



राष्ट्रीय राजधानी क्षेत्र दिल्ली सरकार  
GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI  
लोक निर्माण विभाग  
PUBLIC WORKS DEPARTMENT

कार्यालय अधीक्षण अभियंता  
शिक्षा अनुसंधान इकाई-1  
रिंगरोड बाईपास फ्लाईओवर के नीचे,  
विपरीत आई. जी. आई. स्टेडियम गेट नं०-9,  
आई.पी. एस्टेट. नई दिल्ली-110002

OFFICE OF THE SUPERINTENDING ENGINEER  
EDUCATION MAINTENANCE UNIT-1  
RING ROAD BYPASS BELOW FLYOVER, OPPOSITE  
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दिनांक :- 07.07.2023

### INSPECTION NOTE

Following two works under East & North East Division (Education) were inspected on 06.07.2023 (Thursday) along with Shri S K Meena EE (E & NE), AE(C)/JE(C) concerned and contractor / his representative(s).

- 1. Name of the work:** C/o 68 Nos. (G+3) SPS equivalent classrooms at SKV (Ravindra Thakur) East Vinod Nagar Delhi (School ID 1002028) including 5 nos. stair cases, 8 toilets, 1 lift & 25 nos class rooms over existing (G+1) SPS structure with Prefabricated Reinforced Sandwich panel with Light Gauged Steel Framed Structure including internal & external water supply, sanitary installations, electrical installations, development of site, UGR, RWH, Natural STP & fire fighting system etc.

A/A & E/S Details:	₹38,29,94,000/- vide no. F 16/Estate/DoE/Const 132 rooms/SKV Vinod Nagar/2327-31 dated 27.09.2021
Agreement No.:	06/EE Edu M (E & NE)/PWD/2022-23.
Agency:	M/s Swastic Construction Co.
Date of Start:	27.03.2023
Stipulated Date of Completion:	19.02.2024
Estimated Cost:	₹ 22,27,72,671/-
Agreement Amount:	₹ 15,54,25,800/- (30.00 % below)
Expenditure:	₹ 1,39,37,873 /- (1 <sup>st</sup> RA Bill dated 20.06.2023) civil works against agreement;

Observations are as under:

- Progress of the work is slow; presently RCC columns, beams at plinth / ground level are in progress. In physical / financial terms only about only 8-10% progress is made whereas more than 25 % of stipulated time period for completion of the work is over. Contractor to submit the detailed revised program to expedite progress and completion of the work on time.
- Work Registers are not docketed by EE with Serial numbers of issue, to be docketed now. Registers are required to be reviewed frequently by EE.
- Details i.e. Voucher Number, Brand Name and Batch Number etc of Cement, Steel etc are to be mentioned in the MAS Register.
- Action, detailing for construction of the Prefabricated Reinforced Sandwich panel with Light Gauged Steel Framed Structure is also to be initiated simultaneously, being independent work from the construction of new building.



V. Steel Reinforcements

- a) Steel reinforcement in columns is not properly fixed and found dislocated in orientation, resulting covers on the reinforcement is negligible on 1-2 faces of the columns.
- b) Steel to be stacked properly to avoid rusting.
- c) Ductile detailing in the Longitudinal Reinforcement (not more than 50 % of area of steel bars shall be spliced at any one section) & Transverse Reinforcement (shall have 135 degree hook end with an extension of 6 times diameter, but not less than 65 mm) as per IS 456, 13920 (latest) etc are lacking at site in the columns under construction.

2. **Name of the work:** C/o 76 Nos. (G+3) SPS equivalent classrooms at RSKV Mandawali No. 2 (School ID 1002023) including 5 stair cases, 8 toilet blocks, 1 lift and internal, external water supply, sanitary installations, electrical installations, development of site, UGR, RWH, Natural STP & fire fighting system etc.)

A/A & E/S Details:	₹ 24,89,69,000/- No. 16/Estate/DoE/Cnst 80 rooms/RSKV Mandawali No. 2/1002023/2308-11 dated 27.09.2021
Agreement No.:	08/EE Edu M (E& NE)/PWD/2021-22.
Agency:	M/s K L Arora & Sons
Date of Start:	02.04.2022
Stipulated Date of Completion:	25.02.2023
Estimated Cost:	₹ 21,37,20,469/-
Agreement Amount:	₹ 13,67,81,100/- (36.00 % below)
Expenditure:	₹ 3,86,65,492/- ( 4 <sup>th</sup> RA Bill dated 31.05.2023 ) civil works against agreement;

Observations are as under:

- I. Progress of the work is slow; presently RCC, Brick Masonry, plaster works at level 2, 3 & 4 level are in progress in different blocks. In physical / financial terms 30-35% progress is made, whereas stipulated date for completion i.e. 25.02.2023 is already over. Contractor to submit the detailed revised program to expedite progress and completion of the work by November 2023.
- II. One sample room and one toilet with doors and windows, flooring, finishing, fittings & fixtures including electrical works, fixtures (complete in all respect) to be made ready preferably within 15 days as per the agreement items, provisions, architectural drawings etc for approval.
- III. EE to ensure that overall expenditure do not exceed the sanctioned / agreement amount (including electrical works) without prior approval.
- IV. Work Registers are not docketed by EE with Serial numbers of issue, to be docketed now.
- V. Details i.e. Voucher Number, Brand Name and Batch Number etc of Cement, Steel and Paint etc are to be mentioned in the MAS Register.
- VI. Steel Reinforcements
  - a) Steel to be stacked properly to avoid rusting. Rusted steel buried in earth, ground are not to be used in structural works and have to be removed from site.



- b) Ductile detailing in the Longitudinal Reinforcement (not more than 50 % of area of steel bars shall be spliced at any one section) & Transverse Reinforcement (shall have 135 degree hook end with an extension of 6 times diameter, but not less than 65 mm) as per IS 456, 13920 (latest) etc are lacking at site in the columns under construction.

VII. RCC work:

- a) Honeycombing, undulations etc are visible in the RCC members (column, beams, Staircase waist slab) are to be corrected by the agency. EE to ensure proper centering & shuttering, placement of the steel before pouring of the concrete and compaction to avoid such defects.
- b) Date of casting of RCC members, walls, plaster etc to be written therein to ensure desired curing of the structure to gain the strength as per codal, agreement provisions.

- VIII. Water being used in the construction is not tested during last 2-3 months; same should be tested now and at frequently to ensure suitability of water for construction especially for RCC members and its curing.

Beside above, for both the works following suggestions may also be considered:

- a) Air Pollution Control measures are lacking at site, EE to ensure compliance as per agreement provisions, directions, guidelines issued by the CPCB, Ministry of E&F, NCT Delhi, CAQM etc time to time on the matter.
- b) Safety measures are lacking at site, necessary sign boards, panels etc may also be provided for guidance of the students, school staff and visitors to the school / site (since academic session has started and large number of students are attending classes) to avoid mishap. Workers / supervisory staff at construction sites are to be encouraged to wear safety belt, helmets, shoes etc at site.
- c) Maximum area in the ground to be left Kutcha (without flooring, concrete in the ground, courtyard etc) for plantations, greening in the premises. Necessary works i.e. construction of planters, fixing of Kerb stones, laying of pipeline for watering etc may be taken up simultaneously.
- d) Instead of PVC water tanks, RCC water tanks may be constructed to have better water quality especially for drinking water.

(एस के अग्रवाल)

अधीक्षण अभियन्ता ( शिक्षा अनुरक्षण इकाई-1 )

प्रतिलिपि / Copy to following:

1. मुख्य अभियन्ता ( परियोजनाएं ), लोक निर्माण विभाग, नई दिल्ली को सूचनार्थ प्रेषित ।
2. कार्यपालक अभियन्ता , शिक्षा अनुरक्षण मण्डल, पूर्व एवं उत्तर पूर्व (एम-232) लोक निर्माण विभाग, नई दिल्ली को आवश्यक कार्रवाई के लिए प्रेषित ।
3. कार्यपालक अभियन्ता (विद्युत) , शिक्षा अनुरक्षण विद्युत मण्डल, लोक निर्माण विभाग, नई दिल्ली को आवश्यक कार्रवाई के लिए प्रेषित ।

अधीक्षण अभियन्ता ( शिक्षा अनुरक्षण इकाई-1 )