

Items Required for Grade Inspection

- 1. Completed Program Application: Submit with Grade Inspection Package for review.**
- 2. Special Provisions**
 - A. Each Non-Standard Pay Item needs a special provision
 - B. Pay Item Name must match the estimate and plans exactly
 - C. Pay Item Unit must be spelled out to match unit names of standard spec. book
 - D. Maintaining Traffic with Detour Route map and legend (when detour required).
 - E. HMA Application Estimate
- 3. Other Items**
 - A. Progress Clause
 - B. Notice To Bidders For Utility Coordination
- 4. Estimate**
 - A. Preliminary List of Pay Items
 - B. Breakdown between Bridge and Approach Pay Items
 1. Participating Road Pay Items
 2. Participating Bridge Pay Items
 3. Non-Participating Road Pay Items
 4. Non-Participating Bridge Pay Items
 - C. Pay Codes for each Pay Item
- 5. Plans – Submit 11” x 17” Plan Sheets.**
 - A. Title Sheet**
 1. Traffic Data (present & future ADTs, posted & design speeds, % commercial)
 2. Township, Section, and Range
 3. Utility Companies List (if not on site sheet)
 4. Preliminary List of Standard Plans / Special Details
 5. Preliminary Index of Plan Sheets
 6. Preliminary Project Titles (actual numbers will be supplied at a later date)
 - a) Local Agency
 - b) State Bridge Number
 - c) Job Number
 - d) Control Section
 - e) Federal Project Number (if federal funds apply)
 - f) Federal Item Number (if federal funds apply)
 7. Map of Bridge Location (include detour route if not shown elsewhere)
 8. Notes: All applicable MDOT Design Manual notes.
 9. Preliminary Title Block
 10. Erosion Control Items and Legend (if not shown on site or structure sheet)
 11. Bridge Structure Number & Job Number on all sheets
 12. Design Loading
 - B. General Plan of Site**
 1. Plan View of Project
 - a) Right of Way Limits
 - b) Slope Stake Line

- c) Easements Labeled
 - 1) Permanent Easements
 - 2) Grading Permits
 - d) Stations Shown (include P.O.B. & P.O.E.)
 - e) Utilities
 - f) Flow direction and name of water course (if applicable)
 - g) North Arrow
 - h) Layout of Bridge
 - 1) deck
 - 2) approach
 - 3) wingwalls
 - 4) guardrail
 - i) Survey and Construction Centerlines
 - j) Horizontal Alignment and/or Alignment Diagram
 - k) Outline of Existing Bridge
 - l) Erosion Control w/ Legend (if not shown on title or structure sheets)
 - m) Topography
2. Elevation View
- a) Vertical Alignment
 - 1) All vertical curve data
 - a) Grade Left
 - b) Grade Right
 - c) Length
 - d) K value computed
 - 2) Existing and Proposed Alignments
 - 3) Existing Grades just outside the P.O.B. & P.O.E.
 - b) Span Lengths
 - c) Reference Point Stations and Elevations
 - d) Project Limits (include labels for P.O.B. and P.O.E.)
 - e) Bottom of Abutment, Pier Footing Elevations
 - f) Pile Information: Capacity and Type (if applicable)
 - g) Water Surface Information (survey elevation & date and 100 year elevation)
 - h) Rip Rap
 - i) Stations and Elevations
 - j) Proposed Low Beam Elevation
3. Benchmark Box
4. Existing Structure Information
5. Control Points or Horizontal Tie Points
6. Notes: All that pertain from the MDOT Design Manual
7. Title Block with Bridge Number(s) and Job Number(s)
8. Construction Staging Details (if applicable)

C. **Log of Borings** (*see current AASHTO Standard Specifications for Highway Bridges, Section 4 – Foundations, Subsurface Exploration - General Requirements for minimum depth and minimum coverage*)

- 1. Soil Profile
 - a) Soil Strata
 - b) Blow Counts with three 6" increments

- c) Elevations shown, not depths
- 2. Pile Information (if applicable)
 - a) Bottom of Footing Elevations (abutments and piers)
 - b) Bottom of Tremie Elevations (if necessary)
 - c) Minimum Pile Penetration Elevations
 - d) Estimated Pile Penetration Elevations
 - e) Total Scour Elevations
- 3. Notes: All that pertain from MDOT Bridge Design Manual
- 4. Soil Boring Diagram indicating locations of borings

D. **General Plan of Structure**

- 1. Plan View of Structure
 - a) Lane and Shoulder Widths dimensioned
 - b) Clear Roadway dimensioned
 - c) Angle of Crossing shown
 - d) Reference Points: Stations and Elevations
 - e) Guardrail Details shown
 - f) Rip Rap shown (if applicable)
 - g) Slope Stake Line
 - h) Permanent Easements and Grading Permits shown
 - i) Survey and Construction Centerline shown
 - j) Slope Steepness indicated
 - k) Erosion Control shown (if not shown on Site sheet)
 - l) Right of Way Limits shown and dimensioned
 - m) Cofferdam Layout (if applicable)
- 2. Elevation View of Structure
 - a) Railing Type shown
 - b) Beam Type indicated (if applicable)
 - c) Berm Elevation shown
 - d) Water Elevations shown
 - 1) Elevation at Date of Survey
 - 2) 100 year Elevation
 - e) Rip Rap shown, include degree of slope
 - f) Cofferdams shown
 - g) Piles shown
 - 1) Type shown
 - 2) Capacity shown
 - h) Abutments and Pier(s) shown
 - 1) Bottom of Tremie Elevations
 - 2) Bottom of Footing Elevations
 - i) Guardrail Layout and Type
 - j) Approach Type information
 - k) Bearing Fixity
 - l) Vertical Underclearance (if grade or railroad separation)
 - m) Span Lengths
 - n) Overall Bridge Length

3. HMA Application Table
4. Hydraulic Table – To be completed for river/drain crossings, as shown in the MDOT Bridge Design Manual, with the following data.
 - a) 50 Year Data
 - b) 100 Year Data
5. Typical Bridge Cross Section
 - a) Lane and Shoulder Widths shown: include centerline label
 - b) Shoulder to Fascia Distances dimensioned
 - c) Centerline to Fascia Distances dimensioned
 - d) Out to Out of Fascia dimensioned
 - e) Deck Material and Thickness shown
 - f) Deck Cross Slope shown
 - g) Railing Type indicated
 - h) Number and Type of Beam shown
 - i) Earth Slopes shown (include existing and proposed)
 - j) Rip Rap shown
 - k) Pile Type and Capacity shown (include pile batter)
 - l) Limits of Backfill and Excavation shown
 - m) Cofferdams shown
6. Typical Section Through Abutment / Pier
 - a) Deck Type shown
 - b) Beam Type shown
 - c) Reference Lines shown
 - d) Approach Material shown (abutments)
 - e) Rip Rap shown
 - f) Limits of Backfill and Excavation
 - g) Berm Elevations (abutments)
 - h) Bottom of Tremie Elevations
 - i) Bottom of Footing Elevations shown
 - j) Pile Type, Capacity and Batter shown
 - k) Cofferdams shown
 - l) Dimensions of Abutments and Piers
 - a) widths
 - b) minimum/maximum heights
7. Typical Section Through Wingwall
 - a) Show all dimensions
 - 1) widths
 - 2) minimum/maximum heights
 - b) Limits of Backfill and Excavation
 - c) Pile information
 - 1) Capacity
 - 2) Type
 - 3) Batter

8. Approach Typical
 - a) Lane and Shoulder widths
 - b) Guardrail Type
 - c) Road/Subbase Material

 9. Rip Rap Header Details (if applicable)
 - a) Toe Header Dimensions w/ geotextile liner
 - b) Side Header Dimensions w/ geotextile liner

 10. Notes: All that pertain from the MDOT Design Manual
- E. **Detour Route** - Show a map and legend sheet (if detour route required and not adding to the Maintaining Traffic special provision).