

| JOB SAFETY ANALYSIS (JSA) FORM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Rev 1 Feb 24 |
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| Unit/Area:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Specific Location: | Work Authorizer (if applicable):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Supervisor / Work Lead: | Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |
| Job Description for Tasks with High Potential Consequence (i.e., life-altering injuries or Consequence Level 1 process safety events including HC 1&2 events) (include Equipment Numbers as Practical):                                                                                                                                                                                                                                                                                                             |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| Check LSRA(s) that apply and review Start Work Check(s). Complete Page 2 with any additional task steps with high potential consequence or if there is no applicable LSRA.                                                                                                                                                                                                                                                                                                                                          |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
|  <b>Confined Space Entry</b><br>Obtain authorization before entering a confined space <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                      |                    |  <b>Bypassing Safety Controls</b><br>Obtain authorization before overriding or disabling safety controls <input type="checkbox"/>                                                                                                                                                                                                                                                                                                       |                         |  <b>Energy Isolation</b><br>Verify isolation and zero energy before work begins <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                       |              |
| <ol style="list-style-type: none"> <li>1. I confirm energy sources are isolated</li> <li>2. I confirm the atmosphere has been tested and is monitored</li> <li>3. I check and use my breathing apparatus when required</li> <li>4. I confirm there is an attendant standing by</li> <li>5. I confirm a rescue plan is in place</li> <li>6. I obtain authorization to enter</li> </ol>                                                                                                                               |                    | <ol style="list-style-type: none"> <li>1. I understand and use safety-critical equipment and procedures which apply to my task</li> <li>2. I obtain authorization before:               <ul style="list-style-type: none"> <li>• Disabling or overriding safety equipment</li> <li>• Deviating from procedures</li> <li>• Crossing a barrier</li> </ul> </li> </ol>                                                                                                                                                      |                         | <ol style="list-style-type: none"> <li>1. I have identified all energy sources</li> <li>2. I confirm that hazardous energy sources have been isolated, locked, and tagged</li> <li>3. I have checked there is zero energy and tested for residual or stored energy</li> <li>4. I never remove or tamper with energy control devices without authorization</li> <li>5. I confirm equipment is back to safe operating condition prior to re-energizing</li> </ol>                                                                                   |              |
|  <b>Safe Mechanical Lifting</b><br>Plan lifting operations and control the area <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                            |                    |  <b>Hot Work</b><br>Control flammables and ignition sources <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                    |                         |  <b>Working Around Mobile Equipment</b> See and be seen; maintain a safe distance <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                     |              |
| <ol style="list-style-type: none"> <li>1. I confirm that the equipment and load have been inspected and are fit for purpose</li> <li>2. I only operate equipment that I am qualified to use</li> <li>3. I establish and obey barriers and exclusions zones</li> <li>4. I never walk under a suspended load</li> <li>5. I understand the lift plan prior to starting work and keep hands off load unless authorized</li> <li>6. I establish and maintain communication with lifting and rigging personnel</li> </ol> |                    | <ol style="list-style-type: none"> <li>1. I identify and control ignition sources</li> <li>2. Before starting any hot work:               <ul style="list-style-type: none"> <li>• I confirm flammable material has been removed or isolated</li> <li>• I obtain authorization</li> </ul> </li> <li>3. Before starting hot work in a hazardous area, I confirm:               <ul style="list-style-type: none"> <li>• A gas test has been completed</li> <li>• Gas will be monitored continually</li> </ul> </li> </ol> |                         | <ol style="list-style-type: none"> <li>1. I plan work to separate workers and mobile equipment</li> <li>2. I only operate mobile equipment if qualified and use spotters where required</li> <li>3. I verify safety devices are functional on mobile equipment</li> <li>4. I establish clear means of communication with equipment operator</li> <li>5. I stay out of the equipment's exclusion zone while in operation</li> <li>6. I confirm controls are in place to prevent unintentional movement of mobile equipment and/or loads</li> </ol> |              |
|  <b>Breaking Containment/OPE</b><br>Manage ignition sources and exposure to energy & hazardous substances <input type="checkbox"/>                                                                                                                                                                                                                                                                                                |                    |  <b>Driving</b><br>Follow safe driving rules <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                 |                         |  <b>Work Authorization</b><br>Work with a valid permit when required <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                |              |
| <ol style="list-style-type: none"> <li>1. I verify opening/break location(s)</li> <li>2. I confirm energy isolation is complete</li> <li>3. I manage ignition sources and confirm gas testing is completed when required</li> <li>4. I use appropriate PPE and defensive behaviors when opening process equipment</li> </ol>                                                                                                                                                                                        |                    | <ol style="list-style-type: none"> <li>1. I always wear a seatbelt</li> <li>2. I do not exceed the speed limit, and reduce my speed for road conditions</li> <li>3. I do not use phones or operate devices while driving</li> <li>4. I am fit, rested and fully alert while driving</li> <li>5. I follow journey management requirements</li> </ol>                                                                                                                                                                      |                         | <ol style="list-style-type: none"> <li>1. I have confirmed if a permit is required</li> <li>2. I am authorized to perform the work</li> <li>3. I understand the permit</li> <li>4. I have confirmed that hazards are controlled, and it is safe to start</li> <li>5. I stop and reassess if conditions change</li> </ol>                                                                                                                                                                                                                          |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |  <b>Line of Fire</b><br>Keep yourself and others out of the line of fire <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                            |              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         | <ol style="list-style-type: none"> <li>1. I position myself to avoid:               <ul style="list-style-type: none"> <li>• Moving objects</li> <li>• Vehicles</li> <li>• Pressure releases</li> <li>• Dropped objects</li> </ul> </li> <li>2. I establish and obey barriers and exclusion zones</li> <li>3. I take action to secure loose objects and report potential dropped objects</li> </ol>                                                                                                                                               |              |
| Confirm these safeguards are in place and effective prior to starting work using the applicable SWC(s).<br>During the task, if safeguards are no longer in place or effective, STOP Work.                                                                                                                                                                                                                                                                                                                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |

## Are there any additional high potential consequence hazards present?

|                                                                                                     |                                                                                                        |                                                                                                           |                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Electrical Energy  | Moving Objects        | Lighting & Visibility  | Simultaneous Operations (SIMOPS) or Stacked Work  |
| Stored Energy      | Hazardous Substances  | Noise & Vibration      |                                                                                                                                      |
| Thermal Energy     | Radiation             |                                                                                                           |                                                                                                                                      |

| High Potential Consequence Task Steps (Description) | Check off to indicate Hold Point       | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards |
|-----------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
|                                                     | Hold Point<br><input type="checkbox"/> |                                                                                            |                                                                                 |
|                                                     | Hold Point<br><input type="checkbox"/> |                                                                                            |                                                                                 |
|                                                     | Hold Point<br><input type="checkbox"/> |                                                                                            |                                                                                 |
|                                                     | Hold Point<br><input type="checkbox"/> |                                                                                            |                                                                                 |
|                                                     | Hold Point<br><input type="checkbox"/> |                                                                                            |                                                                                 |

**Confirm these safeguards are in place and effective prior to starting work using this JSA.**  
**During the task, if safeguards are no longer in place or effective, STOP Work.**

**Lessons Learned (as needed):** What improvements should be made for future work? Discussion leader to provide feedback to update planning package.

### LAI HAZARD ANALYSIS

| <b>Project Number:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Project Task: Installation of Rebar</b>                                                                                                                                                                 |                                                                            |                             |                     | <b>Location:</b> |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |   |   |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------|---------------------|------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                            | <b>Date:</b>                                                               |                             | <b>Reviewed By:</b> |                  |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers                                                                                                                 | Target<br>Check off to indicate Hold Point<br><br><input type="checkbox"/> | Preliminary Risk Assessment |                     |                  | Control Type                                                                                | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                                                                                                                          | Final Risk Assessment |   |   |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                            |                                                                            | H                           | M                   | L                |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | H                     | M | L |
| 1                      | Excavation and Earthworks Work Activities within and around the GOLD project<br><br><br><br><br><br> | Personnel exposure to: unstable soil associated with excavation work resulting in cave-in or collapse and personnel injury.<br>Fall hazards.<br>Inadequate access/egress.<br>Mobile equipment and traffic. | P<br><br><input type="checkbox"/>                                          |                             | X                   |                  | D/E<br>/S/<br>W/<br>A<br><br><br><br><br><br><br><br><br><br>A<br><br><br><br><br><br><br>A | Prior to starting a task, Evaluate the Lifesaving Rules and actions (LSRA) start work Checks (SWC) that may apply to that task review START/STOP work expectations and implement, Verify & Validate (V&V) the appropriate behaviors and or control Safeguards per the ExxonMobil PSMS and site HSE Procedures during the pre-task brief<br><br>Ensure JHA for specific LAI tasks address proper hazard control methods<br><br>Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task |                       |   | X |

**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                             | <b>Project Task: Installation of Rebar</b>                                                              |                                                  |                                   | <b>Location:</b>    |   |                 |                                                                                                                                     |                          |              |   |  |
|------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------|---------------------|---|-----------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------|---|--|
| <b>Prepared By:</b>    |                                             |                                                                                                         | <b>Date:</b>                                     |                                   | <b>Reviewed By:</b> |   |                 |                                                                                                                                     |                          | <b>Date:</b> |   |  |
| Ref.<br>Number         | High Potential<br>Consequence<br>Task Steps | POTENTIAL HAZARDS &<br>CONSEQUENCES<br><br>Include applicable Error<br>Prone Situations and<br>Triggers | Target<br>Check off<br>to indicate<br>Hold Point | Preliminary<br>Risk<br>Assessment |                     |   | Control<br>Type | SAFEGUARDS (Actions &<br>Physical Safeguards)<br><br>Eliminate or Mitigate the<br>hazards                                           | Final Risk<br>Assessment |              |   |  |
|                        |                                             |                                                                                                         |                                                  | H                                 | M                   | L |                 |                                                                                                                                     | H                        | M            | L |  |
|                        |                                             |                                                                                                         |                                                  |                                   |                     |   | A               | Utilize work permit system to control excavation work.                                                                              |                          |              |   |  |
|                        |                                             |                                                                                                         |                                                  |                                   |                     |   | A               | Perform analysis of soil to determine required actions.                                                                             |                          |              |   |  |
|                        |                                             |                                                                                                         |                                                  |                                   |                     |   | A               | Designate a competent person to perform daily inspections of excavations and protective systems.                                    |                          |              |   |  |
|                        |                                             |                                                                                                         |                                                  |                                   |                     |   | E               | Use appropriate protective systems (shoring, shields, and/or trench boxes).                                                         |                          |              |   |  |
|                        |                                             |                                                                                                         |                                                  |                                   |                     |   | E               | Ensure spoil pile and heavy equipment is kept away from the edge of the excavation if workers are required to be in the excavation. |                          |              |   |  |

 Target: **P**=Personnel, **F**=Facilities and equipment, **E**=Environment

 Control Type: **D**=Design hazard out or minimize, **E**=Engineering control, **S**=Safety device, **W**=Warning device, **A**=Administrative control

**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                       | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             | <b>Location:</b>    |   |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       |   |   |
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| <b>Prepared By:</b>    |                                       |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type                     | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                                                                                                   | Final Risk Assessment |   |   |
|                        |                                       |                                                                                            |                                            | H                           | M                   | L |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | H                     | M | L |
|                        |                                       |                                                                                            |                                            |                             |                     |   | E<br><br><br>A<br><br><br>D/S /A | Excavation shall be sloped and benched appropriately according to the type of soil present.<br><br><br>Adequate means for access to and egress from the excavation shall be provided (access ladders required every 25 feet of lateral travel)<br><br><br>For excavations deeper than 4 ft, follow Working at Height requirements. Ensure hard barricades are installed if left unattended and personal fall protection equipment is utilized if within 6 ft. of excavation edge. |                       |   |   |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                              | <b>Project Task: Installation of Rebar</b>                                                                                                                         |                                            |                             |                     | <b>Location:</b> |              |                                                                                                                                                                     |                       |   |   |
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| <b>Prepared By:</b>    |                                                                              |                                                                                                                                                                    | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |                  |              |                                                                                                                                                                     | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                        | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers                                                                         | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |                  | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                     | Final Risk Assessment |   |   |
|                        |                                                                              |                                                                                                                                                                    |                                            | H                           | M                   | L                |              |                                                                                                                                                                     | H                     | M | L |
|                        |                                                                              |                                                                                                                                                                    |                                            |                             |                     |                  | D/S /A       | Ensure excavations are barricaded and guarded from vehicle and mobile equipment traffic. No mobile equipment shall be within 2 ft. of unprotected excavation edges. |                       |   |   |
|                        |                                                                              |                                                                                                                                                                    |                                            |                             |                     |                  | D/A          | Ensure all personnel are out of excavation while digging (or lowering in materials / equipment)                                                                     |                       |   |   |
| 2                      | Excavation and Earthworks Work Activities within and around the GOLD project | Personnel exposure to a hazardous atmosphere while working in an excavation resulting personnel injury.<br><br>(Oxygen deficient, toxic, or flammable atmospheres) | P<br><br><input type="checkbox"/>          |                             | X                   |                  | A<br><br>A   | Utilize work permit system to control excavation work.<br><br>Designate a competent person to perform daily inspections of excavations and protective systems.      |                       |   | X |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                       | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             | <b>Location:</b>    |   |              |                                                                                                                                                                                  |                       |              |   |  |
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| <b>Prepared By:</b>    |                                       |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |              |                                                                                                                                                                                  |                       | <b>Date:</b> |   |  |
| Ref. Number            | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                  | Final Risk Assessment |              |   |  |
|                        |                                       |                                                                                            |                                            | H                           | M                   | L |              |                                                                                                                                                                                  | H                     | M            | L |  |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A            | Evaluate potential sources of hazardous gases including nearby storage tanks, pipelines, unloading stations, vehicle traffic, internal combustion engine driven equipment, etc.) |                       |              |   |  |
|                        |                                       |                                                                                            |                                            |                             |                     |   | W/S          | Utilize a gas monitor to verify the atmosphere in the excavation prior to personnel entering the area.                                                                           |                       |              |   |  |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A            | Coordinate with ExxonMobil site Environmental dept. to verify and conduct soil testing (VOC's) as required.                                                                      |                       |              |   |  |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A            | Adequate means for access to and egress from the excavation shall be provided.                                                                                                   |                       |              |   |  |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                                                                                                                              | <b>Project Task: Installation of Rebar</b>                                                                                       |                                            |                             |                     | <b>Location:</b> |                     |                                                                                                                                                                                                                                               |                       |   |   |
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| <b>Prepared By:</b>    |                                                                                                                                                                              |                                                                                                                                  | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |                  |                     |                                                                                                                                                                                                                                               | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                                                                                                                        | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers                                       | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |                  | Control Type        | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                               | Final Risk Assessment |   |   |
|                        |                                                                                                                                                                              |                                                                                                                                  |                                            | H                           | M                   | L                |                     |                                                                                                                                                                                                                                               | H                     | M | L |
| 3                      | Excavation and Earthworks Work Activities within and around the GOLD project                                                                                                 | Damage to underground utilities resulting in damage to or temporary shutdown of the facility.                                    | P<br><input type="checkbox"/>              |                             | X                   |                  | A<br><br>A<br><br>A | Utilize work permit system to control excavation work.<br><br>Survey of excavation area to determine location of underground utilities. i.e. probing, GPRS<br><br>Review of underground utility drawings by a competent person.               |                       |   | X |
| 4                      | Operation of heavy equipment, and mobile equipment within and around the GOLD project<br> | Working in close proximity to large mobile equipment.<br><br>Large equipment working in close proximity to live process systems. | P/F<br><input type="checkbox"/>            | X                           |                     |                  | A/S/D<br><br>A/W    | Barricade or cone working area of heavy equipment. Area shall be barricaded whenever possible to restrict access to personnel.<br><br>Personnel shall wear high visibility vest or reflective arm bands around mobile equipment and at night. |                       | X |   |

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| <b>Project Number:</b> |                                                                                   | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             | <b>Location:</b>    |   |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                         |                       |              |   |  |
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| <b>Prepared By:</b>    |                                                                                   |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                         |                       | <b>Date:</b> |   |  |
| Ref. Number            | High Potential Consequence Task Steps                                             | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type                                     | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                         | Final Risk Assessment |              |   |  |
|                        |                                                                                   |                                                                                            |                                            | H                           | M                   | L |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                         | H                     | M            | L |  |
|                        |  |                                                                                            |                                            |                             |                     |   | A/<br>W<br><br>W/<br>A<br><br>A<br><br>W/<br>A/S | <p>Have spotter located to direct foot or vehicle traffic around equipment. Designated Flaggers/Spotters shall wear high visibility vest day and night.</p> <p>When working in close proximity to live systems, use a spotter when moving, mobilizing, or positioning mobile equipment into place.</p> <p>Barricade off area where equipment will be swung over.</p> <p>Utilize whistles and horns.</p> |                       |              |   |  |

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## LAI HAZARD ANALYSIS

| LAI HAZARD ANALYSIS |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                |                                            |                             |   |              |                                                                                                                                                                                                                                                                                                                                                                                  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| Project Number:     |                                                                                                                                                                                                                                                                                                                                                                                                                                | Project Task: Installation of Rebar                                                            |                                            |                             |   |              | Location:                                                                                                                                                                                                                                                                                                                                                                        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| Prepared By:        |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                |                                            | Date:                       |   | Reviewed By: |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                     |                       | Date: |   |  |
| Ref. Number         | High Potential Consequence Task Steps                                                                                                                                                                                                                                                                                                                                                                                          | POTENTIAL HAZARDS & CONSEQUENCES<br><br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |   |              | Control Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SAFEGUARDS (Actions & Physical Safeguards)<br><br>Eliminate or Mitigate the hazards | Final Risk Assessment |       |   |  |
|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                |                                            | H                           | M | L            |                                                                                                                                                                                                                                                                                                                                                                                  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| 5                   | Overhead Material handling (Crane) within and around the GOLD project<br><br><br><br> | Personnel exposure to falling objects from overhead work resulting in injury.                  | P<br><div><input type="checkbox"/></div>   | X                           |   |              | D/E<br>/S/<br>W/<br>A<br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br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|                                                                                     |                       |       |   |  |

Target: **P**=Personnel, **F**=Facilities and equipment, **E**=Environment

Control Type: **D**=Design hazard out or minimize, **E**=Engineering control, **S**=Safety device, **W**=Warning device, **A**=Administrative control

**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                                   | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             | <b>Location:</b>    |   |              |                                                                                                                                                                                           |                       |   |   |
|------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|---|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                                                                   |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |              |                                                                                                                                                                                           | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                             | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                           | Final Risk Assessment |   |   |
|                        |                                                                                   |                                                                                            |                                            | H                           | M                   | L |              |                                                                                                                                                                                           | H                     | M | L |
|                        |  |                                                                                            |                                            |                             |                     |   | D/A          | If possible, position crane/swing radius to avoid lifting over occupied buildings, and/or remove personnel for duration of lift.                                                          |                       |   |   |
|                        |                                                                                   |                                                                                            |                                            |                             |                     |   | S/ WA        | Areas below overhead work areas will be barricaded to prevent personnel exposure. Barricades must be located so that the objects that could fall are contained within the barricade area. |                       |   |   |
|                        |                                                                                   |                                                                                            |                                            |                             |                     |   | A            | When possible, work shall be planned and coordinated to eliminate work by multiple crews in the same area.                                                                                |                       |   |   |
|                        |                                                                                   |                                                                                            |                                            |                             |                     |   | A/S          | Personnel in the construction area are required to wear proper PPE.                                                                                                                       |                       |   |   |

 Target: **P**=Personnel, **F**=Facilities and equipment, **E**=Environment

 Control Type: **D**=Design hazard out or minimize, **E**=Engineering control, **S**=Safety device, **W**=Warning device, **A**=Administrative control

| LAI HAZARD ANALYSIS |                                                                       |                                                                                                 |                                            |                             |              |           |              |                                                                                 |                       |   |   |
|---------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|--------------|-----------|--------------|---------------------------------------------------------------------------------|-----------------------|---|---|
| Project Number:     |                                                                       | Project Task: Installation of Rebar                                                             |                                            |                             |              | Location: |              |                                                                                 |                       |   |   |
| Prepared By:        |                                                                       |                                                                                                 | Date:                                      |                             | Reviewed By: |           |              |                                                                                 | Date:                 |   |   |
| Ref. Number         | High Potential Consequence Task Steps                                 | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers      | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |              |           | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards | Final Risk Assessment |   |   |
|                     |                                                                       |                                                                                                 |                                            | H                           | M            | L         |              |                                                                                 | H                     | M | L |
|                     |                                                                       |                                                                                                 |                                            |                             |              |           | S            | Tag lines shall be used when handling materials via crane.                      |                       |   |   |
|                     |                                                                       |                                                                                                 |                                            |                             |              |           | A            | Ensure that the crane operator is trained and certified to operate equipment.   |                       |   |   |
|                     |                                                                       |                                                                                                 |                                            |                             |              |           | A            | Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task      |                       |   |   |
| 6                   | Overhead Material handling (Crane) within and around the GOLD project | Equipment exposure to falling objects from overhead work resulting in damage to a live process. | F/E<br><input type="checkbox"/>            |                             | X            |           | A            | Utilize critical lift plan process to control lift.                             |                       |   | X |
|                     |                                                                       |                                                                                                 |                                            |                             |              |           | A            | Limit access to process unit to essential personnel only.                       |                       |   |   |
|                     |                                                                       |                                                                                                 |                                            |                             |              |           | A            | Ensure that the crane operator is trained and certified to operate equipment.   |                       |   |   |
|                     |                                                                       |                                                                                                 |                                            |                             |              |           | A            | Ensure that crane has been inspected and in proper working condition.           |                       |   |   |

Target: **P**=Personnel, **F**=Facilities and equipment, **E**=Environment

Control Type: **D**=Design hazard out or minimize, **E**=Engineering control, **S**=Safety device, **W**=Warning device, **A**=Administrative control

**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                       | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             | <b>Location:</b>    |   |              |                                                                                                                                         |                       |   |   |
|------------------------|---------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|---|--------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                       |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |              |                                                                                                                                         | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                         | Final Risk Assessment |   |   |
|                        |                                       |                                                                                            |                                            | H                           | M                   | L |              |                                                                                                                                         | H                     | M | L |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A            | A spotter shall be used to assist when lifting over congested area or when material is being moved out of the operator's line of sight. |                       |   |   |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A            | When possible, work shall be planned and coordinated to eliminate work by multiple crews in the same area.                              |                       |   |   |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A            | Ensure information from regular coordination meetings with unit operators is communicated.                                              |                       |   |   |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                                                                                                                                            | <b>Project Task: Installation of Rebar</b>                                                                                                                                                                                                                                                         |                                            |                             |                     | <b>Location:</b> |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                       |   |   |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                    | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |                  |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                                                                                                                                      | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers                                                                                                                                                                                                         | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |                  | Control Type                     | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                                                                                                                              | Final Risk Assessment |   |   |
|                        |                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                    |                                            | H                           | M                   | L                |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | H                     | M | L |
| 7                      | Towing and Loading or Unloading of Materials or equipment from large trucks and flatbed trailers<br><br> | Equipment or property damage and Injury due to inadequate planning, communication, or technique. I.E Load shifts, rolls, or moves during unbinding process, Load is unstrapped in an unplanned manner causing load to move. Falls from flatbed or while accessing/egressing from flatbed or truck. | P/F/E<br><br><input type="checkbox"/>      | X                           |                     |                  | A<br><br>A/D<br><br>A<br><br>A/D | Follow all requirements of the Worley Loading and unloading standard MS-HS-STD-0062<br><br>Utilize the Worley Trailer Towing Pre-Trip Safety Inspection Checklist prior to towing trailers, welding machines or other equipment within or around the GOLD project.<br><br>Develop a task/ load specific JSA prior to loading/unloading.<br><br>Identify and avoid any crush points. Ensure all crew members aware of their respective responsibilities including driver. Determine who will unbind the load. |                       | X |   |

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| LAI HAZARD ANALYSIS |                                       |                                                                                            |                                            |                             |              |           |              |                                                                                                                                                                                                                                                                                                           |                       |   |   |
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| Project Number:     |                                       | Project Task: Installation of Rebar                                                        |                                            |                             |              | Location: |              |                                                                                                                                                                                                                                                                                                           |                       |   |   |
| Prepared By:        |                                       |                                                                                            | Date:                                      |                             | Reviewed By: |           |              |                                                                                                                                                                                                                                                                                                           | Date:                 |   |   |
| Ref. Number         | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |              |           | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                           | Final Risk Assessment |   |   |
|                     |                                       |                                                                                            |                                            | H                           | M            | L         |              |                                                                                                                                                                                                                                                                                                           | H                     | M | L |
|                     |                                       |                                                                                            |                                            |                             |              |           | D/E /S       | If unloading with equipment (crane/Forklift) Safeguards must be in place to prevent load from being pushed or shifted off trailer. (Chocks, pipe stands, second piece of equipment, etc.)                                                                                                                 |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | A            | A Spotter will always be in constant communication with operator to ensure safe delivery of material to staging location.                                                                                                                                                                                 |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | A/S          | Ensure load is secure before accessing trailer to rig material. Use trailer access ladder or portable ladder to gain access to trailer deck. Face the ladder and maintain 3-point contact. If fall potential is > 6' the fall hazard must be evaluated by a competent person and appropriately mitigated. |                       |   |   |

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| LAI HAZARD ANALYSIS |                                                                                                                                                                  |                                                                                            |                                            |                             |              |           |              |                                                                                                                                                                                                                                                                                                    |                       |       |   |  |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|--------------|-----------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------|---|--|
| Project Number:     |                                                                                                                                                                  | Project Task: Installation of Rebar                                                        |                                            |                             |              | Location: |              |                                                                                                                                                                                                                                                                                                    |                       |       |   |  |
| Prepared By:        |                                                                                                                                                                  |                                                                                            | Date:                                      |                             | Reviewed By: |           |              |                                                                                                                                                                                                                                                                                                    |                       | Date: |   |  |
| Ref. Number         | High Potential Consequence Task Steps                                                                                                                            | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |              |           | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                    | Final Risk Assessment |       |   |  |
|                     |                                                                                                                                                                  |                                                                                            |                                            | H                           | M            | L         |              |                                                                                                                                                                                                                                                                                                    | H                     | M     | L |  |
|                     |                                                                                                                                                                  |                                                                                            |                                            |                             |              |           | S            | Ensure tag lines are attached as appropriate when rigging is performed.                                                                                                                                                                                                                            |                       |       |   |  |
|                     |                                                                                                                                                                  |                                                                                            |                                            |                             |              |           | A/D          | Barricade the affected area as appropriate to ensure unauthorized individuals are protected from overhead lifts.                                                                                                                                                                                   |                       |       |   |  |
|                     |                                                                                                                                                                  |                                                                                            |                                            |                             |              |           | A/D          | Drivers are to be in the cab or always escorted by spotter / safety watch during unloading operations.                                                                                                                                                                                             |                       |       |   |  |
| 8                   | General work activities (housekeeping) within and around the GOLD project<br> | Slips, trips, and falls due to poor housekeeping resulting in personnel injury             | P<br><input type="checkbox"/>              |                             | X            |           | D/E /S/ W/A  | Prior to starting a task, Evaluate the Lifesaving Rules and actions (LSRA) start work Checks (SWC) that may apply to that task review START/STOP work expectations and implement, Verify & Validate (V&V) the appropriate behaviors and or control Safeguards per the ExxonMobil PSMS and site HSE |                       |       | X |  |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                                                                                                                                                                                                             | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             | <b>Location:</b>    |   |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                 |                       |   |   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|---|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                                                                                                                                                                                                                                             |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                                                                                                                                                                                                       | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type                     | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                                 | Final Risk Assessment |   |   |
|                        |                                                                                                                                                                                                                                                             |                                                                                            |                                            | H                           | M                   | L |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                 | H                     | M | L |
|                        | <br><br> |                                                                                            |                                            |                             |                     |   | A<br><br>A/D<br><br>D<br><br>A/E | Procedures during the pre-task brief<br><br>Ensure JSA for specific LAI tasks address proper hazard control methods.<br><br>Shop work areas shall be set up and organized to minimize the buildup of materials and eliminate slip/trip hazards.<br><br>Use pre-job stretching and flexing exercises.<br><br>Proper waste management receptacles shall be utilized to control trash, debris, and scrap material. |                       |   |   |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                       | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             | <b>Location:</b>    |   |              |                                                                                                                                                                            |                       |   |   |
|------------------------|---------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|---|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                       |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |              |                                                                                                                                                                            | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                            | Final Risk Assessment |   |   |
|                        |                                       |                                                                                            |                                            | H                           | M                   | L |              |                                                                                                                                                                            | H                     | M | L |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A/D          | Access/ egress points and walkways shall be kept clear at all times.                                                                                                       |                       |   |   |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A/D /E       | Extension cords, welding leads, and other cables shall be routed overhead, when possible, in a manner that does not create a slip/trip hazard.                             |                       |   |   |
|                        |                                       |                                                                                            |                                            |                             |                     |   | A            | Regular supervisor walkthroughs should identify and eliminate housekeeping hazards and ensure proper housekeeping methods are being implemented throughout the work shift. |                       |   |   |
|                        |                                       |                                                                                            |                                            |                             |                     |   | E/W          | All employees are to correct (or notify their supervisor) if they observe uneven walking/working surfaces.                                                                 |                       |   |   |

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| LAI HAZARD ANALYSIS |                                                                                                                                                                                                                      |                                                                                                                                                 |                                            |                             |              |           |              |                                                                                                                                                                                                                                                                                                                                         |                       |   |   |
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| Project Number:     |                                                                                                                                                                                                                      | Project Task: Installation of Rebar                                                                                                             |                                            |                             |              | Location: |              |                                                                                                                                                                                                                                                                                                                                         |                       |   |   |
| Prepared By:        |                                                                                                                                                                                                                      |                                                                                                                                                 | Date:                                      |                             | Reviewed By: |           |              |                                                                                                                                                                                                                                                                                                                                         | Date:                 |   |   |
| Ref. Number         | High Potential Consequence Task Steps                                                                                                                                                                                | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers                                                      | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |              |           | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                         | Final Risk Assessment |   |   |
|                     |                                                                                                                                                                                                                      |                                                                                                                                                 |                                            | H                           | M            | L         |              |                                                                                                                                                                                                                                                                                                                                         | H                     | M | L |
|                     |                                                                                                                                                                                                                      |                                                                                                                                                 |                                            |                             |              |           | A            | Care should be exercised, when surveying overhead areas.                                                                                                                                                                                                                                                                                |                       |   |   |
|                     |                                                                                                                                                                                                                      |                                                                                                                                                 |                                            |                             |              |           | A/W/E        | All holes/floor opening eliminated or protected with hard barricades                                                                                                                                                                                                                                                                    |                       |   |   |
|                     |                                                                                                                                                                                                                      |                                                                                                                                                 |                                            |                             |              |           | A/D          | Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task                                                                                                                                                                                                                                                              |                       |   |   |
| 9                   | Use of electrical tools and hand tools<br><br> | Exposure to electrical shock<br><br>Exposure to flying particles from material being worked or from equipment.<br>Injuries from use hand tools. | P<br><input type="checkbox"/>              |                             | X            |           | D/E/S/W/A    | Prior to starting a task, Evaluate the Lifesaving Rules and actions (LSRA) start work Checks (SWC) that may apply to that task review START/STOP work expectations and implement, Verify & Validate (V&V) the appropriate behaviors and or control Safeguards per the ExxonMobil PSMS and site HSE Procedures during the pre-task brief |                       |   | X |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                                                                                                                            | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             |                     | <b>Location:</b> |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |   |   |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                                                                                                                                                            |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |                  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                                                                                                                      | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |                  | Control Type                              | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                                                                                                | Final Risk Assessment |   |   |
|                        |                                                                                                                                                                            |                                                                                            |                                            | H                           | M                   | L                |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | H                     | M | L |
|                        | <br><br> |                                                                                            |                                            |                             |                     |                  | A<br><br>S/A<br><br>A<br><br>E/A<br><br>A | Ensure JSA for specific LAI tasks address proper hazard control methods.<br><br>Implementation of GFCI requirements and Assured Grounding Program.<br><br>Pre-use Inspection. Prompt removal from service of damaged equipment. A documented inspection will be performed, at least monthly, by a designated competent person.<br><br>Use tools according manufacturer's instructions.<br><br>Proper use of safe work practices including barriers, distance and required PPE. |                       |   |   |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                                                                                                      | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             |                     | <b>Location:</b> |              |                                                                                                                                                                                              |                       |   |   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                                                                                                                                      |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |                  |              |                                                                                                                                                                                              | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                                                                                                | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |                  | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                              | Final Risk Assessment |   |   |
|                        |                                                                                                                                                      |                                                                                            |                                            | H                           | M                   | L                |              |                                                                                                                                                                                              | H                     | M | L |
|                        |                                                                                                                                                      |                                                                                            |                                            |                             |                     |                  | E/S          | Use appropriate work area barrier screens and PPE. Eye /Face protection Must be z87.1+ rated for high impact flying particles. Ensure all guards are in place. Do not use damaged equipment. |                       |   |   |
|                        |                                                                                                                                                      |                                                                                            |                                            |                             |                     |                  | S            | Use secondary support handle if equipped.                                                                                                                                                    |                       |   |   |
|                        |                                                                                                                                                      |                                                                                            |                                            |                             |                     |                  | A            | Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task                                                                                                                   |                       |   |   |
| 10                     | Material handling (manual) within and around the GOLD project<br> | Improper lifting resulting in personnel injury (strains and sprains)                       | P<br><input type="checkbox"/>              | X                           |                     |                  | A            | Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task and address proper lifting and material handling methods.                                                         |                       | X |   |
|                        |                                                                                                                                                      |                                                                                            |                                            |                             |                     |                  | A            | One person will not lift over a maximum of 50 pounds or lift awkward loads without assistance.                                                                                               |                       |   |   |

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| LAI HAZARD ANALYSIS |                                       |                                                                                            |                                            |                             |              |           |              |                                                                                                             |                       |   |   |
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| Project Number:     |                                       | Project Task: Installation of Rebar                                                        |                                            |                             |              | Location: |              |                                                                                                             |                       |   |   |
| Prepared By:        |                                       |                                                                                            | Date:                                      |                             | Reviewed By: |           |              |                                                                                                             | Date:                 |   |   |
| Ref. Number         | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |              |           | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                             | Final Risk Assessment |   |   |
|                     |                                       |                                                                                            |                                            | H                           | M            | L         |              |                                                                                                             | H                     | M | L |
|                     |                                       |                                                                                            |                                            |                             |              |           | A/D /S       | Two persons will not lift over a maximum of 100 pounds or lift awkward loads without mechanical assistance. |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | A/D          | All employees must be trained in proper lifting techniques and how to avoid awkward body positioning.       |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | A            | Utilize mechanical lifting equipment when possible.                                                         |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | A/D          | Supervisor walkthroughs should identify potential repetitive motion activities for further analysis.        |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | A            | Shop work areas shall be set up and organized to minimize the necessity to move materials around.           |                       |   |   |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                                                                                                      | <b>Project Task: Installation of Rebar</b>                                                       |                                            |                             | <b>Location:</b>    |   |              |                                                                                                                                                                                                                                                                                                                                         |                       |   |   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|---|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                                                                                                                                      |                                                                                                  | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |              |                                                                                                                                                                                                                                                                                                                                         | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                                                                                                | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers       | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                         | Final Risk Assessment |   |   |
|                        |                                                                                                                                                      |                                                                                                  |                                            | H                           | M                   | L |              |                                                                                                                                                                                                                                                                                                                                         | H                     | M | L |
|                        |                                                                                                                                                      |                                                                                                  |                                            |                             |                     |   | A/D /S       | Ensure JSA address proper hazard control methods and use of mechanical means when the maximum amount of weight that can be lifted, is to be lifted above a height of 4ft, lifted and carried more than 4ft, or lift to an elevated platform/ above head, up/down stairways etc.                                                         |                       |   |   |
| 11                     | Material handling (manual) within and around the GOLD project<br> | Improper lifting and/or material handling resulting in personnel injury (pinch and crush points) | P<br><input type="checkbox"/>              | X                           |                     |   | D/E /S/ W/A  | Prior to starting a task, Evaluate the Lifesaving Rules and actions (LSRA) start work Checks (SWC) that may apply to that task review START/STOP work expectations and implement, Verify & Validate (V&V) the appropriate behaviors and or control Safeguards per the ExxonMobil PSMS and site HSE Procedures during the pre-task brief |                       | X |   |

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| LAI HAZARD ANALYSIS |                                       |                                                                                            |                                            |                             |              |           |              |                                                                                                                                                               |                       |   |   |
|---------------------|---------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|--------------|-----------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| Project Number:     |                                       | Project Task: Installation of Rebar                                                        |                                            |                             |              | Location: |              |                                                                                                                                                               |                       |   |   |
| Prepared By:        |                                       |                                                                                            | Date:                                      |                             | Reviewed By: |           |              |                                                                                                                                                               | Date:                 |   |   |
| Ref. Number         | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |              |           | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                               | Final Risk Assessment |   |   |
|                     |                                       |                                                                                            |                                            | H                           | M            | L         |              |                                                                                                                                                               | H                     | M | L |
|                     |                                       |                                                                                            |                                            |                             |              |           | A            | Ensure JSA for specific LAI tasks address proper hazard control methods                                                                                       |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | A/S          | Personnel shall wear proper gloves when handling materials.                                                                                                   |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | S            | Tag lines and no touch tools shall be used when handling materials via crane.                                                                                 |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | S            | Push blocks or other means shall be used when placing or adjusting cribbing under a load.                                                                     |                       |   |   |
|                     |                                       |                                                                                            |                                            |                             |              |           | S            | Temporary supports shall be designed to take into consideration uneven weight distribution to eliminate the possibility of shifting, rotating, swinging, etc. |                       |   |   |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                         | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             | <b>Location:</b>    |   |              |                                                                                                                      |                       |   |   |
|------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|---|--------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                         |                                                                                            | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |              |                                                                                                                      | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps   | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                      | Final Risk Assessment |   |   |
|                        |                                         |                                                                                            |                                            | H                           | M                   | L |              |                                                                                                                      | H                     | M | L |
|                        |                                         |                                                                                            |                                            |                             |                     |   | A            | Complete a Last Minute Risk Assessment (LMRA) prior to beginning each task                                           |                       |   |   |
| 12                     | Handling rebar<br>Moving rebar manually | Hand injuries<br>Back/muscle strain, cuts                                                  | P<br><input type="checkbox"/>              |                             | X                   |   | S            | Wear approved proper gloves while handling rebar.                                                                    |                       |   | X |
|                        |                                         |                                                                                            |                                            |                             |                     |   | A            | Use good communication with coworkers when shaking out, picking up, and setting down rebar. Be aware of sharp edges. |                       |   |   |
|                        |                                         |                                                                                            |                                            |                             |                     |   | A            | Good stretching at beginning of shift and periodically as needed.                                                    |                       |   |   |
|                        |                                         |                                                                                            |                                            |                             |                     |   | A            | When pulling rebar from existing pile, watch for punctures from wire and sharp edges of rebar.                       |                       |   |   |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                                                                                           | <b>Project Task: Installation of Rebar</b>                                                                                                                                                                                                                                                                                                                           |                                                                            |                             |                     | <b>Location:</b> |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       |   |   |
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| <b>Prepared By:</b>    |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                      | <b>Date:</b>                                                               |                             | <b>Reviewed By:</b> |                  |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                                                                                     | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers                                                                                                                                                                                                                                                                           | Target<br>Check off to indicate Hold Point<br><br><input type="checkbox"/> | Preliminary Risk Assessment |                     |                  | Control Type          | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                                                                                      | Final Risk Assessment |   |   |
|                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                      |                                                                            | H                           | M                   | L                |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | H                     | M | L |
|                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                      |                                                                            |                             |                     |                  | A                     | Have another employee in place to assist in moving rebar.<br>Clear walk paths. Use proper body position, use legs to lift – Not your back.                                                                                                                                                                                                                                                                                                                           |                       |   |   |
| 13                     | Cut boards and plywood for templates and cut rebar using a circular saw, jigsaw, bandsaw, bolt-cutters, drill, and hammer | Excessive noise from saws<br>Cuts & Abrasions from saw blades or drill bits<br>Electric Shock from power tools or cords<br>Airborne debris while cutting material with a circular saw or jigsaw<br>Tripping hazards from cords<br>Muscle pulls or wrist/arm sprains from drill binding or twisting<br>Material or clothing getting caught in rotating parts of tools | P<br><br><input type="checkbox"/>                                          |                             | X                   |                  | S<br><br>A/D<br><br>A | Use double hearing protection (ear plugs and earmuffs) while using any saw or within 10' of someone using a saw.<br>Unplug saws or drill to change blade or bit. Keep both hands on power tools at all times and secure material. Material will not be held.<br>Inspect cords thoroughly that do not get returned to the tool-room and check frequently throughout the day for abrasions or cuts to the cords. Use a GFCI at the power source. Unplug tools when not |                       |   | X |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                       | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             |   | <b>Location:</b>    |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       |   |              |  |  |
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| <b>Prepared By:</b>    |                                       |                                                                                            | <b>Date:</b>                               |                             |   | <b>Reviewed By:</b> |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       |   | <b>Date:</b> |  |  |
| Ref. Number            | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |   |                     | Control Type                            | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Final Risk Assessment |   |              |  |  |
|                        |                                       |                                                                                            |                                            | H                           | M | L                   |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | H                     | M | L            |  |  |
|                        |                                       | Splinters from handling wood<br>Cut potential and pinch point in bolt-cutters              |                                            |                             |   |                     | S/A<br><br>A/D<br><br>A/D /S<br><br>A/S | in use and keep any cords elevated out of standing water.<br>Use a mono-goggle and a face shield while cutting any material or within 10' of someone cutting material with a circular saw or jigsaw<br><br>Keep cords elevated so a 7' clearance can be maintained in walkways. If cords are unable to be elevated, they will be flagged.<br><br>Have a firm grasp on both factory designated handles and drill at a moderate speed.<br><br>Keep loose clothing (shirttails) tucked in and/or material secured and away from rotational parts of tools while in use and keep shirt sleeves buttoned. |                       |   |              |  |  |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                | <b>Project Task: Installation of Rebar</b>                                                                                                                                         |                                            |                             | <b>Location:</b>    |   |              |                                                                                                                                  |                       |              |   |  |
|------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|---|--------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|---|--|
| <b>Prepared By:</b>    |                                                |                                                                                                                                                                                    | <b>Date:</b>                               |                             | <b>Reviewed By:</b> |   |              |                                                                                                                                  |                       | <b>Date:</b> |   |  |
| Ref. Number            | High Potential Consequence Task Steps          | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers                                                                                         | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |   | Control Type | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                  | Final Risk Assessment |              |   |  |
|                        |                                                |                                                                                                                                                                                    |                                            | H                           | M                   | L |              |                                                                                                                                  | H                     | M            | L |  |
|                        |                                                |                                                                                                                                                                                    |                                            |                             |                     |   | A/D          | Use the hand-over-hand method to handle material and do not slide material through gloves (hands.)                               |                       |              |   |  |
|                        |                                                |                                                                                                                                                                                    |                                            |                             |                     |   | A/D          | Hold nail with free hand and tap it to get it started. Remove free hand prior to driving nail in fully.                          |                       |              |   |  |
|                        |                                                |                                                                                                                                                                                    |                                            |                             |                     |   | A/D          | Do not allow other workers to have hands within 10" of the cut point on the rebar. Keep both hands on designated factory handles |                       |              |   |  |
| 14                     | Bend and Tie rebar using rebar benders, pliers | Struck by pliers.<br><br>Punctures or abrasions from rebar ends, tie-wire, nine-wire, and pencil rod<br>Pinched by rebar.<br><br>Repetitive strain injuries while lifting, moving, | P<br><br><input type="checkbox"/>          |                             | X                   |   | A            | Use caution not to snatch tie wire – Pliers could slip off and strike body.                                                      |                       |              | X |  |
|                        |                                                |                                                                                                                                                                                    |                                            |                             |                     |   | A            | Never tie in front of face                                                                                                       |                       |              |   |  |
|                        |                                                |                                                                                                                                                                                    |                                            |                             |                     |   | A            | Leave a long enough tail so wire can be easily bent. Bend wire over after tie is complete.                                       |                       |              |   |  |
|                        |                                                |                                                                                                                                                                                    |                                            |                             |                     |   | A            | Be aware while reaching through rebar to tie, that wire                                                                          |                       |              |   |  |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                       | <b>Project Task: Installation of Rebar</b>                                                 |                                            |                             |                     | <b>Location:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 |                       |   |   |
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| Ref. Number            | High Potential Consequence Task Steps | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers | Target<br>Check off to indicate Hold Point | Preliminary Risk Assessment |                     |                  | Control Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards | Final Risk Assessment |   |   |
|                        |                                       |                                                                                            |                                            | H                           | M                   | L                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 | H                     | M | L |
|                        |                                       | adjusting rebar, or when bending rebar<br><br>Falling or slipping on/through rebar cage    |                                            |                             |                     |                  | A/D is bent over, and wrists are protected.<br><br>A/D Protect exposed end of rebar with caps<br><br>A/D Take regular breaks from repetitive task and stretch those muscle groups multiple times a day.<br><br>A/D Keep backs straight, bend knees, and lift with legs and move at a moderate pace. Have a firm grasp on rebar bender with both hands, firm stance with both feet, and bend at a moderate speed.<br><br>A/D Place plywood or other flat material on top of rebar as a walking/working surface. |                                                                                 |                       |   |   |

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**LAI HAZARD ANALYSIS**

| <b>Project Number:</b> |                                                              | <b>Project Task: Installation of Rebar</b>                                                                                                                 |                                                                            |                             |                     | <b>Location:</b> |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |   |   |
|------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------|---------------------|------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---|---|
| <b>Prepared By:</b>    |                                                              |                                                                                                                                                            | <b>Date:</b>                                                               |                             | <b>Reviewed By:</b> |                  |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Date:</b>          |   |   |
| Ref. Number            | High Potential Consequence Task Steps                        | POTENTIAL HAZARDS & CONSEQUENCES<br>Include applicable Error Prone Situations and Triggers                                                                 | Target<br>Check off to indicate Hold Point<br><br><input type="checkbox"/> | Preliminary Risk Assessment |                     |                  | Control Type                      | SAFEGUARDS (Actions & Physical Safeguards)<br>Eliminate or Mitigate the hazards                                                                                                                                                                                                                                                                                                                                                                          | Final Risk Assessment |   |   |
|                        |                                                              |                                                                                                                                                            |                                                                            | H                           | M                   | L                |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                          | H                     | M | L |
| 15                     | Move rebar cages and hardware using a crane and/or forklift. | Equipment striking personnel or other objects<br>Pinch points between rebar cage and trailer<br>Exposing others to tripping hazards while staging material | P/F<br><br><input type="checkbox"/>                                        |                             | X                   |                  | A/D<br><br><br>A/D<br><br><br>A/D | Have a spotter with a flag, horn, and vest to direct any traffic and warn or stop the operator if any hazards are not visible to the operator. Use a 2nd spotter if necessary. Keep any personnel from going near or under a suspended load.<br><br>Do not place hands between a load (rebar cage) and the trailer.<br><br>Stage material in an organized manner with clear access paths to be able to maneuver without the need to climb over material. |                       |   | X |

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