Special Provisions

Appleton International Airport

Parking Lot Improvements

Outagamie County

Bid Date May 20, 2021

Special Provisions

Table of Contents

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract 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, 2021 Edition, as published by the department, and these special provisions.

Outagamie County Appleton International Airport (ATW), as issuer of the bid proposal, shall hereinafter be referred toas “the Department”.

2. Scope of Work.

The work under this contract shall consist of improvements to Valet Parking on the Appleton International Airport. Base bid is partial expansion of the parking area used for storing valet cars. Alternate 1 is reconfiguring the east terminal loop and median to add additional valet parking stalls. Alternative 2 is a further expansion of the parking area used to store valet cars. Alternative 3 is an asphalt surface lift on the existing park area used for storing valet cars.

Construction work will include asphalt pavement, concrete pavement, base aggregate, curb and gutter, sidewalk, lighting, signing and pavement marking and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

3. Prosecution and Progress.

Provide the time frame for construction of the project within the 2021 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the beginning of the approved time frame.

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

Base bid, partial parking lot expansion, work is to be completed in 12 working days.

Alternative 1, east terminal loop - If awarded, work shall be completed prior to July 20, 2021 and 10 working days will be allowed.

Alternative 2, parking lot expansion – If awarded, all work shall be concurrent with base bid and an additional 12 working days will be allowed.

Alternative 3, asphalt surface – If awarded, all work shall be concurrent with paving operations of the base bid and an additional 2 working days will be allowed.

Work on Alternative 1 shall occur between 6:00 PM and 4:00 AM or as directed by the airport. Coordinate night work with the engineer and airport prior to work. Time frame may be adjusted based on airport schedule and needs.

The crosswalks from the terminal baggage claim area to short term parking may not be closed to pedestrian traffic prior to 11:00 PM or after 6:00 AM. The north two crosswalks to the terminal building may not be closed to pedestrian traffic prior to 6:00 PM or after 4:00 AM

Interim Liquidated Damages – Alternative 1 - Crosswalks

If the contractor fails to complete the work necessary to reopen the crosswalks to pedestrian traffic prior to the time designated above (4:00 AM and 6:00AM), the department will assess the contractor $1,000 in interim liquidated damages for each hour that each crosswalk remains closed after the designated time (4:01 AM and 6:01AM). An entire hour will be charged for any period of time within an hour that a crosswalk remains closed beyond the designated time (4:01 AM and 6:01 AM).

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed according to Liquidated Damages item.

4. Liquidated Damages

For base bid, Alternative 2, and Alternative 3, ATW will access daily liquidated damages of $1,000 for each working day beyond what is allowed in the prosecution and progress for that alternative.

For Alternative 1, ATW will access daily liquidated damages of $2,500 for each working day beyond 10 working days or for each day beyond July 20, 2021 whichever comes first, that work is not completed.

5. Traffic

Base Bid

Access to and from the parking lot expansion area shall be from CTH CB using the ATW access road across from Greenville Center Drive. Construction vehicles shall not use ATW main access on Challenger Drive.

Alternative 1

All work shall take place between 6:00 pm and 4:00 am.

West Terminal Loop

- Maintain one thru lane and the west parking lane at all times.
- Reopen the east parking lane before 4:00 am.

East Terminal Loop

- Maintain one thru lane and the east parking stalls at all times.
- Position all drums adjacent to the new parking stalls by 4:00 am.

Crosswalks

- Maintain pedestrian access to the crosswalks at all times except that the north two crosswalks may be closed between 6:00 pm and 4:00 am and the cross walks from baggage claim area may be closed between 11:00 pm and 6:00 am.

Alternative 2

Access to and from the parking lot expansion area shall be from CTH CB using the ATW access road across from Greenville Center Drive. Construction vehicles shall not use ATW main access on Challenger Drive.

Alternative 3

Access to and from the parking lot shall be from CTH CB using the ATW access road across from Greenville Center Drive. Construction vehicles shall not use ATW main access on Challenger Drive. Coordinate the location of the parked valet cars with base bid and/or alternative 2 area. Contact Brandon Lamaide at 920-832-1736 one week prior to paving the surface lift.

6. Utilities

Appleton International Airport (ATW)

ATW has the following electrical facilities on the project.

- Along the terrace between the east terminal loop and short-term parking
- Crossings of the terminal loops at Station 101+82 East Loop.

ATW has a 6-inch water lateral crossing at Station 102+17 East Loop.

No conflicts anticipated.

Town of Greenville – Sanitary

Town of Greenville has Sanitary facilities in the terrace area between the two terminal loop roads, with multiple service leads to the terminal.

Adjusting sanitary manhole at Station 104+16 East Loop is part of Alternative 1.

Town of Greenville – Water

Town of Greenville has the following water main facilities on the project.

- Watermain crosses Challenger Drive at Station 105+75 East Loop and runs along the west edge of the East Terminal Loop
- Watermain crosses the parking lot expansion at Station 157+25 Service Road

Adjust valves are included in Base Bid and Alternative 1.

WE Energies – Electric

WE Energies Electric has the following underground facilities.

- In the terrace between the terminal loop roads
- Crossings of the terminal loops at Station 367+89 'NB', Station 25+45 'TD', and Station 372+40 'NB'

No conflicts anticipated with the underground facilities.

WE Energies – Gas

We Energies has gas main running in the terrace between the terminal loop roads, crossing the terminal loop at station 101+79 and 104+70 East Loop.

No conflicts anticipated.

7. Other Contracts

ATW plans to construct project ATW1008 / AIP-59 for the Rehabilitation of Runways and GA Taxiways. The project is scheduled to be let April 22 with construction anticipated to start June 1, 2021.

ATW also plans to construct project ATW1006C3 / SOP-90 for the addition of Gate 7B Passenger Boarding Bridge and Gate 8B. The project is scheduled to be let May 20 with construction anticipated to start June 14, 2021.

8. Permits

The airport has obtained or applied for the following permits: Wisconsin Department of Natural Resources NOI, Greenville Stormwater Permit and Greenville Erosion Control Permit. Comply with the requirements of the permits in addition to requirements of the special provisions. Copies of the permits are available from Westwood by contacting Peggy Hawley at (920) 830-6176.

9. Signing

All type 2 signs shall be sheet aluminum. No plywood signs will be accepted. .

Provide regulatory, warning, work zone, and guide signs that conform to the Wisconsin DOT Standard Sign Plate Manual.

For this project, Section 637 of the Standard Specifications is supplemented as follows:

Subsection 637.2.4.2, Sign Mounting Hardware, Type 2 Signs, is amended as follows:

For signs mounted on special fabricated sign supports, use self-tightening stainless screws or bolts that do not protrude outside the opposite side of the vertical member. Mount signs with a 7/8-inch O.D. nylon washer between the bolt head and message side of sign.

For signs mounted on street light poles, use stainless steel strapping, a stainless flared leg strapping bracket with threaded center hole, and a 3/4-inch heavy duty stainless buckle. Mount sign with a 3/4-inch hex head stainless bolt and a 7/8-inch O.D. nylon washer.

All existing temporary/portable sign bases to remain the airport property.

10. Removing Signs, Type II.

Supplement subsection 638.3.4 with the following:

All signs removed within the airport property limits shall become the property of the airport. Contact Scott Volberding at 920-832-5176 to arrange delivery to airport.

11. Removing Small Sign Supports.

Supplement subsection 638.3.5 with the following:

All small sign supports removed within the airport property limits shall become the property of the airport. Contact Scott Volberding at 920-832-5176 to arrange delivery to airport.

12. Traffic Control

Perform this work conforming to standard spec 643, and as the plans show, or as the engineer approves, except as follows.

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as the plans show. Submit this plan ten (10) days before the preconstruction conference.

Provide 24 hours-a-day availability of equipment and forces to expeditiously restore lights, signs, or other traffic control devices that are damaged or disturbed. The cost to maintain and restore the above items shall be considered incidental to the item as bid and no additional payment will be made therefore.

Supply the name and telephone number of a local contact person for traffic control repair before starting work.

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

The turning of traffic control devices when not in use to obscure the message will not be allowed under this contract.

Obtain prior approval from the engineer for the location of egress and ingress for construction vehicles to prosecute the work.

Cover existing signs which conflict with traffic control as the engineer directs.

Conduct operations in such a manner that causes the least interference and inconvenience to the free flow of vehicles on the roadways. This includes the following:

All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic.

Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency.

13. Electrical General

A Description

This section supplements Section 651 of the latest edition of the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, and all Supplemental Specifications, hereinafter referred to as the Standard Specifications, except where superseded by these specifications or the special provisions contained herein.

B Materials

B.1 General

All materials furnished by the contractor for electrical installation under this contract are subject to approval by the engineer.

Furnish a complete list and cut sheets/shop drawings of materials to be furnished and used for lighting. Include on the list the names and addresses of manufacturers, together with catalog numbers, certificates of compliance, specifications, and other product information requested by the engineer. Submit the list and cut sheets/shop drawings within 20 calendar days of the award of the contract. No materials shall be incorporated into the contract prior to the written approval of the engineer. Approval does not change the intent of the specifications. Resubmit for approval any substitute or changes in material.

Up to two (2) submittals of material for approval are allowed. If more than two (2) submittals are required, the contractor will be charged on a time-and-material basis for additional review time with payment made before submittals will be returned.

The following materials shall be submitted for approval.

- Conduit

- Conductors
- Splices
- Fusing
- Pull Boxes
- Lighting Units

B.2 Splices

Poles:

Splices shall accept (4) #14-#2 conductors, be underground/overhead rated and include gel filled hinged splice closure. Utilize NSI Easy-Splice Gel Tap Splice Kit series connectors ESGTS-2 or TE Connectivity GTAP-1. Split bolts and connectors with plugs/caps are not allowed.

Floodlights:

Splices shall use silicon filled connectors and accept wire sizes as required per the plans.

Pull Boxes:

Splices shall accept quantity and size of conductors required at individual pull boxes (which may be of differing configurations), be direct burial and submersible rated. Utilize multi-cable compression connectors with the splice encased in a Scotchcast 85 series multi-mold permanent resin compound or TE Connectivity PXE series. Split bolts and connectors with plugs/caps are not allowed. No splices are allowed in pull boxes, unless indicated on the plans or approved by Airport.

B.3 Pole Wiring/Fusing

Conductors from the underground cable network to the luminaire shall be #12 AWG Type RHW-USE (XLP) individual conductors. In each utilized phase conductor in the handhole, there shall be installed secondary inline 600 VAC fuse breakaway fuse holder assemblies with weatherproof boots and fast acting fuses as manufactured by Eaton, Littelfuse or Mersen.

C Construction

C.1 General

Perform all work in conformance with the Wisconsin Electrical Code, National Electric Code (NEC), National Electrical & Safety Code (NESC), and the construction practices of the National Electrical Contractors Association (NECA).

Make available for inspection any installations below grade before backfilling or concealing. The engineer reserves the right to reject installations not made available for inspection.

Contact the engineer for coordination and inspection of all electrical installations.

Obtain utility locations prior to work and verify with engineer the routing of existing underground wiring and lighting circuits.

Show care not to damage existing conduit and wiring to remain and/or be used for temporary lighting purposes.

Furnish all labor, material, equipment and incidentals necessary to complete the project in accordance with the plans and specifications and to provide a completely operational system. All items not specifically identified, but required shall be incidental to the most appropriate bid item.

The contractor shall be responsible for pavement and terrace restoration beyond that which is part of bid items and quantities in the plan.

C.2 Splices

Poles - Utilize insulated multi-port mechanical wire connectors. Provide necessary conductor length to allow splices to be accessible from outside transformer base.

Pull boxes (allowed ONLY where needed) - Utilize underground rated wire multi-mode resin kits. Compression fitting shall correspond with conductor makeup at the respective location. Provide necessary conductor length to allow splices to be accessible from outside the pull box.

C.3 Pole Wiring/Fusing

Conductors shall have sufficient length to permit removal of the fuse assembly through the transformer base.

C.4 Circuit Identification

Color coding shall be applied by means of 2-inch bands of tape suitable for the application, unless the cable jacket is of the proper color. Color code all tails of all splices. Code both tails of all fuse assemblies. Color code secondary distribution circuits as shown on the plans.

Each accessible location of cable at wire splices (i.e. cabinet base, pedestal & transformer bases) shall have a permanent tag identifying the conductor circuit number.

Identification shall consist of a permanent embossed 304 stainless steel tag with 3/16" characters (Panduit MEHT187 system, Dymo Rhino M1011 metal tape embosser, ShortOrderProducts Hand Held Embosser system or approved equal) attached using black outdoor rated nylon ties.

C.5 Branch Circuit Tagouts

Any work on existing circuits may be worked on while disconnected and tagged out. Any branch circuit not disconnected and tagged out shall be considered live, and the contractor shall restrict his work force to those qualified to work on live circuits.

Make disconnection by disconnecting branches at the overcurrent device.

Tagouts shall be made with manufactured electrical warning tags furnished by the contractor and endorsed with the name of the contractor, the date, and the project I.D. Clear all tagouts by the end of the workday.

C.6 Threaded Fasteners

Liberally coat all threaded fasteners (i.e. screws, bolts, etc.) with an anti-seize compound from the approved electrical materials list. Excepting fasteners inside control cabinets, fasteners up to half an inch in diameter shall be stainless steel.

C.7 Bonding Wire

Install bonding wire in conduits for equipment grounding. Ground all equipment as required. All metal junction boxes and pull boxes shall be bonded to ground using a mechanical lug.

C.8 Concrete Bases

Concrete bases shall comply with DOT Specification Section 654.

Poles and standards shall not be erected on the base until the bases have cured for at least seven (7) days.

Prior to pouring the base, the contractor shall check the lighting plans for the number, size and direction of conduit entrances required at each and every given location. All bases shall have at least two (2) conduit entrances, any unused conduits shall be capped below grade. Refer to plans for extended conduits.

C.9 Initial Failures

For materials and equipment provided by the contractor, agree on a time with the engineer for test burning of completed installations, which is generally toward the end of the contract period. Replace failed LED modules or luminaires along with any other non-functioning component, for no additional compensation. Only one test burn for the purpose of identifying initial failures will be required.

C.10 Underground Installation

The conduit shall be directionally bored where the conduit passes under an existing roadway, driveway, sidewalk, or other hard surfaces, unless noted otherwise in the plans. Correct any "bumps" or "pavement failures" caused by boring operations to the satisfaction of the engineer. Hand trench and/or directional bore around existing trees/plantings as required to minimize harm to the trees/plantings.

C.11 Utility Coordination

Coordinate with WE ENERGIES to de-energize and/or energize services as required on the plans.

C.12 Demolition, Renovation and Disposition of Existing Equipment

Perform the necessary demolition work in the affected areas including the removal of existing concrete, wiring and electrical equipment, etc. In addition, and preceding demolition work, de-energize all circuits in the affected areas and where wiring is routed through these areas of the facility remaining in service, and

provide temporary and/or permanent wiring as required. Removal of materials not specific to a bid item shall be considered incidental to the project.

Remove all electrical equipment released from service as a result of construction, and equipment removed shall not be reused, except as specifically directed on the drawings or elsewhere herein. All electrical equipment removed from use and not identified to be salvaged by Owner shall become the property of the Contractor and shall be removed from the site by the Contractor. The Contractor shall transport all materials designated for salvage to the location as identified by the Owner.

Any existing circuits or equipment not shown on the drawings and which are logically expected to be continued in service and which may be interrupted or disturbed during construction shall be reconnected in an approved manner.

C.13 Restoration

Backfilling of holes or voids caused by removals or other work shall consist of appropriate clean backfill.

Surfaces affected by work shall be restored to match original and/or surrounding conditions as appropriate.

There shall be placed a minimum of 3" of blended topsoil at the top of the excavation. Tamp down backfill at appropriate depth intervals at least every 6" to avoid excessive future settling. The topsoil shall be graded, raked and rolled. Provide wood chips or grass seed as required by specific area that is level with surrounding grades.

Asphalt or concrete replacement shall be done by a qualified and experienced company, replacing surface and providing appropriate backfill for restoration.

Unacceptable material shall be removed from the site by the EC.

The contractor is responsible for restoring all surfaces to match existing conditions.

C.14 Project Closeout

At the substantial completion of the project, the Contractor shall review the completed work with the Engineer during a “Substantial Completion Site Inspection” to determine any items that need to be completed or corrected in accordance with requirements of the project.

The Contractor shall turn-over to the Engineer a set of drawings indicating as-built conditions at the “Substantial Completion Site Inspection”. The drawings shall indicate changes made in the field during the installation process.

The as-built drawings shall be turned over PRIOR to substantial completion of the project and BEFORE FINAL PAYMENT is made to the contractor.

C.15 Warranty

Provide a one (1) year warranty from acceptance of the completed lighting system, unless indicated to be longer per specific bid items, for all materials and labor.

D (Vacant)

E Payment

The department will pay for the work specified under the various lighting items.

14. Sawing

Add to standard spec 690.3.3:

Contain sawing sludge to prevent tracking by pedestrians and vehicles.

15. Removing Flag Poles, Item 204.9060.S.

A Description

This special provision describes removing flag poles conforming to standard spec 204.

B (Vacant)

C Construction

Backfill with granular backfill or base aggregate dense. Use base aggregate dense 1 ¼-Inch for the top two feet below subgrade.

D Measurement

The department will measure Removing Flag Poles in Each, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S	Removing Flagpole	EACH

Payment is full compensation for removing flag poles, and for restoring the site including providing granular backfill, base aggregate dense and backfilling removal area.

16. Adjusting Water Valves Boxes, Item SPV.0060.01

A Description

This special provision describes adjusting water valve boxes to final pavement elevations the plans show.

B Materials

Utilize existing valve boxes where the required extent of adjustment allows.

C Construction

Before completion of paving operations, adjust the water valve boxes to match the final proposed grade. Excavate and expose the existing water main valve box to the depth needed to adjust the valve box to grade, add or remove extension(s) as needed, and backfill with base aggregate material conforming to the requirements for the adjacent roadway base course construction.

Complete adjustments in such a manner to avoid any damage to the water valve boxes.

D Measurement

The department will measure Adjusting Water Valve Boxes as a unit of work for each valve box acceptably adjusted.

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	Adjusting Water Valve Boxes	EACH

Payment is full compensation for adjusting each valve box; excavating as necessary to access the valve box; backfilling; repairing any damage done to the valve box during adjustment; and for adding new sections if necessary.

17. Adjusting Sanitary Manhole, Item SPV.0060.02

A Description

This special provision describes adjusting sanitary manhole covers.

B Materials

Furnish materials conforming to Municipality of Greenville Standard Specifications which can be found at http://cms3.revize.com/revize/greenvillewi/Greenville%20Standard%20Specifications%20and%20Details%202021.pdf.

Internal manhole chimney seal shall be Cretex or equal.

C Construction

Use construction methods conforming to standard spec 611.3 and as follows:

Remove existing chimney seal and install new chimney seal according to Municipality of Greenville Standard Specifications.

D Measurement

The department will measure Adjusting Sanitary Manhole Covers by the each 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	Adjusting Sanitary Manhole Covers	EACH

Payment is full compensation for providing all required materials, exclusive of frames, grates, or lids; and for removing, reinstalling and adjusting the covers, including removing existing chimney seal and installing new chimney seal.

18. Relocating Trees, Item SPV.0060.03

A Description

This special provision describes removing the existing trees and replanting in accordance with standard spec 632.

B Material

Based aggregate dense shall meet the requirements of standard spec 305.

C Construction

The contractor shall remove the existing trees in a manner that will prevent injuries to the trunk, branches, and roots. Transport trees and replant them in accordance with 632.

Backfill the area where the trees were removed with granular backfill and/or base aggregate dense. Use base aggregate dense 1 ¼-Inch for the top two feet below subgrade. Place backfill in 8 inch lifts and thoroughly compact each layer using engineer-approved tampers, rollers or vibrators.

Contact Scott Volberding at 920-832-5176 to coordinate the designated area where the trees will be planted.

D Measurement

The department will measure Relocating Trees by the each 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	Relocating Trees	EACH

Payment is full compensation for removing trees, transporting, handling, storing, pruning, and placing trees; for excavating all plant holes, salvaging topsoil, mixing, and backfilling; for providing and applying all required fertilizer, weed barrier fabric, mulch, water, wrapping, guys and braces, rodent protection, herbicides; for removing guys and braces; and for restoring the site including granular backfill, base aggregate dense and backfilling removal area.

19. Precast Concrete Wheel Stops, Item SPV.0060.04

A Description

This special provision describes providing precast wheel stops.

B Materials

B.1.Precast Concrete Wheel Stops.

Furnish precast, steel-reinforced, air-entrained concrete with 4000-psi minimum compressive strength; 7 inches high by 9 inches wide by 7 feet long. Provide chamfered corners, transverse drainage slots on underside, and a minimum of two factory-formed or -drilled vertical holes through parking curb for anchoring to substrate.

Obtain wheel stops from single source from single manufacturer.

Surface Appearance shall be smooth, free of pockets, sand streaks, honeycombs, and other obvious defects. Corners shall be uniform, straight, and sharp.

B.2. Surface Sealer

Surface shall be sealed with Manufacturer's standard salt-resistant, clear sealer. Sealer shall be applied at precasting location.

B.3 Mounting Hardware

Provide galvanized-steel hardware as standard with wheel-stop manufacturer.

C Construction

Layout wheel stops as shown in the plans. Do not anchor to pavement. Contact Scott Volberding at 920-832-5176 to coordinate the delivery on the anchor hardware for ATW's use in the future.

D Measurement

The department will measure Precast Concrete Wheel Stops by the each 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.0060.04	Precast Concrete Wheel Stops	EACH

Payment is full compensation for providing, layout and installing precast concrete wheel stops.

20. Sign Supports 2x2-Inch x 10-FT, Item SPV.0060.05; Sign Supports 2x2-Inch x 14-FT, Item SPV.0060.06.

A Description

This special provision describes furnishing, fabricating, and installing sign support structures.

B Materials

For concrete bases, provide materials conforming to the concrete requirements specified in Section 501 of the standard specifications.

Furnish square galvanized tubular steel posts that have outside dimensions 2-inch x 2-inch, wall thickness of 0.125 inch, with 0.125-inch thick closure plates welded to the top of the post. Posts shall be of sufficient length when installed to meet the sign height requirements in accordance with the plan details or as directed by the Engineer.

Sign supports shall be brush blast, cleaned and coated with one coat of Sherwin-Williams two-part epoxy primer suitable for galvanized steel posts and with the surface coating system and two coats of Sherwin Williams SHER-CRYL HPA. Provide a minimum dry mil thickness of 3 mils per primer and finish coat. The color shall be dark brown that matches the existing sign supports. Provide a touch up paint kit. All sign support pieces shall match in color.

Furnish stainless steel sign mounting hardware. Use self-tightening stainless screws or bolts that do not protrude outside the opposite side of the vertical member. Mount signs with a 7/8-inch O.D. nylon washer between the bolt head and message side of sign.

C Construction

Erect sign supports at the locations shown on the plans or as directed by the engineer. Locate all underground facilities before installing sign supports.

Install sign supports in concrete bases. Form 8-inch diameter bases to a minimum depth of 3'-6". Install bases flush with the finished grade. Erect sign supports a minimum depth of 36-inches within the concrete base in a true vertical position. Ensure sign supports are installed with the proper installed sign face position to the road.

Sign supports that have the painted surface damaged due to installation shall be cleaned, primed, and painted with the touch up paint kit, matching the same color as the sign support structure.

Remove and dispose of all excess excavation, surplus materials, and debris resulting from the installation. Repair and restore all other work damaged by installation operations.

D Measurement

The department will measure Sign Support 2x2-Inch x (length) by the each 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	Sign Support 2x2-Inch x 10-FT	EACH

SPV.0060.06	Sign Support 2x2-Inch x 14-FT	EACH

Payment is full compensation for excavation and backfill; for concrete coring as necessary; furnishing concrete bases, tubular steel, and mounting hardware; for painting; for providing touch up paint kit; for installing sign supports; for disposing of excess material; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

21. Erecting Airport Owned Signs, Item SPV.0060.07

A Description

This special provision describes erecting airport owned signs at the required locations.

B (Vacant)

C Construction

Erect airport-furnished signs on Sign Support 2x2-Inch x (length) as specific for installing signs in sections 634 through 637 and in accordance with the Signing special provision.

D Measurement

The department will measure Erecting Airport Owned Signs by the each 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	Erecting Airport Owned Signs	EACH

Payment is full compensation for erecting signs including mounting hardware.

22. Concrete Bollard, Item SPV.0060.08

A Description

This special provision describes providing concrete bollards in accordance with the details in the plan and these special provisions.

B Materials

Furnish material conforming to the following.

Steel Pipe: ASTM A 53/A 53M, Standard Weight (Schedule 40) unless otherwise indicated.

Concrete: Furnish grade A, A2, A-FA, A-S, A-T, A-IL, A-IS, A-IP, or A-IT air-entrained concrete conforming to 501 for normal-weight, air-entrained concrete with a minimum 28-day compressive strength of 3000 psi.

C Construction

Shop Assembly: Preassemble items in the shop to the greatest extent possible. Galvanize assembly.

Anchor bollards in place with concrete footings. Center and align bollards in holes above bottom of excavation as shown on drawings. Place concrete and vibrate or tamp for consolidation. Support and brace bollards in position until concrete has cured.

Fill bollards solidly with concrete, mounding top surface to shed water.

Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780/A780M.

D Measurement

The department will measure Concrete Bollard by the each 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.0060.08	Concrete Bollard	EACH

Payment is full compensation for providing all material including plastic sleeve; for forming, excavation and backfilling concrete bollard.

23. Concrete Barrier Special, Item SPV.0060.09

A Description

This special provision describes providing concrete barrier in accordance with section 603 and as amended below.

B Materials

Furnish precast, concrete barrier that is 24 inches high by 18 inches wide at the base tapering to 8 inches wide at the top by 36 inches long at the base tapering to 24 inches long at the top. There should be two drainage slots on the underside.

C Construction

Place concrete barrier at locations shown on the plans. Do not anchor barrier to the pavement. Attached gate eye to top of barrier.

D Measurement

The department will measure Concrete Barrier Special by the each 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.0060.09	Concrete Barrier Special	EACH

Payment is full compensation for providing, layout and installing concrete barrier special and attaching the gate eye.

24. Flagpole 35-FT, Item SPV.0060.10, Flagpole 40-FT, Item SPV.0060.11

A Description

This special provision describes providing and installing flagpoles with exposed height of 35 feet and 40 feet.

B Materials

Furnish 8” diameter aluminum flagpoles with exposed height of 35 and 40 feet. Flagpole should meet all state and local design requirements. Base flagpole design on flags of maximum standard size suitable for use with flagpole or flag size of 5’ by 8’, whichever is more stringent. Flagpoles should have external hardware. The color will be determined by ATW. Contact Brandon Lamaide at 920-832-1736.

C Construction

Install flagpole per manufactures recommendation.

Restore landscaping area around flagpole. Place new weed barrier fabric and decorative stone if needed.

D Measurement

The department will measure Flag Pole (Height) by the each 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.0060.10	Flag Pole 35-FT	EACH
SPV.0060.11	Flag Pole 40- FT	EACH

Payment is full compensation for furnishing, installing, and restoring site including additional weed barrier fabric and decorative stone if needed.

25. Concrete Bases with Junction Box, Item SPV.0060.12.

A Description

This work shall consist of construction of lighting unit concrete foundations, including necessary hardware, as shown on the plans, in accordance with the pertinent provisions of Section 654 of the Standard Specifications and as hereinafter provided.

B Materials

Materials shall be in accordance with Section 654 of the Standard Specifications and as shown on the plans.

Concrete bases with junction boxes (at pole locations that include cameras) shall include a divided 12”x12”x4” curved junction box installed in the concrete base; Carlon E1212C24/E1212DIV.

C Construction

Construction shall be in accordance with Section 654 of the Standard Specifications and as shown on the plans.

Anchor bolts shall be cast into the base as shown on the plans. Bolt circle diameters shall be verified before constructing the bases.

Manufactured elbows shall be furnished and installed in all bases by the contractor, except as noted on the details. Elbows shall be installed to permit conduit to be installed in as nearly straight-line runs as possible, without unnecessary bends. Bases not installed to this standard will not be accepted.

Install curved junction box in concrete base in accordance with manufacturer requirements, with conduits for camera power and communications entering separate sections of the junction box with conduits from the junction box sections into to pole base.

D Measurement

The department will measure Concrete Bases, completed in accordance with the contract accepted, as a single complete 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.0060.12	Concrete Bases with Junction Box	EACH

Payment is full compensation for furnishing and installing all materials including conduit, bushings, caps and/or plugs, ground rod, anchor bolts, cadwelding, copper grounding wire; bar steel reinforcement, junction box, and concrete masonry; for excavation, backfill, and disposal of surplus materials; and for all labor, tools, equipment, and incidentals necessary to complete this item of work.

26. Lighting Units, Type P6, Item SPV.0060.13.

A Description

This special provision describes furnishing and installing pole, luminaires and all miscellaneous hardware required to complete the installation of the lighting units, in accordance with section 659 of the standard specifications, as shown on the plans, and as hereinafter provided.

B Materials

Furnish LED luminaires with a slim, low profile design that minimizes wind loading. Luminaires shall be constructed of cast and extruded aluminum with integral, weather-tight LED driver components with high performance aluminum heat-sinks. Each luminaire shall use a three-terminal block for power input.

Luminaire design shall be modular to accommodate varied lighting output by use of LED light bar modules and/or differing driver outputs. LED shall have a nominal color temperature of 4000K (±300K) with a minimum of 70 CRI. Drivers shall operate with an input voltage ranging from 120-277V, 50/60 Hertz, ±10% as standard. LED drivers shall have a power factor greater than 90%. Projected L70 at up to 50℃ ambient temperature shall be 416,000 hours or greater. All luminaires shall come equipped with an integral surge suppression protection standard and a quick disconnect harness suitable for mate and break under load provided on power feed to driver.

The finish shall be factory applied powder coat durable semi-gloss bronze topcoat for entire housing providing resistance to corrosion, ultraviolet degradation and abrasion.

Luminaires shall have a minimum of 5 year warranty on materials and finish.

Luminaires shall be rated and/or certified as follows:

- UL listed for wet locations
- IP-66 enclosure rating

- IDA dark sky full cutoff compliant

Furnish and deliver aluminum light poles conforming to the plan details. The pole shall include internal dumb bell style vibration damper, handholes with stainless steel fasteners, provisions for luminaire mounting and full base cover.

The pole shafts, handhole covers and full base covers shall be finished as indicated on the plans.

C Construction

Install LED Luminaires in accordance with the pertinent provisions of section 659 of the standard specifications and as the manufacturer directs.

Install the light poles on concrete as required by plans.

Furnish and install all incidental items, such as hardware, pole wiring, fusing, grommets, splices, etc. necessary to make the lighting unit complete.

D Measurement

The department will measure Lighting Units completed in accordance with the contract accepted, as a single complete 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
SPV.0060.13	Lighting Units, Type P6	EACH

Payment is full compensation for furnishing all materials including pole, luminaires, pole wiring and fusing; for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

27. Floodlights, Type F1, Item SPV.0060.14.

A Description

This special provision describes furnishing and installing LED flood lights, concrete bases, supports and all miscellaneous hardware required to complete the installation of the luminaires, in accordance with section 659 of the standard specifications, as shown on the plans, and as hereinafter provided.

B Materials

Furnish LED luminaires with a slim, low profile design that minimizes wind loading. Luminaires shall be constructed of cast and extruded aluminum with integral, weather-tight LED driver components with high performance aluminum heat-sinks. Each luminaire shall use a three-terminal block for power input.

Luminaire design shall be modular to accommodate varied lighting output by use of LED light bar modules and/or differing driver outputs. LED shall have a nominal color temperature of 4000K (±300K) with a minimum of 70 CRI. Drivers shall operate with an input voltage ranging from 120-277V, 50/60 Hertz, ±10% as standard. LED drivers shall have a power factor greater than 90%. Projected L70 at up to 25℃ ambient temperature shall be 350,000 hours or greater. All luminaires shall come equipped with an integral surge suppression protection standard and a quick disconnect harness suitable for mate and break under load provided on power feed to driver.

The finish shall be factory applied powder coat durable semi-gloss bronze topcoat for entire housing providing resistance to corrosion, ultraviolet degradation and abrasion.

Luminaires shall have a minimum of 5-year warranty on materials and finish.

Luminaires shall be rated and/or certified as follows:

- UL listed for wet locations
- IP-66 enclosure rating
- Uplight minimized

Provide wiring/fusing in stanchion.

C Construction

Install LED Luminaires in accordance with the pertinent provisions of section 659 of the standard specifications and as the manufacturer directs.

D Measurement

The department will measure Floodlights completed in accordance with the contract accepted, as a single complete 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
SPV.0060.14	Floodlights, Type F1	EACH

Payment is full compensation for furnishing all materials including luminaire, supports and concrete base; for associated conduit, fittings, supports and wiring/fusing; for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

28. Concrete Handholes, Item SPV.0060.15.

A Description

This work shall consist of furnishing and installing concrete handholes in accordance with Section 653 of the Standard Specifications, the plan details, and as herein provided.

B Materials

Concrete handholes shall be a rectangular concrete enclosure with heavy-duty hinged cover as shown on the plans. The handhole can be precast or cast-in-place construction.

C Construction

The handholes shall be set flush with the grade or pavement and installed on aggregate as indicated on the plans.

D Measurement

The department will measure Concrete Handholes, completed in accordance with the contract accepted, as a single complete 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
SPV.0060.15	Concrete Handholes	Each

Payment is full compensation for furnishing and installing all materials, including handhole, frame/cover, crushed aggregate; for excavation, backfill, and disposal of surplus materials; and for all labor, tools, equipment, and incidentals necessary to complete this item of work.

29. Electrically Operated Barrier Gates, Item SPV.0060.18

A Description

Construct electrically operated sliding gates as shown on the plans and these Special Provisions.

B Materials

Barrier Gate:

The gate operator shall meet UL325 and UL991 with listing for Class I, II, III and IV operation.

The operator shall be for high-traffic locations, have a 1/2hp motor, 120V, photoeye receiver (mounted on unit) with remote located reflector, battery backup (batteries included), 850LM Security+ 2.0 receiver. The arm shall be tubular aluminum and include yellow foam sleeves similar to existing installation and in appropriate length.

The operator shall be a Lift Master model MAT-DC-BB3 or an Engineer approved equal.

Remote Transmitters:

Eight (8) (total for project) 4-channel RF transmitters for remote operating the respective gate controller complete with batteries and operating at frequency compatible with gate receiver, Lift Master 894LT or approved equal.

Concrete:

Concrete shall be 3500 PSI in accordance with WISDOT Class III Ancillary Concrete per the Standard Specifications for Highway and Structure Construction, current edition.

Miscellaneous Materials:

Materials as indicated on the plans and as required for an operational gate shall be provided including conductors, conduit, etc.

All conduits associated with the gate installation located below grade shall be schedule 40 PVC.

C Construction

The gate controller shall be concrete base mounted and secured to the concrete per plans and manufacturer requirements.

The concrete base shall be installed as shown on the plans and coordinated with the manufacturer. The Engineer reserves the right to adjust the diameter or base size to accommodate a different equipment manufacturer at no additional cost to the contract.

The Contractor shall install each gate controller in accordance with the manufacturer's recommendations and requirements and as shown on the plans.

The intended mode of operation shall be as follows:

Entering/Leaving:

The remote controls shall activate the gate for opening. Once the gate is open, the time closed cycle shall be activated. If the vehicle has not cleared the gate as sensed by the photo-reflective photo eye system, the gate shall remain open.

All conduits shall be dux sealed to prevent moisture and rodents from entering the gate equipment.

Grade the site, furnish and install concrete in accordance with the Drawings and Specifications. Install all underground conduits as shown on the plans before concrete is installed.

Provide crushed aggregate base course, topsoil, seeding, fertilizing and mulching in accordance with grading specifications contained in these Specifications.

System Acceptance Tests. The following testing shall be provided for the gate location:

- After preliminary tests have determined that the system is operating properly, notify the Engineer at least three (3) working days prior to the test so arrangements can be made to have the test witnessed and approved.
- Test each system function. Supply all equipment necessary for system adjustment and testing.
- Each system feature is a separate component of the gate system.
- Ensure that all instructions for mechanical components, safety features and the gate operator are available for everyone who will be using the gate system.
- The warning signs shipped with the gate operator must be installed in prominent position on both sides of the gate.
- Ensure the owner is clear with regard to the safety points concerning the basic operational guidelines of the safety features of the gate operator system. These safety points are listed in the operator manual and must be read prior to system use.

D Method of Measurement

The department will measure the Electrically Operated Barrier Gates completed in accordance with the contract accepted, as a single complete unit of work.

E Basis of Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.18	Electrically Operated Barrier Gates	EACH

Payment is full compensation for barrier gate operator, gate arm and protective foam sleeving, remote transmitters, safety equipment, conduit, wire, concrete bases, excavation, backfill, seed, mulch, and all other materials, labor, equipment and incidental items necessary to complete the work.

30. Street Sweeping, Item SPV.0075.01

A Description

This special provision describes removing small dirt and dust particles from the roadway using a street sweeper periodically during the project as the engineer directs.

B (Vacant)

C Construction

Provide a self-contained mechanical or air conveyance street sweeper and dispose of the material collected.

D Measurement

The department will measure Street Sweeping by the hour that the street sweeper is on the project picking up and removing debris from the roadway.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0075.01	Street Sweeping	HRS

31. Salvage Decorative Rocks, Item SPV.0105.01

A Description

This special provision describes salvaging the large decorative rocks in the median between the east and west terminal loops.

B (Vacant)

C Construction

Remove, transport and place large decorative rock in a manner that will prevent damage to the rocks. Contact Brandon Lamaide at 920-832-1736 to coordinate the designated area where the rocks will be placed.

D Measurement

The department will measure Salvage Decorative Rocks 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.0105.01	Salvage Decorative Rocks	LUMP SUM

Payment is full compensation for removing, transporting and placing decorative rocks.

32. Metering and Panelboard Equipment, Item SPV.0105.02.

A Description

The work under this item shall consist of furnishing and installing metering, panelboard, supports and associated materials as indicated on the plans and these Special Provisions.

B Materials

All Materials and Methods of Construction shall be in accordance with the applicable provisions of Section 656 of the Standard Specifications and the following:

All materials furnished for this portion of the work shall be Listed and Labeled by U.L. or other National Recognized Testing Laboratory.

Panelboard:

The panelboard shall be in a NEMA 3R enclosure as manufactured by Square D, Eaton or GE. Provide copper ground and split neutral bus bars in addition to copper bus bars. Provide bolt-on, thermal-magnetic circuit breakers that clearly indicate ON, OFF or TRIPPED position in the panel.

Meter Pedestal:

The contractor shall furnish a utility approved meter pedestal, conduit, fittings, ground rod(s) and connection(s) and all necessary conductors and equipment required by the State Electrical Code and the utility for a service connection.

Supports:

Materials to support the meter pedestal and panelboard shall be provided as indicated on the plans.

Concrete shall be 3500 PSI in accordance with WISDOT Class III Ancillary Concrete per the Standard Specifications for Highway and Structure Construction, current edition.

Wiring:

Conductors shall be color coded USE (XLP insulated).

C Construction

The cables shall be trained in wireways or conduit. All equipment shall be mounted to panel in enclosure unless otherwise indicated. Refer to the Drawings for equipment layout within the cabinet. Cabinet interior shall be cleaned of all construction debris prior to final acceptance.

Construction shall include furnishing and installing all electrical components, concrete base, meter pedestal, and for all labor, equipment, tools and incidentals necessary to complete the work.

Provide assistance and coordinate submittal of electric service application to the utility. The Owner (Appleton Airport) will pay for all required utility extension fees.

D Measurement

The department will measure the Metering and Panelboard Equipment as a single complete 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
SPV.0105.02	Metering and Panelboard Equipment	Lump Sum

Payment is full compensation for panel, meter pedestal, grounding, supports, concrete bases and all necessary electrical components; and for all labor, tools, equipment and incidentals necessary to complete the work.

33. Conduit Locating, Item SPV.0105.03

A Description

This work consists of locating existing conduits as needed for contractor to confirm location/routing of conduits that need to be re-routed/extended to new and/or relocated equipment.

B (Vacant)

C Construction

Conduits shall be located via electronic line tracing and/or hydro-excavation to not damage conduits, etc. as needed.

Locations and makeup of conduits (that will remain) shall be surveyed. Survey information shall be provided to Civil Engineer and information shall be included on as-built documents.

Any holes shall be backfilled and restored to match surrounding surface where needed.

D Measurement

The department will measure Conduit Locating completed in accordance with the contract accepted, as a single complete 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
SPV.0105.03	Conduit Locating	Lump Sum

Payment is full compensation for furnishing all work; for associated restoration; for associated surveying work; for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

34. Concrete Sidewalk 7-Inch HES, Item SPV.0165.01

A Description

This special provision describes constructing concrete sidewalk with high early strength concrete in accordance with standard spec 415, 602 and 710.

B Materials

Provide all materials in accordance with section 602 of the standard specifications except concrete shall be as specified in standard spec 416.2.

Furnish and use concrete that is in accordance with Sections 415.2 and 501 of the standard specifications. Provide QMP for class II ancillary concrete as specified in Section 716.

C Construction

Concrete sidewalk 7-Inch HES must attain a minimum compressive strength of 1500 psi before they can be opened to pedestrian traffic The opening strength shall be determined by Maturity Methods standard spec 502.3.10.1.3.3 or other engineer approved methods. If cylinders are used, the compressive strength shall be measured by testing concrete cylinders cured in the field on top of the slab, under the curing blanket. At least two cylinders shall be tested in determining the attained strength of concrete repairs for the purpose of opening the pavement to traffic. The average of test results for the two cylinders shall be used to determine compliance, except that neither cylinder may be less than 10 percent below the required strength.

D Measurement

The department will measure Concrete Sidewalk 7-Inch HES by the square 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.0165.01	Concrete Sidewalk 7-Inch HES	SF

Payment is full compensation for providing materials, including concrete, reinforcement, and expansion joints; for excavating and preparing the foundation; backfilling; for placing, finishing, protecting, and curing; and for restoring the site.