

Job Hazard Analysis (JHA)

Activity/Work Task: BUILT-UP ASPHALT ROOFING	Overall Risk Assessment Code (RAC) (Use highest code)	M				
Project Location: Poolesville, Md.	Risk Assessment Code (RAC) Matrix					
Project Number: 121522	Severity	Probability				
Date Prepared: December 15, 2022		Frequent	Likely	Occasional	Seldom	Unlikely
Prepared By: Rodney Baxter	Catastrophic	E	E	H	H	M
Reviewed By: Dave Handershot	Critical	E	H	H	M	L
Notes: Field Notes, Review comments, etc.	Marginal	H	M	M	L	L
	Negligible	M	L	L	L	L
	<p>Step 1: Review each "Hazard" with identified safety "Controls" and determine RAC (See above)</p> <p>"Probability" is the likelihood to cause an incident, near miss, or accident and identified as: Frequent, Likely, Occasional, Seldom or Unlikely.</p> <p>"Severity" is the outcome/degree if an incident, near miss, or did occur and identified as: Catastrophic, Critical, Marginal, or Negligible</p> <p>Step 2: Identify the RAC (Probability/Severity) as E, H, or L for each "Hazard" on JHA. Annotate the overall highest RAC at the top of JHA</p>					
					RAC Chart	
					E = Extremely High-Risk	
					H = High Risk	
					M = Moderate Risk	
					L = Low Risk	

Job Steps	Hazards	Controls	RAC
Site-specific/Job-specific training for workers	Employees not trained in the safe execution of their tasks may harm themselves or others	<ul style="list-style-type: none"> - Use this Activity Hazard Analysis and other formal and informal training as a means to train workers. NOTE: If the scope of work detailed below changes in any way, contact the Safety Department and complete an AHA amendment detailing the new scope of work. <p>EM 385-1-1, Sect., 1.B.1 - 1.B.3</p>	L
Put on your personal protective equipment.	Head, foot, or eye injury Personnel being struck by equipment/trucks Hearing damage	<ul style="list-style-type: none"> - Workers entering the job site must wear a hard hat and Class II reflective vest AT ALL TIMES. Routinely inspect hard hats for dents, cracks or deterioration. Replace hard hat after any hard blow or electrical shock. - Safety glasses or face shields must be worn any time work operations can cause foreign objects to get into the eye. - Workers must wear safety-toed work boots with slip-resistant and puncture-resistant soles AT ALL TIMES. - Wear gloves when handling sharp objects. Gloves should fit snugly. Wear the right glove for the job. - Workers shall wear earplugs/earmuffs in high noise work areas where loud or heavy equipment is being used. Clean or replace earplugs regularly. - Do not wear clothing or jewelry that could easily get snagged or caught by equipment or machinery. <p>EM 385-1-1, Sect. 5.A, 5.B, 5.C, 5.D, 5.E, 5.F</p>	L

Job Steps	Hazards	Controls	RAC
Receive deliveries and store material	Crushing or pinching hands or feet Excessive material handling Strains and Sprains	<ul style="list-style-type: none"> - When moving material, keep hands and feet clear of pinch points. Stack material on stickers. - Store material in such a manner that it will not be blown or knocked over. - Stay clear of moving machinery, heed backup alarms and get out of the way. - Stage material as close to its final destination as possible. - Use safe lifting techniques. EM 385-1-1, Sect. 14.A	L
Check electrical cords (portable flexible cords)	Electrical Shock Electrocution/Death	<ul style="list-style-type: none"> - Do not use electrical cords with cuts, worn insulation, or visible conductors. - All frayed, patched, oil-soaked or worn electrical cords shall be taken out of service immediately. - Use cords rated for hard or extra-hard usage. - All cords shall have a double-insulated or grounding plug. - Use factory-assembled cord sets as much as possible. Repairs must preserve the original electrical and mechanical integrity of the cord. - Electrical tape fixes are prohibited and replacement plugs must be properly sized and provided with strain relief clamps. - Check that the ground prong is intact. - GFCI protection shall be provided on all circuits serving portable electric hand tools. Use only GFCI protected circuits. - All electrical systems shall comply, with the NEC. EM 385-1-1, Sect. 11.D.05, 11.A.06	L
Inspect tools	Injury due to defective or improperly functioning power tools Electric shock from defective tools. Impact injuries, splinters Impact injuries from spinning tool	<ul style="list-style-type: none"> - Remove defective tools from the job site. - Wooden handles for tools are secured tightly in the tool and free of cracks and splinters. - All saws are equipped with properly functioning manufacture installed guards. - Handheld power tools (saws, drills, grinders) are equipped only with a constant pressure switch. - Pneumatic nailers have a functioning safety device on the muzzle to prevent ejection unless muzzle in contact with work surface. - Only use tools for their intended use. - GFCI protection shall be provided on all circuits serving portable electric hand tools. Use only GFCI protected outlets. - Tag defective tools and remove them from the workplace. EM 385-1-1, Sect. 11.D.05, 13.A, 13.B, 13.C, 13.D	L

Job Steps	Hazards	Controls	RAC
Mobilize and Stage Roofing Tanker	Spillage during transit Accidental movement of tanker Fires, Explosions - Burns	<ul style="list-style-type: none"> - Tanker covers should be closed and latched during transit, and the tanker should be slop proof when the cover is closed. - Block the wheels of the tanker while it is parked. EM 385-1-1, Sect. 5.A, 5.B, 5.C, 5.D, 5.E, 5.F, 6.A, 6.B, 6.C,	L
Set up barricades and caution-off area.	Entry of unauthorized personnel Knocking down power lines	<ul style="list-style-type: none"> - Set up warning barricades or temp. fencing and caution off area where earthwork is ongoing to prevent the entry of unauthorized personnel. - Caution tape off power poles and guy wires and be careful when operating heavy equipment near high voltage lines. EM 385-1-1, Sect. 25.B	L
Tend Asphalt Tanker	Crushing or pinching hands or feet Excessive material handling Strains and Sprains Burns	<ul style="list-style-type: none"> - Use safe lifting techniques. - Use material handling aids whenever possible. - Be aware of your surroundings and watch where you are going while carrying material. - Do not place body parts near pinch points - Do not touch any hot surfaces - Never make repairs to the machine while it is still hot - Wear proper clothing and PPE EM 385--1-1, Sect. 5.A, 5.B, 5.C, 5.D, 5.E, 5.F	L
Carrying buckets of hot asphalt	Excessive material handling Strains and Sprains Burns	<ul style="list-style-type: none"> - Team lift heavy or awkward materials. - Use safe lifting techniques. - Balance your load by carrying two partially filled buckets, one in each hand instead of one full bucket - Use material handling aids whenever possible. - Be aware of your surroundings and watch where you are going while carrying material. - Never move materials above coworkers. EM 385-1-1, Sect. 14.A	L
Cut Material	Cut by utility knife, or razor blades Flying particles- Eye injury Skin or airway irritation	<ul style="list-style-type: none"> - Cut away from yourself. The blade should always be pointed in a direction opposite any body parts. - Wear safety goggles for any work that creates hazardous dust, mist, or fumes EM 385-1-1, Sect. 5.A, 5.B, 5.C, 5.D, 5.E, 5.F, 13.A	L
Spread or mop asphalt	Impact injuries Splinters Struck by falling material	<ul style="list-style-type: none"> - Make sure that wooden handles for tools are secured tightly in the tool and are free of cracks and splinters. - Wear gloves, and long-sleeved shirt. - Do not allow workers to stand or walk under the area where roofing operations are ongoing. EM 385-1-1, Sect. 5.A, 5.B, 5.C, 5.D, 5.E, 5.F, 13.A	L

Job Steps	Hazards	Controls	RAC
Working from a Ladder - Entering or exiting work areas via Extension Ladder	Falls from, Struck by Serious Injury, Death	<ul style="list-style-type: none"> - Extension ladders are set up so that the horizontal distance from the top support to the ladder base is 1/4 the working length of the ladder. - The top of the ladder is tied off and the side rails extend 36" above the landing. - Step ladders used only in full open position. - Set up ladders on firm level footing. - Don't work from a step ladder leaned against a wall. - All step and extension ladders are equipped with ladder shoes. - Don't work from the top two steps of a step ladder. - Choose the correct size of ladder for the job. - Ladders must be inspected regularly and tagged "do not use" if defective. Remove defective ladders from the job site. - Do not move a ladder while you are on it. - Do not move ladder with tools on it. <p>EM 385-1-1, Sect. 24.B</p>	L
Working from an elevated position	Falling- Injury, Death	<ul style="list-style-type: none"> - To work from an elevated position, workers must understand and follow all requirements of an approved Site-specific Fall Protection Plan. - Whenever working from an elevated location that is 6' or more above the lower level you must be protected by either a guardrail system or a personal fall arrest system. - Workers must follow the requirements of the Site-specific Fall Protection Plan at all times by wearing a full body harness and lanyard secured to a safe anchorage point, as required. This may be a bracket specifically designed for fall protection or a structural member. - If a guardrail system is implemented as part of the Site-specific Fall Protection Plan to protect workers from the leading edge hazard, workers shall NEVER proceed beyond the boundary of the guardrail without being secured to a safe anchorage point with full harness and lanyard connection. - Lines shall be checked after each move to ensure correct length. - Never allow material or tools to fall on workers below. <p>EM 385-1-1, Sect. 21.A, B, C, H Note: It is a requirement that a Site-specific Fall Rescue Plan be developed, implemented, and reviewed daily prior to the start of work.</p>	M

Job Steps	Hazards	Controls	RAC
Hoist and Set Material/Components (Forklift)	Unexpected movements Materials striking and injuring workers Crushed by falling material Swinging loads striking and injuring workers	<ul style="list-style-type: none"> - Assure that there is good communication between workers and the lift operator. - Never walk under a raised load. - Use a tag line on all loads to help stabilize the load and maneuver it into position. See Activity Hazard Analysis on Forklift Operation EM 385-1-1, Sect. 16.A.	L
Responding to an emergency	Delayed emergency response- further injury or loss of life	<ul style="list-style-type: none"> - Respond quickly and decisively in case of an accident. Call 911 immediately. - Know where the emergency numbers are posted, where the first aid kit is, and who is trained in first aid. - Post Project Address and ensure all employees know the project address/location. - Only persons trained in first aid should be allowed to administer first aid. EM 385-1-1, Sect. 3.A, 3.B	L
Administering First Aid	Exposure to blood-borne pathogens	<ul style="list-style-type: none"> - Use appropriate PPE when administering first aid such as gloves, masks, eye protection and/or resuscitation equipment especially when blood is present. - Wash after contact with blood or other body fluids. - Dispose of soiled material in a labeled leak-proof container. EM 385-1-1, Sect. 3.A, 3.B.	L
Equipment	Training Requirements/Competent or Qualified Personnel name(s)	Inspection requirements	
Crane	Crane Operators Certification / License Required Review Crane Data and Lift Plan	<ul style="list-style-type: none"> - Crane to be inspected prior to entry into the facility. - Crane to have current Inspection Certification on window of cab. - Conduct Daily Inspection prior to Use including Back-up Alarm and Maintenance Records. - Operators Manual shall be on ALL equipment. - Crane will be equipped with Fire Extinguisher. 	
Forklift	Forklift Operator Training and Certification/License Review of Manufacturer's Operating Manual Activity Hazard Analysis Review	<ul style="list-style-type: none"> - Conduct Daily Inspection prior to Use including Back-up Alarm and Maintenance Records. - Operators Manual shall be on ALL equipment. - Forklift will be equipped with Fire Extinguisher. 	
Roofing Kettle	Field workers are trained on the proper usage of kettle. Activity Hazard Analysis Review for each worker.	-Inspected daily for broken parts, damaged cords etc. If equipment is found to be defective, it will be tagged, taken out of service and replaced immediately.	

Equipment	Training Requirements/Competent or Qualified Personnel name(s)	Inspection requirements
Ladders	Field workers are trained on the proper usage of a ladder Activity Hazard Analysis Review for each worker.	<ul style="list-style-type: none"> - Ladders to be in good working condition. Metal conductive ladders are not allowed on job-site. - All stickers must be undamaged, clear, and legible. - Inspect daily for broken parts, loose components etc. Any ladder found defective will be tagged, taken out of service and replaced immediately.
Personal Fall Protection System	All workers will be trained in the proper donning and use of Personal Fall Arrest Equipment before beginning work.	- Inspect personal fall arrest equipment (lanyard, harness, D-rings), for frays, burns, hair line cracks, or other defects prior to use.
Power Tools	Trained by site supervisor and authorized to use power tools.	- Inspected daily for broken parts, damaged cords etc. Any equipment found defective will be tagged, taken out of service and replaced immediately.
Hand Tools	Trained by site supervisor before use.	- Inspected daily for broken parts, loose handles or components etc. Any equipment found defective will be tagged, taken out of service and replaced immediately.
Propane Torch	Trained by site supervisor before use.	- Inspected daily for broken parts, loose handles or components etc. Any equipment found defective will be tagged, taken out of service and replaced immediately.
Personal Protective Equipment (PPE)	All workers will be trained in the proper donning and use of PPE before beginning work.	- Inspect ALL PPE prior to each use. Any damaged PPE will be replaced immediately.

Competent Person

Signature

Activity/Work Task: BUILT-UP ASPHALT ROOFING - 07 51 13
Contract Name: POOLESVILLE HS
Contract Number: 121522

Competent Persons:

Name:	Signature:	Date:	Name:	Signature:	Date:
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Meeting Attendees:

Name:	Signature:	Date:	Name:	Signature:	Date:
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