Environmental Monitoring Report

Semestral Report
September 2017

PRC: Xi'an Urban Road Network Improvement Project

Prepared by Xi'an Municipal Urban and Rural Construction Commission and HJI Group Corporation for the People's Republic of China and the Asian Development Bank.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

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Environmental Monitoring Report

ADB Loan No. 2802-PRC

6th Semiannual Report (period from January to June 2017)

September 2017

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Prepared by Xi'an Municipal Urban and Rural Construction Commission and HJI Group Corporation for Asian Development Bank.

WEIGHTS AND MEASURES

cm	centimeter
dB(A)	A-weighted sound pressure level in decibels
ha	hectare
kg	kilogram
km	kilometer
kWh	kilowatt hours
m	meter
mm	millimeter
m/s	meters per second
m^2	square meter
m^3	cubic meters
mg/l	milligrams per liter
mg/m^3	milligrams per cubic meter
mg/Nm^3	milligrams per standard cubic meter
Nm^3	standard cubic meter
^0C	degrees Celsius

NOTE

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I. INTRODUCTION

1. This Environmental Monitoring Report (EMP) was prepared by the Consultants from HJI Group USA, together with the environmental supervision firm (Shanxi Haosheng Environmental Supervision Co.) and the project management office (PMO) of Xi'an Municipal Urban and Rural Construction Commission (XMURCC) to ADB for the Xi'an Urban Road Network Improvement Project (the project). During the reporting period from January to June 2017, the following seven contracts were with construction activities:

i). **R-C05 The Interchange of Zhuhong Road - Fengcheng 4th Road**, with the main constructions of street lamp cable laying, sidewalks paving and roadside trees planting, etc.;

ii). **R-C06 Hongmiaopo Interchange:** the main constructions include site clearance, existing sewer pipes demolishing, reinforcing bar colligation for base slabs and tunnels, maintenance of cement stabilized courses, sidewalks laying, and retaining wall masonry, etc.;

iii). **R-C07 Xinghuo Road Interchange:** the constructions include scaffold installation, reinforcing bar colligating and concrete pouring for box-girders, piling and reinforced concrete filling pile foundation; demolishing existing pavement and water supply pipes, maintenance of cement stabilized course (road bed), masonry of retaining wall and sidewall. The Ramp A of interchange was opened to traffic on 20 June 2017;

iv). **R-C09 The Interchange of Fengcheng 8th Road – Taihua Road:** the constructions include excavation of foundation pit, scaffold installation, reinforcing bar colligating and concrete pouring for pile caps, pier studs, abutments, box girders and bent caps, and masonry of retaining wall, etc.;

v). **R-C02 Dazhai Road (section from Yanhuan Road to the West Ring Road):** the constructions include road bed filling, asphalt road pavement, sewer pipe-jacking, sidewalk backfilling and paving, masonry of catch basins and power cable manholes, etc.;

vi). **R-C01 Ease and West sections of No.2 Keji Road:** the work includes site clearance (construction wastes removal) only. The road construction was planned to begin in August 2017; and

vii). **The Bus Parking and Maintenance Depot at public transit hub of Xi'an North Railway Station:** the constructions include foundation for tower crane, pile foundation detection and piling.

2. Unfortunately, due to the requirements of domestic procedures, the external compliance monitoring contract was just signed in early August 2017. There is no any monitoring data in this EMR. The contractor for monitoring is Xi'an Huace Environment Protection Technology Co. Ltd. (the certified environmental monitoring entity), the monitoring defined in the EMP will be conducted in September – December 2017, the monitoring results will be included in next EMR according to the PMO and IA's promise. As the appendix, the comprehensive semiannual environmental supervision report (January to June 2017) provided by Haosheng Co. is included in this EMR.

A. Report Purpose and Rationale

3. It is the sixth EMR, covering the period from January to June 2017, and is based on i) the independent Environmental Supervision Co.' environmental supervision monthly reports, ii) the information provided by the IA; and iii) the PMO, the Environmental Supervision Co. and consultants' construction site inspections.

4. The purpose of this EMR is to document the environmental management activities and compliance with the approved environmental management plan (EMP) of this project. This report presents project implementation progress, institutional setup for EMP implementation and supervision; project readiness assessment; public consultation and the grievance redress mechanism (GRM); as well as the assessment of environmental impact mitigation measures implemented within and nearby the construction sites by the contractors during the construction.

B. Project Objective and Components

5. The summary of the key project information is shown in **Table 1**.

Table 1: Project Key Data

Loan Number:	2802-PRC
Project Title:	Xi'an Urban Road Network Improvement Project
Borrower:	The People's Republic of China (PRC)
Executing Agency:	Xi'an Municipal Urban and Rural Construction Commission
Date of Board Approval:	8 November 2011
Loan Agreement Signing:	19 January 2012
Date of Loan Effectiveness:	28 May 2012
Date of Completion:	31 December 2016
Loan Closing Date:	30 June 2017
Approved Adjusted Date of Completion	31 December 2018
Approved Adjusted Loan Closing Date:	30 June 2019
Date of Last Bank Review Mission	8-12 May 2017
Implementing Agencies (IAs):	Xi'an Urban Infrastructure Construction Investment Group Co., Ltd
Project Cost and Financing Plan:	The total Project cost is estimated at $558 million, of which $150 million will be covered by ADB loan, and the remaining is the counterpart funding.

6. To alleviate the traffic congestion and improve local traffic conditions, Xi'an City, supported by ADB, has been implementing the Project. The Project includes components of

road network improvements, pedestrian crossing and safety improvements, multimodal interchange facilities, intelligent transport system and road user safety program and environmental protection enhancement, etc. Total investment in the Project is expected to be RMB 3.74 billion Yuan (including US$ 150 million from ADB loan).

7. The Project will improve Xi'an urban road network, promote pedestrian safety, introduce advanced traffic management methods, facilitate integrated urban transportation exchange system and infrastructures, improve traffic facilities and management, promote vehicle emission monitoring facilities, control relating impact of vehicle emission, and realize sustainable economic and environmentally friendly development through the increasing of urban integrated traffic management capacity.

8. The project includes the following five components.

(i) Road Network Improvements. This output aims to transform 12.92km urban roads, including West Section of Keji 2nd Road (South Ring Road – North Zhangba Road, 6.2 km), Dazhai Road (North Yanhuan Road – West 3RR, 2.33 km), and Kunming Road (West 2RR- West Ring Road, 4.39 km). On these roads, it will set up 21.57km bus lane (including lane priority, traffic signal optimization, site improvement, and traffic management, which will improve the PT conditions), 21.57 km NMV lane and one green belt along Kunming Road. In addition, it will build six interchanges with the appropriate scale and structure, covering Zhuhong Road-North 2RR Interchange, Zhuhong Road-Fengcheng 4th Road Interchange, Hongmiaopo underpass, Xinghuo Road underpass, Fengcheng 8th Road- Beichen Avenue Interchange, and Fengcheng 8th Road-Taihua Road Interchange. They will effectively connect roads between 2RR and 3RR, thus further optimize and improve local urban road network structure.

(ii) Pedestrians crossing and safety improvements. This aims to transform 110 urban intersections, 15 road sections and junction connection facilities, optimize the pedestrian crossing signals, and thus provide high visibility and safety for pedestrians. It will apply the advanced information technology into safety equipment, and strengthen the law enforcement. These improvement measures will promote NMV traffic, make it safer, and provide better services for low-income groups who are unable to purchase private cars and must rely on walking and PT facilities, especially for housewives and children.

(iii) Multimodal Interchange facilities. This output is implemented by Xi'an Infrastructure Investment Group (XIIG), including: Four multimodal transport hubs (Xi'an North Train Station, Xi'an Qujiang New District, Xi'an Yuhua Zhai, and Xi'an International Logistics Park) can provide convenient connections with subway, bus, taxi, car, motorcycle and bicycle; Five multilevel parking facilities can provide 2,249 parking spaces for MVs, motorcycles and bicycles, of which: two of them will be built in Xi'an Yuhua Zhai, and Xi'an International Logistics & Park, in order to popularize PT mode, and three will be built around the Ming City Wall (Leju Chang, South Guoshang Village and Xizhan Community);five gas stations,, of which: four of them will be implemented together with four integrated transport hub facilities, and the 5th gas station will be built near Mujiangwang Interchange on the 3RR.

(iv) Intelligent Transport System and Road User Safety Program. This output is implemented by Xi'an Municipal Traffic Police Brigade, including the expansion of

current 3RR and coverage rate of intelligent traffic system (ITS) as an economic growth point; It will develop the corresponding development program, in order to improve the use and management of ITS; provide travel information services for private transport and public transport; carry out road safety education activities for disadvantageous road groups, such as children and the elderly; popularize pedestrian safety items, including tool kit, training materials and safety education activities. This component will include 20 VMS, 140 microwave detectors, 66 closed-circuit televisions, 31 red light cameras, and 10 speed violation cameras.

(v) Environment protection enhancement. This output is implemented by Xi'an Municipal Environmental Protection Bureau (XMEPB). It will purchase five emission regulation enforcement vehicles, ten black smoke stations, and four pieces of mobile emission enforcement equipment for exhaust to strengthen random sampling and monitoring capability. Meanwhile, it will set up four monitoring sub-stations to improve air quality detection, install air quality and noise monitoring devices along the 3RR, and connect them with environment information center, whose environment remote sensing management system can monitor the city's air quality. In addition, it will also establish the information sharing system for environment and vehicle emissions, vehicle emission regulation and law-enforcement system (provide management assistance for scrapped vehicles), and environmental information disclosure system, and meanwhile, build the environment information center.

C. Summary of Project Implementation Progress

9. Road Network Improvements.

10. The subproject includes 2 roads and 5 bridges after adjustment. Two roads are West section A of Keji No. 2 Road C01 (West 3RR – Zhangba North Road, 6.2km) and Dazhai Road C02 (Yanhuan North Road - West 3RR, 2.33km). These roads will set up the public transportation lane (include priority, optimizing traffic signal, improving the stations, traffic management) as well as the non-motorized vehicle lane. Five bridges are Zhuhong Road – Fengcheng 4th Interchange C05, Zhonghong Road – North 2RR interchange C04, Hongmiaopu Interchange C06, Xinghuo Road Interchange C07 and Fengcheng 8th Road – Taihua Road Interchange C09.

11. By the end of the report period, the subprojects of C03 Kunming Road (West 2RR – West Round City, 4.39 km) and C08 Fengcheng 8th Road – Beichen Avenue Interchange has been cancelled from the loan, and will be financed by the domestic fund.

12. By the end of the report period, the Project has completed contract amount of CNY 662 million. And the disbursement of CNY 420 million has been paid, of which, the ADB loan is CNY 164 million, account for 30.31% of the total loan amount. The ADB loan balance is CNY 372 million. As of the reporting period, the procurement for the adjusted 7 civil work packages including 2 roads and 5 bridges has been completed. The procurement progress is as following.

13. Four civil works contract packages have completed the procurement in 2013, including: Zhuhong Road – Fengcheng 4th Interchange C05, Zhonghong Road – North 2RR interchange C04, Hongmiaopu Interchange C06, and Xinghuo Road Interchange C07. The contract award status is shown in Appendix 1.

14. 2 civil works contract packages have completed the procurement in 2015, including: 1) Dazhai Road (R-C02); 2) Fengcheng 8th Road - Taihua Road Interchange.

15. 1 civil works contract package has completed the procurement in 2016, namely: West section A of Keji No. 2 Road (West 3RR – Zhangba North Road, 2.8 km).

16. The summary of the contracts under construction are shown in Table 2.

Table 2 Summary of Subprojects under Construction

Subproject	Contract NO.	Contractor	Construction Supervision Co.	Date of Contract Award	Construction Commencement
Zhuhong Road-North 2RR Interchange	Road-C04	Zhongtai Construction Group Co., Ltd	Xi'an Kexin Municipal Engineering Supervision Co., Ltd	11 Dec. 2013	25 June 2014
Zhuhong Road-Fengcheng 4th Road Interchange	Road-C05	China Railway NO. 21 Group Co., Ltd	Xi'an Kexin Municipal Engineering Supervision Co., Ltd	11 Dec. 2013	25 June 2014
Hongmiaopo Interchange	Road-C06	China Railway Tunnel Group Co., Ltd	Xi'an Zhonghe Municipal Engineering Supervision Consulting Co., Ltd	11 Dec. 2013	The fourth quarter of 2015
Xinghuo Road Interchange	Road-C07	Xi'an Municipal Road and Bridge Construction Co., Ltd	Shanxi Provincial Engineering Supervision Co., Ltd	11 Dec. 2013	Before the end of 2015
Fengcheng 8th Road – Taihua Road Interchange	Road-C09	Joint venture of Xi'an Municipal Construction (Group) Co., Ltd and Wuhan Municipal Construction (Group) Co., Ltd	Xi'an Kexin Municipal Engineering Supervision Co., Ltd	25 Dec. 2015	the end of 2015
Dazhai Road	Road-C02	Xi'an Municipal Construction (Group) Co., Ltd	Xi'an Kexin Municipal Engineering Supervision Co., Ltd	25 Dec. 2015	the end of 2015
West sections of Keji No. 2	Road-C01	Shaanxi Construction	Xi'an Kexin Municipal	26 August 2016	30 July 2016

Road		Machinery Construction Group Co., Ltd	Engineering Supervision Co., Ltd		

II. INSTITUTIONAL SETUP AND RESPONSIBILITIES FOR EMP IMPLEMENTATION AND SUPERVISION

A. Institutional responsibilities for environmental management

17. **Project Leading Group and Executive Agency.** The project leading group (PLG) was established under the Xi'an Municipal Government. The PLG arranged a project management office under Xi'an Municipal Urban and Rural Construction Commission (PMO) as the EA for the project implementation.

18. **Implementation Agency.** Xi'an Urban Infrastructure Construction Investment Group Co., Ltd (XIIG) is the IA of the project, which is responsible for implementation of the EMP, including (i) coordinating implementation and supervision of the EMP; (ii) supervising the implementation of mitigation measures during project construction and operation; (iii) supervising contractors and Construction Supervision Companies' (CSCs') internal monitoring and coordinating the environmental supervision by the independent environmental supervision Co. and the compliance/external monitoring by the local EMS; (iv) ensuring that environmental management, monitoring, and mitigation measures are incorporated into bidding documents, construction contracts and operation management plans; (v) reporting the EMP performance to the EA and ADB; (vi) coordinating the grievance redress mechanism (GRM); and (vii) responding to any unforeseen adverse impact beyond those mentioned in the domestic EIAs, the ADB version EIA and the EMP.

19. **Other Project Implementation Units.** The Municipal Public Bureau, Municipal Traffic Police Detachment and Municipal Environmental Protection Bureau are responsible for their own component and subprojects, respectively.

20. **Independent environmental Supervision Co.** The IA signed the contract in December 2012 with Shanxi Haosheng Environmental Supervision Company (the Environmental Supervision Co.) for the overall environmental supervision, which is responsible for the daily supervision and inspection to all contractors and CSCs in accordance with the PRC environmental policies, regulations and EMP, and reporting to the IA and PMO monthly in the form of monthly environmental supervising report (Appendix II-IV). The Environmental Supervision Co. has the qualification for the environmental supervision, but no qualification for compliance environmental monitoring (See appendix V). The environmental supervision staffs involving in this project are listed in Table 3.

Table 3 Environmental Supervision Co.'s Staff Involving in the Project

No.	Name	Major	professional title	Certificate	Service term
1	Wang Guichun	Environmental monitoring	Senior engineer	SHJG20102068 Shaan Envir. Building Technology Training	Since Jan. 2015

				Certificate- [2012] No.94	
2	Wang Youlei	Environmental Science	Assistant Engineer	SHJG20102007 Shaan Envir.Building Technology Training Certificate- [2012] No.204	Since Jan. 2015
3	Song Yejing	Environmental engineering	Assistant Engineer	SHJG20132003 Shaan Envir.Building Technology Training Certificate- [2013] No.326	Since Mar. 2015
4	Bie Qianwen	Environmental engineering	Assistant Engineer	SHJG20161037	Since Mar. 2016

21. **Loan implementation environment consultants (LIEC).** The LIECs were hired under the loan implementation consultancy services (HJI Group). The LIEC advises the PMO, IAs, the environmental supervision Co., contractors and the CSCs on environmental management and monitoring for the project. The LIECs (i) assist the PMO to update the EMP and environmental monitoring program; (ii) verify the implementation of the mitigation measures specified in the EMP; (iii) review internal and compliance monitoring reports and prepare semiannual environment monitoring report; (iv) provide training to PMO, IAs, CSCs, contractors on environmental laws, regulations and policies, ADB SPS, EMP implementation, GRM, etc.; (v) identify any environment-related implementation issues, propose necessary corrective actions, and reflect these in a corrective action plan; and (vi) undertake site visits as required.

22. **Construction contractors.**

23. Construction contractors are responsible for implementing relevant mitigation measures and internal monitoring during construction with the help of CSCs and under the supervision of the city EPB. Each contractor must appoint an environment, health and safety officer (EHSO) to supervise the implementation of the on-site environment, health and safety management plan (EHSMP).

24. **Construction supervision companies (CSCs)** were contracted to conduct stand-by internal environmental supervision on contractor's mitigation measures implementation. The CSCs are responsible for supervising construction progress and quality, and EMP implementation on construction sites. Each CSC must at least one environmental engineer on each construction site to: (i) supervise contractor's EMP and EHSMP implementation performance; (ii) conduct internal environmental inspection and monitoring; (iii) fill out monthly environmental performance forms to be submitted to the IA and PMO.

25. **External environmental monitoring unit.**

26. **T**he contract between the IA and Xi'an Huace Environment Protection Technology Co. Ltd. (the certified environmental monitoring entity) has been signed in early August 2017 for the external compliance environmental monitoring. The monitoring defined in the EMP will be conducted in September – December 2017, the monitoring results will be included in next EMR.

III. COMPLIANCE WITH ENVIRONMENT RELATED PROJECT COVENANTS

27. Compliance with covenants defined in the Loan Agreement and Project Agreement that directly or indirectly refer to environment, health and safety, and the implementation of the EMP, is rated **generally satisfactory**. The project complies with most covenants, with some not yet due. A list of loan covenants and compliance status is shown **Table 4** below.

Table 4. Compliance with Environment related Project Covenants

Covenants	Reference to Loan Documents	Status of Compliance
PROJECT AGREEMENT		
a) XMG through XMURCC and XIIG shall carry out the Project with due diligence and efficiency, and in conformity with sound administrative, financial, engineering, environmental and urban and rural development practices.	Schedule: Particular Covenants Para 3	In compliance.
b) XMG through XMURCC and XIIG shall ensure that the construction, operation, maintenance, and monitoring of the Project facilities shall be conducted in accordance with (a) all relevant national and provincial environmental laws and regulations; (b) the measures prescribed in the Environmental Management Plan; and (c) the Borrower's environmental impact assessment, including the environmental management plan and grievance redress mechanism contained thereto.	Schedule: Execution of Project Para 26	In compliance.
c) XMG through XMURCC and XIIG shall ensure that sufficient resources, including the allocation of adequate number of full-time personnel, are provided to monitor the implementation of the environmental monitoring program, under the guidance of the Xi'an Provincial Environmental Protection Bureau, Xi'an Municipal Environmental Protection Bureau or other environmental monitoring stations.	Schedule: Execution of Project Para 27	Partially in compliance. The independent environmental supervision company was contracted for daily environmental supervision. External environmental monitoring work has not yet begun.
d) XMG through XMURCC and XIIG shall review any changes to the Project design that may have potential negative environmental impacts and, in consultation with ADB, make necessary adjustment to the environmental monitoring and mitigation	Schedule: Execution of Project Para 28	In compliance.

Covenants	Reference to Loan Documents	Status of Compliance
measures set out in the Environmental Management Plan.		
e) XMG through XMURCC shall ensure that XIIG prepare the regular monitoring reports, which shall be submitted to ADB as part of the semi-annual environmental reports.	Schedule: Execution of Project Para 29	Partially in compliance

IV. ENVIRONMENTAL MITIGATIONS MEASURES IMPLEMENTED IN THE REPORTING PERIOD

28. It had been more than five years since preparing the EIA during the PPTA, some contents and requirements in the EIA are not suitable for the current situation. In consideration that Xi'an is the World famous history city, The LIEC, together with the Environmental Supervision Co. updated the EMP and environmental monitoring plan. The main mitigation measures implemented during construction are highlighted below:

- **Noise control**: Construction activates are prohibited between 22:00 – 6:00. In noise sensitive areas, such as schools, hospitals and residential areas, low noise machineries must be used, and construction time must be strictly controlled; placement of temporary fence hoards or noise barriers to shield noise sources during construction if necessary.

- **Dust control**: Watering of road and construction site during windy days; Cover construction material/earth transport trucks before leaving the site; The trucks must follow the route approved by the environmental supervision Co. and local EPB; Particular attention must be paid to dust suppression adjacent to sensitive receptors such as schools, hospitals or residential areas; materials should be stored in appropriate places and covered.

- **Solid waste**: The domestic wastes must be timely collected and carried to the places appointed by local EPB and public sanitary authority;

- **Waste Discharge**: All waste produced by construction must be handled in accordance with the requirements of Xi'an municipal EPB. All the construction vehicles and machineries should be periodic maintained; the oil and lubricating oil shall not be contaminated the ground; install the oil-water separator in the washing and refueling area; storage of fuel in quarantine area.

- **Water and wastewater**: Wastewater during construction must be treated and controlled, recycled water will be used to spray for dust control; Latrines and seepage pits will be installed in all camps;

- **Traffic congestion**: Contractors must consider impacts to traffic during construction. A traffic control and operation plan will be prepared and be approved by local traffic management administration prior to any construction; the plan will include diverting or scheduling construction traffic to avoid morning and afternoon peak traffic hours,

regulating traffic at the road crossings, building interim roads, selecting transport routes to reduce disturbance to regular traffic; reinstating the roads and opening to traffic as soon as completion of the construction.

- **Emission from construction machinery**: Asphalt plants and mixers will be sited as far away as possible (at least a minimum of 200 m downwind) from the nearest residential areas and other sensitive receptors; Vehicles and construction machinery should be properly maintained and will comply with emission standards.

- **Soil erosion**: An erosion protection plan was developed and approved, which included: i) disturbed surfaces, such as borrow and fill areas, compacted pipeline trenches and cut banks will be properly sloped and/or revegetated to minimize erosion; and ii) limit construction and/or material handling during rain and high winds to minimize erosion.

29. During the reporting period, the Environmental Supervision Co., together with the LIEC conducted 41 times site environmental inspections, during the inspection, the Environmental Supervision Co. and LIEC found some environmental issues on the construction sites that fail to accord with the EMP and PRC environmental regulations and good practices. For solving the problems, 3 EMP coordination meetings were held with contractors, CSCs and IA, and 7 rectify notices to contractors were issued (**Table 5**). After the contractor corrected its fault, an additional inspection was conducted again to see if the environment was properly protected. The major issues and the rectify measures taken by the contractor are shown in **Table 6**.

Table 5 Summary of Environmental Inspection Activities (January- June 2017)

No.	Contents	Unit	Quan.
1	Environmental Inspections	Times	41
2	Supervision Logs	each	41
3	Environmental supervision work contact list	each	7
4	Monthly environmental performance forms	each	6
5	EMP Coordination Meetings	Times	3
6	Prepare the minutes of the meeting	each	3
7	Environmental protection publicity and training	Times	1
8	Environmental monitoring	Times	4
9	Stand-by Monitoring	Times	2

Table 6 Summary of Environmental Issues and Rectify Measures taken by Contractors

Subproject	Issues	Rectify measures
Issues in the	Covering the soil on the site, cleaning the	The contractor covered the

last environmental supervision report	road and the entrance are not appropriate sometimes	soil on the site, and cleaned the entrance, and sprayed water on site daily.
	The construction materials were placed without classification on the construction site of Zhuhong Road-North 2RR Interchange	The construction materials are placed by types on the site now.
	The project environmental engineering construction qualification, engineering contracting, special personnel qualification and other related qualifications, environmental aspects and other relevant information of construction organization design are not submitted	The contractor has already submitted the required documents.
	On the sites, people could find rubbish carelessly disposed although waste containers for disposal of domestic wastes from worker's camp available	The contractors cleaned the domestic wastes on the site timely.
Zhuhong Road-North 2RR Interchange	The topsoil on the impermeable pavement and entrance is thick, which lead to dust when the vehicles passing.	The soil on the site was covered. The topsoil on the road was cleaned after spraying water.
	The lubricating oil leakage of equipment in the steel processing area was significantly.	The related equipment has been repaired.
Zhuhong Road-Fengcheng 4th Road Interchange	The rail in the east is broken. The people dropped litter in the site.	The rail was repaired. The domestic wastes were cleaned.
	Vehicle maintenance oil was indiscriminate discharged.	The CSC has strengthened the site management.
	The soil was not covered.	The soil has been covered.
Hongmiaopo Interchange	There are domestic wastes on site.	The wastes have been covered.
	The topsoil on the impermeable pavement and entrance is thick, which lead to dust when the vehicles passing.	The soil on the site was covered. The topsoil on the road was cleaned after spraying water.
Zhuhong Road-Xinghuo Road Interchange	The solid was placed casually in the northern fence.	The contractors cleaned the domestic wastes on the site regularly.
Fengcheng 8th Road – Taihua Road Interchange	The topsoil on the temporary road of the pile foundation site of the side roads in the southeast corner is thick. There is big amount of earth on the construction site and which is not covered timely.	The earth has been covered.

V. SUMMARY OF EXTERNAL ENVIRONMENTAL MONITORING

30. The environment monitoring program in the updated EMP is show in **Table 7.**

31. Unfortunately, due to the requirements of domestic procedures, the external compliance monitoring contract was just signed in early August 2017. There is no any monitoring data in this EMR. The contractor for monitoring is Xi'an Huace Environment Protection Technology Co. Ltd. (the certified environmental monitoring entity), the monitoring defined in the EMP will be conducted in September – December 2017, the monitoring results will be included in next EMR.

32. After signing the contract, the environmental monitoring firm timely began to prepare the monitoring work, including monitoring points and monitoring methods identification, etc. Figure 1 below is the selected points for noise monitoring (R-C09 The Interchange of Fengcheng 8th Road – Taihua Road), which was submitted to the IA and LIEC for confirming.

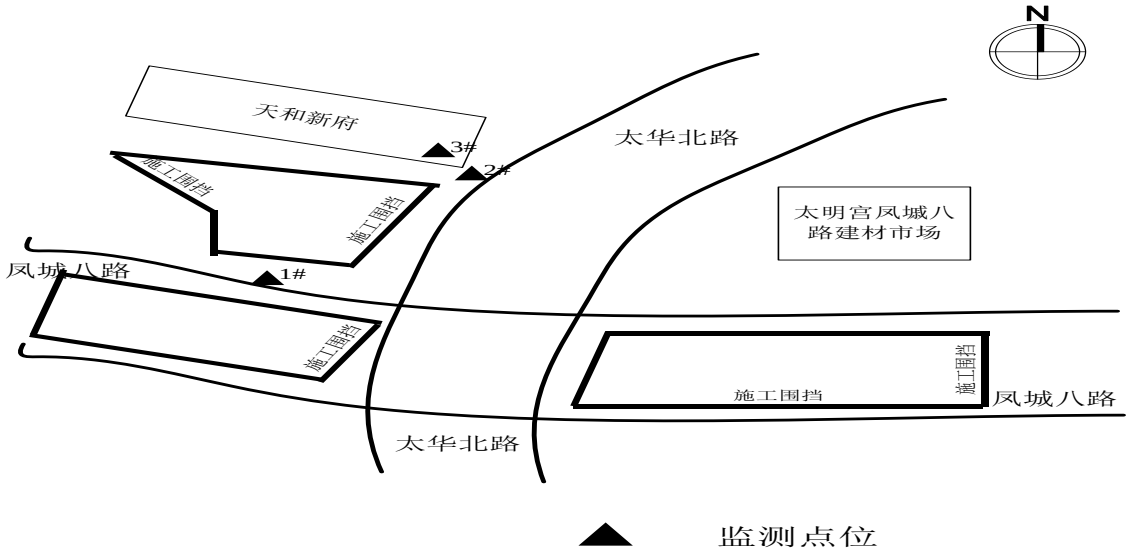


Figure 1 Selected Noise Monitoring Points for the Contract of R-C09

Table 7 Updated environmental compliance monitoring program

Subject	Parameter	Location	Frequency	Who Implements	Who Supervises
Construction					
Air	Inspection of dust mitigation measures (water spraying, cover transport vehicles, etc.);	Visual inspection at all construction sites.	Internal Monitoring: daily	IESC	IA
			External Monitoring: At least four times per year	LIES	PIU, EPB

Subject	Parameter	Location	Frequency	Who Implements	Who Supervises
	and maintenance of vehicles and construction equipment				
	TSP, PM_{10}, NO_x	At all construction sites (at least one point upwind, two points downwind) and sensitive receivers nearby	Impact Monitoring: Twice per day for 3 consecutive days, 4 times per year during construction activities.	EMS	IA, PMO EPB
Noise	LAeq	At the boundary of all construction sites and sensitive receivers nearby	Impact Monitoring: Twice per day (once in day time and once at night time) for 2 consecutive days, 4 times per year during construction activities.	EMS	PMO, EPB
Solid Waste	Garbage from work-camps and construction waste at construction sites	Visual inspection at all construction sites and work-camps	Internal Monitoring: weekly	CSC, IESC	IA
			External Monitoring: Twice per year	LIES	EPB, PMO, ADB
Soil erosion, vegetation	Soil erosion intensity, re-vegetation	Visual inspection at borrow pit and spoil sites	Internal Monitoring: Random check after rainstorm (rainfall＞50mm)	CSC, IESC	IA, PMO
			External Monitoring: twice per year, and once after completion of construction	LIES	EPB, PMO, ADB
	Slope stability, topsoil stockpile and rehabilitation of construction sites	Visual inspection of all subgrade slopes and retaining walls, bridges, culverts	Internal Monitoring: At least four times per year	CSC, IESC	IA
			External Monitoring: Twice per year, and once after completion of construction	LIES	EPB, PMO, ADB

Subject	Parameter	Location	Frequency	Who Implements	Who Supervises
	Compensatory plantings and re-vegetation of borrow pits, spoil disposal sites and construction sites	Visual inspection at all disposal sites, borrow pits and temporary occupied lands	Internal Monitoring: At least four times per year	CSC, IESC	IA
			External Monitoring: Twice per year, and once after completion of construction	LIES	EPB, PMO, ADB
Occupational health and safety	Work camp hygiene and safety, availability of clean water and emergency response plans	Inspection at all construction sites and work-camps	Internal Monitoring: Monthly	CSC, IESC	IA, PIU
			External Monitoring: Twice per year	LIES	Health Bureau
Operation					
Noise	LAeq	All sensitive receivers along the roads and nearby bridges	Twice per day (once in day time and once at night time) for 2 consecutive days, twice per year	EMS	PMO, EPB
Air	TSP, SO_2, NO_x, PM_{10}	All sensitive receivers along the roads and nearby bridges	Twice per day for 3 consecutive days, twice per year	EMS	PMO, EPB
Soil and Vegetation	Vegetation survival and coverage rate	Re-vegetated sites (spoil disposal sites, construction sites)	Spot check, twice per year	OPFs, PMO	PMO, EPB, Forestry Bureau
Traffic flow and safety	Vehicle numbers and road use (against predictions), accident incidents	Project roads	Road traffic monitoring program	OPFs, PMO	Traffic Bureau, PMO

VI. PUBLIC CONSULTATION, GRIEVANCE REDRESS MECHANISM

33. In accordance with the guidelines of the EIA and the ADB's safeguards policy statement requirement, public participation was carried out in each subproject during the EIA period. There is no public consultation during the report period.

34. During the PPTA, the GRM system was established in accordance with ADB's SPS requirement. And it is provided to the affected persons. The contact persons for different GRM entry points, including contractors, CSCs, the EPB, PPCU, etc., was identified prior to construction. The contact details for the entry points (phone numbers, addresses, e-mail addresses) were publicly disclosed on information boards at construction sites. The details are summarized in the **Table 8** below.

Table 8. Contact Information for GRM

Agency	Contact person	Position	Telephone	E-mail
Contractor of Zhuhong Road-Fengcheng 4th Road Interchange	He Zengfa	Project manager	18509247448	354186880@qq.com
Construction supervisor of Zhuhong Road-Fengcheng 4th Road Interchange	Zhang Jianjun	Project director	15202439228	843113799@qq.com
Contractor of Zhuhong Road-North 2RR Interchange	Li Po	Project manager	15928182970	370205125@qq.com
Construction supervisor of Zhuhong Road-North 2RR Interchange	Zhao Danwen	Project director	13572116285	2289581552@qq.com
Contractor of Xinghuo Road Interchange	Ma Guodong	Project manager	13991303638	156850116@qq.com
Construction supervisor of Xinghuo Road Interchange	Liu Jianhua	Project director	15319729586	312134186@qq.com
Contractor of Hongmiaopo Interchange	Liu Zhitao	Project manager	18591940050	274568229@qq.com
Construction of Hongmiaopo Interchange	Zhang Yinmin	Project director	13772179169	1206039019@qq.com
Contractor of Pedestrians crossing and safety improvement project	Hu Xi	Project manager	13571985821	545503479@qq.com
Construction supervisor of Pedestrians crossing and safety improvement project	Li Yuchun	Project director	13772185033	1770515366@qq.com
EPB	Chen Wei	Deputy director	02986787842	505090311@qq.com
LPMO of Road Network Improvement project	Meng Yichen	Manager	15319760151	27141578@qq.com
LPMO of Pedestrians crossing and safety improvement project	Liu Yong	Project manager	13991959010	383761499@qq.com
LPMO of ITS project	Ma Yongyi	Manager	13319271687	40007908@qq.com
Environmental monitoring and the LPMO of environmental protection project	Chen Wei	Deputy director	02986787842	505090311@qq.com
LPMO of MIF project	Liu Xiaoxia	Manager	02988354935	286842241@qq.com
IA	Zhao Qiang	Manager	02988320934	1044093268@qq.com
Construction supervisor of Dazhai Road	Zhao Danwen	Project director	13572116285	2289581552@qq.com
Construction supervisor of Keji 2nd Road	Zhao Danwen	Project director	13572116285	2289581552@qq.com

VII. ISSUES, CORRECTIVE ACTIONS, RECOMMENDATIONS

35. **EMP implementation is generally satisfactory.** All the contractors have assigned staff in charge of daily environment, health and safety inspections; The Environmental

Supervision Co. conducted 41 times on-site environmental supervision and prepared monthly environmental supervision reports, which were timely submitted to the IA and PMO and the consultants. The IA established EMU and the GRM; no complaint has been filed for environmental issue in the report period.

36. During site visit, the Environmental Supervision Co. found the following problems:

i) **R-C09 The Interchange of Fengcheng 8th Road – Taihua Road: i)** Slurry flowed out of construction site after mud tank was removed out; and ii) construction wastes, packaging wastes and waterproof paint buckets were casually piled up on site;

ii) **The Bus Parking and Maintenance Depot at public transit hub of Xi'an North Railway Station:** uncovered earthwork was found on the construction site.

37. To solve above problems, the Environmental Supervision Co., the LIEC, the IA and the PMO required the contractors to correct the above problems timely, and to strictly implement all the mitigation measures defined in the EMP. The two contractors conducted the correcting measures in the same week and sent back photos to the IA and the Environmental Supervision Co. for showing the measures were timely taken, and the problems were resolved.

38. Also, the Environmental Supervision Co. together with the LIEC conducted on-the-site environmental training to the environmental staff of contractors and CSCs during the report period.

VIII. APPENDIX

39. The environmental supervision report with photos taken on the construction sites from January to June 2017 is attached below.

亚行贷款西安城市路网完善项目

环境监理工作小结

（2017.1-2017.6）

西安市皓盛环境工程监理有限公司

亚行贷款路网工程项目部

二 O 一七年七月

一、项目概况

1.1 项目建设内容及性质

2017 年上半年，亚行贷款西安城市路网完善项目（以下简称“项目”）已开工的项目为路桥完善子项目中的朱宏路-凤城四路立交工程、朱宏路-北二环立交工程、红庙坡立交、星火路立交工程、凤城八路-太华路立交工程和大寨路工程（雁环路-西三环）、科技二路西段工程（西绕城-丈八北路）。综合交通设施子项目中西安火车北站公交枢纽停保场工程。其他子项目及分项工程经环境监理现场实地核实，均未开始施工。路桥完善子项目中已开工的 7 个立交工程的建设内容及性质见表 1.1-1。综合交通设施子项目中已开工的 1 个停保场工程建设内容及性质见表 1.1-2。

表 1.1-1 路桥完善子项目已开工项目建设内容及性质一览表

序号	工程名称	工程位置	建设宽度（m）	工程性质
1	朱宏路-凤城四路立交	西安市北郊 重要节点	朱宏路 80 凤城四路 40	新建
2	朱宏路-北二环立交	西安市北郊 重要节点	朱宏路 80 北二环 80	新建
3	红庙坡立交	西安市北郊 重要节点	朱宏路 50 大兴路 70	新建
4	星火路立交	西安市北郊 重要节点	星火路 40	新建
5	凤城八路-太华路立交	西安市北郊 重要节点	凤城八路 60 太华路 80	新建
6	大寨路（雁环路–西三环）	西安市西郊 连接沣渭新区	60	新建
7	科技二路西段（西绕城–丈八北路）	西安市西郊 连接西安高新技术区	40	新建

表 1.1-2 综合交通设施子项目已开工项目建设内容及性质一览表

序号	工程名称	工程位置	建筑面积（m^2）	工程性质
1	西安火车北站公交枢纽停保场	西安北郊东兴一村	14859	新建

1.2 项目主要工作内容

目前已开工的路桥完善子项目中，凤城四路立交工程主体工程已经施工完毕，立交桥上已通车，道路绿化已完成。北二环立交工程目前 B 匝道于 2017 年 1 月 18 日正式通车，A 匝道于 2017 年 1 月 28 日正式通车，环境监理工作已经完成。红庙坡

立交工程正进行下穿隧道主体施工。星火路立交工程正进行主体道路两侧施工及搭板施工，A 匝道路基路面施工。凤城八路-太华路立交工程正进行桥梁主体施工。大寨路（雁环路-西三环）工程东、西两侧分别进行主体道路施工。科技二路西段（西绕城-丈八北路）工程进入施工前期准备工作。综合交通设施子项目中，西安火车北站公交枢纽停保场工程正进行地基施工。现将各开工子项目 2017 年上半年的具体施工情况进行如下说明。

1.2.1 朱宏路-凤城四路立交工程施工情况

朱宏路-凤城四路立交工程 2017 年上半年主要施工内容包括：主体工程已经施工完毕，朱宏路西侧路灯电缆施工、人行道铺设，绿化方案完成，进行行道树绿化。

1.2.2 朱宏路-北二环立交工程施工情况

朱宏路-北二环立交工程 2017 年上半年主要施工内容包括：B 匝道于 2017 年 1 月 18 日正式通车，并安装了隔声屏障。A 匝道护栏焊接、刷漆，桥面接缝安装，路面划线施工，于 2017 年 1 月 28 日正式通车。

1.2.3 红庙坡立交工程施工情况

红庙坡立交工程 2017 年上半年主要施工内容包括：南侧场地进行锅锥补桩施工，冠梁桩头钢筋破除，现场清理，底板施工，原污水管道破除、底板钢筋绑扎施工，侧墙混凝土钢架搭建施工；北侧场地进行桩基施工、地面破除施工、桩头破除施工，隔料网搭建施工；南北下穿隧道两侧侧墙钢筋绑扎施工、绿化带道沿施工、及养护施工及排水沟施工。十字东西向道路道沿施工、水稳层养护。东南侧钢筋绑扎施工；西南侧人行道铺设；西北侧小广场人行道路铺设；南侧辅道沥青铺设。西侧挡墙施工；东侧人行道铺设。

1.2.4 星火路立交工程施工情况

星火路立交工程 2017 年上半年主要施工内容包括：东侧场地内满堂架搭设，箱梁钢筋绑扎、箱梁混凝土浇筑，地下桩头破除。西侧场地内打桩施工，桩基混凝土灌注施工，路面破除施工，桥台养护施工。东侧人行道已铺设完成。A 匝道顶管施工，路基碎石铺设，挡墙施工，侧墙施工，侧墙路基钢筋绑扎，路基底板施工，路面水稳养护，排水沟施工，两侧搭板施工，原供水管道破除施工。A 匝道于 2017 年

6 月 20 日已通车。

1.2.5 凤城八路-太华路立交工程施工情况

凤城八路-太华路立交工程 2017 年上半年主要施工内容包括：东侧场地内基坑开挖、桩头破除、墩柱承台钢筋绑扎、打桩施工，墩柱养护、墩柱吊装、承台钢筋绑扎、桥台箱梁搭建、盖梁钢筋绑扎。内满堂架搭设，盖梁钢筋绑扎、盖梁混凝土浇筑，箱梁钢筋绑扎，箱梁混凝土浇筑，地下桩头破除，挡墙钢筋绑扎，挡墙模板支设。桥面护栏钢筋绑扎。西侧场地内打桩施工，墩柱钢筋绑扎，污水管道地面破除，污水管道改迁施工，挡墙地基开挖。内打桩施工，墩柱钢筋绑扎。桩基混凝土灌注施工，路面破除施工，桥台养护施工。盖梁穿钢绞线，盖梁钢筋绑扎，桥侧墙拆模后表面修补，满堂架搭设。南侧打桩施工。中部墩柱浇筑，钢框架焊接。

1.2.6 大寨路（雁环路-西三环）工程施工情况

大寨路（雁环路-西三环）工程 2017 年上半年主要施工内容包括：靠近富源二路处铺设 300 米沥青路面，东侧污水顶管施工，地基粗油铺设，人行道铺设，二灰石铺设；西侧污水管道坑夯实施工，雨水收集井施工，人行道铺设。富源三路东侧人行道土方回填，人行道施工；西侧雨水坑施工，绿化带道沿施工，人行道道沿施工，电力管道检查井施工。富源二路：西侧污水管道坑夯实施工，人行道铺设。

1.2.7 科技二路西段（西绕城-丈八北路）工程施工情况

科技二路西段（西绕城-丈八北路）工程 2017 年上半年主要施工内容包括：东南角清除建筑垃圾 5 万余方，计划于 8 月份正式进场施工。

1.2.8 西安火车北站公交枢纽停保场工程施工情况

西安火车北站公交枢纽停保场工程 2017 年上半年主要施工内容包括：建设北项目部。南侧基坑塔吊基础施工，基坑内桩基检测，地基夯实施工，临时道路排水系统施工，原料储存间正在建设。北侧打桩施工。

二、环境监理工作情况

2.1 环境监理部人员配备及设备使用情况

项目环境监理人员配备严格按照《建设项目环境监理规范》（DB61/571-2013）和省市环境保护行政管理部门的相关要求进行设置。根据项目的特点，项目环境监理组织按直线式编制，实行总监负责制。项目 2017 年上半年环境监理人员配备情况见表 2.1-1，开展环境监理工作配备的设备、设施见表 2.1-2，项目环境监理机构见图 2.1-1。

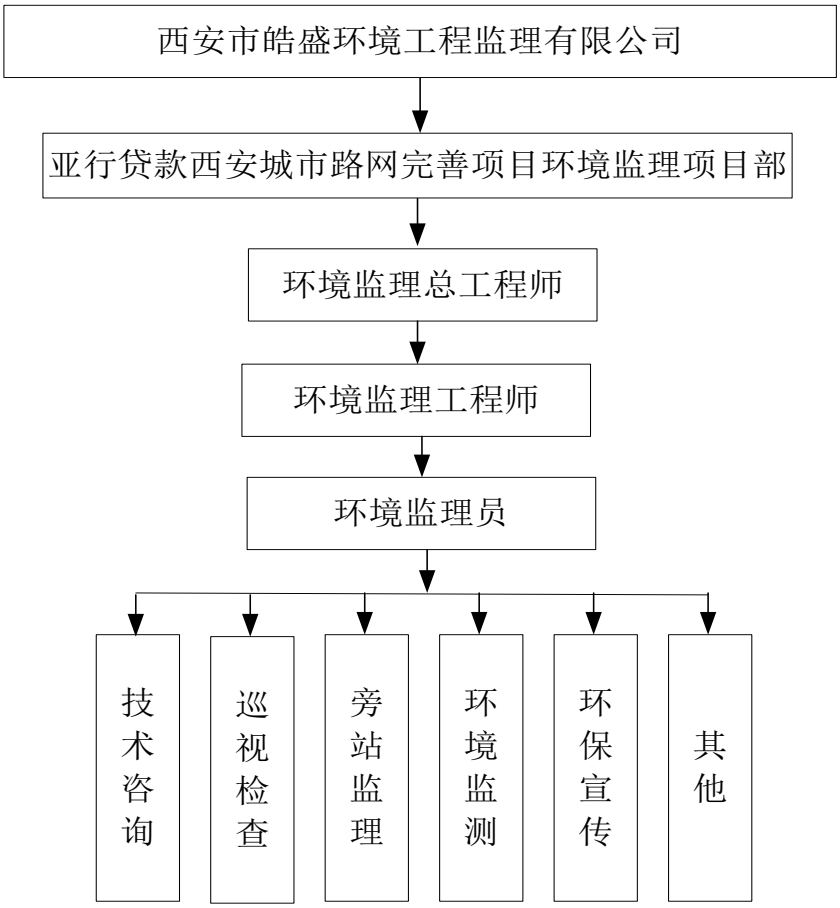


图 2.1-1　建设项目环境监理机构框图

表 2.1-1　环境监理人员配备一览表

序号	姓名	专 业	职 称	证书编号	服务期限
1	王桂春	环境监测	高 工	SHJG20102068 陕环建技培证[2012]第 94 号	2015.1 至今

2	王优磊	环境科学	助理工程师	SHJG20102007 陕环建技培证[2012]第 204 号	2015.1 至今
3	宋叶静	环境工程	助理工程师	SHJG20132003 陕环建技培证[2013]第 326 号	2015.5 至今
4	别倩雯	环境工程	助理工程师	SHJG20171037	2016.3 至今

表 2.1-2　开展环境监理工作配备的设备及设施清单一览表

序号	名　　称	型　　号	单位	数量
1	计算机	/	台	2
2	打印机	/	台	1
3	测距仪	/	台	1
4	传真机	/	台	1
5	噪声统计分析仪	爱华 6218-B 型	台	2
6	大气综合采样仪	6120　2020	台	3
7	照相机	S3100	台	1

2.2 环境监理工作过程及环境监理实施方案落实情况

2.2.1 环境监理工作过程

根据《建设项目环境监理规范》（DB61/T571-2013）中的相关要求，项目环境监理工作程序分为准备、实施、移交三个阶段，环境监理工作程序见图 1。

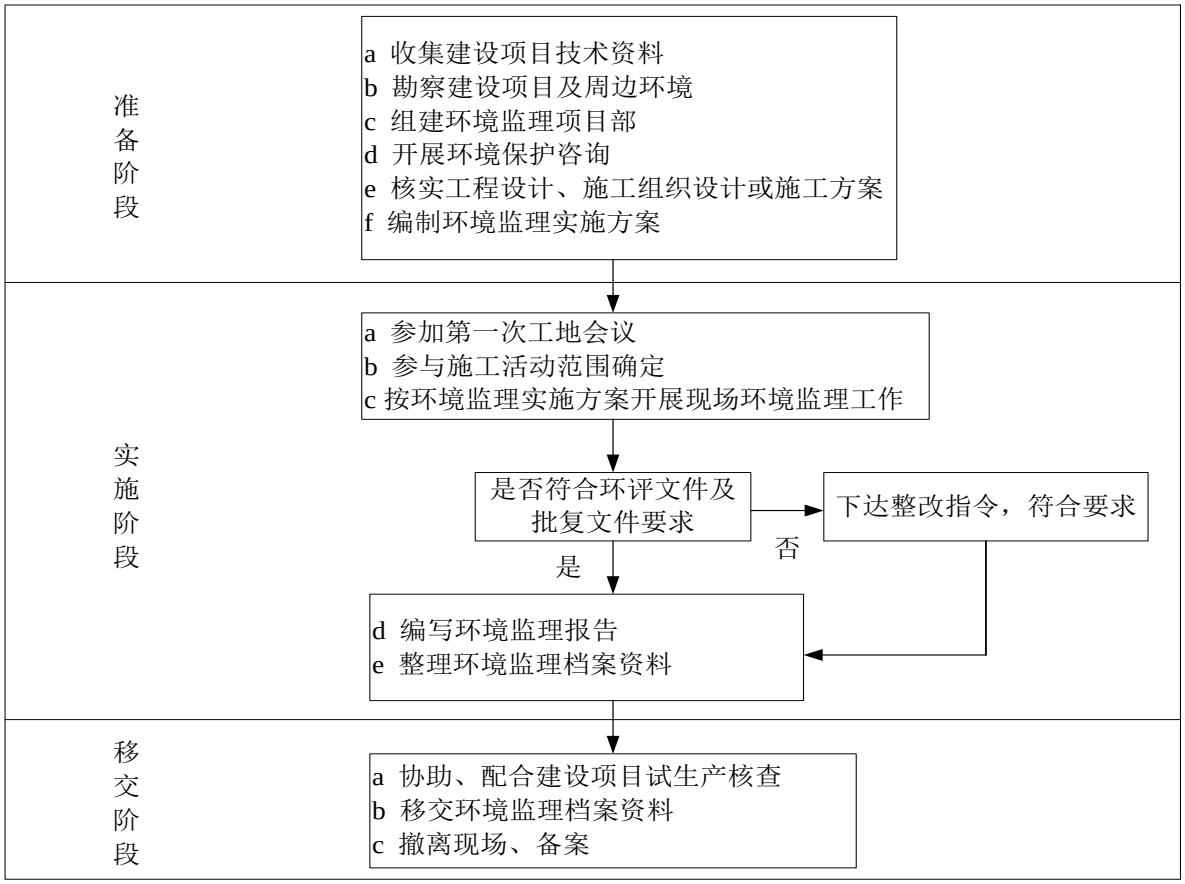


图 2.2-1　建设项目环境监理工作程序框图

2.2.2 环境监理工作情况

（1）查阅资料

环境监理通过查阅环评及批复文件、施工图设计、可行性研究报告、施工单位施工组织设计、各施工单位环境管理体系认证材料、建设项目环境监理规范等资料，结果表明：项目环评及批复文件、施工图设计、可行性研究报告、施工单位施工组织设计、施工单位环境管理体系等资料完善，针对施工期环境污染问题均提出了相关治理措施。环境监理协助各施工单位对施工组织设计文件中的环境保护篇章进行了补充完善，建立健全了环境管理体系，基本符合环评文件及批复文件要求。环境监理已查阅的主要资料及主要查阅内容见表 2.2-1，表中所列资料均已完成查阅，在监理过程中依据项目进展情况再进行相应的资料查阅。

表 2.2-1　环境监理已完成查阅资料一览表

序号	资料名录	主要查阅信息
1	环评及批复文件	结合项目实际施工进展，进一步明确施工期各项污染防治措施及项目应配套建设的环保设施信息。建设内容发生变化，环境监理提醒建设单位进行环评变更，建设单位已委托环评单位进行环评。
2	施工图设计	明确工程实际的规模、线路走向、项目组成、投资及环保投资、环保设施及生态恢复措施等方面内容，核查项目设计文件落实环评及批复文件要求情况
3	施工单位施工组织设计复核	对各施工单位施工组织设计中涉及环保篇章的落实情况进行现场核实，施工单位环保体系建立情况等信息
4	各施工单位环境管理体系认证材料	收集和协助完善各施工单位环境管理体系建设情况，环境管理人员配备情况。
5	建设项目环境监理规范	了解交通类项目环境监理方法与要点
6	环境监理相关法律法规	了解环境监理相关法律法规

（2）巡视检查

环境监理现场巡视检查是指环境监理技术人员对项目建设场区的环境状况及采取的环保措施进行日常不定期监督、检查，这是环境监理主要的工作方法。2017 年上半年，环境监理共累计进行日常巡查 41 次。日常巡查过程中，环境监理发现施工过程中存在的主要环境问题包括：

1）凤城八路-太华路立交工程

a、凤城八路东侧围挡内泥浆池移除后存在泥浆漫流现象。环境监理与施工单位进行现场沟通，口头要求及时整改。施工单位于当月整改完毕。

b、项目部内随意堆放建筑废料及废旧不用设备问题。环境监理发送联系单，并要求施工单位及时整改。并将整改照片以回复单的形式进行回复。施工单位已整改完成。

c、项目部废防水涂料桶随意堆放问题。环境监理发送联系单，并要求施工单位

及时整改。并将整改照片以回复单的形式进行回复。施工单位已整改完成。

d、项目部仓库不整洁，且未做到分类堆放问题。环境监理发送联系单，并要求施工单位及时整改。并将整改照片以回复单的形式进行回复。施工单位已整改完成。

e、凤城八路东侧施工现场包装废料任意堆放现象。环境监理与施工单位进行现场沟通，口头要求及时整改。施工单位于当月整改完毕。

2）西安火车北站公交枢纽停保场工程

北客站现场有多处土方未覆盖完全。环境监理与施工单位进行现场沟通，口头要求及时整改。施工单位于当月整改完毕。

（3）旁站监理

旁站监理是环境监理人员对一些重要环境问题所采取的连续性的全程监督和检查，是巡视检查的重要补充，项目环境监理过程中对检查发现的重大环境问题的处理情况、施工区内环境影响较大的污染源的防护、重要的文物保护等进行旁站监理，填写旁站监理记录单。环境监理分别于 2017 年 1 月 10 日和 2017 年 2 月 27 日进行了 2 次旁站监理工作。项目旁站监理执行人员主要为项目部环境监理工程师和环境监理员。

依照项目环境监理实施方案中提出的主要旁站内容，于 2017 年 1 月 10 日对星火路立交工程施工现场进行旁站监理。环境监理对“径流排水系统”施工过程是否建设合理，施工过程中的走向、建设情况进行了旁站监理，在施工过程中，该径流排水系统与西安市市政管网连接，雨水最终进入漕运明渠。且未发现施工问题。

于 2017 年 2 月 27 日对凤城八路-太华路立交工程施工现场进行旁站监理。环境监理对“打桩”施工过程地下出土是否堆放合理，打桩泥浆是否合理收集情况进行了旁站监理，在施工过程中，地下出土统一堆放，晾晒后外运，向地下灌注混凝土时，注入打桩孔的泥浆水液面上升，用泵抽至泥浆池。且未发现施工问题。

（4）发布指令文件

项目环境监理在日常工作所采用的发布文件指令主要有环境监理工作联系单、环境监理通知单等。环境监理在巡查过程中针对存在的环境污染问题先以口头通知

形式通知施工单位进行整改，若施工单位未整改，环境监理工程师以工作联系单的方式发送至施工单位，要求其整改落实，同时抄送总包单位及建设单位，环境监理人员对施工单位整改的情况进行确认落实；项目在施工过程中环境问题较严重时或是突发性的环境污染问题，环境监理工程师通过查看现场的环境污染问题，以工作通知单的方式要求施工单位限期整改，并将整改的情况以书面的形式向环境监理回复，同时环境监理将整改的内容报送建设单位。我公司对监理文件及上报材料实行三级审核管理。环境监理日志、监理联系单、整改通知单等现场监理文件资料由项目部监理员、监理工程师、项目总监审核；月报、专题报告、监理报告由环境监理项目部初审，其次公司专家组审核，再次由环境监理总工程师审定，最后经公司盖章确认后将文件发出。

针对项目各参建单位日常施工过程中存在的环境问题，环境监理 2017 年上半年共发送环境监理工作联系单 7 次。环境监理工作联系单主要内容包括：

1）001 联系单（**2017.2.27**）

环境监理要求西安市政建设集团有限公司和武汉市市政建设集团有限公司联合体提供相关资料的事宜：贵单位进行该工程凤城八路-太华路立交工程的施工，为了解现阶段工程建设情况及环境保护相关情况，环境监理要求施工单位提交高阻尼橡胶支座进场检查合格单及相关质量证明文件。

2）002 联系单（**2017.3.7**）

由于西安火车北站公交枢纽停保场工程在施工准备阶段，为了解现阶段工程建设情况及环境保护相关情况，环境监理要求参建单位提供相关资料的事宜：提供工程的设计文件；提供施工单位的资质、环境管理体系及环境保护措施；定期向环境监理提交施工进度计划。

3）003 联系单（**2017.4.19**）

近日我省受西北沙尘污染传输持续影响，陕北、关中地区出现沙尘污染过程，且此次沙尘天气过程较长。为防止建设工地扬尘加剧空气污染，环境监理要求各施工单位做好施工场地内裸露土方及地面覆盖，渣土车辆进行清运时必须采取密闭措施，场地内定期进行洒水降尘，施工过程必要时采取湿法作业等，防止扬尘污染。

4）004 联系单（**2017.5.26**）

关于省环保厅工作检查存在问题整改的事宜，环境监理要求西安市市政建设(集团)有限公司和武汉市市政建设集团有限公司联合体对陕西省环境保护厅及陕西省建设项目环境监督管理站检查问题进行整改回复，问题包括：核实施工渣土清运最终去向；核实项目部废水排放动向；清理项目部建筑废料及废旧不用设备（附处理后现场图片）；清理项目部废防水涂料桶；整理项目部仓库，做到分类堆放。

5）005 联系单（**2017.6.1**）

由于 2017 年 5 月 25 日，陕西省环境保护厅、陕西省建设项目环境监督管理站、西安市环境保护局对亚行贷款西安城市路网完善工程凤城八路-太华路立交施工现场进行环境监理工作检查。在检查中，发现施工现场存在突出的环境问题，环境监理要求对此类共性问题予以重视，并要求各施工单位整改落实：明确核实施工渣土清运最终去向；定期清理项目部及施工区域内的建筑废料及废旧不用设备；定期清理项目部及施工区域内堆放的危险废物，如废防水涂料桶、废油桶等；对原料仓库进行整理，做到分类堆放，防止交叉污染。

6）006 联系单（**2017.6.2**）

关于“6•5”世界环境日宣传活动事宜，环境保护部发布 2017 年我国环境日主题为“绿水青山就是金山银山”，旨在动员引导社会各界牢固树立“绿水青山就是金山银山”的强烈意识，尊重自然、顺应自然、保护自然，自觉践行绿色生活，共同建设美丽中国。环境监理倡议全线各参建单位项目部结合自身实际情况，采取会议、宣传栏等多种形式，加强生态文化的宣传教育，倡导勤俭节约、绿色低碳、文明健康的生活方式和消费模式，进一步提高全社会生态文明意识。每个施工过程做到绿色施工，保护自然，共同建设美丽西安。并要求施工单位就环保宣传教育组织情况以回复单形式进行回复。

7）007 联系单（**2017.6.5**）

关于加强 2017 年高中考期间施工的相关事宜，2017 年 6 月 7 日、8 日、28 日、29 日我市中高考期间，环境监理要求各施工单位应严格执行西安市今年关于中高考的相关规定，合理安排施工时间、施工工序，规定范围内要求禁止施工的标段必须停止白天及夜间的一切施工作业。同时根据《西安市建筑垃圾清运市场秩序综合加

强 2017 年高中考期间建筑垃圾管理工作的紧急通知》要求，在高中考期间，要求施工单位当日禁止进行建筑垃圾外运作业，加强噪音管控。环境监理要求全线各标段认真学习文件通知相关内容，提前安排好施工计划，中高考期间严格执行通知要求，避免各类环保投诉事件发生，为中高考考生营造良好的学习及考试环境。

（5）报送环境监理监理月报

1）月报的主要内容

环境监理月报主要包括以下内容：

a、项目概况

简要叙述工程建设情况。

b、环境监理委托及进场情况

环境监理委托及进场情况，项目部人员组成情况。

c、本月项目建设情况

d、本月环境监理的主要工作内容

包括相关资料查阅、巡视检查、旁站监理、环境监理指令签发情况、环境监理专题会议及环境保护宣传情况。

e、项目施工期污染防治设施、措施及生态保护措施落实情况

f、项目配套污染防治设施、措施及生态保护落实情况

g、本月项目存在的主要环境问题及处理结果

h、上月项目存在的主要环境问题

i、下月环境监理计划和工作重点

j、本月环境监理工作总结

2）项目月报的基本情况

2017 年上半年环境监理向西安市环境保护局、西安市环境保护局监理处、陕西省建设项目环境监督管理站及西安市政公用局等 4 个部门报送环境监理月报 24 份。

（6）环境监理工作会议

工地例会是建设单位、监理单位、施工单位集中探讨相关工程事宜，解决项目建设过程中出现问题的最佳平台。环境监理充分利用每周定期参加工地例会的机

会，详细了解工程进展状况，集中向参会人员反映本周施工过程中存在的环境问题，并提出明确整改要求，及时解决施工过程中存在的环境问题。

环境监理共参加项目工地例会 12 次，编写会议纪要 12 份。

（7）环境保护宣传

开展建设场区环境保护宣传是环境监理的一项十分重要的工作。在项目的日常环境监理工作中，环境监理人员始终把环境保护宣传放在重要位置，认真努力做好项目的环境保护宣传，推进环境监理工作的开展。

1）利用工地会议，宣传环境保护理念

自进驻项目开始，环境监理充分利用施工现场协调会和三方工地会议等进行环境保护理念的宣贯。在会议中通报近期环境监理现场日常巡查及环保措施落实情况；分析当前建设场区存在的环境问题，研究确定具体治理措施；传达各级环保部门及环境监理上级主管部门文件精神；反复强调施工单位要像抓生产安全、质量教育一样重视现场施工人员的环保教育培训，进一步提升施工单位管理层的环境保护意识，确保在日常施工过程中尽可能地降低对周边区域环境的影响。

2）发放监理简报，现场环境保护宣传

公司每年定期筹办两期《皓盛监理简报》，通过四个版面来宣传环境理念、环保法律法规、环保常识及最新环境监理信息等。在项目日常环境监理过程中，环境监理向建设单位、施工单位及工程监理单位等定期发送公司编制的《皓盛监理简报》，强化各参建单位施工人员的环境保护意识，扩大了环境保护宣传的影响，确保在日常施工过程中尽可能地降低对周边区域环境的影响，全面提升建设场区环境质量。

2017年上半年环境监理进行了现场环境保护宣传共计1次，并累计向建设单位、工程监理单位及施工单位发送《皓盛监理简报》20余份，取得各单位的认可和好评。

3）“6.5 世界环境日”环境保护宣传

在“6.5世界环境日”期间，环境监理通过发放环境保护宣传材料及现场环境保护知识讲解等形式进行环境保护宣传，同时要求施工单位在“6.5”世界环境日宣传期间

结合项目实际，以项目部为单位，采取多种形式，认真组织安排环境保护宣传、教育、培训，并以此为契机，与6月安全生产月活动有机结合起来，强化施工人员的环保意识和生态意识，提升建设场区环境质量。

（8）环境监测

2017 年上半年，环境监理对大寨路（雁环路-西三环）工程和凤城八路-太华路立交工程分别进行了 1 次噪声监测，对大寨路（雁环路-西三环）工程进行 1 次扬尘监测，凤城八路-太华路立交工程进行 1 次扬尘监测，编写监测报告共计 4 份。针对监测结果超标问题，要求高噪音施工过程注意避开周围人群休息时间，减少对周围人群的声环境的影响。

2.2.3 环境监理实施方案内容落实情况

项目环境监理实施方案中规定的工作内容的实际落实情况见表 2.2-2。

表 2.2-2　建设项目环境监理实施方案工作内容落实情况一览表

项目阶段	实施方案工作内容	环境监理日常工作内容	落实情况
准备阶段	收集项目设计及施工文件资料	全面核查项目设计文件与环评文件及批复文件的相符性	落实
	勘察建设项目及周边环境	凤城四路-朱宏路立交工程位于朱宏路与凤城四路十字，建址区域内周围无学校及住宅等环境敏感点，北二环-朱宏路立交工程位于朱宏路与北二环十字，红庙坡路立交工程位于朱宏路与红庙坡路十字，该十字东北、西北、南北均为在建项目，东南角有三层老居民楼，有少量居民居住，星火路立交工程位于西安市西北角，星火路沿线东西侧均有商铺，东侧为西安市政道桥有限公司第六分公司，凤城八路-太华路立交工程位于凤城八路与太华路十字，大寨路（雁环路-西三环）工程周围有和平村、陕西省商务技术学院、南、北二府庄，科技二路西段（西绕城-丈八北路）工程周围敏感点较多，包括西曹村、东曹村、王家寨、燕家庄、西安职业技术学院、英发寨、西安市52中、博迪学园、柯家庄、胡家庄、西安外事学院、丁家桥等敏感点分布于道路两侧，西安火车北站公交枢纽停保场工程位于北客站东南方向，周边敏感点为长乐新苑D区。	落实
	组建环境监理项目部	西安市皓盛环境工程监理有限公司组建亚行贷款路网工程项目部，配备环境监理总监1名、环境监理工程师1名、环	落实

项目阶段	实施方案工作内容	环境监理日常工作内容	落实情况
		境监理员2名	
	核实各施工单位施工组织设计或施工方案	审核施工单位《施工组织设计》中的环保组织机构和施工进度计划，核实施工期拟采取各项环保措施与环评文件及批复文件要求的一致性	落实
	编制环境监理实施方案	编制完成《亚行贷款西安城市路网完善项目环境监理实施方案》，并用于指导环境监理日常工作	落实
实施阶段	参加工地会议	利用工地会议，对环境监理的定义、依据、定位及主要工作内容和关注点进行了讲解。对近期监理工作进行总结，针对建设场区存在的环境问题提出整改要求，确保各施工单位对建设场区存在的环境问题及时整改落实	落实
	参加施工活动范围确定	环境监理关注的施工活动范围为建设施工场地围挡区域内范围，主要包括建设场地内主体工程、辅助工程、公用工程、环保工程、临时办公区域和施工营地等	落实
	开展建设场区日常环境监理工作	对建设场区进行不定期巡查，就施工过程中存在的环境问题首先与施工单位进行沟通协调，若未及时进行整改，则通过发送环境监理工作联系单的形式告知施工单位，并抄送建设单位，对建设场区存在的环境问题进行现场监督落实；每月按时向西安市环保局、西安市环境监理处和西安市市政用局报送环境监理月报；现场核查配套环境保护设	落实

项目阶段	实施方案工作内容	环境监理日常工作内容	落实情况
		施的建设情况；对收集的资料进行分类归档，并及时交公司存档；现场指导施工单位落实好施工期各项环保措施，确保环保“三同时”的有效执行。	

2.2.4 环境监理主要成果

西安市皓盛环境工程监理有限公司亚行贷款路网工程项目部 2017 年上半年主要环境监理工作及成果见表 2.2-4。

表 2.2-4　环境监理工作及成果一览表

序号	工作内容	单位	数量
1	日常巡查	次	41
2	环境监理日志	份	41
3	环境监理工作联系单	份	7
4	环境监理月报	份	6
5	环境监理会议	次	3
6	编写会议纪要	份	3
7	环境保护宣传和培训	次	1
8	环境监测	次	4
9	旁站监理	次	2

2.3 环境监理措施的执行情况

根据项目施工过程中存在的环境问题，环境监理向责任施工单位发送环境监理文件指令，并抄送建设单位。同时，环境监理利用施工现场协调会和工地会议等通报近期环境监理现场日常巡查及环保措施落实情况，确保各项环境监理措施的执行效果。2017 年上半年环境监理措施执行情况见表 2.3-1。

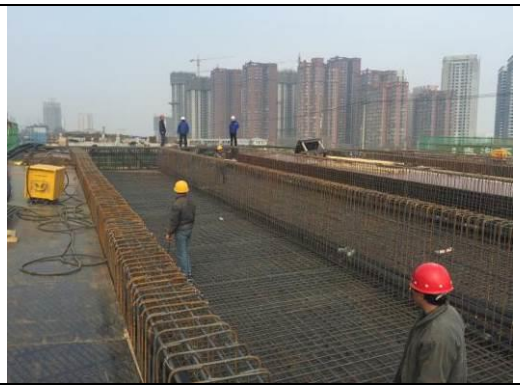
表 2.3-1　2017 年上半年环境监理措施执行情况一览表

序号	环境监理要求	执行情况
1	落实西安市治污减霾工作领导小组办公室关于加强大气污染防治工作紧急通知的相关要求，强化建设场区施工过程中大气污染防治措施的事宜	各施工单位在日常施工过程中强化大气污染防治措施的落实，对责任区域的施工环境进行了规范整改。
2	报送项目环保工程施工资质、工程承包及特种人员资质等相关资质、施工组织设计中的环保篇章等相关资料	施工单位已将工程施工资质及施工组织设计等资料完成报送
3	针对建设场区施工过程中存在的渣土裸露堆放、道路浮土较厚、车辆冲洗废水随意排放、施工区域内生活垃圾随意丢弃等问题	施工单位对施工区域内的土方进行了覆盖，道路浮土进行了清扫，但工程施工过程中还会不间断的产生渣土，环境监理会及时督促施工单位做好渣土覆盖及道路清扫，施工区生活垃圾只进行了部分清理。

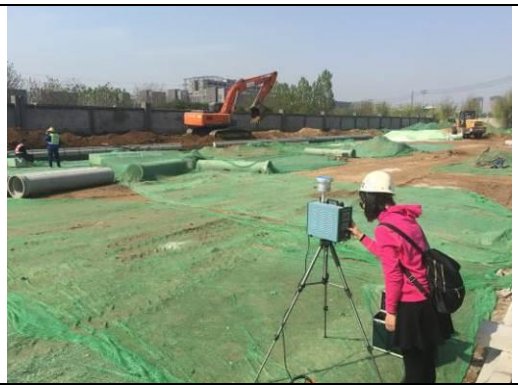
附：环境监理巡查照片

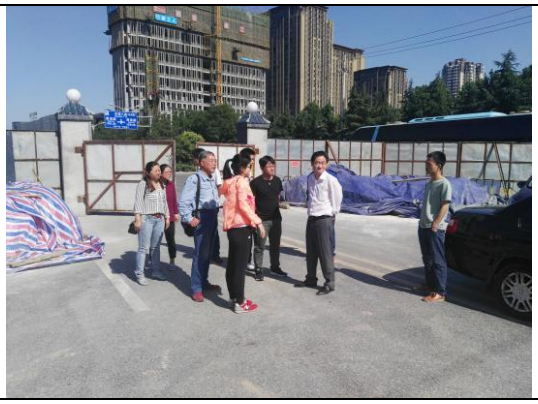
	
红庙坡北场地打桩施工	凤城八路东侧承台钢筋绑扎
2017年1月10日	2017年1月10日
	
凤城八路东侧打桩施工	大寨路沥青铺设
2017年1月10日	2017年1月10日
	
红庙坡南场地覆盖情况	北二环立交护栏焊接
2017年1月19日	2017年1月19日

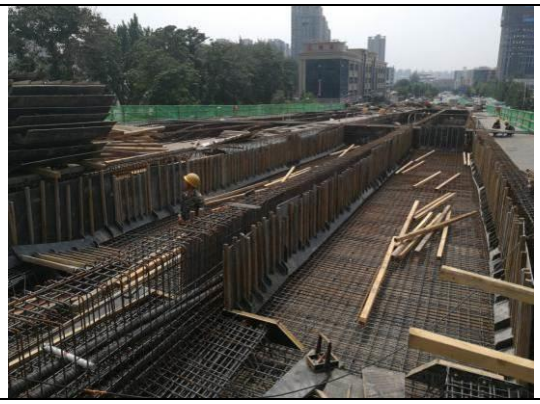
	
凤城八路承台及墩柱钢筋绑扎	大寨路路面排水系统
2017年2月20日	2017年2月20日
	
北二环立交隔声屏障安装	红庙坡冠梁及底板施工
2017年2月24日	2017年2月24日
	
凤城八路-太华路立交西侧从围挡外洒水降尘	红庙坡北场地覆盖情况
2017年2月14日	2017年2月15日
	
星火路立交南侧原管道破除	凤城八路东侧盖梁浇筑

2017年3月10日	2017年3月7日
	
凤城八路东侧桥面箱梁钢筋绑扎	红庙坡立交北侧原桩头破除施工
2017年3月22日	2017年3月20日
	
大寨路雨水篦子	凤城八路工程概况
2017年3月6日	2017年3月7日

	
大寨路西侧道沿施工	红庙坡立交南侧桩基连接施工
2017年4月12日	2017年4月21日

	
星火路立交A匝道路基碎石铺设	凤城八路东侧箱梁浇筑
2017年4月12日	2017年4月1日
	
大寨路西侧大气监测	凤城四路绿化
2017年4月12日	2017年4月20日
	
大寨路西侧电力管沟模板拆除	红庙坡西北侧小广场路面铺设
2017年5月4日	2017年5月8日
	

星火路立交侧墙及路基钢筋绑扎	凤城八路中部土方回填
2017年5月8日	2017年5月22日
	
凤城八路省厅检查	科技二路现场裸露地面覆盖
2017年5月25日	2017年5月23日
	
大寨路富源三路东侧人行道道沿施工	凤城八路第二联箱梁支架搭设、模板安装施工
2017年6月1日	2017年6月5日
	
星火路立交路面水稳养护	红庙坡立交下穿隧道钢筋绑扎
2017年6月6日	2017年6月14日

	
凤城八路西侧第二联箱梁顶板模板安装	北客站打桩施工
2017年6月20日	2017年6月20日

A. Appendix II - Certificate of the Environmental Supervision Co.

建设项目环境监理资格备案证书

单位名称：西安市皓盛环境工程监理有限公司

详细地址：西安市曲江新区雁南五路

法定代表人：丁真真

证书编号：陕环监理备字第9号

业务范围：水利、交通运输、建材火电、化工石化医药、采掘、冶金、轻工化纤（印染业和食品、饮料、酒类的制造及加工）、社会区域（生活垃圾集中处置、危险废物集中处置等）、输变电

有效期：2014年9月16日至2016年9月15日

二〇一四年九月十四日