

## **1.0 GENERAL**

### **1.1 TRAFFIC ACCOMMODATION STRATEGY**

- .1 Provide a Traffic Accommodation Strategy detailing the measures proposed to safely accommodate the travelling public. The minimum requirements are specified in the Department manual: "Traffic Accommodation in Work Zones" (Latest Edition); Any Contract specific requirements, in excess of the minimum requirements, will be identified in this Section 01552.
- .2 Provide a Traffic Accommodation Strategy consisting of drawings detailing the configuration of temporary construction signs and other traffic control devices at the Site and provide written confirmation of the methods or procedures being used by the Contractor to address specific traffic safety related issues or situations at the Site.
- .3 When detours are required, ensure the Traffic Accommodation Strategy includes detailed drawings identifying the corresponding proposed traffic accommodation measures.
- .4 Ensure any issues or concerns regarding the Contractor's proposed Traffic Accommodation Strategy are addressed to the mutual satisfaction of the Contractor and the Minister prior to the commencement of the Work.
- .5 The Contractor shall have no claim against the Minister resulting from the Minister's failure to accept the Contractor's Traffic Accommodation Strategy submission.
- .6 The Contractor is responsible for all costs to address concerns raised by the Minister during the review of the Contractor's Traffic Accommodation Strategy submission.

### **1.2 REQUIREMENTS FOR TRAFFIC ACCOMMODATION**

- .1 Unless otherwise specified, accommodate public traffic on a 24-hour per day basis using any means at the Contractor's discretion, subject to the minimum requirements of the "Traffic Accommodation in Work Zones" (Latest Edition).
- .2 Make suitable provisions, including the use of detours, to accommodate all vehicular and pedestrian traffic safely and with a minimum of inconvenience.
- .3 Provide, install, maintain and protect traffic control devices such as signs, barriers, fences and lights at the Contractor's expense and in accordance with Section 1.6 "Temporary Construction Signing".
- .4 Install, maintain and protect at the Contractor's expense, any additional traffic control devices deemed necessary by the Minister.
- .5 Provide the required number of flagpersons, during all periods of active equipment operations which may affect normal traffic operations.
- .6 Control the Contractor's operations to ensure normal school bus operations are not interfered with.
- .7 Ensure uninterrupted access is provided to developments along the Site.

- .8 Obtain prior approval from the Minister before changing or disrupting existing accesses and road crossings.
- .9 Carry out construction operations in one continuous operation at road crossings, intersections and entrances for the Site.
- .10 Provide and use such other methods or equipment necessary to accommodate public traffic safely.
- .11 Promptly make any modifications to the traffic accommodation operations deemed necessary by the Minister. The Minister may suspend Work in accordance with Section 00725 – General Conditions, Clause 12.1, Suspension of Work, in cases where the Contractor fails to adequately provide for the safety of the public, for recurring safety issues or when the Contractor fails to comply with orders issued by the Minister regarding traffic accommodation operations.
- .12 Remove or cover all traffic control devices when not essential for the safe accommodation of public traffic, in order to eliminate unnecessary inconvenience to the traffic.
- .13 Coordinate traffic accommodation measures with those of other forces at or adjacent to the Work, as required, to accommodate public traffic safely and conveniently. This shall not relieve the Contractor of his responsibility for the safe accommodation of traffic over the whole of the Site.

### **1.3 PUBLIC HIGHWAYS AND ROADS**

- .1 Comply with all requirements of the road authority having jurisdiction over public roads used by the Contractor in the execution of the Work.
- .2 Determine the condition and availability of public highways and roads, clearances, restrictions, bridge load limits, bond requirements, and other limitations that may affect ingress to and egress from the Site.
- .3 Comply with applicable load regulations during hauling of materials and equipment over public highways, roads, or bridges. Minimize interference with local traffic.
- .4 Before commencing the Work, conduct a detailed video survey, in the presence of the Minister, of the following facilities that are to be used. This survey establishes the restoration standard for such facilities.
  - .1 Public highways, roads and bridges
  - .2 Existing access roads including local roads and canal bank roads upstream and downstream of the Site.

### **1.4 TEMPORARY ROADS**

- .1 Design and construct all temporary roads including access, haul and detour roads, temporary parking areas, access road to Minister's site office, [ and crossings of an existing canal ], temporary bridges, and drainage structures required for construction operations.
- .2 Provide detours required for the execution of the Work.

- .3 Confine construction traffic to the limits of temporary roads and avoid disturbances to adjacent lands.
- .4 Hauling of [excavated and fill] materials across the existing [on-Site bridges] [Bridge Nos. [ ] is not permitted.
- .5 Contain hauled material in vehicles, and keep routes clear of mud, fallen rock, and debris resulting from construction operations.
- .6 Control dust, remove snow, and maintain road surfaces daily or at frequent intervals depending upon weather or traffic and as required by the Minister.
- .7 Reclaim all temporary roads when they are no longer required. Scarify, grade to original contours, cultivate, replace topsoil, and seed to grass.

## **1.5 TYPICAL DRAWINGS**

- .1 Drawings detailing minimum requirements for temporary signing and other traffic control devices for typical rural highway situations are contained in Section II of the Department manual entitled "Traffic Accommodation in Work Zones" (Latest Edition).
- .2 Develop any drawings necessary to address non-typical rural or urban highway situations and include in the Traffic Accommodation Strategy.

## **1.6 TEMPORARY CONSTRUCTION SIGNING**

- .1 Materials
  - .1 Supply all signing materials including sign posts, weighted stands, brackets and any required mounting hardware and miscellaneous materials required for the erection of temporary construction signs.
  - .2 Provide signs, barricades and other traffic control devices conforming to the requirements for shape, colour and size specified in the Department manual entitled "Traffic Accommodation in Work Zones" (Latest Edition). Ensure the orange portion of all signs, barricades and other traffic control devices are fully reflectorized using High Brightness, Retroreflective, Non-Metallized, Prismatic Sheeting Material which incorporates durable, transparent, fluorescent pigment and meets the brightness requirements as specified in ASTM D4956 Type VIII sheeting. Unless otherwise approved by the Minister, ensure the orange coloured reflective sheeting supplied by the Contractor is one of the Proven Products for "Temporary Orange Work Zone/Construction Signs" listed on the Alberta Transportation Products List on the Department's web site.
  - .3 Ensure all other colours of sheeting material are Type III or Type IV high intensity retroreflective sheeting meeting or exceeding the minimum requirements as specified in ASTM-D4956.
  - .4 Larger construction signs or oversized signs may be used where conditions require greater visibility in order to be effective. Use larger or oversized signs in special circumstances where more than average attention value is required from the sign.
- .2 Equipment

- .1 Supply all equipment for Traffic Accommodation.
- .3 Erection of Signs
    - .1 Do not commence work on the Site until all necessary temporary construction signs and all other traffic control devices as proposed in the traffic accommodation strategy are in place.
    - .2 When signs require frequent moves, portable type signs, mounted on weighted stands, may be used. Place portable signs on the shoulder of the road such that the face of the sign is fully visible to oncoming traffic and the bottom of the sign is not less than 300 mm above the road surface. Provide securely weighted stands and erect in a manner to ensure against being blown over by prevailing winds or gusts from passing vehicles.
    - .3 Ensure non-portable signs are conspicuously posted, and erected at right angles to the road, with the bottom of the sign at a height of 1500 mm above the road surface, and not less than 2000 mm or more than 6000 mm from the nearest traffic lane.
    - .4 Erect traffic signs and devices close to the construction work adjacent to the road, or the road work, in progress. Move them to remain close to the work with the progress of the construction.
    - .5 Mark objects within or immediately adjacent to the road which constitute a hazard to traffic with alternating black and orange stripes attached directly to the object or erected immediately in front of it.
    - .6 Ensure the use of signs is held to a minimum to prevent confusion.
    - .7 Install "STOP" signs on all subsidiary roads (local, district, municipal, service or approach) intersecting a primary highway detour route.
    - .8 Post speed zones, where required, as indicated on the applicable drawing contained in the "Traffic Accommodation in Work Zones" (Latest Edition).
  - .4 Maintenance and Removal of Signs
    - .1 Replace, repair or clean without delay any poorly maintained, defaced, damaged or dirty construction signs. Take special care to ensure that construction materials and dust are not allowed to obscure the face of a sign.
    - .2 Cover or remove signs not in effect and remove all construction signs after the Work is completed.
  - .5 Modifications to Temporary Construction Signing
    - .1 The Contractor is responsible for the supply and proper placement of temporary construction signs. However, in the case of potential danger to the traveling public or other circumstances where the Minister determines that signing is inadequate, the Minister will require changes to the Contractor's operations to remedy the situation. These changes may involve the use of different types and/or sizes of signs, modifying the number or locations of signs, and any other modifications or additions required to protect the safety of the travelling public.

## **1.7 REMOVAL AND SALVAGE OF EXISTING SIGNS AND GUIDEPOSTS**

- .1 Salvage any existing signs and guideposts which must be removed during the execution of the Work. Maintain critical signs necessary for the protection of traffic such as railroad crossing signs or stop signs.

## **1.8 FLAGPERSONS**

### **.1 General**

- .1 Provide flagpersons when construction operations or Site conditions cause interruption, delay or hazard to the traveling public or anyone on the Site. Provide and equip responsible flagpersons as necessary for the direction and control of traffic. Ensure that flagpersons are instructed in and use proper traffic control procedures appropriate for the prevailing conditions.
- .2 Ensure flagpersons are certified from a recognized training program on traffic control procedures. The Minister will recognize traffic control programs administered by the Alberta Construction Safety Association, however the Minister reserves the right to accept or reject certification from any other institute.

### **.2 Safety Apparel**

#### **.1 Coveralls**

- .1 Ensure flagpersons are dressed in coveralls which meet the Class 3 Level 2 requirements of CSA Z96-02, High Visibility Safety Apparel. Each pair of coveralls shall have a permanent label affixed certifying compliance with Class 3 Level 2 of CSA Z96-02.
- .2 The colour of the coveralls shall be fluorescent yellow-green with silver retroreflective striping. The retroreflective striping shall be a minimum of 50mm wide, and shall be sewn onto a 100 mm wide fluorescent red-orange background material. Ensure flagperson safety apparel are kept clean and in good condition at all times. Replace faded, torn and/or dirty coveralls, or coveralls without CSA certification labels.

#### **.2 Headgear**

- .1 Prior to commencement of the Work, identify and assess existing and potential hazards at the Site. Where there is a foreseeable risk of injury to a worker's head, flagperson's shall wear fluorescent orange protective hardhats meeting the requirements of CSA Standard Z94.1-92.
- .2 Where no foreseeable risk of head injury exists, flagpersons will be permitted to wear any type of fluorescent orange headgear.

### **.3 Night Time Operations**

- .1 During hours of darkness, equip flagpersons with hand held red traffic signal wands of sufficient brightness to be clearly visible to approaching traffic. In addition, illuminate flagging stations by overhead lighting; and mark signs indicating hazardous conditions and signs requiring increased attention with flashers

## **1.9 DETOURS**

- .1 Design, construct, maintain and remove all detours required for the Work. Where necessary, provide any Environmental Authorizations, temporary relocation of any utilities and reclamation of the disturbed areas to a similar condition as existed prior to the disturbance. Do not construct Detours without the prior authorization of the Minister.
- .2 Design, construction, maintenance, graveling, dust abatement, detour removal, reclamation and utility relocation will be considered incidental to the Work.

## **1.10 ROAD MAINTENANCE**

- .1 Obtain any necessary approvals from the agency having jurisdiction to haul materials or equipment over the proposed haul routes. Abide by all road restrictions and maintenance requirements established by the road or bridge authority having jurisdiction, including all roads and portions of the highway within the Site.
- .2 When Contract generated Traffic disturbs public highways, roads and bridges, maintain and repair the roads and bridges at the Contractor's expense. In addition to the requirements of the road agency having jurisdiction, keep the disturbed areas of travelled lanes well graded and free of potholes, maintain surfacing gravel and replace when required, and control dust using water or other dust abatement material approved by the Minister. Following completion of the Work, restore the road to a condition as good as existed prior to the commencement of work.
- .3 Carry out winter snow removal and ice control for traffic accommodation for public highways, roads and bridges within the Site.
- .4 If the Contractor fails to promptly maintain the public highways, roads, and bridges the Minister may make other arrangements to have the Work done and deduct the cost thereof from any money owing to the Contractor.

## **1.11 PROLONGED SHUT DOWN**

- .1 Prior to any prolonged shut-down of construction, ensure that any disturbed road surface is restored to a condition suitable for traffic operations and acceptable to the Minister. Carry out winter snow removal and ice control for traffic accommodation for public highways, roads and bridges within the Site during the period of prolonged shut-down.
- .2 Prior to commencing any prolonged shut-down of the Work, host a meeting between the Contractor and the Minister for the purpose of developing a "Shutdown Plan" based on the specific needs and requirements of the Site. The "Shutdown Plan" shall outline the Contractor's methods and procedures for monitoring and maintaining the Site during the shutdown period, and will outline any responsibilities of the other parties.
- .3 Notwithstanding the above, no component of the shut-down plan will negate the Contractor's responsibilities for the Contract.

### **1.12 MONITORING TRAFFIC ACCOMMODATION AT THE SITE**

- .1 To ensure the traffic accommodation strategy is performing as intended; monitor and maintain traffic accommodation measures at the Site on a regular basis. Designate a specific individual or individuals to perform this function to ensure any issues arising are addressed in a consistent and timely manner.
- .2 The worker(s) carrying out the traffic accommodation monitoring shall be qualified, trained and experienced in traffic control and must be knowledgeable in the operation of the traffic control devices and other related equipment. Provide these workers with vehicles equipped with revolving warning lights and suitable communication devices to contact others for assistance if and when required.
- .3 Monitor all traffic control devices, temporary signing and road conditions during periods of inactivity. Ensure the frequency of inspection is commensurate with the traffic volumes on the highway or road. For all detours, consecutive inspections will not be more than 6 hours apart, unless otherwise agreed by the Minister. Document all site inspections by the Contractor and make this information available for the Minister's review upon request.
- .4 The traffic accommodation measures will be monitored by the Minister. If, in the opinion of the Minister, traffic is being unduly hindered, the Contractor may be required to modify his traffic accommodation measures.

### **1.13 COMPLIANCE**

- .1 In cases where the Contractor is not in compliance with the specifications and, in the opinion of the Minister there is imminent danger to the travelling public, the Minister has the authority to order the immediate suspension of Work. Such orders must be made in writing.
- .2 In other cases where the Contractor is not in compliance with the specifications but, in the opinion of the Minister the infraction is not causing imminent danger to the travelling public, the Minister will use the following escalating process to address the situation:
  - .1 Issue verbal instructions requiring the Contractor to correct the infraction
  - .2 Issue a written warning instructing the Contractor to correct the infraction
  - .3 Issue a written order instructing the Contractor to suspend Work until the infraction is corrected to the satisfaction of the Minister.

### **1.14 SUBMITTALS**

- .1 Provide the following submittals.
- .2 Submit the Traffic Accommodation Strategy to the Minister 14 days prior to the pre-construction meeting for the Contract or to a schedule as agreed upon by the Minister. The Minister will review the Traffic Accommodation Strategy and communicate any concerns to the Contractor within 7 days of the pre-construction meeting.
- .3 Plans showing the location of temporary access and haul roads and detours, drainage structures, and bridges required for execution of the Work, at least 10 days prior to commencement of the Work at the Site.

- .4 Video Survey at least 14 days prior to commencement of the Work at the Site.
- .5 Daily Records of Temporary Construction Signing
  - .1 Record the location of all temporary construction signs and any other traffic control devices used at the Site on a daily basis and as the Work Area changes. Record this information on a form suitable to the Minister and submit it to the Minister on a weekly basis or when requested.
- .6 Plan showing the location of the proposed haul roads 14 days prior to the pre-construction meeting. The Minister will review the haul routes and communicate any concerns to the Contractor within 7 days of the pre-construction meeting.
- .7 If required for a pro-longed shutdown period, submit a Shutdown Plan at least 14 days prior to the scheduled shutdown.
- .8 Names of those workers who will be responsible for monitoring and maintaining the traffic control devices at the pre-construction meeting.

**2.0 PRODUCTS – NOT USED**

**3.0 EXECUTION – NOT USED**

**END OF SECTION**