PID 120775, MOT-75-1044/1078: QUANTITY CALCULATIONS

Calculated by: *Dan Grilliot, P.E., Date: 4/1/2025*

Checked by: *Lawton Gerlinger, P.E., Date: 4/29/2025*

Revised by: *Dan Grilliot, P.E., Date: 8/6/2025*

<u>Erosion Control</u>

1. *Item 832-Erosion Control (EA)*
   a. *Considered Maintenance Project: $1,000/bridge x 2 bridge = $2,000*

<u>Traffic Control</u>

2. Item 646-Edge Line, 6" (MILE)
   a. See Pavement Marking Plan Sheet subsummary for quantity.
   b. 0.44 mile (yellow)
   c. 0.44 mile (white)
   d. Total = 0.88 mile
3. Item 646-Lane Line, 6" (MILE)
   a. See Pavement Marking Plan Sheet subsummary for quantity.
   b. Total = 0.88 mile
4. Item 646-Channelizing Line, 12" (FT)
   a. See Pavement Marking Plan Sheet subsummary for quantity.
   b. Total = 247 ft.
5. Item 646-Dotted Line, 6" (FT)
   a. See Pavement Marking Plan Sheet subsummary for quantity.
   b. Total = 1076 ft.

<u>Structure Repair (MOT-75-1044)</u>

6. Item 858-Thin Polymer Epoxy Overlay, As Per Plan (SY)
   a. Area Measured from previous project deck replacement CADD files
   b. Lt. bridge (Southbound I-75) deck surface = 57333.12 sq. ft.
   c. Rt. bridge (Northbound I-75) deck surface = 53996.14 sq. ft.
   d. 3" up parapet wall
   e. Lt. bridge Lt. parapet length = 920.05 ft.
   f. Lt. bridge Median Parapet Length = 933.24 ft.
   g. Rt. bridge Median Parapet Length = 933.51 ft.
   h. Rt. bridge Rt. Parapet Length = 942.50 ft.
   i. Total parapet length = 3729.30 ft.
   j. Area 3" up parapet wall = 0.25 ft. x 3729.30 ft. = 932.33 sq. ft.

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      k.   Total overlay area = Lt. bridge deck surface + Rt. bridge deck surface + 3" up parapet wall = 57333.12 sq. ft. + 53996.14 sq. ft. + 932.33 sq. ft. = 112261.59 sq. ft. = 12474 sq. yd.

Structure Repair (MOT-75-1078)

7. Item 858-Thin Polymer Epoxy Overlay, As Per Plan (SY)
   a. Area Measured from previous project deck replacement CADD files
   b. Lt. bridge (Southbound I-75) deck surface = 11197.656 sq. ft.
   c. Rt. bridge (Northbound I-75) deck surface = 11186.8368 sq. ft.
   d. 3" up parapet wall
   e. Area 3" up parapet wall = 0.25 ft. x 206.63 ft. x 4 parapets = 206.63 sq. ft.
   f. Total overlay area = Lt. bridge deck surface + Rt. bridge deck surface + 3" up parapet wall = 11197.656 sq. ft. + 11186.8368 sq. ft. + 206.63 sq. ft. = 22591.12 sq. ft. = 2510 sq. yd.

Maintenance of Traffic

8. Item 614-Law Enforcement Officer with Patrol Car For Assistance (HOUR)
   a. MOT-75-1044 Phase 1 (NB inside) = 2535 sq. yd. / (avg. 780 sq. yd./night) = 4 nights x (12 hr./night) = 48 hr.
   b. MOT-75-1044 Phase 2 (NB Outside) = 3517 sq. yd. / (avg. 780 sq. yd./night) = 5 nights x (12 hr./night) = 60 hr.
   c. MOT-75-1044 Phase 3 (SB Inside) = 2530 sq. yd. / (avg. 780 sq. yd./night) = 4 nights x (12 hr./night) = 48 hr.
   d. MOT-75-1044 Phase 4 (SB Outside) = 3892 sq. yd. / (avg. 780 sq. yd./night) = 5 nights x (12 hr./night) = 60 hr.
   e. MOT-75-1078 Phase 1 (NB inside) = 560 sq. yd. / (avg. 780 sq. yd./night) = 1 night x (12 hr./night) = 12 hr.
   f. MOT-75-1078 Phase 2 (NB Outside) = 694 sq. yd. / (avg. 780 sq. yd./night) = 1 night x (12 hr./night) = 12 hr.
   g. MOT-75-1078 Phase 3 (SB Inside) = 605 sq. yd. / (avg. 780 sq. yd./night) = 1 night x (12 hr./night) = 12 hr.
   h. MOT-75-1078 Phase 4 (SB Outside) = 651 sq. yd. / (avg. 780 sq. yd./night) = 1 night x (12 hr./night) = 12 hr.
   i. Total = 264 hr. will round to a Total = 300 hr.
9. Item 614-Portable Changeable Message Sign, As Per Plan
   a. 4 PCMS signs for 1 month
   b. Total = 4 sign months
10. Item 614-Work Zone Lane Line, Class I, 6", 740.06, Type I
    a. See Pavement Marking Plan Sheet subsummary for quantity.
    b. Total = 0.88 mile
11. Item 614-Work Zone Edge Line, Class I, 6", 740.06, Type I
    a. See Pavement Marking Plan Sheet subsummary for quantity.
    b. 0.44 mile (yellow)
    c. 0.44 mile (white)
    d. Total = 0.88 mile
12. Item 614-Work Zone Channelizing Line, Class I, 12", 740.06, Type I
    a. See Pavement Marking Plan Sheet subsummary for quantity.
    b. Total = 247 ft.
13. Item 614-Work Zone Dotted Line, Class I, 6", 740.06, Type I
    a. See Pavement Marking Plan Sheet subsummary for quantity.
    b. Total = 1076 ft.

<u>Incidentals</u>

14. Item 614-Maintaining Traffic (LS)
    a. Lump Sum (LS)
15. Item 624-Mobilization (LS)
    a. Lump Sum (LS)

END OF CALCULATIONS