

Generic Environmental Specifications for Construction

1. Minimize Social Disturbance

- 1.1 Preparation work should be finished before construction, detailed investigation on the construction contents such as road, electricity, and telecommunication should be conducted and relocation plan should be determined by cooperation with relevant department. Emergency plan should be provided for the construction contents to facilitate the normal social life.
- 1.2 Traffic separation should be planned during construction phase in order to prevent traffic congestion and reduce the impact on urban transportation and resident life. Cooperation with police, traffic control department should be provided and announced using radio, TV and newspaper when necessary to ensure the smooth of the traffic flow.
- 1.3 Announcement plate should be installed at the construction site, explaining the contents, construction period, petition for public understanding and providing contact and complaint method.
- 1.4 Large amount of electricity and water will be used during construction, the construction unit should contact relevant department to determine plan for pipeline connection of electricity and water and prepare for connection work, for the area with limited regional capacity, reconstruction of the pipeline should be finished to prevent temporary pause of water and electricity use along the route.
- 1.5 Temporary pedestrian bridge should be installed at sensitive road section such as school, hospital, home for the aged, business building to ensure the safety of pedestrian.
- 1.6 Construction at night is prohibited.
- 1.7 Minimizing pedestrian interaction with construction vehicles.
- 1.8 Using locally sourced materials, whenever possible, to minimize transport distance. Locating associated facilities such as worker bus transport to minimizing external traffic.

2. Noise Management

- 2.1 The construction team should strictly executed noise control measures during the construction period, and keep the fixed machinery away from the sensitive receptors.
- 2.2 Use low noise machinery, keep good maintenance of the machinery.
- 2.3 Choose proper construction time period on sensitive road sections.
- 2.4 Enhance the management of construction and transportation machinery, slow down when entering the vicinity of sensitive area, reduce or prohibit horn.
- 2.5 Construction at night (22:00~6:00) is prohibited.
- 2.6 Should keep the machinery well maintained to minimize the noise level.
- 2.7 Should rotate the operators of the machinery to reduce the time exposure to high noise; should protect construction staff working long near noise source by using ear plug.
- 2.8 Construction near school should be arranged during the weekend or holiday, transportation of materials should also be kept away from school.
- 2.9 Prohibit the operation of high noise, high vibration machinery during the rest time in the noon.

3. Dust Control

- 3.1 Enforce the implementation of “Notice on Implementation of Dust Control and Management in Changzhi”;
- 3.2 Street water sprinkling should be applied for the sensitive section such as hospital and school along the corridor, especially before and after school; the surface of the road should be maintained clean.
- 3.3 Construction of the parking and maintenance yard at south of city should prepare construction road to prevent the generation of dust from transportation vehicle on earth ground. Before earth excavation, solidification of the door, fence, ground at construction site, entrance/exit should be done. Washing facilities should be provided for the vehicle.
- 3.4 During excavation, the site should be sprayed with water to maintain certain humidity, especially for the loose surface soil at

construction site; during filling, the site should also be sprayed to prevent the flying of dust.

- 3.5 Enhance the management of temporary storage of the materials, sprinkle water or cover the materials prone to air-borne dust; spoil, construction waste should be collected as soon as possible.
- 3.6 The transportation vehicle should be covered and not loaded too much to prevent leakage from the vehicle; make specific plan of the route and schedule for the transportation vehicle, prevent the vehicle running at central area, large traffic area and resident area; for road section that needs strict standard, transportation should be done at night according to the actual condition. The leakage of soil from the transportation should be cleaned up as soon as possible to reduce dust.
- 3.7 Steel fence higher than 2.5m should be used at construction site, the height should be higher than 3m for road section with sensitive receptors.

4. Waste Management

- 4.1 Contractors should have plans for spoil disposal before construction and keep balance of the soil inside the project. Spoil should be reused as much as possible, if not, it should be disposed at the designated construction waste landfill
- 4.2 Spoil and construction solid waste should be collected on daily basis and transported to the construction waste landfill site designated by local urban sanitation department in timely manner;
- 4.3 Storage of spoil on site should be enhanced. Spoil and excavated earth should be compacted to stable slope and covered so as to prevent rain wash and generation of air-borne dust;
- 4.4 Storage of earth and construction materials should be limited within the red line of the road;
- 4.5 Before refilling of earth, the earth should be sprayed with water to some moisture content so as to prevent the generation of air-borne dust;
- 4.6 Construction waste and soil should be transported by authorized by relevant agencies. Transportation of construction materials should be covered and transported according to regulated time, route and location as determined by city agencies. The leaked materials on roads should be cleaned in timely manner.

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- 4.7 Construction waste is prohibited to be used as fuel for heating

5. Wastewater Management

- 5.1 Construction wastewater containing a lot of oil and grease, should be settled in a retarding pit before discharging into municipal sewers, direct discharge of construction wastewater into surface water is prohibited;
- 5.2 Construction of bridges should be well scheduled to avoid high flow season; wastewater during construction of bridges should be collected and settled on site before discharging into municipal sewers;
- 5.3 Education on surface water protection should be provided to workers;
- 5.4 A staff should be designated by contractor to supervise the collection of spoil from river channels. Dump of spoils into rivers is banned.

6. Construction Site Management

- 6.1 Construction site should be well managed and fenced with color steel plates with a height not less than 2.5 m;
- 6.2 Before construction is started, the construction site surface should be solidified by compaction;
- 6.3 During excavation, drilling, demolition and refilling, water should be sprayed to prevent generation of air-borne dust. Frequency of water spray should be increased in windy or dry weather;
- 6.4 The construction should be confined within the redline range, storage of the soil and material should not occupy the land near the site.
- 6.5 The vegetation and trees in the middle or at side of the road should be protected and then relocated, rather than replanting after demolition. The trees and green area near the construction site should be protected.
- 6.6 The vegetation and green area should be restored immediately after construction on this section is completed;
- 6.7 Vegetation and green area around the project roads should be protected during construction.
- 6.8 Should minimize the land occupation as much as possible and

make proper arrangement on the construction progress. Clean the construction site after completion of construction, retreat from the occupied land, recover previous road and greening.

7. Physical Cultural Resources

- 7.1 Any unit or personnel when find cultural relics during construction should protect the site and report to the local cultural administrative institute. Upon receiving the report, the cultural administrative institute should arrive at the site within 24 hours and provide protection opinion within 7 days. The cultural administrative institute can report to the police department and ask for protection of the site; if important cultural relics are found, it should be reported to the state cultural administrative institute, which should provide protection opinion within 15 days. Construction should be paused before the completion of the relic excavation.
- 7.2 The cultural relics found should be preserved by the public museum, library or other public units designated by the cultural administrative institute of the city, province or state. Permission should be obtained from the cultural administrative institute of the city, province or state in order to keep a sample of the cultural relics found.
- 7.3 The cultural relic found belongs to the state, any unit or personnel should not keep it privately.

8. Traffic Safety

- 8.1 Underscore safety regulations for the driver;
- 8.2 Improve driving technique and use licensed driver;
- 8.3 Limit driving time, rotate drivers;
- 8.4 Avoid dangerous road and time, minimize the chance of traffic accident;
- 8.5 Install speed control system on the truck and supervise the driver;
- 8.6 Maintenance in a timely manner using parts from the dealer, prevent accident happening due to out of order for the parts;
- 8.7 Minimize situations that pedestrian and construction vehicle use the road at the same time;
- 8.8 Improve the visibility of the signal to enhance overall traffic safety;
- 8.9 Education on traffic safety and pedestrian safety should be

provided at communities near school;

- 8.10 Cooperate with the emergency responding staff to provide proper first aid when accident happens; purchase local materials as much as possible to minimize transportation; use large vans around construction site to reduce the traffic volume; adoption of traffic safety control measure, use traffic signal and staff to remind the pedestrian and vehicle of dangerous situation.

