

Minutes of the Shelter Advisory Group Meeting

Venue: Mini Conference Hall, Collectorate, Nagapattinam

Date: 18th February 2008

The meeting started at 4.00 pm and was chaired by the District Collector, Thiru Thenkasi S Jawahar IAS. DRO (RR) PO, DRDA, APO, Mr. Prashant Hedao and Mr. Dipan Shah of SAG, and the officers of TDIU also attended the meeting. The DRO enquired about the corrective measures taken based on the recommendations of the last SAG Meeting. The District Collector strongly reiterated that the TDIU engineers should be ever vigilant about the quality of the houses being constructed by the government. The DRO invited Mr. Dipen Shah to present the field visit report held from 7th February to 9th February 2008

The following were the observations by the Shelter Support Group:

Day 1: 7th February 08

SERUTHUR (TDIU Site) – 233 Houses

Mr. Dipan Shah stated that:

- Slab detailing has improved and has become more meticulous. It is done as per the design.
- Chair bars are used so as to maintain the position of negative steel.
- Compared to last visit, bracket length is increased and made to 1.5 m as per the drawing.
- Mostly all structures are plastered. As informed at site about 200 slabs are cast and, in the remaining houses the works are ongoing.
- The team was not able to see any house at lintel level to check the lintel beam details.

While a lot of changes have been done for the better, there are still some areas of concern.

- The criticality of the mid landing beam in the staircase is neglected.
- Even during this visit, random omissions were found in the installation of the same.
- Also, when one of the ongoing concreting operation at site was observed, the mixing was found in 1:2:4 i.e. in M15 instead of M20 i.e. 1:1.5:3

The recommended follow up actions are:

- The mid landing concealed beam should be handled with more seriousness and quality.
- A structural engineer should be consulted for the stability implication of the omissions found earlier and corrective actions taken.

SERUTHUR (PDA Site)

- Work completed and site handed over.
- The filling is carried out in the front lane but not as yet taken up behind the house. Sand Filling and leveling of ground on the rear side of the houses also needs to be taken done.
- Water stagnation is visible.
- The Sanitation works are still pending. Quality of ongoing septic tank installation was a concern.
- Water supply is still not in place after about 6 months of handing over.
- Site needs specific attention in terms of its Solid Waste Management handling.

Vellapallam (DPG)

- This site is nearing completion.
- All structures are plastered.
- Overall quality of work is found good.
- An appropriate sanitation model is being adopted by DPG and its installation is in process. Changes in the height and depth of the chambers of the septic tank are recommended.
- And also the shifting of rain- water spout is needed.

Vellapallam (TDIU)

During the time of visit the work was not going on at the site but the authorities concerned were present.

- The installation of reinforcement at one of the slabs seen (without staircase installation) and the spacing and details were as per the drawing.
- The bracket beam of the staircase is omitted on this site.
- No drawings or formal approval for the same were available on the site to comment on the same.
- Concerns with the mid landing concealed beam stand the same as last visit.

Arcottuthurai – TMSSS

- The site is completed and handed over about 2 months back.
- There are general complaints about non – structural cracks, dampness and leakages, floor cracking and toilet seat settlements
- At few places the internal toilet wall has settled or is showing signs of settlement.
- It is to be noted that in earlier visit also it is reported that the same is simply supported on the flooring and not connected with cross walls.
- The site does not have street light installed yet.
- Water supply is still awaited and people fetch water from the old location.
- Site also awaits the sanitation systems.
- Water supply, sanitation, Solid Waste Management and street light installations should be expedited as far as possible.
- Terrace leakage complaints were quite high and the same should be further investigated. If need be, weathering tiles could be installed to arrest the same, wherever needed.
- The internal partition walls need attention.

Velankani – TMSSS

- This site is completed and handed over about 6 months back.
- There are general complaints about non – structural cracks, dampness and leakages, floor cracking or toilet seat settlements.
- At few places the internal toilet wall has settled or is showing signs of settlement. It is to be noted that in earlier visit it is reported that the same is simply supported on the flooring and not connected with cross walls.
- Site also awaits the sanitation and Solid Waste Management systems.
- The temporary public toilets installed by the TDIU are leaking through disposal pipe due to breakage of pipe. The Community also stated that they have not as yet received the House Insurance documents.

- Sanitation and Solid Waste Management installations should be expedited as fast as possible.
- Terrace leakage complaints were quite high and the same should be further investigated. If need be weathering tile could be installed to arrest the same, wherever needed.
- Filling is going on and should be done between the houses and also on the rear side.
- The internal partition walls need attention.

Day 2

Palayar – TDIU

- In this site Staircase concealed beam is still starting from wall and is using 6 mm stirrups instead of 8mm.
- It is noted that the design of few staircases have been changed but there is no change in detailing.
- Way slab distribution spacing found at 20 cms c/c instead of 17.5 cm specified in drawing.
- For staircase top landing, the bracket design has been changed from what is specified in drawing. The Contractor says that it was changed with the consent of TDIU engineer but there is no revised drawing available on site. It will be advisable to provide the same to avoid any wrong detailing.
- Corner vertical rod missing at many places and is fixed in mortar and not in concrete.
- The cutting of RCC members was seen for electrification.
- Middle beam was found misaligned and, at multiple locations, the brickwork above was found to be out of plumb by 2” to 3”.
- Also, the detailing of the middle beam was found changed randomly from 3 – 12 tor at bottom to either 2-12 tor OR 2-12 tor and 1-10 tor.
- Concrete quality is poor and with lot of honeycombs.
- The structural engineer should evaluate the staircase details and site should be provided with detail drawings for the same.
- Reinforcement detailing should be done more meticulously. The line and level should be improved especially in case of the middle beam.

Periyakottaimedu – CARE Plan

- It is noticed that the work was on halt for long time and has just been resumed.
- On the day of the visit, masonry, plaster and formwork activities in 3 to 5 structures was ongoing.
- The roadwork is going on at the site.
- Since work was on halt for long time, while resuming, there are chances of cold joints at multiple location. Also the reinforcement led would have corroded. The same should be taken care before resuming the old work.

Melamoovarkarai – Sewabharthi

- Quite systematic work is going on in this site.
- Good quality of workmanship and concrete.

Madatakuppum – GGF

- There is no progress.
- Work is still at the same stage since the last visit of SSG.

Poomphar - TDIU

- The design of lintel beam and plinth beam was changed.
- The stirrup is changed from 8mm to 6mm and was found at 8" to 10" c/c distance.
- The observation on Grade beam revealed changes in the steel detailing other than what was specified. The drawing suggested 2-10 tor as top and 3 – 12 tor as bottom which was changed to 2-10 tor and 1-12 tor at bottom. Similarly another Grade beam which was suppose to have 2-10tor as top and 2-12 tor as bottom was changed to 2-10 tor as top and bottom same.
- Also stirrup spacing was found ranging from 8" to 9" c/c in 8mm.
- The staircase details have been changed. The staircase thickness was found ranging from 3" to 5" at multiple locations on site.
- The Concrete quality was poor with excessive honeycombing.
- No extra bar provided in the center of column as specified in the drawing.
- More stringent monitoring needed to improve the quality. Some of the observations have structural implication. The same should be studied and, if need be, actions taken to mitigate the same.

Poomphar – JEER

- The houses are handed over but they are not finished.
- There are no doors or window installed.

Sellur – REAL Plan

- Site is complete and handed over.
- Filling work in progress during visit.
- Proper care should be taken to ensure that sand filling is done with a gradient so as to avoid water logging.
- Filling should be ensured behind the houses too.

Saveriacoil – TMSSS

- Structures are completed and finishing work is ongoing at site.
- The quality of Brickwork very poor with lean cement mortar
- Other concerns in terms of alignment, column reinforcement stays as mentioned during the earlier SAG report.
- Intervention needed to improve the quality of work and omission should be evaluated in specific for structural implications if any.

Muttam – Sewabharthi

- Very good quality of concrete and workmanship onsite.
- Measuring box used for concrete batching.
- Good alignment and practices on site.
- Deviations were observed in reinforcement detailing of one of the slabs.
- The main steel which was supposed to be at 6" c/c was shifted to 6.75 to 7" c/c.
- All the lintel stirrups are changed to 6mm at 6.75" to 7".
- Staircase detail is changed but no sketch available for the new detail.
- The staircase has single layer reinforcement.
- A new approved sketch of structural detailing to be issued to the site for the changes in staircase detailing.

- The structural engineer of the site should approve the changes in the design.
- More stringent monitoring to ensure installation of correct detailing of reinforcement as specified in drawing.

Ambedkar nagar – IID

- No progress. Stage remains the same as seen in last SSG visit.

Thethi – IID

- No progress. Work on halt.

Mahalakshmi Nagar – TMSSS

- Houses completed.
- Roadwork by Government is ongoing at site.
- Filling is completed in front but is pending between the houses and on the rear side.

Additional Recommendation from SSA

- As the Second Phase of Housing is coming on it will be advisable to immediately conduct specific training programs on disaster resistant construction for the engineers and contractors who are to be involved with the work.
- The SAG will be able to provide recommendations on the training modules required and even provide trainings, if necessary.

The District Collector advised the PO DRDA to strictly follow up the recommendations of the SAG. The meeting came to an end at 5.30 pm.