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| Michigan Department  of Transportation  0394 (06/19) | | **AWS D1.1 – FIELD WELDING PLAN**  To be completed by the Contractor and submitted to the Engineer for approval.  Naming Convention: 0394 CS-JN YYYY-MM-DD Field Welding Plan.pdf | | | | | | | | | | | PAGE  1 of |
| LOCATION | | | | | | | | | CONTROL SECTION | | **Bridge Field Services**  **Approval Block** | | |
| CONTRACTOR | | | | | | | | | JOB NUMBER | |
| WELDING CONTRACTOR | | | | | | | | | STRUCTURE # | |
| PREPARED BY | | | | | | | | | DATE | |
| **SPECIFICATIONS** | | | | | | | | | | | | | |
| The Contractor must comply with the current AWS D1.1 – Structural Welding Code - Steel, (as modified by the current FUSP 12SP707(A) - Structural Steel and Aluminum Construction), subsection 707.03.D.8 of the MDOT Standard Specifications for Construction, and all other contract requirements. | | | | | | | | | | | | | |
| **WELD INSPECTION AND TESTING** | | | | | | | | | | | | | |
| Test 100% of all welds in accordance with subsection 707.03.C.10 of the MDOT Standard Specifications for Construction and AWS D1.1. The testing must be performed by a Certified Welding Inspector (CWI) qualified as American Society for Nondestructive Testing (ASNT) Level II or Level III on Recommended Practice No. SNT-TC-1A. The Contractor must provide CWI and ASNT certifications to the Engineer prior to beginning the work. Upon completion of testing submit all non-destructive test reports, CWI and ASNT certifications to the Engineer. | | | | | | | | | | | | | |
| **SCOPE OF WORK** | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **WELDER CREDENTIALS** | | | | | | | | | | | | | |
| All welders performing AWS D1.1 field welding on MDOT construction projects must be certified through [MDOT’s Welder Certification Program](https://www.michigan.gov/documents/mdot/Welder_Certification_Program_650419_7.pdf) or qualified through [MDOT’s Welder Qualification Program](https://www.michigan.gov/documents/mdot/MDOT_Welder_Qualification_Program_653964_7.pdf). Certified welders will have Form 5620 – Welder Certification Test Report and qualified welders will have Form 0396 – *Welder Qualification Test Report* for each welding process and position they are certified / qualified. The Contractor must submit all welder credentials with this form to the Engineer prior to beginning the work**.** | | | | | | | | | | | | | |
| **WELD PROCEDURE SPECIFICATIONS (WPS)** | | | | | | | | | | | | | |
| Weld Procedure Specifications (WPS) must be completed by the contractor and submitted to the Engineer for approval. The Contractor must submit all WPS’s with this form to the Engineer for approval prior to beginning the work. The Contractor may complete the WPS’s included as additional pages of this form or may delete the additional pages and attach their own WPS’s to page 1 of this form. | | | | | | | | | | | | | |
| **FORM INSTRUCTIONS** | | | | | | | | | | | | | |
| 1. Complete page 1 of Form 0394 and all required WPS’s the for project and save as an Adobe PDF file; 2. Attach Form 5620 – Welder Certification Test Report or Form 0396 – Welder Qualification Test Report for all welders performing the welding; 3. Save Form 0394 with all attachments as follows: 0394 CS-JN YYYY-MM-DD Field Welding Plan.pdf; 4. Submit to the Engineer for approval. | | | | | | | | | | | | | |
| Michigan Department  of Transportation  0394 (06/19) | | | **WELDING PROCEDURE SPECIFICATION (WPS)**  To be completed by the Contractor and submitted to the Engineer for approval.  Naming Convention: 0394 CS-JN YYYY-MM-DD Field Welding Plan.pdf | | | | | | | | | | PAGE  2 of |
| LOCATION | | | | | | | | | | CONTROL SECTION | | **Bridge Field Services**  **Approval Block** | |
| WELDING CONTRACTOR | | | | | | | | | | JOB NUMBER | |
| PROCEDURE # / REVISION # | | | | | | | | | | STRUCTURE # | |
| PREPARED BY | | | | | | | | | | DATE | |
| **WELDING INFORMATION** | | | | | | | | | | **JOINT DETAIL** | | | |
| MATERIAL SPECIFICATION | | | | | |  | | | |  | | | |
| WELDING PROCESS | | | | | |  | | | |
| WELDING METHOD | | | | | |  | | | |
| WELDING POSITION | | | | | |  | | | |
| FILLER METAL SPECIFICATION | | | | | |  | | | |
| FILLER METAL CLASSIFICATION | | | | | |  | | | |
| CURRENT/POLARITY | | | | | |  | | | |
| WELDING PROGRESSION | | | | | |  | | | |
| ROOT TREATMENT | | | | | |  | | | |
| PREHEAT SURFACES 3” IN EVERY DIRECTION FROM WELD | | | | | | | | | |
| BASE METAL THICKNESS | | | | | PREHEAT TEMPERATURE | | | | |
| < 1½” | | | | | 250 °F MIN | | | | |
| 1½” TO 2½” | | | | | 300 °F MIN | | | | |
| > 2½” | | | | | 400 °F MIN | | | | |
| INTERPASS TEMPERATURE | | | | | | 650 °F MAX | | | |
| **WELDING PROCEDURE** | | | | | | | | | | **WELD INSPECTION AND TESTING** | | | |
| PASS  NO. | ELECTRODE  DIAMETER | | | WELDING CURRENT | | | | TRAVEL  SPEED | | VISUAL TESTING – 100%  PENETRANT TESTING – 100%  MAGNETIC PARTICLE TESTING – 100%  ULTRASONIC TESTING – 100%  RADIOGRAPHIC TESTING – 100%  OTHER | | | |
| AMPERES | | | VOLTS |
|  |  | | |  | | |  |  | |
| * Approved Form 0394 must be in the possession of the welder performing the work at the jobsite. * Welding is not allowed when the ambient air temperature is below 40 °F or during periods of precipitation unless heating and housing the area has been approved by the Engineer. | | | | | | | | | | | | | |

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| Michigan Department  of Transportation  0394 (10/17) | | **WELDING PROCEDURE SPECIFICATION (WPS)**  To be completed by the Contractor and submitted to the Engineer for approval.  Naming Convention: 0394 CS-JN YYYY-MM-DD Field Welding Plan.pdf | | | | | | | | PAGE  3 of |
| LOCATION | | | | | | | | CONTROL SECTION | **Bridge Field Services**  **Approval Block** | |
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| **WELDING INFORMATION** | | | | | | | | **JOINT DETAIL** | | |
| MATERIAL SPECIFICATION | | | | |  | | |  | | |
| WELDING PROCESS | | | | |  | | |
| WELDING METHOD | | | | |  | | |
| WELDING POSITION | | | | |  | | |
| FILLER METAL SPECIFICATION | | | | |  | | |
| FILLER METAL CLASSIFICATION | | | | |  | | |
| CURRENT/POLARITY | | | | |  | | |
| WELDING PROGRESSION | | | | |  | | |
| ROOT TREATMENT | | | | |  | | |
| PREHEAT SURFACES 3” IN EVERY DIRECTION FROM WELD | | | | | | | |
| BASE METAL THICKNESS | | | | PREHEAT TEMPERATURE | | | |
| < 1½” | | | | 250 °F MIN | | | |
| 1½” TO 2½” | | | | 300 °F MIN | | | |
| > 2½” | | | | 400 °F MIN | | | |
| INTERPASS TEMPERATURE | | | | | 650 °F MAX | | |
| **WELDING PROCEDURE** | | | | | | | | **WELD INSPECTION AND TESTING** | | |
| PASS  NO. | ELECTRODE  DIAMETER | | WELDING CURRENT | | | | TRAVEL  SPEED | VISUAL TESTING – 100%  PENETRANT TESTING – 100%  MAGNETIC PARTICLE TESTING – 100%  ULTRASONIC TESTING – 100%  RADIOGRAPHIC TESTING – 100%  OTHER | | |
| AMPERES | | | VOLTS |
|  |  | |  | | |  |  |
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| Michigan Department  of Transportation  0394 (10/17) | | **WELDING PROCEDURE SPECIFICATION (WPS)**  To be completed by the Contractor and submitted to the Engineer for approval.  Naming Convention: 0394 CS-JN YYYY-MM-DD Field Welding Plan.pdf | | | | | | | | PAGE  4 of |
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| **WELDING INFORMATION** | | | | | | | | **JOINT DETAIL** | | |
| MATERIAL SPECIFICATION | | | | |  | | |  | | |
| WELDING PROCESS | | | | |  | | |
| WELDING METHOD | | | | |  | | |
| WELDING POSITION | | | | |  | | |
| FILLER METAL SPECIFICATION | | | | |  | | |
| FILLER METAL CLASSIFICATION | | | | |  | | |
| CURRENT/POLARITY | | | | |  | | |
| WELDING PROGRESSION | | | | |  | | |
| ROOT TREATMENT | | | | |  | | |
| PREHEAT SURFACES 3” IN EVERY DIRECTION FROM WELD | | | | | | | |
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| > 2½” | | | | 400 °F MIN | | | |
| INTERPASS TEMPERATURE | | | | | 650 °F MAX | | |
| **WELDING PROCEDURE** | | | | | | | | **WELD INSPECTION AND TESTING** | | |
| PASS  NO. | ELECTRODE  DIAMETER | | WELDING CURRENT | | | | TRAVEL  SPEED | VISUAL TESTING – 100%  PENETRANT TESTING – 100%  MAGNETIC PARTICLE TESTING – 100%  ULTRASONIC TESTING – 100%  RADIOGRAPHIC TESTING – 100%  OTHER | | |
| AMPERES | | | VOLTS |
|  |  | |  | | |  |  |
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| **WELDING INFORMATION** | | | | | | | | **JOINT DETAIL** | | |
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| WELDING PROCESS | | | | |  | | |
| WELDING METHOD | | | | |  | | |
| WELDING POSITION | | | | |  | | |
| FILLER METAL SPECIFICATION | | | | |  | | |
| FILLER METAL CLASSIFICATION | | | | |  | | |
| CURRENT/POLARITY | | | | |  | | |
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| **WELDING PROCEDURE** | | | | | | | | **WELD INSPECTION AND TESTING** | | |
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