

SEQUENCE OF CONSTRUCTION

ALL WORK IN A GIVEN PHASE SHALL BE COMPLETED IN ITS ENTIRETY PRIOR TO PROCEEDING TO THE NEXT PHASE.

PRE-PHASE

WORK TO BE COMPLETED IN THIS PHASE IS AS FOLLOWS:

- 1. CONSTRUCT TEMPORARY PAVEMENT ALONG OUTSIDE SHOULDER OF IR-77 SOUTHBOUND FOR USE IN PHASE 1
2. CONSTRUCT TEMPORARY PAVEMENT ALONG OUTSIDE SHOULDER OF IR-77 NORTHBOUND FOR USE IN PHASE 1 BRIDGE WIDENING.
3. REMOVE RUMBLE STRIPS FROM MEDIAN SHOULDER OF IR-77SB BETWEEN STA. 1068+75 AND STA. 8+00.

MAINTAIN TRAFFIC AS FOLLOWS:

- 1. MAINTAIN TRAFFIC USING MT-95.30 AND THE LATEST PERMITTED LANE CLOSURE SCHEDULE (PLCS) AVAILABLE FROM THE ODOT WEBSITE DURING CONSTRUCTION OF SOUTHBOUND TEMPORARY PAVEMENT (odot.ms2soft.com/tdms.ui/PLCS/AdminSchedules?loc=odot)

PHASE 1

WORK TO BE COMPLETED IN THIS PHASE IS AS FOLLOWS:

- 1. CONSTRUCT INSIDE WIDENING OF PROJECT BRIDGE (SUM-77-32.27L) ALONG IR-77SB
2. CONSTRUCT INSIDE WIDENING OF PROJECT BRIDGE (SUM-77-32.27R) ALONG IR-77NB
3. CONSTRUCT INSIDE ROADWAY IMPROVEMENTS ALONG IR-77SB SOUTH OF BRIDGE (SUM-77-32.27L)
4. CONSTRUCT INSIDE ROADWAY IMPROVEMENTS ALONG IR-77NB SOUTH OF BRIDGE (SUM-77-32.27R)
5. CONSTRUCT INSIDE ROADWAY IMPROVEMENTS ALONG IR-77SB NORTH OF BRIDGE (SUM-77-32.27L) TO NORTHERN PROJECT LIMITS
6. CONSTRUCT ROADWAY IMPROVEMENTS ALONG SR-21

MAINTAIN TRAFFIC AS FOLLOWS:

- 1. IMPLEMENT DETOURS AND CLOSE RAMP FROM SR 21 TO IR-77SB
2. PLACE PORTABLE BARRIER AND TEMPORARY MARKINGS ALONG IR-77SB ROADWAY
3. SHIFT TWO IR-77SB LANES TO THE OUTSIDE ONTO EXISTING & TEMPORARY PAVEMENT CONSTRUCTED IN PRE-PHASE
4. PLACE PORTABLE BARRIER AND TEMPORARY MARKINGS ALONG IR-77NB ROADWAY
5. SHIFT TWO IR-77NB LANES TO THE OUTSIDE ONTO EXISTING & TEMPORARY PAVEMENT CONSTRUCTED IN PRE-PHASE

PHASE 2

WORK TO BE COMPLETED IN THIS PHASE IS AS FOLLOWS:

- 1. CONSTRUCT OUTSIDE IMPROVEMENTS OF PROJECT BRIDGE (SUM-77-32.27L) ALONG IR-77SB
2. CONSTRUCT OUTSIDE ROADWAY IMPROVEMENTS ALONG IR-77SB NORTH OF BRIDGE (SUM-77-32.27L) TO NORTHERN PROJECT LIMITS
3. CONSTRUCT RAMP IMPROVEMENTS ALONG SR 21 TO IR-77SB RAMP
4. CONSTRUCT TEMPORARY PAVEMENT ALONG OUTSIDE SHOULDER OF IR-77NB FOR USE IN PHASE 3
5. THIS PHASE SHALL BE COMPLETED PRIOR TO 10/01/2023

MAINTAIN TRAFFIC AS FOLLOWS:

- 1. CONTINUE RAMP CLOSURE AND DETOUR OF SR 21 TO IR-77SB RAMP. OPEN RAMP TO TRAFFIC WHEN PHASE 2 WORK IS COMPLETE
2. PLACE PORTABLE BARRIER AND TEMPORARY MARKINGS ALONG IR-77SB ROADWAY
3. SHIFT TWO IR-77SB LANES TO THE INSIDE ONTO PAVEMENT BUILT IN PHASE 1
4. RETURN TWO IR-77NB TRAFFIC LANES TO PRECONSTRUCTION CONDITION (SPRAY THERMOPLASTIC MARKINGS)
5. MAINTAIN IR-77NB TRAFFIC USING MT-95.30 AND THE LATEST PERMITTED LANE CLOSURE SCHEDULE (PLCS) AVAILABLE FROM THE ODOT WEBSITE DURING CONSTRUCTION OF NORTHBOUND TEMPORARY PAVEMENT

SEQUENCE OF CONSTRUCTION (CONTINUED)

WINTER MOT CONDITIONS (SHEETS 34 - 36)

IT IS ANTICIPATED THAT END OF PHASE 2 WORK WILL COINCIDE WITH THE IMPLEMENTATION OF WINTER MOT TRAFFIC CONTROL

MAINTAIN TRAFFIC AS FOLLOWS:

- 1. REMOVE TEMPORARY TRAFFIC CONTROL FROM IR-77SB LANES AND INSTALL PHASE 3 MARKINGS (SPRAY THERMOPLASTIC MARKINGS)
2. KEEP IR-77NB LANES IN PHASE 2 CONFIGURATION
3. ITEM 621 RPMs SHALL BE USED

PHASE 3

WORK TO BE COMPLETED IN THIS PHASE IS AS FOLLOWS:

- 1. CONSTRUCT INSIDE ROADWAY IMPROVEMENTS ALONG IR-77NB NORTH OF BRIDGE (SUM-77-32.27R) TO NORTHERN PROJECT LIMITS

MAINTAIN TRAFFIC AS FOLLOWS:

- 1. PLACE PORTABLE BARRIER AND TEMPORARY MARKINGS ALONG IR-77NB ROADWAY
2. SHIFT TWO IR-77NB LANES TO THE OUTSIDE ONTO EXISTING & TEMPORARY PAVEMENT CONSTRUCTED IN PHASE 2

PHASE 4

WORK TO BE COMPLETED IN THIS PHASE IS AS FOLLOWS:

- 1. CONSTRUCT OUTSIDE IMPROVEMENTS OF PROJECT BRIDGE (SUM-77-32.27R) ALONG IR-77NB
2. CONSTRUCT OUTSIDE ROADWAY IMPROVEMENTS ALONG IR-77NB NORTH OF BRIDGE (SUM-77-32.27R) TO NORTHERN PROJECT LIMITS
3. THIS PHASE SHALL BE COMPLETED PRIOR TO 10/15/2024. FAILURE TO COMPLETE ON TIME WILL RESULT IN AN ASSESSMENT OF CMS 108.07

MAINTAIN TRAFFIC AS FOLLOWS:

- 1. PLACE PORTABLE BARRIER AND TEMPORARY MARKINGS ALONG IR-77NB ROADWAY
2. SHIFT TWO IR-77NB LANES TO THE INSIDE ONTO PAVEMENT BUILT IN PHASE 3

FINAL

WORK TO BE COMPLETED IN THIS PHASE IS AS FOLLOWS:

- 1. PLACE FINAL SURFACE COURSE THROUGHOUT PROJECT
2. COMPLETE INSTALLATION OF PERMANENT TRAFFIC CONTROL

MAINTAIN TRAFFIC AS FOLLOWS:

- 1. MAINTAIN TRAFFIC PER MT-99.20 USING THE LATEST PLCS GUIDELINES IN ACCORDANCE TO THE LANE VALUE CONTRACT TABLE ON SHEET 18

NOTE ON SEQUENCE OF CONSTRUCTION

THIS SEQUENCE OF CONSTRUCTION IS PHASED TO PRIORITIZE THE CONSTRUCTION OF THE SOUTHBOUND ROADWAY IMPROVEMENTS WITHOUT CONSIDERATION FOR THE NORTHBOUND DIRECTION.

HOWEVER, THE CONTRACTOR MAY CONSTRUCT THE MEDIAN IMPROVEMENTS AND WIDENING SHOWN IN PHASE 1 AND PHASE 3 CONCURRENTLY. THE CONTRACTOR SHALL COMMUNICATE TO THE ENGINEER WITH HIS INTENTION OF COMBINING THIS WORK AND RECEIVE THE APPROVAL OF THE ENGINEER.

IF PHASE 1 AND PHASE 3 WORK IS COMBINED, THE CONTRACTOR IS STILL REQUIRED TO MEET THE CONTRACTUAL MILESTONE DATE(S) FOR THE OPENING OF THE SOUTHBOUND IMPROVEMENTS.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE CHANGEABLE MESSAGE SIGN, THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCE OF 800 FEET AND 650 FEET RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO OF SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL [IN ACTIVE CELLULAR AREAS] ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.07. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (CONTINUED)

FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 30 SNMT (2 CLASS A PCMS SIGNS FOR 12 MONTHS / IR-77) (2 CLASS A PCMS SIGNS FOR 3 MONTHS / SR-21)

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08

THE FOLLOWING BID ITEM IS INCLUDED IN THE PLANS AND IS QUANTIFIED IN THE MOT SUBSUMMARY:

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

DRAINAGE DURING MOT IN ADDITION TO THE PROVISIONS IN CMS 105.14 AND CMS 614.02, THE CONTRACTOR MAY BE REQUIRED TO INSTALL TEMPORARY DRAINS/DRAINAGE TO ENSURE POSITIVE DRAINAGE DURING CONSTRUCTION WHILE THE PERMANENT DRAINAGE FACILITIES ARE BEING CONSTRUCTED. ALL WORK RELATED TO DRAINAGE DURING MOT, NOT ITEMIZED IN THE DRAINAGE PLANS, SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

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