Special Provisions

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SPECIAL PROVISIONS

1. General

Perform the work under this construction contract for Project ID 2290-22-70, Northwestern Avenue, CTH MM to CTH K, STH 38, in Racine 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, 2020 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 (20191121)

2. Scope of Work

The work under this contract shall consist of milling and paving of HMA pavement, removing concrete surface partial depth, concrete base patching, concrete pavement replacement, concrete curb and gutter, adjusting or reconstructing manhole and inlet structure covers, structure overlays, common excavation, grading, base course, signal improvements, permanent signing, pavement marking, traffic control, restoration 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

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

Fish Spawning

There shall be no instream disturbance of Hoods Creek as a result of construction activity under or for this contract, from March 1 to June 1 both dates inclusive, in order to avoid adverse impacts upon the development of fish eggs and substrate for aquatic organisms.

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.

0036 (20090901)

Do not begin construction on Stage 2A prior to June 10, 2021 without written consent from the engineer.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. 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.

Stage 1 is the outside lane closure of STH 38 from CTH K to STH 31. During this stage the contractor shall excavate and widen Emmertsen Rd right turn lane, replace concrete island, partial depth concrete removal, HMA full depth mill, concrete base patch, shoulder pavement removal, prepare foundation for asphaltic shoulder, concrete curb and gutter replacement, adjust manholes and inlets, signal replacement, and pave HMA layers.

Complete removing asphaltic surface milling before performing base patching.

Stage 2A and 2B shall be constructed concurrently.

Stage 2A is the full closure of STH 38 from STH 31 to CTH MM. During this stage the contractor shall remove guardrail, partial depth concrete removal, concrete base patch, complete pavement replacement, prepare foundation for asphaltic shoulder, concrete curb and gutter replacement, adjust manholes and

inlets, install overhead sign, and pave HMA layers. Traffic will be detoured on Green Bay Rd (CTH MM) and STH 31 or Spring St (CTH C) and STH 31.

Stage 2B is the inside lane closure of STH 38 from CTH K to STH 31. During this stage the contractor shall complete partial depth concrete removal, HMA full depth mill, concrete base patch, close median opening, concrete curb and gutter replacement, adjust manholes and inlets, signal replacement, and pave HMA layers.

Complete removing asphaltic surface milling before performing base patching. For base patching, contractor shall use SHES concrete for concrete base patching and concrete pavement replacement.

Stage 3 is the polymer modified asphaltic (PMA) overlay on B-51-54. Stage 3 can be constructed concurrently with either Stage 1 or Stage 2A/2B weather permitting.

Stage 4 is the polymer modified asphaltic (PMA) overlay on B-51-74. Stage 3 can be constructed concurrently with either Stage 1 or Stage 2A/2B weather permitting.

Local access within the detour shall be maintained throughout the entire project duration, traffic control requirements within the project limits are as follows:

During Daytime Working Hours:

Two lanes of traffic (one in each direction) shall be maintained with a minimum lane width of 10.5 feet, plus a 2 foot buffer between traffic and work operations will be required unless under a flagging operation. A flagging operation shall be required during any work activities that limit existing roadway to one lane total for both directions of traffic. A lane is defined as minimum of 10.5 feet in width. Flagging operation limits shall not extend more than 0.25 mile at any time during work operation it is being utilized for. At side roads one minimum 10.5 foot lane in each direction will be maintained at all times, unless a flagger is utilized on side road and mainline.

During Nighttime Working Hours:

Two lanes of traffic (one in each direction) shall be maintained with a minimum lane width of 10 feet, plus a 2 foot buffer between traffic and work operations will be required unless under a flagging operation. A flagging operation shall be required during any work activities that limit existing roadway to one lane total for both directions of traffic. A lane is defined as minimum of 10 feet in width. Flagging operation limits shall not extend more than 0.25 mile at any time during work operation it is being utilized for. At side roads one minimum 10 foot lane in each direction will be maintained at all times, unless a flagger is utilized on side road and mainline.

During Non-Work Hours:

One minimum 10.5 foot lane in each direction shall be required and maintained. At side roads one minimum 10.5 foot lane in each direction shall be required and maintained. Stop signs shall be maintained at all side roads.

Acceptable driving surface shall be maintained within the limits. Acceptable driving surfaces include asphaltic surface temporary, HMA pavement, milled HMA pavement, milled concrete pavement, or 6 inches of compacted and uniform base aggregate dense.

Maintain access to properties along the project for local residents, businesses, and emergency vehicles. Access for all driveways where alternative access is not available shall remain open at all times, except for when it is necessary to close driveway for curb and gutter replacements at local resident driveways. Commercial driveways are not to be closed and shall be constructed in halves or by closing one access at a time for properties that have multiple driveways. Construct temporary private and commercial entrances including a crushed aggregate surface, within same working day of entrance removal.

Inform all impacted property owners two working days prior to closing a driveway. Maintaining property access as described above is considered incidental to the Traffic Control bid item.

Emergency vehicle access shall be maintained at all times during work and non-work hours.

Do not store equipment, vehicles, or materials on side roads beyond the project limits without approval from the project engineer.

Notify the following emergency services and school district at least 5 days prior to closure of STH 38 and 5 days prior to overnight closures for bridge work.

Racine Area School District – 262-635-5600

Racine County Sherriff – 262-636-3822

City of Racine Police – 262-886-2300

City of Racine Fire Department – 262-886-2300

Village of Mount Pleasant Police – 262-886-2300

South Shore Fire Department – 262-995-1200

Village of Caledonia Police – 262-835-4423

Village of Caledonia Fire Department – 262-835-2050

4. Traffic

A General

The construction sequence and the associated traffic control shall be accomplished as detailed on the plans and described herein.

Definitions:

Peak Hours:	6:00 AM – 9:00 AM Monday, Tuesday, Wednesday, Thursday, and Friday
	3:00 PM – 6:00 PM Monday, Tuesday, Wednesday, Thursday, and Friday
Off-Peak Hours:	9:00 AM – 3:00 PM Monday, Tuesday, Wednesday, Thursday, and Friday ·
	6:00 PM – 9:00 PM Monday, Tuesday, Wednesday, Thursday, and Friday ·
	10:00 AM – 9:00 PM Saturday and Sunday
Night Time Hours:	9:00 PM – 6:00 AM (Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)
	9:00 PM – 10:00 AM (Friday PM to Saturday AM, Saturday PM to Sunday AM)

No lane closures are allowed during Peak Hours.

Contractor shall deploy PCMS boards a minimum of 5 nights before any overnight full closures for bridge work.

Stage 1

Keep STH 38 from CTH K to STH 31 open to traffic at all times with one lane. Work will require flagging for intersection operations as specified in the plan details and standard detail drawings.

Contractor shall construct a 4-ft wide safety edge within 72 hours of completing HMA milling or before weekend or holiday, whichever comes first. Construct safety edge with 6.0% cross slope as specified in traffic staging typical sections.

Contractor shall notify Mr. John Strack from the Racine Unified School District a minimum of 14 days prior to closing any lanes to traffic. Mr. Strack can be reached at (262) 631-7138 or john.strack@rusd.org.

Maintain access to local residences and businesses at all times.

During Work Hours:

Within the rural 4 –lane section from CTH K to Shamrock Dr maintain a minimum 11- foot lane open in each direction at all times. All side roads to remain open during construction.

Within the 4-lane section from Shamrock Dr to STH 31 maintain a minimum 10.5-foot lane open in each direction during daytime operations. Maintain a minimum 10-foot lane open in each direction during nighttime operations.

Keep flagging operations limited to 0.25 Miles. All side roads shall remain open during construction. Additional flaggers shall be used at side roads.

Milling, paving, and base patching work that encroaches on the travel lane shall require flagging operations.

For overnight closures, full intersection closures are permitted between 9PM and 6AM. Notify property owners two days before any full closures.

Non-Work Hours:

Provide a minimum of one lane of traffic in each direction on STH 38 with a minimum 10.5-foot lane width from CTH K to STH 31. All side roads are to remain open throughout the project limits.

Stage 2A

Contractor shall deploy PCMS boards a minimum of 5 days before full closure of STH 38.

Through traffic shall use the signed detour as shown in the plan. Detour from the City of Racine will follow Spring St (CTH C) west to STH 31 and north to STH 38 or follow Green Bay Rd (CTH MM) west to STH 31 and north to STH 38. Then continue on STH 38 to the north end of the construction limits. Detour from the Village of Caledonia will follow STH 31 south to Spring St (CTH C) east to STH 38.

Place and operate Traffic Control Signs Portable Changeable Message west of STH 31 on STH 38 and at Rapids Dr and STH 38 intersection. Fixed message signs shall be placed at both ends of the stage 2A limits 14 calendar days before the STH 38 closure, as detailed in the plan.

Stage 2B

Keep STH 38 from CTH K to STH 31 open to traffic at all times with one lane. Work will require flagging for intersection operations as specified in the plan details and standard detail drawings.

Maintain access to local residents and businesses at all times.

For overnight closures, full intersection closures are permitted between 9PM and 6AM. Notify property owners two days before any full closures.

During Work Hours:

Within the rural 4-lane section from CTH K to Shamrock Dr maintain a minimum 11- foot lane open in each direction at all times. All side roads to remain open during construction.

Within the 4-lane section from Shamrock Dr to STH 31 maintain a minimum 11-foot lane open in each direction during daytime operations. Maintain a minimum 11-foot lane open in each direction during nighttime operations.

Keep flagging operations limited to 0.25 Miles. All side roads shall remain open during construction. Additional flaggers shall be used at side roads.

Milling, paving, and base patching work that encroaches on the travel lane will require flagging operations.

Non-Work Hours:

Provide a minimum of one lane of traffic in each direction on STH 38 with a minimum 11-foot lane width from CTH K to STH 31. All side roads shall remain open throughout the project limits.

5. Holiday Work Restrictions

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 38 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 28, 2021 to 6:00 AM Tuesday, June 1, 2021; Memorial Day;
- From noon Friday, July 2, 2021 to 6:00 AM Tuesday, July 6, 2021; Fourth of July;
- From noon Friday, September 3, 2021 to 6:00 AM Tuesday, September 7, 2021 Labor Day.

stp-107-005 (20181119)

6. 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 less than 16 feet)	**MINIMUM NOTIFICATION**
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
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 feet or greater)	**MINIMUM NOTIFICATION**
Lane and shoulder closures	3 business days
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.

7. Erosion Control

Supplement standard spec 107.20 with the following:

Erosion control best management practices (BMP's) shown on the plans are at suggested locations. The actual locations will be determined by the contractor's ECIP and by the engineer. Include each dewatering (mechanical pumping) operation in the ECIP submittal. The ECIP will supplement information shown on the plans and not reproduce it. The ECIP will identify how to implement the project's erosion control plan. ECIP will demonstrate timely and diligently staged operations, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-application of top soil to minimize the period of exposure to possible erosion.

Provide the ECIP 14 days prior to the pre-construction conference. Provide 1 copy of the ECIP to the department and 1 copy of the ECIP to the WDNR Liaison (Kristina Betzold, (414) 507-4946, Kristina.betzold@wi.gov). Do not implement the ECIP until department approval, and perform all work in accordance to the approved ECIP.

Maintain Erosion Control BMP's until permanent vegetation is established or until the engineer determines that the BMP is no longer required.

Stockpile excess materials or spoils on upland areas away from wetlands, floodplains, and waterways. Immediately install perimeter silt fence protection around stockpiles. If stockpiled materials will be left for more than 3 days, install temporary seed or other temporary erosion control measures the engineer orders.

Re-apply topsoil on graded areas, as designated by the engineer, immediately after grading is completed within those areas. Seed, fertilizer, and mulch/erosion mat top-soiled areas, as designated by the engineer, within 3 days after placement of topsoil. If graded areas are left not completed and exposed for more than 24 hours, seed those areas with temporary seed.

Do not allow any excavation for; structures, utilities, grading, that requires dewatering (mechanical pumping) of water containing sediments (sand, silt, and clay particles) to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Prior to each dewatering operation, submit to the department a separate ECIP amendment describing in words and pictorial format an appropriate BMP for sediment removal, in accordance to WisDNR Storm Water Construction Technical Standard, Code 1061, Dewatering. Include reasoning, location, and schedule duration proposed for each operation. Per Code 1061, include all selection criteria: site assessment, dewatering practice selection, calculations, plans, specifications, operations, maintenance, and location of proposed treated water discharge. Provide a stabilized discharge area. If directing discharge towards or into an inlet structure, provide additional inlet protection for back-up protection.

SEF Rev. 15_0120

8. Maintaining Drainage

Maintain drainage at and through worksite during construction in accordance to standard specs 107.22, 204, 205 and 520.

Use existing storm sewers, existing culvert pipes, existing drainage channels, temporary culvert pipes, or temporary drainage channels to maintain existing surface and pipe drainage. Pumps may be required to drain the surface, pipe, and structure discharges during construction. Costs for furnishing, operating, and maintaining the pumps is considered incidental to the project.

SEF Rev. 15_0209

9. Adjusting Storm Sewer Structures

Add the following text to 611.3.1 of the standard specs:

Remove covers and frames prior to milling. Cover openings with a Cover Plates Temporary of sufficient thickness to carry traffic and at a depth to accommodate the milling operations. Backfill excavated areas with an asphalt surface mix to an elevation that will match the adjacent pavement. Cover Plates Temporary will be paid as separate contract bid item.

Add the following text to 611.3.7 of the standard specs:

The replacement of Grade A concrete when adjusting manhole covers in areas of bituminous resurfacing shall be to the top of the existing concrete base as shown on the construction detail for adjusting manhole covers. Use construction methods that conform to the requirements set forth in 611.3.3 of the standard specs.

Add the following text to 611.5 of the standard specs:

Removal and replacement of concrete pavement to accomplish the work shall be incidental to the cost of work. Removal and replacement of concrete curb and gutter will be paid for under items Removing Curb and Gutter and Concrete Curb and Gutter, 30-Inch.

SER-611-001 (20161216)

10. Utilities

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

107-065 (20080501)

Underground and overhead utility facilities are located within the project limits. Utility adjustments are required for this construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to insure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Bidders are advised to contact each utility company listed in the plans prior to preparing their bids, to obtain current information on the status of any utility within the project work limits.

The following utilities are to be adjusted as part of this contract:

- WisDOT (Signals)
- Village of Mount Pleasant (Manholes)

The following utilities have facilities within the construction limits.

AT&T Wisconsin has underground and aerial facilities within the project limits. Aerial lines are located on the north side of STH 38. Overhead lines cross STH 38 east of Newman Rd. Buried fiber optic lines are east of Taurus Dr and east of STH 31 along STH 38. The buried fiber optic lines near 186+95 RT do not require relocation for endwall grading, but caution should be exercised when excavating.

Manhole covers at STA 195+94 42' LT, STA 197+96 44' LT, and STA 218+96 24' RT will require adjustment to final road grade during construction. Contact AT&T Wisconsin a minimum of seven days prior to work to allow for mobilization. Allow for one day per manhole for completion of work. Work to be completed during construction.

The AT&T Wisconsin contact person is Scott Sokolowski at (414) 258-5239, (262) 994-8070 or ms4143@att.com.

Racine Water Works Commission has water, sanitary and storm water facilities within the project limits. Facilities run along STH 38 east of Markridge Dr. Water valve covers between STA 184+50 and STA 228+24 in the pavement will require adjustment to final road grade during construction.

Contact Jerome at (262) 497-4615 seven days prior to paving to coordinate adjustment of water valves within the paving limits. Allow for two hours per water valve adjustment for completion of work.

The Racine Water Works Commission contact person is Mr. Robert Bowers, Village of Mount Pleasant Sanitary and Sewer Utilities Manager, at (262) 664-7847. Contact Mr. Bowers a minimum of 14 days prior to work to coordinate casting and cover delivery or pick-up.

Village of Mount Pleasant has facilities within the project limits. The storm sewer and sanitary sewer manholes within the paving limits will be adjusted to final grade during construction as part of the let contract.

The Village of Mount Pleasant contact person is Bob Lui at (262) 681-3900 or blui@caledoniawiutility.com

Village of Caledonia Water has facilities within the project limits. Water lines run along STH 38 from Taurus Dr to Newman Rd. The fire hydrant in the NE quadrant of the STH 38 and Emmertsen Rd intersection will be relocated prior to construction.

The Village of Caledonia contact person is Bob Lui at (262) 681-3900 or blui@caledoniawiutility.com

The following utilities have facilities within the construction limits, however, no adjustments are anticipated:

Caledonia Storm Sewer Utility Commission has storm sewer facilities within the project limits. Numerous lines near the CTH K roundabout, culverts under Taurus Dr both north and south of STH 38 and twin CMPs under Newman Rd north of STH 38.

The Caledonia Storm Sewer Utility Commission contact person is Bob Lui at (262) 681-3900 or blui@caledoniawiutility.com.

Charter Communications has underground and aerial facilities for the length of the project.

The Charter Communications contact person is Pete Kruzela at (414) 908-1339 or pete.kruzela@charter.com

City of Racine has sanitary and storm water facilities within the project limits. Facilities run along STH 38 east of Markridge Dr.

The City of Racine contact person is Keith Haas at (262) 636-9434 or keith.haas@cityofracine.org.

Midwest Fiber Networks, LLC has underground and aerial facilities within the project limits. Buried fiber optic lines run from CTH K to Emmertsen Rd along STH 38. Aerial lines are on WE Energies' poles on the north side of STH 38.

The Midwest Fiber Networks, LLC contact person is Richard Trgovec at (414) 459-3554 or rtrgovec@midwestfibernetworks.com.

PaeTec Communications, LLC has underground and aerial facilities for the length of the project.

The PaeTec Communications, LLC contact person is Ms. Mary Fisher at (262) 792-7938 or mary.b.fisher@windstream.com.

Village of Caledonia - Sewer has facilities within the project limits. Sanitary sewer lines run along STH 38 from Chapel Ln to Newman Rd.

The Village of Caledonia contact person is Bob Lui at (262) 681-3900 or blui@caledoniawiutility.com

WE Energies electrical has underground and aerial facilities for the length of the project.

The WE Energies electric contact person is Nicole Smullen at (414) 221-5617 or Nicole.smullen@wecenergygroup.com.

We Energies electric has facilities within the construction limits. It is imperative that the highway contractor contact We Energies if removing any electrical underground cables, to verify that they have been discontinued and carry no electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24-hour Dispatch lines to arrange for this verification. We Energies Electric Dispatch #1-800-662-4797

WE Energies gas has underground facilities for the length of the project.

The WE Energies gas contact person is Nicole Smullen at (414) 221-5617 or Nicole.smullen@wecenergygroup.com.

We Energies gas has facilities within the construction limits. It is imperative that the highway contractor contact We Energies if removing any gas facilities, to verify that they have been discontinued and carry no natural gas. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24-hour Dispatch lines to arrange for this verification. We Energies Gas Dispatch #1-800-261-5325.

Windstream KDL, LLC has underground and aerial facilities for the length of the project.

The Windstream KDL, LLC contact person is Ms. Mary Fisher at (262) 792-7938 or mary.b.fisher@windstream.com.

Windstream NTI, LLC has underground and aerial facilities for the length of the project.

The Windstream NTI, LLC contact person is Ms. Mary Fisher at (262) 792-7938 or mary.b.fisher@windstream.com.

11. Notice to Contractor – Traffic Signal Equipment Lead Time

Order traffic signal equipment as soon as possible to assure the equipment is procured in a timely fashion and, therefore, installed, inspected, and ready for turn-on at the required date.

12. Railroad Insurance and Coordination - Union Pacific Railroad Company

A. Description

Comply with standard spec 107.17 for all work affecting Union Pacific Railroad Company (UPRR) property and any existing tracks.

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Union Pacific Railroad Company.

Notify evidence of the required coverage, and duration to David C. LaPlante, Senior Manager-Real Estate-Special and Public Projects, 1400 Douglas St. STOP 1690, Omaha, NE 68179; Telephone: (402) 544-8563; E-mail: dclaplante@up.com.

Also send a copy to the following: Paul Derksen, SE Region Railroad Coordinator; 141 N. W. Barstow Street, Waukesha, WI 53188; Telephone (262) 548-8770; E-mail: paul.derksen@dot.wi.gov.

Include the following information on the insurance document:

- Project ID: 2290-22-90
- Project Location: Mt. Pleasant WI
- Route Name: STH 38 (6 Mile Rd), Racine Co
- Crossing ID: 176806P
- Railroad Subdivision: Milwaukee Sub
- Railroad Milepost: 68.43
- Work Performed: PMA overlay of Roadway Structure over UPRR, repave bridge roadway approaches.

A.2 Train Operation

Approximately 10 through freight trains operate daily at up to 50 mph.

A.3 Names and Addresses of Railroad Representatives for Consultation and Coordination

Construction Contact

Chris T. Keckeisen, Manager Special Projects - Industry & Public Projects Engineering Department; 1400 Douglas, MS 0910, Omaha, NE, 68179; Telephone (402) 5445131; E-mail ctkeckei@up.com or Richard Ellison, Project coordinator, 207 Powell Avenue, Labadie, MO, 63055; Telephone (847) 323-7197; E-mail richardellison@up.com for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

Flagging Contact

See Construction Contact. If more than 30 days of flagging is required contact UPRR 30 days prior to needing a flagger on site. Reference the Wisconsin Milepost and Subdivision located in A.1.

Cable Locate Contact

In addition to contacting Diggers Hotline, contact the UPRR Call Before You Dig line at (800) 336-9193 at least five working days before the locate is needed. Normal business hours are 6:30 AM to 6:30 PM, Central Time, Monday through Friday, except holidays and are subject to change. Calls will be routed at all times in case of an emergency. Reference the Wisconsin Milepost and Subdivision located in A.1.

UPRR will only locate railroad owned cable buried in the railroad right-of-way. The railroad does not locate any other utilities.

A.4 Work by Railroad

The railroad will perform the work described in this section, except for work described in other special provisions, and will be accomplished without cost to the contractor.

A.5 Temporary Grade Crossing

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 at least 40 days prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

A.6 Rail Security Awareness and Contractor Orientation

Prior to entry on railroad right-of-way, the contractor shall arrange for on-line security awareness and contractor orientation training and testing and be registered through "e-RAILSAFE" for all contractor and subcontractor employees working on railroad right-of-way. See e-railsafe.com "Information". The security awareness and contractor orientation training is shown under the railroad's name.

The department has secured right of entry to railroad property; neither the contractor nor subcontractors or their employees will be required to sign a right of entry form.

The security awareness and contractor orientation certification is valid for 2 year(s) and must be renewed for projects that will carry over beyond the 2 year period. Contractor and subcontractor employees shall wear the identification badge issued by e-RAILSAFE when on railroad right-of-way. Costs associated with training and registration are incidental to other items in the contract.

stp-107-026 (20190717)

13. Public Convenience and Safety

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 7 PM until 7 AM the following morning, unless prior written approval is obtained from the engineer. The exception is for approved night time work on B-51-54 and B-51-74. Coordinate night time closure and work schedule with the engineer. The engineer will notify Tom Lazcano, Village of Caledonia engineer, and Tony Beyer, Village of Mount Pleasant engineer, a minimum of 14 days before any overnight closure.

stp-107-001 (20060512)

14. Construction Over or Adjacent to Navigable Waters

The Hoods Creek is classified as a federal navigable waterway under standard spec 107.19.

The Root River is classified as a federal navigable waterway under standard spec 107.19.

stp-107-060 (20171130)

15. 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 (>104º 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)

16. Joint and Crack Repair, Item SPV.0195.01

A Description

This special provision describes providing HMA for Joint and Crack Repair in existing pavement as the plans show and as follows.

B Materials

Furnish HMA pavement meeting the requirements for mixture LT or MT as specified in standard spec 465.2; except the engineer will not require the contractor to conform to the quality management program in 460.2.8. Furnish tack coat conforming to standard spec 455.2.5.

C Construction

Clean out all joints and cracks removing all loose and spalled concrete and all HMA patches. Dispose of all material off the project. Place asphaltic tack coat in the void. Fill voids with HMA pavement and machine compact.

D Measurement

The department will measure Joint and Crack Repair by the ton 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
SPV.0195.01	Joint and Crack Repair	TON

Payment is full compensation for removing, cleaning, and properly disposing of all loose and spalled concrete and HMA patches; for providing and applying tack coat, and for providing, placing and compacting HMA pavement.

SER-460-001 (20170502)

17. Water for Seeded Areas, Item SPV.0120.01

A Description

This special provision describes furnishing, hauling and applying water to seeded areas as the engineer directs and as follows.

B Materials

Furnish water that is clean, free of impurities or substances that might injure the seed.

C Construction

If rainfall is not sufficient, keep all seeded areas thoroughly moist by watering or sprinkling. The equivalent of one inch of rainfall and/or applied water per week shall be considered the minimum amount of water. Water for 30 days after seed placement or as the engineer directs. Apply water in a gentle and even manner to preclude washing or erosion. The topsoil shall not be left un-watered for more than 3 days during this 30-day period unless the engineer determines that it is excessively wet and does not require watering. Continue to water after seed germination to allow grass to become established.

D Measurement

The department will measure Water for Seeded Areas by volume by the thousand gallon units (MGAL), acceptably completed. The department will determine volume by engineer-approved meters or from tanks of known capacity.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0120.01	Water for Seeded Areas	MGAL

Payment is full compensation for furnishing, hauling, and applying the water.

ser-630-010 (20180131)

18. Special HES Curb and Gutter, Item SPV.0090.01

A Description

Construct concrete curb and gutter conforming to Section 601 of the 2020 WisDOT Standard Specifications.

B Materials

Furnish HES Curb and Gutter concrete mix with 660 lbs cement.

C Construction

Conform to Section 601 of the 2020 WisDOT Standard Specifications.

D Measurement

The department will measure HES Curb and Gutter by the linear foot 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
SPV.0090.01	HES Curb and Gutter	LF

Payment is full compensation for foundation excavation and preparation; special construction required at driveway entrances; for providing materials, including concrete, expansion joints; for placing, finishing, protecting, and curing; and for restoring the site. However, if the contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract. Payment also includes providing tie bars in unhardened concrete. For tie bars provided in concrete no placed under the contract, the department will pay separately under the Drilled Tie Bars bid item as specified in 416.5.

19. Grading Sloped Endwall Area, Item SPV.0060.01

A Description

This special provision describes grading sloped endwall area at culvert locations and grading within ditches to improve / restore drainage to existing conditions prior to culvert replacement.

B (Vacant)

C Construction

Construct embankment slopes as shown on plans, and any required ditch grading for drainage within ditch due to end wall replacements. Properly dispose of all surplus and unsuitable material in accordance with standard spec. 205.3.12. Finish all disturbed areas with topsoil, Fertilizer Type B. Seeding Mixture No. 30, and E-Mat Class I Type A.

D Measurement

The department will measure Grading Sloped Endwall Area as Each individual unit, 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
SPV.0060.01	Grading Sloped Endwall Area	EACH

Payment is full compensation for providing required material, grading operations, removal of waste, and for all landscaping to include; topsoil, Fertilizer Type B, Seeding Mixture No. 30, and E-Mat Class I Type A. Payment includes furnishing all labor, tools, equipment, and incidentals necessary to complete contract work required.

20. Section Corner Monuments, Item SPV.0060.02

A Description

Coordinate with Southeastern Wisconsin Regional Planning Commission (SEWRPC) for the perpetuation and replacement of a section corner (Public Land Survey System- PLSS) monument.

B Materials

SEWRPC will provide a pre-cast concrete monument or brass disk to be used to mark the PLSS corner.

Furnish base aggregate dense materials that conform to standard spec 305. Furnish concrete, asphalt, topsoil or other materials depending on the surface surrounding the corner.

C Construction

SEWRPC will perpetuate existing section corner monument. The CONTRACTOR is responsible to coordinate with SEWRPC and the WisDOT Project Manager throughout the perpetuation and replacement process. The CONTRACTOR will contact the engineer and SEWRPC at (262) 953-4295 at

least two (2) weeks before starting construction operations or the preconstruction meeting to allow for section corner monument perpetuation.

CONTRACTOR must excavate and completely remove the existing monument. CONTRACTOR is responsible for providing a backfilled 3 to 4 foot deep hole where existing monument was removed. CONTRACTOR is responsible to coordinate the materials and methodology to complete the construction of the surface surrounding the monument. This may include but is not limited to a 2' x 2' "box out" or 24" diameter core hole in concrete, asphalt pavement/paving rings, coring to facilitate poured in place monuments, topsoil, seed and mulching or other materials or methodologies as agreed to by the CONTRACTOR and SEWPRC.

Contact Information:

Attn: John Washburn
Southeastern Wisconsin Regional Planning Commission
W239 N1812 Rockwood Drive
P.O. Box 1607
Waukesha, WI 53187-1607
Phone (262) 547-6721
Cell (262) 953-4295
Fax (262) 547-1103
jwashburn@sewrpc.org

D Measurement

The department will measure Section Corner Monuments Special by the individual unit 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
SPV.0060.02	Section Corner Monuments	Each

Payment is full compensation for all excavating; removal of existing monument, for placing and compacting backfill material; for disposing of surplus materials; for concrete or asphalt material, finishing of roadway or other surfaces, for all coordination with SEWRPC.

SER-621-001 (20170530)

21. 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.

Coordinate lane, ramp, and roadway closures with any concurrent operations on adjacent roadways within 3 miles of the project. If other projects are in the vicinity of this project, coordinate lane closures to run concurrent with lane closures on adjacent projects when possible. When lane closures on adjacent projects extend into the limits of this project, Lane Rental Fee Assessments will only occur if the closure facilitates work under this contract.

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:

- $1,500 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)

22. Abatement of Asbestos Containing Material B-51-54, Item 203.0210.S

A Description

This special provision describes abating asbestos containing material on structures.

B (Vacant)

C Construction

John Roelke, License Number All-119523, inspected Structure B-51-54 for asbestos on October 31, 2017. Regulated Asbestos Containing Material (RACM) was found on this structure in the following locations and quantities: Parapet expansion joint contains 5 sq ft of caulk with non-friable ACM; abutment joint contains 3.4 sq ft of caulk with non-friable ACM.

The RACM on this structure must be abated by a licensed abatement contractor. A copy of the inspection report is available from Andy Molsom, WisDOT (262) 548-6705. 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 and the abatement report to

Andy Molsom, WisDOT (262) 548-6705 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:

- Site Name: Structure B-51-54, STH 38
- Site Address: 0.2 mi W JCT CTH G
- Town Range: 1004N22E Village of Caledonia; 42°48’50”N 87°52’55”E
- Ownership Information: WisDOT Transportation Southeast Region, 141 NW Barstow St, PO Box 798, Waukesha, WI 53187
- Contact: Charles Krummel
- Phone: (414) 750-0565
- Age: 34 years. This structure was constructed in 1987.
- Area: 6,161 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.

D Measurement

The department will measure Abatement of Asbestos Containing Material (Structure), completed in according to the contract and accepted, as a single complete lump sum unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
203.0210.S	Abatement of Asbestos Containing Material B-51-54	LS

Payment is full compensation for submitting necessary forms; removing all asbestos; and for properly disposing of all waste materials.

stp-203-005 (20120615)

23. Debris Containment B-51-54, Item 203.0225.S

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 Root River until the engineer approves the debris containment plan.

Maintain adequate protection throughout construction for people and property within the potential fall zone. Install a containment system that maintains existing vertical clearance to the facilities below and is capable of protecting underlying facilities from falling construction debris 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. Chris T. Keckeisen, Manager Special Projects - Industry & Public Projects Engineering Department; 1400 Douglas, MS 0910, Omaha, NE, 68179; Telephone (402) 5445131; E-mail ctkeckei@up.com
2. Richard Ellison, Project coordinator, 207 Powell Avenue, Labadie, MO, 63055; Telephone (847) 323-7197; E-mail richardellison@up.com

Upon completion of the work or when directed by the engineer, remove the debris containment system.

D Measurement

The department will measure Debris Containment B-51-54 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	Debris Containment B-51-54	LS

Payment for Debris Containment is full compensation supplying a debris containment plan; and for furnishing, installing, maintaining, and removing a debris containment system.

stp-203-010 (20190618)

24. Debris Containment Over Waterway B-51-74, Item SPV.0105.01

A Description

This special provision describes providing a containment system to prevent debris, chippings, saw cut slurry, and construction materials from concrete surface repair or other construction operations from falling into waterways or wetlands located under the structure. Workers may use waders to stand in the waterway to perform work operations, however equipment may not enter the waterway. Using this containment system does not relieve the contractor of requirements under standard spec 107.17 and standard spec 107.19.

B (Vacant)

C Construction

Before starting work, submit a debris containment over waterways plan to the engineer for review. Incorporate engineer-requested modifications. Do not start work at STH 38 over the Root River (B-51-74) until the engineer approves the debris containment over waterways 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 concrete surface repair or other operations that may generate debris.

D Measurement

The department will measure Debris Containment over Waterways 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
SPV.0105.01	Debris Containment over Waterway B-51-74	LS

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

25. Removing Concrete Surface Partial Depth, Item 204.0109.S

A Description

This special provision describes removing a portion of concrete surfaces as the plans show and conforming to standard spec 204.

B (Vacant)

C Construction

C.1 Equipment

Use a machine that provides a surface finish acceptable to the engineer. Shroud the machine to prevent discharge of any loosened material into adjacent work areas or live traffic lanes.

Use a machine that is equipped with electronic devices that provide accurate depth, grade and slope control, and acceptable dust control system.

C.2 Methods

Remove existing concrete to the depths as shown on the plan by grinding, planing, chipping, sawing, milling, or by using other methods approved by the engineer.

Perform the removal operation in such a manner as to preclude damage to the remaining pavement and results in a reasonable uniform plane surface free of excessive large scarification marks and having a uniform transverse slope.

The sequence of removal operations shall be such that no exposed longitudinal joints 2 inches or more in depth remain during non-working hours. Windrowing or storing of the removed material on the roadway will only be permitted in conjunction with a continuous removal and pick-up operation. During non-working hours, clear the roadway of all materials and equipment.

Removed pavement becomes the property of the contractor. Properly dispose of it as specified in standard spec 204.3.1.3.

D Measurement

The department will measure Removing Concrete Surface Partial Depth in area by the square foot of surface area removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0109.S	Removing Concrete Surface Partial Depth	SF

Payment is in full compensation for removing the concrete; and for disposing of materials.

stp-204-041 (20080902)

26. Removing Overhead Sign Support S-51-11, Item 204.9105.S

A Description

This special provision describes removing Overhead Sign Supports Station at the location shown on the plans and in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction

Remove and disassemble overhead sign supports and all attached components and properly dispose of all material off the project site.

Concrete footings and reinforcement shall be removed to 2 feet below final grade. Reinforcement shall be cut off flush. Backfill all holes as specified in Section 203.3.5, except that broken masonry will not be allowed, to the final grade lines or as directed by the engineer.

Restore all areas disturbed by construction activities to the final grade lines with topsoil and seed and mulch that meet the requirements of 625, 630, and 627 of the standard specs respectively. Restoration is incidental to this bid item.

Existing signs on structure to be salvaged and moved to S-51-257 under move sign type I item in quantities

D Measurement

The department will measure Removing Overhead Sign Supports as a Lump Sum, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S	Removing Overhead Sign Support S-51-11	LS

Payment is full compensation for disassembling and removing the full span overhead sign support and all attached components, removing the concrete footings to 2 feet below final grade, backfilling all holes as provided in 203.3.5, and restoring areas disturbed by construction activities.

SER-204.4 (20170405)

stp-204-025 (20150630)

corrective action tests required due to unacceptable material.

27. QMP HMA Pavement Nuclear Density

A Description

Replace standard spec 460.3.3.2 (1) and standard spec 460.3.3.2 (4) with the following:

(1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 except as modified in this special provision.

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:

1. Selection of test sites.
2. Testing.
3. Necessary adjustments in the process.
4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures.

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

(4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:

http://www.atwoodsystems.com/

B Materials

B.1 Personnel

(1) Nuclear gauge owners and personnel using nuclear gauges shall comply with WisDOT requirements according to 460.3.3 and CMM 8-15.

B.2 Testing

(1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Conform to CMM 8-15.10.4 for test duration and gauge placement.

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges according to CMM 8-15.2.

(2) Furnish nuclear gauges from the department's approved product list at

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/default.aspx

B.3.2 Comparison of Nuclear Gauges

B.3.2.1 Comparison of QC and QV Nuclear Gauges

(1) Compare QC and QV nuclear gauges according to CMM 8-15.7.

B.3.2.2 Comparison Monitoring

(1) Conduct reference site monitoring for both QC and QV gauges according to CMM 8-15.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.

(2) Determine required number of tests according to CMM 8-15.10.2.1.

(3) Determine random testing locations according to CMM 8-15.10.3.

B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 8-15.10.2.

(2) Determine required number of tests according to CMM 8-15.10.2.2.

(3) Determine random testing locations according to CMM 8-15.10.3.

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

(1) Calculate the average sublot densities using the individual test results in each sublot.

(2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

(3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sublot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay as specified in standard spec 460.5.2.2.

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.2.2 Width of 5 Feet or Less

(1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.4 Documentation

(1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

(1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.

(2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted sublot. Testing in a previously accepted sublot will not be used to recalculate a new lot density.

(3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full sublot width within the traffic lanes or shoulders.

(4) Retesting and acceptance of replaced pavement will be as specified in standard spec 105.3.

(5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the sublot and lot densities.

(6) If 2 consecutive sublot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one sublot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.

(2) The QV tester will test each selected sublot using the same testing requirements and frequencies as the QC tester.

(3) If the verification sublot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.

(4) If the verification sublot average is more than one percent below the specified target density, compare the QC and QV sublot averages. If the QV sublot average is within 1.0 lb/ft^3 of the QC sublot average, use the QC tests for acceptance.

(5) If the first QV/QC sublot average comparison shows a difference of more than 1.0 lb/ft^3 each tester will perform an additional set of tests within that sublot. Combine the additional tests with the original set of tests to compute a new sublot average for each tester. If the new QV and QC sublot averages compare to within 1.0 lb/ft^3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft^3 after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

(1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge comparison according to B.3.2.1.

(2) The testers may use comparison monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.

(3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

(4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

(1) The department will not accept QMP HMA Pavement Nuclear Density if a non-compared gauge is used for contractor QC tests.

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the 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.

E.2 Disincentive for HMA Pavement Density

(1) The department will administer density disincentives as specified in standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

(1) The department will administer density incentives as specified in standard spec 460.5.2.3.

stp-460-020 (20181119)

28. Removing Asphaltic Concrete Deck Overlay B-51-54, Item 509.9010.S

A Description

This special provision describes removing asphalt bridge deck overlays with or without an underlayment of waterproof membrane by milling the entire bridge deck as the plans show.

Conform to standard spec 204 as modified in this special provision.

B (Vacant)

C Construction

C.1 Milling

Use a self-propelled milling machine that is specially designed and constructed for milling bridge decks. It shall mill without tearing or gouging the concrete masonry underlying the deck overlay. The machine shall consist of a cutting drum with carbide or diamond tip teeth. Space the teeth on the drum to mill a surface finish that is acceptable to the engineer.

Shroud the machine to prevent discharge of any loosened material into adjacent work areas or live traffic lanes. Equip the machine with electronic devices that provide accurate depth, grade and slope control, and an acceptable dust control system.

Perform milling in a manner that precludes damage to the bridge floor and results in a uniform textured finish that:

- Is free of sharp protrusions;
- Has uniform transverse grooves that measure up to 1/4 inch vertically and transversely; and
- If applicable, is acceptable to the manufacturer of the sheet waterproof membrane.

Windrowing or storing of the removed milled asphaltic concrete on the bridge is only permitted in connection with the continuous removal and pick-up operation. During nonworking hours, clear the bridge of all materials and equipment.

D Measurement

The department will measure Removing Asphaltic Concrete Deck Overlay in area by the square yard 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
509.9010.S	Removing Asphaltic Concrete Deck Overlay B-51-54	SY

Payment is full compensation for removing the asphaltic concrete with or without an underlayment of waterproof membrane; and for properly disposing of all materials.

stp-509-010 (20171130)

29. Removing Asphaltic Concrete Deck Overlay B-51-74, Item 509.9010.S

A Description

This special provision describes removing asphalt bridge deck overlays with or without an underlayment of waterproof membrane by milling the entire bridge deck as the plans show.

Conform to standard spec 204 as modified in this special provision.

B (Vacant)

C Construction

C.1 Milling

Use a self-propelled milling machine that is specially designed and constructed for milling bridge decks. It shall mill without tearing or gouging the concrete masonry underlying the deck overlay. The machine shall consist of a cutting drum with carbide or diamond tip teeth. Space the teeth on the drum to mill a surface finish that is acceptable to the engineer.

Shroud the machine to prevent discharge of any loosened material into adjacent work areas or live traffic lanes. Equip the machine with electronic devices that provide accurate depth, grade and slope control, and an acceptable dust control system.

Perform milling in a manner that precludes damage to the bridge floor and results in a uniform textured finish that:

- Is free of sharp protrusions;
- Has uniform transverse grooves that measure up to 1/4 inch vertically and transversely; and
- If applicable, is acceptable to the manufacturer of the sheet waterproof membrane.

Windrowing or storing of the removed milled asphaltic concrete on the bridge is only permitted in connection with the continuous removal and pick-up operation. During nonworking hours, clear the bridge of all materials and equipment.

D Measurement

The department will measure Removing Asphaltic Concrete Deck Overlay in area by the square yard 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
509.9010.S	Removing Asphaltic Concrete Deck Overlay B-51-74	SY

Payment is full compensation for removing the asphaltic concrete with or without an underlayment of waterproof membrane; and for properly disposing of all materials.

stp-509-010 (20171130)

30. HMA Overlay Polymer-Modified, Item 509.3500.S

A Description

This special provision describes providing a polymer-modified HMA overlay on bridge decks.

B Materials

B.1 Mixture Composition

Furnish a mixture composed of fine and coarse aggregates, mineral filler if used, asphalt cement, and polymer modifier additive. Ensure that the final job mix design conforms to polymer modifier manufacturer requirements and is approved by the engineer.

Use fine and course aggregate conforming to standard spec 460.2.2. Do not use blast furnace slag, expanded shale, porous limestone, lightweight aggregates, or other porous aggregate. Ensure that mineral filler, if used, conforms to standard spec 450.

Use asphalt cement conforming to standard spec 455 and virgin thermoplastic polymer modifier additive. Furnish additive packaged in 22.5-pound meltable polyethylene bags, in 2,025-pound super sacks containing 45 units per sack, or as bulk material in tankers.

B.2 Deck Preparation Materials

Furnish tack coat and edge sealer conforming to the polymer modifier manufacturer’s requirements. Furnish rubberized asphalt joint sealer conforming to ASTM D3405, or if the polymer modifier manufacturer recommends, use a 20 inch wide strip of geotextile paving fabric applied according to their recommendations.

C Construction

C.1 General

Ensure that an on-site polymer modifier manufacturer representative oversees mixture production, placement, and compaction of polymer-modified HMA.

C.2 Proportioning and Mix Design

Seven days before the pre-construction meeting, submit the name and location of the intended sources for bituminous pavement products. Furnish HMA mixture from an engineer-approved automated plant conforming to ASTM D995 and SS405 and equipped with interlocks and printouts.

Coordinate with the polymer modifier manufacturer to formulate a job mix formula (JMF). Submit a JMF to the engineer that shows the gradation and conforms to the generic requirements under this special provision. As a part of the submittal include the following:

- Mineral aggregate sources and types.
- Grade and source of bituminous material.
- Type and source of all asphalt modifiers.
- Samples of aggregates to be used.

Submit a complete HMA mix design to the engineer according to department test method 1559 described in CMM 8.65.5. Submit a new JMF for engineer review if changing the production plant, aggregate, asphalt, or asphalt modifier.

C.3 Verification of the JMF

Unless the asphalt content (AC) of specimens used to develop the JMF is the same as the proposed design AC, prepare additional specimens at the proposed AC to ensure that gyratory test results accurately represent the design.

Generic Formulation of the Polymer Modified HMA Mixture

Sieve Size, metric (imperial)	Nominal size of aggregate/Percent passing	Gradation Control on JMF
	9.5mm	
12.5 mm (1/2")	100	± 7 %
9.5 mm (3/8")	90 – 100	± 7 %
4.75 mm (#4)	55 – 85	± 7 %
2.36 mm (#8)	32 – 67	± 4 %
1.18 mm (#16)	Report	± 4 %
600 microns (#30)	Report	± 4 %
300 microns (#50)	7 – 23	± 4 %
150 microns (#100)	Report	± 4 %
75 microns (#200)	2 – 10	± 2 %

AC (% Total Mix) 5.0% minimum

Thermoplastic Polymer 2.25% by weight of total mix

Generic Minimum/Maximum Desired Physical Properties of the Design Mixture

Volumetric mix design parameters		
Volumetric parameter	Control requirement	Nominal size of aggregate/percent passing
		9.5mm
Gyratory volumetric requirements		
VMA	Minimum	16.5%
VFA	Minimum	90.0%
$\%G_{mm}$	@ N_{ini} (6 gyrations)	>87.0%
$\%G_{mm}$	@ N_{des} (50 gyrations)	99.0%
$\%G_{mm}$	@ N_{max} (75 gyrations)	>99.0%

Target Void Percentage: 1%

Weigh and heat aggregates for batching in an oven to 401 - 419 F. Add polymer modifier at a rate of 45 pounds per ton of mix or 2.25 percent of total batch weight. Dry mix the heated aggregate and the polymer modifier for 10 seconds at 374 - 383 F; introduce AC-binder at 302 - 320 F; and mix together for 90 seconds. Mix until aggregates are completely and uniformly coated. Verify that the temperature of the finished mix is 347 - 374 F. After mixing is completed, condition the material according to AASHTO R30 before compacting. Compact at 338 - 356 F. Evaluate the gyratory specimen at N_{ini}= 6, N_{des}=50, and N_{max}=75 gyrations regardless of class designation or aggregate structure.

After reviewing the JMF, the engineer will authorize initial placement. Once production begins, provide the engineer daily certification that in-place materials conform to the JMF and contract specifications.

Polymer modifier manufacturer personnel shall certify material production, take samples, and are authorized to reject material not meeting contract specifications. The polymer modifier manufacturer shall retain samples available upon engineer request for department examination and testing throughout the contract duration. The engineer may take additional independent samples and examine certifications to verify material quality.

Provide the engineer with access to the plant and equipment as necessary to review and verify certifications of material quality. The engineer may reject affected mixture placed if the contractor fails to perform quality control or submits an incorrect certification. The engineer may halt production and require the contractor to dispose of material due to temperature, oxidation, contamination, segregation, or incomplete coating of aggregate. The engineer may base rejection on visual inspection.

C.4 Deck Preparation

After deck patching and before placing polymer-modified HMA, prepare the deck surface. Cure the repaired deck a minimum of 7 days before placing the polymer-modified HMA overlay. Ensure that a polymer modifier manufacturer representative is present to oversee edge sealer and tack coat application.

Prepare the entire deck surface area by shot blasting. Include the vertical face of curbs or parapets to the specified finish overlay surface elevation. Collect and dispose of used steel shot and dust. Remove pavement-marking lines within the cleaning area to prevent bleeding through the tack coat. After shot blasting operations, clean the deck by sweeping, air blasting, pressure washing, or other engineer-approved method.

Clean the existing surfaces to remove any milled material or debris which would reduce or prevent bonding. Ensure that the surface is clean, dry, and free from loose debris or other contaminants. Saw cut and seal construction joints. Apply edge sealer and tack coat. Place an impermeable hot-mix waterproofing asphalt course on the cleaned and tack coated bridge deck, to the lines, grades, width, and depth the plans show.

Seal all edges of the planned day's placement of the asphalt waterproofing course with 4-6 inches of edge sealer applied at the manufacturer specified rate. Ensure that vertical edges of headers, drains, scuppers, expansion joints, or other areas where compaction may be difficult to achieve are adequately sealed. For vertical edges, apply sealer from the specified finish overlay surface elevation and out horizontally 4-6 inches. Maximize drying time by sealing as early as possible on the day of, or even the day before, overlay placement.

C.5 Placement

Before placing tack coat, ensure that the deck moisture is 6 percent or less. Apply tack coat at a rate of 0.07 to 0.15 gallons per square yard without puddles for concrete decks and at 0.04 to 0.1 gallons per square yard for steel decks. Cover and protect all deck drains and joints before paving.

Place the polymer-modified material in a uniform 2 inch thick layer.

Seal butt joints made during paving that have cooled below 150 F before placing the adjoining asphalt lift. Saw cut construction joints 1/2 inch wide and fill to within 1/8 inch of the surface with joint sealer. Do not overfill sawed joints since excess sealer will cause surface ripples requiring contractor correction.

Apply edge sealer to all terminations of the paved asphalt, including curb lines and deck joints, as soon as possible after the pavement has cooled.

C.6 Compaction

Because of higher compaction temperatures, use extra water applied evenly across the mat to keep material from sticking to the steel rolls.

Compact within a temperature range of 212 - 374 F conforming to standard spec 450.3.2.6. Use a minimum of two static rollers, one for break down and one for finish rolling. Have a third roller available on the job as a backup. Ensure that roller unit compression is 250 pounds or more per inch of driving roll width. Use three-wheel and tandem steel-wheel rollers with a manufacturer's rating of eight tons or more or use three-axle tandem steel-wheel rollers with a manufacturer's rating of 12 tons or more. Do not use pneumatic tired rollers. The contractor may use other compaction means in areas that cannot be accessed by the specified roller. The contractor may use an asphalt vibrator wacker with a water system.

Breakdown roll closely behind the spreading operation and finish roll to remove mat imperfections. Use a straight rolling pattern aligned with the paving direction. Do not turn except as necessary to move from pass to pass. Use the pattern and frequency the polymer modifier manufacturer's representative specifies. Do not change paving or rolling procedures without approval from the polymer modifier manufacturer's representative.

The department will waive the contract QMP HMA pavement nuclear density requirements for polymer-modified HMA overlay work.

D Measurement

The department will measure HMA Overlay Polymer-Modified by the ton 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
509.3500.S	HMA Overlay Polymer-Modified	TON

Payment is full compensation for providing overlays including mixture design and surface preparation; and for the polymer modifier manufacturer's on-site mix production and placement oversight.

The department will pay separately for repairs under the Curb Repair, Concrete Surface Repair, and Full-Depth Deck Repair bid items as specified in standard spec 509.

stp-509-035 (20141107)

31. Concrete Masonry Deck Repair, Item 509.2100.S

A Description

This special provision describes providing concrete masonry on the sawed deck preparation areas of the concrete bridge deck and in full depth deck, curb, and joint repair areas. Conform to standard spec 502 and standard spec 509.

B Materials

B.1 Neat Cement

Furnish a neat cement bonding grout. Mix the neat cement in a water-cement ratio approximately equal to 5 gallons of water per 94 pounds of cement.

B.2 Concrete

Furnish grade C, C-FA, C-S, C-IS, C-IP, C-IT, or E concrete conforming to standard spec 501 for deck preparation, full-depth deck repair, curb repair and joint repair areas except as follows:

1. The contractor may increase slump of grade E concrete to 3 inches.
2. The contractor may use ready-mixed concrete.

Provide QMP for class II ancillary concrete as specified in standard spec 716.

C Construction

C.1 Neat Cement

Immediately before placing the concrete deck patching, coat the prepared surfaces with a neat cement mixture. Ensure the prepared concrete surfaces are moist without any standing water before coating with the neat cement mixture. Brush the neat cement mixture over the prepared concrete surfaces to ensure that all parts receive an even coating, and do not allow excess neat cement to collect in pockets. Apply the neat cement at a rate that ensures the cement does not dry out before being covered with the new concrete.

C.2 Placing Concrete

Place concrete conforming to standard spec 509. As determined by the engineer, consolidate smaller areas by internal vibration, strike them off, and finish the areas with hand floats to produce plane surfaces that conform to the grade and elevation of the adjoining surfaces. Give all deck patching areas a final hand float finish.

C.3 Curing Concrete

Cure the concrete masonry deck patching conforming to standard spec 502.2.6(1).

D Measurement

The department will measure the Concrete Masonry Deck Repair bid item by the cubic yard, acceptably completed.

The department will measure concrete used in deck preparation areas and in full depth deck, curb, and joint repair as part of the Concrete Masonry Deck Repair bid item.

The department will not measure wasted concrete.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.2100.S	Concrete Masonry Deck Repair	CY

Payment is full compensation for furnishing, hauling, preparing, placing, finishing, curing, and protecting all materials.

stp-509-060 (20191121)

32. Sawing Pavement Deck Preparation Areas, Item 509.0310.S

A Description

This special provision describes sawing around deteriorated areas requiring deck repairs under the Preparation Decks bid items on decks receiving asphalt or polymer overlays and for deck repairs that will not receive an overlay.

B (Vacant)

C Construction

The department will sound and mark areas of deteriorated concrete that require deck preparation. The engineer may identify and mark additional areas as the work is being performed.

Wet cut a minimum of 1 inch deep and at least 2 inches outside of the marked areas. Bound each marked area by providing cuts aligned parallel and perpendicular to the deck centerline.

Remove sawing sludge after completing each area. Do not allow sludge or resulting residue to enter a live lane of traffic, storm sewer, stream, lake, reservoir, marsh, or wetland. Dispose of sludge at an acceptable material disposal site located off the project limits or, if the engineer allows, within the project limits.

D Measurement

The department will measure Sawing Pavement Deck Preparation Areas by the linear foot acceptably completed, measured as the total linear feet of bounding cuts.

The department will not measure for payment over-cuts or cuts made beyond what is required to bound engineer-marked deterioration limits.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.0310.S	Sawing Pavement Deck Preparation Areas	LF

Payment is full compensation for making all saw cuts; and for debris disposal.

stp-509-070 (20180628)

33. Adjusting Manholes, Village of Mount Pleasant, Item SPV.0060.13; Reconstructing Manholes, Village of Mount Pleasant, Item SPV.0060.14.

A Description

This special provision describes providing adjustment and reconstruction of Village of Mount Pleasant manholes.

B Materials

Village of Mount Pleasant to supply castings and covers.

Furnish the following components. Components are incidental to this pay item.

- Adjusting rings shall be injection molded High Density Polyethylene (HDPE) adjustment rings as manufactured by Ladtech Inc. (Lino Lakes, Minnesota), Cretex Materials, Ipex Inc., or equivalent.
- Butyl rubber sealant shall be EZ-Stik or Kent Seal butyl base sealant in trowelable grade.
- Concrete bricks and block in conformance with subsection 519.2 of the standard specifications.
- Provide all other needed materials in conformance with subsections 501, 519, and 611 of the standard specifications.

C Construction

The contractor shall contact Mr. Robert Bowers, Village of Mount Pleasant Sanitary and Sewer Utilities Manager, at (262) 664-7847 a minimum of 14 days prior to work to coordinate casting and cover delivery or pick-up.

The contractor shall adjust existing manhole castings on precast manholes to grade by adding or removing adjusting rings. After removing the manhole casting and rings, the contractor shall clean the casting and manhole mating surfaces to remove all loose mortar and other substances. The contractor shall take precautions to prevent gravel and other materials from entering the manhole. All materials falling into the manhole shall be removed by the contractor. Manhole adjustments are shown on the plans.

- Adjusting rings shall be furnished by the contractor and shall match the dimensions of existing rings and/or manhole castings.
- Adjusting rings and manhole frames shall be set with butyl rubber sealant troweled into a 1/4-inch-thick layer over the entire surface areas of the top of cone and all adjusting rings. The butyl rubber sealant shall be EZ-Stik or Kent Seal butyl base sealant in trowelable grade.

    1. Manhole frames and rings on storm sewers may be set with either butyl sealant. The exposed exterior surface of sanitary manholes adjusted to grade shall be sealed with a minimum 1/4-inch-thick coating of butyl rubber sealant.

The contractor shall adjust existing castings on concrete block manholes to grade by adding or removing adjusting rings, concrete brick, or concrete block as the case may be. After removing the manhole casting and adjusting devices, the contractor shall clean the casting and manhole mating surfaces to remove all loose mortar and other substances. Should it be necessary to reach final grade, the contractor shall remove the top four (4) inches of the top course of concrete block. This work shall result in a flat, smooth bearing surface to support the manhole casting.

- The contractor shall take precautions to prevent gravel and other materials from entering the manhole. All materials falling into the manhole shall be removed by the contractor. Manhole adjustments are shown on the plans.

    1. Additional details of manhole adjustment shall be in accordance with the specifications above.

Manhole Adjustment/Reconstruction

- Precast Concrete Manholes: Manholes that cannot be brought to final grade by adding or removing adjusting rings shall be adjusted to grade in accordance with the following procedure:

    1. Remove casting, rings, cone section, and riser section(s) as required.
    2. Place new riser section(s) and/or cone section, 3” to 18” of concrete adjusting rings and reset casting to grade in accordance with specifications above. Salvaged materials in satisfactory condition may be reused if approved by the engineer.

- All manhole adjustments shall be constructed in accordance with these special provisions.
    1. Manhole steps shall be OSHA approved and fabricated using 3/8 minimum diameter steel reinforcing rod with molded plastic covering.
    2. Joints for precast manhole riser sections shall be made with rubber “O”-ring gaskets or a continuous ring of butyl rubber sealant (EZ-Stik or Kent-Seal in rope form), except that joints for storm sewer manholes may also be made with mortar. The butyl sealant shall be 1-inch diameter equivalent or as recommended by the manhole manufacturer.
    3. The entire outside surface of sanitary manhole chimneys, including all adjusting rings and overlapping both the manhole cone or flat-top slab (a minimum of 4 inches) and the manhole frame, shall be covered with a minimum 1/4-inch-thick coating of butyl rubber sealant. The butyl rubber sealant shall be EZ-Stik or Kent-Seal butyl base sealant in trowelable grade.
- Finished Grade
    1. The top of manhole castings shall be set 1/4 inch below the finished grade.

D Measurement

The department will measure adjusting and reconstructing manholes by the manhole 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
SPV.0060.13.	Adjusting Manholes, Village of Mount Pleasant	EA
SPV.0060.14.	Reconstructing Manholes, Village of Mount Pleasant	EA

Payment for Adjusting Manholes and Reconstructing Manholes is full compensation for providing required materials, including masonry and fittings; for salvaging and reinstalling existing covers including frames, grates, or lids as required; for necessary excavation, backfilling, and for cleaning out and restoring the site.

34. Adjusting Manhole Covers

This special provision describes adjusting manhole covers conforming to standard spec 611 as modified in this special provision.

Adjust manhole covers located in pavement areas in two separate operations. Initially, remove designated manhole covers along with sufficient pavement to permit installation of temporary cover plate over the opening. Fill the excavated area with asphaltic pavement mixture, which shall remain in place until contract milling and paving operations permit setting the manhole frames to grade. During the second phase, remove the asphaltic pavement mixture surrounding the manhole plus the temporary cover plate, and set the manhole cover to final grade. The department will measure and pay for the items of asphaltic pavement mixture, temporary cover plate, milling, and paving separately.

Revise standard spec 611.3.7 by deleting the last paragraph.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than 5/8 inches, reset the manhole frame to the correct plane and elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.

stp-611-005 (20030820)

35. Cover Plates Temporary, Item 611.8120.S

A Description

This special provision describes providing and removing steel plates to cover and support asphaltic pavement and traffic loading at manholes, inlets and similar structures during milling and paving operations.

B Materials

Provide a 0.25 inch minimum thickness steel plate that extends to the outside edge of the existing masonry.

C (Vacant)

D Measurement

The department will measure Cover Plates Temporary as each individual unit 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
611.8120.S	Cover Plates Temporary	EACH

Payment is full compensation for furnishing, installing, and removing the cover plates.

The steel plates shall become the property of the contractor when no longer needed in the contract work.

stp-611-006 (20151210)

36. Traffic Signals, General

All work shall be in accordance to the plans and the State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, 2020 Edition, and these special provisions.

Note that failure to comply with the state standards and specifications may result in the cost of the corrections to be made at the Contractors expense. Also, any additional disruption of Department-owned facilities shall be repaired or relocated as needed at the Contractors expense.

Notify the department's Electrical Field Unit at (414) 266-1170 at lease three weeks prior to the beginning of the traffic signal work.

Furnish the engineer with material lists and specifications of all traffic control equipment for approval prior to installation.

37. General Requirements for Electrical Work.

Replace section 651.3.3 (3) of the standard specifications with the following:

(3) Request a signal inspection of the signal installation to the project engineer after completing the Prerequisites for Underground Inspection or Prerequisites for Above Ground Inspection at least five working days prior to the time of the requested inspection. Notify the department's Electrical Field Unit at (414) 266-1170 to coordinate the inspection. The department's Region Electrical personnel will perform the inspection. In the event of deficiencies, request a re-inspection when the work is corrected. The engineer will not authorize continuation to aboveground work or turn-on until the contractor corrects all deficiencies.

38. Removing Traffic Signals STH 38 & Newman Rd, Item 204.9105.S.01; STH 38 & Emmertsen Rd/Johnson Park Rd, Item 204.9105.S.03

A Description

This special provision describes removing existing traffic signals at the intersections of STH 38 & Newman Rd and STH 38 & Emmertsen Rd/Johnson Park Rd in accordance to the pertinent provisions of section 204 of the standard specifications and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signals can be removed.

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

The Department assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, emergency vehicle preemption heads (EVP), mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable off the state right of way. Deliver the remaining materials to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, Milwaukee County. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

DOT forces shall remove the signal cabinet from the footing. The signal cabinet and associated signal cabinet equipment will be removed from the site by DOT forces and will remain the property of the department.

D Measurement

The department will measure Removing Traffic Signals as a single lump sum unit of work for each intersection acceptably completed.

E Payment

The department will pay for the measured quantity at the contract unit price under the following bid item.

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.01	Removing Traffic Signals STH 38 & Newman Rd	LS
204.9105.S.03	Removing Traffic Signals STH 38 & Emmertsen Rd/Johnson Park Rd	LS

Payment is full compensation for removing, disassembling traffic signals, scrapping of some materials, disposing of scrap material, for delivering the requested materials to the department, and incidentals necessary to complete the contract work.

39. Removing Loop Detector Wire & Lead-In Cable, STH 38 & Newman Rd, Item 204.9105.S.02; STH 38 & Emmertsen Rd/Johnson Park Rd, Item 204.9105.S.04

A Description

This special provision describes removing loop detector wire and lead-in cable at STH 38 & Newman Rd and STH 38 & Emmertsen Rd/Johnson Park Rd. Removal will be in accordance with section 204 of the standard specifications, as shown in the plans, and as hereinafter provided.

B (Vacant)

C Construction

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the loop detector wire and lead-in cable.

Remove and dispose of detector lead-in cable including loop wire for abandoned loops off the right of way.

D Measurement

The department will measure Removing Loop Detector Wire & Lead-in Cable as a single lump sum unit of work for each intersection acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.02	Removing Loop Detector Wire & Lead-In Cable STH 38 & Newman Rd	LS
204.9105.S.04	Removing Loop Detector Wire & Lead-In Cable STH 38 & Emmertsen Rd/Johnson Park Rd	LS

Payment is full compensation for removing, scrapping, and disposing of material and incidentals necessary to complete the contract work.

40. Electrical Service Meter Breaker Pedestal STH 38 & Newman Rd, Item 656.0200.02; STH 38 & Emmertsen Rd/Johnson Park Rd, Item 656.0200.01

Append 656.2.3 of the standard specifications with the following:

(2) The department will be responsible for the electrical service installation request for any department maintained facility. Notify the maintaining authority if the signal is not state maintained that it is their responsibility to arrange for the electrical service installation.

(3) Electrical utility company service installation and energy cost will be billed to and paid for by the maintaining authority.

(4) Install the cabinet base and meter breaker pedestal first, so the electrical utility company can install the service lateral. Install a 3" conduit from the point of service from the utility to the meter breaker pedestal. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, and mulch all areas that are disturbed by the electrical utility company.

Append 656.5 of the standard specifications with the following:

(8) Payment is full compensation for grading the service trench; replacing topsoil; and for fertilizing, seeding, and mulching to restore the disturbed area of the service trench.

41. Signal Housings

Replace 658.2(3) of the standard specifications with the following:

(3) For traffic signal faces: furnish black signal housings, visors, LED modules, reflective backplates, and cut away or tunnel type visors as the plans show.

Replace 658.2(4) of the standard specifications with the following:

(4) For pedestrian signal faces: furnish polycarbonate resin housings, doors, and visors. Use yellow, Federal Standard 595 – FS13538, housings and dull black door faces and visors. For 16-inch heads, mount a z-crate visor and gasket to the door with stainless steel tabs. Drill the housing for top and bottom pipe mounting with the ability to rotate 270 degrees on the poly mounting brackets.

42. Traffic Signal Mounting Hardware

Replace 658.2.(7) of the standard specifications with the following:

(7) For signal mounting hardware: furnish weather tight mounting hardware. Protect mounting hardware from the elements before installation. Use corrosion resistant poly bracket shims. Use an approved type of pole or standard vertical mounting brackets/clamps for signal faces from an approved manufacturer. Pedestrian traffic signal heads mounted in the median shall use federal yellow aluminum side of pole 2-way upper and lower arm assemblies providing 16 ½-inch center to center spacing.

43. Traffic Signal Faces and Pedestrian Signal Face 16-Inch

Append 658.3 of the standard specifications with the following:

(5) Connect all ungrounded conductors with wire nuts in the appropriate sections of the signal heads. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

44. Temporary Traffic Signals for Intersections, STH 38 & Newman Rd, Item 661.0200.01; STH 38 & Emmertsen Rd/Johnson Park Rd, Item 661.0200.02

Replace 661.2.1 (1) of the standard specifications with the following:

(1) Furnish control cabinet and control equipment. The Department will supply, maintain, and install a signal controller, cellular modem, and ethernet switch to establish remote communication to the signal controller and vehicle detection system. The cabinet must be equipped with at least two open non-GFI receptacles. Provide a cabinet with a Corbin #2 door lock and an access door that allows placing the controller in emergency flash. Provide keys to the access door to the engineer and law enforcement agencies as required. Also provide a manual control accessible by the police. Test traffic signal control cabinets before installation. The Department will provide the signal controller with the initial traffic signal timing, and the Department will be responsible for all subsequent signal timing changes.

Replace 661.2.1 (3) of the standard specifications with the following:

(3) The Department has initiated the installation of the temporary electrical service with the electrical utility as it pertains to the service application and site sketch at the intersections of STH 20 & W Frontage Rd; IH-94 EB Ramps & STH 20; IH-94 WB Ramps & STH 20; STH 20 & E Frontage Rd; STH 20 & CTH H/Renaissance Blvd to expedite the process. Contact Parwinder Virk at (262)548-6717 to coordinate the temporary electrical service. The Department will pay for all installation and Energy Costs associated with the operation of the Temporary Traffic Signal. It is the contractor's responsibility to contact the electrical utility as it pertains to the affidavit and site ready card to arrange timely installation of the temporary service. If the control cabinet is not mounted on the electrical service pole, add a second electrical service disconnect to the outside of the control cabinet for the convenience of emergency personnel.

Append 661.3.1.4 (4) of the standard specifications with the following:

(4) Arrange for every other week inspections with the engineer to check the height of the span wire above the roadways to ensure that the bottom of the traffic signal heads remain within the minimum and maximum heights allowed above the roadway. Make all height adjustments within 1-hour of an inspection indicating that adjustments are required. Notify the engineer in writing upon completion of all necessary adjustments. Maintain a written log to properly document the date of each every other week inspection, the heights above the roadway, the roadway clearance after adjustments have been made, and acceptance by the engineer. Provide all documentation related to the every other week span wire height checks as well as all records related to maintenance performed on the temporary traffic signal installations to the engineer.

Replace 661.3.2.2 (2) of the standard specifications with the following:

(2) Install the tether wire at 20 feet to 22 feet over the roadway.

Replace 661.3.2.4 (1) of the standard specifications with the following:

(1) Install the span wires free of any splices or kinks. Install the span wire mounted signal faces so the bottom is a maximum of 22 feet above the roadway (minimum height is 20 feet). Compute the vertical height of the span wire on the span pole using the following formula:

HD (0.05) + RC + HH = SH

Replace 661.5 (2) of the standard specifications with the following:

(2) Payment for the Temporary Traffic Signals for Intersections bid item is full compensation for providing, maintaining, and repairing the complete temporary installation; and for removal. Payment also includes the following:

1. Furnishing and installing replacement equipment.
2. The cost of delivery and pick-up of the cabinet assemblies.

Payment is full compensation for drilling holes; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding, and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; for making inspections; for cleaning up and properly disposing of waste; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

45. Install Poles Type 10, Item SPV.0060.03; Install Poles Type 9 Special, Item SPV.0060.04; Install Poles Type 10 Special, Item SPV.0060.05; Install Poles Type 13, Item SPV.0060.06; Install Monotube Arms 15-FT, Item SPV.0060.07; Install Monotube Arms 30-FT, Item SPV.0060.08; Install Monotube Arms 45-FT Type 9/10 Spec Pole, Item SPV.0060.09; Install Monotube Arms 50-FT, Item SPV.0060.10; Install Luminaire Arms Steel 15-FT, Item SPV.0060.11

A Description

This special provision describes installing state furnished materials conforming to standard spec 657, details shown in the plans, and as modified in this special provision.

B Materials

The department will furnish the monotube poles, monotube arms and luminaire arms. Provide any other necessary material required to complete the installation as the plans show.

C Construction

Install equipment in accordance to standard spec 657.3.

D Measurement

The department will measure Install [Equipment] at the contract unit price 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
SPV.0060.03	Install Poles Type 10	Each
SPV.0060.04	Install Poles Type 9 Special	Each
SPV.0060.05	Install Poles Type 10 Special	Each
SPV.0060.06	Install Poles Type 13	Each
SPV.0060.07	Install Monotube Arms 15-FT	Each

SPV.0060.08	Install Monotube Arms 30-FT	Each
SPV.0060.09	Install Monotube Arms 45-FT Type 9/10 Spec Pole	Each
SPV.0060.10	Install Monotube Arms 50-FT	Each
SPV.0060.11	Install Luminaire Arms Steel 15-FT	Each

Payment for the Install Poles bid items is full compensation for installing department furnished poles and for providing grounding lugs, fittings, shims, hardware, and other required components the department does not furnish.

Payment for the Install Monotube Arms and Install Luminaire Arms bid items is full compensation for installing department furnished arms; for providing high-strength bolt/nut/washer assemblies and DTIs including those required for testing; and for providing related mounting hardware, leveling shims, and other required components the department does not furnish.

46. Concrete Bases Monotube Type 10 Special, Item SPV.0060.12

A Description

This special provision describes constructing concrete bases for Monotube Type 9 & 10 Special Pole conform to standard spec 654, details shown in the plans.

B Materials

Materials shall be according to standard spec 654.

C Construction

Construction shall be according to standard spec 654.

D Measurement

The department will measure Concrete Bases Monotube Type 9 & 10 Special Pole at the contract unit price 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
SPV.0060.12	Concrete Bases Type 10 Special	Each

Payment is full compensation for providing concrete bases; for embedded conduit and electrical components; for bar steel reinforcement; if required; for excavating, backfilling, and disposing of surplus materials; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

47. Fiber Optic Warning Tape, Item SPV.0090.02

A Description

This special provision describes furnishing and installing fiber optic warning tape above all conduit containing fiber optic cable.

B Materials

Provide underground warning mesh that is constructed of polypropylene and is fluorescent orange in color. Provide 6-inch detectable marking tape that has the words “Buried Fiber Optic Cable” and is orange in color.

C Construction

Lay underground warning mesh above all underground conduits, 12-inches below grade. The width of the warning mesh shall be the same as the width of the trench. Lay directly above the underground warning mesh, a 6-inch detectable marking tape that has the words “Buried Fiber Optic Cable” and is orange in color.

D Measurement

The department will measure Fiber Optic Warning Tape in length by the linear foot of tape, measured along the centerline of the conduit.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Fiber Optic Warning Tape	LF

Payment is full compensation for furnishing and installing the marking tape; properly disposing of surplus materials; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

48. Trnspt & Install State Furn Traffic Signal Cabinet STH 38 & Newman Rd, Item SPV.0105.05; STH 38 & Emmertsen Rd/Johnson Park Rd, Item SPV.0105.08

A Description

This special provision describes the transporting and installing of department furnished materials for traffic signals.

B Materials

Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet.

Pick up the department furnished materials at the department’s Electrical Shop located at 935 South 60th Street, West Allis. Notify the department’s Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five (5) working days prior to picking the materials up.

Provide all other needed materials in conformance with sections 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2 of the standard specifications.

C Construction

Perform work in accordance with sections 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 of the standard specifications except as specified below.

Request a signal inspection of the completed signal installation to the project engineer at least five (5) working days prior to the time of the requested inspection. The departments’ Region Electrical personnel will perform the inspection.

Coordinate directly with the department's traffic signal cabinet vendor {TAPCO at 262-814-7327 or rickk@tapconet.com / TCC at 651-439-1737 or mallwood@trafficcontrolcorp} to schedule the cabinet acceptance testing. Coordinate with the department's Electrical Field Unit at (414)-266-1170 to participate in the acceptance testing. The department has final determination of the cabinet acceptance testing date and time.

D Measurement

The department will measure Trnspt & Install State Furn Traffic Signal Cabinet as a single lump sum unit of work for each intersection acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Trnspt & Install State Furn Traffic Signal Cabinet STH 38 & Newman Rd	LS
SPV.0105.08	Trnspt & Install State Furn Traffic Signal Cabinet STH 38 & Emmertsen Rd/Johnson Park Rd)	LS

Payment is full compensation for transporting and installing the traffic signal controller and the traffic signal cabinet; for furnishing and installing all other items necessary (such as, wire nuts, splice kits and/or connectors, tape, insulating varnish, ground lug fasteners, etc.) to make the proposed system complete from the source of supply to the most remote unit and for clean-up and waste disposal.

49. Trnspt Traffic Signal & Intersection Lighting Materials STH 38 & Newman Rd, Item SPV.0105.06; STH 38 & Emmertsen Rd/Johnson Park Rd, Item SPV.0105.09

A Description

This special provision describes the transporting of department furnished materials for traffic signals and intersection lighting.

B Materials

Transport materials furnished by the department including: Monotube arms/poles and luminaire arms (to be installed on monotube assemblies).

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five (5) working days prior to picking the materials up.

Provide all other needed materials in conformance with sections 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2 of the standard specifications.

C Construction

Perform work in accordance with sections 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 of the standard specifications except as specified below.

D Measurement

The department will measure Trnspt Traffic Signal & Intersection Lighting Materials as a single lump sum unit of work for each intersection acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.06	Trnspt Traffic Signal & Intersection Lighting Materials STH 38 & Newman Rd	LS
SPV.0105.09	Trnspt Traffic Signal & Intersection Lighting Materials STH 38 & Emmertsen Rd/Johnson Park Rd	LS

Payment is full compensation for transporting the monotube poles/arms and luminaire arms (to be installed on monotubes). Installation of these materials is included under a separate pay item.

50. Trnspt & Install State Furn EVP Detector Heads & Confirmation Lights, STH 38 & Newman Rd, Item SPV.0105.07; STH 38 & Emmertsen Rd/Johnson Park Rd, Item SPV.0105.10

A Description

This special provision describes the transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads, Confirmation Lights and mounting brackets at STH 38 & Newman Rd and STH 38 & Emmertsen Rd/Johnson Park Rd.

B Materials

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking the materials up.

C Construction

Install the EVP detector heads and confirmation beacons as shown on the plans. The department will determine the exact location to ensure that the installation does not create a sight obstruction. Mount the EVP detector heads and wire them per manufacturer instructions. Mount the confirmation beacons and wire them with 3-14AWG Traffic Signal cable in a continuous run from the cabinet to the beacon. For a cabinet that is not operating the signal, the contractor will terminate the ends and install the discriminators and card rack in the cabinet. If the cabinet is operating the signal, the cabinet wiring will be done by the department

Notify the department's Electrical shop at (414) 266-1170 upon completion of the installation of the Emergency Vehicle Preemption (EVP) Detector Heads with Confirmation Beacons.

D Measurement

The department will measure transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads, Confirmation Lights and mounting brackets as a single lump sum unit of work for each intersection 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
SPV.0105.07	Trnspt & Install State Furn EVP Detector Heads & Confirmation Lights STH 38 & Newman Rd	LS
SPV.0105.10	Trnspt & Install State Furn EVP Detector Heads & Confirmation Lights STH 38 & Emmertsen Rd/Johnson Park Rd	LS

Payment is full compensation for transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads, Confirmation Lights and mounting brackets.

51. Temporary Infrared EVP System With Confirmation Lights, STH 38 & Newman Rd, Item SPV.0105.11; STH 38 & Emmertsen Rd/Johnson Park Rd, Item SPV.0105.12

A Description

This special provision describes furnishing, installing, and maintaining temporary infrared EVP systems with confirmation lights at the temporary signalized intersections of STH 38 & Newman Rd and STH 38 & Emmertsen Rd/Johnson Park Rd as shown in the plans.

B Materials

Furnish an infrared emergency vehicle preemption system with confirmation lights compatible with the Village of Mount Pleasant system and users. Contact the Village of Mount Pleasant Police Department for information regarding the equipment needs and operational requirements of the emergency vehicle preemption system.

C Construction

The temporary infrared EVP system with confirmation lights, as shown in the temporary traffic signal plans or as directed by the engineer, shall be complete in place, tested, and in full operation during each stage of construction.

Install the temporary infrared EVP system with confirmation lights as shown in the plans and according to the manufacturer's recommendations. Detectors and lights may be mounted on the temporary traffic signal span wire or wood poles. It shall be the contractor's responsibility to relocate the temporary infrared EVP detectors to a suitable location if there is impedance on the sensor operation. Arrange for testing of equipment prior to acceptance of the installation for each construction stage.

All cables associated with the temporary infrared EVP system with confirmation lights shall be routed to the cabinet. Each lead shall be appropriately marked as to which EVP channel it is associated.

Periodic adjustment and/or moving of the temporary infrared EVP detectors and confirmation lights may be required due to changes in traffic control, staging, or other construction operations.

Ensure that the temporary infrared EVP system with confirmation lights stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

The temporary EVP system with confirmation lights may not be used for the permanent installation.

D Measurement

The department will measure Temporary Infrared EVP System With Confirmation Lights as a single lump sum unit of work for each intersection acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.11	Temporary Infrared EVP System With Confirmation Lights, STH 38 & Newman Rd	LS
SPV.0105.12	Temporary Infrared EVP System With Confirmation Lights, STH 38 & Emmertsen Rd/Johnson Park Rd	LS

Payment is full compensation for furnishing and installing all required equipment, materials, and supplies; for maintaining and changing the EVP detectors and confirmation lights to match the plans, traffic control, and construction staging; for relocating the temporary EVP detectors and confirmation lights due to construction activities, if required; for testing the EVP system with confirmation lights for each stage and sub-stage of construction; for periodically cleaning all temporary EVP detectors and confirmation lights; for cleaning up and properly disposing of waste; and incidentals necessary to complete the contract work.

52. Trnspt & Install State Furn Fiber Optic Cable Pigtail 8-Ct CB1 (S51-0884), Item SPV.0105.13; CB1 (S51-0474), Item SPV.0105.14; CB1 (S51-0097), Item SPV.0105.15; CB1 (S51-0056), Item SPV.0105.16

A Description

This special provision describes transporting and installing fiber optic communications equipment in traffic signal cabinets.

B Materials

The department will furnish pre-terminated fiber optic patch panels and managed Ethernet switches. The materials will be provided with the traffic signal cabinet. The patch panels will have pre-terminated fiber optic cable pigtails. Provide two each 1-meter lengths of ST-ST single mode fiber jumper (2 fibers per jumper) from the patch panel to the Ethernet switch. Provide a 1-meter length of CAT-5e cable from the Ethernet switch to the controller. Provide a 1-meter length of CAT-5e cable from the Ethernet switch to the Interface Panel. CAT-5e patch cords shall have factory pre-terminated RJ45 / 8P8C connectors on both ends per TIA/EIA T568B. Provide all patch panel, Ethernet switch, and Interface Panel attachment hardware.

Provide a 14 AWG XLP insulated, stranded, copper, 600 volt AC locate wire through the conduit run from the communication vault to the traffic signal cabinet. Connect the locate wire by using a silicone filled wire nut at each pull box, vault or other access point. Alternatively, use a single wire through the access points, leaving a six (6) foot coil in each pull box, vault or other access point for splicing. All material under this item shall meet the requirements of section 655 of the Standard Specifications.

C Construction

Install the patch panel and Ethernet switch on the side of the traffic signal cabinet opposite the electrical service at a location as approved by the engineer. With approval by the engineer, the Ethernet switch may be placed on a shelf near the patch panel. Install the pre-terminated fiber optic cable in conduit from the patch panel to the communication vault as specified in section 678.3.1 of the standard specifications. Fiber optic cable ends shall be covered securely to protect open ends during installation in raceways. Leave the remainder of the fiber optic cable coiled in the communication vault.

Install the fiber jumpers and CAT-5e cable and provide a communications link from the communication vault to the controller. Install the CAT5-e cable from the Interface Panel to the Ethernet switch.

Connect the locate wire by using a wire nut at each access point. Alternatively, use a single wire through the access points.

D Measurement

The department will measure Trnspt & Install State Furn Fiber Optic Cable Pigtail 8-Ct a single lump sum unit of work for each intersection 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
SPV.0105.13	Trnspt & Install State Furn Fiber Optic Cable Pigtail 8-Ct CB1 (S51-0884)	LS
SPV.0105.14	Trnspt & Install State Furn Fiber Optic Cable Pigtail 8-Ct CB1 (S51-0474)	
SPV.0105.15	Trnspt & Install State Furn Fiber Optic Cable Pigtail 8-Ct CB1 (S51-0097)	LS
SPV.0105.16	Trnspt & Install State Furn Fiber Optic Cable Pigtail 8-Ct CB1 (S51-0056)	LS

Payment is full compensation for transporting and installing pre-terminated patch panels, Ethernet switches, and fiber optic cable in conduit; furnishing and installing attachment hardware, fiber jumpers, CAT-5e cable, and locate wire; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.