



Lusail Real Estate Development Company

Health, Safety, Security, Environment, Logistics & Quality
Department

Lusail Construction Safety Management Procedure – Dirt Control at Site Access Guidelines

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COMPANY PROPRIETARY INFORMATION

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1. Definition and Purpose

A stabilized construction access is a defined point of entrance/exit to a construction site that is designed to reduce the tracking of mud and dirt onto Asphalt roads by construction vehicles.

Construction vehicles exiting the site through muddy unpaved conditions can cause damage to road surfaces and unwanted run-off of materials into drains..

This Guideline is provided as an example of what measures can be undertaken by contractors to prevent damage to roads and the movement of materials on to shared road surfaces at access points. This is in line with the contractual requirements to prevent damage to existing road surfaces.

2. Appropriate Application

Construction roadways and detour roads:

- Where mud/dirt tracking is a problem during wet weather
- Where displacement of soil occurs because of vehicular traffic during wet weather
- Where dust control is a problem during dry weather
- As a preventive method instead of a treatment method (e.g., sweeping or dust control)
- Where mud/dirt can be tracked onto public roads
- Adjacent to water bodies

Areas effected:

- Marina District
- Entertainment City
- Fox Hills

3. Dirt Control Strategy – Expectations

- Minimize the amount of dirt, dust and debris transferred from construction site onto paved roads.
- Reduce the cost of clean-up on the roads.
- Promote a safe construction site by slowing the existing traffic.
- Maintain clean asphalt road surface for better traction, dust mitigation and safer driving conditions.

4. Strategy Components

4.1 Design Guidelines and Considerations – Above Ground Mud Gate - Considerations

- Limit the points of access and egress points to construction site.
- Site conditions may dictate the design and need for access point.
- Design a stabilized construction access and egress points to support the heaviest vehicles and equipment that will use it.
- Use of constructed or constructed/manufactured steel plates with ribs for entrance/exit access if required.
- Ideally the access point should be at least 10-15 m in length or four times the circumference of the largest construction vehicle tire, whichever is greater.
- Designated access and egress points that require all employees, subcontractors and others to use them.

- Route way to access and egress point area shall be barricaded to guide all vehicles through access and egress point and signage shall be in place.
- Aggregate (gravel, crushed stone) route ways to access and egress point and route ways on site shall be in place to avoid mud build up on exterior of vehicles and on tires.

4.2 Grading

- Grade construction entrance/exit points to prevent runoff from leaving the construction site
- Route runoff from entrances/exit through a sediment-trapping device before discharge.
- Stabilize the roadway with aggregate, AC, or concrete, depending on expected usage and site conditions.
- Aggregate diameter should be between 75 mm (3 in) and 150 mm (6 in) and at least 300 mm (1ft) in depth.
- Place aggregate over a geotextile fabric.
- The use of cold mix asphalt or AC grindings is not allowed.

4.3 Aggregate characteristics

- Stabilize the roadway with aggregate, AC, or PCC, depending on expected usage and site conditions.
- When access points are constructed from aggregate, aggregate should be 75 mm (3 in) and 150 mm (6 in) and at least 300 mm (1ft) in depth.
- Place aggregate over a geotextile fabric

4.4 Alternative stabilization Methods

- Alternative stabilization methods such as manufactured steel plates or steel pipes/gratings require written approval of the Consultant.
- The use of cold mix asphalt or AC grindings is not allowed

4.5 Inspection and Maintenance Suggestions

- Inspect and maintain stabilized construction access and egress points daily.
- Routinely check for damage and effectiveness.
- Remove accumulated sediment and /or replace stabilization material as needed.
- Ongoing maintenance as required and or regular clean-up of mud and dust on Asphalt roads without damaging Asphalt roads. Contractor/Developer shall be accountable and liable for damaging of Asphalt roads.
- Stabilized construction exits are moderately effective in removing sediment from equipment leaving the construction site.
- Inspect and clean construction access and egress points and adjacent pavement at the end of each shift or workday, street sweeping may be required depending on the level of mud deposited on the roadway. Mud on public streets and roads is a traffic hazard and should be preventable at all costs.

5. Field Conditions

Field conditions may vary and a variety of solutions may be required. Each contractor should determine the best method as it relates to their site conditions.

5.1 Common solutions / Suggestions

- Access points require constant maintenance
- Select proper stabilization material or consider alternate methods for longevity, performance and site conditions.
- Stabilization material (aggregate) is tracked onto roadway
- Limit larger vehicles from construction exit or use larger diameter material
- Aggregate material is being incorporated into soil
- Use geotextile fabric under base material
- Excessive sediment is tracked onto roadway
- Increase length of stabilized exit. Regularly maintain access area to remove sediment build up
- Sediment – laden water is leaving the construction site
- Properly grade access point to prevent runoff from leaving site.
- Route runoff through a sediment-trapping device
- Sediment is being tracked from numerous locations
- Limit access points and require their use.
- Stabilize designated access points.
- Runoff leaves the site via the roadway
- Properly grade roadway so that runoff is kept on site.
- Install a drainage ditch along roadway to convey flows.
- Roadway degrades or breaks up
- Re-grade roadway using material that will support the heaviest vehicles that will use the road. Stabilize roadway with AC, concrete base, aggregate, or equivalent
- Vehicles kick up dust
- Re-stabilize the roadway.

6. Implementation and Execution

Stabilized construction entrance/exit points shall be implemented and in place at each site according to local conditions and weather conditions.

7. Appendices

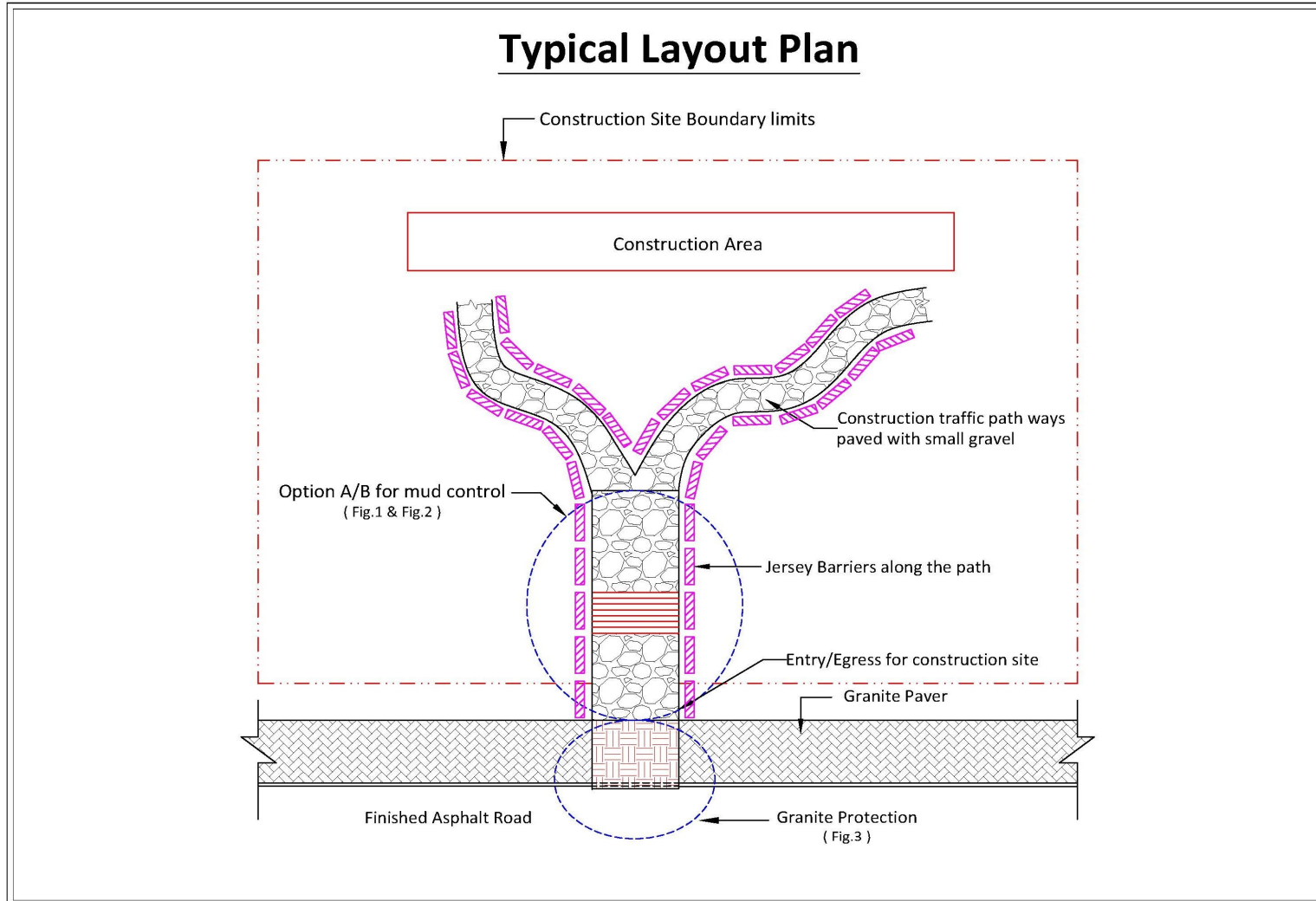
Appendix 1 – TYPICAL LAYOUT PLAN

Appendix 2 – OPTION A - MUD CONTROL (Fig.1)

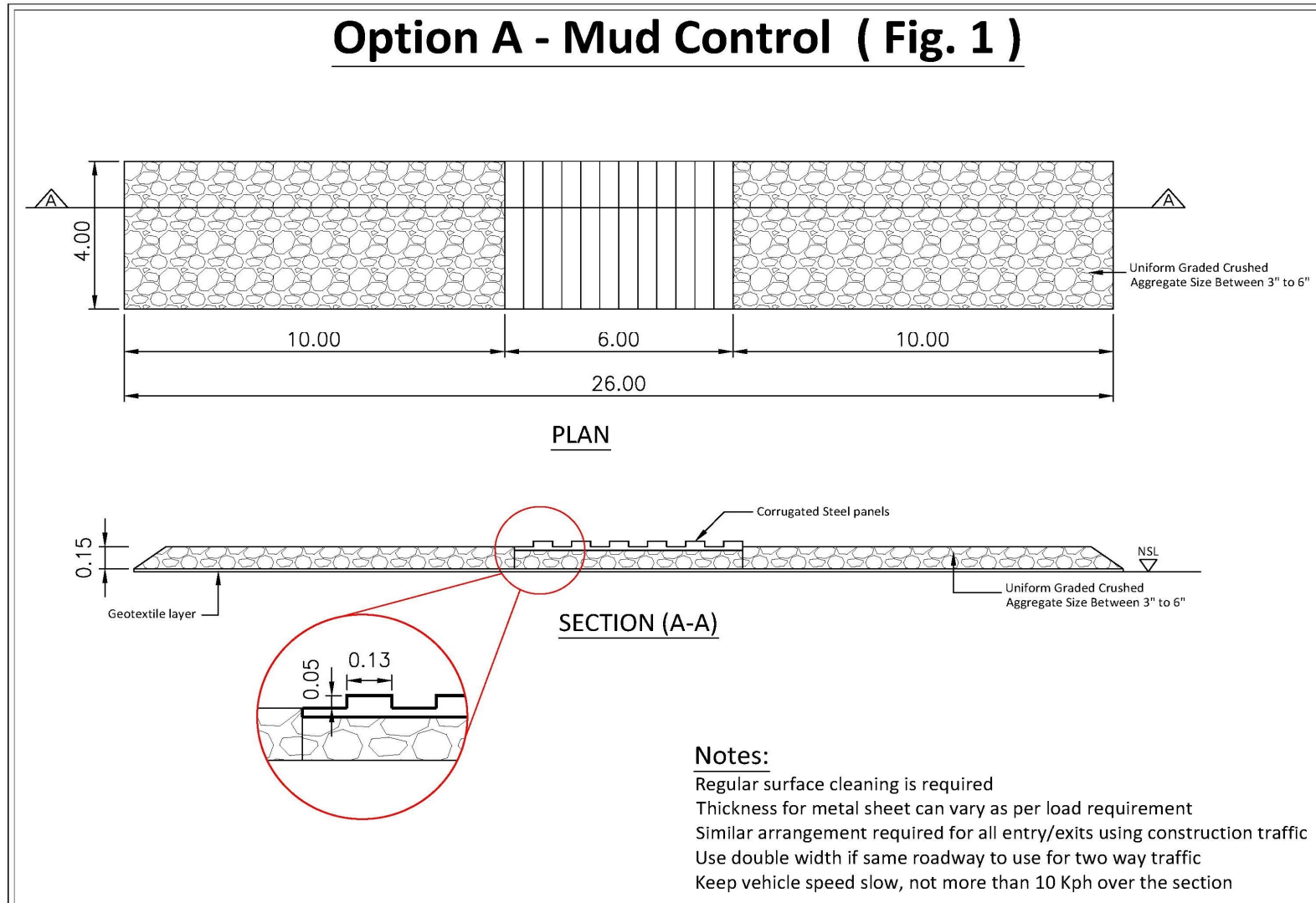
Appendix 3 – OPTION B – MUD CONTROL (Fig.2)

Appendix 4 – GRANITE PROTECTION (Fig.3)

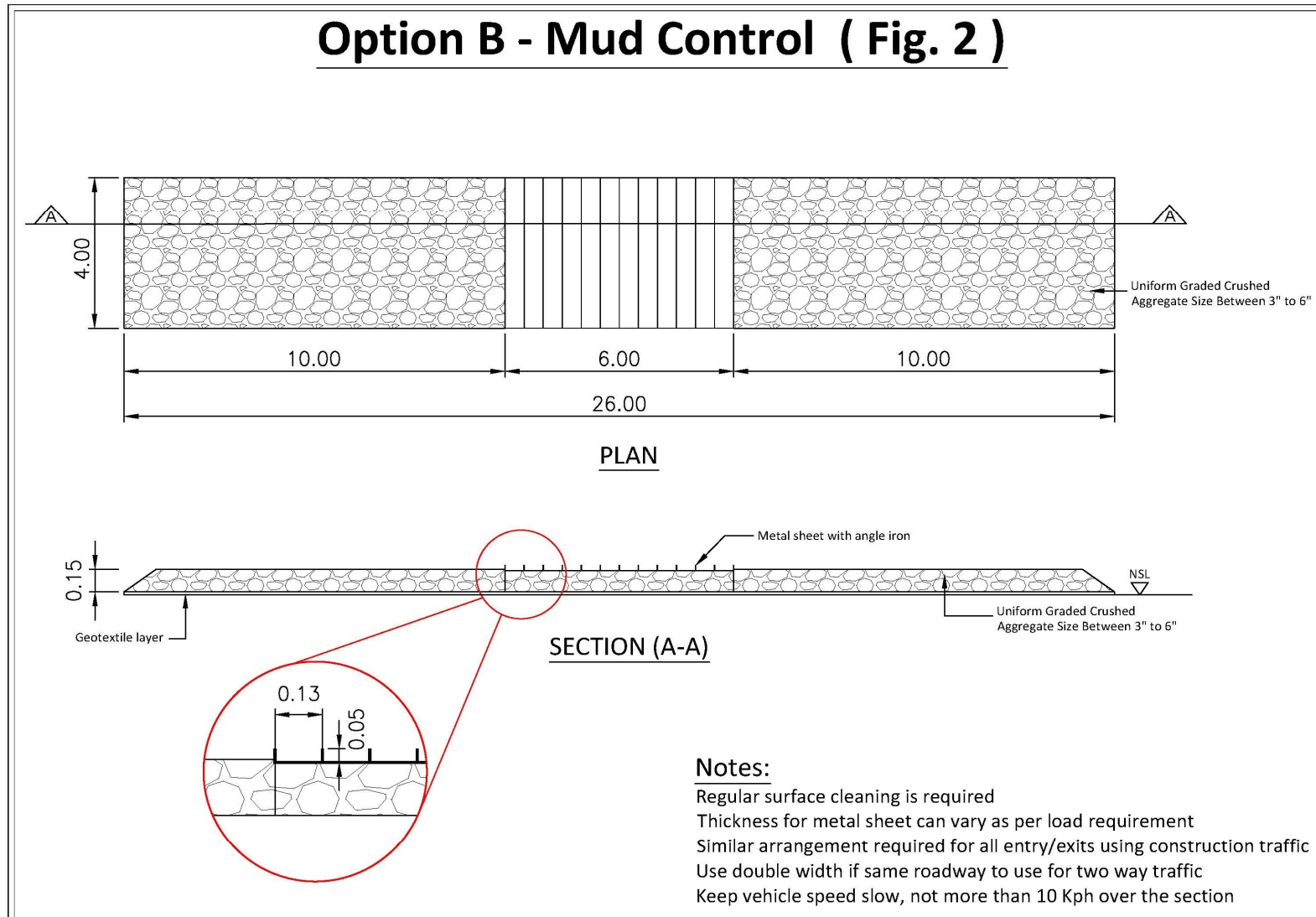
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