

RISK ASSESSMENT FOR STREET LIGHTS WORKS

Project Name:		Main Contractor:		Document Reference No:	
Project No:		Sub-Contractor:		Date:	01-01-2024
Client / Developer:		Task:	Street Light Works	RA Type:	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Review
Location:		Assessor Name:			

Risk Matrix					
Risk Rating (RR) = Probability (P) X Severity (S)					
Probability	Severity	1-Insignificant	2-Minor	3- Moderate	4- Major
1- Rare	1	2	3	4	5
2- Possible	2	4	6	8	10
3- Likely	3	6	9	12	15
4- Often	4	8	12	16	20
5- Frequent / Almost Certain	5	10	15	20	25

RISK LEGEND					
1-3	LOW RISK	No Action is required unless escalation of risk is possible			
4-6	MODERATE RISK	Acceptable but must be managed as low as reasonably possible			
8-12	HIGH RISK	Activity to be modified to include remedial planning and action and be subjected to detailed EHS Risk Assessment.			
15-25	EXTREME RISK	Do not commence the activity until a risk assessment has been completed to ensure the safety of the situation or task. If it is not possible to reduce or eliminate the risk even with unlimited resources, work must remain prohibited.			

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Tasks	Persons at risks	Existing Hazards/ Risks	Risk Rating			Applicable Control Measures/ Check to apply to reduce risk	Residual Risks			Action By
			Probability(P)	Severity (S)	Risk Rating R= P X S		Probability(P)	Severity (S)	Risk Rating R= P X S	
Survey works	Visitors, Subcontractor workers/ Staff; Main Contractors' workers/ Staff.	Uneven terrain Presence of Snake/ Poisonous Arachnids Slip/ trip Snake/ scorpion bite Personal injuries/ Fatality	3	3	9	<ul style="list-style-type: none"> □ Don't perform survey work during adverse weather conditions. □ Survey shall only be conducted during clear day light situations. □ Provide Roll over protection for survey vehicle to protect survey team in case of vehicle overturn. □ Fire extinguishers shall be available with the survey team's vehicles. □ Inform all employees about the presence of snakes and venomous reptiles in the project site. □ Access shall be free from obstacles. □ Inform all survey team members about the possible wild animals (i.e. snakes, reptiles, scorpions, etc.) at survey sites. □ Food shall not be delivered to the construction sites. It shall only be provided in the camp dining hall. □ Never throw/ leave food wastes at survey location which may attract insects and snakes. □ Good housekeeping shall be maintained at the survey location. □ Waste shall be collected at a point and returned back to the base for disposal. □ Never attempt to remove desert plants and 	1	3	3	PM/PE/SE/ Sup/FM

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						bushes which might have snake nesting. <input type="checkbox"/> Never attempt to attack insects or snakes once visible at site. <input type="checkbox"/> No smoking policy shall be complied at all work sites. (smoking at designated area only) <input type="checkbox"/> All survey team shall wear the following PPE while conducting surveys; high neck safety boots, Hard Hat, High Visibility Jackets. Five-point PPEs compliance.				
Mobilization and other General safety practices that are applicable for all tasks involved in this activity	Visitors, Subcontractor workers/ Staff; Main Contractors' workers/ Staff.	<p>Lack of training lead to operatives being unaware of workplace hazards. Poor supervision may result in a loss of leadership control over the workforce.</p> <p>Inadequate barriers and signage may lead to invasion of unauthorized personnel/equipment to our work area.</p> <p>Lack of clear access and egress may lead to entrapment of operatives, during emergency conditions.</p> <p>Lack of drinking water facilities and over exposure to direct sunlight may lead to heat stress for operatives.</p> <p>Lone Working and lack of emergency preparedness may lead to non-compliance of legal requirements</p> <p>Poor Housekeeping affects industrial hygiene and increases the risk of fire.</p> <p>Lack of PPE may increase the</p>	4	4	16	<input type="checkbox"/> Safety Induction shall be provided to all employees. <input type="checkbox"/> Supervisor/ foreman shall conduct daily task briefing prior to commencement of work. <input type="checkbox"/> Provide HSE internal training's to all operatives as per training matrix. <input type="checkbox"/> Provide proper supervision over workforce all the time. <input type="checkbox"/> Provide means of clear access and egress for all operatives. <input type="checkbox"/> Work area shall be demarcated all the time using suitable barricading equipment and signage(s). <input type="checkbox"/> Always follow PTW system without fail. <input type="checkbox"/> Ensure water thermos is issued to all operatives those who work directly under sunlight. <input type="checkbox"/> Verify temporary shelter area available for operatives to take intermittent breaks as necessary during high humid days. <input type="checkbox"/> Follow Buddy system strictly. Lone working shall not be permitted. <input type="checkbox"/> Daily Housekeeping shall be done at the end of every working shift. Waste shall be shifted to nearby main contractor's waste collection points.	1	4	4	PM/PE/SE/ Sup/FM

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		severity of physical injuries to operatives during workplace incidents.			 	<ul style="list-style-type: none"> □ All employees shall be effectively wearing Site Mandatory PPE as per project PPE Code. [That includes safety helmet, Suitable goggles, appropriate respiratory mask, hand gloves, safety shoes and cover all (for labor category)] □ Coordinate with main contractor's emergency response team in case of any emergency and act appropriately. 			 	
Preparation activities /Obtain PTW.	Visitors, Subcontractor workers/ Staff; Main Contractors' workers/ Staff.	Poor planning. Lack of safety awareness may lead to accident hazard. Lack of skills & knowledge. Lack of competent supervision. Un-certified equipment's & operators. Interference with other operational activities. Defective tools.	3	3	9	<ul style="list-style-type: none"> □ All personnel shall attend HSE induction and other required/relevant training's prior to commence the work on site. □ Only competent and authorized personnel to be deployed, supervisor to control the work. □ All required document like PTW where required must be ensured/secured prior to activities kept in a folder and display at site. □ Ensure all equipment and operators have 3rd party certificates and valid vehicle driving license. □ Supervision shall have proper means of communication/coordination with main contractor & other site teams to avoid any inconvenience & incident. □ Tools must be in good condition/inspected by the competent supervisor to ensure safe use. 	1	3	3	PM/PE/SE/ Sup/FM
Usage of Hand tools	Subcontractor workers/ Staff;	Usage of damaged hand tools/ homemade hand tools may cause physical injuries to users and operatives those work in the vicinity. Slip, trip and fall of tools can result from tools having handles with worn out grip. Sharp objects or edges may	4	3	12	<ul style="list-style-type: none"> □ Visual checks must be completed by operatives on tools prior to their use. □ All tools shall be used as per manufacturer's instructions. □ Tools are required to be suitable for the purpose for which they will be used. □ No homemade tools or substandard tools shall be permitted. □ Proper manual handling techniques shall 	1	3	3	SUP/FM/Workers

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		cause cut, abrasion, and bruise. Poor manual handling techniques while using wrench/ hammer may cause back pain, sprain, WRULD etc.,				be deployed while torque wrench. ② Open bladed knives, screwdrivers, and other sharp tools are to be carried and used so as not to cause injury to the user or others. ② All necessary task related PPE must be worn by operatives				
Material Loading/ unloading & Materials Handling (manual)	Subcontract- or workers/	Poor manual handling may cause back pain and MSD posture and repetitive action. Entrapment of body parts during manual handling may lead to crush injuries. Overloading/ over speeding of vehicles may lead to toppling of equipment or other vehicular accidents. Poor stacking of materials.	4	3	12	② Ensure to deploy proper manual handling techniques. ② Avoid manual handling as far as practically possible. ② Use suitable mechanical accessories as practically as possible. ② Avoid repeated bending, twisting while handling load. ② Maximum allowable load for manual handling is 30 kg. ② Always ensure proper stacking of materials. ② Always secure load while transporting/shifting through vehicles. ② Always follow site speed limits and avoid over loading of vehicle. Never use mobile phones while driving. ② All must wear rubber dotted hand gloves for firm grip.	1	3	3	SUP/FM/Workers
Area Clearance	Subcontract- or workers/ Staff; Main Contractors' workers/ Staff.	Damages to existing service lines (overhead/underground service) leads to penalty and work delay. Interruption of live electric cables may lead to electrocution. Snake bites, insect bites and other venomous reptiles bite may cause fatality or ill health issues for operatives	4	3	12	② Check NOC from concerned authorities available. ② Ensure to have Excavation permit. ② Demarcate the area with suitable signage. ② Verify that no service lines are present using cable detectors/ pipe line locator. ② If service lines are present, mark using chalk powder and wooden pricks. ② Report the concerned authorities as immediately as possible, if any existing service lines are damaged during the activity.	1	3	3	PE/SE/ Sup/FM

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Road Transport on site	Visitors, Subcontract- or workers/ Staff; Main Contractors' workers/ Staff.	Unsecured loads Overturning Collision with pedestrians/operatives Collisions with structures Collision with other vehicles Causing collapse of or falling into excavations Restricted vision due to traffic route corners Site service cables (surface) Excessive Speeds	4	5	20	<ul style="list-style-type: none"> Any venomous bite shall be instantly reported to the responsible engineers and the affected person shall be rushed to hospital immediately. 	<ul style="list-style-type: none"> Don't perform work in adverse weather during poor visibility i.e. fog, sand storm. Vehicles will be subject to a planned maintenance programme. Restricted visibility at junctions and corners will be addressed by placing reflective mirrors or traffic lights especially on large heavy trafficked sites. Lighting to be placed on all traffic routes during part of winter months and when night work is to be carried out. Ensure 360-degree visibility for drivers and operators by fixing 360-degree aid on vehicles and equipment's. An approved Traffic management plan must be in place. Traffic management plan must be reviewed regularly and amended. The site will be surveyed, and vehicle routes planned to avoid danger to pedestrians, contact with buildings, structures, or overhead power lines, and to be clear of excavations. Load shall be secured properly while transporting or shifting at site. Ensure PTW of lifting operation while loading/unloading or installation of foundation. Speed Limits imposed with signage. On sandy/dusty, a dust suppression schedule to be agreed and implemented, on contaminated sites provision & use of a washing down point to prevent heavy mud 	1	4	4	PE/SE/ Sup/FM

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					<p>or dust being dispersed by vehicles leaving site onto the local highway.</p> <ul style="list-style-type: none">☒ Suitable fencing will be provided around excavations.☒ Barriers and notices will be erected at overhead power lines.☒ Vehicle operating areas and traffic routes will be clearly signed and fenced off where practicable. Stop boards will be fitted to excavations where tipping is to take place.☒ Drivers will ensure loads are placed evenly in vehicles and that the vehicle is not overloaded.☒ Drivers will not remain in or on vehicles being loaded.☒ Tipping vehicles will not move with the body raised and stop boards must be used to prevent over-run of edges.☒ Vehicles used for removal of site waste must be registered with the local authority.☒ Those intended for use on the public highway will comply with current licensing requirements.☒ Signs requesting visiting vehicle drivers to report to the site office will be displayed.☒ Speed restrictions will be displayed and enforced, as necessary.☒ Where audible warnings are not fitted to vehicles, banks men will be used to give warning to others when vehicles are reversing.☒ Visiting drivers will be briefed on site rules and hazards.				

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						<ul style="list-style-type: none"> □ All employed and contractor's drivers will hold a current driving license and will be trained in site and plant safety awareness. In general, visiting drivers must wear the minimum standard PPE safety helmet and safety boots. □ Toolbox talks given at regular intervals. □ Mandatory PPEs shall be worn by all operatives involved in the task. □ While slinging of load at height full body harness shall be worn. 				
Excavation & back-filling Works for Installation of street light foundations by auger machine	Subcontractor workers/ Staff; Other contractors' employees working at the vicinity	<p>Striking buried services</p> <p>Collapse of sides</p> <p>Persons falling into excavations</p> <p>Plant and materials falling into excavations</p> <p>Presence of contaminated soil (lead, arsenic, clinical waste etc)</p> <p>Electrocution,</p> <p>Manual Handling, Noise.</p> <p>Overturning of tipping trucks.</p>	4	4	16	<ul style="list-style-type: none"> □ Selection of equipment with less noise and vibration. □ Cable location devices (C.A.T.) and local authority drawings will be used to trace buried services prior to commencement of work. □ Soil test shall be carried out and decide protection method as per the soil type. □ Ensure equipment's and vehicles are equipped with 360-degree visibility aid. □ Equipment is subject to planned maintenance. □ Pre mobilization inspection of auger machine shall be done by PMV team, ensure guards are fitted and free from defects. □ PTW shall be obtained of excavation. □ Exclusion zone shall be made in the vicinity of auger machine. □ Adequate warning signs shall be posted in the area to warn operatives. □ Operator must be competent with valid third-party training certificate. □ Ensure operator is medically fit, OSHAD 	1	4	4	PE/SE/ Sup/FM

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					<p>health surveillance shall be carried out.</p> <ul style="list-style-type: none"> □ Each streetlight pole shall be individually secured during unloading, the unloading sequence can lead to instability of loads. □ The location of the lifting inserts on pre-cast concrete elements is checked to ensure they are compatible with the lifting system. □ Lifting inserts shall be clearly identified to assist in the loading and unloading stages. □ Establish "No Go" Zone during the installation. □ Ensure provisions has been made for safe working at heights during securing the load or disengaging the load from lifting accessories. □ NOC shall be obtained from authorities if required. □ Location of existing services must be complete before work starts, also information obtained on ground conditions from site surveys and trail trenches shall be carried out. □ Operatives must have received training in excavation support procedures and use of cable location devices. □ Sides of excavations must be supported or stepped back if required, Visual Daily inspection shall be carried by Engineer. □ While performing back fill works ensure competent flagman. □ Ensure backfilling layer by layer and compaction to avoid overturning of vehicles. □ Remove all the materials from the vicinity while performing backfilling operations. □ Conduct induction to operatives and 				

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						regular toolbox talk training. <ul style="list-style-type: none"> □ Deep excavation more than 1.2mtrs to be stepped & barricaded with soil bunds or hard barriers. □ Material to be placed 2m away from the edge. □ Approved MS and excavation plan shall be complied. □ Physical barriers will be erected around. □ Suitable signs and barriers will be provided to warn of the work. □ Separate access and egress for operatives and vehicles Stop barriers will be used to prevent vehicle entry. □ Suitable signs and barriers will be provided to warn of the work. □ Inspect supported excavations before each shift, and record details, also following any destabilizing event or fall of material □ Suitable monitoring equipment and personnel trained in its use will be required where known exposure to toxic substances or lack of oxygen may occur. □ COSHH assessments are to be made of substances likely to be found or produced during the work. □ Supervisor will check the suitability of equipment before work starts and monitor its correct use as work progresses. □ Ensure safe system of work provided, taking account of prevailing conditions including weather, traffic, and existing structures. □ Ensure personnel selected are capable, fit and experienced unless under direct 					

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						supervision. <ul style="list-style-type: none"> ☒ Barricade protection of bore hole by using cover and orange mesh in surrounding. ☒ Correct use of PPE (safety shoes, coverall, hand gloves, safety goggles, helmets, full body safety harness etc) 				
Lifting Operations/ Installation of Precast foundations	Subcontract- or workers/ Staff; Main Contractors' workers/ Staff.	Collision/Collapse - Death, Serious Injury, property damage Falls of material - Death, Serious Injury, property damage. Electricity/ overhead power lines - Electric Shock, Electrocution	4	4	16	<ul style="list-style-type: none"> ☒ Lifting equipment (crane) shall be installed in a well compacted area, skilled and competent operatives to be provided, appropriate exclusion zone shall be provided. ☒ If excavator used as crane with a variable safe working load greater than 1 tonne, the excavator shall be fitted with an automatic safe load indicator. ☒ An appointed person for lifting operations shall be provided to control the lifting operation prior to the commencement of the task. ☒ Provide & maintain appropriate exclusion zone prior to start the task. ☒ Strictly follow the Lifting Permit to work system for all lifting carrying out by using mobile crane. ☒ Ensure Task Briefing is completed ☒ HSE induction, Craft Training's. ☒ Adequate communication of Method statement & Risk assessment to work force. ☒ Competent and 3rd party certified Crane operator and Rigger shall be deployed ☒ Correct use of PPE ☒ Daily and periodic crane inspection before each operation. ☒ Periodic maintenance & statutory certification of lifting gear and crane. ☒ When using an excavator/ shovel for 	1	4	4	PE/SE/ Sup/FM

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					<p>lifting pipes/ load, ensure the additional lifting eye is inspected by an approved Inspection body and certified.</p> <ul style="list-style-type: none"> ☒ Use competent operator for the crane. ☒ Provide competent riggers to guide the crane. ☒ Use outrigger pads and crane legs fully extended. ☒ Always place the crane levelled ground. ☒ Use correct slinging methods to lift the load. ☒ Avoid operatives standing/working under the suspended loads ☒ Use tag line for controlling the loads while lifting. ☒ Do not take over lifts or short cuts. ☒ Check the safe load indicator is working or not ☒ Stop operation in blind spots /congested locations. ☒ Aware of overhead power lines and underground utilities ☒ Provide adequate traffic diversions or traffic managements. ☒ Segregation of pedestrian/other workers from the lifting operation area with necessary safety barricades, warning sign boards and flag man as required. ☒ Follow the weather forecast and stop operation in wind / poor visibility. ☒ Operator must consider the bad weather conditions like sand storm, fog, heavy wind etc. ☒ Provide/maintain good housekeeping and fire extinguishers around the area to reduce the fire hazard. ☒ Implement no smoking at site to reduce 					



						<ul style="list-style-type: none"> ☒ the fire hazard ☒ Provide regular maintenance for the machine. ☒ Provide and maintain suitable spill kits if any. ☒ Special PTW required if working closer than 15 meters of overhead power lines. ☒ Ensure lifting plan is complete. ☒ Ensure lifting supervisor is present. 				
Manual Handling	Visitors Subcontract- or workers/ Staff; Main Contractors' workers/ Staff.	Minor injuries, Back and Upper limb problems, Sprains, Bruises, Fatigue	3	3	9	<ul style="list-style-type: none"> ☒ Don't work manually use lifting equipment? ☒ Adopt mechanical aids if required. ☒ Replace heavy tools with light tools. ☒ Administrative Controls: ☒ Provide training on Safe Manual handling techniques to operatives involve in activity. ☒ Job rotation system shall be adopted. ☒ Adequate supervision for the job. ☒ Provide appropriate PPE for the activity. ☒ Ensure PPEs are free from damage. 	1	3	3	PE/SE/ Sup/FM
Working at Height	Visitors, Subcontract- or workers/ Staff; Main Contractors' workers/ Staff	Personnel falling Tools/ equipment and material falling Slips, trips and fall-caused by materials cluttered at scaffold structure	4	3	12	<ul style="list-style-type: none"> ☒ Ensure JSA is completed. ☒ Work platform must be safe and suitable for work. ☒ Scaffolding platforms must be erected by competent scaffolders and must be inspected and tagged (Scaftag) by a competent scaffolding inspector. ☒ Scaffolding tag must be displayed on the access and must be inspected and updated weekly. ☒ Work at height on a ladder to be carried out only when scaffold cannot reasonably be provided. ☒ Step ladders to be secured or footed. ☒ Safety harnessed or fall arrestor (where applicable) to be worn with double 	1	3	3	PE/SE/ Sup/FM



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						<ul style="list-style-type: none"> ☒ Lanyard securing on a firm structure and ensure the 100% anchoring. ☒ Step ladders not to be used outside modules, on gratings etc. ☒ For work in height, a scaffold must be provided. ☒ Ladders and forklifts must not be used as time saving devices. The above precautions are necessary for jobs even of short duration. ☒ Use of tool bags, safety nets, toe board. ☒ Not overloading walkways. ☒ Provide spill kit. ☒ Provide netting and barricade areas ☒ Spillage of substance onto scaffold boards must be reported. ☒ Waste materials should be removed, and disposed on a daily basis. 				
Working at night (If applicable)	Visitors, Subcontract- or workers/ Staff; Main Contractors' workers/ Staff.	Night work	3	3	9	<ul style="list-style-type: none"> ☒ TBT /Training shall be conduct to all work force ☒ Close supervision shall be in place ☒ Emergency evacuation shall be conduct on regular interval ☒ Materials shall be stacked on designated area only ☒ Always maintain emergency access free from obstruction 	1	3	3	PE/SE/ Sup/FM
Emergency Preparedness	Visitors, Subcontract- or workers/ Staff; Main Contractors' workers/ Staff.	Fire and Explosion. Fumes/smoke, Earthquake/nearby building collapse, riots/accident etc. Bodily injuries/Fatality/Severe burns, property damage	3	4	12	<ul style="list-style-type: none"> ☒ Emergency access route shall be kept always free from obstruction. ☒ Emergency contact numbers to be affixed at prominent locations. ☒ HSE Training on emergency situation. ☒ Emergency Cluster point shall be identified and Signposted accordingly. ☒ Emergency procedure must be shared on Tool Box Talk Scenario based drill. 	1	3	3	PE/SE/ Sup/FM

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Heat stress / Working at High Temperature	Visitors, Subcontractor workers/ Staff; Main Contractors' workers/ Staff.	<p>Change in climatic condition</p> <p>Duty hours</p> <p>Poor physical fitness of the personnel</p> <p>Unhealthy habits</p> <p>No Liquid / salt intakes</p> <p>Not getting acclimatized ill-effect from the activity performed</p> <p>No provision for shelters & sheds</p> <p>Inadequate awareness for emergency measures</p> <p>Exposure to high heat</p> <p>Exposure to humid condition</p> <p>Heat related illness like Heat cramps/ Heat stress/ heat stroke, etc.</p> <p>Personal injury / illness</p>	3	4	12	<ul style="list-style-type: none"> ② Ensure accurate monitoring of the climatic condition. ② Ensure the site adopts the "STOP Work" policy in event of adverse climatic conditions. ② Ensure the person is physically fit to work, not under the influence of ② Ensure the person is physically fit to work, not under the influence of drugs/alcohols / medications, and with proper food habits. ② Ensure acclimatization prior to allocation of work ② Ensure salts, lemon, salads, and other re-hydration drinks to be available at all times ② Provide adequate shelters & encourage Work-rest regime ② Ensure adequate quantities of cool drinking water and it is available at reasonably close to work ② Ensure the Heat related illness campaign is effective and all personnel are made aware of the symptoms & precautions. ② Ensure availability of first aid facilities & effective emergency preparedness. ② Ensure effective supervision. 	1	3	3	PE/SE/ Sup/FM
Lone Working	Visitors, Subcontractor workers/ Staff; Main Contractors' workers/ Staff.	<p>Violence, Manual handling, Medical suitability, Weather condition, equipment failure</p> <p>Unconsciousness, Injury, fatality, illness.</p>	3	3	9	<ul style="list-style-type: none"> ② Avoiding lone working requirements as much as possible. ② Selection of medically fit personal for such specific job. ② Provision of proper training on the hazards and risk of the task. ② Selection of the appropriate tools and equipment. ② Arrangements for the uninterrupted communication such as buddy system 	1	3	3	PE/SE/ Sup/FM

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					Yellow	<ul style="list-style-type: none">visual contact, use of walkie-talkie.Rotation of the workers as per the requirement of the task risks.Provision of basic lifesaving tools such as drinking water.Provision of proper PPE.Training on the reporting of incident/near miss reporting			Green	
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Prepared By:

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