



GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

Minutes of 5th meeting
of
Works Standards Committee
(27th - 28th September 2012)
at
Madurai
Southern Railway

Research Design & Standards Organisation
Lucknow-226011



INDEX - A
(Old Agenda Items)

| Introduction | | | i-v | |
|--------------|-----------|--|------------------|------|
| SL | Item No. | Subject | Item Proposed By | Page |
| 1. | 002/01/05 | Strengthening of organisation for works at various levels | WSC | 1 |
| 2. | 003/01/05 | Unified Works Specifications and Basic Data Sheets for preparation of SOR | WSC | 3 |
| 3. | 004/01/05 | (a) Standardisation of flooring of platform, concourse & FOB and platform cover sheds based on categories of stations (A1, A, B, C & others) (b) Standardisation of Workshop flooring | WSC | 4 |
| 4. | 005/01/05 | Review of Indian Railway Works Manual | NER, SECR & SER | 5 |
| 5. | 006/01/05 | Review Of Provisions Of IRWM & Engineering Code Regarding Measurement | NER | 6 |
| 6. | 007/01/05 | New Building Materials | ER/NER /SER/SR | 8 |
| 7. | 009/01/05 | Rationalisation of yardstick for Works organization | NER & WR | 8 |
| 8. | 018/02/06 | Provision Of Green Building Concept In India | SWR & SCR | 9 |
| 9. | 019/02/06 | Change In System Of Maintenance Of Colony | WR & NFR | 10 |
| 10. | 021/02/06 | Prefabricated Buildings | WSC | 12 |
| 11. | 022/03/08 | Standardisation of Various Drawings on Indian Railways | SCR & NCR | 13 |
| 12. | 025/03/08 | Provision Of Tool Kit With Artisan Staff On Indian Railways | SWR | 14 |
| 13. | 026/03/08 | Manual On Passenger Amenities On Stations Of Indian Railway | SER | 15 |
| 14. | 027/04/12 | Standard procedure for ducting and wall recess in buildings | SR | 16 |
| 15. | 031/04/12 | Guidelines on Retrofitting of Existing Buildings | RDSO | 17 |
| 16. | 033/04/12 | Standardization of facilities for Engineering Department at Stations | SECR | 18 |
| 17. | 034/04/12 | Detailed guidelines for site order book, | SECR | 19 |

| | | | | |
|-----|-----------|---|------|----|
| | | Material passing Register, quality of Cement & Steel | | |
| 18. | 035/04/12 | Penalties for non-deployment of Engineers by Contractors at worksite | SECR | 21 |
| 19. | 036/04/12 | Appreciable improvement of existing Railway Colonies and to develop Model Colonies for maximum staff satisfaction | CR | 22 |
| 20. | 038/04/12 | Standard drawings for Platform Shelters with openings for OHE mast in sloped corrugated sheet roofing | SR | 24 |

* * * *

INDEX - B
(New Agenda Items)

| SL | Item No. | Subject | Item Proposed By | Page |
|-----|------------|--|--------------------|-------|
| 21. | 039/05/12 | Provision of ramp on FOBs and at the end of platforms. | SCR | 25 |
| 22. | 040/05/12 | 1). Re-designating various categories of artisans as multi skilled artisans 2). Imparting training from outside organization and providing a standard tool kit 3). Drafting a specified syllabus for multi-skilled artisans. | SCR | 26 |
| 23. | 041/05/12 | Provision of MSL at Stations | SCR | 27 |
| 24. | 042/05/12 | De-linking the maintenance activities of Bridges entrusted with the works Cadre. | SR | 28 |
| 25. | 043/05/12 | Approval for creation of separate imprest for SE/JE/SSE (Works) for local purchase of materials for maintenance works | CR | 29 |
| 26. | 044/05/12 | Instructions for signage's at Railway stations. | NCR | 30 |
| 27. | 045/05/12 | Performance Guarantee (PG) | RCF, Kapurthala | 32 |
| 28. | 046/05/12 | Review for planning & policies towards housing accommodation in Railways | NWR | 33 |
| 29. | 047/05/12 | Maintenance of bore wells fitted with Electrical pumps | SR | 34 |
| 30. | 048/05/12 | Issue of controlled documents | SR | 35 |
| 31. | Annexure-1 | Closed Agenda Items of Earlier Meetings. | | 37-38 |
| 32. | Annexure-2 | WSC Recommendations & Railway Board's Orders of 1 st , 2 nd & 3 rd Meeting | | 39-54 |

* * * *

5th Meeting of the Works Standards Committee September 2012.

Introduction

1. 5th Meeting of Works Standards Committee was held at Southern Railway, Madurai on 27th & 28th September 2012. Sri. R. Ramanathan, Hon'ble Additional Member Civil Engineering inaugurated the meeting of Works Standards Committee and graced the first session by attending the same. Other dignitaries present in the first session were Shri H.K. Jaggi, Adviser/L&A, Railway Board, New Delhi, Shri C.P.Tayal, Director/IRICEN, Shri M. Satish PCE/SR and Shri A. K. Rastogi, DRM/Madurai, SR

All the members of Works Standards Committee i.e CE (W)/CPDE/CGE of zonal Railways except member from WR and CR attended the meeting. However, CR was represented by Dy. CE/CR but Western Railway did not send any representative in the meeting. Shri Alok Kumar, EDCE(G), Shri D.R. Gupta, ED (L&A), Shri Ramesh Kumar, Director (L&A), Railway Board, Shri N. C. Sharda, Dean/ IRICEN and ED/Works, RDSO have also attended the meeting.

2. Additional Member/Civil Engineering, Adviser/L&A, distinguished observers from Railway Board DRM/Madurai/SR and all the members of WSC were welcomed by PCE & CE/P&D, Southern Railway.
3. Shri Nand Kishore, Executive Director/Works/RDSO and Member Secretary/WSC during his introductory address gave a brief historical resume of WSC. He also pointed out major achievements of WSC like preparation and finalization of 'Unified Standard Schedule of Rates' and 'Unified Specifications' and standardization of flooring and finishing at station premises. Important issues to be discussed in the 5th meeting of WSC were also briefed.
4. Shri C.P.Tayal, Director/IRICEN/Pune was entrusted with the responsibility to Chair the 5th meeting of WSC.
5. Shri C. P. Tayal, Director/IRICEN/Pune extended his warm welcome to all delegates of 5th meeting of WSC. He also expressed his pleasure and conveyed his thanks to Additional Member Civil Engineering for sparing his precious time to attend the occasion and emphasized on import of standards of other organizations. He emphasized that the issues of alternative maintenance of colonies and improvements at work sites need to be addressed in an advanced manner.

6. Shri H. K. Jaggi, Adv (L&A) emphasized upon meticulous planning and attention required to be taken during execution of work at even IOW level to avoid discrepancies He also emphasized upon ensuring quality implementation at work site. He drew the attention of the committee to the items like measurements and arbitration issues including performance guarantee. He also asked the committee to meet once a year for which he promised to extend all required assistance. He desired that the USSOR and passenger amenity data to go on line. He appreciated the recommendations of WSC on subject "Colony Maintenance" and called it a path breaking one.
7. Shri M. Satish, PCE/Southern Rly. Welcomed the august dignitaries and members of the Works Standards Committee at Madurai for deliberating on standardization of works matters. He complemented Southern Rly. HQ and Division for arrangements made by them for WSC meeting. He stated that WSC is the best forum to come up with a solution for existing issues as well as the new issues that crop up time to time. He requested the committee to deliberate and formulate the required changes in rules regarding Performance Guarantee and arbitration cases.
8. AMCE, Railway Board in his presidential address emphasized the need of conducting regular meetings of WSC. In his address, he suggested the following:
 - (a) Regular/ periodical review of USSOR to update existing rates and accommodate new items.
 - (b) Including exhaustive options in USSOR to enable the field officials to choose an option based on the site condition.
 - (c) Including all aspects of work viz. justification, planning sanction etc. in IRPSM so as to reduce the paper work.
 - (d) Use of multi-skill of staff in a big way and taking advantage of innovations by use of science and technology in order to sustain with less staff.
 - (e) To keep track of new developments made in technology such as precast components and incorporate such developments into our system.
 - (f) Being cautious in carrying out modifications in arbitration issues so as to avoid legal issues.
9. The meeting of the Committee was held in 4 technical sessions, during which 20 Review items more carried forward from earlier WSC meetings and 10 new items were deliberated.

10. During the meeting technical presentations were made by industries bringing out the highlights of new technology/products. Following presentations were organized during the meeting.
 1. M/S A B Composites Pvt. Limited
 2. M/S VME Precast Private Limited
 3. M/S Henkel Adhesive Technologies-Maintenance & Repair Solutions
 4. M/S Savoir Faire Manufacturing Co. Pvt. Ltd(SFMC)
 5. M/S JSW steel Ltd.

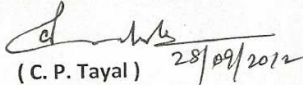
11. The Committee specially acknowledges the assistance rendered by following officers from RDSO for their valuable contribution during 5th Meeting of the Works Standards Committee.
 - (i) Shri Rajesh Agarwal, Director/Works.
 - (ii) Shri Ashutosh kumar, ADE/Works.


12. The next (6th) meeting of WSC is proposed to be held at Nainital, NER on 26th & 27th Sept 2013.


13. The Committee would like to place on record their gratitude and appreciation for Principal Chief Engineer/Southern Railway and his team of officers and staff for the excellent arrangements made and the hospitality extended to all the participants.

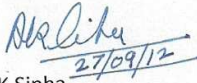
* * * * *


The Minutes of the 5th Meeting of the Works Standards Committee
(27th & 28th Sept 2012 at Southern Railway, Madurai)



(C. P. Tayal) 28/09/2012
Chairman
Director/IRICEN



(V.K.Srivastav)
Chief Engineer/Works
East Central Railway



(S.P. Samantaray)
Chief General Engineer
East Coast Railway

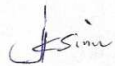

A.K.Sinha 27/09/12
CPDE
Southern Railway



(Pradeep Singh)
Chief General Engineer
North Eastern Railway



(B.S.K. Raj Kumar)
Chief Engineer/Works
South Central Railway



(K. D. Ralh)
Chief Engineer Planning & Design
North Central Railway

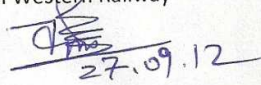

(A. Achuta Rao)
Chief General Engineer
South West Railway



(J. K. Singla)
Chief Planning & Design Engineer
South East Central Railway



(S.C.L. Meena)
Chief Planning & Design Engineer
North Western Railway



(R.K.Singh)
CPDE
Eastern Railway



(R.B.Rai)
Chief Engineer Planning & Design
South Eastern Railway


(K. M. Tripathi)
CPDE
North East Frontier Railway



(O. P. Tanwar)
CE/P&D
West Central Railway



(M.S.Lakha) 27.9.12
Chief Engineer Planning & Design
Northern Railway

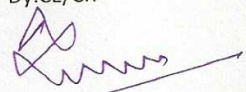

(S.K. Garg)
Sr.Prof.IRICEN


(N. C. Sharda)
Dean/IRICEN

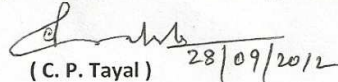

(A.K. Khandelwal)
CE/S&RB/MS



(M. K. Agarwal)
Dy.CE/CR

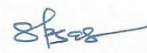

(Niranjan Nayak)
Dy.CE/Works
E.Coast Railway/Con.

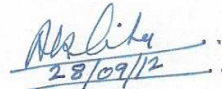

(Nand Kishore)
Executive Director/Works/RDSO &
Member Secretary


The Minutes of the 5th Meeting of the Works Standards Committee
(27th & 28th Sept 2012 at Southern Railway, Madurai)

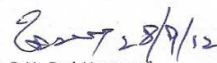

(C. P. Tayal) 28/09/2012
Chairman
Director/IRICEN



(V.K. Srivastav)
Chief Engineer/Works
East Central Railway



(S.P. Samantaray)
Chief General Engineer
East Coast Railway

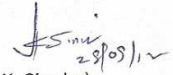

A.K. Sinha
CPDE
Southern Railway


(Pradeep Singh)
Chief General Engineer
North Eastern Railway



(B.S.K. Raj Kumar)
Chief Engineer/Works
South Central Railway



(K. D. Ralh)
Chief Engineer Planning & Design
North Central Railway

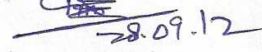

(A. Achuta Rao)
Chief General Engineer
South West Railway



(J. K. Singla)
Chief Planning & Design Engineer
South East Central Railway


(S.C.L. Meena)
Chief Planning & Design Engineer
North Western Railway



(R.K. Singh)
CPDE
Eastern Railway

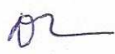

(R.B. Rai)
Chief Engineer Planning & Design
South Eastern Railway


(K. M. Tripathi)
CPDE
NorthEast Frontier Railway



(O. P. Tanwar)
CE/P&D
West Central Railway



(M.S. Lakha)
Chief Engineer Planning & Design
Northern Railway



(S.K. Garg)
Sr. Prof. IRICEN


(N. C. Sharda)
Dean/IRICEN


(A.K. Khandelwal)
CE/S&RB/MS


(M. K. Agarwal)
Dy. CE/CR


(Niranjan Nayak)
Dy. CE/Works
E. Coast Railway/Con.


(Nand Kishore)
Executive Director/Works/RDSO &
Member Secretary

RECOMMENDATIONS ON AGENDA ITEMS OF 5th MEETING OF THE 'WORKS STANDARDS COMMITTEE'

A. Earlier Continuing Agenda Items :

Following items, as discussed during 4th meeting of WSC, have further been deliberated -

1. Item 002/01/05

Subject:- Strengthening Of Organisation For Works At Various Levels -
(Proposed by WSC)

- a) RDSO
- b) Zonal Railways
- c) Divisional Headquarters

AGENDA :- During 1st WSC meeting, WSC members felt that on Indian Railways Works organization needs to be strengthened at various level to get works equal importance.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

- (1) As already decided, the item related to separate work cadre in the division is closed.
- (2) The measures suggested by Railway Board for strengthening the work cadre may be implemented on Zonal Railways for functional improvement.
- (3) For technical training, the services of outside institutions may be taken by ZTS or Divisional Training School. Training in institutions having core competence in these fields may be utilized for senior supervisory levels & officers by nominating them directly.
- (4) Practices being followed by Zonal Railway can be put on e-based portal which can be shared by all Railways. IRICEN may provide link to this portal on its web site.

Item is proposed for closure.

Railway Board's Order

Non-Railway Institutions (within India) imparting training to engineering officers, supervisors and artisan staff shall be identified by IRICEN and RDSO and submitted to Railway Board for formation of standing panel. Care should be taken that training institutes for artisan staff may have proximity to their

respective HQ. IRICEN, RDSO and all Zonal Railways have already been advised in term of Board letter no. 2012/LMB/8/1, dated 23-1-2012.

Name of the training programme, its duration alongwith approximate cost and justification shall be prepared jointly by IRICEN & RDSO and submitted to Board within a month. Training programme may cover all spectrum of technical aspects, quality test & control and managerial skills.

RDSO shall circulate the instructions as approved by Board to all Railways/PUs etc. for implementation.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

- (i) CPWD is having training facilities and charging about Rs.2000/- per week for the training of artisans. Full charges including lodging & boarding arrangements may also be ascertained from CPWD.
- (ii) SC Railway have already done training course for Artisan staff at NICMAR.
- (iii) If CPWD training centre are not there, then other training centre may be explored.

COMMITTEE RECOMMENDATIONS :-

- (i) The regional Training Centre of CPWD at New Delhi, Chennai, Kolkata & Mumbai may be contacted by CPDE of that area for details of training modules.
- (ii) The adjoining Railways may utilise each regional office of CPWD Training Centre by sending 20 Nos of artisan staff per course. The following may be the arrangement for training of Artisan by Railways.
 - (a) New Delhi - NCR, NWR, NER & NR (Co-ordinating).
 - (b) Kolkata - ECR, SER, NF, Kolkata Metro, ER (Co-ordinating)
 - (c) Mumbai - WCR,WR, CR (Co-ordinating).
 - (d) Chennai - SWR, SR (Co-ordinating)
 - (e) Secunderabad -SCR.

Railway Board may issue instructions for trial training by Co-ordinating Railway for training of specified staff of Railways.

Railway Board's Draft Orders:-

- (i) WSC's recommendations are accepted.
- (ii) Coordinating Railways should coordinate with regional training center of CPWD & send min. 20 artisans for multi skilled artisan course and give their feedback to Railway Board for further considerations.

2. Item No. 003/01/05

Subject: -Unified Works Specifications And Basic Data Sheets For Preparation Of SOR.(Proposed by WSC)

AGENDA: - During 1st WSC meeting, WSC members felt that there is requirement of unified Works Specifications And Basic Data Sheets For Preparation Of SOR.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting :

Recommendations -

- 1. USSOR has not been prepared by ECR & NER. CE/W/ECR & CGE/NER to ensure finalization of USSOR by March 2012.
- 2. Feedback on further improvement of USSOR and new NS items be submitted to Board for consideration & inclusion in USSOR.
- 3. SCR issued instructions regarding operation & approval of NS items through Engineering Standing Orders. Similar instructions can be issued by other Railways.
- 4. Concordance table linking SOR items with specifications Para need to be provided by collective efforts with following distribution of SOR Chapters :

SCR Chapter 1 - 5

SR Chapter 6 - 10

SECR Chapter 11 - 15

NWR Chapter 16 - 20

NCR Chapter 21 - 25

Results may be advised Board within next two months.

- 5. Item 007/01/05, i.e. New Building Material shall be a standing item of WSC. Therefore, this item is proposed for closure.

Railway Board's Order :

1. PCEs of NER & USSOR of their Railways are finalised, issued and implemented latest by 31.3.12.
2. EDCE/G, Railway Board will monitor and coordinate for items 2, 4 & 5 of the recommendations w.r.t. IR's USSOR.
3. Railway Board have already asked Zonal Railways to advise corrections and additions/ modifications to the approved USSOR, so that Correction Slip may be issued. Railways to ensure required inputs to the Standing Expert Group latest by 10th March '12.
4. Item is closed, except for continuation of item no. 007/01/05, i.e. New Building Materials, which shall be a Standing Agenda Item in all meetings of WSC.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS: -

- (i) NE & ECR confirmed that USSOR has been issued since then.
- (ii) Railways can give further suggestions for inclusion on any new items or other improvements for consideration by Standing Expert Group.

COMMITTEE RECOMMENDATIONS:-

Proposed for closure.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed.

3. Item No. 004/01/05

Subject:-(a) **Standardization of flooring of platform, concourse & FOB and platform cover sheds based on categories of stations (A, B, C & others).**

(b) **Standardisation of Workshop flooring.** (Proposed by WSC)

AGENDA :- During 1st WSC meeting, WSC members felt that, Flooring at various locations need to be standardized.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

- (1) Standards approved for flooring & finishing at station premises are satisfactory and do not require any modifications for the time being.
- (2) WSC endorsed the recommendations for roofing material for platform covering & workshop flooring with following modifications.
 - (a) Polycarbonate sheets proposed as roofing material shall be limited to approx 10% area for lighting/aesthetic purposes with approval of Zonal Headquarters.
 - (b) VDC in acid proof floor for workshop flooring be made 75 mm instead of 50 mm.

With the above modifications, sub-committee may submit their recommendations to Railway Board.

Railway Board's Order:

WSC's recommendations are accepted except that Polycarbonate roofing shall be provided as per local requirement and VDC flooring should be minimum 100 mm thick.

Sub-committee shall submit modified recommendations by March 2012.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

Recommendations have been submitted to Railway Board and the same have been approved by them on 20.09.2012.

COMMITTEE RECOMMENDATIONS :-

Item is proposed to be closed.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

4. Item No. 005/01/05

Subject:- Review of Indian Railway Works Manual

(Proposed by NER/SECR/SER)

AGENDA :- During 1st WSC meeting NER, SECR and SER Proposed item for Review of Indian Railway Works Manual.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendation-

1. The Works Manual should be in two parts, the main Manual & Annex, quoting references to NBC, IS Codes etc.
2. Sub-Committee to prepare draft Indian Railway Work Manual through special meetings to be convened by Dean/IRICEN, Pune.
3. After deliberation by sub-committee & getting feedback from Zonal Railways, draft be submitted for further consideration & approval.

Railway Board's Order

WSC's recommendations are accepted.

Sub-committee shall submit the Draft Works Manual and make presentation to Board by April 2012.

Thereafter, draft will be circulated to Zonal Railways for their comments within next 15 days. Sub-committee shall accordingly modify the draft document and submit final to Board by June 2012.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

- (i) Web links for various details included in the Manual may be given wherever possible.
- (ii) New items which have been added in the revised IRWM, may be studied by Railways and their remarks furnished.

COMMITTEE RECOMMENDATIONS :-

- (i) Board may issue suitable instructions to PCEs of all Indian Railways to go through the Manual & send Suggestions/Remarks of the Railways on priority to Board for early issue of Works Manual.
- (ii) Policy Circulars from Railway Board may be issued in the form of correction slips in the Manual or amendment to Manual so that it is connected easily by Railways.

Railway Board's Draft Orders:-

- (i) WSC's recommendations are accepted.
- (ii) PCEs of all Indian Railways to go through the Manual & send Suggestions/Remarks of the Railways on priority to Board for early issue of Works Manual.

5. Item No. 006/01/05

Subject:- Review Of Provisions Of IRWM & Engineering Code Regarding Measurement. (Proposed by NER)

AGENDA:- During 1st WSC meeting NER Proposed item for Review of Indian Railway Works Manual & Engineering Code Regarding Measurement.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

Recommendation of sub-committee shall be finalized by Feb. 2012 and sent to WSC members through e-mail & thereafter submitted to the Board for approval.

Railway Board's Order:

WSC's recommendations are accepted.

Sub-committee shall also study the practices being followed in other organizations regarding system of recording of measurements and competency of initiating officials for recording of measurements including recording of measurements by contractors and submit the recommendations by March '12 for consideration of Railway Board.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

- (i) Sub-Committee has revised the recommendations.
- (ii) The financial limit for test check proposed by Sub-Committee may be revised periodically.
- (iii) Sub-Committee informed that provisional payment on the basis of bill produced by contractor is included in the recommendations.
- (iv) SSE & AEN should record that they are satisfied that 75% work done by the contractor for which provisional payment is being released to Contractor.
- (v) Limit of exaggeration by more than 1% may be indicated as also "malafide" may be deleted.

COMMITTEE RECOMMENDATIONS :-

The following may be included by Sub-Committee in the recommendations to be submitted to Board.

- (i) Financial limit for test check, provisional payment on the basis of bill produced by contractor and Certificate in this respect by SSE & AEN may be examined by Sub-Committee.
- (ii) The Sub-Committee report may accordingly be submitted after incorporating these issues.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

Subcommittee to submit its report by 15.12.2012

6. Item No. 007/01/05

Subject:- New Building Materials. (Proposed by ER/NER/SER/SR)

AGENDA:- During 1st WSC meeting ER, NER, SER & SR Proposed item for introduction of New Building Materials in Indian Railways SOR and adoption on Indian Railways .

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

Committee recommends as under :

This item is proposed for closure in view of standing monitoring item on new materials proposed to be included.

Railway Board's Order :

This item shall be the Standing Agenda Item in all the meetings of WSC.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

Board has decided that this item will be standing item for the WSC.

COMMITTEE RECOMMENDATIONS :-

Item will continue as a standing agenda item.

Railway Board's Draft Orders:-

WSC's recommendations are accepted. Item will continue as a standing agenda item.

7. Item No. 009/01/05

Subject:- Rationalisation of yardstick for Works organization. (Proposed by NER & WR)

AGENDA :- During 1st WSC meeting NER & WR Proposed item for Rationalisation of Yardstick for Works Organisation on Indian Railways.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

The report submitted by Sub-Committee may be submitted to the Board for approval.

Railway Board's Order :

WSC's recommendation is accepted. Sub-committee shall submit the recommendations for consideration of Railway Board by 15th March 2012.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

- (i) Sub Committee has modified the report as suggested by Railway Board for considering the old/new quarters and multistoried buildings etc.
- (ii) Practices and yardsticks prevalent in CPWD also to be studied by Sub-Committee and considered adequately.

COMMITTEE RECOMMENDATIONS :-

Practices and yardsticks prevalent in CPWD also to be studied by Sub-Committee and considered adequately.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

Subcommittee to submit its report by 15.12.2012

8. Item No. 018/02/06

Subject:- Provision Of Green Building Concept In India.

(Proposed by SWR, SCR)

AGENDA :- During 2nd WSC meeting SWR & SCR Proposed item for introduction of Green Building Concept in Works being executed on Indian Railways .

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

1. Works Manual Sub-committee to incorporate a Para/Chapter on Green Buildings.

2. IRICEN/Pune to include Green Building Concept in curriculum.
3. Type plan of Type II, III & IV quarters be got approved from Indian Green Building Council to have green building

Railway Board's Order :

WSC's recommendations accepted except (3).

RDSO shall develop type plan along with framework & guidelines for the Green Building Compliant Design of quarters of type-II, III, IV and V. Its cost and financial implication shall also be brought out by RDSO. Report shall be submitted to Board and presentation made by RDSO in next WSC.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

- (i) A Chapter is being added on Green Buildings in IRWM by Sub-Committee.
- (ii) Guidelines issued by TERI as 'GRIHA' indicating detailed procedure of certification of building as Green.
- (iii) It is not possible to prepare the standard Type plan of Green Building for houses.

COMMITTEE RECOMMENDATIONS :-

- (i) To begin with, Railways should incorporate as many green features as possible as indicated in the guidelines of "GRIHA" issued by TERI.
- (ii) There is no need of Green Certification of building at present.
- (iii) Item is proposed for closure.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of item

9. Item No. 019/02/06

Subject:- Change In System Of Maintenance Of Colony.

(Proposed by WR, NFR)

AGENDA: - During 2nd WSC meeting WR & NFR Proposed item for change in system of maintenance on Indian Railways.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

1. System of BHEL/CPWD like organisation also be studied before finalisation of recommendation.

Main items which need to be maintained properly in even lowest category house are:

- Leakage free / dampness free environment.
 - Proper doors and windows.
 - Uniform / leveled flooring.
 - Proper water supply.
 - Proper water closets.
 - Proper sanitation / drainage.
 - Proper walkable road in front of quarter.
 - Fencing to feel personal belonging.
2. The Sub-Committee should submit their recommendation within stipulated time period of 30.4.2012.

Railway Board's Order :

WSC's recommendation regarding study of System of CPWD/MES and other like organizations & PSUs by sub-committee before finalization of their recommendations is accepted.

Sub-committee to submit their recommendations by 30.04.2012.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

- No feedback received from any Railway on the recommendation of Sub-committee so far.
- Sub-Committee have again submitted their report to Railway Board for acceptance.

COMMITTEE RECOMMENDATIONS :-

All Railways may send their comments to Railway Board on the recommendations of the report for consideration.

Railway Board's Draft Orders:-

All Railways may send their comments to Railway Board on the recommendations of the report by 15.11.12 positively for consideration otherwise it will be presumed that Railways agree with the recommendations

10. Item No. 021/02/06

Subject:- Prefabricated Buildings. (Proposed by WSC)

AGENDA: - During 2nd WSC meeting WSC members Proposed item for use of prefabricated buildings.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

1. Zonal Railways should submit details to RDSO. The details available with IRICEN should also be taken. RDSO will also collect details from the manufacturers and other organizations.
2. CPDE/SER mentioned that details of porta-cabin are available in the list of DGS&D. He should circulate the details to all Zonal Railways.
3. EDCE/G will co-ordinate for providing portal for sharing information. Such details may be loaded on the portal by Railways who may be provided administrative control for loading & viewing by others.

Every six month updates shall be circulated.

Railway Board's Order :

WSC's recommendations are accepted with the proviso that IRICEN shall place on their website information on new building materials and related issues & concepts.

The information available herein shall be utilized by the Standing Expert Group on IR's USSOR.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

Link to Railway by IRICEN has been provided. Railway can upload the details and other information.

COMMITTEE RECOMMENDATIONS :-

Railways can upload the details of Works where prefabricated materials are being used for benefit of other user Railways on IRICEN Website on the relevant link-up.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

Link to Railway by IRICEN has been provided. Railway should upload the details of prefabricated materials and other information. The presentation be made by IRICEN for the loaded material by railways in next WSC meeting.

11. Item No. 022/03/08

Subject : Standardisation of Various Drawings on Indian Railways.

- (i) Platform layouts (Proposed By SCR)
- (ii) Station Name Boards (Proposed By SCR)
- (iii) Water booth/taps (Proposed By SCR & NCR)
- (iv) Gate Lodge (Proposed By SCR)
- (v) Platform Walls / RCC coping (Proposed By SCR & NCR)
- (vi) Platform Benches (Proposed By SCR)
- (vii) Pale Fencing (Proposed By SCR)
- (viii) Standardisation of platform shelters. (Proposed By NCR)

Agenda : SCR & NCR proposed for standardization of various drawings on Indian Railways.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting :

Recommendations -

Committee observes that drawings may not be standardized as this kills innovations. The information should be shared by providing details on Civil Engg Portal. EDCE/G may co-ordinate to provide linkage on the portal like IRPSM software. Railways can upload their excellence in sub groups.

There is need to standardize the low cost mini-platform shelters.

Railway Board's Order

WSC's recommendations are accepted with the proviso that IRICEN shall provide place on their website for Railways to upload their excellences on this portal.

Linkage to this information through IRPSM shall be organised by EDCE(G).

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

- (i) IRICEN has provided link on their website for uploading of information by Railways. CE/P&D or Dy.CE/P&D of Railway can be nodal officer for getting password from IRICEN for uploading information on the Web.

- (ii) IRICEN may consider providing subgroups for loading of information on Website such as Track, Bridges, Works, Drawings, New materials etc.

COMMITTEE RECOMMENDATIONS :-

- (i) The link provided by IRICEN on their Website should be utilized by Railways for their own use.
- (ii) Further sub-groups on items indicated by IRICEN on Web-site should be made as per the need and requirements of the concerned Railways.
- (iii) Now, the item is proposed for closure.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure

12. Item No. 025/03/08

Subject : Provision Of Tool Kit With Artisan Staff On Indian Railways.
(Proposed by SWR)

AGENDA : SWR proposed to modernize the IOW artisan staff, such as carpenter, blacksmith, mason etc. by prescribing small tools & equipments for them, including provision of funds for purchase of these tools & equipments.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

1. No need to standardize the kit.
2. Each Railway to nominate 2 artisans each who are sincere, young & not from divisional HQ & send for training in NICMAR, Hyderabad and advise to IRICEN.
3. IRICEN to co-ordinate & tie up with NICMAR for training of artisans.
4. System support & free kit will be a part of the training & kit.

Tool kit shall be as per our requirement.

Railway Board's Order :

WSC's recommendation regarding training by IRICEN from NICMAR is accepted.

A comprehensive list of tool kit including battery operated tools shall be prepared for artisan staff of all categories keeping in view the multi-skilling operations.

IRICEN & RDSO shall prepare 'Tool Document' containing Specifications of tools along with scale of tool kit, adequate inventories and consumables with each artisan staff.

RDSO shall circulate the 'Tool Document' to the Zonal Railways/PUs etc. for implementation.

These details will also be advised to the Standing Expert Group for IR's USSOR who shall incorporate these items in the USSOR document for uniform implementation on IR system.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

- (i) SCR informed that tool kits are being provided by NICMAR along with the training module.
- (ii) Three lists of Standard tool kits have been recommended by the Sub-Committee for plumber, mason and carpenter.
- (iii) Tool kit bag to be modularly customized, portable - conveniently carried by helpers/artisans so that they can move comfortably.
- (iv) It needs to be incorporated in USSOR also.

COMMITTEE RECOMMENDATIONS :-

The item is proposed for closure.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

13. Item No. 026/03/08

Subject : Manual On Passenger Amenities On Stations Of Indian Railway. (Proposed by SER)

AGENDA : SER proposed to develop a detailed Manual, in the form of neat spiral bound book A4 size, containing neat sketches of various fixtures, connections, heights, clearances, slopes, other fixing arrangements for various amenities provided at station buildings like PRS counters, Booking windows, details of steps of FOB, ramps, hand railings, urinals etc. may be prepared which will serve as a handy guide to the field staff. This will help in evolving standard patterns and finishing for various passenger amenities

to give a uniform appearance at any station as in the case of retail outlet of any corporate entity.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

Presentation on the Manual on Passenger Amenities on stations of Indian Railway was delivered by RDSO. Committee observed that there are variations in the level of amenities proposed by sub-committee & presently approved by Railway Board.

Railway Board may approve the guidelines at the earliest.

Railway Board's Order:

RDSO shall submit 8 copies of the guidelines prepared for circulation to concerned Directorates for study and finalization in Railway Board.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

There are inter-department issues involved in this item. The Committee has submitted report to Railway Board. The issue to be dealt by Board.

COMMITTEE RECOMMENDATIONS :-

Board may issue suitable instruction on the issue. The item is proposed for closure.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

14. Item No. 027/04/12

Subject : Standard procedure for ducting and wall recess in buildings (Proposed SR).

AGENDA : SR proposed for Standard procedure for ducting and wall recess in buildings.

Presently ducting for electrical wiring and wall recess for electrical switch boxes are being done after the wall is constructed by making non-standard grooves on the wall that too, by breaking with crow bars/hammering etc. which lead to development of cracks at such locations immediately after building is commissioned. In order to avoid such practice, there is necessity to issue a standard procedure for ducting/concealed wall recess in buildings.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting :

Recommendations -

Committee observes that this issue requires administrative decision through JPO which can be issued by Railways on the lines of SC & SECR. Railway Board is also requested to issue guidelines in this regard.

Railway Board's Order :

WSC's recommendation is accepted.

Joint Guidelines with Electrical & Telecom Directorates from Railway Board shall be considered.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

ED/L&A/III informed that Railway Board have already processed the JPO in their office and is likely to be issued shortly within a fortnight.

COMMITTEE RECOMMENDATIONS :-

Board may issue instructions already in the process of finalisation.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

15. Item No. 031/04/12

Subject : Guidelines on Retrofitting of Existing Buildings (Proposed by RDSO).

AGENDA : As per reports, 59% of India's land area could face moderate to severe Earthquakes. During Earthquakes, buildings particularly masonry buildings are susceptible to damage due to lack of tensile strength etc.

Seismic retrofitting is a technique which focuses on modifying existing structures to make them more earthquakes resistant. Presently, there are no concrete guidelines available on Indian Railways in spite of falling in high intensity Seismic Zones, i.e. Zones III, IV & V. It is proposed to issue a guideline for retrofitting of various structures.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting :

Recommendations -

Sub-committee may be formed to finalise the guidelines prepared by RDSO as under:

1. Shri S. M. Maheshwari, Ex-ED/W/RDSO, Convener
2. Shri R. P. Saxena, CE/W/WR
3. Shri K. M. Tripathi, CPDE/ NFR
4. Shri Alok Verma, CE/HQ/WR
5. Shri S. K. Garg, SP/Works/ IRICEN

Railway Board's Order :

WSC's recommendation is accepted.

Sub-committee to finalise the guidelines prepared by RDSO and submit to Railway Board for approval by end of April 2012.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

It was apprised that CPWD in association with IIT, have already issued the detailed instructions on this subject "Handbook on Seismic Retrofit of Buildings" by CPWD, Indian Buildings Congress in association with IIT, Madras. Hence, there is no further need to reinvent the wheel. We can follow these instructions straightway.

COMMITTEE RECOMMENDATIONS :-

Item is proposed to be closed.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

16. Item No. 033/04/12

Subject : Standardization of facilities for Engineering Department at Stations (Proposed by SECR).

AGENDA : SECR proposed for standardization of facilities for Engineering Department at stations.

S&T department has standardized room sizes or other buildings for major stations. Engineering Department should also plan for centralized rooms for operation of valves of different carriage watering lines and other lines in the yard as well as a room for works supervisors.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

1. At Type A-1, A & B stations & where IOW is headquartered, a service room may be provided for Engineering Deptt for maintenance staff & IOW at the end of the home platform or mezzanine floor or suitable place with pathways to connect all the platforms.
2. IOW & his staff may be given walkie-talkie to have connections with related station staff.

Railway Board's Order :

WSC's recommendation is accepted. It may be included in I.R. Works Manual under revision.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

This item is being included in the Draft IRWM under preparation.

COMMITTEE RECOMMENDATIONS :-

Item is proposed to be closed.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

17. Item No. 034/04/12

Subject : Detailed guidelines for site order book, Material passing Register, quality of Cement & Steel (Proposed by SECR).

Agenda : SECR proposed for detailed guidelines for Site Order Book, Material Passing Register, Quality of Cement & Steel.

Detailed guidelines for Site Order Book, Material Passing Register, Accountal of cement & steel supplied by contractor, Type of test reports & test to be conducted for ensuring quality of cement & steel, test check by Officers of different levels; be issued by Railway Board.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

Sub-committee of Shri J. K. Singla, CPDE, SECR as convener & Shri Venkataswar Rao, CE/W/SCR is nominated to study the various guidelines/ circulars of Railways.

Committee may submit detailed guidelines with formats to Railway Board under advise to Member Secretary/WSC by April 2012.

Railway Board's Order :

WSC's recommendation is accepted. Sub-committee shall submit its recommendation by 30.04.12.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

Sub Committee has already submitted this report to Railway Board on 16.8.2012. In the presentation, it was informed as under :

- (i) Sub-Committee has identified 36 registers. Sub-Committee proposed that relevant items out of 36 registers depending upon the type of work may be contained in one register and it should be printed & machine numbered and issued by Sr.DEN/DEN dealing with the contract.
- (ii) Committee also recommended that test lab be established for testing of material.
- (iii) A quality audit team at HQ level consisting of one JA Grade and one Sr.Scale/Jr.Scale may be nominated for inspection/checking the quality of works at site.

COMMITTEE RECOMMENDATIONS :-

- (i) Registers suggested by Sub-Committee will be made part of proposed Works Manual which is under revision.
- (ii) Geo-tech Lab may be set up only where it is required. The equipments required may be procured through Store contract. Other tests may be done through Institutions and Engineering Colleges etc., if available nearby.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

- (i) Registers suggested by Sub-Committee will be made part of proposed Works Manual which is under revision.
- (ii) Geo-tech Lab may be set up only where it is required. Other tests may be done through Institutions and Engineering Colleges etc., if available nearby.
- (iii) Item is closed as further new directions are not required.

18. Item No. 035/04/12

Subject : Penalties for non deployment of Engineers by Contractors at worksite (Proposed by SECR).

Agenda : SECR proposed for Penalties for non-deployment of Engineers by Contractors at work site.

Vide Railway Board letter no. 81/W1/CT/16, dated 18.03.1983; the penalty of Rs. 1000 and Rs. 2000 per month for diploma and degree holder respectively is to be imposed for defaulting the provision. This has lost relevance after passing 28 years.

NWR had moved the proposal to their HQ/Finance for enhancing the amount narrated above to Rs. 20000 and 25000 per month penalty for diploma holder and degree holder respectively. Finance had opined that since policy was issued by Railway Boards hence modification shall be issued by Railway Boards. In view of this issue should be taken up with Railway Board for enhancing the penalty amount.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting:

Recommendations -

- (i) The imposition of penalty for non engaging the engineer may be enhanced as :
 - For degree holder Engineer - Rs. 40000.
 - For Diploma holder Engineer - Rs. 25000.
- (ii) Penalty for non-engaging the engineer on contracts costing above Rs 5.0 Cr to be decided by CAO/C depending upon the nature of work.

Full time employment of contractor's Engineers and their duties with site supervision specifically should be ensured.

Railway Board's Order :

The matter to be suitably examined in Railway Board with correction slip to the concerned clause of GCC and standard special conditions / instructions to tenderers.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

- (i) Site engineer whether diploma or degree holder will be considered at par only.

- (ii) Number of site engineers may be decided as per the value and nature of the work.
- (iii) Penalty may be laid down on the basis of "per engineer per month".
- (iv) This is not part of GCC so far. It may be incorporated as a special condition.
- (v) This should be looked into in detail by CE/P&D/NWR and will send a draft proposal to Board for issuing instructions.

COMMITTEE RECOMMENDATIONS :-

Railway Board is requested to consider and issue necessary instructions.

Railway Board's Draft Orders:-

Item should be looked into in detail by CE/P&D/NWR and who will send a draft proposal to Board by 15.12.2012 for consideration of Railway Board.

19. Item No. 036/04/12

Subject : Appreciable improvement of existing Railway Colonies and to develop Model Colonies for maximum staff satisfaction (Proposed by CR).

AGENDA : Central Railway proposed for appreciable improvement to existing Railway Colonies and to develop Model Colonies for maximum staff satisfaction.

- (1) Present situation : At present, the condition of railway colonies is very bad and funds are spent in unplanned way, mainly because officers from ADEN onwards are not devoting/having even 5% time for colonies.
- (2) Aim is to develop Model Colonies :
 - a) To improve the life style of staff, their satisfaction, to enhance their potential and to improve image of Engg. Deptt.
 - b) To provide all required amenities in important / major colonies, as being done by private, semi-government & government sectors (e.g. Air Force, Army etc.)
 - c) To use all limited resources on planned maintenance.
- (3) Proposal/Suggestions to Develop Model Colonies :
 - a) Development of Integrated Master Plan and planning all required amenities in important / model colonies. Major expenditure for 'A' category, i.e. important Model Colonies in important cities & least expenditure for 'C' category colonies, i.e. way side stations.

- b) Amenities proposed in important Model Colonies/Townships :
- (i) Entire boundary wall with only one security gate.
 - (ii) Parks, Playground etc., Recreation Club / Railway Institute, Community Hall, Barat Ghar etc.
 - (iii) Sports facilities like swimming pools, badminton court etc. and Health Club including Yoga Centre.
 - (iv) Polyclinic / Health Unit, Co-operative / Shopping Complex, Post Office, Bank & Schools etc.
 - (v) Well planned wide roads with shady trees.
 - (vi) Good drainage & water carriage sewerage disposal system with treatment plant.
 - (vii) Efficient electric supply with standby arrangement.

(4) Improved and planned maintenance of existing colonies / quarters :

- a) Identifying quarters, which are unsafe, unlivable and beyond economical repairs for reducing maintenance resources.
 - b) Survey of quarters required at each station as per Performa for realistic assessment and planning extra quarters, if at all required, only in major model colonies.
 - c) Allotting vacant quarters in major ('A' Category) & medium ('B' category) colonies.
 - d) Survey of each quarter for planned maintenance through DBM, Zonal Contract, LAW, PWP etc. instead of complaint based maintenance.
 - e) Planning major expenditure for 'A' category, i.e. important model colonies & least expenditure for 'C' category colonies, i.e. way side stations.
- (5) Separate Sr.DEN/Bldg. at divisional level, in charge of all buildings, i.e. colonies including station, as in Electrical & Mechanical Deptt. of Indian Railways.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting :

Recommendations -

System of SIG for colony be implemented for improvement of existing Railway colonies.

It is proposed for closure.

Railway Board's Order :

WSC's recommendations are accepted.

RDSO shall prepare comprehensive circular within two months for SIG inspection of colonies by all concerned departments at various levels at Division & HQ and submit to Railway Board for approval.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

This item has been incorporated in item No.019/02/06. Therefore, this item is not required further.

COMMITTEE RECOMMENDATIONS :-

Item is proposed to be closed.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

20. Item No. 038/04/12

Subject : Standard drawings for Platform Shelters with openings for OHE mast in sloped corrugated sheet roofing (Proposed by SR.)

Agenda : Standard drawing for opening in COPs for OHE mast etc.

Presently there are no standard drawings available for openings in platform shelters for OHE mast, leading to adoption of local arrangements which are not effective in preventing water leakage from shelters. In most of the places where OHE mast is on platform, wet floors are seen. These locations are creating inconvenience to passengers during rainy seasons. RDSO may arrange to issue standard drawings for openings in platform shelters; specially with corrugated AC sheet, Galvalume sheet roofing etc.

RECOMMENDATIONS DURING WSC MEETING & RAILWAY BOARD'S ORDERS:

4th Meeting :

Recommendations -

System of SIG for colony be implemented for improvement of existing Railway colonies.

It is proposed for closure.

Railway Board's Order:

WSC's recommendations are accepted.

RDSO shall prepare comprehensive circular within two months for SIG inspection of colonies by all concerned departments at various levels at Division & HQ and submit to Railway Board for approval.

COMMITTEE OBSERVATIONS: -

SR had submitted drawing with sealing arrangement to RDSO. The drawing can be studied by RDSO.

COMMITTEE RECOMMENDATIONS:-

- (i) SR should upload the drawing to be used by all Railways on trial basis.
- (ii) The future construction should ensure that generally portals are not allowed on platform obstructing passenger movement & causing leakage problem etc. as far as possible.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

SR should upload the drawing to be used by Zonal Railways on trial basis. SR will coordinate with all railways and will present the trial results in next WSC.

B. New Agenda Items :

21. Item No. 039/05/12

Subject: Provision of ramp on FOBs and at the end of platforms

(Proposed by SCR.)

Agenda: SCR proposed for Provision of ramp on FOBs and at the end of platforms.

- 1) Most of the FOBs on South Central Railway have not been provided with ramp and are having steps on one side or both sides. Handicapped people are being taken by ramp of 1 in 6 (provided as per SOD, item no. 6, note (b), Chapter-II), from the one end of platform to other platform, whereas to carry physically challenged persons the ramp should be 1 in 20.

This requires correction to the SOD, item no. 6, note (b), Chapter-II. The Board may issue necessary instructions for modification of ramp from 1 in 6 to 1 in 20 in case ramp is not provided on FOB's or alternate arrangements may be suggested.

- 1) It is proposed that all new FOBs should invariably to be provided with ramp on one side and steps on one side. Also wherever feasible ramps may be provided on existing FOBs. Board may issue suitable instructions to this.

- 2) At few stations lift is being provided on the end platforms. If the same is provided on the island platform also, then the existing ramp of 1 in 6 available at the end of Platform need not be replaced with 1 in 20.

This item may be included under minimum essential amenity under Passenger amenities. Board may issue suitable instructions.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

SCR informed that SOD permits the slope of 1:6 for provision of ramp for handicapped person. As per direction indicated in the RDSO Guidelines of 1998, 1 in 12 ramp is permitted and flatter slope can be provided by Railways. Trolley path may be used by handicapped person with escort.

COMMITTEE RECOMMENDATIONS :-

- (i) Wherever space permits, one side stair & other side ramp may be constructed with 1 in 12 slope for FOB with centrally supported single columns to reduce the area at platform for foundation like it is done for Metro etc.
- (ii) In future structures and end of platform 1:12 ramping may be provided. Wherever possible, modification in existing structures may also be provided with 1:12 ramp.

Railway Board's Draft Orders:-

In new construction of FOB 1:12 ramp may be provided with landing at every 9 m horizontal distance as per RDSO guidelines on "AMENITIES TO BE PROVIDED AT RAILWAY STATION AND OTHER PUBLIC BUILDINGS FOR THE PERSONS WITH DISABILITIES" Nov 1998.

22. Agenda Item No. 040/05/12

Subject : 1) Re-designating various categories of artisans as multi skilled artisans

2) Imparting training from outside organization and providing a standard tool kit

**3) Drafting a specified syllabus for multi-skilled artisans.
(Proposed by SCR.)**

Agenda : SCR proposed-

- 1).Re-designating various categories of artisans as multi skilled artisans
 - 2). Imparting training from outside organization and providing a standard tool kit
 - 3). Drafting a specified syllabus for multi-skilled artisans.
- 1) It is proposed that the present system of posts of multiple disciplined artisans, is to be disbanded. There should be multi-skilled artisans.

There is need to re-designate various multiple posts like Mason/Carpenter/Plumber etc., as multi skilled Khalasi/Artisan.

- 2) They should be trained to carry out a small repairs/work pertaining to plumbing, carpentry, mason etc., as in case of private maintenance of residential, apartments/buildings.

Training for artisans will improve output of staff. Procuring and replacement on a regular basis and providing them a standard tool kit.

- 3) CAMTECH schedule and syllabus may be adopted and referred to in IRWM. This will help in developing multi-skilled Khalasis and also increase in the efficiency of the artisans in addition to savings.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

Rail Coach factory/Kapurthala is having the concept of multi skilled artisans in their factory. This issue needs further examination from Industrial Relations points of view in the Railways.

COMMITTEE RECOMMENDATIONS :-

Sub Committee of CE/P&D from WCR, NCR and SCR (Convener) is nominated to further study the issue and submit recommendation for consideration.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

Sub Committee of CE/P&D from WCR, NCR and SCR (Convener) is nominated to further study the issue and submit recommendation by 15.12.2012 for consideration of WSC.

23. Agenda Item No. 041/05/12

Subject : Indication of MSL (mean sea level) at Stations name board on Platform (Proposed by SCR.)

Agenda : SCR proposed for Provision of MSL at Stations.

Para 424 of IRWM describes the method of provision of Station Name Boards. In this the convention of writing MSL has been done away. Hence MSL, is not being written on the station name boards by maintenance IOW's. However, MSL is very essential for planning various civil and track works, like doubling, tripling, siding works, yard remodeling, drainage system, service buildings etc.

Hence it is proposed that **Para 424** of IRWM may be modified and correction slip to be issued duly indicating the reference bench mark to be taken for MSL value, similar to GTS bench mark.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

MSL is to be written as was being done in earlier Works Manual.

COMMITTEE RECOMMENDATIONS :-

MSL is to be written on name Board of stations duly rounded off to the accuracy of at-least to the nearest half of a meter.

Item is proposed to be closed.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

24. Agenda Item No. 042/05/12

**Subject : De-linking the maintenance activities of Bridges entrusted with the works Cadre
(Proposed by SR)**

Agenda : SR Proposed for De-linking the maintenance activities of Bridges entrusted with the works Cadre.

As per para No. 117 of Bridge Manual as well as para 119 of Works manual, SE/works cadre is responsible for keeping water way of all Railway Bridges clear, maintenance of the foundations and superstructure of all bridges as well as maintenance of the superstructure of bridge having spans less than 12.20m span. However, as SE/works has no transportation means of his own (unlike PWI, who has, at his disposal, trolleys etc) more often than not, he has to depend

upon on PWI for access to the bridge site. Also, with dwindling staff, it is not possible for SE/Works to undertake such maintenance aspects of bridges as, at present; Works Cadre is hard pressed with the maintenance of ever increasing work load of quarters, colonies, service buildings etc. Therefore, in order to address the problem and ensure a satisfactory level of bridge maintenance which is a safety related item, it is proposed to create a separate cadre of SE/Works/Bridge who will be provided with means of communication, mobility for maintenance of bridges.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

SE/W are maintaining the Bridges. There should be SE/W/Bridge to look after the bridges. Approaches to Bridges can be provided & the trolley to SE/W/Bridge is not required. Strengthening of Bridge organization is required. This should be covered in item No.009/01/05 regarding Rationalisation of Yardstick for work organization.

COMMITTEE RECOMMENDATIONS :-

It is proposed to be closed in view of the fact that issue shall be addressed by Sub-Committee dealing issue as subject of Yardstick for works organization.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

25. Agenda Item No. 043/05/12

**Subject : Approval for creation of separate imprest for SE/JE/SSE (Works) for local purchase of materials for maintenance works.
(Proposed by CR)**

Agenda : CR Proposed for Approval for creation of separate imprest for SE/JE/SSE (Works) for local purchase of materials for maintenance works.

On central railway, no power of imprest for making local purchase of miscellaneous materials for emergent requirements has been given to SSE(Works). The SSE(Works) utilizes the ADEN' imprest ranging Rs.10000 to 15000 which has been found to be grossly inadequate considering the increase in prices of materials, requirement of new type of fittings not connected with PL number and delay involved in purchase and supply from stores. The other route of local procurement through EA to DRM is effective only purchases valuing

near Rs.40000 per case. The procurement through this route is not suitable for small value purchases due to cumbersome procedures involved in local purchase. Further, through the supply chapter - 25 of USSOR contains broad list of items which can be taken from zonal contractor as supply item but procurement of small quantities of material is difficult due to procedural requirements of issue and sanction of W.O.

It is, therefore necessary, to approve creation of imprest for all SE/SSE depots which needs to be decided at board's level. It is brought out that the efficiency of the maintenance system of SE/SSE largely depends on the availability of requisite materials on time. The adequate availability of imprest shall go a long way in improving the efficiency of system. A detailed policy guideline is therefore required to be issued.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

This item is already covered in WSC item No.019/02/06. This item is also addressed in revised IRWM. Requirement of creation of Cash imprest for IOWs for carrying out emergent repairs and to purchase materials, equipments & hiring men for such purpose may be included in IRWM.

COMMITTEE RECOMMENDATIONS :-

Requirement of creation of Cash imprest for IOWs for carrying out emergent repairs and to purchase materials, equipments & hiring men for such purpose may be included in IRWM.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

26. Agenda Item No. 044/05/12

Subject : Instructions for signage's at Railway stations.

(Proposed by NCR)

Agenda : NCR Proposed for Instructions for signage's at Railway stations.

Various guidelines including colour scheme for signages at Railway stations are not matching with the provisions in 'Indian Railways Works Manual', as indicated below:

1. Para 425 of 'Indian Railways Works Manual' as issued by Railways Board in year 2000.

| Area/Type of signage | Background | Signage matter |
|----------------------|------------|----------------|
|----------------------|------------|----------------|

| | | |
|--|---------|------------|
| Important offices (i.e. SS, Dy SS, Enquiry, Telegraph and RMS etc) | White | Red |
| Passenger amenities (i.e. refreshment room, waiting room, retiring room, platform lavatories etc.) | White | Blue |
| Other offices | White | Black |
| Direction-for amenities | On wall | Blue arrow |
| Direction-for offices | On wall | Red arrow |

2. (i) Para 4.9.4.1 of 'manual of Standard and Specifications for Stations' issued by Railway Board in June 2009 in connection with development of world class stations.
- (ii) Policy circular No.2 issued by Commercial Directorate vide letter No.97/TG.II/39/11/signages dated 11.03.1999.

| Area/Type of signage | Background | Signage matter |
|------------------------------------|------------|----------------|
| Services | Yellow | Black |
| Utilities | Blue | White |
| Caution | Red | White |
| Direction-within station building | Yellow | Black |
| Direction-station circulating area | Green | White |
| Direction-station approach roads | Blue | White |

3. Pictograms for Railway Premise' issued by IRICEN, Pune in December 1995.

| Area/Type of signage | Background | Signage matter |
|----------------------|------------|----------------|
| Services | Yellow | Black |
| Utilities | Yellow | Black |
| Caution | Yellow | Black/Red |
| Direction | White | Black |

Suggestion: The item requires discussion in the Works Standards Committee meeting for reconciling the provision in both the manuals to match with each other. Even circulars issued should be either matching with manuals otherwise correction slips should be issued to manuals to remove the contradiction.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS : -

- (i) There are different instructions on signage's by Railway Board, IRICEN's Pictogram & Commercial Directorate of Railway Board etc. These need to be examined to remove contradictions.

- (ii) There is established system of International Signage's which can be studied and used suiting to our requirements and needs after making modification for domestic requirement.

COMMITTEE RECOMMENDATIONS :-

Sub-Committee of CE/P&D/NCR (Convener) & CPDE/NWR are nominated to study further and submit report for consideration of WSC.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

Sub-Committee of CE/P&D/NCR (Convener) & CPDE/NWR are nominated to study further and submit report for consideration of WSC by 15.01.2013

27. Agenda Item No. 045/05/12

Subject : Performance Guarantee (PG)

(Proposed by RCF, Kapurthala)

Agenda : RCF, Kapurthala Proposed for Performance Guarantee (PG)

The introduction of submission of PG in works contracts has improved the contract management wonderfully. It has reduced court cases which were mandatory to recover Liquidated damages of any other outstanding dues against the defaulting contractors. Dispensing with calling of tenders at the risk & cost of the defaulting contractors and forfeiting PG and security deposit on termination of the contract on contractors default has eliminated wastage of time in pursuing the contractors for signing the final bills and vetting thereafter. The time previously wasted in these activities is now being fruitfully utilized for finalizing the tenders for the balance work.

The contractors were previously required to submit the PG within 15 days of the date of issue of letter of acceptance. This period has now been extended to 30 days and further extendable up to 60 days with penal interest of 15% per annum. This revision has not taken care of the duration of completion period.

Suggestion:-

Submission of PG within 30 days from the date of issue of letter of acceptance in case of urgent works with shorter completion period (say upto 6 months) and works relating to day today maintenance such as zonal contracts, is hampering the satisfactory execution, Therefore it is suggested that the earlier provision of submission PG within 15 days should be restored in such cases. For contracts other than zonal with completion period of more than 6 months and up to one year, the period of submission of PG may be kept within 30 days without any

grace period and for contracts having completion period more than one year, additional grace period of 30 days with penal interest may be given.

It is also suggested in the interest of work that signing of contract agreement be de-Inked from the submission of PG so that the work could be got started immediately after issue the contractor, if any, before the prescribed time frame of submission of PG, should not be violation to contractual conditions and contract agreement might be terminated on this account also. Suitable clause may be enshrined in the GCC.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

- (i) As per existing instructions, Contractor can start the work after issue of acceptance letter even without depositing the PG.
- (ii) The changes in instruction by Railway Board has been issued in view of certain observations made by members and if any problem is faced by Railways, the issue can be referred to Board for clarification.

COMMITTEE RECOMMENDATIONS :-

- (i) Existing instructions are sufficient. No need to issue further instructions.
- (ii) Item is proposed for closure as no further action is required.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

28. Item No. 046/05/12

Subject : Review for planning & policies towards housing accommodation in Railways. (Proposed by NWR, Jaipur)

Agenda : NWR, Jaipur Proposed for Review for planning & policies towards housing accommodation in Railways.

Corporate welfare plan (2006-2015) made for providing adequate residential accommodation & improving upkeep of existing quarters, Which includes basically providing basic amenities like kitchen, bathroom, toilet & replacement of non-standard quarters on age cum condition basis.

Further Railway Board has issues instructions for providing type-II quarter for new construction. But the sanction works are slow progressing due to less fund allotment.

Thus staffs are not incline to live in Railway accommodation which are having grossly in- adequate accommodation for family needs and to live decent life, looking to the raised living standards of people. So also there is enhance rate of HRA which is sufficient to higher rented accommodation having better living accommodation. There are 8826 nos Nonstandard type I quarter and most of these quarters are vacant on one hand & HRA is being granted to employee on other hand.

To overcome all the problem conversion of old type-I, two quarters into Standard type-II quarter is a better solution without incurring much of expenditure.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

COMMITTEE OBSERVATIONS :-

Railways feel the requirement that two quarter (Type - I) may be allotted to one staff so that he may have Type II accommodation. This issue can be dealt by Railway either by attaching one additional new room to existing Type I quarter.

COMMITTEE RECOMMENDATIONS :-

- (i) Two type I quarters can be combined to make it as Type II quarter. No extra rent be payable by occupant due to extra covered area as the same is on account of administrative decision.
- (ii) Board may consider issuing suitable instructions as the issue if felt necessary.
- (iii) Item is proposed for closure.

Railway Board's Draft Orders:-

WSC's recommendations are accepted for closure of the item. Item is therefore closed

29. Item No. 047/05/12

**Subject: Maintenance of bore wells fitted with Electrical pumps.
(Proposed by SR)**

Agenda: Now days more or less, all the bore wells are fitted with electrical pump. Electrical department is not having any annual contract for maintenance of these pumps Hence, all pumps in bore well with capacity up to 2HP/5HP can be brought under the maintenance of engineering department and item can be included in SOR for maintenance of the same.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

Committee Observation:

- (i) All pumps fitted with bore well can be brought under maintenance of Engineering department in consultation with Electrical department.
- (ii) Item can be included in USSOR for maintenance of these pumps.

Committee Recommendation:

- (i) All pumps fitted with bore well can be brought under maintenance of Engineering department in consultation with Electrical Deptt.
- (ii) Item can be included in SOR for maintenance of the same.
- (iii) The issue can be referred to Board if Electrical Deptt. does not agree for this change of system.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

Item can be included in USSOR for maintenance of bore wells fitted with Electrical pumps.

30. Item No. 048/05/12

Subject: Issue of controlled documents (Proposed by SR)

Agenda: All the instructions on policy matters, circulars, correction slip being issued are not reaching gross root level. Many times correction slip, latest instructions etc. go out of sight. There is no system of maintaining all the related instructions at one places and deleting the instructions which would have been superseded subsequently. During review of vigilance cases also it has been noticed that several vigilance cases have resulted because of ignorance of relevant instructions on the subject. It has also been noticed that though executive applies/ use a particular instruction vigilance try to examine the case with respect to some other instruction both of which may co-exists with certain amount of overlap. Earlier the issue of controlled documents was addressed by way of issuing various Engineering Standing Orders

under the signature of ME incorporating all the relevant instruction on tender and other subjects. It was also stated in the above standing order that the instructions /circulars which do not find a place in the above standing order were not valid and deemed to be cancelled. The above compendiums of instructions were very handy and useful. However, with the passage of time, the above system has gone into dis-use. Hence, there is need to revive the above system so that various circulars/policy letters are issued in a systematic way through systems of "controlled document "to ensure that no policy letter/circular misses from the applicability list. It is also felt that the above system of issuing and maintenance of controlled documents would reduce the avoidable vigilance cases.

Minutes of 5th meeting of WSC held on 27th-28th September 2012

Committee Observation:

- (i) Board has been issuing Engineering Standing orders earlier but of late the same are being issued incorporating the latest instructions.
- (ii) It was felt that this system needs to be revived.
- (iii) Instructions on policy matter such as Tender etc be examined by Sub-Committee of CE/P&D of NWR (Convener), SECR and WCR to prepare a Compendium.

Committee Recommendation:

- (i) Board may consider reviewing the system of Standing Engg. Orders.
- (ii) Sub-Committee should prepare Compendium of Instruction on Tender to begin with.

Railway Board's Draft Orders:-

WSC's recommendations are accepted.

Instructions on policy matter such as Tender etc be examined by Sub-Committee of CE/P&D / NWR (Convener), SECR and WCR who will prepare a Compendium by 15.12.2012

Annexure 1

Agenda Items Closed During Previous Meetings of Works Standards Committee

| SL | Item No. | Subject (Proposed By) | Item Closure Reference |
|-----|-----------|---|--|
| 1. | 001/01/05 | Name & Constitution of Committee. (WSC) | 2 nd WSC Meeting 04 th & 05 th Apr 2006 |
| 2. | 007/01/05 | Rationalisation of the Specifications. (NER, ER, SR) | 2 nd WSC Meeting 04 th & 05 th Apr 2006 |
| 3. | 011/01/05 | Use Of Bricks Made Of Fly Ash. (SECR) | 2 nd WSC Meeting 04 th & 05 th Apr 2006 |
| 4. | 012/01/05 | Strengthening Of Works Unit. (WR) | 2 nd WSC Meeting 04 th & 05 th Apr 2006 |
| 5. | 014/01/05 | Authority of Works Measurement At Various Levels In Works Cadre (Open line /Construction). (WSC) | 2 nd WSC Meeting 04 th & 05 th Apr 2006 |
| 6. | 015/02/06 | Contract - System Improvement suggestions. (NWR) | 2 nd WSC Meeting 04 th & 05 th Apr 2006 |
| 7. | 016/02/06 | Arbitrations (EDCE/G/Rly Board will be able to discuss the subject matter). (NWR) | 2 nd WSC Meeting 04 th & 05 th Apr 2006 |
| 8. | 017/02/06 | Separate cadre for Architect. (WSC) | 2 nd WSC Meeting 04 th & 05 th Apr 2006 |
| 9. | 013/01/05 | Setting Up Quality Audit Cell For Checking The Quality Of Construction And Maintenance Works Executed By Railway Board. | 3 rd WSC Meeting 2 nd & 3 rd July 2008 |
| 10. | 020/02/06 | ISO Certification of Railway Colonies. | 3 rd WSC Meeting 2 nd & 3 rd July 2008 |
| 11. | 008/01/05 | Rationalisation of maintenance practices : Maintenance of leaky roofs | 4 th WSC Meeting 19 th & 20 th January 2012 |
| 12. | 023/03/08 | Standardisation of Landscaping Area At Various Class Of Stations on Indian Railway | 4 th WSC Meeting 19 th & 20 th January 2012 |

| | | | |
|-----|-----------|--|--|
| 13. | 024/03/08 | Development of Master Plans for Infrastructure Facilities At Stations & Colonies on Indian Railway | 4th WSC Meeting 19th & 20th January 2012 |
| 14. | 028/04/12 | Outsourcing of maintenance works related to water supply and sanitation | 4th WSC Meeting 19th & 20th January 2012 |
| 15. | 029/04/12 | Hoisting of the Passenger Amenity Data on website | 4th WSC Meeting 19th & 20th January 2012 |
| 16. | 030/04/12 | Standardization of GCC for entire Indian Railways | 4th WSC Meeting 19th & 20th January 2012 |
| 17. | 032/04/12 | Enhancement of plinth area of quarters | 4th WSC Meeting 19th & 20th January 2012 |
| 18. | 037/04/12 | Planning of expeditious completion of works say 1-3 years | 4th WSC Meeting 19th & 20th January 2012 |

WSC Recommendations & Railway Board's Orders of 1st & 2nd Meeting:

1. Item 002/01/05

1st Meeting :

Recommendations -

- a) RDSO - Committee recommends for a separate Works Directorate in RDSO. Organization structure to be decided by DG/RDSO in consultation with Railway Board.
- b) Zonal Railways - Committee recommends for creation or re-designation of one SAG post as CE/Works who will look after maintenance, policy and cadre pertaining to works.
- c) Divisional Head Quarters - Committee recommends for a separate Branch Officer in Divisional Office Exclusively dealing with works matter.

Orders of Railway Board -

1. **For RDSO** - Committee recommendation for a separate Works Directorate in RDSO is found justified and agreed to. This could be headed by ED level officer and can be designated as ED/Works Standards, RDSO. Such Directorates can be created through reorganization of the existing structure of engineering department in RDSO. Structure of this Directorate can be decided by DG/RDSO in consultation with Railway Board.
2. **On Zonal Railways** - Committee's recommendation for creation/designation of one SAG post as CE/Works who will look after the maintenance, policy and works cadre and any other item pertaining to works matter, is agreed to in principle taking into account of the need. However, it is necessary that the duties and responsibilities of proposed CE/Works are to be listed, including those of CPDE and CGE as they are presently looking after such works. As far as new posts are concerned, these posts can be assigned for the cadre restructuring of the engineering department under process at present.
3. **At Divisional Level** - Committee recommended a separate branch officer in Division office exclusively dealing with works matters as works are found to be neglected. The need for separate branch officer dealing with works matter, may be agreed in principle. However, details of his duties and responsibilities need to be worked out before final decision.

The details of the work to be assigned/seen by proposed CE/Works in Zonal headquarter and Sr. DEN/Works in Division, should be deliberated by Works Standards Committee in its next meeting and make appropriate recommendations for consideration of the Board.

2nd Meeting:

Recommendations -

(A) Duties of CE/Works :

The committee discussed various suggestions given by Zonal Railways. After detailed deliberation, the Committee recommends the Duty List of CE/Works as under:-

- i) Administrative control of Sr. DEN/Works, DEN/ADEN/Works of the Division
- ii) Cadre control of Works cadre & Horticulture
- iii) Policy in regards to upkeep & maintenance of Colonies, Office/Station Building, Water Supply, Drainage and Horticulture
- iv) Works Policy
- v) Quarter Policy
- vi) Contract, Arbitration Policy
- vii) Quality Audit of works, inspection schedule of Sr.DEN/Works, DEN/ADEN/Works
- viii) Updating of Works Manual, SOR and Specifications
- ix) Performance review of latest construction/execution techniques and new materials
- x) Technical training of Works Cadre
- xi) Any other duty assigned by PCE

(B) Duties of Sr. DEN/Works :

The committee discussed suggestions given by some Zonal Railways. Keeping in view the complexity of the issue, the committee recommends constitution of sub-committee comprising CE/G/WR, CE/Works/ NWR and CE/Works/SR to frame their recommendations on duties of Sr. DEN/DEN (Works) within the next three months.

Sub-committee may consult all other Zonal Railways. In the mean time, Zonal Railways should forward their views to CE/G/WR within 15 days.

Orders of Railway Board -

- (A) Item (i) may be excluded from the duty list as there is no such post at present.
Item (vii) may also exclude the post of Sr. DEN/DEN/ADEN Works. The duty list will be guidelines for PCEs to allocate these duties as far as possible to one SAG officer in addition to any other duties considered necessary.
- (B) **This may not be pursued further.**

3rd Meeting:

Recommendations -

Committee observed that Railway Board has not agreed to duties of Sr. DEN/Works at Division level. The committee discussed the item in detail and felt that there is a need for strengthening of works organization at Division level at the level of DEN, AEN & IOW. Therefore, Railway Board may reconsider the issue related to works organization at Division level.

Railway Board's Order

Concept of Sr.DEN/Works at Divisional level is not agreed to due to functional and administrative reasons. It also overlaps & duplicates the work. Item need not be pursued further and is Closed.

However, the Works Standard Committee should take up following items for functional improvement:

- i. Basic technical training (in-house and from outside organisations) to supervisors and artisans staff of Works Cadre.
- ii. Availability and acquaintance with relevant Codes, e.g. National Building Code, IS: 456, Design Mix Guidelines, Latest advancements etc. to JEs & SSEs of Works.
- iii. Availability of standard and state of art tools & kits for working & supervision.
- iv. Ensuring System of Material Passing before its use at site.
- v. Introduction of Quality Assurance through 'Check List', 'Method Statement' etc.
- vi. Mandatory 'Refresher Courses' at Zonal Railway Training Institutes along with 'Resource Management Training' for Works Cadre.

2. Item No. 003/01/05

1st Meeting:

Recommendations -

Committee recommends for formation of Expert Group for unified work specification, preparation of basic data sheet for preparation of SOR. The Expert Group would consist of :

N. Railway (Const) - SAG Officer (Member Secretary);

Sr.Prof. (Works)/IRICEN - Convener of Committee;

NF Railway - SAG officer dealing with works matter - Member;

Western Railway - SAG officer dealing with works matter - Member;

Southern Railway - SAG Officer dealing with works matter - Member;

ED (B&S)/RDSO - Member

Railway Board's Order-

Committee's recommendation accepted with a change that Eastern Railway instead of NF Railway can be part of the Expert Group. Following will be the composition of the Expert Group:

N. Railway (Const) - SAG Officer (Member Secretary);

Sr.Prof. (Works)/IRICEN - Convener of Committee;

Eastern Railway - SAG officer dealing with works matter - Member;

Western Railway - SAG officer dealing with works matter - Member;

Southern Railway - SAG Officer dealing with works matter - Member;

ED (B&S)/RDSO - Member

Necessary support work can be outsourced, if departmental resources are inadequate.

2nd Meeting:

Recommendations -

Expert Group has recommended the outsourcing of this work through appointment of M/s RITES as Consultant. The proposal in this regard is already under consideration in Railway Board.

Expert Group has taken parallel action of collecting different documents required for the purpose from the Zonal Railways. Secretary/Expert Group & CE/Con/NR informed that Zonal Railways have not forwarded the required documents like SOR, Standard Specifications of Works, Analysis of Rates and compiled list of Non-SOR items with their rate analysis. All Zonal Railways should expedite the same so that after finalization of Consultant for this job, work may not get delayed on this account.

Committee recommends expediting this work within six months. All Zonal Railways should cooperate by forwarding required information to Expert Group within next 15 days.

Railway Board's Order-

WSC's recommendations are accepted. However, Expert Group should expedite this work.

3rd Meeting

Recommendations -

1. RITES should expedite the work of preparation of SOR & Specification.
2. Presently Shri A. K. Lahoti, CE/ Construction is coordinator from Railways side with RITES. Due to his busy schedule some other coordinator from NR may be nominated by PCE to expedite the work.

3. Convener should monitor closely the progress of SOR and Specification.
4. SOR prepared by CE/W, ECR may also be submitted to RITES for study and inclusion wherever necessary.

Order of Railway Board -

- i. Indian Railways Unified Documents - 'Standard Schedule of Rates' and 'Standard Specifications' for Works & Materials have already been approved by Railway Board alongwith financial concurrence and circulated to all Zonal Railways/PUs/PSUs vide letter no. 2009/LMB/01/03, dated 14.01.10.
- ii. All Zonal Railways have also implemented these software based documents after input of market rates for material, labour, equipment etc. and thereby, generating their respective USSORs.
- iii. A seminar to discuss the experience/feedback of Zonal Railways (Open Line and Construction) on implementation of USSOR as also the institutional mechanism created on Zonal Railways for its implementation and updation should be held at IRICEN. Shri N.C. Sharda, Dean/ IRICEN to coordinate.
- iv. Railway Board have further formulated a Standing Expert Group for systematising the regular updation of these documents through annual exercise of Correction Slip, so that all advancements alongwith feedback from Zonal Railways etc. are taken care of and non-schedule items are only by exception & not as a routine.

3. Item No. 004/01/05

1st Meeting :

Recommendations -

Committee recommends that N.Rly and S.C. Rly. will compile data in this regard and will forward to RDSO. RDSO will prepare the compiled note and will present the same in the next meeting. Other Railways may also forward their suggestions to RDSO.

Orders of Railway Board -

Committee's recommendations accepted.

2nd Meeting:

Recommendations -

Sub-committee constituted in 1st meeting of WSC comprising of **NR & SCR** had given their recommendations regarding materials to be used at different locations. Committee deliberated on each item. After discussing pros and cons of issues involved as proposed by sub-committee, it is felt by the committee to have more in-depth study on the subject. Hence, committee recommends to defer this item for discussion during next WSC meeting.

Orders of Railway Board -

This is an important topic related to works in Civil Engineering. Committee should finalize the same early **RDSO should convene the meeting of sub-committee and make draft recommendations** which should be circulated to railways and Board for finalization in next meeting.

3rd Meeting

Recommendations -

- (i) Good efforts have been made by Sub-committee in framing recommendation. However, some modifications are needed to be made in recommendations :
 - (a) Heavy duty floor terrazzo tiles mentioned by ER, CR, ER & WR can be studied for inclusion, if found suitable by Sub-Committee.
 - (b) Detailed Specifications alongwith IS Specs, if any alongwith book references, whatsoever to be reflected regarding each item in notes.
 - (c) Paver block in 'E' Class stations in proposed recommendations shall be avoided and be replaced by concrete items.
 - (d) Fiber reinforcement, vacuum dewatered concrete used at SCR, seems quite good surface and can be recommended for use by Sub-committee in all categories of stations.
 - (e) Marble floor recommended shall be avoided being the soft material.
 - (f) On Gangways, use of ceramic tiles needs review. At 'A1', 'A' & "C Category stations, Flame Granite be recommended for steps of FOBs.
 - (g) Heavy duty Chequered tiles/ Concrete Blocks with projected studs can be a good surface for edges of platform.
- (ii) At Dadar FOB, about ten years back, some tiled surface was provided which is still giving good service. CE/W/WR shall provide detailed specification of the same to RDSO for consideration of Sub-Committee.
- (iii) All Zonal Railways shall send their suggestions/remarks on proposed recommendations, again circulated during meeting within next 10 days to RDSO for consideration of Sub-Committee.
- (iv) Sub-Committee shall consider economy and life of material as well as least maintenance requirement criteria during framing recommendations. A great thought need to be put in for finalization of roofing.
- (v) RDSO should revise recommendations, as discussed above.

Order of Railway Board-

- (i) Standardisation of flooring of platform, concourse & FOB has already been approved by Railway Board and instructions issued vide RDSO's letter no. WKS/

WS/05/FS, dated 22.9.09 to Zonal Railways for following the same as and when replacement is done.

- (ii) RDSO should take feedback from the Zonal Railways on Item-(i) above and make presentation during next meeting of WSC.
- (iii) Recommendations submitted in regard to platform coverings should also be presented during next meeting of WSC.
- (iv) Sub-Committee (ED/W/RDSO, CE/W/WR & CE/W/SCR) shall also propose the recommendations for flooring in workshops and goods shed areas and to be presented during next meeting of WSC.

4. Item No. 005/01/05

1st Meeting :

Recommendations -

The Committee discussed various para of Works Manual as proposed for amendment by NE & Northern Railways. SEC & SE Rly also referred few paragraphs of Works Manual. Looking to the quantum of referred paragraphs, Committee found that it would be difficult to discuss all these para of Works Manual in this meeting. Committee recommends for formation of a Sub-Committee consisting of representatives from N, SE, SEC Railway, IRICEN/Pune and RDSO/Lucknow to review the referred paragraphs and to present the same in next meeting of Works Standards Committee. Senior Prof./Works will be Convener and CE/G N.Rly will be Secretary for this Sub-Committee. Paragraphs already discussed and decision taken by Committee will be forwarded to this Sub-Committee by RDSO. All other Railways may forward their views on IRWM paras requiring amendments.

Orders of Railway Board -

Number of Railways have indicated the need for correction in various provisions of Works Manual in the meeting. Committee's recommendations to form a Sub-Committee consisting of NR, SE, SECR, IRICEN/Pune and RDSO/Lucknow is accepted. CE/G/NR will be the Secretary and Sr. Professor (Works)/IRICEN will be the Convenor. The Sub-Committee will collect views of all the Railways on this matter and present the report in the next meeting of the Works Standards Committee.

2nd Meeting :

Recommendations -

Sr.Prof./Works/IRICEN, convener of Sub-committee nominated in 1st WSC for this review presented proposed amendments to IRWM. Committee members deliberated on proposed amendments for Chapter-I. It is observed that nos. of

amendments proposed by sub-committee are quite large and is not possible to deliberate all the proposed amendments in this WSC meeting. However, the copy of proposed amendments has been circulated to all Zonal Railways. In view of volume of discussion involved on this item, committee recommends **to conduct a special meeting of WSC.**

Orders of Railway Board -

WSC's recommendations accepted.

3rd Meeting:

Recommendations-

Sr. Professor/IRICEN presented the proposed amendment in Works Manual to committee. In addition, members proposed following items to be included in the Works Manual :

- Water supply treatment process
- Sewage treatment process
- Test check by AEN & Dy.CE should be included
- Imprest power to IOW for petty works can be included

Green building guidelines should be available in the Works Manual. Committee recommended that there is need of separate special WSC on the issue of amendment to Work Manual. All members can send their suggestions to IRICEN within one month.

Order of Railway Board-

- (i) A Sub-Committee of six Members with Shri N.C. Sharda, Dean/IRICEN as Convenor for Works Manual is reformed as under :
 - Shri N.C. Sharda, Dean/IRICEN
 - Shri S.M. Maheshwari, ED/RDSO
 - Shri R.G. Singh, CE/NR
 - Shri R.P. Saxena, CE/WR
 - Shri K.V. Prasad, CE/C, SCR
 - Shri S.P. Samantaray, CE/ECOR
- (ii) The Sub-Committee shall work out the recommended amendments to Work Manual through special meetings, to be convened by Dean/IRICEN.
- (iii) Proper Indexing of Manual also needs to be organised.
- (iv) The Sub-Committee shall make full presentation on the subject during next meeting of WSC.

5. Item No. 006/01/05

1st Meeting :

Recommendations -

After thorough discussions, committee recommends that a Sub-Committee formed for item no.1 will also do review of this work. Sub-Committee will present the same in the next Works Standards Committee meeting.

Orders of Railway Board -

The recommendation of the Committee is accepted.

2nd Meeting :

Recommendations -

Sub-committee constituted for review of IRWM was asked to examine this item also in 1st WSC meeting. Sr.Prof/Works/IRICEN, convener of the sub-committee presented proposed amendments required in IRWM or Engineering Code to enhance the powers of Railway official with regard to measurements of works. After a long deliberation on the subject by members, the proposed enhancement of powers was agreed upon. Therefore, committee recommends for enhancement of the powers of engineering officials with regard to measurements, as given in enclosed annexure.

Orders of Railway Board -

Committee's recommendation to enhance the powers of Railway official with regard to measurements of works is accepted in principle for examination in Board on case.

3rd Meeting:

Recommendations -

Committee observed that recommendations of the Sub-Committee regarding measurements are under consideration at Railway Board level.

Order of Railway Board-

Recommendations of the sub-committee have not yet been received in Railway Board. Committee's recommendations should be presented during next meeting of WSC.

6. Item No. 007/01/05

1st Meeting :

Recommendations -

- A. Following new materials, as already tried by different Railways may be widely adopted for use -
- i) Ductile iron pipes and CI mechanical compression joint - These materials may be used regularly in new works or through renewal works.
 - ii) Vitrified tiles flooring - These tiles may be used by Railways for indoor areas.
 - iii) Fly ash bricks - These may be used in lieu of clay bricks, wherever available.
 - iv) Fly ash concrete - Use of blended fly ash concrete as per BIS specifications is permitted, Railways may use the same
- B. Following new materials may be used on trial basis -
- i) Polyester fiber reinforced concrete/plaster.
 - ii) Poly tetra Methylene Terephthalate (PTMT) bib cocks and fittings.
 - iii) Aluminum sheet gutters.
 - iv) High strength tiles for flooring and pavements (outdoor use only).

Orders of Railway Board -

Some items like ductile iron pipe and CI mechanical compression joint, vitrified flooring tiles for indoor area of heavy public use, use of fly ash bricks in lieu of clay bricks (wherever available) and use of fly ash concrete as per BIS specifications have been in use for quite some time by Zonal Railways. Committee's recommendation for adoption of the same for wide usage is agreed to.

Certain items like Polyester fiber reinforced concrete/plaster, Polytetra Methylene Terephthalate (PTMT) bib cocks and fittings, Aluminum sheet gutters and High strength tiles for flooring and pavements (for outdoor use) have been recommended for use on trial basis by the Committee which is agreed to.

2nd Meeting :

Recommendations -

During 1st meeting of WSC, 4 new building materials were recommended by WSC for wide adoption. RDSO should issue necessary instructions in this regard to all concerned. Expert Group formed for Unified Works Specifications should include these items in Unified SOR.

Some more items were recommended for adoption on trial basis. Railways have taken initiatives for their use. However, no experience has been gained at this stage by Railways. Nominated Railways should undertake their usage on trial basis and send their reports to RDSO within next three months.

Orders of Railway Board -

WSC recommendations accepted.

3rd Meeting:

Recommendations -

- (i) Performance of items at SL-1 (Polyester fiber reinforced concrete/plaster) & SL-2 [Poly Tetra Methylene Terephthalate (PTMT) bib cocks and fittings] being satisfactory, can be used on regular basis. However, w.r.t. SL-3 (Aluminum Sheet gutters), there are other materials also available in market. RDSO should study these items and suggest 3 or 4 alternatives.
- (ii) Following materials can be used on trial basis by Zonal Railways :
 - (a) Ready mix bitumen compound for repairs of pot holes.
 - (b) Toughened Glass on counters.
 - (c) Cool and seal (Leak proof/ Thermal protection), white cement based Wall care putty.
 - (d) Floor Repairing Compound.
 - (e) Anti Slip Coatings compound.
 - (f) Expansion joints and wall sealing compound.
 - (g) Chemical Coating for leakage in Tanks.
 - (h) Leak proof Tape in joints of Pipes and fittings.
 - (i) Aluminum Composite Panel

Order of Railway Board-

- (i) Most of the new building materials being widely used have already been incorporated in the IR's Unified SSOR.
- (ii) New Building Materials and Technological Advancements should be used by field organisations and also to be recommended to the Standing Expert Group for inclusion in the unified documents through Correction Slips for adoption on Indian Railway system.
- (iii) The Standing Expert Group shall submit report on the subject in all the meetings of Works Standards Committee and it shall be Standing Agenda item in all meetings of WSC.

7. Item No. 009/01/05

1st Meeting :

Recommendations -

All the members are of the opinion that presently, there is inadequate supervision for ensuring quality of works. Railways should make suggestions to evolve the system for assessing the requirement of work supervisor based on workload for ensuring proper quality to RDSO. Based on suggestion from Zonal Railways, this item will be discussed in next meeting.

Orders of Railway Board -

Committee's recommendation accepted.

2nd Meeting :

Recommendations -

Committee members deliberated on the subject. As there were diverse views by different members, committee recommends for constitution of sub-committee consisting of CE/Works/WR, CE/Works/NWR and CE/Works/ SR to give their recommendations. Sub-committee should forward their recommendations to RDSO within next 3 months. All Zonal Railways should forward their opinion to CE/Works/WR, the convener of the sub-committee within next 15 days. The recommendations of the sub-committee will be discussed in next WSC meeting.

Orders of Railway Board -

WSC's recommendations are accepted.

3rd Meeting:

Recommendations -

CE/W/WR presented the recommendation of Sub-committee. Members suggested further changes, e.g. Yardstick should be linked with ITKM.

Total implication of recommendations to be worked out for any selected units. Sub-Committee should again discuss the issue raised by WSC and come out with recommendations at the earliest.

Order of Railway Board-

The Sub-Committee of Shri S.B. Ninawe, CBE/SECR, Shri A.K. Sinha, CE/Works/SR & Shri C.L. Meena, CE/C/NWR has submitted its report to Board in August 2011. Salient features of the report should be deliberated in 4th meeting of WSC and accordingly, with these recommendations, the approval of Board shall be processed.

8. Item No. 018/02/06

2nd Meeting :

Recommendations -

Two presentations by SWR & SCR were made bringing out the concept and benefits of Green Building Constructions. In view of the importance being attached to Green buildings world over for environmental considerations, committee recommends to take up at least one important building as Green building in each Zonal Railway.

Railway Board may issue necessary policy guidelines, instruction on this subject to enable the Railways to grasp the technological developments in this direction.

WSC recommends that exposure may be given to the engineering officials in India & abroad.

Orders of Railway Board -

WSC's recommendations are acceptable. Few Railway Officers may be deputed/trained abroad/or in India on Green Building Concept.

3rd Meeting:

Recommendations -

Para on Green Building concept should be provided in the Works Manual alongwith the list of items which are as per this concept. Efforts should then be made to plan new buildings as per provisions of these green building concepts in the Manual.

IRICEN can organize two days course for this purpose on green building concept. Thereafter, RDSO may consider standardization of drawing of Type I, II, III & IV quarters as per green building concept.

Order of Railway Board-

- (i) WSC's recommendations are accepted. Proposed Para should be finalized by the Works Manual Sub-Committee.
- (ii) IRICEN, Pune should include in their curriculum a two days course on the subject.
- (iii) WSC recommendations on development of drawings of Types - II, III & IV quarters as per Green Building Concept by RDSO, is accepted. For this purpose, assistance of professional agencies/organisation could also be taken.
- (iv) Typical Type Plans for Types II, III & IV quarters, as submitted by RDSO are under examination and a decision would be communicated by Railway Board soon.

9. Item No. 019/02/06

2nd Meeting:

Recommendations -

WSC discussed the item but has not recommended any suggestion. This item needs more deliberations All Zonal Railways should present their view in next meeting of WSC.

Orders of Railway Board -

WSC should deliberate on this item further in the next meeting.

3rd Meeting:

Recommendations -

- (i) There are large no. of houses, which are beyond repair - should be proposed for condemnation.
- (ii) Number of supervisors to be increased by giving matching surrender.
- (iii) Item-wise works contract should be carried out as a pilot project on one IOW unit per zone. Based upon experience, further action will be taken.
- (iv) For petty repair, IOW should be given power for quotation and getting petty repairs done through imprest.
- (v) There is no means for mobility of IOW, which is essential for inspection and supervision. Either two wheeler be provided or adequate allowance be given to IOW as mobility allowance.

Order of Railway Board-

- (i) WSC recommendations for item (i) is accepted.
- (ii) A decision on Item (ii) will be taken after consideration of sub-committee's recommendation on agenda item no. 010/01/05 on yardstick for works organisation and WSC's recommendations there-on.
- (iii) Only after proper assessment, Zonal Contract tenders should be invited covering all items of Unified Schedule of Rates, duly giving weightage (% of the total) to various Chapters of USSOR as per maintenance assessment.
- (iv) A sub-committee consisting of Shri S.M. Maheshwari, ED/W/RDSO (Convenor), Shri Desh Ratan Gupta, ED/L&A-III/R.Bd. and Shri Alok Kansal, CE/TSP/NR is constituted to make recommendations on improving the maintenance of Qrs./ Colonies and allied assets. Sub-committee shall

take into account the best maintenance practices being followed by other organizations like CPWD, MES etc. and PSUs like SAIL, Oil Companies etc. or Private companies. Outsourcing of maintenance shall also be deliberated. This sub-committee shall also deliberate upon other WSC recommendations on the subject.

- (v) The sub-committee shall submit the report by 30.4.12.

10. Item No. 021/02/06

2nd Meeting :

This Item was cropped up during 2nd WSC meeting but due to shortage of time could not be discussed, so it was decided to discuss in the 3rd WSC meeting.

3rd Meeting:

Recommendations -

- (i) Pre-fabricated building concept is very useful for temporary accommodation.
- (ii) Sr. Professor/Works/IRICEN has already done lot of survey and therefore, IRICEN will issue guidelines for the type of pre-fabricated building, which are available in the market and can be used as a temporary structure.

Order of Railway Board-

WSC's recommendations are accepted.

RDSO in consultation with IRICEN shall issue guidelines on the subject matter and also, the item to be incorporated in IR's USSOR by the Standing Expert Group; to be presented by RDSO during 4th Meeting of WSC.

11. Item No. 022/03/08

3rd Meeting :

Recommendations -

All Zonal Railways shall send their drawings/plans to RDSO. RDSO shall study them and finalize three types of alternative drawings/plans for each item for adoption on Indian Railways. These can also be included in Works Manual later on.

Order of Railway Board-

- (i) *WSC's recommendations are accepted. Light weight shelters for use at smaller stations should also be standardized. Work done by NR, NWR, NCR and some other Railways on small shelters should also be studied. RDSO may*

associate NID, other experts as required for finalising the designs. Drawings/Plans of DMRC may also be studied for this purpose.

- (ii) *This work should be completed within six months and details submitted to Works Manual Sub-committee who will submit its recommendations there-on.*

12. Item No. 025/03/08

3rd Meeting: Recommendations -

Tools to be provided to Artisan Staff should be part of Works Manual. Works Manual Sub-Committee should look in to the proposal of SWR & guidelines issued by IRCAMTEC, Gwalior and put the details in Manual.

Order of Railway Board-

Tools & kit to be provided to the artisan staff need to be standard and state of art. A sub-committee (which can be constituted in next meeting of WSC) shall make recommendations by considering Railways feedback and modern tools & kit available in the market/used by industry/other organization.

These recommendations/approval shall ultimately find a place in IR Works Manual.

13. Item No. 026/03/08

3rd Meeting :

Recommendations -

Sub-Committee comprising of ED/Works/RDSO, CE/W/WR & ED/Traffic/RDSO may be formed. The committee should engage NID/Ahmedabad & expert with international experience and come out with recommendation.

Order of Railway Board-

- (i) This item is with reference to CRB's instructions during GCM of RDSO.
- (ii) RDSO should finalise 'Manual on Passenger Amenities on Stations of IR' through committee of ED/Works (convener), ED/Traffic, ED/EM, ED/Tele & ED/Carriage RDSO duly taking suggestions from Zonal Railways and it should be presented during 4th meeting of WSC.