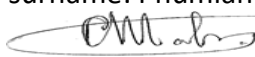
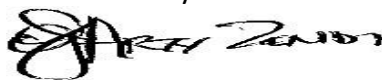




## ETHEKWINI MUNICIPALITY Occupational Health & Safety Directorate

### SITE BASED BASELINE RISK ASSESSMENT

#### Construction Regulations 5.1(a)

Document Title	Baseline Risk Assessment.
Client	EThekwini Municipality–Development engineering-South.
Contract title	Traffic Safety Improvement: Road Intersection and Pedestrian crossing upgrade to Monty Naicker Road and Dr. AB Xuma Street-Ward 28.
Contract Number	1T-33786
Revision	00
Date	17/11/2025
Internal Reference no.	BRA 37/11/2025-DEVENG
Compiled by (Safety officer)	Name and surname: Phumlani Mabaso Signature:  Date: 17/11/2025
Reviewed by (Manager: Safety& Risk)	Name and surname: Arty Zondi Signature:  Date: 17/11/2025
Received by Principal contractor	Name:
	Signature:

## **BASELINE RISK ASSESSMENT**

**1. INTRODUCTION:** In accordance with the Occupational Health and Safety Act, (Act 85 of 1993) the Legislator places specific requirements on an Employer. One of these is prescribed in Section 8(i) of the Act where it requires the Employer to ascertain the risks and dangers which may occur within the workplace or section of the workplace and then goes on to establish working procedures or practices.

**2. PURPOSE:** This is conducted to create a benchmark of the potential risks that apply to the whole project or business operation.

**3. SCOPE:** This assessment could be approached on a site, regional or national level concerning any facet of the business operation or process or activity.

### **4. REVIEW AND MONITORING PLAN**

The risk assessment form part of the health and safety plan to be applied on the site and must include the following:

- (a) The identification of the risk and hazards to which to which persons may be exposed.
- (b) An analysis and evaluation of the risk and hazards identified based on a documented method.

### **5. REFERENCES**

- (a) Tender document number 1T-33786
- (b) Occupational Health & Safety Act and its Regulations

## 6. LOCALITY PLAN



LOCALITY SKETCH

**PLEASE NOTE THAT THIS IS A BASELINE RISK ASSESSMENT AND NOT A DETAILED RISK ASSESSMENT OF ALL ANTICIPATED ACTIVITIES ON SITE.**

## **7. SCOPE OF WORK**

### **Description of Works**

The Works to be carried out include the following main activities:

<b>Type of Works</b>	<b>Description of Works</b>
<b>Site Clearance</b>	General clearance including the removal of trees, concrete slabs, concrete paver, clay pavers, kerb, and channel and fillet roadways including milling of the existing roadway.
<b>Roads</b>	<p>Widening of existing road approximately 400 m<sup>2</sup> with the associated road layer works. This includes:</p> <ul style="list-style-type: none"><li>• Excavation of material to spoil, rip and recompact of formation to 95% MOD AASHTO</li><li>• 300 mm G7 compacted to 95% MOD AASHTO</li><li>• 150 mm C3 cement stabilised layer</li><li>• 110 mm Asphalt Base Layer</li><li>• 50 mm Asphalt Wearing Course.</li></ul> <p>Raised road intersections and pedestrian crossings by milled 20mm asphalt and replaced/raised with 120 mm asphalt wearing course.</p> <p>Construction of a new 2180m kerb and channel.</p> <p>Roadmaking including setting out and pre-marking for both roadways and parking.</p>
<b>Paved Areas</b>	Construction of a new paved areas with both concrete and clay pavers, approximate total area = 8000 m <sup>2</sup> .
<b>Drainage</b>	<p>Alterations and extension of the existing stormwater drainage network. This will include:</p> <ul style="list-style-type: none"><li>• Laying of New pipes approximately 220 meters</li><li>• Alteration of existing Manhole and catchpits.</li><li>• Construction of new manholes and catchpits.</li></ul>
<b>Services</b>	<p>The installation of new service ducts across the roadway to accommodate internal and external service providers infrastructure. Approximately: 8000meters of 110mm diameter and 4000meters of 160mm diameter.</p> <p>The raising or lowering of existing manholes and valve chambers for all affected infrastructure. Approximately 262 items of valve and manhole covers.</p>
<b>Protection Works</b>	<ul style="list-style-type: none"><li>• Erection of bollards. Approximately 685 number of.</li></ul>

**The following activities were assessed:**

- (1) Access to the site.
- (2) Material delivery to the site.
- (3) Site establishment.
- (4) Survey.
- (5) Site clearance and grubbing.
- (6) Busy residential/industrial/urban commercial area.
- (7) Traffic management.
- (8) Excavation/ earthworks.
- (9) Manual moving of precast products.
- (10) Provision of pipe bedding, laying of pipe and backfilling.
- (11) Proving/relocation of existing services.
- (12) Construction mobile plant and machinery.
- (13) Construction of protection works.
- (14) Concrete works.
- (15) Construction of manholes and appurtenant drainage works.
- (16) Installation of guardrails.
- (17) Non pressure pipelines and pc culverts.
- (18) Sidewalk, footpaths and median areas.
- (19) Construction of asphalt wearing course.
- (20) Crack sealing.
- (21) Installation of road signs.
- (22) Removal of existing paint by sand blasting.
- (23) Application of road markings.
- (24) Site security.
- (25) Removal of rubble material off site.

## 1. RISK ESTIMATION AND EVALUATION

### RISK CLASSIFICATION USING A RISK SCORE TECHNIQUE

<b>Exposure (E) How frequently does the hazardous event occur</b>		<b>Risk level</b>
Continuously .....		10
Frequently (daily) .....		6
Occasionally (weekly) .....		3
Unusually (monthly) .....		2
Rarely (few a year) .....		1

<b>Probability (P) The probability of a loss when the hazardous event does occur</b>		<b>Risk level</b>
Frequent (happens often) .....		10
Probable (quite possible) .....		6
Occasional (unusual, but possible) .....		3
Remotely possible (has happened somewhere) .....		1
Improbable (practically impossible) .....		0.5

<b>Severity (S) Consequences of the hazardous event</b>		<b>Risk level</b>
<b>Catastrophic</b> many fatalities; or interruption of longer than 2 weeks; or asset or environmental damage (or both) exceeding R100m .....		100
<b>Disaster</b> (few fatalities; or interruption between one and 2 weeks; or asset or environmental damage (or both) exceeding R10m) .....		40
<b>Very serious</b> (one fatality; or interruption of 6 days; or asset or environmental damage (or both) exceeding R100,000 .....		7
<b>Important</b> (temporary disability; or interruption between 6 and 24 hours; or damage exceeding R10,000 .....		3
<b>Noticeable</b> (first aid needed; or interruption of less than 6 hours; damage exceeding R1000) .....		1

<b>Risk classification (Risk score = E x P x S )</b>	
<b>Risk score</b>	<b>Risk level</b>
Over 400-----5	Very high risk – discontinue operation or activity
200 to 400 ----- 4	High risk – immediate correction needed
70 to 200----- 3	Substantial risk – correction needed
20 to 70----- 2	Possible risk – attention needed
Under 20 ----- 1	Risk accepted

### BASELINE RISK ASSESSMENT WORKSHEET

	Activity	Hazard	Risk	Risk Evaluation			Risk Score	Risk level
				E	P	S		
1	Access to the site.							
	<ul style="list-style-type: none"><li>Traveling to and from site in a vehicle.</li></ul>	<ul style="list-style-type: none"><li>Safety belts not worn when traveling in or operating a vehicle.</li><li>Vehicle not equipped with safety belts for all passengers.</li><li>Over speeding of vehicles.</li><li>Driving on public roads.</li><li>Extensive vehicular and pedestrian traffic.</li></ul>	<ul style="list-style-type: none"><li>Injuries caused when in vehicle accident.</li><li>Fatalities when in vehicle accident</li><li>Risk of personnel being injured by over speeding vehicles.</li><li>Involved in accident.</li></ul>	6	6	7	252	4
2	Material delivery to the site.							
	<ul style="list-style-type: none"><li>Loading and offloading of equipment manually.</li><li>Mechanical handling.</li></ul>	<ul style="list-style-type: none"><li>Employee being struck by the load.</li><li>Manual lifting of heavy objects.</li></ul>	<ul style="list-style-type: none"><li>Serious injury.</li><li>Back strain.</li><li>Skeletal damage</li><li>Head, hand, and foot injuries.</li><li>Backache.</li></ul>	3	6	7	126	3

		<ul style="list-style-type: none"> <li>Bending.</li> </ul>						
<b>3</b>	<b>Site establishment.</b>							
	<ul style="list-style-type: none"> <li>Manual and mechanical clearing of the land</li> <li>Off-loading and positioning of containers by mobile crane</li> <li>Fencing off the site.</li> <li>Installation of temporary water supply, electricity, ablution facilities, fire equipment, notice boards.</li> </ul>	<ul style="list-style-type: none"> <li>Incompetent construction mobile plant operator.</li> <li>Sharp protruding objects.</li> <li>Manual Handling of equipment and materials.</li> <li>Uneven surfaces</li> <li>Driving on dangerous and undulating terrain.</li> <li>Reckless driving.</li> <li>Electrocution</li> <li>Incorrect/ poor connection of temporary services.</li> </ul>	<ul style="list-style-type: none"> <li>Injuries, Accidents</li> <li>Hand injuries.</li> <li>Skeletal injuries</li> <li>Destruction of services</li> <li>Death, burns</li> </ul>	6	6	7	252	4
<b>4</b>	<b>Site survey.</b>							
	<ul style="list-style-type: none"> <li>Survey coordination of</li> </ul>	<ul style="list-style-type: none"> <li>Rubble existing on</li> </ul>	<ul style="list-style-type: none"> <li>Environmental contamination</li> </ul>	6	6	7	252	4



	existing valves, manholes, catchpits and cable duct makers.	site. <ul style="list-style-type: none"> <li>• Snakes bites.</li> <li>• Bees.</li> <li>• Dust accumulation.</li> <li>• Bending.</li> <li>• Heat exposure.</li> </ul>	<ul style="list-style-type: none"> <li>• Death, poison</li> <li>• Respiratory problems.</li> <li>• Back strain.</li> <li>• Sun stroke or heat exhaustion.</li> </ul>					
<b>5</b>	<b>Site clearance and grubbing.</b>							
	<ul style="list-style-type: none"> <li>• Clearing of the site using construction mobile plant/labourer.</li> <li>• Proving of existing services.</li> <li>• Removal of trees, concrete slabs, concrete pavers, kerb, channel and fillet roadways including milling of existing roadways.</li> <li>• Removal of street/traffic lights.</li> <li>• Removal of bollards, unreinforced/reinforced concrete, roadwa</li> </ul>	<ul style="list-style-type: none"> <li>• Public exposure to construction activities.</li> <li>• Rubble existing on site</li> <li>• Snakes bites.</li> <li>• Bees.</li> <li>• Incompetent driver/operator</li> <li>• Unsafe construction mobile plant</li> <li>• Petrol and oil spillages</li> <li>• Dust and Airborne Particles.</li> <li>• Bending.</li> <li>• Noise and Vibration.</li> </ul>	<ul style="list-style-type: none"> <li>• Accident/property damage. Nuisance, poisonous</li> <li>• Environmental contamination</li> <li>• Death, poison</li> <li>• Collision with other vehicles</li> <li>• Hearing damage, fatigue, and long-term health effects.</li> <li>• Respiratory issues.</li> <li>• Back strain.</li> <li>• Blood circulation problems.</li> <li>• Burns from electrocution.</li> <li>• Hand injuries.</li> </ul>	6	6	7	252	4

	ys,sidewalks,kerbs,channel/hauch/fillet, scarify existing hardened areas/,300-600mm diameter pipes, concrete block/bricks paving, underground brickwork, heavy duty cast iron covers and frames.	<ul style="list-style-type: none"> <li>Working in the vicinity of illegal connections (Electrical cables and water pipes)</li> <li>Faulty hand tools.</li> </ul>						
<b>6</b>	<b>Busy residential/industrial/urban commercial areas.</b>							
	<ul style="list-style-type: none"> <li>Working next to residential/industrial areas.</li> </ul>	<ul style="list-style-type: none"> <li>Public exposure to construction activities.</li> <li>Destruction of services in the area.</li> <li>Other activities in the areas</li> <li>Strikes in the area.</li> <li>Noise Pollution.</li> <li>Construction</li> </ul>	<ul style="list-style-type: none"> <li>Injuries public and employees, broken bones, damage to property, death,</li> <li>Disturbance of personnel activities</li> <li>Fights, lawsuits, disagreement</li> <li>Damage to property, injuries to employees</li> <li>NIHL.</li> </ul>	6	6	7	252	4

		zones near shops, offices or sidewalks.						
<b>7</b>	<b>Traffic management.</b>							
	<ul style="list-style-type: none"> <li>Supply and installation of temporary signs, barricades, and delineators.</li> <li>The use of construction vehicle and mobile plant in the public and next to public roads/ streets.</li> </ul>	<ul style="list-style-type: none"> <li>Signage not visible to oncoming traffic/road users.</li> <li>Incompetent flaggers.</li> <li>Poor/ no traffic management plan in place</li> <li>Lack of traffic management training</li> <li>Unroadworthy plant and vehicle</li> <li>Collision with other vehicles.</li> <li>Unauthorized entry to the construction zones by members of the public.</li> </ul>	<ul style="list-style-type: none"> <li>Accidents, death, broken bones, damage to property</li> <li>Noncompliance with the National Road Traffic Act, Council Road Traffic bi-laws and other applicable Regulations</li> <li>Blockage/ inconvenient access to industrial/ commercial areas.</li> <li>Serious and severe injuries.</li> </ul>	6	6	7	252	4
<b>8</b>	<b>Excavation/Earthworks.</b>							

	<ul style="list-style-type: none"> <li>• Manual and mechanical excavation using construction mobile plants and hand tools.</li> <li>• Excavation of unsuitable material and spoil at tip.</li> <li>• Importation of material from commercial source.</li> <li>• Compaction of imported material to various % Mod. AASHTO.</li> <li>• Excavation for pipe trenches.</li> <li>• Manual digging for road sign posts and bollards.</li> <li>• Excavation for kerb and channel/fillet.</li> </ul>	<ul style="list-style-type: none"> <li>• Faulty hand tools</li> <li>• Hitting underground services</li> <li>• Unsafe machinery/ hand tools</li> <li>• Dust accumulation</li> <li>• Improper barricading or warning signs to indicate location of an excavation.</li> <li>• Excavation collapsing.</li> <li>• Excavated material stacked too close to the edge of the excavation which may results to the fall back into the excavation.</li> <li>• Illegal dumping.</li> </ul>	<ul style="list-style-type: none"> <li>• Hand injuries.</li> <li>• Lack of service delivery which may result in community protest</li> <li>• injuries to hands,</li> <li>• Severe injuries or even fatalities.</li> <li>• Damage to equipment.</li> <li>• Fine from EThekweni authorities.</li> <li>• Damage to Property.</li> <li>• Respiratory failure</li> <li>• Fatigue. Kidney damage. Muscle/ body/ joint pain</li> <li>• Noise induced hearing loss</li> <li>• Skin irritation</li> <li>• Breathing/ respiratory diseases</li> <li>• Hand Injuries.</li> </ul>	6	6	7	252	4
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		<ul style="list-style-type: none"> <li>• Traffic accidents on site when transporting materials.</li> <li>• Reversing of trucks and mobile plant.</li> <li>• Incompetent driver/ operator</li> <li>• Vibration</li> <li>• Noise.</li> <li>• Faulty hand tools.</li> </ul>						
9	<b>Manual moving of precast product.</b>							
	<ul style="list-style-type: none"> <li>• Manual handling and moving of precast product using wheelbarrows,</li> <li>• Mechanical handling and moving of precast product using lifting equipment,</li> </ul>	<ul style="list-style-type: none"> <li>• Unsafe wheelbarrows,</li> <li>• Manual handling of precast product</li> <li>• Lifting of excess/ heavy load</li> <li>• Ergonomics hazards</li> <li>• Faulty lifting equipment.</li> <li>• Incompetent</li> </ul>	<ul style="list-style-type: none"> <li>• Injury to hands/ toes</li> <li>• Skeletal injuries</li> <li>• Slippery surface</li> <li>• Tripping hazards</li> <li>• Ergonomic risks</li> <li>• Feet/body crush</li> <li>• Noncompliance with DMR.</li> <li>• Noncompliance with stipulated safe working load.</li> </ul>	3	3	3	27	2

		operator.						
<b>10</b>	<b>Provision of pipe bedding, laying of pipe and backfilling.</b>							
	<ul style="list-style-type: none"> <li>• Levelling</li> <li>• Compaction</li> <li>• Transportation of imported material</li> <li>• Provision of clean coarse sand for pipe trench bedding from commercial source.</li> <li>• Provision of 19mm stone material for pipe bedding.</li> <li>• Provision and laying of geofabric.</li> <li>• Offloading and laying of 450mm pipe.</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic accidents on site when transporting materials.</li> <li>• Reversing of trucks and mobile plant.</li> <li>• Dust inhalation.</li> <li>• Incompetent driver/ operator</li> <li>• Dust</li> <li>• Vibration</li> <li>• Noise</li> <li>• Faulty hand tools</li> <li>• Bending and lifting.</li> <li>• Trench collapse.</li> </ul>	<ul style="list-style-type: none"> <li>• Damage to Property.</li> <li>• Respiratory failure</li> <li>• Fatigue. Kidney damage. Muscle/ body/ joint pain</li> <li>• Noise induced hearing loss</li> <li>• Skin irritation</li> <li>• Breathing/ respiratory diseases</li> <li>• Hand Injuries.</li> <li>• Backache.</li> <li>• Serious injury or fatality</li> </ul>	7	6	7	252	4
<b>11</b>	<b>Proving/relocation of existing services.</b>							
	<ul style="list-style-type: none"> <li>• Maintenance of water mains, sewer,</li> </ul>	<ul style="list-style-type: none"> <li>• Disturbance of the services,</li> <li>• Improper</li> </ul>	<ul style="list-style-type: none"> <li>• No water and electricity, community</li> </ul>	6	6	7	252	4

	stormwater, electrical etc.	connection, <ul style="list-style-type: none"> <li>• Sewer spillage,</li> <li>• Blockage of sewer and stormwater lines</li> <li>• Exposure to biological agents</li> <li>• Electrocutation.</li> </ul>	strikes, <ul style="list-style-type: none"> <li>• Health hazards</li> <li>• Environmental hazards</li> <li>• Burns, death</li> <li>• Financial costs for replacing damaged cables</li> </ul>					
<b>12</b>	<b>Construction mobile plant and machinery.</b>							
	<ul style="list-style-type: none"> <li>• Use of construction vehicles and mobile plants and equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Unsafe construction plants and equipment</li> <li>• Incompetent drivers/operators</li> <li>• Uneven surface</li> <li>• Equipment/machinery failure</li> <li>• Running out of control</li> <li>• Noise</li> <li>• Vibration</li> <li>• Oil Spillage</li> <li>• Dust</li> </ul>	<ul style="list-style-type: none"> <li>• Accidents. Property damage. Noncompliance with DMR. Noncompliance with stipulated safe working load.</li> <li>• Capsizing of mobile construction plants. Jammed construction mobile plants, death</li> <li>• Injury to employees and community, death, loss of</li> </ul>	6	6	7	252	4

			limb/ disablement <ul style="list-style-type: none"> <li>• Damage to property</li> <li>• Noise induced hearing loss</li> <li>• Muscular pains, kidney damage,</li> <li>• Environmental contamination</li> <li>• Lung disease</li> </ul>					
<b>13</b>	<b>Construction of protection works.</b>							
	<ul style="list-style-type: none"> <li>• Erection of bollards.</li> </ul>	<ul style="list-style-type: none"> <li>• Excavation Hazards</li> <li>• Manual Handling and Ergonomic strain.</li> <li>• Power Tool and Equipment Hazards.</li> <li>• Injury due the use of hand tools.</li> <li>• Faulty hand tools.</li> </ul>	<ul style="list-style-type: none"> <li>• Collapse of trenches, striking underground utilities (e.g., water, gas, electrical).</li> <li>• Back injuries or muscle strain from lifting and positioning heavy bollards.</li> <li>• Cuts, abrasions, or entanglement from drills, grinders, or concrete saws.</li> <li>• Disabling injury</li> <li>• Hand injuries.</li> </ul>	6	6	3	108	3



<b>14</b>	<b>Concrete works.</b>							
	<ul style="list-style-type: none"> <li>• Pre-leveling the area.</li> <li>• Shuttering and formwork preparation for inlets, kerbs foundation, channel, concrete paving.</li> <li>• Hand mixing of cement.</li> <li>• Pouring of ready-mix concrete.</li> <li>• Floating of the concrete.</li> </ul>	<ul style="list-style-type: none"> <li>• Noise.</li> <li>• Vibration.</li> <li>• Dust accumulation.</li> <li>• Faulty hand tools.</li> <li>• Cement contact with body.</li> <li>• Over bending.</li> </ul>	<ul style="list-style-type: none"> <li>• Injury to employees and community, disablement.</li> <li>• Noise induced hearing loss</li> <li>• Lung disease, eye irritation.</li> <li>• Hand injuries.</li> <li>• Backache.</li> </ul>	6	6	3	108	3
<b>15</b>	<b>Construction of manholes and appurtenant drainage works.</b>							
	<ul style="list-style-type: none"> <li>• Casting and floating of concrete during construction of stormwater systems.</li> <li>• Excavation above 1m deep using mobile plant</li> <li>• Preparation and laying of concrete pipes using a lifting equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Collapsing of trenches.</li> <li>• Unsafe access to trench</li> <li>• Unprotected trenches</li> <li>• People exposure to excavations</li> <li>• Unsafe lifting devices</li> <li>• Incompetent lifting</li> </ul>	<ul style="list-style-type: none"> <li>• Collapsing of trench walls</li> <li>• Death, dislocation, trauma/ panic attack</li> <li>• Broken bone, dislocation,</li> <li>• Falling into excavation.</li> <li>• Injury to body. Accidents. Property</li> </ul>	6	6	7	252	4

	<ul style="list-style-type: none"> <li>Construction of above 1m deep manhole using cement, blocks, hand tools and concrete manhole rings/ cover</li> <li>Connection of the stormwater pipes into the existing stormwater drainage system.</li> <li>Kerbs, haunching and channel.</li> <li>Handling and floating of concrete during construction of channel.</li> <li>Raising/lowering of existing stormwater/sewer manholes, valve cover, and Telkom manholes.</li> </ul>	<p>machinery operator</p> <ul style="list-style-type: none"> <li>Equipment failure</li> <li>Overloading of equipment/ machinery</li> <li>Working/ operating equipment too close to the excavation</li> <li>Contact with and inhalation of cement dust</li> <li>Manual handling of heavy manhole rings and covers</li> <li>Incorrect connection of stormwater pipes.</li> <li>Manual Handling and Ergonomic Strain</li> <li>Incorrect</li> </ul>	<p>Damage. Noncompliance with DMR. Noncompliance with stipulated safe working load.</p> <ul style="list-style-type: none"> <li>Falling into excavation. Property damage.</li> <li>Respiratory diseases. Skin disease/ irritation</li> <li>Back/ spine problems. Possible of pinch. Skeletal injuries. Injury to hands and toes.</li> <li>Destruction/ blockage of stormwater drainage system.</li> <li>Back injuries, muscle strain from lifting heavy covers or adjusting frames.</li> </ul>					
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		connection of stormwater pipes. <ul style="list-style-type: none"> <li>Exposure to toxic gases (e.g., methane, hydrogen sulfide), low oxygen levels.</li> <li>Confined Space Entry.</li> <li>Falls into Open Manholes.</li> </ul>	<ul style="list-style-type: none"> <li>Destruction/blockage of stormwater drainage system.</li> <li>Serious injury or fatality from falling into uncovered or improperly secured manholes.</li> </ul>					
<b>16</b>	<b>Installation of guardrails.</b>							
	<ul style="list-style-type: none"> <li>Manual digging for guardrails and sign posts</li> <li>Installation of guardrails and sign posts</li> <li>Mixing and floating of cement.</li> <li>Installation of signage and guardrail panels.</li> <li>Drilling and aligning.</li> </ul>	<ul style="list-style-type: none"> <li>Faulty hand tools.</li> <li>Handling and lifting of heavy objects.</li> <li>Skin contacts with cement.</li> <li>Dust</li> <li>Unsafe drilling machine</li> <li>Bending.</li> <li>Working on a stepladder.</li> </ul>	<ul style="list-style-type: none"> <li>Hand injuries.</li> <li>Environmental contamination</li> <li>Lung disease, eye irritation.</li> <li>Noise induced hearing loss</li> <li>Burns, skin infections</li> <li>Breathing/respiratory diseases.</li> <li>Backache.</li> <li>Trip and fall.</li> </ul>	6	6	3	108	3

<b>17</b>	<b>Non pressure pipelines and pc culverts.</b>							
	<ul style="list-style-type: none"> <li>Manual handling and moving of precast product,UPVC cable ducts etc.</li> </ul>	<ul style="list-style-type: none"> <li>Manual handling of precast product</li> <li>Lifting of excess/ heavy load</li> <li>Ergonomics hazards</li> </ul>	<ul style="list-style-type: none"> <li>Injury to hands/ toes</li> <li>Skeletal injuries</li> <li>Slippery surface</li> <li>Tripping hazards</li> <li>Ergonomic risks</li> <li>Feet/body crush.</li> </ul>	3	3	3	27	2
<b>18</b>	<b>Sidewalks, Footpaths and Median areas.</b>							
	<ul style="list-style-type: none"> <li>Levelling the ground surface.</li> <li>Laying of sand bedding</li> <li>Compacting</li> <li>Cutting paving bricks using a grinder.</li> <li>Grouting.</li> <li>Installation of planter boxes.</li> </ul>	<ul style="list-style-type: none"> <li>Unsafe tools</li> <li>Ergonomic hazards.</li> <li>Defective grinder machine.</li> <li>Dust.</li> <li>Noise.</li> <li>Vibration.</li> <li>Manual Handling Injuries.</li> <li>Trips, slips, and falls.</li> <li>Traffic and Public Interface.</li> <li>Weather Conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Backache.</li> <li>Injuries to hands and toes</li> <li>Ergonomic risks</li> <li>Injury to employees.</li> <li>Severe cuts.</li> <li>Respiratory problems.</li> <li>NIHL.</li> <li>Blood circulation problems.</li> <li>Silicosis.</li> <li>Strains, sprains, or back injuries from lifting heavy planter boxes or soil.</li> <li>Uneven surfaces,</li> </ul>	6	6	3	108	3

		<ul style="list-style-type: none"> <li>Incorrect Installation.</li> </ul>	<p>tools, or materials left in walkways.</p> <ul style="list-style-type: none"> <li>Working near roads or pedestrian areas increases the risk of collisions or public interference.</li> <li>Heat stress, dehydration, or slippery surfaces in wet conditions.</li> <li>Planter boxes tipping over or becoming unstable, posing a hazard to people or property.</li> </ul>					
<b>19</b>	<b>Construction of asphalt wearing course.</b>							
	<ul style="list-style-type: none"> <li>Supply and lay asphalt wearing course.</li> <li>Cleaning/sweeping of road before applying tack coat.</li> <li>Application of</li> </ul>	<ul style="list-style-type: none"> <li>Contact with hot asphalt.</li> <li>Dust accumulation.</li> <li>Faulty hand tools.</li> <li>Contact with tack coat.</li> </ul>	<ul style="list-style-type: none"> <li>Burns, skin infections.</li> <li>Lung disease, eye irritation.</li> <li>Injuries,</li> <li>Skin irritation.</li> <li>Environmental contamination</li> </ul>	6	6	3	108	3

	tack coat. <ul style="list-style-type: none"> <li>Using hand tools during raking of asphalt.</li> <li>Milling</li> <li>Compaction.</li> <li>Saw cutting.</li> <li>Breaking of existing asphalt surface.</li> </ul>	<ul style="list-style-type: none"> <li>Bending.</li> <li>Incompetent driver/ operator.</li> <li>Vibration</li> <li>Noise</li> <li>Fumes</li> </ul>	<ul style="list-style-type: none"> <li>Contamination of the nearest commercial buildings</li> <li>Back strain.</li> <li>Accident due to collision.</li> <li>Fatigue.</li> <li>Kidney damage. Muscle/ body/ joint pain</li> <li>Noise induced hearing loss</li> <li>Breathing/ respiratory diseases.</li> </ul>					
<b>20</b>	<b>Crack sealing.</b>							
	<ul style="list-style-type: none"> <li>Supply and application of sealant.</li> </ul>	<ul style="list-style-type: none"> <li>Incompetent driver/ operator</li> <li>Dust</li> <li>Vibration</li> <li>Noise</li> <li>Contact with hot sealant</li> <li>Fumes.</li> <li>Fire.</li> <li>Faulty compressor.</li> </ul>	<ul style="list-style-type: none"> <li>Injuries,</li> <li>Environmental contamination.</li> <li>Lung disease, eye irritation.</li> <li>Fatigue. Kidney damage. Muscle/ body/ joint pain.</li> <li>Noise induced hearing loss</li> <li>Burns, skin infections</li> <li>Breathing/</li> </ul>	6	6	3	108	3

		<ul style="list-style-type: none"> <li>Flying debris.</li> </ul>	respiratory diseases. <ul style="list-style-type: none"> <li>Injury to hands</li> <li>Burns.</li> <li>Eye injuries.</li> </ul>					
<b>21</b>	<b>Installation of road signs.</b>							
	<ul style="list-style-type: none"> <li>Manual digging for sign posts</li> <li>Installation of and sign posts</li> <li>Mixing and floating of cement.</li> <li>Installation of signage.</li> <li>Drilling and aligning.</li> </ul>	<ul style="list-style-type: none"> <li>Faulty hand tools.</li> <li>Handling and lifting of heavy objects.</li> <li>Skin contacts with cement.</li> <li>Dust</li> <li>Unsafe drilling machine</li> <li>Bending.</li> <li>Working on a stepladder.</li> </ul>	<ul style="list-style-type: none"> <li>Hand injuries.</li> <li>Environmental contamination</li> <li>Lung disease, eye irritation.</li> <li>Noise induced hearing loss</li> <li>Burns, skin infections</li> <li>Breathing/ respiratory diseases.</li> <li>Backache.</li> <li>Trip and fall.</li> </ul>	6	6	3	108	3
<b>22</b>	<b>Removal of existing paint by sand blasting.</b>							
	<ul style="list-style-type: none"> <li>Topping up blasting grit.</li> <li>Performing grit blasting.</li> <li>Grit removal and emptying the grit.</li> </ul>	<ul style="list-style-type: none"> <li>Incorrect working methodology.</li> <li>Strike by compressed air/grit /hose.</li> <li>Inhalation of fumes from a diesel</li> </ul>	<ul style="list-style-type: none"> <li>Physical injuries.</li> <li>Body injuries.</li> <li>Lung diseases.</li> <li>Lung diseases.</li> <li>Back pain.</li> </ul>	6	6	3	108	3

		<ul style="list-style-type: none"> <li>operated air compressor.</li> <li>Dust accumulation.</li> <li>Flying debris.</li> <li>Dust inhalation.</li> <li>Bending.</li> </ul>						
<b>23</b>	<b>Application of road markings.</b>							
	<ul style="list-style-type: none"> <li>Cleaning the area to be painted.</li> <li>Painting using a retro-reflective paint and brush.</li> <li>Cleaning of brushes using a thinners.</li> </ul>	<ul style="list-style-type: none"> <li>Dust accumulation.</li> <li>Paint in contact with skin.</li> <li>Thinners in contact with skin.</li> <li>Fire.</li> <li>Inhalation of HCS fumes.</li> <li>Exposure to moving vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>Respiratory problems.</li> <li>Skin irritation.</li> <li>Burns.</li> <li>Chest pains.</li> <li>Accidents.</li> </ul>	6	6	7	252	4
<b>24</b>	<b>Site security.</b>							
	<ul style="list-style-type: none"> <li>Provision of security to staff and property.</li> <li>Robbery/hijacking/mugging on site.</li> </ul>	<ul style="list-style-type: none"> <li>Incompetent security personnel</li> <li>Unguided property</li> <li>Unprotected/</li> </ul>	<ul style="list-style-type: none"> <li>Loss of property</li> <li>Theft,</li> <li>Financial risk</li> <li>Uncontrolled entry</li> <li>Serious injuries</li> </ul>	6	6	7	252	4



		fenced site camp <ul style="list-style-type: none"> <li>• Working in a high risk zone.</li> <li>• Employees being attacked by robbers with dangerous weapons.</li> </ul>	or death.					
<b>25</b>	<b>Removal of rubble material off site.</b>							
	<ul style="list-style-type: none"> <li>• Site clearance and rubble removal.</li> </ul>	<ul style="list-style-type: none"> <li>• Dust accumulation.</li> <li>• Dumping illegally.</li> </ul>	<ul style="list-style-type: none"> <li>• Air pollution.</li> <li>• Respiratory problem due to inhalation of dust.</li> <li>• Fine or imprisonment from Metro authorities.</li> </ul>	6	6	3	108	3