rolling Scaffold</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43. Lighting</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>44. Grounding</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>45. Lock Out/Tag Out</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>46. Temporary Power</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47.</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>48.</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>49.</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>50.</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>51.</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>
# Management Safety Audit

(1 of 2 pages) Use this form to track safety inspections completed by non project personnel. Go to [https://www.insidexl.net/document/SAFETY_CHK_48v1](https://www.insidexl.net/document/SAFETY_CHK_48v1)

---

**CONSTRUCTION**

## Management Safety Audit

**Date:** __________ **Project:** ___________________________ **Project No.:** __________ **File No.:** 1400

**Superintendent:** ____________________________ **Foreman:** ____________________________

**Inspection performed by:** __________________________ **CC:** ____________________________

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERSONAL PROTECTIVE EQUIPMENT</th>
<th>HOUSEKEEPING</th>
<th>LADDERS &amp; STAIRS</th>
<th>RAILINGS/Covers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Hard Hats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Eye Protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Ear Protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Respirators/Dustmasks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Proper Clothing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Footwear</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Fall Protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Exits and Stairs Clear</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Piling and Stacking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Debris Removal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Nails Bent or Removed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Ladder Condition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Ladder Use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Ladder 3’ Above Landing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Ladder Secured</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Stairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Perimeter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Floor/Roof Opening</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Stairs/Ramps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Walkways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Elevator Door Openings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Toe Boards</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Page 1 of 2

Rev. 11/09
## Management Safety Audit

(2 of 2 pages) Use this form to report a construction incident that did not involve an injury.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRE PROTECTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Extinguishers</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>24. Flammable Material Storage</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>25. Welding/Cutting Equipment</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td><strong>TOOLS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Condition</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>27. Guarded Properly</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>28. Power Cords</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td><strong>SITE &amp; PUBLIC PROTECTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Excavation/Trenches</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>30. Earthmoving Equipment</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>31. Forklifts/Cranes</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>32. Scissor/JLG</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>33. Barricades</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>34. Signs</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>35. Impalement Protection</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td><strong>FIRST AID</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Trained Personnel</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>37. Kits/Supplies</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>38. Sanitation/Water</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td><strong>SCAFFOLDS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. Railings</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>40. Tied to Building</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>41. Planks and Platforms</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>42. Rolling Scaffold</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43. Lighting</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>44. Grounding</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>45. Lock Out/Tag Out</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>46. Temporary Power</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. Crisis Mgmt Responsibilities</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>48. Project Camera on Site</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>49.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>50.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
<tr>
<td>51.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>________________________________</td>
</tr>
</tbody>
</table>
Correction of Unsafe Conditions or Acts

Unsafe or unhealthy work conditions, practices or procedures will be corrected in a timely manner based on the severity of the hazard. The following steps will be used when hazard correction is deemed necessary:

1. Employees are instructed to correct any serious hazardous condition they may observe, immediately, if they can do so in a safe and timely manner. If unable to correct the hazardous condition in a safe and timely manner, the employee will take steps necessary to separate other exposed employees from the hazard by verbally warning them, asking them to leave the area, or in some other way cordon-off the location. The employee will then notify his/her Supervisor.

2. When a hazard is discovered and is of such a serious nature that it cannot be abated immediately by the employee without endangerment or risk of property damage, workers equipped with the necessary training and equipment shall be summoned as soon as possible to correct the hazard.

3. All actions taken shall be thoroughly documented, including time, date and location. This documentation will be placed in the jobsite safety file.
Jobsite Weekly Safety Meetings

Holding effective Weekly Safety Meetings can be a challenge. Making a meeting work takes preparation, thought, and imagination. The following points are guidelines that combined with your own experience, can assist you in holding an effective safety meeting.

**Preparation**

1. Familiarize yourself with the work that crews will be doing that week and make a list of identified hazards associated with those tasks.

2. Review the previous week's “Daily Jobsite Inspections Checklist” and become familiar with any item requiring corrective action.

3. Know what accidents, near misses and or complaints came in this week.

4. Find out what action was taken on any issue brought up last week.

5. Pick a topic related to upcoming worksite hazards and prepare a short five-minute presentation.
   - Consider using a trigger such as a recent incident or something from your own experience.
   - Be clear about 2-3 major points you want to get across about the incident.

**At the Meeting**

1. Go over work coming up and identify all hazards to be faced and ways those hazards can be avoided. Ask people to bring up their own ideas or concerns.

2. Point out other upcoming work on site that may affect everyone.

3. Review any hazard indicators on the prior week’s “Daily Jobsite Inspection”.

4. Review accidents and/or near misses and complaints and discuss what action was taken.

5. Go over any issues/problems mentioned in previous weeks and discuss what action was taken.

6. Close by emphasizing that it's management's responsibility to provide a safe and healthy workplace. Point out the workers not only have the right to speak up about hazards, but a duty. Remind people that they should contact you immediately about any safety issues/hazards they encounter during the workweek. Ask for final comments and questions.

**After the Meeting**

1. Keep a record of what was discussed at the safety meeting.

2. Collect the meetings attendance sign in sheet and place it in the project safety files along with the safety meeting topics discussed.
Jobsite Weekly Safety Meeting

Use this form to document items discussed at jobsite weekly safety meetings.

Go to https://www.insidexl.net/document/SAFETY_FORM_88v1

---

**Jobsite Weekly Safety Meeting**

Date: _______  Project:  ______________________________  Project No.: ________File No.: 1400

Meeting Conducted By: _____________________________________ CC: _____________________

Project Hazardous Conditions:

Safety Topic Discussed:

Other:
Jobsite Weekly Safety Meeting Sign-In

Use this form to document who attended a weekly safety meetings.

Go to https://www.insidexl.net/document/SAFETY_FORM_87v1

---

**Jobsite Weekly Safety Meeting**

Date: __________ Project: **Carlton School Remodel** Project No: 123456

<table>
<thead>
<tr>
<th>Name</th>
<th>Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Smith</td>
<td>XL Construction</td>
</tr>
<tr>
<td>David Hathaway</td>
<td>ABC Construction</td>
</tr>
</tbody>
</table>
IIPP Injury, Illness & Prevention Program

Injury/Illness Response, Investigation and Reporting

Serious

The investigation and reporting of any serious workplace injury or illness shall be conducted after first aid, emergency medical care, and/or serious hazardous conditions have been controlled. The following steps will be utilized to respond to, report and investigate a serious workplace injury or illness:

1. Contact Emergency Medical Services – Call 911, or the facilities (campus) Emergency Response Number.

2. Designate an individual to meet EMS personnel at the entrance to the site.

3. Administer First Aid as required.

4. Clear the immediate area of personnel and/or equipment and materials to facilitate EMS access.

5. Notify XL Construction Safety Department personnel, General Superintendent or Project Manager as soon as possible.

6. Contact Supervisor or Employer if the injured or ill individual is not an XL Construction Employee.

7. Obtain the full name of the individual and the name of the facility they will be transported to for treatment.

8. If possible, obtain and document information about the injury or illness from the affected worker.

9. Document names, statements and contact information of witnesses.

10. Secure the immediate area with caution tape or other means.

11. Take photographs of the area; objects in the area, as well as any remaining body fluids; measure and document distances.

12. Take possession of any device, tool, ladder, guard, cover, etc. that may have contributed to the injury or illness.

13. Decontaminate the area of residual body fluids, contaminated clothing, rags, etc. Refer to XL’s “Bloodborne Pathogen Summary” for further information.

14. Obtain injury report from Subcontractor if applicable.

16. Forward to the XL Construction Safety Department:

- Witness names and statements.
- Subcontractor accident report (if applicable).
- All photographs, diagrams, etc.
- Copies of “Daily Jobsite Inspection Checklist” form.
- Copies of “all-hands” safety meeting attendance lists and topics (preceding three weeks).

17. The Health and Safety Director will report the injury and/or illness to the XL Construction Insurance Broker Representative, as well as to the Worker’s Compensation Insurance Provider for injuries/illness involving XL Construction Employees. In addition, the Health and Safety Manager will notify the Division of Occupational Safety and Health (Cal-OSHA) if required.
Supervisors Report of Injury

Use this form to report an injury.
Go to https://www.insidexl.net/document/SAFETY_FORM_94v1

Supervisor’s Report of Injury

Complete this form whenever an employee (XL or subcontractor) reports an injury or illness which they have specified as work-related. XL Employees: Complete all sections. Be as specific as possible regarding the injury / illness and the circumstance how injury / illness occurred. Send original to XL safety department within 24 hours; keep copy in jobsite file. Subcontractor: Complete and send to XL safety department with subcontractor’s report attached.

SERIOUS AND LOST TIME INJURIES MUST BE REPORTED TO XL SAFETY DEPARTMENT BY TELEPHONE IMMEDIATELY.

Job Name: ___________________________________________   Project No: ___________________

CC: _________________________________________________________________________   File No: 1400

Injury is questionable: □ NO □ YES (if yes, explain on reverse).

Name of Injured: _________________________________________________________________________

Name of Subcontractor: _________________________________________________________________________

Date of injury: ______________ Date of birth: ____________ Occupation: ___________________________

Time of injury: __________ Date XL notified: __________ Did employee report for next shift: □ NO □ YES

Part of body injured: (right knee, head, etc.) Describe injury: (cut, puncture, strain, etc.)
_________________________________________________________________________________________
_________________________________________________________________________________________

What was employee doing when injury / illness occurred?: (Identify tools or equipment involved)
_________________________________________________________________________________________
_________________________________________________________________________________________

How injury / illness occurred?: (Tell what happened and how it happened – attach extra sheets if needed)
_________________________________________________________________________________________
_________________________________________________________________________________________

List names of any witnesses and their employer:
_________________________________________________________________________________________
_________________________________________________________________________________________

Treatment for injury: □ First Aid □ Outside Medical □ Hospitalized

Name and address of treating facility: _________________________________________________________________________

Name of XL Superintendent: _____________________ Name of XL Foreman: _________________________

Corrective Measures: _________________________________________________________________________
_________________________________________________________________________________________

Prepared by _____________________________________________________   Date ___________________

SAMPLE ONLY
Non-Serious

1. Administer first aid as required.

2. Notify XL’s Safety Department or General Superintendent, as soon as possible.

3. Arrange for transportation to medical treatment facility, if necessary.

4. Contact and inform appropriate Supervisor or Employer if injured worker is not an XL Construction Employee.


6. Request and obtain an injury/accident report from Injured Worker’s Employer (if Subcontractor).

7. For XL Construction Employee injuries requiring outside medical care, the following additional items must be completed:
   - DWC form –1 (Employee completes top portion and Supervisor complete the lower portion).
   - XL Construction’s “Authorization for Medical Treatment” form.
   - Worker’s Compensation Pamphlets (Spanish or English) give to Injured Employee

8. Document names, statements and contact information of witnesses.

9. Secure the immediate area with caution tape or other means.

10. Take photographs of the area, objects in the area, as well as any remaining body fluids; measure and document distances.

11. Take possession of any device, tool, ladder, etc. that may have contributed to the injury or illness.

12. Decontaminate the area of residual body fluids, contaminated clothing, rags, etc.

13. Forward to XL Construction Safety Department:
   - Any additional summary information.
   - Witness names and statements.
   - Subcontractor accident report (if applicable)
   - Any doctors reports, work status reports, etc.
   - Employer’s copy of “DWC” Form-1.
14. Obtain injury report from Subcontractor, if applicable.

15. The Health and Safety Director will report the injury and/or illness to the Worker's Compensation Insurance Provider for injuries / illness involving XL Construction Employees. In addition, the Health and Safety Director will notify the Division of Occupational Health and Safety (Cal-OSHA), if required.
Sample of Employee’s Claim for Worker’s Compensation Benefits

View sample of Employee's Claim for Worker's Compensation Benefits. This is a 3 page file. The sample below is the third page. Contact the Safety Department for this form.

---

<table>
<thead>
<tr>
<th>Worksite Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer: Complete this section and give the form to your employer. Keep a copy and mark it “Employee’s Temporary Receipt” until you receive the signed and dated copy from your employer. You may call the Division of Workers’ Compensation and hear recorded information at (800) 736-7401. An explanation of workers’ compensation benefits is included as the cover sheet of this form. You should also receive a pamphlet from your employer describing workers’ compensation benefits and the procedures to obtain them. Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers’ compensation benefits or payments is guilty of a felony.</td>
</tr>
<tr>
<td>Employee: Complete the “Employee” section and give the form to the employee. Complete the section “Employee’s Temporary Receipt” and give the form to the employee.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Name. Nombre.</td>
</tr>
<tr>
<td>4. Date of Injury. Fecha de la lesión (accidente).</td>
</tr>
<tr>
<td>5. Address and description of where injury happened. Dirección/lugar donde ocurrió el accidente.</td>
</tr>
<tr>
<td>6. Describe injury and part of body affected. Describa la lesión y parte del cuerpo afectada.</td>
</tr>
<tr>
<td>8. Signature of employee. Firma del empleado.</td>
</tr>
<tr>
<td>10. Address. Dirección.</td>
</tr>
<tr>
<td>11. Date employer first knew of injury. Fecha en que el empleador supo por primera vez de la lesión o accidente.</td>
</tr>
<tr>
<td>12. Date claim form was provided to employee. Fecha en que se le entregó al empleado la petición.</td>
</tr>
<tr>
<td>13. Date employer received claim form. Fecha en que el empleador devolvió la petición al empleado.</td>
</tr>
<tr>
<td>14. Name and address of insurance carrier or adjusting agency. Nombre y dirección de la compañía de seguros o agencia administradora de seguros.</td>
</tr>
<tr>
<td>16. Signature of employer representative. Firma del representante del empleador.</td>
</tr>
<tr>
<td>17. Title. Título.</td>
</tr>
</tbody>
</table>

---

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers’ compensation benefits or payments is guilty of a felony.
Authorization for Medical Treatment


---

**Authorization for Medical Treatment**

(for XL Construction Employees Only)

Complete this form whenever employee seeks outside medical treatment for a work related injury/illness. Treatment to be provided by an M.D., not a nurse practitioner.

To Provider: NOTE: XL Construction offers light duty/modified work to injured employees. If employee is unable to return to regular or modified work, please contact the project superintendent or the XL Construction Safety Department at 408.240.6000

Please send “Doctor’s First Report of Work Injury” to both insurance company and XL Construction, Attention Safety Department.

---

**Workers Compensation Insurance**

Zurich American Insurance Company

P.O. Box 7774

San Francisco, CA 94188-7774

Tel 800.701.4926 or 415.986.4900

Fax 800.622.8081

Policy #: WC508450105

Policy effective: 11/1/2012 thru 11/01/2013

---

* Please bill direct XL Construction for treatment of all “First Aid Only” injuries *

---

Employee’s Name: __________________________ SSN: __________________________

Date of Injury: __________________________ Project Name: __________________________

Supervisor’s Signature: __________________________

Treating Facility: __________________________

Address: __________________________

---

Any person who makes or causes to be made any false or fraudulent material statement or material representation for the purpose of obtaining or denying worker’s compensation benefits or payments may be found guilty of a felony.

---

Employee: You may select treatment by your personal physician initially only if you have completed the required Pre Designation Form prior to the injury/illness.
Copy of Facts For Injured Worker’s Pamphlet
View facts for injured worker’s. This is an 8 page document which can be obtained from XL’s Safety Department.
Non-Injury Incident Response, Investigation and Reporting

Accidents not resulting in personal injury but where significant damage to property and/or equipment occurs, shall be thoroughly investigated to determine cause and corrective action needed. The following steps will be completed any time significant accidental damage occurs to property and/or equipment on an XL Construction Project or when reasonably deemed to be caused by XL Construction, or XL Construction Subcontractor activities:

1. Immediately evacuate personnel if a hazard is created by the accidental damage.
2. Mitigate or control the hazard if possible.
3. Secure the area using site designated personnel or appropriate signage, barricades, flagging, etc.
4. Summon emergency assistance for utility, process, actual or threatened environmental damage.
5. Contact XL Construction Safety Department personnel and/or XL Construction General Superintendent.
6. Contact property/equipment owner and/or client.
7. Interview witnesses and document their statements.
8. Take photographs.
10. Maintain control of the site — do not allow access to unauthorized individuals.
Non-Injury Incident Report

Use this form to report a construction incident that did not involve an injury. Go to https://www.insidexl.net/document/SAFETY_FORM_91v1

Complete this form whenever a non-injury accident occurs involving significant damage to property or equipment. Attach additional sheets if needed. **XL Construction**: Complete all sections. Be as specific as possible regarding the accidental damage and the circumstances surrounding the accident. Send original to XL Safety Department; keep copy in jobsite safety file. **Subcontractor**: Complete and send to XL Safety Department with subcontractor’s report attached.

ACCIDENTS RESULTING IN THE SERIOUS DAMAGE TO UTILITIES, PROCESS EQUIPMENT, ETC. MUST BE REPORTED TO XL SAFETY DEPARTMENT BY TELEPHONE IMMEDIATELY.

Job Name: ___________________________________________ Project No:  ___________

List Witnesses: ___________________________________________ File No: _______________

________________________________________________ CC: __________________

Description of Incident

________________________________________________

Supervisor’s Signature                                      Date
Employee Safety Training and Instruction

All XL Construction Employees will be provided health and safety training and instruction on a regular basis for both general and task specific workplace hazards.

Such instruction and training will occur:

1. At time of hire.
2. When an employee is given a new task for which no specific training/ instruction has been previously provided.
3. When an employee is transferred to a new project and has not received basic safety orientation instruction in the preceding twelve (12) months.
4. Whenever a new work procedure, process, chemical or equipment is introduced to the workplace.
5. Whenever a new XL Construction policy is implemented.
6. Whenever laws governing worker safety change in a manner applicable to the construction industry.

Basic Health and Safety Training/Instruction will include:

1. The purpose, contents and objectives of the XL Construction Injury and Illness Prevention Program.
2. Requirements for appropriate dress and personal protective equipment.
3. The purpose and objectives of the “Code of Safe Work Practices”.
4. Procedures for reporting workplace injury and/or illness.
5. Procedures for reporting unsafe conditions, work practices or unsafe acts by individuals.
6. Information on chemical hazards to which employees may be exposed during the course of work.
7. The availability of restroom and hygiene facilities.
9. Requirements and methods for summoning emergency services to the workplace.
Specific Training/Instruction will include:
1. Scaffold Competency
2. Trenching and Excavation Competency
3. Asbestos and Lead Awareness
4. Respiratory Hazards and Protection
5. Health and Safety Regulatory Requirements
6. Hazardous Substances and Worker-Right-To-Know
7. Fall Protection
8. Vehicle Safety
9. Fire Safety
10. First Aid and CPR
11. Emergency Response
12. Confined Space

Training will be provided at the following intervals and venues:
1. Regular monthly management staff meetings and workshops.
2. Weekly “all-hands” jobsite safety meetings.
3. On-site safety orientation of new employees.
4. Pre-event planning meetings.
5. Periodically scheduled safety training workshops i.e. CPR/First Aid, competent person, etc.
**Record Keeping**

Employee Health and Safety related records will be maintained and preserved according to the following schedule:

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Location(s)</th>
<th>Final Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobsite Daily Inspection Sheet</td>
<td>Jobsite Safety File 1410</td>
<td>Archived with project documents</td>
</tr>
<tr>
<td>Jobsite Safety Program Audit</td>
<td>Safety Department and Jobsite Safety File 1410</td>
<td>Archived with project documents</td>
</tr>
<tr>
<td>Weekly Jobsite Safety Meeting</td>
<td>Jobsite Safety File 1410</td>
<td>Archived with project documents</td>
</tr>
<tr>
<td>Supervisor Report of Injury</td>
<td>Safety Department and Jobsite Safety File 1410</td>
<td>Archived with project documents and Safety Dept. archive</td>
</tr>
<tr>
<td>Non-Injury Accident / Incident Report</td>
<td>Safety Department and Jobsite Safety File 1410</td>
<td>Archived with project documents and Safety Dept. archive</td>
</tr>
<tr>
<td>Employee Safety Training</td>
<td>Safety Department</td>
<td>Five years active then safety archive</td>
</tr>
<tr>
<td>Safety Related Employee Medical Records</td>
<td>Safety Department</td>
<td>Length of employment plus 30 years</td>
</tr>
<tr>
<td>Workers Compensation Claims</td>
<td>Safety Department</td>
<td>Five years active then Safety Dept. archive</td>
</tr>
<tr>
<td>Safety warning Report</td>
<td>Jobsite Safety Files 1410 HR Employee File</td>
<td>Five years active then safety archive</td>
</tr>
<tr>
<td>Regulatory Citation / Action or Inspection</td>
<td>Safety Department and Jobsite Safety File 1410</td>
<td>Archived with project documents</td>
</tr>
<tr>
<td>OSHA Injury Logs</td>
<td>Safety Department</td>
<td>Five years active then safety Dept. archive</td>
</tr>
</tbody>
</table>
## New Employee Safety Orientation

Use this form to record training of an employee. 

| Employee: ____________________________ | Date: ___________ | Project No: _________ |
| CC: Personnel File | File No: 1400 |
| Immediate Supervisor: ____________________________________________ | Orientation Provided By: ____________________________ |
| Job Description: ____________________________________________ |

Does employee have any physical condition or disability that would require the provision of reasonable accommodation by XL Construction in order to perform the essential functions of the job? If so, what reasonable accommodation can be provided by XL Construction?

**Office Employee Orientation:**
- [ ] Employee informed of company Injury and Illness Prevention Program, contents, requirements and document location.
- [ ] Employee informed of Safety Information Bulletin Board location and contents.
- [ ] Employee issued appropriate personal protective equipment.
- [ ] Employee informed of procedure for reporting unsafe conditions, acts; or safety suggestions.
- [ ] Employee completed SSP. [ ] SSP Orientation not required.

**Field Employee Orientation:**
- [ ] Employee provided with XL "New Field Employee Information" booklet and sticker.
- [ ] Employee informed of company Injury and Illness Prevention Program, contents and document location.
- [ ] Employee informed of site specific safety requirements (i.e. safety meetings, emergency procedures, etc.)
- [ ] Employee informed of XL Construction company vehicle and driver requirements.
- [ ] Employee provided appropriate personal protective equipment.
- [ ] Employee informed of injury reporting procedures.
- [ ] Employee informed of jobsite safety postings and location.
- [ ] Employee completed SSP.

Comments: ____________________________________________
________________________________________________________________________________________

_________________________________________   ________________________________________
Employee Signature             Supervisor Signature

Rev. 9/09
**Employee Record of Safety Training**

Use this form to record the training of an employee.  
Go to [https://www.insidexl.net/document/SAFETY_FORM_83v1](https://www.insidexl.net/document/SAFETY_FORM_83v1)

<table>
<thead>
<tr>
<th>Employee Name: ___________________________</th>
<th>Project No: __________</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC: ___________________________</td>
<td>File No: __________</td>
</tr>
<tr>
<td>Title of Training: ___________________________</td>
<td>Date: __________</td>
</tr>
<tr>
<td>Location of Training: (ie: Jobsite, Office, Other)</td>
<td></td>
</tr>
</tbody>
</table>

Training content/description:

---

Instructor/Provider Signature

Employee Signature
New Field Employee Information — Safety
XL Construction Safety Program Manual

XL Construction Corporation  851 Buckeye Court Milpitas, CA 95035  Tel 408-240-6000  Fax 408-240-6001
SAFETY

New Field Employee Information
Excerpt from Safety Program Manual
New Field Employee Information — Safety

Welcome to XL Construction ................................................................. 2-6
Contact Information ........................................................................ 2-7
Safety at XL Construction ................................................................. 2-8
Drug Testing Policy ........................................................................ 2-8
Heat Illness ...................................................................................... 2-9
Hazard Communication Program .................................................... 2-9
Other Safety Procedures .................................................................... 2-9
Disciplinary Process ......................................................................... 2-10
XL’s Code Of Safe Work Practices .................................................. 2-11
   All Employees: ............................................................................. 2-11
   Carpenters: ................................................................................ 2-16
   Laborers: .................................................................................... 2-17
   Cement Masons: ......................................................................... 2-18
XL Construction Motor Vehicle Policies ......................................... 2-20
   Use of Company Owned Vehicles ............................................... 2-20
   Use of Personal Vehicles for Company Business ....................... 2-22
Weekly Payroll Process .................................................................... 2-24
Dispatch Procedure .......................................................................... 2-24
   Currently Working – Project Coming to an End .......................... 2-24
   Not Working .............................................................................. 2-25
My XL Jobsite Information ............................................................... 2-26
Required Forms to Complete .......................................................... 2-28
   Receipt of XL Construction's New Field Employee Information Handbook 2-29
Welcome to XL Construction

We are thrilled to have you as part of the XL Team. Our employees are our biggest assets and it is our philosophy to treat you with the same respect we give our clients. We work hard to maintain an open work environment in which our employees can learn and grow, both personally and professionally. We welcome your contributions and hope you will take pride in your work here at XL.

Quarterly Field Safety Breakfast
Each XL Construction Field Employee shall attend a Safety Breakfast Meeting held each quarter. Your Supervisor will notify you of the date and time of the next meeting.

Company Purpose
We build to improve lives.

Values
We value excellence, safety, integrity, innovation, passion and people.

Mission
XL Construction will be recognized as a best-in-class builder of technical projects in Northern California.
Contact Information

**XL Construction**
851 Buckeye Court
Milpitas, CA 95035
Tel: 408/240-6000
Fax: 408/240-6001

**Dispatch**
Amy Redmond
Tel: 408/240-6400
Email: dispatch@xlconstruction.com

**Health and Safety Department**
Mike Popp, Corporate Health and Safety Director
Tel: 408/240-6407
Cell: 408/592-0776
Fax: 408/240-6025
Email: safety@xlconstruction.com

**Field Safety Engineers**
Craig Pancoast
Cell: 408/592-0885

Lindsey Van Why
Cell: 408/592-2037

**Human Resources Information**
Jerry Harmon, Human Resources Director
Tel: 408/240-6380
Fax: 408/240-6025
Email: jharmon@xlconstruction.com

**Payroll Information**
Kim Murphy, Accounting
Tel: 408/240-6353
Fax: 408/240-6022

**XL Shop (Equipment Yard and Supplies)**
Daniel Frye
Cell: 408/592-1986
Fax: 408/240-6024
Email: shop@xlconstruction.com
Safety at XL Construction

At XL Construction we believe that safety is of the highest importance. XL Superintendents, Project Managers and Foremen are required to make their jobsites as safe a place to work as possible. However, it takes your willingness and participation to make this happen. Most injuries on construction projects are caused by individuals; either hurting themselves or others. Remember the following:

Safety will be given primary importance in the planning and performance of all activities in order to prevent injuries. Think before you act, don’t take shortcuts and stay focused on your task!

If at any time you have doubts about how to safely do a task assigned to you, or if you have any questions about any of these safety rules, stop and ask your Foreman or Superintendent.

We all must take responsibility for the safety of everyone on the project. This means reporting unsafe conditions and reminding others to avoid unsafe acts. Any employee who won’t cooperate or comply with all XL Safety Rules is subject to dismissal.

Drug Testing Policy

Effective 2/1/09, XL Construction has adopted the “Carpenters 46 Northern California Counties Uniform Substance Abuse Policy” which allows for pre-employment and reasonable cause drug testing.

Members of the Laborers and Masons Unions will have post-accident drug and alcohol testing performed.

If Tradesmen choose to participate in XL company functions beyond the regular union working hours, they will be required to abide by all rules as outlined in XL’s Non-Union Drug and Alcohol Workplace Policy.

For a current copy of these policies, contact the Human Resources department at: (408) 240-6380 or the Safety department at: (408) 240-6497.
Heat Illness

Heat Illness is a broad term that encompasses different adverse physical symptoms related to elevated environmental temperatures. Outdoor construction activities fall within the new standard that became effective 4/1/06. All XL Construction projects that include outdoor work implement the physical components of this standard.

The components included are:

■ Recognizing the hazard
■ Providing enough drinking water on the jobsite for each employee to have no less than one (1) quart of drinking water per hour of the work shift
■ Providing jobsites with outdoor work activities an area of shade for employees to take normal breaks or rest breaks
■ Recognizing the symptoms

For further information about XL Construction's Policy on Heat Illness, please contact your Supervisor or any member of the Safety Department to receive a full copy of the plan.

Hazard Communication Program

XL Construction is firmly committed to providing each of its employees of safe and healthy work environment. It is recognized that workers may use chemicals or substances that have potentially hazardous properties. When using these substances, workers must be aware of the identity, toxicity or hazardous properties of a chemical or substance, since an informed employee is more likely to be a safe employee. To this end, XL has established a written Hazardous Communication Program.

For further information on XL Construction's Hazard Communication Program, please contact your Supervisor or any member of the Safety Department to receive a full copy of the plan.

Other Safety Procedures

XL Construction has detailed procedures that address; employee protection, equipment, hazardous material, electrical, and project hazards that may be found in XL's Safety Program Manual. Please contact your Supervisor or any member of the Safety Department to receive a copy of any of these procedures.
Disciplinary Process.

Responsibilities

It is the responsibility of each and every person employed by XL Construction to work in a safe and efficient manner. In the event that any employee violates provisions of the XL Construction safety systems or works in a manner that threatens his own health and safety or the health and safety of the employees around him, he will be subject to disciplinary action, up to and including termination of employment.

Procedures

Supervisors will follow the disciplinary procedures as follows:

- The first offense will result in a verbal warning.
- The second offense will result in a written reprimand and additional training.
- The third offense will result in the termination of the offending employee.

In the case of serious safety violations, XL Construction may move the violator directly to the second or third warning level.
XL’s Code Of Safe Work Practices

All Employees:

1. All XL employees will follow these safety practices and conduct their work in a safe manner at all times. Non-compliance with these safety rules may result in dismissal.

2. Employees will correct safety hazards within their authority or notify their Foreman or Superintendent of the hazard. While the hazard exists, employees will warn others in the area who may be effected by the hazard.

3. Employees will attend regularly scheduled safety meetings and will receive injury and illness prevention instructions at these meetings.

4. Any employee known to be under the influence of illicit drugs, alcohol and/or other intoxicating substances will not be allowed on the job while in such condition. Employees found to be under the influence will be subject to dismissal.

5. Horseplay, scuffling and other similar behaviors often lead to injury and are prohibited at all times.

6. No employee will work while his/her ability or alertness is so impaired by fatigue, illness or any other reason that might cause the employee or others to be injured. Contact your Supervisor if you are unable to report to work for any reason.

7. Employees will report all injuries or suspected injuries promptly to their Foreman or Superintendent so arrangements can be made for medical treatment and/or first aid. Modified work may be available if medically required.

8. Employees will wear appropriate clothing for construction work.
   - Shirt with sleeves
   - Full-length pants
   - Acceptable work boots.
   - Yellow safety vest when exposed to vehicular traffic, motorized construction equipment or any other time deemed appropriate by jobsite supervision.

9. Jewelry (rings, bracelets, neck chains, etc.) should not be worn by Tradesmen working in the field.

10. Hard hats will be worn at all times on site unless otherwise directed by the Superintendent. Baseball caps may not be worn underneath hard hats at any time.

11. Safety Glasses are required to be worn by all personnel on site at all times.
12. Additional personal protective equipment such as face shield, ear plugs, gloves, knee pads, foot protection, respirators, back belts and fall protection will be provided for your protection. Note: Foot protection (foot guards) is required for any worker using pneumatic or electric hammer for breaking concrete, pavement or hard soil; or using a jumping compactor, or similar device where crushing injury to the feet is possible.

Face shields attached to hard hat will be required, in addition to safety glasses, anytime a worker is engaged in demolition work above the shoulders. This includes pulling down ceiling components, HVAC components and other fastened items that may suddenly come loose or cause debris to fall onto or at the worker. Face shields, in addition to safety glasses, will be required when a worker is cutting metal materials with a powered miter (chop) saw, where the saw is setup at or above the waist level of the worker.

13. Keep personal protective equipment (PPE) in good condition and report loss or damage to your Supervisor. Personal Protective Equipment (PPE) - shall be provided for you on the jobsite. To obtain new or additional PPE, ask your Supervisor or obtain the required equipment from XL's Shop/Equipment yard. Refer to XL's “Personal Protective Equipment “procedure for further information.

14. Maintain awareness of work going on around you. Keep clear of suspended loads and traffic whenever possible.

15. No job requires running. Walk – don’t run!

16. Follow all health and safety precautions on the containers of chemicals that you use.

17. If additional product information is needed ask your Supervisor to provide a Material Safety Data Sheet (MSDS) on the product and to review the information with you to ensure proper safety precautions are taken. Refer to XL’s “Hazard Communication Plan” for further information.

18. Good ventilation is required for most chemical products we use in construction. Eye and hand protection, an approved respirator, as well as other safety equipment may be required.

19. Do not enter existing manholes, underground vaults, tanks or other confined spaces with limited access or no ventilation, unless your Supervisor has determined it is safe to do so, and confined space procedures are followed.

20. Do not enter newly constructed confined spaces with any hazardous chemical products until your Supervisor has determined that it is safe to do so.

21. Do not enter a trench or other such excavation that is more than five (5) feet in depth unless it has been properly shored, sloped or benched to prevent cave-in.
22. Make certain that all guardrails, floor and roof opening covers are in place and secured before starting work in your area. Immediately correct or report any of these hazards to your Supervisor.

23. If you have to remove a guardrail, roof or floor opening cover, you must replace and secure it before you leave the immediate area.

24. Never stand or sit on a roof skylight.

25. When railings are not practical and potential falls are greater than six (6) feet, the use of a safety harness with shock-absorbing lanyard is required.

26. Always inspect your safety harness and lanyard before each use. Tie off to something substantial that won't break if you fall. Fall arrest system anchorage points must be rated to a minimum of 5,000 pounds, with only one worker per each 5,000 pound anchorage point.

27. Always inspect ladders for damage or excessive wear before each use. Place all ladders on firm level surfaces before climbing up.

28. Damaged ladders will not be used. Don't try and fix them. Take the ladder out of service and notify your Supervisor.

29. Always set-up extension type ladders so that the top extends beyond the landing at least three feet. The ladder needs to be tied off at the top with rope or heavy wire.

30. Do not attempt to carry tools, buckets, etc. up or down a ladder. Both hands should be free to hold on while ascending or descending. Use a rope to raise or lower tools from elevated areas.

31. Avoid short cuts such as jumping down or over. Use stairs, ladders, ramps and walkways.

32. Don’t work off the cap, top two steps or backside of a ladder. Move the ladder rather than over reaching for that last bit of work. If you must lean out while working from a ladder, a harness and lanyard will be required.

33. Never work above exposed vertical rebar or stakes; make sure they are capped or otherwise guarded to prevent your impalement if you fall. Fall protection above exposed rebar is required at six (6) feet or greater working height.

34. Get help when lifting heavy objects. Bend your knees and keep your back straight. Do not reach and twist for a load instead of repositioning your feet.

35. Inspect all hand tools prior to use. Tools with split, broken or loose handles or other safety defects will not be used.

36. Never point an air hose at another individual or use it to clean clothing. Compressed air hose connections must utilize whip-checks or tie-wire.
37. Pressure will be released at the tool prior to disconnection of the hose from the compressor.

38. Only authorized and trained employees may operate equipment or machinery.

39. Guards and other protective devices will be in place and properly adjusted before using equipment and machinery.

40. Damaged or missing parts to any scaffold or shoring system will be repaired prior to use.

41. Scaffold use requires the scaffold to have a good footing, proper bracing, and a fully planked deck prior to anyone climbing on the scaffold. Railings may be required if the scaffold is above six (6) feet or work is above exposed rebar or stakes. Refer to XL’s “Scaffold Safety Policy” procedure for further information.

42. You must possess a valid State Motor Vehicle License to drive any XL Construction vehicle. You must also possess a valid license and current insurance on file in the Main Office if you drive any vehicle for official XL Construction business.

43. All employees operating XL Construction Vehicles and/or private vehicles for company business will wear seat belts.

**Forklift Use** - All XL Forklifts will be inspected daily before use. Each Forklift contains an inspection booklet to identify items to be inspected. Ask your Supervisor to review the inspection process with you.

**Training Cards/Certification:** XL employees must have a valid safety training card when operating Forklifts, Scissor-lifts, or Aerial boom-type lifts. Refer to XL’s “Forklift and Aerial Lift” procedures for further information.

Ask your Supervisor about required training before operating these pieces of equipment.

44. Only the operator will be on moving equipment such as forklifts and loaders. No riders are allowed at any time.

45. All equipment, elevated loads and load lines will be kept no less than ten (10) feet away from energized high voltage lines at all times.

46. Equipment that requires an operator will not be left unattended while a load is suspended in the air.

47. Operate equipment only within the rated capacity and at safe speeds.

48. Never disconnect back-up alarms on XL or rental equipment. Report defective back-up alarms to your Supervisor.
49. Ground Fault Interrupter Circuits will be tested prior to plugging into a temporary power box.

50. Power cords must be inspected before use. Damaged cords (exposed inner wires or splices, missing ground prongs) will be removed from service. Report damaged electrical power cords to your Supervisor.

51. Never work with any electrical power tool while standing in water. Keep connections out of water as well. No employee will ever be permitted to work on any energized “hot” electrical equipment. This includes battery systems of any kind used for emergency power.

52. Keep your work area clean. Stack materials out of the foot traffic and place debris in appropriate containers.

53. Pull or bend over protruding nails in used lumber to prevent puncture injuries.

54. Clean up spilled water, oil or grease immediately to prevent slip and fall injuries.

55. Powder actuated loads such as Hilti or Remmington will not be left lying on the floor. Dispose of spent loads by placing them in the XL provided approved containers.

56. Do not block stairs or aisle with scaffolds or debris any longer than absolutely necessary.

57. Fuel cans and other flammable and/or combustible items will be removed from areas where heat from welding, cutting, or grinding may cause a fire.

58. A 10-pound (minimum) dry chemical fire extinguisher will be immediately available in any work area where gasoline, acetylene, propane or other flammable liquids, gases or other flammable products are being used.

59. All gasoline will be stored in self-closing safety cans. Gasoline will not be used for cleaning purposes.

60. Never smoke when handling flammable liquids.

61. Know where the fire extinguishers are located in your work area.

62. Know evacuation and/or escape routes.

63. It is your responsibility to bring to the attention of your Supervisor any unsafe condition or work practice.

64. Gloves shall be worn at all times while performing any of the following tasks:

   Placing and finishing of concrete; building or stripping formwork; demolition of any type; grinding or burning with torches; handling metal, aluminum, duct work, unistrut, metal door frames, metal studs, glass, rebar, steel or rough lumber; welding; rigging; handling hot or cold objects; and installing safety cable.
Carpenters:

1. Safety glasses and hard hats are mandatory on the jobsite.

2. Select the correct tool for the job and take time to set up your work properly.

3. Learn the correct use of hand and power tools before using. Ask your Supervisor if you are not sure. Do not use dangerous short-cuts such as cutting a board while resting it on your foot.

4. Do not use damaged power or hand tools. Report all defective equipment to your Supervisor.

5. Safety glasses are mandatory; additional protection, such as a face shield is required for grinding, cutting metal studs with a chop saw above waist high, use of a rescue saw, and other similar operations.

6. Make sure guards are in place on all power tools and never defeat the guard by wedging it up. Anyone found using a skill saw with a guard missing or wedged up will be dismissed.

7. Wear appropriate goggles when using a gas cutting torch.

8. Know the correct gas pressure to be used for cutting, check to see that the regulators are working properly and that the set is equipped with a fire extinguisher. A fire extinguisher must be within 25 feet of the work at all times.

9. Store Compressed gas cylinders in an upright position, caps on, and secure from falling. Never tie off cylinders to a guardrail or guardrail system.

10. Fuel gases (such as Acetylene and Propane) and oxidizers (oxygen) will be separated by at least 20 feet when not in use, or in storage.

11. Do not lift portable electric tools by their power cords; use a rope instead.

12. Before using powder-actuated tools, make sure you know the safety rules, possess a training card and always wear eye and hearing protection. Pick up all spilled/used loads off the floor and place them in the approved XL provided disposal container. You are responsible for assuring that warning signs are posted.

13. Never shoot a powder actuated tool too close to the edge of any material. Follow the load chart when you arm the tool.

14. Unload powder-actuated tools when not in use and secure them in their case.

15. You are responsible for the safety conditions in your immediate area. If something is unsafe, fix it. If you can’t fix it immediately, inform your Supervisor and warn others in the area about the hazard.

16. Ask your Supervisor about specific or additional training you may need for your work.
17. Become familiar with project’s specific safety requirements as described in the “Jobsite Safety Records Binder” Tab 2-Project Specific Requirements.

**Laborers:**

1. Safety glasses and hard hats are mandatory on the jobsite.

2. Sand blasting requires the use of an airline fed sand blasting helmet. A face shield, in addition to safety glasses or goggles, is required for all grinding, and chemical handling operations.

3. Use additional face and eye protection, such as a face shield, for all overhead work.

4. Pavement breakers, jackhammers and other tools with crushing or penetrating action require the use of foot guards.

5. Compressed air hoses will be disconnected only after the pressure has been discharged.

6. Secure each compressed air hose connection with a whip check, prior to use.

7. Employees engaged in heavy lifting will wear a back or lifting belt. This requirement includes the use of this safety device in positioning of concrete pump hoses, vibrators or rodding concrete.

8. Wear kneepads, rubber boots, rubber gloves and back belts when working with concrete.

9. Wear a safety vest if your work exposes you to vehicular traffic; a safety vest is required for any work on a street or roadway. Warning signs and traffic cones will be used when working on public streets.

10. Wear cutting torch goggles when using a cutting torch.

11. No torch cutting is allowed on any tank, vessel or drum.

12. Know the correct gas pressure to be used for cutting, check to see that the regulators are working properly and that the set is equipped with a fire extinguisher. A fire extinguisher must be within 25 feet of the work.

13. Store compressed gas cylinders in an upright position, caps on, and secure from falling. Never tie off cylinders to a guardrail or guardrail system.

14. Fuel gases (such as Acetylene and Propane) and oxidizers (oxygen), and oxygen cylinders, when not in use, or in storage, will be separated by a minimum distance of 20 feet or by a half-hour rated firewall at least five (5) feet in height.

15. Do not throw debris, materials or other objects from a building until proper precautions (a spotter or barricades) are taken to protect others from falling objects.
16. Always clinch or pull nails from lumber when stripping formwork to prevent nail puncture injuries.

17. Wear suitable gloves when handling rough materials, chemical products, and/or hot and cold items.

18. All grinders will have guards in place.

19. You are responsible for the safety conditions in your immediate area. If something is unsafe, fix it. If you can’t fix it immediately, inform your Supervisor and warn others in the area about the hazard.

20. Ask your Supervisor about specific or additional training you may need for your work.

21. Become familiar with project’s specific safety requirements as described in the “Jobsite Safety Records Binder” Tab 2-Project Specific Requirements.

Cement Masons:

1. Safety glasses and hard hats are mandatory on the jobsite.

2. Rubber over-boots are required for employees placing concrete.

3. Approved knee-pads and back support belts will be worn when needed for concrete work.

4. Always practice proper lifting technique for heavy lifts – USE YOUR LEGS and KEEP YOUR BACK STRAIGHT. Get help when needed.

5. Rubber gloves are required for concrete work. Check with your Supervisor for the correct glove for your task (i.e. long rubber gloves for handling wet concrete). Wet concrete should be cleaned from skin and clothing as soon as possible.

6. Wear a safety vest when your work exposes you to vehicular and other motorized traffic, such as automobiles, tractors, backhoes, dump trucks, graders and concrete trucks.

7. Never stand in the blind spot of any backing equipment – be sure the driver/operator sees you.

8. Make sure all back-up alarms are in working condition. Report to your Supervisor any concrete trucks without back-up alarms.

9. Be sure all screed stakes are capped with protective caps at all times.

10. Be sure that all protruding re-bar ends in the work area are properly capped with protective caps.
11. Never take down a hand-rail or remove an opening cover without first checking with your Supervisor.

12. While working near the edge of a building, such as an elevated deck pour, you will wear a safety harness and be tied-off to a secure anchorage point.

13. Always check the work area for electrical lines, distribution panels, switch-gear and/or other sources of electricity before using aluminum handled Bull-float, Fresno or other tool. If electrical hazards are present, only fiberglass handles will be used.

14. Any work involving the grinding of concrete will require the use of an approved dust mask, or other respiratory protective device depending on the duration of the work and ventilation conditions. Review with XL’s Safety Department the planned respiration protective device that is to be used before starting work.

15. Do not leave fuel cans unattended in a building, unless work on the same floor is actively in progress and the building is not enclosed. Only OSHA approved, self-closing, metal fuel cans will be used.

16. If you see an unsafe condition (defective equipment, etc.) or practice, notify your Supervisor promptly.

17. Always inspect hose sections for excess old material inside, tears, bulges and/or defective clamps before use when working with a concrete pump service.

18. Always alert the pump operator immediately if you suspect the pump hose has become blocked or clogged.

19. Excess concrete or concrete slurry should never be allowed to flow into storm drains, creeks or waterways.

20. When operating a concrete vibrator, always be aware of personnel working next to you as well as the location of the power cord.

21. Always read “Warnings” and “Cautions” printed on the containers of chemicals used for concrete work, such as Curing Compound, Form Release and Acids used for etching or cleaning. For more information, ask your Supervisor for a copy of the Material Safety Data Sheet for the products you use.

22. Always check with your Supervisor before using a Power Trowel, Soft-Cut Saw, Jumping-Jack Compactor, Vibratory Plate Compactor, or Re-Bar Bender. Verify that training has been provided prior to working with these tools.

23. When working with a compressor, always discharge the pressure before disconnecting and hose couple.

24. While under pressure, all twist compressor hose connections must be secured with a “Whip-check” or tie-wire.
XL Construction Motor Vehicle Policies

Use of Company Owned Vehicles

Any employee driving a company owned vehicle should recognize that XL Construction vehicles are part of the company's visible presence in and around the communities in which we work. Employees will exercise caution and extend courtesy to other drivers while operating an XL Construction vehicle. All employees assigned a company owned vehicle and those employees who may occasionally use a company owned vehicle must adhere to the following policy. Failure to adhere to rules set forth herein may result in the loss of both regular and occasional use of company owned vehicles, as well as additional disciplinary action up to and including termination of employment.

1. Only the assigned driver or employee receiving prior management permission may drive XL Construction owned vehicles. Spouses, children, friends and/or significant others are not authorized to drive XL Construction owned vehicles.

2. Any employee driving an XL Construction owned vehicle shall have in their possession a valid drivers license.

3. Seat belts must be worn by all occupants whenever the vehicle is in motion.

4. Driving a company vehicle while impaired by alcohol and or drugs is strictly forbidden. Violation of this policy will result in disciplinary action up to and including termination of employment with XL Construction. Use of over-the-counter or prescription medications shall be limited to “use as directed” or as prescribed by a Medical Doctor. Employees shall avoid driving and arrange for alternative transportation if medication side effects may impair driving ability.

5. Employees assigned company vehicles or those employees requesting occasional use of a company vehicle must have and maintain an acceptable driving record.

   An acceptable driving record means that the employee’s motor vehicle record must not indicate any serious moving violation (misdemeanor or felony) where the violation occurred within the previous (36) months; and must not reflect more than (2) minor moving violations (infraction) in any twelve-month period. XL Construction participates in the California Department of Motor Vehicles Employer Pull Program and receives updates of employee driving records.

6. If an employee who is assigned a company owned vehicle is cited for Driving Under the Influence of drugs or alcohol, the employee will forfeit the use of the assigned vehicle and may not drive any other company owned vehicle for a period of (3) years. The employee may be re-assigned to a non-driving position, if such a position is available. The employee may be allowed to use his/her personal vehicle for company business provided the requirements as stated in this vehicle policy for “Use of Personal Vehicles” are met.
7. It is the responsibility of the vehicle assignee to keep the XL owned vehicle he/she uses clean and in good repair.

8. Smoking is prohibited in any XL Construction owned vehicle.

9. XL Construction vehicle assignees are responsible for all regularly scheduled maintenance such as oil changes, tire rotation, wiper blades, etc. The maintenance schedule published by the manufacture and contained in the vehicle Owners Manual should be followed. Receipts for such maintenance must be submitted to the accounting department in a timely manner.

10. Major mechanical or body repairs on any XL owned vehicle must be coordinated through the XL Equipment Yard Manager.

11. XL Construction vehicle assignees and occasional company vehicle users are responsible for the payment of any penalty resulting from vehicle and/or municipal code violations, such as speeding tickets or parking violations.

12. Any employee involved in an accident while operating an XL vehicle should notify the Health and Safety Director or General Superintendent as soon as possible. The employee must complete the Drivers Accident Report located in the glove compartment of each XL company vehicle and return it to the Safety Department as soon as possible.

13. XL Construction vehicles shall not be used for towing recreational trailers or boats.

14. XL Construction vehicles shall be used in accordance with applicable state vehicle codes and manufacturers recommendations for towing and/or hauling of materials.

15. Employees may not use their cell phone while driving unless using a hands-free device. Text messaging is not permitted at any time while driving.

16. It is the responsibility of the driver of any XL Construction vehicle to ensure that loads/materials of any kind are securely held within the bed, or upon the utility rack before driving the vehicle.

17. The interior of all vehicles used for XL Construction company business should remain free of loose items that can obstruct the driver’s ability to safely operate the vehicle (i.e. empty bottles and cans rolling on the floor).

18. Company vehicles should not be used for personal travel, out-of-town.

19. Damage to an XL Construction vehicle or equipment resulting from non-business use may require the employee to pay for XL’s insurance deductible, up to $2,000, toward the costs of repair or replacement.

20. Loss or theft of personal items (i.e. golf clubs, personal tools) transported in XL Construction vehicles are not covered by the company auto insurance policy.
21. Damage or loss to any towed, non-company owned, equipment or trailer may not be covered under the XL Construction auto insurance policy.

22. Any employee driving any XL Construction owned vehicle, or towing an XL Construction owned trailer or other equipment who causes damage to that vehicle or equipment through negligent or reckless driving may be responsible for the costs of the insurance deductible, up to $2000, toward repair to the vehicle, trailer or equipment. Negligent or reckless driving includes unsafe speeds, following too close, overloading or improper loading of hauled materials, and/or other acts.

**Use of Personal Vehicles for Company Business**

XL Construction requires those employees who use their personal vehicles in the course of business for XL Construction to adhere to the following policy. This includes any employee using their personal vehicle for company business whether or not such use is reimbursed or otherwise compensable to the employee.

1. Employee must possess and maintain in good standing a current, valid California Driver’s License.

   ■ “Good Standing” means that the employees’ Motor Vehicle Record must reflect no more than (2) minor moving violations (infractions) in any twelve-month period.

2. Driving personal vehicles for company business while impaired by alcohol or drugs is strictly forbidden. Violation of this policy will result in disciplinary action up to and including termination of employment with XL Construction. Use of over-the-counter or prescription medications shall be limited to “use as directed” or as prescribed by a Medical Doctor. Employees shall avoid driving and arrange for alternative transportation if medication side effects may impair driving ability.

3. If an employee is cited for a serious motor vehicle violation (misdemeanor or felony) such as Driving Under the Influence (DUI) or reckless driving that causes an accident where personal injury results, the employee will be restricted from driving their personal vehicle for company related business for a period of (1) year unless restrictions imposed by the Department of Motor Vehicles and/or the courts is longer than one year; in which case such restrictions will supersede this policy.

4. While under such restriction, the employee shall be prohibited from running errands, picking up plans, supplies, traveling between jobsites, etc. The employee may drive to and from an assigned job site or office, and/or to the office for meetings and other training events, unless restriction placed on the employee by the Department of Motor Vehicles and/or courts does not allow such driving. During such restriction, the employee will be ineligible for mileage and/or other personal vehicle expense reimbursement.

5. Employees who use their personal vehicle for company business must at all times maintain acceptable auto insurance coverage for their vehicle.
6. Acceptable personal automobile insurance means:

A. If you drive occasionally for company business and do not receive a vehicle allowance, you must maintain proof of insurance coverage. Examples of occasional company business driving are: Field craftspersons, office administrators and project engineers.

B. If you receive a vehicle allowance, you must maintain proof of valid insurance in amounts no less than $100,000 bodily injury-each person and $300,000 each occurrence.

7. Proof of current insurance coverage shall be provided to the Safety Department annually, or upon renewal of the insurance coverage. Failure to provide evidence of current insurance coverage will result in a suspension from driving a personal vehicle for company business and denial of any mileage or vehicle allowance reimbursement from XL Construction to the employee. In addition, the use of an XL Construction fuel credit card will be revoked.

8. Any personal vehicle accident occurring while conducting company business must be reported to the Health and Safety Director within 24 hours.

9. If you use your personal vehicle for company business, such as picking up materials or other items for the jobsite, you may complete and submit a “Mileage Log” to accounting for mileage reimbursement. These forms are available from your Superintendent.

10. The amount of mileage reimbursement is determined each year by the Internal Revenue Service (IRS).

As in all corrective actions, management reserves the right to determine the appropriateness of any action taken regarding the policies set forth herein.
Weekly Payroll Process

XL Construction payday is Thursday of each week following a pay period of Monday through Sunday. XL encourages all employees to use our automatic payroll deposit service. If you choose not to utilize this service, employee pay checks will be mailed to the address provided to XL Construction on your employee information form.

You are responsible for completing your time card daily. Your Supervisor will provide you with information on cost codes and job numbers for the activities on your time card. **Time cards are due in the XL office by 9:00 am each Monday morning for the prior week’s work.** Your Supervisor is responsible for getting the time cards in on time and must approve all overtime hours. If you are unable to work on Monday, please call your time in to your Supervisor or directly to the XL Accounting Department.

Work hours are from 7:00 AM to 3:30 PM. You will receive a morning and afternoon break as well as 1/2 hour for lunch. Working through any of these breaks in order to leave early is prohibited.

If you are unable to report to work, please contact your Supervisor or call the XL Main Office. Provide your name, the jobsite you work at, and your Supervisor’s name so that he can be notified.

Dispatch Procedure

Currently Working – Project Coming to an End

If you are currently a XL employee and have been informed by your project supervisor that your project will be coming to an end please feel free to contact the Dispatch Department: 408/240-6400.

Please have the following information ready:

- First and Last name
- Contact number
- Project name
- Project supervisor
- Estimated completion date
- Union Trade
**Not Working**

If you are currently a XL employee and are not working on a project, please feel free to contact the Dispatch Department: 408/240-6400. As soon as we have an opening for employment we will contact you.

Please have the following information ready:

- First and Last name
- Contact number
- Union trade
My XL Jobsite Information

**Project #1**

Project Name: ____________________________________________

XL Project Number: ________________________________________

XL Jobsite Phone #: _______________________________________

XL Superintendent: _________________________________________

Superintendent’s Phone #: _________________________________

Foreman: ________________________________________________

**Project #2**

Project Name: ____________________________________________

XL Project Number: ________________________________________

XL Jobsite Phone #: _______________________________________

XL Superintendent: _________________________________________

Superintendent’s Phone #: _________________________________

Foreman: ________________________________________________

**Project #3**

Project Name: ____________________________________________

XL Project Number: ________________________________________

XL Jobsite Phone #: _______________________________________

XL Superintendent: _________________________________________

Superintendent’s Phone #: _________________________________

Foreman: ________________________________________________
Project #4

Project Name: ________________________________

XL Project Number: ____________________________

XL Jobsite Phone #: __________________________

XL Superintendent: ____________________________

Superintendent’s Phone #: _____________________

Foreman: ____________________________________

Project #5

Project Name: ________________________________

XL Project Number: ____________________________

XL Jobsite Phone #: __________________________

XL Superintendent: ____________________________

Superintendent’s Phone #: _____________________

Foreman: ____________________________________

Project #6

Project Name: ________________________________

XL Project Number: ____________________________

XL Jobsite Phone #: __________________________

XL Superintendent: ____________________________

Superintendent’s Phone #: _____________________

Foreman: ____________________________________
**Required Forms to Complete**

Have you completed all of your new hire forms?

- W-4 Form
- Employment Eligibility Verification I-9 Form
- Emergency Contact Form
- DMV Employer Pull Notice Program
- New Employee Safety Orientation
- New Field Employee Information Handbook Receipt
- Direct Deposit Form
- Pre-designation of Personal Physician Form
- Consent for Pre-Employment Oral Fluid and/or Urine Test for Drugs and Alcohol Form
- Pre-Employment Drug and Alcohol Test Results Form
- If Required: Urinalysis Request Form and Urinalysis Results

If you have not completed all these forms, please check with your Supervisor.
Receipt of XL Construction’s New Field Employee Information Handbook

Go to https://www.insidexl.net/document/SAFETY_FORM_177v2

Receipt of XL Construction
New Employee Information “Safety” Handbook

Name: _________________________________ Date: ___________________

I have received, read and will comply with the XL CONSTRUCTON code of safe work practices. I understand that safety begins with me and that failure to comply with these safe work practices may be grounds for termination of employment with XL CONSTRUCTON.

Signature: _______________________________________________________

THINK SAFETY…. THINK SAFETY…. THINK SAFETY…. THINK SAFETY…. THINK SAFETY

PLEASE RETURN TO SAFETY DEPARTMENT
SAFETY

Subcontractor Safety Program – SSP

Excerpt from Safety Program Manual
Subcontractor Safety Program — SSP

Letter to Subcontractors ................................................................. 3-6
Requirements Prior to Field Activities ........................................ 3-7
General Requirements .................................................................. 3-9
Safety Rules For All Field Personnel ........................................... 3-14
Hazardous Materials Storage and Use ........................................... 3-17
Project Specific Safety Requirements ............................................ 3-20
   SSP Acknowledgment Log ......................................................... 3-21
XL Subcontractor Safety Program Quiz ....................................... 3-22

Safety Quiz Answers for Quiz dated Rev. 6/07: 1b, 2a, 3c, 4b, 5a, 6a, 7a, 8b, 9a, 10a, 12c
Letter to Subcontractors

TO: ALL SUBCONTRACTORS

RE: XL Construction Subcontractor Safety Program

To: Subcontractor Supervisors, Foreman and/or Superintendents

Welcome to this XL Construction project. The following information contains the Subcontractor Safety Rules for all XL Construction projects. Additional “Project Specific Requirements” for safety, evacuation, parking, fall protection, security etc. will be contained later in this document. This Subcontractor Safety Program (SSP) document will help ensure that you and your fellow employees are made fully aware of any and all safety requirements previously agreed upon by your company. As you add more employees to your crew, you will be responsible for making sure that each new employee receives this information, before going to work at the project.

As part of this project team, we recognize that your company’s success depends on efficient, high quality and safe work practices. Therefore, your company’s and your employee’s participation in this program is required.

XL Construction also offers this Subcontractor Safety Program ‘on-line’ through a safety-training provider called ‘Click-Safety’. Please check with your company administration to see if you and your fellow employees will be using this service to complete the program. If not, then you are required to do the following:

1. Review the information contained in this document with your employees.

2. Have each employee complete and sign the quiz (make copies as needed).

3. Grade each employee quiz – each quiz question must be answered correctly. Answers to quiz questions are provided on page one.

4. Have each employee sign the ‘SSP Log-Sheet’ attached to this document.

5. Give completed quizzes and log-sheet to the XL Superintendent or Safety Coordinator.

6. Obtain a Hard Hat Sticker from the XL Superintendent or Safety Coordinator for each of your employees.

If you have any questions regarding the completion of this SSP program, please contact the XL Construction Project Superintendent or Safety Coordinator. Thank you for your cooperation. We look forward to working with you to have a safe and profitable project.

Sincerely,

XL CONSTRUCTION Corporation,

Dave Beck
Vice President
Requirements Prior to Field Activities

1. **Injury and Illness Prevention Program (IIPP)**—Each Subcontractor must have a copy of their company’s written Injury and Illness Prevention Program on site and readily available upon request by XL Construction Project Management.

2. **Certificates of Insurance**—Each Subcontractor must have submitted all required insurance certificates to XL Construction prior to start of work.

3. **Language Barriers**—It is the responsibility of the subcontractor to ensure communication of all safety and workplace rules to the subcontractor’s employees. Subcontractors must have a supervisor employee onsite who is fluent in the language necessary to ensure communication at all times.

4. **Hazardous Materials**—Each Subcontractor must maintain the most current copy of an MSDS for each chemical product used on this project, as well as chemical products applied to, or otherwise installed, as part of this project. MSDS must be readily available upon request by XL Construction Project Management. Clients may require an MSDS to be submitted by the Subcontractor prior to the chemical product delivery to the site.

5. **Pre-Task Meeting**—Each Subcontractor engaging in:
   - crane lifts of any kind
   - hazardous material removal / abatement
   - steel erection / decking
   - trenching and excavation exceeding (5) feet in depth
   - demolition
   - application of epoxy or other odor producing coatings/materials
   - confined space work
   - utility tie-ins
   - work on hazardous process systems
   - energized electrical work including back-up battery systems or other tasks deemed to present an unusual potential hazard, must participate in a pre-task safety meeting with XL Construction Project Management prior to work. The Subcontractor must present a safety plan that meets all NFPA Requirements and be prepared to discuss what safety precautions will be implemented to ensure safe completion of the task. XL’s “Energized Electrical Work Permit” must be completed and submitted for approval to XL’s Project Superintendent a minimum or two weeks before planned work.
6. **Certifications**—Individual certifications of training and/or other generally accepted documentation of qualification shall be provided to the XL Construction project superintendent for the following activities including but not limited to:

- Operation of Scissor Lifts, Industrial Lift Trucks/Forklifts, Aerial Boom Lifts, Cranes
- Use of respiratory protection devices beyond the use of ‘dust’ or ‘nuisance’ dust masks.
- Hazmat removal or disturbance including lead, asbestos or hazardous chemicals.
- Use of ‘Powder Actuated Tools’

7. **Subcontractor Safety Representative**—Each Subcontractor must designate and identify to XL Construction Project Management an individual among the Subcontractor’s crew who will serve as the Subcontractor’s Safety Representative. This individual must have the ability, through training and/or experience, to identify unsafe work conditions and/or practices and have the authority to correct these conditions and/or practices immediately, or upon request of the XL Construction Project Superintendent.

8. **Underground Utility Location**—Any Contractor involved with excavation on this project is responsible for positively locating underground utilities by “Hand Digging” methods prior to excavating by mechanical means. It is also the responsibility of the contractor conducting excavation activities to notify “Underground Service Alert” (USA) obtain the appropriate permit for any excavation activity affected by the USA system and to follow the requirements in 8 CCR 1541 regarding high priority subsurface installations.

9. **Competent Person**—As defined by the state Division of Occupational Health and Safety (DOSH), each subcontractor performing any of the following scopes of work will identify by name the onsite ‘Competent Person’ for the operation, Including but not limited to:

- Trenching operations greater than (4) feet in depth into which employees may enter.
- Excavations of any kind where employees may be exposed to cave-ins.
- Erection and use of scaffolds where by the erection and use is integral to the scope of worked being performed.
- Rigging or any kind.
General Requirements

1. **Worker Conduct**—Harassment and/or acts of discrimination based on disability, race, religion, gender, etc. are prohibited on this jobsite. Lewd behavior, catcalls and/or other inappropriate gestures will not be tolerated and will result in the immediate and permanent removal of the offending individual from the project site.

2. **Orientation of Supervisor’s**—The Supervisor from each Subcontractor must receive this Subcontractor Safety Program (SSP) packet with a review of its contents from the XL Construction Project Superintendent.

3. **Employee Orientation**—It is the responsibility of each Subcontractor Supervisor to review and/or otherwise communicate the requirements contained in this (SSP) to each member of his/her work crew. And, to obtain the signature of each Employee indicating their understanding of these requirements. It is also the responsibility of each Subcontractor to review and enforce these requirements with any second tier Subcontractor, Supplier or Vendor.

4. **Injuries**—All injuries requiring medical treatment including on-site first-aid, must be reported to XL Construction Project Management immediately. A copy of the Subcontractor's Report of Injury form must be submitted to XL Construction Project Management within 24-hours from the time the Subcontractor was notified of the injury.

5. **Injury Review Meeting**—If a serious injury occurs whereby the injured individual is taken from the work site by emergency medical personnel, or if a Subcontractor sustains (3) doctor case injuries to his/her crew in any (12) month period on any active XL Construction Project, a meeting will be convened by XL Construction Project Management to discuss the cause(s) of the injury(s) and what steps will be taken to prevent future injury to Employees. A Senior Level Management Employee of the Subcontractor must attend this meeting.

6. **Safety Meetings**—All Subcontractor Field Personnel must attend weekly “all-hands” safety meetings conducted by XL Construction Project Management. This safety meeting attendance is required regardless of any other safety meeting held by the Subcontractor for their Employees.

7. **Safety Inspections**—The designated Subcontractor Safety Representative must conduct safety inspections for the purpose of identifying and evaluating hazards arising out of the Subcontractor’s activities. The frequency of these inspections must be consistent with criteria contained in the Subcontractor’s Injury and Illness Prevention Plan (IIPP).

8. **Near Misses**—The only difference between a near miss and accident is Luck. XL encourages the use of our “Near Miss Hazard Report” form as a means to document near miss events, but more importantly, to develop a plan with our subcontractors on how to prevent this near miss from ever occurring again.
9. **Personal Protective Equipment**—Subcontractors must maintain and supply to their Employees all required personal protective devices for this project as well as any special or additional personal safety equipment necessary for the Subcontractor’s scope of work. **The use of safety glasses and hard hats is required, at all times, on all XL Construction Project sites.**

- Foot protection (foot guards) is required for any worker using a pneumatic or electric hammer for breaking concrete, pavement or hard soil; or using a jumping compactor, or similar device where crushing injury to the feet is possible.

- Workers need to wear a hard-hat fitted face shield, in addition to safety glasses, when the worker is engaged in
  - Overhead Demolition.
  - Pulling down ceiling material, or ceiling component systems.
  - Pulling down or prying materials that are fastened in a way that may cause other debris to dislodge and come down.
  - Pulling down ducting and other mechanical system components. Pulling down any other material that may release from its attachment in a sudden or unpredictable way.
  - Using a powered miter (chop-saw) for cutting metal where the saw is set-up at the or above the workers waist. Example: cutting metal studs or extruded aluminum.
  - Grinding metal or concrete
  - Caustic Chemical use acids and bases, concrete etching, etc.

10. **Drinking Water and Shade**—Subcontractor must provide potable water in sufficient quantity and a shady area for resting that meets or exceeds the current California Heat Illness Prevention Standard.

11. **Protection of Non-Construction Personnel**—The Subcontractor must implement effective protective measures when the Subcontractor’s work impedes areas of public right-of-way (either pedestrian or vehicular) or areas where Client Employees must share access with construction areas. The Subcontractor must utilize devices such as signage, visqueen, flagging, barricades, K-rail, traffic plates, covered walk-ways, flag persons, etc., to effectively separate Non-Construction Personnel from construction activities.

12. **Hot Work Permit**—Any Subcontractor that Performs: Abrasive Cutting, grinding, welding, torch cutting, brazing or soldering must complete a “Hot Work Permit” and submit it to XL’s Project Superintendent for approval. Hot Work Permit Forms are available from any XL Project Team Member.
13. **Work in Confined Spaces**—The Subcontractor must notify XL Construction Project Management prior to performing work in a confined space. Confined spaces may be considered vaults, man-holes, certain excavations, tanks, vessels, exhaust or supply ducting or similar areas where access and egress are impeded. Work in these locations may require a confined space permit and additional special safety precautions such as atmospheric monitoring and ventilation.

14. **Electrical “Energized Work”**—Work on energized electrical panels, switchgear, transformers, battery systems of any kind, etc. is prohibited without the expressed permission of the XL Construction Project Superintendent and concurrence by the General Superintendent assigned to the project.

15. **Lockout Tagout**—Subcontractors must use an approved “Lockout Tagout” procedure when ever working on equipment that has the potential to be energized while being serviced.

16. **Flaggers**—Shall be trained in the proper fundamentals of flagging & moving traffic before being assigned as flaggers. Flagging shall wear orange, strong yellow-green, or fluorescent versions of these colored garments such as vests, jackets, or shirts.

17. **High-Visibility Outerwear**—Employees who are exposed to vehicular traffic and or proximate or transient operation to other Mobil construction equipment shall wear at all times, a High-Visibility upper garment (bright yellow shirt or vest)

18. **Motorized Equipment Use**—The use of forklifts, material handlers, tractors, skid loaders, scrappers, compressors, water trucks, etc., is often critical to the Subcontractor’s scope of work. The Subcontractor must ensure that such equipment is maintained in good working order. All safety devices such as roll-over-protection, seat belts, back-up warning alarms, mirrors, lights and guards shall be in place and working. Employees who are authorized by way of specific safety and operation training for the equipment shall only operate such equipment. In some situations, the Subcontractor may be required to provide a spotter to work with the motorized equipment to enhance the safety of other workers in the area. Operators of equipment must use seat belts whenever the equipment is in motion. Loads, forks and implements (buckets and scrappers) must be lowered to the ground when there is no operator in attendance of the equipment. Loads, load lines, booms, or forks must never come closer than 10 feet from any energized high voltage lines. Compressors and other towed equipment must be prevented from rolling (chocked wheels) when detached from the towing vehicle. Compressed air hoses must be connected with the use of whip-checks or tie-wire. The use of internal combustion engine powered equipment may be prohibited inside buildings and structures. Equipment will be operated by the operator only; i.e. no riders.

19. **Aerial Lifts**—Any Subcontractor Employee that uses any Aerial Lift devices of any kind must be properly trained and have proof of training immediately, available to
XL Construction whenever requested. Any tradesmen operating an Aerial Lift of any kind, must wear a Full Body Harness secured to the lift at all times.

20. **Crane Hoisting and Rigging**—Any Subcontractor that performs crane hoisting or rigging of any kind must submit a completed “Crane Hoisting and Rigging Checklist” to XL’s Project Superintendent for approval at least two weeks prior to the planned hoist date. This checklist is available from any XL Project Team Member.

21. **Clean up**—The Subcontractor must supply all equipment, labor, debris boxes and/or containers necessary to remove debris and construction wastes, which it generates on a daily basis. If in the opinion of XL Construction Project Management, daily clean up by the Subcontractor is unsatisfactory, a 24-hour notice will be given to the Subcontractor to comply with clean-up requirements. In the event that clean up is not conducted within the 24-hour notification period, at the discretion of XL Construction Project Management, labor and equipment will be allocated to conduct the necessary clean up. The cost of such labor and equipment will be the responsibility of the Subcontractor.

22. **Fall Protection**—Each Subcontractor conducting work such that an Employee is exposed to a potential fall distance greater than 6 feet must implement and maintain a Fall Protection Plan appropriate to the site conditions and scope of work. Subcontractors must supply and require their Employees to use appropriate fall protection equipment at all times when exposed to a fall hazard.

23. **Working Hours**—XL Construction’s standard working hours are 7:00AM to 3:30PM, Monday through Friday. The Subcontractor must notify and receive authorization from the XL Construction Project Superintendent if it needs to perform work at times other than normal working hours. XL Construction requires the presence of at least one XL Construction Employee on site during the performance of off-hours work by Subcontractors.

24. **Safety Program Compliance**—Compliance with both the XL Construction’s Subcontractor Safety Program as well as state and federal regulations pertaining to worker health and safety is required. Individuals who fail to comply with these safety requirements will:

- Receive a verbal warning.
- Receive a written notice of safety violation (fax copy to the Subcontractors office).
- Be removed from this project.
Note: At the discretion of the XL Construction Project Superintendent, these steps may be applied to a Subcontractor, Foreman or Supervisor if failure to comply with these safety requirements occurs repeatedly among his/her crew. At the discretion of the XL Construction Project Superintendent, the steps listed above may be utilized in any order depending on the severity of safety non-compliance. The reasonable determination of impairment due to drugs or alcohol, and/or determination of a total disregard for the safety of the individual or others, shall be deemed sufficient cause for immediate removal of the individual from the project.

IMPORTANT! Client requirements for worker health, safety and/or the protection of the environment may differ from the requirements contained in this SSP. Where such differences occur, the more stringent requirement will be implemented. Project Specific Safety Requirements will contain any specific requirements for this project including: parking, security, badging, fall protection and special site orientations.
Safety Rules For All Field Personnel

1. No one will work on this project when their ability and alertness are so impaired by fatigue, illness, medication or any other reason such that they may cause injury to themselves or others.

2. Report all injuries, suspected injuries, or near misses to your Supervisor immediately.

3. Wear clothing appropriate for construction work:
   - Shirt with sleeves (no tank tops)
   - Full length pants
   - Work boots

4. Horseplay, scuffling and other similar behavior can lead to injury and is prohibited on this project.

5. All personnel shall attend a weekly safety meeting conducted by XL Construction.

6. Radios and/or headphones are not allowed on this project.

7. Hard hats and safety glasses are to be worn at all times on this project.

8. Additional safety devices such as knee pads, back belts, face shields, safety vests, hearing protection, respirators, safety harness, etc., may be required for certain tasks and will be provided by your supervisor. Note: Foot protection (foot guards) is required for any worker using a pneumatic electric hammer for breaking concrete, pavement or hard soil; or using a jumping compactor, or similar device where crushing injury to the feet is possible.

9. No task on this project requires you to run. Walk - don't run.

10. Read and follow all warnings and safety precautions on labels of chemical products you use. For more information, ask your Supervisor.

11. Report any strange smells, oily or discolored soil to your Supervisor immediately.

12. Do not enter any confined space such as a manhole, vault, tank, vessel, ducting or other similar area without checking with your Supervisor first.

13. Always check the condition of a ladder before you use it. Damaged or broken ladders will not be used and will be removed from the project.

14. Ladders should be set-up on a firm, level surface. Extension or straight ladders must extend at least three (3) feet beyond their landing at the top. Ladders must be tied off to prevent slipping.
15. Do not try and carry tools in hand while ascending and descending a ladder; use a rope and bucket to lift or lower tools.

16. Never work off the cap or back of a step or “A” frame ladder. You may have to be tied-off with a safety harness and lanyard while working from a ladder if over-reaching is required. If you are not sure, ask your Supervisor.

17. Use ladders, stairs, ramps or walkways; avoid jumping down whenever possible.

18. Always check behind you before swinging a sledgehammer, pick or other similar tool.

19. Never work above vertical re-bar, stakes, conduit or other protruding objects that are not properly covered. OSHA requires approved protection on protruding rebar, stakes, etc. Fall protection is also required if working more than six (6) feet above such hazards.

20. Never take down guard rails or remove floor/roof opening covers without first getting authorization from the XL Construction Project Superintendent, and arranging acceptable flagging or barricades to warn other Employees of the hazard.

21. Do not throw materials, debris or other objects from any level of a building or structure until a spotter, flagging or other precautions are taken to prevent other people from being hit and injured.

22. Do not work from damaged scaffolds. Scaffolds must be used on firm, even surfaces or set-up on good footings. Railings or other fall protection is required for scaffold platforms exceeding 6 feet in height.

23. Electrical cords must be in good condition (no exposed inner wires or splices). Always test ground fault interrupter circuits on temporary power supplies prior to use—they could save your life!

24. Tool guards must be in place and properly adjusted. If the guard is missing, the tool is defective and must not be used. Disabling or blocking the guard on a skillsaw is prohibited.

25. Always pick up spilled, live or spent powder actuated tool loads. You must possess a training card to operate powder-actuated tools on this site.

26. All compressed air hose connections must use whip checks. Never point a compressed air stream at another person or use compressed air to blow off your clothes.

27. Do not block stairways, aisles or other building egress paths with scaffolding or other material, without the permission of the XL Construction Project Superintendent.

28. Clean-up oil, grease and other liquid spills immediately.
29. Always bend over or pull protruding nails, screws and staples from lumber, crating, forms, etc.

30. Store compressed gas cylinders in an up-right position, secured from falling and with the stem caps in place. Never tie-off cylinders to temporary guardrails. Refer to XL Construction's requirements for on-site hazardous materials storage.

31. Anyone using acetylene, propane or other flammable gases or liquids is responsible for providing an appropriate fire extinguisher in the immediate work area. A fire watch or hot work permit may also be required.

32. **Yellow Caution Tape** used on this project requires that any person entering an area demarcated by yellow caution tape to first determine what hazards exist in the area and what precautions are needed to prevent injury.

33. **Red Danger Tape** used on this project means that entry to the area demarcated by the tape is limited to authorized personnel only. The presence of Red Danger Tape means that serious potential hazards exist in the area. Subcontractors who put up caution or danger tape as a warning device are responsible for maintaining the tape until it is no longer needed.

34. Riders are not allowed on motorized equipment that is designed with seating only for the operator.

35. Employees must not ride in the back of pick-up trucks or similar vehicles unless the vehicle is equipped with fixed seating and seatbelts for each Employee.

36. All slings and associated rigging must be inspected prior to use for lifting. Defective or damaged equipment must not be used.
Hazardous Materials Storage and Use

The State of California and the Federal Government consider many chemical products used in construction to be hazardous materials. In addition to the MSDS requirement for chemical products brought on to this construction site, the Subcontractor must continually identify (label), store and dispose of these products in a safe and legal manner.

In most cases, products may be considered hazardous if they are:

- flammable or combustible – fire hazard
- adversely reactive with other chemicals, air, water or heat
- damaging to the environment – air, soil or water
- toxic to humans or animals if inhaled, ingested or absorbed through the skin

Some products found on construction sites will be installed as part of the project (i.e. paints, epoxies, elevator hydraulic fluids, coolants and roofing tar), while other products may be used as part of the construction process (i.e. diesel and gasoline for equipment, compressed gases like oxygen, acetylene, nitrogen and argon).

XL Construction requires that storage of any potentially hazardous material on site be kept to a minimum. Subcontractors must take delivery of such products as close to the actual installation date, or time of use, as possible to minimize storage time on site. When storage of these materials on-site becomes necessary, the following requirements must be observed:

1. Compressed Oxygen and Fuel Gas Cylinders – basic requirements

   - All locations - Regulators must be removed and valve protection caps in place when compressed gas cylinders are transported, moved, stored, or not in continuous use. Continuous use means that the equipment will be used repeatedly throughout the shift.

   - Inside the building - Oxy-Acetylene and Propane torch set-ups must have cylinder valves closed when the equipment will not be used repeatedly within a 30 minute period.

   - A dry-chemical or carbon dioxide fire extinguisher rated at least 10B:C shall be kept near operations where compressed fuel gas cylinders are being used.

   - Compressed gas cylinders not equipped with fixed hand wheel valves, shall have keys, handles or non-adjustable wrenches on the valve stems while these cylinders are service.

   - Cylinders must not be placed where they can accidentally come into contact with an electrical circuit.
Cylinders must be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried.

Oxygen and gas regulators must be in proper working order. If a leak develops in a gas cylinder or regulator, immediately take the cylinder to a safe and remote location outside the building. If the leak cannot be corrected, immediately contact the equipment supplier.

Each cylinder must be clearly marked by the supplier to identify what type of gas it contains.

When extra compressed oxygen and fuel gas cylinders (those not secured in a cylinder cart) are stored on XL Construction projects, separation between fuel gas and oxygen, or oxygen cylinders and other combustibles (especially oil or grease) must be no less than 20 feet unless oxygen and fuel gas cylinders can be separated by a wall constructed of non-combustible material with a fire-resistance rating of (1/2) hour, at least 5 feet in height.

Whenever possible, storage of both oxygen and compressed fuel gas cylinders must be outside the building, tool locker, or tote shed, and in a location which will afford the greatest protection against undue absorption of heat (i.e. direct sunlight).

The use of any fuel gas, oxidizer, or any substance with the potential to displace oxygen (i.e. argon, nitrogen, carbon dioxide) within a confined space is prohibited without the notification, review and permission of the XL Construction Project Superintendent.

2. Flammable and combustible liquids – basic requirements

Flammable and combustible liquids must be stored in approved containers. Such materials must be stored outside the building in a well-ventilated area, and in a manner sufficient to protect containers against undue heat absorption (i.e. direct sunlight).

Gasoline & Fuel Containers – Gasoline & Fuel will be stored in a “Safety Can”. A Safety can is a metal container of NOT more then 5 gallon having a self-closing, pressure relieving lid & spout cover.

Storage of flammable and/or combustible liquids in quantities greater than (5) gallons must include secondary containment capable of containing 110% of the liquid volume of the largest container.

Secondary containment trays, pans, enclosures, etc. must be provided with protection from rainwater accumulation.

A 10B rated fire extinguisher must be provided within (50) feet of wherever more than (5) gallons of flammable or combustible liquids are used on the jobsite.
A 20B rated fire extinguisher must be provided not less than 25 feet, nor more than 75 feet, from any flammable liquid storage area located outside.

Flammable and combustible liquids must never be stored under the job office trailer.

Spills of either flammable or combustible liquids of any amount must be cleaned up immediately. Report all spills to the XL Construction Project Superintendent immediately.

The use of any flammable or combustible liquid within a confined space is prohibited without the notification, review and permission of the XL Construction Project Superintendent.

3. Water-based paints, coatings, and/or other non-flammable liquids – basic requirements

- Storage of water-based paints, coatings or other non-flammable liquids in quantities greater than (5) gallons, where such storage on site is anticipated to be for a period of time exceeding (5) calendar days prior to use or installation, must include secondary containment capable of containing 110% of the liquid volume of the largest container.

- Secondary containment trays, pans, enclosures, etc. must provide protection from rainwater accumulation.

- For locations within the jobsite, where water-based paints, coatings, or other non-flammable liquids are actively being applied, or where quantities greater than (5) gallons of such materials are necessary to sustain continuous daily application, secondary containment is not required. However, containers must be closed at the end of each shift and moved to an area where they will not impede the movement of people and or equipment.

- Pouring any liquid other than clean water down a storm drain is prohibited.

Any unused, extra or left-over chemical product such as paint, epoxy, solvents, or other similar material must be removed from this project by the Subcontractor upon completion of work unless the transfer for such material is requested in writing by either XL Construction or the project client.

**IMPORTANT!** These requirements for hazardous material storage and use are minimum requirements. The Subcontractor must comply with all local, state and federal regulations, as well as client requirements for storage and use of any hazardous material brought to the project.
Project Specific Safety Requirements

Use this form to acknowledge the XL Construction safety requirements. Go to https://www.insidexl.net/document/SAFETY_FORM_224v1

1. Hazardous Materials
   (describe location and disposition of any hazardous materials on site i.e: Asbestos)

2. Security Requirements
   (describe any special badging, background check, and etc. requirements here)

3. Evacuation and Emergency Procedures
   (describe any specific procedures, evacuations routes, etc.)

4. Infection Control
   (describe any special precautions, procedures and methods)

5. Fall Protection
   Determine what specific Fall Protection measures will be required for this Project.

6. Job Hazard Analysis (JHA)
   Determine if this Project will require the creation, review and approval of JHA’s for each tasked performed by XL and every Subcontractors.

7. Smoking and Tobacco Use
   (describe and prohibitions on smoking or other tobacco use on this project site)
SSP Acknowledgment Log

Use this form to acknowledge the XL Construction safety requirements.
Go to https://www.insidexl.net/document/SAFETY_FORM_216v1

I have read the Safety Rules for Subcontractor Employees and understand the requirements of the XL Construction Subcontractor Safety Program as well as any Project Specific Requirements. I understand these safety requirements and will comply with them. I will report any safety concerns I have to my supervisor.

Subcontractor: _____________________________________________________________________
Supervisor: ________________________________________________________________________
Project Site: _______________________   XL Job No.____________________________________

<table>
<thead>
<tr>
<th>Print Name</th>
<th>Signature</th>
<th>Date</th>
<th>Foreman Acknowledges Quiz Passes</th>
<th>Sticker Issued by XL</th>
<th>Click Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Return this sheet to the XL Construction Project Superintendent after the requirements of the SSP have been explained to your employees. Be sure to orient any new hire that may join your crew during this project.

Rev. 9/09
XL Subcontractor Safety Program Quiz

SUBCONTRACTOR ____________________________________________  DATE ________
NAME _______________________________________  XL JOB NO. ___________________
PROJECT SITE __________________________________________________________________________

Choose the answer that best applies

1. Any contractor involved with excavations is responsible for positively locating underground utilities by _____________________________ methods prior to excavating by mechanical means.
   a. Search and Recon  b. Hand Digging
   c. Sonar  d. X-Ray  e. None of the above

2. Each Subcontractor must maintain the most current copy of an MSDS for each chemical product used on this project.
   a. True  b. False

3. The use of Proper Eye Protection and Hard Hats is required, __________ on all Project Sites.
   a. When necessary  b. Only if required by Subcontractor IIPP
   c. At all times  d. As designated by Project Manager

4. Loads, load lines, booms or forks must never come in closer than ___ from any energized voltage lines.
   a. 8 feet  b. 10 feet
   c. 12 feet  d. you can get as close as you like.

5. Loads, forks and implements (buckets and scrapers) must be lowered to the ground when there is no operator in attendance of the equipment.
   a. True  b. False

6. Subcontractors who put up caution or danger tape as warning devices are responsible for maintaining the tape until it is no longer needed.
   a. True  b. False

7. Scaffold platforms exceeding 6 feet in height must be equipped with a proper railing or fall protection system.
   a. True  b. False
8. Ladders must be tied off to prevent slipping and extension or straight ladders must extend at least _____ beyond their landing at the top.
   a. No requirement  b. 3 feet  c. 5 feet  d. 7 feet

9. The use of acetylene, propane or other flammable gases may require a “Fire watch” or “Hot Work” permit.
   a. True  b. False

10. In most cases, products may be considered hazardous if they are:
   a. Flammable or Combustible - Fire Hazard
   b. Adversely reactive with other chemicals, air, water or heat
   c. Damaging to the environment - air, soil or water
   d. Toxic if inhaled, ingested or absorbed through the skin.
   e. All the above

11. Pouring any liquid other than clean water down a storm drain is prohibited.
    a. True  b. False

12. Fuel gas and oxygen, or oxygen cylinders and other combustibles should be separated by 1/2 hour rated firewall at least 5 feet in height or should be stored:
    a. 10 feet apart  b. 15 feet apart  c. 20 feet apart  d. No requirement

This quiz must be graded by your Foreman for 100% correct answers and returned with the employee's signature on the “SSP Acknowledgment log to the XL’s superintendent or Jobsite Safety Coordinator. The XL representative will then issue the Subcontractor employee a sticker to be applied to their Hard Hat. That will then allow them to gain access to XL’s Construction Site.
Safety Procedures

Employee Protection ................................................................. 4-5
New Hire Employee Onboarding ............................................. 4-5
Field Employee Stretch and Flex ............................................. 4-7
Personal Protective Equipment ............................................... 4-16
PPE Hazard Assessment Form .................................................. 4-23
Noise Exposure and Hearing Conservation ............................ 4-27
First Aid / CPR ........................................................................... 4-29
Bloodborne Pathogens Summary ............................................. 4-32
Bloodborne Pathogens Exposure Control Plan ....................... 4-33
Vaccination Declination Form .................................................... 4-40
Post-Exposure Evaluation and Follow Up Checklist .................... 4-41
Equipment ................................................................................. 4-42
Hand and Power Tools ......................................................... 4-42
Ladder Safety ........................................................................... 4-50
Welding, Cutting and Hot Work ............................................... 4-55
Hot Work Permit ........................................................................ 4-67
Compressed Gas Cylinders ...................................................... 4-68
Fire Extinguisher Protection .................................................... 4-71
Aerial Lift .................................................................................. 4-74
Forklifts .................................................................................... 4-76
Crane Safety ................................................................................. 4-82
Crane Hoisting and Rigging Checklist ....................................... 4-93
Material Off-loading and Rigging Procedures ............................ 4-97
Hazardous Material .................................................................. 4-99
Hazard Communications Program ........................................... 4-99
Pressure and Fire Retardant Treated Woods ......................... 4-106
Air Monitoring for Operating Gas Powered Equipment Indoors 4-107
Daily Air Monitoring Log ............................................................ 4-110
Mold Policy .................................................................................. 4-111
Lead Exposure Program ............................................................ 4-112
XL Construction Lead Exposure Training Record ................... 4-124
XL Construction Lead Medical Surveillance Record .................. 4-125
XL Construction Removal of Employee From Lead Related Work 4-126
Asbestos Awareness ................................................................. 4-128
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Protection Program</td>
<td>4-130</td>
</tr>
<tr>
<td>XL Construction Worksite-Specific Respiratory Protection Plan</td>
<td>4-136</td>
</tr>
<tr>
<td>XL Construction Respirator Training Program Attendance Roster</td>
<td>4-138</td>
</tr>
<tr>
<td>XL Construction Respirator Medical Evaluation Questionnaire</td>
<td>4-139</td>
</tr>
<tr>
<td>XL Construction Weekly Respirator Inspection Checklist</td>
<td>4-144</td>
</tr>
<tr>
<td><strong>Electrical</strong></td>
<td></td>
</tr>
<tr>
<td>Electrical Safety Program</td>
<td>4-145</td>
</tr>
<tr>
<td>Assured Grounding Program</td>
<td>4-154</td>
</tr>
<tr>
<td>Lock Out/Tag Out</td>
<td>4-156</td>
</tr>
<tr>
<td>Equipment Isolation Steps</td>
<td>4-160</td>
</tr>
<tr>
<td>Isolation Log</td>
<td>4-161</td>
</tr>
<tr>
<td>Annual Audit of the Control of Hazardous Energy Program</td>
<td>4-166</td>
</tr>
<tr>
<td>Energized Electrical Work Policy</td>
<td>4-169</td>
</tr>
<tr>
<td>Energized Electrical Work Permit</td>
<td>4-172</td>
</tr>
<tr>
<td><strong>Safety Inspections</strong></td>
<td></td>
</tr>
<tr>
<td>Cal-OSHA Permit Requirement</td>
<td>4-175</td>
</tr>
<tr>
<td>Daily Job Hazard Analysis (JHA)</td>
<td>4-178</td>
</tr>
<tr>
<td>Job Hazard Analysis Worksheet</td>
<td>4-180</td>
</tr>
<tr>
<td>Near Miss Policy</td>
<td>4-181</td>
</tr>
<tr>
<td>Near Miss Hazard Report</td>
<td>4-182</td>
</tr>
<tr>
<td>Cal-OSHA Jobsite Inspections</td>
<td>4-183</td>
</tr>
<tr>
<td><strong>Project Hazards</strong></td>
<td></td>
</tr>
<tr>
<td>Cal-OSHA Heat Illness Prevention</td>
<td>4-185</td>
</tr>
<tr>
<td>Training</td>
<td>4-188</td>
</tr>
<tr>
<td>Silica Exposure Control Program</td>
<td>4-190</td>
</tr>
<tr>
<td>General</td>
<td>4-190</td>
</tr>
<tr>
<td>Trenching and Excavations</td>
<td>4-193</td>
</tr>
<tr>
<td>Scaffold Safety Policy</td>
<td>4-206</td>
</tr>
<tr>
<td>Daily Scaffold Inspection Checklist</td>
<td>4-212</td>
</tr>
<tr>
<td>Fall Protection Plan</td>
<td>4-215</td>
</tr>
<tr>
<td>Roof Fall Protection Plan</td>
<td>4-226</td>
</tr>
<tr>
<td>Jobsite Fall Protection Plan</td>
<td>4-233</td>
</tr>
<tr>
<td>Process Systems and Highly Hazardous Chemicals</td>
<td>4-238</td>
</tr>
<tr>
<td>Confined Space Program</td>
<td>4-240</td>
</tr>
<tr>
<td>XL Confined Space Entry Permit</td>
<td>4-255</td>
</tr>
</tbody>
</table>
Employee Protection

New Hire Employee Onboarding

Purpose

The purpose of the New Hire Employee Onboarding Program is to prevent work related injuries and illnesses to new hires. The Supervisors and co-workers must be able to readily identify New Hire Employee Onboarding participants. XL Construction will assign experienced employees to oversee the daily activities of those assigned to the New Hire Employee Onboarding Program.

Scope

- Applies to all XL employees in Shop and Field Operations.
- Applies to all newly hired XL employees (regardless of experience), temporary agency personnel or our independent contractors working on company or client locations/facilities.

Definitions

- New Hire Employee – An employee or Subcontractor employee with less than three months experience in the same job or with his/her present employer.
- Mentor – An experienced employee, who has been assigned to help and work with a New Hire Employee Onboarding participant by his/her Supervisor.

Key Responsibilities

Superintendents and Foremen shall ensure that this program is implemented and followed.

Procedure

Supervisors will ensure that all new, transferred and temporary employees have been through XL's Safety Orientation and have a complete knowledge of the expectations for their job function.

Supervisors will identify all employees with less than 90 days of service or those employees they desire to return to a mentoring status for improvement in job and/or safety performance. Any New Hire Employee experiencing an OSHA Recordable injury during the initial 90 days will repeat the mentoring program or shall be dismissed for poor performance.

New Hire Employee participants will wear a green new employee sticker on their hardhat to help identify them. Superintendents and Foremen can use the “Current Field Tradesmen” List to monitor the 90 day period of each employee. Once this list changes
the employee’s status from New Hire (<90 days) to Regular Full Time (RFT) the sticker may be removed from the hardhat.

Mentors will set the proper safety example for any New Hire Employee assigned them. Mentors will be assigned one employee. Exception: On XL jobsites, a maximum of 3 New Hire Employee participants may be assigned per mentor. Mentors will converse daily with those persons assigned to them, preferably at the start of the day. This will be in addition to other tailgate or daily safety meetings held in the work area.

The Safety Department will randomly audit for process compliance. This will involve interviewing employees in the New Hire Employee Onboarding Program (documentation is not required).
Field Employee Stretch and Flex

Some of the most common construction injuries are the result of strains and sprains.

In an effort to reduce these types of injuries XL has implemented a mandatory Stretch and Flex Program for all of our Field Employees.

According to the Bureau of Labor Statistics there are over 500,000 strain and sprain type injuries that occur on construction projects each year and the majority of these occur as a result of improper work practices. When the proper steps are not taken to allow our bodies and muscles the time they need to get warmed up prior to starting work, there is a much higher risk of suffering a strain or a sprain type injury.

It takes 10-15 minutes to perform the proper Stretch and Flex techniques that will help employees loosen up and be better prepared to start their physical work activity for the day. On the following pages of this bulletin are some examples of Stretch and Flex techniques that you can start using as a part of your program. Feel free to incorporate other types of Stretch and Flex exercises into your program that you feel would benefit your work crew.

Your work crew will need to meet every morning for 10-15 minutes prior to starting work to perform their Stretch and Flex exercises. Typically the Project Foreman or Jobsite Safety Coordinator leads this, but it can be led by anyone on your crew if you elect to do so. You may encounter some resistance at first from your workers, however you will find that after a few days most workers will start to see the personal benefits in doing the Stretch and Flex exercises.

Make sure you ask everyone on your crew before you start the program if anyone has any pre-existing injuries that will not allow him or her to participate in the Stretch and Flex program. In the event that anyone does have a pre-existing injury, they will not be required to participate.

It is important to be consistent in doing these exercises daily or they will not be effective. Please contact the Safety Department if you have any questions or require any assistance.
**Neck and Shoulder Stretch**

This stretches the sternocleidomastoid, pectoralis major and deltoid muscles.

Position: Stand with the feet shoulder width apart and the arms behind the body.

Action: Grasp the left wrist with the right hand. Pull the left arm down and to the right. Tilt the head to the right. Hold this position for 10 to 15 seconds. Repeat the action with the right wrist, pulling the right arm down and to the left. Tilt the head to the left.

**Abdominal Stretch**

This stretches the abdominals, obliques, latissimus dorsi and biceps.

Position: Stand and extend the arms upward and over the head. Interlace the fingers with the palms turned upward.

Action: Stretch the arms up and slightly back. Hold this position for 10 to 15 seconds.

Variation: This stretches the rectus abdominis muscles. Stretch to one side, then the other. Return to the starting position.
Chest Stretch

This stretches the pectoralis major, deltoids and biceps muscle groups.

Position: Stand and extend the arms upward and over the head. Interlace the fingers with the palms turned upward.

Action: Stretch the arms up and slightly back. Hold this position for 10 to 15 seconds.

Variation: This stretches the rectus abdominis muscles. Stretch to one side, then the other. Return to the starting position.

Upper-Back Stretch

This stretches the lower trapezius and posterior deltoid muscles of the upper back.

Position: Stand with the arms extended to the front at shoulder height with the fingers interlaced and palms facing outward.

Action: Extend the arms and shoulders forward. Hold this position for 10 to 15 seconds. Return to the starting position.
Overhead Arm Pull

This stretches the external and internal obliques, latissimus dorsi and triceps

Position: Stand with the feet shoulder width apart. Raise the right arm, bending the right elbow and touching the right hand to the back of the neck.

Action: Grab the right elbow with the left hand and pull to the left. Hold this position for 10 to 15 seconds. Return to the starting position. Do the same stretch and pull the left elbow with the right hand for 10 to 15 seconds
Thigh Stretch

This stretches the quadriceps and anterior tibialis.

Position: Stand.

Action: Bend the left leg up toward the buttocks. Grasp the toes of the left foot with the right hand and pull the heel to the left buttock. Extend the left arm to the side for balance. Hold this position for 10 to 15 seconds. Return to the starting position. Bend the right leg, grasp the toes of the right foot with the left hand and pull the heel to the right buttock. Extend the right arm for balance. Hold this position for 10 to 15 seconds. Return to the starting position.
**Hamstring Stretch (Standing)**

This stretches the hamstrings, erector spinae and gluteal muscles.

- **Position:** Stand with knees slightly bent.
- **Action:** Bend forward keeping the head up and reach toward the toes. Straighten the legs and hold this position for 10 to 15 seconds.

**Groin Stretch (Standing)**

This stretches the hip adductor muscles.

- **Position:** Lunge slowly to the left while keeping the right leg straight, the right foot facing straight ahead and entirely on the floor.
- **Action:** Lean over the left leg while stretching the right groin muscles. Hold this position for 10 to 15 seconds. Repeat with the opposite leg.
Calf Stretch

This stretches the calf (gastrocnemius and soleus) muscles.

Position: Stand straight with the feet together, arms extended downward, elbows locked, palms facing backward, fingers extended and joined and head and eyes facing front.

Action: Move the right foot to the rear about two feet and place the ball of the foot on the ground. Slowly press the right heel to the ground. Slowly bend the left knee while pushing the hips forward and arching the back slightly. Hold this position for 10 to 15 seconds. Return to the starting position. Repeat with the left foot. Return to the starting position.
Calf Stretch (Variation: Toe Pull)

This stretches the calf (gastrocnemius) and to a lesser extent the hamstrings, gluteus maximus and erector spinae muscles.

Position: Stand with the feet shoulder width apart and the left foot slightly forward.

Action: Bend forward at the waist. Slightly bend the right knee and fully extend the left leg. Reach down and pull the toes of the left foot toward the left shin. Hold this position for 10 to 15 seconds. Return to the starting position. In a similar manner, pull the toes of the right foot toward the right shin and hold for 10 to 15 seconds

Neck

Position: Stand with the back straight and feet shoulder width apart. Place the hands on the hips.

Action: Roll the head slowly to the left, making a complete circle with the path of the head. Do this three times in each direction.
Hips

Position: Stand in the same manor as for the neck rotation.

Action: Rotate the hips clockwise while keeping the back straight. Repeat the action in a counterclockwise direction. Do this three times in each direction.
Personal Protective Equipment

Purpose

The purpose of the Personal Protective Equipment (PPE) Program is to set forth the procedures for the use, care, and maintenance of personal protective equipment required to be used by employees for the prevention of injuries.

Key Responsibilities

Health and Safety Director and Safety Engineers

- Shall assist in the selection of appropriate PPE. If a task exposes an employee to hazards which cannot be eliminated through engineering or administrative controls, the Health and Safety Director assists the Superintendent and Safety Engineer to identify and select PPE suitable for the specific task performed, conditions present, and frequency and duration of exposure. Employees need to give feedback to the Superintendent or Foreman about the fit, comfort, and suitability of the PPE being selected.

- Shall assist Superintendents and Foreman in assuring all PPE obtained meets regulatory and XL’s requirements.

- Shall perform Worksite Hazard Assessments, initially and as needed to assess the need for PPE. Sources of hazards include, but are not limited to; hazards from impact/motion, high/low temperatures, chemicals, materials, radiation, falling objects, sharp objects, rolling or pinching objects, electrical hazards and workplace layout.

Superintendents, Foremen, and Safety Engineers

- Shall regularly monitor employees for correct use and care of PPE, and obtain follow-up training if required to ensure each employee has adequate skill, knowledge and ability to use PPE.

- Shall enforce PPE safety rules following the guidance of the XL progressive disciplinary procedures.

Employees

- Shall wear required PPE, as it is a condition of employment.

- Shall comply with the correct use and care of PPE.

- Shall report changes in exposure to hazardous conditions that might require a follow-up assessment of the task for PPE.

- Shall report and replace defective PPE. Defective PPE equipment shall never be used.
**XL's Equipment Warehouse/Shop**

- XL’s Shop maintains an inventory of all PPE. The various types of the PPE available are displayed in the Shop.
- Every XL employee is responsible for obtaining PPE from their immediate Supervisor or from XL’s Shop.

**Procedure**

**General**

Employee owned PPE is NOT permitted, except for safety toe footwear and prescription safety glasses. XL is still responsible for the assurance of its adequacy. All PPE issued by XL Construction shall be at no cost to the employee. PPE shall be used and maintained in a sanitary and reliable condition by the employee. All employees are required to know and follow the procedures outlined in this Program.

**Eye Protection**

Employees must use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids or chemical gases or vapours. Eye and Face PPE must comply with ANSI Standard Z87.1-2003 (Z87+), Occupational and Educational Personal Eye and Face Protective Devices.

**Safety Glasses**

- Safety glasses, with side shields, that meet ANSI Z-87.1-2003 standards with “high impact lenses” are required to be worn by all employees, Subcontractors, and visitors while on XL jobsites, at all times or as described below:

- In all yard work zones or by everyone when in the vicinity of loading or unloading equipment, performing mechanic or maintenance work, test stand operations, operating equipment such as forklifts, welding or any type of work which has the potential to inflict an eye injury.

- In any office, restroom, or any other building while performing any type of work where a potential eye injury may be present.

- Visitors will be provided with visitor glasses. In the absence of approved prescription safety glasses, “over the glass” type safety glasses or goggles, must be worn over the non-safety glasses until approved prescription safety glasses are obtained.

- Workers assisting welders must wear absorbent safety glasses that protect the wearer from ultra-violet (UV) and/or infrared rays (IR).

- Dark shaded lens (sunglasses) darker than a #1 shade are prohibited to be worn indoors unless welding or assisting a welder.
Safety glasses are not required:

- Inside offices.
- Parking lots when traveling from vehicles to and from office buildings by way of main doors that do not pass through projects.

**Goggles**

- Chemical splash proof goggles shall be worn when handling or mixing liquid chemicals, solvents, paints, etc. and/or as recommended on the Material Safety Data Sheet (MSDS) of the material being handled.

**Face Shields**

- Full face shields shall be worn over safety glasses when operating hand held or stationary grinders with abrasive or wire wheels, while chipping paint or concrete, when performing all overhead demolition activities, or performing jobs where there is the potential for flying objects striking the face and safety glasses or goggles would not provide adequate protection.

**Head Protection**

Employees must wear protective hardhats when working in areas where there is a potential for injury to the head from employee initiated impact or impact from falling or other moving objects. Hardhats must comply with ANSI Standard Z89.1-1997 Class E, American National Standard for Industrial Head Protection for Type II head protection or be equally effective.

- XL shall provide hardhats to all XL employees.
- A supply of hardhats must be made available to visitors.
- Employees will be trained in the use, care and maintenance of head protection equipment.
- Hardhats will be inspected by the employee regularly for cracks, chips, scratches, signs of heat exposure (sun cracks), etc.
- Defective hardhats will be replaced immediately.
- Hardhats are to be worn at all field, shop and warehouse locations, or where deemed necessary as per each location's PPE Hazard Assessment.
- Do not alter the suspension system.
- Hardhats will not be altered in any way.
- Do not drill, cut, bend, or apply heat.
- Do not paint or apply unauthorized stickers, name plates, etc.
■ Hardhats shall not be placed in rear windows of vehicles where they will be exposed to the sun or become projectiles during an accident.

**Hearing Protection**

Hearing protection is required to be worn by all employees, Subcontractors, and visitors while in posted “High Noise” areas. Refer to the XL Hearing Conservation Program for more information. Warning signs will be posted in areas known or suspected to have noise levels exceeding 85 dBA either constantly or intermittently. When signs are not posted, employees shall wear hearing protection when noise caused by machinery, tools, etc., prevents normal conversations to be heard clearly.

Rule of thumb: If you have to yell to be heard, hearing protection is required.

**Types**

■ Molded Inserts (ear plugs)

■ Canal Caps (head band type)

■ Muff, either headband or hardhat mounted Earmuffs and earplugs shall be provided to the employee in sizes and configurations that will be comfortable to the employee

**Care and Maintenance**

■ Inspect hearing protection prior to each use

■ Hearing protection must be kept clean to prevent ear infections

■ Most earplugs used today are disposable and must be discarded when they become dirty, greasy, or cracked

■ Earmuffs that have deteriorated foam inserts, cracked seals or are defective must be replaced

**Fit**

■ Due to individual differences, not everyone can wear the same type of hearing protection. A variety of styles may have to be tried before one is found to be comfortable and provide adequate protection

■ Employees shall be instructed how to obtain the proper fit
Hand Protection

Gloves

XL’s preferred method for glove use is to wear gloves at all times while performing any physical labor on an XL jobsite, however at a minimum all XL employees are required to wear gloves while performing any of the tasks listed below, without exception. As with all PPE, the use of gloves will only be effective if the employee is wearing the proper type and size.

- Placing and finishing of all concrete
- Building or striping formwork
- Demolition of any sort
- Grinding or burning with torches
- Handling metal, aluminum, duct work, uni-strut, or metal door frames
- Handling glass, including mullions
- Handling rebar or steel, including tie-wire, and embeds
- Handling rough lumber or pressure treated wood products
- All rough carpentry, including metal/wood stud framing
- Handling or cutting metal decking
- Installing safety handrails, perimeter cabling or cantenary lines for fall protection
- Welding
- Handling hot or cold objects

Glove Inspections

- Gloves shall be inspected before each use for holes, tears, and worn areas.
- Chemical gloves shall be periodically air tested for pinholes by twisting the cuff tightly, apply low air pressure to expand the glove, and then submerging in water to check for bubbles.
- Defective gloves shall be discarded immediately.

Types of gloves available in XL’s Warehouse and their recommended use:
**Foot Protection**

Safety footwear shall be worn by all employees with regularly assigned duties at field locations, in shops and warehouses.

- Office workers and visitors who enter these areas on an infrequent basis will not be required to wear foot protection provided they stay clear of the work being performed.

- If required to be in the close proximity of the work, the work will be stopped while visiting the area or safety footwear will be worn.

All Project Sites, Warehouses and XL’s Shop: Leather or equivalent boots, either lace up or pull up, shall be worn.

- The boot must provide ankle protection and have soles designed to protect from punctures with defined heels for climbing ladders.

- Metatarsal guards will be worn when duties present a hazard of equipment or material crushing the foot.

- All safety footwear must meet ANSI Z41-1999 standards.

- Client locations may require safety footwear to be worn. All visitors and guests shall check with the local Supervisor for client requirements before visiting field locations.

**Fall Protection**

Personal fall protection is required when performing certain elevated jobs in excess of six feet. Consult the XL Fall Protection Program for specific requirements.

**Electrical Protection**

Consult the XL Electrical Safety Program for specific requirements.

**Worksite Hazard Assessment**

During a hazard assessment the following sample hazard sources will be identified:

- High or low temperatures; Chemical exposures (use MSDSs for guidance)

- Flying particles, molten metal or other eye, face, or skin hazards

- Falling objects or potential for dropping objects; employee falling from a height of 6 feet or more

- Sharp objects; Rolling or pinching that could crush the hands or feet

- Electrical hazards

Where these hazards could cause injury to employees, personal protective equipment must be selected to substantially eliminate the injury potential. Employees will
be notified for the selection and reason. The results of this assessment shall be communicated to each affected employee and kept at XL's Main Office.

Selected/identified PPE shall be fitted to each affected employee. Exemptions for use of PPE must be supported by the PPE hazard assessment. Use XL's PPE Hazard Assessment Certification Form to help you with this assessment.

**Monitoring**

Superintendents, Foreman, and Safety Engineers shall monitor jobsite tasks for changes in, or the introduction of new hazards. If new hazards are discovered, they are required to notify XL's Safety Department who will then conduct a hazard assessment for appropriate PPE. The Safety Department will monitor the effectiveness of the PPE Procedure and will make recommendations to improve the procedure as required.
# PPE Hazard Assessment Form

Go to [https://www.insidexl.net/document/SAFETY_FORM_207v1](https://www.insidexl.net/document/SAFETY_FORM_207v1) (1 of 3 pages)

<table>
<thead>
<tr>
<th>EYES</th>
<th>Work activities, such as:</th>
<th>sanding</th>
<th>sawing</th>
<th>grinding</th>
<th>hammering</th>
<th>Work-related exposure to:</th>
<th>airborne dust</th>
<th>flying particles</th>
<th>hazardous liquid chemicals</th>
<th>intense light</th>
<th>other:</th>
<th>Can hazard be eliminated without the use of PPE?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>abrasive blasting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>chopping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>cutting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>drilling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>welding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>punch press operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>other: ______</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACE</th>
<th>Work activities, such as:</th>
<th>cleaning</th>
<th>painting</th>
<th>welding</th>
<th>mixing</th>
<th>spraying</th>
<th>other</th>
<th>Work-related exposure to:</th>
<th>hazardous liquid chemicals</th>
<th>extreme heat/cold</th>
<th>potential irritants:</th>
<th>other:</th>
<th>Can hazard be eliminated without the use of PPE?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HEAD</th>
<th>Work activities, such as:</th>
<th>building maintenance</th>
<th>confined space operations</th>
<th>construction</th>
<th>electrical wiring</th>
<th>walking/working under catwalks</th>
<th>walking/working under conveyor belts</th>
<th>walking/working under crane loads</th>
<th>utility work</th>
<th>other:</th>
<th>Work-related exposure to:</th>
<th>beams</th>
<th>pipes</th>
<th>exposed electrical wiring or components</th>
<th>falling objects</th>
<th>machine parts</th>
<th>other:</th>
<th>Can hazard be eliminated without the use of PPE?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HANDS/ARMS</td>
<td>Work activities, such as:</td>
<td>Work-related exposure to:</td>
<td>Can hazard be eliminated without the use of PPE?</td>
<td>If no use:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------</td>
<td>---------------------------</td>
<td>---------------------------------------------</td>
<td>-----------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>material handling</td>
<td>blood</td>
<td>Yes ☐ No ☐</td>
<td>Gloves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sanding</td>
<td>irritating chemicals</td>
<td></td>
<td>Chemical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sawing</td>
<td>tools or materials that could scrape, bruise, or cut</td>
<td></td>
<td>Liquid/leak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>grinding</td>
<td>extreme heat/cold</td>
<td></td>
<td>Temperature</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>hammering</td>
<td>other:</td>
<td></td>
<td>Abrasion/cut</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>working with glass</td>
<td></td>
<td></td>
<td>Slip</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>demolishing building finishes</td>
<td></td>
<td></td>
<td>Protective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>other:</td>
<td></td>
<td></td>
<td>sleeves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FEET/LEGS</th>
<th>Work activities, such as:</th>
<th>Work-related exposure to:</th>
<th>Can hazard be eliminated without the use of PPE?</th>
<th>If no use:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>building maintenance</td>
<td>explosive atmospheres</td>
<td>Yes ☐ No ☐</td>
<td>Safety shoes or boots</td>
</tr>
<tr>
<td></td>
<td>construction</td>
<td>explosives</td>
<td></td>
<td>Toe protection</td>
</tr>
<tr>
<td></td>
<td>demolition</td>
<td>exposed electrical wiring or components</td>
<td></td>
<td>Electrical protection</td>
</tr>
<tr>
<td></td>
<td>plumbing</td>
<td>heavy equipment</td>
<td></td>
<td>Heat/cold protection</td>
</tr>
<tr>
<td></td>
<td>trenching</td>
<td>slippery surfaces</td>
<td></td>
<td>Anti-slip soles</td>
</tr>
<tr>
<td></td>
<td>use of highly flammable materials</td>
<td>tools</td>
<td></td>
<td>Leggings or chaps</td>
</tr>
<tr>
<td></td>
<td>welding</td>
<td>other:</td>
<td></td>
<td>Foot-Leg guards</td>
</tr>
<tr>
<td></td>
<td>other:</td>
<td></td>
<td></td>
<td>Other:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BODY/SKIN</th>
<th>Work activities such as:</th>
<th>Work-related exposure to:</th>
<th>Can hazard be eliminated without the use of PPE?</th>
<th>If no use:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>battery charging</td>
<td>chemical splashes</td>
<td>Yes ☐ No ☐</td>
<td>Vest, Jacket</td>
</tr>
<tr>
<td></td>
<td>fiberglass installation</td>
<td>extreme heat/cold</td>
<td></td>
<td>Coveralls, Body suit</td>
</tr>
<tr>
<td></td>
<td>irritating chemicals</td>
<td>sharp or rough edges</td>
<td></td>
<td>Raingear</td>
</tr>
<tr>
<td></td>
<td>sawing</td>
<td>other:</td>
<td></td>
<td>Welding leathers</td>
</tr>
<tr>
<td></td>
<td>other:</td>
<td></td>
<td></td>
<td>Abrasion/cut resistance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other:</td>
</tr>
</tbody>
</table>
# PPE Hazard Assessment Form

(2 of 3 pages)

## BODY/WHOLE

<table>
<thead>
<tr>
<th>Work activities such as:</th>
<th>Work-related exposure to:</th>
<th>Can hazard be eliminated without the use of PPE?</th>
</tr>
</thead>
<tbody>
<tr>
<td>building maintenance</td>
<td>working from heights of 10 feet or more</td>
<td>Yes [ ] No [ ]</td>
</tr>
<tr>
<td>construction</td>
<td>working near water</td>
<td>If no use:</td>
</tr>
<tr>
<td>utility work</td>
<td>other: _____</td>
<td>Fall Arrest/Restraint: Type: _____</td>
</tr>
<tr>
<td>other: _____</td>
<td></td>
<td>PFD: Type: _____</td>
</tr>
</tbody>
</table>

## LUNGS/RESPIRATORY

<table>
<thead>
<tr>
<th>Work activities such as:</th>
<th>Work-related exposure to:</th>
<th>Can hazard be eliminated without the use of PPE?</th>
</tr>
</thead>
<tbody>
<tr>
<td>cleaning</td>
<td>irritating dust or particulate matter</td>
<td>Yes [ ] No [ ]</td>
</tr>
<tr>
<td>mixing</td>
<td>irritating or toxic gas/vapor</td>
<td>If no use:</td>
</tr>
<tr>
<td>pouring</td>
<td>other: _____</td>
<td>Fall Arrest/Restraint: Type: _____</td>
</tr>
<tr>
<td>sawing</td>
<td></td>
<td>PFD: Type: _____</td>
</tr>
<tr>
<td>painting</td>
<td></td>
<td>Other: _____</td>
</tr>
<tr>
<td>fiberglass installation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>compressed air or gas operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other: _____</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## EARS/HEARING

<table>
<thead>
<tr>
<th>Work activities such as:</th>
<th>Work-related exposure to:</th>
<th>Can hazard be eliminated without the use of PPE?</th>
</tr>
</thead>
<tbody>
<tr>
<td>generator</td>
<td>loud noises</td>
<td>Yes [ ] No [ ]</td>
</tr>
<tr>
<td>ventilation fans</td>
<td>loud work environment</td>
<td>If no use:</td>
</tr>
<tr>
<td>motors</td>
<td>noisy machines/tools</td>
<td>Fall Arrest/Restraint: Type: _____</td>
</tr>
<tr>
<td>sanding</td>
<td>punch or brake presses</td>
<td>PFD: Type: _____</td>
</tr>
<tr>
<td>pneumatic equipment</td>
<td>other: _____</td>
<td>Other: _____</td>
</tr>
<tr>
<td>use of conveyors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other: _____</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Training
Each employee who requires PPE shall be properly trained. Training shall include:

- When PPE is necessary
- What PPE is necessary
- How to properly put on, adjust and wear PPE
- The limitations of PPE
- How to maintain PPE in a sanitary and reliable condition

Retraining
Retraining is required when:

- The workplace changes, making the previous training obsolete.
- The type of PPE changes.
- When the employee demonstrates lack of use, improper use, or insufficient skill or understanding in PPE selection, necessity, use and limitations.

Documentation
Training shall be documented and records kept at XL’s Main Office. The training documentation shall include:

- Name of employee(s) trained
- The dates of training
- The training topic/subject
Noise Exposure and Hearing Conservation

Purpose

The purpose of this program is to provide a process to minimize employee hearing loss caused by excessive occupational exposure to noise.

Scope

This program is applicable to all employees who may be exposed to noise in excess of 85 decibels (db). This document covers XL Construction employees and shall be implemented on all XL jobsites.

Definitions

Decibels – means the sound energy measured by a sound level meter using the “A” scale. The “A” scale is electronically weighted to simulate the response of the human ear to high and low frequency noise.

Key Responsibilities

Health and Safety Director, Superintendents, Foremen and Safety Engineers

Ensure requirements of this program are established and maintained.

Ensure employees are trained and comply with the requirements of this program.

Employees

Wear hearing protection when required, attend the training and cooperate with testing and sampling.

Procedure

Occupational hearing loss is a cumulative result of repeated or continued absorption of sound energy by the ear. Employee protection is based on reduction of the noise level at the ear or limiting the employee's exposure time. XL shall offer hearing protection to all employees exposed to potential high noise levels in working areas and to those employees requesting hearing protection.

All employees who work in areas where the exposure to noise levels are 85 decibels or greater must wear hearing protection.

Signage

Clearly worded signs shall be posted at entrances to, or on the periphery of, areas where employees may be exposed to noise levels in excess of 85 decibels. These signs shall describe the hazards involved and the required protective actions.
Hearing Protection Devices

Earmuffs and earplugs shall be made available to the employee in sizes and configurations that will be comfortable to the employee. These hearing protection devices shall be made available to all employees exposed to an 8-hour time-weighted average of 85 db at no cost to employees. Employees shall be instructed how to obtain the proper fit.

Training

A training program shall inform employees on an annual basis of the effect of noise on hearing; the purpose of hearing protectors, including the advantages, disadvantages and alternatives of various types, including instructions on selection, fitting, use and care. Training shall be updated to be consistent with changes in the work process and Personal Protective Equipment (PPE) requirements.
First Aid / CPR.

Purpose

The purpose of this program is to establish the minimum first aid supplies, equipment and actions to properly respond to injuries.

Scope

This program is applicable to all XL Construction employees while engaged in work at company facilities and/or facilities operated by others.

Responsibilities

1. It is the responsibility of the Project Superintendent to see that first aid kits are provided and maintained.
2. All employees are responsible for using first aid materials in a safe and responsible manner.
3. The Health and Safety Director is responsible for corresponding with the American Red Cross or equivalent to keep employee training levels current.

Requirements

Planning

The Project Superintendent will:

1. Ensure that a minimum of one employee with a valid certificate shall be present to render first aid at all times work is being performed if medical assistance is not available within 3-4 minutes.
2. Provisions shall have been made prior to commencement of a project for prompt medical attention, including transportation, in case of serious injury.
3. Ensure that adequate first aid supplies and equipment are easily accessible when required.
4. In areas where 911 is not available, the telephone numbers of the physicians, hospitals or ambulances to be used shall be conspicuously posted.

Medical Response

All minor first aid is to be self-rendered. Because of the risks presented by certain bloodborne pathogens, assistance by others should be discouraged.

Only American Red Cross or equivalent trained and certified employees are allowed to render first aid and then only in actual emergencies. Employees authorized to render first
Aid will always observe universal precautions. (Universal Precautions means that the aid giver treats all bodily fluids as if they were contaminated).

If 911 is not available, refer to the list of posted phone numbers for prearranged medical response providers. All XL authorized first responders shall have a cell phone or radio as a means of communication.

**Supplies & Equipment**

First aid supplies shall be provided in easily accessed and posted locations. Always follow the manufacturer’s instructions when using the materials in the first aid kit.

All XL first aid kits contain appropriate items and are stored in a weather proof container with individual contents sealed from the manufacturer.

First Aid kits are to be inspected:

- On the first working day of each week to verify that they are fully stocked and that no expiration dates have been exceeded
- Before being sent out to each job

Replace any items that have exceeded their expiration dates or that have been depleted.

Where the eyes or body of any person may be exposed to injurious corrosive materials, a safety shower and/or eye wash (suitable facilities) shall be available. Ensure expiration dates are checked and water used in storage devices is sanitized. An assessment of the material or materials used shall be performed to determine the type flushing/drenching equipment required. At client jobsites, portable or temporary stations must be established prior to the use of corrosive materials.

**Transportation**

Based on the first responder’s assessment of the injuries involved, decide whether the injured requires to be taken directly to a hospital’s emergency room, occupational medicine provider or administer first aid on location.

Examples of serious injuries that result in the injured being transported to a medical provider are those resulting in severe blood loss, possible permanent disfigurement, head trauma, spinal injuries, internal injuries and loss of consciousness. Keep in mind that the needs and well being of the injured are the first priority.

Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulance service shall be provided. Choices to consider include: private automobile, company vehicle, EMS vehicles including medi-vac helicopters, or any other transportation that can provide safe transportation to the hospital or doctors office in order to provide medical attention to the injured in the quickest manner without any additional complications or injuries to
the injured employee. Transportation needs must be preplanned and coordinated with the transportation provider prior to an incident requiring such service.

**Training**

Volunteers or selected employees are trained by the American Red Cross or equivalent in CPR and first aid. Each of these trained and certified employees are equipped with latex gloves and other required paraphernalia. CPR and first aid training must be re-certified every two years. This training is offered to XL employees annually at no cost.

**Administering of First Aid and CPR**

In response to the growing concern of contracting communicable diseases, including AIDS, through the administering of first aid and CPR, the Center for Disease Control suggests the use of common sense. XL Construction agrees with this position and stresses that if an individual is at all concerned about contracting any disease, the Center for Disease Control has suggested that precautions can be taken by using rubber gloves and one-way valve masks for mouth-to-mouth resuscitation. These items shall be stocked in first aid kits.

If an individual has doubt or concern as to the adequacy or use of these precautions, or how to perform any first aid or CPR procedures, get the victim out of immediate danger of further injury and request professional medical attention.
Bloodborne Pathogens Summary

No employee at XL is required as a part of their job duties to come in contact with blood and/or any other potentially hazardous bodily fluids.

All employees will have access to XL’s Detailed Exposure Control Plan upon request in accordance with 29 CFR, 1910.1020(e).

In the event a workplace accident occurs involving bodily fluids that require clean up the below procedures shall be followed in the listed order:

1. Open package #901 inside of the bloodborne pathogen kit and put on the gown and cap.
2. Open package #902 and put on goggles, mask, and gloves.
3. Open package #903 of clean-up absorbent pack and sprinkle it over the spill, wait 1 minute and scoop up the absorbent with the scraper into the biohazard bag.
4. Open package #904 and clean and dry the spill area using the towels supplied within the kit.
5. Clean up the exposed spill and place all items, including latex disposable gloves, disposable goggles, and disposable facemask into the red plastic bag. Use one of the towlettes to clean your hands and discard into the red plastic bag.
6. Thoroughly wash your hands using the onsite hand washing facility provided by XL at each of our jobsites.
7. Tie the red plastic bag securely to prevent leakage. Use the second antimicrobial towlette to re-clean hands.
8. Disposal will need to be made through the proper channels such as a waste disposal company or clinic, please contact the XL’s Safety Department to handle the required disposal.

Every XL jobsite is required to have a bodily fluid disposal kit on site. Local emergency services are best prepared to perform this task and should be asked to do so whenever possible. Please contact the Safety Department if you have any questions or require any assistance regarding bloodborne pathogens.

In the event of a large exposure, please see XL’s detailed Bloodborne Pathogens Exposure Control Plan for further instructions.
Bloodborne Pathogens Exposure Control Plan

Purpose

This Bloodborne Pathogens Exposure Control Plan has been established to ensure a safe and healthful working environment and acts as a performance standard for all XL Construction employees. This program applies to all occupational exposure to blood or other potentially infectious materials. The content of this plan complies with OSHA Standard 29 CFR 1910.1030, Occupational Exposure to Bloodborne Pathogens.

Scope

All employees who have or may have the potential for exposure to blood or other potentially infectious materials in the workplace.

Key Responsibilities

Exposure Control Officer, XL’s Health and Safety Director

Has overall responsibility for developing and implementing the Exposure Control Procedure for all facilities.

Site Project Manager and Supervisors

Site Project Superintendents and Supervisors are responsible for exposure control in their respective areas.

Employees

Know what tasks they perform that have occupational exposure.

Plan and conduct all operations in accordance with our work practice controls.

Develop good personal hygiene habits.

Procedure

Training

Employees with reasonable anticipated occupational exposure to bloodborne pathogens shall participate in training before their initial assignment and within one year of any previous training. Training shall include:

What bloodborne pathogens are; how to protect themselves from exposure

Methods of warnings (signs, labels, etc.) - see Biohazard Label
The OSHA requirements of bloodborne pathogens

Availability of the Hepatitis B vaccine to those that have occupational exposure at no cost

**Availability of Procedure to Employees**

The Bloodborne Exposure Control Plan is to be kept at all locations and shall be accessible to employees.

**Reviews and Update of the Procedure**

The procedure is reviewed annually and updated whenever we establish new functional positions within our facility that may involve exposure to biohazards.

**Exposure Determination**

Designated employees are trained to render first aid and basic life support. Rendering first aid or basic life support will expose employees to bloodborne pathogens and will require them to adhere to this program.

- There are no job classifications in which some or all employees have occupational exposure to bloodborne pathogens.
- In addition, no medical sharps or similar equipment is provided to, or used by, employees rendering first aid or basic life support.
- This exposure determination has been made without regards to the Personal Protective Equipment that may be used by employees.
- A listing of all first aid and basic life support trained employees in this work group shall be maintained at each jobsite at each first aid kit.

**Methods of Compliance**

**Universal Precautions**

We treat all human blood and body fluids such as semen and vaginal secretions as if they are known to be infectious for HBV, HIV and other bloodborne pathogens.

**Engineering Controls**

Hand washing facilities (or antiseptic hand cleansers or antiseptic towelettes), which are readily accessible to all employees who have the potential for exposure. Containers for contaminated reusable sharps that our clients provide have the following characteristics: Puncture-resistant; Color-coded or labelled with a biohazard warning label; Leak-proof on the sides and bottom.

Secondary containers which are: Leak-proof; Color-coded or labelled with a biohazard warning label; Puncture-resistant, if necessary.
**Work Practices**

- Employees shall wash their hands immediately, or as soon as feasible, after removal of potentially contaminated gloves or other personal protective equipment.

- Following any contact of body areas with blood or any other infectious materials, employees wash their hands and any other exposed skin with soap and water as soon as possible.

- Hand washing facilities shall be available. If hand washing facilities are not feasible XL will provide either an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes.

- Contaminated needles and other contaminated sharps should not be handled if you are not AUTHORIZED or TRAINED to do so. Contaminated needles and other contaminated sharps are not bent or recapped.

- Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses is prohibited in work areas where there is potential for exposure to biohazardous materials.

- Food and drink is not kept in refrigerators, freezers, on countertops or in other storage areas where potentially infectious materials are present.

- All equipment or environmental surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

- Any material possibly containing bloodborne pathogens shall be put in leak proof bags for handling, storage and transport.

- If outside contamination of a primary specimen container occurs, that container is placed within a second leak proof container, appropriately labelled, for handling and storage.

Bloodborne pathogens kits are located on top of first aid kits and are to be used in emergency situations by the caregiver. Once the seal is broken on the kit and any portion has been used it is not to be reused. Pathogen Kits shall be ordered and replaced promptly. Biohazard bags are identified by stickers and located in the first aid area. Contaminated supplies are to be disposed at once.

**Personal Protective Equipment**

XL provides at no cost to our employees gloves, safety glasses, goggles, gowns, face shields/masks and other as needed PPE for bloodborne pathogens response. All PPE shall be of the proper size and readily accessible.

Our employees adhere to the following practices when using their personal protective equipment:
Any garments penetrated by blood or other infectious materials are removed immediately.

All potentially contaminated personal protective equipment is removed prior to leaving a work area.

Gloves are worn whenever employees anticipate hand contact with potentially infectious materials or when handling or touching contaminated items or surfaces.

Disposable gloves are replaced as soon as practical after contamination or if they are torn, punctured or otherwise lose their ability to function as an “exposure barrier”.

Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.

Any PPE exposed to bloodborne pathogens shall be disposed of properly.

Housekeeping

Our staff employs the following practices:

All equipment and surfaces are cleaned and decontaminated after contact with blood or other potentially infectious materials.

Protective coverings (such as plastic trash bags or wrap, aluminum foil or absorbent paper) are removed and replaced.

All trash containers, pails, bins, and other receptacles intended for use routinely are inspected, cleaned and decontaminated as soon as possible if visibly contaminated.

Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush, tongs, forceps, etc.).

Post-Exposure and Follow Up

Post-Exposure Evaluation and Follow-Up

If there is an incident where exposure to bloodborne pathogens occurred we immediately focus our efforts on investigating the circumstances surrounding the exposure incident and making sure that our employees receive medical consultation and immediate treatment.

XL’s Health and Safety Director or an XL Supervisor investigates every reported exposure incident and a written summary of the incident and its causes is prepared and recommendations are made for avoiding similar incidents in the future. We provide an exposed employee with the following confidential information:

Documentation regarding the routes of exposure and circumstances under which the exposure incident occurred.

Identification of the source individual (unless not feasible or prohibited by law).
Once these procedures have been completed, an appointment is arranged for the exposed employee with a qualified healthcare professional to discuss the employee’s medical status. This includes an evaluation of any reported illnesses, as well as any recommended treatment.

**Information Provided to the Healthcare Professional**

We forward the following:

- A copy of the Biohazards Standard.
- A description of the exposure incident.
- Other pertinent information

**Healthcare Professional’s Written Opinion**

After the consultation, the healthcare professional provides our facility with a written opinion evaluating the exposed employee’s situation. We, in turn, furnish a copy of this opinion to the exposed employee. The written opinion will contain only the following information:

- Whether Hepatitis B Vaccination is indicated for the employee.
- Whether the employee has received the Hepatitis B Vaccination.
- Confirmation that the employee has been informed of the results of the evaluation.
- Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which require further evaluation or treatment.
- All other findings or diagnosis will remain confidential and will not be included in the written report.

**Record Keeping**

All records shall be made available upon request of employees, OSHA’s Assistant Secretary and the Director of OSHA for examination and copying. Medical records must have written consent of employee before being released. XL Construction shall meet the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

The respective Human Resources Representative shall maintain Bloodborne Pathogen exposure records.

Employee medical records shall be kept confidential and are not to be disclosed without the employee’s written consent, except as required by 29 CFR 1910.1030 or other law.

Medical records shall be maintained for the duration of employment plus 30 years and shall include at least the following:

- Employee’s name, Social Security number and XL employee number.
Employee’s Hepatitis B vaccination status, including vaccination dates.

All results from examinations, medical testing and follow-up procedures, including all health care professional’s written opinions.

Information provided to the health care professional.

Any Hepatitis B Vaccine Declinations.

Training records shall be maintained for 3 years from the date on which the training occurred and shall include at least the following:

- Outline of training program contents.
- Name of person conducting the training.
- Names and job titles of all persons attending the training.
- Date of training

**Labels & Signs**

Biohazard warning labelling shall be used on containers of regulated waste; Sharps disposal containers; contaminated laundry bags and containers; contaminated equipment.

**Information**

Information provided to our employees includes:

- The Biohazards Standard itself.
- The epidemiology and symptoms of bloodborne diseases.
- The modes of transmission of bloodborne pathogens.
- Our facility’s Exposure Control Procedure (and where employees can obtain a copy).
- Appropriate methods for recognizing tasks and other activities that may involve exposure.
- A review of the use and limitations of methods that will prevent or reduce exposure.
- Selection and use of personal protective equipment.
- Visual warnings of biohazards within our facility including labels, signs and “color-coded” containers.
- Information on the Hepatitis B Vaccine.
- Actions to take and persons to contact in an emergency involving potentially infectious material.
Safety Procedures

- The procedure to follow if an exposure incident occurs, including incident reporting.
- Information on the post-exposure evaluation and follow-up, including medical consultation.
Vaccination Declination Form

Go to https://www.insidexl.net/document/SAFETY_FORM_225v1

Date: ___________ Project: ______________________________________ Project No: _____
Employee Name: _________________________________________________

I understand that due to my occupational exposure to blood or other potential infectious material,
I may be at risk of acquiring Hepatitis B virus (HBV) infection. I have been given the opportunity to
be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline the Hepatitis B
vaccination at this time. I understand by declining this vaccine, I continue to be at risk of acquiring
Hepatitis B, a serious disease. If, in the future, I continue to have occupational exposure to blood
or to other potentially infectious materials and I want to be vaccinated with Hepatitis B vaccine, I
can receive the vaccination series at no charge to me.

____________________________________  _____________________________
Employee Signature       Date
____________________________________  _____________________________
XL Construction Safety Department or   Date
HR Department Representative
# Post-Exposure Evaluation and Follow Up Checklist

Go to [https://www.insidexl.net/document/SAFETY_FORM_209v1](https://www.insidexl.net/document/SAFETY_FORM_209v1)

## Bloodborne Pathogen Exposure Control Plan

### Post-Exposure Evaluation and Follow Up Checklist

Date:    Project:    Project No:    Employee Name:    

Description of exposure that was incurred:  

The following steps must be taken, and information transmitted, in the case of an employee’s exposure to bloodborne pathogens:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Employee furnished with documentation regarding incident</td>
<td></td>
</tr>
<tr>
<td>□ Source individual was identified as:</td>
<td></td>
</tr>
<tr>
<td>□ Who is Employed By:</td>
<td></td>
</tr>
<tr>
<td>□ Appointment arranged for employee with healthcare professional</td>
<td></td>
</tr>
<tr>
<td>Healthcare Professional’s Name:</td>
<td></td>
</tr>
<tr>
<td>□ Documentation forwarded to Healthcare Professional</td>
<td></td>
</tr>
<tr>
<td>□ Description of exposure incident, including routes of exposure</td>
<td></td>
</tr>
<tr>
<td>□ XL follow up after Healthcare Professional review</td>
<td></td>
</tr>
</tbody>
</table>

Were any follow-up procedures or visits required of the Employee:  

Did the Employee complete these follow up visits:  

Describe the final disposition of the employee who had the exposure:

XL Construction Safety Department or HR Department Representative Date  

Rev. 9/09  

SAMPLE ONLY
Equipment

Hand and Power Tools

Purpose

The purpose of this program is to provide establish requirements for the safe operation of hand and power tools and other portable tools, including proper guarding. All hand and power tools shall be maintained in a safe condition.

This program applies to all XL Construction employees who use hand and power tools.

Responsibilities

Any tool which is not in compliance with any applicable requirement of this plan is prohibited. Such tool shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

Superintendents, Foremen, Safety Engineers

- Ensure that all employees using portable tools have been trained and fully understand the operations and maintenance procedures of such tools, including their proper use.
- Provide and train employees with all additional PPE that may be needed for the safe operation of portable tools.

Employees

- Shall ensure they have the correct tool and properly use the correct tool for each task.
- Shall follow manufacturers safety and operating instructions before using

Equipment Manager

- Shall ensure that all hand tools have been tested and are in proper working order before being sent out to the jobsite.

Requirements

General

All tools, regardless of ownership, shall be of an approved type and maintained in good condition.

- Tools are subject to inspection at any time.
- All employees have the authority and responsibility to condemn unsafe tools, regardless of ownership.
Unsafe tools shall be tagged with a “DO NOT USE OR OPERATE” tag to prevent their use.

Employees shall always use the proper tool for the job to be performed. Makeshift and substitute tools shall not be used.

Hammers with metal handles, screwdrivers with metal continuing through the handle, and metallic measuring tapes shall not be used on or near energized electrical circuit or equipment.

Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool bags/buckets firmly attached to hand lines.

Tools shall never be placed unsecured on elevated places.

Impact tools such as chisels, punches, and drift pins that become mushroomed or cracked shall be dressed, repaired, or replaced before further use.

Chisels, drills, punches, ground rods, and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee.

Shims shall not be used to make a wrench fit.

Wrenches with sprung or damaged jaws shall not be used.

Tools shall be used only for the purposes for which they have been approved.

Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets unless suitable protectors are in use to protect the edge.

Wooden handles that are loose, cracked, or splintered shall be replaced. The handle shall not be taped or lashed with wire.

Tools shall not be left lying around where they may cause a person to trip or stumble.

When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where others are present or the danger area shall be barricaded or guarded.

The insulation on hand tools shall not be depended upon to protect users from high voltage shock (except approved live line tools).

**Portable Electric Tools**

The non-current carrying metal parts of portable electric tools such as drills, saw and grinders shall be effectively grounded when connected to a power source unless the tool is an approved double-insulated type, or the tool is connected to the power supply by means of an isolating transformer or other isolated power supply.
Safety Procedures

- All powered tools shall be examined prior to use to ensure general serviceability and the presence of all applicable safety devices.

- Powered tools shall be used only within their design and shall be operated in accordance with manufacturer’s instructions. The use of electric cords for hoisting or lowering tools shall not be permitted.

- All tools shall be kept in good repair and shall be disconnected from the power source while repairs or adjustments are being made.

- Electrical tools shall not be used where there is hazard of flammable vapors, gases, or dusts without a valid Hotwork Permit.

- Ground fault circuit interrupters shall be used with portable electric tools. This does not apply to equipment run off of portable or truck mounted generators at 5kw or less that are isolated from ground or to equipment run directly off of secondaries.

**Pneumatic Tools**

- Pneumatic tools shall never be pointed at another person.

- Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.

- Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

- Compressed air shall not be used for cleaning purposes, except where reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.

- Compressed air shall not be used to blow dust or dirt from clothing.

- The manufacturers stated safe operating pressure for hoses, pipes, valves, filters, and other fitting shall not be exceeded.

- The use of hoses for hoisting or lowering tools shall not be permitted.

- Before making adjustments or changing air tools, unless equipped with quick-change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.

- Compressed air tools, while under pressure, must not be left unattended.

- All connections to air tools shall be made secure before turning on air pressure.

- Air at the tool shall not be turned on until the tool is properly controlled.

- All couplings and clamps on pressurized air hose shall be bridged (pinned) with suitable fasteners.
Hose and hose connections used for conducting compressed air to utilization equipment shall be designed for the pressure and service to which they are subjected.

Use only approved end-fitting clamps (screw type heater hose clamps are not acceptable).

While blowing out hose, do not point it toward people.

Power tools are to be operated only by competent persons who have been trained in their proper use.

Conductive hose should not be used near energized equipment.

Foot protection shall be worn while operating paving breakers, tampers, rotary drills, clay spades, and similar impactor-type tools or at other times when instructed by supervision.

All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi. pressure at the tool shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.

**Powder Actuated Tools-PAT (Tools actuated by an explosive charge)**

Only those employees who have been certified in their use shall operate these tools.

Explosive charges shall be carried and transported in approved containers.

Operators and assistants using these tools shall be protected by means of eye, face, and hearing protection.

Tools shall be maintained in good condition and serviced regularly by qualified persons. The material upon which these tools are to be used shall be examined before work is started to determine its suitability and to eliminate the possibility of hazards to the operator and others.

Prior to use, the operator shall ensure that the protective shield is properly attached to the tool.

Before using a tool, the operator shall inspect it to determine to his satisfaction that it is clean, that all moving parts operate freely, all guards and safety devices are in place, and that the barrel is free from obstructions.

Before using tools the operator shall read and become familiar with the manufacturers operating guidelines and procedures.

When a tool develops a defect during use, the operator shall immediately cease to use it, until it is properly repaired in accordance with the manufactures specifications.
Safety Procedures

- Tools shall not be loaded until just prior to the intended firing time, nor shall an unattended tool be left loaded. Empty tools are not to be pointed at any workmen.

- In case of a misfire, the operator shall hold the tool in the operating position for at least 30 seconds. He shall then try to operate the tool a second time. He shall wait another 30 seconds, holding the tool in the operating position and shall then proceed to remove the explosive load in strict accordance with the manufacturer’s instructions.

- A tool shall never be left unattended in a place where it would be available to unauthorized persons.

- Fasteners shall not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface hardened steel, glass block, live rock, face brick, or hollow tile.

- Driving into materials easily penetrated shall be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side.

- All spent or partially spent loads shall be disposed of into a properly labeled Red bucket; these buckets are available through XL’s Shop.

- Strips are never to be thrown or left on the ground and never mixed with live loads. Whenever an employee or Subcontractor is using a PAT tool is to remain in their immediate supervision and locked in a container when not in use. A PAT is never to be left unattended.

- The red shot buckets are never to contain any water. The buckets should be emptied in the general debris dumpster only after verifying there are no unspent shots. If there is any water in the bucket, it cannot be emptied into the general debris dumpster and must be treated as hazardous material.

- Tools shall not be used in an explosive or flammable atmosphere.

**Hydraulic Jacks**

**Loading and Marking**

- The operator shall make sure that the jack used has a rating sufficient to lift and sustain the load.
The rated load shall be legibly and permanently marked in a prominent location on the jack by casting, stamping, or other suitable means.

Operation and Maintenance

In the absence of a firm foundation, the base of the jack shall be blocked. If there is a possibility of slippage of the cap, a block shall be placed in between the cap and the load.

The operator shall watch the stop indicator, which shall be kept clean, in order to determine the limit of travel. The indicated limit shall not be overrun.

After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.

Hydraulic jacks exposed to freezing temperatures shall be supplied with adequate antifreeze liquid.

All jacks shall be properly lubricated at regular intervals.

Each jack shall be thoroughly inspected before each use. Jacks, which are in unsafe condition, shall be tagged accordingly, and shall not be used until repairs are made.

**Abrasive Blast Cleaning Nozzles**

The blast cleaning nozzles shall be equipped with an operating valve, which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.

**Fuel Powered Tools**

All fuel-powered tools shall be stopped while being refueled, serviced, or maintained, and fuel shall be transported, handled, and stored in an approved OSHA container that has self-closing venting.

When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment, shall be adhered to.

**Guarding Portable Tools**

Guards shall be in place and operable at all times while the tool is in use. The guard may not be manipulated in such a way that will compromise its integrity or compromise the protection in which intended. Guarding shall meet the requirements set forth in ANSI B15.1.

**Portable Circular Saws**

All portable, power-driven circular saws having a blade diameter greater than 2 inches shall be equipped with guards above and below the base plate or shoe.
Safety Procedures

- The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts.

- The lower guard shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work.

- When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to covering position.

- All cracked saw blades shall be removed from service.

- All dull blades shall be replaced.

Switches and Controls

- All hand held powered tools, circular saws, drills, tappers, fastener drivers, horizontal or vertical angle grinders, etc., shall be with a constant pressure switch or control, and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.

- All hand-held powered circular saws having a blade diameter greater than 2 inches, electric, hydraulic or pneumatic chain saws, and percussion tools without positive accessory holding means shall be equipped with a constant pressure switch or control that will shut off the power when the pressure is released. All hand-held gasoline powered chain saws shall be equipped with a constant pressure throttle control that will shut off the power to the saw chain when the pressure is released.

- The operating control on hand held power tools shall be so located as to minimize the possibility of its accidental operation, if such accidental operation would constitute a hazard to employees.

- Grounding of portable electric powered tools shall meet the electrical requirements that can be found in the Electrical Safety Program. All electric power tools shall be equipped with a three-prong plug.

Portable Grinders

Special “revolving cup guards” which mount behind the wheel and turn with it shall be used. They shall be made of steel or other material with adequate strength and shall enclose the wheel sides upward from the back for one-third of the wheel thickness. It is necessary to maintain clearance between the wheel side and the guard. The clearance shall not exceed one-sixteenth inch.

Vertical portable grinders, also known as right angle grinders, shall have a maximum exposure angle of 180 degrees and the guard shall be located between the operator and the wheel during use. Adjustment of the guard shall ensure that pieces of an accidentally broken wheel will be deflected away from the operator.
Other Portable Grinders

The maximum angular exposure of the grinding wheel periphery and sides for safety guards used on other portable grinding machines shall not exceed 180 degrees and the top half of the wheel shall be enclosed at all times.

Personal Protective Equipment

Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects or exposed to harmful dust, fumes, mists, vapors or gases shall be provided with the particular PPE necessary to protect them from the hazard.
Ladder Safety

Purpose

The purpose of the program is to prescribe rules and establish minimum requirements for the construction, care and use of the common types of ladders.

All ladders that are purchased and placed into service; or, any ladders that are engineered, manufactured and installed on any of XL Construction projects shall follow the requirements set forth by this program.

Definitions

Ladder – an appliance usually consisting of two side rails joined at regular intervals by cross-pieces called steps, rungs, or cleats, on which a person may use to ascend or descend.

Stepladder – a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back. Its size is designated by the overall length of the ladder measured along the front edge of the side rails.

Single ladder – a non-self-supporting portable ladder, nonadjustable in length, consisting of but one section. The overall length of the side rail designates its size.

Extension ladder – a non-self-supporting portable ladder adjustable in length. It consists of two or more sections traveling in guides or brackets so arranged as to permit length adjustment. Its size is designated by the sum of the lengths of the sections measured along the side rails.

Fixed ladder – a ladder permanently attached to a structure, building or equipment.

Individual-rung ladder – a fixed ladder each rung of which is individually attached to a structure, building, or equipment.

Cage – a guard that may be referred to as a cage or basket guard, which is an enclosure that is fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space of the ladder for the safety of the person who must climb the ladder.

Key Responsibilities

Superintendents and Foreman

- Supervisors are responsible for ensuring that all employees have been trained in the use and inspection of ladders in accordance to the manufactures guidelines.

- Supervisors are responsible for ensuring that all employees and Subcontractors are aware that if an inspection discovers a defect, the ladder shall not be used and taken out of service immediately.
Employees

- Employees shall inspect ladders prior, during and at the completion of each use to ensure the condition of the ladder and the safety of its occupants.
- Employees are responsible for following this program and reporting any damage or repairs that may be needed to their Supervisor.

Procedure

**Inspection, Care and Safe Work Practices of Ladders**

**Inspection**

Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.

- Ladder rungs, cleats and steps shall be parallel, level and uniformly spaced.
- Any ladder that has developed defects shall be withdrawn from service for repair or destruction and tagged or marked as “Dangerous, Do Not Use.”
- If a ladder is tipped over, it shall be inspected by a competent person for side rail dents or bends or excessively dented rungs; check all rung to side rail connections; check hardware connections; check rivets for shears.
- Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment shall not be used; improvised repairs shall not be made.
- All wood parts shall be free from sharp edges and splinters, sound and free from accepted visual inspection from shake or other irregularities.

**Care**

Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached and the movable parts shall operate freely without binding or undue play.

- Metal bearings of locks, wheels, pulleys, etc., shall be frequently lubricated.
- Frayed or badly worn rope shall be replaced. Safety feet and other auxiliary equipment shall be kept in good condition to ensure proper performance.
- Rungs shall be kept free of grease and oil.
- Ladders shall be stored in a well-ventilated area in a manner to prevent sagging and warping.
Safe Work Practices

Ladders shall be used only for the intended purpose for which they were designed.

- The ladder shall be secured at the top or held by another person at the base.
- The footing of the ladder shall be placed on a stable and level surface.
- Ladders shall extend 3 feet above the top of an upper landing surface and extension ladders shall be placed at a 4:1 ratio.
- Ladders shall not be placed on boxes, barrels or other unstable bases to obtain additional height.
- Ladders shall not be used in a horizontal position as platforms, runways or scaffolds.
- Ladders shall not be used by more than one man at a time.
- Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked open, locked or guarded.
- If a ladder is used in a high traffic area, barricades shall be placed to avoid accidental displacement due to collisions.
- Do not stand on the top two rungs or top of step ladders.
- On two-section extension ladders the minimum overlap for the two sections in use shall be as follows:

<table>
<thead>
<tr>
<th>Size of Ladder (feet)</th>
<th>Overlap (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to and including 36’</td>
<td>3</td>
</tr>
<tr>
<td>Over 36 up to and including 48’</td>
<td>4</td>
</tr>
<tr>
<td>Over 48 up to and including 60’</td>
<td>5</td>
</tr>
</tbody>
</table>

- No ladder shall be used to gain access to an elevated surface unless the top of the ladder extends at least 3 feet above the point of support and properly tied off.
- The employee shall maintain a three (3)-point grip on the ladder at all times and carry tools/equipment on a belt or hoist up. Do not carry anything in the hands that could cause injury in case of fall.
- The employee shall face the ladder while ascending or descending.
- The bracing on the back legs of stepladders is designed solely for increasing stability and not for climbing.
- The ladder shall not be moved while occupied.
Portable Ladders
- Stepladders shall not be longer than 20 feet.
- Single ladders shall not be longer than 30 feet.
- A two-section extension ladders shall not be longer than 60 feet. All ladders of this type shall consist of two sections, one to fit within the side rails of the other and arranged in such a manner that the upper section can be raised and lowered.
- Keep all ladders at least ten (10) feet away from power lines.
- Ladders shall not be loaded beyond the maximum intended load for which they were built or in excess of the manufacturer’s rated capacity. Weight includes the combined weight of the climber and his tools/equipment. Ladders are rated as the following:
  1. I (holds 250 lbs)
  2. I-A (holds 300 lbs)
  3. II (holds 225 lbs)
  4. III (holds 200 lbs)

Fixed Metal Ladders
- Ladders shall be constructed to withstand a minimum of 200 pounds.
- All metal rungs shall have a minimum diameter of 1/2 inch and wooden rungs shall have a minimum diameter of 1 1/8 inches.
- Rungs shall not be more than 12 inches apart and shall be uniform throughout the length of the ladder.
- Rungs shall be a minimum length of 16 inches and provide protection so a foot cannot slip off the end.
- Rungs shall have a minimum of 7 inches between itself and the structure behind it.
- A fall restraint system must be provided for all fixed ladders greater than six feet in length.
  1. A Cage is required when the fixed ladder is at least twenty feet tall.
  2. Cages on fixed ladders shall not begin at a point less than 7 feet nor greater than 8 feet from the walking surface below the cage.
  3. Cages shall provide a clear width of 15 inches in each direction of the rung’s centerline.
  4. Cages shall not extend less than 27 inches, but not greater than 28 inch ed from the centerline of the rung.
5. A climbing fall restraint system may be substituted for a ladder cage.

For more information on design specifications, refer to Cal-OSHA regulations article 25, sections 1675-1678 of The Construction Safety Orders.
Welding, Cutting and Hot Work

Purpose
The purpose of this program is to assure a safe work environment during welding, cutting and hot work operations.

Scope
This program is applicable to all employees directly involved or assisting in the welding, cutting and hot work operations. This document covers XL Construction employees and Subcontractors and shall be used on all XL jobsites. Operators of equipment should report any equipment defect or safety hazards and discontinue use of equipment until its safety has been assured. Repairs shall be made only by qualified personnel. If welding and cutting cannot be conducted safely the welding and cutting operation shall not be performed.

Definitions
Welding/Hot Work Procedures - any activity which results in sparks, fire, molten slag or hot material which has the potential to cause fires or explosions.

Examples of Hot Work - Cutting, Brazing, Soldering, Thawing Pipes, Grinding, using an electric tool in a hazardous area and Welding.

Special Hazard Occupancies - any area containing Flammable Liquids, Dust Accumulation, Gases, Plastics, Rubber and Paper Products.

Hazards - includes, but not limited to the following; fires and explosions, skin burns, welding “blindness“ and respiratory hazards from fumes and smoke.

Key Responsibilities
Superintendents and Foremen
- Determine if its property is safe for welding and cutting operations.
- Establish safe areas for welding and cutting operations.
- Provide training for all employees whose task includes heat, spark or flame producing operations such as welding, brazing or grinding.
- Develop and monitor effective hot work procedures.
- Provide safe equipment for hot work.
- Provide proper and effective PPE for all hot work.
- Monitor all hot work operations.
- Ensure all hot work equipment and PPE are in safe working order.
Safety Procedures

- Allow only trained and authorized employees to conduct hot work and conduct inspections of the hot work area before operations begin.
- Ensure permits are used for all hot work outside authorized areas.

Employees
- Follow all hot work procedures.
- Properly use appropriate hot work PPE.
- Inspect all hot work equipment before use.
- Report any equipment problems or unsafe conditions.

Procedure

General

Before cutting or welding is permitted the area shall be inspected by an XL Supervisor responsible for inspection and granting authorized welding and cutting operations. Precautions that are to be taken shall be in the form of a written Hot Work Permit.

Where practical, all combustibles shall be relocated at least 35 feet from the work site. Where relocation is impractical, combustibles shall be protected with flameproof covers, shielded with metal, guards, curtains or wet down the material to help prevent ignition of material.

Ducts, conveyor systems and augers that might carry sparks to distant combustibles shall be protected or shut down.

Where cutting or welding is done near walls, partitions, ceilings, or openings in the floor (grating, manholes, etc.), fire-resistant shields or guards shall be provided to prevent ignition.

If welding is to be done on a metal wall, partition, ceiling, or solid decking/flooring, precautions shall be taken to prevent ignition of combustibles on the other side due to conduction or radiation of heat. Where combustibles cannot be relocated on the opposite side of the work, a fire watch person shall be provided on the opposite side of the work.

Welding shall not be attempted on a metal partition, wall, and ceiling or decking/flooring constructed of combustible sandwich panels.

Cutting or welding on pipes or other metal in contact with combustible walls, partitions, floors, ceilings or roofs shall not be undertaken if the work is close enough to cause ignition by combustion.

Cutting or welding shall not be permitted in the following situations:
Safety Procedures

- In areas not authorized by management.
- In sprinkled buildings while such protection is impaired.
- In the presence of potentially explosive atmospheres, e.g. flammables.
- In areas near the storage of large quantities of exposed, readily ignitable materials.
- In areas where there is dust accumulation of greater than 1/16 inch within 35 feet of the area where welding/hot work will be conducted.
- All dust accumulation shall be cleaned up before welding or hot work is permitted.

Whenever welding or cutting is performed in locations where other than a minor fire might develop or any of the conditions mentioned above cannot be met, a fire watch shall be provided.

- The fire watch shall be provided during and for a minimum of 1/2 hour past the completion of the welding project.
- The fire watch shall be trained in the use of fire extinguishers and the facility's alarm system.
- During this time the fire watch will have appropriate fire extinguishers readily available.
- Suitable extinguishers shall be provided and maintained ready for instant use.
- A hot-work permit will be issued on all welding or cutting outside of the designated welding area.

**Fire Prevention Measures**

A designated welding area shall be established to meet the following requirements:

- Floors swept and cleaned of combustibles within 35 feet of work area.
- Flammable and combustible liquids and material will be kept 35 feet from work area.
- Adequate ventilation to remove welding fumes and smoke.
- At least one 10 pound dry chemical fire extinguisher shall be within access of 35 feet of the work area.
- Protective dividers such as welding curtains or noncombustible walls will be provided to contain sparks and slag to the combustible free area.

Requirements for welding conducted outside the designated welding area:

- Portable welding curtains or shields must be used to protect other workers in the welding area.
Safety Procedures

- A hot-work permit must be completed and complied with prior to initiating welding operations.

- Respiratory protection is mandatory unless an adequate monitored airflow away from the welder and others present can be established and maintained.

- Plastic materials must be covered with welding tarps during welding procedures.

- Fire watch must be provided for all hot-work operations.

After welding operations are completed, the welder shall mark the hot metal or provide some other means of warning other workers.

Confined Space

- A space that is large enough and so configured that an employee can bodily enter and perform assigned work;

- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults and pits are spaces that may have limited means of entry); and

- Is not designed for continuous occupancy.

Refer to XL’s Confined Space Program before commencing any welding, cutting, and/or brazing operations in an area meeting the requirements of a confined space.

Ventilation is a prerequisite to work in confined spaces.

When welding or cutting is being performed in any confined spaces, the gas cylinders and welding machines shall be left on the outside. Before operations are started, heavy portable equipment mounted on wheels shall be securely blocked to prevent accidental movement.

When a welder must enter a confined space through a manhole or other small opening, means shall be provided for quickly removing him in case of an emergency.

- When safety belts and lifelines are used for this purpose, they shall be so attached to the welder’s body so that it cannot be jammed in a small exit opening.

- An attendant with a preplanned rescue procedure shall be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect.

When arc welding is to be suspended for any substantial period of time, such as during lunch or overnight, all electrodes shall be removed from the holders and the holders carefully located so that accidental contact cannot occur and the machine shall be disconnected from the power source.
In order to eliminate the possibility of gas escaping through leaks of improperly closed valves, when gas welding or cufing, the torch valves shall be closed and the fuel-gas and oxygen supply to the torch positively shut off at some point outside the confined area whenever the torch is not to be used for a substantial period of time, such as during lunch hour or overnight. If practical, the torch and hose shall also be removed from the confined space.

When welding must be performed in a space entirely screened on all sides, the screens shall be so arranged that no serious restriction of ventilation exists. It is desirable to have the screens mounted so that they are about 2 feet (0.61 m) above the floor unless the work is performed at so low a level that the screen must be extended nearer to the floor to protect nearby workers from the glare of welding.

A fixed enclosure shall have a top and not less than two sides which surround the welding or cutting operations and a rate of airflow sufficient to maintain a velocity away from the welder of not less than 100 linear feet (30 m) per minute.

All welding and cutting operations carried on in confined spaces shall be adequately ventilated to prevent the accumulation of toxic materials or possible oxygen deficiency. This applies not only to the welder, but also to helpers and other personnel in the immediate vicinity. All air withdrawn will be replaced with air that is clean.

In circumstances for which it is impossible to provide such ventilation, airline respirators or hose masks approved for this purpose by the National Institute for Occupational Safety and Health (NIOSH) will be provided. In areas immediately hazardous to life, a full-face piece, positive pressure, self-contained breathing apparatus or a combination full-face piece, positive pressure supplied-air respirator with an auxiliary, self contained air supply approved by NIOSH must be used.

Where welding operations are carried on in confined spaces and where welders and helpers are provided with hose masks, hose masks with blowers or self-contained breathing equipment, a worker shall be stationed on the outside of such confined spaces to ensure the safety of those working within.

**Fumes, Gases and Dust**

Fumes produced by some welding processes can be toxic and may require source extraction. An assessment of the work to be performed must be completed before each job is undertaken. Fumes generally contain particles from the material being welded. Welding fumes can have an acute effect on the respiratory system.

Welders and helpers will refer to XL’s Respiratory Protection Program to determine the appropriate respiratory protection to be used during welding operations.

All welding and cutting operations shall be adequately ventilated to prevent the accumulation of toxic materials. This applies not only to the welder, but also to helpers and other personnel in the immediate vicinity.
**Safety Procedures**

**Personal Protection**

Hardhats and hand shields shall be made of a material which is an insulator for heat and electricity. Hardhats, shields, and goggles shall not be readily flammable and shall be capable of withstanding sterilization.

Hardhats and hand shields shall be arranged to protect the face, neck and ears from direct radiant energy from the arc.

Hardhats shall be provided with filter plates and cover plates designed for easy removal.

All parts shall be constructed of a material which will not readily corrode or discolor the skin.

Goggles shall be ventilated to prevent fogging of the lenses as much as practical.

All glass for lenses shall be tempered, substantially free from scratches, air bubbles, waves and other flaws. Except when a lens is ground to provide proper optical vision correction, the front and rear surfaces of lenses and windows shall be smooth and parallel.

Lenses shall bear some permanent distinctive marking which may readily identify the source and shade.

The following is a guide for the selection of the proper shade numbers. These recommendations may be varied to suit the individual's needs.

<table>
<thead>
<tr>
<th>Welding Operation</th>
<th>Shade Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shielded metal — arc welding 1/16, 3/32, 1/8-5/32 inch electrodes</td>
<td>10</td>
</tr>
<tr>
<td>Gas-shielded arc welding (nonferrous) 1/16, 3/32, 5/32 inch electrodes</td>
<td>11</td>
</tr>
<tr>
<td>Gas-shielded arc welding (ferrous) 1/16, 3/32, 1/8, 5/32 electrodes</td>
<td>12</td>
</tr>
<tr>
<td>Shielded metal arc welding: 3/16 7/32, 1/4 inch electrodes 5/16, 3/8-inch electrodes</td>
<td>12 14</td>
</tr>
<tr>
<td>Atomic hydrogen welding</td>
<td>10 – 14</td>
</tr>
<tr>
<td>Carbon arc welding</td>
<td>14</td>
</tr>
<tr>
<td>Soldering</td>
<td>2</td>
</tr>
<tr>
<td>Torch brazing</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Light cutting, hp to 1 inch</td>
<td>3 or 4</td>
</tr>
<tr>
<td>Medium cutting, 1 inch to 6 inches</td>
<td>4 or 5</td>
</tr>
<tr>
<td>Healy cutting, 6 inches or over</td>
<td>5 or 6</td>
</tr>
<tr>
<td>Gas welding (light) up to 1/8 inch</td>
<td>4 or 5</td>
</tr>
</tbody>
</table>
### Safety Procedures

#### Welding Operation

<table>
<thead>
<tr>
<th>Welding Operation</th>
<th>Shade Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas welding (medium) 1/8 - 1/2 inch</td>
<td>5 or 6</td>
</tr>
<tr>
<td>Gas welding (heavy) 1/2 inch or over</td>
<td>6 or 8</td>
</tr>
</tbody>
</table>

**Note:** In gas welding or oxygen cutting where the torch produces a high yellow light, it is desirable to use a filter or lens that absorbs the yellow or sodium line in the visible light of the operation. All filter lenses and plates shall meet the test for transmission of radiant energy prescribed in ANSI Z87.1 — 1968 — American National standard Practice for Occupational and Educational Eye and Face Protection. Where the work permits, the welder is to be enclosed in an individual booth painted with a finish of low reflectivity such as zinc oxide (an important factor for absorbing ultraviolet radiation) and lamp black or shall be enclosed with noncombustible screens similarly painted. Booths and screens shall permit circulation of air at floor level. Workers or other persons adjacent to the welding areas shall be protected from the rays by noncombustible or flameproof screens or shields or shall be required to wear appropriate goggles.

Adequate hand protection and clothing must be used to protect the body from welding hazards.

**Cleaning Compounds**

In the use of cleaning materials, because of their possible toxicity or flammability, appropriate precautions such as manufacturer instructions shall be followed.

- Degreasing and other cleaning operations involving chlorinated hydrocarbons shall be so located that no vapors from these operations will reach or be drawn into the atmosphere surrounding any welding operation.

- In addition, trichloroethylene and perchloroethylene shall be kept out of atmospheres penetrated by the ultraviolet radiation of gas-shielded welding operations.

Oxygen cutting, using a chemical flux, iron powder or gas shielded arc cutting for stainless steel shall be performed using mechanical ventilation adequate to remove the fumes generated.

**Cylinders**

Compressed gas cylinders shall be DOT-approved and legibly marked near the shoulder of the cylinder for the purpose of identifying the gas content with either the chemical or trade name of the gas.

- All compressed gas cylinder connections must comply with ANSI B57.1-1965 Standards.
Compressed gas cylinders shall be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried.

All cylinders shall be kept away from sources of heat and from radiators and piping systems that may be used for grounding purposes. Cylinders and cylinder valves including couplings and regulators shall be kept free from oily or greasy substances and must not be handled with gloves or rags in the same condition.

Stored oxygen cylinders shall be kept at least 20 feet from the fuel gas cylinders or combustible materials, especially oil or grease, or separated by a non-combustible barrier at least 5 feet high with a fire rating of at least one-half hour. All empty cylinders shall have closed valves. Valve protection caps shall always be in place and hand-tight except when cylinders are in use or connected for use.

Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards.

Fuel gas cylinders stored inside buildings shall be limited to a total capacity of 2,000 cubic feet (300 pounds) of liquefied petroleum gas, except for those in actual use or attached ready for use.

All acetylene cylinders shall be stored valve-end up.

Assigned storage spaces shall be located where cylinders cannot be knocked over or damaged by falling objects or subject to tampering by unauthorized persons.

Back flow protection shall be provided by an approved device that will prevent oxygen from flowing into the fuel-gas system or fuel from flowing into the oxygen system.

An approved device that will prevent flame from passing into the fuel-gas system shall provide flashback protection.

An approved pressure-relief device set at the appropriate pressure shall provide backpressure protection.

Special care must be taken when transporting gas cylinders:

- Cylinders must be secured with the valve cap installed.
- Cylinders shall not be lifted by the valve protection caps. The regulators must be removed and cylinders shall not be dropped or permitted to strike each other.
- Removed regulators must be carried in the cab of the vehicle.
- Cylinders shall not be tampered with nor should any attempt be made to repair them.
- They shall be handled carefully - rough handling, knocks, or falls are liable to damage the cylinder, valve or safety device and cause leakage.
Safety procedures shall not be tampered with.

**Arc Welding and Cutting**

All personnel operating, installing and maintaining welding equipment shall be qualified or trained to operate and maintain such equipment.

- All workmen assigned to operate or maintain equipment shall be familiar with and electrical welding equipment shall be chosen for safe operation and comply with applicable Requirements for Electric Arc Welding Standards to include: 29 CFR 1910.254, 29 CFR 1910.252 (a)(b) (c) and if gas shielded arc welding is done they must be familiar with the American Welding Society Standard A6-1-1966.

- Arc welding equipment must be designed to meet conditions such as exposure to corrosive fumes, excessive humidity, excessive oil vapor, flammable gasses, abnormal vibration or shock, excessive dust and seacoast or shipboard conditions.

- It shall be operated at recommended voltage in accordance to the manufacturer recommendations.

- All leads shall be periodically inspected and replaced if insulation is broken or splices are unprotected.

- Leads shall not be repaired with electrical tape.

- All ground connections shall be checked to determine that they are mechanically strong and electrically adequate for the required current.

A disconnecting switch or controller shall be provided at or near each welding machine along with overcurrent protection.

All direct current machines shall be connected with the same polarity and all alternating current machines connected to the same phase of the supply circuit and with the same polarity.

- To prevent electrical contact with personnel, all electrode holders shall be placed where they do not make contact with persons, conducting objects or the fuel of compressed gas tanks.

- All cables with splices within 10 feet of the holder shall not be used.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

If an object to be welded or cut cannot be moved and if all of the fire hazards cannot be removed, then guards shall be used to confine the heat sparks and slag and to protect the immovable fire hazards.
Resistance Welding

All personnel operating, installing and maintaining welding equipment shall be qualified or trained to operate and maintain such equipment.

- Voltage, interlocks, guarding, grounding and shields shall be in accordance with manufacturer recommendations.

- Precautions such as flash guarding, ventilation and shields shall be provided to control flashes, toxic elements and metal fumes.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

Transmission Pipeline

When arc welding is performed in wet conditions, or under conditions of high humidity, special protection against electric shock shall be supplied.

Pressure testing:

- In pressure testing of pipelines, the workers and the public shall be protected against injury by the blowing out of closures or other pressure restraining devices.

- Protection shall be provided against expulsion of loose dirt that may have become trapped in the pipe

The welded construction of transmission pipelines shall be conducted in accordance with the Standard for Welding Pipelines and Related Facilities, API Std. 1104-1998.
Safety Procedures

**Oxygen Fuel Gas Welding and Cutting**

Only approved apparatuses such as torches, regulators or pressure-reducing valves, setting generators and manifolds shall be used:

- Mixtures of fuel gases and air or oxygen may be explosive and must be guarded against.
- All hoses and hose connections shall comply with the Compressed Gas Association and Rubber Manufacturers’ Associations’ applicable standards.
- Workers in charge of the oxygen or fuel-gas supply equipment, including generators, shall be instructed and judged competent by the XL Supervisor before being left in charge.

If the object to be welded or cut cannot be readily moved, all moveable fire hazards should be removed.

**Fire Watch Requirements**

A Fire Watch shall be under these conditions as a minimum:

- Locations where other than a minor fire might develop.
- Combustible materials are closer than 35 feet to the point of operation.
- Combustibles that are 35 feet or more away but are easily ignited.
- Combustible materials are adjacent to the opposite side of metal partitions, ceilings or roofs.

Fire Watch personnel MUST be maintained at least a half an hour after welding or cutting operations have been completed.

**First Aid Equipment**

First aid equipment shall be available at all times. All injuries shall be reported as soon as possible for medical attention. First aid shall be rendered until medical attention can be provided.

**Training**

Training shall include:

- Position Responsibilities
- Cutters, welders and their Supervisors must be suitably trained in the safe operations of their equipment and the safe use of the process.
- Fire Watch Responsibilities - specifically, the fire watch must know:
  - That their ONLY duty is Fire Watch
- When they can terminate the Watch
- How to use the provided fire extinguisher(s)
- Be familiar with facilities and how to activate fire alarm, if fire is beyond the beginning stage
- Operator responsibilities
- Contractor responsibilities
- Documentation requirements
- Respirator Usage requirements
- Fire Extinguisher training
**Hot Work Permit**

Go to [https://www.insidexl.net/document/SAFETY_FORM_208v1](https://www.insidexl.net/document/SAFETY_FORM_208v1)

This Hot Work Permit must be completed each day for each location, prior to work involving but not limited to: **abrasive cutting, grinding, welding, torch cutting, brazing, soldering, other sources of ignition.** The completed permit must be approved by the XL Construction project superintendent and posted in the immediate area of work.

Responsible Subcontractor: ____________________________

Date Work scheduled: ____________________________

Emergency phone number(s): ____________________________

Name of supervisor: ____________________________

Name of Fire Watch: ____________________________

Location of work: ____________________________

Description of work:

<table>
<thead>
<tr>
<th>Permitted Work</th>
<th>Equipment and precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasive cutting</td>
<td>Extinguisher Type:</td>
</tr>
<tr>
<td>Torch cutting</td>
<td>Fire sprinkler system</td>
</tr>
<tr>
<td>Grinding</td>
<td>Clearance from other combustibles</td>
</tr>
<tr>
<td>Welding</td>
<td>Fire and spark blankets</td>
</tr>
<tr>
<td>Brazing</td>
<td>Smoke detector system disabled</td>
</tr>
<tr>
<td>Powder actuated tool</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>Soldering</td>
<td>Ventilation equipment</td>
</tr>
<tr>
<td>Other:</td>
<td>Other:</td>
</tr>
</tbody>
</table>

XL Const. Approval: ____________________________

Date: ____________________________

Work start time: ____________________________

Work stop time: ____________________________

Fire Watch check 1/2 hour after work completion by: ____________________________

Time: ____________________________

☐ Smoke detector returned to service

Facilities Management Approval: ____________________________ Date: ____________________________

Rev. 9/09
Compressed Gas Cylinders

Purpose
The purpose of this program is to prevent injury from failure of compressed gas cylinders and to establish requirements for handling, lifting and storing compressed gas cylinders safely.

Scope
This program covers all XL employees and Subcontractors who handle, transport and/or use compressed gas cylinders.

Key Responsibilities

Superintendents and Foremen

■ Shall ensure that all employees are aware of the proper handling, storage and use requirements for compressed gas cylinders.

■ Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.

Employees

■ Shall follow all requirements regarding the safe handling, storage and use of compressed gas cylinders.

Procedure

General
Cylinders shall not be accepted, stored or used if evidence of denting, bulging, pitting, cuts, neck or valve damage is observed. If damage is observed:

■ The cylinder must be taken out of service.

■ The cylinder’s owner shall be notified to remove the cylinder from the premises.

■ If owned, the cylinder shall be de-pressured and inspected as required by this program.

Handling
Valve caps must be secured onto each cylinder before moving or storage.

Secure the cylinder in a blanket when being lifted by mechanical means. Slings, ropes or electromagnets are prohibited to be used for lifting compressed gas cylinders.

The preferred means to move compressed gas cylinders is with a cart, carrier or with a helper.
Compressed gas cylinders must not be allowed to strike each other.

**Storing**

All cylinders must be secured upright in a safe, dry, well-ventilated area that limits corrosion and deterioration.

- Cylinders must be secured by means that will prevent the cylinder from falling.
- When securing the cylinder, the restraints shall not be attached to electrical conduit or process piping.

Empty and non-empty cylinders shall be stored separately.

Oxygen cylinders must be stored a minimum of 20 feet from combustible gas cylinders or areas where there may be open flame or arcing. Cylinders may also be stored where the oxygen is separated from combustible gas cylinders by a 5 foot or higher wall with a fire resistance rating of 30 minutes.

**Use**

Only regulators and fittings that correspond to the threads on the valve outlet shall be used. Never force or modify connections.

Only regulators and gauges shall be used within their designated ratings.

The use of a pressure-reducing regulator is required at the cylinder, unless the total system is designed for the maximum cylinder pressure.

The main cylinder valve must be closed before attempting to stop leakage between the valve and regulator.

The cylinder and attachments must be protected from sparks, molten metal, excessive heat, flames or electrical currents.

**Inspection of Owned Compressed Gas Cylinders**

The following inspection procedures apply only to compressed gas cylinders owned by XL, e.g., gas standard cylinders, gas sampling cylinders, propane, etc.:

- These owned cylinders shall be visually inspected prior to charging, before each use and at least annually.
- All inspections and testing must be documented.

The following inspection procedures apply only to compressed gas cylinders owned by XL, e.g., gas standard cylinders, gas sampling cylinders, propane, etc.:

- These owned cylinders shall be visually inspected prior to charging, before each use and at least annually.
- All inspections and testing must be documented.
High Pressure Cylinders are those cylinders marked for service pressures of 900 psi and greater.

- High pressure cylinders shall be taken out of service and submitted for requalification testing when any of the following conditions are identified by visual inspection:
  - Cuts, dings, gouges, dent, bulges, pitting, neck damage or evidence of exposure to fire.
  - The cylinders shall be inspected and retested according to the requirements stated in 49 CFR 180.205 and .209.
  - Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Low Pressure Cylinders are those cylinders marked for service pressures of less than 900 psi.

- Low pressure cylinders fall into two categories, those requiring requalification and those that do not require re-qualification.
  - Low pressure cylinders that do not require re-qualification shall be taken out of service and condemned when any of the following conditions are identified during inspection:
    - The tare weight of the cylinder is less than 90% of the stamped on weight of the cylinder.
    - Observed pitting, dents, cuts, bulging, gouges or evidence of exposure to fire.
  - Low pressure cylinders subject to re-qualification shall be taken out of service, inspected and retested when visual inspection identifies any of the following conditions: dents, bulges, pitting or neck damage.
  - Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.
Fire Extinguisher Protection

Purpose

The purpose of this program is to provide fire extinguisher procedures to ensure equipment is operable and employees have the knowledge to safely operate in case of a fire incident.

Responsibilities

XL’s Equipment Yard will maintain and keep current all fire extinguishers used on XL’s jobsites. XL’s Safety Department will ensure that all field staff receive proper training on the correct use of the equipment.

Procedure

Selection and Distribution

Portable fire extinguishers shall be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of the hazard which would affect their use. Fire extinguishers used by this company are for four classes of fires:

- Class A Fire Extinguishers. Use on ordinary combustibles or fibrous material, such as wood, paper, cloth, rubber and some plastics. Travel distance for employees to any extinguisher is 75 feet (22.9 m) or less.

- Class B Fire Extinguishers. Use on flammable or combustible liquids such as gasoline, kerosene, paint, paint thinners and propane. Travel distance from the Class B hazard area to any extinguishing agent is 50 feet (15.2 m) or less.

- Class C Fire Extinguishers. Use on energized electrical equipment, such as appliances, switches, panel boxes and power tools. Travel distance from the Class C hazard area to any extinguishing agent is 50 feet (15.2 m) or less.

- Class D Fire Extinguishers. Use on combustible metals, such as magnesium, titanium, potassium and sodium. Travel distance from the combustible metal working area to any extinguishing agent is 75 feet (22.9 m) or less.

Labeling of Fire Extinguishers

Fire extinguishers are to be mounted in easily accessible locations. Fire extinguishers are to be located so that no employee will ever be more than 75 feet from an extinguisher. No equipment, boxes or product may be placed (even temporarily) in the way of a fire extinguisher.

Large projects should consider labeling all fire extinguishers so that it can be easily determined where they belong.
Safety Procedures

Maintenance
All fire extinguishers shall be mounted at 48 inches above the floor. All fire extinguishers shall be maintained as follows:

■ Fully charged and in operable condition
■ Clean and free of defects
■ Readily accessible at all times

Inspection, Maintenance and Testing
All fire extinguishers are to be inspected by XL employees monthly. All fire extinguishers are to be inspected and serviced annually by certified personnel from a fire extinguisher dealer. Fire extinguishers are to be inspected and re-charged by certified personnel after any use.

Any fire extinguisher that shows a loss of pressure during the monthly inspection will be inspected and re-charged by certified personnel.

Use
In the event of a fire, one employee will get the nearest fire extinguisher and use it to attempt to put the fire out. All other employees in the immediate area will prepare to evacuate if needed. All other employees in the building need to be advised that a fire is in progress.

The employee attempting to extinguish the fire will break the safety seal on the handle and pull the pin. He will then aim his extinguisher at the base of the fire and discharge it with a sweeping motion from side to side; continuing until the fire is out or the extinguisher is emptied.

Remember that a standard fire extinguisher will be emptied in about 10 to 15 seconds. If the fire is not out when the extinguisher has been completely discharged, the employees must evacuate the area.

Training and Education
Training will occur prior to initial assignment and at least annually thereafter. On even numbered years this training will be conducted by a member of the local fire department (where possible) and will include “live fire” hands on use of the extinguisher. On odd number years this training will be conducted by the Safety Department and will include a demonstration of the use of a fire extinguisher, without actually discharging the unit.

New employees will be given the odd-number year training upon hire.
**Initial Training Outline**

- General principles of a fire; Hazards employed with an initial stage fire(s).
- When to "back off" (evacuate) of an initial stage fire(s).
- General fire principles of a fire extinguisher.
- Hazards employed with the use a fire extinguisher; Use of a fire extinguisher.

**Retraining**

Retraining shall re-establish employee proficiency and introduce new or revised control methods and procedures, as necessary. Retraining shall be provided for all authorized and affected employees whenever there is:

- An annual basis of review
- A change in job assignment
- XL has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of fire extinguishers or fire prevention procedures.
Aerial Lift

Purpose

The purpose of this program is to define the requirements for safely operating an aerial lift device. An aerial lift device is defined as any device, vehicle mounted telescoping or articulating, or both, which is used to position personnel above six feet in height.

Scope

This policy shall cover all aerial lift devices used on XL’s jobsites. All employees shall operate these devices in accordance with this policy. This policy does not pertain to scissor lifts.

Key Responsibilities

Supervisors

■ Shall ensure that all aerial devices are properly operated by trained personnel.

■ Aerial lifts acquired for use on or after January 22, 1973 shall be designed and constructed in conformance with the applicable requirements of the American National Standards for “Vehicle Mounted Elevating and Rotating Work Platforms,” ANSI A92.2-1969, including appendix. Aerial lifts acquired before January 22, 1973 which do not meet the requirements of ANSI A92.2-1969, may not be used after January 1, 1976, unless they have been modified so as to conform with the applicable design and construction requirements of ANSI A92.2-1969.

■ Shall ensure that aerial lift devices are designed and constructed in conformance with applicable requirements of the American National Standards for “Vehicle Mounted Elevating and Rotating Work Platforms” ANSI A92.2-1969, including appendix.

Employees

■ Shall operate an aerial lift device only if they have received the proper training and are currently “certified” to operate it.

Procedure

■ Aerial lifts may be “field modified” for uses other than those intended by the manufacturer provided the modification has been certified in writing by the manufacturer or by an equivalent entity.

■ Lift controls shall be tested each day prior to use to determine that such controls are in safe working conditions. Tests shall be made at the beginning of each shift during which the equipment is to be used to determine that the brakes and operating systems are in proper working condition.

■ Only authorized persons shall operate an aerial lift.
■ Boom and basket load limits specified by the manufacturer shall not be exceeded.

■ The minimum clearance between electrical lines and any part of the equipment (i.e. crane or load) shall be 10 feet for lines rated 50 kV or below.

■ Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders or other devices for a work position.

■ Approved fall protection shall be worn at all times and a lanyard attached to the boom or basket when working from an aerial lift.

■ All employees who operate an aerial lift device shall be trained in the safe operation of the specific device they will operate. Training must conform to all Cal-OSHA requirements.
Forklifts

Purpose

The purpose of this program is to establish requirements for the safe operation and use of Powered Industrial Trucks (forklifts).

Scope

This program applies to all XL Construction employees who operate a Powered Industrial Truck in the scope of their job duties and assignments. This document covers XL employees and Subcontractors and shall be used on all XL projects.

Definitions

Authorized Employee – A person at least 18 years of age and who has completed the required safety training for the safe operations of forklifts.

Forklift (Powered Industrial Truck) – Any mechanical device used for the movement of supplies, material or a finished product that is powered by an electric motor or an internal combustion engine.

Key Responsibilities

Superintendents and Foremen

- Shall ensure that each powered forklift operator is competent to operate a forklift safely, as demonstrated by the successful completion of the training and evaluation program.
- Shall ensure that all forklifts are inspected before each shift and all repairs are made before the forklift is operated.

Employees

- Shall be current on applicable training.
- Operate forklift in accordance to the forklift standards and manufacturer requirements.
- Inspect forklift at the start of shift and remove from service if defects are found until they are corrected.
- Record in the Equipment Inspection Manual the results of the daily inspection.
- Operate forklift in a safe manner.
**Procedure**

**General**

All approved forklifts shall have a manufacturers identification plate attached showing all specifications of the forklift and that the forklift is accepted by a nationally recognized testing laboratory.

Modifications and additions that affect capacity and safe operation shall not be performed without manufacturer’s prior written approval. Capacity, operation, and maintenance instruction plates, tags or decals shall be changed reflect the modification or addition.

If the forklift is equipped with front-end attachments other than factory installed attachments, the Supervisor shall ensure that the forklift is marked to identify the attachments and show the approximate weight of the forklift and attachment combination at maximum elevation with load laterally centered.

The operator shall see that all nameplates and markings are in place and are maintained in a legible condition.

All forklifts shall be equipped with safety seat belts.

All forklifts shall be equipped with a horn, backup alarm, beacon light, headlights and taillight.

**Safety Guards**

Forklifts shall be fitted with an overhead rollover cage, as per manufacturer’s specifications.

If the type of load presents a hazard to the operator, the forklift shall be equipped with a vertical load backrest extension, as per manufacturer’s specifications.

**Training**

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, videos, written material, etc.) and evaluation of the operator’s performance in the workplace.

Persons who have the knowledge, training and experience to train forklift operators and evaluate their competence shall conduct all operator training and evaluation.

Selected employees who have been trained shall receive refresher training and be evaluated, at a minimum, every three years.

Training content shall include all minimally-required items including load capacity, instructions, distance, differences between cars vs. PITs, refueling/recharging, ramps, visibility, balance/counter balance, etc.
Retraining is required when an employee operates the equipment in an unsafe manner, there is an incident, a different vehicle type is put in service or changes in conditions occur.

**Certification**

The trainer shall certify that each operator has been trained and evaluated as required.

The certification shall include the name of the operator, the date of the training, the date of the evaluation and the identity of the person(s) performing the training and/or evaluation.

**Operations**

**General**

- All operators shall wear a safety seat belt when operating a forklift.
- Forklifts shall not be driven up to anyone standing in front of a bench or other fixed object.
- No person shall be allowed to stand or pass under the elevated portion of any forklift, whether loaded or empty.
- Unauthorized personnel shall not be permitted to operate forklifts.
- No riders or passengers are permitted.
- It is prohibited for arms or legs to be placed between the uprights of the mast or outside the running lines of the forklift.
- When a forklift is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off and brakes set.
- Wheels shall be blocked if the forklift is parked on an incline.
- A forklift is unattended when the operator is 25 ft. or more away from the vehicle, which remains in view, or whenever the operator leaves the forklift and it is not in view.
- When the operator of a forklift is dismounted and within 25 ft. of the forklift still in view, the load engaging means shall be fully lowered, controls neutralized and the brakes set to prevent movement.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car.
- Forklifts shall not be used for opening or closing freight doors.
- Brakes shall be set and wheel blocks shall be in place to prevent movement of trucks, trailers or railroad cars while loading or unloading.
Fixed jacks may be necessary to support a semi trailer during loading or unloading when the trailer is not coupled to a tractor.

The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.

There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.

An overhead guard (cages) shall be used as protection against falling objects.

An overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.

Fire aisles, access to stairways and fire equipment shall be kept clear.

Traveling

The operator shall slow down and sound the horn at cross aisles and other locations where vision is obstructed.

If the load being carried obstructs forward view, the operator shall be required to travel with the load trailing.

The operator shall be required to look in the direction of, and keep a clear view of the path of travel.

Grades shall be ascended or descended slowly.

When ascending or descending grades in excess of 10 percent, loaded forklifts shall be driven with the load upgraded.

On all grades the load and load engaging means shall be tilted back, if applicable, and raised only as far as necessary to clear the road surface.

Under all travel conditions the forklift shall be operated at a speed that will permit it to be brought to a stop in a safe manner.

Stunt driving and horseplay are prohibited.

The operator shall slow down for wet and slippery floors.

Dock board or bridge plates shall be properly secured before they are driven over.

Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.

While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion.
Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

**Loading**

- Only stable or safely arranged loads shall be handled.
- Caution shall be exercised when handling off-center loads, which cannot be centered.
- Only loads within the rated capacity of the forklift shall be handled.
- Forklifts equipped with attachments shall be operated as partially loaded forklifts when not handling a load.
- A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.
- Extreme care shall be used when tilting the load forward or backward, particularly when high tiering.
- Tilting forward with load engaging means while elevated shall be prohibited except to pick up a load.
- An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack.
- When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

**Operation of the Truck**

- If at any time a forklift is found to be in need of repair, defective, or in any way unsafe, the forklift shall be taken out of service until it has been restored to safe operating condition.
- Fuel tanks shall not be filled while the engine is running.
- Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting the engine.
- No forklift shall be operated with a leak in the fuel system.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.
- Operator must verify trailer chocks, supports and dock plates are secured prior to loading/unloading.
**Maintenance of Forklifts**

- Only authorized personnel shall perform maintenance and make repairs.
- Those repairs to the fuel and ignition systems of forklifts, which involve fire hazards, shall be conducted only in locations designated for such repairs.
- Forklifts in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- Only parts equivalent with those used in the original design shall replace all parts of any forklift requiring replacement parts.
- Forklifts shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts.
- Additional counter weighting of forklifts shall not be done unless approved by the truck manufacturer.
- Forklifts shall be inspected before being placed in service, and shall not be placed in service if the inspection shows any condition adversely affecting the safety of the forklift.
- Inspection shall be made at least daily, prior to each shift. Results of the inspection shall be recorded in the Forklifts Equipment Inspection Booklet.
- Where forklifts are used on an around-the-clock basis, they shall be inspected before each shift.
- Defects, when found, shall be immediately reported to the Supervisor and corrected before operating the forklift.
- When the temperature of any part of any forklift is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the forklift shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Forklifts shall be kept in a clean condition, free of lint, excess oil and grease.
- Noncombustible agents, where at all possible, shall be used for cleaning trucks.
- Low flash point (below 100 degrees F) solvents shall not be used.
- High flash point (at or above 100 degrees F) solvents may be used if precautions regarding toxicity, ventilation and fire hazard are mitigated with the agent or solvent used.
Crane Safety

Purpose

Overhead cranes, hoists and rigging equipment are only used by XL Construction Subcontractors for lifting and moving materials. In order to maintain a safe workplace for its employees, only qualified individuals shall operate these devices. This program outlines the procedures for safe operations and the training requirements regarding overhead cranes, hoists and rigging equipment. XL Construction does not own or operate cranes or hoists; rather this type of operation is always subcontracted out to a qualified Subcontractor.

Definitions

ANSI - The American National Standards Institute.

Appointed - assigned specific responsibilities by the employer or the employer’s representative.

Auxiliary hoist - a supplemental hoisting unit of lighter capacity and usually higher speed than provided for the main hoist.

Brake - a device used for retarding or stopping motion by friction or power means.

Bridge - that part of a crane consisting of girders, trucks, end ties, foot-walks and drive mechanism that carries the trolley or trolleys.

Bridge travel - the crane movement in a direction parallel to the crane runway.

Bumper (buffer) - an energy absorbing device for reducing impact when a moving crane or trolley reaches the end of its permitted travel; or when two moving cranes or trolleys come in contact.

Crane - a machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism an integral part of the machine. Cranes, whether fixed or mobile, are driven manually or by power.

Designated - selected or assigned by the employer or the employer’s representative as being qualified to perform specific duties.

Drum - the cylindrical member around which the ropes are wound for raising or lowering the load.

Emergency stop switch - a manually or automatically operated electric switch to cut off electric power independently of the regular operating controls.

Floor-operated crane - a crane which is pendant or nonconductive rope controlled by an operator on the floor or an independent platform.

Hoist - an apparatus that may be a part of a crane, exerting a force for lifting or lowering.
Holding brake - a brake that automatically prevents motion when power is off.

Limit switch - a switch that is operated by some part or motion of a power-driven machine or equipment to alter the electric circuit associated with the machine or equipment.

Load - the total superimposed weight on the load block or hook.

Load block - the assembly of hook or shackle, swivel, bearing, sheaves, pins and frame suspended by the hoisting rope.

Main hoist - the hoist mechanism provided for lifting the maximum rated load.

Main switch - a switch controlling the entire power supply to the crane.

Overhead crane - a crane with a movable bridge carrying a movable or fixed hoisting mechanism and traveling on an overhead fixed runway structure.

Rated load - the maximum load for which a crane or individual hoist is designed and built by the manufacturer and shown on the equipment nameplate(s).

Rope - refers to wire rope, unless otherwise specified.

Runway - an assembly of rails, beams, girders, brackets and framework on which the crane or trolley travels.

Side pull - that portion of the hoist pull acting horizontally when the hoist lines are not operated vertically.

Span - the horizontal distance center to center of runway rails.

Standby crane - a crane which is not in regular service but which is used occasionally or intermittently as required.

Stop - a device to limit travel of a trolley or crane bridge. This device normally is attached to a fixed structure and normally does not have energy absorbing ability.

Trolley - the unit that travels on the bridge rails and carries the hoisting mechanism.

Trolley travel - the trolley movement at right angles to the crane runway.

Wall crane - a crane having a jib with or without trolley and supported from a sidewall or line of columns of a building. It is a traveling type and operates on a runway attached to the sidewall or columns.
Key Responsibilities

Superintendents and Foremen

- Are responsible to ensure that Subcontractors are trained and qualified on the proper operations and have been trained in crane and hoist safety. Modifications or additions which affect the safe operation of the equipment may only be made with the manufacturer’s written approval.

- Are responsible to see that all provisions of this program are followed and that crane inspections are performed and the equipment is in safe operating condition.

Operators

- Operators are responsible to follow the requirements of this program and report any damage or needed repairs immediately to their Supervisor.

- Operators must meet the physical qualifications, pass a physical, a written examination, understand and be able to use a load chart as well as calculate loads for the crane type operated.

- Subcontractors designated as crane operators are responsible for the entire lift. In addition, crane operators are responsible to:
  - Make the required inspections
  - Ensure that the crane is maintained
  - Ensure that all personnel working in the area around the crane are kept clear of all hazards related to crane operations
  - Determine the weights and correct rigging required for loads to be lifted

Procedure

General

XL Construction shall comply with the manufacturer’s specifications and limitations applicable to the operation of any and all cranes. Where manufacturer’s specifications are not available, the limitations assigned to the equipment shall be based on the determination of a qualified engineer competent in this field and such determinations will be appropriately documented and recorded. Attachments used with cranes shall not exceed the capacity, rating or scope recommended by the manufacturer.

- This program applies to all cranes including overhead cranes, wall cranes, (jib cranes) and others having the same fundamental characteristics.

- Only designated employees trained in crane and hoist safety shall operate cranes covered by this program. Manufacturer rated load capacities and operating speeds shall be followed.
All cranes in service and utilized by XL shall meet, as a minimum, the design specifications of the American National Standard Safety Code for Overhead and Gantry Cranes, ANSI B30.2.0-1967.

Each crane shall have the load rating plainly marked on each side of the crane. Rated load capacities, and recommended operating speeds, special hazard warnings, or instruction, shall be conspicuously posted on all equipment. Instructions or warnings shall be visible to the operator while he is at the control station. If the crane has more than one hoisting unit, each hoist shall have its rated load marked on it or its load block and this marking shall be clearly legible from the ground floor.

All cranes shall be locked and tagged out while repairs are in progress to them or any other equipment or building structure that may have personnel or equipment in their path.

Whenever internal combustion engine powered equipment exhausts in enclosed spaces, tests shall be made and recorded to see that employees are not exposed to unsafe concentrations of toxic gases or oxygen deficient atmospheres.

**Inspections**

Cranes and hoists that have been overloaded shall be inspected prior to being returned to service. The inspection and testing requirements are included.

Initial inspection and testing shall be performed by a qualified third party.

- Prior to initial use, all new and altered cranes shall be inspected and tested to ensure compliance with the provisions of 29 CFR1910.179 and ABSI B30.2.
- Only after determining, by this inspection, testing and proper documentation, that the crane is in safe operating condition, shall it be put into service.

Daily inspections shall be performed by the crane operator (designated as XL's designated competent person) prior to beginning a shift and through observation during normal operation. Daily inspections shall include:

- Any deficiencies shall be repaired, or defective parts replaced, before continued use.
- All functional operating mechanisms for maladjustment interfering with proper operation.
- Deterioration or leakage in lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems.
- Hooks, if deformations or cracks are found the hook shall be tagged out of service until repaired and tested by qualified personnel.
- Hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations.
Annual inspections shall be documented with a certification record which includes the signature of the qualified third party (person or agency) who performed the inspection, the date, and identifier (serial number, unit number, etc.) for each piece of equipment. If safety hazards are found during inspections, the equipment in question shall be tagged out and not used until repairs are made. Any deficiencies constituting a safety hazard shall cause the equipment to be tagged out of service until repairs are made.

All crawler, truck, or locomotive cranes in use shall meet the applicable requirements for design, inspection, construction, testing, maintenance and operation as prescribed in the ANSI B30.5-1968, Safety Code for Crawler, Locomotive and Truck Cranes. However, the written, dated and signed inspection reports and records of the monthly inspection of critical item prescribed in section 5-2.1.5 of the ANSI B30 5-1968 standard are not required. Instead, XL’s crane operator shall prepare a certification record which includes the date the crane items were inspected; the signature of the person who inspected the crane items; and a serial number, or other identifier, for the crane inspected.

Operational Procedures

Only qualified personnel shall operate cranes and equipment covered by this program. Operators shall comply with the following safety rules while operating cranes and hoists:

- Employees shall not be exposed to unsafe concentrations of toxic gases or oxygen deficient atmospheres when internal combustion engine powered equipment is used. Tests shall be conducted and documented.
- Do not engage in any practice that will divert your attention while operating the crane.
- Respond to signals only from the person who is directing the lift or any appointed signal person.
- Obey a stop signal at all times, no matter who gives it.
- Do not move a load over people.
- People shall not be placed in jeopardy by being under a suspended load.
- Do not work under a suspended load unless the load is supported by blocks, jacks or a solid footing that will safely support the entire weight.
- Have a crane or hoist operator remain at the controls or lock open and tag the main electrical disconnect switch.
- Ensure that the rated load capacity of a crane's bridge, individual hoist, or any sling or fitting is not exceeded.
- Know the weight of the object being lifted.
- Check that all controls are in the OFF position before closing the main line disconnect switch.
If spring-loaded reels are provided to lift pendants clear off the work area, ease the pendant up into the stop to prevent damaging the wire.

Avoid side pulls. These can cause the hoist rope to slip out of the drum groove, damaging the rope or destabilizing the crane or hoist.

To prevent shock loading, avoid sudden stops or starts. Shock loading can occur when a suspended load is accelerated or decelerated and can overload the crane or hoist. When completing an upward or downward motion, ease the load slowly to a stop.

At the start of each work shift, the designated competent person operator shall do the following steps before making lifts with any crane or hoist:

- Test the upper-limit switch and slowly raise the unloaded hook block until the limit switch trips.
- Visually inspect the hook, load lines, trolley, and bridge as much as possible from the operator’s station; in most instances, this will be the floor of the building.
- If provided, test the lower-limit switch.
- Test all direction and speed controls for both bridge and trolley travel.
- Test all bridge and trolley limit switches, where provided, if operation will bring the equipment in close proximity to the limit switches.
- Test the pendant emergency stop.
- Test the hoist brake to verify there is no drift without a load.
- If provided, test the bridge movement alarm.
- Lock out and tag for repair any crane or hoist that fails any of the above tests.
- Any deficiencies shall be repaired, or defective parts replaced, before continued use.

Moving a Load

- Center the hook over the load to keep the cables from slipping out of the drum grooves and overlapping, and to prevent the load from swinging when it is lifted.
- Inspect the drum to verify that the cable is in the grooves.
- Use a tag line when loads must traverse long distances or must otherwise be controlled.
- Manila rope may be used for tag lines.
- Plan and check the travel path to avoid personnel and obstructions.
- Lift the load only high enough to clear the tallest obstruction in the travel path.
■ Start and stop slowly.

■ Land the load when the move is finished.

■ Choose a safe landing area.

■ Never leave suspended loads unattended.

■ In an emergency where the crane or hoist has become inoperative, if a load must be left suspended, barricade and post signs in the surrounding area, under the load and on all four sides.

■ Lock open and tag the crane or hoist’s main electrical disconnect switch.

**Parking a Crane or Hoist**

■ Remove all slings and accessories from the hook.

■ Return the rigging device to the designated storage racks.

■ Place the emergency stop switch (or push button) in the OFF position.

**General Rigging Safety Requirements**

■ Only select rigging equipment that is in good condition.

■ All rigging equipment shall be inspected annually; defective equipment is to be removed from service and destroyed to prevent inadvertent reuse.

■ The load capacity limits shall be stamped or affixed to all rigging components.

■ All devices shall be visually inspected prior to use and removed from service for any of the following conditions:

  ■ Nylon slings with:
    ■ Abnormal wear
    ■ Torn stitching
    ■ Broken or cut fibers
    ■ Discoloration or deterioration
  
  ■ Wire rope slings with;
    ■ Kinking, crushing, bird caging or other distortions
    ■ Evidence of heat damage
    ■ Cracks, deformation or worn end attachments
    ■ Six randomly broken wires in a single rope lay
- Three broken wires in one strand of rope
- Hooks opened more than 15% at the throat
- Hooks twisted sideways more than 10 degrees from the plane of the unbent hook

- Alloy steel chain slings with:
  - Cracked, bent, or elongated links or components
  - Cracked hooks
  - Shackles, eye bolts, turnbuckles or other components that are damaged or deformed

**Rigging a Load**

- Determine the weight of the load - do not guess.
- Determine the proper size for slings and components.
- Do not use manila rope for rigging.
- Ensure that shackle pins and shouldered eyebolts are installed in accordance with the manufacturer’s recommendations.
- Ensure that ordinary (shoulderless) eyebolts are threaded in at least 1.5 times the bolt diameter.
- Use safety hoist rings (swivel eyes) as a preferred substitute for eye bolts wherever possible.
- Pad sharp edges to protect slings.
- Remember that machinery foundations or angle-iron edges may not feel sharp to the touch but could cut into rigging when under several tons of load.
- Wood, tire rubber or other pliable materials may be suitable for padding.
- Do not use slings, eyebolts, shackles or hooks that have been cut, welded or brazed.
- Install wire-rope clips with the base only on the live end and the U-bolt only on the dead end.
- Follow the manufacturer’s recommendations for the spacing for each specific wire size.
- Determine the center of gravity and balance the load before moving it.
- Initially lift the load only a few inches to test the rigging and balance.
Safety Procedures

- Any crane or hoist suspected of having been overloaded shall be removed from service by locking open and tagging the main disconnect switch.

- Overloaded cranes shall be inspected, repaired, load tested and approved for use before being returned to service.

Working at heights on cranes or hoists:

- Anyone conducting maintenance or repair on cranes or hoists at heights greater than 6 ft (1.8 m) shall use fall protection.

- Fall protection includes safety harnesses that are fitted with a lifeline and securely attached to a structural member of the crane or building.

- Properly secured safety nets are another option for fall protection.

- Use of a crane as a work platform should only be considered when conventional means of reaching an elevated worksite are hazardous or not possible.

- Workers shall not ride a moving bridge crane.

- Personnel shall not board any bridge crane unless the main disconnect switch is locked and tagged out of service.

Signals to the operator shall be in accordance with the standard hand signals prescribed by the applicable ANSI standard for the type of crane in use unless voice communications equipment (telephone, radio, or equivalent) is used.

- Signals shall be discernible or audible at all times.

- Some special operations may require addition to or modification of the basic signals.

- For all such cases, these special signals shall be agreed upon and thoroughly understood by both the person giving the signals and the operator, and shall not be in conflict with the standard signals.

All maintenance, tests and inspections shall be conducted in accordance with the manufacturer’s recommendations.

All records of annual and load testing shall be retained at the jobsite where each crane, hoist or other equipment covered by this program is located. All maintenance and repair records shall be retained for the life of the equipment.

The use and operation of client owned cranes, hoists and rigging equipment by qualified XL Subcontractors will occur only at the express permission of the designated client representative.

An accessible fire extinguisher of 5BC rating, or higher, shall be available at all operator stations or cabs of equipment.
When operating cranes near power lines rated 50 KV or below, minimum clearance between the power line and any part of the crane or load shall be 10 feet.

**Training**

Training shall include:

- Documentation of employee awareness training, date of training and subject matter.
- No XL employee shall operate cranes or equipment covered by this program.

**Overhead Crane and Hoist Inspection Procedures**

Inspections can be classified as either “frequent” or “periodic” based upon the intervals at which the inspections must be performed.

**Frequent**

Frequent inspection -daily. The following shall be inspected for defects as noted:

- All functional operating mechanisms for maladjustment interfering with proper operation
- Daily - must be performed by operator (no documentation required).
- Deterioration or leakage in lines, tanks, valves, drain pumps and other parts of air or hydraulic systems.
- Hooks with deformation or cracks. Hooks with cracks or having more than 15% in excess of normal throat opening or more than 10 degrees twist from the plane of the unbent hook should be discarded.
- Wire rope and nylon sling inspection.

Daily inspections are to be conducted by the equipment operator. These inspections are visual inspections made daily when the overhead crane is used and record keeping is not required.

**Periodic Inspection**

The annual inspection shall be performed and documented by a qualified third party. Records shall be kept at the location of the completed inspection.

**Crane Hoisting and Rigging Checklist**

A crane hoisting checklist should be filled out by the Subcontractor performing the hoisting operation and submitted to XL along with all other required documentation for approval at least 2 weeks before the planned hoist. This checklist will receive input from the crane company in order to correctly complete the checklist.
Daily Guide for Overhead Crane Inspections

■ Check all functional operating mechanism for miss adjustment interfering with proper operation.

■ Check for leakage for lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems.

■ Check hooks for deformation, chemical damage, or cracks. Hooks having more than 15% in excess of normal throat opening or more than 10 degrees twist from the plan of the unbent hook, must be removed from service.

■ Hooks must be dye penetrant, magnetic particle, or other suitable crack-detecting inspection performed at least once a year.

■ Check all functional operating mechanisms for excessive wear of components.

■ Check rope reeving for noncompliance with manufacturer’s recommendations.

■ Is condition of wire rope acceptable?

■ Check for deformed, cracked or corroded members.

■ Check for cracked or worn sheaves or drums.

■ Check for loose bolts, nuts or rivets.

■ Check for worn, cracked or distorted parts such as pins, bearings, shafts, gears, rollers, locking and clamping devices.

■ Check for excessive wear in brake system parts, linings, pawls and ratchets.

■ Check load, wind and other indicators over their full range, for any significant inaccuracies.

■ Check gasoline, diesel, electric or other power plants for improper performance or noncompliance with applicable safety requirements.

■ Check electrical apparatus, for signs of pitting or any deterioration of controller, master switches and push button stations.

■ Are required warning labels absent or illegible?

■ Check supporting structure, trolley and bridge for alignment and continued ability to support the imposed loads.
**Crane Hoisting and Rigging Checklist**

**DAILY GUIDE FOR OVERHEAD CRANE INSPECTIONS**

The plan should be based on “worst case” combination of load weight and lift radius for a specific crane configuration in the location as indicated on the Lift Crane Plan. The Lift Crane Plan may be valid for more than one day, as long as the configuration, location, maximum expected load and maximum expected radius do not change from the Lift Crane Plan as submitted. The Lift Crane Plan as submitted must cover every crane setup and operation. The crane shall be inspected and documented on a daily basis.

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Project No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CC:</th>
<th>File: 0014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date Submitted:</th>
<th>Proposed Date(s) for Lift Start:</th>
<th>Complete:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subcontractor/Rigging Company:</th>
<th>Emergency Phone Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crane Company:</th>
<th>Emergency Phone Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Lift Location/Nearest Building(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of Lifting Work to be done:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of Lifting Scope:</th>
<th>Number of items to be picked:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CRANE INFORMATION

<table>
<thead>
<tr>
<th>Make:</th>
<th>Model:</th>
<th>Capacity (tons):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crane's Total Boom Length for this Configuration (Boom only):</th>
<th>JIB Used:</th>
<th>Length:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Will outriggers be fully extended?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If not, please explain setting:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Will the Lift be based on 360 degree crane use and chart?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If no, please explain:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum Boom Length Required:</th>
<th>Maximum Pick Radius Required:</th>
<th>Is any Special Notice Required:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

Rev. 9/09
## Crane Hoisting and Rigging Checklist

### Page 2 of 4

#### LOAD CHARACTERISTICS

Description of Max Load:

<table>
<thead>
<tr>
<th>Dimensions of Max Load:</th>
<th>Provide Sketch?</th>
<th>Weight of Max Load:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□ Yes □ No</td>
<td></td>
</tr>
</tbody>
</table>

How was the weight of Max Load determined? Please attached calculations.

What is the maximum safe wind speed allowed for the picks covered under this lift plan?

Will the load be balanced? □ Yes □ No If so, how will it be leveled during pick?:

#### RIGGING INFORMATION

List Rigging Components: Please be specific - number, type, size, length, lift beam, capacity, etc.

Worst Case Weight of Line, Block, and All Rigging:

#### OTHER WEIGHTS TO BE CONSIDERED TO DETERMINE TOTAL GROSS LOAD OF ITEM TO BE LIFTED

Weight of Max Load:

Weight of Rigging:

Added weight factor of safety (minimum 20% of Weight of Max Load for uncertain weight):

Total Gross Load:

#### CRANE LOCATION / CLEARANCES

Has the subcontractor developed a traffic and pedestrian protection plan? □ Yes □ No Please submit.

Will a full road blockage or partial road blockage be required? □ Yes □ No If yes, please explain:

Will load be laid down on permanent facilities such as existing roof or landscaping at any time during pick? □ Yes □ No

Has the Subcontractor developed a "to scale" plot plan showing crane location, adjacent structures, roadways, underground utilities, etc. within swing radius? □ Yes □ No Please submit diagram showing direction of swing.

Has the Subcontractor completed a to-scale elevation sketch or drawing depicting crane, adjacent structures, and load? □ Yes □ No Please submit.
## Crane Hoisting and Rigging Checklist

### (Page 3 of 4)

| Has the Subcontractor surveyed the area for overhead power lines and other hazards? | □ Yes □ No |
| Will the load or any part of the crane be over any active or operating equipment, piping, etc? | □ Yes □ No |
| Will load be within 15 feet but less than 10 feet of active electrical lines, pipes, or process system at any time during pick? | □ Yes □ No |

### SUMMARY “WORST CASE” LIFT SCENARIO

<table>
<thead>
<tr>
<th>Max Pick Radius:</th>
<th>Total Gross Load:</th>
<th>Crane Chart Capacity @ Max Pick Radius:</th>
<th>% of Crane Capacity (equals total gross load/crane chart capacity):</th>
</tr>
</thead>
</table>

### CRITICAL PICK

| Will crane(s) need to “walk” with loads? | □ Yes □ No |
| Will a full road blockage or partial road blockage be required? | □ Yes □ No |

Please describe

| Is total gross load more than 75% of rated capacity of crane at the max radius? | □ Yes □ No |

(Equals % of Crane Capacity)

| Will pick lift/carry personnel? | □ Yes □ No |

| Will pick be made over occupied building or facility? | □ Yes □ No |

| Is pick item weighing over 10,000 pounds being up ended (horizontal/vertical)? | □ Yes □ No |

If the answer to any of the above is yes then this is a critical lift plan which will require additional information and must be signed off by contractor’s licensed professional engineer unless otherwise waived by all individuals who sign below. PE STAMP Required? □ Yes □ No

### ATTACHMENTS PROVIDED (ALL MUST BE PROVIDED)

- □ Plot Plan with Crane location, etc.
- □ Elevation Sketch
- □ Weight Calculations for Max. Load
- □ Rigging List / Sketch
- □ Appropriate Crane Charts
- □ Traffic Control Plan
- □ Other information subcontractor/rigger or crane operator deems important
### Crane Hoisting and Rigging Checklist

(Page 4 of 4)

#### SIGNATURES

<table>
<thead>
<tr>
<th>Role</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crane Company (competent person)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subcontractor / Rigger (competent person)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subcontractor / Rigger and Crane Operator are solely responsible for accuracy and completeness of this lift plan and the safe execution of the lift(s). Subcontractor / Rigger and Crane Operator verify lift will comply with applicable OSHA and ANSI Standards.

<table>
<thead>
<tr>
<th>Role</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>XL Project Superintendent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XL Safety Representative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Representative from Affected Site Department(s) or Building(s)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Rev. 9/09)
Material Off-loading and Rigging Procedures

Material Unloading Procedures

The removal or off-loading of material from delivery trucks may present certain safety hazards. Whether removing the material manually or using mechanical equipment (crane, forklift, etc.), special consideration should be given to make sure the material has been delivered properly, that adequate resources are available to remove the material and that the involved employees are properly trained to avoid unnecessary dangers including the ‘danger zone’. To ensure a safe work environment is provided, the following items shall be considered whenever material is off-loaded at an XL jobsite.

Pre-Plan Material Deliveries

- Every project will involve the delivery of material and equipment to the jobsite. Larger items such as reinforcing steel, formwork, structural steel will be scheduled for delivery well in advance of the delivery date and should be anticipated. Smaller, more routine deliveries may not be easily anticipated. In either case, however, steps must be taken to make certain provisions are in place to unload the material safely.

- At the start of each project, the Project Superintendent along with the Project Foreman should identify the major material deliveries. For each type of material, the method of delivery and removal shall be discussed. The following factors should be considered for each item and the appropriate equipment and training provided to the employees involved. The Project Superintendent shall ensure this preplanning is accomplished.

- Deliveries of larger material such as structural steel, reinforcing steel and precast concrete must be loaded properly at the point of origin to be off-loaded safely. For example, when loading structural steel beams or columns, the larger material should be on the bottom and different length pieces should be separated by dunnage. Material may be “nested” so long as they are of typical length and size. Smaller material nested within larger items creates an unsafe condition and is not allowed. Coordination with the material supplier should begin early in the procurement process. Ask your supplier for standard loading practices.

Provide Safe Access

- It is imperative that workers involved in the off-loading of material have a safe means of access and egress to and from the delivery truck bed. Many deliveries require multiple picks and workers typically find themselves under the load in the ‘danger zone’. Accordingly, the workers involved in the rigging should be directed to exit the delivery truck bed each time a pick is made. The point of access/egress must be away from the direction of the load swing. In some cases it may be appropriate to provide a work platform or stair access system for the off-loading operation, for example, when no clear area on the truck bed is available for standing and accessing the material to be rigged, the minimum access/egress acceptable is a secured ladder.
Proper Rigging

- **Only workers trained in the proper methods to rig material are permitted to off-load material by mechanical means.** Rigging hardware should be inspected prior to each pick to make sure it is sound and free of defect. Where a crane is being utilized, one person should be designated as the signal person for the crane operator.

- The selection of rigging material must be based not only on the strength capacity of the hardware, but also according to the type of material being off-loaded. For instance, in some cases it may not be appropriate to use nylon straps to pick sharp-edged structural steel members that may cut the webbing of the rigging. Some deliveries may require multiple rigging arrangements.

- **Never** use “shake-out” hooks to unload a truck. Use a tag line on loads that may swing uncontrollably.

Employee and Third Party Awareness

- A Daily Job Hazard Analysis meeting shall be held each day that material is to be off-loaded from a delivery truck. Employees involved in the operation must be advised to always avoid the ‘danger zone’. This includes the area beneath the swing radius of the material being lifted and the area between the equipment being used to offload the material and the delivery truck (e.g., a forklift). In addition, because material can shift during transportation, the entire perimeter of a tractor-trailer should be barricaded to prevent workers not involved in the unloading from unknowingly entering a danger area. Be alert to any drift of the load when it is picked from the truck, especially around fixed structures or traffic.

- Workers who are not directly involved in the off-loading operation but who may be subject to the ‘danger zone’ must be warned prior to hoisting material. Every possible step should be taken so that material is off-loaded in a manner that does not expose others to the ‘danger zone’.

- If unloading from a street traveled by pedestrians and motor vehicle traffic, make certain the unloading area is properly marked and barricaded to prevent unauthorized entry. Employees directing traffic shall wear high-visibility vests and use paddle signs.
Hazardous Material

Hazard Communications Program

Purpose

The purpose of this program is to ensure that the hazards of all chemicals and substances are evaluated and the information concerning their hazards is communicated to employees, including emergency response organizations, state and federal agencies, other employers and contractors, as necessary. This hazard information will be communicated and displayed in accordance with this Hazard Communication Program.

XL Construction is firmly committed to providing each of its employees a safe and healthy work environment. It is recognized that workers may use chemicals or substances that have potentially hazardous properties. When using these substances, workers must be aware of the identity, toxicity or hazardous properties of a chemical or substance, since an informed employee is more likely to be a safe employee.

Definitions

Chemical - any element, chemical compound, or mixture of elements and/or compounds.

Chemical Inventory List - a list of chemicals used at this facility, or by personnel that report to this facility.

Electronic Access – using electronic media (telephone, fax, internet, etc.) to obtain Material Safety Data Sheets or health information.

Facility - an establishment at one geographical location containing one or more work areas.

Hazardous chemical - any chemical that is a physical hazard, a health hazard or has a Permissible Exposure Limit established for it.

Hazardous substance - see hazardous chemical.

Hazard Communication Program Coordinator - the person who has overall responsibility at a facility for that facility’s Hazard Communication Program.

Health hazard - a substance for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic adverse health effects may occur in exposed employees.

IDLH - immediately dangerous to life and health.

Immediate Use - the chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.
Jobsite - an area remote from an XL facility where hazardous chemicals are stored or used and employees are present for the purpose of XL business.

(MSDS) Material Safety Data Sheet - a written or printed document containing chemical hazard and safe handling information, prepared in accordance with the OSHA Occupational Safety and Health Standards, Section 1910.1200, paragraph (g).

(NFPA) National Fire Protection Association Labeling - a common industry labeling method developed by the National Fire Protection Association to identify the hazards associated with a particular chemical.

(PEL) Permissible Exposure Limit - the maximum eight-hour time weighted average of any airborne contaminant to which an employee may be exposed.

Readily available - when an employee has access during the course of his/her normal work shift.

Substance - see Chemical.

(TLV) Threshold Limit Value - the airborne concentration of a substance that represents conditions under which it is believed that nearly all normal workers may be repeatedly exposed day after day without adverse effect.

Work area - a room or defined space in a facility where hazardous chemicals are stored or used and where one or more employees are present.

Workplace - see Facility.

Workplace Chemical List - see Facility Chemical List.

Responsibilities

The Hazard Communication Program shall be maintained at each XL jobsite. The program shall describe how labels, other forms of warning and Material Safety Data Sheets shall be communicated to employees.

XL’s Health and Safety Director is responsible for developing and implementing the Hazard Communications Program. XL’s Shop Manager is responsible for maintaining Material Safety Data Sheets and the Hazardous Materials Inventory List for their location. XL’s Health and Safety Director will review the MSDS files and Hazard Materials Inventory List at least annually to ensure that they are complete and up to date. Managers are responsible for training all new employees in the requirements of this program and XL’s Health and Safety Director is responsible for annual retraining of current employees.

Employees are responsible for following the requirements in the Hazard Communication Program, to use proper personal protective equipment, to report containers without labels immediately and to not deface any label.
Any employee who transfers any material from one container to another is responsible for labeling the new container with all required information.

All employees are responsible for learning the requirements of this section and for applying them to their daily work routine.

Requirements

Introduction

This Hazard Communication Program was prepared by XL Construction to explain how XL meets the requirements of the federal Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200). It spells out how XL will inventory chemicals stored and used, obtain and use Material Safety Data Sheets, maintain labels on chemical substances and train employees about the hazards of chemicals they are likely to encounter on the job.

Preparation of this program indicates our continuing commitment to safety among our employees in all of our locations.

- Each jobsite is expected to follow this program and maintain its work areas in accordance with these requirements.

- Employees, their designated representatives and government officials must be provided copies of this program upon request.

- In addition to the program, other information required as part of our hazard communication effort is available to workers upon request.

- Asking to see this information is an employee's right.

- Using this information is part of our shared commitment to a safe, healthy workplace.

List of Chemicals

XL maintains a listing of all chemicals used at, or by, its Corporate Facility.

This chemical inventory list is updated as necessary and at least annually by XL's Health and Safety Director.

The facility chemical inventory list is maintained by XL's Warehouse Manager and is available for review upon request.

Material Safety Data Sheets

Material Safety Data Sheets for chemicals used in this facility or by personnel reporting to this facility are readily available to all employees during all work shifts.

Material Safety Data Sheets are filed alphabetically, by material classification, in the MSDS Book. A Hazardous Materials Inventory is provided in the front of the MSDS Book, listing
all MSDSs contained therein. This inventory serves as the index of the MSDS Book. The MSDS Book is displayed in a prominent location in the Shop where it is accessible to all employees.

A copy of a MSDS request form is located in the first section of the MSDS Book. An employee may use a copy of this form to request an MSDS or he may ask the Warehouse Manager for one. In either case the requested MSDS must be given to the employee within 24 hours.

MSDSs must be obtained for each required chemical from the chemical manufacturer, supplier or vendor. The purchasing of any potentially hazardous chemical products from any supplier that does not provide an appropriate Material Safety Data Sheet in a timely fashion is prohibited.

The Material Safety Data Sheet must be kept in the MSDS library for as long as the chemical is used by the facility.

Electronic access (telephone, fax, internet, etc.) may be used to acquire and maintain MSDS libraries and archives.

The Hazardous Materials Inventory is maintained in a computer file folder in each location. The Yard Equipment Manager is responsible for seeing that the inventory is maintained, is current and is complete. He will review the inventory and the MSDS Book at least annually. He will sign and date the Review and Update Roster at the front of the MSDS Book when he completes his review. When a hazardous material has been permanently removed from the work place, its MSDS is to be removed from the MSDS Book and the Hazardous Materials Inventory. A file copy is to be maintained in a “dead file”.

MSDS’s for hazardous materials to which XL employees have been exposed must be maintained after the employee leaves the employment of XL. Before any non-routine task is performed, employees will be advised of special precautions. In the unlikely event that such tasks are required, the operations manager will provide MSDS for involved chemical. Hoses and gaskets that have been in service and brought into an XL facility for quote and/or repair will possess a MSDS for the chemical service it was in. A certificate of cleanliness on the customer’s company letterhead signed by a competent body will accompany material. Employees have the right to request MSDS on any chemical under “The Right to Know” and it must be provided without any issues.

Labels, Labeling and Warnings

XL’s Health and Safety Director will ensure that all hazardous chemicals used or stored in the facility are properly labeled.

- Damaged labels or labels with incomplete information shall be reported immediately.
- Damaged labels on incoming containers of chemicals shall not be removed.
■ New labels shall be provided as needed so that all containers are properly labeled.
■ Only containers into which an employee transfers a chemical for their own immediate use will not require labeling.
■ Employees who are unsure of the contents of any container, vessel or piping must contact their Supervisor for information regarding the substance including:
  ■ The name of the substance.
  ■ The hazards related to the substance.
  ■ The safety precautions required for working with the substance.
Labels, tags or markings on containers shall list as a minimum:
■ Words, pictures, symbols or combinations thereof may be used.
■ The trade name of the product as listed on the Material Safety Data Sheet.
■ Appropriate hazard warnings to help employees protect themselves from the hazards of the substance.
■ Labels provided by chemical manufacturers, distributors and importers must also list the name and address of the manufacturer, importer or vendor responsible for the chemical, and from whom more information about the chemical can be obtained.
■ Labels shall be legible, in English. However, for non-English speaking employees, information shall be presented in their language as well.

All containers must be labeled. When an employee transfers the contents of one container to another, he must label the new container with all required information. This information can be obtained from the labeling of the original container or from the material’s MSDS. Any container of a potentially hazardous material that will not be emptied during one shift must be labeled, without exception.

Personnel in the Shipping and Receiving Departments are responsible for proper labeling of all containers shipped by XL and for the inspection of all incoming materials to ensure correct labelling. Chemicals received from vendors that are not properly labeled must be rejected.

NFPA Standard 704 labels shall be the preferred hazard identification method used in XL facilities and on materials containers used on client sites. All employees, clients, Subcontractors and visitors who may come in contact with an XL hazardous substance must be briefed to ensure understanding of the NFPA 704 labeling system.

**Training**

Every employee who works with or may be exposed to hazardous chemicals will be trained annually on the safe use of those substances and about the hazard
communication standard. New or newly assigned employees shall be provided training before working with or working in an area containing hazardous chemicals.

Additional training will be provided whenever a new chemical hazard is introduced into the work area. To reinforce the importance of handling chemicals properly when performing new or non-routine tasks, Supervision will conduct supplementary training as needed.

Hazard Communications Program training is covered in one of the monthly Safety Meetings and is documented by the meeting sign-in sheet.

Formal training will be conducted by facility employees or individuals who are knowledgeable in the Hazard Communication Program.

The Safety Department shall ensure records of employee training are maintained.

When an outside Subcontractor, such as plumber enters an XL site to perform a service for the company, he must first present MSDSs for any and all hazardous chemicals he will use. These MSDSs will be treated as above with the same training requirements. The Project Manager and Project Superintendent will be responsible for contacting each Subcontractor before work is started to gather and disseminate any information concerning chemical hazards the contractor is bringing into the workplace.

The Hazard Communication Program training shall, as a minimum, include:

- Requirements and rights of the employee as contained in the Hazard Communication Regulation.
- Operations and work areas where hazardous chemicals are present.
- Location of the written Hazard Communication Program and the Chemical Inventory List.
- How to access MSDSs or MSDS information.
- How to read labels and Material Safety Data Sheets for pertinent hazard information.
- How to determine the presence or release of a hazardous substance in the workplace.
- Physical and health effects of over exposure to hazardous substances in the workplace.
- How personnel can protect themselves or prevent exposure to hazardous substances, through the use of protective equipment, proper work practices and engineering or environmental controls.
- The proactive steps XL has taken to prevent exposure to hazardous substances and non-routine tasks.
Emergency and first aid procedures to follow for exposure or harm caused by hazardous substances.

**Multi-Employer Job Sites / Multi-Work Site**

Where employees must travel between work places during a work shift, the written HAZCOM Program shall be kept at a primary jobsite. If there is no primary jobsite, then the program shall be sent with employees.

A pre-job briefing shall be conducted with the Subcontractor prior to the initiation of work on the site.

During this pre-job briefing, Subcontractors shall notify XL and present current copies of Material Safety Data Sheets for every hazardous substance brought on-site.

XL shall notify and provide MSDSs for all hazardous materials the Subcontractor may encounter on the job.

The facilities labelling system and any precautionary measures to be taken by contractor during normal conditions and emergencies shall be addressed.

By providing such information to other employers, XL does not assume any obligations that other employers have for the safety of their employees.

In this regard, other employers working on XL property or for XL on client’s property remain fully responsible for developing and implementing their own compliant hazard communication programs.

**NFPA 704**

The NFPA 704 Diamond is a means of disseminating hazard information for a material. The diamond is divided into four sections. Each of the first three colored sections has a number in it associated with a particular hazard. The higher the number is, the more hazardous a material is for that characteristic. The fourth section includes special hazard information. The four sections and an explanation of the numbers in them are provided below:

<table>
<thead>
<tr>
<th>RATING NUMBER</th>
<th>HEALTH HAZARD</th>
<th>FLAMMABILITY HAZARD</th>
<th>INSTABILITY HAZARD</th>
<th>RATING SYMBOL</th>
<th>SPECIAL HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Can be lethal</td>
<td>Will vaporize and readily burn at normal temperatures</td>
<td>May explode at normal temperatures and pressures</td>
<td>AlK</td>
<td>Alkali</td>
</tr>
<tr>
<td>3</td>
<td>Can cause serious or permanent injury</td>
<td>Can be ignited under almost all ambient temperatures</td>
<td>May explode at high temperature or shock</td>
<td>ACID</td>
<td>Acidic</td>
</tr>
<tr>
<td>2</td>
<td>Can cause temporary incapacitation or residual injury</td>
<td>Must be heated or high ambient temperature to burn</td>
<td>Violent chemical change at high temperatures or pressures</td>
<td>CORROSIVE</td>
<td>Corrosive</td>
</tr>
<tr>
<td>1</td>
<td>Can cause significant irritation</td>
<td>Must be preheated before ignition can occur</td>
<td>Normally stable, high temperatures make unstable</td>
<td>Radioactive</td>
<td>Radioactive</td>
</tr>
<tr>
<td>0</td>
<td>No hazard</td>
<td>Will not burn</td>
<td>Stable</td>
<td>Reacts violently or explosively with water</td>
<td>Reacts violently or explosively with water and oxidizing</td>
</tr>
</tbody>
</table>
Pressure and Fire Retardant Treated Woods

Policy

**ACQ** (Alkaline Copper Quaternary) is a chemical widely used in Pressure Treated Woods and Formaldehyde in Fire Retardant Treated Woods.

**Requirement while cutting or sanding these types of lumber**

Some individuals can be sensitive to the dust that is created by cutting or sanding the wood containing these chemicals, thus XL Construction is going to make it a requirement to follow these guidelines while cutting or sanding these types of lumber:

- Wear an N-95 or better 2 Strap Dust Mask (employees must have taken a physical and received a doctors release to wear this type of mask. Release is good for 1 year.

- Wear the Atlas Blue type gloves or better and a long sleeve shirt.

- Dust or shake off the residue from clothes when complete.

- Make sure to wash hands and face periodically throughout the day as well as at the completion of the task daily (It is mandatory to wash hands and face before touching any food or beverages).

- Discard of gloves and mask at the final completion of the task.

**Additional Information**

- Only use approved fasteners for either of the treated woods. In the ACQ treated woods, any dissimilar metals, i.e. copper and ferrous metals will react and corrosion will begin. Use Hot-Dipped Galvanized or Stainless Steel fasteners and hardware only.

- Do not take scraps or drop-offs from the project and use them for firewood.
Air Monitoring for Operating Gas Powered Equipment Indoors

Purpose

This policy describes the Safety Measures that must be taken if operating Internal Combustion Driven Equipment indoors. Internal combustion engine-driven equipment shall be operated inside buildings or enclosed structures only when such operation does not result in exposure to dangerous gases or fumes in concentrations above the maximum acceptable limits listed in the Cal-OSHA General Industry Safety Orders.

The main concern with operating Internal Combustion Driven Equipment indoors or in an enclosed area is the potential exposure to Carbon Monoxide or (CO). Carbon monoxide (CO) is a potentially deadly gas. It is colorless, odorless, tasteless and non-irritating. It is generally produced as a by-product from the incomplete burning of carbon-containing fuels such as wood, oil, natural gas, kerosene, coal, gasoline or diesel.

In order for workers to perform such work, XL must make sure that our employees, Subcontractors or the public are not over exposed to this deadly gas.

The following sections review Carbon Monoxide monitoring and its exposure limits as specified in the Cal-OSHA General Industry Safety Orders.

Methods

Some acceptable methods of control are:

1. Piping exhaust gases to the outside atmosphere.
2. Providing a system of building ventilation that dilutes and removes exhaust products to the outside atmosphere.
3. Installing effective, catalyst-type exhaust treatment units on the engines (Scrubbed Exhaust).

The most effective and feasible methods are a combination of control method (2) and (3) for equipment that must go from point A to point B constantly throughout the work shift. Stationary equipment can utilize method (1) and be piped through a roof hatch door, window or any other opening that will lead the hazardous fumes outside the building. Remember to use exhaust or heat rated piping and to post signage reminding employees of the Hot Pipe.

For methods that rely on ventilation and a catalyst-type exhaust treatment or “Scrubbed Exhaust” XL must verify that our personnel are not over exposed to Carbon Monoxide (CO). XL Construction owns several gas monitors that can be obtained through the Safety Department and Shop.
Air Monitoring Equipment

This particular model is a Multi-Gas Detector. It will detect real time gas concentration of Carbon Monoxide (CO), Hydrogen Sulfide (H2S), Oxygen (O2) and % Lower Explosive Limit (LEL). When the alarm points are reached, the light at the top of the unit will flash and a 95 db audible alarm will occur.

To keep things simple, the alarms on all of our monitors are set to alarm if concentrations of CO reach 25 Parts Per Million (PPM). The Permissible Exposure Limit (PEL) of CO is 25 PPM over an 8 hour Time Weighted Average (TWA). It becomes even more complicated if we go over 25 PPM so at no time will XL allow exposure greater than 25 PPM and a limit of concentrations in the 12-15 PPM will trigger us to ventilate the work space better.

What to Monitor

The following operations will be required to perform CO air monitoring. This will include all internal combustion engine driven equipment:

- Loaders, Excavators and Forklifts
- Concrete Cutting Saws
- Jumping Jack and Vibra-Plate Compactors
- Compressors
- Generators
- Welders
- Passenger vehicles

Air Monitoring Log

Document your Air Monitoring using the attached Air Monitoring Log. Make sure to perform an initial baseline air sample prior to starting up the equipment so you know where you are starting. Perform continuous monitoring throughout the work shift and document this on an hourly basis. The log is set up for an 8-hour day. If you work additional hours, use another log and number it pages 1 of 2, 2 of 2, etc. and date appropriately. Write down the highest reading of PPM in the CO column. Note that this log can be used for the other gases Hydrogen Sulfide (H2S), Oxygen (O2) and % Lower Explosive Limit (LEL). Please contact XL's Safety Department if you have any questions regarding other hazardous gas monitoring or Oxygen Deficient Atmospheres.
Some Recommendations

- Change the equipment to reduce or eliminate carbon monoxide emissions. Substitute electric powered forklifts and tools for gasoline or propane powered equipment. This is extremely important in temperature controlled spaces or in spaces that are not ventilated. (Propane powered vehicles must have their carburetor properly adjusted and the catalytic converter operating correctly, or they will produce as much carbon monoxide as gas powered)

- Provide sufficient ventilation in the work area to reduce the concentration of carbon monoxide to safe levels. Do not allow gasoline or propane powered engines or tools in poorly ventilated areas. It is best to blow air into the building and draw it out simultaneously. This procedure generally requires two or more openings. For ventilation purposes, it is best to open as many of the adjacent entry points as possible. The ventilation fans should be arranged to provide a cross flow ventilation in which the air is always in motion and free of any dead spots.

Additional

- A Diesel Exhaust Gas Purifier / Scrubber is a device which initiates a chemical oxidation reaction and allows the reaction to proceed at lower temperatures than otherwise possible. Purifier / scrubbers are flow-through devices in which the exhaust gas is directed into a catalytically coated honeycomb core. At relatively low exhaust gas temperatures the exhaust gas pollutants are catalytically burned (oxidized). Pollutants such as CO are catalytically reacted with oxygen. The net result is that harmful CO reacts with oxygen to form relatively harmless CO2 and water.

- When renting equipment, request that the equipment be equipped with a scrubber.

- Always Pre-task Indoor Equipment Operation with your XL Crew or your Subcontractors. Discuss our requirements and offer alternatives such as Electric Powered Equipment.

- While working in a building where the client is still occupying the workspace, make the client aware that this type of work might occur. Some clients do not allow Internal Combustion Driven Equipment indoors.

The following pictures are some examples of the types of equipment XL Construction would expect to perform CO monitoring for when operated indoors:

Please contact the XL Safety Department if you have any questions or require any assistance regarding the proper use of gas air monitors.
**Daily Air Monitoring Log**

Go to [https://www.insidexl.net/document/SAFETY_FORM_210v1](https://www.insidexl.net/document/SAFETY_FORM_210v1)

---

**Daily Air Monitoring Log**

Date: _____________  Project #:  _________  Project Name:  _________________

Superintendent: ______________________  Forman:  _____________________

Inspection Performed by:  ____________________________________________

File No.:  ___________  cc:  _______________

Location of test:  ____________________________________________________

Test Equipment Used: _______________________________________________

<table>
<thead>
<tr>
<th>TIME</th>
<th>CO (PPM) %</th>
<th>OXYGEN %</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Baseline Reading Before Start of Work</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ALARM at 25 PPM</td>
</tr>
</tbody>
</table>

**NOTE:** Mechanical ventilation is required if CO levels are greater than 15PPM.
**Mold Policy**

**Policy**

The presence of moisture and/or water damage discovered during demolition of existing interior walls, flooring systems and ceilings will be reported immediately to the property owner and/or client. The source of the moisture or water damage will be investigated and repaired if possible.

XL Construction will investigate, to the extent possible, to determine the presence of any visible suspected mold contamination.

Upon discovery of suspected mold, XL Construction will advise the property owner and/or client of the discovery. XL Construction will assist the property owner and/or client in procuring the services of both an accredited laboratory for the purposes of confirming the presence of toxic mold and a qualified abatement or remediation Contractor to remove and decontaminate areas where mold is confirmed.

XL Construction will stop all activities in areas where mold is suspected. Neither XL Construction personnel nor XL Construction Subcontractors will be allowed to disturb any material or area where suspected mold is discovered until a written clearance is provided by an EPA accredited laboratory or a Certified Industrial Hygienist.

XL Construction will, to the extent possible, isolate the immediate area where suspected mold is discovered using methods described in the U.S. EPA publication number 402-K-01-001, “Mold Remediation in Schools and Commercial Buildings”. Methods include shutting off HVAC, sealing the area with polyethylene sheeting and prohibiting access to the area.

Please contact the Safety Department if you have any questions or require any further assistance in dealing with mold on your project.
Lead Exposure Program

Statement

Employee exposure to lead in the construction industry is always a possibility. Exposure may be chronic, small doses over a long period of time; or acute, exposure to large doses in a short period of time. If the Pre-Job Survey identifies the potential of lead exposure, or if lead exposure is identified anytime during construction, the Project Superintendent shall contact the Health and Safety Director to analyze the need for a Site Specific Lead Exposure Compliance Program. The following is a guideline for preparation of such a program.

Introduction

This Lead Exposure Compliance Program was prepared for the protection of employees as required by OSHA in 29CFR 1926.62 and equivalent State Standards. The applicable standards must be referenced for additional details of regulatory requirements.

Hazards of Lead Exposure

Lead is a soft, heavy metal, used for various applications in the construction industry. It is found in small amounts in the environment. Generally it is used with other products to enhance their performance, such as paint that is corrosion-resistant or pipes needing the same protection properties. Lead is found in everyday products, such as ammunition, batteries, chemical compounds, explosives, glassware and petroleum projects. Whether the exposure is acute or chronic and the magnitudes of the exposure are the key to the negative impact of lead on the human body.

1. Acute Exposure extremely high short-term exposure. Though very uncommon could be fatal in a matter of days. This could happen in a lead particle enriched environment in which a person was required to work for several days in a row without a break.

2. Chronic Exposure (elevated long-term exposure). A more common situation where the body absorbs minute amounts of lead over a long period of time. Overexposure to lead can result in a variety of symptoms. The symptoms may include some or all of the following:
   - Anxiety
   - Constipation
   - Dizziness
   - Headaches
   - Insomnia
   - Loss of appetite
   - Nausea
Weakness
- Excessive fatigue
- Hyperactivity
- Numbness
- Metallic taste in the mouth
- Soreness in the muscles and joints

Both acute or chronic exposure to lead can lead to serious health problems, such as high blood pressure, anemia, birth defects, urinary and reproductive system disorders. Damage to the central nervous system is one of the most severe forms of lead poisoning. Kidney disease happens over a long period of time with few, if any, symptoms until extensive and most likely permanent damage is done to the kidneys.

**How Exposure to Lead Occurs**

Exposure to lead occurs much the same way any other hazardous material would enter the body. Lead particles may enter the body by:

1. Through the lungs - breathing in lead particles if they are in the air.
2. Through the digestive system - when eating and drinking facilities are located too close to lead exposure areas or there is a lack of facilities for personal hygiene. Lead particles can be ingested by accidentally swallowing them when food or drink is contaminated with lead particles in the air or transferred from the hands to the food.
3. Absorption through the skin - when protective clothes are worn improperly or not worn at all, the results can be absorption through the skin.

**Exposure Assessments**

Assessments regarding the exposure of employees to airborne lead in the workplace are evaluated through monitoring of “breathing zone” air and laboratory analysis of air samples for lead content.

- Air monitoring will be performed by collecting personal samples representative of a full shift including at least one sample for each job classification in each work area, either for each shift or for the shift with the highest exposure level.
- Full shift personal samples shall be representative of the monitored employee’s regular, daily exposure to lead.

The results of air monitoring are compared to OSHA exposure limits, as follows:

- Action Level-the air is monitored to determine if the level of lead particles in the air has reached the action level. The action level for employee exposure (without the use of the respirator) is 30 micrograms of airborne lead per cubic meter of air in the work
environment. Exposure above the action level triggers certain requirements under OSHA Lead Standards.

- Permissible Exposure Limit (PEL) – No employee shall be exposed to concentrations of lead greater than 50 micrograms per cubic meter of air 50 ug/m³ averaged over an eight-hour period.

- Additional Exposure Assessment whenever there has been a change of equipment, process, control, personnel or a new task has been initiated that may result in additional employees being exposed to lead at or above the action level or may result in employees already exposed at or above the action level being exposed above the PEL, “additional monitoring” will be conducted to confirm that exposure does not exceed the permissible exposure level.

**Medical Surveillance**

Medical surveillance will be required if exposure is above the action level for more than thirty days in any consecutive twelve month period. The medical surveillance program will provide all exposed employees biological monitoring and medical examinations, by or under the direction of a licensed physician, as required by OSHA Standards.

1. Each new employee that will be exposed to lead hazards will undergo “blood sampling and analysis” to determine initial blood levels. Once exposed, the employee will undergo “blood sampling and analysis” at least every two months for the first six months thereafter until exposure ends. If an employee’s level of lead in their blood reaches or exceeds 40 ug/dl (micrograms lead per deciliter of blood), sampling will continue to be everytwo months (except in the case of medical removal, during which sampling will be performed every month). Once it returns to less than 40 ug/dl monitoring once every six months will once again be the cycle until exposure ends.

2. Medical removal protection—temporary removal for levels of lead in the blood sample at or above 50 ug/dl will be accomplished until the employee’s level of lead in the blood is at or below 40 ug/dl. That is, the employee will be assigned duties where exposure to lead is not expected until blood levels are lowered and confirmed to be below acceptable levels, via two consecutive readings. New hires that have an initial blood level greater or equal to 50 ug/dl shall not be exposed to lead hazards.

3. Medical examinations will be provided to employees with elevated blood levels and/or symptoms of overexposure to lead, as required by the OSHA Standard.

4. Where respirators are required, employees must undergo and pass a medical qualification examination prior to being assigned a respirator.

**Methods of Compliance**

Engineering, work and practice administrative controls must be used to the extent feasible to control Employee exposures to below “PEL”. During exposure assessment and where engineering and work practice controls are not sufficient, respirators are
required. Engineering controls may be needed to protect the employees during exposure assessment and during the course of work. See Engineering Controls Required Determined by Lead Exposure Levels for a summary of these controls.

Written plans for the Site Specific Compliance Program shall include:

- A description of each activity in which lead is emitted, i.e. equipment used, material involved, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices.

- A description of the specific means that will be employed to achieve compliance and where engineering controls are required engineering plans and studies used to determine methods selected for controlling exposure to lead.

- Air monitoring data, which documents the source of lead emissions. A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment, construction contracts, etc. and other relevant information.

- Other information, where applicable and relevant, as required by the OSHA Standard.

The compliance program shall provide for frequent and regular inspections of jobsites, materials and equipment to be made by a Competent Person.

**Protection During Exposure Assessment**

**The possibility of Exposure ABOVE the PEL.** While assessment of the exposure level is being conducted, employees shall be protected by respiratory protection, which would protect them as if they were exposed by up to as much as ten times the “PEL” (Permissible Exposure Level) that is 500 ug/m³. The tasks covered by this requirement are:

1. Where lead containing coatings or paint are present, manual demolition of structures (i.e. drywall), manual scraping, manual sanding, heat gun applications and power tool cleaning with dust collection systems.

2. Excavation and backfilling of contaminated soil. Once assessment has been completed and documented. If the exposure level is shown to be lower than 50 ug/m³, respiratory protection may be discontinued.

**For Levels in Excess of the PEL.** When XL believes that the employee in all probability may be exposed above the PEL and possibly above 500 ug/m³ and while performing the following tasks, the protection level shall be for levels in excess of 500 ug/m³ during the assessment of exposure:

1. Using mortar containing lead

2. Lead burning

3. Where lead containing coatings or paint are present
4. Rivet busting

5. Power tool cleaning without dust collection systems

6. Cleanup activities where dry expendable abrasive is used

Once assessment has been completed and documented, if the exposure level is shown to be lower than 500 ug/m³, respiratory protection may be selected for the lower level.

**Protection for Levels Above 2500 ug/m³.** For the following tasks, until assessment has proven the level of exposure to be below 2500 ug/m³, employees shall be protected as if the level were above 2500 ug/m³:

1. Abrasive blasting
2. Welding
3. Cutting
4. Torch burning

Once assessment has been completed and the level is shown to be lower than 2500 ug/m³, the respirator may be changed for one adequate for the lower exposure level, once the readings have been documented.

**Accuracy of Measurement of Exposure.** The method used to measure monitoring and analysis shall have an accuracy level of ninety-five percent (95%) of not less than plus or minus thirty-five percent (35%) for airborne concentrations of lead equal to or greater than 30 ug/m³. The testing will be performed by an outside testing agency with experience in this type of monitoring.

**Employee Notification of Exposure Assessment Results.** Within five working days of exposure assessment, (i.e., receipt of air monitoring results) each affected employee will be notified of their exposure level in writing. Whenever the results indicate the exposure level is at or above the PEL, the written notice of exposure level must include the level it was at and a description of the corrective action that will be taken to reduce the exposure below the PEL.

**Respiratory Protection**

Where respirators are used under this program, the employee shall select the appropriate respirator or combination or respirators as outlined in the OSHA Standard for respiratory protection (29 CFR 1910.134) and the XL Respiratory Protection Program.

**NOTE:** Disposable dust-mask respirators DO NOT provide enough protection from airborne lead particles and shall not be used when working with any concentration of lead which exceed the “PEL.” The minimum acceptable respirator for exposures to lead above the PEL is a reusable, half-mask air-purifying respirator equipped with high efficiency particulate air (HEPA) cartridges.
Personal Protective Equipment

XL Construction will provide and expect employees to use appropriate protective work clothing and equipment. Clothing and equipment provided may include the following:

- Coveralls or similar full-body work clothing
- Gloves, hats and shoes or disposable coverlets and face shields, vented goggles or other appropriate protective equipment. The purpose of protective clothing is to avoid contamination of worker’s clothing, shoes, vehicles and areas outside the work area.

Cleaning and replacement: XL Construction shall provide the protective clothing required in a clean and dry condition at least weekly and daily to employees whose exposure levels without regard to a respirator are over 200 ug/m3 of lead as an eight hour TWA. XL will provide for the cleaning, laundering and disposal of protective clothing and equipment, as well as any repair or replacement to maintain their effectiveness.

Control of lead contaminated clothing. Lead contaminated clothing will be removed in a designated change area. Contaminated clothing shall be placed in a closed container in the designated change area.

Labeling of containers with lead contaminated clothing. All designated containers shall be labeled with the following:

CAUTION

CLOTHING CONTAMINATED WITH LEAD

DO NOT REMOVE DUST BY

BLOWING OR SHAKING

DISPOSE OF LEAD-CONTAMINATED WASH WATER IN ACCORDANCE WITH

APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS
Hygiene Facilities and Practices

Before entering the work area:
- Change into the proper protective clothing in a designated changing area. Any clothing not worn under protective clothing should be stored in separate storage areas inside the changing area.
- Put on the correct respirator and perform the proper fit checks. The purpose of these checks is to make sure the mask forms a good seal to the face. Fit checks shall be done every time an employee uses a respirator before entering a hazardous area.

In the work area:
- Eating, drinking, smoking, chewing tobacco or gum and applying cosmetics is PROHIBITED. Signs stating this shall be posted at entrances to and within the work area.
- Before leaving the work area remove all surface dust from the protective clothing and equipment. Use a vacuum equipped with a high efficiency particulate filter or other cleaning method that does not cause an uncontrolled release of lead.

After leaving the work area:
- Remove protective clothing and equipment in a designated dirty area of the changing facility. The last piece of equipment removed is the respirator.
- To remove protective coveralls, carefully roll down the suit while turning them inside out. Place the contaminated clothing in the proper closed container for cleaning or disposal.
- Never leave the workplace wearing any clothing or equipment worn during the work shift.
- After removing all protective clothing and equipment wash hands and face thoroughly to remove lead particles from the skin at the designated wash area.
- Clean protective equipment, including the respirator, according to proper manufacturer’s procedures.
- Advise employees to shower as soon as possible.

Housekeeping

Housekeeping Guidelines are as follows:
- All surfaces shall be maintained as free as practical of accumulations of lead.
- Clean-up of floors and other surfaces where lead accumulates shall be cleaned by vacuuming or other methods that minimize the likelihood of lead becoming airborne.
Safety Procedures

■ Shoveling, dry or wet sweeping and brushing shall be used only where vacuuming or other equally effective methods have been tried and found not to be effective.

■ Where vacuuming methods are selected, the vacuums shall be equipped with HEPA filters and used and emptied in a manner that minimizes the re-entry of lead into the workplace.

■ Compressed air shall not be used to remove lead from any surface unless the compressed air is used in conjunction with a ventilation system designed to capture the airborne dust created.

Employee Information and Training

The Project Site Safety Engineer shall train employees on the Lead Exposure Program. Employees will be trained and evaluated medically by the guidelines set forth in the Respiratory Protection Program and Confined Space Program, if applicable. Training will be provided in accordance with the Hazard Communication Program for all employees who are subject to lead exposure at or above the action level. Retraining will be accomplished annually for all employees who are subject to lead exposure. The attached Lead Exposure Training Record shall be used as a training record and shall be completed by the employee. All training will be in accordance with the following:

Training Program Contents

■ Employees shall be trained on the contents of the lead standard and all of the appendices.

■ The specific nature of the operations that could result in exposure to lead above the action level.

■ The purpose, proper selection, fitting, use and limitations of respirators.

■ The purpose and a description of the medical surveillance program and the medical removal protection program, including concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant).

■ The engineering controls and work practices associated with the employee’s job assignment, including training employees to follow relevant good work practices.

■ Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

■ The employee’s rights of access to exposure records.
Access to Information and Training Materials

- Copies of the lead standard and its appendices will be made available to employees upon request.

Signs

The following warning sign shall be posted in each work area where an employee's exposure to lead is above the “PEL”: WARNING-LEAD WORK AREA-POISON-NO SMOKING OR EATING.

Record Keeping

Exposure Assessment

XL Construction shall maintain an accurate record of all monitoring and other data used in conducting Employee Exposure Assessments. Exposure monitoring records shall include:

- The date(s), number, duration, location and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable.

- A description of the sampling and analytical methods used and evidence of their accuracy.

- The type of respiratory devices worn, if any.

Medical Surveillance

- XL Construction shall establish and maintain an accurate record for each employee subject to medical surveillance as required by the program. (Refer to Lead Medical Surveillance Record attached.) This record will include:

  - The name, social security number and description of duties of the employee.

  - A copy of the physician's written opinions.

  - Results of any airborne exposure monitoring done on or for that employee and provided to the physician.

  - Any medical complaints related to the exposure to lead.

- XL Construction shall keep and maintain the following medical records in accordance with all applicable regulations:

  - A copy of the medical results including medical and work history.

  - A description of the laboratory procedures and a copy of any standards or guidelines used to interpret the test results or references to that information.

  - A copy of the results of biological monitoring.
Medical Removal

XL Construction shall establish and maintain an accurate record for each employee removed from current exposure to lead, with each record including the following information (Refer to Lead Removal Record attached):

- The name and social security number of the employee.
- The date of each occasion that the employee was removed from current exposure to lead as well as the corresponding date on which the employee was returned to their former job status.
- A brief description of how each removal was or is being accomplished.
- A statement with respect to each removal indicating whether or not the reason for the removal was an elevated blood lead level. XL Construction will maintain each medical removal record for at least the duration of an employee’s employment.

Objective Data for Exemption from Requirement for Initial Monitoring

For purposes of this section, objective data or information demonstrating that a particular product or material containing lead or a specific process, operation or activity involving lead cannot release dust or fumes in concentrations at or above the action level under any unexpected conditions of use. Objective data can be obtained from an industry-wide study or from laboratory product test results from manufacturers of lead containing projects or materials. The data used from an industry-wide survey will be obtained under workplace conditions closely resembling the processes, types of material, control methods, work practices and environmental conditions in current operations.

A copy of any objective data, which XL Construction has relied upon, must be provided to the Safety Department, who will maintain the required records.
XL Construction Lead Exposure Compliance Program Summary

**Getting Started:**

1. Survey of work to be performed.
2. Possible use of objective data; possibly already available from other sources?
3. If objective data is unavailable, arrange for initial air monitoring assessment.
4. Complete training of all employees who may be exposed:
   - Lead Standard Training
   - Medical Screening of employees
   - Respirator Fit Testing of employees
   - Additional Personal Protective Equipment Training

**Contents of Compliance Program**

**Initial Air Monitoring Assessment:**

1. Ensure all engineering controls discussed in the Compliance Program are in effect.
2. Work practices to be used in reducing exposure are being followed according to the Compliance Program.
3. Initial air monitoring assessment completed.
4. Employees made aware of exposure levels.
5. Re-evaluation of respiratory protection in use for the actual exposure level.

**Air Monitoring Assessment Frequency:**

1. If initial determinations were below the “Action Level”, no additional monitoring is needed if conditions remain the same.
2. If above the “Action Level”, assessment will be each six months until below the “Action Level”.

**Inspections of Jobsite:**

**Note:** Frequent inspections shall be made by the assigned Competent Person and documented that all aspects of XL Construction’s Compliance Program are in fact being complied with.
**Biological Monitoring of Employees:**

If employees are exposed thirty days in a twelve month period:

1. Each employee undergoes biological monitoring at the end of each two months, for the first six months, then once every six months.

**If the Employee’s Last Blood Monitoring Indicated a Level of Lead Above 40 ug/m3:**

1. The Employee shall be monitored every two months until the level is below 40 ug/m3.

2. Once below 40ug/m3 for two consecutive blood tests, then each six months.

**If the Employee Is In The Medical Removal Program, the Testing Interval is:**

1. Monthly during the removal period.

**Compliance Program Review:**

Each six months the Compliance Program for this jobsite shall be reviewed to ensure it reflects the conditions the Program was prepared for. The following elements will be used to evaluate the effectiveness of the Compliance Program:

1. Air Monitoring Assessments

2. Are engineering controls in place and still effective?

3. Effectiveness of personal protective equipment.

4. Biological monitoring results.

5. Employee interviews soliciting recommendations and suggestions to reduce exposure and improve safety.

**Retraining of Personnel:**

Employees shall be retrained annually and when tasks or exposure levels change substantially.
XL Construction Lead Exposure Training Record

Go to https://www.insidexl.net/document/SAFETY_FORM_228v1

I have been trained in the following hazards regarding exposure to lead dusts, fumes and compounds:

1. The contents of 29 CFR 1926.59, Hazard Communication Standard, including the contents of MSDSs, their location, signs and labels related to the products and safe work practices required for their use.

2. The contents of 29 CFR 1926.62, the Lead Standard and all the Appendices.

3. The specific nature of the operations which could result in exposure to lead above the action level.

4. The purpose, proper selection, fitting, use and limitations of respirators.

5. The purpose and a description of the medical surveillance program and the medical removal program, including information concerning the adverse effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for Employees who are pregnant).

6. The engineering controls and work practices associated with the Employee's job assignment, including training employees to follow relevant good work practices.

7. The contents of any compliance plan in effect.

8. Instructions to Employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

9. The Employee's rights to access of exposure records under 29 CFR 1926.20.

Employee's Printed Name:__________________________________________________

Employee's Signature:______________________________________________________

Craft:_______________________________ Date:________________________________

Job Name:___________________________________ Job Number:_________________

Instructor/Competent Person:_______________________________________________
XL Construction Lead Medical Surveillance Record

Go to https://www.insidexl.net/document/SAFETY_FORM_226v1

Employee's Printed Name:____________________________________________________
Employee's Social Security Number:___________________________________________
Description of Duties:________________________________________________________

Attach the following reports to this Record:

1  Copy of Physician's written report.
2  Results of any airborne exposure monitoring done on or for that Employee and provided to the Physician.
3  Any medical complaints related to the exposure to lead.

Ensure that the Physician has received a copy of the following:

1  The Lead Standard, 29 CFR 1926.62 and its Appendices.
2  Description of the Employee's duties as they relate to the exposure to lead.
3  The exposure level or anticipated exposure level.
4  A description of any protective equipment worn by the Employee.
5  Prior blood level results.
6  Any prior written medical opinions concerning this Employee's exposure to lead.

Originals of Medical Records Location:________________________________________

Copies of Documents Given to:

Physician:_________________________________________ Date:____________________
Employee or Representative:_________________________ Date:____________________

DO NOT GIVE OUT RECORDS WITHOUT EMPLOYEE PERMISSION

(Page 1 of 1) Rev. 10/09
XL Construction Removal of Employee From Lead Related Work

Go to [https://www.insidexl.net/document/SAFETY_FORM_227v1](https://www.insidexl.net/document/SAFETY_FORM_227v1)

---

**Employee’s Printed Name:**

**Employee’s Social Security Number:**

**Description of Duties:**

**Date of removal from exposure to lead:**

**Was removal due to elevated level of lead in blood?** □ Yes □ No

**Date Employee was notified in writing:**

**How was removal accomplished?**

**Date Employee returned to former job status:**

---

**THIS INFORMATION IS CONFIDENTIAL**
### XL Construction Engineering Controls Required Determined by Lead Exposure Levels

<table>
<thead>
<tr>
<th>Control Practice</th>
<th>Below 30 ug/m³ Action Level</th>
<th>Between Action Level and PEL</th>
<th>Above 50 ug/m³ PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining Presence of Lead&lt;sup&gt;(a)&lt;/sup&gt;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Competent Person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure Monitoring and Associated Record Keeping</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Mechanical Ventilation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Exhaust Ventilation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enclosures/Containment Systems&lt;sup&gt;(b)&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEPA Vacuums</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Wetting Agents</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Written Compliance Program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warning Signs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Training</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notification of Other Employers</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protective Clothing/Gloves/Shoe Covers</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Hand Washing Facilities Only&lt;sup&gt;(c)&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Areas with Storage Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decontamination Facilities (Including Showers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating Areas and Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological Monitoring and Associated Record Keeping</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Medical Examinations and Associated Record Keeping</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Medical Removal Protection Reqmts&lt;sup&gt;(d)&lt;/sup&gt;</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Footnotes:**

(a) Exemption is possible if objective data shows that exposures are below the action level or if the Employer has relevant data from the past 12 months.

(b) Enclosures are only assumed to be needed in conjunction with indoor projects using mechanical ventilation. Outdoor enclosures are required by EPA regulations concerning environmental release of lead.

(c) Hand washing facilities for activities below the PEL are required by 29 CFR 1926.51(f).

(d) Medical removal is dependent on worker blood-lead level.

Source: OSHA, Office of Regulatory Analysis
Asbestos Awareness

Introduction

Asbestos is a naturally occurring fibrous stone. In appearance asbestos containing materials range from soft and cottony to hard and brittle.

There are in excess of 3,800 different asbestos-containing materials that have been fabricated for construction, industrial and manufacturing products, serving both interior and exterior functions. Most uses fall into the following categories:

- Thermal system insulation, i.e. pipe and HVAC insulation
- Resilient floor coverings and mastics, i.e. tile and vinyl
- Structural fireproofing and decorative coatings
- Asphalt-based roofing
- Roofing felts and papers
- Heat deflective material, i.e. fire stopping
- Cement asbestos board, i.e. soffits, shingles

Generally, most buildings constructed, renovated, remodeled or altered prior to 1980 are likely to have asbestos containing building materials.

Asbestos containing materials that are in their original untouched/undisturbed product are usually not a health threat. When these products must be disturbed they must be given special consideration.

Health Hazards

Asbestos is dangerous when it becomes airborne. When it is in the air, the fibers are so small that they cannot be seen. Asbestos fibers can enter your body through your nose and mouth by breathing or swallowing them. You cannot see, feel or taste asbestos. It simply does not let you know it is there. Breathing asbestos fibers could cause the following diseases:

- Asbestosis: A disease that causes scarring of the lungs
- Mesothelioma: A cancer of the lining lungs or stomach
- Lung Cancer: A cancer of the lungs
- Other Cancers: Cancers of the digestive system
Asbestos Identification

Before authorizing or allowing any construction, renovation, remodeling, maintenance, repair or demolition on buildings built prior to 1980, the owner is required to conduct or have an environmental firm conduct a “Good Faith Inspection” of the materials to be worked on or removed. The “Good Faith Inspection” will determine the following:

- The location of asbestos containing materials
- The quantity of asbestos containing materials
- The type of asbestos in the materials

XL’s Project Executive or Project Manager shall NOT authorize any work that will disturb asbestos containing materials until a certified asbestos abatement contractor removes it and the abatement contractor deems the area safe for workers. XL will maintain a copy of the survey onsite for review or inspection upon request. Work will not commence until the survey is in XL’s possession. In the event that the need for formal asbestos awareness training arises, contact XL’s Health and Safety Director.

Procedures after discovering potential asbestos containing Material

If an employee discovers material that they suspect may contain asbestos, they will stop work immediately, secure the area from unauthorized entry and notify the project management staff and XL’s Health and Safety Director. To determine if the suspected material contains asbestos, an asbestos abatement environmental firm or one XL’s certified Safety Engineers will be contacted to sample and analyze the material. Sampling will be performed by a certified AHERA (Asbestos Hazard Emergency Response Act) abatement Subcontractor, environmental firm or an XL Certified Safety Engineer.

Building Demolition

Prior to demolition of any structure, the demolition contractor must obtain a permit from the local air pollution agency, Bay Area Air Quality Management District, if applicable. To determine if a permit will be required for your specific project, contact XL’s Safety Department.
Respiratory Protection Program

Respirators shall be provided by XL when such equipment is necessary to protect the health and safety of the employee. XL shall provide the respirators, which are applicable and suitable for the purpose intended. The Project Staff shall be responsible for implementing the written Respiratory Protective Program, which shall be established with the assistance of XL's Safety Department.

Purpose

To establish a Respirator Program in accordance with OSHA Respirator Standard (29 CFR 1910.134). Control of airborne contaminants is accomplished, when feasible, by accepted engineering controls. When effective engineering controls are not feasible or while they are being implemented, approved respirators are used.

General

1. The Respiratory Protection Program is designed to protect Employees from airborne contaminants.

2. A Respirator Coordinator (Typically a member of XL's Safety Department) is assigned to coordinate the program.

Requirement Program

1. Each Project that is going to use respirators shall appoint a Respirator Coordinator to be responsible for implementing the Respirator Program in an effective manner.

2. The Respirator Coordinator must maintain written procedures.

3. The Respirator Coordinator must complete the Worksite Specific Respiratory Protection Plan prior to the start of any work requiring respiratory protection.

4. Personnel must only wear respirator equipment approved by the Respirator Coordinator.

5. Personnel must be issued their own respirators when practical.

6. Respirators must be kept in a clean, sanitary condition.

7. The Respirator Coordinator must provide convenient, sanitary storage for each respirator.

8. All respirators must be periodically inspected, cleaned and sanitized in accordance with standards and this program.

9. All respirator users must be trained and fit tested, except as follows: If disposable dust masks are approved and used only at the desire of workers when exposure levels are
below permissible limits, the Respirator Coordinator may allow optional use without implementing the entire program procedures.

10. Approval must be obtained from the Jobsite Health Service Consultant(s) for any employee to use a respirator. The Health Service Consultant must be established prior to Project start-up. This is to be coordinated with the Safety Department.

11. The Respirator Protection Program must be evaluated annually by XL’s Health & Safety Director to determine its effectiveness.

**Respirator Coordinator Responsibility**

The Respirator Coordinator is responsible for administration of the Respirator Protection Program as described below.

1. Provide a site summary of locations or job descriptions where employees must wear respirators and under what conditions (normal or emergency).

2. Maintain facilities and procedures for fit testing; fit testing will be done through an approved occupational medical facility. Contact the Safety Department to schedule fit testing for your employees.

3. Coordinate training for both new and experience employees.

4. Establish care and maintenance requirements for individually assigned respirators.

5. Establish procedures for Health Service Consultants’ approval of employee use of respirators.

6. Audit care and use of respirators.

7. Consult with the XL Safety Department or Health & Safety Consultant to:

   Maintaining fit test, training and medical approval records. All records shall be kept in the Safety Department files.

**Respirator Selection**

The Respirator Coordinator will select all respiratory protection devices and maintain a listing of approved respirators for existing applications. Only those respirators approved by the Respirator Coordinator may be used.

**Training**

The Respirator Coordinator is responsible for the training of employees in the Respirator Program relative to their responsibilities. This consists of classroom sessions with visual aids as well as hands on training.
The Respirator Coordinator shall ensure each employee can demonstrate knowledge of the following:

1. Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.

2. The limitations and capabilities of a respirator.

3. How to inspect, put on and remove, use and check the seals of the respirator.

4. What the procedures are for maintenance and storage of the respirator.

5. How to recognize the medical signs and symptoms that may limit or prevent the effective use of respirators.

Retraining shall be conducted annually, and when the following situations occur:

1. Changes in the workplace that renders previous training obsolete.

2. Inadequacies in the employee's knowledge or use of a respirator.

All training shall be documented. Copies of all fit testing, training and inspections shall be maintained on site and will be available upon request. Refer to the Respirator Training Program Attendance Roster and the Air Purifying Respirator Checklist. Original records shall be stored in the Safety Department files at XL's main office.

**Medical Evaluation and Fit Testing**

Every employee who is being considered for inclusion in the Respirator Protection Program must participate in a medical evaluation. A determination is made initially upon employment, or change into a job classification requiring respiratory protection, and every 24 months thereafter.

The employee will fill out the Medical Questionnaire for Respirator Users, which will be reviewed by a physician. If the physician deems it necessary, the employee will receive an examination. The purpose of the questionnaire and the examination is to assure that the employee is physically and psychologically able to perform their work while wearing respiratory equipment. If the physician denies approval, the employee will not be able to participate in the Respiratory Program.

Each respirator user and potential user is fit tested by the Health Service Consultant to assure proper face-to-face piece seal. The employee must be fit tested with the name make, model, style and size of respirator that will be used.

Qualitative fit testing may only be used to fit test negative pressure respirators that must achieve a fit factor of 100 or less.
Quantitative fit testing must be used for tight fitting half face pieces when the fit factor is equal to or greater than 100 and equal to or greater than 500 for tight fitting full face pieces.

Respirator users are to be fit tested annually. In the case of any facial structure change, such as surgery or dental changes, the user must then be refitted.

Each time a respirator is donned, the user must:

1. Check to see that it is properly sealed and will not loosen during use.
2. Leak test the respirator according to established procedures (Positive and Negative pressure fit check).

Respirators must not be worn when conditions prevent face piece to face seal.

1. Employees required to use a respirator are not allowed to have a beard, sideburns, or mustache that passes between the face and the sealing surface of the respirator.
2. Any employee with a facial condition that prevents a proper seal (missing dentures, growths, severe acne, one day beard, etc.) must not be allowed to perform duties that require the use of a respirator until that facial condition is corrected.

(Note: Acceptable fit testing methods are outlined in OSHA 1910.134, Appendix A. Your Health Service Consultant should be familiar with these).

**Inspection and Maintenance**

Respirators must be inspected as follows:

1. All respirators used must be inspected by the user before and after use, and during cleaning.
2. Emergency respirators must be inspected at least once a month, as well as after each use, with records maintained of inspection dates and findings.
3. All employees using air-purifying respirators must complete the Air Purifying Respirator Checklist weekly.

Respirator inspections must include the following:

1. Check condition of face piece, headbands, valves, connection tabs and cartridges. Replace defective parts of take respirator out of service.
2. Gently stretch rubber or elastomer parts to detect cracks or deterioration.
3. Check tightness of connections.
4. Check cleanliness.
Only trained persons may make repairs with parts supplied for that respirator. Only those repairs recommended by the manufacturer may be made.

The user will change cartridges on air purifying type respirators. Check the manufacturer recommendations for different filter life guidelines. Industry accepted guidelines suggest changing the cartridge when breathing becomes difficult or when chemical odor is detected; both indicate that the cartridge is at the end of its useful life.

Cleaning Of Respirators

Respirators shall be maintained in a clean, sanitary condition. Individually assigned respirators shall be cleaned after each day’s use. Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals.

During cleaning, the respirator is disassembled, inspected, repaired (if necessary), thoroughly washed and disinfected.

Respirators are to be cleaned in warm water not to exceed 110 degrees F, using a mild detergent and disinfecting agent, and air-dried.

Storage Of Respirators And Cartridges

Respirators must be stored so that no pressure is placed on the face piece and exhalation valve. Improper storage can deform the face piece and create a poor sealing surface. The straps must not be stored inside the face piece. Respirators must be protected against dust, sunlight, hot, extreme cold, excessive moisture, and damaging chemicals.

Organic Vapor Cartridges may be left installed in the face piece, if desired, and stored in the storage container. There is low potential for contamination of the face piece and the storage container because the cartridge filtering media absorbs the contaminant.

Dust/Fiber Cartridges may be returned to the cleaned face piece as long as they are covered with protective cartridge covers. If protective covers are not used, the cartridges must be removed from the face piece and stored in plastic bags. The face piece and the bagged cartridges should be stored together in the storage container. This step is recommended because of some potential for contamination if the face piece is stored with cartridges still installed.

Optional Use Of Duct Masks

If the use of single strap filtering face pieces (dust masks) are provided at the employee’s request when exposure levels are below permissible limits, all phases of the Respirator Program do not have to be followed. Dust mask (filtering face piece) use will be allowed on approved job descriptions where respirator use is not required.

(Note: Appendix D of OSHA 1910.134 is mandatory information for Employees using respirators when not required under the standard.)
Definitions

- **Respirator Coordinator**: Designated XL employee responsible for administering an On Site Respiratory Program.

- **Health Service Consultant**: Third Party Consultant responsible for administrating the Pulmonary Function Test and Respirator Evaluation Questionnaire and fit testing, as requested.

- **Industrial Hygienist Consultant (IHC)**: Third Party Consultant responsible for determining on site atmospheric hazards.
XL Construction Worksite-Specific Respiratory Protection Plan

Date: ___________  Project: ___________________________  Project No: ________
Superintendent: _______________  Foreman: _______________  File No: _______
Respirator Coordinator: _______________  CC: __________________

Task Description and Location:

Atmospheric Hazards:
■ Oxygen Levels: ______  Is this oxygen level deficient? ______
■ Monitoring (List the monitoring frequency and method for each atmospheric hazard):

Controls to be implemented to reduce Employee exposure to atmospheric hazards:
■ Respirators to be worn (List type, cartridge type if APR, concentration and limits for use):

Authorized Employees (List each employee):

(Page 1 of 2)
Emergency response:

- Signs and symptoms of overexposure

- Evacuation procedures

- First aid and emergency medical procedures

- Reporting procedures

XL Supervisor Signature: __________________________ Date: ____________

XL Respirator Administrator Signature: __________________________ Date: ____________
# XL Construction Respirator Training Program Attendance Roster

Go to [https://www.insidexl.net/document/SAFETY_FORM_222v1](https://www.insidexl.net/document/SAFETY_FORM_222v1)

---

**XL Construction**

**XL Construction Respirator Training Program Attendance Roster**

<table>
<thead>
<tr>
<th>Brand Respirator(s):</th>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name:</td>
<td>Model #:</td>
</tr>
<tr>
<td>Project #:</td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td>XL Respirator Coordinator</td>
</tr>
<tr>
<td>Health Service Consultant:</td>
<td>Industrial Hygienist Consultant:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Print Name (use pen)</th>
<th>Signature</th>
<th>Employee ID/SSN</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rev. 3/09
XL Construction Respirator Medical Evaluation Questionnaire

To the Employer:

Answers to questions in Section 1 and to question 9 in Section 2 of Part A do not require a medical examination.

To the Employee:

Part A. Section 1 (Mandatory) The following information must be provided by every Employee who has been selected to use any type of respirator.

Can you read English? (check one) □ Yes □ No

Your employer must allow you to answer this Questionnaire during normal working hours or at a time and place that is convenient for you. To maintain your confidentiality, your employer or Supervisor must not look at or review your answers and your employer must tell you how to deliver or send this Questionnaire to the health care professional who will review it.

(Please print)

1. Today’s Date: ___________________________________________
2. Your Name: ___________________________________________
3. Your Age: ____________________________
4. Sex (check one): □ Male □ Female
5. Your Height: ______ ft. ______ in.
6. Your Weight: _____ lbs.
7. Your Job Title: ____________________________
8. A phone number where you can be reached by the health care professional who reviews this Questionnaire: (Include the Area Code) _______________________
9. The best time to call you at this number: _______________________
10. Has your Employer told you how to contact the health care professional who will review this Questionnaire? (check one) □ Yes □ No
XL Construction Respirator Medical Evaluation Questionnaire

(Page 2 of 5)

11. Check the type of respirator that you will use (You can check more than one category):  

- Series of Air Purifying Respirator (APR)  
  - □ N (not resistant to oil)  
  - □ R (somewhat resistant to oil)  
  - □ P (oil proof)  

Efficiency Level  
- □ 95%  
- □ 99%  
- □ 100%  
- □ Supplied air respirator

Supplemental Information. To be provided by the employer regarding the use of respirator and the working conditions.  

Employer Representative: ___________________________ Telephone: ___________________________

<table>
<thead>
<tr>
<th>Respirator Type</th>
<th>Weight</th>
<th>Duration of Use</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Expected physical effort:  
- □ Light Effort  (Sitting/standing while writing, performing light assembly work, controlling machines)  
- □ Moderate Effort  (Sitting/standing/walking using tools, performing assembly work, lifting/pushing moderate loads)  
- □ Heavy Effort  (Lifting heavy loads (>35lbs.), shoveling, walking up an 8° grade, climbing stairs with a load)

Expected use of additional protective clothing and/or equipment while using the respirator.  
- □ Yes  □ No  
If yes, describe: ____________________________________________

Expected working conditions:  
- Temperature Extremes  
  - Low: ___°F  High: ___°F  
- Humidity Extremes  
  - Low: ___%  High: ___%

12. Have you worn a respirator before? (check one)  
- □ Yes  □ No  
If yes, what type(s)? ____________________________________________

(Page 2 of 5)  

Rev. 9/09
Part A. Section 2. (Mandatory) Every Employee who has been selected to use any type of respirator must answer questions 1 through 9 below. Please check either “Yes” or “No”.

1. Do you currently smoke tobacco or have you smoked tobacco in the last month? □ Yes □ No

2. Have you ever had any of the following conditions?
   a. Seizures (fits): □ Yes □ No
   b. Diabetes: □ Yes □ No
   c. Allergic reactions that interfere with your breathing: □ Yes □ No
   d. Claustrophobia (fear of closed-in places): □ Yes □ No
   e. Trouble smelling odors: □ Yes □ No

3. Have you ever had any one of the following pulmonary or lung problems?
   a. Asbestosis: □ Yes □ No
   b. Asthma: □ Yes □ No
   c. Chronic Bronchitis: □ Yes □ No
   d. Emphysema: □ Yes □ No
   e. Pneumonia: □ Yes □ No
   f. Tuberculosis: □ Yes □ No
   g. Silicosis: □ Yes □ No
   h. Pneumothorax (Collapsed Lung): □ Yes □ No
   i. Lung Cancer: □ Yes □ No
   j. Broken Ribs: □ Yes □ No
   k. Any chest injuries or surgeries: □ Yes □ No
   l. Any other lung problem that you have been told about: □ Yes □ No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?
   a. Shortness of breath: □ Yes □ No
   b. Shortness of breath when walking fast on level ground or walking up a slight hill or inline: □ Yes □ No
   c. Shortness of breath when walking with other people at an ordinary pace on level ground: □ Yes □ No
   d. Have to stop for breath when walking at your own pace on level ground: □ Yes □ No
   e. Shortness of breath when washing or dressing yourself: □ Yes □ No
   f. Shortness of breath that interferes with your job: □ Yes □ No
   g. Coughing that produces phlegm (thick sputum): □ Yes □ No

(Page 3 of 5)
h. Coughing that wakes you early in the morning: □ Yes □ No
i. Coughing that occurs mostly when you are lying down: □ Yes □ No
j. Coughing up blood in the last month: □ Yes □ No
k. Wheezing: □ Yes □ No
l. Wheezing that interferes with your job: □ Yes □ No
m. Chest pain when you breathe deeply: □ Yes □ No
n. Any other symptoms that you think may be related to lung problems: □ Yes □ No

5. Have you ever had any of the following cardiovascular or heart problems?
   a. Heart attack: □ Yes □ No
   b. Stroke: □ Yes □ No
c. Angina: □ Yes □ No
d. Heart Failure: □ Yes □ No
e. Swelling in your legs or feet (not caused by walking): □ Yes □ No
f. Heart Arrhythmia (heart beating irregularly): □ Yes □ No
g. High Blood Pressure: □ Yes □ No
h. Any other heart problem that you have been told about: □ Yes □ No

6. Have you ever had any of the following cardiovascular or heart symptoms?
   a. Frequent pain or tightness in your chest: □ Yes □ No
   b. Pain or tightness in your chest during physical activity: □ Yes □ No
c. Pain or tightness in your chest that interferes with your job: □ Yes □ No
d. In the past two years, have you noticed your heart skipping or missing a beat: □ Yes □ No
e. Heartburn or indigestion that is not related to eating: □ Yes □ No
f. Any other symptoms that you think may be related heart or circulation problems: □ Yes □ No

7. Do you currently take medication for any of the following problems?
   a. Breathing or lung problems: □ Yes □ No
   b. Heart Trouble: □ Yes □ No
c. Blood Pressure: □ Yes □ No
d. Seizures (fits): □ Yes □ No

8. If you have used a respirator, have you ever had any the following problems?
   (If you have never used a respirator, check the following space and go to question 9).
   a. Eye Irritation: □ Yes □ No
XL Construction Respirator Medical Evaluation Questionnaire
(Page 5 of 5)

b. Skin Allergies or Rashes: □ Yes □ No
c. Anxiety: □ Yes □ No
d. General weakness or fatigue: □ Yes □ No
e. Any other problem that interferes with your use of a respirator: □ Yes □ No

9. Would you like to talk to the health care professional who will review this Questionnaire about your answers to the Questionnaire? □ Yes □ No

Every employee who has been selected to use either a full facepiece respirator or a self-contained breathing apparatus (SCBA) must answer question 10-15 below. For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently): □ Yes □ No

11. Do you currently have any of the following vision problems?
   a. Wear Contact Lenses: □ Yes □ No
   b. Wear Glasses: □ Yes □ No
c. Color Blind: □ Yes □ No
d. Any other eye or vision problem: □ Yes □ No

12. Have you ever had an injury to your ears, including a broken eardrum: □ Yes □ No

13. Do you currently have any of the following hearing problems?
   e. Difficulty hearing: □ Yes □ No
   f. Wear a hearing aid: □ Yes □ No
g. Any other hearing or ear problem: □ Yes □ No

14. Have you ever had a back injury: □ Yes □ No

15. Do you currently have any of the following musculoskeletal problems?
   a. Weakness in any of your arms, legs, or feet: □ Yes □ No
   b. Back pain: □ Yes □ No
c. Difficulty fully moving your arms and legs: □ Yes □ No
d. Pain or stiffness when you lean forward or backward at the waist: □ Yes □ No
e. Difficulty fully moving your head up or down: □ Yes □ No
   f. Difficulty fully moving your head side to side: □ Yes □ No
g. Difficulty bending at your knees: □ Yes □ No
   h. Difficulty squatting to the ground: □ Yes □ No
   i. Difficulty climbing a flight of stairs or a ladder carrying more than 25 lbs.: □ Yes □ No
   j. Any other muscle or skeletal problem that interferes with using a respirator: □ Yes □ No

(Please indicate your answers to the above questions.)

Rev. 9/09
XL Construction Weekly Respirator Inspection Checklist

Date: ____________ Project: ________________________________ Project No: ______
Superintendent: ____________________ Foreman: ____________________ File No: ______
Respirator Coordinator: ____________________ CC: ____________________
Inspection Performed by: ____________________

1. **Headbands**: Elasticity, cracks or tears, connection to face piece.
   - Good ☐ Damaged ☐
2. **Face Piece**: Cleanliness, cracks, tears, holes and distortion of the face piece from improper storage or flexibility?
   - Good ☐ Damaged ☐
3. **Valves**: Inhalation/Exhalation, valve and valve seat—any tears, distortion or build-up of material.
   - Good ☐ Damaged ☐
4. **Cartridge holders**: cracks, and/or damage to threads.
   - Good ☐ Damaged ☐
5. **Cartridge**: dents, scratches or tears, sealing problems.
   - Good ☐ Damaged ☐

If any item has been damaged, the Respirator must be taken out of service.
Please inform your immediate Supervisor.

New cartridges were installed on: ______________ Date ______________

Rev. 9/09
Electrical

Electrical Safety Program

Purpose

The purpose of the Electrical Safety program is to set forth procedures for the safe use of electrical equipment, tools and appliances at XL Construction.

Definitions

Affected Personnel - Personnel who normally use and work with electrical equipment, tools, and appliances, but who do not make repairs or perform lock out/tag out procedures.

Appliances - Electrical devices not normally associated with commercial or industrial equipment such as air conditioners, computers, printers, copiers, coffee pots, microwave ovens, toasters, etc.

Circuit Breaker - A device designed to open and close a circuit by non-automatic means and to open the circuit automatically on a predetermined over current without injury to itself when properly applied within its rating.

Disconnecting Means - A device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply.

Disconnecting Switch - A mechanical switching device used for isolating a circuit or equipment from a source of power.

Double Insulated Tool - Tools designed of non-conductive materials that do not require a grounded, three wire plug.

Ground - Connected to earth or some conducting body that serves in place of the earth.

Grounded Conductor - A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.

Ground Fault Circuit Interrupter (GFCI) - A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds some predetermined value that is less than that required to operate the over current protective device of the supply circuit.

Insulated - A conductor encased within material of composition and thickness that is recognized as electrical insulation.

Premises Wiring - That interior and exterior wiring, including power, lighting, control, and signal circuit wiring together with all of its associated hardware, fittings and wiring devices, both permanently and temporarily installed, which extends from the load end
of the service drop, or load end of the service lateral conductors to the outlet(s). Such wiring does not include wiring internal to appliances, fixtures, motors, controllers, motor control centers and similar equipment.

Qualified Person - One that has been trained in the repair, construction and operation of electrical equipment and the hazards involved.

Strain Relief - A mechanical device that prevents force from being transmitted to the connections or terminals of a cable or extension cord.

Class I Locations - Are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Class 1 Division 1 - Is a location (a) in which hazardous concentrations of flammable gases or vapors may exist under normal operating conditions; or (b) in which hazardous concentrations of such gases or vapors may exist frequently because of repairs or maintenance operations or because of leakage; or (c) in which a breakdown or faulty operation or equipment or processes might release hazardous concentrations of flammable gases or vapors and might also cause simultaneous failure of electrical equipment.

Class 1 Division 2 - Is a location (a) in which volatile flammable liquids or flammable gases are handled, processed, or used, but in which the hazardous liquid, vapors, or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in of abnormal operation of equipment or (b) in which hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation, and which might become hazardous through failure or abnormal operations of the ventilating equipment; or (c) that is adjacent to a Class 1, Division 1 location, and to which hazardous concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided.

Class II locations - Class II locations are those that are hazardous because of the presence of combustible dust. Class II locations include the following:

Class II, Division 1 - A Class II, Division 1 location is a location (a) in which combustible dust is or may be in suspension in the air under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures; or (b) where mechanical failure or abnormal operation of machinery or equipment might cause such explosive or ignitable mixtures to be produced, and might also provide a source of ignition through simultaneous failure of electric equipment, operation of protection devices, or from other causes, or (c) in which combustible dusts of an electrically conductive nature may be present.
NOTE: This classification may include areas of, areas where metal dusts and powders are produced or processed, and other similar locations that contain dust producing machinery and equipment (except where the equipment is dust-tight or vented to the outside).

- These areas would have combustible dust in the air, under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures.

- Combustible dusts that are electrically nonconductive include dusts produced in the handling and processing produce combustible dusts when processed or handled.

- Dusts containing magnesium or aluminum are particularly hazardous and the use of extreme caution is necessary to avoid ignition and explosion.

Class II, Division 2 - A Class II, Division 2 location is a location in which: (a) combustible dust will not normally be in suspension in the air in quantities sufficient to produce explosive or ignitable mixtures, and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus; or (b) dust may be in suspension in the air as a result of infrequent malfunctioning of handling or processing equipment and dust accumulations resulting there from may be ignitable by abnormal operation or failure of electrical equipment or other apparatus.

NOTE: This classification includes locations where dangerous concentrations of suspended dust would not be likely but where dust accumulations might form on or in the vicinity of electric equipment. These areas may contain equipment from which appreciable quantities of dust would escape under abnormal operating conditions or be adjacent to a Class II Division 1 location, as described above, into which an explosive or ignitable concentration of dust may be put into suspension under abnormal operating conditions.

Responsibilities

Manager/Supervisor

Project Superintendents, Supervisors and the Warehouse Manager are responsible for ensuring that only qualified employees and or qualified Subcontractors perform electrical repairs or installations.

Project Superintendents are responsible for ensuring all applicable electrical safety programs are implemented and maintained on their jobsites.

Employees are responsible to use electrical equipment, tools, and appliances according to this program, for attending required training sessions when directed to do so and to report unsafe conditions to their Supervisor immediately.
Only qualified employees may work on electric circuit parts or equipment that has not been de-energized. Such employees shall be made familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools, as well as all NFPA requirements prior to performing any energized electrical work. Please also see XL’s Energized Electrical Work Policy prior to performing any energized electrical work.

**Safe Work Practices**

**Inspections**
- Electrical equipment, tools, and appliances must be inspected prior to each use.
- The use of a hard fixed GFCI or a portable GFCI adapter shall be used with all portable hand tools, electric extension cords, drop lights and all 110 volt equipment.
- Faulty equipment, tools, or appliances shall be removed from service immediately and tagged “Out of Service”, dated and signed by the employee applying the tag.

**Repairs**
- Only Qualified Personnel, who have been authorized by the department Supervisor or Manager, may make repairs to supply cords on electrical tools and to extension cords.
- Only certified electricians shall be allowed to make repairs to electrical equipment and wiring systems.
- The Supervisor obtaining the services of a certified electrician is responsible to verify the electrician's credentials.
- Employees shall not enter spaces containing exposed energized parts unless qualified and proper illumination exists to enable employees to work safely.
- Employees shall not wear conductive apparel such as rings, watches, clothing, etc. (unless they are rendered non-conductive by covering, wrapping, or other insulating means) while working on or near open energized equipment this includes batteries on trucks, forklifts, phone backup systems or other such equipment.
- If employees are subject to handle long dimensional conductor objects (ducts or pipes), steps for safe work practices shall be employed to ensure the safety of workers.

**Extension Cords**
- Use only three-wire, grounded, extension cords and cables that conform to a hard service rating of 14 amperes or higher and grounding of the tools or equipment being supplied.
- Only commercial or industrial rated-grounded extension cords may be used in shops and outdoors.
Cords for use other than indoor appliances must have a rating of at least 14 amps.

Cords must have suitable strain relief provisions at both the plug the receptacle ends.

Work lamps (drop light) used to power electrical tools must have a 3 wire, grounded outlet, unless powering insulated tools.

Adapters that allow three wire, grounded prongs, connected to two wire non-grounded outlets are strictly prohibited.

Cords must have a service rating for hard or extra-hard service and have S, AJ, ST, SO, SJO, SJT, STO, or SJTO printed on the cord.

Cords routed on project sites must be done in a neat and orderly manner to minimize the potential for tripping hazards.

When a cord must be run through a door or across a walkway or driving surface, provide protection that eliminates the possibility of crushing or abrading the cord.

If a cord must cross an aisle way, place a mat over the cord or tape the cord to the finished floor surface to minimize the potential tripping hazard.

High current equipment or appliances should be plugged directly into a wall outlet whenever possible.

All extension cords shall be plugged into one of the following:

- A GFCI outlet;
- A GFCI built into the cord;
- A GFCI adapter used between the wall outlet and cord plug.

All extension cords and or electrical cords shall be inspected daily or before each use, for breaks, plug condition and ground lugs, possible internal breaks and any other damage. If damage is found, the extension cord or electrical cord shall be removed from service and repaired or replaced.

Extension cords shall not be used on compressor skid to operate heat tapes or any other type of equipment on a temporary basis. Heat tapes or other equipment shall be hard wired per applicable electrical codes.

**Outlets**

Outlets connected to circuits with different voltages must use a design such that the attachment plugs on the circuits are not interchangeable.

**Multiple Outlet Boxes**

Multiple outlet boxes must be plugged into a wall receptacle.
Safety Procedures

- Multiple outlet boxes must not be used to provide power to microwave ovens, toasters, space heaters, hot plates, coffee pots or other high-current loads.

**Double Insulated Tools**

- Double insulated tools must have the factory label intact indicating the tool has been approved to be used without a three wire grounded supply cord connection.

- Double insulated tools must not be altered in any way, which would negate the factory rating.

**Switches, circuit breakers, and disconnects**

- All electrical equipment and tools must have an on and off switch and may not be turned on or off by plugging or unplugging the supply cord at the power outlet.

- Circuit breaker panel boxes and disconnects must be labeled with the voltage rating.

- Each breaker within a breaker panel must be labeled for the service it provides.

- Disconnect switches providing power for individual equipment must be labeled accordingly.

**Ladders**

- Only approved, non-conductive ladders, may be used when working near or with electrical equipment, which includes changing light bulbs.

- Ladders must be either constructed of wood, fiberglass or have non-conductive side rails.

**Energized and Overhead High Voltage Power Lines & Equipment**

- A minimum clearance of 10 feet from high voltage lines must be maintained when operating mobile equipment such as forklifts, cranes, winch trucks, and other similar equipment.

- When possible, power lines shall be de-energized and grounded or other protective measures shall be provided before work is started.

- Minimum approach distance to energized high power voltages lines for unqualified employees is 10 feet.

- Minimum approach distance for qualified employees shall be followed per 29 CFR 1910.333(c)(3)(i) Qualified – Table S5.

**Confined or Enclosed Work Spaces**

- When an employee works in a confined or enclosed space that contains exposed energized parts, the employee shall isolate the energy source and turn off the source and lock and tag out the energy source (Only qualified electricians can work on an exposed energy source).
■ Protective shields, protective barriers or insulating materials as necessary shall be provided.

Enclosures, Breaker Panels, and Distribution Rooms
■ A clear working space must be maintained in the front, back and on each side of all electrical enclosures and around electrical equipment for a safe operation and to permit access for maintenance and alteration.
■ Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.
■ Housekeeping in distribution rooms must receive high priority to provide a safe working and walking area in front of panels and to keep combustible materials to the minimum required to perform maintenance operations.
■ Flammable materials are strictly prohibited inside distribution rooms (boxes, rags, cleaning fluids, etc.)
■ Maintain a good level of lighting in all electrical and distribution rooms throughout the course of construction.

Lock Out/Tag Out
■ No work shall be performed on or near to exposed live parts due to the dangers of tools or other equipment coming into contact with the live parts.
■ While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.
■ Conductors and parts of electrical equipment that have been de-energized but not been locked or tagged out shall be treated as live parts.
■ Per XL Construction's policy, all electrical will be outsourced and performed by qualified and licensed electrical contractors who are familiar with the use of special precautionary techniques, PPE, insulating and shielding materials and insulated tools. Any equipment being made ready for maintenance will be locked out using XL’s Control of Hazardous Energy – Lock Out/Tag Out Program. Lockouts are performed by the qualified electrical Subcontractor or owner client representative. If live sources are to be worked on it will only be performed with the knowledge and approval of XL management and client. Only certified electricians may work on electric circuit parts or equipment.
■ Only authorized personnel may perform lock out/tag out work on electrical equipment and will follow XL's Control of Hazardous Energy – Lock out/Tag Out Program.
■ Authorized personnel will be trained in lock out/tag out procedures.
Safety Procedures

- Affected personnel will be notified when lock out/tag out activities are being performed in their work area.

**Contractors**

- Only approved, certified, electrical contractors may perform electrical construction or service work on XL Construction or client property.
- It is the Manager/Supervisor’s responsibility to verify the Contractor’s certification.

**Fire Extinguishers**

- Approved fire extinguishers must be provided near electrical breaker panels and distribution centers.
- Water type extinguishers shall not be located closer than 50 feet from electrical equipment.

**Electric Shock-CPR**

- If someone is discovered that has received an electric shock and is unconscious, first check to see if their body is in contact with an electrical circuit. Do not touch a person until you are sure there is no contact with an electrical circuit.
- When it is safe to make contact with the victim, begin CPR if the person’s heart has stopped or they are not breathing.
- Call for help immediately.

**Electric Welders**

- A disconnecting means shall be provided in the supply circuit for each motor-generator arc welder, and for each AC transformer and DC rectifier arc welder which is not equipped with a disconnect mounted as an integral part of the welder.
- A switch or circuit breaker shall be provided by which each resistance welder and its control equipment can be isolated from the supply circuit. The ampere rating of this disconnecting means may not be less than the supply conductor ampacity.

**Equipment Grounding**

- All gas compressors, air compressors, separators, vessels, etc. shall be grounded by means of using a lug and ground strap, nominal in size to a ½” bolt or larger, attached to a ground rod six feet or longer.
- Equipment bonding jumpers shall be of copper or other corrosion-resistance material.
- The transfer of hazardous or flammable material from a metal or plastic container with a flash point of 100 degrees F or less shall have a ground strap from the container and attached to the skid or a ground rod placed in the ground.
Training

All regular full time and temporary employees will be trained in Electrical Safety utilizing the XL Electrical Safety Training course or an approved equivalent.

Employees who face a risk of electric shock, but who are not qualified persons, shall be trained and familiar with electrically related safety practices.

Employee shall be trained in safety related work practices that pertain to their respective job assignments.

Employees shall be trained on clearance distances.

Safe work practices shall be employed to prevent electric shock or other injuries resulting for either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized.
Assured Grounding Program

Purpose
The purpose of this program is to provide requirements to eliminate all injuries resulting from possible malfunctions, improper grounding and/or defective electrical tools. This program covers XL employees and Subcontractors and shall be used on all XL jobsites.

Definitions
Competent Person - one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

Ground Fault Circuit Interrupter - a device for the protection of personnel that functions to de-energize a circuit or portion thereof within an established period of time when a current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.

Responsibilities
Supervisors are designated as competent persons for the Assured Equipment Grounding Conductor Program and are responsible for implementation.

Employees are responsible for following the requirements of this program, to perform visual inspections and to take defective equipment out of service.

Procedure

Assured Grounding
OSHA requires that employers shall use either ground fault circuit interrupters (GFCI) or assured equipment grounding conductor program to protect personnel from electrical shock while working.

- XL Construction shall use ground fault circuit interrupters (GFCI) in lieu of an assured grounding program.

Ground Fault Circuit Interrupters
All 120-volt, single-phase 15 and 20 ampere receptacle outlets used on construction sites shall have approved ground fault circuit interrupters for personnel protection. This can be accomplished by using temporary power boxes that have GFCIs built in, or by using a pigtail with a portable GFCI as the first device plugged into an outlet that is a permanent part of the structure.

- All hand portable electric tools and extension cords shall use a GFCI.
- GFCIs must be used on all 120 volt, single-phase 15 amp and 20 amp receptacles within 6 feet of a sink, damp areas or on installed outdoor equipment.
- The GFCI must be tested before each use.
- Approved GFCIs shall be used for 240-Volt circuits in the same service as described above.
Lock Out/Tag Out

Purpose

The purpose of this program is to establish procedures for affixing appropriate lock out/tag out equipment to energy isolating devices and to otherwise disable machines or equipment to prevent unexpected energization, start up or release of stored energy to prevent injury or incident.

Scope

This program covers the servicing and maintenance of machines and equipment where the unexpected energization or start up of the machine or equipment, or the release of stored energy could cause an incident. This program establishes minimum performance requirements for the control of such hazardous energy. This document covers XL Construction employees and Subcontractors and shall be used on all XL jobsites.

Definitions

Affected employee - An employee whose job requires them to operate or use a machine or equipment on which servicing and maintenance is being performed under lock out/tag out, or whose job requires the employee to work in an area in which such servicing or maintenance is being performed.

Authorized employee - A person that performs lock out/tag out procedures on machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes authorized when that employee’s duties include performing servicing or maintenance covered under this program.

Capable of being locked out - An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild or replace the energy-isolating device or permanently alter its energy control capability.

Energized - Connected to an energy source or containing residual or stored energy.

Energy isolating device - A mechanical device that physically prevents the transmission or release of energy including, but not limited to, the following:

- A manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors and no pole can be operated independently, a line valve, a block and any similar device used to block or isolate energy.

- Push buttons, selector switches and other control circuit type devices are not isolating devices.
Energy source - Any source of gas, electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy sources.

Hot tap - A procedure used in the repair, maintenance and service activities that involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or other appurtenances (note: 1910.147 (2) (iii) [B] [1] [2] [3]).

Lockout - The placement of a lockout device on an energy-isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device - A device that utilizes a positive means, such as either a key or combination type lock, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Normal operation - The utilization of a machine or equipment to perform its intended operation.

Servicing and/or maintenance - Workplace activities such as constructing, setting up, adjusting, inspecting, modifying and maintaining and/or servicing machines and equipment, where the employee may be exposed to an unexpected energization or startup of the equipment or release of a hazardous energy source.

Setting up - Any work performed to prepare a machine or equipment for performing its normal operation.

Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until tagout device is removed.

Key Responsibilities

Superintendents, Foremen and Warehouse Manager

- Responsible to enforce this plan and to see that all their employees and Subcontractors that are affected by lockout/tagout procedures, have the knowledge and understanding required for safe application, usage, and removal of all energy controls and devices.

- Ensure employees are trained and comply with the requirements of this program.
Employees
- Employees who are affected by this program are required to attend training on an annual basis.
- Are required to follow the provisions of this program.

Procedure

General
Only an authorized employee or qualified employees performing the servicing or maintenance shall perform lock out or tag out.

Devices
Lock out Device - If an energy source can be locked out a device that utilizes a lock to hold an energy-isolating device in a safe position shall be used. Each site shall have the same type of lock as specified by XL Construction.

Tag out Device – If an energy source cannot be locked out with a lock out device then a tag out device shall be used. Tag out devices are a warning only level of protection and shall be weather and chemical resistant, standardized in color with clear written warning of hazardous energy; i.e. Do Not Operate, Do Not Start, Do Not Energize, etc. Each site shall have the same style of tags specified by XL Construction.

Specific Energy Control Procedures
Each Manager or Supervisor is responsible for developing specific step-by-step shutdown and startup procedures for a particular machine or piece of equipment in their respective area.

- A written, step-by-step isolation procedure for shutdown and startup shall be prepared for each type of machine or piece of equipment.

- This procedure shall include:
  - Equipment number if assigned
  - Equipment location
  - Energy Source(s) (i.e. electrical, hydraulic, gas pressure, etc.)
  - Location of isolating controls (i.e. breaker switches, valves, etc.)
  - Quantity of isolating controls
  - Quantity of locks required to isolate the equipment
  - Other hardware required to isolate the equipment (i.e. chains, valve covers, blocks, etc.)
  - List any residual energy required to be dissipated before work begins
Specific Sequence for Application of Energy Control

1. Notification

   Authorized employees must notify all other affected employees of the application and removal of lock out/tag out devices. Notification shall be given before the controls are applied and before they are removed from the machine or equipment.

2. Preparation for Shutdown

   Before an authorized or affected employee shuts down a machine or equipment, the authorized employee shall have the knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means (locks) to control the energy sources.

3. Machine or Equipment Shutdown

   The machine or equipment shall be shut down using the procedures established for that machine or piece of equipment. The shutdown shall be orderly to avoid any addition hazards to employees as a result of the stoppage.

4. Machine or Equipment Isolation

   All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).
Equipment Isolation Steps

Go to https://www.insidexl.net/document/SAFETY_FORM_211v1

EQUIPMENT ISOLATION STEPS

Department: ______________________________________________________________________

Equipment No  _____________________________________________________________________

Energy Sources: _____________________________________________________________________

Procedure for Shutdown and Isolation

List the steps in order, required to isolate machine or equipment

1. ________________________________________________________________________________

2. ________________________________________________________________________________

3. ________________________________________________________________________________

4. ________________________________________________________________________________

5. ________________________________________________________________________________

6. ________________________________________________________________________________

7. ________________________________________________________________________________

8. ________________________________________________________________________________

9. ________________________________________________________________________________

10. _______________________________________________________________________________

ADDITIONAL INFORMATION:

NOTE: This procedure is to be communicated to all authorized and affected employees and kept on file at location of machine or equipment.
# Isolation Log

Goto [https://www.insidexl.net/document/SAFETY_FORM_212v1](https://www.insidexl.net/document/SAFETY_FORM_212v1)

---

**ISOLATION LOG**

Date of Isolation: ___________________

Description of Work: ______________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

List Equipment out of Service __________________________

Necessary Requirements of Clear Isolation: __________________

Authorized Employee Signature: __________________________

Person Continuing Work Signature: _________________________

<table>
<thead>
<tr>
<th>Locks/Tags for GROUP LOCKOUT or Multiple Locks / Tags</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lock# or Tag</strong></td>
</tr>
<tr>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** If additional space is needed, please attached an additional page.
5. Lock out/Tag out Devices and Application

- Each authorized employee shall have the proper number of locks and devices to be able to perform proper lock out/tag out procedures for machines or equipment that they may be working on.

- Lock out or tag out devices shall be affixed to each energy-isolating device by authorized employees.

- Each lock out and tag out devices shall include the name of the individual placing the device.

- Lock out devices shall be affixed in a manner to hold the energy isolating devices in a safe or off position.

- Tag out devices shall be affixed in a manner that will clearly indicate that the operation or movement of isolating devices from the safe or off position.

- Tag out devices used with energy isolating devices with the capability of being locked out shall be fastened at the same point at which the lock would have been attached. If a tag cannot be directly attached to the energy isolation device it shall be located as close as safely as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.

- Each energy source shall be locked out completely isolating the equipment.

- Isolating machines or equipment shall include, but are not limited to: Pumps, compressors, generators, electric distribution, storage tanks, etc.

- Each type of equipment to be isolated shall have specific procedures for isolation, i.e. for compressors: suction, discharge, power, starting, fuel, dumps shall be closed, locked and tagged out properly. The blow-down valve shall be opened, locked and tagged out properly. (NOTE): If compressor has a side stream hooked up, the side stream shall be closed, locked and tagged out properly.

6. Stored Energy and the Possibility of Reaccumulation

Following the application of lock out or tag out devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained and otherwise rendered safe.

If there is a possibility of re-accumulation of stored energy, verification of isolation shall be continued until the servicing or maintenance operation is completed, or until the possibility of such accumulation no longer exists.
7. Verification of Isolation

The authorized employees performing the lockout procedure verifies/ensures that the equipment is isolated or disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the machine or equipment by operating the control(s) or by testing to make certain the equipment will not operate.

Multiple Workers

A crew of authorized employees may use a group lock out or tag out device.

- A tailgate meeting shall be conducted to review the lockout procedures and other information as required for safe work to continue.
- An authorized employee will isolate the equipment.
- All workers will then place their locks on the device's group lock out or tag out device after they have verified the procedure.
- The crew leader or an assigned authorized employee shall be responsible of assuring the integrity of the lockout procedures including documenting lockout information passed along during a shift change.

Release from Lock out/Tag out

When servicing or maintenance is completed or when Lock out / Tag out devices must be temporarily removed, the equipment requires testing and the machine or equipment is ready for testing or to return to normal operating conditions, the following steps shall be taken, in this order:

1. Check the machine or equipment and the immediate area surrounding the machine or equipment to ensure that all nonessential items such as tools have been removed and that the machine or equipment components are operationally intact.
2. Check the work area to ensure that all personnel have been safely positioned or removed from the area.
3. Remove the Lock out/Tag out device.
4. Energize and proceed with testing.
5. Deenergize and reapply control methods including Lock out / Tag out devices.
6. Document the procedure by use of the completed isolation log and provide to Supervisor for filing.
Removal of Locks

The authorized employee who applied the lock shall be the one to remove their lock. However, after all work has been completed, certain conditions may arise which prohibit this person from being present to remove the lock.

The following procedures shall be followed to allow for the removal of a lock that another person has applied:

- Every effort shall be made to contact the authorized employee who applied the lock to obtain the key(s).

- If the key(s) cannot be made available, the employee who requests removal of the lock shall contact their Supervisor.

- The Supervisor shall verify that every effort was made to contact the original authorized employee who applied the lock and to obtain the key(s).

- The employee removing the lock shall note on the Service Report that the lock(s) were removed with permission by Supervisor.

- All reasonable efforts will be made by Supervisor to notify that employee their lock has been removed, ensuring that the authorized employee has this knowledge before they return to work.

- If the equipment is client owned, the Supervisor or employee requesting to remove the lock(s) shall contact the client to get the lock removed. Clients must remove their lock(s).

Note: XL employees shall not remove any client locks.

Shift or Personnel Changes

In the event shift or personnel changes occur during maintenance and/or repair activities, the designated XL employee in charge shall take the necessary steps to maintain the continuity of the lock out/tag out protection. This includes maintaining that all provisions in this procedure are adhered to and the transfer of lock out/tag out devices between authorized employees is accomplished.

Subcontractors

Subcontractors performing lockout procedures on XL property shall comply with this procedure. Subcontractors shall supply their own locks.

XL shall initially lockout XL machines and equipment before the subcontractor will be allowed to apply their own lock in addition to the XL’s.
**Annual Audits**

Each year the Manager or Supervisor, or his representative, will perform an inspection of the Lockout Program in their respective areas to verify the effectiveness of the program. An authorized employee other than the one(s) utilizing the energy control procedure being inspected shall perform the audit and shall verify that:

- Each authorized and/or affected employee has been trained, as required.
- Any new equipment added has specific lockout procedures developed and documented.
- Current procedures are adequate for performing complete isolation of equipment and resulting in a zero energy state.
- The annual audit will be certified in writing and a copy of the audit maintained on file at the Managers/Supervisor’s office.
Annual Audit of the Control of Hazardous Energy Program

Go to https://www.insidexl.net/document/SAFETY_FORM_213v1

ANNUAL AUDIT OF THE CONTROL OF HAZARDOUS ENERGY PROGRAM

I certify that an audit of the XL Construction “Control of Hazardous Energy” Program was conducted and that each employee has been trained in the recognition and procedures to lockout equipment they may be required to work on or may be affected by.

I further acknowledge that the current procedure is adequate to safely lockout equipment in this department for servicing and maintenance.

Department: 

Manager (or Representative): 

Date: 

Original to File:
Training

XL Construction shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees. The training shall include the following:

- The recognition of applicable hazardous energy (lock out/tagout) sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
- The purpose and use of energy control procedures.
- When tag out systems are used, employees shall also be trained in the following limitations of tags:
  - Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
  - When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.
  - Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
  - Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
  - Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
  - Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.
Retraining

Retraining shall be conducted whenever a periodic inspection reveals, or whenever XL has reason to believe that there are deviations from or inadequacies in the employee’s knowledge or use of the energy control procedures.

The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

Training Documentation

XL shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee’s name and dates of training.
Energized Electrical Work Policy

Definition

Energized electrical work includes working on or near any energized electrical system, whether alternating or direct current, including, but not limited to, service entrance sections, distribution switch gear, transformers, distribution panels, UPS Systems and branch circuit wiring and may include, but not limited to:

- Voltage Testing
- Circuit Testing
- Trouble Shooting
- Power Switching
- De-energizing and Re-energizing Procedures
- Pushing fish tapes or pushing/pulling wire into an energized enclosure
- Work performed on energized enclosures
- Excavations near electrical lines

Training

XL Construction does not perform any electrical work, as we are not qualified to do this type of work, this type of work is only performed by qualified professional electrical Subcontractors. All employees who face the risk of electric shock but who are not qualified persons shall be trained and familiar with electrically related safety practices. Employees shall be trained in safety as it relates to their respective job assignment, and shall be trained to understand and observe the proper clearance distances. Safe work practices (as described below) shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is being performed near or on equipment or circuits, which are or may be energized.

GFCI’s

Ground Fault Circuit Interrupters shall be used on ALL XL jobsites when using any power tools and extension cords of any kind, this includes temporary power boxes without exception.

Justification for Work

Live parts to which an employee might be exposed shall be put into an electrically safe condition before an employee works on or near them, unless the employer can demonstrate that de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. Energized parts that
operate at less than 50volts to ground shall not be required to be de-energized if there will be no increased exposure to electrical burns or to explosion due to arcs.

Examples of increased or additional hazards include, but not limited to:

- Interruption of life support equipment
- Deactivation of emergency alarm systems
- Shutdown of hazardous location ventilation equipment

Policy

Work on energized electrical panels, switchgear, transformers, battery systems of any kind, etc. is prohibited without the expressed permission of the XL Construction Project Superintendent, General Superintendent assigned to the project, in conjunction with XL’s Health and Safety Director.

Hazard / Risk Analysis

The following information is based from the NFPA 70E Standard for Electrical Safety in the Workplace:

1. Hazard/ Risk Analysis must be performed (Chart 7-3). Review Hazard/ Risk Analysis Flow Chart (Based on approach distances) to determine what work class will be performed:
   - Electrically non hazardous
   - Limited
   - Diagnostic
   - Restricted
   - Prohibited

2. Once a work class has been assessed, the following will be determined utilizing the Hazard/ Risk Category Selection Chart:
   - Hazard/Risk Category 0-4
   - What level of protective clothing and equipment are required
   - Whether or not Voltage Rated Gloves are required
   - Whether or not Voltage Rated Tools are required
   - Whether or not an XL Construction Energized Electrical Hot Work Permit will be required
Permit Requirements

An XL Construction Energized Electrical Hot Work Permit must be obtained from the Superintendent in charge of the project.

The XL Construction permit will need to be approved with signatures by the following personnel:

- The Project Superintendent
- XL Health and Safety Director
- XL Construction General Superintendent
- Subcontractor Superintendent
- Client Representative

A permit is required when work has been classified as prohibited or restricted.
### Energized Electrical Work Permit

**Part 1 - Work Request**

(To be completed by the person requesting the permit)

<table>
<thead>
<tr>
<th>Site:</th>
<th>Area:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Work order/Project#:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Planned Start Date:</th>
<th>Time:</th>
<th>Duration:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description of the work to be done:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Work Classification:</th>
<th>Prohibited</th>
<th>Restricted</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The following equipment was requested to be shut down:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Until work is complete</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requested by:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
</table>

---

(Page 1 of 3)
Energized Electrical Work Permit

Part 2-Justification for Request
(To be completed by the electrically qualified persons doing the work)

| Detailed job description procedure to be used in performing the above described work: |
| Description of the safe work practices to be employed: |
| Results of the shock hazard analysis: |
| Determination of shock protection boundaries: |
| Results of the flash hazard analysis |
| Determination of the flash protection boundary: |
| Necessary personal protective equipment to safely perform the assigned task: |
| Means employed to restrict the access of unqualified persons from the work area: |
| Evidence of completion of a job briefing, including discussion of any job-specific task: |

Do you agree that the work described above can be done safely? □ Yes □ No

| Signature, Electrically Qualified Person | Date |
| Signature, Electrically Qualified Person | Date |
Energized Electrical Work Permit

Part 3-Approval to Perform the Work While Electrically Energized

(To be completed by Client Representative)

<table>
<thead>
<tr>
<th>Reason for live work request:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The next available date for shutdown is:</td>
</tr>
<tr>
<td>I deny the request for shutdown and authorize the live work to be done.</td>
</tr>
<tr>
<td>Signature, Operation Manager</td>
</tr>
<tr>
<td>Live work on this equipment is:  □ Approved  □ Not Approved</td>
</tr>
<tr>
<td>Signature, Client Project Manager</td>
</tr>
<tr>
<td>Signature, XL Safety Director</td>
</tr>
<tr>
<td>Signature, General Superintendent</td>
</tr>
<tr>
<td>Signature, Maintenance/Engineering Manager</td>
</tr>
<tr>
<td>Signature, Electrically Knowledgeable Person</td>
</tr>
</tbody>
</table>

(Page 3 of 3)
Safety Inspections

Cal-OSHA Permit Requirement

Whenever possible, the preferred method of applying for and obtaining OSHA Permits is to contact XL's Health and Safety Director, however in the event that you have to apply for an OSHA Permit on your own this procedure has been written to walk you through the necessary steps and requirements you will need to follow in order to obtain an OSHA Permit. XL is not required to hold any Annual OSHA Permits for any activities, however XL is required to apply for a site specific Construction Activity Permit whenever the scope of work includes the activities shown in paragraph one below.

1. **When is XL required to pull a Cal-OSHA Construction Activity Permit?**

   A Construction Activity Permit is required for the following:

   A. Construction of any new building, structure, scaffolding or false-work more than three stories high or the equivalent height (36 feet) or higher.

   B. Demolition of any building or structure, or dismantling of scaffolding or false-work more than three stories high or the equivalent height (36 feet) or higher.

   C. Construction of trenches or excavations which are five feet or more deep and into which a person is required to descend. XL would not be required to pull this type of permit unless there will be self performing of the trenching and excavation scope of work, otherwise the Subcontractor would be responsible for this specific permit notification. (XL is responsible to verify that the Subcontractor has pulled the required permits and has a copy of the permits available onsite upon request from an OSHA Inspector.)

   **Note:** Contractors who perform their work by using scaffolding constructed by another contractor are NOT required to obtain an activity permit for the construction of scaffolding. However, if their work involves the construction of a building or structure, they are required to obtain an activity permit for this construction.

2. **When are XL’s Subcontractors required to pull an OSHA Permit?**

   A. All scaffold and excavation Subcontractors are required to hold an Annual OSHA Permit for the activities listed below. In addition they are required to pull a site specific Activity Notification Permit. While XL is not responsible to pull these permits, it must be verified that the Subcontractors have pulled their required permits and that they are available on the jobsite upon request by an OSHA inspector.

   B. Erection or dismantling of vertical shoring systems more than three stories high, or the equivalent height (36 feet) or higher.
C. Construction of trenches or excavations which are five feet or more deep and into which a person is required to descend.

D. Demolition of any building or structure, or dismantling of scaffolding or false-work more than three stories high or the equivalent height (36 feet) or higher.

3. What OSHA standards apply?

Direct links to Cal-OSHA application forms & standards referenced are highlighted in blue)

**Title 8, California Code of Regulations, Chapter 4, Subchapter 4**

4. What’s required to pull an OSHA permit?

The following is required to pull an OSHA Permit:

A. Schedule a safety permit conference appointment with the nearest Cal/OSHA district office. Schedule the appointment 5-7 days in advance. Permits are typically issued at the conclusion of the permit conference (unless unforeseen circumstances are flushed out during the conference).

B. The safety permit conference shall be attended by the permit applicant (typically the company Health and Safety Director, General Superintendent or the Project Superintendent) who must be knowledgeable about and in a position of authority and responsibility with respect to the permitted activity.

C. The potential safety and health risk of the activity shall be discussed and the contractor shall identify specific measures to be taken to minimize these risks to employees. Be prepared to discuss the details of the site specific Fall Protection methods you intend to use, Steel erection methods, including the type and capacity of crane to be used, heaviest anticipated load to be hoisted and proper rigging procedures, as well as your job site proximity to nearest overhead power lines (if applicable in your area).

D. Details of the activity shall be reviewed along with Title 8 Safety Orders applicable to the activity in which the permit applicant will engage.

E. The permit applicant shall provide enough detail about the construction activity to allow the district office to make a reliable determination that the activity will proceed safely. Be prepared to discuss the routing and locating of underground utilities, as well as the access and egress path of travel for emergency response purposes. (Keep in mind that any building or structure 60 feet in height or higher is required to have a man lift for hoisting employees).

F. In order for Cal-OSHA to make this determination, the applicant shall provide the following for evaluation and review:

(Direct links to Cal-OSHA application forms highlighted in blue)
5. **What are the costs of pulling an OSHA permit?**

Construction Activity Permit fee = $50.00. An activity permit may be issued to a single contractor for any one or a combination of the following activities.

*NOTE:* It’s imperative that we verify the Cal-OSHA permit requirements prior to starting any construction or demolition on any of our projects (Permit requirements are shown in section one and two of this procedure). If we overlook this critical requirement we can be subject to an OSHA Citation. Also, remember that once you have received your OSHA Permit there is a much greater chance that you may also receive an OSHA inspection, as OSHA is now aware of your specific project location and details of the project. Please contact the Safety Department directly if you have any questions or concerns regarding the OSHA Permit Process.
Daily Job Hazard Analysis (JHA)

Purpose

It is imperative to continuously improve safety awareness on every task to be performed, and to provide for a safer work environment. The following program is not a new procedure; it is simply a way to write down your discussions that already take place on your jobsites prior to starting a specific task. Utilize the Daily Job Hazard Analysis Form during the pre-planning with each crew on your jobsite.

Prior to the start of work each day, every Foreman or Superintendent shall meet with all members of their crew to identify, evaluate, discuss and/or revisit each task they will be performing during that day. The purpose of this meeting shall be to identify and analyze what safety hazards and danger zones exist in the performance of each task. Once the safety hazards and danger zones have been analyzed, the Foreman/Superintendent and the crew will recommend what safe work procedures will need to be implemented.

There will obviously be times when the task being performed will be the same from day-to-day, but because members of a Crew could change, previously unknown, unsafe conditions become apparent, the weather changes, etc., it shall still be necessary for the Daily Job Hazard Analysis to performed at the start of each day, or anytime there is a change in the task or activity being performed throughout the work day.

The attached Job Hazard Analysis Meeting Form shall be completed daily by the Crew Foreman in a legible manner, and added into the Jobsite Safety Records Binder. The form will be available on-site for review by XL’s Project Superintendent, Safety Engineers and Health and Safety Director upon request.

Instruction for Use of the JHA Form

- This form can be completed electronically or hand written, these forms are typically completed by a Project Superintendent, Foreman, or Leadman, although they can also be completed by a tradesman.

- Begin by completing the jobsite information:
  1. Project Name and Number
  2. Work Activity
  3. Foreman who will be completing the Analysis
  4. Location of Work i.e. Building # to include floor level

- The next steps to complete will describe the following:
  1. Basic Job Steps
  2. Safety Concerns/ Potential Hazards
3. **Required Personal Protective Equipment**

4. **Recommended Action or Safety Procedures**

5. The Foreman will discuss the required actions with the crew(s) as they relate to the specific tasks identified on the JHA form.

6. All personnel involved with the specific tasks discussed must sign the acknowledgement log located on the bottom of the JHA form.

7. Post a copy of JHA at location of work, as well as in the Jobsite Safety Records binder.

**TIPS:** Keep it simple. Think of the greatest risk, safety hazard or hazard potential, i.e. fall, Electrical and Chemical Exposures. Keep all JHAs in a binder or in a protective sleeve if it is posted in the field.
# Job Hazard Analysis Worksheet

Go to [https://www.insidexl.net/document/SAFETY_FORM_214v1](https://www.insidexl.net/document/SAFETY_FORM_214v1)

![XLC Logo]

## JOB HAZARD ANALYSIS

<table>
<thead>
<tr>
<th>Subcontractor:</th>
<th>Prepared By:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date:</td>
</tr>
<tr>
<td></td>
<td>Revised:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Craft(s):</th>
<th>Scheduled Start Date:</th>
<th>Reviewed By:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date:</td>
<td>Date:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Describe Task:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location on site where task to be performed:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required PPE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Permits:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Operation</th>
<th>Potential Accidents/ Hazards</th>
<th>Safe Job Actions Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rev. 9/09
Near Miss Policy

Purpose

Accidents by their nature are ALWAYS preventable, in an effort to heighten hazard awareness and encourage the reporting of unsafe conditions XL has developed a Near Miss Program as a means of documenting the Near Misses that occur and which are quite often dismissed or overlooked.

Remember: The only difference between a “Near Miss” and an “Accident or Injury” is simply “Pure Luck”.

Description

A Near Miss Hazard Report will be used by XL Construction Personnel and XL Construction Subcontractors to report a “Near Miss” or “Hazard” that was witnessed and “followed through” with a correction by the reporting individual(s).

To “follow through“ with a correction, the individual(s) that witnessed the Near Miss or Hazard must complete the information on the form and turn it into their Supervisor and XL Construction immediately. At this time, the XL Supervisor will assess the situation and verify that the proper corrections have been made.

To recognize the individual(s), a Safety Recognition Prize will be awarded as determined by XL’s Project Management
Near Miss Hazard Report

Go to https://www.insidexl.net/document/SAFETY_FORM_215v1

<table>
<thead>
<tr>
<th>Date:  _________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name:</td>
</tr>
<tr>
<td>Superintendent:</td>
</tr>
<tr>
<td>Companies Involved:</td>
</tr>
<tr>
<td>Report By:</td>
</tr>
<tr>
<td>Type of Hazard:</td>
</tr>
</tbody>
</table>

Brief Details:

Action taken by you, your Foreman or XL's Safety Coordinator:

Follow up action taken by XL Construction:

Once completed, this form must be forwarded to the Subcontractor's Supervisor and then on to XL Construction for follow up action.
Cal-OSHA Jobsite Inspections

What do I do if an OSHA Compliance Officer shows up on my jobsite to perform an inspection?

In the event an OSHA Compliance Officer appears on your jobsite for an inspection, the following procedures shall be followed:

Don’t Admit Guilt To Any Allegations Made During The Inspection.

1. Welcome the Inspector and determine if the inspection is the result of a complaint or a general inspection. Make sure someone on your jobsite contacts XL's Health and Safety Director and one of the General Superintendents immediately to assist with a conference call to initiate the opening conference prior to the inspection.

2. If the inspection is a result of a complaint, request a copy of the complaint. If the inspection is in response to a complaint, the inspection should be limited to the complaint only. Obtain the Inspector’s name, badge # and contact phone number prior to walking the jobsite inspection.

3. Encourage the Inspector to visit your jobsite trailer to review XL's IIPP, Safety Program Manual, Site-specific Safety Records and all Safety information pertinent to your specific jobsite (Explain that you are waiting for XL's Safety Director to arrive to meet the Inspector before you start the actual site inspection). This will allow for time for a member of XL's Safety Department or one of the General Superintendents to arrive at the jobsite.

4. If a video camera is going to be used, advise the Inspector that due to non-disclosure agreements currently in place with our clients, XL's policy is not to allow Inspectors to use video cameras unless a search warrant provides for their use.

5. Communicate via Nextel radio or other means (outside of the Inspector’s presence) to all Project Site Foreman (XL and Subs) that an OSHA Compliance Inspector is onsite.

6. If you are on a remote jobsite and time will not allow for XL's Health and Safety Director and one of the General Superintendents to assist with the inspection, then XL's Project Superintendent and Jobsite Safety Coordinator (if applicable) must accompany the Inspector on the inspection of the jobsite. Be sure to take detailed notes and pictures of the same items the Inspector photographs during the inspection. Be cooperative with the Inspector at ALL times.

7. Remember that generally, a Compliance Officer will be less likely to “nit-pick” if they have the full cooperation of the Project Staff.

8. Reassure the Inspector that any request for information they make during the inspection will be followed up on and submitted to OSHA by XL's Health and Safety Director if requested. In addition, if the Inspector points out any minor issues that can
be easily addressed, have them taken care of immediately while the Inspector is still onsite.

9. Make sure that upon completion of inspection that a request is made for a formal closing conference onsite. The XL Health and Safety Director and General Superintendent should be included in a conference call for this meeting if they are not able to be present for the inspection. This conference will formally conclude the inspection with a written document of the OSHA Inspector’s initial findings.

**NOTE:** Don’t Admit Guilt To Any Allegations Made During The Inspection. XL’s Health and Safety Director will provide direction on how to proceed in responding to the OSHA inspection
Project Hazards

Cal-OSHA Heat Illness Prevention

Heat Illness is a broad term that encompasses different adverse physical symptoms related to elevated environmental temperatures. More specifically, heat illness includes both heat exhaustion and/or heat stroke. Or, any symptoms displayed by an employee that may precede the onset of heat exhaustion or heat stroke. Personal factors, such as age, weight, level of fitness, medical condition, use of medications and alcohol, as well as acclimatization all affect how well the body deal with excess heat. Outdoor construction activities fall within OSHA's new standard. All XL Construction projects that include outdoor work need to implement the physical components of this standard.

Jobsites with workers exposed to heat illness need to do the following:

1. Recognize the hazard:

   There is no cut-off below which working in heat is not a risk. With heavy work at high relative humidity or if workers are wearing protective clothing, even working at 70°F can present risk. In the relatively low humidity levels often found in the hot areas of California many employers (20-40%) need to take some actions to effectively reduce heat illness risk when temperatures approach 80°F. At temperatures above 90°, especially with heavy work, heat risk reduction needs to be a major concern. It is especially important to be extra vigilant during periods of abnormally high heat. People need time for their bodies to adjust to working in heat. This “acclimatization” is particularly important for employees returning to work after a long period of absence or working in the beginning stages of a heat wave. Whenever possible, work shifts should be scheduled for earlier starting times to help mitigate the contributing factors of heat illness.

2. Water:

   Provide a suitable amount of drinking water for XL employees. This means that enough drinking water must be availed to supply each employee with no less than (1) quart per hour during the work shift. A simple example shows that for ten employees, working an (8) hour shift, the project must supply (20) gallons of water per day, or (8) hours * (10) employees * (.25) gallons = (20) gallons. Note: Not all 20 gallons need to be available at once as long as no less than (1) quart per employee is available each hour. Most of our job trailers have bottled drinking water, but is it enough? Water supplies may be supplemented by placing a large drinking water container in the tool tote, or other shaded location. In both cases, disposable drinking cups must be provided. Contact the XL shop to order water containers, & disposable cups, remember you will also need a small trash can to dispose of used cups, and consider buying a block of ice to help maintain cool drinking water.
3. Shade:

Jobsites with outdoor work activities must provide an area with shade for employees to take normal breaks, or rest breaks due to the possible onset of heat related symptoms. In many cases, the job trailer should meet this requirement, however with larger projects, the trailers primary function as an office and meeting facility may be compromised if employees rely on this location to “get out of the heat“. Other means of providing shade under the standard would include the designation of shaded rest area that may be availed from an existing structure on the project or an awning type temporary canopy. Contact the XL Shop to order a temporary type canopy if needed. Shade required to be available when the temperature does not exceed 85 degrees. fahrenheit and must be available upon employees request.

4. Recognize the Symptoms:

Common early symptoms and signs of heat illness include headache, musclecramps, and unusual fatigue.

When an employee displays possible signs or symptoms of heat illness, a trained first aid worker or supervisor will check the sick employee and determine whether resting in the shade and drinking cool water will suffice or if emergency service providers will need to be called. Do not leave a sick worker alone in the shade, as he or can take a turn for the worse.

Call emergency service providers (911) immediately if an employee displays signs or symptoms of possible heat stroke (loss of consciousness, incoherent speech, convulsions, red and hot face), does not look OK or does not get better after drinking cool water and resting in the shade. While the ambulance is in route, initiate first aid (cool the worker: place in the shade, remove excess layers of clothing, place ice pack in the armpits and groin area and fan the victim.

Regardless of workers protests, no employee with any of the symptoms of possible heat illness described above should be left unattended, or allowed to drive themselves home or to seek medical care without prior a medical assessment and authorization.

Please refer to Project Specific Safety Plan for Emergency Response Instruction. All personnel must review this plan prior to commencing work activities.

5. Weather Monitoring:

Prior to each workday, the Project Superintendent will review the forecasted temperature and humidity for the worksite and compare it against the National Weather service Heat Index to evaluate the risk level for heat illness, for instance whether or not workers will be exposed at a temperature and humidity characterized as either “extreme caution” or “extreme danger” for heat illnesses such as heat stroke. It is important to keep in mind that the temperature at which these warnings occur
must be lowered as much as 15 degrees if the workers under consideration are in direct sunlight.

Prior to each workday, the Project Superintendent will be responsible for monitoring the weather (using www.nws.noaa.gov or with the aid of a simple thermometer) at the worksite. This critical weather information will be taken into consideration, to determine when it will be necessary to make modifications to the work schedule (such as stopping work early, rescheduling the job, working at night or during the cooler hours of the day, increasing the number of water and rest breaks).

The Project Superintendent will be responsible for using a thermometer at the jobsite and checking the temperature every 60 minutes to monitor for sudden increases in temperature, to ensure that once the temperature exceeds 85 degrees Fahrenheit, the shade structures are opened and accessible to the workers and to make certain that once the temperature equals or exceeds 95 degrees Fahrenheit additional preventive measures such as the High Heat Procedures are implemented.

Procedures for Monitoring the Weather include but are not limited to:

2 weeks in advance (or with as many days in advance as possible), the Project Superintendent will go on the internet (www.nws.noaa.gov), call the National Weather Service Phone Numbers (see CA numbers below) or check the Weather Channel TV Network to view the extended weather forecast in order to plan in advance the work schedule, know whether a heat wave is expected and if additional schedule modifications will be necessary. This type of advance planning should take place all summer long

   CALIFORNIA Dial-A-Forecast
   Los Angeles 805-988-6610(#1)
   Sacramento 916-979-3051
   San Francisco 831-656-1725(#1)

6. High Heat Procedures:

XL construction shall implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

- Ensure effective communication by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.

- Observing employees for alertness and signs or symptoms of heat illness.

- Reminding employees throughout the work shift to drink plenty of water.
Close supervision of a new employee by a supervisor or designee for the first 14 days of the employee's employment by the employer, unless the employee indicates at the time of hire that he or she has been doing similar outdoor work for at least 10 of the past 30 days for 4 or more hours per day.

Training

Training in the following topics shall be provided to all supervisory and non-supervisory employees:

- The environmental and personal risk factors for heat illness;
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;
- The importance of acclimatization;
- The different types of heat illness and the common signs and symptoms of heat illness;
- The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;
- The XL Construction procedure for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- The XL Construction procedure for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;
- The XL Construction procedure for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in heat. Supervisors will be trained in the XL Construction heat illness emergency response procedures to prevent heat illness and procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

Communication for employees shall be in a form readily understandable by all affected employees.

XL Construction shall ensure all XL Construction employees working outdoors have been trained in heat illness prevention.
These requirements are specific to XL Construction and its employees only. Subcontractors (as employers) are also required to provide these measures to their own employees. XL Construction, as the General Contractor has the responsibility to make sure the each Subcontractor meets the required standard daily for all of his or her employees. Of course a project may elect to combine one or more of these provisions to all site personnel, as long as the standard is being met.

Each Supervisor running a project is required to hold periodic safety meetings throughout the year, and during times of high temperatures should have Heat Illness as the main topic of one of those meetings. There is further information available on heat illness safety meeting topics located on Inside XL, inside the Safety Folder and listed under 5 Minute Safety Talks.

If anyone has any questions or requires any assistance in dealing with a heat illness related issue on your jobsite, please contact the Safety Department for further assistance.
Silica Exposure Control Program

**Purpose**

The purpose of this program is to define the OSHA requirements for operating tools or equipment that may produce silica dust in order to reduce any potential silica dust exposure to XL employees.

**Scope**

This program applies to all XL Construction employees and Subcontractors who operate power tools or equipment that have the potential to produce silica-containing dust during their job duties and assignments. This document covers XL employees and Subcontractors and shall be used on all XL projects.

The following are high-risk tasks for silica exposure:

- Crushing, loading, hauling, chipping, hammering, drilling, and dumping of rock or concrete
- Chipping, hammering, drilling, sawing and grinding concrete or masonry
- Removal of paint and rust with power tools
- Abrasive blasting of pipes, tanks, and other painted surfaces while using silica sand
- Grinding mortar
- Abrasive blasting of concrete
- Demolition of concrete and masonry structures
- Dry sweeping or pressurized air-blowing of concrete or dust
- Jack-hammering on various materials

**Key Responsibilities**

**Superintendents and Foremen**

Shall ensure that each power tool or equipment operator is competent to operate their tools and equipment safely, and follow the guidelines provided below to reduce the possibility of silica exposure.

**General**

There are various recommendations to reduce exposure to respirable crystalline silica on the jobsite. The most efficient method is to perform a silica exposure evaluation and prepare a control plan. You or a member of the safety department can incorporate a plan utilizing your location, manpower and other resources to control the silica and be
cost effective. Workers can limit their exposure by being aware of and practicing the following:

- Use materials that do not contain silica when possible.
- Recognize where silica dust may be generated and plan ahead to eliminate or control the dust at the source.
- Use controls such as wet drilling, or wet sawing of silica-containing materials, to control the hazard and protect adjacent workers from exposure.
- Provide regular ongoing maintenance to dust control systems to keep them in good working order.
- Conduct air monitoring to measure worker exposure and ensure that controls are providing adequate protection for workers.
- Use adequate respiratory protection when source controls cannot keep silica exposures below the PEL.
- Post warning signs to mark the boundaries of work areas contaminated with respirable crystalline silica.
- Provide workers with training that includes information about health effects, work practices, and protective equipment for respirable crystalline silica.
- Use a respirator approved for protection against crystalline silica-containing dust (e.g. CE positive pressure abrasive blasting respirator for sandblasting).
- Change into disposable or washable work clothes at the jobsite; shower (where available) and change into clean clothing before leaving the jobsite to prevent contamination of cars, homes and other areas.
- Do not eat, drink, use tobacco products or apply cosmetics in areas where there is dust containing crystalline silica.
- Wash your hands and face before eating, drinking, smoking or applying cosmetics in areas where there is dust containing crystalline silica.

**Workers in the following occupations are at risk for developing silicosis:**

- Building construction, demolition, and repair
- Bead Blasting/Sand Blasting
- Masonry work
- Concrete finishing
- Drywall finishing
- Rock drilling
Sand and gravel screening

Rock crushing (for road base)

What is the likelihood of silica overexposure on construction worksites?
The results of studies of airborne silica on construction worksites vary. Most studies however, suggest that over-exposure occurs on more than 50% of worksites. The rule of thumb for silica exposure is “if dust containing silica is visible in the air, it is almost always over the permissible limit.”

How is OSHA addressing exposure to crystalline silica?
OSHA has an established Permissible Exposure Limit, or PEL, which is the maximum amount of crystalline silica to which workers may be exposed during an 8-hour shift (29 CFR 1926.55, 1910.1000). OSHA also requires hazard communication training for workers exposed to crystalline silica, and requires a respirator program until engineering controls are implemented.

What does OSHA require if overexposure to silica exists?
OSHA requires XL Construction to provide and assure the use of appropriate controls or crystalline silica-containing dust by following the existing OSHA standards:

1. Provide training and information to workers on crystalline silica (MSDS)
2. Provide ongoing personal air monitoring program
3. Provide personal air monitoring results to employees upon request
4. Implement Respiratory protection program

Contact the safety department if you require any assistance in developing a site specific silica exposure plan for your project or work activity.
Trenching and Excavations

Purpose

The purpose of this training program is to protect employees from safety hazards that may be encountered during work in trenches and excavations.

Definitions

Accepted engineering practices—the standards of practice required by a registered professional engineer.

Aluminum Hydraulic Shoring—a manufactured shoring system consisting of aluminum hydraulic cylinders (crossbraces) used with vertical rails (uprights) or horizontal rails (wales).

Bell-bottom pier hole—a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

Benching (Benching system)—a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or more horizontal steps, usually with vertical or near-vertical surfaces between levels.

Cave-in—the movement of soil or rock into an excavation, or the loss of soil from under a trench shield or support system, in amounts large enough to trap, bury, or injure and immobilize a person.

Cross braces—the horizontal members of a shoring system installed from side to side of the excavation. The cross braces bear against either uprights or wales.

Excavation—any man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.

Faces or sides—the vertical or inclined earth surfaces formed as a result of excavation work.

Failure—the movement or damage of a structural member or connection that makes it unable to support loads.

Hazardous atmosphere—an atmosphere that is explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, which may cause death, illness or injury.

Health Safety Officer—the individual (Health and Safety Director) at XL Construction responsible for developing and implementing this program, conducting unannounced work site inspections, and ensuring that the departments comply with the program requirements.

Kickout—the accidental movement or failure of a cross brace.
Protective system—a method of protecting employees from cave-ins from material that could fall or roll from an excavation face into an excavation or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

Ramp—an inclined walking or working surface that is used to gain access to one point from another. A ramp may be constructed from earth or from structural materials such as steel or wood.

Sheeting—the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

Shield (Shield system)—a structure used in an excavation to withstand cave-ins and which will protect employees working within the shield system. Shields can be permanent structures or portable units moved along as work progresses. Shields used in trenches are usually referred to as “trench boxes” or “trench shields.”

Shoring (Shoring system)—a structure that is built or put in place to support the sides of an excavation to prevent cave-ins.

Sides—See “Faces.”

Sloping (Sloping system)—sloping the sides of the excavation away from the excavation to protect employees from cave-ins. The required slope will vary with soil type, weather, and surface or near surface loads that may affect the soil in the area of the trench (such as adjacent buildings, vehicles near the edge of the trench and so forth).

Stable rock—natural solid mineral material that can be excavated with vertical sides that will remain intact while exposed.

Structural ramp—a ramp built of steel or wood, usually used for vehicle access. Ramps made of soil or rock are not considered structural ramps.

Support system—a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

Tabulated data—tables and charts approved by a registered professional engineer and used to design and construct a protective system.

Trench (Trench excavation)—a narrow excavation (in relation to its length) made below the surface of the ground.

Trench box or shield. See “Shield.”

Uprights—the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called “sheeting.”
Wales-horizontal members of a shoring system placed in the direction of the excavation face whose sides bear against the vertical members of the shoring system or earth (the uprights or sheeting).

**Key Responsibilities**

The Project Superintendent is to ensure that all persons working in an excavation or trenching operation have been properly trained.

XL’s Safety Department will conduct annual training programs to allow XL’s staff exposed to this type of construction to become certified as a “Competent Person”.

**Procedure**

**Competent Person Duties**

**Protective Systems or Equipment**

- Monitoring water removal equipment and operations.
- Inspecting excavations subject to runoff from heavy rains to determine need for diversion ditches, dikes, or other suitable protection.
- Determining cave-in potential to assess need for shoring or other protective system.
- Examining damaged material or equipment used for protective systems to determine its suitability for continued use.
- Classifying soil and rock deposits, by both visual analysis and by testing, to determine appropriate protection; re-classifying, if necessary, based on changing conditions.
- Determining the appropriate slope of an excavation to prevent collapse due to surcharge loads from stored material or equipment, operating equipment, adjacent structures, or traffic, and assuring that such slope is achieved.

**Inspecting Trench and Protective Systems**

- Authorizing immediate removal of employees from the hazardous area where evidence of possible cave-in, failure of protective systems, hazardous atmospheres or other hazardous conditions exists.

**Unsafe Access/Egress**

- Designing structural ramps that are used solely by employees as a means of access or egress. Structural ramps used for access or egress of equipment must be designed by a competent person qualified in structural design.

**Utilities and Pre-work Site Inspection**

Prior to excavation the site shall be thoroughly inspected to determine if special safety measures must be taken.
XL must request from the Building Owner, if there are any known contaminants in the soil to be excavated or hauled off site to determine if any special protective measures must be employed. XL must determine the suitability of the off hauled material and its ability to be disposed of correctly. If this information is not known, XL must perform a soils analysis to determine if there is any presence of a hazardous material.

The location of sewers, telephone, fuel, electric, water lines or any other underground installations that may be encountered during excavation work shall be determined and marked prior to opening an excavation. Arrangements shall be made as necessary by the Project Superintendent with the appropriate utility agency for the protection, removal, shutdown, or relocation of underground installations.

If it is not possible to establish the exact location of these installations, the work may proceed with caution if detection equipment or other safe and acceptable means are used to locate the utility.

Excavation shall be done in a manner that does not endanger the underground installations or the employees engaged in the work. Utilities left in place shall be protected by barricades, shoring, suspension or other means as necessary to protect employees.

**Protection of the Public**

Barricades, walkways, lighting and posting shall be provided as necessary for the protection of the public prior to the start of excavation operations.

Guardrails, fences or barricades shall be provided on excavations adjacent to walkways, driveways and other pedestrian or vehicle thoroughfares. Warning lights or other illumination shall be maintained as necessary for the safety of the public and employees from sunset to sunrise.

Wells, holes, pits, shafts and all similar hazardous excavations shall be effectively barricaded or covered and posted as necessary to prevent unauthorized access. All temporary excavations of this type shall be backfilled as soon as possible.

Walkways or bridges protected by standard guardrails shall be provided where employees and the general public are permitted to cross over excavations. Where workers in the excavation may pass under these walkways or bridges, a standard guardrail and toe board shall be used.

**Protection of Workers in Excavations**

Access and Means of Egress

- Stairs, ladders or ramps shall be provided where employees are required to enter trench excavations over 4 feet deep. The maximum distance of lateral travel (e.g., along the length of the trench) required to reach the means of egress shall not exceed 25 feet.
Safety Procedures

Structural Ramps

Structural ramps used solely by employees as a means of access or egress from excavations shall be designed by a competent person. Structural ramps used for access or egress of equipment shall be designed by a person qualified in structural design, and shall be constructed in accordance with the design.

Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent movement or displacement.

Structural members used for ramps and runways shall be of uniform thickness.

Cleats or other appropriate means used to connect runway structural members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping.

Structural ramps used in place of steps shall be provided with cleats or other surface treatments on the top surface to prevent slipping.

Ladders

When portable ladders are used, the ladder side rails shall extend a minimum of 3 feet above the upper surface of the excavation.

Ladders shall have nonconductive side rails if work will be performed near exposed energized equipment or systems.

Two or more ladders, or a double-cleated ladder, will be provided where 25 or more employees will be conducting work in an excavation where ladders serve as the primary means of egress or where ladders serve two-way traffic.

Ladders will be inspected prior to use for signs of damage or defects. Damaged ladders will be removed from service and marked with "Do Not Use" until repaired.

Ladders shall be used only on stable and level surfaces unless secured. Ladders placed in any location where they can be displaced by workplace activities or traffic shall be secured, or barricades shall be used to keep these activities away from the ladder.

Non-self-supporting ladders shall be positioned so that the foot of the ladder is one-quarter of the working length away from the support.

Employees shall not be allowed to carry any object or load while on the ladder that could cause them to lose their balance and fall.

Exposure to Vehicular Traffic

Employees exposed to vehicular traffic shall be provided with, and shall wear warning vests or other suitable garments marked with or made of reflectorized or high-visibility
material. Warning vests worn by flagmen shall be red or orange and shall be of reflectorized material if worn during night work.

**Employee Exposure to Falling Loads**

No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles provide adequate protection for the operator during loading and unloading operations.

**Warning System for Mobile Equipment**

A warning system shall be used when mobile equipment is operated adjacent to the edge of an excavation if the operator does not have a clear and direct view of the edge of the excavation. The warning system shall consist of barricades, hand or mechanical signals or stop logs. If possible, the grade should be away from the excavation.

**Hazardous Atmospheres**

The atmosphere in excavations over 4 feet deep shall be tested if a hazardous atmosphere exists or could reasonably be expected to exist. A hazardous atmosphere could be expected, for example, in excavations in landfill areas, in excavations in areas where hazardous substances are stored nearby, or in excavations near or containing gas pipelines.

Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or forced ventilation of the workspace.

Forced ventilation or other effective means shall be used to prevent employee exposure to an atmosphere containing a flammable gas in excess of 10 percent of the lower flammability limit of the gas.

When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, continuous air monitoring will be performed. The device used for atmospheric monitoring shall be equipped with an audible and visual alarm.

Atmospheric testing will be performed using a properly calibrated direct reading gas monitor. Direct reading gas detector tubes or other acceptable means may also be used to test potentially toxic atmospheres.

**Personal Protective Equipment**

All employees working in trenches or excavations shall wear approved hardhats and steel toed shoes or boots.
Employees exposed to flying fragments, dust, or other materials produced by drilling, sawing, sanding, grinding and similar operations shall wear approved safety glasses with side shields.

Employees exposed to hazards produced by, or performing, welding, cutting, or brazing operations shall wear approved spectacles or a welding faceshield or hardhat.

Employees entering bell-bottom pier holes or other similar deep and confined footing excavations shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.

Employees shall wear approved gloves or other suitable hand protection.

Employees using, or working in the immediate vicinity of, hammer drills, masonry saws, jackhammers or similar high noise producing equipment shall wear suitable hearing protection.

Each employee at the edge of an excavation 6 feet or more deep shall be protected from falling. Fall protection shall be provided by guardrail systems, fences or barricades.

Emergency rescue equipment, such as breathing apparatus, a safety harness and line, and a basket stretcher shall be readily available where hazardous atmospheric conditions exist or may develop during work in an excavation. This equipment shall be attended when in use. Only personnel that have received approved training and have appropriate equipment shall attempt retrieval that would require entry into a hazardous atmosphere.

**Protection from Hazards Associated with Water Accumulation**

Employees shall not work in excavations that contain or are accumulating water unless precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions taken must include inspection by a competent person special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water or use of safety harnesses and lifelines.

If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operation shall be monitored by a Competent Person trained in the use of the equipment.

If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation. Precautions shall also be taken to provide adequate drainage of the area adjacent to the excavation.

The Competent Person shall inform workers of the precautions or procedures that are to be followed if water accumulates or is accumulating in an excavation.
Safety Procedures

Stability of Adjacent Structures

The Competent Person will determine if the excavation work could affect the stability of adjoining buildings, walls, sidewalks or other structures.

Support systems (such as shoring, bracing, or underpinning) shall be used to assure the stability of structures and the protection of employees where excavation operations could affect the stability of adjoining buildings, walls, or other structures.

Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees shall not be permitted.

Protection of Employees from Falling Objects and Loose Rocks or Soil

Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of:

- Scaling to remove loose material;
- Installation of protective barricades, such as wire mesh or timber, at appropriate intervals on the face of the slope to stop and contain falling material; or
- Benching sufficient to contain falling material.

Excavation personnel shall not be permitted to work above one another where the danger of falling rock or earth exists.

Employees shall be protected from excavated materials, equipment or other materials that could pose a hazard by falling or rolling into excavations.

Protection shall be provided by keeping such materials or equipment at least 2 feet from the edge of excavations, by the use of restraining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

Materials and equipment may, as determined by the competent person, need to be stored further than 2 feet from the edge of the excavation if a hazardous loading condition is created on the face of the excavation.

Materials piled, grouped or stacked near the edge of an excavation must be stable and self-supporting.

Using the following categories, soil is classified into different types, which determine the kind of cave-in protection required. Only a competent and trained person can determine the soil type by using these classifications.

- Grain sizes are usually classified into four types: gravel, sand, silt, clay. Gravel is the least stable, and clay is the most stable.
Saturation is the amount of water that the soil is currently holding. Complete saturation is much less stable than soil that is only slightly damp. However, soil with no water content is unstable.

Cohesiveness is a test that determines how well the soil sticks together. The more it sticks together, the more stable the trench walls will be. The field test usually consists of rolling the soil in your hand into the shape of a worm and observing how and when it separates.

Unconfined compressive strength determines how much weight per square foot the soil can withstand. This will determine how easily the soil will shear and cave in.

**Soil Types**

- The most stable type of soil is Type A. It is dense and heavy and consists primarily of clay.
- Type B has a medium level of stability and is made of soils such as silt, sandy loam, and medium clay.
- The least stable soil is Type C, which consists of gravel, loamy sand, and soft clay.

**Daily Inspection**

The Competent Person shall conduct daily inspections of excavations, adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when the trench will be or is occupied by employees.

Where the Competent Person finds evidence of a situation that could result in a possible cave-in, failure of protective systems, hazardous atmosphere, or other hazardous conditions, exposed employees shall be removed from the hazardous area until precautions have been taken to assure their safety.

There shall be a written log of all inspections conducted. This log shall include the date, work site location, results of the inspection, and a summary of any action taken to correct existing hazards.

**Training**

All personnel involved in trenching or excavation work shall be trained in the requirements of this program and regulatory requirements.

Training shall be performed before the employee is assigned duties in excavations.
Retraining will be performed whenever work site inspections conducted by the Competent Person or Corporate Health and Safety Director indicate that an employee does not have the necessary knowledge or skills to safely work in or around excavations.

Training records shall include the date(s) of the training program, the instructor(s) of the training program, a copy of the written material presented, and the names of the employee(s) to whom the training was given.

**Permits**

XL holds a T-1 Annual Cal-OSHA Trenching Permit, however, XL is responsible to verify that the proper OSHA Permit(s) have been obtained by the Subcontractor performing the work for all construction of trenches or excavations which are five feet or deeper and into which a person is required to descend. Our Subcontractor will normally obtain this type of permit unless XL is self-performing the trenching & excavation, in which case XL would be responsible to obtain the Activity Notification Cal-OSHA Permit. The Permit must be available onsite upon request by a Cal-OSHA Inspector.
Benching/Sloping - Soil Types

TABLE B-1
MAXIMUM ALLOWABLE SLOPES

<table>
<thead>
<tr>
<th>SOIL OR ROCK TYPE</th>
<th>MAXIMUM ALLOWABLE SLOPES (H:V)(1) FOR EXCAVATIONS LESS THAN 20 FEET DEEP(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STABLE ROCK</td>
<td>VERTICAL (90°)</td>
</tr>
<tr>
<td>TYPE A (2)</td>
<td>3/4:1 (53°)</td>
</tr>
<tr>
<td>TYPE B</td>
<td>1:1 (45°)</td>
</tr>
<tr>
<td>TYPE C</td>
<td>1.5:1 (34°)</td>
</tr>
</tbody>
</table>

Footnote(1) Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.

Footnote(2) A short-term maximum allowable slope of 1/2H:1V (63°) is allowed in excavations in Type A soil that are 12 feet (3.67 m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth shall be 3/4H:1V (53°).

Footnote(3) Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

FIGURE B-1—SLOPE CONFIGURATIONS
(All slopes stated below are in the horizontal to vertical ratio)

R = 1:1 Excavations made in Type A soil.

1. All simple slope excavation 20 feet or less in depth shall have a maximum allowable slope of 5:1.

   SIMPLE SLOPE—GENERAL

   \[ \frac{H}{V} = 5:1 \]

   Exception: Simple slope excavation which are open 24 hours or less (blind face) and which are 12 feet or less in depth shall have a maximum allowable slope of 3:1.

   SIMPLE SLOPE—SHORT TERM

   \[ \frac{H}{V} = 3:1 \]

2. All benching (50 feet or less in depth) shall have a maximum allowable slope of 5% to 1 and maximum bench dimensions as follows.

   SIMPLE BENCH

   \[ H = 0.05V \]

3. All excavations 4 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical side of 3:1.

   UNSUPPORTED VERTICALLY SIDED LOWER PORTION—MAXIMUM 4 FEET IN DEPTH

   \[ \frac{H}{V} = 3:1 \]

   All excavations more than 4 feet but not more than 12 feet in depth which unsupported vertically sided lower portions shall have a maximum allowable slope of 1:1 and a maximum vertical side of 3:1.

   UNSUPPORTED VERTICALLY SIDED LOWER PORTION—MAXIMUM 10 FEET IN DEPTH

   \[ \frac{H}{V} = 1:1 \]

   All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of 5:1. The support or shield system must extend at least 18 inches above the top of the vertical side.

   SUPPORTED OR SHIELDED VERTICALLY SIDED LOWER PORTION

   \[ \frac{H}{V} = 5:1 \]

4. All other simple slope, compound slope, and vertically sided lower portion excavations shall be in accordance with the other options permitted under T800.02/B4.
Safety Procedures

B-1.2 Excavations Made in Type B Soil

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1:

2. All bench-height excavations 20 feet or less in depth shall have a minimum allowable slope of 1:1 and maximum bench dimensions as follows:

   - SINGLE BENCH:
     - [Diagram showing single bench excavation dimensions]

   - MULTIPLE BENCH:
     - [Diagram showing multiple bench excavation dimensions]

3. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a minimum allowable slope of 1:1.5:

   - VERTICALLY SIDED LOWER PORTION:
     - [Diagram showing vertically sided lower portion of excavation]

4. All other sloped excavations shall be in accordance with the other options permitted in §1026.5(b)(3).

B-1.3 Excavations Made in Type C Soil

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1:

2. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a minimum allowable slope of 1:1.5:

   - VERTICALLY SIDED LOWER PORTION:
     - [Diagram showing vertically sided lower portion of excavation]

3. All other sloped excavations shall be in accordance with the other options permitted in §1026.5(b)(3).
B.1.4 Excavations Made In Layered Soils

1. All excavations 20 feet or less in depth made in layered soils shall have a minimum allowable slope for each layer as set forth below:

   - Layer A
   - Layer B

2. All other sloped excavations shall be in accordance with the criteria permitted in §1026.6(b)(8).
Scaffold Safety Policy

Purpose

The purpose of this program is to prevent injuries due to falls from elevated work areas and ensure XL employees and Subcontractors are able to inspect scaffolding materials and erected scaffolds.

Definitions

Bearer - A horizontal member of a scaffold upon which the platform rests and which may be supported by ledgers.

Brace - A tie that holds one scaffold member in a fixed position with respect to another member.

Coupler - A tie that holds one scaffold member in a fixed position with respect to another member.

Double pole or independent pole scaffold - A scaffold supported from the base by a double row of uprights, independent of support from the walls and constructed of uprights, ledgers, horizontal platform bearers, and diagonal bracing.

Guardrail - A rail secured to uprights and erected along the exposed sides and ends of platforms.

Heavy Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 75 pounds per square foot.

Ledger (stringer) - A horizontal scaffold member which extends from post to post and which supports the putlogs or bearer forming a tie between the posts.

Light Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 25 pounds per square foot.

Manually Propelled Mobile Scaffold - Manually propelled mobile scaffold.

Maximum intended load - The total of all loads including the working load, the weight of the scaffold, and such other loads as may be reasonably anticipated.

Medium duty scaffold - A scaffold designed and constructed to carry a working load not to exceed 50 pounds per square foot.

Mid-Rail - A rail approximately midway between the guardrail and platform, used when required, and secured to the uprights erected along the exposed sides and ends of platforms.

Putlog - A scaffold member upon which the platform rests.

Runner - The lengthwise horizontal bracing or bearing members or both.
Scaffolding - Any temporary elevated platform and its supporting structure used for supporting workmen or materials or both.

Toe board - A barrier secured along the sides and ends of a platform, to guard against the falling of material.

Tube and coupler scaffold - An assembly consisting of tubing, which serves as posts, bearers, braces, ties, and runners, a base supporting the posts, and special couplers which serve to connect the uprights and to join the various members.

Tubular welded frame scaffold - A sectional, panel, or frame metal scaffold substantially built up of prefabricated welded sections that consist of posts and horizontal bearer with intermediate members. Panels or frames shall be braced with diagonal or cross braces.

Working Load - Load imposed by men, materials, and equipment.

Key Responsibilities

Superintendents and Foremen

- Responsible for ensuring that scaffolds are erected by a qualified person, that set up inspections are performed, and all daily inspections are performed before work starts for the day.

- Responsible for ensuring that all employees, and/or Subcontractors have been trained in the use and inspection methods for scaffolds.

Employees

- Responsible for following this program by inspecting the scaffolds daily and report any damages or repairs that may be needed to their Supervisor.

Procedures

General Requirements

Scaffolds shall be furnished and erected in accordance with applicable standards for persons engaged in work that cannot be done safely from the ground or from solid construction. Except that ladders used for such work shall conform to ladder safety standards.

Scaffolds shall only be erected by a qualified third party, who is competent to certify the scaffolding safe to use.

The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose boards shall not be used to support scaffolds or planks.
Scaffolds and their components shall be capable of supporting without failure at least four times the maximum intended loads. Scaffold components must meet Cal-OSHA requirements, Article 22, sections 1640-1655.

Wood scaffold planks must be cross-supported every 8 feet. Scaffold deck boards shall be cleated, wired or nailed into place.

All working levels of scaffolds will be floored completely except where internal ladders require space for ladder openings.

Scaffolds and other devices mentioned or described in this program shall be maintained in safe condition. Scaffolds shall not be altered or moved horizontally while they are occupied.

Any scaffold damaged or weakened from any cause shall be immediately repaired and shall not be used until repairs have been completed.

Scaffolds shall not be loaded in excess of the working loads for which they are intended.

Bolts used in the construction of scaffolds shall be of adequate size and in sufficient numbers at each connection to develop the designed strength of the scaffold.

All planks shall be overlapped (minimum 12 inches) and secured from any movement.

An access ladder or equivalent safe access shall be provided.

Scaffold planks shall extend over their end supports not less than 6 inches or more than 18 inches.

The poles, legs, or uprights of scaffolds shall be plumb, and securely and rigidly braced to prevent swaying and displacement.

Materials being hoisted onto a scaffold shall have a tag line.

Overhead protection shall be provided for workers on a scaffold exposed to overhead hazards.

Toe boards and guardrails shall be installed if a scaffold or platform is erected to a height of 6 feet or more. Scaffolds shall be provided with a screen between the toe board and the guardrail, extending along the entire opening, consisting of No. 18 gauge wire one-half inch mesh or the equivalent, where workers are required to work or pass under the scaffolds.

Work shall not be performed on a scaffold during storms or high winds.

Work shall not be performed on scaffolds that are covered with snow or ice, unless all snow and ice has been removed and all planking has been sanded to prevent slipping.

Tools, material, and debris shall not be allowed to accumulate in quantities to cause a hazard.
Inspections

Scaffolding shall be inspected by a qualified person, in conjunction with the manufacturer’s required recommendations. The Competent Person must ensure scaffolds are safe prior to and during scaffold use.

- At a minimum, the following shall be inspected after erection, before the start of the day or beginning of a shift change:
  - Ground or surface footing shall be inspected to ensure that there is no settling.
  - All main supports and cross braces shall be inspected for any signs of damage, missing pins, bolts and any locks and/or safety keepers.
  - All walking surfaces and/or planks shall be inspected for damage and proper placements and any possible movement.
  - All walkways and planks must be secure to prevent any movement.
  - Inspection shall be made to ensure that the scaffold is stable and any movement is prevented.
  - If during the inspection, a defect or damage to the scaffold is discovered, the scaffold shall be tagged out and use prohibited until needed repairs are made.

Signs and Tags

Signs and tags shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.

Defective equipment shall be tagged out by using a weather resistant tag secured to the scaffolding structure on all four sides.

Danger signs shall be used only where an immediate hazard exists. Danger signs must be posted around the immediate area of the scaffold, to alert other workers of possible danger from falling objects from the scaffold.

Caution Signs and/or barricade tape shall be used to mark off a larger area around scaffolding warning other workers to use caution.

Modifications

Modification and repairs shall be performed by a qualified person, who is competent to certify the scaffolding safe to use.

Employees shall not perform any modifications or repairs, unless they have been trained and certified, failure to comply may result in disciplinary action and or termination.

Training Requirements

The Supervisor shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the
type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall include the following areas, as applicable:

- The nature of any electrical hazards, fall hazards and falling object hazards in the work area.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
- The maximum intended load and the load-carrying capacities of the scaffolds used.

The Supervisor shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a Competent Person to recognize any hazards associated with the work in question. The training shall include the following topics, as applicable:

- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in use.
- The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.

When the employer has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employer shall retrain each employee so that the requisite proficiency is regained:

- Retraining is required in at least the following situations:
  - Where changes in scaffolding at the worksite present a hazard about which an employee has not been previously trained.
  - Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained.
  - Where inadequacies in an affected employee’s work involving scaffolds indicate that the employee has not retained the requisite proficiency.
### Tube and Coupler Scaffolds - Light Duty
(Typical Use: Taper, Painter)

<table>
<thead>
<tr>
<th>Uniformly Distributed Load</th>
<th>Not to Exceed 25 p.s.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Spacing (longitudinal)</td>
<td>10 ft 0 in.</td>
</tr>
<tr>
<td>Post Spacing (transverse)</td>
<td>4 ft 0 in.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working Levels</th>
<th>Additional Planked Levels</th>
<th>Maximum Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>125 ft.</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>125 ft.</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>125 ft.</td>
</tr>
</tbody>
</table>

### Tube and Coupler Scaffolds - Medium Duty
(Typical Use: Block or Brick Installation)

<table>
<thead>
<tr>
<th>Uniformly Distributed Load</th>
<th>Not to Exceed 50 p.s.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Spacing (longitudinal)</td>
<td>7 ft 0 in.</td>
</tr>
<tr>
<td>Post Spacing (transverse)</td>
<td>4 ft 0 in.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working Levels</th>
<th>Additional Planked Levels</th>
<th>Maximum Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11</td>
<td>125 ft.</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>78 ft 0 in.</td>
</tr>
</tbody>
</table>

### Tube And Coupler Scaffolds - Heavy Duty
(Typical Use: Stone Installation)

<table>
<thead>
<tr>
<th>Uniformly Distributed Load</th>
<th>Not to Exceed 75 p.s.f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Spacing (longitudinal)</td>
<td>6 ft 0 in.</td>
</tr>
<tr>
<td>Post Spacing (transverse)</td>
<td>6 ft 0 in.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working Levels</th>
<th>Additional Planked Levels</th>
<th>Maximum Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>125 ft.</td>
</tr>
</tbody>
</table>

**Note:** The maximum post spacing in width given above may be increased if the bearer tube is supported in the middle by another post or diagonal, and provided that the posts are not overloaded.
## Daily Scaffold Inspection Checklist

**Date:** [ ] **Project:** [ ] **Project No:** [ ]

Superintendent: [ ] Foreman: [ ] File No.: [ ]

Inspection Performed by: [ ] CC: [ ]

Scaffold Owned and Erected by: [ ]

Erected Scaffold was Inspected by what Competent Person: [ ]

<table>
<thead>
<tr>
<th>Type of Scaffold</th>
<th>Planned Rated Loads:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tubular Welded Frame</td>
<td>Light Duty 25 psf</td>
</tr>
<tr>
<td>Tube and Coupler</td>
<td>Medium Duty 50 psf</td>
</tr>
<tr>
<td>Manufactured Systems</td>
<td>Heavy Duty 75 psf</td>
</tr>
<tr>
<td>Supported by Structure</td>
<td>Rolling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NA</th>
<th>OK</th>
<th>HAZ COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Sample Only*
### Daily Scaffold Inspection Checklist

#### (Page 2 of 3)

**SECURING SCAFFOLD TO STRUCTURE**

<table>
<thead>
<tr>
<th>Item</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Are ties located at both ends and not more than 30’ horizontally?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>16. Are all ties at least #9 wire?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>17. If the scaffold has netting it must be tied to the structure.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

**BRACING AT TUBE AND COUPLER SCAFFOLDS**

<table>
<thead>
<tr>
<th>Item</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Braces must be installed at a 45 degree angle?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>19. If scaffold is more than 5 bays long start new brace at every 5th post.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>20. Cross bracing must be installed across the scaffold and at every 4th level.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>21. Transverse bracing must be installed across the width of the scaffold at every 3rd set of posts horizontally.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

**ACCESS**

<table>
<thead>
<tr>
<th>Item</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Is safe access provided for platforms more than 2’ high?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>23. If portable ladders are used are they secured to the scaffold to prevent being taken away?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

**HOOK ON LADDERS**

<table>
<thead>
<tr>
<th>Item</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>24. Are ladders installed to prevent tipping of scaffold?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>25. Is lowest rung within 24” of grade?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>26. Are rungs no ore than 16” apart?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>27. Are rest platforms provided every 35” vertically?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>28. If scaffold frame has built-in ladder, are rungs at least 8” wide?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

**WORKING PLATFORMS**

<table>
<thead>
<tr>
<th>Item</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. Are all working levels fully planked?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>30. Are all platforms at least 20” wide?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>31. Are open sides of the scaffold less than 16” from the work face?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>32. Are all platforms cleated or extend at least 6” over support?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

**PLANKING**

<table>
<thead>
<tr>
<th>Item</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>33. Is all planking of scaffold grade lumber?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>34. Planking must not exceed a span of 10’ for light duty, 8’ for medium duty and 7’ for heavy duty.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>35. Is the gap between the last plank and upright less than 9-1/2”?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>36. Are all planks overlapped min of 12”?</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>
## Daily Scaffold Inspection Checklist

### (Page 3 of 3)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>NA</th>
<th>OK</th>
<th>HAZ</th>
<th>COR</th>
<th>HAZARDS/COMMENTS</th>
</tr>
</thead>
</table>

#### PLANKING (continued)

37. At platforms less than 10’ planks should not cantilever more than 12”.

38. At platforms more than 10’ planks should not cantilever more than 18”.

#### GUARDRAILS

39. Are guardrails and midrails installed on all open sides and open ends of platforms?

40. Are all guardrails 36”-45” heigh?

41. Is netting installed where required to protect people from falling objects?

#### TOEBOARDS

42. Are toeboards installed everywhere people pass below the scaffold?

43. Are all toeboards at least 3-1/2” tall?

#### ELECTRICAL EXPOSURE

44. Is scaffold a minimum of 10’ away from power lines?

#### OSHA PERMIT

45. An OSHA Permit is required if scaffold erected is greater than 36’ in height.

#### ROLLING SCAFFOLDS

46. The height to base radio must not exceed 3:1

47. Are casters pinned into the frames?

48. Are all frames pinned together?

49. Are casters locked while scaffold is in use?

50. The tower must have horizontal and diagonal cross bracing?

51. Work platform must be fully planked.

52. Railings are required if greater than 6’ heigh.
Fall Protection Plan

Purpose

The purpose of this program is to provide fall protection procedures to prevent injury to XL’s employees and subcontractors while performing work assignments at elevated levels on our construction projects.

Any changes to this Fall Protection Program must be approved by XL’s Corporate Safety Director, who is designated as XL’s Qualified Person because he has received the appropriate training in fall protection planning, and has demonstrated skills and knowledge in the preparation of fall programs, plans and the identification of hazards involved.

Scope

This fall protection program applies to all XL Construction employees who have work assignments at work levels that exceed 6 feet in height. This includes work near and around excavations. Every project will attempt to use conventional fall protection methods as outlined in this program. In the event these conventional practices are not practical for a specific project’s needs, a site specific plan will be developed to address how protection will be provided.

As subcontractors begin work on an XL Construction project, they will agree to adhere to and be responsible to implement XL’s Jobsite Fall Protection Plan for their workers, or submit a site-specific fall protection plan describing their approach to protecting their employees from fall hazards. This subcontractor site specific plan will be reviewed by XL’s Safety Department for acceptability.

Definitions

“Anchorage” means a secure point of attachment for lifelines, lanyards or deceleration devices.

“Body belt (safety belt)” means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

“Body harness” means straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

“Buckle” means any device for holding the body belt or body harness closed around the employee’s body.

“Carabineer” - see Snaphook

“Connector” means a device which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent
component of the system, such as a carabiner, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

“Competent Person” means on who is capable of identifying existing and predictable hazards in the surroundings or working conditions, which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

“Deceleration device” means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

“Deceleration distance” means the additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

“Equivalent” means alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

“Failure” means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

“Free fall” means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

“Free fall distance” means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

“Guardrail system” means a barrier erected to prevent employees from falling to lower levels.

“Infeasible” means that it is impossible to perform the inspection work using a conventional fall protection system (i.e., guardrail system, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of these systems to provide fall protection.
“Lanyard” means a flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

“Leading edge” means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an “unprotected side and edge” during periods when it is not actively and continuously under construction.

“Lifeline” means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

“Lower levels” means those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

“Opening” means an opening in any floor or platform, 12 inches or more in the least horizontal dimension. It includes: stairways, ladder ways, floor openings, hatchways, roof openings, and chute openings.

All “Openings” shall be properly secured and labelled “Opening Do Not Remove” as shown below:

![Opening sign]

All covers shall be constructed and of such material that will withstand the greater of 400 lbs. or twice the intended load.

“Personal fall arrest system” means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

“Positioning device system” means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.
“Rope grab” means a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

“Safety Nets shall be provided when workplaces are higher than 25 feet above ground or water surfaces or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines or safety belts are impractical.

Nets shall extend 8 feet beyond the edge of the work surface where employees are exposed and shall be installed as close under the work surface as practical but in no case more than 25 feet below the work surface. Nets shall be positioned in a manner to prevent the user from coming into contact with below surfaces or structures. Proper clearance positioning of nets shall be determined by impact load testing. Work procedures shall not begin until nets are in place and have been properly tested.

New nets shall meet accepted performance standards of 17,500 foot pounds minimum impact resistance as determined and certified by the manufacturers and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5000 pounds.

“Self-retracting lifeline/lanyard” means a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

“Snaphook” means a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types: (1) The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or (2) The non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.

“Qualified Person” means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, work, or project.

“Unprotected sides and edges” means any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches (1.0 m) high.

“Walking/working surface” means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges,
runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

“Work area” means that portion of a walking/working surface where job duties are being performed.

**Drawing of Components**

1. Tie-off Point
2. Lifeline
3. Rope Grab
4. Shock Absorbing Lanyard
5. Cross-Arm Strap
6. Retractable Lifeline
7. Full-Body Harness
8. Restraining Belt
9. Restraining Lanyard
10. Carabineer
Responsibilities

Project Superintendent

It is the responsibility of the Project Superintendent (designated as XL’s competent person) to implement this Fall Protection Program and to determine to what extent a Site Specific Plan must be developed. Preplanning of any work that exposes employees or subcontractors to a fall hazard must be performed well in advance of the work activity so that the correct protective measures can be selected or developed before the commencement of work. Continual observation of adherence to safety procedures selected must be performed. Disciplinary measures must be enforced for any employee or subcontractor choosing not to follow the established procedures. The Project Superintendent must determine what the emergency rescue procedures will be in the event a fall occurs and must maintain on site all required rescue equipment while that activity is in progress.

Supervisor/Foreman

The supervisor or foreman shall ensure that all persons assigned to work at elevated levels, exceeding 6 feet in height or more above a lower level and where guardrails or nets are not utilized, must be protected by personal fall protection equipment.

- Supervisors shall make exposure determinations and shall discuss with their employees the extent to which scaffolds, ladders or vehicle mounted work platforms can be used.
- Supervisors shall ensure that fall protection equipment is available and in safe working condition for every employee working on that task.
- Supervisors shall ensure that employees have been properly trained in the use, limitations, inspections and rescue procedures for all fall protection equipment used.
- Supervisors shall ensure that all training has been documented and that all training records are kept on file at the project site.

Employees

Employees shall ensure that they have and use the fall protection equipment as required by this program and:

- Understand the potential hazards of working at elevated levels as well as gaining access to and from the work location.
- Understand the use and limitations of such equipment.
- Pre-plan the job with his/her supervisor to agree that the job can be done safely.
- Inspect such equipment before each use and to report defective equipment immediately to their supervisor.
Minimum Standards for Fall Protection Systems

The following minimum standards must be used on all fall protection equipment or systems:

- Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.
- Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- D-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds.
- D-rings and snap hooks shall be proof-tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or taking permanent deformation.
- Snap hooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snap hook. Only a locking type snap hook designed and used to prevent disengagement of the snap hook by the contact of the snap hook keeper by the connected member shall be used.
- Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds. Where vertical lifelines are used, each employee shall be attached to a separate lifeline.
- Lifelines shall be protected against being cut or abraded.
- Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet or less, rip stitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two and under the supervision of a qualified person.
- Systems used by an employee having a combined person and tool weight in excess of 310 pounds shall be modified to provide proper protection for such heavier loads.
Safety Procedures

- The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head, except when climbing.

- Body harnesses and components shall be used only for employee protection and not to hoist materials.

- Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.

- Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.

- Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists unless prior approval is obtained from a competent person.

- If and when a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

- When purchasing equipment and raw materials for use in fall protection systems applicable ANSI, ASTM or Cal-OSHA approved equipment shall be used.

Storage

A dedicated storage area shall be provided for the storage of fall protection equipment and all components. The storage area shall keep the equipment clean, dry, and free from oils, chemicals, paints, and excessive heat.

Inspections

Fall protection equipment shall be inspected by the user before each use for wear, damage, deterioration, or other defects. XL's Safety Department along with XL's Warehouse Manager will perform a thorough inspection of all fall protection equipment on a quarterly basis and keep a record of those inspections. Equipment that has gone more than 2 quarters without this inspection shall be pulled out of service until this inspection can be performed.

Stopping a Fall

The arresting force on an employee stopped by a fall shall be limited to a maximum arresting force of 1,800 pounds when wearing a body harness.

The fall arrest system shall be rigged such that an employee can neither free fall more than 6 feet, nor contact any lower level.

The fall arrest system shall bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.
The fall arrest system shall have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.

**Protection From Falling Objects**

Employees performing work at elevated levels shall keep tools, materials, and equipment away from the edge to keep potential objects from falling over the side. Where practical, tools shall be secured with rope, wire, etc. to keep them from falling.

When employees are required to work below others working with materials, tools, or equipment at elevated levels, barricades or flagging around the immediate area of the overhead work shall be erected to warn employees as to the potential dangers above and to encourage them not to enter the barricaded area.

**Portable Ladders**

Three point climbing is required while ascending or descending ladders. While on ladders, both hands and one foot, or both feet and one hand shall always be in contact with the ladder.

Tools required to perform a task shall be transported by a mechanical carrier such as a tag line, suspended bucket or tool belt.

- Tools shall not be carried by hand while climbing.
- Hands must be free to grip the ladder.

Tools shall not be carried in clothing pockets.

- Tools shall be pulled up to the job site only after reaching the area of work.

When work is to be performed from straight/extension ladders, fall protection shall be utilized when heights exceed 6 feet.

Straight ladders shall be tied off at the top to prevent them from moving. A second person shall steady the ladder at the base while it is being tied off at the top by another employee. Do not tie off fall protection equipment to the ladder.

**Aerial Lifts and Elevated Personnel Platforms**

Work performed, regardless of the nature of the work, from aerial lifts or personnel platforms raised by forklifts shall require the use of a full body harness and its lanyard shall be connected to the platforms designated anchor point.

**Non Conventional Fall Protection Plan**

A non conventional fall protection plan is available only to employees engaged in leading edge work who can demonstrate that it is infeasible or it creates a greater hazard.
to use conventional fall protection equipment. This non conventional fall protection plan shall conform to the following provisions:

- The fall protection plan shall be prepared by a qualified supervisor and developed specifically for the site where the leading edge work is being performed.
- The fall protection plan shall document the reasons why the use of conventional fall protection systems (guardrail systems, personal fall arrest systems, or safety net systems) are infeasible or why their use would create a greater hazard.
- The fall protection plan shall identify each location where conventional fall Protection methods cannot be used.
- These locations shall then be classified as controlled access zones.

**Controlled Access Zones**

When used to control access to areas where leading edge or other operations are taking place the Controlled Access Zone shall be defined by a control line or by any other means that restricts access.

When control lines are used, they shall be erected not less than 6 feet (1.8 m) nor more than 25 feet (7.7 m) from the unprotected or leading edge.

The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.

The control line shall be connected on each side to a guardrail system or wall.

- Control lines shall consist of ropes, wires, tapes, or equivalent materials.
- Each line shall be flagged or otherwise clearly marked at not more than 6-foot (1.8 m) intervals with high-visibility material.
- Each line shall be rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches (1 m) from the walking/working surface and its highest point is not more than 45 inches (1.3 m).
- Each line shall have a minimum breaking strength of 200 pounds.

Only employees required to perform work in this area shall be permitted in the controlled access zone.

Signage shall be erected to clearly indicate that this is a controlled access zone and to describe the procedures required to access this area.
Safety Procedures

Safety Monitoring System

When the use of conventional fall protection equipment is deemed infeasible or the use of this equipment creates a greater hazard a Fall Protection Plan which includes a Safety Monitoring System shall be implemented by the supervisor.

Supervisors shall designate a competent person to monitor the safety of other employees. The competent person shall be required to:

- Recognize fall hazards.
- Warn employees if they are unaware of fall hazard or are acting in an unsafe manner.
- Be on the same working surface and in visual contact of working employees.
- Stay close enough for verbal communication.
- Not have any other assignments that would take his/her attention from the monitoring function.

Incident Investigations

All incidents and near misses must be investigated according to XL’s incident investigation procedure. Changes to the fall protection program shall be implemented if deemed appropriate from incident corrective actions.

Training

XL Construction Employees who may be exposed to fall hazards shall be trained to recognize the hazards of falling and understand the procedures to be followed in order to minimize these hazards.

The employee will be trained in the use and operation of fall arrest systems, inspections, and maintenance procedures.

Training must be conducted initially, and refresher training conducted annually or as needed due to deficiencies in training, changes in the workplace, changes in fall protection systems or procedures that render previous training obsolete, or inadequacies in an employee's understanding of previous training.

Training must be documented in writing and include the following information: Who was trained, dates of training, signature of person providing training, and date training was deemed adequate.

Training records will be maintained in the Safety Department at XL’s corporate office.
Roof Fall Protection Plan

The following information below has been provided to help guide jobsite teams to best decide how to protect, flag and control work at elevated heights around or near skylights, holes, openings and leading edges of decks, roofs, or structures.

Diagram Guide:
A. General work area (often in wide-screen) on roof
B. Skylight-Tie off required if not protected
C. New construction addition
D. Access / Egress Path
E. CAZ (Controlled Access Zone)
F. Perimeter Edge Work
G. Penetrations
H. Hand Rail System
I. Scaffold Stair Tower

1. **General Work Area** – Defined as any fall exposure hazard. No restrictions on workers.

2. **Skylights** – Options:
   A. Remove skylight and cover, or deck over, must be secured properly and labeled.
B. Protect with plywood box or handrail system.

C. Protect with cable system.

D. Barricade off with snow fence (back minimum of 10’).

3. **New Construction Addition** – If working on new deck or roof with no perimeter rail system, fall protection is required. Options are:

A. Connect catenary line to structural steel or structure rated at least 5,000 lbs per person connected to cable with yo-yo (maximum 2 workers per catenary line if using 3/8” wire rope.)
B. Connect rated D-ring anchorage point rated for 5,000 lbs per person (1 per anchorage point).

C. Wrap and connect cable (wire rope) around a suitable structure rated for a minimum of 5,000 lbs and tie off directly to that.

4. **Access / Egress Path** – Zone in which workers travel to work area with no fall hazards or restrictions.
5. **Controlled Access Zone (CAZ)** – An area in which certain work may take place without the use of guardrails, personal fall arrest systems, or safety nets and access to the zone is controlled.

These zones must be defined by a control line, or by any other means that restricts access. These control lines:

A. Must be erected 6’ to 25’ from the unprotected or leading edge.

B. Shall have signage posted restricting access.

C. Shall extend along entire length of zone and parallel to unprotected or leading edge.

D. Shall be connected on each side to standard railing or wall rated for 200 lbs.

E. Shall consist of ropes, wires, tapes, or equivalent material.

F. Shall be flagged or clearly marked at least every 6’ with high visibility material.

G. Shall be rigged and supported between 39” and 45” off working level (including sag).

H. Shall have minimum break, strength of 200 lbs.

6. **Perimeter Edge Work** – Any work occurring within 0’ to 10’ from unprotected leading edge. Requirements are:

A. Fall protection is required at all times.

B. Anchorage point must be rated for 5,000 lbs.

C. Only 1 worker per anchorage point can be tied off at any one time.
7. **Holes or Openings** – If not protected, can never be left unattended. Requirements are:

   A. When penetrations are present, fall protection is required.
   
   B. If not filled, must be protected (covered).
   
   C. Cover must be rated for 4 times the intended load.
   
   D. Cover must be secured and labeled with sign.
   
   E. Sign must be in English and Spanish and contain “Opening” and “Do Not Remove” on them.

8. **Guard Rail / Cable Rail Systems** – Can be used to eliminate exposure to fall hazards on jobsites, it’s always best to put up some sort of hard rail or cable (wire rope) system. In our shop we have a variety of rail systems to accommodate many different fall hazard solutions. They can be installed near unprotected edges or on parapet walls to provide your jobsite with the necessary fall protection you are looking for. Requirements are:

   A. Top rails must be 42” off working level (ideal).
   
   B. Mid rail at 21”.
   
   C. Rated for 200 lbs in any direction.
   
   D. Rail Options:
Safety Procedures

Yellow Boot Type

Anchor Plate Type

Parapet Wall Clamp Type
Jobsite Fall Protection Plan

Project Plan

At the beginning of every project XL's Project Superintendent along with XL's Safety Department and General Superintendent will evaluate the tasks required to complete the project and will identify those tasks that have related fall protection hazards. XL's project team will then select the preferred protective measure they choose to use, from the options available from XL's standard hazard protections. In the event a unique situation occurs whereby following one of XL's conventional measures is not feasible, then a Site Specific Plan will be developed and evaluated for completeness by XL's Safety Department. This Jobsite Fall Protection Plan along with all XL and Subcontractor Site Specific Plans will become part of the Project Safety Records and all tradesmen working on site will be required to become familiar with and follow the prescribed procedures.

Subcontractor Agreement with Project Plan

Each subcontractor will be required to follow the prescribed fall protection measures that are identified in XL's Project Plan. In the event they choose to complete tasks with alternate fall protection safety measures, those measures must be submitted to XL's Safety Department for approval prior to beginning any of those tasks.

Documentation of Subcontractor knowledge

During each Subcontractor's tradesmen orientation of XL's SSP and Project Specific Safety Requirements a specific review of the Jobsite Fall Protection Plan will be conducted and then acknowledged by gathering the tradesman signature on the SSP Acknowledgement Log.

Pretask Meetings

A pretask meeting will be held prior to any task that has been identified as a potential fall protection hazard and a review of the protective measures chosen will be performed.
# Jobsite Fall Protection Plan

*Date: __________ Project: ____________________________ Project No: ________
Superintendent: ____________________ Foreman: ____________________ File No: ________
Inspection Performed by: ____________________ CC: ____________________

<table>
<thead>
<tr>
<th>Exists</th>
<th>N/A</th>
<th>Hazard</th>
<th>Protection Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>□</td>
<td>A. Edge of excavation greater than 6'</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>B. Working on face of formwork or reinforcing steel above 6'</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>C. Erection of Steel</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>D. Installation of Metal Decking</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>E. Leading edge work above 6'</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>F. Precast Concrete Erection</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>G. Scaffold Erection higher than 10'</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>H. Roofing Installation at Low Slope Roofs &lt;4:12</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>I. Roofing Installation at Steep Slope Roofs &gt;4:12</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>J. Work on existing roof</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>K. Roof Skylight Protection</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>L. Perimeter of Building Railing System</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>M. Wall openings 6' above work surface</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>N. Loading Bay</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>O. Using fixed ladders above 20'</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>P. Floor or roof hole NTE 12&quot; x 12&quot;</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>Q. Floor or roof openings</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>R. Working surface above 6' with an unprotected edge</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>S. Ramps or runways above 6'</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>T. Ladders</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>U. Rolling Towers</td>
<td></td>
</tr>
</tbody>
</table>
# Jobsite Fall Protection Plan

## (Page 2 of 5)

<table>
<thead>
<tr>
<th>Exists</th>
<th>N/A</th>
<th>Hazard</th>
<th>Protection Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>□</td>
<td>V. Scissor Lifts</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>W. Aerial Booms</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>X. Manbaskets attached to a forklift</td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>□</td>
<td>Y. Other Hazards:</td>
<td></td>
</tr>
</tbody>
</table>

| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |
| □      | □   |                      |                  |

*SAMPLE ONLY*
## Jobsite Fall Protection Plan

### Fall Protection Methods

<table>
<thead>
<tr>
<th>Type</th>
<th>Conventional Fall Protection Method Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Excavations:</strong></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>Provide fencing around excavation.</td>
</tr>
<tr>
<td>A2</td>
<td>Provide barricades around excavation.</td>
</tr>
<tr>
<td>A3</td>
<td>Provide guardrail system with height at 42” midrail and toeboard if required. Guardrail must resist 200 lbs. of lateral force.</td>
</tr>
<tr>
<td><strong>Face of Formwork or Reinforcing Steel Work:</strong></td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>Provide personal fall arrest device.</td>
</tr>
<tr>
<td>B2</td>
<td>Provide positioning device system.</td>
</tr>
<tr>
<td><strong>Erection of Steel:</strong></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>All steel erection, bolting and weld up to be completed while tied off 100% of time.</td>
</tr>
<tr>
<td>C2</td>
<td>Steel erector to provide Fall Protection Plan.</td>
</tr>
<tr>
<td><strong>Installation of Metal Decking:</strong></td>
<td></td>
</tr>
<tr>
<td>D1</td>
<td>Spreading of decking to be completed while tied off 100% of time.</td>
</tr>
<tr>
<td>D2</td>
<td>Decking erector to provide Fall Protection Plan.</td>
</tr>
<tr>
<td><strong>Leading edge work:</strong></td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>Use personal fall arrest system while working near leading edge.</td>
</tr>
<tr>
<td><strong>Precast Concrete Erection:</strong></td>
<td></td>
</tr>
<tr>
<td>F1</td>
<td>Use personal fall arrest system while performing erection.</td>
</tr>
<tr>
<td>F2</td>
<td>Precast erector to provide Fall Protection Plan.</td>
</tr>
<tr>
<td><strong>Scaffold Erection:</strong></td>
<td></td>
</tr>
<tr>
<td>G1</td>
<td>Erectors to be tied off 100% of time while working above 6’.</td>
</tr>
<tr>
<td><strong>Roofing Installation at Low Slope Roof:</strong></td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>Use personal fall arrest system while working on roof.</td>
</tr>
<tr>
<td>H2</td>
<td>Install guardrails at perimeter of roof.</td>
</tr>
<tr>
<td>H3</td>
<td>Scaffold erected around perimeter of roof limits fall exposure to &lt; 6’.</td>
</tr>
<tr>
<td>H4</td>
<td>A combination of warning line system and fall arrest system will be used.</td>
</tr>
<tr>
<td>H5</td>
<td>A combination of warning line system and safety monitoring system will be used.</td>
</tr>
<tr>
<td><strong>Roofing Installation at Steep Slope Roof:</strong></td>
<td></td>
</tr>
<tr>
<td>I1</td>
<td>Use personal fall arrest system while working on roof.</td>
</tr>
<tr>
<td>I2</td>
<td>Install guardrails at perimeter of roof.</td>
</tr>
<tr>
<td>I3</td>
<td>Scaffold erected around perimeter of roof limits fall exposure to &lt; 6’.</td>
</tr>
<tr>
<td><strong>Work on Existing Roof:</strong></td>
<td></td>
</tr>
<tr>
<td>J1</td>
<td>Install warning line system &gt; 6’ back from edge of roof.</td>
</tr>
<tr>
<td>J2</td>
<td>Install cable rail system at perimeter of roof.</td>
</tr>
<tr>
<td>J3</td>
<td>Install guardrails at perimeter of roof.</td>
</tr>
</tbody>
</table>
## Jobsite Fall Protection Plan

### Type Conventional Fall Protection Method Description

**Skylight Protection:**
- **K1** Install warning line system > 6' back from edge of skylight.
- **K2** Install plywood over skylights.
- **K3** Install railings around skylights.

**Perimeter of Building Railing System:**
- **L1** Install 2 line cable system by Steel Erector at time of building erection. Top cable to be at 45” above finish floor with intermediate rope installed at midpoint. Provide mid span support to prevent sagging.
- **L2** Install wood railing system with 2x6 wood cap, 2x4 midrail. Posts to be installed no more than 8’ on center.
- **L3** Toe boards to be provided at all points where tradesmen may pass below. Toeboards to be a minimum of a 1x4.

**Wall Openings:**
- **M1** Guardrails will be provide at 45” above finish floor across the opening. Midrails and toeboards will be provided where required.

**Loading Bay:**
- **N1** Removable railing to be provided at edge of building. Life line to be provided anchored to structure. Body harness to be warn while loading tied off back to life line.
- **N2** Removable railing to be provided at edge of building. Personal fall arrest system to be used while loading.

**Fixed Ladders above 20’**
- **O1** Provide retractable fall arrest system.
- **O2** Provide vertical life line and rope grab system.
- **O3** Provide cage around ladder.

**Hole Cover not exceeding 12”x12”:**
- **P1** Provide wood or metal cover secured to floor.
- **P2** Provide sleeve that protrudes through floor that can not be removed.

**Opening Cover:**
- **Q1** Minimum 3/4 plywood cover, fixed to floor or roof with sign affixed that says this is an opening cover and should not be removed. Wording must be in english and spanish.

**Unprotected edge of work surface:**
- **R1** Provide guardrail system.
- **R2** Provide fall arrest system.

**Ramps or runways:**
- **S1** Provide guardrail system.
## Jobsite Fall Protection Plan

### Conventional Fall Protection Method Description

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ladders:</strong></td>
<td></td>
</tr>
<tr>
<td>T1</td>
<td>3 point climbing system will be used at all times while ascending or descending a ladder.</td>
</tr>
<tr>
<td><strong>Rolling Towers:</strong></td>
<td></td>
</tr>
<tr>
<td>U1</td>
<td>A guardrail system will be provided if work surface is &gt; 6' above work surface.</td>
</tr>
<tr>
<td><strong>Scissor Lifts:</strong></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>A body harness and lanyard will be used if the tradesmen feet will ever leave the working platform of the lift. Lanyard must be tied off to an approved anchor point within lift or to the structure above.</td>
</tr>
<tr>
<td><strong>Aerial Booms:</strong></td>
<td></td>
</tr>
<tr>
<td>W1</td>
<td>A body harness and lanyard will be used at all times while operating an aerial boom. The lanyard will be secured to the approved anchor point within the basket.</td>
</tr>
<tr>
<td><strong>Manbaskets attached to forklifts:</strong></td>
<td></td>
</tr>
<tr>
<td>X1</td>
<td>Basket to be mechanically attached to forklift. All occupants of basket to wear body harness and lanyard attached to an approved anchor point within basket.</td>
</tr>
<tr>
<td><strong>Other Project Specific protection methods utilized:</strong></td>
<td></td>
</tr>
<tr>
<td>Z1</td>
<td></td>
</tr>
</tbody>
</table>
Process Systems and Highly Hazardous Chemicals

Process Systems Management is the proactive identification, evaluation and mitigation or prevention of chemical releases that could occur as a result of failures in process, procedures or equipment. The major objective of process safety management of highly hazardous chemicals is to prevent unwanted releases of hazardous chemicals especially into locations, which could expose employees and others to serious hazards.

XL Construction is required to recognize and participate as a contract employer at client locations with PSM Programs in place. XL as a contractor has certain obligations to fulfill in order to comply with established PSM programs. Contract employer responsibilities are as follows:

- XL shall assure that each contract employee is trained in the work practices necessary to safely perform his/her job.
- XL shall assure that each contract employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process, and the applicable provisions of the emergency action plan.
- XL shall document that each contract employee has received and understood the training required by this paragraph. XL shall prepare a record, which contains the identity of the contract employee, the date of training, and the means used to verify that the employee understood the training.
- XL shall assure that each contract employee follows the safety rules of the facility including the safe work practices required of this section.
- XL shall advise the employer of any unique hazards presented by XL's work, or of any hazards found by XL's work.
- XL will assure that trade secret information will be kept in confidence as process safety information is released to them.

XL employees shall participate in all client PSM requirements as directed, including:

- Employee Participation; Process Safety Information (PSI)
- Process Hazards Analysis (PHA) Operating Procedures
- Training Contractors
- Pre-Startup Safety Review (PSSR) Mechanical Integrity
- Hot Work Permits Management of Change (MOC)
- Incident Investigation Emergency Planning and Response
- Compliance Audits Trade Secrets

XL, as a contract employer shall follow safe work practices established by the client. The client shall develop and implement safe work practices to provide for the control
of hazards during operations such as lockout/tagout; confined space entry; opening process equipment or piping; hot work; and control over entrance into a facility by maintenance, contractor, laboratory, or other support personnel. These safe work practices shall apply to client employees and contractor employees. To comply with 1910.119(f)(4) XL employees are required to complete all required documentation for any permit-required activities.

XL employees are required to report all incidents to their immediate Supervisors as quickly as possible. In the event of a catastrophic release or an incident with the potential to create a catastrophic release of highly hazardous chemicals in the work place, an incident investigation shall be initiated as promptly as possible, but no later than 48 hours.

In the event XL becomes the sole operator of a facility, the existing PSM Program for that facility may be amended and adopted or, in the absence of a PSM Program, an assessment will be required prior to assuming operating responsibilities.
Confined Space Program

Purpose

The purpose of this program is to ensure the safety of all employees and Contractors working for XL Construction, and to comply with all federal and state requirements that pertain to work in confined spaces.

Definitions

Acceptable entry conditions - the conditions that must exist in a confined space to allow entry and to ensure that employees involved with a confined space entry can safely enter into and work within the space.

Attendant - an individual stationed outside one or more confined spaces who monitors the authorized entrants and who performs all attendant’s duties assigned in the XL's Confined Spaces Program. Attendants must have sufficiently completed and fully understands the Confined Space training and is approved by XL’s Health and Safety Director to work in a confined space as an Attendant.

Authorized Entrant - an individual who is authorized by XL to enter a confined space. Entrants must have sufficiently completed and fully understands the Confined Space Training and is approved by XL’s Health and Safety Director to work in a confined space as an Authorized Entrant.

Blanking or Blinding - the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line or duct with no leakage beyond the plate.

Confined Space

- A space that is large enough and so configured that an employee can bodily enter and perform assigned work.
- Has limited or restricted means for entry or exit (for example, tanks, vessels, coolers, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry).
- Is not designed for continuous occupancy.

Double block and bleed - the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Emergency - any occurrence (including any failure of hazard control or monitoring equipment) or an event internal or external to the confined space that could endanger entrants.
Engulfment - the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Entry - the action by which a person passes through an opening into a confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant’s body breaks the plane of an opening into the space.

Entry permit - the written or printed document that is provided by XL to allow and control entry into a confined space that contains the information specified in this program.

Entry Supervisor - the person responsible for determining if acceptable entry conditions are present at a confined space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

- Entry Supervisors must have sufficiently completed and fully understands the Confined Space training and is approved by XL’s Health and Safety Director to work in a confined space.
- An Entry Supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of Entry Supervisor may be passed from one individual to another during the course of an entry operation.
- The Entry Supervisor is responsible to test and monitor the atmosphere conditions.

Hazardous atmosphere - an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a confined space), injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL), (0% is normal).
- Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent, (20.9 % is normal).
- Any other atmospheric condition that is immediately dangerous to life or health. (Ex.- H2S 10%, 0% is normal).
- Note: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Material Safety Data Sheets that comply with the Hazard Communication Standard, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Hot work permit - the written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.
Immediately dangerous to life or health (IDLH) - any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual’s ability to escape unaided from a confined space.

**Note:** Some materials -- hydrogen fluoride gas and cadmium vapor, for example -- may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim “feels normal” from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be “immediately dangerous to life or health”.

Inerting - the displacement of the atmosphere in a permit space by a non-combustible gas (such as nitrogen) to such an extent that the resulting atmosphere is non-combustible. This procedure produces an IDLH oxygen deficient atmosphere.

Isolation - the process by which a confined space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line Breaking - the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Non-Permit Confined Space - A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen deficient atmosphere - an atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen enriched atmosphere - an atmosphere containing more than 23.5 percent oxygen by volume.

Permit-Required Confined Space - a confined space that has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing an entrant.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
- Contains any other recognized serious safety or health hazard.
Permit system - the employer’s written procedure for preparing and issuing permits for entry and for returning the confined space to service following termination of entry.

Prohibited condition - any condition in a confined space that is not allowed by the permit during the period when entry is authorized.

Rescue service - the personnel designated to rescue employees from Permit-Required Confined Spaces.

Retrieval system - the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from confined spaces.

Testing - the process by which the hazards that may confront entrants of a confined space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

Responsibilities

Superintendents and Foremen

■ Shall ensure that all employees have been trained and fully understand the requirements of this program.

■ Shall provide the necessary equipment to comply with these requirements and ensure that all employees are trained on its use.

■ Shall ensure that all confined space assessments have been conducted and documented.

■ Shall ensure that provisions and procedures are in place for the protection of employees from external hazards including but not limited to pedestrians, vehicles and other barriers.

■ Shall ensure that all Permit-Required Confined Spaces permits are posted.

■ Shall ensure that confined spaces are identified properly as either a Non-Permit Confined Space or a Permit-Required Confined Space.

■ Shall ensure that all confined spaces that have been identified as “no entry” have signs that state, “DANGER- DO NOT ENTER”.

■ Shall ensure signs have been posted at all Permit-Required Confined Space areas that state, “DANGER – PERMIT ENTRY CONFINED SPACE” along with the proper warning word such as “ASPHYXIANT, FLAMMABILITY or TOXIC HAZARD”

■ Shall file all permits at the area offices for review. Permits shall be kept on file for one year.
**XL’s Health and Safety Director**

- Shall ensure an annual review of the program including all entry permits issued that during that annual period.
- Shall file all permits at the area offices for review. Permits shall be kept on file for one year.

**Affected Employee**

- Shall attend Confined Space Entry Training commensurate with their duties and when duties change as required.
- Shall comply with all aspects of this program.
- Authorized Entrants, Attendants and Entry Supervisors may be any XL employee that is authorized by management to work in a confined space setting and that has been trained and is proficient in the understanding of program requirements.

**Entry Supervisor**

- Shall have a tailgate safety meeting, with all workers to be involved in the confined space entry and review the job to be performed and what safety concerns may be present.
- Shall confirm that all isolation, Lock/out and Tag/outs have been completed prior to entry into a confined space.
- Shall ensure that the requirements of this program are followed and maintained.
- Shall test all atmosphere conditions prior to entry and shall complete and maintain the confined space permit form, and have it accessible for review on the job site at all times.
- Shall notify XL Supervisor of entry into a confined space, and notify the Supervisor of any changes that may occur, during an entry.
- If the confined space poses a hazard that cannot be eliminated, the Entry Supervisor must arrange for a rescue services.
- If the confined space poses no hazards to the entrants, the Entry Supervisor can reclassify the confined space to a Non-Permit Confined Space.
- A stand-by rescue team is not required to be on site for Non-Permit Confined Space entries.

**Attendant**

- Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
- Is aware of possible behavioral effects of hazard exposure in authorized Entrants.
Continuously maintains communication and an accurate count of authorized entrants in the confined space and ensures that the means used to identify authorized entrants, and accurately identifies who is in the confined space.

Remains outside the confined space during entry operations until relieved by another attendant.

Attendants are NOT allowed to monitor more than one confined space.

Note: Attendants may enter a confined space to attempt a rescue, if they have been trained and equipped for rescue operations as required and only when they have been relieved by another authorized attendant.

Monitors activities inside and outside the confined space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the confined space immediately under any of the following conditions:

- If the attendant detects a prohibited condition;
- If the attendant detects the behavioral effects of hazard exposure in an authorized Entrant;
- If the attendant detects a situation outside the space that could endanger the authorized Entrants;
- If the attendant cannot effectively and safely perform all the duties required.

Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from confined space hazards.

Takes the following actions when unauthorized persons approach or enter a confined space while entry is underway:

- Warn the unauthorized persons that they must stay away from the confined space.
- Advise the unauthorized persons to exit the confined space immediately, if they have entered the space.
- Inform the authorized entrants and the Entry Supervisor if unauthorized persons have entered the confined space.
- Performs no duties that might interfere with the attendant’s primary duty to monitor and protect the authorized entrants.
- Authorized attendants shall not monitor more than one confined space at a time.

**Authorized Entrants**

Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of the exposure.
■ Uses appropriate personal protective equipment properly, e.g., face and eye protection, and other forms of barrier protection such as gloves, aprons, coveralls, and breathing equipment.

■ Is aware of possible behavioral effects of hazard exposure in authorized entrants.

■ Shall witness and verify calibrated air monitoring data and if approved, sign off, before entry is made.

■ Is entitled to request additional monitoring at any time.

■ Maintain communication with the attendants to enable the attendant to monitor the entrant’s status as well as to alert the entrant to evacuate if needed.

■ Exit from confined spaces as soon as possible when ordered by an attendant or Entry Supervisor, when the entrant recognizes the warning signs or symptoms of an exposure exists, or when a prohibited condition exists or when an alarm is activated.

Procedure

Non-Permit Confined Space Entry

If testing of the confined space atmosphere is within acceptable limits without the use of forced air ventilation and the space is properly isolated, the space can be entered by following the requirements for Level I confined space entry.

■ Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.

■ Entrants shall review and sign the confined space permit.

Employees may enter and work in the confined space as long as LEL, O2, and toxicity hazards remain at safe levels.

■ Complete the XL Confined Space Entry Permit to document that there are no confined space hazards. Make this certification available to all personnel entering the space.

■ A trained attendant must always be outside the confined space. The Attendant must monitor the authorized entrants for the duration of the entry operation.

Exception: The attendant requirements for Level I confined space entry may be exempted, if the job assessment is performed and has determined that there are no inherent dangers to allow single person entry.

■ This provision is intended to permit field operations to enter crankcases, shallow valve boxes, cellars, excavations, etc., without an Attendant being present and all other aspects of the entry permit complied with.

■ When there are changes in the use and configuration of a confined space that might increase the hazards to the entrants (e.g., using epoxy coating on a tank floor,
welding, painting, etc.), re-evaluate the space. If necessary, reclassify the space as a Permit-Required Confined Space.

- Continuously monitor the confined space atmosphere to ensure that it is still safe.
- The space must not contain a hazardous atmosphere while personnel are inside.
- If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.
- Re-evaluate the space to determine how the hazardous atmosphere developed.
- The Entry Supervisor shall cancel the entry permit.
- Take action to protect personnel before any subsequent activity to re-enter the space takes place.
- Reissue the COMPANY Confined Space Entry Permit before allowing entrants to re-enter the space.
- If necessary, reclassify the space as a Permit-Required Confined Space.
- Ensure that vehicle or other equipment exhaust does not enter the space.

**Permit-Required Confined Space Entry**

If the space is properly isolated and results of air monitoring are above acceptable parameters without local exhaust ventilation in operation, classify the entry as a Permit-Required Confined Space.

- Complete the XL Confined Space Entry Permit before proceeding with work in a Permit-Required Confined Space.
- Entrants and/or their representative shall be given the opportunity to observe and participate in the air monitoring process.
- Entrants shall review and sign the Confined Space Permit.
- At least one trained attendant must always be outside the Permit-Required Confined Space.
- The attendant must monitor the authorized entrants for the duration of the entry operation.
- Only authorized entrants may enter a Permit-Required Confined Space.
- All entrants must sign in and out on the entry permit when entering and leaving a Permit-Required Confined Space.
- The back of the permit or a sign-in sheet must be used for this purpose.
Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited.

Conditions must be continuously monitored where entrants are working to determine that acceptable conditions are maintained during entry.

If a hazardous atmosphere is detected during an entry, personnel must immediately evacuate the space.

- The Entry Supervisor shall cancel the entry permit.
- Re-evaluate the space to determine how the hazardous atmosphere developed.
- Take action to protect personnel before any subsequent activity to re-enter the space takes place.
- Re-issue the XL Confined Space Entry Permit before allowing Entrants to re-enter the space.
- Employees or their representatives are entitled to request additional monitoring at any time.

The permit must be terminated when the entry operations are complete or when permit conditions change (i.e., hazardous air monitoring results are noted, unsafe behaviors are observed, etc.).

The minimum rescue equipment required for Permit-Required Confined Space entry is covered in the Rescue and Emergency section of this program.

Permit-Required Confined Space entry operations will be reviewed when XL believes that the requirements of this confined space program may not adequately protect personnel.

If deficiencies are found in the program, the program will be revised and personnel will be trained in the new revisions before subsequent entries are authorized.

**Pre-Job Planning and Space Preparation**

The Entry Supervisor must determine that the confined space is properly isolated by blinding, disconnecting, and/or by following local Lockout/Tagout procedures.

The Entry Supervisor must discuss with all entrants the hazards of the space, communication methods and emergency procedures during the confined space entry.

Eliminate any condition making it unsafe to open the equipment to atmosphere.

Promptly guard the opening to prevent an accidental fall through the opening and to protect each employee working in the space from foreign objects entering the space.
If applicable, wash, steam, ventilate or degas the confined space to properly free it of possible contaminants. Vent vapors to a safe location.

Do not allow unauthorized personnel to enter a confined space. Barricade and/or guard all confined spaces to prevent entry of unauthorized entrants.

If performing hot work in the confined space, precautions must be taken consistent with the XL Hot Work Permit procedure.

Ensure that vehicle or other equipment exhaust does not enter the space.

**Pre-Entry Safety Meeting**

The Entry Supervisor must declare when the confined space is ready for entry.

The Entry Supervisor shall hold a pre-entry safety meeting to discuss all requirements and procedures with all authorized entrant(s) and attendant(s) involved with the entry. He/she will discuss other concerns such as previous contents, vessel coating, PPE required etc., during this meeting.

The Entry Supervisor must coordinate entry operations when employees of more than one company are working simultaneously in the confined space. This coordination is necessary so that one company’s work does not endanger the employees of another company.

**Equipment**

Check all work equipment to ensure that it has the proper safety features and is approved for the locations where it will be used. The Entry Supervisor shall ensure that all equipment is properly maintained in a safe condition and that entrants use the equipment properly.

The following equipment must be considered and may be required when entering a confined space:

- Atmospheric Testing and Monitoring Equipment.
- Barriers, Shields, and Signs – Post signs and barricades outside all Permit-Required Confined Spaces to notify personnel that a confined space entry is in progress and unauthorized entry is prohibited. Any signs used must state “Danger – Permit Entry Confined Space” along with the proper warning word such as “Asphyxiant, Flammability or Toxic Hazard”. All barricades must be capable of preventing a person from inadvertently walking into or kicking an object into the space.
- Communications Equipment – Only use intrinsically safe equipment in areas where a hazardous atmosphere may exist. Use a communication system that will keep the attendant in constant, direct communication with the entrant(s) working in the confined space. Also, use a communication system that allows the Attendant to summon help from rescue or emergency service.
■ **Entry and Exit Equipment** – (For example: ladders may be needed for safe entry and exit).

■ **Lighting Equipment** – Needed for safe entry, work within the space and exit. Lighting equipment used in the confined space must be certified safe for the location.

■ **Portable electric lighting used in wet and/or other conductive locations (drums, tanks, vessels)** must be operated at 12 volts or less. 120 volt lights may be used if protected by a ground-fault circuit interrupter.

■ **Personal Protective Equipment** – Ensure that personnel wear the required personal protective equipment. For respiratory protection requirements, refer to the XL’s Respiratory Protection Program.

■ **Rescue and Emergency Equipment** – Except if provided by outside rescue services. The attendants must also have an approved first aid kit.

■ **Vacuum Trucks** – When used, trucks must be properly grounded or bonded to prevent static sparks.

■ **Ventilating Equipment** – Local exhaust air movers used to obtain acceptable atmospheric entry conditions (e.g., Copus air movers).

■ **Other** – Any other equipment necessary for safe entry into and rescue from permit required confined spaces.

**Air Monitoring**

Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order.

**Ventilation**

Continuous forced air ventilation shall be used, as follows:

■ An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;

■ The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space;

■ The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.

■ The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee, who enters the space, or that employee’s
authorized representative, shall be provided with an opportunity to observe the periodic testing required by this paragraph.

- If a hazardous atmosphere is detected during entry each employee shall leave the space immediately and the space shall be evaluated to determine how the hazardous atmosphere developed; and measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

**Multiple Employer Procedure**

When a Supervisor arranges to have employees of another employer perform work that involves confined space entry, the Entry Supervisor shall:

- Verify that all contractor employees have been trained in confined space and that all contractor employees fully understand XL’s procedures pertaining to Confined Space.

- Inform the Contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section.

- Apprise the Contractor of the elements, including the hazards identified and the employees experience with the space, that make the space in question a permit space.

- Inform the Contractor of any precautions or procedures that XL has implemented for the protection of employees in or near permit spaces where Contractor personnel will be working.

- Coordinate entry operations with the Contractor, when both XL’s personnel and Contractor personnel will be working in or near confined spaces.

- Debrief the Contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in confined spaces during entry operations.

- In addition to complying with the confined space requirements that apply to all employees; each Contractor, who is retained to perform permit space entry operations, shall:
  - Obtain any available information regarding confined space hazards and entry operations from the XL Construction Entry Supervisor.
  - Coordinate entry operations with the XL Entry Supervisor, when both XL personnel and contractor personnel will be working in or near permit spaces.
  - Inform XL of the Confined Space Program that the Contractor will follow and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation.
Rescue and Emergency Services

General

■ If entry is to be made into an IDLH atmosphere, or into a space that can quickly develop an IDLH atmosphere (if ventilation fails or for other reasons), the rescue team or service would need to be standing by at the permit space.

■ In case of an emergency and/or injuries, the confined space site shall be secured and emergency response personnel shall be notified to respond per the host facility emergency plan.

■ If there is reliance on outside services for rescue the outside rescue team must be given an opportunity to examine the entry site, practice rescue and decline as appropriate.

■ The attendant shall order the other entrants not to move the injured or allow untrained workers into the space that are not trained to handle a confined space rescue.

■ Material Safety Data Sheets for substances that an injured entrant was exposed to must be provided to the medical facility treating the injured worker.

Permit-Required Confined Space Rescue

■ When the attendant becomes aware of the need for rescue, the attendant shall immediately notify the onsite rescue team by the agreed upon communication method, verbally, radio or cell phone without leaving the vicinity of the confined space.

■ After the rescue team has been notified, the attendant shall alert the Entry Supervisor of the emergency via the same communication methods.

■ The preferred means of providing rescue service is through the use of a qualified outside rescue service vendor.

■ The outside rescue service vendor must be:
  ■ Informed of the hazards that they may confront during a rescue.
  ■ Provided access to the Permit-Required Confined Space.
  ■ Access to the space allows the rescue service and local supervision to jointly develop appropriate rescue plans.

■ If XL employees are to perform Permit-Required Confined Space rescues, they must be:
  ■ Provided and trained in the use of the proper personal protective equipment necessary to make the rescue.
Safety Procedures

- Provided PPE at no cost
- Trained to perform the assigned duties.
- Required to practice making rescues at least once every 12 months.
- Trained in basic first aid and CPR.
- A minimum of one member of the rescue team must hold a current certification in first aid and CPR.
- If the operator is designated to provide rescue services for XL, the agreement of services must be included in the contract for the job.

**Non-entry Rescue**

- To facilitate non-entry rescue, an entrant must be attached to a retrieval system whenever he/she enters a Permit-Required Confined Space with a vertical depth of more than 5 feet.
- The retrieval equipment is not required if it will increase the overall risk of the entry, e.g., creating an entanglement hazard, or will not contribute to the rescue of the entrant.
- Each entrant shall use a full body harness equipped with a “D” ring located between the shoulders or above the head.
- Wristlets may be used instead of the full body harness, if the use of the full body harness is not feasible or creates a greater hazard and that using wristlets is the safest and most effective alternative.
- The retrieval line must be attached to the “D” ring and the other end of the retrieval line attached to a retrieval device or fixed point located outside the space so that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.

**Issuance/Review of Permit**

Only when all pre-entry requirements are satisfied, the Entry Supervisor shall issue a completed and signed confined space permit. The confined space permit is valid for one shift.

In the event of any unauthorized entry, employee complaints, a hazard not covered by the permit, the occurrence of an injury or near miss the entry permit shall be cancelled and a review shall be conducted to provide employee protection and for revising the program prior to authorizing subsequent entries.

An annual review of this program, using the cancelled permits retained within 1 year after each entry shall be conducted by XL’s Health and Safety Director to revise the program as necessary, to ensure that employees are protected. If no confined space entries were performed during a 12-month period, no review is necessary.
Cancellation/Closure of Permits

The Entry Supervisor shall cancel the confined space permit, at the end of the job operation, at the end of the shift or when the Entry Supervisor or attendant determine that conditions in or near the confined space have changed and is hazardous to the Entrants.

The Entry Supervisor shall, at the conclusion of entry operation, close out the permit and provide the safety department the original copy of the Confined Space Permit.

Training

Training shall be provided so that all employees whose work is regulated by this program acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned to them.

Training shall be provided to each affected employee, before the employee is first assigned duties under this program and before there is a change in assigned duties.

The employee shall be retrained:

■ Whenever there is a change in confined space operations that presents a hazard about which an employee has not previously been trained.

■ Whenever the supervisor has reason to believe either that there are deviations from the permit space entry procedures required by this section or that there are inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required by this program and shall introduce new or revised procedures, as necessary.

The Supervisor shall certify that the training required by this program has been accomplished.

■ The certification shall contain each employee’s name, the signatures or initials of the trainers, and the dates of training.

■ The certification shall be available for inspection by employees, management, clients and the Safety Department.
**XL Confined Space Entry Permit**

(Revised 9/09)

**Location and description of confined space:**

**Facility Manager:** Date of entry:

**Other permits required (hot work, line breaking, other):** Time of entry:

**Expiration date and time:**

**Entry supervisor (print):** Entrants:

**Attendants (print):**

**Known and potential hazards in space:**

**Describe acceptable entry conditions:**

### Precautions

- Pre-entry briefing on specific hazards and control methods
- Notify contractors of permit and hazard conditions
- Verify adequate confined space training
- Notification to affected departments/individuals of service interruption
- LOTO and verification of zero energy
- Lines blocked or broken
- Air flush (preliminary or continuous)
- Communication method (radio, rope signals, visual hand signals, verbal)
- Lighting (hazardous location rated or standard)
- Drain space
- Other (specify)

### Operational and Protective Equipment

- Ladder
- Full body harness
- Lifeline
- Tripod/hoist
- Area security (warning signs, barricades)
- Ventilation fan or blower
- Fier extinguisher
- SCBA
- Coveralls
- Face/eye protection
- Footwear
- Gloves (impervious, chemical, leather, other)
- Air purifying respirator (specify cartridge type)
- Head protection
- Fall protection equipment
- Other (specify)
## Precautions

(Comment and explain where required)

<table>
<thead>
<tr>
<th>Explanation for any checked Precaution item(s):</th>
<th>Explanation for checked Operational/Protective Equipment item(s):</th>
</tr>
</thead>
</table>

## Rescue Procedures and Equipment

- □ Non-entry rescue procedure and equipment in place
  (Attendant will extract entrant without entering space)
  OR
- □ Entry rescue service and equipment ready to effect a timely rescue (considering hazards in space)
- □ List rescue equipment:

<table>
<thead>
<tr>
<th>Notes:</th>
<th>Notes:</th>
</tr>
</thead>
</table>

## Air Monitoring Device

<table>
<thead>
<tr>
<th>Air Monitoring Device</th>
<th>Sequence or Serial Number</th>
<th>Date Due for Calibration</th>
<th>Pre-Use Spot Check Performed by</th>
<th>Notes</th>
</tr>
</thead>
</table>

## Air Monitoring Data

Attendant air sampling required (continuously or every ______ minutes)

<table>
<thead>
<tr>
<th>Time</th>
<th>Sampled by</th>
<th>Air sampling required for: (check and complete where applicable)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>□ O2: 19.5 - 23.5% □ &lt;10% LEL/LFL □ &lt;25 ppm CO □ &lt;10 ppm H2S □ Stratification □ Other</td>
<td></td>
</tr>
</tbody>
</table>

## Entrant IN/OUT record (Name)

<table>
<thead>
<tr>
<th>Entrant IN/OUT record (Name)</th>
<th>Time IN</th>
<th>Time OUT</th>
<th>Time IN</th>
<th>Time OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Page 2 of 3)
## XL Confined Space Entry Permit

**Work Authorization**

<table>
<thead>
<tr>
<th>Building/area/facility manager or designee (print)</th>
<th>Date</th>
<th>Phone</th>
<th>Time</th>
</tr>
</thead>
</table>

**Permit Authorization** *(Must be signed before entry)*

<table>
<thead>
<tr>
<th>Competent entry supervisor’s signature</th>
<th>Date</th>
<th>Phone</th>
<th>Time</th>
</tr>
</thead>
</table>

(Signature certifies that precautions and equipment are in place, atmospheric testing shows air acceptable for entry, and permit is complete.)

**Permit Cancellation** *(Must be signed after work is completed)*

<table>
<thead>
<tr>
<th>Competent entry supervisor’s signature</th>
<th>Date</th>
<th>Phone</th>
<th>Time</th>
</tr>
</thead>
</table>

### Instructions

A confined space entry permit must be completed for all permit-required confined space (PRCS) entries.

1. Contact competent entry supervisor prior to entry to assist in space preparation and permit completion.
2. Complete the entry permit.
3. Prepare the space for entry according to the permit.
4. The competent entry supervisor must review the permit for accuracy and completeness, determine if acceptable entry conditions are present, authorize entry, and oversee entry operation and termination.
5. The building/area/facility manager responsible for the confined space (the confined space “owner”) also reviews the permit and authorizes the work with a signature.
6. Verify that qualified and trained rescue services are equipped and ready to perform a timely rescue, considering the hazards potentially present in the permit space.

**Post Permit at job Site Until Job is Completed**

**In Case of Emergency, Call 911**
Safety Program — Pre-Task

XL Construction Safety Program Manual

Rev. 07/12
Safety Program – Pre-Task

Excerpt from Safety Program Manual
Safety Program — Pre-Task

Caissons/Piles ................................................................. 5-11
Pre-Task Meeting Checklist ............................................... 5-11
Controlled Access Zone / Fall Protection: ............................ 5-13
Concrete, Cutting, Coring Operations ............................... 5-14
Pre-Task Meeting Checklist ............................................... 5-14
Concrete, Cutting, Coring Operations ............................... 5-15
Pre-Task Meeting Checklist ............................................... 5-15
General Requirements: ...................................................... 5-15
Building Documents & Utility Location: ............................ 5-15
Equipment, PPE & Training:  .......................................... 5-16
Public & Employee Safety: ................................................. 5-17
Additional Considerations: ................................................ 5-18
Concrete Placement .......................................................... 5-19
Pre-Task Meeting Checklist ............................................... 5-19
Concrete Placement .......................................................... 5-20
Pre-Task Meeting Checklist ............................................... 5-20
General ................................................................. 5-20
“Tailgate” Pour ................................................................. 5-20
Pump Truck Pour ............................................................. 5-21
Concrete Tilt-Up Panel ...................................................... 5-23
Pre-Task Meeting Checklist ............................................... 5-23
General ................................................................. 5-24
Crew Designation ............................................................ 5-24
Crane ................................................................. 5-25
Rigging ................................................................. 5-25
Inserts ................................................................. 5-26
Bracing ................................................................. 5-26
Additional Considerations ................................................ 5-26
Confined Space Work ....................................................... 5-28
Pre-Task Meeting Checklist ............................................... 5-28
Definition ................................................................. 5-29
Procedure ................................................................. 5-29
Permit ................................................................. 5-29
Training ................................................................. 5-30
Environmental Testing ..................................................... 5-30
Ventilation ................................................................. 5-31
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Protective Equipment</td>
<td>5-31</td>
</tr>
<tr>
<td>Respiratory protection:</td>
<td>5-31</td>
</tr>
<tr>
<td>Electrical Lighting</td>
<td>5-32</td>
</tr>
<tr>
<td>Communications</td>
<td>5-32</td>
</tr>
<tr>
<td>Fire Protection</td>
<td>5-32</td>
</tr>
<tr>
<td>Lock-Out and Tag-Out Procedures</td>
<td>5-33</td>
</tr>
<tr>
<td>Other Items Discussed</td>
<td>5-33</td>
</tr>
<tr>
<td>Pre-Erection Cranes</td>
<td>5-34</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-34</td>
</tr>
<tr>
<td>Operation:</td>
<td>5-36</td>
</tr>
<tr>
<td>Tower Cranes:</td>
<td>5-37</td>
</tr>
<tr>
<td>Crane Operations Near Power Lines</td>
<td>5-37</td>
</tr>
<tr>
<td>Personnel Platforms</td>
<td>5-37</td>
</tr>
<tr>
<td>Crew Briefing (Safety Task Assignment &amp; Job Hazard Analysis)</td>
<td>5-39</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-39</td>
</tr>
<tr>
<td>Job Hazard Analysis</td>
<td>5-40</td>
</tr>
<tr>
<td>Activity Hazard Analysis / Daily Crew Briefings</td>
<td>5-40</td>
</tr>
<tr>
<td>Demolition</td>
<td>5-43</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-43</td>
</tr>
<tr>
<td>Demolition Checklist</td>
<td>5-44</td>
</tr>
<tr>
<td>Hotwork Electrical</td>
<td>5-47</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-47</td>
</tr>
<tr>
<td>Checklist:</td>
<td>5-48</td>
</tr>
<tr>
<td>Building Documents &amp; Utility Location</td>
<td>5-49</td>
</tr>
<tr>
<td>Equipment, PPE &amp; Training</td>
<td>5-50</td>
</tr>
<tr>
<td>Public &amp; Employee Safety</td>
<td>5-50</td>
</tr>
<tr>
<td>Pre-Hoisting of Equipment</td>
<td>5-51</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-51</td>
</tr>
<tr>
<td>Equipment</td>
<td>5-52</td>
</tr>
<tr>
<td>Excavation/Trenches</td>
<td>5-54</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-54</td>
</tr>
<tr>
<td>Excavations/ Trenches</td>
<td>5-55</td>
</tr>
<tr>
<td>Fall Protection -Excavations / Trenches</td>
<td>5-57</td>
</tr>
<tr>
<td>Attachment</td>
<td>5-59</td>
</tr>
<tr>
<td>Excavations &amp; Soils Disturbance Permit (ESD)</td>
<td>5-63</td>
</tr>
<tr>
<td>Fall Protection</td>
<td>5-66</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-66</td>
</tr>
<tr>
<td>Fall Protection Safety Tips:</td>
<td>5-67</td>
</tr>
</tbody>
</table>
Ladder Safety ................................................................. 5-68
Extension Ladders ............................................................. 5-68
Fireproofing ................................................................. 5-69
Pre-Task Meeting Checklist ............................................ 5-69
Checklist: ......................................................................... 5-69
Heat illness Prevention .................................................... 5-71
Pre-Task Meeting Checklist ............................................ 5-71
Heat Illness Risk Reduction ............................................... 5-72
Cal/OSHA Heat Illness Prevention: ................................... 5-74
What you need to know .................................................. 5-74
Training ............................................................................ 5-75
Checklist: ......................................................................... 5-75
Shade ................................................................................. 5-76
Water ................................................................................ 5-76
Written Procedures ......................................................... 5-76
Use Best Practices ............................................................. 5-76
Check the Weather .......................................................... 5-77
Tailgate Trainings ............................................................. 5-77
IIPP .................................................................................. 5-77
Water and Rest Breaks. ..................................................... 5-77
Shade ................................................................................. 5-77
Clothing ............................................................................. 5-78
Monitor .............................................................................. 5-78
Shift Change. .................................................................... 5-78
Housekeeping & Debris Removal ................................. 5-80
General Checklist ............................................................. 5-80
Use of Forklift Debris Box ............................................... 5-82
Debris Drop Zones: ........................................................... 5-82
Introduction to Energized Electrical Work (the last resort) ...... 5-84
Working on Energized Equipment (NFPA 70 E) ................. 5-84
Appendix E ................................................................. 5-86
Energized Electrical Work Permit ..................................... 5-86
Lead Preinstall & Installation ........................................... 5-87
Pre-Task Meeting Checklist ............................................ 5-87
Checklist ........................................................................... 5-88
Materials Review ............................................................. 5-88
Masonry Block Wall .......................................................... 5-94
Pre-Task Checklist ........................................................... 5-94
General Checklist ............................................................. 5-94
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scaffolding</td>
<td>5-96</td>
</tr>
<tr>
<td>Cutting of Block</td>
<td>5-97</td>
</tr>
<tr>
<td>New Job Start-Up Checklist</td>
<td>5-98</td>
</tr>
<tr>
<td>Safety Items</td>
<td>5-98</td>
</tr>
<tr>
<td>PRE-ACTIVITY SURVEYS</td>
<td>5-98</td>
</tr>
<tr>
<td>SAFETY &amp; ENVIRONMENTAL PERMITS</td>
<td>5-99</td>
</tr>
<tr>
<td>OTHER</td>
<td>5-99</td>
</tr>
<tr>
<td>New Contractor Site</td>
<td>5-101</td>
</tr>
<tr>
<td>Checklist</td>
<td>5-102</td>
</tr>
<tr>
<td>Coatings and Paintings</td>
<td>5-104</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-104</td>
</tr>
<tr>
<td>Coatings and Paintings Checklist</td>
<td>5-105</td>
</tr>
<tr>
<td>Pressureized Piping Pre Task Testing</td>
<td>5-108</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-108</td>
</tr>
<tr>
<td>Notification and communication</td>
<td>5-108</td>
</tr>
<tr>
<td>Description of Piping systems to be Tested</td>
<td>5-109</td>
</tr>
<tr>
<td>Preparation for Testing</td>
<td>5-110</td>
</tr>
<tr>
<td>Testing</td>
<td>5-111</td>
</tr>
<tr>
<td>Public Protection</td>
<td>5-113</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-113</td>
</tr>
<tr>
<td>Pedestrian Checklist</td>
<td>5-114</td>
</tr>
<tr>
<td>Vehicular</td>
<td>5-114</td>
</tr>
<tr>
<td>Rolling Scaffolds</td>
<td>5-115</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-115</td>
</tr>
<tr>
<td>Rolling Scaffolds Checklist</td>
<td>5-115</td>
</tr>
<tr>
<td>Roofing Installation</td>
<td>5-118</td>
</tr>
<tr>
<td>Pre-Task Meeting Checklist</td>
<td>5-118</td>
</tr>
<tr>
<td>Checklist</td>
<td>5-119</td>
</tr>
<tr>
<td>Fall Protection</td>
<td>5-120</td>
</tr>
<tr>
<td>Pre-Erection Steel and Decking</td>
<td>5-123</td>
</tr>
<tr>
<td>Checklist</td>
<td>5-124</td>
</tr>
<tr>
<td>Preliminary Subcontractor Requirements</td>
<td>5-124</td>
</tr>
<tr>
<td>Cranes &amp; Other Equipment</td>
<td>5-125</td>
</tr>
<tr>
<td>Erection</td>
<td>5-125</td>
</tr>
<tr>
<td>Decking</td>
<td>5-126</td>
</tr>
<tr>
<td>Other</td>
<td>5-127</td>
</tr>
<tr>
<td>Railings and Access</td>
<td>5-127</td>
</tr>
<tr>
<td>Safety Cable Systems Inspections</td>
<td>5-129</td>
</tr>
</tbody>
</table>
Safety Program — Pre-Task

Perimeter & Interior Cable Systems .......................................................... 5-129
General Requirements (all cable systems): ......................................... 5-129
Supporting Posts / Uprights ................................................................. 5-129
Specific Location Requirements/Corrections: Attachment A .............. 5-131
Subcontractor Injury Prevention Program ............................................ 5-135
Injury Review Meeting Checklist ......................................................... 5-135
Checklist ......................................................................................... 5-136
Supported Frame Scaffold ................................................................. 5-137
Pre-Task Meeting Checklist ............................................................... 5-137
and .................................................................................................. 5-137
Supported Frame Scaffold User Training Requirements ..................... 5-137
Checklist ......................................................................................... 5-138
Erection and Use of Suspended Scaffolds .......................................... 5-149
Pre-Task Meeting Checklist ............................................................... 5-149
Preliminary ...................................................................................... 5-150
The Erector .................................................................................... 5-150
The User ......................................................................................... 5-152
Traffic Control/Flagging .................................................................. 5-154
Pre-Task Meeting Checklist ............................................................... 5-154
Traffic Flagger/Work Zone Pre-Task Checklist .................................. 5-154
Traffic Plan Consideration ............................................................... 5-155
Flagging Instruction Hand Book ......................................................... 5-157
Characteristic of a Flagger ................................................................. 5-157
High Visibility Clothing .................................................................. 5-157
Flagger Equipment .......................................................................... 5-158
Work Zone Layout and Flagger Station .............................................. 5-158
Hand-Signaling Procedures ............................................................... 5-159
Method of One-Lane, Two-Way Traffic Control ............................... 5-159
A Demonstration of Proper Flagger Methodology and Operations ...... 5-160
Emergency Situations ...................................................................... 5-160
Methods of Dealing with Hostile Drivers ......................................... 5-161
Lane Closure on Low-Volume, Two Lane Road ............................... 5-165
Trench Plate .................................................................................... 5-168
Pre-Task Checklist .......................................................................... 5-168
Checklist ......................................................................................... 5-168
Public Vehicular Safety ................................................................. 5-169
Pedestrian/ bicycle safety ............................................................... 5-170
Utility Start-Up and Tie-In ............................................................... 5-171
Pre-Task Meeting Checklist ................................................................. 5-171
Checklist .......................................................................................... 5-171
Restricted Area Ventilation ................................................................. 5-173
Pre-Task Meeting Checklist ................................................................. 5-173
Ventilation Hazard to Address ............................................................ 5-174
Mechanical Ventilation Method ............................................................ 5-174
Ventilation Plan - Site Specific ............................................................ 5-176
Specific Precaution - Lead ................................................................. 5-176
Welding Fumes - General ................................................................. 5-177
Epoxy and Urethane Painting - Roller Application ............................ 5-178
Combustion Engines ......................................................................... 5-178
Silica Dust ......................................................................................... 5-178
Caissons/Piles

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE - To protect workers while drilling and constructing caissons and piles. Controlled Access Zones (CAZ) and Fall Protection Systems are required while drilling and constructing caissons.

THIS CHECKLIST APPLIES - Prior to any drilling and handling or placement of caissons/piles. Upon review with the Project Superintendent, other pre-task checklist may be required.

Date: ________________________________ Job: ________________________________

Project Name: ________________________________

Attendees: __________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Drilling/Caissons/Piles Pre-Task Checklist

☐ Contract and insurance certificates from Subcontractor and any Lower Tier Subcontractors.

☐ Soil Testing must be performed representative of the maximum depth of the Drilling and Caisson/ Pile Installation. A Qualified Contractor or Consultant must review the Testing results to provide guidelines for disposal of Soils, Groundwater, and handling by personnel.

☐ Identify Equipment to be used for drilling operation. Where cranes are required complete Crane Safety Procedures and complete Crane Hoisting and Rigging Checklist (See XL SPM)

☐ If work will commence indoors where Internal Combustion Engines are operated, review Air Monitoring for Operating Gas Powered Equipment Indoors (See XL SPM)

☐ Subcontractor to submit Injury Illness Prevention Program

☐ Review Trenching And Excavations (See XL SPM)

☐ XL Fall Protection Plan (See XL SPM)

☐ Provide Copy of CAL-OSHA Annual T-1 Permit and Activity Notification for Excavations/ Trenches 5 or greater in depth where personnel must enter.

☐ Mark Excavation/ Underground Work Area and Contact Underground Service Alert (USA--Dial 811) Ticket #_______________. In cases where the Utility Owners will not Locate Underground Installations on Private Property a Private Utility Locator must be contracted.

☐ Review As-Builts (where available) of Excavation/ Underground Work Area and create As-Builts for future reference.

☐ Where work occurs adjacent to Existing Structures, an RPE must identify where Drilling / Pile Driving operations might affect the (E) Building structural integrity and provide temporary measures during construction.

☐ Pre-start coordination meeting between operator, oiler, and rigging crew.

☐ Review Job Safety Analysis with entire crew involved with Drilling/ Caisson/ Pile installation

☐ Site logistics plan reviewed. Staging areas identified

☐ Approved rigging plan reviewed. Copies transmitted to applicable subcontractors

☐ Provide appropriate access and egress for personnel, drilling rigs, cranes, vehicles, etc.

☐ Personnel to complete Subcontractor Safety Program.

☐ Name Competent person/persons for drilling/crane operations.

☐ Name(s) __________________________ Phone #:___________________________

☐ Where Crane Operations are required, name Qualified Rigger/ Signalman

☐ Name(s) __________________________ Phone #:___________________________
Safety Program — Pre-Task

- Daily inspections by “Competent Person”.
- Personnel clear of equipment and materials such as piles hoisted overhead.
- Appropriate Hi-Vis Clothing worn by all personnel on foot and working in proximity to Equipment.
- Holes protected and securely fastened with covers marked “DANGER OPENING DO NOT REMOVE”.
- Ensure stability of adjacent structures and protection of existing finishes.
- Utility shut off: Where? __________________
- Overhead power lines no closer than 20 feet (taking swing into account) to drilling rig(s) or crane(s).
- Back up alarms all equipment & spotter(s) when backing in congested areas.

**Controlled Access Zone / Fall Protection:**

- Controlled Access Zone (CAZ) established when drilling is performed more than six feet in depth as follows:
  - Control Lines place not less than six feet or more than 25 feet restricting all points of access.
  - Line comprised of rope, wire, tape or equivalent materials with minimum breaking strength of 200 pounds supported by stanchions
  - Control lines flagged and clearly marked at six foot intervals.
  - Rigged such that the lowest point is not less than 39 inches (including sag) nor more than 45 inches above work surfaces.
  - CAZ system pre-approved by XL and inspected daily by Competent Person(s).
- Authorized entrants into CAZ must don a safety harness.
- Self Retracting Lifeline(s) “SRL” attached “directly” to “D” ring.
- Free fall distance at open hole(s) less than two feet?
- Work surfaces at and around open hole clear of loose debris, rock, and spoil.
- Spoils at least two feet or more from open hole of trench.
- Oiler or other authorized CAZ entrant(s) utilizing a portable plank as needed for level footing and distribution of weight to mitigate cave-ins
- As required, review Fall Protection, Crane and other applicable pre-task checklists.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Concrete, Cutting, Coring Operations

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To get a common clear understanding and commitments for site safety requirements and the work that is required to be completed for concrete cutting, coring operations.

THIS CHECKLIST APPLIES – Prior to cutting or coring through concrete walls, decks or slabs.

Date: ________________________________  Job: _________________________

Project Name: __________________________________________________________

Attendees: ___________________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Concrete, Cutting, Coring Operations
Pre-Task Meeting Checklist

**General Requirements:**

- XL Construction has a signed contract and current insurance certificates for the Subcontractors and any second tier Subcontractors.
- Subcontractor Injury & Illness Prevention Program submitted?
- Subcontractor Safety Program has been reviewed and signed by all workers?
- If working over 6’: Review XL Fall Protection Plan and any site specific requirements.
- Are all Subcontractors that may be affected by this activity present? Yes: ____ No: ____.

**Building Documents & Utility Location:**

- Review as-built drawing of the area of areas where work is being performed. List pages referred to from the as built drawings.
  - __________________________________________
  - __________________________________________
- Are any photos of the area available for review? No: _____ Yes: ____ If yes attach copies.
- Structural engineers report required if the work being performed is going to affect the structural integrity of the building or structure.
- Depth of slab and or thickness of wall surface have been verified?
- Above or Below slab Utilities / Equipment Located?
- In Slab Utilities and rebar located and marked across cut area?
- Is there any equipment with electrical, gas, chemical, hydraulic, water or communications lines that have not been accounted for? No: _____ Yes: _____ If yes, list:
  - __________________________________________
  - __________________________________________
- List methods used to locate utilities. IE USA, Utility locator company, Locator Devices, X-Ray.
  - __________________________________________
  - __________________________________________
  - __________________________________________
Safety Program — Pre-Task

☐ List Utilities located or thought to be in or near cut or core area.

☐ Review and attach Subcontractors lockout tag-out procedures, if applicable.

☐ Emergency shut off(s) for utilities located and functioning?

☐ Owner Contact Person: ______________________________Phone # __________

☐ List precautions measures for protecting building finishes.

Equipment, PPE & Training:

☐ List Equipment being used.

☐ Is the equipment right for the job and the work area? Working in occupied buildings or enclosed spaces may require the use of air monitoring devices and or electric power equipment.

☐ All electrical sources must be GFCI Protected.

☐ Is the equipment in good working condition, has it not been modified and are all manufactured safety devices in place and functioning?

☐ Is the operator experienced with the equipment being used? How long?

☐ Is there the possibility that during cutting operations that there is a falling object or equipment hazard during the cut? Can the machine or the operator fall through the opening being cut?

☐ All JLG or extended reach lift operators must show proof of training and are required to wear a full body harness during operation.

☐ All scissors lift operators must show proof of training and are required to wear a full body harness during operation if required by Site Specific Safety Plan or Client.

☐ All Straight Mast & Rough Terrain Forklift operators must show proof of training and must wear the seat belt at all times.
Safety Program — Pre-Task

☐ Does fork lift have five extinguishers?

☐ If planned for use, all forklift attachments must be manufacturer approved.

☐ List Personal Protective Equipment (PPE) that will be used – ie. Rubber gloves, earplugs, face shield, rubber boots, grounded equipment, fall protection equipment.

- ____________________________________________

- ____________________________________________

- ____________________________________________

Public & Employee Safety:

Is the space occupied? No: _____ Yes: _____ If yes, by who?

- Construction related employees: ____.

- Owner or tenant employees: ____.

☐ If occupied, has the planned activity been communicated with the effected parties?

Contact Person __________________________ Phone# __________________

☐ Area barricaded/taped off above/below/next room.

☐ Public Protection: In addition to the above items, protect occupied spaces adjacent to work areas with approved/proven methods. Barricade sidewalks/walkways-provide safe alternate clearly marked routing.

☐ Are spotters required? Yes: _____ No: _____. List reasons if any why a spotter is not required for the tasks.

- ____________________________________________

- ____________________________________________

☐ Spotters, if used, must be able to communicate hazards to the public and employees working nearby.

☐ Review and attach removal procedures for cores and large sections being removed.

☐ Will hearing protection be available for employees working near the cutting or coring activity?

☐ Provide adequate ventilation for the workspace. This may include air-monitoring devices.

Will cutting or coring be done wet (water spray, hoses, etc.) Yes: _____ No: _____ If no, half face respirators equipped with P100 filters will be needed for all workers exposed to concrete dust.

☐ Medical exam & respirator fit test requires prior to using Respirators. (See Respiratory Program in XL SPM)
Review Silica Exposure Control Program (See XL SPM)

☐ All personnel shall be tied off when working six feet or more above vertical rebar. Floor openings covered and labeled on deck.

☐ All access ladders shall be secured (top & bottom) and have hoist ropes available for tools/supplies.

☐ Tie off or whip-check all air hose connections, this includes protected impalement hazards.

☐ All personnel working over impalement hazards will be tied off.

☐ Location of slurry disposal approved? Yes: _____ No: _____.

  ________________________________________________________________

Additional Considerations:

☐ SWPPP (Storm Water Pollution Prevention Program)

☐ Slurry and any other dry or wet material will not be disposed of in any drain.

☐ Clean up and disposal of slurry, and any other debris such as concrete cores will be cleaned and removed immediately.

☐ Infection Control: Some XL Construction projects may be under an Infection Control program. If so, this may require additional precautions. Refer to the Site Specific Infection Control Program.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Concrete Placement

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE --To provide for the safe placement of concrete without risk to XL Construction, Subcontractor employees or the General Public.

**THIS CHECKLIST APPLIES** – When deemed appropriate by the XL Construction supervisor. Prior to the initial concrete pour.

Date: ___________________________________________ Job: ____________________

Project Name: ____________________________________________

Attendees: ____________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Concrete Placement
Pre-Task Meeting Checklist

General

☐ Project plans reviewed. Finish elevations, finish type, locations of expansion joints/score lines and block outs.

☐ Approved submittals have been reviewed and copies given to crew Foreman. (Mix designs, expansion materials, dowels, etc.) Review mock-ups if available.

☐ Confirm mix design is compatible with pump system (sump, hose size, etc.)

☐ MSDS’s reviewed and chemical storage areas have been identified.

☐ Proper PPE for task has been reviewed.

☐ Safety Glasses, Hard hats and Safety Vests at all times.

☐ Rubber / PVC Boots and Gloves when Feet or Hands are submersed in concrete. Wear Longer Sleeve Glove when potentially submersing arm.

☐ Eye wash station/device readily available during pour.

☐ Rebar impalement protection in place.

☐ All utilities located in pour have been protected/isolated per plans and specs.

☐ Weather forecast reviewed.

☐ Rebar inspection signed off by City and Special Inspector.

☐ Fall protection plan reviewed if employees will be exposed to a 6’ or greater fall distance.

☐ Locations of score lines and expansion joints reviewed.

☐ Temporary lighting available (as required).

☐ Designated concrete cleanout/washout area provided.

“Tailgate” Pour

☐ Proper truck access to area – lighting, traffic considerations, back up allowance.

☐ Trench plates if needed with sufficient support & access well marked.

☐ Employee orientation (Safety Meeting).

☐ Backup alarm

☐ Only one person giving signals to driver
Pre-established signals used.

Jobsite hazards (i.e. electrical lines):

List:

- 
- 
- 

Pump Truck Pour

- No overhead power lines close to boom. 20’ minimum clearance from power lines.
- Proper truck and pump access to area.
- Back up alarms & spotter when backing up in congested areas
- Safety chains/cables at boom joint connections on pump truck.
- Pre-placement Safety Meeting.
  - Boom failure escape route.
  - Possible hose rupture.
  - Area concrete placed (elevated or ground).
  - Mandatory hard hats, safety glasses, back supports, and gloves.
  - Pre-placement false work inspection procedure, if applicable.
  - Knee pads available.
  - Rebar/Dowels capped.
  - Deck cutouts secure.
  - Other considerations:

List:

- 
- 
- 

-
Pour Area

- Elevated areas: Proper safety rails in place – platform decked & free of holes/ openings.
- Safety belts and life lines if needed. Note: Full body harness and shock absorbing lanyard required for “fall protection”. See Fall Protection (See XL SPM) and any site specific requirements.
- Safe lifting access for troweling machines.
- Safe worker access on and off elevated areas.
- Deck penetrations protected.
- Rebar caps on steel stakes & rebar, area free of debris. Use planking for walking on steel mats on deep mat slabs.
- Crane buckets – tag lines.
- Riding concrete buckets prohibited.
- No workers under concrete bucket being raised or lowered into place.
- Deck inspected & shored per plan.
- Deck re-shored as necessary.
- Pour watch – unauthorized personnel prevented from entry.
- Designated wash out area
- Safety signage, especially during deck pours, for the safety of others not involved in the placing process.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Concrete Tilt-Up Panel

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction, Inc. Injury and Illness Prevention Program and SIP for additional Safety considerations.

PURPOSE – To review equipment, conditions and procedures for a safe erection.

WHEN THIS CHECKLIST APPLIES – Prior to tilt-up.

Date: ____________________________ Job: ____________________________

Project Name: ____________________________

Attendees: ____________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Concrete Tilt-Up Panel
Pre-Task Meeting Checklist

General

☐ Weather forecast (wind/rain) ________________________________

☐ Housekeeping on jobsite good. Any special conditions? ________________________________

☐ Review panel plan developed by concrete contractor.

☐ List any changes made to panel plan: ________________________________

☐ Panel intersection at corners may change sequencing- all corners work with sequencing pattern.

☐ Concrete testing (3, 5, 7 day… are extra cylinders required).

☐ Back up tools available and in good condition.

☐ Powers supply available. Are generators needed? Yes: ____ No: ____.

☐ Are ladders in good condition and tall enough?

☐ Steel wedges available to break panel free from casting surface.

☐ Panel design has been coordinated with roof system requirements.

☐ Slab blockout and MEP stub drawings reviewed and transmitted to crane and rigging company.

☐ Concrete contractor has validated shop drawings for the embed types and locations.

☐ Mock-ups have been inspected and approved by XL & Client.

☐ Who will be inspecting the installation?

List names and company:

1. __________________________________________________________

2. __________________________________________________________

3. __________________________________________________________

Crew Designation

☐ Rigging: ____________________________________________________

☐ Bracing/ Lacing/ Knee braces: ________________________________

☐ Stripping: __________________________________________________
Safety Program — Pre-Task

**Crane**

- A crane hoisting & rigging checklist must be held before hoisting takes place.
- Panel plan has been reviewed given to crane / rigging company.
- Approved rigging plan reviewed with all participating contractors present.
- Certified crane operator (within last 5 years).
- Years experienced with tilt-ups __________.
- Current crane certification (make copy for file).
- Maintenance record (make copy for file).
- Crane capacity: ________________________.
- Weight of heaviest pane: ________________.
- Longest reach: ________________________ Which panel? _________________________
- List panels that will be walked: ________________________________________________
- Spreader bar changes required? Which panels: _____________________________________
- Adequate clearance with outriggers fully extended?
- Slab access is adequate; route is clear, is designed for the operation and has been walked by the operator/ crew.
- Any blind or inverted picks (Attempt to avoid)? Which one (s): ________________________
- Clearance of power lines (minimum 10'). Spotter required if any chance of hitting lines.
- Are any areas blocked out/plated over so the crane can cross- make operator aware of these locations (toilet rooms, kitchens, pits, thin depressions, column block outs, etc.)

**Rigging**

- Rigging foreman works with XL Construction foreman for all decisions.
- Rigging foreman experience with tilt ups: ________________________________
- Rigging inspected.
- Don’t abuse rigging by tossing from one location to another.
- Type of rigging used: ________________________________
**Inserts**
- Were there any replacement pick pints or brace points? ______________________________
- Everyone on lifting crew aware of location of all replacement inserts?
- Have replacement pick/ brace points been pull tested?
- Rotohammer and anchors ready if one is missing or cannot be used.

**Bracing**
- Bracing system engineered. Engineer or manufacturer:
- Bracing system in good condition (never substitute parts).
- Will braces clear each other in the corners? Yes: _____ No: _____.
- Adjust braces to proper length prior to pick, with pins replaced and secure.
- Have knee braces ready when panel is set.
- Will the bracing have to be laced?
- If JLG's scissor lift will be used, confirm operator is certified to operate, and take extreme caution around braces.
- Anchoring system inspected.
- RE-CHECK BRACES AND SAFETY CONDITION OF PANELS AT THE END OF EVERY SHIFT.

**Additional Considerations**
- Stripping bars/ Burke bar- crew trained in use and hazards.
- Pane, when set on walls, prevented from kickout. How: ______________________________
- Panel swept off and rigging connections cleaned out prior to lift.
- Survey instruments to check panels for plumb and alignment.
- Shim stock available.
- Maximum wind allowed before shut down: ________________MPH.
- Backup gear, bracing, inserts, and tools.
- Excavations/ holes at building perimeter flagged off, if a hazard.
- Rebar caps available/ placed on vertical dowels or other protruding bars.
- Chain of command: rigging Foreman in charge.
Everyone understand their assignments.

Housekeeping issues:
  a. Panels clean, tolls picked up pick, points free of debris.
  b. Clear areas around lift in all directions.
  c. Other: ______________________________________________________________________

Personnel not associated with lift, kept out of area.

Stand clear while panels are being lifted.

No stripping while panels are being lifted.

Wait to grab braces until directed.

Hold braces at your side, never between your legs.

Don’t put braces down until directed.

Keep clear of walking wheels.

Avoid area between crane and panel.

Keep eyes on panel until secured and braced.

Plan escape routed in case of crane or rigging failure. It may be quicker to escape to the side.

Don’t pull panel releases until instructed.

Beware of unbalanced rigging which may run free after rigging has been released from panel.

If it’s not correct, stop and make corrections before moving to the next panel

This checklist with added notes serves as the meeting minutes for this pre-task meeting. Notify the XL Construction supervisor listed below immediately if any corrections are required.
Confined Space Work

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – The confined space entry procedure is designed to ensure a safe work environment when work is performed in a confined space. The procedure is to be used whenever employees are required to enter a confined space as defined within this procedure. Or BEFORE any work is performed in a confined space or ENCLOSED space that is contained or is suspected of having contained toxic materials, flammable gases, or any area where there is restricted air flow or access.

THIS CHECKLIST APPLIES – Prior to entry of confined space by any personnel.

Date: ________________________________ Job: __________________

Project Name: ________________________________ Attendees: ________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Confined Space Work
Pre-Task Meeting Checklist:

Definition

☐ A confined or enclosed space is any space having limited means of access and egress, such as a tank, manhole, vault, or other restricted opening. Confined or enclosed spaces include, but are not limited to storage tanks, vessels, bins, boilers, ducts, sewers, underground utility vaults, tunnels, pipelines, and open top spaces more than 4’ in depth, such as pits, trenches or excavations, tubs, vaults, caissons, and vessels or any other space which is subject to the accumulation of toxic or flammable contaminants or has the potential to be oxygen deficient or enriched atmosphere. Also space not intended for continued human occupancy.

List known confined spaces to be worked:
_______________________________________________________________________
_______________________________________________________________________

Procedure

☐ No entry or work will be allowed by a craftsman unless a valid XL Construction Confined Space Permit has been issued and is current and conspicuously displayed in the work area. The permit must be properly completed with all appropriate boxes and blanks filled in.

List Persons:
_______________________________________________________________________
_______________________________________________________________________

Permit

☐ A “permit” will only be issued by XL Constructions Superintendent or Entry Supervisor after the work area has been properly tested. See Confined Space Program (See XL SPM) for Permit.

☐ The Foreman (subcontractor supervisor) must check the permit to ensure full compliance with all of the applicable requirements. Upon completion of the work, the permit must be marked complete and returned to the XL Constructions superintendent or supervisor.

☐ It will be the crafts supervisor’s responsibility to include any required safety precautions in his daily instructions (training) to all personnel involved in the work, BEFORE the work begins, and to ensure compliance with the terms of the permit.
Permits will be issued prior to entry of any confined space. The length of the work permit duration will be determined solely by the XL Constructions Superintendent, Field Safety Engineer or Corporate Director of Safety. The Project Superintendent or Entry Supervisor will ensure compliance of all personnel with the terms and conditions of the permit.

All non-complying activities will be stopped immediately and will not recommence until corrective actions have been made.

Training

Employee required to enter into confined or enclosed spaces shall be TRAINED, and UNDERSTAND:

- The nature of the potential hazards involved. (Review of MSDS)
- The necessary precautions to be taken.
- The required use of protective and emergency equipment and its location (equipment, testing gear)

Environmental Testing

BEFORE ENTRY into any confined or enclosed space suspected of having flammable or toxic concentrations or oxygen enriched or deficient atmospheres, appropriate test of the atmosphere must be taken to ensure that explosive or toxic limits are not exceeded, or the oxygen concentration is not below 19.5% or above 23.5% of the total air mixture.

In addition, carbon monoxide tests will be taken whenever “hot work” is anticipated or gas, propane, or diesel engines are being used in close proximity to the confined area.

During inert gas welding in confined spaces, portable and or fixed oxygen analysis and/or audible alarms shall be used.

Any confined space found to have or suspected of having Monoxide (CO) contamination will be:

1. Evacuated immediately
2. Promptly reported to XL Superintendent or entry Supervisor
3. Posted with appropriate signage.
4. Ventilated/Exhausted
5. Discontinue the source of contamination

6. Rechecked by approved XL Superintendent or entry Supervisor

7. Additional safety precautions

All monitoring and air sampling equipment will be checked and calibrated prior to any entry and at least two times daily when used for continuous operations

**Ventilation**

Mechanical ventilation is preferred method in reducing concentrations of flammable and toxic contaminates.

1. Ventilation exhaust systems must be designed, constructed, and operated so as to ensure the required protection by maintaining a volume and velocity of exhaust air sufficient to gather dust, fumes, vapors or gases from the confined or enclosed space to convey them to suitable place for safe disposal, thereby preventing their dispersion in harmful concentrations into atmospheres where nearby employees may be working during ventilation operations. Exhausted contaminants should be discharged away from employees/workers to an open area (outside building, if possible).

2. Periodic air sampling for flammable, toxic and oxygen deficient atmospheres should be done BEFORE and during employee work assignments in confined or enclosed spaces to ensure that toxic limits are not exceeded.

3. The XL Construction Superintendent or Entry Supervisor is responsible for making appropriate tests.

4. The use of any heat producing and/or oxygen consuming equipment must be reviewed and approved by the XL Constructions Superintendent or Entry Supervisor.

**Personal Protective Equipment**

Suitable and necessary work/rescue equipment, including lifelines, harnesses or hoists, etc., shall be immediately available at all times. This equipment shall be selected with the potential hazards or possible contingencies anticipated during the work operations.

Appropriate clothing, eye, face and ear protection shall be worn by all employees.

**Respiratory protection:**

Where air sampling has determined that toxic limits have been exceeded or an oxygen deficiency exists, and accepted engineering control measures such as general and local ventilation are not feasible, respiratory protection (cartridge masks, air line respirators, etc.) shall be worn, which are applicable and suitable for the identified air contaminates, and as stipulated in the work permit. Respirators will be utilized only by trained personnel in accordance with the XL Construction, Inc.
Respiratory Protection Program. Subcontractors must provide a copy of their respirator training program and personal fit test record prior to use. XL Construction respirator program will serve as a guideline for comparing adequacy of subcontractor’s program.

**Electrical Lighting**

1. Lighting will be provided in areas where sufficient natural light does not meet requirements.

2. In work areas where flammable air concentrations may exceed explosive limits, only explosion proof fixtures, or equipment otherwise designed for explosive atmospheres, shall be used.

3. Emergency lighting shall be provided at all points of access and egress. When this is not practical, explosion proof flashlights shall be provided to persons required to enter confined or enclosed spaces which are subject to blackout.

4. All electrical equipment will be on “ground fault” interrupters including generator supplied power.

**Communications**

Communications as stipulated by the Permit shall be MAINTAINED between all personnel in the enclosed or confined space and personnel outside those areas. This shall be accomplished by utilizing one or more of the following:

1. Visual contact

2. Voice

3. Two-way radio

4. Motion detector/proximity alarm (PAL alarm)

**Fire Protection**

The following conditions shall be maintained in confined spaces at all times.

1. Emergency access and egress.

2. All flammable liquids will be reduced to the smallest quantities possible.

3. 20BC or better rated fire extinguishers shall be immediately available.

4. Compressed gas cylinders except SCBA’s are forbidden to be within the confined space without consent from the Field Safety Engineer or Corporate Director of Safety

5. All rags, brushes, gloves, etc. Shall be stored in metal containers with lids
6. Trained personnel assigned to fire watch shall be present at all times during welding, burning and heating operations and ensure that no fire conditions exist for a thirty minute period after work has ceased.

7. All flammable gas equipment, hoses, torches, etc., shall be free of defects and inspected by the crew foreman prior to use during such operations.

**Lock-Out and Tag-Out Procedures**

All lines, pipes or ductwork where flammable and or toxic materials are carried shall be positively double blinded, locked out and tagged.

All electrical equipment, motor, fans, etc., not necessary for supporting confined space operations will be locked out and tagged.

All equipment which can move, fall, or crush must be blocked and secured from moving.

**Other Items Discussed**

☐ A CPR/First Aid certified person will be on site and readily available during confined space operations.

  List:
  
  ____________________________________________________________
  
  ____________________________________________________________

☐ Refer to the XL Construction Confined Space Program

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Pre-Erection Cranes

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To establish a safety plan & common agreement/understanding prior to equipment arriving on site.

THIS CHECKLIST APPLIES - Prior to any/all cranes on site.

Date: ________________________________  Job: ________________________________

Project Name: ___________________________________________________________________

Attendees: _____________________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Crane to be used: ________________________________  Capacity: ________________________________

CRANES: PRELIMINARY AND SET UP

☐ Reviewed Crane Safety (See XL SPM)

☐ Completed and approved Crane Hoisting and Rigging Checklist (See XL SPM)

☐ Approve insurance certificates received.
Current DOSH certifications – annual & quadrennial (cranes exceeding 3 tons capacity).

FAA permit needed (if over 200 feet/close to airport) No _____. Yes ____: Aviation light ___, flag ___ to be used. Permit and instruction can be found on line type (FAA crane permit)

Access roads prepared – any underground utilities or slab weak spots examined.

Enough room to erect/extend boom.

Will boom be extended over public areas during initial crane set up and travel or at other times? No_____ Yes _____: Responsibility for traffic/pedestrian control: ____________________________

Adequate swing clearances.

Set up on firm/level surface, free of known underground hazards which could affect stability.

Mats/cribbing for soft soil.

Outrigger fully extended – free of leaks.

Operator currently certified by an OSHA designated Accredited Certifying Entity (i.e. NCCCO) (within 5 years of card issue date) for the specific type of crane used (Exceptions for boom lengths less than 25 feet or maximum rated capacity less than 15,000 pounds).

Qualified rigging crews supplied by ________________________________

Rigging in good condition supplied: ________________________________

Crane log up to date (repair, maintenance, test, etc.).

Load capacity – lifting chart posted

Weight of heaviest load?

Maximum swing radius for heaviest load per chart.

Crane not altered in any way.

Landing area can support load.

Qualified signal person supplied by: ________________________________

Communication to be used: Hand signals ____, wireless radio _____, hardwire radio _____.

Overhead utilities at least 20+ feet away from boom/line/load? (See Crane Operations near Energized Power lines section of this checklist.)

Traffic plan for deliveries – steel, mechanical equipment, etc.

Will crane be left overnight? Yes _____No _____. Yes: cab/controls lockable for security?
Operation:

- Public access to hoist area barricaded off.
- Pinch points around crane rotation area flagged.
- Warning horn operational.
- Slings, shackles and other rigging checked for defects/modifications. Responsibility: ____________________________
- Tag lines.
- Clear landing area.
- Overloading of structure prevented. Where will loads be placed?
- Are building floors clear of occupants under pick?
- Clear view of signal men as needed.
- Fall protection required if landing crew is exposed to a fall within 6 feet of a perimeter, roof/floor openings or within a Controlled Access Zone (CAZ) and fall distance is 6 feet or more by any worker or supervisor. Review Fall Protection Plan (See XL SPM)
- Riding suspended loads, hooks or slings prohibited.
- Pre-determined wind speed shutdown (anemometer) __________ and/or at discretion of the operator or landing supervisor.
- Operator understands he is responsible for a safe operation at any time where safety of the workers or public is endangered.
**Tower Cranes:**
- ☐ Erection permit and operating permit required from Cal/OSHA.
- ☐ Twenty-four hour beacon/flash.
- ☐ Load automatic stop (overload limit device).
- ☐ Trolley limit device.
- ☐ Test weights on site.
- ☐ Dedicated communications with rigger.
- ☐ Arrange for Cal/OSHA Inspection at least 30 days prior to initial use date.
- ☐ Manufacturer’s qualified person on site during erection, climbing and dismantling of crane.
- ☐ Certified inspection.
- ☐ Re-inspections: List: ____________________________________________
  ____________________________
  ____________________________

**Crane Operations Near Power Lines:**
- ☐ Can power lines be turned off?
- ☐ No closer than 20 feet?
- ☐ Insulated boom guard.
- ☐ Insulated boom link
- ☐ Crane “lock-out” device available?
- ☐ Experienced Spotter. Location of Spotter.

**Personnel Platforms:**
- ☐ Only used if other conventional means would be more hazardous.
- ☐ Pre-task safety meeting held prior to use.
- ☐ Approved platform and suspension system; rated load capacity specified on unit.
- ☐ Crane equipped with two-blocking prevention device.
- ☐ Trial lift, with weights simulating expected load, performed immediately prior to lifting personnel; trail lift repeated after each crave move.
- ☐ Visual inspection of all components and rigging, after trail lift, by qualified person.
☐ Continuous radio contact.

☐ Safety harness and shock lanyard for all hoisted personnel with attachment at overhaul ball (preferred) or at basket structural member.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
**Crew Briefing (Safety Task Assignment & Job Hazard Analysis)**

**Pre-Task Meeting Checklist**

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

**PURPOSE** – Identify possible hazards and prevent injuries.

**THIS CHECKLIST APPLIES** - When necessary as determined by XL Construction supervisor.

Date: ___________________________ Job: ________________________

Project Name: _____________________________

Attendees: _____________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Hazard Analysis
Activity Hazard Analysis / Daily Crew Briefings

Date: ______________________________________
Contractor: ________________________________ Foreman: ______________________________

1. Scope of Work:
_______________________________________________________________________________
_______________________________________________________________________________
                                                                                      
a. Estimated start and stop times:Start: ___________________________ Stop: _____________

2. Possible Hazards
a. Crews: (equipment, fall exposure, lifting, noise, cave-in, electrical, traffic, sharp objects, dust, fire, chemical. If chemicals used attach MSDS sheets.

b. Possible hazard to other Contractor’s Crews (equipment, falling materials, sparks, traffic noise).

c. Possible hazards to existing site (traffic, equipment, dust, welding flash, fire, laser, noise).

3. Required PPE
a. Always hard hat, safety glasses, traffic vest, shirts, gloves, seat belts. Additional (circle items that apply: Ear plugs, face shield, welding hood, flagging, sand blast helmet, respirator, knee pads, steel toes. Other (list):

_______________________________________________________________________________
_______________________________________________________________________________
b. Safety Harness/Fall Protection (list rated tie off points):

__________________________________________________________________________
__________________________________________________________________________

4. Permits need (circle): None, Excavation permit (right to penetrate/dig), Open flame/burn, Confined Space, Shut down, Other:

_____________________________________________________________________________
_____________________________________________________________________________

5. EQUIPMENT:
   a. Motorized/mechanical equipment to be used (List equipment).

__________________________________________________________________________
__________________________________________________________________________

b. All equipment will be inspected before use each day. Will confirm to have operating safety devices (backup alarms, horns, seat belts, fire extinguishers, GFI’s guards, heavy duty electrical cords with operating grounds, Grounding Rods, no cuts or exposed wires.

c. Lifting and transporting materials with (circle as applies): Crane, Excavator Forklift, Backhoe, Drill Rig, Other __________________________. Operators certified:

   ■ Yes: ____ No: ____ Not required: ____

d. Equipment inspected, rigging inspected, load tags free of damage. Rigging capable of supporting loads. How will load be secured: __________________________

e. Communications /signals known to operator and groundman. Confirm and initial: __________________________

f. All non-involved personnel clear of lift area. Area flagged off.

6. Dirt work cuts marked and flagged, stable for equipment, ground personnel and operator in common briefing. Required set-backs for heavy equipment / loads established.

7. Name(s) of competent person(s) if required:

__________________________________________________________________________
__________________________________________________________________________

8. Provided additional write-up or diagrams as needed to describe work.

__________________________________________________________________________
__________________________________________________________________________
9. Dust Control: Do any areas affected contain naturally Occurring Asbestos (NOA) in concentrations greater than 0.25%? If so, list the additional dust control measures to prevent any visible emissions from traveling farther than 25 feet from point or origin or across any property lines.

_____________________________________________________________________________
_____________________________________________________________________________

Submitted by:
Contractor: _________________________________________________________________
Completed by (name): __________________________________________________________
Date reviewed: _______________________________________________________________
Demolition

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To plan for the safe demolition of items scheduled for demolition, and the safe handling of hazardous materials and construction debris.

THIS CHECKLIST APPLIES – Prior to starting any demolition or remodeling activities. In addition, reference public protection and other related checklists.

Date: ___________________________  Job: ___________________________

Project Name: ___________________________

Attendees: ___________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Demolition Checklist:

☐ Demolition per EPA and Local Air Quality Management Districts (AQMD) is the removal of a load bearing member without its replacement.

  ■ AQMD signs off on demo permit before some local agencies will issue permit. It could take as much as 10 days to review and sign off.

☐ Renovation is all other remodels and interior / exterior improvements

☐ What is the age of the Building? List _______

☐ Is it a School? If yes, then there are additional precautions to be taken that are not listed in the pre-task-call Safety for possible additional regulatory required training, testing to meet Abestos Hazard Emergency Response Act (AHERA) protocols.

☐ Structural Engineers Report – Survey by licensed engineers or qualified person to be done before demolition can begin.

☐ Must have an asbestos abatement report prepared by a Certified Asbestos Consultant (CAC) in hand and review it before demolition/renovation starts. All surfaces to be demolished/renovated must be tested. Asbestos listed as trace (0.1% in California) or better is considered “hot” by Cal OSHA. All materials that can be made friable at 1 % or greater are heavily regulated by EPA and Local Air Quality Districts for handling and disposal.

☐ Will lead based paints be disturbed? All surfaces other than in residences (housing) most likely contain lead if put in place prior to the mid 90’s. If yes, call XL Construction Safety Department for guidance. As a minimum all loose and flakey paint will need to be removed prior to impacting the structure. (Note: Asbestos and lead have been found in some paints). With the exceptions for School Renovations, lead removal operations are primarily conducted for Health and Safety of the workers involved versus childhood lead prevention exposures. There are additional regulatory reporting requirements for childhood lead prevention inspection and abatement activities

☐ If the structure was/is an active healthcare facility, research facility, chemistry lab or similar, check low points in plumbing/P-traps for Mercury and contain and dispose of properly. Consult Field Safety Engineer or Corporate Director of Safety for guidance of safety precautions and handling of possible mercury contaminated wastes.

☐ Is there or was there any hazardous material processes used onsite? If yes, have the process piping and duct work been decontaminated?

☐ Is there a formal closure report for the site? If no, does one need to be developed to meet local requirements?

☐ Are there process tanks, diesel or gasoline tanks and associated piping involved in the demo/remodel? If yes, have there been any leaks or indications that contamination to surface concrete or subsurface ground or water?
☐ Is independent inspection/testing needed for determining the extent of potential solids mitigation?

☐ Is there any other known contamination to the subsurface materials? To include: Naturally Occurring Asbestos (NOA) in soils greater than 0.25% or know soil or ground water contamination from adjacent sites.

☐ Permits – Must have demo permit, Cal/OSHA permit (36'+) and asbestos removal or lead removal notifications, environmental permits BAAQMD for all demolitions or renovations involving asbestos removal (over 160 sq. ft or 260 linear feet (typically), Fire, Water, Street Closure, or Pedestrian Walkway Permits. Review Safety Inspections (See XL SPM) for additional information.

☐ Review Concrete Cutting And Coring Pretask (Where Applicable)

☐ Has USA been contacted and area marked? Have non-signatory utility owner’s in the area been contacted? USA Ticket #:__________________________________________________

☐ Are “Private Utility Locators” needed for surveying the site?

☐ List high hazard underground utilities: _______________________________________

☐ Qualified demo contractor and supervisor. Contractor and Supervisor have experience in this area of demo.

☐ List Contractors supervision training/certifications, i.e., Hazardous waste operations, Asbestos Supervisor, Lead Supervisor, OSHA 10 or better, CPR/First Aid, ___________________________ ____________________________________________________________________

☐ If asbestos is present, only a Cal/OSHA Registered Asbestos Contractor will be used for removal.

☐ Dust Control Plan – If there is Naturally Occurring Asbestos over 0.25% then a more stringent dust control plan is mandatory in accordance with local AQMD regulations and California Health and Safety Code 93105.

☐ Can the Health Care facilities or other business be affected by dust from demolition activities? Check onsite water pressure. Use booster pumps if pressure is too low. Check haul routes and plan for loads being covered and wheels of trucks leaving the site cleaned. Plan for a minimum of daily street sweeping/cleaning of roadways for debris removal/tire tracking through city streets.

☐ Water containment, SWPPP notifications of all sites 1 acre or greater and water discharge protection in place. Who is responsible for maintaining BMPS? __________________________ 

☐ Utility Shut Off – Remove electric, gas, water, sewer, phone and data lines back from demo area. If possible try to find as-builts of building and site. Continue to evaluate for changes in scope and conditions. If Asbestos abatement needs to occur, water and power are required. Provide a plan of how the temp services are set up. How is the temporary electric system grounded, etc. How is the waste water contained and disposed. Do you need to contact the local water district to notify them that you are using the sewer system to depose of PRE FILTERED waste water?
List shared utilities that must remain during various phases of demolition.

List how remaining utilities and limits of demolition are to be marked and protected to prevent unintentional removal.

Refer to lock-out tag-out and test out pre-tasks and protocol.

Building access for workers – stairs, ladders and construction passenger elevators (60’+) must be in place for demo work. Covered and protected entrances to buildings are required for construction workers.

Protected access for the public when required for emergency exiting and access to other areas.

Proper signage, adequate flagging, fencing & notification.

An enclosed chute must be used when debris is dropped outside the building. The discharge end must be closed off when not in use. All material, debris and waste material must be removed from site as work progresses.

Pre-demolition survey of adjacent structures and roadways for pre-existing damage – Digital photos, notes, video, etc. Have this done and documentation preserved prior to the demolition commencing.

The building or site must be secured at the end of the work day. Fencing of all public access is required.

Fire watch make final pass through site after the work stops and document.

Verify proper disposal of all hazardous waste, and non-hazardous materials. What is the extent of recycling required by the owner/local municipality?

Is this a LEED project? Are provisions for meeting this requirement known and provisions for successfully meeting this contract requirement understood?

At the start of the workday the building should be inspected for people, exposed wiring, asbestos, structural integrity, or anything that may be hazard to workers or the public.

Pedestrian safety plan – List precautions and responsibilities for providing public protection to include: site fencing, signage, traffic flaggers, notifications, environmental testing etc.

Recycle freons (HVAC systems)/halons (Fire Suppressions)/fluorescent lights/smoke detectors, Mercury electrical switches and components, PCB light ballasts and possible electrical transformers if installed prior to 1978.

Check Fall Protection Pretask section of this book and Fall Protection Plan (SPM 4-215)

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Hotwork Electrical

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify possible hazards.

THIS CHECKLIST APPLIES - Prior to equipment start-ups and utility tie-ins.

Date: ___________________________________________ Job: ________________________

Project Name: ____________________________________________

Attendees: ____________________________________________

Please check if you are trained in any of the following:

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
<th>First Aid</th>
<th>CPR</th>
<th>Defib</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Checklist:

☐ The following XL Construction representative will be present during the hot work:

______________________________________________________________________________.

☐ The location of the panel is in (state room name & number) ____________________________.

☐ What are the voltage levels involved ________________________________________________.

☐ Include a description of the job to be performed.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

☐ Identify the people doing the work and their roles.

☐ Who is the person in charge?

☐ Who is the “standby person”? (Standby person must be CPR certified).

☐ What is the skill level required?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
Building Documents & Utility Location.

☐ Review drawing of the area or areas were work is being performed. This includes the job plans, single line diagrams, as built, submittals, etc. List pages referred to from the drawings.

☐ Are any photos of the area available for review? No:___ Yes:____. If yes, attach copies.

☐ Is there any nearby hazard, i.e.- additional electrical, gas, chemical, hydraulic, water, or communications line? No:___ Yes:____ If yes, list:

☐ What is the available incident energy?

☐ Is there a potential for arc flash? What is the flash protection boundary?

☐ Review and attach Subcontractors lockout tag-out procedures if applicable.

☐ Emergency shut off(s) for utilities located and functioning?

Owner Contact Person: ________________________Phone No.:_____________________

☐ Are there any “foreign” or secondary voltage sources?

☐ Are back feeds of the circuits to be worked on possible?

☐ Are there any unusual work conditions? No:___ Yes:___ If yes, list:

☐ Locate the nearest phone. Do you need to dial 9 before 911?

☐ Who are the people you need to identify immediately in case of an accident and what are their phone numbers?

☐ Locate the fire alarm pull stations.
Safety Program — Pre-Task

**Equipment, PPE & Training.**
- List equipment being used.
  - __________________________________________________________
  - __________________________________________________________
- Is the equipment right for the job and the work area? Is the equipment in good working condition, has it not been modified and are all manufactured safety devices in place and functioning?
- Is the operator experienced with the equipment being used? How long? ______________
- List Personal Protective Equipment (PPE) that will be used. IE., Rubber gloves, earplugs, face shield, rubber boots, grounded equipment, fall protection equipment,
  - __________________________________________________________
  - __________________________________________________________
- Is the required emergency equipment available? Where is it?
- Qualified personnel who tag and lock out are the only one to remove the locks when work is completed.
- Only qualified personnel will do start-ups after tie-ins are made and/or activation of thermal systems.

**Public & Employee Safety**
- Is the space occupied? No: ___ Yes: ___. If yes, by who?
  - Construction related employees: __________________________________________
  - Owner or tenant employees: __________________________________________
- If occupied, has the planned activity been communicated with the effected parties?
- Contact Person _____________________________Phone #___________________________
- Area barricaded /taped off above /below /next room.
- Signage
- Public Protection: In addition to the above items. Protect occupied spaces adjacent to work areas with approved/proven methods. Barricade sidewalks/ walkways-provide safe alternate clearly marked routing.
- All access ladders shall be secured (top & bottom) and have hoist ropes available for tools/ supplies.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Pre-Hoisting of Equipment

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify possible hazards.

THIS CHECKLIST APPLIES - Before lifting of equipment

Date: ___________________________ Job: ________________________

Project Name: _____________________________________________

Attendees: ________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Equipment

☐ Reviewed Crane Safety (See XL SPM)?

☐ Completed and approved Crane Hoisting and Rigging Checklist (See XL SPM)?

☐ Completed Pre Erection Cranes Checklist.

☐ Review Fall Protection Plan (See XL SPM)

☐ Current crane certification?

☐ Current operator certification (within last 5 years)?

☐ Qualified Riggers and Signalman?

☐ Rigging in good condition and adequate supply.

☐ Accurate weight and dimensions of equipment.

☐ Do pick points look adequate and sensible?

☐ If no pick points provided, what is manufacturer’s recommendation?

☐ Lift heaviest piece of equipment last if possible.

☐ Any damage to frame or pick points due to handling during transport?

☐ Are sleepers, roof supports, and structural members adequate? Do the loads designs match what the actual units on site tags say, and is the weight distributed evenly?

☐ Do layout of anchor bolts. Sleepers, or supports match dimensions given on submittals, and do actual unit dimensions match?

☐ Are radios needed?

☐ Is a tie off point harness/shock lanyard handy for signaling/landing near edge?

☐ Is a tag line needed?

☐ Should any areas be flagged off?

☐ Is entire jobsite aware of lift?

☐ Do areas need to be evacuated prior to lifting?

☐ Is building occupied by tenants and lift scheduled off hours?

☐ Do any local ordinances restrict times?

☐ If at night, is there adequate light?

☐ What weather conditions to expect; will wind or rain endanger safe lift?

☐ Will crane be able to set up in pre-planned point on day of pick?
☐ Does soil, asphalt, building slab, or whatever surface crane will sit on, have adequate bearing capacity?

☐ Are mats needed for outriggers?

☐ See Fall Protection Section of this book for specific requirements

This checklist with added notes serves as the meeting minutes for this pre-task meeting
Excavation/Trenches

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To protect workers in and around excavations. All excavations 4’ or deeper must be surveyed by a Competent Person to prevent collapse or cave-in all trenches & excavations 5’ or deeper must be protected if personnel will enter.

THIS CHECKLIST APPLIES - Prior to any digging onsite. Other checklist may also be needed (i.e. Public Protection)

Date: ___________________________________________ Job: __________________

Project Name: ____________________________________________

Attendees: _______________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Excavations/ Trenches

☐ Subcontractor to submit Injury Illness Prevention Program

☐ Review Trenching And Excavations (See XL SPM)

☐ Provide Copy of CAL-OSHA Annual T-1 Permit and Activity Notification for Excavations/ Trenches 5 or greater in depth where personnel must enter.

☐ Mark Excavation/ Underground Work Area and Contact Underground Service Alert (USA--Dial 811) Ticket #________________. In cases where the Utility Owners will not Locate Underground Installations on Private Property a Private Utility Locator must be contracted.

☐ List high hazard utilities known to be within 10 feet or closer to excavation. Location of existing utilities.

List

_______________________________________________________________________
_______________________________________________________________________

☐ Review As-Builts (where available) of Excavation/ Underground Work Area and create As-Builts for future reference.

☐ As-built plans reviewed? No: ___ Yes: ___. Are copies available?No: ___ Yes: ___.

☐ XL Construction Policy on utility potholing explained and understood. How will potholing be done?

☐ List_______________________________________________________ See attached.

☐ Where work occurs adjacent to Existing Structures, an RPE must identify where Excavation and Trenching operations might affect the (E) Building structural integrity and provide temporary measures during construction.

☐ Signed contract and required insurance certificates received from subcontractor.

☐ Who is the Competent Person during work in excavation?

☐ List name: ____________________________________________ Phone #: ________________

☐ Name of person for contractor who will do probing and is that person trained______________________

☐ No: ___ Yes: ___. Will person also spot for equipment?No: ___ Yes: ___.

Safety Program — Pre-Task
Utilities shut-off: Where?_________________
What type of utility key is required? __________________
List
_____________________________________ Phone_______________________________
_____________________________________ Phone_______________________________
_____________________________________ Phone_______________________________

Project soils report reviewed

Soil conditions expected: ___________________________________________________
hard/ compact, wet, running water, etc.

Protect surface encumbrances that may create a hazard to employees or equipment.

Is there any potential chance for damage to adjacent structures or properties? Have pre-work photos of existing conditions been taken?

Soil classification. Who classified? Competent persons name: List: ____________________
___________________________________________________________________________

If sloped or benched what is anticipated slope: ¾ to 1; 1 to 1; 1 ½ to 1 measured from the bottom of the trench. See attached diagram

Shoring system (hydraulic/ timber) description: Cal/OSHA specified or engineered system.

- Alternative protection system
- Designed by a registered P.E. includes trench box/shield (Tabulated Data)
- Submit a copy to XL Construction.
- System engaged within first 5' of excavation.

Reduce employees exposure to vehicular traffic with the use of high visibility garments.

- Vests- stop/ slow paddle, barricades, signage, blocking vehicles.

- How will excavation be fenced,flagged or barricaded to prevent potential fall exposure to the public, other contractors, co-workers.

List: ______________________________________________________________________
________________________________________________________________________

Provide appropriate access and egress within 25’ for excavations 4’ or more in depth.

- Ladders extended 3 feet above top of excavation.
- Ramped excavations.
Safety Program — Pre-Task

☐ Equipment routes, and equipment to be used? List________________________________________

☐ Any known contamination? List_____________________________________________________

☐ Test the air in excavations deeper than 4’ as necessary to identify potentially hazardous atmospheres; (i.e., methane, H2S, others): List: _______________________________________

☐ Adequate protection of employees from loose rock that may fall or roll into an excavation. Spoils to be 2’ or more away from the excavation.

☐ Walkways or bridges with guardrails are required when crossing over excavations 6’ in depth and wider than 30”.
  ■ Exposed work at perimeter of excavations 6’ in depth unless sloped or benched:
    ■ Guardrails
    ■ Tie point Harness an lanyard with S.R.L (yoyo's)
    ■ Barricaded or covered, example: cyclone fence panels laid secured over trench.
    ■ K-Rail for preventing vehicle traffic.

Fall Protection - Excavations / Trenches

☐ Traffic direction and control. Public/workers traffic direction & control.

☐ Trench plates. See Trench Plate Pre-task.

☐ Fall Protection: Cal/OSHA Article 6, Section 1541(1)

  1. Where employees or equipment are required or permitted to cross over excavations over 6’ in depth and wider than 30 inches, walkways or bridges with standard guardrails shall be provided.

  2. Adequate barrier (physical protection) shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be backfilled.
- Guardrails surrounding a trench/excavation deeper than 6 feet shall be flagged or have a temporary fence 5' back from the edge.
- Trench boxes designed for the excavation with sides extending 36” or more above the excavation for short duration or 42” for exposed trades or public.
- Tie-off’s for employees exposed to an unprotected excavation while working alongside the open hole deeper than 6 feet.
- Use of a personal fall restraint system which will allow the worker to work at the trench perimeter but prevent worker from falling into the trench.
- Self-retracting life lines. SRL's and harnesses to be used for fall protection within 5’ of the unprotected excavation edge greater than 6 feet in depth.
- Covers over excavation, such as trench plates, designed plywood, cyclone fence panels, etc. shall withstand 2 times the intended load.

Other considerations. List ____________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Attachment

1. Pot holing/ hand digging- Hand dig in conflict areas to locate the utility without damaging it. Anyone responsible for cutting into or severing an underground utility will be suspended or terminated unless they: 1) First checked with their supervisor before excavating or trenching for possible utility conflicts, and then 2) hand dug in conflict areas to locate the utility without damaging it.

2. Backup alarm audible to be heard up to 200 feet. Anyone who intentionally disconnects and equipment back-up alarm or other equipment warning device will be dismissed from this jobsite.

3. Anyone who enters an excavation or trench of 5 feet depth or more that is not properly shored or sloped will be dismissed form this jobsite.

Slopping requirements- soil classifications.
- **Class A** - .75 wide to 1 deep
- **Class B** - 1 wide to 1 deep
- **Class C** - 1.5 wide to 1 deep

Measured from the bottom toe of the trench/ excavation.

FROM Cal/OSHA WEB PAGE

Figure B-1

Slope Configurations

(All slopes stated below are in the horizontal to vertical ratio)

B-1.1 Excavations made in Type A soil

- All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 3/4:1.

**Simple Slope-General**
Exception: Simple slope excavations which are open 24 hours or less (short term) and which are 12 feet or less in depth shall have a maximum allowable slope of $\frac{1}{2}:1$.

**Simple Slope-Short Term**

- All benched excavations 20 feet or less in depth shall have a maximum allowable slope of $\frac{3}{4}$ to 1 and maximum bench dimensions as follows:

**Simple Bench**
Multiple Bench

- All excavations 8 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical side 3 ½ feet.

All excavations more than 8 feet but not more than 12 feet in depth with unsupported vertically sided lower portions shall have a maximum allowable slope of 1:1 and a maximum vertical of 3 ½ feet.

Unsupported Vertically Sided Lower Portion-Maximum 12 Feet in Depth

All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of ¾:1. The support or shield system must extend at least 18 inches above the top of the vertical side.

Supported or Shielded Vertically Sided Lower Portion

B-1.2 Excavations Made in Type B Soil

- All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1.

Simple Slope

- All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1 and maximum bench dimensions as follows:

**Single Bench**

**Multiple Bench**

- All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1:1

Vertically Sided Lower Portion

B-11.3 Excavations Made in Type C Soil
All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1 1/2:1.

**Simple Slope**

All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1 ½:1.

Vertically Sided Lower Portion

All other sloped excavations shall be in accordance with the other options permitted in 1541.1 (b)

**B-1.4 Excavations Made in Layered Soil**

All excavations 20 feet or less in depth made in layered soils shall have a maximum allowable slope for each layer as set forth below:

- B OVER A- (refer to OSHA website for diagram)
- C OVER A- (refer to OSHA website for diagram)
- C OVER B- (refer to OSHA website for diagram)
- A OVER B- (refer to OSHA website for diagram)
- A OVER C- (refer to OSHA website for diagram)
- B OVER C- (refer to OSHA website for diagram)

All other sloped excavations shall be in accordance with the other options permitted in 1541.1. (b).
XL Construction, Inc.

**Excavations & Soils Disturbance Permit (ESD)**

Job Name: ___________________________ Permit #____________________________

Job Number: ___________________________

Subcontractor: ___________________________  _____XL Self Performed Work_________

Date Requested: _________________________ Date Permit Expires: _________________________

Requested by: _____________________________________________________________________

Type of Work:  ____ Excavation/ Mass Ex.  _____Trenching/ Digging

_____Utility Location/ Pothole ____Directional Boring/ Caissons/ Piles

☐ Date of Initial Excavation/ Trenches Pre-Task: ______________________________________

☐ Note: An Excavation & Soils Disturbance Permit shall NOT replace the XL Construction
Excavation/Trenches Pre-Task Meeting.

  ■ Confirm USA Underground (Nor/Cal) or Underground Service Alert (So/Cal) has been
  notified & list Confirmation/ Ticket Number: ___________________________ & date
  renewal is required: ___________________

☐ Date work is to be Performed: _________________________________

☐ Nearest Project Grid Lines Work is to be Performed: _________________________________

☐ Type of Equipment to be used: __________________________________________________

☐ Equipment Operators Name: ___________________________________________________

  ■ Anticipated depth, width & length of excavation/ trench: depth_____’ width_____’
  length_____’

  ■ Review as-built drawing of the area or areas were work is being performed.
  List pages referred to from the as built drawings. Attach copies if possible.

  ______________________________________________________
  ______________________________________________________

  ■ List methods used to locate utilities. IE USA, Utility Locator Company (UTI) or Handheld
  Locator Devices.

  ■ List date(s) location service was provided: ____________________________
  ______________________________________________________
Known utilities located and marked across/ through excavation/ trench area.

List utilities known to be within 10’ or closer of the excavation/ trench.

- Electrical (any voltage)
- Water: Drinking/ Irrigation/ Reclaimed (Transite Pipe)
- Street & Areal Lighting
- Petroleum/ Diesel Fuel/ Heating Oil
- Chilled Water
- Natural Gas
- Steam Lines
- Cable/ Fiber Optic/ T1/ Phone Lines
- Sanitary Sewer (Lead Okum Seal)
- Fire Main
- Storm Drain
- Pneumatic Tubing
- Oxygen/ Nitric Oxide
- Other: _________________________________

Confirm that utilities will be hand dug by non-mechanical means within 24” of the utility.

Review location of or facility contact person(s) responsible for utility shut off.

- Contact Person(s) Name & Number: _________________________________
- Review location of utility shut off tool/ key.
- Tool/ key is at current permitted area.
- Verify emergency contact information for utility operator, owner contact & emergency services.
☐ This ESD Permit requires a revalidation if any of the following situations should occur.

- Project Superintendent/Coordinator has changed.
- ESD boundaries I.E. length, width, and or depth are increased.
- Utility field marking have changed or have been removed.
- An unexpected underground utility or structure is found to have been marked in the wrong location.

☐ Verify public and crew protections are in place via barriers, tapes and fall protection if required.

Competent Persons Signature (Print & Sign): _____________________________________________

Superintendents Signature (Print & Sign): _____________________________________________
Fall Protection

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

NOTE: All Fall Protection Plans must be site specific.

PURPOSE – Identify all possible hazards associated with

**THIS CHECKLIST APPLIES** - Prior to employees working at elevation of 6’-0” or greater, or over vertical rebar.

This checklist and the fall protection plan with added notes serves as the meeting minutes for this pre-task meeting. Notify the XL Superintendent immediately if any corrections are required.

Date: ____________________________ Job: ____________________________

Project Name: _______________________________________________________

Attendees: ___________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall Hazards To Address</td>
<td>Fall Protection Methods</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Structural Steel Connection Covers</td>
<td>Guardrails / Openings</td>
<td></td>
</tr>
<tr>
<td>Bolting</td>
<td>Fall Restraint Systems</td>
<td></td>
</tr>
<tr>
<td>Decking</td>
<td>Positioning Device Systems</td>
<td></td>
</tr>
<tr>
<td>Crane suspended personnel platforms</td>
<td>Fall Arrest Systems</td>
<td></td>
</tr>
<tr>
<td>Boom Lifts</td>
<td>Horizonatl Lifelines/Catinary Lines</td>
<td></td>
</tr>
<tr>
<td>Scissors Lifts</td>
<td>Vertical Lifelines</td>
<td></td>
</tr>
<tr>
<td>Roof Work/Roof Openings</td>
<td>Rope Grabs</td>
<td></td>
</tr>
<tr>
<td>Skylights</td>
<td>Self-retracting lifelines (ree/yo-yo’s)</td>
<td></td>
</tr>
<tr>
<td>Perimeter Work</td>
<td>Double Lanyard System (100% tie-off)</td>
<td></td>
</tr>
<tr>
<td>Wall openings/Elevator Shafts</td>
<td>Secure Anchorage</td>
<td></td>
</tr>
<tr>
<td>Floor Openings/Stairwells</td>
<td>Flag Lines/Warning Signs</td>
<td></td>
</tr>
<tr>
<td>Ladders</td>
<td>Safety Monitor</td>
<td></td>
</tr>
<tr>
<td>Scaffolds (rolling/exterior build-up)</td>
<td>Safety Nets</td>
<td></td>
</tr>
<tr>
<td>Others:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fall Protection Safety Tips:**

- Fall Protection must be inspected for damage prior to use and inspected/ documented quarterly by a competent person.
- Any Damaged Fall Protection Equipment must be removed from service immediately and repaired or destroyed.
- Use both hands when climbing.
- Don’t ride equipment unless a proper seat is provided.
- Be careful when working or climbing on equipment; always climb, don’t jump.
- Provide guardrails on all platforms 6’ high or more, or use fall restraint/ fall arrest system.
- Guardrails must be 42”- 45” (max), have a midrail and capable of withstanding the force of 200 pounds.
- Tie off to an approved Anchor Point. Must be Approved by Qualified Person.
- Minimize fall distance by tying off as high as possible above the waist.
- Always connect Lanyard or SRL directly to Center “D” Ring.
If wearing shock absorbing lanyard, make sure that you calculate the distance of an expanded shock absorber (up to 3 1/2’). Shock absorbing lanyards come in 2’, 5’ and 6’ lengths.

Distance must be 18.5 feet above level below when using a 6 foot lanyard.

Never Tie a lanyard off to itself and Knots decrease lanyard strength.

Always have a point of rescue incase of a fall.

Catenary lines, with a minimum safety factor of 2, must be secured between two fixed points and not sag more than 15” in a 30 foot span.

Tie-off when working elevated over exposed vertical rebar or capped vertical rebar. Tie-off when working more than 6 feet over covered vertical rebar.

See ladder safety checklist on page 3.

**Ladder Safety**

- Use proper ladder for task.
- Remove defective ladders from the work area immediately and destroy.
- Insure that ladder footing is secure.
- Do not lean an “A” frame ladder unless it is secured from slipping.
- Make certain ladder landings are free of debris and tripping hazards.
- Maintain three points of contact while climbing.
- Always face ladder while doing work.
- Use belt buckle rule- Do not work off the top three rungs without fall protection.
- Do not straddle ladder; back rungs are not made to support weight.
- Do not work on top two steps (cap and first step down) of a step ladder without fall protection.
- Do not use a metal/aluminum ladder near electrical sources.

**Extension Ladders**

- Secure extension ladders at top and bottom when possible to prevent sliding.
- Extend access ladders 3’ above the landing.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Fireproofing

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Injury and Illness Prevention Program and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify all possible hazards.

WHEN THIS CHECKLIST APPLIES - Prior to application of fire proofing

Date: ____________________________________________ Job: __________________

Project Name: ___________________________________________________________

Attendees: _______________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Checklist:


☐ MSDS’s Reviewed to determine Required PPE

☐ Is Respiratory Protection Required? Yes or No?
  ■ If Yes, Review XL Construction Safety Program Manual (Respiratory Protection Program) for requirements for wearing respirators.
Fall protection - Review XL Construction Safety Program Manual (Fall Protection Plan) and Reviewed Fall Protection in this Booklet.

Scaffolding (rolling) requirements - (access ladder/ locking wheels planking/ bracing) Review XL Construction Safety Program Manual Scaffold Safety and Rolling Scaffold Checklist

Plan for securing work area with Flagging/ Tape and Signage appropriately.

Overspray Protection.

Spray Hopper Placement:

Ground Protected from Run-off.

Clean-out / Disposal Prepared - Subcontractor Responsible for disposal

Wheels Chocked on Trailer.

Inspect Pump and associated Equipment for defects and or user modifications:

Hand railing in place?

Gas Powered Pumps must be placed outdoors and away from any fresh air intakes of adjacent structure.

Proper Storage of Fuel

Fire Protection: 20 BC Fire Extinguisher.

Prepare for Power Requirements for electric powered pumps.

Remote Controlled Pumps must be factory wired.

Inspect all hoses, and hose connections for damage and proper hose connections.

Factory Required Safety grate in place at pumps.

Prompt clean-up/ method of removing from building.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Heat illness Prevention

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues, nor replace Cal-OSHA requirements if they are more stringent. Refer to the XL Construction Injury and Illness Prevention Program and SIP program for additional Safety considerations.

PURPOSE – Identify all possible hazards and prevent injuries.

THIS CHECKLIST APPLIES - When necessary as determined by anticipated weather conditions.

Date: ___________________________________________ Job: __________________

Project Name: __________________________________________

Attendees: __________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CAL/OSHA Heat Advisory

When employees work in hot conditions, employers must take special precautions in order to prevent heat illness. Heat illness can progress to heat stroke and be fatal, especially when emergency treatment is delayed. An effective approach to heat illness is vital to protecting the lives of California workers.
Employers of outdoor workers must comply with the new permanent heat illness prevention standard. This standard requires employers to take four simple steps that include shade, water, training and written procedures. These can greatly reduce the risk of outdoor workers developing heat illness.

Heat illness results from a combination of factors including environmental temperature and humidity, direct radiant heat from the sun or other sources, air speed, and workload. Personal factors, such as age, weight, level of fitness, medical condition, use of medications and alcohol, and acclimatization affect how well the body deals with excess heat.

**Heat Illness Risk Reduction**

1. **Recognize the Hazard.**

   There is no absolute cut-off below which work in heat is not a risk. With heavy work at high relative humidity or if workers are wearing protective clothing, even work at 70°F can present a risk. In the relative humidity levels often found in hot areas of California (20 to 40 percent) employers need to take some actions to effectively reduce heat illness risk when temperatures approach 80°F. At temperatures above 90°F, especially with heavy work, heat risk reduction needs to be a major concern. It is especially important to be vigilant during period of abnormally high heat.

2. **Water.**

   There must be adequate supply of clean, cool, portable water. Employees who are working in the heat need to drink 4 eight-ounce glasses of water per hour, including at the start of the shift, in order to replace the water lost to sweat. For an eight-hour day this means employers must provide two or more gallons per person. Many people can be very dehydrated and not feel thirsty at all. Employees need ongoing encouragement to consume adequate water. Drink water frequently. Avoid soda, alcohol and coffee.

3. **Shade and Rest Breaks.**

   Employers are required to provide shade for recovery period when employees need relief from the heat. The direct heat of the sun can add as much as 15 degrees to the heat index. Heat illness occurs due to a combination of environmental and internal heat that cannot be adequately dissipated. Rest breaks are important to provide time for cooling and provide an opportunity to drink water. Breaks should be taken in cooler, shaded areas. Wide brimmed hats can also decrease the impact of direct heat.

4. **Acclimatization**

   People need time for their bodies to adjust to working in heat. This “acclimatization” is particularly important for employees (1) returning to work after a prolonged absence or recent illness, (2) recently moving from a cool to a hot climate, or (3) working during the beginning stages of a heat wave. For heavy work under extremely hot conditions, a period of 4-10 days of progressively increased work time starting with about 2 hours work per day, though not
required, is recommended. Also, recommended. For less severe conditions at least the first 2 or 3 days of work in the heat should be limited to 2 to 4 hours. Monitor employees closely for signs and symptoms of heat illness, particularly when they have not been working in heat for the last few days or when a heat wave occurs.

5. Prompt Medical Attention

Recognizing the symptoms of heat illness and providing an effective response requires promptly acting on early warning signs. Common early symptoms and signs of heat illness include: headache, muscle cramps, and unusual fatigue. However, progression to more serious illness can be rapid and can include: unusual behavior, nausea/vomiting, weakness, rapid pulse, excessive sweating, hot dry skin, seizures, and fainting or loss of consciousness. Any of these symptoms require immediate attention. Even early symptoms may indicate serious heat exposure. If first aid trained personnel are not immediately available on-site to make an assessment and worker show any abnormal response to the heat, you should call 911 immediately. Regardless of the worker’s protests, no employee with any of the symptoms of possible serious heat illness noted above should be sent home or left unattended without medical assessment and authorization.

6. Training.

Supervisors and employees must be trained in the risk of heat illness and the proper measures to protect themselves and their co-workers. Training should include:

a. Why it is important to prevent heat illness
b. Procedures for acclimatization
c. The need to drink water frequently
d. The need to take breaks out of the heat
e. How to recognize the symptoms of heat illness
f. How to contact emergency services and how to effectively report the work location to 911
g. The importance of choosing water instead of soda or other caffeinated beverages and avoiding alcoholic beverages all together during high heat.

7. Written Procedures

Employers are required to put their heat illness prevention procedures, including employee training in writing. It is recommended this document be incorporated into the employers Injury and illness Prevention Plan. Other recommended procedures include account for all your workers during and at the end of the work shift. Check the heat index prior to starting work each day. If the temperatures are high, consider beginning and ending your shifts early. If possible, work should be performed in the shade.
Cal/OSHA Heat Illness Prevention:

What you need to know

The new Heat Illness Prevention Standard

By Len Welsh, Acting Chief, Cal/OSHA

As temperatures rise, so does the risk of heat illness. The California Division of Occupational Safety and Health (Cal/OSHA) wants to remind all employers that heat illness can be deadly. This risk is generally the highest for people who work outdoors, and that is why California’s first heat illness prevention standard was developed. Heat illness, a medical condition that results from the body’s inability to cope with heat and cool itself, contributed to 13 work related deaths in 2005, and was an underlying factor in the high percentage of non-fatal incidents reported last year.

Heat illness preventable

The best defense against heat-related illnesses and fatalities is prevention. The new Heat Illness Prevention Standard, Title 8, California code of Regulations, Section 3395, adopted on June 15, 2005, requires all employers with outdoor worksites to take 4 basis steps to prevent heat illness:

1. Provide heat illness prevention training to all employees, including supervisors.
2. Provide enough fresh water so that each employee can drink at least 1 quart per hour and encourage them to do so.
3. Provide access to shade for at least 5 minutes of rest when and employees believes he or she needs a preventative recovery period. They should no wait until they feel sick to do so.
4. Develop and implement written procedures for complying with heat illness prevention standard.

Heat illness types and syndromes

Heat stroke, the most serious health problem for workers in hot environments, is caused by the failure of the body’s internal mechanism to regulate its core temperature. Sweating stops and the body can no longer rid itself of excess heat. Signs include (1) mental confusion, delirium, loss of consciousness, convulsion or coma; (2) a body temperature of 106 degrees F or higher; and (3) hot dry skin which may be red, mottled, or bluish. Victims of heat stroke will die unless treated promptly.

Heat exhaustion results from loss of fluid through sweating when a worker has failed to drink enough fluids or take in enough salt or both. The worker with heat exhaustion still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. The skin is clammy and moist, the complexion pale or flushed, and the body temperature normal or slightly high.
Heat cramps, painful spasms of the muscles, are caused when workers drink large quantities of water but fail to replace their bodies’ salt loss. Tired muscles—those used for performing the work—are usually the ones most susceptible to cramps.

Fainting (heat syncope) may be a problem for the worker not acclimated to a hot environment who simply stands still in the heat.

Heat rash, also known as prickly heat, may occur in hot and humid environments where sweat is not easily removed from the surface of the skin by evaporation. When extensive or complicated by infection, heat rash can be so uncomfortable that it inhibits sleep and impedes a worker’s performance or even results in temporary or permanent disability.

**Training**

Before employees can work outdoors, employers are required to provide them with heat illness prevention training. This mandatory training for supervisors and employees under the new standard includes the following information:

- Environmental and personal risk factors.
- Employer’s heat illness prevention plan and procedures.
- They need to drink water frequently throughout the day.
- Importance of acclimatization (allowing the body to adjust gradually to the work in high heat)
- Types of heat illness and the signs and symptoms.
- Necessity of immediately reporting to an employer any signs or symptoms.
- Employer’s procedures for responding to the symptoms.
- Employer’s procedure for contacting emergency medical services. This includes alternative modes of transportation.
- Employer’s procedures for emergency communications. This includes the emergency response procedures such as location, local medical services, and communication alternatives.

**Adjusting to the heat**

One training component for employees on heat illness prevention is the importance of acclimatization, or adjusting to physical activity in hot weather. The body needs time to adapt to increased heat and humidity, especially when one is engaged in heavy physical exertion. Typically, people need four to fourteen days to adjust fully to significant increases in the heat. Cal/OSHA data reveals that most workplace deaths related to heat illness that occurred last year involved new employees who were on the job only one to four days and were unaccustomed to working in hot or humid weather. While the heat illness prevention standard calls for employers to train employees on the importance of acclimatization, it is up to employers to determine what acclimatization procedure they will use. The best strategy is to allow employees, and especially new ones, to adjust.
to hot weather by gradually increasing to a full work shift and pace. On very hot days, other good strategies include timing the shifts so that more work can be done during the cooler parts of the day, increased the number of water and rest breaks, and using “buddy system” so that workers and supervisors can monitor each other. Also, employees should be reminded of the cooling benefits of wearing loose fitting, light-colored clothing and a wide-brimmed hat, when it’s feasible.

Shade

Recent safety and health data shows that all the surviving victims of heat illness has access to some shade during work periods, lunch or at breaks. Under Cal/OSHA’s new standard, and employee working outdoors who wants to cool off must be provided with shade for 5 minutes at a time. Shade fore heat illness recovery periods must be accessible to employees at all times. In industries other than agriculture, employers may utilize measures other than shade to prove cooling if they can demonstrate that these alternative measures are at least as effective as shade.

According to the new standard, shade means blockage of direct sunlight. Shade is sufficient when objects do not cast a shadow in the shaded area and there is sufficient space for the employee to be comfortable. Shade is not adequate when the temperature in the shaded area prevents cooling. You must avoid sources of shade such as metal sheds or parked cars that are hot from sitting in the sun. Also, tractors and other machinery do not qualify as sources of shade and have potential to create an even greater hazard. If you have employees who work outdoors, consider some easy-to-assemble portable sources of shade, such as umbrellas, canopies, or other temporary structures. Buildings, canopies, and trees all can qualify for shade as long as they block the sunlight and are either ventilated or open to the air.

Water

The third component of the new standard requires an employer to prove employees, working outdoor, one quart of portable, fresh and cool water per person, per hour. In last year’s case studies, Cal/OSHA data revealed drinking water was present at all worksites, even though 78% of those who succumbed to the heat suffered from dehydration. Therefore, it is critical to keep drinking water accessible and remind your workers to drink it frequently.

Written Procedures

The new standard requires an employer’s heat illness prevention procedures to be in writing and made available to employees and to representatives of Cal/OSHA upon request. These written procedures must include:

- How an employer will comply with the heat illness standard requirements.

- How to respond to symptoms of possible heat illness, including how emergency medical services will be provided.

- How to contact emergency medical services, and if necessary, how employees will be transported to a point where they can be reached by and emergency medical service provider.
■ How they will ensure that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders. Employers are encouraged to integrate their heat illness prevention procedure into their Injury and Illness Prevention programs (IIPPs). All the elements of the Heat Illness Prevention standard must be implemented to prevent serious illness to your workers. By protecting your employees from heat illness, you promote a healthier and more productive workplace.

■ To learn more about the shade, water, written procedures and training requirement of the new Heat Illness Prevention Standard, visit www.dir.ca.gov

**Use Best Practices**

The new Heat Illness Prevention Standard Provides a solid foundation for employers to follow in protecting outdoor workers from heat related illnesses and fatalities. But with record temperatures we are experiencing and are expected to endure in the upcoming summers, Cal/OSHA encourages employers to go beyond the basics in worker safety, and take the initiative to provide a healthier work environment.

**Check the Weather**

In addition to the regulatory requirements. Many best practices can be implemented to add a degree of additional safety to the workplace. First, develop a habit of checking the heat index. If you anticipate heat waves you can be prepared. www.nws.noaa.gov/om/heat/index/shtml

**Tailgate Trainings**

Though the standard requires initial training, as best practice employers should consider conducting weekly or daily tailgate trainings on heat illness throughout the summer.

**IIPP**

As a best practice, employers are encouraged to integrate heat illness prevention procedures into their Injury and Illness Prevention Programs (IIPPs).

**Water and Rest Breaks**

An essential best practice is to provide water instead of drinks with caffeine and sugar, as these can dehydrate a person even more. Add ice to water, increase the number of water and rest breaks for employees, and keep the water nearby!

**Shade**

Provide your workers with shade as required and whenever else possible. Consider easy-to-assemble portable sources of shade, such as umbrellas, canopies, or other temporary structures and remember the investment you’re making is in your employees’ lives.
**Clothing**

Another simple strategy to prevent heat illness is to employ the cooling benefits of loose fitting, light-colored clothing and wide-brimmed hats, when and if work allows.

**Monitor**

Utilize a “buddy system” so that workers and supervisors can monitor each other when out in the field.

**Shift Change**

When temperatures are excessive, time your shifts to accomplish heavy work during the cooler parts of the day, and consider starting and/or ending your shifts early. Also, alternate tasks when possible.

Cal/OSHA Consultation Services: A valuable employer resource.

Cal/OSHA Consultation Services assists employers in reducing their workplace injuries and illness through onsite visits, telephone consultation, publications and educational outreach. In addition, employers may receive recognition for their achievements and inspection exemptions through Cal/OSHA partnership programs.

All consultations are confidential from Cal/OSHA Enforcement and are free of charge. If you are a California employer who wishes to obtain assistance from Cal/OSHA Consultation, or want to learn more about what services are available, you can do so by calling the toll-free assistance number: 1(800)963-9424

Or visiting the website at www.dir.ca.gov/DOSH/consultation.html.

**Free Cal/OSHA Workplace Health and Safety Publications**

Two new, free publication sun heat illness prevention will be available soon

Through the Cal/OSHA Research and Education Unit.


This publication has useful information on risk factors and key elements on preventing and responding to heat illness. The information can be used to create a written heat illness prevention program.
(Available in English and Spanish)

Protect Yourself from Heat Illness- This handy pocket card suggests practical steps employees can take to prevent heat illness. (Available in English and Spanish) More than 100 free workplace health and safety publications, on various topics and in various languages, (including Spanish) are available on the Cal/OSHA website. You can order or download copies from the internet at www.dir.ca.gov/dosh/puborder.asp, or call your local Cal/OSHA office. For more information on heat related illness and the new Heat Illness Prevention Standard please visit www.dir.ca.gov.

CAL/OSHA Heat Advisory

When employees work in hot conditions, employers must take special precautions in order to prevent heat illness. Heat illness can progress to heat stroke and be fatal, especially when emergency treatment is delayed. An effective approach to heat illness is vital to protecting the lives of California workers.
Housekeeping & Debris Removal

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To establish standard procedures for housekeeping and debris disposal.

THIS CHECKLIST APPLIES – At the start of all projects generating any debris.

Date: ___________________________ Job: ___________________________

Project Name: _______________________________________________________________________

Attendees: _________________________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General Checklist

☐ Each sub is responsible to clean and clear generated debris on a daily basis unless a different arrangement is agreed to or required by the XL Construction Superintendent.

☐ Debris will be removed from the site by: Debris box ____ Trash truck ____ Other: ____

☐ Debris boxes/ truck provided by: _______________________________________________________

Box located at: ______________________________________________________________________
☐ Debris on stairways or in passageways removed immediately if these areas are in use.

☐ Emphasis placed on immediate removal of “rollers”: stubs of conduit, all thread and pipe in walkways and on stairs.

☐ Combustible debris piles removed daily for fire prevention.

☐ Flammable and hazardous waste placed in separate labeled, covered containers and removed from building daily.

☐ Oil, grease, water and other liquid spills cleaned up immediately to avoid slipping injuries.

☐ Used powder actuated tool load strips- put in belt pouch or carry-around containers while using tool; no strips on floor. Dispose of live loads strips in a designated bucket. Do not put water inside bucket.

☐ PAT tool will ___ Will not ___ be used.

☐ Sweeping compound required for large area sweeping (>400sf) to control dust.

☐ Sweeping compound will be need: No: ___ Yes: ___.

☐ If yes, it is available: Now____ When: _____________________________

☐ Who provides: __________________________________________________________

☐ Clinch or remove nails from crates or scrap material as crates are opened, timbers demoed, etc.

☐ Eating will ___ Will not ___ be allowed in building.

Designated area if any: ______________________________________________________

Prohibited areas if any: ____________________________________________________

☐ Adequate receptacles for food debris will be provided by: XL Construction____Sub____

☐ Adequate receptacles are available in eating area: Now____ When: _________________________

☐ Adequate receptacles available at toilet hand wash areas.

☐ Materials stored/ stockpiled in buildings:

1. Stacked neatly (confined)

2. Not obstructing passageways.

3. Flammable liquids kept in covered containers when not actually in use, with dry chemical fire extinguisher nearby

☐ Materials subject to being wind blown off open floors or roof to be secured.
Use of Forklift Debris Box

Fork debris box will ____Will not____be used on this site.

☐ Forklift operator currently certified (within 3 years). Copies of cards are on file.

☐ Fork Operator(s): ___________________________________________________________  

☐ Daily equipment inspections are required with completed forms given to Superintendent/Foreman

☐ Required seat belt use for fork operator.

☐ Box constructed in a manner sufficient to support any load imposed.

☐ Forklift operator shall periodically check integrity of box construction and be responsible for needed repairs.

☐ Box securely attached to fork carriage with rope, cable, chains, etc.

☐ If loading area over a walk-thorough area (including an open bay), fork operator shall string red flagging or red barricade tape from column to column under loading area prior or first lift and remove at completion of task.

☐ Forklift operator responsible for control of access under loading area.

☐ Personal fall protection required for cable gate attendant prior to opening cable gate or other railing (fall restraint or fall arrest).

☐ Gate attendant responsible for keeping other workers, without personal fall protection, 6 feet back from open perimeter exposure. Red tape area off if feasible. Close gate immediately after box removal.

Debris Drop Zones:

Establish whenever debris is dropped or thrown from an upper building lever.

Debris drop zones will ___Will not ___be used on this site.

☐ Guarded with red barricade tape, red flagging, barricades, fences or combination. You will use _____________________________________________  

☐ Flagging or barricade tape will be supported by __________________________ (delineators, barricades, existing fixtures, etc.)  

☐ Spotter also used in access/egress areas (including open bays) and other walk-through areas to prevent access into zone.
☐ Foremen will choose spotters with care to help insure good command of drop zone and explicitly instruct spotters on requirements. Likely designated spotters:

______________________________________________________________

☐ Spotter will instruct personnel approaching the zone, both verbally and with hand signals to communicate the danger.

☐ Spotter responsible for controlling the zone from all directions, preventing walk-through.

☐ Spotter shall remove zone guarding as needed on completion of debris drop.

☐ Foremen shall instruct crews: No trash dropped/thrown from building without established drop zone and spotter as previously specified.

☐ Walk-through areas: guarding will run completely around or on both sides of debris boxes or trash trucks; no gaps.

☐ Guarding set back far enough to prevent bounce-off material from striking personnel.

☐ Signs posted at the drop zone warning personnel of falling debris (e.g. DANGER/DROP ZONE).

☐ XL Construction Superintendent to inspect and “OK” drop zone prior to initial use.

Chutes:

☐ Chutes will ___ Will not ___be used on this site.

☐ Designated and constructed to support loads imposed on the chute without failure. If job built, chute designated by __________________________. Construction checked by:

☐ Chutes with slopes greater than 45 degrees shall be entirely enclosed (except for necessary mid-span openings with solid closures).

☐ Chute openings shall not exceed 48 inches in height.

☐ Top openings guarded with railing or solid cover.

☐ Covers/ railings closed when chute not in use.

☐ Exposure to falling into chute (opening/dumping) requires use of personal fall protection use as required.

☐ Clogging or stoppages shall be cleared with pushers such as long pipe or timbers and personal fall protection use as required.

☐ Set- back red flagging used around debris boxes if/when possibility of material bounce-off.

☐ Supervisor responsible for safe chute operation: _________________________________

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Introduction to Energized Electrical Work (the last resort)

The front section of this document is for information and the various signatures of the involved parties including owner, XL Construction, Electrical contractor. Prior to any hot work. After these discussions and signatures and hot work is determined to be the only viable alternative then the attached pre-task form must be utilized.

The hold harmless form signed by the owner releasing us from liability and/or damage to equipment and personnel must also be signed prior to the start of work. Any exceptions to this must be approved by our corporate counsel.

Reference separate “Release from Liability” form as a typical example.

Working on Energized Equipment (NFPA 70 E)

- If the equipment cannot be shut down fill out the Energized Electrical Work Permit” Appendix E.
- Select the Hazard/Risk Category from appendix G.
- Select the corresponding Task Assessment Checklist from appendix C. Each item is explained in detail and some of the work has been completed on the form. Shock boundary, and flash protection boundary have been determined using prescriptive criteria the user may elect to use alternate calculation methods to determine this boundary.
- Select the required PPE from appendix H.
- Write and submit a work plan that includes:
  - A line drawing and description of the location of the work.
  - The name and experience level of the onsite competent/qualified person responsible for the activity.
  - The names and experience levels of the workers involved in the work.
  - Lock Out Tag Out procedures.
  - A completed task assessment checklist for each hazard.
  - The correct PPE for the associated risk category.
  - A documented pre-start safety meeting where hazards are addressed and tasks are assigned with be held before each shift or when the task changes.
- This work plan is task specific and needs to be completed for each day and each shift.
- The completed plan will be reviewed by the XL Construction Director and work will not proceed until he has given his approval in writing either by fax or email.
Hotwork

This is meant to be an internal checklist prior to Hotwork.

The following people must be notified when suspected Hotwork may occur and as early in the project as possible.

*Mike Popp (Safety Department) must be notified of any Hotwork*

*Someone else (Insurance) must be notified of any Hotwork*

*Someone else (Corporate Legal) must be notified of any Hotwork*

The owner must acknowledge that there will be hotwork and require us to do this work hot.

- Have the following information prepared.
- What are the voltages?
- How many incidents of hot work are there?
- What are the consequences if something goes wrong? ie: what equipment does it effect? What will shut down?
- How much does it cost to the facility per day/hour if something goes wrong?
- Does XL Construction have a signed contract and current insurance certificates for the Subcontractors and any second tier Subcontractors?
- Has the Subcontractor Injury & Illness Prevention Program submitted?
- Has the Subcontractor Injury Prevention (SIP) Program been reviewed and signed?
- The following will have to be done by your electrical engineer or your electrician.
  - What is the incident energy?
  - Is there the possibility of shock? If so what is the Shock Hazard Analysis?
  - Is there the possibility of an arc flash? If so what is the Flash Hazard Analysis?
  - What is the shock protection boundary?
  - What is the flash protection boundary?
Appendix E

Energized Electrical Work Permit

This appendix provides an energized electrical work permit that can be used in the company’s electrical safety program to ensure that the hazards of working on or near exposed live parts receive adequate consideration. The permit, which relates to topics covered in Chapters 5, 6, 7 and 12, advises both workers and equipment owners, in writing, that work is going to be performed while the circuit remains energized. An equipment owner might be more likely to think about the consequences of his or her decision if he or she must sign a form accepting responsibility for that decision. Using this permit assures the worker that the increased costs associated with work on or near an exposed electrical conductor that is energized are justified. The use and very existence of this permit can also sometime help management to understand that work performed on the near exposed energized parts is not worth the risk. He or she might, then, find a way to shut down the system and perform the work on de-energized equipment.
Lead Preinstall & Installation

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual, Subcontractor Safety Program, applicable State, Federal OSHA, EPA & HUD regulations for additional safety & training considerations and project specific requirements.

PURPOSE – To get a common clear understanding and commitments for site safety requirements. Lead installers upper management and field supervisors are required to be present.

THIS CHECKLIST APPLIES - Prior to any lead containing materials arriving on site to include but not be limited to lead shielding (lead lined drywall), lead brick, lead lined door frames, lead containing glass/ glazing, lead floor covering & roof jacks containing lead.

Date: ______________________________________ Job: __________________

Project Name: ________________________________

Attendees: ____________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Checklist

Materials Review

☐ List the materials/ products that will be covered by this preinstall & installation meeting and assign approximate quantities in square feet (ft²), number of rooms or penetrations.
  ■ Lead lined drywall:
  ■ Lead lined Door Frames:
  ■ Lead Bricks:
  ■ Lead sheeting (floor or wall coverings):
  ■ Lead roof jacks (roof penetrations):
  ■ Other:

☐ Subcontractor has been provided with copies of the following standards:
  ■ Code of California Regulation (CCR) §1532.1.Lead.
  ■ CCR §5194. Hazard Communication.
  ■ California Department of Health Services (DHS) Regulations & Forms
  ■ Lead Pre-Job Notification form (Ms Excel Format) (153KB pdf format)
  ■ HUD & EPA Guidelines for Clearance.

☐ Does this work require the contractor or their supervisors to be DHS registered?
  ■ Yes____
  ■ No____
  ■ If no, will potential change order work which may require demolition of preinstalled materials change this answer?

Preinstall Review

☐ Submit & review Subcontractors delivery schedule, storage procedures and move in procedures for lead containing materials. The plan at a minimum must address:
  ■ Delivery procedures.
    ■ How is the material delivered?
    ■ Is it covered during transport?
    ■ Identify material delivery routes on map or prints.
Safety Program — Pre-Task

■ Storage procedures.
  ■ At what location on site will the material be stored?
  ■ How will it be secured?
  ■ What signage will be placed on the material to warn employees of the potential hazard?

■ Move in procedures.
  ■ What procedures will be implemented for transport of the material through the project.
  ■ Will the product be covered/sealed for transport?
  ■ Will floors, hallways, corridors be covered?
  ■ Will transport routes be cleaned after move in?

☐ XL has a signed and executed contract and current insurance certificates for the Subcontractor.
  ■ Insurance renewal date: ________________________________

☐ Subcontractor Injury & Illness Prevention Program (IIPP) / Safety Manual.
  ■ Submitted
  ■ Reviewed? Review completed by: _______________________ Date: ______________________

☐ XL Subcontractor Safety Program (SSP) has been:
  ■ Distributed.
  ■ Reviewed by the Subcontractors involved &
  ■ Has been signed by: ___________________________ Date: __________________

  ■ It is understood that no Subcontractor or any tier Subcontractors employee is allowed to perform work on this site without reviewing and signing the SIP Program

☐ Is a Lead Pre-Job Notification required for the above related work?
  ■ Yes: ___ No: ___

  ■ If yes, attach copy of the submitted notification. Attached: _______________________
  ■ If no, Why? ___________________________________________________________________

☐ Exposure Assessment (EA) shall be conducted to assess the employee's exposure to lead.
  ■ Review the most current EA
Safety Program — Pre-Task

- Are they at or below the Action Level (30µg/m³ calculated at an 8 hour Time Weighted Average) [CCR1532.1(1)(1)(B)]

- Are they at or below the Permissible Exposure Limit (PEL) (50µg/m³ calculated at an 8 hour Time Weighted Average)

- Attach the most current exposure assessment (EA). Attached: ______

- Date of previous EA: ______

- If the test data indicates consistent exposure levels below the action level and if the data is within 12 months, for similar operation, materials and personal training levels, a Negative Exposure Assessment (NEA) may exist and respirators may not be required.

☐ If available, but no later than the start of work, submit & review employee training records.

☐ If available but no later than the start of work, submit for review the medical records of employees performing lead related work. Records should be sensitive to employee confidentiality but should provide enough information to assure that the employees are under medical surveillance & are within allowable limits for lead related work.

- Blood samples and analysis which includes BLL, Zinc protoporphyrin, blood urea nitrogen and others.

- Respiratory fit test records & exam records.

- This should be a part of the Subcontractors Respiratory Protection Program.

- Fit test records should be within one year of start of work.

☐ Submit & Review Subcontractors install procedures. Procedures should include, at a minimum, considerations for:

- Work area setup, security & cleanup

- Install work practices.

- Install engineering controls, to include onsite personnel monitoring if applicable.

- Install Personal Protective Equipment (PPE)

- Post installation clearance criteria.

☐ Submit Cal/OSHA and CDPH (DHS) notifications if required.
Work Area Setup

☐ Review & attach Subcontractors procedures for setting up of the work area. Procedures should address at a minimum:

- Pre work area cleanliness.
- Does the area need to be pre-cleaned and tested for lead contaminants?
- Critical barrier protection.
- Floor, wall & ceiling protection.
- Will poly be installed on floors, wall and open ceiling areas and critical barriers?
- Change/ Anti room set up.
- Room/ area security & acces.
- How will the room or area be secured to prevent unauthorized access by other trades and personnel not authorized to be in the lead install regulated areas?

Installation Work Practices

☐ Review & attach Subcontractors work practices. Work practices should address at a minimum:

- Change/ Anti room maintenance
- Cleaning of mop water and changing of tacky mats if used.
- Cleaning of the area on a regular bases to prevent lead dust migration/ buildup.
- Installation methods.

Installation Engineering Controls

☐ Review & attach Subcontractors engineering controls. Controls should address at a minimum:

- Cutting methods.
- Tools to be used.
- High Efficiency Particulate Air (HEPA) tolls with shrouds available.
- Negative Air Machines (NAM’s) with HEPA filtration.

Installation Personal Protective Equipment (PPE)

☐ Review & attach Subcontractors list of PPE that will be available for use and those items that are required to be used. PPE that should be, at a minimum considered:
Safety Program — Pre-Task

- Booties for covering of work boots.
- Possible spare pair of boots for use during work only.
- Coveralls or disposable Tyvek® style suits.
- Respiratory protection.
- Respiratory protection should be addressed even if the EA demonstrated a low exposure below the action lever.
- Respiratory protection must be available for employees to use in the event they choose to do so.

Post Installation Cleaning & Clearance Criteria & Labeling

☐ Review & attach Subcontractors plan for cleaning the work area prior to clearance wipe sampling begins.

☐ HUD guidelines for dust wipes samples are as follows. Wipes must be below these levels to be considered a non-lead-dust hazard and clear for other trades to occupy the space/ area. In addition, revised section 35035 of title 17 considers dust to be “lead-contaminated” when at or above the following levels.

- Forty micrograms per square foot (40µg/ft²) for interior floor surfaces.
- Two hundred and fifty micrograms per square foot (250µg/ft²) for interior horizontal surfaces including window sills; or
- Four hundred micrograms per square foot (400µg/ft²) for exterior floor and exterior horizontal surfaces and interior window wells.

☐ Clearance sampling shall be performed by a CDPH (DHS) accredited Project Monitor or Assessor.

☐ List lab that samples will be analyzed by- (Note the use of lead checks/ silver nitrate pens are not acceptable for sampling purposes.)

☐ Sampling methods should include 3 clearance wipes per room & 1 wipe per corridor to ensure engineering methods are affective. Adjacent rooms and open ceiling areas should also be considered for clearance wipe sampling.

☐ List the provisions for re-cleaning if the clearance samples do not pass or the area outside the immediate work area becomes contaminated due to non-compliance-maintenance of the work area exclusion zone.

☐ Label walls, floors, penetrations and areas that contain lead products. Labels should warn of the hazard and should state: Warning, Lead Containing Material/ Coatings, DO NOT Alter or Penetrate.
☐ List the Senior Management Personnel that are to be contacted if the agreed upon procedures are not being followed on the job.

☐ Are there any other lead related pre-existing conditions, work procedures, clearance procedures, isolation procedures, and ventilation procedures that need to be addressed?

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Masonry Block Wall

Pre-Task Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify all possible hazards, as well as to maintain compliance with all Cal/OSHA regulations subchapter 4. Construction Safety Orders Article 29. Erection and construction, Section 1722. Masonry Construction, and XL Construction Inc. safety policies.

**THIS CHECKLIST APPLIES** – Prior to the construction of any masonry wall.

Date: ____________________________  Job: ____________________________

Project Name: ____________________________

Attendees: ____________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General Checklist**

☐ Limited access zones/ Restricted Work Areas shall be established prior to the construction of any and all masonry walls, and conform to the following:
The limited access zone shall be established on the side of the wall that will not have scaffolding. If there is to be no scaffolding used to construct the wall then both sides will have a limited access zone. List locations and durations for where limited access zones will be established:

- The limited access zone shall be restricted to only those trained employees that are engaging in the construction of the masonry wall. The boundaries shall be established by the use of fencing, danger tape, rope or flagging. Also signage listing contractors name and contact person will be in place to deter the entry of the limited access zone. If the limited access zone width cannot be attained what additional precaution will be taken to prevent injuries to others?

- List:

- The width of the limited access zone shall be determined by overall height of the non-grouted/ cured wall plus and additional 4 feet, and run the entire length of the wall plus an additional 4 feet on each side of the non-grouted/ cured masonry wall.

- List at what heights Block will be grouted:
  - 1st lift _____________; 2nd lift _______________; 3rd lift _______________.

- The limited access zone shall remain intact until the wall is secure from collapse. If the wall to be constructed is over eight feet in height then the limited access zone shall remain in tact until the requirements of section 1722(b) have been met. Are there access doors that need to be barricaded? (yes /no)

List:

- All masonry walls over eight feet in height shall be adequately braced to prevent overturning and to prevent collapse unless the wall is adequately supported through its design and/or construction method to prevent overturning or collapse. The bracing shall remain in place until permanent supporting elements of the structure are in place. What wind loads/ MPH is bracing design adequate for: __________________________ __________________________

- The Mason Contractor shall designate a responsible person to be present during masonry construction.

Name of responsible person: _____________________________________________

Phone number: ________________________________________________________

- Maintenance of bracing. Provide inspection of braces to ensure their proper adjustment and that none are damaged or have excessive wear. Documentation of inspections is mandatory. Name of person conducting daily inspections: ______________________________________

- How was bracing spacing, anchorages and strength of braces determined?
Alternative methods. Alternative bracing designs and methods are permitted when documented by data representing field conditions and approved by a registered professional engineer.

Measurement of wind speed. List design wind speed of bracing _______________ MPH

Whichever method is used to determine the wind speed, instrumental or visual, it is assumed that this determination will occur in close proximity to the masonry wall under construction. This determination of wind speed should represent the wind speed normal to the wall. To assure life safety, no one is permitted in the limited access zone when wind speed exceeds the value used in the design of the masonry wall bracing.

**Scaffolding**

- List name of proof of training of trained scaffold erector (if done in-house).

- Annual Permit for Scaffold/Falsework/Vertical shoring has been submitted and a copy has been attached to this pre-task?

- How will scaffold be tied into wall to prevent overturn?

- What is load capacity of scaffold by sq. ft.?

- Will there be any openings or shafts that personnel/ masons will be exposed to a fall 6 feet or greater? If so what will be utilized for fall protection?

- List the # of courses of block/brick that will always be above the scaffold plank level to prevent the mason from falling over the wall. Guardrails must be in place when the scaffold platform is 6’ or greater the the grade below. Guardrails are not required on the inboard side of the scaffold only if the block is installed 16” in height above the scaffold platform and the inboard edge of the scaffold platform is within 7”, or closer to the block wall being installed.

- How will scaffolding at elevation be accessed? Ladder? Stair?

- Heavy duty scaffolding to be used? Yes ___ No ___

  - All heavy duty scaffolding shall have frames no more than 7’ on center.
  
  - All planking shall have a minimum of 6” overlap over scaffold frames.
  
  - All planking shall be inspected prior to installation to assure that damaged planks are not used.
- All scaffold frames shall be inspected prior to installation to assure non-damaged frames are installed.
- All footpads shall be a minimum of 1 \( &\frac{11}{8}\)" plywood and 10"sq.
- Mudsills required? Yes___ No ___

**Cutting of Block**

- Wet cutting with guarded saw. Yes___ No ___
- No dry cutting allowed without permission by XL and only after proof that work is below OSHA PEL’s of 0.1 milligrams silica per cubic meter of air (0.1 mg/M3) averaged over an 8-hour work shift (Table AC-1 5155) or personnel are properly equipped with respiratory protection and that no additional hazards to other workers or general public is created. In addition to being in compliance with local air quality management regulations.

- Housekeeping- maintained in work area on an hourly basis

  This checklist with added notes serves as the meeting minutes for this pre-task meeting.
New Job Start-Up Checklist

Safety Items

From XL Safety Dept.:

☐ Completed Safety Work Order Form for the following items:
  ■ OSHA Board
  ■ Maps to nearest Hospital and Clinic (Onsite Health and Safety),
  ■ OSHA 300 Log (Feb 1- April 30)
  ■ Jobsite Safety Records Binder
  ■ New Employee Hire Package
  ■ Subcontractor Safety Program Pamphlets
  ■ SSP and Site Specific Hardhat Stickers
  ■ Written Site Specific Safety Program

☐ The following signs:
  ■ Emergency Contact Information
  ■ Hardhat, Safety Glasses, Workboots Required
  ■ Job Specific
  ■ 3E Company Poster for MSDS Procurement

☐ Pre-Task Meeting checklists. (available on the XL Construction Intranet- “Inside XL”).

☐ XL Construction Safety Program Manual

☐ MSDS Binder (Job Specific)

☐ Cal/OSHA Construction Safety Orders

☐ pill Kit barrel

☐ Opening cover signs

☐ Necessary Personal Protective Equipment and safety supplies (first aid kits, fire extinguishers, etc.)

PRE-ACTIVITY SURVEYS

☐ USA Underground called (minimum 2 days prior: Dial 811 CA & NV)
Confirmation # ______________________________ (good for 28 days).

☐ Contaminated soil
☐ Lead
☐ Asbestos

☐ Laboratories Decontamination Reports for Biopharm, Hospital, Cleanroom, Manufacturing with Hazardous Materials. Survey must include but not limited to All Horizontal Surfaces, HVAC, Plumbing, P-Traps, Vessels, Storage Tanks, Cabinets, Fume Hoods

SAFETY & ENVIRONMENTAL PERMITS

☐ Excavation (notify OSHA if digging 5’ or deeper where personnel must enter)

☐ High Rise (if structure is over 36’ high – build or demo) (Requirement for permit for XL may vary by the type of building and the Cal/OSHA district. Phone local Cal/OSHA office for determination; permit may apply to subcontractors only.) Check with Safety Dept.

☐ Tower Crane (erection and operation; phone OSHA ASAP to avoid schedule delays for required inspections).

☐ Man Lift (man lift required if structure is 60’ or more in height)

☐ Storm Water Discharge: BMP’s (Best Management Practices) in place? ________________

☐ NOI required: Yes___  No ___

☐ Local Air Quality Management District notification for Demolition (wrecking or removal of any load supporting structural member). (Subcontractor requirement for subcontracted work.) (Requires a 10 day waiting period)

☐ Air Quality (primarily for sandblasting activities)

☐ Carcinogen Registration (primarily asbestos) (Notification required if XL Construction actively inspecting within containments; otherwise a sub requirement)

☐ Underground Fuel Tank Removal (contact local fire/health dept. for permit.)

☐ Scaffold (36’ high or greater)

OTHER

☐ Be sure to check subcontractor’s insurance.

☐ Sub’s IIPP in sub supervisor’s possession; site specific MSDS’s collected prior to them starting any work.

☐ Call Safety Dept. to locate local Urgent Care Clinic and get poster & map.
☐ Notify the I.S. Dept. to put project on the Project List. ??

☐ MSDS request letters (subs and vendors; see “HazMat references” section in the Safety Manual for sample letters.)

☐ Union notification letter (Northern California only)- cc: XL Construction Industrial Relations
New Contractor Site

Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Injury and Illness Prevention Program and SIP for additional Safety considerations.

PURPOSE – This checklist is to be used for the initial safety orientation/ explanation of XL Site Safety Requirements.

THIS CHECKLIST APPLIES – Whenever a new Subcontractor arrives/ starts work on the job.

Date: ____________________________________________  Job: ______________________

Project Name: _____________________________________________________________

Attendees: _________________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Checklist

☐ Required attendees: Subcontractor’s Site Specific Foreman, Superintendent, and Site Specific Safety Coordinator.

☐ Review site logistics (entrances, access ways, surrounding conditions, site offices, knows underground utilities, parking, etc.)

☐ Review Site’s Emergency Plan (evacuation plan, Emergency Spill barrel, etc.)

☐ Review XL Construction’s General Requirements.

☐ Review XL Construction’s Instruction to Bidders, All Trades.

☐ Review XL Construction’s Amendments to Bidders, Site Specific.

☐ Review Subcontractor’s IIPP.

☐ Review Weekly all Hands Safety Meetings- Time/Day Expectation that contractor's onsite supervisors participate and lead by example.

☐ Review Weekly Subcontractor Meetings- Time/Day- expectation to attend the meeting, and penalties for not being represented.

☐ Review Subcontractor Safety Program (SSP) and Site Specific Orientation.
  ■ Performed SSP through Clicksafety www.clicksafety.com/xl
  ■ Performed SSP Manually

☐ Subcontractor signed Acknowledgement Log

☐ Issue SSP and any Site Specific Safety Sticker

☐ Owner Safety Requirements

☐ Other Site Safety Requirements

☐ Review Daily Safety Inspection Reports- representative/ reviewed by supervision and submitted to XL Construction daily. Bring to the XL Construction Superintendent’s attention immediately any serious safety conditions that need immediate attention to prevent injury to anyone on site.

☐ Review Daily Activity Reports.

☐ Review Insurance Status.

☐ Review MSDS Status- Received site specific MSDS’s and crews aware of requirements and precautions.

☐ Review contract Status
☐ Review Site Specific Plans required for this Project (e.g., trenching, demolition, concrete, placement, steel erection, fireproofing, confined space, roofing, paints, fall protection, scaffolds, etc.)

☐ Site Storm Water Pollution Prevention Program and subcontractor’s participation.

☐ Traffic Plan

☐ Open.______________________________________________________________________

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Coatings and Paintings

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE: Identify all possible hazards.

THIS CHECKLIST APPLIES - - Prior to the application of coatings or paintings including preparation of surfaces.

Date: ___________________________________________ Job: ____________________

Project Name: ___________________________________________________________

Attendees: __________________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Coatings and Paintings Checklist:

☐ Submittals: Review approved submittals. Confirm Foremen have hard copies.

☐ Materials: All materials, including cleaning agents, must have an MSDS on file before work begins. That MSDS will be reviewed and discussed with all users and any personnel who will come in contact with or be subjected to inhalation of dust, mists or vapors. Everyone should be aware of potential health hazards, safe handling procedures, protective equipment required, and procedures for emergencies and first aid. Discuss Right-to-Know law. List any hazardous materials on the job bulletin board.

☐ Application: Review manufacturer’s detailed application methods. Confirm applicator’s familiarity with product and past experience. Discuss site-specific problems.

☐ Ventilation: Review ventilation, air monitoring, and isolation procedures. Are fans on site if needed? Who else in area of work could be affected? In an occupied building, do you have enough exhaust ducting? Will a negative air fan filter be needed? Insist on a written Respiratory Protection Plan and Haz-Com training of all workers involved. Off-gassing may occur for sometime as materials cure, so plan accordingly.

☐ Personal Protection: Proper respirators used and maintained as manufacturer recommends with a good fit. Glasses or goggles used. Gloves and proper clothing to protect skin from contact. Personnel to be trained, fit-tested, and medically qualified prior to using respirator. Refer to Respiratory Protection Program (XL SPM)

☐ Fire Protection: Fire extinguishers to be available (at least 10BC), within fifty feet of product being applied. What is flash point? When sprayed, could mist be ignited by tool’s spark or arcing? Enforce smoking rules. Will explosion-proof lighting or explosion-proof ventilators be required?

☐ Storage: Follow proper storage recommendations, (e.g. away from heat, no stacking, etc.) Should product be in a double-containment trough? Fire extinguishers, (20BC+), in area. No smoking signage. Inventory taken and proper disposal of extra product and used containers.

- Onsite Storage of Materials with a Flammable, Health, Reactivity Hazard Rating of 3 or Greater is not preferred and in most cases not allowed. It is preferred that the amount of any materials which will be used in an 8hr shift be brought to the project and unused materials safely transported off the project until the following shift. Special accommodations must be made for quantities greater than 5 gallons of material. Refer to Hazardous Materials Storage and Use (XL SSP)

☐ Secondary containment requirements?

☐ Confined space considerations?

☐ Wash out areas must be identified. Washouts in storm or sanitary sewers are illegal.

☐ Flagging/Safe off work areas to protect others from walking through paint areas

☐ Overspray protection- autos/other buildings/other trades, etc.
Emergency Response—review necessary emergency equipment requirements; discuss reactions to incidents and procedures to follow. Are emergency response materials and equipment onsite? (i.e. eye wash kits, portable shower, containment materials such as absorbent or diking products).

Yard Available equipment for confined space and hazardous material work:

<table>
<thead>
<tr>
<th>Portable Showers</th>
<th>Eye Wash Kits</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Downed Man&quot; retrieval winch</td>
<td>Litmus paper</td>
</tr>
<tr>
<td>Self contained breathing apparatus</td>
<td>Exhaust ventilators</td>
</tr>
<tr>
<td>H.E.P.A Vacuums</td>
<td>Fire Extinguishers</td>
</tr>
<tr>
<td>Full face supplied air respirator equipment</td>
<td>Body Harnesses</td>
</tr>
</tbody>
</table>

Community Right-to-Know Plan

**Purpose** - To provide for safe storage, handling of hazardous materials, along with preplanning/notifications to local emergency response agencies who may respond to site emergencies.

**Conditions** - Requires: (1) Chemical Inventories, (2) Material Safety Data Sheets, (3) Double containment of all hazardous materials stored/used on site, (4) Preplanning for emergency evacuations, (5) Spill response by trained personnel, and (6) Notifications to local agencies if uncontrolled spill occurs.

**Notification** - Site program reviewed and filed with local Fire Dept./Hazardous Materials Organization. If spill occurs which may enter storm sewers, or create a hazard to the public, immediate notification to local Fire Dept. as a minimum.

**Special Note** - The implementation of the Community Right-to-Know program is an important part of complying with Storm Water Discharge Permit requirements. See XL Construction's Community Right to Know Plan.

The following procedures should be followed when cleaning a hazardous chemical spill.

- Eliminate all sources of ignition (welding, cigarette smoking, etc.).
- Evacuate the immediate area.
- Prevent unauthorized personnel from entering the contaminated area.
- Get help from people trained and equipped with protective clothing and equipment. *
- Prevent the spill from spreading by the use of diking, dams, ditches, etc.
- Use an absorbent, like kitty litter or Zorball (use to clean up oil spills), to contain the spill. Do not use sawdust.
- Keep adding layers of absorbent on the spill until there is a dry layer on top.
■ Pick up the material, using a shovel or broom, and place it in a container or several trash bag liners.

■ Wash off tools. (Some tools and clothing cannot be cleaned. Dispose of these items in the same container as the contaminated absorbent.)

■ Your Superintendent will label the container and call a chemical transportation company.

■ Further decontaminate the area through acceptable methods. This may be through the use of water.

■ DO NOT pour chemicals into the sewer.

■ DO NOT use water on water-reactive chemicals.

■ DO NOT attempt to clean up a spill by yourself.

■ DO NOT clean up a chemical spill if you do not know what you are doing.

■ READ and UNDERSTAND Material Safety Data Sheet (MSDS) for added health and safety information.

■ Protective clothing and absorbent material for spills are stocked at the XL Construction Equipment Yard. Jobsites should stock an appropriate supply (E.R. spill drum kit).

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Pressureized Piping Pre Task Testing
Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To plan for safe implementation of piping systems pressure testing.

Date: ____________________________ Job: ____________________________

Project Name: ____________________________________________________

Attendees: _______________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notification and communication

1. Has written notification been proved to the XL Construction project Superintendent two days prior to the start of any testing?
   ■ Yes: OK to continue
   ■ No: notification required before proceeding
2. Has the inherent danger of pneumatic testing with the stored energy of a compressible gas been discussed or the preferred use of hydrostatic testing, with the introduction of a corrosion inhibitor if necessary, been fully evaluated before pneumatic testing methods are applied to piping systems?
   - Yes: OK to continue
   - No: discussion and evaluation required if pneumatic testing option is being considered.

3. Does the written notification include complete descriptions of the piping being tested (see requirements below)?
   - Yes: OK to continue
   - No: provide descriptions before continuing

4. How will other trades working in close proximity to systems under test be notified of potential stored energy?
   - Describe: ______________________________________________________________

5. Who will place warning signs in the areas in which the testing is being performed and in locations sufficient to define the boundaries of the test area?
   - Name(s) ______________________________________________________________

6. Who will remove warning signs after depressurization and the system is confirmed to be in a depressurized condition by the contractor’s superintendent?
   - Name ________________________________________________________________

7. Confirm that the piping test completion and depressurization has been recorded and documented by the contractor’s superintendent.
   - Has a record of depressurization been recorded in a log?

8. No pressurized vessel or piping will be handled on the jobsite using a crane or forklift, unless the XL Construction Superintendent has been notified and the proper warnings and precaution have been implemented. Written confirmation from XL must be received before proceeding. List proposed pressurized systems, maximum pressures, and an explanation of the reason for pressurizing the system or equipment being handled.
   - Describe ______________________________________________________________

**Description of Piping systems to be Tested**

1. Provide Written description and drawings to show the following:
   a. Locations of piping being tested and boundaries of areas under test.
   b. Piping service, material and type of joints.
c. Preliminary or final test.
d. Test pressure.
e. Duration of test.
f. Test method
g. Hydraulic
h. Pneumatic
i. Relevant specification sections.

**Preparation for Testing**

1. Has a “walkdown” of the piping to be tested been performed, prior to any testing, for visual confirmation of readiness for testing including complete joints, correct valve positions, identification and awareness of check valves installed, plugs and caps, and temporary blinds?

2. Have end of line blind flanges, caps and plugs been fully bolted, welded, brazed, soldered or attached in a permanent fashion approved for the piping system being tested?

3. For use during testing, have the temporary end of line flanges, blinds and caps greater than that 2 inches in size, been installed with bleed valves and a maximum ¾ inch size plug regardless of the testing medium being employed?

4. Have warning tags been placed at all the end line flanges, caps and plugs noting that the piping system is under pressure?

5. If the cap is a welded cap, has the correct welding bead, length and thickness been calculated to secure the component under test pressure?

6. Have any necessary thrust blocks or other restraining devices been installed?

7. Have all personnel conducting the testing been trained in the safety precaution required for systems containing stored energy?

8. Provide copy of training records and procedures.

9. Have the contractor’s superintendent and foremen been trained in the Lock Out Tag Out (lock Out/Block Out) procedures & requirements?

10. Has this training been documented and conducted by a qualified individual?

11. List the name of the individual(s) and company providing training:

   ___________________________________  ____________________________

12. What safety precautions have been taken for pneumatic testing of the outer pipe of double-contained piping? Can the test pressure be limited to 10 psig? Have the stored energy forces been calculated for sizes greater than 4 inches?
Testing

1. If the test is a preliminary pneumatic test, for the contractor’s internal quality control and assurance, will the test pressure be limited to 10 psig for systems categorized within the ASME B31.9 standards and 25 psig for systems categorized within the ASME B31.3 standards?

2. Will confirmations be made that pneumatic testing will be prohibited, per the ASME code, for piping systems that contain cast iron pipe or plastic pipe that is subject to brittle failure?

3. Will confirmations be made that pneumatic testing will be prohibited, per the ASME codes, for piping systems that contain soldered joints over 2 inch size and solvent or cement joints over 2 inch size?

4. If the test is a sectional or final test required by the authority having jurisdiction, and pneumatic pressure is employed, and the end cap force is greater than 400 pounds as calculated by the formula of Force=(Pressure)(Area), will the test be conducted during shift or “off-hours”? If not, what special precautions will be made for personnel protection?

5. For sectional or final tests required by the authority having jurisdiction at the specified test pressures and utilizing pneumatic methods, will the initial test pressure be no greater than 10 psig and then slowly raised to 25% of the final test pressure and thereafter in increments of 1/10 of the final test pressure?

6. For Fire Protection piping systems utilizing grooved type piping joints the use of pneumatic testing is strongly discouraged, with the exception of “Dry Pipe and Double Interlock” systems tested at 40 psig per the NFPA code. Any pneumatic testing, including code required testing, performed for piping systems that include grooved type joints shall be conducted in strict accordance with the requirements described within this pre-task checklist document. Have these checklist requirements described with the Fire Protection Contractor’s personnel?

7. For both pneumatic and hydrostatic testing will precautions against overpressure due to thermal expansion, or any other source of over pressurization, be made by installing a relief device as required by ASME?

   List device(s), location(s), and pressure setting(s):
   ____________________________  __________________________

8. List personnel by name and company who will be conducting testing.
   ____________________________

9. List personnel by name and company who will be responsible for immediately depressurizing system after test.
   ____________________________  __________________________

10. Have all personnel who will be continuing work on the tested piping system been notified that the system had been under test and will the superintendent or foreman provide visual
confirmation to the personnel that the piping system has been depressurized? ______________
____________________

This checklist with added notes serves as the meeting minutes for this pre-task meeting. This checklist must be reviewed every month by all personnel conducting the pressure test and their supervisors. Each time new personnel are assigned to conduct pressure testing a full pre-task checklist shall be held and documented.
Public Protection

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To insure public safety and identify all possible hazards.

THIS CHECKLIST APPLIES – During initial site setup & whenever work in traffic or general public work areas will occur.

Date: ___________________________ Job: ___________________________

Project Name: ______________________________________________________

Attendees: ________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Pedestrian Checklist**

- Encroachment Permits from Local Municipalities, Agencies, City, County, State as Required
- Jobsite fence.
- Signage for access & egress (lighted barricades, flagging).
- Trained personnel.
- Sidewalks clear & clean- walk surfaced flat & free of holes.
- Lighting.
- Visitor protocol/check-in
- Safety signage (hard hats/danger/construction zone).
- Pedestrian access and routing plan distributed.
- 2 daily safety walks required (fall protection, holes, trenches, rebar caps, etc).
- Hard hats, safety vests, safety glasses and appropriate footwear for visitors.

**Vehicular**

- Encroachment Permits from Local Municipalities, Agencies, City, County, State as Required
- Permits for street or lane closures
- Properly Trained Flagman / traffic control personnel.
- Barricades/ blocking vehicles/ cones/ delineators.
- Cleaning of streets and parking lots (dirt, garbage, nails, etc.).
- Off-hours work identified.
- Speed limit(s).
- Distribute plan for Traffic Routing/ Access.
- Traffic trench plates. (paint edges orange and or sloped)
- Required vehicles have back-up alarms/ beacons.
- Only authorized personnel, with proper certifications, shall operate equipment.
- Signage- direction of travel, parking, speed limits.
- Delivery drivers shall wear required PPE when outside of cab in construction site

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Rolling Scaffolds

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify all possible hazards and prevent injuries.

THIS CHECKLIST APPLIES – When necessary as determined by the XL Construction supervisor prior to the use of a rolling scaffold.

Date: ____________________________ Job: ____________________

Project Name: __________________________________________

Attendees: ____________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rolling Scaffolds Checklist

☐ Site Specific Fall protection plan written and submitted.

☐ Refer to XL Constructions Fall Protection Plan (XL SPM)

☐ Refer to XL Constructions Scaffold Safety Policy (XL SPM)

☐ Individuals using scaffold(s) are trained on that scaffold (assembly and safe use).
Safety Program — Pre-Task

☐ Scaffold must be inspected by a Competent Person before initial use and when it is modified and reassembled.

☐ Name of Subcontractor Competent Person for this Project: ______________________________
........................................................................................................................................

☐ Assembled per manufacturers requirements.

☐ Planks and platforms in good condition. Don’t use damaged parts.

☐ Two wheels must be swivel type.

☐ Wheels or Casters of rolling scaffolds shall be provided with an effective locking device and kept locked when workers are climbing or working on scaffold.

☐ Wheels locked into the frame so they will not fall out.

☐ Wheels made of rubber or similar resilient tires.

☐ Exposed thread on screw jack shall not exceed 12”.

☐ Joints of metal scaffold must have lock pins.

☐ Horizontal and diagonal bracing properly place and locked in.

☐ Planks shall be prefabricated, cleated or otherwise secure to the frames.

☐ Must be fully planked or use adjusted guardrail.

☐ Adequate access (is ladder built into frame?)

☐ The height shall not be greater than 3 times the base minimum width unless the scaffold is equipped with appropriate Outriggers or securely Guyed or Tied.

☐ Proper Guardrailing system required above 6’ in elevation
  ■ Top Guardrails must be a minimum of 42”- 45” maximum with Midrails installed

☐ Guardrails are required if combined fall distance is greater than 6’ when working near edge of building, shafts, holes, stairwells, etc. or personal fall protection required to be worn and used.

☐ When working above vertical impalement hazards (covered stakes, conduits, etc.), guardrailing is required at 6’.

☐ Alternate fall protection required if guardrail cannot be properly installed.

☐ Are toeboards or netting needed?

☐ Have overhead obstructions been identified? Is there a wet building sprinkler system in close proximity to the work?

☐ If yes, what is the broken sprinkler control procedure? Who has plugs, fire hose to divert water, and where is shut off valve?
Riding. Employees may ride on rolling scaffold moved by others below if the following conditions exist:

- The floor or surface is within 3 degrees of level, and free from pits, holes, or obstructions;
- The minimum dimension of the scaffold base, when ready for rolling, is at least 1/2 of the height. Outriggers, if used, shall be installed on both sides of staging;
- The wheels are equipped with rubber or similar resilient tires. For towers 50 feet or over, metal wheels may be used;
- The manual force used to move the scaffold shall be applied as close to the base as practicable, but not more than 5 feet (1.5 meters) above the supporting surface of the scaffold;
- Before a scaffold is moved, each employee on the scaffold shall be made aware of the move.
- No employee shall be on any part of the scaffold which extends outward beyond the wheels, casters, or other supports.

Riding on a Self-Propelled Scaffold. One employee may ride on and move a rolling scaffold while on the platform without assistance from others below provided the following conditions are met:

- The scaffold platform shall not be more than 4 feet above the floor level;
- The working platform shall be no less than 20 inches in width with a maximum 1 inch space between platform planks;
- Wheels or casters of rolling scaffolds shall be provided with an effective locking device; or rolling scaffolds shall be provided with an effective device that is used to prevent movement of the scaffold when workers are climbing or working on the scaffold.
- The use of power systems such as motor vehicles, add-on motors, or battery powered equipment to propel a rolling scaffold is prohibited.
- Training. Employees who ride on rolling scaffolds and employees that assist in moving employees riding on a rolling scaffold shall be trained in accordance with the requirements of this checklist and with the requirements of the Construction Safety Orders, Section 1509 to recognize the hazards associated with riding on a rolling scaffold.

What is the tag-out procedure when there is a deficient scaffold?

Other: ______________________________________________________________________

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Roofing Installation

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify hazards.

THIS CHECKLIST APPLIES – Prior to roofing operations.

Date: ____________________________________________ Job: ___________________

Project Name: ____________________________________________

Attendees: ____________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Checklist

☐ **Materials:** MSDS on site. Discuss particular hazards of all materials used to include odors/fumes, air intake locations, etc.
   - Review Hazardous Materials Survey. If a survey is not available then XL must coordinate with Client to have a Certified Asbestos Consultant perform a survey.
   - If lead roof jacks are to be used, complete Lead Pretask Checklist.
   - Review approved material submittals. Copies to crew Foreman.

☐ **Access**
   - Adequate ladder
   - Stair
   - Roof Hatch
   - Ladders: 1) In good condition, 2) Set up on stable surface or soil, 3) Overlapped 3 feet minimum at top and tied off, 4) Base cleated, tied-back, staked or in foot holes, 5) Railing or flagging next to access opening and 6) Haul rope for small tools/materials.
   - If a roof hatch is being used for access, a Retractable 3’ extension must be added to the top of the ladder. Roof Hatch must be closed behind last person up.

☐ **Roof Loading:** Be careful not to overload structure; locate structural support for landing and stocking areas prior to loading materials.
   - Material staging areas have been identified.
   - Sloped Roofs: 1) Build level stocking platforms or supports to prevent material from rolling or falling off and 2) Flag areas below when stocking tile, shingles rolls of felt, or metal roofing.

☐ **Loading Equipment:**
   - Crane: Follow proper pre-task checklist. Refer to XL Construction Crane Safety (XL SPM)
   - Conveyor: 1) In good condition with adequate pulley and belt guards? 2) Area flagged underneath. 3) Watch for overloading.
   - High lift material trucks: 1) Standard railings and toeboards at exposed sided or 2) Use of personal fall protection.
   - A-Frame Hoist: Fall protection required above 6 feet.
Fall Protection

- **Fall Protection Plan**: Site specific plan required. Refer to XL Construction’s Roof Fall protection Plan (XL SPM)

- Roofs over 6 feet in elevation with slope to 4:12
  - **Standard Railings**: 42”-45” with midrail and toeboards
  - **Scaffold Platform** or catch platform: fully guardrailied and planked platform provided within 24” of roof line or Eve of Roof.
  - Minimum 24 inch Parapet 36” if walk behind felt machines or motorized rider equipment is being used.
  - Red Flag Warning Line with Warning Signage (Fall Protection Required Beyond this Point) set back at least 6 feet and (see next item)
  - Personal Fall Protection required for work outside the flagged area. No felt machine or motorized rider equipment outside flagged area. See Fall Protection pre-task.

- **All roof with slopes greater than 4:12**
  - **Standard Railing**: 42”-45” with midrail and toeboards.
  - **Scaffold Platform** or catch platform: fully guardrailied and planked platform provided within 24” of roof line.
  - Minimum 24 inch parapet.
  - Personal Fall protection Refer to XL Construction’s Roof Fall protection Plan (XL SPM)
  - **Roof Openings**:
    - Covered with material strong enough to withstand 2 times the intended load or 400lb. minimum or Properly Railed.
    - Cover secure in place and warning sign posted. (Danger Opening Don Not Remove)
    - Skylights railed, covered or cordoned off with flag warning line set back 6 feet minimum.
    - Specify: ______________________________. Personal fall protection required for work within warning line.
    - Personal fall protection required for cover removal and for work at uncovered openings.
    - Flag off area around opening and below opening while cover removed.
    - Prior to hot asphalt use, seal all small openings (over-cut pipe penetrations, etc.) or flag off area underneath work if possible seepage of hot asphalt could occur.
**Fire Prevention**

- A Hot Work permit is to be obtained daily from XL Construction for any work that generates an Open Flame, Spark or can create combustion. Please follow instructions on Hot Work Permit for a Fire Watch.

- Maintain at least one 10 pound dry chemical fire extinguisher on the roof at all times.

- Maintain at least one 10 pound dry chemical fire extinguisher at the tanker or kettle.

- A dry chemical fire extinguisher shall be kept near operations where gas, propane, or flammable roofing materials are in use.

- Flammable liquids shall be removed from the roof at the end of the shift; stock only that amount that can be used during the shift.

- Flammable materials shall be stored in a secure location, away from the building, with a dry chemical fire extinguisher nearby.

- If a hand torch is used, be aware of where you set the torch down- not pointed toward the building or toward other combustible materials.

**Weather Conditions**

- Rain- May make sloped roof too dangerous for working. Materials may also slide off.

- Wind- Materials may be blown off roof. Materials must be banded, wired, nailed, or otherwise secured to roof. Be aware of sheet goods, and especially careful of handling sheet metal roofing systems.

- Heat – Roof are generally the hottest spot on the job. Avoid heat exhaustion or stoke by being aware of heat. Supply plenty of drinking water on the roof; also extra water for hot work initial burn treatment. Take breaks in the shade as necessary.

**Notification:** Notify all workers on site of roofing operations, concerns, and hazards. Notify building occupants, (if occupied) of potential odors.

**Flagging:**

- Flag off kettle, tanker, and piping when in use.

- flag off any perimeter or any area where material may fall, roll, or slide off roof.

- Flag off all areas under hotmop operation if any possible seepage of hot asphalt could occur and coordinate with XL Construction job supervision to clear area.

**Other:**

- In occupied building try to mitigate odors, (e.g., close off makeup air, possible shot shutdown of HVAC supply system, etc.)

- Electrical lines in close proximity? List precautions take: ________________________________
■ Carrying hot asphalt/pitch?
  ■ Not more than one bucket at a time.
  ■ Never carried on ladders.
  ■ Don’t overfill; 4 inches from to maximum.
  ■ Wear appropriate gloves.

☐ Face shield required for kettle tender during loading and other work over open kettle.

☐ Noncombustible Protection Materials must be used when protecting finishes from Hot Pitch/Tar around Kettle.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Pre-Erection Steel and Decking

Pre-Task Meeting Checklist

- Attachment A (Safety Cable Systems Inspection Perimeter & Interior Cable Systems)
- Attachment B (Cable Gate Training & Authorization)

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To get a common clear understanding and commitments for site safety requirements. Steel Erection. Decker and Miscellaneous Iron upper management and field supervisors are required to be present.

THIS CHECKLIST APPLIES: Prior to any elevated structural steel and precast installation.

Date: ____________________________  Job: __________________________

Project Name: _______________________________________________________

Attendees: ___________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Checklist:**

For erection of ____ story building. Starting: ______ Scheduled erection completion ______

PRE-ERECTION CONTROLLING CONTRACTOR REQUIREMENTS- (typically XL Construction):

- □ Written notification that the footings, piers, walls, and the mortar in the masonry piers and walls has attained 75% of intended minimum compressive design strength.
- □ Have any anchor bolts been repaired, replaced or modified?
  - □ None modified
  - □ Yes, some bolts have been modified or repaired. If so, list grid lines and attach approved repair documents to this checklist. Structural engineer agreed to any modifications?
- □ Traffic/Haul routes reviewed for adequate access into and through site. (Any off site vehicle or pedestrian traffic controls, if needed and related to the erection, are the responsibility of the erector.) Traffic flaggers, if used, shall be trained. List number and location of trained flaggers:
  - ____________________________________________________________
  - ____________________________________________________________
- □ Equipment/lay down areas isolated, firm, and drained. Yes____No____. If no, what are the special site precautions that must be followed to compensate for known site restrictions.
  
  List ______________________________________________________________________

Erector understands and accepts the procedures.

**Preliminary Subcontractor Requirements:**

(Note: All below requirements must be met before work can commence onsite):

- □ XL Construction has a signed contract and current insurance certificates for the Subcontractors.
- □ Subcontractor Injury & Illness Prevention Program submitted and reviewed.
- □ Subcontractor Safety Program (SSP www.clicksafety.com/xl) has been reviewed, understood, and signed?
- □ Subcontractor Site Specific Fall Protection Plan submitted and reviewed?
- □ Current Annual Cal/OSHA Steel Erection and activity permit for buildings/structures >36 feet high: Submitted _____Not Required_____. An erection plan and procedure prepared by a current California registered civil engineer for projects with trusses or beams >25 feet long: _____Is required and Submitted _____Is not required
- □ A site specific Erection Plan has been submitted and approved.
Plan of erection progression
(discuss)________________________________________________________

Erection shall present some evidence that each crew member has been trained per Cal/OSHA
steel erection requirements, including fall hazard training and multiple lift rigging procedures if
used.

- Training cards/ certificates signed by qualified person.
- Other: ________________________________________________

Subcontractor’s crews will communicate safety-related problems to XL Construction
supervision.

Safety meeting required with all workers involved in erection onsite prior to start of work.

Cranes & Other Equipment

- A Crane Pre-Task must be held before any hoisting of any load takes place. This Pre-Task will list
  hoisting requirements and required crane moves so all lifts will be within rate chart. See Pre-
  erection Cranes Pretask and XL Construction Crane Safety (4-82)

- All JLG or extended reach lift operators must show proof of training and are required to wear a
  full body harness during operation.

- All Equipment operators must show proof of training.

- All Straight Mast & Rough Terrain Forklift operators must show proof of training certification
  and must wear the seat belt at all times.

- Personnel will not work on any suspended forklift load; operators shall remain in the cab when
  loads are elevated.

- All Back-up alarms and safety devices such as out of level indicators must be working.

- All forklift attachments will be approved for use and equipment used with attachment
  rate chart if specified. A jib will _____Will not____ be used. capacity with job:
  ______________________

Fire Extinguishers required?

Erection

- Other Multiple Lift Rigging Requirements Include:
  - Qualified, experienced rigger.
  - Rigging assembly tagged with rated capacities and assembled with 7 foot minimum
    separation between members.
Maximum hoist load of 3 beams or similar members to stay within single bay.

In no case will total load exceed 75% of crane load chart rated capacity.

Shear connectors and other similar devices shall be installed after metal deck or similar work/walking platform has been installed.

All columns must be anchored by a minimum of (4) anchor bolts.

Loads shall not be released from hoisting lines until the members are secured by at least (2) bolts per connection, drawn up wrench-tight. More bolts may be necessary as determined by the competent person.

Perimeter columns must have holes or other devices attached to perimeter columns at 42°-45° above finished floor to permit installation of perimeter safety cables prior to erection of the next tier.

What are the approved provisions if connections do not line up? How will member be supported until corrections are made?

All Ironworkers, including connectors must be tied-off 100% when fall exposure equals or exceeds 6 feet. This includes traveling point to point and unhooking of slings or shackles.

Safety harness with 2 shock absorbing lanyards required for all personnel (including supervision) without exception for any structure or level that is not protected with a minimum top and mid rail protecting all sides, shafts, and holes, or a floor/roof opening cover.

Fall protection required for all work over unprotected impalement hazards and for work exceeding 6 feet above the top of protected (covered) rebar.

Known vertical rebar hazards: ____________________________________________
_____________________________________________________________________

Work from scaffold platforms without standard railings requires tie-off at 6 feet.

All personnel working off of “anger wings”, or the equivalent will be tied off before they get on the device.

All inspectors will be required to use fall protection/restraint at 6 feet and whenever need arises if not protected by guardrails.

**Decking**

Whenever possible, decking shall be installed on the elevated floor immediately below steel erection work; decker’s and erectors shall coordinate their work to achieve this end. Decking shall always be installed within 2 floors or 30 feet maximum below erection work.

The use of a controlled decking zone is prohibited.

Deck holes/openings will not be cut until needed for component installation.
Safety Program — Pre-Task

☐ Floor openings which are not railed shall be covered, labeled, and secured to deck (400lbs. minimum capacity or 2x expected load.)

■ Responsible: _________________________________________________________

■ Fall protection required when cutting deck openings 6 feet or more above surface below.

☐ Wind tacking of deck will happen immediately. List frequency and type per sheet, i.e., welds or shot pins: _______________________________________________________________

☐ All loose decking will be secured at the end of each shift.

Other

☐ All access ladders shall be secured (top & bottom), extend (3) feet beyond their landing at the top and have hoist ropes available for tools/ supplies.

☐ Gas cylinders, when not in use, shall be stored properly, tied off, and capped. Cylinders will not be tied off to interior or exterior guardrails. Cylinder will only be moved with caps/ valve protection in place.

☐ Will gas cylinders be hoisted to upper to upper floors: Yes ____ No____

☐ If hoisted, cylinders will be secured in boxes, cradles, nets, or carts specifically fabricated for hoisting with clamps and lifting eyes.

☐ Welding equipment in good condition and free of leaks.

☐ No welding leads, air hoses or power cords over safety cable.

☐ Fire extinguishers supplied by erector for welding, cutting, and flammables.

☐ Fire watch required if known fire danger areas, including perimeter dry grass, combustible materials which can't be otherwise protected, etc. List known areas: __________________ ____________________________

☐ Wedges at upper floors secured with wire, tools, equipment and materials left aloft with potential for accidental displacement (falling objects) shall be secured.

☐ Tie off or whip-check all air hose connections. Air tanks inspected prior to use.

Railings and Access

☐ Handrail/ cable systems will be engineered for use as fall protection anchorages. Minimum support requirements will meet or exceed 5,000lbs holding strength. All cable systems will be secured with a minimum of 3 properly torqued, wire rope clips per end or equivalent. See Safety Cable Systems Inspections checklist for additional details.

☐ Consider finished floor thickness when initially establishing rail heights. Top rail shall be 42” to 45” from finished floor. List concrete deck thickness: ________ inches. Any thickened slab
location? List where typical: __________________________________________________
_________________________________________________________________________.

☐ If the structure is not completed on a floor-by-floor basis (i.e., bill boarding), a temporary cable rail system shall be installed to prevent other trades from accessing areas not yet protected.

☐ Bill boarding will ____ Will not ____ be used.

☐ Cable gate systems, when in use, shall not affect the integrity of the perimeter guardrail system.

☐ The erector is ____ is not ____ installing cable gates.

☐ Hand railings, when used in connection with stairs, shall be not less than 34 inches or more than 38 inches above the treat nosing.

☐ Cable railing placed as soon as possible with mid-cable placed as soon as decking has been installed.

☐ Until all floor openings are protected and both perimeter safety cables are installed, access to levels above grade will be restricted to erection and decking crews.

☐ Other trades, inspectors, etc., see XL jobsite supervision for access authorization.

☐ The attached Safety Cable Systems Inspections form shall be completed and signed off by XL Construction prior to custody acceptance of wire rope guardrail systems.

☐ Stairs shall be installed to the uppermost decked floor. Responsibility: _______________________

☐ Second set of stairs installed if more than 3 stories or 36 feet.
   Required ____ Not Required _____

☐ “Man lift” required for buildings 60 feet and above.
   Required ____ Not Required _____

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Safety Cable Systems Inspections

Perimeter & Interior Cable Systems

The purpose of this Inspection/ Checklist is to document the adherence to specifications, conditions, and adequacy of the cable guard rail systems installed by:

Erection contractor: ______________________________________________________

Project Name: ___________________________________________________________

Upon completion of this inspection by a designated XL Construction representative, correction of items noted and subsequent re-inspection to confirm corrections, the cable guardrail system will be considered installed correctly by ______________________ for use by other trades. Subsequent inspections and maintenance of cable systems will be assumed by XL Construction, Inc and/or its designated subcontractor(s) in accordance with contract document and related Cal/OSHA requirements.

General Requirements (all cable systems):

Cable systems shall be designed to meet 5,000 pounds holding strength (reference XL Construction, Inc. General Requirements-Railings and Floor/ Roof Opening Covers).

☐ Design criteria for meeting this requirement submitted and reviewed?

Yes ____ No ____ Initials: ______________

☐ If no, then engineering must be submitted prior to release of the floor.

☐ Cable is at least 3/8” diameter with minimum breaking strength of 13,500 lbs.

☐ Cable free of burns and breaks that may affect strength.

☐ Cable splice looped and each cable end secured with a minimum of 3 properly torqued, torqued wire rope clips installed with proper orientation and spacing between forged clips (about 6 cable diameters apart) and tail ends. (See submitted design criteria, submitted rope clip manufacturer’s specifications.)

☐ Mid cables installed ½ way between top cable and finished floor.

☐ Cable rails do not deflect past building deck or walking surface.

Supporting Posts / Uprights

☐ Posts free of visible damage (bent, cracked.)

☐ Posts welded with a minimum of two 1/8” continuous beads (filet welds) both sides of the angles or all sides of the box and in accordance with Engineer’s design.
☐ Are corner braces of sufficient size and or braced to prevent bending when cable systems tightened to meet deflection requirements for handrail system.

☐ Washers are used at columns? Yes _____No _____ Check: Within Design?

☐ Washer used is of adequate size. List size used: ________________________________

☐ Washer depth on column is adequate. List average depth: _________________________

☐ Inspect welding of washer to be sure they meet the fall protection requirements.
Specific Location Requirements/Corrections: Attachment A

- Perimeters, shafts/interior openings and stair landing: Cable railings systems shall have the top cable installed at least 42”-45” along its entire run above finished floor (concrete) height. If deficiencies, including General Requirements and Posts, list location and correction needed for:

  - **Perimeter:**
    - Railing height: ______________________________________________________
    - ___________________________________________________________________
    - Posts: ______________________________________________________________
    - ___________________________________________________________________
    - General Requirements: ________________________________________________
    - ___________________________________________________________________

  - **Floor Opening:**
    - Railing height: ______________________________________________________
    - ___________________________________________________________________
    - Posts: ______________________________________________________________
    - ___________________________________________________________________
    - General Requirements: ________________________________________________
    - ___________________________________________________________________

  - **Stair Landing:**
    - Railing height: ______________________________________________________
    - ___________________________________________________________________
    - Posts: ______________________________________________________________
    - ___________________________________________________________________
    - General Requirements: ________________________________________________
    - ___________________________________________________________________

- Shafts and interior openings, not protected by railing, shall be covered by material capable of supporting the greater of 400 pounds or twice the intended load imposed.
  - Covering shall be secured in place and labeled “Danger Opening” – Do Not Remove.
  - List deficiencies: __________________________________________________________
☐ **Stair railing** installed at 34”-38” above the stair tread nosing:

☐ If deficiencies, including Posts and General Requirements, list location and correction needed for each specific category.

- Railing height: ________________________________________________________________
- Posts: ______________________________________________________________________
- General Requirements: ______________________________________________________
Attachment B (Cable gate training and authorization)

The purpose of this training is to insure the safety of the project, and the personnel. These gates are provided for ease of access, and egress of materials and debris. Specific training and authorization is required to maintain the security of the cable gates, as well as to hold authorized personnel and non-authorized accountable. The attendant of the access gate as well as the operator of the hoisting equipment will be required to attend the training.

XL Construction have provided a fall restraint body belt at each cable gate loading bay. The fall restraint must be donned prior to opening the cable gates.

Training will include the donning and doffing of the fall restraint system. As well as the overall procedures of hoisting and removing materials from all loading bays.

☐ We will also discuss the cable gate assembly and how to properly remove and reinstall the system as to not damage it. Also if damage is found the proper protocol will be discussed.

☐ The XL Construction, Inc. Safety Coordinator shall approve all non-loading bay hoisting. Prior to any non-loading bay hoisting, the Safety Coordinator shall conduct hoisting a pre-task.

☐ An eight-foot setback shall be established by either the use of delineators, paint or red tape adhered onto the concrete. Only the person wearing the fall restraint shall be allowed in the access zone. All others shall remain behind the line. Signage required?

The following areas have been inspected by XL Construction’s Supervisor or Safety Coordinator, (Name) ______________________________ and the cable guardrail systems and work/walking surfaces are adequately secured and protected. The signature by the XL Construction representative indicates that (Company)_______________________________ has provided the cable system free of visible defects per the above guideline and other related Cal/OSHA and contract documents.
<table>
<thead>
<tr>
<th>Area Inspected</th>
<th>Location</th>
<th>Floor</th>
<th>Date</th>
<th>Acceptance Signature (XL)</th>
<th>Release Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Subcontractor Injury Prevention Program

Injury Review Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – To understand events leading to a serious injury of an onsite craftsman and what steps will be implemented to prevent a recurrence.

**THIS CHECKLIST APPLIES:** Within 10 days after a lost time or offsite medivac, or 3 contractor injuries within 12 months. An injury review meeting will be held as part of the normal weekly job schedule meeting. Contractor’s senior management will be required to participate in the meeting.

Date: ________________________________  Job: ________________________________

Project Name: ____________________________________________________________

Attendees: _______________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Checklist

☐ Name of Subcontractor(s) _____________________________  XL Construction Injury Review

☐ Name of Employee: _________________________________

☐ Meeting held with Subcontractor or XL Construction’s senior management scheduled meeting.

☐ Detailed Description of injury/incident: ________________________________
  ■ ___________________________________________________________________
  ■ ___________________________________________________________________

☐ Extent of Injuries: List ________________________________________________
  ■ ___________________________________________________________________
  ■ ___________________________________________________________________

☐ What safety equipment was required: List ________________________________
  ■ ___________________________________________________________________

☐ Was the injury deemed to be preventable by those in attendance?
  ☑ Yes Confirmed by vote? ____
  ☐ No  Confirmed by vote? ____

☐ What steps will be implemented to prevent:
  1. Reoccurrence at the contractor level:
     List ______________________________
  2. Reoccurrence at the job level:
     List ____________________________

☐ If preventable, a $500 donation will be made per injury to:
  Option #1. $500 to this project’s Safety Incentive Program.
  Option #2. $500 to a local charity jointly selected by the owner and XL Construction, Inc.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Supported Frame Scaffold

Pre-Task Meeting Checklist
and
Supported Frame Scaffold User Training Requirements

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify all possible hazards and prevent injuries associated with scaffold use and erection.

**THIS CHECKLIST APPLIES** – When necessary as determined by the XL supervisor prior to erection of scaffold.

Date: ___________________________ Job: ___________________________

Project Name: ___________________________

Attendees: ___________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Checklist

☐ **Permits**

- XL Construction Annual Scaffold Posted? Yes ____ No ____.
- Copy of Subcontractor Annual Scaffold Permit received? Yes ____ No ____.
- Faxed, scanned or emailed copy of the Cal/OSHA Activity Notification Form on file if scaffold structure is 36’ or greater in height? Yes ____ No ____.

☐ **Design, Erection and Dismantling of Scaffolds**

- Review XL Construction Scaffold Safety (XL SPM)
- Manufactured Frame Scaffold have been designed by a qualified person, and must be constructed and loaded in accordance with that design.
- Scaffold capacity will be posted on the scaffold.
- The erection and dismantling of scaffolds shall be performed under the supervision and direction of a qualified person.
  - Name of Company Erecting/ Dismantling scaffold: _______________________________
  - Name of Qualified Person for scaffold Erection/ Dismantling.
    - Print____________________________________________________________
    - Sign ____________________________________________________________
- Erection and dismantling of scaffolds shall be performed in accordance with good engineering practices.
- Where engineering design is required the drawings will be available at the jobsite.
- All required ties will be installed as soon as the scaffold has been completed to the tie-in level during erection.
- No unsecured section of scaffolding shall be permitted to remain up overnight.
- Ties shall only be removed during dismantling as work progresses downward unless other methods are used to prevent the scaffold from falling over.
- No structural members shall be removed from scaffolds during dismantling operations below the level being dismantled.
- Where work platforms are proposed, guardrails shall be installed before other work not directly related to scaffold erection is permitted to begin.
Safety Program — Pre-Task

☐ Proof of Training (Attach Copies)

■ Competent Person
■ Scaffold Erector
■ Scaffold User

☐ A Site Specific Fall Protection Plan meeting XL Construction requirements has been reviewed and accepted.

Yes _____ No ____.

☐ Competent Person Duties

■ The company having the scaffold installed will designate a Primary Competent Person for that scaffold.

Name of Company: ___________________________________________________

Competent Person (print) _____________________________________________

Sign: ___________________________________________________________________

☐ Primary Competent Person Requirements and Duties

■ Has a scaffold erectors card. Yes _____ No ____.

■ Modifications made to scaffolds must be made only by persons with a scaffold erectors card and only after approval by the XL Construction superintendent.

■ Has the authority to stop work. Yes _____ No ____.

■ Has been assigned this responsibility by his employer. Yes _____ No ____.

■ Inspect after vendor has completed scaffold and have corrections made before vendor leaves site. Place a green tag on scaffolds when it is OK to use.

■ Inspect scaffold daily prior to use.

■ Red tag incomplete or unsafe scaffolds.

■ Restrict access by barricading scaffold sections that have not been released for use.

■ Place signage indicating limited access to restricted areas only by authorized scaffold erectors.

■ Provide inspection documentation to XL Construction. (XL Superintendent to verify inspections are taking place.)

■ Verify scaffold users have valid scaffold user cards.
• Verify that others using scaffold (XL and subcontractors) are inspecting the scaffold daily prior to use.

• Scaffolds shall be altered only under the direction of the Primary Competent Person.

• See XL Construction Daily Scaffold Inspection Checklist (XL SPM)

☐ A Secondary Competent Person will be designated for each company using the scaffold. (Attach list of companies and names of competent persons.)

• Secondary Competent Person Duties

• Inspect scaffold daily prior to use. CCR 1510, CCR 1511, and CFR 1926.451(f)(3)

• Provide inspection documentation to XL. (XL Superintendent to verify inspections are taking place.)

• Notify the Primary Competent Person and XL Construction of any scaffold deficiencies observed.

• Verify scaffold users have valid scaffold user cards.

☐ Base Section

• Firm foundation (Concrete Yes ____ No ____ (Soil Yes ____ No ____)

  (Other ____________________)

  • Footing must be capable of supporting the loaded scaffold without settling or displacement.

  • Mud sills (Minimum 10”x10”x2” or 10”x10”x 1 1/8 plywood)

  • Base Plates or screw jacks are required.

  • Scaffolds must be plumb and braced to prevent swaying and displacement

☐ Support Structure

• Capacity

  • Must be able to support its own weight and at least 4 times their maximum intended load. Scaffold capacity must be posted on scaffold.

• Bracing

  • Frames and panels must be connected by cross, horizontal, or diagonal braces alone or in combination, which secure vertical members together laterally.

  • As frames are stacked panels must be of such length as will automatically keep the scaffold plumb, lever and square.

    All brace connections must be secured to prevent dislodging.
Safety Program — Pre-Task

- **Pinning**
  - Frames and panels must be joined together vertically by coupling pins or stacking pins or equivalent means.
  - Frames and panels must be locked together where uplift can occur.
    - Yes _____ No _____
  - Is additional pinning required per engineer's requirements?
    - Yes _____ No _____

- **Components**
  - Scaffold components may not be intermixed unless they fit together without being forced and the scaffold's structural integrity has been maintained.
  - Scaffold components manufactured by different manufacturers may not be modified to make them fit together unless the competent person has determined that the resulting scaffold is structurally sound.

- **Access**
  - Employees must be able to safely access any level of a scaffold that is 2 feet above or below an access point.
  - Climbing the cross braces is forbidden.
  - Portable, hook on and attachable ladder.
    - Must be specifically designed for use with that type of scaffold.
    - Uniform spacing of no more than 16 ¾ inches.
    - Have a minimum rung length of 11 ½ inches.
    - Have rest platforms at a minimum of 35 foot vertical intervals.
  - Integral (built in) access frames.
    - Be specifically designed and constructed for use as ladder rungs.
    - Have rungs which are uniformly spaced and a length of at least 8 inches, with a maximum space between rungs of 16 ¾ inches.
    - Have rest platforms at a maximum of 35 foot vertical intervals.
  - Steps and rungs must line up vertically with each other between rest platforms.
Fall Protection Systems

- Guard Rails  Yes _____No ____
  - Guardrails are required for platforms 6 feet and greater per XL Construction SSP.
  - Guardrails are required on the inside of platforms when the edge of the scaffold is greater than 16” Cal/OSHA and 14” Fed OSHA from face of structure, to include shafts, wall openings, thrust outs or other unusual shapes. CCR1644(a)(7), CFR 1926.451 (b)(3).
  - Top Rail not greater than 45 inches or less than 42 inches.
  - Top rails must be able to withstand a force of 200 lbs. applied in any direction except up.
  - Mid rail approximately between the top rail and the working platform.
  - Cross braces may be used as a top rail if the intersection occurs at 45” (plus or minus 3”) above the platform. A mid rail will still be required.
  - Cross braces may be used as mid rails if the intersection occurs between 20” and 30 inches above the platform. A top rail will still be required.

- Fall arrest systems used on scaffolds.Yes _____No ____
  - Shall comply with Cal/OSHA CCR 1670 and Fed/OSHA CFR 1926 subpart M
  - Shall comply with the accepted site specific fall protection plan.
  - Be attached by lanyard to a vertical lifeline, horizontal lifeline or scaffold structural member

Platform

- Planking
  - Each platform must be fully planked or decked between the front uprights and the guardrail supports. Yes _____No ____
  - Planking shall be scaffold rated and OSHA approved. No other material may be used.
  - No gaps greater than 1 inch.
  - Wooden planking must not be covered with opaque finishes.

- Working distances
  - There must not be a gap of more than 16 inches (Note*) between the scaffold platform and the structure being worked on. If distance is greater than 16 inches the guardrails must be installed. (“16” Cal/OSHA and 14” Fed OSHA) from face of structure to include shafts, wall openings, thrust outs or other unusual shapes. 7” for Masonry Block Work. (CCR1644(a)(7) CFR 1926.451(b)(3)).
Safety Program — Pre-Task

- **Overlap**
  - Planks must overlap supporting member at least 6 inches from centerline.
  - Or planks must be cleated or secured to prevent slippage.
  - Outrigger Brackets must only be used to support personnel. They are not to be used to store material.

**WARNING:**

1. **UNSTABLE OBJECTS MUST NOT BE USED TO GAIN ADDITIONAL HEIGHT WHILE WORKIN ON A SCAFFOLD.**
2. **ALWAYS KEEP YOUR FEET ON THE WORK PLATFORM.**
3. **NEVER CLIMB ON OR ABOVE THE GUARD RAIL.**
4. **IF MODIFICATIONS TO THE SCAFFOLD ARE NEEDED OR ADDITIONAL FALL PROTECTION IS NEEDED TO ENABLE WORKERS TO WORK ABOVE THE GUARD RAIL NOTIFY THE FOLLOWING PEOPLE:**
   - XL Construction Superintendent.
   - XL Construction Jobsite Safety Coordinator.
   - The Primary Competent Person for this scaffold.

- **Capacity**
  - Scaffolds must support their own weight plus 4 times their maximum intended load.
  - Scaffold capacity must be posted on the scaffold.
  - Scaffolds must not be over loaded by:
    - To many people being on the platform.
    - Too much material being on the platform.
    - Point loading, or concentrating too much weight in one area.

- **Maximum Intended Working Load** *(Choose from following list.)*
  - Light Duty Scaffolds  Yes _____No ____
    - 25 lbs. per square foot of platform
    - Frames are 10 feet apart.
    - A couple of workers and a small amount of tools and material.
■ Medium Duty Scaffolds Yes _____No _____
  ■ 50 lbs. per square foot of platform.
  ■ Frames are 8 feet apart.
  ■ Move tools and material.

■ Heavy Duty Scaffolds Yes _____No _____
  ■ 75 lbs. per square foot of platform.
  ■ Frames are 7 feet apart.
  ■ Typically used for Masonry work.

■ Special Duty Scaffolds exceeding 75 lbs. per square foot of platform as determined by a Qualified Person or a Civil Engineer currently registered in the state of California. Yes _____ No _____

■ Engineered Scaffolds (to include scaffolds with wind screens): determined by a Civil Engineer currently registered in the state of California. Yes _____ No _____

☐ Falling Object Protection

■ Employees on a scaffold must be protected from falling hand tools, debris, and other small objects by:
  ■ Hardhats.
  ■ Toeboards, screens, or guardrail systems.
  ■ Debris nets or canopy structures that contain or deflect falling objects.
  ■ The placement of falling objects away from the edge. (Work Practices)

Name of person monitoring for compliance.

Print____________________________________________________________

Sign ______________________________________________________________

■ Where there is a danger of tools, materials, or equipment falling from a scaffold onto employees working below, they must be protected by:

  ■ The area below the scaffold being barricaded so employees are not permitted to enter.
  ■ Toe boards, screens, or guardrail systems are installed along the platforms edges.
  ■ Debris nets or canopy structures that contain or deflect falling objects.
  ■ Paneling or screening installed from the toe board to the top of the guardrail to contain material.
When toe boards are used for falling object protection they must be:

- Able to withstand a force of 50 lbs.
- At least 3 ½ inches high.
- Securely fastened in place.

Overhead protection is required to be placed:

- Where scaffold has been erected above the entrance into the building.
- Where walkways pass near the scaffold that present a falling object hazard.
- Where sensitive equipment is in close proximity to the scaffold.

Keeping Upright

Guy wires, ties and braces

- Metal scaffolds shall be securely tied to the building or structure by means of double looped #12 single looped #10 iron wire or equivalent not to exceed 30 foot intervals. CCR1644 (a)(5).

If other methods will be used to secure the scaffold to the structure attach the approved engineered drawings.

Has attachment been approved by:

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHPD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Engineer of Record</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Building owner</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
</tr>
</tbody>
</table>

At a minimum ties shall be required at the free ends of the scaffold when the height of the scaffold platform exceeds 3 times its minimum base dimension.

Do the engineered drawings require more ties? Yes ____ No _____

The remaining ties shall be required when the height of the platform reaches 4 times its minimum base dimension.

Ties for subsequent levels shall be installed at 26 foot intervals with the uppermost tie no further from the top than 4 times the minimum base dimension.

All required ties to the structure shall be installed as soon as the scaffold has been completed to the tie-in area during erection.

Ties shall only be removed during dismantling as the work progresses downward unless other methods are used to prevent the scaffold from falling over.

No unsecured section of scaffold will be permitted to remain up overnight.
As an alternate means scaffolds shall be guyed or outriggers shall be used to prevent tipping or upsetting.

Wind Screens

Will wind screens be attached to this scaffold? Yes _____ No _____

When wind screens are used specific precautions shall be taken to assure the frequency and adequacy of ties attaching the scaffold to the building and securing it from the anticipated wind forced.

Engineered drawing attached and on file. Yes _____ No _____

Must the installed per approved engineered drawings.

Modifications to the scaffold and wind screen will not be allowed without written approval by the design engineer and the modification paperwork in hand.

Maximum wind speed per engineers design. __________________________

Maximum safe working wind speed. _________________________________

How will wind screens be removed? __________________________________

_______________________________________________________________

Who will be removing the wind screens?

Print __________________________________________________________

Sign __________________________________________________________

What is the material being used for the wind screen.

Tarps Yes _____ No _____

Tyvek® Yes _____ No _____

Other? List _____________________________________________________

Does the material meet NFPA requirements of a flame spread of less than 15 as required by the specifications? Yes _____ No _____

Weather

Employees are not permitted to work on or from a scaffold during storms or high winds unless the competent person has determined that it is safe and these employees are protected by Personal Fall Arrest Systems.
Safety Program — Pre-Task

□ Electrical Hazards

■ Overhead Power lines.

■ Will the scaffold be within 10 feet of power lines or in close proximity of employees, tools and material on the scaffold? Yes _____ No _____

■ If the scaffold is within 10 feet of power lines contact the power company or electrical system operator who must either:

□ De-energize the line Yes _____ No _____

□ Relocate the lines Yes _____ No _____

□ Install protective coverings to prevent accidental contact with the lines. Yes _____ No _____

■ Portable Electric Tools

■ GFCI protected power source. (Ground Fault Circuit Interrupter) Yes _____ No _____

■ If a condition exists where a GFCI is not in place the use of a pig tail with a GFCI is required. (When the temporary power and spider boxes have been removed and permanent building power is in use.)

□ Inspect cords and power tools for missing ground pins and insulation failure.

□ Comments

_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________

□ Comments

_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________

□ Training requirements for scaffold users. CCR 1510, CCR 1511, and CFR 1926.454(a)

■ Employees who perform work while on a Scaffold must be trained by a Qualified Person to:

□ Recognize hazards associated with the type of scaffold being used.

□ Understand the procedure to control those hazards.
Training Shall include:

- The nature of electrical hazards
- The correct procedures for dealing with those hazards
- The proper use of the scaffold and the proper handling of material on the scaffold.
- The maximum intended load and the load carrying capacity of the scaffold.
- Any other pertinent requirements.

Employers shall retrain each employee when they have reason to believe that the employee lacks the skill to understanding to safely erect, use or dismantle a scaffold. Such retraining is required in at least the following situations:

- Changes at the worksite present a hazard for which an employee has not been previously trained.
- Changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard for which an employee has not previously been trained.
- Inadequacies in an affected employee’s work indicate that the employee has not retained the necessary proficiency. CFR 1926.454(c)

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Erection and Use of Suspended Scaffolds

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues, nor replace Cal-OSHA requirements if they are more stringent. Refer to the XL Construction, Inc. Injury and Illness Prevention Program and SIP for additional Safety considerations.

PURPOSE – Identify hazards and prevent injuries.

THIS CHECKLIST APPLIES – Prior to erection and use of most suspended scaffolds.

Date: ___________________________ Job: ___________________________

Project Name: ___________________________

Attendees: ___________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Preliminary

This checklist is intended to cover electric hoist type single stage suspended scaffolds. Contact the XL Construction Safety Department or your regional Safety Coordinator for more specialized (less common) suspended scaffolds including air powered units, multi-level, masons’ suspended scaffolds, etc.

The suspended scaffold erection company: _____________________________________________

The contractor using the equipment: _________________________________________________

The proposed date of installation: ___________________________________________________

☐ The erector and the user shall comply with applicable Cal/OSHA requirements for this equipment.

☐ The erection and dismantling of suspended scaffolds shall be performed under the supervision of a qualified (trained) supervisor. Generally professional scaffold companies are doing this work, but that may not always be the case. Since the avoidance of serious injury or death may be dependent on the proper installation of this equipment, erectors other than professional scaffold companies shall present proof of this training prior to the work.

☐ The erector’s qualified supervisor is: ______________________________________________

☐ Prior to installation, the erector’s qualified supervisor, together with the XL Construction Superintendent shall ascertain that the roof and other building components used for anchorage are capable of safely supporting at least 4 times the rated suspended load. Attachment location of independently anchored droplines (500# requirement) and equipment tiebacks shall also be determined.

☐ A site specific Fall Protection Plan shall be submitted by:
  ■ The erector
  ■ The user

☐ Other construction work above a manned scaffold shall be rescheduled if scaffold workers may be exposed to potential falling objects.

☐ Roof work by others which may conflict with scaffold support equipment or ropes shall be rescheduled.

The Erector

☐ The erector shall submit the manufacturer’s erection procedures for the particular equipment to be installed and follow the procedures for the safe installation of the equipment. The erector will also comply with the following general guidelines:

☐ During erection or dismantling, the ground below the outriggers shall be flagged or barricaded off to prevent other worker form being exposed to the overhead work.
If personnel are exposed to the possibility of a fall (working within 5 feet of an unprotected perimeter), properly attached personal fall protection shall be worn.

The scaffold supporting system shall be secured to prevent tipping or collapsing. Outrigger beams, if used, shall be secured against twisting or turning.

Counterweight systems, used in conjunction with outrigger beams, shall consist of solid materials such as concrete or steel and shall be secured to the beam in a way to prevent unintentional disconnection.

Supporting wire rope shall have a safety factor of at least 6 and be inspected for defects before installation. The use of repaired wire rope is prohibited.

Any hooks used as part of the rigging shall be closed or “moussed”.

The entire length of supporting cables shall be vertical so that suspension points are directly above the hoisting machines.

The equipment shall not be erected where it will be exposed to live power lines within 10 feet along the path of travel.

Platforms shall be hung so as to avoid overlap or interference with building components or possible movement from another scaffold.

Use roller bumpers to avoid damage to the building or equipment.

If drum type hoists are used, they shall be installed with a minimum of 4 wraps of wire on each unit at any point of travel.

If welding or torch cutting is to be performed from the scaffold, the wire ropes shall be protected by a rubber hose or equivalent protection to a height of 8 feet above the platform. Coordinate with the user.

Tie off power supply cords to prevent them from falling; restrain cord connections to prevent separation.

Platforms shall have a protective railing or the equivalent on all open sides and ends; hoisting units may replace end railing. Railing shall be from 36 inches to 42 inches in height with a midrail and toe board.

Drop lines, as part of a personal fall protection system, shall be securely anchored and independent of the anchorage used to support the scaffold platform.

Droplines shall have a minimum breaking strength of 5,000 pounds and shall be inspected prior to installation. One dropline shall be provided for each scaffold worker, which shall be a continuous rope in good condition and free of imperfections, serious wear, or fraying.

Droplines shall be positioned between each pair of hangers and shall be protected against abrasion or cuts from roof flashing or parapets.
The scaffold support system, unless secured in place to the structure, shall be tied back to a structurally sound anchorage with wire rope at least equivalent in strength to the suspension cables.

Install tiebacks at right angles to the face of the building, without slack.

The suspended scaffold equipment as well as the installation shall be inspected by the erector’s qualified supervisor, who shall also test the equipment operation prior to release to the user.

The qualified supervisor shall instruct user personnel in the safe operation of the equipment and shall leave with the user all applicable safe operation and use instructions.

**The User**

The user shall comply with the equipment manufacturer’s operating and use instructions for the specific equipment in use and these general safety guidelines:

All suspended scaffold hoist operators shall become qualified operators through training given by the erector, through printed operating instructions presented by the erector and by familiarizing themselves with the equipment operation, the requirements of the suspension system and the fall protection requirements prior to use. The qualified operators are ______________, ______________, ______________.

The manufacturer’s rated working capacity for the scaffold (workers, materials, and tools) shall not be exceeded. The working capacity of your platform is ______________________________ ______________________________________________________________________.

Heavy materials shall be evenly distributed. Impose loads gently and without impact and avoid unnecessary accumulation of materials.

A qualified operator shall inspect the scaffold and all related equipment 2 times daily. (Before use and after midday break) to insure it is in safe working condition and has not been altered.

The equipment shall be inspected, tested and serviced per the manufacturer’s maintenance instructions with special attention to ropes and rigging.

Do not alter, remove or substitute parts of the equipment. Do not use the scaffold if equipment has been damaged, parts are missing or the equipment is working improperly. Stop work, red tag the equipment, disconnect power and call the supplier.

Tiebacks shall not be removed while the scaffold is in use.

Bridging between 2 or more suspended scaffold is prohibited.

When slippery conditions are encountered on the platform, work shall stop until condition is corrected.
☐ Suspended scaffolds shall not be used in extreme windy conditions; no work shall be performed when wind speed is in excess of 35 MPH.

☐ Unattended scaffolds left in an elevated position shall be cleaned of tools and materials and lashed to the building. Window cleaning anchors shall not be used for this purpose.

☐ Never step into an elevated suspended scaffold or begin hoisting a grounded scaffold without being properly attached to a fall arrest system consisting of a full body harness and a shock absorbing lanyard attached to an independent drop line by a rope-grab device.

☐ Each worker shall be attached to a separate drop line, which shall be used only for a fall protection and not for other uses including hoisting materials or lashing.

☐ Attach the lanyard to the D-ring at the center of the back. Adjust the rope-grab on the drop line to prevent free fall in excess of 4 feet.

☐ Do not move the scaffold horizontally when occupied.

☐ No gasoline powered equipment shall be used on the platform.

☐ Do not expose the wire rope to flame, undue heat, corrosive chemicals or damage from tools. Welding or torch cutting requires protection of the ropes above the platform.

☐ Flag off the area under the scaffold platform during use.
Traffic Control/Flagging

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction, Inc. Injury and Illness Prevention Program and SIP for additional Safety considerations.

PURPOSE – To insure public safety and identify all possible hazards.

THIS CHECKLIST APPLIES – During initial site setup & whenever work in traffic or general public work areas will occur.

Date: ___________________________ Job: ___________________________

Project Name: ___________________________________________________________________

Attendees: ___________________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Traffic Flagger/Work Zone Pre-Task Checklist

1. Will there be work activities which will/may encroach on public roads?
   Yes_____No_______If yes, go to question #3.
2. Will pedestrians be forced to walk on public roads to avoid construction?
   Yes_____ No______ If yes, go to question #3.

3. Can traffic and pedestrians, bicycles be safely channeled/ separated from work area by the use of K-rails, traffic barrels, blocker vehicles, or other substantial/ formidable objects?
   Yes_____ No______ If no, then flagger and traffic control plan required.

4. Can Construction related traffic/ equipment safely enter/ exit the public roadways without the assistance of a flagger(s)?
   Yes_____ No______ If no, then flagger and traffic control plan required.

5. Will any construction equipment be required to be unloaded/ loaded on or directly adjacent to the public roadway?
   Yes_____ No______ If yes, flagger & traffic control man will be required.

6. Permits required.
   Yes_____ No______ If yes, name: ________________________________

Traffic Plan Consideration

1. Treat traffic control as a priority and equal to the job being performed- be credible.

2. Temporary traffic control system must not create confusion and is easy to navigate.

3. Plan must be realistic and pertinent to the project.

4. Minimize the impact to traffic, attempt to work during off peak hours, park off and work off roadway when possible.

5. Drivers will typically not slow down until they see some type of activity.

6. Don’t make driver think, respond, brake, or maneuver quickly.

7. Plan must be developed and procedures for routing/ handling emergency vehicles before work begins.

8. Reduce/ minimize time that workers are exposed to traffic.

9. Give plenty of advance notice, so that drivers have time to think, understand, and react to the changes.

10. Use Flaggers to supplement other traffic control measures to improve safety. Work zones are safer when flaggers are used.

11. Only trained workers should setup, maintain and inspect the traffic control system.
12. Modifications to the plan may be necessary due to weather, unusual site traffic and working conditions.

You need a flagger Checklist

Establish traffic plan. Traffic plan will include: (see Manual on Uniform Traffic Control Devices (MUTCD) manual for descriptions).

1. SIGNAGE
   - Road construction ahead/road work ahead.
   - Detour.
   - One lane road-lane closed
   - Prepare to stop.
   - Flagger.
   - Right/Left lane closed ahead.
   - Temporary work zone, reduced speed limit.
   - Open trench.
   - End construction.
   - Shoulder work ahead.
   - Construction traffic entering roadway.
   - Reflective signage for nighttime visibility.
   - Flashing lights.
   - Other: ____________________________________________

2. Who maintains signage? Name: ___________________________ Frequency:
   List signs that will remain up during non-activity or non-work hours (if any) List:
   __________________________________________________________________________

Flagging Instruction Hand Book

April 1999

Table of Contents

1. Characteristics of a Flagger
2. High Visibility Clothing
3. Flagger Equipment
4. Work Zone Layout and Flagger Station
5. Hand-Signaling Procedures (Diagram Included)
6. Methods of One-Lane, Two-Way Traffic Control
7. A Demonstration of Proper Flagger Methodology and Operations
8. Emergency Situations
9. Methods of Dealing with Hostile Drivers
10. Typical Lane Closure with Reversible Control (Diagram Included)

Characteristic of a Flagger

- A sense of responsibility to the public and co-workers.
- Training and/or experience in traffic control practices.
- Average intelligence.
- Good physical condition, including sight and hearing.
- Mental alertness and the ability to react in an emergency.
- Courteous, but firm manor.
- Neat appearance. Proper clothing, no shorts or cutoffs.

High Visibility Clothing

Day Time Work:

- A flagger shall wear orange, strong yellow-green or fluorescent colored warning garments such as vests, jackets or shirts, safety glasses and a high visibility hard hat.
Night Time Work:

- A flagger shall be outfitted with retroreflective garments, safety glasses and a high visibility hard hat.
- White outer garments with retroreflective material may be worn in lieu of colored vests, jackets and/or shirts.
- White outer garments should not be worn during snow or fog conditions.

Flagger Equipment

- A STOP/SLOW paddle (C28A & B) in good condition.
- Advance warning signs.
- Channelizing devices, such as cones.
- A method of communication, such as 2-way radio.
- Drinking water.
- Protective clothing in case of a change in weather.

Work Zone Layout and Flagger Station

Work Zone Layout:

- All advance warning signs shall be equipped with flags for daytime closures and flashing beacons for nighttime closures, as indicated on Traffic Control Plan.
- Use approved transitions to channelize traffic from a normal path to a new path.
- An Activity Area should consist of a Work Space, Traffic Space and Buffer Space and a Termination Area to return traffic to the normal traffic path.

Flagger Station:

- Shall have the proper advance warning signs.
- Shall be visible to approaching traffic at all times.
- Have an escape route.
- Adequate lighting. Away from shadows during the day, and well lit at night.
- When flaggers are no longer needed, be sure to cover, turn or remove “FLAGGER AHEAD” and “PREPARE TO STOP” signs.
- Park all vehicles away from the flagger station.
- Keep the flagger station clean. Eliminate distractions like chairs, books, or radios.
Hand-Signaling Procedures

- Tell the driver what action to take, use standard hand and paddle signals.
- The following methods of signaling for STOP, SLOW, and GO should be used.

**STOP:**

Stand on the shoulder, stop sign facing traffic with arm outstretched and palm toward the traffic until the first car is stopped, then move to center of the road.

**SLOW:**

Slow sign facing traffic, arm outstretched and palm down, move hand and arm up and down in a pumping motion. Stand on the shoulder facing the traffic.

**GO:**

Slow sign facing traffic, arm in a sweeping gesture, then end the sweep by directing traffic. Stand in the lane when traffic uses the left lane, and on the shoulder when traffic uses the right lane.

Method of One-Lane, Two-Way Traffic Control

- One-way traffic control can be handled by a single flagger or by a flagger at each end of the work zone. A Pilot Car or Official Car is used with flagger for lengthy work zones.

**Single Flagger:**

- When a single flagger is used, the flagger station should be located on the shoulder opposite the work space or in a position where good visibility and traffic control can be maintained.
- The traffic control zone is short enough to allow a good visibility from one end to the other end.
- The traffic is normally light to avoid the possibility of opposing traffic arriving at the traffic control zone at the same time.

**Two Flaggers:**

- When two flaggers are used, the flaggers should be able to communicate orally or with hand signals.
- Radios may be desirable even when visual contact is possible.
- Any considerations for radio failure? Extra battery, etc?
- Signals between the flaggers should not give the wrong message to motorists.
**Pilot Car:**
- All traffic waits for the pilot car.
- Provides guidance and speed control. In long lane closures, two pilot cars may be used.
- Pilot cars require special signs and radios.

**Official Car:**
- This is a special car that brings up the end of a line of traffic.
- It is also helpful if hauling trucks needing to be taken out of the closure along with traffic.

**A Demonstration of Proper Flagger Methodology and Operations**
- Flagger shall be able to demonstrate the proper use of the STOP/SLOW paddle and hand signals to be used to direct traffic.
- When a flagger is used only to slow traffic, use the SLOW side of the paddle, and the word STOP should be covered.
- The STOP/SLOW paddle shall always be held by the flagger and never placed in a traffic cone or on a barricade.
- Never flag from inside a vehicle. Do not lean, sit, or lie on a vehicle.

**Operation:**
- Location and visibility are very important in flagging operation.
- Flagger station should be on the shoulder and opposite to the active work area.
- Flagger should not stand next to the active work area.
- The flagger should be easily identified by drivers and not confused with other workers in the area.
- Do not blend with the background.
- Stand alone. Do not allow other workers to congregate around the flagger station.
- Place personal items out of the way, so they will not distract approaching traffic or block your escape route.

**Emergency Situations**
- Establish a warning signal for the work area crew in case of an emergency.
**Emergency vehicle:**

- When informed in advance of an approaching emergency vehicle, the flagger should clear an unimpeded path for the emergency vehicle by stopping traffic from all directions.
- When no advance notice is given, first stop the emergency vehicle, stop all traffic including construction equipment to provide a clear path for the emergency vehicle to pass.
- When the type of work, such as blasting or excavation makes the roadway impassable, advance arrangements should be made with the local police agency who has jurisdiction over the roadway.

**Violations:**

- Flagger must know how to handle violations of traffic control, crashes or accidents in traffic control zone and emergency flagging operations.
- Warn the construction workers that a driver has run the flagger station.
- Stop all vehicles entering the work area, but do not put yourself in an unsafe situation.
- Prepare ahead of time for this possibility.
- Plan your escape route in an emergency.

**Traffic Accidents:**

- Notify your supervisor and call for help.
- If an accident happens in the line of waiting traffic, stay at your station and continue to control traffic until you receive instructions from your supervisor or a police officer.
- If an accident happens within the controlled area, hold approaching traffic and follow instructions from your supervisor, the head flagger or from a police officer.
- Flaggers are to communicate with each other before releasing or stopping traffic.

**Methods of Dealing with Hostile Drivers**

- Be courteous and professional.
- Do not get involved in an argument with motorists or pedestrians.
- If a motorist fails to follow your instruction and threatens the safety of the work area, note the vehicle license number and description of the vehicle and driver.
- Report the information to your supervisor for the purpose of filing a police report.

I have been trained, understand, and will meet the requirements for flaggers as outlined in the Flagging Instruction Handbook and the Traffic Control Plan for this site.
As a Supervisor I will certify all persons I assign to flagging duties will be properly trained in accordance with OSHA Regulations and the contents of this plan.

Company: ___________________________________________ Date: _________________________
Name: ___________________________________________ Date: _________________________
Signature: ___________________________________________ Date: _________________________
Supervisor: __________________________________________ Date: _________________________

**Identify Sign Placement and Protection Barricades/Cones for the Work Zone Area.**

- **Advanced Warning Area**
  - Tells traffic what is expected ahead.
  - Diamond shaped black on orange signs.
  - High lever warning device.

- **Transition Area**
  - Moves traffic out of its normal path.
  - Traffic cones, barricades that taper traffic around work zone.

- **Buffer Area**
  - Provides protection for traffic and workers.
  - Extend part of the work area for additional safety for crews from oncoming traffic.

- **Work Area**
  - Area for workers, equipment, and material storage.
  - Area downstream form buffer area. Protected by cones, etc.

- **Termination Area**
  - Let’s traffic resume to normal flow.
  - Tapers/ direct traffic back into designated lanes.
Barricades to be Used

- [ ] Cones
- [ ] Delineators, candles sticks, tubular markers
- [ ] K-Rails
- [ ] Barrels
- [ ] Other

Typical traffic tapers- list ones to be used.

- [ ] Merging taper-Moves two traffic lanes into one.
- [ ] Shifting taper- Moves traffic from one lane to another.
- [ ] Shoulder taper- Used when shoulder is closed to traffic.
- [ ] 2 Way taper- Traffic controlled by flaggers and one of two lanes of oncoming traffic is closed.
- [ ] Downstream taper- Returns traffic to normal lanes.

Additional Considerations

1. Reset breaks- Who will be trained and available for duty?
   (Name) _______________________________________________________

2. Reposting Procedures- Who will forward erratic drivers report to local police?
   (Name) _______________________________________________________

3. Who will inspect and maintain work zone signage and barricades and provide documentation?
   (Name) _______________________________________________________

4. Training records to be kept for 3 years. By who?

5. XL Construction to retain this Pre-Task files.

Lane Closure on Two-Lane Road Using Flaggers

1. Floodlights should be provided to mark flagger stations at night as needed.

2. For low-volume applications, a single flagger may be adequate. Where one flagger can be used, such as for short work zones on straight roadways. The flagger must be visible to approaching traffic from both directions.
3. Channelizing devices are to be extended to a point where they are visible to approaching traffic.

4. The ROAD WORK AHEAD sign may be omitted for short-duration operations or when

5. Flashing warning lights and/or flags may be used to call attention to the advanced warnings signs.

6. For State highways, see Caltrans Standard Plan T13.
Typical Application - Lane Closure on Two-Lane Road Using Flaggers

Lane Closure on Low-Volume, Two Lane Road

1. This temporary application may be used as an alternate traffic control plan to the lane closure with flaggers, when the following conditions exist.

2. Traffic volume is such that sufficient gaps exist for traffic that must yield.
3. Drivers from both directions must be able to see approaching traffic through and beyond the work site.

4. Drivers from both directions must be able to see approaching traffic through and beyond the work site.

5. The YIELD sign and YIELD AHEAD sign may be covered and flaggers used, as needed, during daylight working hours to control the flow of traffic through the work place. When flaggers are used, the FLAGGER sign will be used in place of YIELD AHEAD sign.

6. The Type A flashing warning lights may be placed on the ROAD WORK AHEAD and the ONE LANE ROAD AHEAD signs, whenever a night lane closure is necessary.
Typical Application - Temporary Road Closure
Safety Program — Pre-Task

Trench Plate

Pre-Task Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify all possible hazards associated with installation and use of trench plates.

**THIS CHECKLIST APPLIES** – Prior to any use of trench plates.

Date: ___________________________ Job: ______________________

Project Name: ____________________________________________

Attendees: ______________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Checklist

☐ Job site personnel/ workers/ equipment:

☐ Plates come in all sizes, get the right size plate for the job. List sizes and weights
Safety Program — Pre-Task

☐ Use only equipment that is rated to lift the weight of the plate, operator must understand the load chart for lifting and transporting. List equipment to be used

☐ Pre-task safety review for personnel working with or around trench plates. When?

☐ Only experienced and Properly Trained workers will rig, lift, move, and position trench plates.

☐ Never allow hands, feet, or any part of the body under a lifted trench place.

☐ Use only proper rigging and attachments to lift trench plates.

☐ Do not rig from forks without proper and manufacturer approved attachment.

☐ Inspect Rigging before use. Red Tag and Remove damaged rigging.

☐ Tag lines used when necessary and feasible.

☐ Check for uneven ground before transporting the trench plate. Uneven ground may cause swaying and rocking, resulting in the tipping of the equipment.

☐ Insure that the ground, or whatever surface the trench plate will be placed on can support the weight of the plate and the intended load.

☐ Keep electrical cords and temporary power cords away from the trench plates to avoid the possibility of shock of electrocution.

☐ Daily inspection of all lifting apparatus prior to use.

☐ THESE TRENCH PLATES ARE HEAVY AND AWKWARD- USE CAUTION AT ALL TIMES!!!

☐ Is traffic control required? Yes_____No______. If yes, Traffic Flagger/ Work Zone Safety Pre-task.

Public Vehicular Safety

☐ Trench plates must be secured from displacement and rocking by using whatever means necessary; i.e. fine grading, backfill and compaction, welded seams, etc.

☐ Edges of plates painted orange delineation.

☐ Cold patch or bevel the edges of the trench plate for smooth transition for vehicles.

☐ If overlapping of trench plates is necessary, plates must be secured from rocking or “bouncing” by whatever means necessary.

☐ Gaps between the trench plates filled.
☐ Anti-skid paint used to mark continuation of traffic lanes, crosswalks, stop bars and any other established traffic/pedestrian control items.

☐ Advanced signage to make motorist aware of upcoming trench plates in the roadway.

☐ I areas with high speed traffic plates must be recessed into the pavement to avoid uneven pavement height. (some cities require this)

**Pedestrian/ bicycle safety:**

☐ Beveled or cold patched edges for smooth transition for pedestrians.

☐ Orange paint on edges for delineation.

☐ Gaps in trench plates filled.

☐ Lifting eyes covered to prevent shoes, boots, and high heels from entering and causing a trip, slip, or fall.

☐ Surface encumbrances eliminated to avoid slips, trips, and falls. The threaded eyelet type of pick point allows for a smoother walking surface pedestrian areas.

☐ Advanced warning signs for uneven walking surfaces.

☐ Re-route pedestrian traffic if necessary.

☐ Use plates that already have a non-skid finish.

This checklist with added notes serves as the meeting minutes for this pre-task meeting
Utility Start-Up and Tie-In

Pre-Task Meeting Checklist

This pre-task checklist is intended to provide a partial listing of safety considerations for the above referenced work task. The list will not cover all the potential safety issues. Refer to the XL Construction Safety Program Manual and Subcontractor Safety Program for additional safety considerations.

PURPOSE – Identify all possible hazards.

**THIS CHECKLIST APPLIES** – Prior to equipment start-ups and utility tie-ins.

Date: ____________________________ Job: ____________________________

Project Name: ____________________________ Attendees: ____________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Checklist**

☐ Review Electrical Hotwork Pretask in this binder

☐ Review XL Safety Program Manual Energized Electrical Work Policy

☐ All Energized Electrical Work must follow NFPA 70E Safety Requirements.
  - Energized Electrical Work Permit is not required for Diagnostic Work as defined in NFPA 70E.
Subcontractor must have qualified supervision, full time.

Make sure that all personnel understand the purpose of lock outs.

When tying in new utilities to existing, the existing utilities must be tagged and locked out. If not possible, why? __________________________________________________________

Hot work procedures must be implemented. List hot work procedures/ personnel involved:

Name(s)/ List: _______________________________________________________________
___________________________________________________________________________

Safety test gear onsite. List: ____________________________________________________
___________________________________________________________________________

Qualified personnel who tag and lock out are the only ones to remove the locks when work is completed.

All energy sources should be tagged and locked out: electrical, mechanical, hydraulic, pneumatic, chemical, thermal or gravitational.

All piping and lines should be drained, and flushed if appropriate.

Chemicals and hazardous materials should be removed by qualified personnel.

Grounds should be installed on electrical gear after the power source has been disconnected, unless hot work absolutely required.

Before power is turned on, gear should be inspected to make sure tools or parts of any kind are not left inside.

Equipment must be checked before power is turned on. Motor rotation, etc.

All new piping and valves should be tested before tie-ins are made.

Only qualified personnel will do start-ups after tie-ins are made and/or activation of thermal systems.

Workers warned of hot piping during passivation, if applicable.

Occupied Buildings- proper notification to facility engineer & users. Back up valves and freeze kits if existing valve fails. Testing of hazardous wastes if tie-in of drain lines in a facility could have been used for such (i.e. labs, process plants). Trace lines. Do not rely on labeling.

All personnel advised of utility hotup.

Signage

Check Experts List-this book.

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
# Restricted Area Ventilation

**Pre-Task Meeting Checklist**

Attention: Gasoline engines are prohibited from use underground, in confined areas, near building ventilation intakes, or in closed buildings on XL Construction projects.

**THIS CHECKLIST APPLIES** – Mechanical ventilation is necessary whenever diesel, propane, or gasoline powered engines are used in enclosed or restricted space such as underground parking structures. Diesel and propane engines have the potential to create life-threatening environments if they are not tuned properly. Gasoline engines are prohibited from use unless there is no alternative equipment in existence. In that case the use of gas powered equipment must follow all the parameters in this checklist. Ventilation is also essential for welding in restricted space, welding and cutting lead contaminated surfaces, and some epoxy and urethane coating operations.

This checklist serves as the meeting minutes for this pre-task meeting. Notify the XL Construction Superintendent immediately if any corrective actions are required.

Date: ___________________________________________ Job: ______________________

Project Name: ____________________________________________

Attendees: ____________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Ventilation Hazard to Address**

- Whirlybird (gas powered)
- Floor grinder (gas powered)
- Forklift
- Electrical generator (gas powered)
- Water pumps
- Pickup truck/gas powered vehicles
- Compressor
- Welding in restricted space
- Welding and cutting on lead surfaces
- Epoxy spray painting
- Salamander
- Fuel powered JLG's/ Gradals/ Lifts
- Gas powered concrete mixers

**Mechanical Ventilation Method**

- Barrel fan and flex tube for general ventilation.
- Smog Hog for point source exhaust ventilation.
- Pedestal fan for welding fumes.
- HEPA negative air machine/ vacuum for welding fume reduction.

**Ventilation Installation:**

- Connect the tubing to the barrel fan. Be sure that the length of the tube is long enough to prevent recirculation.
- (See Figure 1 on Page 7.)
- Use a smoke tube or other means to verify that there is good air circulation in the area where work will be conducted.

**Training:**

- General- Each worker in the primary exposure area is to be provided with instruction and training in the potential health and safety hazards of the operation and the controls being
used. They also should receive information on the acceptable concentration limits, methods of measurement, and symptoms of overexposure.

- Monitoring: Carbon monoxide readings are taken with a Gas Tech CO-95 monitor, 402 multigas meter, or Drager pump and tubes available from XL Construction Safety. Testing is mandatory for interior, enclosed, and restricted space such as recessed loading docks. Readings are to be taken at the start of the operation and periodically (for example, hourly) after that. Air tests should be taken near the equipment exhaust and in nearby rooms (ceilings) and at the top of stairwells.

- Test equipment is to be calibrated prior to use and kept in good operating condition. If the measured concentrations reach or exceed 25 ppm, the operations to be shut down and additional controls instituted.

- If gasoline powered equipment is used indoors for any reason, the operator must wear an alarm monitor such as the CO-95.

- Symptoms of overexposure to carbon monoxide: Commonly reported symptoms are related to central and peripheral nervous system degradation and bright red coloration of arteries and veins, including:
  - Headaches
  - Lightheadedness
  - Vertigo
  - Cherry red color lips and mucous membranes.
Ventilation Plan - Site Specific

CONTRACTOR/ SUBCONTRACTOR: _____________________________________________________

PROJECT: _________________________________________________________________________

REONSIBLE PERSON: _______________________________________________________________

General principles

- **Ventilation Plan** is developed to provide adequate circulation to each of the affected work areas. The plan includes the direction of air flow, the anticipated CFM, how recirculation is to be prevented, and layout.

  Location: ______________________________________________________________

  Fan CFM: ________________________________ Length of duct tubing:

  Circulation measured by smoke tube adequate: Yes____No ____

- **Air Monitoring** is conducted for gases that could potentially be dangerous to life and health, such as carbon monoxide, etc.

  Monitoring equipment: _______________________ Test for: _____________________

  Permissible limits: _______________________________________________________

  Calibration date: ________________________________________________________

- **Training and Information** is provided to educate employees in the potential hazards and symptoms of exposures. Training includes training in the proper use of respirators (if required), use of ventilation and engineering controls, and symptoms of exposure:

  Date: ________________________________

  (Note: No respirator can effectively filter out or absorb carbon monoxide.)

- **Test on Equipment** is used to determine if engines are in good tune. Use a carbon monoxide in the cool exhaust stream to get an estimate of the carbon monoxide levels. If the exhaust stream is hotter than 125°F, use a ¼ wound copper tubing to cool it down for the sample.

**Specific Precaution- Lead**

1. Will there be welding on lead coated surfaces?

   Yes____ No______

   If yes, continue to question 2. If no proceed to question 4.

2. Has the lead paint on the surface been removed to a distance of 6” form the point of welding?
Yes_____No______.

If yes, go to the next question. If no, clean the surface of residual lead paint to a distance of 6” from the welding points on the surface and go to question 3.

3. Has local exhaust ventilation bee set up?

Yes_____No______.

If so, local exhaust ventilation (i.e., Smog Hog equipped with HEPA filter) should be implemented with the shroud within 8” of the surface to be welded on. At this point ventilation is ready and work can begin. Welding fume respirators are mandatory unless air tests indicate that airborne lead concentrations are less than 30µg/m³.

4. Will there be a mechanical cutting or grinding on lead coated surfaces?

Yes_____No______.

If yes, use the local exhaust and general room ventilation as described in the section on ventilation safety tips above. If no, proceed to the next question.

5. Will there be sweeping or disturbance of lead contaminated dust?

Yes_____No______.

If yes, use a HEPA vacuum to clean up the dust. Do not sweep with a dry broom.

Always remember when working on lead containing surfaces. To wear appropriate respiratory protection, protective gloves and clothing. Follow good hygienic practices. A summary of Cal/OSHA requirements from the lead standard can be found in section 10 of the HazMat segment of the XL Construction IIPP program. Also refer to Cal/OSHA Title 8, Section 1532.1 in the Construction Safety Orders.

Any HEPA filter vacuums should be checked for leaks with a DOP (dioctyl phthalate) solution to assure filter integrity. This is a mandatory requirement if work is being performed in congested, process, or public-sensitive areas.

**Welding Fumes - General**

- **PEDESTAL FANS** should be placed in the area whenever welding or cutting in partially enclosed areas. They should be positioned to blow contaminants away from the welding area and away from other workers.

- **MECHANICAL VENTILATION** with a barrel and duct tubing is necessary when welding or cutting is performed in an enclosure. The duct should be long enough to prevent any recirculation. Check the airflow in the room with a smoke tube.

Always remember to exhaust or filter contaminated air generated from operations and bring clean uncontaminated air into the work areas. Four (4) air changes per hour is the very
minimum standard. Welding fume respirators may also be needed depending on the type of contaminant and the airborne concentration.

**Epoxy and Urethane Painting- Roller Application**

- **DIESEL VENTILATION** is the preferred method because it prevents a buildup of contaminants. The fan needs to be explosion proof. The coating material safety data sheet (MSDS) and, if necessary, the manufacturer should be called for guidance.

**Combustion Engines**

- **DIESEL POWERED AND PROPANE ENGINES** pose a carbon monoxide threat, especially in areas of little or no ventilation. The combustion efficiency of propane engines can vary greatly. The exhaust should be tested for any equipment before it is used underground or in closed off rooms.

- **CATALYTIC SCRUBBERS** must be attached to all diesel equipment used indoor.

**Silica Dust**

- **MECHANICAL VENTILATION** is an important remediation tool for preventing overexposure to silica dust from concrete grinding, pavement breaking, and concrete saws. Standing fans should be positioned to direct the dust cloud away from the operator.

- **WATER SPRAYERS AND MISTING DEVICES** are also required for dust control. These may include Hudson Sprayers, Drip Misting Mister, and hose spraying.

**Table 1: Equipment available in the XL Construction Yard**

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>8” Barrel fan</td>
</tr>
<tr>
<td>8” Flexible duct hose</td>
</tr>
<tr>
<td>24” Barrel fan</td>
</tr>
<tr>
<td>24” Barrel fan explosion proof</td>
</tr>
<tr>
<td>Pedestal fans</td>
</tr>
<tr>
<td>Spay/mist pumps</td>
</tr>
<tr>
<td>36” Box fan</td>
</tr>
<tr>
<td>Airline respirators</td>
</tr>
<tr>
<td>HEPA vacuums</td>
</tr>
<tr>
<td>HEPA negative air machines</td>
</tr>
</tbody>
</table>
### Table 2: Equipment available from the Safety Department

<table>
<thead>
<tr>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training materials and operation manuals</td>
</tr>
<tr>
<td>Carbon monoxide monitors</td>
</tr>
<tr>
<td>Photovac flame ionization detectors</td>
</tr>
<tr>
<td>2Dragger pumps and tubes</td>
</tr>
</tbody>
</table>

This checklist with added notes serves as the meeting minutes for this pre-task meeting.
Safety Trainings

XL Construction Safety Program Manual

Rev. 07/12
Safety Trainings

Annual Training Courses Offered ................................................................. 6-4
  Trench and Excavation Competency .......................................................... 6-4
  Scaffold Competency .................................................................................. 6-4
  CPR and First Aid ....................................................................................... 6-4
  Hazard Communication .............................................................................. 6-4
  Respiratory Protection ................................................................................ 6-4
  Federal OSHA 10 and 30 Hour Construction Outreach Training .............. 6-5
  Click Safety – On-Line Training ................................................................. 6-5
CLICKSAFETY Process .............................................................................. 6-5
How to use CLICKSAFETY (Employee) ..................................................... 6-6
  ClickSafety Course Catalog ..................................................................... 6-7
XL Construction Online SSP Training Program Instructions ....................... 6-10
ClickSafety Subcontractor Notification Letter ........................................... 6-12
Annual Training Courses Offered

Trench and Excavation Competency

XL Construction provides for, and requires all Leadsmen, Jobsite Safety Coordinators, Foremen and Project Superintendents to take and pass a standard (8) hour course in Trench and Excavation Safety. This training is offered annually and required for these employees a minimum of every three years. Among other topics, the training covers soil classification, benching, sloping and shoring methods required by California and Federal OSHA standards.

Scaffold Competency

XL Construction provides for, and requires all Leadsmen, Jobsite Safety Coordinators, Foremen and Project Superintendents to take and pass a standard (8) hour course in Scaffold Safety. This training is offered annually and required for these employees a minimum of every three years. Among other topics, the training covers methods of proper erection, componentry, scaffold inspection, and fall protection required by California and Federal OSHA standards.

CPR and First Aid

XL Construction offers and requires all project team members including Project Coordinators, Project Managers, Project Engineers, Foremen, Jobsite Safety Coordinators, Leadsmen and Project Superintendents to achieve and maintain certification in Standard Cardiopulmonary Resuscitation and Standard Construction First Aid. This training meets or exceeds equivalency to American Red Cross and American Heart Association curriculum for these courses. XL Construction also extends this training, at no cost, to spouses and significant partners of employees.

Hazard Communication

XL Construction will provide annually to all employees training on the safe use and identification of hazardous material used at XL or on XL Construction Projects.

Respiratory Protection

XL Construction will provide annually to all employees awareness training for identification of those conditions or environments that would require the use of Respiratory Protection. For those employees using any kind of Respiratory Protection, a detailed review of all requirements, responsibilities, medical evaluations and fit testing will be conducted.
Federal OSHA 10 and 30 Hour Construction Outreach Training

XL Construction offers and requires the successful completion of Federal OSHA Construction Outreach training for the following employees:

- Leadsmen, Foremen and Superintendents – OSHA 10 every (3) years
- Sr. Superintendents and Jobsite Safety Coordinators – OSHA 30 every (3) years

Click Safety – On-Line Training

XL Construction partners with Click Safety Inc. to offer ‘on-line’, web-based safety and health training. Each course includes testing to ensure comprehension of the subject matter. The service also provides electronic record keeping and progress tracking for each employee. This training delivers a wide variety of Construction and General Industry Safety courses and is used by XL Construction to provide training to field and project management team employees. A course catalog is included in this section.

CLICK SAFETY Process

1. XL Employees
   A. Contact administrator.
   B. Specify what training employee wants or assigned by administrator.
   C. Administrator enrolls and notifies employee.
   E. Employee enters user name and password.
   F. Employee completes training.
   G. Employee prints certificate on-line from website.

2. Subcontractors
   A. Subcontractors are notified of on-line requirement via ITB’s.
   B. Subcontractors receive instruction sheet from XL project team/PM.
   C. Subcontractor go to www.clicksafety.com/xl to open their account.
   D. Subcontractor enrolls their employees for pre-set fee.
   E. Subcontractor employees go to www.clicksafety.com/xl register and complete training.
F. Subcontractor employee presents certificate to XL project team member on the jobsite.

G. XL issues hard-hat sticker and gives any additional site-specific information to sub employee.

How to use CLICKSAFETY (Employee)

CLICKSAFETY is an internet-based Safety Training service used by XL Construction. If you have access/connection to the Internet, you can use this tool to enhance your construction safety knowledge!

Follow these steps:

1. Turn your computer on
2. Click on the internet Explorer or Safari icon to open the Web Browser.
3. Type in www.clicksafety.com in the address box and press enter.
4. Once the Clicksafety home page appears, you can log-in and start your training.
5. To log-in, type in the first letter of your first name followed by your last name, (for example, jsmith for John Smith). Then type the last four numbers of your social security number in the password box. Press Enter.
6. You will see any courses that have been assigned to you by the XL safety administrator. Simply click on the START button and begin.
7. The Clicksafety system stores all your course work information by your log-in name and password.
8. When you complete a course, you may print a completion certificate (if you are hooked up to a printer). A permanent record of your course completion will be stored.
9. Refer to the following click safety course catalog. Please let XL’s administrator know, any courses you wish to take.

Note: All courses you take must be assigned by the administrator.
ClickSafety Course Catalog

ClickSafety offers one of the largest online safety libraries developed in Macromedia Flash and is an Authorized OSHA Online Outreach Instructor. Our courses are written by on-staff Certified Safety Professionals (CSP) and Certified Industrial Hygienists (CIH) ensuring that the course material is accurate to the latest regulations.

Why Online Training: Why ClickSafety:
Self-paced / On-demand training  Authorized OSHA Trainer
Affordable  Proven Track Record
Consistent delivery  Recognized Industry Leader
Tests for comprehension

Course Library Data Date: February 24, 2006

SAFETY AWARENESS COURSES
Click Level 1
Audience: All Employees
Length: 6 - 15 Minutes/Course
Airline Respirator Warning
Bloodborne Pathogens
Cal-OSHA for Construction
Confined Spaces Awareness
Crystalline Silica Exposure
Defensive Driving Awareness
Diversity in the Workplace
Electrical Safety
Emergency Action Planning Awareness
Employer/Employee Responsibility
Ergonomics
Fall Protection I
Fire Prevention
Gas Monitoring and Calibration
General Housekeeping
Hazard Communication Awareness
Jobsite Safety Orientation
Ladder Safety Awareness
Personal Protective Equipment
Power Tool Awareness
Scaffold Safety Awareness
Trenching and Excavation I
Working Around Mobile Equipment
Working Safely With Electricity

SAFETY & HEALTH FUNDAMENTALS
Click Level 2
Audience: Specialized Workers & Supervisory Personnel
Length: 30 – 90 Minutes/Course
100% Fall Protection
Alcohol and Substance Abuse
Anthrax and Suspicious Mail
Asbestos Hazards
Bloodborne Pathogens
CA Confined Space for Construction
Confined Space
Construction Zone Fitness
Control of Hazardous Energies
Crane Safety Basics
Defensive Driving
Demolition Hazards
Dust Disturbance & Mitigation
Electrical Hazards
Electrical Hazard Recognition and Control
Emergency Response
Ergonomics
Fall Protection II
Fall Protection Equipment
Fire Prevention
Forklift Hazards
Ground Fault Protection in Construction
Hazard Communication

333 CAMILLE AVE, SUITE 100 ALAMO, CA 94507 P: 925.855.7233 F: 925.855.8989 WWW.CLICKSAFETY.COM
<table>
<thead>
<tr>
<th>SAFETY &amp; HEALTH FUNDAMENTALS (continued)</th>
<th>Certificate or OSHA Authorized Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click Level 2</td>
<td></td>
</tr>
<tr>
<td>Audience: Specialized Workers &amp; Supervisory Personnel</td>
<td>Audience: All Employees</td>
</tr>
<tr>
<td>Length: 30 – 90 Minutes/Course</td>
<td>Length: 1 ½ - 30 Hours/Course</td>
</tr>
<tr>
<td>Hazardous Waste</td>
<td>Forklift Operator Certification</td>
</tr>
<tr>
<td>Heat Stress</td>
<td>HAZWOPER 8-Hour Refresher</td>
</tr>
<tr>
<td>Helicopter Lift Safety</td>
<td>OSHA 10-Hour Construction Safety</td>
</tr>
<tr>
<td>How to Read a MSDS</td>
<td>OSHA 10-Hour Construction Safety Spanish in August</td>
</tr>
<tr>
<td>Laser Hazards</td>
<td>OSHA 30-Hour Construction Safety</td>
</tr>
<tr>
<td>Lead Hazards</td>
<td></td>
</tr>
<tr>
<td>Materials Handling</td>
<td></td>
</tr>
<tr>
<td>Mold</td>
<td></td>
</tr>
<tr>
<td>Motorized Mobile Platforms</td>
<td></td>
</tr>
<tr>
<td>New and Hot Topics at OSHA</td>
<td></td>
</tr>
<tr>
<td>Noise and Hearing Protection</td>
<td></td>
</tr>
<tr>
<td>Office Safety</td>
<td></td>
</tr>
<tr>
<td>OSHA – An Introduction</td>
<td></td>
</tr>
<tr>
<td>Other Construction Health Hazards</td>
<td></td>
</tr>
<tr>
<td>Personal Protective Equipment, Common</td>
<td></td>
</tr>
<tr>
<td>Personal Protective Equipment, Special</td>
<td></td>
</tr>
<tr>
<td>Power Tool Use and Guarding</td>
<td></td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td></td>
</tr>
<tr>
<td>Rigging</td>
<td></td>
</tr>
<tr>
<td>Safety &amp; Health During Disaster Recovery</td>
<td></td>
</tr>
<tr>
<td>Scaffolds Erection Guidelines</td>
<td></td>
</tr>
<tr>
<td>Scaffolds User Guidelines</td>
<td></td>
</tr>
<tr>
<td>Silica Hazards</td>
<td></td>
</tr>
<tr>
<td>Soils Analysis and Classification</td>
<td></td>
</tr>
<tr>
<td>Spray Coating Operations</td>
<td></td>
</tr>
<tr>
<td>Stairways and Ladders</td>
<td></td>
</tr>
<tr>
<td>Subpart C – Construction General Safety</td>
<td></td>
</tr>
<tr>
<td>Subpart D – Construction Health Hazards</td>
<td></td>
</tr>
<tr>
<td>Subpart D – Occupational Health</td>
<td></td>
</tr>
<tr>
<td>Subpart R – Steel Erection</td>
<td></td>
</tr>
<tr>
<td>Subpart Q – Concrete and Masonry</td>
<td></td>
</tr>
<tr>
<td>Sun and Other Outdoor Hazards</td>
<td></td>
</tr>
<tr>
<td>Trenching and Excavation</td>
<td></td>
</tr>
<tr>
<td>T &amp; E Practical Applications</td>
<td></td>
</tr>
<tr>
<td>Welding/Hot Work</td>
<td></td>
</tr>
<tr>
<td>Workzone Traffic Control</td>
<td></td>
</tr>
<tr>
<td>MANAGEMENT COURSES</td>
<td>SPANISH COURSES</td>
</tr>
<tr>
<td>Click Level 3</td>
<td>Audience: All Spanish Speaking Employees</td>
</tr>
<tr>
<td>Audience: Management and Supervisory</td>
<td>Length: 5 – 60 Minutes/Course</td>
</tr>
<tr>
<td>Length: 1 - 4 Hours/Course</td>
<td></td>
</tr>
<tr>
<td>Competent Person, Excavations</td>
<td>Bloodborne Pathogens</td>
</tr>
<tr>
<td>Competent Person, Fall Protection</td>
<td>Concrete and Masonry</td>
</tr>
<tr>
<td>Conducting Tailgate Meetings</td>
<td>Confined Space Entry</td>
</tr>
<tr>
<td>Contractor’s Safety &amp; Health Program</td>
<td>Confined Spaces Awareness</td>
</tr>
<tr>
<td>Health and Safety Leadership</td>
<td>Control of Hazardous Energies</td>
</tr>
<tr>
<td>OSHA 300 Reporting and Record Keeping</td>
<td>Crane Safety Basics</td>
</tr>
<tr>
<td>OSHA Compliance Basics</td>
<td>Diversity in the Workplace</td>
</tr>
<tr>
<td>Sexual Harassment for Non-Supervisors in August ’05</td>
<td>Electrical Safety</td>
</tr>
<tr>
<td>Sexual Harassment for Supervisors in August ’05</td>
<td>Emergency Action Planning Awareness</td>
</tr>
<tr>
<td>The Competent Person</td>
<td>Employer/Employee Responsibility</td>
</tr>
<tr>
<td></td>
<td>Ergonomics</td>
</tr>
<tr>
<td></td>
<td>Fall Protection</td>
</tr>
<tr>
<td></td>
<td>Fall Protection Awareness</td>
</tr>
<tr>
<td></td>
<td>Fire Prevention</td>
</tr>
<tr>
<td></td>
<td>General Housekeeping</td>
</tr>
</tbody>
</table>

© 2014-2015 XL Construction (Confidential) 6-8 Rev. 01/14
SPANISH COURSES (continued)
Audience: All Spanish Speaking Employees
Length: 5 – 60 Minutes/Course

- Ground Fault Protection
- Hand and Power Tools
- Hazard Communication Awareness
- Hazard Communications
- Heat Stress
- Heat Stress
- Jobsite Safety Orientation
- Ladder Safety Awareness
- Material Handling
- OSHA: An Introduction
- Personal Protective Equipment
- Personal Protective Equipment Awareness
- Power Tool Awareness
- Rigging
- Scaffold Erection Guidelines
- Scaffold Safety Awareness
- Scaffold User Guidelines
- Stairways and Ladders
- Trenching and Excavation
- Trenching and Excavation Awareness
- Welding/Hot Work
- Working Around Mobile Equipment

CAL-OSHA SPECIFIC COURSES
CA 1
Audience: All Employees working in CA
Length: 15 – 60 Minutes/Course

- Cal-OSHA for Construction
- Concrete and Masonry
- Crane Safety Basics
- Electrical Hazard Recognition/Control
- Electrical Hazards
- Fall Protection
- Fall Protection Awareness
- Fire Prevention Awareness
- Fire Prevention Awareness
- Ground Fault Protection
- Hand and Power Tools
- Hazard Communications
- Materials Handling
- OSHA: An Introduction
- Personal Protective Equipment
- Personal Protective Equipment Awareness
- Scaffold Erection
- Scaffold Erection Guidelines
- Scaffold Safety Awareness
- Scaffold User Guidelines
- Stairways and Ladders
- Trenching and Excavation
- Trenching and Excavation - Practical Applications
**XL Construction Online SSP Training Program Instructions**

1. Go to [www.clicksafety.com/xl](http://www.clicksafety.com/xl)

2. Click on “Register for Training” square button on right.

3. Complete “First Name”, “Last Name” and both “Last 4 digits of SSN” fields.

4. Select your preferred language.

5. Select your employer. If your employer is not listed or if you did not receive an access code from your employer, please contact your office administrator to complete company registration information.

6. Enter your company access code. This can be received from your company administrator.

7. Select the Training Courses you are assigned to take. Highlight the course and click the right arrow button so that it will be added to your selected courses to take. If you need to add additional tests, continue to select the course from the left and click on the right arrow button. When you are finished adding courses, click Continue.

8. Confirm your First Name, Last Name, Last 4 digits of your SSN, employer name and Training Courses Selected. Click Next.

9. You will next be sent to an activation page. Click “Login”.

10. You will automatically be sent to the beginning of the course. If you need to log-out for any reason, you can go back to [www.clicksafety.com/xl](http://www.clicksafety.com/xl) and enter your username and password. The course will keep your place. Your username will be your first initial, your entire last name. Example: John Smith = jsmith. Your password will be the last 4 digits of your SSN.

11. Click the red arrow to begin the course.

12. You must answer all quiz questions correctly to move to the next section of the course. There are 4 sections total.

13. If you come to a screen that has graphics in the lower right hand corner, please wait until the pictures move to the left before advancing to the next screen.

14. When you have completed the course, click “Return to the Control Panel”.

15. Scroll down to “Assigned Courses” and double click on the certificate icon to the right of the completed course.

16. Print the certificate and bring it to the job trailer headquarters to receive your hard hat sticker allowing you access to the job site.
17. Please contact your company administrator or foreman if you are having any difficulty completing this course on your own.

18. If you are required to take additional courses, you can then select them from the control panel.
ClickSafety Subcontractor Notification Letter

Project: XL Construction Projects

Notification of Online Contractor Safety Training Initiative

XL Construction and ClickSafety have partnered to create a web-based Contractor Safety orientation course for all XL Construction projects. All contractors requiring access to this project must complete this orientation-training course online through ClickSafety. This course addresses site-specific safety expectations/requirements that you and your employees are expected to understand and comply with while working on the premises.

XL has also created Current Good Manufacturing Practices (cGMP), Good Documentation Practices (GDP) and Infection Control training programs, which address additional training requirements for those types of projects.

Project Requirements:
ClickSafety is the leading provider of web-based safety and risk management systems for the Construction Industry. ClickSafety will be providing the online training and tracking system used to deliver safety orientation. You will be required to have ALL your employees successfully complete the online Contractor Safety orientation course through the ClickSafety system prior to their arrival onsite. The average employee should take 30 - 45 minutes to complete the training for each course. Some of the courses are available in English and Spanish. SSP training is good for one year. Depending on the type of project, you might be required to take some or all of the additional courses outlined above. All mandatory courses for your project will be included on the Invitation to Bid Document. Please refer to the Invitation to Bid Document to see which courses will be required for each project.

Project Fees:
The fee structure for ClickSafety services is $68.00/Employee.

In addition, your company will be required to accept ClickSafety’s Users Agreement upon registration.

ClickSafety Account Setup, User Registration and Implementation:
- Step 1: Go to the XL Construction portal at www.clicksafety.com/xl.
- Step 2: Create a company account. Click on the ‘Company’ tab above the ‘User’ Step 1 on the home page.
- Step 3: Prepay for employee training with a credit card.
- Step 4: Direct all employees to the project page to self-register and complete training prior to arrival at the jobsite.
A ClickSafety representative will be available to answer any of your questions about this program. The ClickSafety program administrator is:

Christina Parkin  
Account Manage  
ClickSafety.com, Inc.  
Phone: 925.208.2618  
Email: cparkin@clicksafety.com

For general information about ClickSafety, you can visit their web site at: [www.clicksafety.com/xl](http://www.clicksafety.com/xl).

Should you have specific questions regarding the project or safety requirements, you may contact:

Michael Popp  
Health and Safety Director  
XL Construction  
(408) 240 - 6407  
Email: mpopp@xlconst.com

We appreciate your attention in this matter and look forward to a continuing and successful business relationship.

**Disclaimer:**
ClickSafety and XL Construction make this training material available with the understanding that users exercise their own skill and care with respect to its use. It is the duty of each employer as specified in the Occupational Safety and Health Act of 1970 (P.L. 91-596) to furnish to each of his employees employment and a place of employment which is free from recognized hazards that are causing or likely to cause death or serious physical harm to his employees and must comply with the applicable occupational safety and health standards adopted for his / her type of work. In addition, each employee must comply with occupational safety and health standards and all rules, regulations, and orders which are applicable to his or her own actions and conduct.
Index

C
Cement Masons 1-21, 2-18
Clean up 3-12
Click Safety 6-5
  course catalog 6-7
  how to use 6-6
  process 6-5
Communication 1-29
Confined Spaces
  working in 3-11
Contact Information
  company 2-7

D
Drinking Water 3-10

E
Electrical “Energized Work” 3-11
Employee Orientation 3-9
Employees
  XL Construction 1-13
Employee’s Safety Suggestion 1-30

F
Fall Protection 3-12
Federal OSHA 10 and 30 Hour Construction Outreach Training 6-5
Field Activities
  requirements prior to 3-7
Flaggers 3-11
Forms
  Employee’s Safety Suggestion 1-30
  SSP Acknowledgment Log 3-21

G
General Superintendent 1-9

H
Hazard Assessment 1-31
Hazardous Materials
  storage of 3-17
  use of 3-17
  High-Visibility Outerwear 3-11

I
Injured Worker’s facts for 1-47
Injuries 3-9
Injury/Illness
  investigation 1-40
  Non-Serious 1-43
  reporting 1-40
  Serious 1-40
  Injury Review Meeting 3-9
  Instruction. See Training

J
Jobsite Information 2-26

M
Motorized Equipment Use 3-11
Motor Vehicle Policies 2-11
My XL Jobsite Information 2-26

N
Non-Construction Personnel
  protection of 3-10
Non-Injury Incident
  investigation 1-48
  reporting 1-48
  response 1-46

O
Orientation of Supervisor’s 3-9

P
Payroll Process
  weekly 2-24
Personal Protective Equipment 3-10
Policies
  safety 1-7
Index

Project Coordinator 1-12
Project Engineer 1-12
Project Foreman 1-12
Project Manager/Estimator 1-12
Project Superintendent 1-11

R
Recognition 1-28
Record Keeping 1-52
Required Forms 2-27
Requirements
  general 3-9
Responsibilities 1-8

S
Safety at XL Construction 2-8
Safety Engineer 1-9
Safety Inspections 3-9
Safety Meetings 3-9
Safety Policy 1-7
Safety Program Compliance 3-12
Safety Requirements
  project specific 3-20
Safety Rules
  all field personnel 3-14
Safety Trainings 6-1
Safe Work Practices
  all employees 1-14, 2-11
  carpenters 1-19, 2-16
  cement masons 1-21, 2-18
  laborers 1-20, 2-17
SSP Acknowledgment Log 3-21
Subcontractor
  safety program quiz 3-22

T
Training
  basic health and safety 1-50
  employee safety 1-50
  Federal OSHA 10 and 30 Hour Construction Outreach Training 6-5
  Online SSP Training Program Instructions 6-10
Training Courses
  offered annually 6-4

U
Unsafe Acts
  correction of 1-36

Unsafe Conditions
correction of 1-36

W
Weekly Payroll Process 2-24
Worker Conduct 3-9
Working Hours 3-12