

## SECTION 01570

### TRAFFIC CONTROL AND PROTECTION

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. This item of work shall include furnishing, installing, maintaining, relocating and removing traffic control and protection devices temporarily or permanently installed for the purpose of regulating, warning, directing or protecting traffic during the construction or maintenance of this improvement. All traffic control and protection shall be executed in conformance with all Kane County DOT and Illinois DOT provisions.

##### 1.2 MEASUREMENT AND PAYMENT

###### A. Method of Payment:

1. This item of work will be measured on a lump sum basis for furnishing, installing, maintaining, relocating and removing the traffic control devices required in the plans and these specifications.

###### B. Basis of Payment:

1. This work will be paid for at the Contract Lump Sum price for Traffic Control and Protection, which price shall be payment in full for all labor, materials, transportation, handling and incidentals necessary to furnish, install, maintain, and remove all traffic control devices indicated in the Plans and Specifications. The salvage value of the materials removed shall be reflected in the Bid price for this item.
2. Delays to the Contractor caused by complying with these requirements will be considered incidental to the item for Traffic Control and Protection, and no additional compensation will be allowed.

###### C. Payment Adjustments:

1. The OWNER may require additional traffic control to be installed in accordance with standards and/or designs other than those included in the plans or specifications. In such cases, the standards and or designs will be made available to the Contractor at least one week in advance of the change in traffic control. Payment for any additional traffic control required will be in accordance with Article 109.04 of SSRBC.
2. Revisions in the phasing of construction of maintenance operations, requested by the Contractor, may require traffic control to be installed in accordance with standards and/or designs other than those included in the plans or specifications. Revisions or modifications to the traffic control shown in the contract shall be submitted by the Contractor for approval by the OWNER. No additional payment will be made for a Contractor requested modification.
3. The value of the work items used in calculating the increase or decrease will include only items which have been added to or deducted from the contract under Article 104.02 of SSRBC and only items which require use of Traffic Control and Protection.

4. In the event the Owner cancels or alters any portion of the contract which results in the elimination or non-completion of any portion of the work, payment for partially completed work will be made in accordance with Article 109.06 of SSRBC.

D. Deficiency Charges:

1. The Contractor is expected to comply with the requirements of SSRBC, contract plans and these Special Provisions concerning traffic control and protection. If the Contractor fails to comply with the any of these requirements, contract plans, or these Special Provisions concerning traffic control, Owner shall execute such work as may be deemed necessary to correct deficiencies and the cost thereof shall be deducted from compensation due or which may become due the Contractor under the contract.
2. Failure to comply with directions from the Owner for corrections or changes to traffic control devices will result in a charge of \$1,000.00 per day payable to the Owner plus any additional fines imposed by other parties.

### 1.3 REFERENCES

- A. Furnish and maintain traffic control and protection in accordance with applicable provisions of current "Standard Specifications for Road and Bridge Construction (IDOT)", the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)", the "Standard Specifications for Traffic Control Items" and other Highway Standards adopted by the Illinois Department of Transportation.
- B. Refer to IDOT Section 701. Work Zone Traffic Control and the following Highway Standards for specific requirements for public convenience and safety:
  1. HIGHWAY STANDARDS:
    - a. 701501: Lane Closure, 2L 2W, Undivided, For Speeds < 45 MPH
    - b. 702001: Traffic Control Devices
- C. Comply with the ordinances and requirements of the City of St. Charles, the Kane County Division of Transportation, the Illinois Department of Transportation and other local authorities having jurisdiction.

### 1.4 QUALITY ASSURANCE

- A. At the preconstruction meeting, the Contractor shall furnish the name of the individual in his direct employ who is to be responsible for the installation and maintenance of the traffic control for this project. If the actual installation and maintenance are to be accomplished by a Subcontractor, consent shall be requested at the time of the preconstruction meeting in accordance with IDOT Article 108.01. This shall not relieve the Contractor of the foregoing requirement for a responsible individual in his direct employ.

## PART 2 PRODUCTS – NOT USED

## PART 3 EXECUTION

### 3.1 TRAFFIC CONTROL AND PROTECTION

- A. Traffic Control and Protection shall be provided as called for in the plan, these Special Provisions, applicable Highway Standards, applicable sections of the Standard Specifications, or as directed by the Owner.
- B. The governing factor in the execution and staging or work for this project is to provide the motoring public with the safest possible travel conditions along the roadway through the construction zone. The Contractor shall arrange his operations to keep the closing of any lane of the roadway to a minimum.
- C. All Traffic Control devices used on this Project shall conform to the Plans, Special Provisions, Traffic Control Standards, Traffic Specifications and the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways." No modifications of these requirements will be allowed without prior written approval of the OWNER.
- D. Traffic Control devices include: signs and their supports, signals, pavement markings, barricades with sand bags, channelizing devices, warning lights, arrow-boards, flaggers, or any other device used for the purpose of regulating, warning or guiding traffic through or around the construction zone.
- E. The initial erection of a traffic control installation shall not include devices that are bent, scratched, faded, worn, dirty or otherwise present a shabby appearance. The Contractor is required to conduct routine inspections of the worksite at a frequency that will allow for the prompt replacement of any traffic control device that has become worn or damaged to the extent that it no longer conforms to the shape, dimensions, color and operational requirements of the MUTCD, and the Traffic Control Standards or will no longer present a neat appearance to motorists. A sufficient quantity of replacement devices, based on vulnerability to damage, shall be readily available to meet this requirement.
- F. The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic control devices. Special attention shall be given to advance warning signs during construction operations in order to keep lane assignment consistent with barricade placement at all times. The Contractor shall cover all traffic control devices that are inconsistent with detour or lane assignment patterns during the transition from one construction phase to another.
- G. The Contractor shall coordinate all traffic control work on this project with adjoining or overlapping projects, including barricade placement necessary to provide a uniform traffic detour patterns. When directed by the OWNER, the Contractor shall remove all traffic control devices which were furnished, installed maintained by him under this contract, and such devices shall remain the property of the Contractor. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the OWNER.
- H. The Contractor shall ensure all traffic control devices installed by him are operational 24 hours a day, including Sundays and holidays.

### 3.2 SIGNS

- A. Construction signs referring to daytime lane closures during working hours shall be removed or covered during non-working hours.

- B. Throughout the duration of this project, all existing traffic signs shall be maintained by the Contractor. All provisions of Article 107.25 of the Standard Specifications shall apply, except the third paragraph shall be revised to read: "The Contractor shall maintain, furnish and replace at his own expense, any traffic sign or post which has been damaged or lost by the Contractor or a third party."
- C. "Fresh Oil" signs (W21-2) shall be used when prime is applied to pavement that is open to traffic. The signs are to remain until tracking of the prime ceases. The sign shall be erected a minimum of 500 feet preceding the start of the prime and on all side roads within the posted area. The "Fresh Oil" sign on the side of the road shall be posted a minimum of 200 feet from the mainline pavement.

### 3.3 BARRICADES

- A. Any drop off greater than three inches, but less than six inches within eight feet of the pavement edge shall be protected by Type I or II barricades equipped with mono-directional steady burn lights at 100 foot center to center spacing. If the drop off within eight feet of the pavement edge exceeds six inches, the barricades mentioned above shall be placed at 50 foot center-to-center spacing. Barricades that must be placed in excavated areas shall have leg extensions installed such that the top of the barricade is in compliance with the height requirements of Standard 702001.
- B. Check barricades shall be placed in work areas perpendicular to traffic every 100 feet, one per lane and per shoulder, to prevent motorists from using work areas as a traveled way. Two additional check barricades shall be placed in advance of each patch excavation or any other hazard in the work area, the first at the edge of the open traffic lane and the second centered in the closed lane. Check barricades shall be Type I or II and equipped with a flashing light.
- C. Vertical panels, drums or other delineating devices may be substituted for Type I or II barricades with the approval of the Engineer.

### 3.4 DIRECTION OF OPERATIONS

- A. Placement of all signs and barricades shall proceed in the direction of flow of traffic. Removal of all signs and barricades shall start at the end of the construction areas and proceed toward oncoming traffic unless otherwise directed by the Engineer.

### 3.5 PEDESTRIAN SIDEWALK CONTROL

- A. The Contractor shall install, maintain and remove necessary signs and barricades needed to direct pedestrians to usable sidewalks and walkways during the construction.
- B. All barricades shall be Type I or H equipped with a flashing light. At each point of closure, sufficient numbers of barricades shall be used to completely close the sidewalk to pedestrian movement. Where construction activities involve sidewalks on both sides of the street, the work shall be staged so that both sidewalks are not out of service at the same time.

### 3.6 PUBLIC CONVENIENCE AND SAFETY

- A. The Contractor shall provide a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis to receive notification of any deficiencies regarding traffic control and protection. The Contractor shall dispatch men, materials and equipment to correct any such deficiencies. The Contractor shall respond to any call from the City concerning any request for improving or correcting traffic control devices and begin making the requested repairs within two hours from the time of notification.
- B. When traveling in lanes open to public traffic, the Contractor's vehicles shall always move with and not against or across the flow of traffic. These vehicles shall enter or leave work areas in a manner that will not be hazardous to, or interfere with traffic and shall not park or stop except within designated work areas. Personal vehicles shall not park within the right-of-way except in specific areas designated by the Engineer.
- C. The Contractor shall maintain at least one lane of traffic at all times on two lane roads and at least one lane in each direction on 4 or more lane roads, during the construction of this project. The Contractor shall also maintain entrances and side roads along the proposed improvement. Interference with traffic movements and inconvenience to owners of abutting property and the public shall be kept to a minimum. Any delays or inconveniences caused the Contractor by complying with these requirements shall be considered, as incidental to the contract, and no additional compensation will be allowed.
- D. One-way traffic with proper flagging and signing will be permitted upon approval by the OWNER between 9:00 a.m. and 4:00 p.m. with two-way traffic being maintained at all other times.
- E. Access for driveways shall be maintained at all times during construction. The Contractor shall notify the property owner of the loss of driveway use a minimum of 48 hours before the driveway access loss.
- F. On two lane roads, the Contractor is to plan his work so that there will be no open holes in the pavement and that all barricades will be removed from the pavement during non-work hours.
- G. On four or more lane highways, there shall be no open holes in the pavement being used by the traveling public. Lane closures, if allowed, will be in accordance with the applicable standards and any staging details shown in the Plans.
- H. Unless otherwise specified in the plans, the maximum length of lane closure on multilane highways shall not exceed one day's production.
- I. The Contractor's equipment shall not be allowed on the pavement open to traffic. The Contractor shall not park on any equipment or vehicles unnecessarily on the shoulder. Whenever work is in progress adjacent to the traveled way, the Contractor shall provide necessary traffic signs to warn the public and protect the work as required herein or as provided in the Standards. The Contractor shall remove all equipment from the shoulders and medians after work hours during the week and on weekends.

- J. No road closure or restriction shall be permitted except those covered by Standard Designs without written approval by the Owner.

### 3.7 MAINTENANCE OF ROADWAYS

- A. Beginning on the date that the Contractor begins work on this project, he shall assume responsibility for the normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the OWNER, but shall **not** include snow removal operations. Traffic control and protection for this work will be provided by the Contractor as required by the OWNER.
- B. The work involved in maintaining the existing pavement as above specified will be considered as incidental to the Contract, and the traffic control and protection required for this work shall be considered incidental to the contract.

### 3.8 PROTECTION OF DRAINAGE FACILITIES DURING CONSTRUCTION

- A. Unless otherwise noted in the contract plans, the existing drainage facilities shall remain in use during the period of construction.
- B. Location of existing drainage structures and sewers, as shown on the contract plans, are approximate. Prior to commencing work, the Contractor, at his own expense, shall determine the exact location of existing structures that are within the proposed construction site.
- C. All drainage structures are to be kept free from any debris resulting from construction operations. All work and material necessary to prevent accumulation of debris in the drainage structures resulting from construction operations shall be removed at the Contractor's own expense, and no extra compensation will be allowed.
- D. The Contractor shall take all necessary precautions when working near or above existing sewers in order to protect these pipes during construction from any damage resulting from his operations. Existing sewers damaged because of noncompliance with this provision shall be replaced as directed by the OWNER, in accordance with Section 550 of the Standard Specifications and at the Contractor's own expense, and no extra compensation will be allowed.
- E. During construction, if the Contractor encounters or otherwise becomes aware of any sewers, underdrains or field drains within the right of way other than those shown on the plans, he shall so inform the OWNER who shall direct the work necessary to maintain or replace the facilities in service and protect them from damage during construction if maintained. Existing facilities to be maintained that are damaged because of noncompliance with this provision shall be replaced at the Contractor's own expense. Should the OWNER have directed the replacement of a facility, the necessary work and payment shall be done in accordance with Section 550 or 601 and Article 104.02 respectively of the Standard Specifications.

## SECTION 01600

### PRODUCT REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Product substitution procedures.

##### 1.2 PRODUCTS

- A. Provide products of qualified manufacturers suitable for intended use. Provide products of each type by a single manufacturer unless specified otherwise.

##### 1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

##### 1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturer's instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

- G. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

#### 1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named in accordance with the following article.

#### 1.6 PRODUCT SUBSTITUTION PROCEDURES

- A. Owner will consider requests for Substitutions only within 30 days after date of Owner-Contractor Agreement.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
  - 2. Will provide the same warranty for the Substitution as for the specified product.
  - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
  - 5. Will reimburse Owner for review or redesign services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
  - 1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
  - 2. Submit Shop Drawings, Product Data, and certified test results attesting to the proposed product equivalence. Burden of proof is on the party submitting the proposal.
  - 3. The Owner will notify Contractor in writing of decision to accept or reject request.



PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END 01600

## SECTION 01700

### EXECUTION REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Protecting installed construction
- D. Project record documents.
- E. Product Warranties and Product Bonds

##### 1.2 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Owner's review.
- B. Provide submittals to Owner that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

##### 1.3 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean construction debris from sanitary and storm systems.
- C. Clean site; sweep paved areas, rake clean landscaped surfaces.
- D. Remove waste and surplus materials, rubbish, and construction facilities from site.

##### 1.4 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic from landscaped areas.

## 1.5 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Location Maps.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. Reviewed Shop Drawings, Product Data, and Samples.
  - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Measured horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements.
  - 2. Field changes of dimension and detail.
  - 3. Details not on original Contract drawings or Location Maps.
- G. Submit documents to Owner with claim for final Application for Payment.

## 1.6 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers and manufacturers.
- C. Verify that documents are in proper form, contain full information and are notarized.
- D. Co-execute submittals when required.
- E. Submit prior to final Application for Payment.

## PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END 01700