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ITEM 614 - WORK ZONE INCREASED PENALTIES SIGN (R11-H5a)

R11-H5a-48 signs shall be furnished, erected, and maintained in good condition and/or replaced as necessary and subsequently removed by the Contractor. Signs shall be mounted at the appropriate offsets and elevations as prescribed by the Ohio Manual of Uniform Traffic Control Devices. They shall be maintained on supports meeting current safety criteria.

The signs may be erected or uncovered no more than four hours before the actual start of work. The signs shall be removed or covered no later than four hours following restoration of all lanes to traffic with no restrictions, or sooner as directed by the Engineer. Temporary sign covering and uncovering due to temporary lane restorations shall be guided by the four-hour limitations stated above. Such lane restorations should be expected to remain in effect for 30 or more consecutive calendar days, such as during winter shut-downs.

The signs on the mainline shall be dual mounted unless not physically possible. The first sign shall be placed between the "ROAD WORK AHEAD" (W20-1) sign and the next sign in the sequence. Signs shall be erected on each entrance ramp and every 2 miles through the construction work limits. Signs on the mainline shall be R11-H5a-48. Signs used on the ramps shall be R11-H5a-24. R11-H5a-24 signs may be used in the median in lieu of R11-H5a-48 signs if it is not physically possible to provide R11-H5a-48 signs in the median.

The Contractor may use signs and supports in used, but good, condition provided the signs meet current ODOT specifications. Sign faces shall be reflectorized with Type G sheeting complying with the requirements of C&MS 730.19.

Work zone increased penalties signs and supports will be measured as the number of sign installations, including the sign and necessary supports. If a sign and support combination is removed and re-erected at another location as directed by the Engineer, it shall be considered another unit.

Payment for accepted quantities, complete, in place will be made at the contract unit price. Payment shall be full compensation for all materials, labor, incidentals and equipment for furnishing, erecting, maintaining, covering during suspension of work, and removal of the sign and support.

Item 614, Work Zone Increased Penalties Sign - - - - - 14 Each

WORK ZONE PAVEMENT MARKINGS AND SIGNS

The Contractor shall be required to install work zone markings and signs at locations identified by the Engineer per the requirements of CMS 614.04 and 614.11.

Work zone pavement markings shall be 642 paint.

Prior to placement of any work zone pavement markings, the Contractor shall completely obliterate, as per 641.10, all existing pavement markings that would create confusion or conflict with the work zone pavement markings.

The following estimated quantities have been carried to the General Summary for work zone pavement markings:

Item 614, Work Zone Lane Line, Class III, 642 Paint - - - - - 12.24 Mile
Item 614, Work Zone Edge Line, Class III, 642 Paint - - - - - 24.48 Mile
Item 614, Work Zone Stop Line, Class III, 642 Paint - - - - - 334 Feet
Item 614, Work Zone Channelizing Line, Class III, 642 Paint - - - 4460 Feet

Work zone raised pavement markers cannot be used to simulate (replace) any type of work zone pavement marking.

The following estimated quantity has been carried to the General Summary for work zone signs:

Item 614, Work Zone Marking Sign (W8-11-36) - - - - - 16 Each
Item 614, Replacement Sign - - - - - 3 Each

ITEM 614 - WORK ZONE SPEED LIMIT SIGN

The Contractor shall furnish, install, maintain, cover during suspension of work, and subsequently remove Work Zone Speed Limit (R2-1-48) (40 MPH Speed Limit) signs and supports within the work limits in accordance with the following requirements:

The Contractor shall cover or remove any existing Speed Limit signs within the reduced Speed Zone. These signs shall be restored during suspension or termination of the reduced speed limit. The expense of covering or removal and restoration of existing Speed Limit or Minimum Speed Limit signs shall be included in the pay item for the Work Zone Speed Limit signs.

The Work Zone Speed Limit signs may be erected or uncovered no more than 4 hours before the actual start of work that causes the warranting condition(s) to occur. The signs shall be removed or covered no later than 4 hours following removal of the warranting condition(s), or sooner as directed by the Engineer. Temporary sign covering and uncovering due to temporary removal of warranting condition(s) shall be guided by the four-hour limitations stated above.

Construction and Material Specifications, Item 614, Paragraph 614.02(B) indicates that the two directions of a divided highway are considered separate highway sections. Therefore, if the work on a multi-lane divided highway is limited to only one direction, a speed reduction in the direction of the work does not automatically constitute a speed reduction in the opposite direction. A speed limit reduction in the opposite direction, in such case, is appropriate only if conditions are expected to have an impact on the directional traffic flow, as directed by the Engineer.

The Contractor shall erect a Work Zone Speed Limit sign in advance of the warranting condition, as detailed in the plans or as directed by the Engineer. The sign shall be mounted on both sides of a directional roadway of divided highways. The first Work Zone Speed Limit sign shall be placed approximately 500 feet in advance of the lane reduction, shift taper, or other roadway or shoulder restriction that warranted the work zone speed zone. On undivided highways the sign shall be mounted on the right side, approximately 250 feet in advance of such restrictions. The sign shall be repeated every 1 mile for 60 and 55 mph zones and every one-half mile for 50 mph and 45 mph zones. These signs shall also be erected immediately after each open entrance ramp within the zone.

The speed limit reduction shall be limited to only the portion of the project and the work that warranted the work zone speed limit reduction.

Speed Reduction (Speed Zone Ahead symbol) signs (W3-5) shall be erected in advance of the speed reduction, approximately 1250 feet on multi-lane highways and 500 feet on 2-lane highways.

A sign(s) to indicate the resumption of the statutory speed limit shall be erected at the end of any reduced Speed Zone. The Contractor may use signs and supports in used, but good condition, provided the signs meet current ODOT specifications. Sign faces shall be retroreflectorized with Type G sheeting complying with the requirements of CMS 730.19.

Work Zone Speed Limit signs shall be mounted on two Item 630, Ground Mounted Supports, No. 3 Posts, unless mounted on a temporary sign support per SCD MT 105.10.

Work Zone Speed Limit and related sign sizes, placement, supports, etc shall be per the OMUTCD, with two exceptions: 1) expressway size Speed Limit signs may be used on freeways and expressways, if necessary; 2) the height of signs mounted on portable supports shall be the height required for ground-mounted signs but shall not be more than 1 foot lower than the height required by the OMUTCD, or as directed by the Engineer. Portable supports should not be used for a duration of more than 3 days.

Work Zone Speed Limit signs and supports will be measured as the number of sign installations, including the signs and necessary supports. If a sign and support combination is removed and reerected at another location within the project due to changes in the Speed Zone as detailed in the plans or as directed by the Engineer, it shall be considered another unit.

Payment for accepted quantities, complete in place, will be made at the contract unit price. Payment shall be full compensation for all materials, labor, incidentals and equipment for furnishing, erecting, maintaining, covering during suspension of work, and removing the signs and supports. Speed limit signing for the point of resumption of the statutory speed limit shall be paid for as Work Zone Speed Limit signs. The following estimated quantity has been carried to the General Summary.

Item 614, Speed Zone Ahead Symbol Sign - - - - - 2 Each
Item 614, Work Zone Speed Limit Sign - - - - - 18 Each

The following table provides details on Work Zone Speed Zones approved for use on this project:

WZSZ Revision Number	County & Route	SLM		Phase/Part & Direction	Approved Speed Limit (mph)	Specific Warranting Conditions and Factors
		From	To			
WZ-60381	BEL-7	20.08	23.45	N.B. & S.B.	40	Lane Closure

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

Use of Law Enforcement Officers (LEOs) by Contractors other than the uses specified below will not be permitted at project cost. LEOs should not be used where the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) intends that flaggers be used.

In addition to the requirements of CMS 614 and the OMUTCD, a uniformed LEO with an official patrol car (car with top-mounted emergency flashing lights and complete markings of the appropriate law enforcement agency) shall be provided for the following traffic control tasks:

For lane closures:

During initial set-up periods, tear down periods, substantial shifts of a closure point, short duration closure of a multi-lane divided highway as indicated on the plan insert sheet or when new lane closure arrangements are initiated for long-term lane closures/shifts (for the first and last day of major changes in traffic control setup). In general, LEOs should be positioned at the point of lane restriction or road closure and to manually control traffic movements through intersections in work zones.

When construction vehicles are entering/exiting the zone directly from/ into an open lane of traffic. If a lane has been closed to provide an acceleration/deceleration lane for the vehicle, the LEO will not be required.

LEOs should not forgo their traffic control responsibilities to apprehend motorists for routine traffic violations. However, if a motorist's actions are considered to be reckless, then pursuit of the motorist is appropriate.

The LEOs work at the direction of the Contractor. The Contractor is responsible for securing the services of the LEOs with the appropriate agencies and communicating the intentions of the plans with respect to duties of the LEOs. The Engineer shall have final control over the LEO's duties and placement, and will resolve any issues that may arise between the two parties.

The LEO shall report in to the Contractor prior to the start of the shift, in order to receive instructions regarding specific work assignments during his/her shift. The LEO is expected to stay at the project site for the entire duration of his/her shift. The LEO shall report to the Contractor at the end of his/her shift. Once the LEO has completed the duties described above and still has time remaining on his/her shift, the LEO may be asked to patrol through the work zone (with flashing lights off) or be placed at a location to deter motorists from speeding. Should it be necessary to leave the project site, the LEO shall notify the Engineer. The Contractor shall provide the LEO with a two-way communication device which shall be returned to the Contractor at the end of his/her shift.

LEOs (with patrol car) required by the traffic maintenance tasks above shall be paid for on a unit price (hourly) basis under Item 614, Law Enforcement Officer (with patrol car) for Assistance. The following estimated quantity has been carried to the General Summary.

Item 614, Law Enforcement Officer with Patrol Car for Assistance - - 200 Hours

The hours paid shall include minimum show-up time required by the law enforcement agency involved.

Any additional costs (administrative or otherwise) incurred by the Contractor to obtain the services of an LEO are included with the bid unit price for Item 614, Law Enforcement Officer with Patrol Car for Assistance.