2021 Workshop: Bridge Inspection Manual PowerPoint Template

Presented: by Bill Dittrich
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January 22, 2021
Microsoft Teams

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Milestones:

Three years in the U.S. Army (1972-1975), 30th Engineering Battalion - Heavy Construction & Map Making Battalion, Fort Belvoir, Virginia. Performed QA/QC on military maps.

Purdue University (1975-1979), graduated in May, 1979, BS Civil Engineering.

Started with INDOT in May, 1979 - Worked in the Fort Wayne District – Engineer Intern Program, May through December, 1979 & Central Office January through May, 1980.

Started in the INDOT Central Office Bridge Inspection Unit in May, 1980. Was the State Bridge Inspection Program Manager from 2003 through 2010.

Temporarily worked in Greenfield District Bridge Inspection Unit, to assist with bridge programming, November, 2011 through May, 2012.

Returned to Central Office Bridge Inspection Unit, in May, 2012, and worked as Bridge Inspection Area Engineer over La Porte, Greenfield, and Fort Wayne Districts, and later just Greenfield and Fort Wayne Districts.

In late 2018, switched from Area Engineer to Assistant Bridge Inspection Program Manager, to ensure BIAS is working and NBI Data is being properly recorded and saved in the Bridge Files.

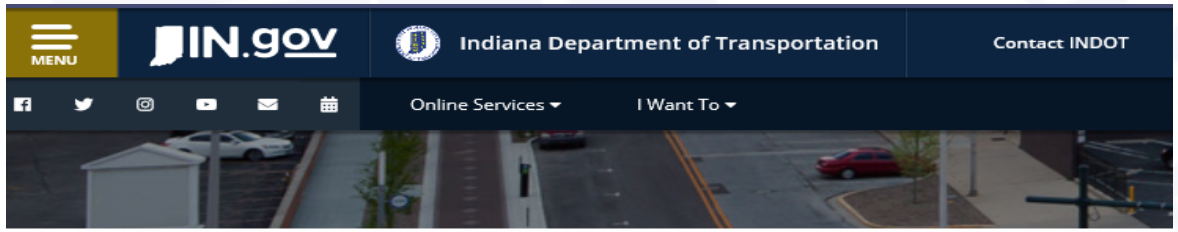
NextLevel INDIANA

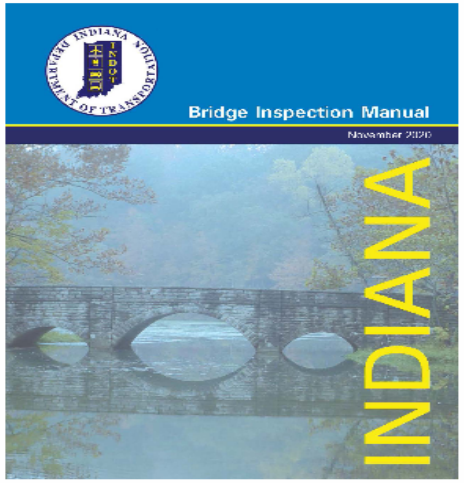
INTRODUCTION

- Introduction- Andy
- Webpage- Andy
- Part 1 (Administration)- Bill
- Part 2 (Types of Inspections)- Bill
- Part 3 (Load Rating)- Bill
- Part 4 (QA/QC)- Randy
- Part 5 (Fatigue & Fracture Critical Inspection)- Tony
- Part 6 (Scour)- Tony
- Part 7 (Wearing Surface)- Randy
- Part 8 (Asbestos)- Randy
- Part 9 (Environmental Concerns)- Andy
- Appendix- Andy
- Conclusion- Andy
- Questions- All

NextLevel INDIANA

Part 1 (Administration)

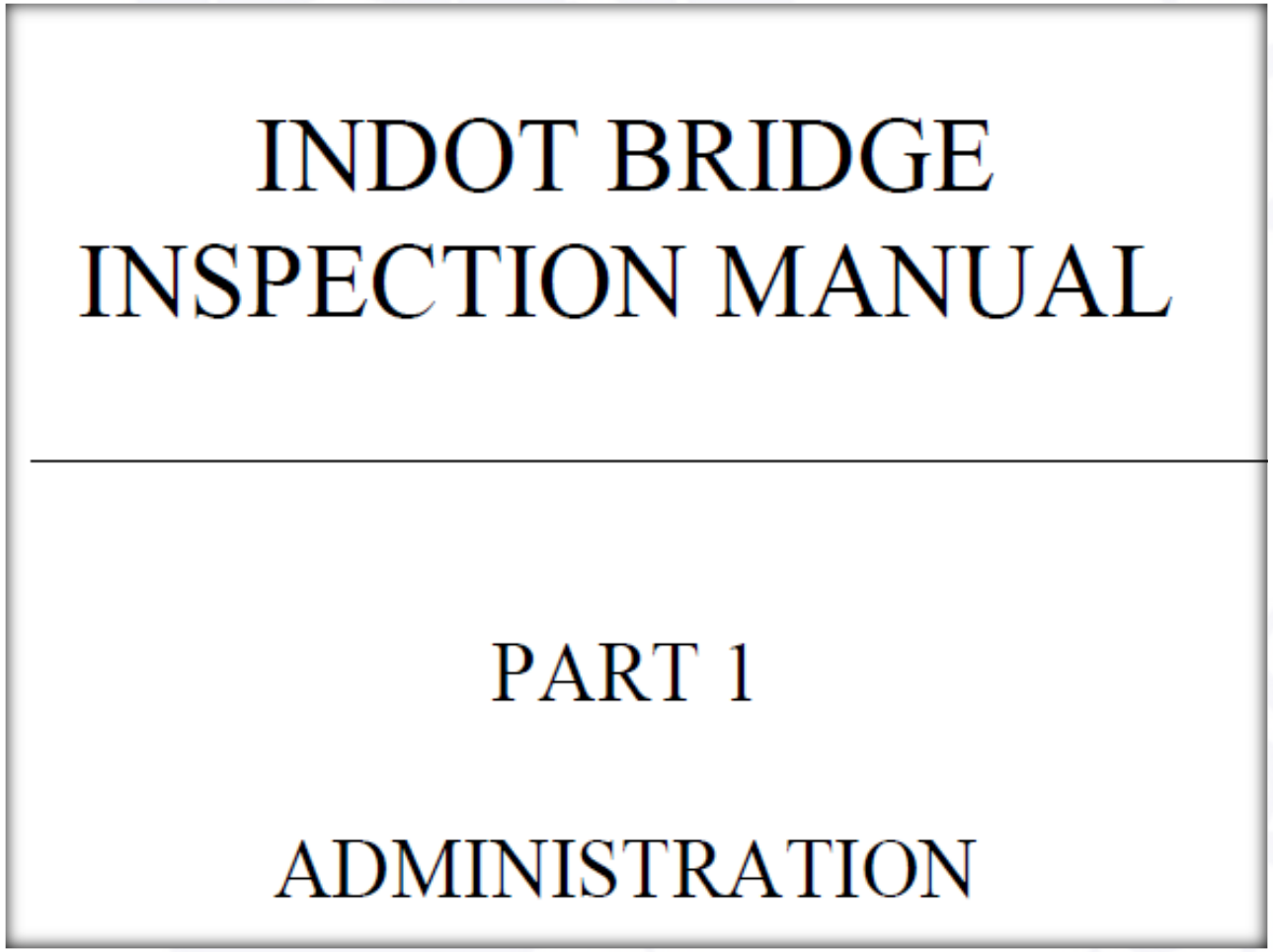




Part 1:Administration
Part 2:Types of Inspections
Part 3:Load Rating
Part 4:QA/QC
Part 5:Fatigue and Fracture Critical Inspections
Part 6:Scour
Part 7:Wearing Surfaces
Part 8:Asbestos
Part 9:Enviromental Concerns
Part :APPENDICES

2020 Bridge Inspection Manual: 2020 Bridge Inspection Manual

Part 1 (Administration)



Part 1 (Administration)

- Sections:
- 1. Program Summary and Overview
- 2. Organization
- 3. Qualifications and Responsibilities
- 4. Figures

Part 1 (Administration)

Program Overview and Summary

1- 1.0 PROGRAM OVERVIEW

1- 1.01 Program Summary

No significant changes made

Part 1 (Administration)

Organization

Revised/Added Assistant State Program Managers:

- **1- 1.04(02) Assistant State Program Manager ASPM-R&P) – Rating & Posting**

  Revised the name and abbreviation

- **1- 1.04(03) Assistant State Program Manager (ASPM-BI&I) – Bridge Inspection & Inventory**

  Added this position and qualifications, etc.

Part 1 (Administration)

Qualifications and Responsibilities

1- 1.04 Qualifications and Responsibilities

Added *Qualification Form* location

1- 1. 04(04) Bridge Inspection Area Engineer (BIAE)

Changed a few responsibilities of the INDOT Area Engineers

1- 1. 04(06) Bridge Inspection Consultant (BIC)

Added to the definition and added information about being a BIAS Administrator

Part 1 (Administration)

Qualifications and Responsibilities – continued

1- 1. 04(07) Approved Team Leader (ATL)

Added information about the required Critical Finding Training Class and will be adding information on non-engineers and their years of related bridge experience, to become a Team Leader.

1- 1. 04(10) Underwater Approved Team Leader (ATL-U)

Added that all areas not able to be inspected due to debris, be clearly documented in their reports

Part 1 (Administration)

Qualifications and Responsibilities – continued

1- 1. 04(11) Approved Team Member (ATM)

Added that ATM's are responsible to study to become a Team Leader and pass NHI Classes

1- 1. 04(14) Load Rating Engineer (LRE)

Added that they must have a list of 15-20 bridges load rated, in their BIAS Account, that includes Bridge Number, Rating Methods, Rating Programs, and if deteriorated or not

Part 1 (Administration)

Qualifications and Responsibilities – continued

Figures

Removed most photos and diagrams at end of the section

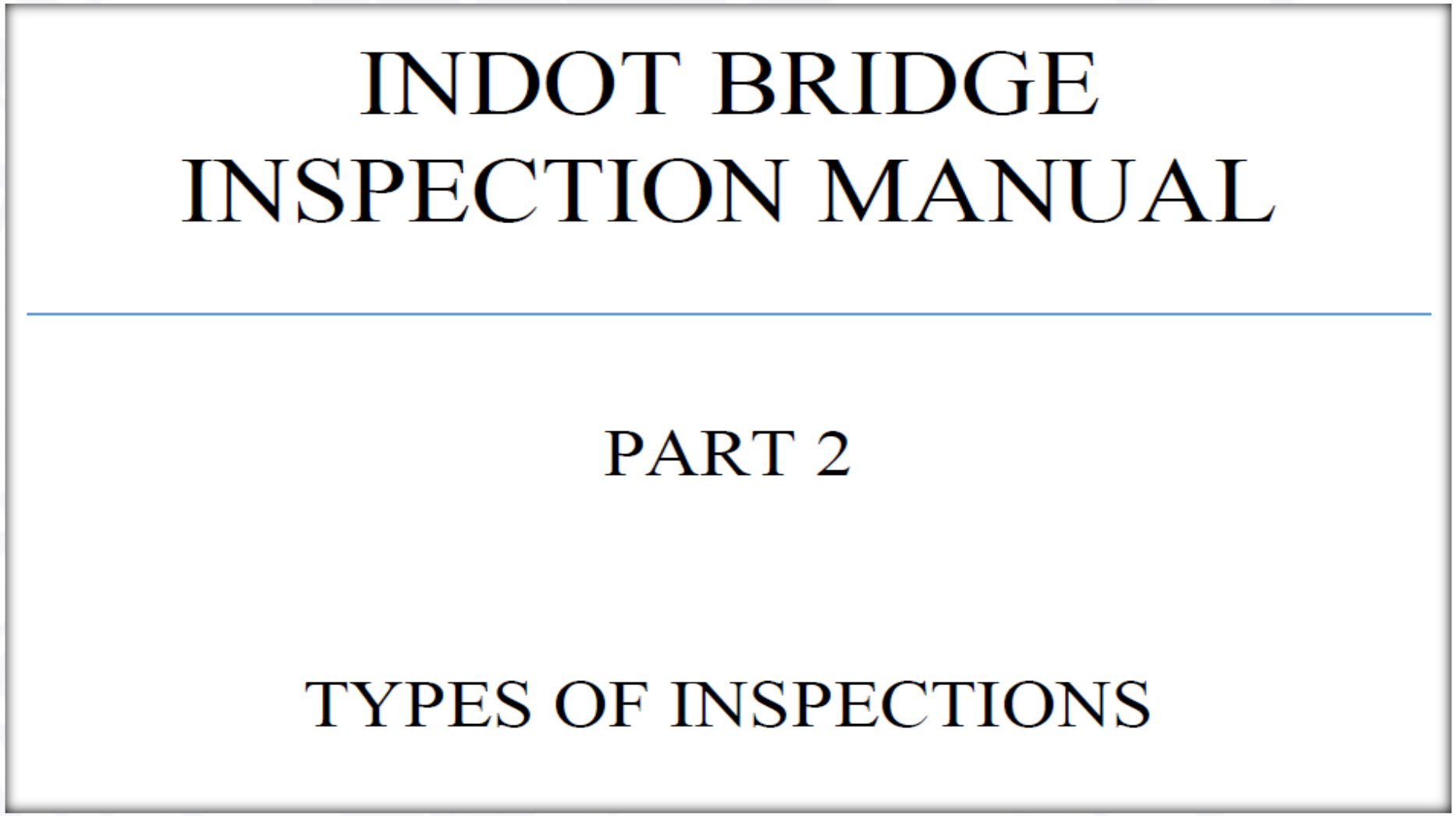
1-1.2: State Bridge Inspection Program Organization

Revised the Inspection Organization Flow Chart

1-1.3: Bridge Inspection Positions

Added at Table with inspection positions, abbreviations, and locations where they can be found in the Manual

Part 2 (Types of Inspections)



Part 2 (Types of Inspections)

- Sections:
- 1. Types of Inspections
- 2. Reporting Systems
- 3. Emergency Notification / Critical Findings
- 4. Figures

Part 2 (Types of Inspections)

Types of Inspections

2- 2.01(01) Delinquent Inspections

A section was added on Delinquent Inspection – describes how to document these in BIAS

2- 2.03 Inspection Schedules

A section on Inspection Schedules was added – covers Compliance Months and the BIAS Schedular

2- 2.04 Inspection Plan of Action

A section was added on Inspection Plan of Actions

Part 2 (Types of Inspections)

Types of Inspections

2- 2.05 Initial Inspections

2- 2. 05(01) Purpose

Documentation was added to the Initial Inspection that covers keeping inspections in cycle with other nearby bridges and adding documents to the Bridge File

2- 2. 05(03) Repairs

For Repairs and Rehabilitations, a sentence was added that says that contractors are required to provide access for NBI Inspections.

Part 2 (Types of Inspections)

Types of Inspections

2- 2.06 Routine Inspection

2- 2. 06(02) Precision

For Routine Inspections, a Channel Survey is now required every 24-months, unless a bridge is on an Extended Frequency – (see section: **2- 2.12(03) Frequency**)

2- 2.06(04) Extended Inspection Frequency

An entire new section on Extended Inspection Frequency was added

INDOT has temporarily suspended approving new bridges to be added to the Extended Inspection Frequency Program

NextLevel INDIANA

Part 2 (Types of Inspections)

Types of Inspections

2- 2.08 Underwater Inspections

2- 2.08 (03) Frequency

A paragraph was added to the Underwater Inspection Frequency section about how to remove bridges that no longer require an Underwater Inspection

Part 2 (Types of Inspections)

Types of Inspections

2- 2.09 Special Inspections

2- 2. 09(01) Purpose

Fatigue Category E and E’ requirements were revised

2- 2. 09(01) Purpose

For Movable Bridges additional documentation was added stating that any “Special Inspection items, such as Electrical Systems” shall fall under the Fracture Critical Inspection for reporting purposes

Part 2 (Types of Inspections)

Types of Inspections

2- 2.10 In-Depth Inspection

Additional narrative was added to “In-Depth” Inspections, to describe when and how to use this type of inspection

2- 2.11 Damage Inspections

2- 2. 11(02) Precision

A sentence was added about a table that is maintained on INDOT Bridges that suffer collision damage - data on bridge collisions is summitted annually to the FHWA

Part 2 (Types of Inspections)

Types of Inspections

2- 2.12 Channel Surveys

2- 2.12(02) Precision & 2- 2.12(03) Frequency

The Precision and Frequency Sections of Channel Surveys were both revised, for both Basic and In-depth Surveys

Part 2 (Types of Inspections)

Types of Inspections

2- 2.13 Large Culvert Inspection

Additional information was added for the definition of a Large Culvert

2- 2.13(02) Precision

Added that Large Culvert Condition Ratings should follow the 0-9 scale on Page #38 of the *White Recording and Coding Guide*, and NOT NBI Item #62

2- 2.13(03) Frequency

Inspection Frequencies for Large Culverts were revised based on deliberations with the INDOT Bridge Asset Engineers

Part 2 (Types of Inspections)

Types of Inspections

2- 2.14 Bridges Closed To Traffic

A sentence was added concerning bridges that are partially closed to traffic at the time a bridge requires an inspection

On INDOT Bridges, the contractor is required to provide a time and access for Inspectors to conduct all needed inspections.

Part 2 (Types of Inspections)

Reporting Systems

2- 3.0 REPORTING SYSTEMS

2- 3.02 BIAS

A sentence was added that says that Load Rating Reports, calculations, etc. are to be housed in BRADIN and ERMS. These items also had revisions made about being included in a BIAS Report

2- 3.01 ERMS

ERMS document naming information and instructions were added for Bridge File storage

Part 2 (Types of Inspections)

Reporting Systems

2- 3. 02(01) NBI Item 8 Structure Number

In the Section for NBI Item 8 Structure Number, a sentence was added about transferred bridges, and NBI Numbers remaining the same

Part 2 (Types of Inspections)

Reporting Systems

2- 3.03 Inside Indiana - County Border Inventory

The section on County-County Border bridges was renamed by adding “Inside Indiana”

2- 3.04 State Line - County Border Inventory

A new section was added on State Line County Border Bridges

Part 2 (Types of Inspections)

Emergency Notification / Critical Findings

2- 4.0 EMERGENCY NOTIFICATION/CRITICAL FINDINGS

2- 4.01 Introduction

A sentence was added that says that an INDOT Approved Inspection Team Leader may close any bridge if it appears unsafe, as long as they follow the guidelines in the Manual

2- 4. 02(01) Procedures for Inspectors

Urgent and Severe Critical Findings were added and described (Urgent = closed CF within 3-days; Severe = closed CF within 30-days)

2- 4.02(02) Documentation

Urgent and Severe Documentation was added for BIAS

Part 2 (Types of Inspections)

Figures

2- 1. 1: Bridge Inspection Types and Maximum Intervals

The table of Bridge Inspection Types and Maximum Inspection Frequencies was revised

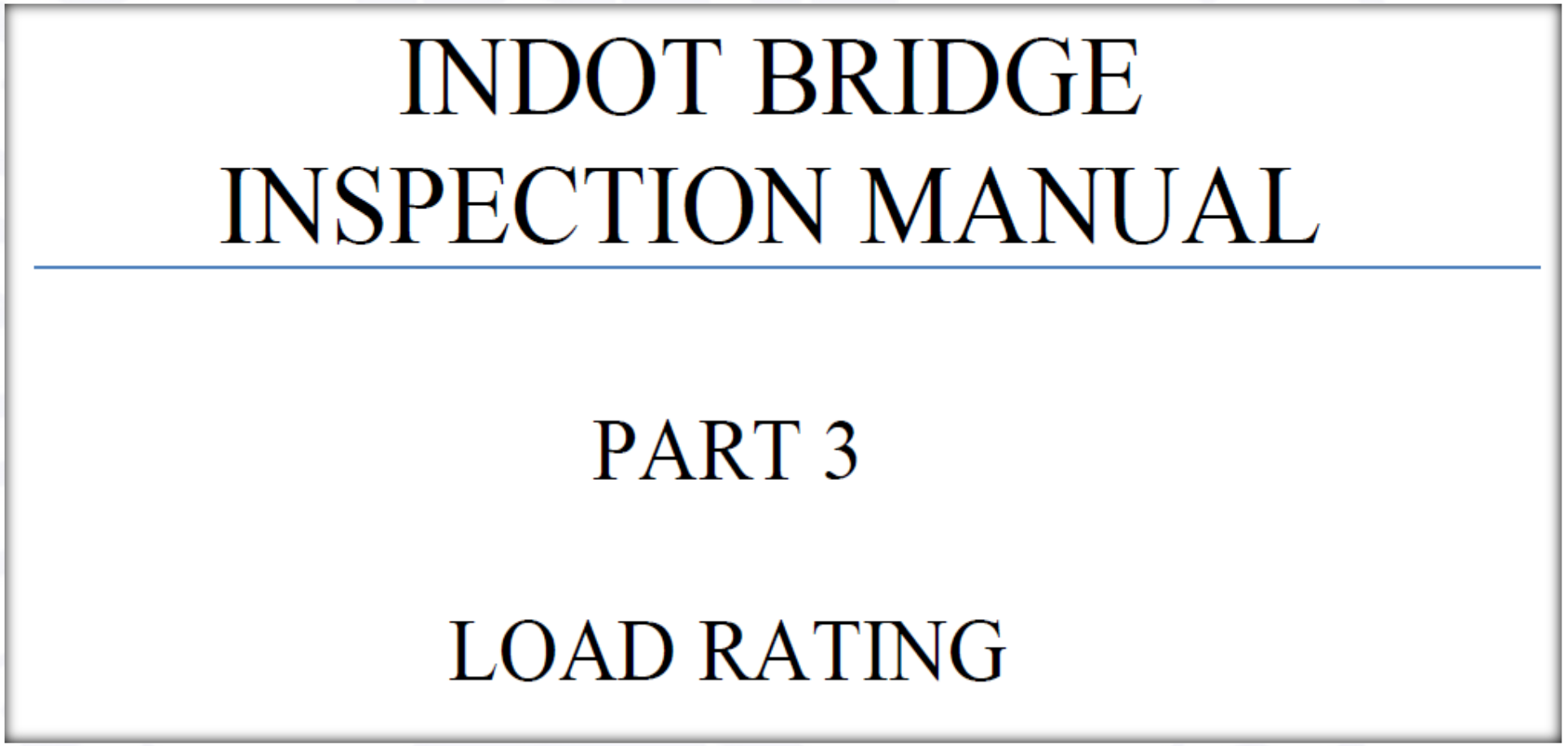
2- 1. 3: CREATING A REPORT IN BIAS

A section describing how to create a BIAS Report and how to added additional report sections (pdf's), to a BIAS Report was added

2-1. 4: REQUESTING ACCESS

A section was added to show how to request Access to ITAP and then ERMS and BRADIN, etc.

Part 3 (Load Rating)



Part 3 (Load Rating)

- Sections:
- Introduction and Reference Material
- Roles and Responsibilities
- Vehicles
- Methods
- Posting
- Documentation
- QA/QC
- Procedure
- Modeling Guidelines & Assumptions
- Appendices

Part 3 (Load Rating)

- Contact Jenifer Hart – Load Rating Assistant Program Manager for all questions on load rating and posting

- There were only a few minor changes with this new version of the Manual

- The Load Rating Part list all changes at the beginning of this Part of the Manual

Inspection Memorandum	Revision Date	Sections Affected
18-01	Apr. 2018	3-9.02(01), 3-9.02(02)

The revision date is noted in brackets next to the heading for each affected section.

Part 3 (Load Rating)

- 3-9.0 PROCEDURE: All Bridge Load Rating requests for state owned or maintained bridges are required to be requested through the Load Rating Request Application. Any plans, sketches, notes, and photos (where applicable) are required to be uploaded to the Load Rating Request Application.

- 3-9.0 PROCEDURE: Instructions for use of the Load Rating Request Application are available from the Department's Bridge Load Rating Aids.

Part 3 (Load Rating)

- 3-9.01(02) New, Replacement, or Rehabilitated Structures: Following the completion of construction work, the bridge file shall be updated within thirty (30) days for state-maintained structures. To do this, a Construction Complete request using the Load Rating Request Application is required. The bridge file for locally maintained structures shall be updated within ninety (90) days.

- 3-9.01(03) Deterioration: For state owned or maintained structures, the deterioration load rating shall be performed and documented in the bridge file within thirty (30) days of the discovery. Within seven (7) days of the discovery, the District Bridge Inspector is required to make a Condition Change – Deterioration load rating request using the Load Rating Request Application.

Part 3 (Load Rating)

- 3-9.01(04) Critical Findings: For state-maintained bridges, the District Bridge Inspector is required to make a Condition Change – Critical Finding load rating request using the Load Rating Request Application within two (2) days of discovery.

- 3-9.02(01) General [Rev. Apr. 2018]: For state-maintained bridges, the load rating summary report and load rating model is required to be made available for review in the Load Rating Request Application within thirty (30) days of the receipt of the original load rating request.

Questions

- Thank you!

- Questions will be answered after all sections of the Manual are discussed.