

Special Provisions

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STSP'S Revised November 21, 2019

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 3240-17-60, STH 32 Storm Sewer Repair, 7th Place, 875 Sheridan Rd, 11th PL, STH 32, Kenosha 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 revetment, excavation common, storm sewer, base aggregate, HMA pavement and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

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

Provide the 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.

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.

Install safety fence at locations shown on the plan prior to beginning any work.

The maintenance and repair of 7th Place to be paid for by maintenance and repair of Haul Road bid item.

Northern Long-eared Bat (*Myotis septentrionalis*)

Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

In accordance to the final 4(d) rule issued for the NLEB, the department has determined that the proposed activity may affect, but will not result in prohibited take of the NLEB. The activity involves tree removal, but will not occur within 0.25 miles of a known hibernacula, nor will the activity remove a known maternity roost tree or any other tree within 150 feet of a known maternity roost tree.

If additional trees need to be removed, no Clearing shall occur without prior approval from the engineer, following coordination with the WisDOT REC. Additional tree removal beyond the area originally specified will require consultation with the United States Fish and Wildlife Service (USFWS) and may require a bat presence/absence survey. Notify the engineer if additional Clearing cannot be avoided to begin coordination with the WisDOT REC. The WisDOT REC will initiate consultation with the USFWS and determine if a survey is necessary.

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

Interim Completion of Work

If the contractor fails to have STH 32 open all four lanes to two-way traffic prior to 12:01 AM August 29, 2020, the Department will assess the contractor \$1,875 in interim liquidated damages for each calendar day the work remains incomplete after 12:01 AM, August 29, 2020. An entire calendar day will be charged for any period within a calendar day that the work remains incomplete beyond 12:01 AM.

If the contractor fails to complete all work along the Lake Michigan shoreline including placing the revetment, pipe placement and abandonment, permanent erosion control, and all incidentals prior to 12:01 AM October 2, 2020, the Department will assess the contractor \$1,875 in interim liquidated damages for each calendar day the work remains incomplete after 12:01 AM, October 2, 2020. An entire calendar day will be charged for any period within a calendar day that the work remains incomplete beyond 12:01 AM.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed according to Standard Specification 108.11.

Final Completion of Work

Contract completion date is October 15, 2021 when the plant care cycle is complete.

4. Traffic.

Perform all work in accordance to the requirements of section 643 of the standard specifications, as detailed in the Traffic Control Plans and as hereinafter described.

Designate an individual responsible for traffic control maintenance including access of local traffic, and 24-hour emergency traffic control repair. Provide the name and telephone number of this individual to the engineer.

The contractor shall conduct operations in a manner that will cause the least interference to traffic movements and adjacent business & residential access within the construction areas.

The parking and storage of construction vehicles, equipment and material shall be approved by the engineer and shall be restricted to the minimum required and the minimum time necessary at the work sites to prosecute the work. At such location the material and equipment involved shall not constitute a hazard to the traveling public.

Staging

Perform construction operations in stages as shown in the traffic control/construction staging plans, unless modifications are approved in writing by the engineer.

Traffic through the construction zone will be reduced to southbound traffic only. Detours for northbound traffic will be posted throughout construction.

Emergency Vehicle Access

Maintain emergency vehicular access at all times to roadways located within the project limits.

Local Vehicle Access

Close driveways for a maximum of 7 days to construct new access approaches. Prior to removal or closing of driveway access, provide 48-hour notice to the occupant and owner of the premises.

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.

Coordination with Residents

The contractor shall arrange and conduct a meeting between the contractor, the department, affected residents and local officials to discuss the project schedule of operations including vehicular access during construction operations. Hold the meeting at least 10 days prior to the start of work under this contract. The contractor shall arrange for a suitable location for the meeting that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for the meeting. The contractor shall schedule meetings with at least 2 weeks prior notice to the engineer to allow for these notifications.

The contractor shall schedule a separate meeting with Nicolet DeRose at (262) 496-7455, the owner of the property at 727 Sheridan Road which is on the north side of outlet #3, prior to tree removal and to coordinate the new tree locations.

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 32 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 Thursday, July 3 to 6:00 AM Monday, July 6 Independence Day;
- From noon Friday, September 4 to 6:00 AM Tuesday, September 8 Labor Day;
- From noon Wednesday, November 25 to 6:00 AM Monday, November 30 Thanksgiving.

stp-107-005 (20181119)

6. Utilities.

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

stp-107-065 (20080501)

There are underground and overhead utility facilities located within the project limits and there are known utility adjustments required for this construction project. Coordinate construction activities with a call to Digger's Hotline or a direct call to the utilities which have facilities in the area as required per statutes. Use caution to ensure the integrity of underground facilities and maintain code clearance 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 existing and any new utility relocation work.

If a conflict with discontinued utility facilities is encountered, contact the appropriate utility owner/representative for instructions on proper removal and disposal of said facility.

AT&T Local Network

AT&T Local Network has aerial lines attached to We Energies poles on the east side of the roadway.

There are no anticipated conflicts with the aerial facilities.

The field contact for AT&T Local Network is Jennifer Navarro at (414) 459-3564.

AT&T Wisconsin

AT&T Wisconsin has aerial lines attached to We Energies poles on the east side of the roadway. There are underground crossings at Sta 192+90 and Sta 196+20.

There are no anticipated conflicts with the aerial or underground facilities.

The field contact for AT&T Wisconsin is Michael VanBoven at (262) 636-0514.

Charter Communications

Charter has aerial lines attached to We Energies poles on the east side of the roadway.

There are no anticipated conflicts with the aerial facilities.

The field contact for Charter Communications is Neal Long at (414) 277-4271.

Village of Somers – Sanitary

The Village of Somers has sanitary facilities located behind the curb on the east and west side of the roadway and a crossing at Sta 194+73. There is a force main that begins at the manhole at Sta 201+10 RT and runs north to 7th Place.

If any manhole adjustments are needed they will be performed as part of the project improvements.

The field contact for the Village of Somers - Sanitary is Jerry Smith at (262) 220-4262.

Village of Somers – Water

The Village of Somers has a watermain located in the middle of the inside northbound lane.

There are laterals that cross the proposed storm sewer at the following locations:

- Sta 187+65 RT – Water Service Crossing – No conflicts anticipated
- Sta 187+97 RT – Hydrant Lead Crossing - No conflicts anticipated
- Sta 188+91 RT – Water Service Crossing – Relay or insulate Service
- Sta 189+52 RT – Water Service Crossing – Relay or insulate Service
- Sta 191+29 RT – Water Service Crossing – Relay Service
- Sta 191+51 RT – Hydrant Lead Crossing – Offset Hydrant Lead
- Sta 192+04 RT – Water Service Crossing – Relay Service
- Sta 192+55 RT – Water Service Crossing – Relay Service
- Sta 194+19 RT – Water Service Crossing – Relay Service
- Sta 194+65 RT – Hydrant Lead Crossing – Offset Hydrant Lead
- Sta 195+82 RT – Water Service Crossing – Relay Service
- Sta 196+03 RT – Water Service Crossing – Relay Service
- Sta 198+75 RT – Water Service Crossing - No conflicts anticipated
- Sta 200+88 RT – Water Service Crossing – Relay or insulate Service

Water service relays is included in the contract documents to be performed as part of the project improvements.

The field contact for the Village of Somers – Water is Jerry Smith at (262) 220-4262.

We Energies – Electric

We Energies Electric has aerial facilities located behind the curb on the east side of the roadway.

The pole at Sta 202+00 RT may need to be supported during storm sewer construction. Contact Dave Paro at (262) 886-7054 a minimum of 7 days prior to digging in this area to determine if support of the pole is needed. No other conflicts are anticipated with the aerial facilities.

The field contact for We Energies Electric is James Nelson at (262) 884-6734.

We Energies – Gas

We Energies Gas has underground facilities located behind the curb on the east and west side of the roadway and a crossing at Sta 195+48.

There are no anticipated conflicts with the underground gas facilities.

The field contact for We Energies Gas is Chris DeGrave at (262) 886-7018.

Windstream

Windstream has aerial lines attached to We Energies poles on the east side of the roadway.

There are no anticipated conflicts with the aerial facilities.

The field contact for Windstream is Mary Beth Fisher at (262) 792-7938.

7. 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 7:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.

stp-107-001 (20060512)

8. Information to Bidders, WPDES General Construction Storm Water Discharge Permit.

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting Doug Cain at (262) 548-5603. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

9. Notice to Contractor – U.S. Coast Guard.

Coordinate any in-water activities with the U.S. Coast Guard. If work is planned by barge or other equipment from the water, the contractor is responsible for coordinating and obtaining all necessary permits from the U.S. Coast Guard.

Navigation aids located within or near the staging and work areas will be removed, if necessary, by the U.S. Coast Guard in advance of construction operations. The Contractor shall not remove, change the location of, obstruct, willfully damage, make fast to, or interfere with any aid to navigation.

The Contractor shall obtain approval from the U.S. Coast Guard for all buoys, construction aid markers to be placed in the water, and construction aid markers affixed with a light prior to the installation. Construction aid markers and lights shall not be colored or placed in a manner that they will obstruct or be confused with navigation aids.

The contractor shall notify the engineer and the U.S. Coast Guard Marine Safety Office of any misplaced material or stone.

10. Notice to Contractor – Picnic Table.

The existing picnic table located at Outfall # 3 shall be moved to a safe location to avoid damage from construction operations and replaced in its original location after work is complete. This work shall be considered incidental to the project.

11. Erosion Control

Add the following to Standard Specification 107.20 as paragraphs nine through sixteen:

(9) Erosion control best management practices (BMP's) the plans show are at suggested locations. The actual locations shall be determined by the contractor's ECIP and by the engineer. Include each dewatering (mechanical pumping) operation in the ECIP submittal. The ECIP shall supplement information the plans show and not reproduce it. The ECIP shall identify how to implement the project's erosion control plan. ECIP shall 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 exposure to possible erosion.

(10) Provide the ECIP 14 days before the pre-construction conference. Provide 1 copy of the ECIP to the Department and 1 copy of the ECIP to the WDNR Liaisons Kristina Betzold, (414) 263-8517, Kristina.betzold@wisconsin.gov, and Craig Webster, (262) 574-2141, craig.webster@wisconsin.gov. Do not implement the ECIP until Department approval, and perform all work conforming to the approved ECIP.

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

- (12) Stockpile excess materials or spoils on upland areas away from wetlands, floodplains, and waterways. Install perimeter silt fence protection around stockpiles within a timeframe acceptable to the engineer. If stockpiled materials will be left for more than 14 days, install temporary seed and mulch or other temporary erosion control measures the engineer orders.
- (13) Re-apply topsoil on graded areas, as designated by the engineer, within a timeframe acceptable to the engineer after grading is completed within those areas. Seed, fertilize, and mulch/erosion mat top-soiled areas, as designated by the engineer, within 2 days after placement of topsoil. If graded areas are left not completed and exposed for more than 14 days, seed those areas with temporary seed and mulch.
- (14) Do not allow excavation for; structures, utilities, grading, maintaining drainage 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. Before each dewatering operation, submit to the Department a separate ECIP amendment describing in words and pictorial format an appropriate BMP for sediment removal, conforming 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.
- (15) Dewatering is incidental.
- (16) Stabilize any temporary grading along Lake Michigan shoreline within 24 hours.

~~sef-107-010 (20180104)~~

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Doug Cain at 262-548-5603.

stp-107-054 (20080901)

13. Environmental Protection, Aquatic Exotic Species Control.

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

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

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

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

Use the following inspection and removal procedures:

1. Before leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can before leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:

- 4.1. Washing with ~212 F water (steam clean), or
- 4.2. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
- 4.3. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104° F) application.

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

stp-107-055 (20130615)

14. **Abandoning Sewer, Item 204.0291.S.**

A Description

This special provision describes abandoning existing sewer by filling it with cellular concrete as the plans show and conforming to standard spec 204 and standard spec 501 as modified in this special provision.

B Materials

Provide cellular concrete meeting the following specifications: 1 part cement, 1 part fly ash, 8 parts sand, or an approved equal, and water. Provide cement meeting the requirements of standard spec 501.2.1 for Type 1 Portland Cement. Provide sand meeting the requirements of standard spec 501.2.5.3 Provide water meeting the requirements of standard spec 501.2.4.

C Construction

Fill the abandoned sewer pipe with cellular concrete as the engineer directs. In the event that the sewer cannot be completely filled from existing manholes, tap the sewer where necessary and fill from these locations.

D Measurement

The department will measure Abandoning Sewer in volume by the cubic yard as specified in standard spec 109.1.3.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0291.S	Abandoning Sewer	CY

Payment is full compensation for furnishing all materials and excavating and backfilling where necessary.

stp-204-050 (20080902)

15. **Clearing and Grubbing – Emerald Ash Borer.**

The emerald ash borer (EAB) has resulted in a quarantine of ash trees (*Fraxinus sp.*) by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) and the Wisconsin Department of Natural Resources (DNR).

Ash trees species attacked by emerald ash borer include the following:

- Green ash (*F. pennsylvanica*) is found throughout the state, but is most common in southern Wisconsin. It may form pure stands or grow in association with black ash, red maple, swamp white oak, and elm. It grows as an associate in upland hardwood stands, but is most common in and around stream banks, floodplains, and swamps.
- Black ash (*F. nigra*) is distributed over the entire state but is most frequently found in northern Wisconsin. It is most common in swamps, but is also found in other wet forest types.
- Blue ash (*F. quadrangulata*) is a threatened species that is currently found only at a few sites in Waukesha County. The species is at the edge of its range in Wisconsin, but is common in states farther south. The species is not of commercial importance. Blue ash twigs are 4-sided.
- White ash (*F. americana*) tends to occur primarily in upland forests, often with sugar maple (*Acer saccharum*).

The quarantine of ash trees includes all horticultural cultivars of the species listed above.

Note that blue ash twigs are 4-sided. All other Wisconsin ash trees have round stems.

Also, Mountain ash (*Sorbus americana* and *S. decora*) is not a true ash and is not susceptible to EAB infestation.

The contractor shall be responsible for hiring a certified arborist to identify all ash trees that will be cleared and grubbed for the project. In addition, prior to scheduled clearing and grubbing activities, the arborist shall mark all ash trees with florescent lime flagging tied around the trunk perimeter.

Follow and obey the following Wisconsin Department of Agriculture, Trade, and Consumer Protection order:

ATCP 21.17 Emerald ash borer; import controls and quarantine.

Importing or Moving Regulated Items from Infested Areas; Prohibition.

Except as provided in subparagraph (3), no person may do any of the following:

- (a) Import a regulated item under sub. (2) into this state if that item originates from an emerald ash borer regulated area identified in 7CFR 301.53-3.
- (b) Move any regulated item under sub. (2) out of an emerald ash borer regulated area that is identified in 7CFR 301.53-3 and located in this state.

Note: the United States Department of Agriculture-Animal and Plant Health Inspection Service (USDA-APHIS) periodically updates the list of regulated areas in 7CFR 301.53-3. subsection (1) applies to new regulated areas as those areas are identified in the CFR.

Regulated Items. The following are regulated items for purposes of subparagraph (1):

- The emerald ash borer, *Agrilus planipennis* Fairmaire in any living stage.
- Ash trees.
- Ash limbs, branches, and roots.
- Ash logs, slabs or untreated lumber with bark attached.
- Cut firewood of all non-coniferous species.
- Ash chips and ash bark fragments (both composted and uncomposted) larger than one inch in diameter.
- Any other item or substance that may be designated as a regulated item if a DATCP pest control official determines that it presents a risk of spreading emerald ash borer and notifies the person in possession of the item or substance that it is subject to the restrictions of the regulations.

Regulatory Considerations

The quarantine means that ash wood products may not be transported out of the quarantined area. Clearing and grubbing includes all ash trees that are to be removed from within the project footprint. If ash trees are identified within clearing and grubbing limits of the project, the following measures are required for the disposal:

Chipped Ash Trees

May be left on site if used as landscape mulch within the project limits. If used as mulch on site, chips may not be applied at a depth greater than standard mulch applications as this will impede germination of seeded areas.

With the written permission of the engineer, chipped material may be buried on site within the airport property as directed by the engineer in accordance to section 201.3(14) of the DOT standard specifications for highway and structure construction.

May be buried on adjacent properties to projects within the quarantined zone with prior approval of the engineer in accordance to section 201.3 (15) of the standard specifications for highway and structure construction.

May be trucked to a licensed landfill within the quarantined zone with the engineer's approval in accordance to section 201.3(15) of the standard specifications for highway and structure construction.

Burning chips is optional if in compliance with section 201.3 of the standard specifications for highway and structure construction.

Chips must be disposed of immediately if not used for project mulching and may not be stockpiled and left on site for potential transport by others. Chips may be stockpiled temporarily if they will be used for project mulching and are not readily accessible to the public.

Chipper equipment must be cleaned following post-chipping activities to insure no spread of wood chip debris into non-quarantined counties.

Ash logs, Branches, and Roots

May be buried without chipping within the existing right-of-way or on adjacent properties in accordance to section 201.3 (14)(15) of the standard specifications for highway and structure construction.

May be trucked to a licensed landfill within the quarantined zone with the engineer's approval in accordance to section 201.3 (15) of the standard specifications for highway and structure construction.

Burning is optional if in compliance with section 201.3 of the standard specifications for highway and structure construction.

Ash logs, branches, and roots must be disposed of immediately and may not stockpiled.

All additional costs will be incidental to clearing and grubbing items.

Do not bury or use mulch in an area that will be disturbed again during later phases of the project.

Anyone moving firewood or ash products from the state or these counties is subject to state and federal fines up to \$1,000.00. All fines are the responsibility of the contractor.

Obtain updated quarantine information at the DNR Firewood Information Line at 1-800-303-WOOD.

Furnishing and Planting Plant Materials

Ash trees may be obtained from inside or outside the quarantine area and planted within the quarantined area. Ash trees from within the quarantine area may not be transported and planted into the non-quarantined area.

Updates for Compliance

Each year, as a service, the Wisconsin department of agriculture, trade and consumer protection distributes an updated federal CFR listing to nursery license holders and other affected persons in this state. More frequent updates, if any, are available on the Department of Agriculture, Trade, and Consumer Protection (DATCP) website at www.datcp.state.wi.us. subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from the DATCP. Persons may request update notices by calling (608) 224-4573, by visiting the DATCP website, or by writing to the following address:

Wisconsin Department of Agriculture, Trade and Consumer Protection
Division of Agricultural Resource Management
P.O. Box 8911
Madison WI 53708-8911

Regulated Items

More frequent updates, if any, are available on the DATCP website at www.datcp.state.wi.us. subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from DATCP. Persons may request update notices by calling (608) 224-4573, by visiting the DATCP website, or by writing to the above address.

16. Fence Safety, Item 616.0700.S.

A Description

This special provision describes providing plastic fence at locations the plans show.

B Materials

Furnish notched conventional metal "T" or "U" shaped fence posts.

Furnish fence fabric meeting the following requirements.

Color: International orange (UV stabilized)
Roll Height: 4 feet
Mesh Opening: 1 inch min to 3 inch max
Resin/Construction: High density polyethylene mesh
Tensile Yield: Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate Tensile Strength: Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at Break (%): Greater than 100% (ASTM D638)
Chemical Resistance: Inert to most chemicals and acids

C Construction

Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.

Overlap two rolls at a post and secure with wire ties.

D Measurement

The department will measure Fence Safety by the linear foot along the base of the fence, center-to-center of posts 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
616.0700.S	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.

stp-616-030 (20160607)

17. Landscape Planting Surveillance and Care Cycles.

Replace standard spec 632.3.18.1.1 with the following:

A plan establishment period of one year shall follow the completion of planting.

Delete standard spec 632.3.18.1.2.

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of \$200 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.

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18. Engineered Soil, Item SPV.0035.01.

A Description

This special provision describes providing Engineered Soil.

B Materials

A. Furnish engineered soil to the following specifications.

1. Sand:

- a. The planting mixture shall consist of a mixture of 70 percent to 85 percent sand and 15 percent to 30 percent compost by volume.
- b. The sand shall meet the gradation of 501.2.5.3.4.
- c. The preferred sand component consists of mostly SiO₂, but sand consisting of dolomite or calcium carbonate may also be used. Manufactured sand or stone dust is not allowed.

d. The sand shall be washed and drained to remove clay and silt particles prior to mixing.

2. Compost:

a. Compost material shall meet the following requirements:

- 1) Particle Size - 98 percent of the compost shall pass through a 0.75-inch screen.
- 2) Physical Contaminants - Less than 1 percent combined glass, metal and plastic.
- 3) Organic Matter/Ash Content -At least 40 percent organic matter and less than 60 percent ash content.
- 4) Carbon to Nitrogen Ratio- 10-20:1 C:N ratio.
- 5) pH - Between 6 and 8.
- 6) Soluble Salts - Electrical conductivity below 10 dS m-1 (mmhos cm -1)
- 7) Moisture Content- Between 35 percent and 50 percent by weight.
- 8) Maturity - The compost shall be aged and resistant to further decomposition and free of compounds, such as ammonia and organic acids, in concentrations toxic to plant growth.
- 9) Residual Seeds & Pathogens - Pathogens and noxious seeds shall be minimized.

B. The engineered soil mix shall be free of rocks, stumps, roots, brush or other material over 1 inch in diameter.

C. The engineered soil mix shall have a pH between 5.5 and 6.5.

C Construction

Placement and Settling of Engineered Soil:

- 1. Prior to placement in the bioretention area, the engineered soil shall be premixed and the moisture content shall be low enough to prevent clumping and compaction during placement.
- 2. The engineered soil shall be placed in multiple lifts, each approximately 12 inches in depth.
- 3. Steps may be taken to induce mild settling of the engineered soil bed as needed to prepare a stable planting medium and to stabilize the ponding depth. Vibrating plate-style compactors shall not be used to induce settling.

D Measurement

The department will measure Engineered Soil by the cubic 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
SPV.0035.01	Engineered Soil	CY

Payment is full compensation for furnishing, hauling of the sand/compost mix, cleanup and all incidentals necessary to complete the work related.

19. Clay Cap, Item SPV.0035.05.

A Description

This specification provision describes providing low permeable clay in areas the plans show.

B Materials

For each source, before excavating and hauling the low permeable clay to the project, submit the results of the laboratory tests described in Table 1. The laboratory testing shall document that the clay from the source meets or exceeds the requirements.

Conduct the laboratory source testing at the frequency listed in Table 1. Submit the test results to the engineer for review, two weeks before construction.

C Construction

C.1 Low Permeable Clay Placement

C.1.1 Erosion Protection

Do not place the low permeable clay until silt fence has been installed completely around the work area.

C.1.2 Low Permeable Clay Placement

After the fine grading is complete, place and compact low permeable clay in completed 6-inch lifts. Place each lift of low permeable clay in one continuous lift. See plans for low permeable clay construction limits. Measure the thickness of the low permeable clay the plans show perpendicular to the surface.

Notify the engineer at least three days before starting construction of low permeable clay.

Table 1

Reference	Number	Test Title	Requirements	Testing Frequency	
				Screening	QA/QC ⁸
AASHTO ¹	T99-01	Moisture –Density Relationships of Soils Using a 2.5-kg (5.5 lb) Rammer a 305 mm (12-in.) Drop (Standard Proctor)	NA ⁷	1/source	1 test total (minimum)
AASHTO	T-88-00	Particle Size Analysis of Soils	$P_{200}^2 \geq 50\%$	2/source	2 tests total (minimum)
AASHTO	T-89-02	Determining the Liquid Limit of Soils	$LL^3 \geq 22\%$	2/source	2 tests total (minimum)
AASHTO	T-90-00	Determining the Plastic Limit and Plasticity Index of Soils	$PI^4 \geq 12\%$	2/source	2 tests total (minimum)
AASHTO	T310-03	In-Place Density and Moisture Content of Soils and Soil-Aggregates by nuclear Methods (Shallow Depth)	$DD^5 \geq 95\%$ of the MDD ⁶	NA	2 tests/lift (minimum)
<p>Notes:</p> <ol style="list-style-type: none"> 1. AASHTO = American Association of State Highway and Transportation Officials 2. P200 = Percent by weight passing the #200 sieve (%) 3. LL = Liquid Limit (%) 4. PI = Plasticity Index (%) 5. DD = Dry Density (pcf) 6. MDD = Maximum Dry Density (pcf) as determined by the Standard Proctor Test 7. NA = Not applicable 8. QA/QC = Quality Assurance / Quality Control 					

Compact the low permeable clay to a minimum of 95% Standard Proctor AASHTO T-99 Maximum Dry Density with compaction equipment appropriate for cohesive soil. As needed, clay shall be disked or otherwise mechanically processed before compaction to break up clods and allow moisture content adjustment. Clod size shall be no greater than 4 inches.

Provide all equipment necessary to adjust low permeable clay to the proper moisture content for compaction.

Make sufficient number of passes of the compaction equipment over each lift of clay to ensure complete remolding of the clay.

Do not proceed with placement of additional lifts until all required low permeable clay testing and documentation has been completed for the previous lift.

During placement of the low permeable clay the minimum moisture content shall be as defined by the testing performed in the source evaluation and with the following limits:

- No drier than three percent below the optimum moisture content as determined by the Standard Proctor test.

If the in-place low permeable clay fails to meet the requirements of Table 1, then remove and replace or rework any portion of the low permeable clay not meeting the project requirements until project specifications are met. There shall be no compensation for removing, replacing and reworking low permeable clay not meeting the requirements in Table 1.

C.1.3 QA/QC Testing of the Low Permeable Clay

The Department will perform the QA/QC testing at the frequency shown in Table 1. The Department will record the thickness of low permeable clay.

Provide the following:

- Access for on-site testing, inspection, and documentation.
- Machinery required to grade/blade density test locations.
- Replace and recompact clay material removed for testing purposes.

D Measurement

The Department will measure Clay Cap in volume by the cubic yards 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.0035.05	Clay Cap	CY

Payment is full compensation for dewatering areas of site where the low permeable clay is to be placed; for furnishing, placing and compacting the low permeable clay; and for performing all tests.

20. Salvage Catch Basins, Item SPV.0060.01.

A Description

This special provision describes excavating and removing existing catch basins if needed, cleaning and reinstalling at the same location or as directed by the engineer.

B (Vacant)

C Construction

Remove the catch basin from the existing location, clean, handle, and install at the new location without damaging the catch basin. Replace any material damaged by the contractor at no expense to the department.

Place catch basins as specified in standard spec 611.

D Measurement

The department will measure Salvage Catch Basins by each 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	Salvage Catch Basins	EACH

Payment is full compensation for excavating and removing catch basins from the existing location; for cleaning, transporting and installing, including masonry, connections and other fittings; and for backfilling.

21. Manholes 4x10-FT, Item SPV.0060.02.

A Description

This special provision describes furnishing and installing a manhole in accordance with standard spec 611 and as shown on the plans.

B Materials

Furnish materials that meet the requirements of standard spec 611

C Construction

Construction methods shall be in accordance with standard spec 611.

D Measurement

The department will measure Manholes 4x10-FT by 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.0060.02	Manholes 4x10-FT	EACH

Payment is full compensation for providing materials, including masonry, conduit and sewer connections, steps, and other fittings; for excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site; except that the department will pay for covers, including frames, grates and lids separately.

22. Adjusting Sanitary Manholes, Item SPV.0060.05.

A Description

This special provision describes the adjustment of existing sanitary manholes.

Perform this work in accordance with the pertinent provisions of section 611 of the standard specifications and the Standard Specifications for Sewer and Water Construction in Wisconsin, Latest edition, except as herein modified. The Standard Specifications for Sewer and Water Construction in Wisconsin is available by contacting the Public Works Industry Improvement Program, 2835 North Mayfair Road, Milwaukee, WI, or by calling (414) 778-1050.

B Materials

Adjustments shall be made using concrete adjusting rings and mortar and conform to section 611 of the standard specifications.

C Construction

Perform work in accordance the Standard Specifications for Sewer and Water Construction in Wisconsin and section 611 of the standard specifications.

D Measurement

The department will measure Adjusting Sanitary Manholes by 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.0060.05	Adjusting Sanitary Manholes	EACH

Payment is full compensation for adjusting the manhole to finish grade; for construction, excavation, and backfilling; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work in accordance with the requirements of the plans and contract.

23. Relay Water Service, Item SPV.0060.06.

A Description

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B Materials

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C Construction

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D Measurement

The department will measure Relay Water Service by 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
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Payment is full compensation for .

24. Insulate Water Service, Item SPV.0060.07.

A Description

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B Materials

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C Construction

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D Measurement

The department will measure Insulate Water Service by each 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.0060.07	Insulate Water Service	EACH

Payment is full compensation for .

25. Revetment Outfall 1, Item SPV.0105.01; Revetment Outfall 3, Item SPV.0105.02.

A Description

This special provision describes surveying existing conditions, furnishing materials and erecting a permanent slope stabilization revetment structure.

This special provision describes contractor quality control (QC) sampling and testing for armor stone and underlayer stone.

B Materials

B1 Existing Condition Survey & Cross Section Check Submittal

It is the responsibility of the contractor to submit a survey of existing shoreline conditions at Outfall 1 and Outfall 3 and revetment cross sections as required by this special provision, for review and acceptance by the Department, to show the existing slope conditions, and required excavation and fill at the time of construction required to meet the specifications, tolerances, required elevations and details provided on the plan sheets. Erosion is expected at both Outfall 1 and Outfall 3 and no compensation will be provided for additional backfilling materials needed to bring the subgrade back to original plan elevation. The submittal shall include the following items for review: contractor baseline survey data used for designs and a minimum of three (3) cross sections along each revetment to construct each revetment.

Department review does not relieve the contractor from responsibility for errors or omissions on cross sections. Submit not later than 30 days from the date of notification to proceed for the project and a minimum of 20 days prior to the beginning of revetment construction.

The cross sections shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the WisDOT project identification number and include revetment outfall number. Any calculations used to develop cross sections and field notes taken during existing condition survey shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the revetment, date of preparation, initials of designer and checker, and page number at the top of the page. All cross section sheets and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

B2 Contractor Experience

Contractor specializing in performing the revetment work in this contract shall have at least five years minimum experience for constructing coastal structures including rock revetment and living shoreline structures. Contractor shall use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the revetment work.

B3 Armor Stone and Underlayer Stone

Furnish and place armor and underlayer stone as shown on the plans.

Furnish armor stone conforming to the following gradation requirements in Table 1 and Figure 1:

Table 1

Class	EUL	NUL	NLL	ELL	M₅₀	Ave. M₅₀
Passing Requirements	>97%	>70%	<10%	<5%	Range	
Armor (Unit: lbs)	20,450	14,041	6,712	4,539	10,319 – 11,729	11,024

The class limits are defined in accordance with CIRIA/CUR C683 Chapter 3 (2007) as follows:

- EUL (Extreme Upper Limit): The mass below which no less than 97 percent passing by mass is permitted.
- NUL (Nominal Upper Limit): The mass below which no less than 70 percent passing by mass is permitted.
- NLL (Nominal Lower Limit): The mass below which no more than 10 percent passing by mass is permitted.
- ELL (Extreme Lower Limit): The mass below which no more than 5 percent passing by mass is permitted.

Furnish underlayer stone conforming to the following gradation requirements in Table 2 and Figure 2:

Table 2

Class	EUL	NUL	NLL	ELL	M₅₀	Ave. M₅₀
Passing Requirements	>97%	>70%	<10%	<5%	Range	
Underlayer (Unit: lbs)	2,696	1,688	464	217	1050-1,439	1,245

The class limits are defined in accordance with CIRIA/CUR C683 Chapter 3 (2007) as follows:

- EUL (Extreme Upper Limit): The mass below which no less than 97 percent passing by mass is permitted.
- NUL (Nominal Upper Limit): The mass below which no less than 70 percent passing by mass is permitted.
- NLL (Nominal Lower Limit): The mass below which no more than 10 percent passing by mass is permitted.
- ELL (Extreme Lower Limit): The mass below which no more than 5 percent passing by mass is permitted.

Figure 1

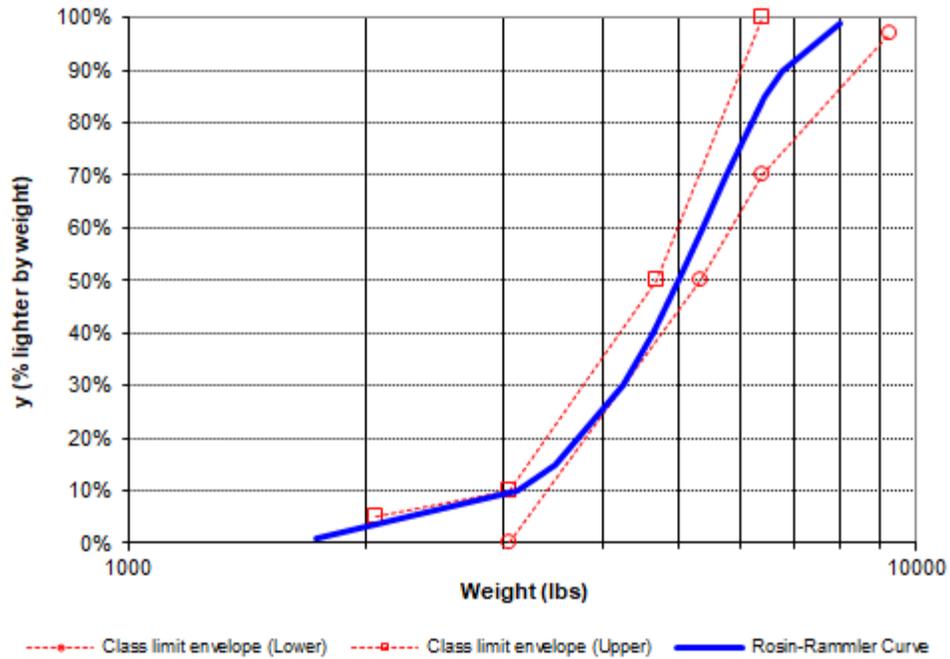


Figure 2

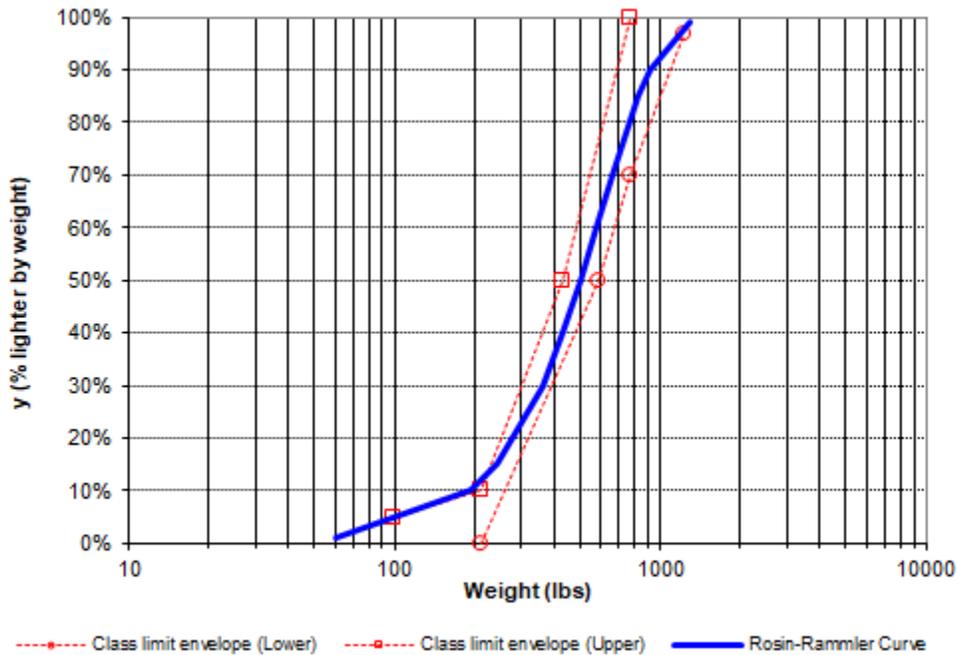


Figure 1 Rock gradation curve for revetment armor and Figure 2 underlayer.

In addition, armor and underlayer stone shall conform to the following requirements in Table 3:

Table 3

Test	Reference	Armor and Underlayer
Unit Weight	ASTM C-127	Greater than 165 pcf
Material	ASTM D-4992	Granite, Limestone, or Bluestone

Test	Reference	Armor and Underlayer
Compressive Strength	EN 1926:1999	80-120 MPa
Water Absorption	EN 13383-2:2002	0.5-2.0%
Sulfate Soundness	ASTM C-88	2-10% loss
LA Abrasion	ASTM C-535	15-25% loss
Wetting and Drying	ASTM D-5313-04	0.5-1.0%
Petrographic Examination	ASTM C295/ASTM D1721	No deleterious material

The new stone shall be furnished from a source designated by the Contractor and accepted by the engineer. The Contractor will conduct a quarry investigation and evaluate the quality test data provided by the quarry to determine whether acceptable stone can be produced from the proposed source. Satisfactory service records on other work may be acceptable. In order for the stone to be acceptable on the basis of service records, stone of a similar size must have been placed in a similar thickness and exposed to weathering under similar conditions as are anticipated for this contract and must have satisfactorily withstood such weathering for a minimum of 20 years. If no such records are available, the Contractor will conduct tests to assure the acceptability of the stone. In addition to an acceptable service record, the engineer has the option to elect to have representative samples taken and tested.

Designate in writing only one source from which it is proposed to furnish stone and notify the engineer at least 30 workdays before the stone leaves the quarry. It is the Contractor's responsibility to determine that the stone source selected is capable of providing the quality, quantities and gradation needed and at the rate needed to maintain the scheduled progress of the work. If a source for the stone so designated by the Contractor is not accepted for use by the engineer, the Contractor shall propose another source.

Prior to delivery or placement of any armor stone or underlayer stone, obtain and furnish to the engineer a certified report of test results showing that the material complies with requirements of this specification. Submit the certified report of test results and representative photos of 3 armor stones and 3 underlayer stones from the selected quarry to the engineer for approval a minimum of 14 days prior to the delivery of any stone. The certified report of tests shall be less than 6 months old. Tests shall be performed by a certified independent laboratory.

B4 Groin Armor Stone and Underlayer Stone

Furnish and place armor and core stone as shown on the plans.

Furnish armor stone conforming to the following gradation requirements in Table 4 and Figure 3:

Table 4

Class	EUL	NUL	NLL	ELL	M ₅₀ Range	Ave. M ₅₀
Passing Requirements	>97%	>70%	<10%	<5%		
Armor (Unit: lbs)	9912	6608	2203	1542	4,012 – 4,955	4,4484

The class limits are defined in accordance with CIRIA/CUR C683 Chapter 3 (2007) as follows:

- EUL (Extreme Upper Limit): The mass below which no less than 97 percent passing by mass is permitted.
- NUL (Nominal Upper Limit): The mass below which no less than 70 percent passing by mass is permitted.
- NLL (Nominal Lower Limit): The mass below which no more than 10 percent passing by mass is permitted.
- ELL (Extreme Lower Limit): The mass below which no more than 5 percent passing by mass is permitted.

Furnish core stone conforming to the following gradation requirements in Table 5 and Figure 4:

Table 5

Class	EUL	NUL	NLL	ELL	W ₅₀ Range	Ave. M ₅₀
Passing Requirements	>97%	>70%	<10%	<5%		
Underlayer (Unit: lbs)	2,696	1,688	464	217	1050-1439	1,245

The class limits are defined in accordance with CIRIA/CUR C683 Chapter 3 (2007) as follows:

- EUL (Extreme Upper Limit): The mass below which no less than 97 percent passing by mass is permitted.
- NUL (Nominal Upper Limit): The mass below which no less than 70 percent passing by mass is permitted.
- NLL (Nominal Lower Limit): The mass below which no more than 10 percent passing by mass is permitted.
- ELL (Extreme Lower Limit): The mass below which no more than 5 percent passing by mass is permitted.

Figure 3

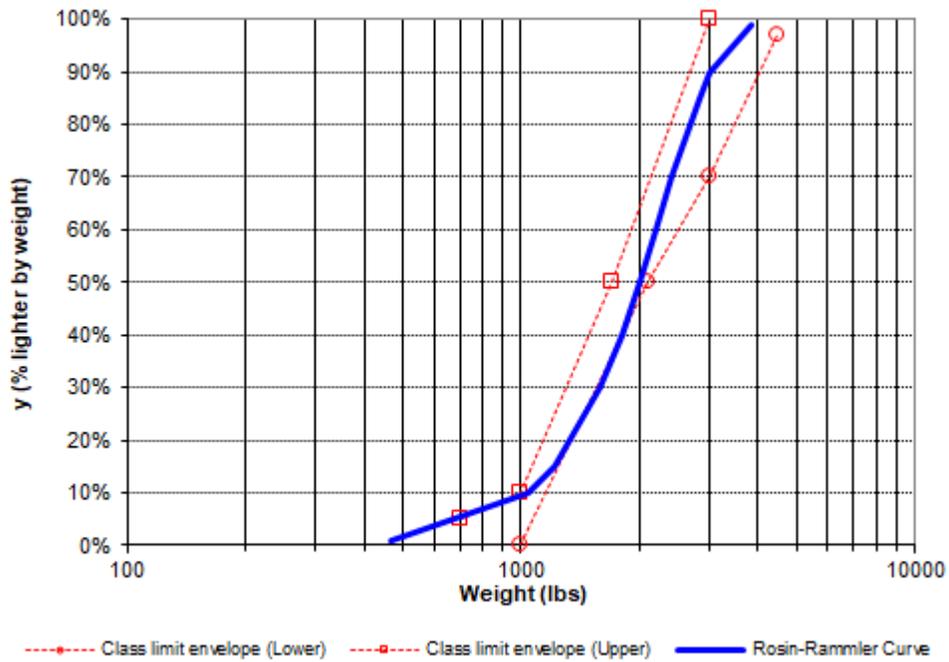


Figure 4

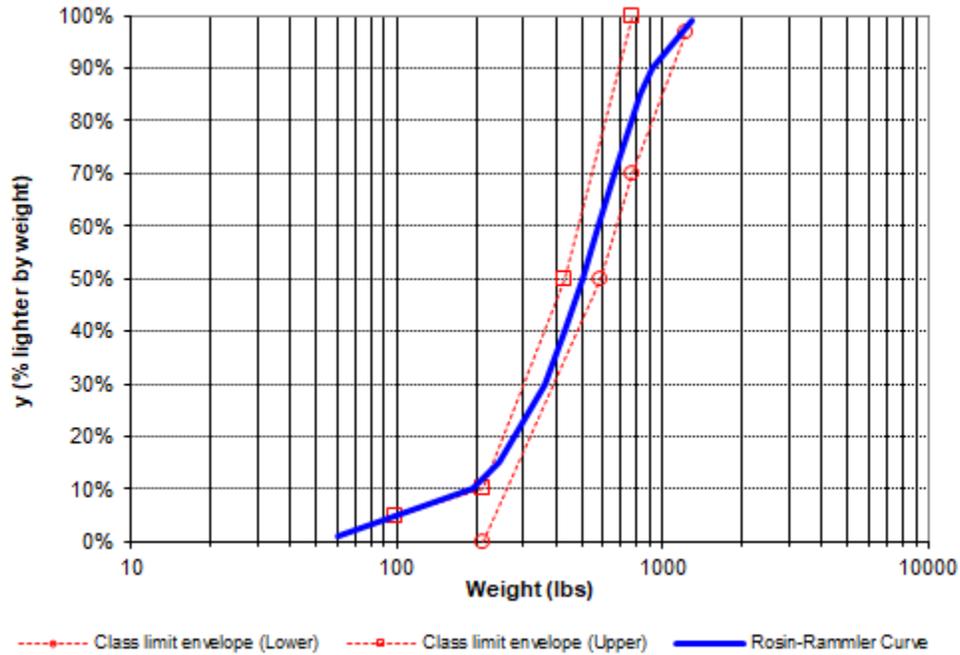


Figure 3 Rock gradation curve for groin and Figure 4 core stone.

The new stone shall be furnished from a source designated by the Contractor and accepted by the engineer. The Contractor will conduct a quarry investigation and evaluate the quality test data provided by the quarry to determine whether acceptable stone can be produced from the proposed source. Satisfactory service records on other work may be acceptable. In order for the stone to be acceptable on the basis of service records, stone of a similar size must have been placed in a similar thickness and exposed to weathering under similar conditions as are anticipated for this contract and must have satisfactorily withstood such weathering for a minimum of 20 years. If no such records are available, the Contractor will conduct tests to assure the acceptability of the stone. In addition to an acceptable service record, the engineer has the option to elect to have representative samples taken and tested.

Designate in writing only one source from which it is proposed to furnish stone and notify the engineer at least 30 workdays before the stone leaves the quarry. It is the Contractor's responsibility to determine that the stone source selected is capable of providing the quality, quantities and gradation needed and at the rate needed to maintain the scheduled progress of the work. If a source for the stone so designated by the Contractor is not accepted for use by the engineer, the Contractor shall propose another source.

Prior to placement of any armor stone or underlayer stone, obtain and furnish to the engineer a certified report of test results showing that the material complies with requirements of this specification. Submit the certified report of test results and representative photos of 3 armor stones and 3 underlayer stones from the selected quarry to the engineer for approval a minimum of 14 days prior to the delivery of any stone. The certified report of tests shall be less than 6 months old. Tests shall be performed by a certified independent laboratory.

B5 Revetment Apron Stone

Furnish and place revetment apron stone as shown on the plans.

Furnish apron stone conforming to the following gradation requirements in Table 6 and Figure 5:

Table 6

Class	EUL	NUL	NLL	ELL	M ₅₀ Range	Ave. M ₅₀
Passing Requirements	>97%	>70%	<10%	<5%		
Armor (Unit: lbs)	37.4	19.8	1.5	0.4	6.3 – 13.3	9.8

The class limits are defined in accordance with CIRIA/CUR C683 Chapter 3 (2007) as follows:

- EUL (Extreme Upper Limit): The mass below which no less than 97 percent passing by mass is permitted.
- NUL (Nominal Upper Limit): The mass below which no less than 70 percent passing by mass is permitted.
- NLL (Nominal Lower Limit): The mass below which no more than 10 percent passing by mass is permitted.
- ELL (Extreme Lower Limit): The mass below which no more than 5 percent passing by mass is permitted.

Figure 5

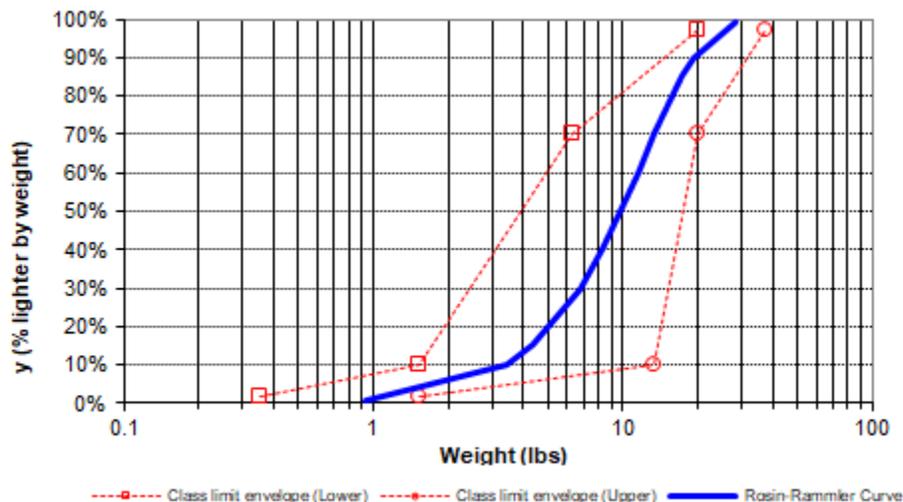


Figure 5 Rock gradation curve for revetment apron.

Prior to placement of any apron stone, obtain and furnish to the engineer a certified report of test results showing that the material complies with requirements of this specification. Submit certified report to the engineer a minimum of 14 days prior to delivery of apron stone for approval. The certified report of tests shall be less than 6 months old. Tests will be performed by a certified independent laboratory.

B6 Geotextile Fabric

Furnish a geotextile fabric conforming to Standard Specification 645 and conforming to the following physical properties:

Test	Method	Value ^[1]
Typical Weight	ASTM D 5261	16 oz/sy
Minimum Tensile Strength	ASTM D 4632	380 lbs
Elongation at Break	ASTM D 4632	50 %
CBR Puncture	ASTM D 6241	1,025 lbs
Trapezoidal Tear	ASTM D 4533	140 lbs
Maximum Apparent Opening Size	ASTM D 4751	No. 100
Minimum Permittivity	ASTM D 4491	0.70 s ⁻¹
Water Flow Rate	ASTM D 4491	50 g/min/sf
UV Resistance at 500 Hours	ASTM D 4355	70%

^[1] All numerical values represent minimum/maximum average roll values. Average test results from all rolls in a lot must conform to the tabulated values.

B7 Storm Sewer Pipe

Furnish corrugated polypropylene Class III-B storm sewer pipe conforming to Standard Specification 608 for revetment storm sewer outfalls in the diameter sizes shown on the plans.

Furnish integral coupler spigot adapter and double wide marmac coupler conforming to Standard Specification 608 for corrugated polypropylene transition to existing concrete pipe as shown on the plans.

Furnish storm sewer foundation backfill conforming to Standard Specification 608.

B8 Structural Backfill Type B

Furnish Structural Backfill Type B conforming to Standard Specification 210 for revetment subgrade fill in areas above lake water level.

B9 AASHTO #57 Stone

Furnish stone conforming to AASHTO #57 for revetment subgrade fill in areas below lake water level.

C Construction

C1 Stone Placement Plan

Within 20 calendar days after date of receipt of Notice to Proceed, a detailed stone placement plan shall be submitted for approval to the engineer incorporating:

- The method of transporting stone from the stone source to the construction site and the method of weighing stone.
- The method of stone placement and the type of equipment to be utilized.
- The direction and area in which construction shall commence
- Any construction aid markers to be placed in the water.
- Any temporary erosion control BMPs in addition to those shown on the erosion control plans.
- The minimum stockpile intended to have on Site as a safeguard for this purpose.
- The proposed timeline to complete construction of Revetment Outfall 1 and Revetment Outfall 3 by October 2 per Interim Completion of Work requirements.

The following will not be permitted:

- Placing armor stone by dumping into chutes or by similar methods.
- Placing armor stone by dumping it at the top of the slope and pushing it down the slope.

C2 Order of Work

When work commences, it shall proceed continuously without skipping areas. Due to tidal currents and wave action, no more than 50 feet of underlayer stone shall be placed in front of the armor stone placement, or as directed by the engineer. Any completed areas damaged by tidal currents or wave action shall be repaired or replaced to the original lines and grades at no expense to the Department.

C3 Demonstration Section

Prior to placement of stone, Contractor will construct a section of stone revetment to demonstrate proposed operations for production placement. The section shall demonstrate procedures and capability of grading and placing stone within the tolerances specified. The demonstration section shall be 30 feet in length and shall conform to all applicable specified. Survey of underlayer and main armor for the demonstration section shall be carried out using surveying methodology provided in section C7 Placement Control.

Methods and equipment employed for placement shall demonstrate the adequacy for use in placement of stone and shall conform to the requirements specified. The quantities of all materials placed within the section shall be accurately tabulated and provided immediately to the engineer for comparison with computed quantities.

Do not proceed with placing stone protection elsewhere prior to the approval of the demonstration section. Within a period of 7 days after completion of the section, the engineer shall determine the adequacy of the section to function as part of the permanent construction. The Contractor will be notified as to the acceptability of the section and may be directed to modify methods of construction and remove the section if necessary.

If removal of the demonstration section is required, it shall be conducted in such a manner as to maintain the integrity of the underlying subgrade.

C4 Foundation Preparation

Any existing rubble and stone shall be removed from the proposed revetment construction limits prior to starting excavation and fill as indicated on the Contract Drawings. All stones removed from the existing shoreline may potentially be reused in the construction of the revetment crest (most rear side/landward

side), provided the stones meet the specified criteria and are approved for use by the engineer. Any stone that is to be considered for reuse will be stockpiled separately.

Any stone considered unsalvageable shall be removed from the site in accordance to Standard Specification 205.

Areas where armor stone and underlayer stone are to be placed shall be excavated, trimmed, filled and dressed in accordance to Standard Specification 205.

C5 Placement

Care shall be taken to place the armor stone and underlayer stone so that it will form a compact mass and uniform blanket thickness to the indicated lines, slopes, and elevations show on the plans and shop drawings. Materials shall be placed on the receiving surface (i.e., underlayer) within 2 days after approval of receiving surface has been received from the engineer.

Underlayer surfaces shall be maintained free of erosion or damage until the armor stone has been satisfactorily placed; areas damaged or eroded shall be repaired or replaced to the original lines and grades.

Embankment and shoreline stability during placement shall be the responsibility of the Contractor.

Areas on which geotextile is to be placed shall be graded and/or dressed to conform to cross sections shown on the contract drawings within an allowable tolerance of plus 4.0 inches and minus 4.0 inches from the theoretical slope lines and grades. Immediately prior to placing the geotextile, the prepared base will be inspected by the engineer and no material shall be placed thereon until that area has been approved. Where such areas are below the allowable minus tolerance limit they shall be brought to grade by fill with AASHTO #57 stone and compacted in maximum 6" lifts. For elevations above lake water level, the areas below the allowable minus tolerance limit will be brought to grade with structural backfill. Subaqueous areas on which geotextile and stone/backfill are to be placed shall be graded and/or dressed to conform to cross sections shown on the contract drawings within an allowable tolerance. Installation of geotextile shall be as specified in Standard Specifications 645.

Underlayer stone shall be placed only after the base of the relocated slope is prepared and geotextile placement has been approved. The underlayer stone shall be spread uniformly on the prepared base in a satisfactory manner to the indicated lines starting from the bottom of the area to be covered and shall continue up slope. Placing of materials by methods that tend to segregate particle sizes within the underlayer will not be permitted. Compaction of the underlayer stone will not be required but it shall be finished to present a reasonably even surface free from mounds or windrows. No subsequent layer shall be placed until the levels, dimensions, and slope of the previous layers have been checked and approved by the engineer. Should the Contractor continue placing subsequent layers without having obtained an approval, then the engineer shall have the right to instruct the Contractor to remove part or all of the subsequent layer or layers and to check that the underlying layer complies with the specifications at no expense to the Department. If, during the course of construction, any stone already in place becomes covered with sand or other materials, to such an extent that, in the opinion of the engineer, would impair the stability of the structure, the Contractor shall be required to remove the sand or other materials before placing any additional stone at no expense to the Department. The finished slope above water level shall be free of objectionable clusters or pockets and shall present a uniform rough appearance.

Armor stone shall be placed only after the upper underlayer stone has been approved. Armor stone shall be placed on the upper underlayer stone in such a manner as to produce a well-graded mass of stone with minimum voids and shall be constructed to the lines and grades indicated on contract drawings. Armor stone shall be placed to its full course thickness in one operation and in such a manner as to avoid displacing the underlying material. The larger stones shall be well distributed, and the entire mass of stones shall be roughly graded to conform to the armor stone gradation specified in C10 Stone Quality Control. The finished slope shall be free from objectionable pockets of small stones, clusters of larger stones, or large voids. Selective placing may be required but only to the extent necessary to secure the results specified above. The desired distribution of the various sizes of armor stones throughout the mass shall be obtained, at the option of the Contractor, either by selective loading at the quarry or other source, by controlled dumping of successive loads during final placing, or by a combination of these methods.

Areas in the vicinity of completed stone protection shall be thoroughly examined and stone found outside the indicated cross section or limits of the stone protection shall be recovered and can be reused in construction of the remaining sections of stone protection.

Protection of uncompleted work is solely the Contractor's responsibility and any repairs needed to the damaged portions of already completed work shall be at no cost to the Department.

C6 Placement Control

Establish and maintain placement control for all work performed at the job site under this section to assure compliance with contract requirements. Maintain records of any placement control spot checks, inspections and corrective actions. Placement control measures shall cover all construction operations including, but not limited to, the placement of all materials to the slope and grade lines shown on the plans and in accordance with this section.

Contractor survey spot checks are required on each layer of material placed to confirm that the materials are acceptably placed as specified herein. 10 spot checks per 50 feet of revetment will be performed by the contractor on each of the following layers:

1. Subsurface
2. Underlayer Stone Layer
3. Armor Stone Layer

Spot checks shall be taken on the slope between the revetment crest and revetment slope. Submit randomly selected locations and plan elevations for each of the spot checks for each of the revetment layers prior to beginning construction of any of the layers. In the field, the engineer will verify a minimum of 80% of spot checks performed by the contractor. Submit reports daily of any spot checks performed detailing the location and elevation to the engineer. Additional spot checks may be required as directed by the engineer.

All spot checks shall be conducted in the presence of the engineer, unless this requirement is waived by the Department.

The cost of all spot checks required to complete the Work shall be done at no expense to the Department.

The elevation of stone above the water surface shall be determined by the use of a leveling instrument and a rod having a spherical end (i.e. base) measuring six (6) inches in diameter per CIRIA (2007). If approved by the engineer other means may also be used. The elevation of stone below water shall be surveyed using single-beam instrument or other techniques if approved by the engineer.

C7 Construction Tolerances

Variation in slope lines and grades from the indicated slope lines and grades shall be within the tolerances specified in the following table per CIRIA 2007 (CIRIA/CUR C683 Chapter 9) in Table 7:

Table 7

LOCATION OF STONE	TOLERANCES	
	Above OMHW	Above OMHW
Underlayer	± 0.60 feet	± 0.95 feet
Armor stone	± 1.20 feet	± 2.00 feet

The above provided tolerances are for average difference between design profiles to actual profile (i.e., mean actual profile) over 50 ft length along the structure's axis. The tolerances on two consecutive mean actual profiles shall not be negative. Notwithstanding any accumulation of positive tolerances on the underlayer, the thickness of layer shall not be less than 80% of the nominal thickness when calculated using mean actual profiles.

The intention is that the work shall be built generally to the required elevations, slope and grade and that the outer surfaces shall be even and present a neat appearance. Placed material not meeting these limits shall be removed or reworked as directed by the engineer at no expense to the Department. Stone of suitable quality replacing stone not meeting limits shall be furnished and placed at no expense to the Department.

C8 Storm Sewer Outfall Extension

Connect corrugated storm sewer pipe to existing concrete as shown on the plans.

Construct storm sewer outfall extensions by laying pipe on revetment underlayer and armor stone at plan outfall invert elevation. After pipe is laid at plan elevation cover pipe with armor and underlayer stone taking care not to crush pipe.

Construct the foundation and foundation backfill of storm sewer trench conforming to Standard Specification 608.

C9 Stone Quality Control

C9.1 Documentation

Submit on a weekly basis, for all material delivered during the week, a certification that the material meets all the requirements of the contract specifications.

All material testing and verification shall be submitted to and approved by the engineer prior to incorporating the tested material into the work. The engineer may allow submission of scanned copies of handwritten documentation.

C9.2 Quality Control (QC) Testing

During the course of the work, the stone shall be tested by the Contractor. The testing will be done at an approved testing laboratory.

The Contractor shall be required to obtain, under the supervision of the engineer, samples of at least five (5) pieces of armor stone and 100 pounds of each under layer stone and deliver them at his own expense to the Contractor's approved testing laboratory. All tests shall be made by the Contractor at the Contractor's expense. Tests to which the material will be subject to are as indicated in B3 Armor Stone and Underlayer Stone.

All stone will be subject to inspection during loading at the source and at the site of the work prior to placement.

Field gradation tests will be required for the armor and underlayer stone. Labor, equipment and apparatus necessary for performing the tests shall be furnished by the Contractor. If the gradation test fails, additional gradation tests will be required at the Contractor's expense to delineate the limits of unacceptable stone. The additional gradation tests shall not count as part of the minimum number of gradation tests required. The unacceptable stone will either be reworked to bring the stone within the specified gradation, or the stone will be removed from the project site at no expense to the Department.

Samples of armor stone and underlayer stone gradation tests will be selected by the engineer from material stockpiled at the jobsite or from material that has already been placed. The quantity selected for testing shall be of the more representative appearing material. The minimum sample size and the number of the tests required shall be as follows in Table 8:

Table 8

Gradation	Minimum Sample Weight	Number of Each Test
Armor Stone	40,000 lbs	2 each gradation
Underlayer Stone	3,000 lbs	2 each gradation

A gradation test shall consist of weighing every stone in a representative sample to determine the amount of each stone between the various specified weights. The weights thus obtained are accumulated and expressed as a percent by weight of the total sample lighter than the various specified stone weight.

Apparatus for testing of underlayer stone shall include: one Gilson Mechanical Testing Screen with sieve sizes from 6 inches to No. 10, one Ro-Tap sieve shaker with sieve sizes No. 4 to No.20, one large capacity sample splitter, one drying oven, one timer for sieve shakers, sieve brushes, scoops, etc., and scales, 100-gram sensitivity.

Sample preparation, testing procedures, and computations for the armor and under layer stone gradation testing shall be performed as specified in CIRIA (C683, 2017) and as directed by the engineer. If necessary, the engineer may modify the routines of the sample preparation and testing procedure to suit field conditions.

Perform one drop test of the underlayer stone and the armor stone prior to installation of the material as directed by the engineer. A drop test provides an immediate evaluation of the durability of very large stone during handling of the stone including placement into a structure. For comparability, the test stone(s) shall be dropped from an orange peel or by other means from a height of 10 ft ± 0.3 onto a rigid surface or second stone of comparable size. Dumping from a truck is not acceptable. The stone shall be examined carefully before as well as after the completion of the test. Failure criteria is the development of new cracks, opening of old cracks, and the loss of piece from the surface of the stone. Each stone shall

be dropped a total of five times for evaluation purposes with examination after each drop. Contractor shall provide all necessary equipment and operating personnel to perform the testing.

If the engineer, finds that the stone quality, gradation or weights of stone being furnished are not as specified or are questionable, re-sampling and re-testing by the Contractor shall be required.

C9.3 Rejected Material

Any stone rejected at the site of work as not meeting the requirements of these specifications for quality, condition, gradation or otherwise shall be removed from the site at no expense to the Department. Replacement stone of suitable quality shall be furnished and placed.

D Measurement

The Department will measure Revetment Outfall 1 and Revetment Outfall 3, completed 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 items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Revetment Outfall 1	LS
SPV.0105.02	Revetment Outfall 3	LS

Payment is full compensation for performing existing condition survey and cross section check sheets; submitting stone placement plan; notifying the US Coast Guard; preparing the revetment foundation including all necessary excavation and disposal of materials, filling using structural backfill and AASHTO #57 stone; constructing a demonstration section of revetment; furnishing and installing armor stone, underlayer stone, apron stone, groin armor and core stone, geotextile fabric, storm sewer pipe, and storm sewer connections; performing required quality control tests; and for performing placement control surveys and cross section submittals.

26. Relocate Swing, Item SPV.0105.03.

A Description

This special provision describes relocating an existing swing to the location agreed upon by the Village of Somers on the same parcel.

B (Vacant)

C Construction

Remove the existing swing and any tie down hardware in a way that prevents damage to the swing. Relocate the swing to a location on the same parcel as designated by the Village and reapply tiedowns if equipped. Contact Jerry Smith, Village of Somers Public Works Superintendent, at 262-859-2822 to coordinate final location of the swing.

D Measurement

The department will measure Relocate Swing by the lump sum 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.0105.03	Relocate Swing	LS

Payment is full compensation for removing, hauling and installing swing in new location, removing and reapplying tie down hardware and all incidentals necessary to complete the work.

27. Relocate Bike Rack, Item SPV.0105.04.

A Description

This special provision describes relocating an existing bike rack to the location agreed upon by the Village of Somers on the same parcel.

B (Vacant)

C Construction

Remove the existing bike rack including the concrete footings in a way that prevents damage to the bike rack. Relocate the bike rack to a location on the same parcel as designated by the Village and install concrete footings. Contact Jerry Smith, Village of Somers Public Works Superintendent, at 262-859-2822 to coordinate final location of the bike rack.

D Measurement

The department will measure Relocate Bike Rack by the lump sum 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.0105.04	Relocate Bike Rack	LS

Payment is full compensation for removing, hauling, excavating, installing, backfilling and all incidentals necessary to complete the work.

28. Moving Wood Sign, Item SPV.0105.05.

A Description

This special provision describes removing the existing sign and reinstalling at the same location or as directed by the engineer.

B (Vacant)

C Construction

Remove the sign and existing supports without damaging them and store them in a safe location. Once construction activity is finished in the area, reinstall the sign and posts in the same location.

D Measurement

The department will measure Moving Wood Sign by the lump sum 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.0105.05	Moving Wood Sign	LS

Payment is full compensation for removing the sign, storing in a safe location, reinstalling the sign and all other incidentals necessary to complete the work.

29. Geomembrane, Item SPV.0180.01.

A Description

This special provision describes providing a geomembrane in the location shown in the plans.

B Materials

Furnish a High Density Polyethylene liner with a minimum thickness of 40 mils.

C Construction

Place geomembrane in accordance with pertinent sections of standard spec 645.3.

D Measurement

The department will measure Geomembrane 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
SPV.0180.01	Geomembrane	SY

Payment is full compensation for furnishing and installing the geomembrane and all incidentals necessary to complete the work.

30. Excavation, Hauling, and Disposal of Sediment, Item SPV.0195.01.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of sediment at a DNR approved landfill facility. The closest DNR approved landfill facilities are:

Advanced Disposal – Emerald Park Landfill, W124 S10629 S. 124th St., Muskego, WI 53150

Republic Services – Kestrel Hawk Landfill, 1989 Oakes Rd, Racine, WI 53406.

Waste Management – Metro Landfill 10712 S 124th St, Franklin, WI 53132

Perform this work conforming to standard spec 205 and Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated sediment.

A.2 Notice to the Contractor - Sediment Locations

Potentially contaminated sediment is present at the following location(s) as shown of the plans:

1. Outfall 1 from Station 3+75 to 4+75 within construction limits
2. Outfall 3 from Station 14+50 to 15+65 within the construction limits

The environmental consultant for this project is:

Consultant: TRC Environmental Corporation
Address: 150 N. Patrick Blvd., Suite 180, Brookfield, WI 53045
Contact: Bryan Bergmann
Phone: 262-901-2126 (office) 262-227-9210 (cell)
Fax: (262) 879-1220
E-mail: bbergmann@trccompanies.com

Information regarding the department's hazardous materials program and the potential for handling and disposal of sediment contaminated or otherwise is available by contacting:

Name: Andrew Malsom
Address: 141 NW Barstow St., Waukesha, WI 53187
Phone: 262-548-6705
E-mail: Andrew.Malsom@dot.wi.gov

A.2 Coordination

Coordinate work under this contract with the environment consultant retained by the department:

Consultant: TRC Environmental Corporation
Address: 150 N. Patrick Blvd., Suite 180, Brookfield, WI 53045
Contact: Bryan Bergmann
Phone: 262-901-2126 (office) 262-227-9210 (cell)
Fax: (262) 879-1220
E-mail: bbergmann@trccompanies.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of sediment to be excavated based on plans.
2. Identifying sediment to be hauled to the landfill facility;
3. Documenting that activities associated with management of sediment are in conformance with the sediment management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of sediment from the landfill facility.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the area listed in A.2 to the environmental consultant. Also notify the environmental consultant at least three calendar days before beginning excavation activities in the area listed in A.2. Identify the DNR approved landfill facility that will be used for disposal of contaminated sediment and provide this information to the environmental consultant no later than 30 calendar days before beginning excavation activities in the area listed in A.2 or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary

approvals for disposal of sediments from the landfill facility. Do not transport sediment offsite without prior approval from the environmental consultant.

Coordinate with the environmental consultant to ensure that the environmental consultant has the opportunity to be present during excavation activities in the area identified in A.2. Before commencing sediment excavation work required by the plans, coordinate with the environmental consultant to provide a representative sediment sample retrieved from the area documented in section A.2.

Provide 10 days lead time for sediment sample laboratory analytical results to be obtained and landfill acceptance permitting to be established. No sediment shall be removed from the project during this time. Following landfill acceptance permitting communicated by the environmental consultant, perform sediment excavation on a continuous basis until the sediment excavation is completed.

A.3 Health and Safety Requirements

Add the following to standard spec 107.1:

During excavation activities, the project will encounter sediment. This material may be contaminated with metals, PAH's, PCB's, or VOC's. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones as required by 29 CFR 1910.120. Submit the site- specific health and safety plan and written documentation of up-to-date OSHA training to the engineer before the start of work.

Disposal of sediment at the disposal facility is subject to the facility's safety policies.

B (Vacant)

C Construction

Add the following to standard spec 205.3:

Control operations to minimize the quantity of sediment excavated. Directly load and haul sediment designated by the environmental consultant for offsite disposal to the DNR approved landfill facility. Verify that vehicles used to transport contaminated material are licensed for such activity according to applicable state and federal regulations. Sediment transported in trucks must be managed to preclude spillage or leakage onto public roadways. It is recommended that sediment be dewatered prior to transport by truck. Sediment that has been dewatered (i.e. no free water) should be transported in lined or watertight trucks, adequately covered/tarped over the top, to prevent the spilling or air dispersal of fugitive material.

Measures must also be implemented to prevent the off-site tracking of sediment from the loading and unloading operation sites. This can be accomplished with the use of a stone tracking pad and/or a truck wash station. All trucks, equipment, and staging areas used in the loading and transport of sediment should be thoroughly cleaned and/or decontaminated, as appropriate. In addition, all efforts must be made to keep streets free of any sediment released during transport operations; if needed, routine/periodic sweeping and street cleaning should be undertaken

D Measurement

The department will measure Excavation, Hauling, and Disposal of PCB Contaminated Sediment in tons of contaminated sediment, accepted by the landfill facility as documented by weight tickets generated by the landfill facility. Load tickets must be delivered to the engineer within 10 business days of the date on which the sediment was accepted by the landfill facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.02	Excavation, Hauling, and Disposal of Sediment	Ton

Payment is full compensation for excavating, segregating, loading, hauling, and disposal of contaminated sediment; obtaining solid waste collection and transportation service operating licenses; assisting in the collection sediment samples for field evaluation; and for dewatering of sediment before transport, if necessary.