

NATIONAL HIGHWAY AUTHORITY
INSPECTION WING

No. GM (Insp)/ NHA / HT /11/

Islamabad, the 12th Dec, 2011

Subject: - **STANDARD OPERATING PROCEDURES FOR ISSUANCE OF TAKING OVER & DEFECT LIABILITY CERTIFICATE**

1. The Inspection Wing will carryout Inspection of Project work before issuance of Taking Over Certificate (TOC) after Substantial Completion and Defect Liability Certificate (DLC) at the end of Defect Liability period.

2. The standard composition of the Committee authorized to recommend the issuance of Taking over Certificate after Substantial Completion of the Project, will be as follows:-

- | | | |
|----|---------------|--|
| a. | Chairman | General Manager (Project) |
| b. | Member | (1) Project Director
(2) Director (Maint. / Region)
(3) Dy. Director (Maint)
(4) Representative of Member (Aided Project)
From NHA HQ, in case of Aided Project. |
| c. | In Assistance | (1) The Engineer/Resident Engineer
(2) Contractor's Authorized Representative. |
| d. | In Attendance | General Manager (Inspection) and his team. |

3. The following procedure will be adopted on substantial completion of project:

- a. On Substantial completion of Project, General Manager (Project) would inform the Member (Construction)/Member (Aided Projects), who would ask Chairman of committee for a visit / inspection.
- b. The constituted team will inspect the site in accordance with the agreed programme, so that each item can be thoroughly inspected.
- c. Inspection and tests will be carried out in the presence of authorized representative of Contractor and Consultant. Necessary tests will to be carried out by General Manager (Inspection) and his team in line with Contract Standards and Specifications.

- d. Committee will check as-built drawings (if ready) and compare the completed work with Tender drawings, Construction drawings, amended Construction drawings (if any).
 - e. Riding quality and condition of finished road surface, shoulders, embankment slopes and drainage work (as per contract), to be checked by the team of General Manager (Inspection). If required, IRI be established by laser profilometer.
4. Following documents are required to be provided by the project General Manager/Project Director to General Manager (Inspection) at least 15 days prior to Inspection.
- a. Copy of Contract Documents including all addendums, amendments, tender drawings, Construction drawings, changes made in construction drawings, specifications etc.
 - b. Copy of Consultancy Agreement along with all VO's.
 - c. As Built Drawings, if ready at ToC stage or otherwise, same must be provided at DLC stage.
 - d. Copies of all Variation order, with justification.
 - e. Final bill of quantities, revised completed cost of Project if ready at ToC stage or otherwise, same must be provided at DLC stage.
 - f. Quantities executed till to date.
 - g. Changes made in the design during the construction period, with details and reasons.
 - h. The Asphalt concrete Mix Design and Job Mix Formula (s) for Project.
 - i. Cement concrete mix design for the Project.

- j. Inventory of NHA assets including vehicles, laboratory equipment with its conditions and office furniture bought against Project/transferred from other sources.

5. On submission of these reports and documents by the General Manager (Project)/Proj. Director and necessary tests will be carried out by General Manager (Inspection) and his team and a report prepared by General Manager (Inspection) will be handed over to Chairman of the committee with a copy to Chairman NHA. In turn, Chairman of the committee will then prepare a detailed Handing/Taking over report. The report after approval by the Employer will be forwarded to the Contractor /Consultant through the Engineer for further necessary action as per provision of the Contract within fixed time frame. Taking over certificate (ToC) can be issued by the Engineer along with punch list regarding the defects, short comings and left over works to be completed by the Contractor in accordance with relevant provision of Contract.

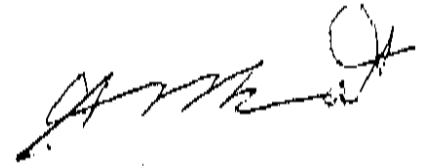
6. Before issuance of Defect Liability Certificate under Contract clauses, a team as mentioned below be constituted.

- | | | | |
|----|---------------|-----|--|
| a. | Chairman | | General Manager (Region) |
| b. | Member | (1) | Project Director |
| | | (2) | Director (Maint) |
| | | (3) | Representative of Member (Aided Project)
From NHA HQ, in case of Aided Project. |
| c. | In assistance | (1) | The Engineer/Resident Engineer |
| | | (2) | Contractor Authorized Representative. |
| d. | In attendance | | General Manager (Inspection) and his team. |

7. The team after site inspection will recommend issuance of DLC or otherwise. The committee after detailed inspection will indicate defects occurred during the Defect Liability Period. It will also recommend the remedies such as giving time line to contractor for repair etc or deduction of defective work at the rates of CSR prevailing in the year of completion of Defect Liability Period with appropriate markup.

8. The check list is attached as **Annex-A** to this SOP.

9. This supersedes SOP on Handing/Taking over issued vide letter No. Chairman / NHA/HT/10/588 dated 4th November 2010 and all other SOPs on the subject.



(Arshad Mehmood Ch.)
General Manager (Inspection)

Distribution List: On reverse.

DISTRIBUTION LIST

No. GM (Insp)/ NHA / HT / 11/

Islamabad, the 12th Dec, 2011

Subject: - **STANDARD OPERATING PROCEDURES FOR ISSUANCE OF TAKING OVER & DEFECT LIABILITY CERTIFICATE**

Finance Wing

Member (Finance)

Construction Wing

Member (Const.)
General Manager (Const.-N)
General Manager (Const.-S)
General Manager (CMTC)/AJK

Admn Wing

Member (Admn)

Aided Project

Member (Aided Project)
General Manager (ADB)
General Manager (NHIP)
General Manager (E-35)

Project GMs

General Manager (M-4)
General Manager (Sehwan-Ratodero)
General Manager (TJRP/PTE)
General Manager (KKH/S-1)
General Manager (Kararo-Wadh)
General Manager (Const. Balochistan)
General Manager (ADB-Balochistan)
General Manager (Hub-Uthal)
General Manager (Const.-P)
General Manager (Const.-Multan Package)
General Manager (Const-Larkana Package)

Planning Wing

Member (Planning)
General Manager (Planning)
General Manager (Design-I)
General Manager (BOT)
General Manager (Design-II)
General Manager (P&CA)

Operation Wing

Member (Ops)

MW/BOT

Member (MW/BOT)

Regional GMs

General Manager (Punjab-N)
General Manager (Punjab-S)
General Manager (Balochistan)
General Manager (Sindh)
General Manager (KP)
General Manager (Gilgit-B)

Others

Secretary NHA
PS to Chairman NHA

CHECK LIST FOR ROAD INSPECTION TEAM

- Compare NSL of Design Consultant with Joint survey of supervisory Consultant and Contractor.
- Check as per available Survey control points and compare it with PGL.
- Drainage works- Carried out as per approved design.
- Check pavement structure by excavating 1x1 m pit at Random.
- Check thickness of Asphalt Base and Asphalt Wearing Course by cutting cores.
- Collection samples to check the quality of materials and road construction.
- Check Riding Quality, through IRI method, if required.
- Confirm Road X-Section over the length at Random.
- Check Shoulders Treatment and slopes along with protection works.
- Construction of Median and Median Drainage as per design.
- Check Road Pavement Markings.
- Check Road Safety Signs, Road Furniture.
- Check already carried out lab. Tests at site as well as Asphalt and concrete designs.

CHECK LIST FOR STRUCTURES

- Carryout destructive/non destructive tests.
- Check already carried out Lab Tests.
- Check surface of the bridge.
- Check surface drainage & drainage pipes.
- Check Expansion Joints.
- Check source and approval of bearing pads.
- Check slope protection of approach roads (if provide)
- Check finishing of concrete for different points of structures.

NATIONAL HIGHWAY AUTHORITY

Inspection Wing

No. GM(Insp)/NHA/13/3050

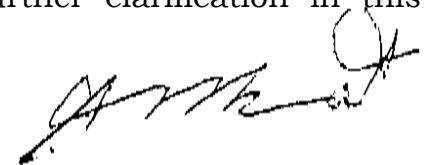
Islamabad, the 28th March, 2013

Subject: **CLARIFICATION REGARDING STANDARD OPERATING PROCEDURE (SOP) FOR ISSUANCE OF TAKING OVER CERTIFICATE (TOC) & DEFECT LIABILITY CERTIFICATE (DLC)**

Reference: NHA SOP issued vide letter No. GM(Insp)/NHA/HT/11/3084 dated 12th December 2011 on the captioned subject.

It has been noted that terms "Substantial Completion Certificate", "Taking Over Certificate" and "Defect Liability Certificate" are being misinterpreted and as such the procedure laid down in the above referred SOP on the Projects is not being adopted in letter and spirit which is causing delay in Taking Over of the Projects. In this connection, following clarification is being issued to address the situation:

- a. In order to have clear understanding of the procedure flow chart diagram (copy attached as Annex-A) has been developed keeping in view provisions of contract conditions and NHA SOP. NHA project authorities should follow the sequence as elucidated in flow chart. As clarified in flow chart, substantial completion certificate / taking over certificate and defect liability certificate (DLC) are to be completed at two different stages as to why two committees were given in SOP.
 - b. It is pertinent to mention that as consequence of initial take over, project is deemed to be handed over to NHA maintenance Unit for purpose of undertaking operational maintenance activities only.
 - c. As evident in composition of both committees, the role of Inspection wing / team is to facilitate the Chairman of Committee i.e. General Manager of Project and General Manager (Region). General Manager of the Project should take leading role and follow up vigorously for the action required for successful completion of the Project.
2. It is trusted that above will clarify the matter. However, please do not hesitate to contact the undersigned for any further clarification in this regard.



**(Arshad Mehmood Ch.)
General Manager (Inspection)**

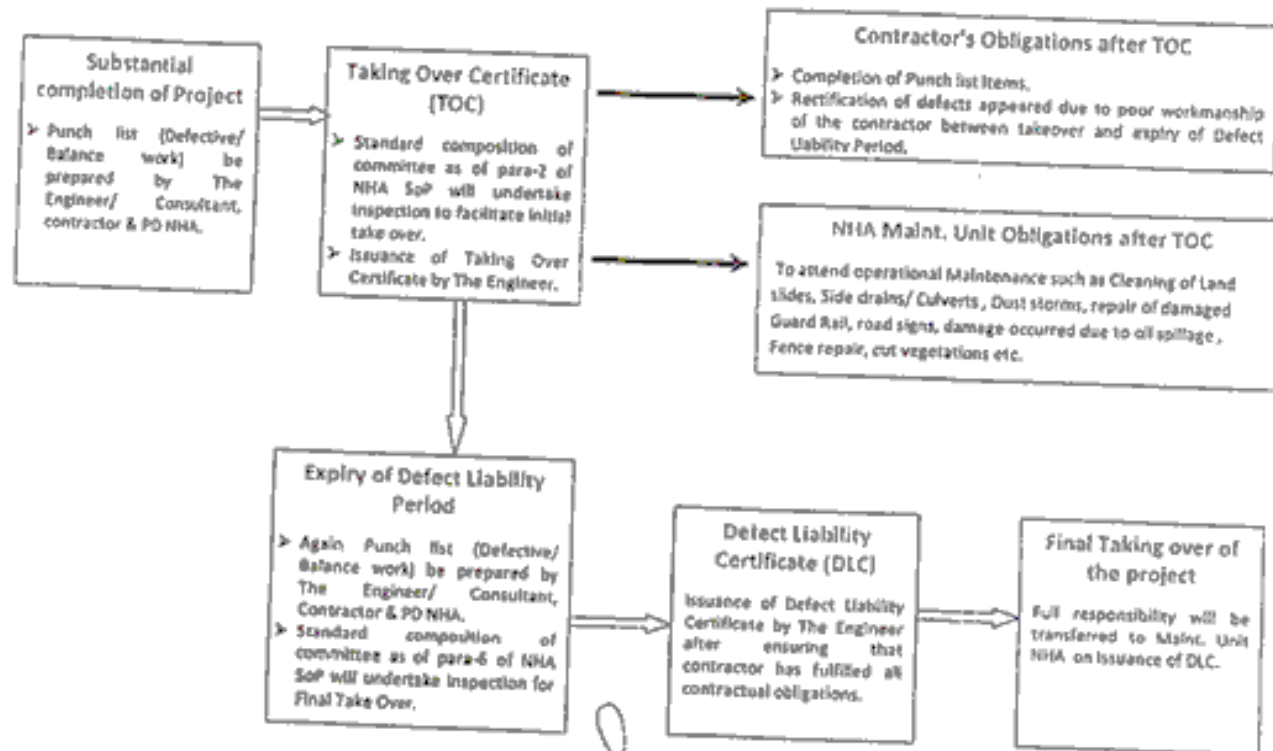
Encl: Flow Chart for the Project

Distribution:-

- Chairman NHA
- All Members NHA
- All General Managers (Projects/Regions) NHA

Annexure-A

FLOW CHART DIAGRAM SHOWING ISSUANCE OF TOC/DLC



12/33