

NTTA Projects	Original Issue Date: 06/05/2008	FD-07
Resource: Final Design	Revision 2 Issue Date: 04/28/2011	Page 1 of 4
Title: Constructability Review		

1.0 PURPOSE:

The purpose of this procedure is to define the constructability review process, checklists to be utilized, and the requirements for addressing comments resulting from constructability review.

All NTTA projects in the final design phase of project development shall undergo a constructability review to ensure the number of potential change orders is minimized and the probability of delays and disputes are reduced in accordance with the procedure herein.

1.1 Constructability reviews shall be categorized into three levels of review:

- Level 1 – Large scale projects with construction costs over \$50M
- Level 2 – Less complex roadway projects with construction costs between \$5M-\$50M, typically pavement widening and/or utility contracts, municipal projects
- Level 3 – Simple projects with construction costs less than \$5M, typically pavement rehab and maintenance projects

2.0 RESPONSIBILITIES:

The following responsibilities are in addition to the responsibilities outlined are to be in accordance with *FD-01 PS&E Development, Review and Approval*.

- 2.1 Corridor Manager (CM)/Project Manager – The CM/ Project Manager shall be responsible for coordinating constructability reviews at the 30/60/90% PS&E levels, and distributing necessary documents to review team members. The CM/Project Manager shall schedule and arrange constructability review meetings as required. The CM/Project Manager shall assure that all PD staff comments are adequately addressed by the DSE in a timely manner so as not to delay the design schedule.
- 2.2 Program Controls – Program Controls personnel shall be responsible for reviewing the construction time schedule submitted at the 60% PS&E review.
- 2.3 Design Section Engineer (DSE) – The DSE shall be responsible for actively participating in the constructability review process and for providing adequate and timely response to comments.
- 2.4 PD Construction Oversight Manager – PD Construction Oversight Manager staff shall be responsible for performing a constructability review of the PS&E that will utilize Form FD-07-F1 Constructability Review Checklists as a basis for the review. Individual reviewers shall complete and sign constructability review checklists, which become part of the administrative record.
- 2.5 PD Construction Management Staff - Shall actively participate in the review process and typically reviews the constructability of the project in the areas of design, construction, environmental, maintenance, ROW, utilities, aesthetics, geotechnical, hydraulics, and permits, recording comments on FD-01-F5, *Comment*

NTTA Projects	Original Issue Date: 06/05/2008	FD-07
Resource: Final Design	Revision 2 Issue Date: 04/28/2011	Page 2 of 4
Title: Constructability Review		

Review Form. The PD Construction Oversight Manager shall be responsible for resolving any disputed comments during the Constructability review process.

3.0 SCOPE/APPLICABILITY:

This procedure shall apply to all NTTA projects and corridors within the Project Delivery Department.

4.0 REFERENCES:

- [NTTA PS&E Preparations Manual](#)
- [NTTA Design Guidelines Manual](#)
- [NTTA Maintenance Design Guidelines Manual](#)
- [NTTA Sign Policy Manual](#)
- [NTTA Sign and Traffic Control Device Guidelines Manual](#)
- [NTTA Roadway Electrical System Manual](#)
- [NTTA Pavement Design Manual](#)
- [DM-03 Administrative Record procedure](#)
- [FD-01 PS&E Development, Review and Approval](#)
- [PC-06 Schedule Management procedure](#)

5.0 DEFINITIONS & ACRONYMS

6.0 PROCEDURES:

- **Constructability Review Process** – Constructability reviews shall be completed at all 30%/60%/90% design milestones in accordance with Form FD-07-F1, *Constructability Review Checklists*.
 - 6.1** Prior to any constructability review deadline, the CM/Project Manager shall ensure all reports, plans, specifications, estimates, submittal checklists, etc. are distributed to the PD staff to facilitate an adequate review. At 60% PS&E, the CM/Project Manager shall ensure a construction schedule is submitted and reviewed by the PD program controls staff.
 - 6.1.1** The Constructability Review process shall be performed in accordance with FD-01, *PS&E Development, Review and Approval Procedure*. PD construction management staff shall perform a detailed, independent review, using FD-07-F1, *Constructability Review Checklists* for their specific review function responsibility(s) and compile comments. These checklists shall be specific to function, milestone, and level of constructability review to be followed. Consolidated comments shall be recorded on FD-01-F5, *Comment Review Form* to be provided to the CM/Project Manager. To assure accountability, the checklists shall be signed by the individual reviewers and become part of the project record. PD Construction Management staff shall review

NTTA Projects	Original Issue Date: 06/05/2008	FD-07
Resource: Final Design	Revision 2 Issue Date: 04/28/2011	Page 3 of 4
Title: Constructability Review		

constructability of the project in areas of design, construction, environmental, maintenance, ROW, utilities, aesthetics, geotechnical, hydraulics, and permits.

- 6.1.2 The CM/Project Manager shall review and compile all comments and meet with appropriate PD staff to review and resolve any conflicting comments, and gain concurrence of all comments to be addressed. The CM/Project Manager shall then compile final comments for transmission to the DSE, ensuring any duplicated and/or conflicting comments are resolved prior to transmission to the DSE.
- 6.1.3 The DSE shall respond to each comment, utilizing the same form, and re-submit to facilitate approval. Design responses such as “will verify” or “will investigate” are not acceptable responses. All responses must give clear direction and state proposed plan revisions.
- 6.1.4 Comment resolution process shall be repeated until all comments have been effectively resolved. If an action to a response is not clear or in disagreement by any representative, the representative may inquire with the CM/Project Manager for further clarification. If the resolution remains in disagreement, the action may be escalated to the PD Construction Oversight Manager for final resolution.

6.2 Resulting modifications to PS&E as a result of the constructability review shall be approved in accordance with FD-01, *PS&E Development, Review and Approval*.

7.0 REGULATORY REQUIREMENTS:

N/A

8.0 RELATED BOARD POLICY:

N/A

9.0 COMPONENT DOCUMENTS:

- [FD-07-F1](#) Constructability Review Checklists
- [FD-01-F5](#) Comment Review Form

10.0 FLOWCHART:

N/A

NTTA Projects	Original Issue Date: 06/05/2008	FD-07
Resource: Final Design	Revision 2 Issue Date: 04/28/2011	Page 4 of 4
Title: Constructability Review		

11.0 REVISION HISTORY:

Revision	Revised by:	Date Issued	DRN NO.	Reason for Revision
0	Dave Clarke	06/05/2008		Original Issue
1	Floyd Martinez	9/18/2008		Process clarified and correlation with FD-01 defined.
1	Edie Adams	5/29/2009	10007	Admin change – Corrected manual title
2	Darla Payberah	04/28/2011	10285	Updated roles new/replaced roles and provided minor revisions for clarity