



**SPECIAL AUDIT REPORT
ON
CONSTRUCTION OF
LAHORE ORANGE LINE METRO
TRAIN PROJECT (VOLUME – I)**

**HUD & PHE DEPARTMENT AND
TRANSPORT DEPARTMENT
GOVERNMENT OF THE PUNJAB**

AUDIT YEAR 2016-2017

AUDITOR GENERAL OF PAKISTAN

PREFACE

Articles 169 & 170 of the Constitution of the Islamic Republic of Pakistan 1973, read with Sections 8 and 12 of the Auditor General's (Functions, Powers, and Terms and Conditions of Service) Ordinance, 2001 require the Auditor General of Pakistan to conduct audit of the accounts of the Federation, the Provinces and any authority or body established by the Federation or a Province. The Special audit of "Lahore Orange Line Metro Train Project" (civil works) funded by the Government of the Punjab and Government of the Peoples Republic of China was carried out accordingly.

The Directorate General of Audit Works (Provincial), Lahore conducted audit of the project "Lahore Orange Line Metro Train Project" pertaining to civil works component for the period April 2015 to March 2017 with a view to reporting significant findings to the stakeholders. Audit assessed, on test check basis, whether the management complied with applicable laws, rules, and regulations in managing the project.

Audit findings indicate need for adherence to the regularity framework besides instituting and strengthening of internal controls to avoid recurrence of similar violations and irregularities.

Most of the observations included in this report have been finalized in the light of written responses of the department and discussions in SDAC meetings.

Audit Report is submitted to the Governor of the Punjab in pursuance of Article 171 of the Constitution of the Islamic Republic of Pakistan 1973, for causing it to be laid before the Provincial Assembly.

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Islamabad

Dated: 27th November, 2018

(Javaid Jehangir)

Auditor General of Pakistan

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ABBREVIATIONS & ACRONYMS

AA	Administrative Approval
AASHTO	American Association of State Highways & Transport Officials
ABC	Asphaltic Base Course
ACP	Aluminum Composite Panel
ADP	Annual Development Programme
ASME	American Standards for Mechanical Engineering
B&R	Buildings & Roads
BOQ	Bill of Quantities
BRTS	Bus Rapid Transit System
BS	British Standards
CDWP	Central Development Working Party
Cft	Cubic Feet
CM	Chief Minister
Cu.m	Cubic Meter
DFR	Departmental Financial Rules
E&M	Electrical & Mechanical
ECNEC	Executive Committee of National Economic Council
EIRR	Economic Internal Rate of Return
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EOT	Extension of Time
EPC	Engineering, Procurement & Construction
FD	Finance Department
FIRR	Financial Internal Rate of Return
GST	General Sales Tax
INTOSAI	International Organization of Supreme Audit Institutions
IPSAS	International Public Sector Accounting Standards
ISSAI	International Standards of Supreme Audit Institutions
JMF	Job Mix Formula
JV	Joint Venture
Km	Kilometer

LAC	Land Acquisition Collector
LDA	Lahore Development Authority
LM	Linear Meter
LOLMTP	Lahore Orange Line Metro Train Project
LRMTS	Lahore Rapid Mass Transit System
MB	Measurement Book
MBS	Metro Bus Service
MD	Managing Director
MRS	Market Rates System
MTDF	Medium Term Development Framework
NEC	National Economic Council
NESPAK	National Engineering Services of Pakistan
NIT	Notice Inviting Tender
NJB	New Jersey Barrier
NRL	National Refinery Limited
PC-I	Planning Commission
PDWP	Provincial Development Working Party
PMA	Punjab Mass Transit Authority
PPRA	Punjab Procurement Regulatory Authority
SDAC	Special Departmental Accounts Committee
PAO	Principal Accounting Officer
PAC	Public Accounts Committee
PC-I	Planning Commission-I
PD	Project Director
P&D	Planning & Development
PFR	Punjab Financial Rules
RCC	Reinforced Cement Concrete
Rft	Running Feet
TEPA	Traffic Engineering & Transport Planning Agency
UD	Urban Development
USD	United States Dollar
VO	Variation Order

EXECUTIVE SUMMARY

The Directorate General of Audit Works (Provincial), Lahore conducted audit of “Lahore Orange Line Metro Train Project” for the period April 2015 to March 2017 during March 2017. The main objectives of the audit were to review compliance with applicable rules, regulations, procedures and loan covenants. The audit was conducted in accordance with the International Standards of Supreme Audit Institutions (ISSAIs).

The Government of Punjab has taken an initiative to develop and improve public transport by implementing the Lahore Rapid Mass Transit System (LRMTS). This system will offer a well organized and effective way of transportation to the public. Lahore Orange Line Metro Train Project is one of the four corridors proposed under LRMTS. The Orange Line Project will ease traffic load on adjacent roads, reduce traffic jams and noise & air pollution. The design capacity of the system is 30,000 persons per hour.

The project, funded under the loan from Government of the Peoples Republic of China, was approved at a cost of USD 1.457 billion with the completion period of two years and three months from its commencement date. The project was mainly financed through the loan from China EXIM Bank along with contribution by Government of the Punjab for shifting of utilities and land acquisition etc. Commercial Document i.e. Engineering, Procurement & Construction (EPC) contract of the Project relating to E&M portion was signed between CR-NORINCO and Punjab Mass Transit Authority on 20th April, 2015 for USD 1.457 billion. The original PC-I cost amounting to USD 1.626 billion was approved by ECNEC on 11th May, 2015 and Government of the Punjab issued administrative approval on 26th May, 2015. The Project Management incurred expenditure of USD 672.852 million up to financial year 2016-17. Loan agreement and inter government framework agreement were not provided to Audit despite repeated reminders.

The PC-I did not include the cost of land acquisition, shifting utilities and payment of customs & excise duty on the import of E&M

items. The expenditure under these heads was being met with from the funds provided by the Government of the Punjab.

Key audit findings

Audit findings, categorized into major issues, i.e. Organization & Management, Financial Management, Procurement & Contract Management and Construction & Works are as under:

1. Organization & Management

The Project was executed by two administrative departments. Civil work was executed by LDA, Lahore which is under Secretary HUD & PHE Department while Electrical & Mechanical work was executed by Punjab Mass Transit Authority (PMA) which is under administrative control of Secretary Transport. The loan agreement and inter government framework agreement were not produced to Audit on the pretext of confidentiality.

2. Financial Management

Review of Financial Management revealed irregularities, overpayments and non-recoveries involving Rs 2,852.643 million. The key audit findings are summarized below:

- I. Overpayment due to allowing extra quantities and hours of machinery/equipment – Rs 1,723.576 million
- II. Irregular payment of Non-BOQ/Non-Standardized items without approval from competent authority – Rs 276.564 million
- III. Overpayment due to higher input rates – Rs 253.127 million
- IV. Unauthentic payment due to non-provision of invoices of NRL Karachi – Rs 230.318 million
- V. Overpayment due to allowing 20% contractor profit / overhead charges twice – Rs 132.640 million
- VI. Non-recovery on account of difference of rates and markup – Rs 130.662 million.

3. Procurement and Contract Management

Examination of Contract Management revealed irregularities amounting to Rs 12,978.215 million. Audit findings under this category, inter alia, include the following:

- I. Irregular sanction/approval of 10% contingency charges instead of admissible 2%.
- II. Non-mutation of land in the name of Authority/Government.
- III. Non-recovery of mobilization advance in spite of expiry of contract period – Rs 3,940.988 million
- IV. Return of unspent amount by LAC without disbursement – Rs 2,080.120 million
- V. Less payment of 20% advance by the foreign contractor to the Employer (PMA) in violation of commercial agreement – Rs 1,939.041 million
- VI. Non-recovery on account of price de-escalation on diesel, bitumen and steel from the contractor – Rs 1,695.659 million
- VII. Irregular payment to affectees of estate/government land – Rs 1,470.139 million
- VIII. Undue financial benefit to the foreign contractor due to excess 20% advance – Rs 921.108 million
- IX. Non-recovery of secured advance – Rs 698.625 million
- X. Non-imposition of penalty – Rs 433.089 million

4. Construction & Works

Review of Construction & Works revealed overpayments and losses amounting to Rs 3,186.247 million, such as:

- I. Irregular execution of items than provided in original estimate - Rs 1,397.923 million
- II. Irregular execution of item due to non-utilization of available quantity – Rs 743.471 million
- III. Non-recovery on account of use of mixed fill material instead of sand – Rs 705.079 million

- IV. Overpayment due to use of heavier capacity 'Front End Loader' than admissible as per Project Specifications – Rs 98.949 million
- V. Non-recovery on account of cost of old scrap/steel from the contractor – Rs 49.006 million
- VI. Overpayment due to allowing admixture without its use in the item rate for Concrete class A2w on ground – Rs 43.964 million
- VII. Overpayment due to non-utilization of dismantled material as sub-base – Rs 41.348 million

Recommendations

Audit observed that the irregularities were mainly due to weak administrative and financial controls. Principal Accounting Officer needs to strengthen internal controls regime in the project besides taking following actions:

- I. Production of complete record to Audit to fulfill its constitutional duty.
- II. Observance of instructions given in PC-I regarding application of input rates in letter & spirits and to effect recoveries where overpayments were made to the contractors.
- III. Imposition of penalty for delayed completion of work as per contract agreement.
- IV. Recovery of the amounts paid to the private allottees of estate land in violation of LAC Act.
- V. Vigorous pursuance of all pending court cases for timely completion of the project and to effect recoveries on account of risk & cost from defaulting contractor.
- VI. Strengthening of internal audit system and to ensure accountability mechanism to avoid recurrence of irregularities/lapses.
- VII. Effecting recoveries / losses pointed out by Audit from the persons at fault besides fixing responsibility and initiating disciplinary action accordingly.
- VIII. Early implementation of SDAC decisions.
- IX. Fixing responsibility for incorrect calculation for internal rate of return to show the project financially viable.

1. INTRODUCTION

1.1 The Directorate General of Audit Works (Provincial), Lahore conducted audit of the Lahore Orange Line Metro Train Project for the period April 2015 to March 2017.

1.2 The Government of Punjab has taken an initiative to develop and improve public transport by implementing the Lahore Rapid Mass Transit System (LRMTS). This system will offer a well organized and effective way of transportation to the public. Lahore Orange Line Metro Train Project was one of the four corridors proposed under LRMTS. The Orange Line Project will ease traffic load on adjacent roads, reduce traffic jams and noise & air pollution. The design capacity of the system is 30,000 persons per hour.

1.3 The Government of Pakistan signed an inter-government agreement with China on 22.05.2014. A commercial agreement between PMA and Chinese contractor M/s CR-NORINCO was also signed on 20.04.2015 for Lahore Orange Line Metro Train Project. The government intended to spend this loan for payments under the contract for engineering, procurement and construction.

1.4 The project, funded under the loan from Government of the Peoples Republic of China, was approved with PC-I cost of USD 1.457 billion with the completion period of two years and three months from its commencement date. The project was mainly financed through the loan from China EXIM Bank along with contribution by Government of the Punjab for shifting of utilities and land acquisition etc. Commercial Document i.e. Engineering, Procurement & Construction (EPC) contract of the Project relating to E&M portion was signed between CR-NORINCO and Punjab Mass Transit Authority on 20th April, 2015 for USD 1.457 billion. The original PC-I cost amounting to USD 1.626 billion was approved by ECNEC on 11th May, 2015 and Government of the Punjab issued administrative approval on 26th May, 2015. The Project Management incurred expenditure of USD 672.852 million up to financial year 2016-17.

1.5 Main objective of the Project was to prepare 27.1 Km long elevated mass transit project in Lahore to facilitate commuter's movement in the city. The project was still in progress at the time of audit.

2. AUDIT OBJECTIVES

The major objectives of the audit were:

- i. To review compliance with applicable rules, regulations and procedures.
- ii. To assess whether rate analyses were prepared in line with project specifications/templates and applicable rates.
- iii. To check whether instructions given in PC-I were followed.
- iv. To check the role of the consultants in supervision of the work and in formulating the analyses of rates with reference to the rates provided in MRS and other analyses of the items.

3. AUDIT SCOPE AND METHODOLOGY

3.1 The Punjab Mass Transit Authority (PMA) and Lahore Development Authority (LDA) executed the work. The scope of the audit was to cover the expenditure up to March 2017.

3.2 Audit methodology included data collection, scrutiny/analysis of record, discussion with engineering staff and consultants, holding SDAC meetings and follow up.

4. AUDIT FINDINGS AND RECOMMENDATIONS

4.1 Organization & Management

4.1.1 The Project was executed by two administrative departments. Civil work was executed by LDA, Lahore which is under Secretary HUD & PHE Department while Electrical & Mechanical work was executed by

Punjab Mass Transit Authority (PMA) which is under administrative control of Secretary Transport.

4.1.2 The supervisory consultants M/s NESPAK-CEC (JV) were supposed to be present at site throughout the execution of work. The consultants were fully responsible for checking and supervision of work. The contractors were required to submit the bills to the consultants. The consultants, after verification of bills, forwarded the same to Project Director for payment. Drawdown applications/invoices for E&M as well as civil works were forwarded to EXIM Bank China through Transport Department. However, payments were directly made by the EXIM Bank to the Chinese Contractor in China. The Chinese Contractor transferred the amounts of civil works to PMA's bank account in Bank of Punjab. The PMA transferred these amounts to Director General, Lahore Development Authority (LDA) for payment to civil works' contractors.

4.2 Non-production of record

As per section 14 (2&3) of Auditor General's (Functions, Powers and Terms & Conditions of Service) Ordinance 2001, the officer in-charge of any office or department shall afford all facilities and provide record for audit inspection. Further, any person or authority hindering the auditorial functions of the Auditor General regarding inspection of accounts shall personally be responsible and dealt with under relevant Efficiency & Discipline Rules.

4.2.1. The LAC UD-Wing LDA, Lahore did not produce the record relating to payments made to affectees on account of land acquired for the "Lahore Orange Line Metro Train Project". A number of written and verbal requests through different requisitions/letters were made to LAC Branch but following record and information was not produced to Audit for scrutiny:

- i. Vouchers/ files of payments made to land acquisition affectees
- ii. Qabzul Wasool
- iii. Correspondence Files
- iv. Cheque Books and Challans deposited into Treasury by the LAC

- v. Notifications of Award announced
- vi. Building Structure Evaluation Reports
- vii. Recoveries from affectees on account of excess payments made by LAC
- viii. Reconciliation Statements with Treasury/Bank and Director Finance LDA, Lahore

Weak supervisory and managerial controls resulted in non-production of record of LAC, LDA Lahore valuing Rs 10,123,881,461.

Audit pointed out the non-production of record in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA (Lahore Orange Line Metro Train Project), neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. Also the LAC did not attend the SDAC meeting. The Committee took it seriously and directed the Authority to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early production of record for special audit of LAC for ensuring transparency besides fixing responsibility against the person(s) responsible.

(Para 276)

4.2.2 Director Finance, UD-Wing LDA, Lahore did not produce the record related to accounts, budget and expenditure charged to Lahore Orange Line Metro Train Project. Various written and verbal requests through different requisitions/letters were made to the Directorate but following record and information were not produced to Audit for scrutiny:-

- i. Loan Agreement signed with EXIM Bank of China
- ii. Inter government Framework agreement
- iii. Budget Statements of Lahore Orange Line Metro Train Project

- iv. Statement of expenditure charged to Lahore Orange Line Metro Train Project
- v. Journals
- vi. General Ledgers
- vii. Trial Balances
- viii. Detail of Securities deducted and their accountal
- ix. Detail of Income Tax and Sales Tax deducted and deposited into Treasury

Weak supervisory and managerial controls resulted in non-production of record to Audit by the Finance Directorate, UD Wing LDA.

Audit pointed out the non-production of record in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The department stated that all the record was produced to Audit through focal person and record was again attached with the working papers for scrutiny. Audit informed the Committee that no record relating to the expenditure charged to the project from the ADP funds and LDA's own sources which were spent on shifting utilities, project contingencies and acquisition of land was produced. The Committee took it very seriously and directed the Authority to produce the record and get it verified from Audit within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early production of complete record / information for scrutiny in compliance of the SDAC directives.

(Para 135)

4.3 Financial Management

The issues relating to the financial management involving an amount of Rs 2,852.643 million, observed during the audit, were as under:-

4.3.1 Overpayment due to allowing extra quantities and hours of machinery/equipment – Rs 1,723.576 million

According to para No. 7 of approved PC-1 for Construction of Lahore Orange Line Metro Train Project, the Authority (LDA) was required to prepare estimate for civil work on the basis of market rates displayed on Finance Department's website for 1st Bi-Annual 2015 District Lahore. Further as per Project's General Specifications, the working hours of equipment, machinery and labour were required to be followed while preparing rates analysis and making payments to the contractor.

4.3.1.1 Chief Engineer, UD-Wing LDA, Lahore awarded the civil work of "Lahore Orange Line Metro Train Project" to various contractors during the year 2015-2016. The Authority got approved the rate analyses of different items "*Concrete class A1, A2, D1, D2 & D3 on ground, elevated, concrete pile and lean concrete*" in the engineering estimate and accordingly payment was released to the contractors. Audit observed that rates of items were sanctioned on higher side by taking extra working hours of different machines used in the execution of above items.

Allowing of higher rates resulted in overpayment of Rs 1,327.755 million to the contractors (Annex-I at Page-109).

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the estimates were prepared keeping in view the site requirement and complex nature of the project which was to be completed on fast track mode. The Authority also referred to FD's letter No. (HUD) 20-20/2016 dated 16.02.2017 that there was no binding on the Authority to use NHA, FD or Engineer's template. Audit informed the Committee that as the department adopted NHA template therefore this template was to be adhered to as such but the department added additional hours for machinery and equipments than admissible which resulted in inflated estimate. Audit also informed the Committee that the FD's letter

dated 16.02.2017 mainly emphasized on economy and cost implications which in this case were ignored by the department. The Committee directed the Authority to take up the matter with the Technical Wing of the Finance Department for seeking clarification. The Finance Department vide letter No. FD (HUD)20-20/2016 dated 09.02.2018 & 19.02.2018 clarified that the departmental contention was not correct.

Audit recommends early recovery of the amount involved as per FD's clarification besides fixing responsibility.

(Paras 4, 7, 10, 13, 16, 24, 28, 31, 34, 37, 40, 43, 45, 46,49, 100, 103, 105, 140, 141, 143, 144, 147, 166, 167, 168, 171, 172, 173, 174, 175, 176, 177, 178, 179, 191, 192 & 206)

4.3.1.2 The Authority got approved the rate analysis of item 404(b) “Reinforcement as per AASHTO M-31 Grade-60 etc” @ Rs 108,778.56 per ton Rs 107,568.24 per ton in estimate on higher side by adding inadmissible 3 hours each for crane and dumper truck valuing Rs 11,034 without their requirement in pile cap, piers, transom, girders, deck slab, RCC slab and New Jersey barrier etc. The detail of overpayment is as under:

(Amount in Rs)

Para No.	Pkg No.	Rate Paid (per ton)	Rate Admissible (per ton)	Diff. (per ton)	Quantity in BOQ/paid (Tons)	Overpayment (after addition and subtraction of mega allowance etc.)
19	I	108,778.56	106,130.40	2,648.16	56390.182	159,275,617
169	II	108,778.56	106,130.40	2,648.16	44112.285	109,502,272
164	III	107,568.24	104,820.00	2,748.24	3144.149	7,666,262
138	IV	108,778.56	106,130.40	2648.16	1277.338	3,607,876
Total						280,052,027

Violation of specifications resulted in overpayment of Rs 280.052 million to the contractor.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were also discussed in SDAC meeting held on 22.11.2017. The Authority stated that in fast track projects, it was not possible to cut in size and fabricate the steel at the very location of the structural component. Once the steel was shifted to site from the steelyard, it was cut and bent as per design for installation at site. The crane was required to load the steel in dumper trucks and then it was delivered to site at respective places for fixing at elevated stations upto height of 12 meters. Audit argued that the rate of steel @ Rs 84,600 per ton given on FD's website (also applicable for LDA) was 'at site' rate and no additional transportation could be allowed. Audit further argued that if at all additional transportation was required, the carriage as per MRS was to be allowed instead of provision of cost of dumper. The SDAC directed the department to seek clarification regarding definition of 'site' from Technical Wing of FD for its uniform application in all projects. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 19, 138, 164 & 169)

4.3.1.3 The Authority made payment on higher side @ Rs 2,724.54 per cu.m in package-IV instead of admissible rate of Rs 2,168.54 per cu.m and Rs 2,291.39 per cu.m for Non-BOQ item "*Formation of embankment with specified material 60% sub-base and 40% sand complete in all respect*". Audit observed that excess rates of Rs 556 per cu.m and Rs 462 per cu.m were sanctioned by allowing extra labour and similarly extra items were also taken than approved template.

(Amount in Rs)

Para No.	Description	Rate Paid (p. cu.m)	Rate admissible (p. cu.m)	Diff. (p. cu.m)	Qty paid (cu.m)	Over-payment
115	Formation of embankment specified material 60% sub-base and 40% sand etc	2,724.54	2,168.54	556	22205.20	12,346,091
153	-do-	2,724.54	2,291.39	462.00 (433.15x6.66%)	22205.20	10,258,802
158	-do-	2,724.54	2,291.39	462.00 (433.15x6.66%)	74882,168	34,595,562
Total						57,200,455

Allowing of higher rates resulted in overpayment of Rs 57.200 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were also discussed in SDAC meeting held on 22.11.2017. The Authority stated that SP-I item was for reinforced earth work only. However, Non-BOQ item with 60:40 ratios was a different item. Moreover, LOLMTP was a complex and fast-track project involving mechanized construction and there was no binding to use NHA/FD template. The Authority also referred to FD letter No. (HUD) 20-20/2016 dated 16.02.2017. The bid rates were prepared by the consultant as per actual site requirements. Audit argued that as per Bidding Documents, the department had adopted NHA Template. Therefore, this template was to be adhered to as such. The Authority allowed extra hours for site engineer, supervisor, helpers and for equipments than the template adopted. The Finance Department's clarification relied upon by the department mainly emphasized on economy and cost implications which were ignored by the Authority while approving the rate analysis. The Committee directed the department to get the matter technically probed by Administrative department (HUD&PHE) and get it verified from Audit at the earliest. No compliance of SDAC directive was reported till finalization of the report. The Finance Department later on clarified vide letter No. FD (HUD)20-20/2016 dated 09.02.2018 & 19.02.2018 that the departmental contention with reference to FD's clarification dated 16.02.2017 was not correct.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 115, 153 & 158)

4.3.1.4 Chief Engineer, UD-Wing LDA, Lahore in the rate analysis of item No. "401 b(i) concrete class A2 (4000 psi on ground-1:1.5:3)" had taken 10 carpenters costing Rs 16,050 for shuttering valuing Rs 7,500, whereas in rate analysis of item No. 401 d (i) & (ii), the same number of carpenters (i.e. ten) were taken for shuttering valuing Rs 205,000 and Rs 307,500 respectively. Audit was of the view that costs of manpower

should be taken with reference to the volume of shuttering instead of assumed progress. The maximum manpower for shuttering valuing Rs 7,500 should not be more than two carpenters. Thus, excess rate of Rs 305 per cu.m was paid by the Authority.

Weak supervisory and financial controls resulted in overpayment of Rs 33.219 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that number of carpenters for all rate analyses of concrete was worked out for minimum formwork activity like item # 401(i), 401b (i), 401b (iii) 401b (v) and 401(f). However, where custom made formwork was involved like for item # 401 d (i) and 402 d (ii), additional resources including manpower of carpenters, machinery etc. were included in the lump sum rate of shuttering under “material” head. Audit contended that Authority did not produce any documentary proof in support of its reply. The Committee directed the Authority to produce the relevant record (i.e. rate analysis of items, measurement sheets and breakup of lump sum cost of shuttering) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 208)

4.3.1.5 The Authority got approved the rate analysis of “*Item No. 203- Asphaltic base/leveling course Plant mix class-B*” under the head “Equipment” by including 10 dumper trucks for Package-I. However, keeping in view the capacity of Asphalt Plant i.e. 45 Ton, the number of dumpers required was worked out to be 3 instead of 10.

Weak supervisory and financial controls resulted in overpayment of Rs 14.284 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the comparison made by auditors was based on the capacity of plant without taking into consideration the concept for execution/laying of asphalt at site. It was further stated that the estimate had been prepared for 187.5 cu.m (450 ton) for daily execution of asphalt. As per production, 25 dumpers (450/18) of 18 ton capacity were required to lay the asphalt if the produced asphalt was transported in single lift. Contrarily, a real time situation in which the dumpers remain in rotation as per time consumed at site, only 10 dumpers were considered in the estimate. Audit argued that in the rate analysis the quantity of bitumen used was only 45 tons, therefore only 3 dumpers were required to fulfill the requirement. The Committee directed the department to get the record re-verified from Audit within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 261)

4.3.1.6 The Authority under item No. “401 d(ii) concrete class DI (5000 psi 1:1:2 Elevated) cast in situ” paid shuttering of Rs 307,500 for assumed progress of 50 cu.m and for item No. “401 d(i) concrete class DI (5000 psi 1:1:2 on ground) precast transom”, the shuttering was paid for Rs 205,000. On the other hand 10 carpenters @ Rs 66 per hour for 24 hours valuing Rs 16,050 has been added as labour cost. Further under the item No. “401 b(i) concrete class A2 (4000 psi on ground) 1:1:5:3” and item No. “401 b(ii) concrete class A2 (4000 psi Elevated) 1:1:5:3” having shuttering value of Rs 7,500 and 15,000 respectively, same labour cost of Rs 16,050 had been added which was on a higher side as compared to material cost. For material cost of Rs 15,000 + Rs 7,500, 2 No. carpenters were sufficient.

Weak supervisory and administrative controls resulted in overpayment of Rs 5.256 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the carpenters were taken as per site requirements in both items. The additional cost of shuttering was paid for Concrete class-D1 (5000 psi) used only in Package-I and II, at transoms and girders due to special shuttering requirements and design drawings. Audit contended that Authority did not produce any documentary proof in support of its reply. The Committee directed the Authority to produce the relevant record (i.e. rate analysis of items, measurement sheets and breakup of lump sum cost of shuttering) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 202)

4.3.1.7 The Authority made payment for the Non-BOQ item “*Reinforced earth facing panels/retaining walls etc.*” on higher side @ Rs 4,277 per Sq.m instead of admissible rate of Rs 4,009.85 per Sq.m. Audit observed that excess rates of Rs 267.15 per Sq.m was sanctioned by allowing extra cost of crane, loader, labour and misc items etc. which were already included in the composite rates of RCC, Fabrication of mild steel Grade-60 etc. Therefore, double payment for these items resulted in overpayment to the contractor.

(Amount in Rs)

Para No.	Pkg No.	Description	Rate Paid (p. Sq.m)	Rate admissible (p. Sq.m)	Diff. after adjusting mega allowance etc. (p. Sq.m)	Qty paid (Sq.m)	Over payment
118	IV	Reinforced earth facing panels / retaining walls etc.	4,227	4,009.85	267.15	7205.65	1,924,989
240	III	Construction of Reinforced Earth concrete wall using panels with concrete class.	4,277	4,009.85	267.15	8505.140	2,015,869
Total							3,940,858

Violation of contract provisions resulted in overpayment of Rs 3.941 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the rate of crane, loader, labour in rates of concrete and steel was only for manufacturing process. However, the additional cranes, labour and loader etc were required for stockpiling the casted panels at the stock yard, loading to flatbed trailer, its transportation, unloading and their erection/installation at site. Audit argued that the department applied FD input rates for steel G-60 which was inclusive of all carriage/handling charges at site. The Committee directed the department to get the matter technically probed by Administrative department (HUD&PHE) and get it verified from Audit at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 118 & 240)

4.3.1.8 The Authority made payment on higher side @ Rs 96 per cu.m for item No.305 “Asphalt Base/Levelling Course Plant mix etc.” by inclusion of 12 hours for helpers instead of 8 hours, 10 dumper trucks for 10 hours instead of 8 as provided in NHA Specifications (Template) which was adopted by the Authority.

(Amount in Rs)

Sr. No.	Description	Rate paid (per cu.m)	Rate admissible (per cu.m)	Diff. (per cu.m)	Qty paid (cu.m)	Over-payment (after adjusting mega allowance etc.)
1	Asphalt Base/Levelling Course Plant mix etc.	13,720.46	13,624.46	96	16,786.483	1,720,504

Violation of Project specifications resulted in overpayment of Rs 1.720 million to the contractor.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the estimates were prepared keeping in view the site requirement and nature of the project which was to be completed on fast track mode. The Authority also referred to FD letter No. (HUD) 20-20/2016 dated 16.02.2017 that there was no binding on the Authority to use NHA, FD or Engineer's template. Audit informed the Committee that the department adopted NHA template, therefore, this template was to be adhered as such. The Authority added extra hours for labour and dumper trucks than allowed in template adopted. Audit also informed the Committee that the FD's letter dated 16.02.2017 mainly emphasized on economy and cost implication which in this case was ignored by the department. The Committee directed the Authority to take up the matter with the Technical Wing of the Finance Department for seeking clarification. No compliance of SDAC directive was reported till finalization of the report. It is pertinent to mention here that FD vide letter No.FD (HUD) 20-20/2016 dated 19.02.2018 has clarified that the departmental contention was not correct.

Audit recommends early recovery of the amount involved as per FD's clarification besides fixing responsibility.

(Para 85)

4.3.1.9 The Authority got approved the rate analysis of item No. 109 "*sub grade preparation in earth cuts*" on higher side @ Rs 40.08 per cubic meter in estimate and accordingly payment was released to the contractor. Audit observed that rate of item was sanctioned on higher side by taking extra equipment i.e. one number tractor for Rs 4,560 and water charges for Rs 2,400. In the said item, the tractor and water charges were not required because all input rates were at site rates and were inclusive of water

charges. By addition of inadmissible item, extra rate of Rs 7.36 per cu.m was allowed which resulted in overpayment of Rs 148,868.

(Amount in Rs)

Sr. No.	Description	Rate paid (per cu.m)	Rate admissible (per cu.m)	Diff. (per cu.m)	Qty paid (Cu.m)	Over-payment
1	Sub grade preparation in earth cuts	40.08	33.18	7.36 (6.90x6.66%)	20226.69	148,868

Weak supervisory and financial controls resulted in overpayment of Rs 148,868.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the estimates were prepared keeping in view the site requirement and nature of the project which was to be completed on fast track mode. The Authority also referred to FD letter No. (HUD) 20-20/2016 dated 16.02.2017 that there was no binding on the Authority to use NHA, FD or Engineer's template. The department also stated that sub grade preparation was used for embankment in earth cuts; therefore water was essential to maintain moisture for embankment preparation. The input rates were exclusive of water charges and therefore it was to be paid separately. Similarly, tractor was required for towing 4" delivery diesel pump at site. Audit informed the Committee that the input rates of FD are inclusive of water charges and no separate payment on this account or cost of additional equipments was admissible. The Committee directed the Authority to get the matter technically probed by Administrative Department (HUD&PHE) and get it verified from Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 149)

4.3.2 Irregular payment of Non-BOQ/Non-Standardized items without approval from competent authority – Rs 276.564 million

According to the instructions issued by the Finance Department, vide No. RO(Tech)FD-18-23/2004 and RO(Tech)FD-2-3/2004, dated 21.09.2004 and 02.08.2004, rate analysis for the non-standardized items shall be prepared by the Executive Engineer/Deputy Director, clearly giving the specifications of the material used and approved by the competent authority not below the rank of Superintending Engineer/Director on the basis of input rate/MRS of relevant quarter placed on FD's website and a copy thereof will be sent to Finance Department for scrutiny/standardization.

Chief Engineer, UD-Wing LDA, Lahore awarded the work "Lahore Orange Line Metro Train Project Package-I (Dera Gujran to Chaurji Chowk (RD 0+600 to 14+200))" to the contractor during September, 2015. The Authority made payment for three Non-BOQ items amounting to Rs 276.564 million without preparation/approval of rate analyses from the Competent Authority. Copy of the rate analysis was also required to be sent to Finance Department for standardization which was also not done.

Violation of FD's instructions resulted in irregular payment of Rs 276.564 million to the contractor.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The department out of three items produced rate analysis of one item pertaining to item "*Providing and fixing double stage pre-stressing post tensioning of elevated viaduct transom using wire strand 0.6 inch dia up to maximum height of 15 meter at pier etc.*" @ Rs 496,639.88 per ton. Audit examined the rates and found that total rate was divided by 1.377 ton instead of 1.490 ton as per PC-I, Recoverable amount was worked out to Rs 4,854,978. Audit demanded rate analyses of other two items for

verification. The Committee directed the department to effect the recovery of Rs 4,854,978 from the contractor and produce remaining record i.e. rate analyses and quotations for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery of admitted amount and produce rate analysis of remaining two items in compliance of SDAC directives.

(Para 86)

4.3.3 Overpayment due to higher input rates – Rs 253.127 million

According to para No. 7 of approved PC-1 for construction of Lahore Orange Line Metro Train Project, the Authority was required to prepare estimate for Civil Work on the basis of market rates displayed on Finance Department’s website for 1st Bi-Annual 2015 District Lahore.

4.3.3.1 Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project Package-I (Dera Gujran to Chauburji Chowk (RD 0+600 to 14+200))” to the contractor during September 2015. The Authority got approved the rate analysis of item# 407a “*Cast in place concrete pile 1200 mm dia including concrete class A3 etc.*” @ Rs 24,009.93 per meter in estimate. Audit observed that rate of item was sanctioned on higher side by taking incorrect rig charges @ Rs 2,000 per hour instead of actual rate of Rs 1,000 per hour as per item No.EQ-32 of equipment rates based on 1st Bi-annual 2015.

(Amount in Rs)

Sr. No.	Description	Rate Paid (per meter)	Rate admissible (per meter)	Diff. (per meter)	Qty paid (meter)	Over payment (after adjusting mega allowance etc.)
1	Cast in place concrete piles 1200 mm dia boring in normal soil including Concrete Class A-3 etc.	24,009.93	22,089.93	1,920	92603	189,824,000

Approval of higher rate resulted in overpayment of Rs 189.824 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the rates available in MRS specify the dia of rig upto 600mm. The same machinery could not be used for 1200mm dia pile. NHA rate of rig for 1m (1000 mm) dia was Rs 4,964.57 per hour. Audit argued that as per input rates of FD, the rates for the dia ranging from 450 mm to 600 mm were Rs 1,000 per hour for piling rig. Audit also brought it on record that for the item No.K5 “Drilling for RCC pile etc 790 mm to 1422mm dia” FD’s rate was Rs 2,625 per meter. Thus, cost of 10 meter pile comes to Rs 26,250, whereas department had taken Rs 32,000 in analysis of 10 meter pile. The Committee upheld the view point of Audit and directed the Authority to get the matter probed by Administrative department (HUD &PHE) for fixing responsibility and to submit the report along with record to Audit for verification within 30 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 102)

4.3.3.2 The Authority got approved the rate analyses of different items “Concrete class A1, A2, D1, D2 & D3 piles and structural excavation” on higher side by taking input/equipment rate of Front End Loader (Cap 3.0 cu.m) @ Rs 3,385 per hour instead of actual rate of Rs 2,753 per hour as per MRS 1st Bi-Annual 2015 District Lahore.

Violation of FD’s input rates resulted in overpayment of Rs 46.319 million (Annex-II at Page 112).

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the front end loader used in this project was of 170 HP capacity which was required for this complex project whereas, the input rate as pointed out by the Audit was for 120 HP capacity front end

loader. Audit informed the Committee that the department applied input rate of 2nd Bi-Annual 2014 which was Rs 3,385 per hour instead of 1st bi-annual 2015 (which was applicable) for which rate was Rs 2,753 per hour. The Committee upheld the viewpoint of Audit and directed the department to effect recovery and get it verified from Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery in compliance of SDAC directives besides fixing responsibility.

(Paras 5, 8, 11, 14, 17, 25, 29, 32, 35, 38, 41, 44, 47, 50, 137, 142, 145, 203, 205, 210 & 224)

4.3.3.3 The Authority made payment for Non-BOQ item “Construction of Precast boundary wall (Post planks) etc.” on higher side @ Rs 7,507.88 per meter instead of admissible rate of Rs 4,365.88 per meter. Audit observed that excess rates ranging from Rs 462 to Rs 3,142 per meter were sanctioned by allowing higher material rate of precast column and post planks (Gondal Pvt. Ltd.) @ Rs 2,400 and Rs 1,600 per number instead of actual rates available on FD’s website for item No.JC2 @ Rs 1,928 (Rs 241 / rft x 8 rft) and item No.JC5 @ Rs 704 (Rs 88 / rft x 8 rft) for the same items respectively. Audit further pointed out that the department also allowed extra loading/unloading and labour (carpenter) charges which were already included in FD’s input rates.

(Amount in Rs)

Para No.	Description	Rate Paid (per LM)	Rate admissible (per LM)	Diff. (per LM)	Qty paid (meter)	Over payment
116	Construction of Precast boundary wall (Post planks) etc.	7,507.88	4,365.88	3,142	1340.350	4,211,379
151	Formation of embankment with specified material (60% sub base material 40% A-2-4) Local sand complete in all respect.	2,724.54	2,291.39	462.00 (433.15x6.66%)	22205.20	10,258,802
155	-do-	7,507.88	7,229.21	297.23 (278.67x6.66%)	1,340.350	398,392
Total						14,868,573

Violation of PC-1/ECNEC instructions resulted in overpayment of Rs 14.869 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that design of precast-pre-stressed boundary wall (Column & Planks) was finalized by NESPAK on design wind load of 100mph/160 Km per hour. These columns & planks had a customized design having different design parameters. The input rates required according to our design and specifications were not available on FD website. The Authority also stated that pre-cast boundary wall was procured at factory rate from M/s Gondal Builders Pvt. Ltd. The transportation of the planks and columns was carried out through tractor trolley. The carpenter was required for bracing with wooden logs for erection of columns in vertical position and making them immoveable. Audit argued that on FD's website the rates of manufacturer M/s Izhar Pvt. Ltd. for pre-cast boundary wall were available and same were required to be applied in the light of PC-I instructions. The Committee directed the department to get the matter technically probed by Administrative department (HUD&PHE) and get it verified from Audit at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 116, 151 & 155)

4.3.3.4 Chief Engineer, UD-Wing LDA, Lahore awarded the work "Lahore Orange Line Metro Train Project Package-III Construction of Depot at Dera Gujran Lahore" to the contractor. The Authority got approved the rate analysis in addendum No 1 of item No. 401-j "*Plinth Protection*" @ Rs 3104.31 per cubic meters. Audit observed that rate of item was sanctioned on higher side by taking the cost of carpenter @

Rs 385.2 per cu.m ($16050/50=321+20\%$ profit) under the head “Man Power” without shuttering and cost of Rs 38.4 per cu.m ($1600/50=32+20\%$ profit) of water tank tow type (4000 L) under head “Equipment” without water usage. In this way extra rate of Rs 423.6 per cu.m was added.

Weak supervisory and financial controls resulted in overpayment of Rs 790,505.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that for the preparation of rate analyses, only ‘material’ were taken for P.C.C, Lean concrete and brickwork. However, equipment & manpower was taken commonly for all sub-activities in plinth protection. Audit contended that Authority did not produce any documentary proof in support of reply. The Committee took it seriously and directed the Authority to produce the relevant record (i.e. rates analysis and measurement sheets etc) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early production of record and resultant recovery.

(Para 160)

4.3.3.5 Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project Package-IV (Stabling Yard at Ali Town, Lahore)” to the contractor during December, 2015. The Authority made payment on higher side @ Rs 2724.54 per cu.m instead of admissible rate of Rs 2,691.54 per cu.m for Non-BOQ item Formation of embankment specified material 60% sub-base and 40% sand etc. An

excess rate of Rs 33 per cu.m was paid to the contractor due to calculation of incorrect MRS carriage rate with lead 220 Km.

Allowing of higher rates resulted in overpayment of Rs 732,771.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the lead for carriage of aggregate was mistakenly written as 220 Km in the approved rate analysis. However, in calculation of rate analysis, the actual lead taken was as 200 Km for which rate of Rs 1,338.97 per cu.m was worked out based on input rates of MRS 2nd Bi-Annual 2015 Lahore. PC-I was based on MRS 1st Bi-Annual 2015. But due to delay in design preparation by Chinese Consultant CEC & NESPAK, the BOQ/estimate based on 2nd bi-annual 2015 was prepared by issuing addendum & corrigendum and the tenders for Package-3&4 were called later on. Audit contended that PC-I was approved by ECNEC based on MRS 1st Bi-annual 2015 Lahore and admissible rate for 200 km lead comes to Rs 1219 per cu.m but department paid higher rate @ Rs 1338 per cu.m by applying rates of 2nd Bi-Annual instead of 1st Bi-Annual 2015 without getting prior approval from ECNEC. The Committee directed the department to get the matter regularized/condoned from Finance Department at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives or recovery of the amount involved besides fixing responsibility.

(Para 60)

4.3.3.6 The Authority got approved the rate analysis of item No. SP-1 “Formation of embankment with specified material for reinforced earth works etc.” @ Rs 1,536 per cubic meters in estimate. Audit observed that rate of item was sanctioned on higher side by application of input/equipment rate of water tank (Local 12,000 Liter) tow type @

Rs 1,282 per hour instead of actual admissible input rate of Rs 641 per hour. The detail is as under:-

(Amount in Rs)

Para No	Pkg No.	Description	Rate Paid (Per cu.m)	Rate admissible (Per cu.m)	Diff. (Per cu.m)	Qty paid (Cu.m)	Over payment (after adjusting mega allowance etc.)
112	IV	Formation of embankment with specified material for reinforced earth works etc	1,536	1,520.60	15.40	22742.426	377,923
230	III	-do-	1,536	1528.31	7.69	31564.98	215,412
Total							593,335

Application of higher input rates resulted in overpayment of Rs 593,335.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the rate for the item SP-1 “Formation of embankment with specified material for reinforced earth works” was derived by taking average of Items 107-d (Granular Sand) and 201 (Granular Sub-base). The average $\{(664.68+3003.04/2) = 1833.86$ per cu.m} of above items would be higher than approved rate of Rs 1,536 per cu.m. Audit argued that no average rate was taken by the department neither it was applicable. The department applied higher rates for water lorry @ Rs 1,282 per hour instead of admissible FD’s input rate Rs 641 per hour which resulted in overpayment. The Committee directed the department to get the matter technically probed by Administrative department (HUD&PHE) and get it verified from Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 112 & 230)

4.3.4 Unauthentic payment due to non-provision of invoices of NRL Karachi – Rs 230.318 million

As per summary of JMF for modified “Asphalt Wearing Course and Asphalt Base Course etc.” submitted by the contractor and recommended by the Consultant M/s NESPAK and approved by Chief Engineer LDA, the source of bitumen (Grade 60/70) in bulk was NRL Karachi.

The Authority made payments for the items of work “Asphaltic base and wearing course etc” to contractor but documentary evidence / invoices showing the procurement of bitumen from National Refinery Ltd. Karachi were neither available on record nor produced to Audit for verification. In the absence of invoices / documentary evidences, it was not possible to ascertain the actual source of the procurement.

Weak managerial and internal controls resulted in unauthentic payment of Rs 230.318 million.

Audit pointed out the unauthentic payment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that invoices were produced for ready reference. Audit contended that Authority did not produce any documentary proof in support of its reply. The Committee directed the Authority to produce the relevant record (i.e. invoices of bitumen) to Audit for verification. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early production of invoices for verification in compliance of the SDAC directives.

(Para 91)

4.3.5 Overpayment due to allowing 20% contractor profit / overhead charges twice – Rs 132.640 million

As per Para 2.10 of PFR, Govt. money should be spent in such a way as a person of ordinary prudence spends out of his own pocket and should not be more than the occasion demanded.

4.3.5.1 The Authority allowed 20% profit and overhead on the components other than civil work for “*Supply of Mould (on loan) Soil Reinforcement strips, C-connection Dowel roads, EPDM pads Scaling Foam, Geotextile, the internal design of Reinforced Earth Structure, Construction Drawings, Method Statement and Technical Assistance for proper execution*” for 0 to 5 meter height, 5 to 7 meter height and 7 to 9 meter height without providing the breakup of rates whereas, 20% profit and overhead as per rate analysis was to be allowed for civil works contractors only.

Weak technical and supervisory controls resulted in overpayment of Rs 114.829 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the 20% overhead and profit was added on all items to compensate for additional resources and third party contractors and vendors needed for the job. Audit argued that 20% overhead and profits were to be allowed on civil works only. As such the actual recovery was to be made from the contractor. The Committee directed the Authority to produce the relevant record (i.e. quotation, rates analysis etc.) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 243)

4.3.5.2 The Authority made payment for Non-BOQ item “*Retaining wall height 0 to 5 meter (non-load bearing) etc.*” on higher side @ Rs 12,360 per Sq.m instead of admissible rate of Rs 9,888 per Sq.m. Audit observed that excess rate of Rs 2,472 per Sq.m was sanctioned by allowing extra 20% overhead charges twice which resulted in overpayment to the contractor.

Weak technical and supervisory controls resulted in overpayment of Rs 17.811 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that from the rate analysis of retaining wall it was clearly evident that overheads & profit (20%) had not been paid twice to the contractor. Audit contended that Authority did not produce any documentary proof in support of its reply. The Committee directed the Authority to produce the relevant record (i.e. quotation, rates analysis etc.) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 123)

4.3.6 Overpayment on account of difference of rates and markup - Rs 130.662 million

As per Para 2.10 of PFR, Govt. money should be spent in such a way as a person of ordinary prudence spends out of his own pocket and should not be more than the occasion demanded.

Under bill No. 4a-xxix (cut & fill) total provision of item No. 107a “*Structural Excavation*” was 862,921 cu.m but during the execution, the quantity of above item in IPC-03 was enhanced to 1,014,370.754 cu.m involving an amount of Rs 127,810,715 and got approved vide VO No. 01 for IPC-03. Subsequently, the quantity of the item was again reduced to 165,766.049 cu.m without adjusting/recovering the amount and payment previously made for Rs 127,810,715 was reduced to Rs 20,886,522 in IPC No.7. The quantity was enhanced due to change of design but its subsequent reduction was not understood which needs justification. The huge amount of Rs 106,924,193 (127,810,715 - 20,886,522) remained

with the contractor for more than four (04) months. Therefore, mark-up amounting to Rs 2,851,312 (Rs 106,924,193 x 8/100 x 4/12) was required to be recovered from the contractor.

Weak supervisory and financial controls resulted in overpayment of Rs 130.662 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the Slush/daldal was paid provisionally as 'Structural excavation'. Later on after approval of Non-BOQ item, it was deducted / adjusted and paid in 'Surplus/Unsuitable material' along with 'Extra for Slush'. Audit contended that Authority had already measured and paid the same item as "Structural excavation common material etc" which was later reduced irregularly and paid at a higher rate by changing the nature / specification of the item. The Committee directed the department to get the matter probed and findings be got verified from Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 189)

4.3.7 Overpayment due to allowing higher MRS rates than admissible on FD's websites – Rs 28.887 million

According to para No. 7 of approved PC-1 for Construction of Lahore Orange Line Metro Train Project, the Authority was required to prepare estimate for Civil Work on the basis of market rates displayed on Finance Department's website for 1st Bi-Annual 2015 for District Lahore.

4.3.7.1 The Authority got approved the rate analysis of "*Water bound macadam, sub-base and disposal of salvage material etc.*" on higher side in the engineering estimate of Package-I and accordingly payments were

released to the contractor. The department calculated incorrect carriage rate for 194 Km and 10 Km over and above the MRS rates as per item No.1 under Chapter-1(Carriage) based on 1st Bi-annual 2015, Lahore.

(Amount in Rs)

Para No.	Pkg No.	Description	Rate Paid (per cu.m)	Rate admissible (per cu.m)	Diff. (per cu.m)	Qty paid (Cu.m)	Over payment
57	I	Item no.206(b) Crushed Water Bound Macadam Class-B with 194 km lead etc.	3,500.07	3,190.47	309.60	62951.106	20,807,943
58	I	Item no.201 Granular Sub Base Course with 194 km lead etc.	2,876.92	2,571.92	305	19554.481	6,367,529
59	I	Item no.209c Disposal of existing unused road pavement structure with 10 km lead etc.	201.34	191.82	9.52	52148.607	530,034
Total							27,705,506

Approval of higher rates resulted in overpayment of Rs 27.705 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that rate analyses for subject items were prepared on the basis of MRS 1st Bi-annual 2015. During verification of rate prepared by auditors, it was observed that it differs from the one available in the above referred MRS available with the Authority. It was further observed that in the MRS 1st Bi-annual 2015 (1st February 2015 to 31st July 2015), the carriage rates from previous MRS 2nd bi-annual 2014, (1st August 2014 to 31st January 2015) had been carried forward. Audit did not agree because on FD's website, the correct MRS 1st Bi-annual 2015 for District Lahore was available and on every page of MRS, the period (1st February 2015 to 31st July 2015) was written and accordingly was required to be applied in the rates of carriage. But the department applied 2nd bi-annual 2014 MRS, wherein the rates of carriage were on higher side. Audit

recommended early recovery, however, on consistent denial by the Authority to admit the overpayment the Committee directed the Authority to seek clarification from Technical Wing of Finance Department. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 57, 58 & 59)

4.3.7.2 The Authority got approved the rate analysis of item “Transportation of earth all types when the total distance was more than 1000 feet upto 7.5 Km etc.” for Rs 185.75 per cubic meters in estimate. Audit observed that rate of item was sanctioned on higher side by calculating the MRS item No.17 (a)(b)(c) under Chapter-3 (Earthwork) with 8 Km lead instead of actual lead of 7.5 Km.

(Amount in Rs)

Sr. No.	Pkg No.	Description	Rate Paid	Rate admissible	Diff.	Qty paid (Cu.m)	Over payment
1	I	Transportation of earth all types when the total distance was more than 1000 feet and upto 7.5 Km etc.	185.75	174.77	11	100635.821	1,181,871

Allowing of excess rate resulted in overpayment of Rs 1.182 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the bid schedule contained this item as 8 Km lead. Lead was from the center of excavation as per lead chart. The Committee directed the Authority to produce the relevant record (i.e. measurement sheets and lead chart) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 90)

4.3.8 Overpayment due to incorrect rate analysis by adding double cost of dumper/loader – Rs 28.821 million

As per specification No.201 of General Specifications 1998 of National Highway Authority followed by LDA in the Orange line Metro Train Project, the use of Front End Loader and Dumper Truck in the execution of item “Granular Sub Base course etc” was not allowed.

Chief Engineer, UD-Wing LDA, Lahore awarded the civil work of “Lahore Orange Line Metro Train Project” to the contractors during the year 2015-2016. The Authority got approved the rate analyses of items “Granular Sub Base Course and water bound macadam with 194 Km lead etc.” which were on higher side. Audit observed that department included cost of Rs 31,108 for 2 dumper trucks for 6 hours and 1 Front end loader for 4 hours in the rate analysis of 100 cu.m which was not admissible. The Authority allowed excess rate to the contractor by allowing the cost of dumpers / trucks in the rate analysis whereas the same was already included in the MRS rate (adopted for this project) of carriage with lead 194 Km @ Rs 1,346.22 per cu.m. The detail of overpayment is as under:

(Amount in Rs)

Para No.	Pkg No.	Description	Rate Paid (per cu.m)	Rate admissible (per cu.m)	Diff. (per cu.m)	Qty paid (Cu.m)	Over payment
73	I	Item no.201 “Granular Sub Base Course with 194 km lead etc”.	2,876.92	2,503.63	373.29	19554.481	7,793,229
74	I	Item no.206b “Water bound macadam or base course etc with 194 km lead etc”	3,500.07	3,196.03	304	62951.106	20,431,572
150	IV	Item no. 201 “Granular subbase with lead of 194 km”	2,876.92	2,585.75	310.56 (291.17x6.66%)	1920.255	596,354
Total							28,821,155

Violation of NHA specifications resulted in overpayment of Rs 28.821 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the dumper / trucks included in the MRS rates covered transportation of material from quarry to the site of work whereas in this case the material was first stock piled and later on delivered at the site of work as per requirement. Audit argued that the composite rates given in MRS were at site rates which included all types of carriages including short ones. Any additional cost of transportation for dumping, stock piling and further shifting from stock yard to site of work was to be borne by the contractor. The Chair and representative of FD stressed upon recoveries but on consistent denial by the Authority, the matter was referred to FD for clarification. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery of the amount involved besides fixing responsibility.

(Paras 73, 74 & 150)

4.3.9 Overpayment due to change of MRS / input rates of original PC-I approved by ECNEC – Rs 21.490 million

According to para No. 7 of approved PC-1 for construction of Lahore Orange Line Metro Train Project, the Authority was required to prepare estimate for civil work on the basis of market rates displayed on Finance Department's website for 1st bi-annual 2015 for District Lahore.

4.3.9.1 The Authority made payment on higher side for items "*concrete class A2 on ground & elevated, lean concrete, structural excavation and granular backfill with sand*" by adopting MRS 2nd bi-annual 2015 instead of admissible MRS/Input rates of 1st bi-annual 2015.

(Amount in Rs)

Para No.	Pkg No.	Description	Rate Paid (p. cu.m)	Rate admissible (p. cu.m)	Diff. (p. cu.m)	Qty paid (Cu.m)	Over-payment
63	IV	Item no.401b(i) Concrete class A2 (4000 psi on ground) 1:1.5:3 etc	13,372.45	12,569.67	802.78	3552.722	3,044,967
64	IV	Item no.401b(ii) Concrete class A2 (4000 psi on elevated) 1:1.5:3 etc	13,552.45	12,749.67	802.78	4723.896	4,048,756
65	IV	Item no.401b(f) Lean Concrete (4000 psi 1:4:8) etc	7,224.07	6306.88	917.19	439.657	430,525
66	IV	Item#107a "Structural excavation in common material etc"	126.00	122.17	3.83	220395.975	901,213
67	IV	Item#107di "Granural backfill with sand/material etc"	664.68	634.344	30.336	292470.03	9,472,497
Total							17,897,958

Violation of PC-1/ECNEC instructions resulted in overpayment of Rs 17.898 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were also discussed in SDAC meeting held on 22.11.2017. The Authority stated that the original PC-I was based on MRS 1st Bi-Annual 2015 and subsequently T.S estimates of Civil Works Packages I&II were sanctioned on 1st bi-annual 2015. The tenders for Package-3&4 were called later due to delay in design preparation by Chinese Consultant CEC & NESPAK and accordingly BOQ/estimates were prepared based on 2nd bi-annual 2015 by issuing addendum & corrigendum by the Chief Engineer LDA. The bids of Package-3&4 were prepared and fixed for the facilitation of contractors in quoting their current rates and to avoid disproportionate rates. Only percentage above or below was required to be entered in bid for competition and payment on quoted / accepted rates was made to the contractor. Audit contended that PC-I was approved by ECNEC based on MRS 1st Bi-annual 2015 Lahore and payment was required to be made to the contractor accordingly. Audit argued that department did not get prior approval from ECNEC while

changing the rates approved in PC-I in the light of FD's instructions. The Committee took it very seriously and directed the department to get the matter regularized/condoned from the Finance Department at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 63, 64, 65, 66 & 67)

4.3.9.2 The Authority made payment on higher side @ Rs 1,536 per cu.m instead of admissible rate of Rs 1,520 per cu.m and Rs 1,409.93 per cu.m for "*Formation of embankment with specified material for reinforced earthwork etc*". Hence, excess rate was allowed due to application of higher rate of carriage for 200 Km and allowing inadmissible cost of dumper truck and extra quantities of water which required to be recovered from contractor.

Violation of PC-1/ECNEC instructions resulted in overpayment of Rs 3.592 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the lead for carriage of aggregate was mistakenly written as 220 Km in the approved rate analysis. However, in calculation of rate analysis, the actual lead taken was 200 Km for which rate of 1,338.97 per cu.m had been worked out which was similar to item No. 201 Granular Sub-base. Audit contended that PC-I approved by ECNEC was based on MRS 1st Bi-annual 2015 Lahore and admissible rate for 200 km lead came to Rs 1,219 per cu.m. Audit further argued that department did not get prior approval from ECNEC while changing the rates approved in PC-I and in this case the rates of carriage were on higher side based on 2nd bi-annual 2015 instead of admissible 1st bi-annual 2015. The Committee took it very seriously and directed the department to get the matter

regularized/condoned from the Finance Department at the earliest. As regards para 154, the department stated that the rate was derived by taking average of item 201 (sub base) and item 107-d (granular sub base). The Committee did not agree and directed the department to get the matter technically probed by Administrative department (HUD&PHE) and get it verified from Audit at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 114 & 154)

4.3.10 Overpayment due to allowing higher rates than provided in the PC-I – Rs 13.845 million

According to approved PC-1 by ECNEC, for Construction of Lahore Orange Line Metro Train Project, the rate of Rs 7,447 LM and Rs 12,750 per cu.m was sanctioned for item “concrete pile boring 760 mm dia etc” and “concrete class A-2 elevated” respectively.

4.3.10.1 The Authority made payment of item No.407d(ii) “concrete pile boring 760 mm dia” at a higher rate of Rs 7,758 per LM instead of approved rate of Rs 7,447 per LM. In this case, mega project allowance was paid twice.

(Amount in Rs)

Para. No	Pkg No.	Description	Rate Paid (p.cu.m)	Rate admissible (p.cu.m)	Diff. (p.cu.m)	Qty paid (meter)	Overpayment
55.	I	Concrete pile boring 760 mm dia	7,758	7,447	311	5039.542	1,671,679
56.	I	Cast in place concrete pile 760 mm dia with boring and concrete class A3 etc.	7,758	7,447	311	19312	6,406,033
Total							8,077,712

Violation of PC-1/ECNEC instructions resulted in overpayment of Rs 8.078 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. Audit pointed out that in the rates analysis the department added 5% mega project allowance twice, once at the time of sanction of rates and again while making payment to the contractor during running bills. The Authority admitted the recovery. The Committee directed the Authority to affect the recovery and get it verified from Audit within 30 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 55 & 56)

4.3.10.2 The Authority made payment to the contractor on higher side @ Rs 12,941.67 per cubic meter instead of admissible rate of Rs 12,750 per cubic meter approved in PC-I by ECNEC vide item “Concrete class A2 (4000 psi, 1:1.5:3) on elevated etc.”.

(Amount in Rs)

Para No.	Pkg No.	Description	Rate Paid (per cu.m)	Rate admissible (per cu.m)	Diff. (per cu.m)	Qty paid (Cu.m)	Over payment
27.	I	Concrete class A2 (4000 psi, 1:1.5:3) on elevated etc.	12,941.67	12,749.67	192	17114.16	3,504,761
209.	II	-do-	12,941.67	12,749.67	192	12571.79	2,262,652
Total							5,767,413

Violation of PC-1/ECNEC instructions resulted in overpayment to the contractor of Rs 5.767 million due to use of higher capacity equipment than admissible.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that there were two different types of concrete items

i.e. # 401 b (ii) and 401 b (ii)a and payment of above items have been made accordingly. Audit argued that in approved PC-I by ECNEC, the rate of item of Concrete Class A2 on elevated was approved @ Rs 12,750 per cu.m, but the Chief Engineer LDA got approved higher rate in TS Estimate and BOQ @ Rs 12,941.67 per cu.m. Audit recommended to effect the recovery, however, on consistent denial by the department, the Chair directed for technical probe by the Administrative Department (HUD&PHE) and to submit fact finding report within 30 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 27 & 209)

4.3.11 Overpayment due to allowing higher loose factor of sand and crushed aggregate – Rs 4.670 million

According to Addendum & Corrigendum issued by the Finance Department vide No.RO (TECH)FD.18-47/2006 dated 26.04.2006, the quantity of crushed stone aggregate for payment of carriage were to be taken as per actual loose volume but not more than 120 cft for sub base and 122 for base course for 100 cft compacted material.

The Authority made payment for Non-BOQ item “*Formation of embankment specified material 60% sub-base and 40% sand etc.*” on higher side @ Rs 2,964.34 per cu.m instead of approved rate of Rs 2,829.34 per cu.m. Therefore, excess rate of Rs 135 per cu.m was paid to the contractor due to allowing higher loose factor of 30% for sub-base (crushed aggregate) and sand instead of admissible factor of 20%. Moreover, the Authority made payment on higher side @ Rs 1,536 per cu.m for BOQ item No. SP1 “*Formation of embankment specified material 30% sub-base and 70% sand for reinforced earthwork etc*” by allowing higher loose factor of 25% for sub-base (crushed aggregate) and sand instead of admissible factor of 20% only (also taken in Packages-

I&II of OLMTP). Therefore, excess rate of Rs 45 per cu.m was paid to the contractor due to allowing higher loose factor.

Violation of Finance Department instructions resulted in overpayment of Rs 4.670 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the item formation of embankment was carried out by using a blended mixture with ratio 60% sub base and 40% sand. Whenever a blended mixture was used, the loose factor was comparatively higher than that of individual elements/components. Therefore extra material was required to prepare the desired composite compacted material. Audit contended that in approved PC-I by ECNEC, 20% loose factor for Granular backfill with sand and crushed stone aggregate was provided and the same was also required to be applied in non-BOQ/BOQ items. The Committee upheld the view point of Audit and directed the department to effect the recovery from the contractor and get it verified from Audit at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 62, 113 & 233)

4.3.12 Overpayment due to allowing higher wastage, extra labour and inadmissible steel bolts in item ‘structural steel’ – Rs 2.533 million

According to para No. 7 of approved PC-1 for construction of Lahore Orange Line Metro Train Project, the Authority was required to prepare estimate for civil work on the basis of market rates displayed on Finance Department’s website for 1st Bi-Annual 2015 for District Lahore. Further as per Volume-III A of General Specifications (Bidding Documents) of item No 404(b) read with standard specifications,

preparation of “Bar bending” schedule was essential before laying the steel bars, because it helps to reduce the wastage upto 98%. Conventionally, wastage of 0.50% was unrecoverable and 1.5% was scrap, which was required to be recovered from the contractor.

The Authority got approved the rate analysis of item 413 “Structural Steel A36 etc.” @ Rs 160,612 per ton and accordingly payment was made to the contractor. Audit observed that the department allowed 5% wastage instead of 2%. Further, extra labour was applied by working on 1,050 kg instead of 1000 kg. The cost of bolts etc. was also added which was not admissible.

(Amount in Rs)

Sr. No.	Description	Rate Paid (per ton)	Rate admissible (per ton)	Diff. (per ton)	Qty paid (Ton)	Over payment
1	Structural Steel A36 etc.	160,612	151,115	9,497	249.82	2,533,019

Violation of Project/Standard Specifications resulted in overpayment of Rs 2.533 million to the contractor.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the rate analysis was based on standard template developed by consultant and wastage was taken at a minimum of 5%. For certain items it was more than 5%. Measurement and payment against the item was made on net weight of material (excluding wastage) however for the labor component, measurement of material must include the gross quantity (including wastage). Bolts were an essential part of steel structure and their effect was taken along with the structural steel. No separate payment for bolts was made to the contractor. Audit informed the Committee that the department allowed 5% wastage instead of admissible 2%, extra labour by working on 1050 kg instead of 1000 kg and inadmissible cost of bolts. The Committee directed the Authority to produce the relevant record (break up of rate analysis) to Audit for

verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 98)

4.3.13 Overpayment due to wrong calculation of wire strand in rate analysis - Rs 2.354 million

As per Rule 2.33 of Punjab Financial Rules Volume-I, every government servant should realize fully and clearly that he would be held personally responsible for any loss sustained by government through fraud or negligence on his part.

4.3.13.1 The Authority got approved the rate analysis of “*Pre-stressing Pre-tensioned wire strand 15 mm (0.6 inch dia) used in precast/cast in situ concretes etc.*” @ Rs 295,489.87 per ton of strands in estimate. Audit observed that the Authority made wrong calculation by taking/carrying forward of composite rate of Post-tensioned wire as Rs 243,852.62 per ton instead of actual rate of Rs 237,343.80 per ton. Hence, due to incorrect carrying forward, the higher rate of Rs 295,489.87 per ton was paid to the contractor instead of 292,607.47 per ton.

(Amount in Rs)

Sr. No.	Pkg No	Description	Rate Paid (per ton)	Rate admissible (per ton)	Diff. (per ton)	Quantity paid (ton)	Over payment
1	I	Pre-stressing Pre-Tensioned wire strand 15 mm (0.6 inch dia) used in precast/cast in situ concretes etc	295,489.87	292,607.47	2,882.40	726.694	2,234,124

Weak supervisory and financial controls resulted in overpayment of Rs 2.234 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that there were two techniques of pre-stressing: 1st, Pre-tensioning and 2nd Post-tensioning, the rate analyses for both types of techniques were different. The composite rate of pre-tensioning wire strand was taken as @ Rs 295,489.87 which as per rate analysis, while the composite rate of post tensioning wire was Rs 292,607.47 as conceived by Audit. Audit contended that Authority did not produce any documentary proof in support of its reply. The Committee directed the department to produce the relevant record (i.e. Break up / rate analysis of composite rate of pre-tensioning wire strand) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early production of record and resultant recovery from the contractor / person (s) responsible.

(Para 22)

4.3.13.2 The Authority got approved the rate analysis of two items “*Pre-stressing Post-Tensioned wire strand 15 mm (0.6 inch dia)*” and “*Pre-stressing Pre-Tensioned wire strand 15 mm (0.6 inch dia) used in precast/cast in situ concretes etc.*” @ Rs 266,179.96 and Rs 295,489.87 per ton respectively in estimate of Package-I. Audit observed that the Authority made wrong calculation by dividing with shortened factor 1.07 ton and 2.71 ton instead of actual factor 1.07114 and 2.7128 per ton respectively.

(Amount in Rs)

Sr. No.	Description	Rate Paid (per ton)	Rate admissible (per ton)	Diff. (per ton)	Quantity paid (tons)	Overpayment
1	Pre-stressing Post-Tensioned wire strand 15 mm (0.6 inch dia) used in precast/cast in situ concretes etc	266,179.90	266,052.40	127.56	2.390	325
2	Pre-stressing Pre-Tensioned wire strand 15 mm (0.6 inch dia) used in precast/cast in situ concretes etc	295,489.87	295,335.37	154.50	726.694	119,752
Total						120,077

Weak supervisory and financial controls resulted in overpayment of Rs 120,077.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that conversion factor was applied as per instruction of Finance Department / system in vogue i.e. 2 and 3 digits were applied. Audit contended that the department in the rates analysis applied the conversion factor by weight of cable 1.102 kg/meter and accordingly it was to be calculated upto 3 decimal points. The SDAC directed to calculate the rate analysis upto 3 decimal points and to effect recovery accordingly. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 21)

4.3.14 Overpayment due to allowing excess rate by including water lorry of 12000 liter instead of 4000 liter capacity - Rs 1.702 million

According to the instructions issued by the Finance Department, vide No. RO (Tech)FD-18-23/2004 and RO(Tech)FD-2-3/2004, dated 21.09.2004 and 02.08.2004 respectively, rate analysis for the non-standardized items shall be prepared by the Executive Engineer/Deputy Director, clearly giving the specifications of the material used and approved by the competent authority not below the rank of Superintending Engineer/Director on the basis of input rate/MRS of relevant quarter placed on FD's website and a copy thereof will also be sent to Finance Department for scrutiny/standardization.

The Authority got executed the item “*Asphaltic Base and Wearing course etc*”. In the rate analysis, the department under the head “Material” had taken the quantity of water as 4000 liters (4x1000). But under sub head “Equipment, the rate of Rs 616 per hour was taken which was for 12000 liters water lorry instead of Rs 200 per hour for 4000 liter water lorry.

Incorrect rate of water taken in the rate analysis resulted in overpayment of Rs 1.702 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the rate available in MRS was only for water lorry of capacity 12000 liters @ Rs 616 per hour. There was no such water lorry for 4000 liter capacity available. So the available MRS rates for 12000 liters had been incorporated in the estimate. Audit contended that the rates of water lorry for 4000 Liters capacity @ Rs 200 per hour was available in PC-I approved by ECNEC. Hence, recovery needs to be effected from the contractors. The Committee upheld the view point of Audit and directed the department to affect the recovery and get it verified from Audit within 30 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 214, 225 & 260)

4.3.15 Overpayment due to application of wrong conversion factor – Rs 1.454 million

According to para No. 7 of approved PC-1 for Construction of Lahore Orange Line Metro Train Project, the Authority was required to

prepare estimate for Civil Work on the basis of market rates displayed on Finance Department's website for 1st Bi-Annual 2015 for District Lahore.

The Authority got approved the rate analysis of items "Asphaltic Base/Leveling and Wearing Course Plant Mix Class B etc." on higher side @ Rs 13,720.46 and Rs 15,690.15 per cubic meters respectively against the admissible rate of Rs 13,683.98 per cu.m and Rs 15,648.40 per cu.m respectively which resulted in overpayment of Rs 1,454,139. The Authority applied a wrong dividing factor of 187.50 instead of correct factor of 188.

Application of wrong dividing factor resulted in overpayment of Rs 1.454 million to the contractor.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the dividing factor 187.50 was as per actual conversion unit upto 2 decimals as required in the FD instructions. Audit argued that department rounded off the quantity of crushed stone aggregate to 188 cu.m but divided the unit with 187.50 cu.m instead of 188 cu.m. The Committee directed the department to refer the case to Technical Wing of the FD for seeking clarification at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 71 & 72)

4.3.16 Irregular sanction/approval of PC-I due to incorrect calculation of FIRR to show the project financially viable

As per Planning Commission of Pakistan Guidelines 12% FIRR was required for project analysis and feasibility of the project. If FIRR falls below the required rate of return, the project should be rejected.

The Authority Lahore Orange Line Metro Train Project got approved the project cost of Rs 162.268 billion with FIRR 11.59% and payback period 14.72 years. Audit observed that the Authority had taken incorrect revenue/fares @ Rs 35.53 per rider with increase of 20% per annum instead of actual increase of 10% inflationary rate. On the other hand the department increased the operational expenses with only 5% margin in 32 years. The fare was increased from Rs 35.53 to Rs 2,553.14 per rider which was not possible. Moreover, nowhere else in other countries, the Metro Train was financially viable as was the case of Metro Buses in Lahore and Rawalpindi-Islamabad. This manipulation in case of LOLMTP was done just to show that the project was financially viable.

Incorrect calculation of FIRR made on the basis of disproportionate increases in revenue and expenses resulted in unauthentic financial analysis.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that value of Rs 35.53 increased to Rs 2,553.14 as mentioned in the para was not fare per rider but total fare revenue in USD. Toll rate have been escalated at the rate of 10% per annum for analysis purpose. As per Planning Commission of Pakistan Guidelines 12% was required for project analysis. With additional 10% rise in the fare revenues due to 10% increase in ridership per annum and 5% increase in O&M expenses, the FIRR was calculated at 11.59%. Audit argued that the department made exorbitantly high provision for increase in the revenue with 20% proportion, whereas expenses were increased with only 5% proportion just to show the project as profitable. Moreover, the other mega projects in Pakistan like Metros Lahore, Rawalpindi-Islamabad and Multan were running in deficit and huge subsidy was being borne by the Government of the Punjab. Therefore, incorrect calculation of FIRR @ 11.59% was done by the department to borrow the loan. Audit recommended that responsibility should be fixed against delinquents. The

Committee directed the department to refer the case to Finance Department (Corporate Finance Unit) for opinion to proceed further. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early realistic projection of revenue and expenses in PC-I and its verification from Audit besides fixing responsibility against person(s) responsible.

(Para 3)

4.4 Procurement & Contract Management

The issues relating to the procurement and contract management involving an amount of Rs 12,978.215 million, observed during the audit, were as under:-

4.4.1 Irregular sanction / approval of 10% contingency charges instead of admissible 2%.

As per Finance Department letter No. FD (M-II) 1-6/2000 dated 23.07.2007, provision of contingency was reduced from 3% to 2%.

4.4.1.1 The Authority got approved the project cost with provision of 10% contingency for Rs 14,581.417 million in addition to 2% provision for escalation amounting to Rs 993.306 million. The extra provision of 10% was not admissible and therefore was irregular.

Weak supervisory and financial controls resulted in excessive provision of contingency for Rs 14,581.417 million.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the provision of 10% contingency was as per international/commercial agreement between China and Pakistan which was approved by ECNEC. However, 10% contingency could not be

utilized for civil works as the same were being executed by Pakistani contractors. As regards 2% contingency, it was part of every contract/work being executed in Punjab and was also necessary for different expenditure required to complete the project. Audit contended that the Authority had made incorrect and higher provision of contingency in the PC-I. Only 2% contingency was admissible to be allowed in the light of Finance Department's instructions and was being followed by the LDA in civil works. This not only resulted in overpayment to the contractor but also added to loan related liability. Hence, excess amount of loan was borrowed from China which resulted in extra expenditure in shape of mark up and commitment charges on loans. The Chief Engineer, LDA requested the Chair that the para relates to Punjab Mass Transit Authority (PMA), so it may be transferred to MD, PMA Lahore. The Committee transferred the para to MD, PMA, Lahore for detailed justification. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early revision of PC-1 with admissible contingency and its verification from Audit.

(Para 1)

4.4.1.2 The Authority got approved the project cost of all 4 packages with fixed provision of 2.50% (2% for price variation and 0.5% for maintenance during defect liability period) amounting to Rs 1,256.425 million in addition to 2% contingency amounting to Rs 1,030.265 million. This extra provision of 2% for fixed price escalation and consequent payment resulted in overpayment to the contractor. Price variation was required to be paid at per actual escalation, if any, instead of fixed provision for this purpose. It was further observed that this extra provision of 2.5% was also allowed on mega project allowance. This extra provision on mega project allowance came to Rs 13,158,709.

Weak supervisory and financial controls resulted in excess provision of contingency for Rs 1,256.425 million.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the provision of 2.5% for price adjustment was for extended defect liability period of 05 years, which was one year in normal/conventional projects. Moreover 2.5% provision has also been approved by the competent fora i.e. ECNEC in PC-I. Audit contended that the 2.5% provision included 2% fixed price escalation which was being paid on every item irrespective of its applicability / actual market fluctuation. The price variation should have been met out of 2% contingencies of approved scheme / technical sanctioned estimate in the light of FD's instructions. The Committee directed the department that audit contention be referred to the Finance Department for seeking clarification at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and making necessary rectifications.

(Paras 2, 156, 159 & 180)

4.4.2 Non-mutation of land in the name of Authority/Government

As per Section 17(A) of Land Acquisition Act 1894, the Collector shall, upon payment of the cost of acquisition make over charge of the land to the Authority, and the land shall thereupon vest in the Authority.

The Land Acquisition Collector, LDA, Lahore made the payment to the various affectees on account of land acquisition, structure cost and loss of business cost for the Project "Lahore Orange Line Metro Train Project" on the basis of various awards announced. The Authority, under the Land Acquisition Act was required to get mutation of the land in the name of the Authority/Government, but the same was not done.

Negligence on the part of the management resulted in non-mutation of land worth Rs 11,519.908 million.

Audit pointed out the non-mutation of land in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA neither produced the complete record during audit nor attended the Audit Office for verification of record. The LAC did not attend the SDAC meeting as well. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends initiating of disciplinary action in compliance of SDAC directives and mutation of land in the name of Authority / Government at the earliest. A joint survey be held by the LAC and Engineering Staff of LDA to submit report to Audit that no encroachment had been made by the affectees.

(Para 269)

4.4.3 Non-recovery of mobilization advance in spite of expiry of contract period - Rs 3,940.988 million

According to Finance Department letter No. RO (Tech)FD 18-44/2006 dated 07.12.2004, the mobilization advance would be given to the contractor whose tendered amount in the acceptance letter exceeds 10 million @ 10% for mobilization of contractor at site and after its completion 5% more. The recovery of mobilization advance will be made after expiry of 20% period of completion or 20% of the work done whichever is earlier @ 25% of work done in each bill.

4.4.3.1 Chief Engineer, UD-Wing LDA, Lahore awarded the work "Lahore Orange Line Metro Train Project Package-I (Dera Gujran to Chauburji Chowk (RD 0+600 to 14+200))" to the contractor during

September, 2015. The Authority awarded the work to a contractor with the time limit of 10-months from the date of start 03.09.2015. Mobilization advance to the extent of Rs 2,140.988 million was granted to the contractor during 1st running bill on 25.05.2016. The time period of contract expired on 07.08.2016 and last payment was made on 18.01.2017 but recovery of mobilization advance was not made from the contractor.

Weak technical and financial controls resulted in non-recovery of mobilization advance of Rs 2,140.988 million.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that due to court cases in different locations of the project, the extension of time limit has been granted to the contractor which may be verified. Audit contended that extension of time limit has expired on 12.02.2017 and amount of mobilization advance was still recoverable from the contractor. The Committee directed the Authority to recover the mobilization advance at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery in compliance of SDAC directives along with 12% markup and responsibility be fixed against person(s) responsible for extending undue financial benefit to the contractor.

(Para 87)

4.4.3.2 Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project Package-II Chauburgi 14+200 to Ali Town 27+600” to M/s Maqbool-Calsen (JV). Audit observed that the contract of the contractor after payment of 11th & running bill was terminated by the Authority on a/c of default on the part of the contractor under Clause 63 of the contract. The contractor was allowed mobilization advance of Rs. 1800,000,000 @ 10% of the contract amount. As per paid

bill provided to the Audit, the recovery of mobilization advance was not even made from the running payments made to the contractor nor its recovery from the contractor in any other form was forthcoming from record. Under the agreement, the recovery of mobilization advance should have been started when progress of work reached 20% of the contract price or when 20% of the contract period elapsed, whichever came first.

Weak supervisory and financial controls resulted in non-recovery of Rs 1,800.000 million to the contractor.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that full recovery has been made from the contractor. Audit contended that up till payment of last running bill, no recovery of mobilization advance was made from the contractor and thereafter, the contract of the contractor was rescinded by the Authority. The Committee directed the department to probe the matter and get the record re-verified from Audit with 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Para 241)

4.4.4 Return of unspent amount by LAC without disbursement – Rs 2,080.120 million

According to Section 11 of LAC Act 1894, the collector shall make an Award under his hand of the true area of the land, the compensation which in his opinion should be allowed for the land; and the apportionment of the said compensation among all the person(s) known are believed to be interested in the land, of whom, or of whose claims he has information, whether or not they have respectively appeared before him.

Director Finance, LDA, Lahore granted advances of Rs 2,080,119,980 to LAC LDA Lahore during the financial year 2015-16 for the purpose of land acquisition. The LAC without disbursement to affectees as per Award announced, returned the funds after the lapse of considerable time. The funds placed in LAC account or revenue deposit were required to be kept till clearance of all dues to affectees.

Weak supervisory and financial controls resulted in Violation of LAC Act.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA (Lahore Orange Line Metro Train Project), neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. The department also did not attend the SDAC meeting. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early regularization of the matter from the Finance Department and Board of Revenue besides fixing responsibility against the person(s) responsible.

(Para 265)

4.4.5 Less payment of advance (20%) by the foreign contractor to the Employer (PMA) in violation of commercial agreement – Rs 1,939.041 million

As per clause 15.1 of Commercial Agreement, the contractor M/s CR-NORINCO was required to make advance payment @ 20% of cost of civil works to the Employer (PMA).

The contractor M/s CR-NORINCO made an advance payment to the Employer (PMA) at lesser rates USD 87,673,790. Whereas, according

to the contract agreement, the contractor was required to make an advance payment @ 20% of the estimated cost of the civil works which comes to USD 106,336,363 (USD 531,681,818x20%).

Violation of contractual obligations resulted in less receipt of Rs 1,939.041 million by PMA.

Audit pointed out the less receipt in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early regularization of the violation of conditions of contract agreement.

(Para 291)

4.4.6 Irregular payment to affectees of estate/government land - Rs 1,470.139 million

As per Standing Order No.28 (1) of Land Acquisition issued dated 26th June, 1909 (amendment in LAC Act I of 1894), land in the possession of Government from one Government to another, or from one department to another would be transferred without any proceedings under the Land Acquisition Act, 1894.

4.4.6.1 The Land Acquisition Collector, LDA, Lahore made payments to the various affectees for the Project “Lahore Orange Line Metro Train Project” on account of compensation of land acquisition to affectees occupying Estate/Government Land and private land owners without their entitlement and ownership documents. Moreover, as per Qabzul Wasool, the payments were not to be made to affectees whose names were not in

the list of Special Package/Summary approved by the Chief Minister Punjab.

Violation of Act resulted in irregular payment of Rs 1,396.026 million.

Audit pointed out the irregular payment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA (Lahore Orange Line Metro Train Project), neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. The department also did not attend the SDAC meeting. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance on SDAC and recovery thereof besides fixing responsibility against the person(s) involved.

(Para 277)

4.4.6.2 The Land Acquisition Collector, LDA, Lahore made payments to the various affectees/staff for the Project “Lahore Orange Line Metro Train” on account of compensation to allottees who were allotted the shops/land by the Evacuee Trust Property Board, Lahore in contradiction of Order *ibid*.

Violation of LAC Act resulted into irregular payment of Rs 74.113 million made to private allottees against land of Evacuee Trust Property Board.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA (Lahore Orange Line Metro Train Project), neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. The LAC did not attend the SDAC meeting as well. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance on SDAC and recovery thereof besides fixing responsibility against the person(s) involved.

(Paras 272 & 273)

4.4.7 Undue financial benefit to the foreign contractor due to excess 20% advance – Rs 921.108 million

As per clause 15.1 of Contract Agreement between the Punjab Mass Transit Authority (PMA) and CR-NORINCO, advance will be payable @ 20% of the price of E&M Works. Further, 60% of design price shall be paid upon submission and approval of the concept design report and 40% of design price shall be paid upon submission and approval of detailed design report.

The MD Punjab Mass Transit Authority, Lahore paid advance of USD 184,500,000 (USD 922,500,000x20%) to the contractor through invoice dated 09.03.2016. The 20% advance payment was calculated against the whole E&M cost including design price. Audit is of the view that while making advance payment against E&M works the design price was required to be excluded. Allowing advance against total project cost inclusive of design price resulted in inadmissible advance payment of Rs 921,107,890 (USD 8,865,331).

Payment of advance against design price resulted in irregular payment of Rs 921.108 million to the contractor.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early recovery from the contractor alongwith markup under intimation to Audit.

(Para 290)

4.4.8 Non-recovery/ irregular grant of secured advance - Rs 698.625 million

According to para 2.98 (a) B&R Code and C&W department's letter No. SO-III(C&W)/2-14/97 dated 29.05.1997, recovery of secured advance should not be postponed until whole of the work entrusted to the contractor is completed. Under normal circumstances the secured advance has to be recovered within three months.

4.4.8.1 Chief Engineer, UD-Wing LDA, Lahore awarded the work "Lahore Orange Line Metro Train Project Package-I" to M/s Maqbool-Calson (JV) in September 2015. Due to default of the contractor, the employer terminated the contract under Sub-clauses 63.1 to 63.3 of the conditions of contract. It was observed that as per last paid bill i.e. 11th & running bill provided by the Authority stated to be the final bill, secured advance of Rs 625,782,084 was granted to the contractor. As the contract was terminated by the Authority therefore, recovery of secured advance was required to be made from the contractor which was not forthcoming from record.

Weak supervisory and financial controls resulted in non-recovery of Rs 625.782 million from the contractor.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority admitted the recovery and promised to effect the same from the security of the contractor on decision of the court case. The Committee directed the department to affect the recovery at the earliest and get it verified from Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early action on SDAC and recovery thereof besides fixing responsibility against the person(s) involved.

(Para 226)

4.4.8.2 Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project Package-I (Dera Gujran to Chauburji Chowk (RD 0+600 to 14+200))” to the contractor during September, 2015. The Authority granted secured advance on steel M.S Bar grade-60 and Steel strand wire during December 2016 through 14th running bill. The secured advance were paid at a higher rates by assessing higher value instead of admissible rates i.e. 75% of material cost as per input rates of Finance Department of relevant quarter placed at its website. In this way, undue financial favour was extended to the contractor.

(Amount in Rs)

Sr. No.	Description	Date of secured advance	Value assessed by Deptt. (p.ton)	Value to be assessed as per FD rates (p.ton)	75% Rate on which secured advance was granted (p.ton)	75% admissible Rate (p.ton)	Qty (Ton)	Extra payment
1	Steel Re-inforcement Grade 60	12/2016	83,500	79,800	62,625	59,850	19284.034	53,513,194
2	Steel pre-stressing strand wire	12/2016	121,500	107,500	91,125	80,625	1840.915	19,329,607
Total								72,842,801

Weak technical and financial controls resulted in irregular grant of secured advance of Rs 72.843 million.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the payment had been made on value assessed on the basis of market rates. The assessment value was also based on input rates of Finance department for relevant quarter. Audit contended that department assessed value of Steel Grade-60 and Steel strand wire over and above the rates for December 2016 available on FD's website. The Committee directed the department to effect the recovery along with markup @ 12.50% per annum from the contractor at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor in compliance of SDAC directives along with 12% markup and responsibility be fixed against person(s) responsible for extending undue financial benefit to the contractor.

(Para 88)

4.4.9 Non-imposition of penalty - Rs 433.089 million

As per Special Stipulation Appendix-A to Bid, the amount of liquidated damages is 0.08% subject to maximum 10% of the contract price.

Chief Engineer, UD-Wing LDA, Lahore awarded the work "Lahore Orange Line Metro Train Project Package-III Construction of Depot at Dera Gujran" to the contractor. Audit observed that time allowed to the contractor was 180 days starting from 22.01.2016 which expired on 22.07.2016 but only 64% work was completed in spite of lapse of more than one year. However, penalty of Rs. 433,089,317 (Rs. 4330,893,171 x 10%) was not recovered from the contractor.

Weak supervisory and administrative controls resulted in non-imposition of penalty of Rs 433.089 million.

Audit pointed out the non-imposition of penalty in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that EOT request submitted by the contractor was under process. The EOT will be awarded after review. The Committee directed the department to produce the time extension for verification by Audit within 15 days or otherwise to impose the penalty. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery in compliance of SDAC directives.

(Para 200)

4.4.10 Non-recovery on account of cost of old material and irregular payment of 5% maintenance charges - Rs 341.845 million

As per rule 2.10 of Punjab Financial Rules Volume-I, every public officer was expected to exercise the same vigilance in respect of expenditure from government funds as a person of ordinary prudence would exercise while incurring expenditure from his own money.

The Land Acquisition Collector, LDA, Lahore made payments to the various affectees on account of compensation of old structure for the acquisition of Project “Lahore Orange Line Metro Train Project”. As per assessment report by Engineers of LDA UD-Wing, Lahore cost of old structure/malba @ 15% of original cost of building structure was added in the formula and payment was made to the affectees accordingly by the LAC LDA Lahore without recovery of cost of old material. The old buildings were dismantled by the Engineering Department of LDA Lahore, therefore, the recovery of cost of old material was required to be effected. The old material was not taken on stock register. Moreover, in the Formula, 5% charges were added on account of annual repair, which were not admissible when the whole building was demolished and compensation was paid to affectees. The detail is as under:

(Amount in Rs)

Sr. No.	Award No and Date	Package Nos.	Amount of old structure	15% cost of old material	5% cost of repairing
1	10/2016, Dt 05.09.2016	II	115,813,498	17,372,024	5,790,674
		I	123,090,232	18,463,534	6,154,511
2	02/2016, Dt 14.01.2016	II&IV	895,358,235	134,303,735	44,767,911
		I&III	379,373,524	56,906,028	18,968,676
3	06/2016, Dt 31.03.2016	II&IV	151,943,944	22,791,591	7,597,197
		I&III	43,649,954	6,547,493	2,182,497
Total				256,384,405	85,461,466

Weak administrative and managerial controls resulted in non-recovery of cost of old material from the affectees for Rs 256.384 million and inadmissible 5% charges for Rs 85.461 million.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA (Lahore Orange Line Metro Train Project), neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. The department also did not attend the SDAC meeting. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends compliance of SDAC directives and early recovery from the affectees.

(Para 275)

4.4.11 Non-recovery of risk and cost amount – Rs 267.521 million

Under clause 63.1 to 63.3 of the contract agreement, the amount on account of risk and cost was required to be recovered from the defaulting contractor.

4.4.11.1 Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project Package-II Chauburgi 14+200 to Ali Town 27+600” to M/s Maqbool-Calsen (JV) for Rs 18,065,773,185 at 12.20% below. After execution of work valuing Rs 9,332,573,103, the contract of the contractor was terminated. The balance work of Rs 8,733,200,082 was to be re-allotted at the risk and cost of the original contractor but the work was put to tender for Rs 11,092,341,026 and allotted for Rs 11,397,380,404 (2.75% above the estimated cost) to another contractor. But recovery of risk and cost of Rs. 240,163,002 on original balance amount i.e. Rs. 8,733,200,082 was not effected. Moreover, the case for initiating punitive action under clause 63.1 of contract agreement was not sent to the PEC.

Weak supervisory and financial controls resulted in non-recovery of Rs 240.163 million to the contractor.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority admitted the recovery and promised to effect it from the security of the contractor on decision of the court case. The case was also forwarded to PEC for taking punitive action. The Committee directed the department to effect the recovery at the earliest and get it verified from Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor in compliance of SDAC directives.

(Paras 239 & 242)

4.4.11.2 During audit of the work “Lahore Orange Line Metro Train Project” it was observed that “Concrete Drain” was provided in the original contract for Rs 171,406,366 but while allotting the balance work to M/s ZKB-Reliable (JV) at the risk and cost of the original contractor,

this item, left over by the original contractor, was not included in the BOQ.

Weak supervisory and financial controls resulted in non-recovery of Rs 27.358 million on account of risk & cost.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority admitted the recovery and committed to effect the same from the bills / securities of the contractor after decision of the court case. The Committee directed the department to affect the recovery at the earliest and get it verified from Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor in compliance of SDAC directives.

(Para 237)

4.4.12 Double payment on account of drilling/boring – Rs 241.099 million

According to para No. 7 of approved PC-1 for Construction of Lahore Orange Line Metro Train Project, the Authority was required to prepare estimate for civil work on the basis of market rates displayed on Finance Department's website for 1st Bi-Annual 2015 for District Lahore. Moreover, in composite rates of item No. 407-a "Cast in place for pile boring including cost of concrete class A3 etc." @ Rs 24,009.93 per meter, the rate of drilling/boring @ Rs 9,998 per meter was already included.

The Authority got approved the rate analysis of items "*Cast in place concrete pile 760, 1000 and 1200 mm dia including concrete class A3 etc*" by including rates of drilling/boring of piles but the department

paid separately the cost of drilling/boring @ Rs 9,998, Rs 7,585, Rs 7,758 and Rs 7,028.55 per meter, which resulted in double payment to the contractor.

(Amount in Rs)

Para. No.	Pkg. No.	Description	Rate paid (per meter)	Qty paid (Meter)	Overpayment
107	I	Item# 407a "Cast in place concrete piles 1200 mm dia boring in normal soil including Concrete Class A-3 etc"	9,998	10,365.705	110,646,279
108	I	Item# 407a(i) "Cast in place concrete piles 1000 mm dia boring in normal soil including Concrete Class A-3 etc"	7,585	1,614.468	13,074,041
109	I	Item# 407a(ii) "Cast in place concrete piles 760 mm dia boring in normal soil including Concrete Class A-3 etc"	7,758	4,397.259	36,417,904
133	II	Cast in place concrete piles 1200 mm dia boring in normal soil etc"	7,028.25	11,519.38	80961082
Total					241,099,306

Incorrect preparation of rate analysis resulted in double payment of Rs 241.099 million to the contractors.

Audit pointed out the double payment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the composite rate of pile paid to the contractor was up to cut off level which was 3 to 4 meters from NSL. Only boring rate has been paid. Therefore, no double payment of boring of pile had been paid. Audit contended that the Authority made double payment of drilling as rate of item was inclusive of rates of drilling/boring but the Authority separately paid the cost of drilling/boring to the contractor. Moreover, in other mega projects like Metro Lahore, Rawalpindi-Islamabad and Multan, no such type of payment was made to the contractors separately. Further, it was also explained that in BOQ, the contractor quoted the rate as a composite rate, therefore, separate payment on account of boring of piles was not admissible. The Committee upheld the view point of the Audit and directed the Authority that the matter be get probed by Administrative department (HUD&PHE) and get it verified

from Audit within 30 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends compliance of SDAC directives and early recovery from the contractor.

(Para 107, 108, 109 & 133)

4.4.13 Loss on account of interest borne by the Government on unspent loan – Rs 157.958 million

As per rule 2.10 of Punjab Financial Rules Volume-I, every public officer was expected to exercise the same vigilance in respect of expenditure from government funds as a person of ordinary prudence would exercise while incurring expenditure from his own money.

Examination of bank statement (Account Number.1914-1 BoP) of MD Punjab Mass Transit Authority, Lahore revealed that an amount of Rs 157,957,560 disbursed by the EXIM Bank remained unspent. Audit was of the opinion that this amount should have been utilized as the Government of Pakistan has to pay interest on this unspent amount.

Poor financial management resulted in loss on account of interest paid on unspent amount of Rs 157.958 million (rate of interest not known as the loan agreement was not provided).

Audit pointed out the loss in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early utilization of this unspent balance and fixing responsibility for this lapse.

(Para 293)

4.4.14 Unjustified advance payment on account of defect liability period without completion of the project – Rs 132.611 million

As per item No.7 of PC-I approved by ECNEC for Lahore Orange Line Metro Train Project, 0.50% amount of civil work was provided for defect liability period of 05 years.

4.4.14.1 The Authority made payment to the contractors in advance @ 0.50% of value of work done for defect liability period without completion of the project and start of defect liability period. The defect liability period of the project was 5 years and as per NHA practice, the amount of the defect liability payment was to be released to the contractor in phases after completion of the project. Under this arrangement, if a contractor defaulted, the advance payment of defect liability period paid to him would not be easy to recover. Therefore, advance payment made in this way was risky.

(Amount in Rs)

Para No.	Package No.	Defect Liability Period	0.50% of value of work done
96	I	05 years	66,709,874
199	III	-do-	13,573,264
121	IV	-do-	3,659,863
Total			83,943,001

Weak managerial and financial controls resulted in unjustified advance payment of Rs 83.943 million to the contractors.

Audit pointed out the unjustified advance payment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the payment for defect liability period has been made as per bindings of contract agreement and its provision in T.S estimate and PC-I. As per NHA practice, 50% of security at the time of completion and remaining 50% of security is required to be released after the completion of defect liability period. However, in this case, only 20% of security was released and remaining 80% will be released at the time of

completion of defect liability period. Hence, the payment was made as per contract agreement and no loss was inflicted to government. Audit contended that the Authority made advance payment to extend undue benefit to contractor without completion of the project and start of defect liability period. The Chair and the representative of the Finance Department agreed with the view point of Audit that the amount of the defect liability payment was required to be released to the contractor after completion of the project in phases. The Committee upheld the viewpoint of the Audit and directed the Authority that audit contention be referred to the Finance Department for clarification. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and early recovery from the contractor.

(Paras 96, 121 & 199)

4.4.14.2 Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project Package-II Chauburgi 14+200 to Ali Town 27+600” to the contractor and payment of Rs 48,668,190 (0.5% of Rs 9,733,637,956) had been made to the contractor up to last paid bill (11th & Running) on account of 0.50% for extended defect liability period of five years as per provision of PC-I/Admn Approval. Audit was of the view that the contract of the contractor had been terminated due to default of the contractor but the recovery of the amount i.e. Rs 48,668,190 paid for defect liability period was not effected.

Weak supervisory and financial controls resulted in overpayment of Rs 48.668 million to the contractor.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority admitted the recovery and promised to effect it from security of the contractor on decision of the court case. The Committee directed the department to effect the recovery at the earliest and get it verified from

Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor in compliance of SDAC directives.

(Para 215)

4.4.15 Overpayment due to non-application of quoted percentage on non-BOQ items – Rs 102.617 million

As per Para (v) of the Finance Department’s Notification No. RO (Tech) FD 1-2/83-VI dated 29th March 2005, final cost of the tender/payment shall be the same percentage above/below the amount of revised sanctioned estimate as was at the time of approval of the tender, so as to check excess payment.

Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project” to different contractors. The contractors quoted the percentage below the rates provided in TS /PC-I. Audit observed that additional non-BOQ items were got executed but quoted percentage was not maintained at the time of payment in violation of criteria *ibid*.

(Amount in Rs)

Para No.	Package No	Value of additional Non-BOQ items paid	below % quoted by contractors	Overpayment
70	I	354,270,433	9.786	34,668,905
183	II	103,939,171	12.20	12,680,578
182	III	267,411,964	16.90	45,192,621
69	IV	78,796,544	12.786	10,074,926
Total				102,617,030

Violation of FD’s instructions resulted in overpayment of Rs 102.617 million to the contractor.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that contractors had quoted 9.786 % and 12.20%

below percentages on rates of BOQ items only and not for non-BOQ items. However, the overall below %age may be applied after / on completion of the project, by making comparative statement. The Committee directed the Authority to produce the financial statement to Audit for analysis of the financial impact on completion of the Project and deferred the para till completion of the Project.

Audit recommends early finalization of the project and resultant recovery from the contractors.

(Paras 69, 70, 182 & 183)

4.4.16 Overpayment due to allowing 2.591% consultancy fee on mega project allowance and price contingency – Rs 74.956 million

As per clause 6.2 read with 6.3(d) of consultancy agreement, the total payable amount was USD 24,000,000 and the consultant shall be paid @ 2.591% of civil works against each IPC.

4.4.16.1 Audit observed that the PMA made payment to consultant M/s NESPAK-CEC (JV) @ 2.591% of total value of work done of civil works, which was inclusive of 4.16% mega project allowance and 2.5% for price adjustment. The Authority was required to make payment after subtracting the cost of mega project allowance and price adjustment etc.

Description	Amount (Rs)
Package-I	13,341,974,801
Package-II	9,498,508,734
Package-III	2,759,685,346
Package-IV	731,972,690
Total value of work done	26,332,141,571
2.591% of total value of work paid	682,265,788
6.667% (4.167-mega allowance + 2.50-price adjustment) of total value of work	1,755,563,879
Amount excluding 6.667%	24,576,577,692
2.591 % of excluded amount	636,779,128
Overpayment (682,265,788 -636,779,128)	45,486,660

Non-subtraction of cost of mega project allowance and price adjustment resulted in overpayment of Rs 45.487 million to the consultants.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early recovery from consultant.

(Para 289)

4.4.16.2 The authority vide Interim Payment Certificate (Invoice No. PMA/cons/OL/01 dated 08.02.2016) paid an amount of USD 1,175,326 @ 2.591% of contractor's civil works invoices for Packages I&II to the consultant as fee. Further, it was observed that amount of package II for the purpose of calculating consultant fee was taken as Rs 3,848,334,945 instead of actual amount of Rs 2,710,952,025.

Weak administrative and financial controls resulted in overpayment of Rs 29.469 million (USD 283,634) to the consultants.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early recovery from the consultant.

(Para 283)

4.4.17 Inadmissible payment on account of loss of goodwill/business allowance to banks and allottees of government shops - Rs 58.285 million

In the light of Sections 4(1), 23 & 23(3)(b) of LAC Act 1894, the goodwill or loss of business allowance was not admissible to tenants of banks and allottees of government shops. Similarly, no such payment was made to banks/financial institutions in other mega project of Rawalpindi-Islamabad Metro Bus Project.

The Land Acquisition Collector, LDA, Lahore made the payment to the various affectees on account of loss of business allowance for the Project “Lahore Orange Line Metro Train Project (Ali Town to Dera Gujran)” on the basis of award number 02 announced on 14.01.2015. The LAC made payment on account of Land and Structure and in addition to that, loss of business allowance was paid to affectee banks irregularly as the business goodwill of the bank was not disturbed. Further, the payment of loss of business allowance was also allowed to allottees of the shops/land by the P&T Colony, Lahore without their entitlement as the Government was the owner of the shops. Moreover, the LAC RDA Rawalpindi in construction of Metro Bus Project did not make payment to the affectee banks/financial institutions. The payment made on this account was irregular and resulted in loss to the Government.

Weak administrative and managerial controls resulted in loss of Rs 58.285 million (Annex-III at Page-114).

Audit pointed out the loss in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA (Lahore Orange Line Metro Train Project), neither produced the complete record during audit nor attended

the Audit Office for verification of record during scheduled dates. The department also did not attend the SDAC meeting. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends initiating disciplinary proceeding against the delinquents in compliance of SDAC directives and early recovery from the effectee(s).

(Paras 266, 267 & 274)

4.4.18 Less recovery of income tax – Rs 20.725 million

According to section 152 (i) (a) of Income Tax ordinance 2001, income tax @ 7% was required to be deducted from the payments made to contractor (non-resident/foreign) for work executed.

Audit observed that the MD Punjab Mass Transit Authority, Lahore made payment of USD 19,946,995 to the contractor M/s CR-NORINCO through invoice dated 23.09.2016, but the department deducted less income tax @ 6% instead of 7% against the FBR instructions.

Violation of FBR instructions resulted in less recovery of Rs 20.725 million as income tax from the contractor.

Audit pointed out the less recovery in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early action on SDAC and recovery thereof and fix responsibility against the person(s) involved.

(Para 292)

4.4.19 Less recovery of income tax from payment of consultant – Rs 19.990 million

As per Income Tax Ordinance 2001 section 153 “Payments for goods and services” (1) (b) every prescribed person making a payment in full or part for the rendering of or providing of services shall at the time of making the payment deduct tax from the gross amount payable at the rate specified in Division III of Part III of the First Schedule.

Managing Director, PMA Lahore made payment to Consultant M/s NESPAK-CEC (JV) and deducted income tax on net amount arrived at after subtracting the amount of retention money and sales tax from gross amount of IPCs. Audit observed that as per provision of Income Tax Ordinance, income tax was required to be deducted (against total value of work done) on the gross amount including amount of retention money and sale tax. Further, the Authority deducted income tax @ 6% instead of 8% on the payment of consultant CEC (Foreigner) in violation of FBR instructions.

Weak financial control resulted in loss due to less recovery of income tax amounting to Rs 19.990 million (Annex-IV at Page-115).

Audit pointed out the loss in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early recovery from the consultant.

(Paras 284, 285 & 286)

4.4.20 Non-imposition of liquidated damages due to non-submission of detailed programme/design report of E&M system – Rs 19.557 million

As per Contract Agreement for Engineering, Procurement and Construction of Lahore Orange Line Metro Train (From Ali Town to Dera Gujran) signed on 20.04.2015 between the Punjab Mass Transit Authority (PMA) and CR-NORINCO, commencement/effectiveness date of contract was 09.04.2016 (30 days+09.3.2016 Mobilization Advance paid) with defect liability period of 6 years. Further as per Schedule-D and 4.10 of Contract Agreement, the Programme was to be furnished by the Contractor M/s CR-NORINCO within 28 days from the date of effectiveness of Contract, failing which damages on account of delay at the rate of PKR 5,000,000 per day shall be deducted for delay beyond this period. Further, failure of the Contractor to meet timeline for completion of E&M works, given at the agreed program of the work, entitles the Employer (PMA) to deduct from the Contract Price of E&M Works, the liquidated damages @ 0.02% of the Contract Price of E&M works.

Audit observed from the record of MD Punjab Mass Transit Authority, Lahore that Programme of the Work was not submitted by the contractor M/s CR-NORINCO within 28 days from the date of effectiveness of agreement due on 07.05.2016 and further within 10 months i.e. till 09.02.2017 the Detailed Design of E&M System was to be furnished by the Contractor. A considerable time of two months had elapsed at the time of audit but detail design was not got approved by the contractor/employer. Hence, the contractor was liable to be penalized under the above agreement clauses.

Violation of contractual obligations resulted in non-imposition of liquidated damages of Rs 19.557 million on the contractor.

Audit pointed out the non-imposition of liquidated damages in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early imposition of penalty under intimation to Audit.

(Para 294)

4.4.21 Non-deduction of sales tax and income tax from the advance payment of consultant - Rs 18.114 million

As per clause 6.2 of contract agreement with consultant M/s NESPAK-JV-CEC, the total payable amount in USD was Twenty Four Million (USD 24,000,000). The contract price was inclusive of all applicable taxes (including sales tax on services).

The MD PMA Lahore made payment of mobilization advance (invoice No. PMA/OL/ADV) dated 08.02.2016 for USD 800,000 without deduction of sales tax and income tax, which resulted in non-recovery of sales tax and income tax amounting to USD 110,345 and 64,000 @ 16% and 8% respectively.

Weak administrative and financial controls resulted in non-recovery of sales tax and income tax of Rs 18.114 million (USD 174,345 x 103.90).

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early recovery from the consultant.

(Para 282)

4.4.22 Irregular deduction of retention money from the payments of consultants - Rs 14.026 million

As per letter of Government of Pakistan Works Division No.F-5(31)74/A&B dated 22nd November, 1975 and 27th November, 1975, security deposit should be deducted from the bills of a contractor at the gross amount of each bill separately in respect of each work being executed by him concurrently.

Audit observed that while making payment to the consultants M/s NESPAK-CEC (JV), the Authority deducted 10% retention money after subtracting the installment of Mobilization Advance, whereas it was to be deducted on gross value of work done. This resulted in less deduction of retention money of Rs 14,026,500 (up to 9th IPC) which led to undue financial favour to the consultant.

Weak administrative and financial controls resulted in less deduction of retention money of Rs 14.026 million.

Audit pointed out the less deduction of retention money in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary, Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early recovery of the amount involved from the consultants.

(Para 287)

4.4.23 Irregular payment by LAC against properties under litigation - Rs 12.896 million

As per rule 2.10 of Punjab Financial Rules Volume-I, every public officer was expected to exercise the same vigilance in respect of expenditure from government funds as a person of ordinary prudence would exercise while incurring expenditure from his own money.

The Land Acquisition Collector, LDA, Lahore made the payment to the affectees (given in the table below) for the Project “Lahore Orange Line Metro Train Project (from Ali Town to Dera Gujran)” on account of compensation to allottees whose cases were pending in the High Court Lahore as per report of Director Law LDA. As per law, the LAC could not make payment against properties which were subjudice till the final decision/orders by the Court.

Sr. No.	Award No and Date	Voucher No & Date	Name of Payees	Amount (Rs)	Remarks
1	Award No.2/2016, Dt: 14.01.2016 Land Structure No.828/118	100/1231 Dated 05.02.2016	Mr. Tariq Mehmood S/o Haji Muhammad Din Address Khewat No.641, Khatoni No.1103 Khasra NO.2823 werea 1 Marla 53 Sft	7,026,671	As per Director Law Report the Property was under litigation/Stay Order vide Writ Petition No.99/16 (Tariq Mehmood VS Government of Pakistan)
2	Award No.2/2016, Dt: 14.01.2016 Land Structure No.802/92	59/1231 Dated 06.02.2016	Mr. Sh Muhammad Rafiq S/o Haji Sh. Bashir Ahmed Address Property No.298 GT Road Baghban Pura werea 3 Marla 10 Sft	5,869,134	As per Director Law Report the Property was under litigation/Stay Order vide Writ Petition No.172/16 (Sh Muhammad Rafique VS Government of Pakistan)

Weak administrative and managerial controls resulted in irregular payment of Rs 12.896 million.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. The LAC did not attend the SDAC meeting as well. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends initiation of disciplinary proceeding against the delinquents in compliance of SDAC directives and early recovery from the affectees.

(Para 278)

4.4.24 Loss due to inadmissible payment of house rent allowance to the affectee Government servants - Rs 5.583 million

As per rule 2.10 of Punjab Financial Rules Volume-I, every public officer was expected to exercise the same vigilance in respect of expenditure from government funds as a person of ordinary prudence would exercise while incurring expenditure from his own money.

4.4.24.1 The Land Acquisition Collector, LDA, Lahore made the payment to the various affectees/staff on account of annual house rent allowance for the Project “Lahore Orange Line Metro Train Project”. The LAC made payment on account of annual house rent allowance to various officials of Government Department, whereas house rent allowance had already been paid by the Government through salary after vacation of allotted flats. Hence, the payment on account of house rent allowance was a double payment and loss to the Government in violation of rules *ibid*.

Weak financial and supervisory controls resulted in loss of Rs 4.283 million.

Audit pointed out the loss in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. The LAC did not attend the SDAC meeting as well. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends initiation of disciplinary proceeding against the delinquents in compliance of SDAC directives and early recovery from the affectees.

(Para 270)

4.4.24.2 The Land Acquisition Collector, LDA, Lahore made payment to the various affectees/staff for the Project “Lahore Orange Line Metro Train Project” on account of compensation to illegal occupants of Postal Colony’ residences, which was a loss to the Government.

Weak administrative and managerial controls resulted in loss of Rs 1.300 million.

Audit pointed out the loss in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. The LAC did not attend the SDAC meeting as well. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends initiation of disciplinary proceeding against the delinquents in compliance of SDAC directives and early recovery from the affectees.

(Para 271)

4.4.25 Unjustified payment of disturbance allowance on account of demolishing of boundary wall – Rs 3.714 million

As per Section 23(3)(b) of Land Acquisition Act 1894, the compensation on account of assessment of building structure shall be made after assessment made by Building (C&W) department.

The Land Acquisition Collector, LDA, Lahore made the payment to two affectees on account of structure allowance for the Project “Lahore Orange Line Metro Train Project” on the basis of award number 10 announced on 05.09.2016. The LAC made payment on account of Disturbance allowance/Building Structure without assessment from Building (C&W) Department.

Weak administrative and managerial controls resulted in unjustified payment of Rs 3.714 million.

Audit pointed out the unjustified payment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Land Acquisition Collector, LDA (Lahore Orange Line Metro Train Project), neither produced the complete record during audit nor attended the Audit Office for verification of record during scheduled dates. The department also did not attend the SDAC meeting. The Committee took it seriously and directed the Administrative department to initiate disciplinary action against LAC under PEEDA Act 2006. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends initiation of disciplinary proceeding against the delinquents in compliance of SDAC directives and early recovery from the affectees.

(Para 268)

4.4.26 Undue financial aid to the contractor due to less deduction of income tax - Rs 3.608 million

As per clause (3) and (4) of Division III of the first schedule to the Income Tax Ordinance 2001 and as per notification of CBR

No.1(74)WHT/2000 dated 30.06.2005, 7.50% income tax should be deducted from all types of contracts.

Audit observed from record that income tax had been deducted by the department on net payable amount after deducting the amount of retention money @ 5% instead of gross amount.

(Amount in Rs)

Sr. No.	Bill No.	Amount of Bill	Mob. Advance (20%)	Secured Advance	Retention Money 5%	Income Tax (7.5%) Deducted	Income Tax (7.5%) to be Deducted	Amount
1	9 th R.Bill	286,322,616	57,264,523	39,451,624	14,316,131	13,146,775	14,220,485	1,073,710
3	7 th R.Bill	226,680,529	45,336,106	29,651,188	11,334,026	9,825,145	11,376,993	1,551,848
4	6 th R.Bill	261,947,269	52,389,454	23,221,127	13,097,363	12,992,949	13,975,252	982,302
Total								3,607,860

Weak financial and supervisory controls resulted in less deduction of income tax amounting to Rs 3.608 million.

Audit pointed out the less deduction of income tax in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that tax was deducted on the retention money in final payment voucher. Audit contended that Authority did not produce any documentary proof in support of its reply. The Committee took it seriously and directed the Authority to produce the relevant record (i.e. vouchers and details of income tax deducted and deposited into FBR's accounts etc) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early production of record in compliance of SDAC directives or recovery from the contractors.

(Para 161)

4.4.27 Irregular award of consultancy at higher percentage for civil work as compared to E&M work

As per clause 6.3 (d) & (e) of Agreement with Consultant M/s NESPAK-CEC (JV), the consultancy fee for civil work would be paid @ 2.591% of civil work contractor's invoices and consultancy fee for E&M work would be paid @ 1% of contractor's invoice.

As per clause-3 (a) & (b) of commercial agreement, the total cost of civil works and E&M works was USD 535,000,000 and USD 922,500,000 respectively. The percentage of consultancy fee against civil works was 2.591% whereas for E&M works the percentage of consultancy fee was 1% only. The percentage of 2.591 for civil work was on higher side. The basis for working out consultant fee was not provided.

Weak administrative and financial controls resulted in award of consultancy at higher percentage for civil works.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The Punjab Mass Transit Authority (PMA), Lahore neither submitted working papers nor a SDAC meeting was convened. The matter was also taken up with the Secretary; Government of the Punjab, Transport Department, Lahore (Principal Accounting Officer of the PMA) through a letter but no response was received.

Audit recommends early justification or recovery from the consultant.

(Para 288)

4.4.28 Non-recovery on account of price de-escalation on diesel, bitumen and steel from the contractor

As per Para C-5 of Standard Procedure and Formula for price adjustment issued by Pakistan Engineering Council, except labour and POL, if any other adjustable items were not used in a particular billing

period then the ratio of current date price and base date price for that particular adjustable item shall be considered as one. Further, Part-I B (1) provides that each of the cost elements, having cost impact of five (05) percent or higher can be selected for adjustment.

Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project” to the different contractors. The price of Diesel, Bitumen and Steel decreased beyond 5% limit during execution of the project but the Authority allowed the price escalation at 2% of value of work done instead of effecting de-escalation in violation of PEC instructions.

Violation of PEC instructions resulted in non-recovery of Rs 1,695.659 million from the contractor. (Annex-V at Page-117).

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that it was a fixed price contract hence, question of de-escalation was not valid. Audit contented that the Authority allowed the price escalation on each and every item without effecting de-escalation on diesel, bitumen and steel which was violation of Pakistan Engineering Council (PEC) and FD’s instructions. The Committee directed the department to take up the matter with the FD for seeking clarification at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance on SDAC and along with preparation of overall comparative statement regarding escalation and de-escalation for comparison recovery thereof besides fixing responsibility against the person(s) involved.

(Paras 93, 94, 95, 119, 120 & 250)

4.5 Construction & Works

The issues relating to the construction & works involving an amount of Rs 3,386.247 million, observed during the audit, were as under:-

4.5.1 Irregular execution of items than provided in original estimate - Rs 1,397.923 million

As per TS estimate, the financial responsibility of rates, rests with the authority competent to sanction rates.

Audit observed from record of Package-III that total provision of item No. 107-d "*Select fill material*" under bill No. 4a-xxix (cut & fill) was 1,507,188 cu.m as compared to item No. 107-a "*Structural Excavation*" having a provision of 862,921 cu.m. During execution, the quantity of structural excavation was enhanced to 1,014,370.754 cu.m and similarly, the quantity of "*Select fill material*" was also enhanced to 2,102,993.677 cu.m. Subsequently the executed quantity of structural excavation was again reduced to 165,766.049 cu.m from 1,014,370.754 cu.m but the quantity of item "*Select fill material*" was kept the same instead of reducing it proportionately.

Weak supervisory and financial controls resulted in irregular execution of item amounting to Rs 1,397.923 million.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the Slush/daldal was paid provisionally as 'Structural excavation'. Later on after approval of Non-BOQ item, it was deducted / adjusted and paid as 'Surplus/Unsuitable material' along with 'Extra for Slush'. Hence, the quantity of excavation was not reduced, only the type of excavation change due to presence of slush/ site condition. Therefore, quantity of back fill was not reduced. Audit contended that Authority had already measured and paid the same item as "*Structural excavation common material etc.*" which was later reduced irregularly and paid at a

higher rate by changing the nature/specification of the item. Audit further argued that both the items were to be paid in equal quantity as area excavated was to be refilled with material. The Committee directed the department to get the matter probed and findings be got verified from Audit. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early completion of the inquiry in compliance of SDAC directives and resultant recovery from the contractor.

(Para 190)

4.5.2 Irregular execution of item due to non-utilization of available quantity – Rs 743.471 million

As per TS estimate, the financial responsibility rests with the authority competent to sanction rates.

Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project” during December 2015. Audit observed that rate analysis of item No. 107-d “*Granular backfill with sand*” was prepared for Rs 664.73 per cu.m by including the cost of local sand @ Rs 370.86 per cu.m. Later on another item 107-d “*Granular backfill with sand (Reuse from Pilling and cut & cover works)*” was also got sanctioned for Rs 311.20 per cu.m by excluding the cost of sand as the same was available at site. It has further been observed that in spite of issuing the Addendum No. 2, the item “*Selected fill material or Granular backfill with sand*” was paid @ Rs 664.73 per cu.m instead of Rs 311.20 per cu.m under bill No. 4a-xxix (cut & fill) for a quantity of 2,102,993.677 cu.m.

Non-utilization of available quantity of sand resulted in irregular execution of quantity of Rs 743.471 million.

Audit pointed out the irregularity in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the material from the piling and cut-and-cover (from Package-I and II) did not fall purely in the category of A-2-4 material due to presence of impurities. The depot site was constructed on barren/pond land and required large amount of pure backfill (impurities may result in settlements). Furthermore, no material from piling works was recovered in Package-III. Audit contended that material obtained from drilling/boring of pile was required to be used for filling material in this project. The Committee directed the department to get the matter technically probed by Administrative department (HUD&PHE) and get it verified from Audit at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early finalization of the probe and recovery from the contractor.

(Para 186)

4.5.3 Non-recovery on account of use of mixed fill material instead of sand – Rs 705.079 million

According to para No. 7 of approved PC-1 for Construction of Lahore Orange Line Metro Train Project, the Authority was required to prepare estimate for civil work on the basis of market rates displayed on Finance Department's website for 1st Bi-Annual 2015 for District Lahore.

The Authority got approved the rate analysis of item#107-d(i) "*Granular backfill with sand/material etc*" on higher side @ Rs 664.68 per cubic meters instead of actual rate of Rs 397.68 per cu.m. Audit observed that the contractor filled the material with Ghassu (sand and earth mix) but full rate of sand was applied. Therefore, recovery on account of use of sub-standard item was required to be effected from the contractor.

(Amount in Rs)

Para No.	Pkg No.	Description	Rate Paid (p.cu.m)	Rate admissible (p.cu.m)	Diff. (p.cu.m)	Qty paid (Cu.m)	Amount
247	III	Select fill material	664.73	326.33	326.33	2,147,351.27	621,707,282
68	IV	Granural backfill with sand/material etc.	664.68	397.68	267	292470.03	83,371,471
Total							705,078,753

Violation of PC-I provision resulted in non-recovery of Rs 705.079 million from the contractor.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the item referred in the audit para was 107-d(i).i.e. “Granular Backfill with Sand” for which rate approved was Rs 311.20 per cu.m as per Addendum No.2 but no payment was made against this item. However, it was further clarified that A-2-4 material instead of Ghassu was used as a back fill material under the item 107-d “Select fill material” which was prepared by consultant as per specification. Every material being used at site was pre-tested in laboratories by core team of CEC-NESPAK which was consultant for ensuring quality controls of this project. So merely on visual observation, one could not judge the quality of material used for backfill. Audit contended that rate applied by the department was for the item A-2-3 (with sand) but the department actually executed item A-2-4 (with ghassu) which was cheaper. Accordingly recovery was required to be effected from the contractor. The Committee directed the department to get the matter technically probed by Administrative department (HUD&PHE) and get it verified from Audit at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early finalization of the probe and recovery from the contractor.

(Paras 68 & 247)

4.5.4 Overpayment due to use of heavier capacity ‘Front End Loader’ than admissible as per Project Specifications – Rs 98.949 million

As per Volume-III(A) of General Specifications (Preamble 1.1) read with template of item No 401(a) of NHA adopted by LDA for Orange Line Metro Train Project, the equipment i.e. Front End Loader with capacity of 1.50 cubic meter was to be used in the composite rate analysis of item “Concrete Class A1 & 2 on ground etc”.

The Authority got approved the rate analysis of item # 401a (i) “Concrete class A1 (3000 psi, 1:2:4) on ground etc” @ Rs 11,654.93 per cubic meter in estimate. Audit observed that rate of the item was sanctioned on higher side due to application of rate for the equipment with capacity of 3 cu.m for Rs 3,385 per hour instead of admissible capacity of 1.50 cu.m @ Rs 1,861 per hour.

Violation of specification resulted in overpayment of Rs 98.949 million to the contractor. (Annex-VI at Page-118).

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that the estimates were prepared keeping in view the site requirement and complex nature of the project which was to be completed on fast track mode. The Authority also referred to FD letter No. (HUD) 20-20/2016 dated 16.02.2017 that there was no binding on the Authority to use NHA, FD or Engineer’s template. Audit informed the Committee that the department adopted NHA template and added

additional hours for machinery and equipments than admissible which resulted in inflated estimate. Audit also informed the Committee that the FD's letter dated 16.02.2017 mainly emphasized on economy and cost implications which in this case were ignored by the department. Audit recommended recoveries, however, on persistent denial by the Authority to admit the overpayment, the Chair directed the Authority to seek clarification from Technical Wing of the Finance Department at the earliest. No compliance of SDAC directive was reported till finalization of the report. It is pertinent to mention here that FD vide letter No.FD(HUD)20-20/2016 dated 19.02.2018 has clarified that the departmental contention was not correct.

Audit recommends early recovery as per FD's clarification besides fixing responsibility.

(Paras 6, 9, 12, 15, 18, 26, 30, 33, 36, 39, 42, 48, 51 & 257)

4.5.5 Non-recovery on account of cost of steel scraps from the contractor – Rs 49.006 million

As per Volume-III A of General Specifications (Bidding Documents) of item No 404(b) for Orange line Metro Train Project read with standard specification, preparation of "Bar bending" schedule was considered very essential before laying the steel bars, because it helps us to reduce the wastage upto 98%. Therefore, conventionally, wastage of 0.50% was unrecoverable and 1.5% was scrap, which was required to be recovered from the contractor.

The Authority, in the work Lahore Orange Line Metro Train Project, got approved the rate analyses of different items in estimate by adding wastage of steel. Audit observed that in the light of above criteria 1.5% scrap of steel was required to be recovered from the contractor, which was not done to extend undue financial benefit to the contractor.

(Amount in Rs)

Para No.	Pkg. No.	Name of items paid	Rate Approved/ Paid (per ton)	Quantity paid (ton)	Cost of Scrap/steel	Amount
20	I	Reinforcement as per AASHTO M-31 Grade-60 etc.	108,778.56	56390.182	<u>(Rate of Steel Rs 84600/2= Rs 42300)</u> 5 ton =2%=0.10 x67%=0.067 tonx Rs 42300 per ton=Rs2834/5=Rs567+20% 113.40 Rs 680.40 per ton	40,923,180
23	I	Pre-stressing Pre-Tensioned wire strand 15 mm (0.6 inch dia) used in precast/cast in situ concretes etc	295,489.87	726.694	<u>(Rate of Steel Rs 121500/2= Rs 60750)</u> Rs 9842 per ton	7,628,453
		-do-	266,176.96	2.390	Rs 3856.80 per ton	9,217
97	I	Item 413 "Structural Steel A36 etc	160,612	249.82	<u>(Rate of Steel Rs 83/2= Rs 41.50 per kg)</u> 50 kg =5%=50kgx67%=33.50kgx Rs 41.50 per kg=Rs1390.25=Rs1390+20%=Rs1668 per tonx249.82ton	444,885
Total						49,005,735

Violation of Project/Standard Specification resulted in non-recovery of Rs 49.006 million from the contractor on account of scrap/steel cost.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The paras were also discussed in SDAC meeting held on 22.11.2017. The Authority stated that rate analysis was based on template of FD, where no such instructions were shown. Rather this analysis was already on safer side as compared to template of FD which incorporated 10% wastage, while in this analysis, the wastage was only 2%. Audit argued that the Authority got approved the rate analysis of items in the estimate by adding 2%, 5% and 8% wastage of steel which included 1.5% scrap of steel so it was required to be recovered from the contractor. Audit

and the representative of the Finance Department also recommended recovery, however, on consistent denial by the Authority to accept the decision, the Chair directed the Authority to seek clarification from Technical Wing of the Finance Department at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early clarifications in compliance of SDAC directives or effect recovery from the contractor.

(Paras 20, 23 & 97)

4.5.6 Overpayment due to allowing admixture/super plasticizer without its use in the Concrete class A2w on ground – Rs 43.964 million

According to project Specification No.401.2.8 (Bidding Documents Volume-III-B), all admixtures to be used in the works shall be accompanied by a Certificate of compliance signed by responsible representative of the Manufacturer. When concrete was designated by compressive strength no reduction in the minimum required cement will be allowed.

4.5.6.1 The Authority got approved the rate analyses of item No. 401-b(iii), 401-b(iv) and 401-b(v) “*Concrete class A2w and A4w on ground and elevated*” on a higher side in estimate and accordingly payment was released to the contractor. Audit observed that rate of item was sanctioned on a higher side by taking 396 liter admixture for water proofing and again 198 liter for workability whereas, the lab test report indicated that only 198 liter (1.091% Pagel G-2002 Plus) admixture was used. Therefore, payment of extra admixture quantity of 396 liter without its use in the work resulted in extra payment to the contractor.

(Amount in Rs)

Para No.	Description	Rate approved in TSE (per cu.m)	Rate admissible (per cu.m)	Diff. (per cu.m)	Qty paid (Cu.m)	Over payment
126	Concrete class A2w (4000 psi, 1:1.5:3) on ground etc	14,095.06	13,211.06	884	3750.320	3,539,528
127	Concrete class A2w (4000 psi, 1:1.5:3) on elevated etc	14,275.06	13,391.06	884	1961.190	1,850,958
128	Concrete class A4w (5000 psi, 1:1:2) on ground for cast in situ etc	16,526.28	15,373.28	1,153	11614.463	14,297,275
Total						19,687,761

Violation of project specifications resulted in overpayment of Rs 19.688 million to the contractor due to sanction of incorrect rate analysis.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that in preparation of rate analysis, quantities of various material items were based on experience and provisional basis to achieve the required design strength as per specifications. It was a waterproofing concrete coded as A2w. A2w was different from A2 concrete and waterproofing agent was also required along with admixture. Audit contended that Authority did not produce any documentary proof in support of its reply. The Committee directed the Authority to produce the relevant record (i.e. JMF of Concrete mix, manufacturer certificate of admixture, lab test reports and quotation of Admixture) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor.

(Paras 126, 127 &128)

4.5.6.2 Chief Engineer, UD-Wing LDA, Lahore awarded the work “Lahore Orange Line Metro Train Project Package-I (Dera Gujran to Chauburji Chowk (RD 0+600 to 14+200)” to the contractor during September, 2015. The Authority made payment for the Non-BOQ Item No.12 “*Providing and applying PAGEL M4 EP high strength for concrete work etc.*” to the contractor which was not admissible as per specification ibid and required to be executed by the contractor under bid clause. Moreover, in the BOQ items pertaining to RCC, composite rates approved in PC-I already included the cost of super plasticizer and water proofing admixture for workability, therefore, separate payment for the above item resulted in double payment to the contractor.

(Amount in Rs)

Sr. No.	Description	Rate paid	Qty paid (each)	Overpayment
1	Providing and applying PAGEL M4 EP high strength for concrete work etc.	66,392	263	17,461,096

Violation of contractual obligations resulted in overpayment of Rs 17.461 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that item dealt with epoxy (joining material) made PAGEL M4 EP for binding two different layers of the concrete, whereas admixture was required at the time of production of concrete. Epoxy could not be compared with admixture as these two things were different. Hence, no overpayment was made to the contractor. Audit contended that Authority did not produce any documentary proof in support of its reply. The Committee directed the Authority to produce the relevant record (i.e. quotation, manufacturer certificate for Epoxy binding and variation statement) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor.

(Para 83)

4.5.6.3 The Authority in the Project “Lahore Orange Line Metro Train Project” got approved the rate analysis of item No. 401b (v) “*Concrete class A4w (5000 psi, 1:1:2) on ground of cast in situ etc*” on higher side @ Rs 16,526.28 per cu.m in estimate and accordingly payment was released to the contractor. Audit observed that rate of item was sanctioned on a higher side by taking extra cost of water proofing admixture for workability as Rs 13,872 in 50 cubic meter analysis in addition to the cost of Super plasticizer for Rs 11,223, whereas the characteristics of Super Plasticizer were same as it increased workability in the light of specification *ibid*.

Violation of product specification resulted in overpayment of Rs 4.129 million to the contractor due to sanction of incorrect rate analysis.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the super plasticizer was to increase workability. It was clarified that the super plasticizer was used for acceleration in the rate to gain strength. It shall be also noted that A4W concrete has been designed for use in underground portion of the project, which was water tight structure for which water tightness was mandatory. To achieve the water tightness, water proof concrete was required. The water proofing admixture was added for this purpose. No loss to government was involved. Audit contended that Authority did not produce any documentary proof in support of reply. The Committee directed the Authority to produce the relevant record (i.e. JMF of Concrete mix, manufacturer certificate of water proofing admixture and quotation of Admixture) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor.

(Para 110)

4.5.6.4 The Authority, in Lahore Orange Line Metro Train Project, got approved the rate analysis of item # 401b (iv) “Concrete class A2w (4000 psi, 1:1.5:3) on elevated etc” on higher side @ Rs 14,275.06 per cubic meters in estimate instead of Rs 12,992.06 per cubic meters. Audit observed that rate of item was sanctioned on higher side due to taking extra cost of water proofing admixture valuing Rs 53,460 in 50 cubic meter analysis which was not required in elevated portion of concretes.

Violation of project specification resulted in overpayment to the contractor of Rs 2.686 million due to sanction of incorrect rate analysis.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the super plasticizer was to increase workability. It was clarified that the super plasticizer was used for acceleration in the rate for gain of strength. It shall be also noted that A4W concrete has been designed for use in underground portion of the project, which was a water tight structure for which water tightness was mandatory. To achieve the water tightness, water proof concrete was required. The water proofing admixture was added for this purpose. No loss to the government was involved. Audit contended that Authority did not produce any documentary proof in support of reply. The Committee directed the Authority to produce the relevant record (i.e. JMF of concrete mix, manufacturer certificate of water proofing admixture and quotation of Admixture) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor.

(Para 111)

4.5.7 Overpayment due to non-utilization of dismantled material as sub-base - Rs 41.348 million

As per BOQ No. 2, the quantity obtained from breaking of existing road pavement structure after disposal of unusable road pavement

structure would be used as sub base at labour rate i.e. Rs 369.92/cu.m against composite rate of Rs 2876.92 per cu.m for Granular Sub base.

During audit of the work “Lahore Orange Line Metro Train Project Package-I” it was observed that a quantity of 68,999.767 cu.m @ Rs 322.25 per cu.m was paid for “*Breaking of Existing Road Pavement Structures*”, out of which a quantity of 52,148.607 cu.m was paid @ Rs 201.34 per cu.m for “*Disposal of existing unsuitable pavement structure*”. The balance quantity of 16,851.16 cu.m (68,999.767 – 52,148.607) was required to be reused as sub base @ Rs 369.92 per cu.m which was not done and paid as sub base @ Rs 2,876.98 per cu.m.

Weak supervisory and financial controls resulted in overpayment of Rs 41.348 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the road structure consisted of compacted layers of different materials forming a sandwiched unified structure. It was not possible to separate different materials at the time of dismantling. Hence, the balance dismantled material was unsuitable to be reused as sub base. Audit contended that disposal was paid for lesser quantity meaning thereby that rest of un-disposed material was reused as sub base at higher rate. The Committee directed the department to get the record (i.e. lab test reports and engineer estimate) re-verified from Audit within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor.

(Para 251)

4.5.8 Irregular/excessive provision in the BOQ of second contractor – Rs 41.218 million

As per Para 2.10 of PFR Govt. money should be spent in such a way as a person of ordinary prudence would spend out of his own pocket and should not be more than the occasion demanded.

Chief Engineer, UD-Wing LDA, Lahore re-awarded the work “Lahore Orange Line Metro Train Project Package-II” to a contractor after default of original contractor. As per accounts record i.e. estimate / bid documents / BOQ, total provision of the item-209-a “*Breaking of existing road pavement structure etc*” was 92,842 cu.m. In the last paid bill i.e. 11th& running bill of the M/s Maqbool-Calson (JV), a payment of Rs 9,834,242 (excluding other deletions & addition) was made for the quantity of 30,517.43 cu.m to the contractor. The contractor was subsequently declared defaulter and remaining work was awarded to another contractor. In the bid documents / BOQ of the 2nd contractor the balance work for a quantity of 62,324.57 cu.m (92842 – 30517.43) was to be depicted and got executed but the whole quantity of 92,842 was taken.

Weak supervisory and financial controls resulted in overpayment of Rs 41.218 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that payments would be made as per actual work executed by the respective contractors and not on the basis of estimated quantities. Audit contented that remaining quantities after execution of actual quantities by the defaulting contractor were required to be incorporated in estimate instead of full original quantities. The Committee directed the department to get the matter regularized through revised estimate/variation statement. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early compliance of SDAC directives and recovery of the amount involved besides fixing responsibility.

(Paras 227, 228, 229, 234, 235 & 236)

4.5.9 Loss due to non-recovery of cost of old material of steel, bricks and concrete pavers – Rs 28.784 million

As per specification No.513.1 of Particular Specifications/Special Provisions (Part of Agreement), the recovery on account of cost of dismantled material i.e. bricks, concrete steel reinforcement would be as approved by the Engineer In-charge.

4.5.9.1 The Authority in the work Lahore Orange Line Metro Train Project got dismantled RCC, brick masonry and road pavement but no recovery of the cost of old/scrap steel, bricks and road pavement was effected from the contractor. Therefore, non-recovery of cost of old material resulted in loss to government.

Violation of the provisions of project specifications resulted in loss of Rs 25.611 million.

Audit pointed out the loss in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority admitted the recovery and promised to effect the same from contractor at the end of completion of Project / final bill. The Committee directed the Authority to affect the recovery at the earliest and get it verified from Audit with 30 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor besides fixing responsibility.

(Para 92)

4.5.9.2 The Authority kept a provision for “*Dismantling, removal and stockpiling of kerb stone of walkway*” under item No. SP-615-ii (bill No. 6-Ancillary works) for a quantity of 20,060 meters @ Rs 62.52 per meter. But no provision for recovery of kerb stone was kept as in case of concrete paver.

Non-keeping of said provision may result in non-recovery of Rs 3.173 million.

Audit pointed out the non-recovery in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that no payment has been made to the contractor against these items for which scope of works has been reflected in balance work to be executed on risk & cost of previous contractor and recovery will be effected upon decision of the arbitrator. The Committee directed the department to recover the amount. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery in compliance of SDAC directives.

(Para 258)

4.5.10 Overpayment due to excess rate - Rs 23.640 million

As per TS estimate, the financial responsibility of rates rests with the authority competent to sanction rates.

Audit observed that in rate analysis of item No. 407 “*Cast in place concrete piles 1200 mm dia including concrete class A3-Boring only (in normal soil)*”, an amount of Rs 1,820 was included on account of “soil class-A4”. Audit was of the view that the item “soil” had no relevance with the subject item.

Weak supervisory and financial controls resulted in overpayment of Rs 23.640 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority replied that soil was required for making temporary land/platform for drilling/boring as per MRS template of Finance department. Audit contended that the item “soil” had no relevance with the

executed item. The Committee pended the para for technical probe by the Administrative department (HUD&PHE) and get it verified from Audit at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early finalization of the inquiry and resultant recovery from the contractor.

(Para 221)

4.5.11 Overpayment due to excess lead – Rs 4.244 million

As per condition No. 5 of the Finance Department letter No.RO (Tech) FD 2-3/2004 dated 02.08.2004, the stone material shall be purchased from the nearest quarry and carted through shortest route.

The Authority made payment on higher side @ Rs 2724.54 per cu.m instead of admissible rate of Rs 2,533.42 per cu.m for Non-BOQ item "*Formation of embankment specified material 60% sub-base and 40% sand etc.*". Therefore, excess rate of Rs 191.12 per cu.m was paid to the contractor due to allowing lead of 220 km instead of actual lead 194 km in Package-I&II.

Violation of the Finance Department instructions resulted in overpayment of Rs 4.244 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the lead for carriage of aggregate was mistakenly written as 220 Km in the approved rate analysis. However, in calculation the actual lead taken was 200 Km for which rate of Rs 1,338.97 per cu.m had been worked out. The lead taken for carriage of stone material for Package-IV was 200 Km instead of 194 Km as the project site was farther away from Package-I &II. Therefore, an extra lead of 6Km was justifiable. Audit contended that as per lead chart available on Google Map/website, the lead from Karana Hills Quarry to Site of work (Ali Town) came to 193 km, therefore, excess lead of 7 km was taken by the department. The Committee directed the department to produce the lead chart and get it

verified from Audit within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor.

(Para 61)

4.5.12 Overpayment due to sanction of higher rates of Non-BOQ item, “Fixing of MS Plate” – Rs 3.705 million

As per Clause No.52.1 of Contract Agreement, all variations in addition to the contract price, shall be valued at the rates and prices set out in the contract if, in the opinion of the Engineer, the same shall be applicable. If the contract does not contain any rates or prices applicable to the varied work, the rates and prices in the Contract shall be used as the basis for valuation so far as may be reasonable.

The Authority made payment for Non-BOQ Item No.1 “*Deformed Bar with 125mm threading to receive nuts on top of piers etc.*” @ Rs 48,574 per pier instead of admissible rate of Rs 45,400.55 per pier due to inclusion of cost of temporary MS plate / bolt which was not admissible being the temporary works. Further, item No.14 “*Provide and fix of Ms Plate 6mmx75mmx750mm (Provided by CR-NORINCO) with three deformed bar hold fast in trench etc*” was paid on higher side @ Rs 7,636 each instead of admissible rate of Rs 4,740.88 each. Audit observed that in the rate analysis double cost on account of labour and carriage through tractor trolley was taken which was already included in the BOQ item No.404-b ”Reinforcement Grade-60 etc”.

(Amount in Rs)

Para No.	Pkg. No.	Description	Rate Paid (per pier)	Rate admissible (per pier)	Diff. (per pier)	Qty paid (each pier)	Over payment
76	I	Deformed Bar with 125mm threading to receive nuts on top of piers etc.	48,574	45,400.55	3,173.45	299	948,861
82	I	Provide and fix of Ms Plate 6mmx75mmx750mm	7,636	4,740.88	2,895.12	952	2,756,154
Total							3,705,015

Violation of contractual obligations resulted in overpayment of Rs 3.705 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were discussed in SDAC meeting held on 22.11.2017. The Authority stated that grade 60 deformed bars and MS plate 6 mm x 75 mm x 750 mm were two different things. As it was clearly mentioned in rate analysis that plates have been provided by CR NORINCO; which showed that source was different and these two items were to be transported from different sources. Therefore, transportation was taken separately. This showed that no overpayment has been made. Audit contended that Authority did not produce any documentary proof in support of reply. The Committee directed the Authority to produce the relevant record (i.e. handing / taking over of the MS Plate and revised TS/variation statement) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor.

(Para 76 & 82)

4.5.13 Unjustified execution of item as non-BOQ - Rs 3.496 million

As per rule 2.10 of Punjab Financial Rules Volume-I, every public officer was expected to exercise the same vigilance in respect of expenditure from government funds as a person of ordinary prudence would exercise while incurring expenditure from his own money.

Chief Engineer, UD-Wing LDA, Lahore under bill No. 4a Non-BOQ items and made payment of Rs 30,998,251 @ Rs 140.25 per cu.m (based on 2nd bi-annual 2015) for the item “*extra for slush/Daldal*” for a quantity of 221,021.396 per cu.m. Audit was of the view that this item was available in MRS, therefore it should have been paid as BOQ item instead of Non-BOQ.

Weak supervisory and financial controls resulted in unjustified payment of Rs 3.496 million.

Audit pointed out the unjustified payment in March 2017. The department did not submit any reply.

The para was discussed in SDAC meeting held on 22.11.2017. The Authority stated that the item “Excavation as unsuitable/ surplus material” was included in BOQ as Item# 106-A. However, extra for slush was not included in BOQ and paid as Non-BOQ for the actual quantity at site (as per MRS rate). Audit contended that Authority did not produce any documentary proof in support of reply. The Committee directed the Authority to produce the relevant record (i.e. rates analysis, MRS rate BOQ and measurement sheets etc) to Audit for verification within 15 days. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor.

(Para 188)

4.5.14 Overpayment due to sanction of higher rates of Non-BOQ items, uPVC 250mm dia Pipe, uPVC pipe Class D – Rs 1.420 million

As per Clause No.52.1 of Contract Agreement, all variations in addition to the contract price, shall be valued at the rates and prices set out in the contract if, in the opinion of the Engineer, the same shall be applicable. If the contract does not contain any rates or prices applicable to the varied work, the rates and prices in the Contract shall be used as the basis for valuation so far as may be reasonable.

The Authority made payment for Non-BOQ items “*Provide and fix uPVC Class B 250mm dia pipe and 200mm dia pipe*” on higher side. Audit observed that in the rate analysis, a BOQ item No.904.2 uPVC pipe 200mm dia was taken for Rs 4,717 without deduction of quoted percentage by the contractor 9.786% below. Therefore, the Authority allowed excess rate @ Rs 493.25 per meter to the contractor.

(Amount in Rs)

Para No.	Pkg No.	Description	Rate paid (per LM)	Rate admissible (per LM)	Diff. (per LM)	Qty paid (meter)	Amount
77	I	Non-Boq item no.2 “Provide and fix uPVC Class B 250mm dia pipe etc”	6,255	5,761.75	493.25	197.870	97,599
78	I	Non-Boq item no.3 “Provide and fix uPVC Class D 250mm dia pipe etc”	9,301	8,807.75	493.25	2218.867	1,094,456
79	I	Non-Boq item no.5 “Provide and fix uPVC Class D 200mm dia pipe etc”	6,906	6,412.75	493.25	463.415	228,449
Total							1,420,504

Violation of contractual obligations resulted in overpayment of Rs 1.420 million.

Audit pointed out the overpayment in March 2017. The department did not submit any reply.

The paras were also discussed in SDAC meeting held on 22.11.2017. The Authority stated that the rebate was not applicable on non-BOQ items. Hence, overpayment had not made. Audit argued that department had taken average of BOQ items and Non-BOQ items but while taking average, the quoted percentage 9.786% below was required to be deducted as done in the case of non-BOQ item no.14 “Providing and fixing of MS plate etc” @ Rs 7,636 each. Hence, recovery needs to be effected from the contractor. The Chair and representative of FD endorsed the view point of Audit and directed the department to effect the recovery from contractor at the earliest. No compliance of SDAC directive was reported till finalization of the report.

Audit recommends early recovery from the contractor in compliance of the SDAC directives.

(Paras 77, 78 & 79)

4.6 Asset Management

The contract for E&M was in EPC mode and the Chinese contractor was responsible for procurement of the E&M articles under the project. The project management should evolve assets management system/record to safeguard the interest of the public.

4.7 Monitoring and Evaluation

Progress of project under execution was being reviewed on monthly and quarterly basis by the PMA and Transport Department.

4.8 Compliance with Grant/Loan Covenants

The project was executed with the help of funding from Development Partner (Peoples Republic of China). The Loan Agreement and Inter Government Frame work Agreement were not produced to audit, therefore compliance status of loan could not be commented on.

4.9 Environment

Environmental Impact Assessment (EIA) was not shown to audit. However, as per media reports, the United Nations Education, Scientific and Cultural Organization (UNESCO) has shown its concerns that the project could be a serious threat to the environment and some protected/heritage sites, which were on the world heritage list. The work at various locations was held up due to pending court case in the Supreme Court of Pakistan.

4.10 Sustainability

4.10.1 Sustainability is an integral part of operational performance. Sustainability of the project depends mainly upon the sufficient flow of financial resources after completion of the project.

4.10.2 Project was under construction and PMA, Lahore would be responsible for overall maintenance of the project after completion.

4.11 Overall Assessment

4.11.1 Relevance: The project was fully funded by the Government of Peoples Republic of China and had no relevance with provincial Annual Development Program as well as Medium Term Development Framework.

4.11.2 Efficacy: This could not be ascertained at this stage as the project was still in progress.

4.11.3 Efficiency: The project was planned initially at a cost of USD 1.457 billion. During the year ended on 30.06.2017 the progressive expenditure was USD 0.672 billion, which was 46.122% in terms of financial achievements of the project.

4.11.4 Economy: The contract was awarded without open competition to a Chinese firm. More economical rates could have been obtained had the project been awarded through open competitive bidding.

4.11.5 Effectiveness: The work is under process; therefore achievement of targets could not be ascertained.

4.11.6 Compliance with Rules: The Management, in general, complied with rules during the financial year under audit.

4.11.7 Performance Rating: Project is under construction and performance rating could not be ascertained.

4.11.8 Risk Rating: The project was facing legal as well environmental issues etc therefore, high risk was involved in the project.

5. CONCLUSION

5.1 Key Issues for the Future: Resolution of legal and environmental issues are key factors for timely completion of work.

5.2 Lessons Learnt: Timely completion of work should be ensured to avoid time overrun and cost overrun.

ACKNOWLEDGEMENT

We wish to express our appreciation to the management and staff of “Lahore Orange Line Metro Train Project” for the assistance and cooperation extended to the auditors during this assignment.

Annex-I

(Para No 4.3.1.1)

(Amount in Rs)

Para No.	Package No.	Description	Rate approved in TSE (p. cu.m)	Rate admissible (p. cu.m)	Diff. (p. cu.m)	Qty paid (Cu.m)	Overpayment
4	I	Item# 401a(i) "Concrete class A1 (3000 psi, 1:2:4) on ground etc"	11,654.93	10,194.93	1,460	2830.414	4,407,622
7	I	Item# 401a(ii) "Concrete class A1 (3000 psi, 1:2:4) elevated etc"	11,834.93	10,374.93	1,460	699	1,088,507
10	I	Item# 401b(i) "Concrete Class A2 (4000 psi, 1:1.5:3) on ground etc"	12569.67	11,109.67	1,460	96223.68	149,842,977
13	I	Item# 401b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) elevated etc"	12,749.67	11,289.67	1,460	34536	53,780,702
16	I	Item# 401b(ii)b "Concrete Class A2 (4000 psi, 1:1.5:3) elevated for cast in-situ transoms etc"	19,769.67	18,309.67	1,460	1539	2,396,586
24	I	Concrete class A2 (4000 psi, 1:1.5:3) on elevated etc	12,941.67	11,481.67	1,460	17114.16	26,650,786
28	I	Item#401d(iii) "Concrete class D3 (6000 psi, 1:1:2) on for cast in situ segmental construction etc"	27,688.29	26,228.29	1,460	596.788	929,339
31	I	Item#401d(i) "Concrete class D1 (5000 psi, 1:1:2) on ground precast transom etc"	19,170.79	17,710.79	1,460	11001.702	17,132,246
34	I	Item#401d(ii) "Concrete class D1 (5000 psi, 1:1:2) on elevated for cast in situ etc"	21,630.79	20,170.79	1,460	11955.907	18,618,169
37	I	Item#401d(iv) "Concrete Class D2 (6500 psi, 1:1:1.5) on ground for pre-cast U girder etc"	21,462.36	20,002.36	1,460	20688.546	32,216,948
40	I	Item#401b(v) "Concrete class A4w (5000 psi, 1:1:2) on ground for cast in situ etc"	16,526.28	15,066.28	1,460	11614.463	18,086,459
43	I	Concrete class D1 (5000 psi, 1:1:2) precast prestressed beams etc	16,463.04	15,003.04	1,460	52.297	81,439
		Concrete class D1 (5000 psi, 1:1:2) precast prestressed beams etc	16,463.04	16,341.70	121.34	52.297	6,768

		Concrete class D1 (5000 psi, 1:1:2) precast prestressed beams etc	16,463.04	16,170.04	293	52.297	16,343
45	I	"Lean Concrete 1:4:8 etc"	6,306.88	6,241.88	65	4557.257	315,950
46	I	Item# 401b(iii) "Concrete class A2w (4000 psi, 1:1.5:3) on ground etc"	14,095.06	12,635.06	1,460	3750.320	5,840,133
49	I	Item# 401b(iv) "Concrete class A2w (4000 psi, 1:1.5:3) on elevated etc"	14,275.06	12,815.06	1,460	1961.190	3,054,035
100	I	Item# 407a "Cast in place concrete piles 1200 mm dia boring in normal soil including Concrete Class A-3 etc"	24,009.93	19,342.93	4,667	92603	461,410,735
103	I	Item# 407a(i) "Cast in place concrete piles 1000 mm dia boring in normal soil including Concrete Class A-3 etc"	17,323	12,656	4,667	10046.750	50,059,698
105	I	Item# 407a(ii) "Cast in place concrete piles 760 mm dia boring in normal soil including Concrete Class A-3 etc"	13,068	8,501	4,567	19312	94,163,610
140	IV	Item # 401 b(i) "Concrete Class A2 (4000 psi, 1:1.5:3) on ground etc"	12,569.67	11,892.27	722.51 (677.40x6.6 6%)	3387.05	2,447,194
141	IV	item # 401 b(i) "Concrete Class A2 (4000 psi, 1:1.5:3) on ground etc"	12,569.67	10,525.74	2,180.06 (2043.93x6. 66%)	3387.05	7,383,972
143	IV	item # 401 b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) on elevated etc"	12,749.67	12,045.10	751.49 (704.57x6.6 6%)	4485.378	3,370,717
144	IV	item # 401 b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) on elevated etc"	12,749.67	10,734.10	2,149.81 (2015.57x6. 66%)	4485.378	9,642,710
147	IV	Item # 401 (f) "Lean Concrete (1:4:8)" (from bill No.4a-III to 4a-XV)	6,306.88	5,524.39	834.60 (782.49x6.6 6%)	439.635	366,919
166	III	Concrete Class A2 (4000 psi, 1:1.5:3) on elevated etc	13,552.45	12,825	727.45	9079.62	5,859,987
167	III	Item # 401 b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) on elevated etc	13,552.45	11,874	1678.45	9079.62	13,520,786
168	II	Item# 401 (f) "Lean Concrete (1:4:8)"	6,306.88	5,524.39	782.49	4,121.97	3,023,448
171	III	Item# 107 (A) "Structural excavation"	126	77.11	48.89	195,505.59	1,289,919
172	II	Item# 107 (A) "Structural excavation"	127.57	74.82	52.75	121,271.60	5,675,543

173	III	Item # 401 b(i) "Concrete Class A2 (Manpower) elevated	13,372.45	12,645.69	726.76	10,331.875	6,661,717
174	III	Item # 401 b(i) "Concrete Class A2 (Equipment) elevated	13,372.45	11,694.01	1678.44	10,331.875	15,385,124
175	II	Item # 401 b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) on elevated etc"	12,749.67	12,022.91	726.76	17,067.83	13,144,599
176	II	Item # 401 b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) on elevated etc	12,749.67	11,043.41	1,706.26	17,067.83	27,976,899
177	II	Item # 401 b(i) "Concrete Class A2 (4000 psi, 1:1.5:3) on ground etc"	12,569.67	11,842.91	726.76	116,188.48	74,916,926
178	II	Item #401 b(i) "Concrete Class A2 (4000 psi, 1:1.5:3) on ground etc"	12,569.67	10,863.41	1,706.26	116,188.48	175,887,163
179	III	Item # 401 (f) "Lean Concrete (1:4:8)"	7,224.07	6,436.31	787.76	-	1,167,408
191	III	Item No. 401b(i) – Concrete Class A2 (4000 PSI on ground) 1:1.5:3 {16608-10361=6247/50 cum+20%=150}	16,608	10,361	Rs. 150 P. Cm	10391.11	1,382,862.70
192	III	Item No. 401b(ii) – Concrete Class A2 (4000 PSI on ground) 1:1.5:3 {16608-10361=6247/50 cum+20%=150}	16,608	10,361	Rs. 150 P. Cm	8927.831	1,188,127.59
206	II	Item No. 401 b(i) "Concrete Class A2 (4000 psi on Ground) 1:1.5:3	-	-	-	-	17,364,107
Total							1,327,755,180

Annex-II

(Para No. 4.3.3.2)

Para No.	Package No.	Description	Rate approved in TSE (Rs p. cu.m)	Rate admissible (Rs p. cu.m)	Diff. (Rs p. cu.m)	Qty paid (Cu.m)	Amount (Rs)
5	I	item# 401a(i) "Concrete class A1 (3000 psi, 1:2:4) on ground etc"	11654.93	11,533.59	121.34	2830.414	366,315
8	I	item# 401a(ii) "Concrete class A1 (3000 psi, 1:2:4) elevated etc"	11,834.93	11,713.59	121.34	699	90,464
11	I	item# 401b(i) "Concrete Class A2 (4000 psi, 1:1.5:3) on ground etc"	12,569.67	12,448.33	121.34	96223.68	12,453,388
14	I	item# 401b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) elevated etc"	12,749.67	12,628.33	121.34	34536	4,469,692
17	I	item# 401b(ii)b "Concrete Class A2 (4000 psi, 1:1.5:3) elevated for cast in-situe transoms etc"	19,769.67	19,648.33	121.34	1539	199,179
25	I	Concrete class A2 (4000 psi, 1:1.5:3) on elevated etc	12,941.67	12,820.33	121.34	17114.16	2,214,936
9	I	item#401d(iii) "Concrete class D3 (6000 psi, 1:1:2) on for cast in situ segmental construction etc"	27,688.29	27,566.95	121.34	596.788	77,237
32	I	item#401d(i) "Concrete class D1 (5000 psi, 1:1:2) on ground precast transom etc"	19,170.79	19,049.45	121.34	11001.702	1,423,853
35	I	item#401d(ii) "Concrete class D1 (5000 psi,	21,630.79	21,509.45	121.34	11955.907	1,547,348

		<i>1:1:2) on elevated for cast in situ etc"</i>					
38	I	item#401d(iv) "Concrete class D2 (6500 psi, 1:1:1.5) on ground for pre-cast U girder etc"	21,462.36	21,341.02	121.34	20688.546	2,677,537
41	I	item#401b(v) "Concrete class A4w (5000 psi, 1:1:2) on ground for cast in situ etc"	16,526.28	16,404.94	121.34	11614.463	1,503,901
44	I	item#107a "Structural excavation in common material etc"	128.00	122.95	5.05	227179.978	1,223,666
47	I	item# 401b(iii) "Concrete class A2w (4000 psi, 1:1.5:3) on ground etc"	14,095.06	13,973.72	121.34	3750.320	485,371
50	I	item# 401b(iv) "Concrete class A2w (4000 psi, 1:1.5:3) on elevated etc"	14,275.06	14,153.72	121.34	1961.190	253,819
137	IV	item# 107 (A) "Structural excavation" (from bill No.2 to 4a-XIII)	128.00	74.82	56.72 (53.18x6.66%)	222361	12,612,316
142	IV	item # 401 b(i) "Concrete Class A2 (4000 psi, 1:1.5:3) on ground etc"	12,569.67	12,448.33	129.42 (121.34x6.66%)	3387.05	438,352
145	IV	item # 401 b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) on elevated etc"	12,749.67	12,628.71	129.01 (120.96x6.66%)	4485.378	578,659
203	II	-	-	-	-	-	1,724,502
205	II	-	-	-	-	-	1,651,445
210	II	-	-	-	-	-	178,773
224	II	-	-	-	-	-	148,389
Total							46,319,142

Annex-III

(Para No. 4.4.17)

Sr. No.	Award No & Date	Sr No. of Award	Description	Amount (Rs)
1	02/2016, Dated 14.01.2015	01	House Building Finance Corporation	4,497,726
2	02/2016, Dated 14.01.2015	570	UBL Bank Mr. Farooq Durrani	994,034
3	02/2016, Dated 14.01.2015	643	MCB Bank Mr. Malik Zawar Ali Dogar	913,263
4	02/2016, Dated 14.01.2015	694	MCB Bank Mr. Ch Iftikhar Ali	55,147
5	02/2016, Dated 14.01.2015	700	UBL Bank Mr. Syed Bakhtawar Ali	24,887
6	02/2016, Dated 14.01.2015	719	Meezan Bank & Faysal Bank Mr. Haji Fawasal Mehmood	795,082
7	02/2016, Dated 14.01.2015	732	Islamic Bank Mr. Qawasar Javed	3,426,731
8	02/2016, Dated 14.01.2015	789	Meezan Bank Mr. Muhammad Farooq	169,494
9	02/2016, Dated 14.01.2015	790	Habib Metro Bank Mr. Shehzada Qamar Zaman	184,882
10	02/2016, Dated 14.01.2015	791	ABL Bank	421,973
11	02/2016, Dated 14.01.2015	805	Fawasal Bank Mr. Major Tahir Mehmood	192,054
12	06/2016, Dated 31.03.2016	69	HBL Bank Mr. Ahsan Saeed Mian	13,994,353
13	06/2016, Dated 31.03.2016	104	Bank Islamic & Meezan Bank Mr. Ch.Ghulam Ahmed	5,369,812
14	Not in Award	2373/99,01.10.2016	Bank Al-Falah Limited Karachi	18,906,000
15	Not in Award	3343/98, 03.05.2015	Habib Bank Limited, Nawan Kot Branch, Multan Road	6,997,176
16	Not in Award	2373/71, 12.08.2016	Meezan Bank Limited, Thokar Niaz Baig, Raiwind Road Branch, Lahore.	1,342,453
Total				58,285,067

Annex-IV

(Para No. 4.4.19)

Sr. No.	IPC No.	Retention money	Amount of I.Tax
1	IPC-1	102,533@48%=49,216@8%= 102,533@52%=53,317@6%=	3,937 3,199
2	IPC-2	241,512@48%=115,926@8%= 241,512@52%=125,586@6%=	9,274 7,535
3	IPC-3	34,070@48%=16,354@8%= 34,070@52%=17,716@6%=	1,308 1,063
4	IPC-4	20,000@48%=9,600@8%= 20,000@52%=10,400@6%=	768 624
5	IPC-5	57,313@48%=27,510@8%= 57,313@52%=29,803@7%=	2,201 2,086
6	IPC-6	53,387@48%=25,626@8%= 53,387@52%=27,761@7%=	2,050 1,943
7	IPC-7	14,945@48%=7,174@8%= 14,945@52%=7,772@7%=	574 544
8	IPC-8	14,546@48%=6,982@8%= 14,546@52%=7,772@7%=	559 544
9	IPC-9	29,375@48%=14,100@8%= 29,375@52%=15,275@7%=	1,128 1,069
Total			40,406 US\$x103.9 Rs 4,198,183

Sr. No.	IPC No.	Amount of I/Tax less deducted
1	M. Advance	141,241@8% = 11299 272,552@6% = 16353
2	IPC-1	61,095@8% = 4888 66,187@6% = 3971
3	IPC-2	143,908@8% = 11513 155,901@6% = 9354
4	IPC-3	20,301@8% = 1624 21,992@6% = 1320
5	IPC-4	11,917@8% = 953 12,910@6% = 775
6	IPC-5	34,151@8% = 2732 36,996@7% = 2590
7	IPC-6	31,812@8% = 2545 34,462@7% = 2412

8	IPC-7		8,905@8% = 712 9,648@7% = 675	
9	IPC-8		8,667@8% = 693 9,390@7% = 657	
10	IPC-9		17,504@8% = 1400 18,962@7% = 1327	
Total		77,793 US Dollar x103.9=Rs 8,082,692		
Sr. No.	IPC	I/Tax deducted @ 6%	To be deducted @ 8%	Difference (Dollar)
1	M. Advance	102,207 US\$	136,276 US\$	34,069
2	IPC-1	24,820 US\$	33,093 US\$	8,273
3	IPC-2	58,463 US\$	77,950 US\$	19,487
4	IPC-3	8,247 US\$	11,132 US\$	2,885
5	IPC-4	4,841 US\$	7,488 US\$	2,647
6	IPC-5	16,186 US\$ (@ 7%)	18,498 US\$	2,312
7	IPC-6	15,077 US\$	17,231 US\$	2,154
8	IPC-7	4,221 US\$	4,824 US\$	603
9	IPC-8	4,108 US\$	4,695 US\$	587
10	IPC-9	8,296 US\$	9,481 US\$	1,185
Total				74,202 US\$ x 103.90=Rs 7,709,587
Grand Total: (4,198,183+8,082,692+7,709,587)				19,990,462

Annex-V

(Para No. 4.4.28)

(Price variation rates)

Para No.	Package No.	Name of Item	Base price (Rs)	Current price (Rs)	Diff. (Rs)	Qty	Amount (In Rs)
93	Package-I	Diesel	87.12 per litre	72.52 per litre	14.60	13,341,974,801 x 0.15x Rs 14.60 / Rs 87.12	335,387,108
94	Package-I	P/Laying Bitumen prime coat etc	65,759 p.ton	52,387 p.ton	13,372 p.ton	212152.193Sq.m/6000x3.09ton =109.26 ton x Rs 13,372	1,461,024
		P/Laying Bitumen Tack coat etc	65,759 p.ton	52,387 p.ton	13,372 p.ton	1801.526Sq.m/6000x1.85ton=0.56 ton x Rs 13,372	7,488
		P/Laying Pre-mixed carpeting 2 inch thick using 4.50% JMF etc (Bitumen bulk 60/70)	65,759 p.ton	52,387 p.ton	13,372 p.ton	16786.483Cum/187.50x14.85ton=1330 ton x Rs 13,372	17,784,760
95	Package-I	Fabrication of Mild Steel Grade-60	84,750 p.ton	74,250 p.ton	10,500 p.ton	56390.182 ton	592,096,911
119	Package-IV	Diesel	83.79 per litre	72.52 per litre	11.27 per litre	731,972,690x 0.15x Rs 11.27 / Rs 83.79	14,767,870
120	Package-IV	Fabrication of Mild Steel Grade-60	81,500 p.ton	74,250 p.ton	7,250 p.ton	968.974 ton	7,025,061
250	Package-II	Steel	84,750 P. Ton	74,250 P. Ton	10,500 P. Ton	44112.285 Ton (Plus 4.16%)	482,447,239
		Diesel	87.12 P. Ltr	72.52 P. Ltr	14.60 P. Ltr	9733637956 x 0.15 x 14.60/87.12	244,681,670
Total							1,695,659,131

Annex-VI

(Para No. 4.5.4)

Para No.	Package No.	Description	Rate approved in TSE (Rs p.cu.m)	Rate admissible (Rs p.cu.m)	Diff. (Rs p.cu.m)	Qty paid (Cu.m)	Amount (Rs)
6	I	Item# 401a(i) "Concrete class A1 (3000 psi, 1:2:4) on ground etc"	11,654.93	11,361.93	293	2830.414	884,543
9	I	Item# 401a(ii) "Concrete class A1 (3000 psi, 1:2:4) elevated etc"	11,834.93	11,541.93	293	699	218,447
12	I	Item# 401b(i) "Concrete Class A2 (4000 psi, 1:1.5:3) on ground etc"	12,569.67	12,276.67	293	96223.68	30,071,227
15	I	Item# 401b(ii) "Concrete Class A2 (4000 psi, 1:1.5:3) elevated etc"	12,749.67	12,456.67	293	34536	10,792,977
18	I	Item# 401b(ii)b "Concrete Class A2 (4000 psi, 1:1.5:3) elevated for cast in-situ transoms etc"	19,769.67	19,476.67	293	1539	480,958
26	I	Concrete class A2 (4000 psi, 1:1.5:3) on elevated etc	12,941.67	12,648.67	293	17114.16	5,348,411
30	I	Item#401d(iii) "Concrete class D3 (6000 psi, 1:1:2) on for cast in situ segmental construction etc"	27,688.29	27,395.29	293	596.788	186,504
33	I	Item#401d(i) "Concrete class D1 (5000 psi, 1:1:2) on ground precast transom etc"	19,170.79	18,877.79	293	11001.702	3,438,183

36	I	Item#401d(ii) "Concrete class D1 (5000 psi, 1:1:2) on elevated for cast in situ etc"	21,630.79	21,337.79	293	11955.907	3,736,385
39	I	Item#401d(iv) "Concrete class D2 (6500 psi, 1:1:1.5) on ground for pre-cast U girder etc"	21,462.36	21,169.36	293	20688.546	6,465,456
42	I	Item#401b(v) "Concrete class A4w (5000 psi, 1:1:2) on ground for cast in situ etc"	16,526.28	16,233.28	293	11614.463	3,629,679
48	I	Item# 401b(iii) "Concrete class A2w (4000 psi, 1:1.5:3) on ground etc"	14,095.06	13,802.06	293	3750.320	1,172,026
51	I	Item# 401b(iv) "Concrete class A2w (4000 psi, 1:1.5:3) on elevated etc"	14,275.06	13,982.06	293	1961.190	612,898
257	II	Item No. 401-b(i) "Concrete class A2 (4000 psi 1:5:3 on ground)	12,569.67 Pcu.m	1,2276.67 Pcu.m	293 Pcu.m (Plus 4.16% & 2.50% - 12.20%)	116188.48 cu.m	31,911,708
Total							98,949,402