

## Special Provisions

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## STSP'S Revised November 30, 2017

### SPECIAL PROVISIONS

#### 1. General.

Perform the work under this construction contract for Project 1067-02-74, Hillside Drive and Johnson Creek Bridges and 1067-02-75, CTH X, B-28-25; CTH D, B-28-27, IH 94, Jefferson County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2018 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.

100-005 (20171130)

#### 2. Scope of Work.

The work under this contract shall consist of grading, borrow, base aggregate dense, HMA pavement, concrete pavement, beam guard, storm sewer, traffic control, Structures B-28-25, B-28-27, B-28-188, B-28-189, B-28-190 and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

#### 3. Prosecution and Progress.

Begin work within ten calendar days after the engineer issues a written notice to do so.

Provide the time frame for construction of the project within the 2019 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the beginning of the approved time frame.

To revise the time frame, submit a written request to the engineer at least two weeks before the beginning of the intended time frame. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the department's scheduled resources.

#### Fish Spawning

There shall be no instream disturbance of Johnson Creek as a result of construction activity under or for this contract, from March 1 to June 15 both dates inclusive, in order to avoid adverse impacts upon the spawning of fish species.

Any change to this limitation will require submitting a written request by the contractor to the engineer, subsequent review and concurrence by the Department of Natural Resources in the request, and final approval by the engineer. The approval will include all conditions to the request as mutually agreed upon by WisDOT and DNR.

Fish (20090901)

#### Migratory Birds

Swallow and other migratory birds' nests have been observed on or under the existing bridge. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act.

The nesting season for swallows and other birds is usually between May 1 and August 30. Either prevent active nests from becoming established, or apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds, or clearing nests from all structures before the nests become active in early spring. As a last resort, prevent birds from nesting by installing a suitable netting device on the remaining structure prior to nesting activity. Include the cost for preventing nesting in the cost of Removing Old Structure Over Waterway with Debris Capture System.

Birds (20090901)

### **Northern Long-eared Bat (*Myotis septentrionalis*)**

Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts have been identified within 150 feet of the project limits. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

To avoid adverse impacts upon the NLEBs, no Clearing is allowed between June 1 and July 31, both dates inclusive.

If the required Clearing is not completed by May 31, the department will suspend all clearing and associated work directly impacted by Clearing. The department will issue a notice to proceed with Clearing and associated work directly impacted by clearing after consulting with the United States Fish and Wildlife Service (USFWS).

Submit a schedule and description of Clearing operations with the ECIP 14 days prior to any Clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of Clearing operations, and list those additional measures in the ECIP.

### **Construction Staging**

1067-02-74

Complete replacement of the eastbound and westbound bridges on IH 94 over Johnson Creek and the westbound bridge on IH 94 over Hillside Drive in five stages and as detailed in the construction staging plans:

- Stage 1 – Conduct this work during off peak hours. Close the outside lanes of eastbound and westbound IH 94 at Johnson Creek. Close the outside lane of westbound IH 94 at Hillside Drive. Fill the existing rumble strips located in the outside shoulders.
- Stage 2 – Install barrier and shift traffic to the outside lane and shoulder. Maintain two lanes of traffic in both directions on IH 94 at all times. Construct the median portion of the bridges, additional lanes, and tapers.
- Stage 3 – Install barrier and shift traffic to the median lanes constructed in Stage 2. Maintain two lanes of traffic in both directions on IH 94 at all times. Construct the outside portion of the bridges and complete mainline paving.
- Stage 4 –
  - For IH 94 at Johnson Creek: Restore traffic to the mainline lanes. During off peak hours, close the inside lane of eastbound and westbound IH 94 and install / re-mill the rumble strips on the inside shoulders.
  - For westbound IH 94 at Hillside Drive: Install barrier and shift traffic to the outside lane and shoulder. Maintain two lanes of traffic at all times. Sawcut and remove the extra HMA pavement and grading placed in the median. Install rumble strips on the inside shoulder.
- Stage 5 –
  - For IH 94 at Johnson Creek: During off peak hours, close the outside lane of eastbound and westbound IH 94. Install / re-mill the rumble strips on the outside

- shoulders.
- For westbound IH 94 at Hillside Drive: Restore traffic to the mainline lanes. During off peak hours, close the outside lane and install / re-mill the rumble strips on the outside shoulders.

#### 1067-02-75

Complete deck replacement of B-28-27 CTH D prior to starting work on the IH 94 Johnson Creek structures.

Close CTH X and CTH D during construction operations. Concurrent closures of CTH X and CTH D will not be allowed.

#### **4. Traffic Ribbon**

Complete the construction sequence, including the associated traffic control as detailed in the construction staging section of the Plans, the Prosecution and Progress article, and as described below. Submit all traffic control change requests in writing to the engineer at least three working days prior to a change in traffic control plans. A request does not constitute approval.

##### **Work Restrictions**

Maintain a minimum of one 12-foot travel lane (16-foot clear width) in each direction at all times on IH 94. Move traffic control drums not in use to the outside edge of the shoulders.

Establish a statutory 55 MPH speed limit zone on IH-94 during the duration of the project when work is being completed on IH-94. Cover all statutory 70 MPH speed limit signs in the work zone. Coordinate these statutory 60 MPH speed limit zones on IH-94 with the Wisconsin Department of Transportation, Southwest Region – Madison Office Traffic Section (XXXXXX).

Provide the Jefferson County Sheriff's Department, the State Patrol, local police, fire, emergency services, and the engineer with the most current phone number the contractor or his/her representative can be reached at during non-working hours in the event of a safety hazard situation occurring at that time.

Do not permit equipment or vehicles to directly cross live traffic lanes of the Interstate highway. Use of median crossovers for construction vehicles is prohibited unless the median lanes are closed in each direction of travel. Yield to all through traffic at all locations. Equip all contractors' vehicles and equipment operating in the live traffic lanes with a hazard identification beam (flashing yellow signal light). Operate the flashing yellow beam only when merging or exiting live traffic lanes or when parked or operating on shoulders.

All construction vehicles and equipment operating on or near roadways, open or closed to traffic, shall be equipped with at least one flashing amber light. The flashing amber light shall be activated when vehicles or equipment are operated on the roadway, parked in close proximity to the roadway, and when entering or exiting live lanes of traffic. The flashing amber light shall be mounted approximately midway between the transverse extremities of the vehicles or equipment and at the highest practical point that provides visibility from all directions. The light shall be of the flashing strobe or revolving type meeting the following minimum requirements:

##### Flashing Strobe Type Light

360-degree lens

60-90 flashes per minute

5-inch minimum height

3 ¾ inch minimum diameter

### Revolving Type Light

360-degree lens

45-90 flashes per minute

4 5/8 inch minimum height

3 ¾ inch minimum diameter

The light shall be equipped with bulbs of 50 candlepower minimum. Mounting shall be either magnetic or permanent. No compensation for furnishing and installing the flashing amber or yellow signal lights to contractor supplied/owned vehicles or construction equipment will be provided in the contract.

Do not park or store equipment, vehicles, or construction materials within 30 feet of the edge of the traffic lanes, in unshielded areas, during non-working hours.

### **Traffic Control Devices**

Prior to any work being performed, place appropriate traffic control signing and devices as detailed on the plans, in the Standard Detailed Drawings and in conformance with the Manual of Uniform Traffic Control Devices (MUTCD). Do not proceed with any operation until all traffic control devices for such work are in the proper location, as approved by the engineer.

Place Traffic Control Signs Portable Changeable Message at least 7 calendars prior to the beginning of the project and between subsequent stages that require a lane shifts. Obtain approval from the department for all messages for the Traffic Control Signs Portable Changeable Message. The Engineer shall contact **XXXX** at the Southwest Region Madison Office.

Do not proceed with any operation until all traffic control devices for such work are in the proper location.

Place drums for lane or shoulder closures one-foot minimum from edge of live traffic lane unless shown otherwise on the plans. Drums placed adjacent to work areas shall be pulled back from the traveled lane when work is not in progress.

Have available at all times sufficient experienced personnel to promptly install, remove and reinstall the required traffic control devices to properly route traffic for work operations.

Do not disturb, remove or obliterate any permanent traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways not shown on the plans without the approval of the engineer.

### **Lane Closures**

Single lane closures on IH 94 eastbound and westbound are allowed during periods between Sunday night and Friday night for work such as:

- Removing existing bridge deck, false work placement, and removing deck forms for CTH X and CTH D.
- Filling in the existing rumble strips on IH 94 eastbound and westbound outside shoulders.
- Replacing rumble strips on IH 94 eastbound and westbound.

Eastbound and westbound lane closures can occur at the same time, but one lane in each direction must always remain open. Both lanes in one direction must remain open during the following times, defined as the PEAK hours for this project:

Start of Construction through Memorial Day

	Westbound Lanes	Eastbound Lanes
Monday – Thursday (mornings)	6:00 AM – 9:00 AM	6:00 AM – 9:00 AM
Monday – Thursday (evenings)	2:00 PM – 7:00 PM	1:00 PM – 7:00 PM
Friday morning – Sunday night	6:00 AM – 8:00 PM	6:00 AM – 9:00 PM

Memorial Day through End of Construction

	Westbound Lanes	Eastbound Lanes
Monday – Thursday (mornings)	6:00 AM – 10:00 AM	6:00 AM – 9:00 AM
Monday – Thursday (evenings)	2:00 PM – 7:00 PM	1:00 PM – 7:00 PM
Friday morning – Sunday night	6:00 AM – 8:00 PM	6:00 AM – 9:00 PM

The engineer has authority to also apply restrictions to closures of IH 94 lanes for special events such as:

- Do not close a westbound lane of IH 94 starting four hours prior to the kickoff of a home game for the Wisconsin Badgers football team, concluding at the kickoff. Do not close an eastbound lane of IH 94 starting at half time of a home game for the Wisconsin Badgers football team, concluding six hours after the completion of the game.
- Do not close an eastbound lane of IH 94 starting three hours prior to the start of a home Milwaukee Brewers game. Do not close a westbound lane of IH 94 starting at the seventh inning of a home game for the Milwaukee Brewers, concluding three hours after the completion of a home game.

The engineer has authority to also apply restrictions to closures of IH 94 lanes for other special events not listed here. Do not perform work on, nor close lanes, nor haul materials of any kind along or across any portion of the highway carrying IH 94 traffic during any of these events.

The engineer has the authority to halt the contractor’s operations at any time based on traffic conditions on IH 94, and to direct that all lanes and/or shoulders on IH 94 be opened to traffic, as specified under standard spec 108.5.

**Wisconsin Lane Closure System Advance Notification**

Provide the following advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

**TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION**

Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16')	MINIMUM NOTIFICATION
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Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Full ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction >16')	MINIMUM NOTIFICATION
Lane and shoulder closures	3 business days
System and service ramp closures	3 business days
Modifying all closure types	3 business days

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly project meetings in order to manage closures nearing their completion date.

108-057 (20160607)

Notify the following 24 hours prior to any lane closures, traffic patterns changes, and send them weekly updates during construction:

County Highway Operations Manager, Brian Udovich, (920) 674-7273

Jefferson County Sheriff Communications Supervisor

Todd Lindert (920) 674-7310

Village of Johnson Creek

Administrator, Kyle L. Ellefson (920) 699-2296

Chief of Police, Gary Bleeker (920) 699-2111

Fire & EMS Chief, Jim Wolf (920) 699-3456

Johnson Creek Public Schools

## 5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH 94 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, May 24, 2019 to 6:00 AM Tuesday, May 28, 2019;
- From noon Wednesday, July 3, 2019 to 6:00 AM Monday, July 8, 2019
- From noon Friday, August 30, 2019 to 6:00 AM Tuesday, September 3, 2019.

stp-107-005 (20050502)

## 6. Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Marie Kopke at (651)290-5733.

## 7. Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels before being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Guidelines from the Wisconsin Department of Natural Resources for disinfection are available at:

<http://dnr.wi.gov/topic/invasives/disinfection.html>

Use the following inspection and removal procedures:

1. Before leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can before leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
  - 4.1. Washing with ~212 F water (steam clean), or
  - 4.2. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
  - 4.3. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104° F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

stp-107-055 (20130615)

## 8. Construction Over or Adjacent to Navigable Waters.

The **Johnson Creek** is classified as a state navigable waterway under standard spec 107.19.

stp-107-060 (20171130)

## 9. Utilities.

This contract comes under the provision of Administrative Rule Trans 220.

stp-107-065 (20080501)

There are underground and overhead utility facilities located within the project limits for this project. The contractor shall coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area, as required by statutes. The contractor shall use caution to ensure the integrity of underground facilities and shall maintain code clearances from overhead facilities at all times.

**1067-02-74**

AT&T Legacy has underground fiber duct package that is located 5' north of the south right-of-way line of IH 94 at Hillside Drive(Sta 349+00). The fiber duct package is not in conflict with the proposed construction although AT&T is requiring AT&T Plant Protection Personnel be present when working in this area. Contact Charles Conely at 262-547-6746, [cc7585@att.com](mailto:cc7585@att.com) and Norman Noorda at 608-556-7199, [nn2589@att.com](mailto:nn2589@att.com) a minimum of 3 days prior to working in this area.

**TDS Telecom** has buried copper communication cable along the west side of Hillside Drive crossing IH 94. These facilities are in conflict with the proposed MGS guardrail on Hillside Drive. TDS is proposing to replace that cable by directional boring west of the existing facilities. TDS also has a copper service drop crossing Hillside Drive at Sta 352+00 that will be replaced at a depth of 7' to avoid conflicts with the proposed MGS guardrail. Their relocation work is scheduled to be done in October of 2018 and prior to the construction under this contract.

**WE Energies** has overhead electric lines...

**Wisconsin Independent Network (WIN)** has underground communication lines...

### 1067-02-75

**TDS Telecom** has buried copper communication lines crossing CTH D at approximately Sta 45+70 and Sta 55+80. These facilities are outside of our project limits; therefore, no conflicts are anticipated. TDS Telecom also has buried copper communication lines crossing CTH X at approximately Sta 46+12. The plans call for a small fill on the ditch inslope so their facilities should not be impacted; therefore, no conflicts are anticipated.

**WE Energies** has overhead electric lines...

**WE Energies** has underground gas lines located along the west right-of-way of CTH X. These facilities are not conflict with the proposed construction.

**Wisconsin Independent Network (WIN)** has underground fiber optic cable along the south right-of-way of IH 94 buried 18'-20' below the pavement. No conflicts are anticipated.

## 10. **Erosion Control Structures.**

Within seven calendar days after beginning work on the bridge superstructure, place all permanent erosion control devices, including riprap, erosion mat, ditch checks, seed, fertilizer, mulch, soil stabilizer, or any other item required by the contract or deemed necessary by the engineer. These devices shall be in place in the area under the bridge and on both sides of the roadway, from the waterway to a point 100-feet behind the backwall of the abutment. Within said limits, place these devices to a height equivalent to the calculated water elevation resulting from a storm that occurs on the average of once every two years (Q2) as shown on the plan, or as the engineer directs. Before initial construction operations, place turbidity barriers, silt screens, and other temporary erosion control measures as the plans show, and remove them after the permanent erosion control devices are in place unless directed otherwise by the engineer.

In the event that construction activity does not disturb the existing ground below the Q2 elevation, the above timing requirements for permanent erosion control shall be waived.

stp-107-070 (20030820)

## 11. **Environmental Protection.**

Supplement standard spec 107.18 as follows:

### **Wetlands**

Do not disturb nor store materials or topsoil within the nearby wetlands as shown on the plans unless areas are designated to be filled or impacted as permitted in the project's US Army Corps of Engineers Section 404 permit. The work area shall be separated from the wetlands by silt fence, as shown on the plans, to avoid siltation and inadvertent fill into the wetland areas. Place stockpiled soil material on upland site an adequate distance from the wetland and any open water areas, as approved by the engineer.

### **Dewatering**

If dewatering is required, treat the water to remove suspended sediments by filtration, settlement, or other appropriate best management practice prior to discharge. The means and methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for dewatering at each location it is required. The submittal shall also include the details of how the intake will be managed to not cause an increase in the background level turbidity prior to treatment and any additional erosion controls necessary to prevent sediments from reaching the project limits or wetlands and waterways. Guidance on dewatering can be found on the Wisconsin Department of Natural Resources website located in the Storm Water Construction Technical Standards, Dewatering Code #1061, "Dewatering". This document can be found at the WisDNR website:

[http://dnr.wi.gov/topic/stormwater/standards/const\\_standards.html](http://dnr.wi.gov/topic/stormwater/standards/const_standards.html)

The cost of all work and materials associated with water treatment and/or dewatering is incidental to the bid items with which the work is associated.

## **12. Notice to Contractor, Asbestos Containing Materials on Structure.**

John Roelke, License Number All-1195232, inspected Structure B-28-25 for asbestos on February 19, 2009. Regulated Asbestos Containing Material (RACM) was found on this structure in the following locations and quantities: 70 square feet of Cat II non-friable gray gasket located where the guardrail attaches to the concrete parapets.

John Roelke, License Number All-1195232, inspected Structure B-28-27 for asbestos on February 19, 2009. Regulated Asbestos Containing Material (RACM) was found on this structure in the following locations and quantities: 60 linear feet of Cat. II non-friable gray caulk around the bolts in the guardrail and 70 square feet of Cat II non-friable gray gasket located where the guardrail attaches to the concrete parapets.

A copy of the inspection report is available from: John Jenkins, SW Region, 608-246-3866. Locations of asbestos containing material are noted on the plan set. Do not disturb any asbestos containing material. Should asbestos containing material be disturbed, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at 608-266-1476 for an emergency response as specified in standard spec 107.24. Keep material wet until it is abated.

stp-107-120 (20120615)

## **13. Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.**

John Roelke, License Number All-1195232, inspected Structure B-28-31, B-28-32 and B-28-667 for asbestos on October 6, 2014; February 25, 2009 and February 25, 2009, respectively. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: John Jenkins, SW Region, 608-246-3866.

In accordance with NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days before beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to John Jenkins, SW Region, 2101 Wright St, Madison, WI 53704 and DOT BTS-ESS attn: Hazardous Materials Specialist PO Box 7965, Madison, WI. 53707-7965. In addition, comply with all local or municipal asbestos requirements.

Use the following information to complete WisDNR form 4500-113 for Structure B-28-31:

- Site Name: Structure B-28-31, IH 94 WB over Hillside Drive
- Site Address: 2.9M W JCT CTH F TO N
- Ownership Information: SW Region, 2101 Wright St, Madison, WI 53704
- Contact: John Jenkins
- Phone: 608-246-3866
- Age: 54 years old. This structure was constructed in 1964.
- Area: 4,365 SF of deck

Use the following information to complete WisDNR form 4500-113 for Structure B-28-32:

- Site Name: Structure B-28-32, IH 94 EB over Johnson Creek
- Site Address: 5.4M W JCT CTH F TO N
- Ownership Information: SW Region, 2101 Wright St, Madison, WI 53704
- Contact: John Jenkins
- Phone: 608-246-3866
- Age: 54 years old. This structure was constructed in 1964
- Area: 1,740 SF of deck

Use the following information to complete WisDNR form 4500-113 for Structure B-28-667:

- Site Name: Structure B-28-667, IH 94 WB over Johnson Creek
- Site Address: 5.4M W JCT CTH F TO N
- Ownership Information: SW Region, 2101 Wright St, Madison, WI 53704
- Contact: John Jenkins
- Phone: 608-246-3866
- Age: 78 years old. This structure was constructed in 1940.
- Area: 1,672 SF of deck

Insert the following paragraph in Section 6.g.:

- If asbestos not previously identified is found or previously non-friable asbestos becomes crumbled, pulverized, or reduced to a powder, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at 608-266-1476 for an emergency response as specified in standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

stp-107-125 (20120615)

## 14. Lane Rental Fee Assessment.

### A General

The contract designates some lane closures to perform the work. The contractor will not incur a Lane Rental Fee Assessment for closing lanes during the allowable lane closure times. The contractor will incur a Lane Rental Fee Assessment for each lane closure outside of the allowable lane closure times. If a lane is obstructed at any time due to contractor operations, it is considered a closure. The purpose of lane rental is to enforce compliance of lane restrictions and discourage unnecessary closures.

The allowable lane closure times are shown in the Traffic article.

Submit the dates of the proposed lane, ramp, and roadway restrictions to the engineer as part of the progress schedule.

### B Lane Rental Fee Assessment

The Lane Rental Fee Assessment incurred for each lane closure, each ramp closure, and each full closure of a roadway, per direction of travel, is as follows:

- \$5,000 per lane, per direction of travel, per hour broken into 15 minute increments

The Lane Rental Fee Assessment represents a portion of the cost of the interference and inconvenience to the road users for each closure. All lane, roadway, or ramp closure event increments 15 minutes and less will be assessed as a 15-minute increment.

The engineer, or designated representative, will be the sole authority in determining time period length for the Lane Rental Fee Assessment.

Lane Rental Fee Assessments will not be assessed for closures due to crashes, accidents, or emergencies not initiated by the contractor.

The department will assess Lane Rental Fee Assessment by the dollar under the administrative item Failing to Open Road to Traffic. The total dollar amount of Lane Rental Fee Assessment will be computed by multiplying the Lane Rental Assessment Rate by the number of 15-minute increments of each lane closure event as described above.

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance. If interim completion time or contract time expires before the completion of specified work in the contract, additional liquidated damages will be assessed as specified in standard spec 108.11 or as specified within this contract.

stp-108-065 (20161130)

**15. Debris Containment Structure B-28-25, Item 203.0225.S.01, Structure B-28-27, Item 203.0225.S.02.**

**A Description**

This special provision describes providing a containment system to prevent debris from structure removal, reconstruction, or other construction operations from falling onto facilities located under the structure. Using this containment system does not relieve the contractor of requirements under standard spec 107.17 and standard spec 107.19 or requirements under a US Army Corps of Engineers Section 404 Permit.

**B (Vacant)**

**C Construction**

Before starting work, submit a debris containment plan to the engineer for review. Incorporate engineer-requested modifications. Do not start work over Johnson Creek until the engineer approves the debris containment plan.

Maintain adequate protection throughout construction for people and property within the potential fall zone. Ensure that a containment system capable of protecting underlying facilities from falling construction debris is in place before beginning deck repair, parapet removal, or other operations that may generate debris.

At least 15 working days before conducting potential debris generating operations, contact the following owners or lessees:

1. Enter name and contact information
2. Enter name and contact information

**D Measurement**

The department will measure Debris Containment Structure B-28-25 and Structure B-28-27 as a single lump sum unit of work for each structure acceptably completed.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
203.0225.S.01	Debris Containment <u>Structure B-28-25</u>	LS
203.0225.S.02	Debris Containment <u>Structure B-28-27</u>	LS

Payment is full compensation for furnishing, installing, maintaining, and removing a debris containment system.

stp-203-010 (20080902)

**16. Removing Old Structure Over Waterway With Minimal Debris Station 892EB+27, Item 203.0600.S.01, Station 892WB+27, Item 203.0600.S.02**

Conform to standard spec 203 as modified in this special provision.

*Add the following to standard spec 203:*

**203.3.6 Removals Over Waterways and Wetlands**

### 203.3.6.2 Removing Old Structure Over Waterway with Minimal Debris

- (1) Remove the existing structure B-28-32 and B-28-667 over the Johnson Creek in large sections and conforming to the contractor's approved structure removal and clean-up plan. During superstructure removal, prevent all large pieces and minimize the number of small pieces from entering the waterway or wetland. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. The contractor may leave limited amounts of small concrete pieces scattered over the waterway floor or wetland only if the engineer allows.
- (2) Submit a structure removal and clean-up plan as part of the erosion control implementation plan required under standard spec 107.20. Do not start work under the structure removal and clean-up plan without the department's written approval of the plan. Include the following information in the structure removal and clean-up plan:
  - Methods and schedule to remove the structure.
  - Methods to control potentially harmful environmental impacts.
  - Methods for superstructure removal that prevent all large pieces and minimize the number of small pieces from entering the waterway or wetlands.
  - Methods to control dust and contain slurry.
  - Methods for removing piers and abutments. If blasting in water, include restrictions that regulatory agencies and the contract require.
  - Methods for cleaning the waterway or wetlands.
- (3) If stockpiling spoil material, place it on an upland site an adequate distance from the waterway, wetland, or any open water created by excavation. Install silt fence between the spoil pile and the waterway, wetland, or excavation site.

Add the following Removing Old Structure bid item to standard spec 203.5.1:

ITEM NUMBER	DESCRIPTION	UNIT
203.0600.S.01	Removing Old Structure Over Waterway With Minimal Debris Station 892EB+27	LS
203.0600.S.02	Removing Old Structure Over Waterway With Minimal Debris Station 892WB+27	LS

stp-203-020 (20170615)

## 17. QMP Base Aggregate.

### A Description

#### A.1 General

- (1) This special provision describes contractor quality control (QC) sampling and testing for base aggregates, documenting those test results, and documenting related production and placement process changes. This special provision also describes department quality verification (QV), independent assurance (IA), and dispute resolution.
- (2) Conform to standard spec 301, standard spec 305, and standard spec 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.
- (3) Do not apply this special provision to material placed and paid for under the Aggregate Detours, Breaker Run, Select Crushed, Pit Run, Subbase, or Riprap bid items.
- (4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:
  1. Production and placement control and inspection.
  2. Material sampling and testing.
- (5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures.

<http://wisconsindot.gov/rdwy/cmm/cm-08-00toc.pdf>

#### A.2 Small Quantities

- (1) The department defines a small quantity, for each individual Base Aggregate bid item, as a contract quantity of 9000 tons or less of material as shown in the schedule of items under that bid item.

- (2) The requirements under this special provision apply equally to a small quantity for an individual bid item except as follows:

**A.2.1 Quality Control Plan**

- (1) Submit an abbreviated quality control plan consisting of the following:
1. Organizational chart including names, telephone numbers, current certifications with HTCP numbers, and expiration dates, and roles and responsibilities of all persons involved in the quality control program for material under affected bid items.

**A.2.2 Contractor Testing**

1. Testing frequency:

Contract Quantity	Minimum Required Testing per source
≤ 6000 tons	One stockpile test before placement, and two production or one loadout test. <sup>[1][2]</sup>
> 6000 tons and ≤ 9000 tons	One stockpile and Three placement tests <sup>[3][4][5]</sup>

<sup>[1]</sup> Submit production test results to the engineer for review before incorporating the material into the work. Production test results are valid for a period of 3 years.

<sup>[2]</sup> If the actual quantity overruns 6,000 tons, on the next day of placement perform one randomly selected placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

<sup>[3]</sup> If the actual quantity overruns 9000 tons, on the next day of placement perform one randomly selected placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

<sup>[4]</sup> For 3-inch material or lift thickness of 3 inch or less, obtain samples at load-out.

<sup>[5]</sup> Divide the aggregate into uniformly sized sublots for testing.

2. Stockpile testing for concrete pavement recycled in place will be sampled on the first day of production.
3. Until a four point running average is established, individual placement tests will be used for acceptance. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Material represented by a subplot with any property outside the specification limits is nonconforming. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

**A.2.3 Department Testing**

- (1) The department will perform testing as specified in B.8 except as follows:
- Department testing may be waived for contract bid item quantities of 500 tons or less.

**B Materials**

**B.1 Quality Control Plan**

- (1) Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not place base before the engineer reviews and comments on the plan. Construct the project as that plan provides.
- (2) Do not change the quality control plan without the engineer’s review. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in each of the contractor’s laboratories as changes are adopted. Ensure that the plan provides the following elements:
1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
  2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
  3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
  4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.
  5. Descriptions of stockpiling and hauling methods.
  6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
  7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

**B.2 Personnel**

- (1) Have personnel certified under the department's highway technician certification program (HTCP) perform sampling, testing, and documentation as follows:

SAMPLING AND TESTING ROLES	TEST STANDARD	REQUIRED CERTIFICATION
Random Sampling of Materials Sampling Aggregates	ASTM D3665 AASHTO T2 <sup>[1]</sup>	Transportation Materials Sampling Technician (TMS) Aggregate Technician I (AGGTEC-I) AGGTEC-I Assistant Certified Technician (ACT-AGG)
Percent passing the 200 Sieve Gradation Moisture Content Fractured Faces	AASHTO T11 AASHTO T27 AASHTO T255 ASTM D5821	Aggregate Technician I (AGGTEC-I) AGGTEC-I Assistant Certified Technician (ACT-AGG)
Liquid and Plasticity Index	AASHTO T89 AASHTO T90	Aggregate Testing for Transportation Systems (ATTS) Grading Technician I (GRADINGTEC-1) Grading Assistant Certified Technician (ACT-Grading)
Plasticity Check	AASHTO T90	Aggregate Technician I (AGGTEC-I) AGGTEC-I Assistant Certified Technician (ACT-AGG) Grading Technician I (GRADINGTEC-1) Grading Assistant Certified Technician (ACT-Grading)

<sup>[1]</sup> Plant personnel under the direct observation of an aggregate technician certified at level one or higher may operate equipment to obtain samples.

- (2) A certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

### B.3 Laboratory

- (1) Perform QC testing at a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Management Section  
3502 Kinsman Blvd.  
Madison, WI 53704  
Telephone: (608) 246-5388

<http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/appr-prod/qual-labs.aspx>

### B.4 Quality Control Documentation

#### B.4.1 General

- (1) Submit base aggregate placement documentation to the engineer within 10 business days after completing base placement. Ensure that the submittal is complete, neatly organized, and includes applicable project records and control charts.

#### B.4.2 Records

- (1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within one business day after obtaining a sample. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

#### B.4.3 Control Charts

- (1) Plot gradation and fracture on the appropriate control chart as soon as test results are available. Format control charts according to CMM 8.30. Include the project number on base placement control charts. Maintain separate control charts for each base aggregate size, source or classification, and type.
- (2) Provide control charts to the engineer within one business day after obtaining a sample. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:

1. Contractor individual QC tests.
  2. Department QV tests.
  3. Department IA tests.
  4. Four-point running average of the QC tests.
- (3) Except as specified under B.8.2.1 for nonconforming QV placement tests, include only QC placement tests in the running average. The contractor may plot process control or informational tests on control charts, but do not include these tests, conforming QV tests, or IA tests in the running average.

## **B.5 Contractor Testing**

- (1) Test gradation, fracture, liquid limit and plasticity index during placement for each base aggregate size, source or classification, and type.
- (2) Perform one stockpile test from each source before placement. One stockpile test may be used for multiple projects up to 60 calendar days.
- (3) Test gradation once per 3000 tons of material placed or fraction thereof. Determine random sample locations and provide those sample locations to the engineer. Obtain samples after the material has been bladed, mixed, and shaped but before watering and compacting; except collect 3-inch samples or lift thickness of 3 inch or less from the stockpile at load-out. Do not sample from material used to maintain local traffic or from areas of temporary base that will not have an overlying pavement. On days when placing only material used to maintain local traffic or only temporary base that will not have an overlying pavement, no placement testing is required.
- (4) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for seven calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.
- (5) The engineer may require additional sampling and testing to evaluate suspect material or the technician's sampling and testing procedures.
- (6) Test fracture for each gradation test until the fracture running average is above the lower warning limit. Subsequently, the contractor may reduce the frequency to one test per 10 gradation tests if the fracture running average remains above the warning limit.
- (7) Test the liquid limit and plasticity index for the first gradation test. Subsequently, test the liquid limit and plasticity index a minimum of once per 10 gradation tests.

## **B.6 Test Methods**

### **B.6.1 Gradation**

- (1) Test gradation using a washed analysis conforming to the following as modified in CMM 8.60:
 

Gradation .....	AASHTO T 27
Material finer than the No. 200 sieve .....	AASHTO T 11
- (2) For 3-inch base, if 3 consecutive running average points for the percent passing the No. 200 sieve are 8.5 percent or less, the contractor may use an unwashed analysis. Wash at least one sample out of 10. If a single running average for the percent passing the No. 200 sieve exceeds 8.5 percent, resume washed analyses until 3 consecutive running average points are again 8.5 percent passing or less.
- (3) Maintain a separate control chart for each sieve size specified in standard spec 305 or standard spec 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:
  1. Control limits are at the upper and lower specification limits.
  2. There are no upper warning limits for sieves allowing 100 percent passing and no lower control limits for sieves allowing 0 percent passing.
  3. Dense graded warning limits, except for the No. 200 sieve, are 2 percent within the upper and lower control limits. Warning limits for the No. 200 sieve are set 0.5 percent within the upper and lower control limits.
  4. Open graded warning limits for the 1-inch, 3/8-inch, and No. 4 sieves are 2 percent within the upper and lower control limits. Upper warning limits for the No. 10, No. 40, and No. 200 sieves are 1 percent inside the upper control limit.

### **B.6.2 Fracture**

- (1) Test fracture conforming to CMM 8.60. The engineer will waive fractured particle testing on quarried stone.

- (2) Maintain a separate fracture control chart for each base aggregate size, source or classification, and type. Set the lower control limit at the contract specification limit, either specified in another special provision or in table 301-2 of standard spec 301.2.4.5. Set the lower warning limit 2 percent above the lower control limit. There are no upper limits.

### **B.6.3 Liquid Limit and Plasticity**

- (1) Test the liquid limit and plasticity according to AASHTO T 89 and T 90.
- (2) Ensure the material conforms to the limits specified in standard spec table 301-2.

## **B.7 Corrective Action**

### **B.7.1 General**

- (1) Consider corrective action when the running average trends toward a warning limit. Take corrective action if an individual test exceeds the contract specification limit. Document all corrective actions both in the project records and on the appropriate control chart.

### **B.7.2 Placement Corrective Action**

- (1) Do not blend additional material on the roadbed to correct gradation problems.
- (2) Notify the engineer whenever the running average exceeds a warning limit. When two consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:
  1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
  2. For fracture, increase the QC testing frequency to at least one test per gradation test.
- (3) If corrective action improves the property in question such that the running average after four additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after four additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.
- (4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.
- (5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:
  1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
  2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
  3. The fracture control limit is exceeded by more than 10.0 percent.

## **B.8 Department Testing**

### **B.8.1 General**

- (1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within two business days after the department obtains the sample.

### **B.8.2 Verification Testing**

#### **B.8.2.1 General**

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

- (2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:
  1. Perform one stockpile test from each source before placement.
  2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.
- (3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV samples after the material has been bladed, mixed, and shaped but before watering and compacting; except, for 3-inch aggregates or for a lift thickness of 3 inch or less, the department will collect samples at load-out. The department will split each sample, test half for QV, and retain half.
- (4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

### **B.8.3 Independent Assurance**

- (1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
  1. Split sample testing.
  2. Proficiency sample testing.
  3. Witnessing sampling and testing.
  4. Test equipment calibration checks.
  5. Reviewing required worksheets and control charts.
  6. Requesting that testing personnel perform additional sampling and testing.
- (2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in B.9.

### **B.9 Dispute Resolution**

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.
- (2) Production test results, and results from other process control testing, may be considered when resolving a dispute.
- (3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

### **C (Vacant)**

### **D (Vacant)**

### **E Payment**

- (1) Costs for all sampling, testing, and documentation required under this special provision are incidental to this work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the non-performance of QMP administrative item.

- (2) For material represented by a running average exceeding a control limit, the department will reduce pay according to CMM 8-10.5.2 for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

stp-301-010 (20171130)

**18. Expansion Device, Structure B-28-25 and Structure B-28-27.**

**A Description**

This special provision describes furnishing and installing an expansion device as the plans show conforming to standard spec 502 as modified in this special provision.

**B Materials**

The minimum thickness of the polychloroprene strip seal shall be 1/4 inch for non-reinforced elastomeric glands and 1/8 inch for reinforced glands. Furnish the strip seal gland in lengths suitable for a continuous one-piece installation at each individual expansion joint location. Provide preformed polychloroprene strip seals that conform to the requirements ASTM D3542, and have the following physical properties:

Property Requirements	Value	Test Method
Tensile Strength, min.	2000 psi	ASTM D412
Elongation @ Break, min	250%	ASTM D412
Hardness, Type A, Durometer	55 ± 5 pts.	ASTM D2240
Compression Set, 70 hours @212°F, max.	35%	D395 Method B Modified
Ozone Resistance, after 70 hrs. at 100°F under 20% Strain with 100 pphm ozone	No Cracks	ASTM D1149 Method A
Mass Change in Oil 3 after 70 hr. 212°F Mass Change, max.	45%	ASTM D471

Install the elastomeric strip seal gland with tools recommended by the manufacturer, and with a lubricant adhesive conforming to the requirements of ASTM D4070.

The manufacturer and model number shall be one of the following approved strip seal expansion device products:

Manufacturer	Model Number Strip Seal Gland Size <sup>[1]</sup>		
	4-Inch	5-Inch	6-Inch
D.S. Brown	SSA2-A2R-400	SSA2-A2R-XTRA	SSA2-A2R-XTRA
R.J. Watson	RJA-RJ400	RJA-RJ500	RJA-RJ600
Watson Bowman Acme	A-SE400	A-SE500	A-SE800
Commercial Fabricators	A-AS400	----	----

<sup>[1]</sup> Expansion device strip seal gland size requirement of 4", 5", and 6" shall be as the plans show.

Furnish manufacturer's certification for production of polychloroprene represented showing test results for the cured material supplied, and certifying that it meets all specified requirements.

The steel extrusion or retainer shall conform to ASTM designation A 709 grade 36 steel. After fabrication, steel shall be galvanized conforming to the requirements ASTM A123.

Manufacturer's certifications for adhesive and steel shall attest that the materials meet the specification requirements.

stp-502-020 (20171130)

**19. Bar Steel Reinforcement HS Stainless Structures, Item 505.0800.S.**

**A Description**

This special provision describes furnishing and placing stainless steel reinforcing bars and associated stainless steel bar couplers.

Conform to standard spec 505 as modified in this special provision.

## **B Materials**

### **B.1 General**

Furnish stainless steel reinforcing bars conforming to ASTM A955 and to one of the following Unified Numbering System (UNS) designations: S31653, S31803, S32205, or S32304. Supply grade 60 bars, all of the same UNS designation. Conform to the chemical composition specified for the given UNS designation in ASTM A276 table 1.

Supply bars that are free of dirt, mill scale, oil, and debris by pickling to a bright or uniform light finish. The department may reject bars displaying rust/oxidation, questionable blemishes, or lack of a bright or uniform pickled surface.

Furnish chairs or continuous supports made of stainless steel or recycled plastic to support high-strength stainless bar steel reinforcement subject to the plastic chair restriction stated in standard spec 505.3.4(1).

Furnish couplers made from one of the UNS alloys allowed for bar steel.

Furnish tie wire made from one of the UNS alloys allowed for bar steel or from an engineer-approved plastic or nonmetallic material. Ensure that stainless steel tie wire is dead soft annealed.

### **B.2 Fabrication**

Before fabrication, supply test results from an independent testing agency certifying that the reinforcement meets the requirements of Annex A1 of ASTM A955.

Bend bars conforming to standard spec 505.3.2 and according to ASTM A955. Bend and cut bars using equipment thoroughly cleaned or otherwise modified to prevent contamination from carbon steel or other contaminants. Use tools dedicated solely to working with stainless steel.

### **B.3 Control of Material**

Identify reinforcement bars delivered to the project site with tags bearing the identification symbols used in the plans. Include the UNS designation, heat treat condition, heat number, grade corresponding to minimum yield strength level, and sufficient documentation to track each bar bundle to a mill test report.

Provide samples for department testing and acceptance according to CMM 8-50 Exhibit 1 requirements for concrete masonry reinforcement for uncoated bar steel.

Provide mill test reports for the project that do the following:

1. Verify that sampling and testing procedures and test results conform to ASTM A955, ASTM A276 table 1, and these contract requirements.
2. Include a chemical analysis with the UNS designation, heat lot identification, and the source of the metal.
3. Include tensile strength, yield strength, and elongation tests results conforming to ASTM A955 for each size furnished.
4. Certify that the bars have been pickled to a bright or uniform light finish.

## **C Construction**

### **C.1 General**

Ship, handle, store, and place the stainless steel reinforcing as follows:

1. Separate from regular reinforcement during shipping. Pad points of contact with steel chains or banding, or secure with non-metallic straps.
2. Store on wooden cribbing separated from regular reinforcement. Cover with tarpaulins if stored outside.
3. Handle with non-metallic slings.
4. Do not flame cut or weld. Protect from contamination when cutting, grinding, or welding other steel products above or near the stainless steel during construction.
5. Place on plastic or stainless steel bar chairs. If placing stainless steel chairs on steel beams, use chairs with plastic-coated feet.
6. Tie with stainless steel wire or an engineer-approved plastic or nonmetallic material.

Do not tie stainless steel reinforcing bars to, or allow contact with, uncoated reinforcing bars or galvanized steel. Maintain at least 1 inch clearance between stainless steel bars or dowels and uncoated or

galvanized steel. Where 1 inch clearance is not possible, sleeve bars with a continuous polyethylene or nylon tube at least 1/8 inch thick extending at least 1 inch in each direction and bind with nylon or polypropylene cable ties. Sleeves are not required between stainless steel bars and shear studs. Stainless steel bars can be in direct contact with undamaged epoxy-coated bars.

Cut flush with the top flange or remove uncoated fasteners, anchors, lifting loops, or other protrusions into a bridge deck before casting the deck on prestressed concrete beams.

## **C.2 Splices**

Splice as the plans show. Provide stainless steel couplers conforming to the minimum capacity, certification, proof testing, and written approval requirements of standard spec 550.3.3.4. The contractor may substitute stainless steel couplers for lap splices the plans show if the engineer approves in writing.

If increasing or altering the number or type of bar splices the plans show, provide revised plan sheets to the engineer showing the reinforcement layout, type, length, and location of revised bar splices and revised bar lengths. Obtain engineer approval for the location of new lap splices or substitution of mechanical bar couplers before fabrication. Ensure that new lap splices are at least as long as those the plans show.

## **D Measurement**

The department will measure Bar Steel Reinforcement HS Stainless Structures by the pound acceptably completed, computed from the nominal weights of corresponding sizes for carbon steel deformed bars in AASHTO M31 regardless of stainless steel alloy provided. The department will not measure extra material used if the contractor alters the reinforcement layout as allowed under C.2, extra material for splices or couplers the plans do not show, or the weight of devices used to support or fasten the steel in position.

The department will measure the Bar Couplers Stainless bid items as each individual coupler acceptably completed.

## **E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB

Payment for Bar Steel Reinforcement HS Stainless Structures is full compensation for furnishing and placing stainless steel reinforcing bars, including supports. Where the plans specify bar couplers, the department will pay for the length of bars as detailed with no deduction or increase for installation of the coupler.

Payment for the Bar Couplers Stainless bid items is full compensation for providing couplers; including bar steel that is part of the coupler and not detailed in the plan; for threading reinforcing bars; for installing and coating the splice; and for supplying and testing 3 couplers.

stp-505-005 (20141107)

## **20. Salvaged Rail.**

1067-02-75 CTH X and CTH D

All guardrail components (railing, hardware and posts) will salvaged and stored within the CTH right-of-way for pick up by Jefferson County Highway. Railing is to be unbolted and not cut. Please notify Brian Udovich of the Jefferson County Highway at 920-723-7273 to arrange for pick up of the salvaged rail.