OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

ADDENDUM NO. 1

PROJECT NO. 43-18-04
BRIDGE DECK REPLACEMENT AND REHABILITATION
OHIO TURNPIKE OVER WHEELING & LAKE ERIE RAILWAY, M.P. 186.0,
INTERSTATE ROUTE 480 EASTBOUND OVER OHIO TURNPIKE, M.P. 186.8,
PORTAGE COUNTY, OHIO

BID OPENING:
EXTENDED TO 2:00 P.M. (EASTERN TIME), JANUARY 25 ~~18~~, 2018

ALL BIDS MUST BE ELECTRONICALLY SUBMITTED THROUGH BID EXPRESS

ATTENTION OF BIDDERS IS DIRECTED TO:

QUESTIONS AND ANSWERS THROUGH 4:00 PM ON JANUARY 10, 2018
-AND-
EXTENSION OF THE BID OPENING TO JANUARY 25, 2018
-AND-
DRAWINGS: ORIGINAL CONSTRUCTION, 1987 REHABILITATION,
1997 THIRD LANE EXPANSION PLANS, AND 1995 RECONSTRUCTION PLANS

MODIFICATIONS TO THE CONTRACT DOCUMENTS:

REVISED PLAN SHEETS 1, 2, 3, 8, 9, 55, 73 AND 105
-AND-
REVISION TO THE BID SCHEDULE OF ITEM REF. NO. 33, 63, 76, 78, AND 79
-AND-
SPECIAL PROVISIONS SP 103, SP 511B, AND SP 827E
-AND-
ODOT STANDARD CONSTRUCTION DRAWING PCB-91 DATED 1-18-13

Issued by the Ohio Turnpike and Infrastructure Commission on January 10, 2018. Issuance authorized by Anthony D. Yacobucci, Chief Engineer, and Mark R. Musson, Director of Contracts Administration.

Anthony D. Yacobucci 1-10-18
Anthony D. Yacobucci Date

Mark R. Musson 1/10/18
Mark R. Musson Date

QUESTIONS AND ANSWERS THROUGH 4:00PM ON JANUARY 10, 2018

Q#1 Please extend 2019 substantial completion to October 1, 2019 and bump up the 2019 construction access milestone to April 1, 2019. The compression of the 2019 construction work to 131 days, as indicated in SP103, is not achievable.

A#1 Through this Addendum No. 1, the Substantial and Final Completion Dates have been revised in SP 103 to October 1, 2019 and November 1, 2019, respectively. In addition, the Winter Time Limitation Note on Plan Sheet 8 of 113 has been revised to incorporate the same. The 2019 Construction Access Milestone will not be changed due to anticipated 2019 Easter Holiday traffic. A revised SP 103 and Plan Sheet 8 of 113 are provided as part of this Addendum No. 1.

Q#2 Please set-up a bid item for Item Special Fill and Plug Existing Conduits in lieu of including it in SP 614 as indicated on plan sheet 5

A#2 The details, notes and pay items for the construction and restoration of the Temporary Cross Over are similar for all Turnpike Projects, and depicted accordingly within the Contract Documents. The quantities are obtainable from the Contract Documents and, as indicated in the plan note on Plan Sheet 5 of 113, the cost for these items are to be incorporated into the unit price for Item SP 614, Maintaining Traffic.

Q#3 Please set-up bid items for the drainage items needed for maintenance of traffic and remove note on page 5. i.e. 12" conduit, slotted drain, catch basins, catch basin removed.

A#3 The details, notes and pay items for the construction and restoration of the Temporary Cross Over are similar for all Turnpike Projects, and depicted accordingly within the Contract Documents. The quantities are obtainable from the Contract Documents and, as indicated in the plan note on Plan Sheet 5 of 113, the cost for these items are to be incorporated into the unit price for Item SP 614, Maintaining Traffic.

Q#4 Please set-up bid items for Concrete Barrier, Type B-50 removal and replacement and remove note on page 5

A#4 The details, notes and pay items for the construction and restoration of the Temporary Cross Over are similar for all Turnpike Projects, and depicted accordingly

within the Contract Documents. The quantities are obtainable from the Contract Documents and, as indicated in the plan note on Plan Sheet 5 of 113, the cost for these items are to be incorporated into the unit price for Item SP 614, Maintaining Traffic.

Q#5 Please add bid items for all Work Zone Pavement Markings and remove note C on page 6/113.

A#5 This question will be answered in Addendum No. 2. It is anticipated that additional Pay Items and estimated quantities will be incorporated into the Contract Documents through Addendum No. 2.

Q#6 Please confirm all pavement marking removals both existing and temporary that conflict with the proposed phasing are include in the quantity under reference number 65.

A#6 The quantity under Reference Number 65, Item SP 614C - Removal of Pavement Marking (10.23 Mile) is only for the removal of existing pavement markings on the Ohio Turnpike and does not include the removal of Work Zone Pavement Markings. This question will be answered further in Addendum No. 2. It is anticipated that additional Pay Items and estimated quantities will be incorporated into the Contract Documents through Addendum No. 2.

Q#7 Please add bid items for temporary guardrail and end terminal assemblies and remove note D on page 6/113.

A#7 This question will be answered in Addendum No. 2. It is anticipated that additional Pay Items and estimated quantities will be incorporated into the Contract Documents through Addendum No. 2.

Q#8 Please add bid items for guardrail delineation and remove note E on page 6/113.

A#8 This question will be answered in Addendum No. 2. It is anticipated that additional Pay Items and estimated quantities will be incorporated into the Contract Documents through Addendum No. 2.

Q#9 Please add bid items for Work Zone Delineation and remove note I on page 6/113.

A#9 This question will be answered in Addendum No. 2. It is anticipated that additional Pay Items and estimated quantities will be incorporated into the Contract Documents through Addendum No. 2.

Q#10 The bid quantity for LEO's is seriously understated for the activities requiring them, as detailed on plan page 8. Please increase by 500%.

A#10 The requirements for the use of a LEO has been revised on Plan Sheet 8 of 113, which does not require the quantity to be revised. A revised Plan Sheet 8 of 113 is provided as part of this Addendum No. 1.

Q#11 The "WINTER TIME LIMITATIONS" on plan sheet 8 do not agree with SP103 of the contract documents. Please clarify.

A#11 The Winter Time Limitation note on Plan Sheet 8 of 113 has been revised. Please see response to Q#1 for additional information. A revised Plan Sheet 8 of 113 is provided as part of this Addendum No. 1.

Q#12 The payment scenario for PCMS as detailed on plan sheet 9 is unreasonable. 3 PCMS are required to be available "near the project site" for 2 seasons. If the PCMS's are only minimally utilized, the payment for them won't cover the costs to have them available for 2 seasons. Please revert back to CMS 614.15 for method of measurement.

A#12 We concur that Item 614, Portable Changeable Message Sign quantity is underestimated. This Addendum No. 1 revises Ref. No. 63: Item 614, Portable Changeable Message Sign, As Per Plan quantity to 28 Sign Month on Plan Sheet Nos. 3 and 9 of 113, the Bid Schedule of Estimated Quantities and the Estimated Quantity Worksheet.

Q#13 Please itemize separately and set-up bid items for all items of work required for median restoration and remove note 7 on page 13/113.

A#13 The details, notes and pay items for the construction and restoration of the Temporary Cross Over are similar for all Turnpike Projects, and depicted accordingly within the Contract Documents. The quantities are obtainable from the Contract Documents and, as indicated in the plan note on Plan Sheet 5 of 113, the cost for these items are to be incorporated into the unit price for Item SP 614, Maintaining Traffic.

Q#14 Please remove the "Erosion Control" note on page 73/113.

A#14 The Erosion Control Note on Plan Sheet 73 of 113 is applicable, but to clarify the intent of erosion control associated with MP 186.8, the Erosion Control Note is modified on Plan Sheet 73 of 113 through this Addendum No. 1 as follows:

"The intent of the project is not to disturb any seeded areas and/or drainage elements, except as indicated on the MP 186.8 Roadway Plans. Any work involving seeded areas, drainage elements or erosion control shall be considered incidental to the project cost and shall be repaired/protected as directed by the engineer.

All labor, materials, equipment and incidentals necessary to complete the work, including implementing erosion control measures in accordance with Ohio Department of Transportation Supplemental Specification 832 for the above stated MP 186.8 work, shall be considered incidental to the project and no additional compensation shall be granted."

A revised Plan Sheet 73 of 113 is provided as part of this Addendum No. 1.

Q#15 Please make available the existing structure drawings electronically.

A#15 For the MP 186.0 Bridge, The Original Construction Plans, the 1987 Rehabilitation Plans and the 1997 Third Lane Plans are provided with this Addendum No. 1.

For the MP 186.8 Bridge, the 1995 Reconstruction Plans provided with this Addendum No. 1.

Q#16 Please clarify who is paying the RR flagging costs. SP 827E Section A8 starts by indicating the contractor is paying but paragraphs 9 and 10 indicate OTC is? Later in section B6C1 it indicate the contractor is responsible for paying the RR flagging cost but section B6C2 indicates the Department will be charged? If the Contractor is to cover the RR flagging costs please add a bid item for this expense.

A#16 The Contractor shall be responsible for payment of all required railroad flagging costs. The cost of railroad flagging and obtaining the railroad permit shall be incidental to the project and no additional compensation shall be granted. SP 827E, Paragraph B6C2, has been revised to change the reference from "DEPARTMENT" to "CONTRACTOR." A revised SP 827E is provided as part of this Addendum No. 1.

Q#17 Please provide a detailed drawing of where the 600' of temporary fence (7' chain link with specials) and the 600' of 32" PCB (w/o glare screen) per the note on page 105/113, is to be utilized.

A#17 The quantities for SP 607, Temporary Fence (7' Chain Link With Specials) and SP 622, 32" Portable Barrier (Without Glare Screen) as noted on Plan Sheet 105 of 113 were estimated to comply with Railroad requirements and SP 827E. The actual paid quantities shall be based on the contractor's means and methods to comply with the Railroad's permitting requirements and SP 827E.

Q#18 Please provide the quantity calculations for references 76, 78, and 79. Based on plan pages 11 through 71 I'm coming up with much different numbers for the phase that has the most PCB per structure. Phase 3 for 186.8 requires 560' yet the quantity for reference 76 is 5,420'? Phase 1 for 186.0 requires 5290 plus the 300 reserve = 5590' yet the quantity for reference number 78 is 1440'? Phase 2 for 186.0 requires 1965' plus a reserve of 300' = 2,265' yet the quantity for reference 79 is 2360'? Please provide clarification.

A#18 Quantity calculations are not available. The quantities have been reviewed and are modified in the General Summary on Plan Sheet 3 of 113, the Bid Schedule of Estimated Quantities and the Estimated Quantity Worksheet through this Addendum No. 1. The revised totals are as follows:

Ref. No. 76: Item 622, Portable Barrier, 32", As Per Plan – 4,260 feet
Ref. No. 78: Item SP 622, 32" Portable Barrier (Without Glare Screen) – 5,600 feet
Ref. No. 79: Item SP 622, 32" Portable Barrier (with Glare Screen) – 2,270 feet

Q#19 I also would like to request the PCB method of measurement be changed to comply with ODOT CMS 622.08 and the bid quantities be adjusted accordingly.

A#19 The PCB method of measurement will not be changed.

Q#20 Please provide as-built/record bridge drawings for MP 186.0 and MP 186.8

A#20 See response to Q#15.

Q#21 Please clarify lane restriction durations allowed at MP 186.8 to perform bridge rehab work on 480 Eastbound over Ohio Turnpike. SP103.D defines substantial completion as all lanes and shoulders open to traffic by October 1, 2018. Additionally, plan note on sheet 5/113 states "the duration of time that the width of the eastbound travel lanes are reduced to 10'-6" shall be restricted

to 120 calendar days per phase". However, on plan sheet 8/113 under Winter Shutdown Time Limitations it states "all work described in the preceding temporary traffic control notes; and all existing lanes, including ramps, shall be open and available to traffic in the original or proposed alignment between September 2, 2018 and April 22, 2019. Should the contractor fail to meet these requirements, a disincentive shall be accessed in the amount of $50 per minute".

A#21 Through this Addendum No. 1, the note on Plan Sheet 8 of 113 is revised to specify that the construction season end date is for "Substantial Completion", the Season One Substantial Completion Date is October 1, 2018, and all work described in the preceding temporary traffic control notes; and all existing lanes, including ramps, shall be open and available to traffic in the original or proposed alignment between October 2, 2018 and April 22, 2019. The disincentive language has been revised to be consistent with SP 104. A revised Plan Sheet 8 of 113 is provided as part of this Addendum No. 1.

Q#22 Under SP511B.M(Pre-Placement Meeting), it states "Prior to the pre-placement meeting, the Contractor shall provide test data which indicates the proposed mix will perform in accordance with the expansive limits established by the Contract and the approved mix design". Please provide Contract expansive limit requirements.

A#22 Through this Addendum No. 1, SP 511B has been revised to remove the requirement to provide test data relative to the expansive limits of the mix. A revised SP 511B is provided as part of this Addendum No. 1.

Q#23 Will the Turnpike consider waiving SP202.B.2 longitudinal sawcut restriction of one and one-half (1-1/2) inches maximum depth due to MP 186.8 phase 2 and phase 3 construction phased joint occurring over top beam K top flange.

A#23 This request will not be considered.

Q#24 Please clarify how work zone pavement marking removal and work zone pavement markings are being paid for on the Project. Plan sheet 4/113 IV. Maintenance of Traffic Materials.C provides a pay item SP614C- removal of pavement markings....10.23 Mile, and further states work zone pavement markings shall be installed by the contractor as per CMS 614 or per SP614B, Respectfully. However, the next paragraph states "payment for work zone pavement markings including removals, shall be included in item SP614, maintaining traffic and shall include all labor, materials, tolls, equipment, and incidentals necessary to *remove* conflicting markings, install work zone

markings, maintain and replace damaged work zone markings, and remove work zone markings when no longer applicable".

A#24 See response to Q#6.

Q#25 Please provide the design engineers quantity calculations for both the roadway items and the structure items.

A#25 Calculations will not be provided.

Q#26 Please provide some "Typical Sections of I.R. 480 both up station and down station of the bridge that details the temporary pavement at various stations.

A#26 The requirements for the temporary pavement are provided in the Item 615 – Pavement for Maintaining Traffic, Class A, As Per Plan note on Plan Sheet 7 of 113.

Q#27 Please provide typical sections showing the resurfacing and full depth pavement areas for all locations.

A#27 Plan Sheet 105 of 113 has been revised to include the requirements for the pavement section to be provided. A revised Plan Sheet 105 of 113 is provided as part of this Addendum No. 1.

Q#28 Ref.#33 indicates SP 404 but the description used is for an intermediate course (SP 402), additionally there is no indication on where this material is to be used.

A#28 Reference No. 33, SP 404, Asphalt Concrete Base Course or Recycled Asphalt Concrete Base Course, PG70-22 has been changed to SP 402, Asphalt Concrete Intermediate Course, PG70-22 on Plan Sheet 2 of 113, the Bid Schedule of Estimated Quantities and the Estimated Quantity Worksheet. This material is to be used for the resurfacing of the travel lanes and will extend 1' into the inside and outside shoulders. This Addendum No. 1 revises Plan Sheet 2 of 113, the Bid Schedule of Estimated Quantities and the Estimated Quantity Worksheet and are provided as part of this Addendum No. 1.

Q#29 Can the calculations be provided?

A#29 Calculations will not be provided.

Q#30 Please provide typical sections for the temporary pavement item.

A#30 See response to Q#26.

Q#31 Plan note 4. on sheet 55/113 states that "payment for installation of the slotted drain shall be included in Item 615, pavement for maintaining traffic, Class A, As per plan. Per plan sheet 3/113, Pavement for maintaining traffic, Class A, as per plan(Ref#67) only has a quantity for MP 186.8 and it is associated with the work on I-480 for the shoulder reconstruction. Should there be additional quantity added to general summary for MP 186.0?

A#31 Payment for installation of the slotted drain shall be included in Item SP 614, Maintaining Traffic, as stated in the note entitled "Drainage Items for Maintenance of Traffic" on Plan Sheet 5 of 113. Plan note 4 on Plan Sheet 55 of 113 has been revised and is provided as part of this Addendum No. 1. An additional quantity of Item 615, Pavement for Maintaining Traffic, Class A, As Per Plan for MP 186.0 is not required.

Q#32 Please provide "typical section" and "maintenance of traffic plan" drawings for Phase 1 of M.P. 186.8.

A#32 This question will be answered in Addendum No. 2.

Q#33 Ref. 47 Temporary Fence (7'-0" Chain Link with Specials). There is no reference to this item in the plans.

A#33 Please reference SP 827E and the SP 827E Wheeling and Lake Erie Railway Requirements note on Plan Sheet 105 of 113 for clarification. Also, see response to Q#17 for additional clarification.

Q#34 Can existing falsework material under MP 186.8 be utilized on the Project, and does the existing falsework material in place meet SP527 specification requirements. Furthermore, upon completion of the Project, who takes ownership of the material?

A#34 This question will be answered in Addendum No. 2.

Q#35 Per plan sheet 60/113 and 61/113, Portable barrier, bridge mounted gets (6) anchors per segment. Please provide anchorage requirements and how to handle potential conflict with existing reinforcing steel in bridge deck.

A#35 This question will be answered in Addendum No. 2.

Q#36 Regarding phased construction joint occurring over beam 'K' on MP186.8 and live traffic being maintained adjacent to beam 'K' during phased construction, has OTIC verified that during the demolition operations, the existing structure will be stable and the adjacent concrete span that will maintain traffic will not deflect significantly to infringe upon the existing 14'-6" vertical clearance? Furthermore, has OTIC verified that the existing concrete deck with 6" width bearing on beam 'k' will be stable with live traffic being maintained and with bridge mounted barrier wall drilled into the existing slab adjacent to beam 'K'?

A#36 This question will be answered in Addendum No. 2.

Q#37 Has OTIC looked into Frost Road ongoing construction Project 170066 that will be ongoing through September 2018 and will require ongoing lane closures on 480, and how it will affect MP 186.8 phase construction work? Currently, barrier wall is in place and in conflict with where MP 186.8 temporary pavement widening begins.

A#37 We are aware of ODOT's Project. This question will be answered in Addendum No. 2.

Receipt of Addendum No. 1
Project No. 43-18-04 is hereby acknowledged:

(Firm Name) _____

(Signature) _____

(Printed Name) _____

(Date) _____

BIDDERS MUST RETURN THE ABOVE ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUM NO. 1 WITH THEIR BID.

SP 103 CONSTRUCTION PHASING AND TIME OF COMPLETION

(12/06/2017)

The Work shall be performed and completed in its entirely in strict accordance with the Plans, Specifications, Special Provisions and other Contract Documents as follows:

2018 CONSTRUCTION SEASON

A. Notice to Proceed (NTP): The Commission will issue the Contractor the Notice to Proceed (NTP) by the Chief Engineer after the Contract is fully executed. Upon receipt of the NTP, the Contractor shall begin performance of preliminary investigations and survey layout work, as approved by the Chief Engineer, and preparation of the Construction Schedule, Shop Drawings and submittals for this Project.

B. Baseline Construction Schedule: The Baseline Construction Schedule for this Project shall be submitted and acceptable prior to the Contractor performing the Work in accordance with General Condition Articles 4.2 and 4.3 and SP 120A or SP 120B. Liquidated damages for failure to submit an acceptable Construction Schedule shall commence on the day the Contractor begins to perform the Work described in General Conditions Article 4.2.4.2. Mobilization on the site shall signify beginning of the Work.

C. 2018 Construction Access: The Commission anticipates providing the Contractor access to the Turnpike on or about **April 3, 2018** at which time the Contractor may begin the Work for this Project.

D. 2018 Substantial Completion Interim Milestone: The 2018 Substantial Completion Interim Milestone shall be defined as completing all Contract Work on the Westbound bridge at MP 186.0 and at the bridge at MP 186.8 and having all traffic lanes and shoulders open to traffic in all directions including all traffic control and safety devices in place and approved by the Chief Engineer **by October 1, 2018**. Liquidated damages for failure to complete this Interim Milestone as described shall commence **on October 2, 2018**.

E. Winter Temporary Shutdown Period: The Contractor shall anticipate a Temporary Shutdown period commencing on **November 17, 2018** and continuing through **April 22, 2019** at which time no access should be anticipated for the Work nor shall any restrictions to traffic on any Turnpike traffic lanes or shoulders be in place.

2019 CONSTRUCTION SEASON

F. 2019 Construction Recommencement: The 2019 Construction Recommencement Milestone shall be defined as **April 23, 2019**, when the Contractor has discontinued the Winter Temporary Shutdown Period and may recommence project operations. At this time, prior to the 2019 Construction Access Milestone, the Contractor may only perform the required preliminary investigations and survey layout work, as approved by the Chief Engineer, and preparation of the Construction Schedule, Shop Drawings and submittals for this Project.

G. Baseline Construction Schedule: The Baseline Construction Schedule for the 2019 Construction Season of this Project shall be submitted and acceptable, in accordance with General Condition Articles 4.2 and 4.3 and SP 120A, prior to the Contractor performing the Work. Liquidated damages for failure to submit an acceptable

Construction Schedule shall commence on the day the Contractor begins to perform the Work described in General Conditions Article 4.2.4.2.

H. 2019 Construction Access Milestone: The 2019 Construction Access Milestone shall be defined as the time when the Contractor is provided access to begin the work on the Eastbound bridge located at MP 186.0 which shall be **April 23, 2019**.

I. Substantial Completion: Substantial Completion shall be defined as all Work for this Contract shall be completed and all traffic lanes and shoulders shall be open to Turnpike traffic including all traffic control and safety devices in place and approved by the Chief Engineer by ~~**September 1**~~ ***October 1*****, 2019**. Liquidated Damages for failure to complete the Work shall commence on ~~**September 2**~~ ***October 2*****, 2019**.

J. Final Completion: All Punch List items for this Project shall be completed in strict accordance with the Plans, Specifications, Special Provisions, and other Contract Documents **by** ~~**October 1**~~ ***November 1*****, 2019**. Liquidated damages for failure to meet the Final Completion Date shall commence **on** ~~**October 2**~~ ***November 2*****, 2019**.

It shall be noted that in order to meet the above referenced dates, the Contractor may be required to Work additional shifts and/or extended hours as well as periodic holidays and weekends. These additional forces shall be included in their Bid and there shall be no additional cost to the Commission.

SP 511B CLASS HP4 CONCRETE, FOR SUPERSTRUCTURES

(01/09/2018)

A. Description

This item shall consist of furnishing and placing Class HP4 concrete for the bridge superstructure, abutment slab and sidewalk, and Portland cement concrete using Type I cement for all parapets, in accordance with these Specifications, and in reasonably close conformity with the lines, grades, and dimensions shown on the Plans. All applicable provisions of Item 511 of the Specifications shall apply except as modified herein.

B. Materials

The cement for parapets shall conform to Section 701.04 (Type I) of the Specifications.

Admixtures used in the concrete mixture must be compatible and shall be dispensed in accordance with the manufacturer's recommendations. Admixtures shall be obtained from a single source. In all cases, admixtures shall be tested in trial mixtures with project materials and proportions under simulated ambient conditions.

The 703.02 coarse aggregate shall be crushed carbonate stone, and 703.02 fine aggregate shall be natural sand.

Adequate quantities of all materials, sufficient to complete the proposed pour, shall be on hand at the batch plant prior to all pours.

Course aggregate stockpiles shall be saturated. Saturation shall be completed a minimum of twenty-four (24) hours prior to use; however, the application of water by sprinkling shall continue as directed by the Chief Engineer.

C. Proportions

The following quantities per Cubic Yard shall be used:

Aggregate Type	Fine Aggregate (lb)	#8 Coarse Aggregate (lb)	#57 Coarse Aggregate (lb)	Total (lb)	Cement Content (lb)	GGBF Slag (lb)	Micro-silica (lb)	Water to Cement-itious Ratio +/- 0.02
Gravel	1245	360	1315	2920	400	170	30	0.42
Limestone	1245	360	1335	2940	400	170	30	0.42
Slag	1245	315	1155	2715	400	170	30	0.42

All coarse aggregate shall have an absorption of 1.00% or greater as defined per ASTM C127. The weights specified in the table were calculated for materials of the following bulk specific gravities (SSD): natural sand and gravel 2.62, limestone sand 2.68, limestone 2.65, slag 2.30, fly ash 2.65, GGBF slag 2.90, Microsilica solids 2.20, and Portland cement 3.15. For aggregates of specific gravities differing more than plus or minus 0.02 from these, the weights in the table shall be corrected.

D. Slump

Provide a maximum concrete slump of 8 inches at the placement site for Class HP4 concrete (if pumped - at the end of the pump line). Concrete using Type I cement shall conform to Section 499.03 of the Specifications.

E. Entrained Air

Class HP4 concrete shall contain seven (7) +/- two (2) percent of entrained air at the time and place of concrete placement (if pumped - at the end of the pump line). Concrete using Type I cement shall contain six (6) +/- two (2) percent of entrained air at the time and place of concrete placement.

F. Concrete Delivery

On the day of the placement, the Contractor shall perform a “refresher” placement meeting to be attended by the complete work crew involved in the concrete placement to review the procedures for the concrete placement as outlined at the Pre-Placement meeting. The Chief Engineer and/or its representatives shall be present at this meeting. At the conclusion of the “refresher” meeting, the Chief Engineer will contact the ready-mix plant to approve release of the concrete for placement. No concrete will be accepted on-site without the Chief Engineer’s release. The ready-mix plant dispatcher is to document the name of the Chief Engineer or its representative and the time of the release on the initial batch slip.

G. Placing Concrete

The Contractor shall submit, for approval, the method of placing concrete and the location of all equipment. The Contractor shall have a representative of the concrete supplier on the Project site at each placement. If concrete is to be placed by pumping, a spare or backup pumper shall be required. Spare or backup vibrator, generator, water pump, extension cord, and any other equipment required to place concrete shall be required.

The Contractor shall designate an individual who will be responsible for the entire operation of the pour and make that person known to the inspectors and testing lab.

Prior to any concrete being placed, it shall be tested for slump and air upon arrival at the site, and at the point of placement (end of pump line if used). The first three (3) truckloads, at a minimum, shall be tested in this manner to establish consistency and amount of slump and air loss, permitting batching out of specification to ensure specification concrete at the point of placement. After consistency is established, each load of concrete will continue to be tested for slump and air but only at the point of placement. Any concrete placed without this testing is subject to removal.

Prior to placing concrete, the forms and rebar must be cleaned of all mud, dirt, loose tie wires, ceramic stud welding disks, and debris. Throughout the concrete placement, the forms and rebar must be kept clean by a constant effort of the Contractor. No debris, including cigarette butts, dried concrete, mud, etc., shall be deposited in the placement area.

Tie wire must be installed in such a manner that concrete cover on the tie wire is the same as concrete cover on rebar.

All superstructure concrete required for side road or ramp structures over the Turnpike shall be placed from the local road or ramp. Pumping of the concrete from Turnpike roadways will not be permitted unless specifically approved by the Chief Engineer. Concrete pumpers shall be set up in such a manner as to prevent excess free fall of concrete in the pump lines. If the flow of concrete through the pumper hose is stopped, the end of the hose shall be buried in the concrete to prevent the hose from emptying. Pumpers shall be repositioned if so directed by the Chief Engineer to prevent excess free fall. Pumpers, booms and pump lines must never be directly over Turnpike roadway.

Full four feet (4') by eight feet (8') plywood sheets shall be placed under pump lines to protect epoxy coating and ties on rebar. Metal pump lines and pump line couplings must never come in contact with rebar. Double tying of rebar under plywood sheets to prevent slippage of rebar shall be required.

The deck formwork, beam flanges, abutment subgrade, and reinforcing shall be thoroughly sprinkled prior to placement of the concrete.

Cleaning of hand tools by banging or tapping on the rebar is prohibited.

Decks and slabs shall be given a fog spray of water when the rate of evaporation exceeds 0.2 lb./sq. ft./hour (ACI 308 section 1.2.1). Fogging shall continue until the wet burlap is placed. Fog misting is to keep the environment surrounding the concrete humid to prevent excessive evaporation from the surface of unhardened concrete. Fog misting shall not be used to apply water to the surface of the concrete to facilitate lubrication for finishing purposes. Fogging equipment shall have water pressure systems rated at 2400 p.s.i. or greater and discharge approximately two (2) to three (3) gallons per minute. Wide angle and sharp angle nozzles shall be used for low wind and windy conditions, respectively.

The Contractor shall protect the Turnpike traffic from splashing concrete, falling debris, and dripping water, at all times, in accordance with Special Provision SP 527 – "Falsework, Temporary Bracing and Protective Structures". Also, in accordance with SP 527, the Contractor shall provide plastic sheeting or other approved material to control water used for concrete placing and curing from falling on Turnpike roadways.

H. Curing and Loading – General

Storage tanks for curing water shall be on site and filled before a placement will be permitted to start. Storage tanks shall remain on site throughout the entire cure period. They shall be replenished, as required, with a shuttle tanker truck or a local water source such as a fire hydrant. Care shall be taken to avoid thermal shock or excessively steep thermal gradients due to the use of cold curing water. Curing water shall not be more than twenty (20)^{o} F cooler than the concrete, because of surface temperature stresses which could cause cracking.

In no case shall the curing time be less than seven (7) days.

The Contractor shall protect the Turnpike traffic from dripping or streams of cure water in accordance with SP 527.

I. Curing – Concrete Decks, Abutment Slabs and Sidewalks

Concrete decks shall be cured by 511.14 Method A, Water Curing followed by Method B, Membrane.

J. Curing – Parapets

Concrete parapets shall be cured by 511.14 Method B, Membrane utilizing ChemMasters Silencure–A or an equivalent equal.

K. Curing and Loading – All Other Concrete

All other concrete shall be cured by 511.14 Method A, Water Curing.

L. Surface Finish

All exposed surfaces of the parapets shall be rubbed and brushed immediately after the concrete has obtained its initial set, enough to remove the forms without damaging the freshly poured concrete. Immediately after the parapets are rubbed they shall have the membrane sealer applied as required in Section J.

All exposed surfaces of the parapets, and vertical faces of deck edges shall have a rubbed finish in accordance with Section 511.15 of the Specifications.

Finishing aids, including monomolecular films, will not be permitted.

M. Pre-Placement Meeting

A pre-placement meeting shall be scheduled after review of the Contractor's submitted placement procedures and prior to each major placement. Prior to the pre-placement meeting, the Contractor shall provide test data with cylinder breaks at seven (7) and twenty-eight (28) days to indicate the proposed mix will achieve the specified strength requirements. The testing shall be performed by a laboratory approved by the manufacturer of the cement and admixture.

N. Pre-Placement Testing

In coordination with the Chief Engineer and the Testing Lab, the supplier shall batch a minimum of four (4) cubic yards of Class HP4 concrete, to be used for pre-placement laboratory testing and placing a test slab. The concrete shall be delivered to the job site or a location in close proximity to the job site to simulate job conditions, as directed by the Testing Lab and the Chief Engineer. In conjunction with the laboratory testing, the concrete shall be placed as a test slab in forms provided and installed by the Contractor on a base prepared by the Contractor as designated by the Chief Engineer. The test slab shall be a minimum of 20' x 10' x 6" unless otherwise directed by the Chief Engineer. The slab shall be cured in accordance with Sections H and I of this Special Provision. It shall then be used for testing the setup of the groove machine in accordance with Section P of this Special Provision. Then, at the direction of the Chief Engineer, the test slab shall be removed and disposed of offsite by the Contractor unless otherwise waived by the Chief Engineer. The cost for complying with this requirement shall be in accordance with "Basis of Payment."

Slump, air, and temperature shall be checked upon arrival at the site and twenty (20) minutes after site arrival. As directed by the Testing Lab, additional four (4) cubic yard batches shall be provided by the supplier until the concrete meets slump, air, and temperature requirements.

O. Concrete Test Specimens

On all structures, six (6) test cylinders will be made from each fifty (50) cubic yards, or fraction thereof, of concrete that is incorporated into the Work.

From the six (6) test cylinders, a seven (7) day compressive strength shall be determined from one (1) cylinder. At twenty-eight (28) days, three (3) cylinders are to be tested and the average compressive strength recorded and defined as the "strength test." One (1) cylinder shall be held in reserve as a spare.

The remaining cylinders shall be used for determining when silane surface treatment may be applied to the new concrete surfaces in accordance with the requirements of SP 536.

When necessary, to permit early removal of falsework or opening to traffic of six (6) tons or less, concrete test beams shall be made and tested according to standard methods. Adequate beams shall be made in order to obtain an average modulus of rupture as required by Section 511.14 of the Specifications.

Methods of sampling, curing and testing concrete test specimens shall be in accordance with the "American Society for Testing Materials," applicable sections. All beams and cylinders shall be field cured in the same manner as the concrete it represents.

Responsibility of Contractor - To facilitate testing and inspection the Contractor shall:

1. Furnish any necessary labor to assist the designated testing agency in obtaining and handling samples at the Project, including, but not limited to, wheelbarrows, plywood runway, etc.

2. Wooden cure boxes shall be provided and maintained by the Contractor, for the sole use of the testing agency, unless other methods are specifically approved by the Chief Engineer, for safe storage and proper curing of concrete test specimens on the Project site for the first twenty-four (24) hours as required by "Method of Making and Curing Concrete Test Specimens in the Field" (ASTM C31).

No separate payment will be made to the Contractor for testing and/or sampling and any associated work will be considered incidental to the associated pay item.

Concrete used for slump and air tests, and excess concrete removed from the placement stream for sampling shall not be returned to the placement but shall be discarded.

Acceptance of Concrete - The strength level of the concrete will be considered satisfactory so long as the "strength test" equals or exceeds the specified strength.

Test results failing to meet the above requirements will be the basis for determining replacement of the concrete at the expense of the Contractor or a proportionate credit to the Commission.

P. Bridge Deck Grooving

The provisions of 511.17 shall be followed, with the exception of the following: the test slab is to be used for testing the setup of the groove machine prior to commencement of the Bridge Deck Grooving on the deck slab. The surface of the deck slab, abutment slabs and approach slabs shall all be grooved. If necessary

to complete the required grooving, the Contractor shall utilize a hand held or walk behind unit.

Q. Method of Measurement

The quantity shall be measured as per Section 511.24 of the Specifications and shall include all labor, materials, equipment and incidentals necessary to complete this item of work. Concrete not meeting strength will not be accepted.

R. Basis of Payment

The payment shall be made at the Contract unit price bid for the following:

Item	Unit	Description
SP 511B	Cubic Yard	Class HP4 Concrete, Superstructure Deck Slab
SP 511B	Cubic Yard	Class HP4 Concrete, Abutment Slab
SP 511B	Cubic Yard	Class HP4 Concrete, for Pre-Placement Testing
SP 511B	Cubic Yard	Class S Concrete, Barriers and Parapets, Using Type I Cement

SPECIAL PROVISIONS

SP 827E **WHEELING & LAKE ERIE RAILWAY REQUIREMENTS**
(01/10/2018)

A. WHEELING & LAKE ERIE RAILWAY COMPANY SPECIAL CLAUSES

The bidder, if awarded the contract for this improvement understands and agrees:

1. To cooperate at all times with the local officials of the Wheeling and Lake Erie Railway (hereinafter referred to as 'Railroad', 'Railroad Company' or 'Railway').

2. To use all reasonable care and diligence in the work in order to avoid accidents, damage or unnecessary delay to, or interference with the trains and other property of the railroad company.

3. To conduct his work in a manner satisfactory to the Chief Engineer of the railroad company or his authorized representative, to perform his work in such manner and at such time as not to unnecessarily interfere with the movements of trains or railroad traffic, and to hold his work at all times open to inspection of railroad company inspectors.

4. To cooperate with any public utility, railroad or other organizations having occasion to do work on or in connection with the improvement.

5. To avoid unnecessary use of railroad property without written permission of the railroad company and to leave railroad roadbed and property in a condition acceptable to the Chief Engineer of the railroad company.

6. To execute Railway Permit for Right of Entry Agreement and pay applicable fees.

7. To execute a bond conditioned according to Section 5525.16 of the Revised Code of Ohio, in favor of the State of Ohio, and further to carry insurance of the following kinds and amounts:

    a. Railroad Protective Liability Insurance

    He shall furnish evidence to the Ohio Turnpike and Infrastructure Commission ("Commission") that, with respect to the operations he or any of his sub-contractors perform, he has provided for and on behalf of the Wheeling & Lake Erie Railway Company, in the amount of $5,000,000 per occurrence and subject to that limit per occurrence, an aggregate limit in the amount of $10,000,000 for each annual period.

    The above railroad protective policy of insurance shall conform to the Railroad Liability requirements prescribed by the Federal Highway Administration in Federal-Aid Policy Guide 23 CFR 646A as amended.

    The corporate name and address of the "Named Insured" as listed on the policy shall be as follows:

    Wheeling & Lake Erie Railway Co.
    100 E. First Street
    Brewster, OH 44613

    Railroad Protective Liability Insurance policies should be sent or emailed to:

Jeffery A. Davis Jr.
Manager of Real Estate
Wheeling & Lake Erie Railway Company
100 East First Street, Brewster, Ohio 44613
330-767-7284 office
www.wlerwy.com

Common Policy Conditions form
Any other endorsement/form not specifically authorized above.

The number of trains operating through the improvement is estimated to be:

0 Passenger trains per day

2 Freight trains per day @ 10 miles per hour

b. General Insurance Requirements

Prior to commencement of occupation or use of the property of Railway for construction activities, the Permittee (Contractor), at its sole cost and expense, shall procure, maintain and furnish Railway during continuance of the permit Commercial Liability Insurance covering liability assumed by Permittee under the permit with a combined single limit of not less than Five Million Dollars ($5,000,000.00) for personal injury and property damage per occurrence, naming Railway as an additional insured. Permittee shall furnish Railway Director Real Estate at 100 East First Street, Brewster, OH 44613, with a certificate of insurance referring to this permit by date, name of Railway, description of permit and location covered. The certificate shall be endorsed to provide for thirty (30) days' notice to said Railway prior to termination of or change in the coverage provided. If a higher limit of liability is required by Railway, Railway shall provide Permittee written notice of the limit required and within thirty (30) days thereafter Permittee shall provide revised certificate of insurance for the increase required limit. Furnishing of this insurance by Permittee shall not limit Permittee's liability under this lease but shall be additional security therefor.

The insurance hereinbefore specified shall be with an acceptable insurance company authorized to do business in the State of Ohio, and shall be taken out before execution of the Contract by the Commission and kept in effect until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by the formal acceptance by the Commission. Such policies shall include thirty (30) days canceling notice. The cost of insurance hereinbefore specified in subsection (a) will be a specific bid item (SP 119).

8. The Railroad company will assign, at the sole cost and expense of the Contractor, railroad flaggers or other protective services and devices as necessary to insure the safety and continuity of the work to be performed as a part of this contract.

   Said services and devices will be provided when necessary, as determined by the railroad company, because of any of the Contractor's operations over, under or adjacent to tracks over which trains are operating. The provision of such protective personnel and devices does not relieve the Contractor from the liability of payment for damage caused by his operations.

   Such protection will be required when men or equipment are working within clearances limits of 25 feet of a rail or when work being performed adjacent to operating tracks may

present hazards to tracks, train operation, or when equipment does or may infringe upon such limits.

The Contractor will not be permitted to operate any of his own equipment on railroad tracks except under an acceptable arrangement with the railroad company.

Such equipment and the operation of such equipment, or equipment rented from the railroad company, shall be arranged for by the Contractor with the railroad and the cost for its use, including protection of railroad traffic, shall be borne by the Contractor.
The Contractor shall notify the following named individual for the railroad company at least 30 days, or as directed by the authorized representative of the Railroad, in advance of starting any work which might require protection:

Wheeling & Lake Erie Railway Co.
Ms. Heidi Rowlands
Engineering Administrator
100 East First St.
Brewster, OH. 44613
Telephone: 330-767-7229
Email: hrowlands@wlerwy.com

Due to limited flagging positions at the railroad, and/or due to other projects needing flagging, requests for flagging made less than 30 days in advance of work on railroad right-of-way made not be made, and no compensation for delay will be provided to the Contractor for any delays that result.

The Contractor shall notify the railroad at least 5 working days in advance of suspending or ceasing operations that require a flagger, and must provide the Project Name, Commission Project Number, railroad line and milepost information. and/or AARDOT#.

Railroad protective personnel assigned to the project will be responsible for notifying the Engineer upon arrival at the job site on the first working day that protective services begin and on the last day that he performs such services. This will be required for each separate period that such services are provided. The Engineer will document such notification in the project diary.

The Contractor will be responsible for protective services provided at his request and not utilized due, in the opinion of the Engineer, to a change in the Contractor's construction schedule or if it is determined by the Engineer that the requested services were not necessary. The actual costs for such protective services so assessed to the Contractor will be deducted from the Contract.

The decision of the Commission shall be final in the event of controversy as to the necessity for any protection services provided and not utilized by the Contractor as described in the preceding paragraph.

9. To indemnify, defend, and hold Wheeling & Lake Erie Railway Co. and its affiliates, and Cleveland Commercial Railroad Company LLC (collectively, “Railroad”) harmless from and against all claims, demands, payments, suits, actions, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages), for any injury to or death to any person(s) (including, but not limited to the employees of Railroad, the Commission, or the Contractor), for the loss of or damage to any property whatsoever (including but not limited to property owned by or in the care, custody, or control of Railroad, the Commission, or the Contractor, and environmental damages and any related remediation brought or recovered against

Railroad), arising directly or indirectly from the negligence, recklessness or intentional wrongful misconduct of the Contractor, the Commission, and their respective agents, employees, invitees, or contractors in the performance of work in connection with the project or activities incidental thereto, or from their presence on or about Railroad's property.

The foregoing indemnification obligation shall not be limited to the insurance coverage required in paragraph 7 above.

10. To pay the railroad or owning company for any changes, requested for his convenience, to railroad property, facilities, wire, fiber optic and/or pipe lines other than shown on the plans for the project.

11. If at any time the Contractor desires a temporary crossing (or the drawings show a temporary crossing is necessary) of the railroad's tracks, he shall make a request for a temporary crossing from the railroad. Contractor shall complete and execute railroad's regular form of private grade crossing agreement covering the crossing desired, paying any fees directly to the railroad necessary for construction, maintenance, removal, protection and other costs associated with the temporary crossing.

    For additional information and application, contact Jeff Davis, Jr., Manager of Real Estate at 330-767-7284, or by email at jdavisjr@wlerwy.com .

12. Methods and procedures for performing work on property operated by Wheeling & Lake Erie Railway must adhere to the attached 'Wheeling & Lake Erie Special Provisions'. All work must be approved by:

    Mr. Kasey S. O'Connor
    Vice President of Engineering
    Wheeling & Lake Erie Railway Company
    100 E. First Street
    Brewster, OH 44613
    Telephone: 330-767-7279
    Email: koconnor@wlerwy.com

B. WHEELING & LAKE ERIE RAILWAY SPECIAL PROVISIONS

1. NOTICE OF STARTING WORK:

A. The Commission's Contractor shall not commence any work on railroad rights-of-way until he has complied with the following conditions:

1. Given the Railroad written notice in electronic format to the Railroad Engineer, with copy to the Department Engineer who has been designated to be in charge of the work, at least thirty (30) days in advance of the date he proposes to begin work on Railroad Right-of-Way.

   All email correspondence should include (at a minimum) either the Commission Project Identification Number, and the WLE Line name and milepost in the Subject line for ease of reference.

2. Obtained written approval from the Railroad of Railroad Protective Liability Insurance coverage as required herein. It should be noted that Railroad Company does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad Company must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Railroad typically takes a minimum of 10-20 days for Railroad Company to review and issue approval of RPL insurance.

3. Obtained Railroad's Flagging Services as required herein.

4. Obtained written authorization in electronic format from the Railroad to begin work on Railroad rights-of-way, such authorization to include an outline of specific conditions with which he must comply.

5. Furnished a schedule for all work within the Railroad rights-of-way.

B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

2. INTERFERENCE WITH RAILROAD OPERATIONS:

A. The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad Company or to poles, wires, and other facilities of tenants on the rights-of-way of the Railroad Company. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability.

   Any work to be performed by the Contractor which requires flagging service or inspection service shall be deferred by the Contractor until the flagging service or inspection service required by the Railroad is available at the job site.

B. Whenever work within Railroad rights-of-way is of such a nature that impediment to Railroad operations such as use of runaround tracks or necessity for reduced speed is

unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.

C. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the Railroad's Division Engineer, such provisions is insufficient, either may require or provide such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the Department.

D. "One Call" Services do not locate buried railroad utilities. The Contractor shall contact the railroad's representative 2 days in advance of work at those places where excavation, pile driving, or heavy loads may damage railroad underground facilities. Upon request from the Contractor or agency, railroad forces will locate and paint mark or flag railroad underground facilities. The Contractor shall avoid excavation or other disturbances of these facilities. If disturbance or excavation is required near a buried railroad facility, the Contractor shall coordinate with the railroad to have the facility potholed manually with careful hand excavation. The facility shall be protected by the Contractor during the course of the disturbance under the supervision and direction of the railroad representative.

E. Jersey barriers and cyclone fencing shall be placed on both sides of the railroad tracks to prevent unauthorized entry within the fouling area. To meet PUCO regulations, the barriers and fencing must remain a minimum distance of 8'-3" from the track centerline. A map to scale (no larger than 11' x 17") showing placement of jersey barrier and cyclone fencing, and specifying the distance from the centerline of the railroad track, shall be provided to the Railroad for approval.

3. TRACK CLEARANCES:

A. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. If temporary clearances are not shown on the project plans, the following criteria shall govern the use of falsework and formwork above or adjacent to operated tracks.

1. A minimum vertical clearance of 22'-0" above top of highest rail, or the existing vertical clearance shown in the project plans, shall be maintained at all times.

2. A minimum horizontal clearance of 13'-0" from centerline of tangent track or 14'-0" from centerline of curved track shall be maintained at all times. Additional horizontal clearance may be required in special cases to be safe for operating conditions. This additional clearance will be as determined by the Chief Engineer Bridges & Structures.

3. All proposed temporary clearances which are less than those listed above must be submitted to the Railroad's engineering representative for approval prior to construction and must also be authorized by the regulatory body of the Commission if less than the legally prescribed clearances.

4. The temporary clearance requirements noted above shall also apply to all other physical obstructions including, but not limited to: stockpiled materials, parked equipment, placement or driving of piles, and bracing or other construction supports.

B. Before undertaking any work within Railroad right-of-way, and before placing any obstruction over any track, the Contractor shall:

1. Notify the Railroad's representative at least 72 hours in advance of the work.

2. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as may be necessary.

3. Receive permission from the Railroad's representative to proceed with the work.

4. Ascertain that the Chief Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

4. CONSTRUCTION PROCEDURES:

A. General:

1. Construction work and operations by the Contractor on Railroad property shall be:
   a. Subject to the inspection and approval of the Railroad or their designated Construction Engineering Representative.

   b. In accord with the Railroad's written outline of specific conditions.

   c. In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.

   d. In accord with these Special Provisions.

2. Submittal Requirements
   a. The Contractor shall submit all construction related correspondence and submittals electronically to the Railroad Engineer.

   b. The Contractor shall allow for 30 days for the Railroad's review and response.

   c. All work in the vicinity of the Railroad's property that has the potential to affect the Railroad's train operations or disturb the Railroad's Property must be submitted and approved by the Railroad prior to work being performed.

   d. All submittals and calculations must be signed and sealed by a registered engineer licensed in the state of the project work.

   e. All submittals shall first be approved by the Chief Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

   f. For all construction projects, the following submittals, but not limited to those listed below, shall be provided for review and approval when applicable:

      i. General Means and Methods
      ii. Roadway Protection
      iii. Construction Excavation & Shoring
      iv. Pipe, Culvert, & Tunnel Installations
      v. Demolition Procedure

vi. Erection & Hoisting Procedure
vii. Debris Shielding or Containment
viii. Blasting
ix. Formwork for the bridge deck, diaphragms, overhang brackets, and protective platforms
x. Bent Cap Falsework. A lift plan will be required if the Contractor want to move the falsework over the tracks.

g. For Undergrade Bridges (Bridges carrying the Railroad) the following submittals in addition to those listed above shall be provided for review and approval:

i. Shop Drawings
ii. Bearing Shop Drawings and Material Certifications
iii. Concrete Mix Design
iv. Structural Steel, Rebar, and/or Strand Certifications
v. 28 day Cylinder Test for Concrete Strength
vi. Waterproofing Material Certification
vii. Test Reports for Fracture Critical Members
viii. Foundation Construction Reports

Fabrication may not begin until the Railroad has approved the required shop drawings.

h. The Contractor shall include in all submissions a detailed narrative indicating the progression of work with the anticipated timeframe to complete each task. Work will not be permitted to commence until the Contractor has provided the Railroad with a satisfactory plan that the project will be undertaken without scheduling, performance or safety related issues.

Submission shall also provide a listing of the anticipated equipment to be used, the location of all equipment to be used and insure a contingency plan of action is in place should a primary piece of equipment malfunction.

In order to properly schedule flagman, the Contractor is required to provide a schedule of work acceptable to the Railroad, submitted a minimum of 1 week in advance of work, or as otherwise acceptable to the Railroad.

B. Track/Ballast Protection

1. The Contractor shall submit a proposed track/ballast protection system detailing the specific filter fabric and anchorage system to be used during all construction activities.

2. The track/ballast protection is to extend 25’ beyond the proposed limit of bridge work above, be installed at the start of the project and be continuously maintained to prevent all contaminants from entering the ballast section of all tracks for the entire duration of the project.

C. Excavation:

1. The subgrade of an operated track shall be maintained with edge of berm at least 10’-0” from centerline of track and not more than 24- inches below top of rail. Contractor will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.

2. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the Railroad right-of-way.

D. Excavation for Structures and Shoring Protection:

1. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material.

2. All plans and calculations for shoring shall be prepared and signed by a Registered Professional Engineer, licensed in the state of the State of the proposed work. The Registered Professional Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions.

3. The Contractor shall provide a detailed installation and removal plan of the shoring components. Any component that will be installed via the use of a crane or any other lifting device shall be subject to the review and approval of the Railroad.

4. The Contractor shall be required to survey the track(s) and railroad embankment and provide a cross section of the proposed excavation in relation to the tracks.

5. Calculations for the proposed shoring should include deflection calculations. The maximum deflection for excavations within 18’-0” of the centerline of the nearest track shall be 3/8”. For all other cases, the max deflection shall not exceed ½”.

6. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations within the Railroad right-of-way.

E. Pipe, Culvert, & Tunnel Installations

1. Pipe, Culvert, & Tunnel Installations shall be in accordance with the requirements for Pipeline Occupancy of the Wheeling & Lake Erie Railway.

F. Demolition Procedure

1. General

a. Demolition plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of boom length plus 15’-0” from the centerline of track.

b. Railroad tracks and other railroad property must be protected from damage during the procedure.

c. A pre-demolition meeting shall be conducted with the Commission, the Railroad Engineer or their representative, and the key Contractor personnel prior to the start of the demolition procedure.

d. The Railroad Engineer or his designated representative must be present at the site during the entire demolition procedure period.

e. Existing, obsolete, bridge piers shall be removed to a sufficient depth below grade to enable restoration of the existing/proposed track ditch, but in no case less than 2'-0" below final grade.

2. Submittal Requirements

a. The Contractor shall submit the following for approval by the Railroad Engineer:

i. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

ii. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.

iii. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing structure showing complete and sufficient details with supporting data for the demolition the structure. If plans do not exist, lifting weights must be calculated from field measurements.

The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.

iv. The Contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided.

All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Department and the Railroad.

v. A complete demolition procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.

vi. Design and supporting calculations for the temporary support of components, including but not limited to the stability of the superstructure during the temporary condition, temporary girder tie-downs and falsework.

3. Overhead Demolition Debris Shield

a. The demolition debris shield shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure over the track area to catch all falling debris.

b. The demolition debris shield shall provide a minimum vertical clearance of 22’-0”, or maintain the existing vertical clearance if the existing clearance is less than 22’-0”.

c. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Demolition procedure submission.

d. The Contractor shall submit the demolition debris shield design and supporting calculations for approval by the Railroad Engineer.

e. The demolition debris shield shall have a minimum design load of 50 pounds per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried.

f. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.

g. The Contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Railroad Engineer.

4. Vertical Demolition Debris Shield

a. A vertical demolition debris shield may be required for substructure removals in close proximity to the Railroad’s track and other facilities, as determined by the Railroad Engineer.

G. Erection & Hoisting Procedures

1. General

a. Erection plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of boom length plus 15’-0” from the centerline of track.

b. Railroad tracks and other railroad property must be protected from damage during the erection procedure.

c. A pre-erection meeting shall be conducted with the Commission, the Railroad Engineer or their representative, and the key contractor personnel prior to the start of the erection procedure.

d. The Railroad Engineer or his designated representative must be present at the site during the entire erection procedure period.

e. For field splices located over Railroad property, a minimum of 50% of the holes for each connection shall be filled with bolts or pins prior to releasing the crane. A minimum of 50% of the holes filled shall be filled with bolts. All bolts must be appropriately tightened.

2. Submittal Requirements

a. The Contractor shall submit the following for approval by the Railroad Engineer:

i. As-built beam seat elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Railroad Engineer for review and verification at least 30 days in advance of the erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.

ii. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or staging locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

iii. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted.

Safety factors that may have been “built-in” to the crane charts are not to be considered when determining the 150% factor of safety.

iv. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the proposed structure showing complete and sufficient details with supporting data for the erection of the structure.

If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.

v. The Contractor shall provide a sketch of all rigging components from the crane’s hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting

capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been “built-in” to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities.

The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Commission and the Railroad.

vi. A complete erection procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.

vii. Design and supporting calculations for the temporary support of components, including but not limited to temporary girder tie-downs and falsework.

H. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Chief Engineer for use of explosives on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:

   a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.

   b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.

   c. No blasting shall be done without the presence of the Railroad Engineer or his authorized representative. At least 72 hours advance notice to the person designated in the Railroad’s notice of authorization to proceed will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.

   d. Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway’s authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.

   e. The blasting contractor shall have a copy of the approved blasting plan on hand while on the site.

   f. Explosive materials or loaded holes shall not be left unattended at the blast site.

   g. A seismograph shall be placed on the track shoulder adjacent to each blast which will govern the peak particle velocity of <u>two inches per second</u>.

Measurement shall also be taken on the ground adjacent to structures as designated by a qualified and independent blasting consultant. The Railroad reserves the option to direct the placement of additional seismographs at structures or other locations of concern, without regard to scaled distance.

h. After each blast, the blasting contractor shall provide a copy of their drill log and blast report, which includes number of holes, depth of holes, number of decks, type and pounds of explosives used per deck.

i. The Railroad may require top of rail elevations and track centers taken before, during and after the blasting and excavation operation to check for any track misalignment resulting from the Contractor's activities.

2. The Railroad representative will:

a. Determine approximate location of trains and advise the Contractor the appropriate amount of time available for the blasting operation and clean up.

b. Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these special provisions.

3. The Contractor must hire, at no expense to the Railroad, a qualified and independent blasting consultant to oversee the use of explosives. The blasting consultant will:

a. Review the Contractor's proposed drilling and loading patterns, and with the blasting consultant's personnel and instruments, monitor the blasting operations.

b. Confirm that the minimum amounts of explosives are used to remove the rock.

c. Be empowered to intercede if he concludes that the Contractor's blasting operations are endangering the Railway.

d. Submit a letter acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.

e. Furnish copies of all vibration readings to the Railroad representative immediately after each blast. The representative will sign and date the seismograph tapes after each shot to verify the readings are for that specific shot.

f. Advise the Railroad representative as to the safety of the operation and notify him of any modifications to the blasting operation as the work progresses.

4. The request for permission to use explosives on the Railroad's Right-of-Way shall include a blasting proposal providing the following details:

a. A drawing which shows the proposed blasting area, location of nearest hole and distance to Railway structures, all with reference to the centerline of track.

b. Hole diameter.

c. Hole spacing and pattern.

d. Maximum depth of hole.

e. Maximum number of decks per hole.

f. Maximum pounds of explosives per hole.

g. Maximum pounds of explosives per delay.

h. Maximum number of holes per detonation.

i. Type of detonator and explosives to be used. (Electronic detonating devices will not be permitted). Diameter of explosives if different from hole diameter.

j. Approximate dates and time of day when the explosives are to be detonated.

k. Type of flyrock protection.

l. Type and patterns of audible warning and all clear signals to be used before and after each blast.

m. A copy of the blasting license and qualifications of the person directly in charge of the blasting operation, including their name, address and telephone number.

n. A copy of the Authority's permit granting permission to blast on the site.

o. A letter from the blasting consultant acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.

p. In addition to the insurance requirements previously outlined, an additional certificate of insurance from the Contractor's insurer stating the amount of coverage for XCU (Explosive Collapse and Underground Hazard) insurance and that XCU Insurance is in force for this project.

q. A copy of the borings and Geotechnical information or report.

I. Track Monitoring

1. At the direction of the Railroad Engineer, any activity that has the potential to disturb the Railroad track structure may require the Contractor to submit a detailed track monitoring program for approval by the Railroad Engineer.

2. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.

3. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Railroad Engineer for analysis.

4. If any movement has occurred as determined by the Railroad Engineer, the Railroad will be immediately notified. Railroad, at its sole discretion, shall have

the right to immediately require all contractor operations to be ceased and determine what corrective action is required.

Any corrective action required by the Railroad or performed by the Railroad including the monitoring of corrective action of the Contractor will be at project expense.

J. Maintenance of Railroad Facilities:

1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within Railroad rights-of-way and repair any other damage to the property of the Railroad or its tenants.

2. If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, temporary pipes, ditches or other drainage facilities shall be installed to maintain adequate drainage, as approved by the Railroad. Upon completion of the work, the temporary facilities shall be removed and the permanent facilities restored.

3. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

K. Storage of Materials and Equipment:

1. Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights-of-way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.

2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons.

The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

L. Cleanup:

1. Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights-of-way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights-of-way in a neat condition satisfactory to the Chief Engineer of the Railroad or his authorized representative.

5. DAMAGES:

A. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by Railroad traffic.

B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

6. FLAGGING SERVICES:

A. Requirements:

1. Flagging services will not be provided until the Contractor's insurance has been reviewed & approved by the Railroad.

2. The Contractor shall provide a look-ahead schedule to the Railroad weekly (or as needed by the Railroad) a minimum of 7 days in advance of the work commencing, in order for the Railroad to properly schedule flagman.

3. Under the terms of the agreement between the Commission and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations.

4. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railroad's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.

5. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits or where site distances are limited. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed.

B. Scheduling and Notification:

1. The Contractor's work requiring railroad flagging should be scheduled to limit the presence of a flagman at the site to a maximum of 50 hours per week. The Contractor shall receive Railroad approval of work schedules requiring a flagman's presence in excess of 40 hours per week. The Contractor may be required to submit regular look-ahead schedules to the Railroad in order to properly schedule flagman to protect the Contractor's operation on Railroad Right-of-Way.

2. Not later than the time that approval is initially requested to begin work on Railroad right-of-way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad right-of-way and arrange for a job site meeting between the Contractor, the Commission, and the Railroad's authorized representative.

Flagmen may not be provided until a railroad job site meeting has been conducted and the Contractor's work scheduled.

3. The Contractor will be required to give the Railroad representative at least 10 working days of advance written notice of intent to begin work within Railroad right-of-way in accordance with this special provision. Once begun, when such

work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman is present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad.

4. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Commission or Railroad.

C. Payment:

1. The Contractor will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction.

2. The estimated cost of flagging is current rate per day based on a 10-hour work day. This cost includes the base pay for the flagman, overhead, and includes a per diem charge for travel expenses, meals and lodging. The charge to the ~~Department~~***Contractor*** by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.

3. Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 and 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 and 1/2 times the normal rate.

D. Verification:

1. Any complaints concerning flagging must be resolved in a timely manner. If the need for flagging is questioned, please contact Railroad's the responsible Railroad Representative, or the Chief Engineer. All verbal complaints will be confirmed in writing by the Contractor within 5 working days with a copy to the Chief Engineer.

2. The Railroad flagman assigned to the project will be responsible for notifying the Contractor's on-site Superintendent or Chief Engineer, who will document such notification in the project records.

   When requested, the Contractor's Superintendent or Chief Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

7. HAUL ACROSS RAILROAD:

   A. Where the plans show or imply that materials of any nature must be hauled across a Railroad, unless the plans clearly show that the Department has included arrangements for such haul road in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor or Agency will be required to bear all costs incidental to such crossings whether services are performed by his own forces or by Railroad personnel.

   B. No temporary crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad Company unless specific authority for its installation, maintenance, necessary watching and flagging thereof and removal, until a temporary private crossing agreement has been executed between the Contractor and Railroad. The approval process for an agreement normally takes 90-days.

8. WORK FOR THE BENEFIT OF THE CONTRACTOR:

   A. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the Commission and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the Commission and/or the Railroad.

   B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.

9. COOPERATION AND DELAYS:

   A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.

   B. No charge or claim of the Contractor against either the Commission or the Railroad Company will be allowed for hindrance or delay on account of railway traffic; any work done by the Railway Company or other delay incident to or necessary for safe maintenance of railway traffic or for any delays due to compliance with these special provisions.

10. TRAINMAN'S WALKWAYS:

    A. Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railway's protective service is provided shall be removed before the close of each work day. If there is any excavation near the walkway, a handrail, with 10'-0" minimum clearance from centerline of track, shall be placed and must conform to AREMA and/or FRA standards.

11. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHT-OF-WAY:

    A. The Contractor and the Agency's personnel must be familiar with Wheeling & Lake Erie Railway's standard operating rules and guidelines, should conduct themselves

accordingly, and may be removed from the property for failure to follow these guidelines and basic safety protocols as outlined.

B. All persons on Railroad property shall wear hard hats, reflective vests and clothing, and use appropriate eye and hearing protection. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate.

   Wearing of safety boots is strongly recommended. In the vicinity of at-grade crossings, it is strongly recommended that reflective vests be worn.

C. No one is allowed within 25’ of the centerline of track without specific authorization from the flagman.

D. All persons working near track while a train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.

E. No one is allowed to cross tracks without specific authorization from the flagman.

F. All welders and cutting torches working within 25’ of track must stop when train is passing.

G. No steel tape or chain will be allowed to cross or touch rails without permission from the Railroad.

12. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHT-OF-WAY:

A. No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15’ of centerline of track without specific permission from railroad official and flagman.

B. No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and approval of the on-site flagman.

C. All employees will stay with their machines when crane or boom equipment is pointed toward track.

D. All cranes and boom equipment under load will stop work while train is passing (including pile driving).

E. Swinging loads must be secured to prevent movement while train is passing.

F. No loads will be suspended above a moving train.

G. No equipment will be allowed within 25’ of centerline of track without specific authorization of the flagman.

H. Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman. Orange construction fencing may be required as directed.

I. No equipment or load movement within 25’ or above a standing train or railroad equipment without specific authorization of the flagman.

J. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.

K. All equipment, loads and cables are prohibited from touching rails.

L. While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.

M. No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.

N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.

O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.

P. Prior to performing any crane operations, the Contractor shall establish a single point of contact for the Railroad flagman to remain in communication with at all times. Person must also be in direct contact with the individual(s) directing the crane operation(s).

13. FAILURE TO COMPLY:

A. In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:

1. The Railroad Engineer may require that the Contractor vacate Railroad property.

2. The Engineer may withhold all monies due the Contractor on monthly statements.

B. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

14. PAYMENT FOR COST OF COMPLIANCE:

A. No separate payment will be made for any extra cost incurred on account of compliance with these special provisions. All such costs shall be included in prices bid for other items of the work as specified in the payment items.

End of Wheeling & Lake Erie Special Provision for Protection of Railway Interest

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

THE JAMES W. SHOCKNESSY OHIO TURNPIKE

PROJECT NO. 43-18-04
BRIDGE DECK REPLACEMENT AND REHABILITATION

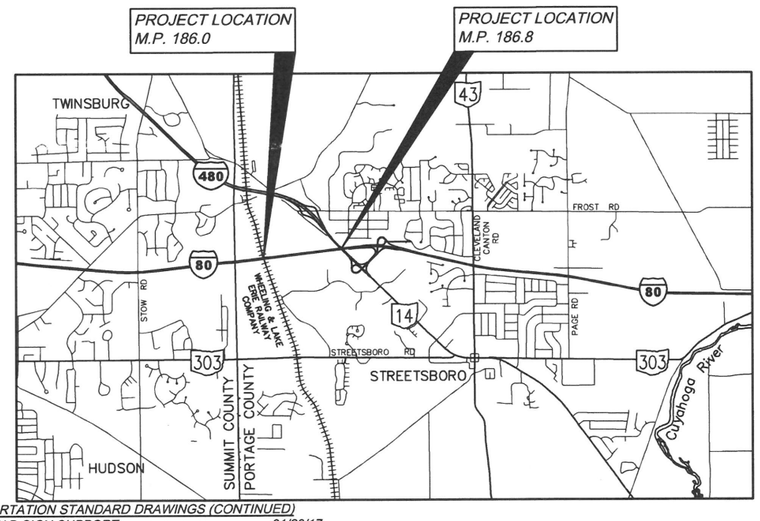
OHIO TURNPIKE OVER WHEELING & LAKE ERIE RAILWAY, M.P. 186.0,
INTERSTATE ROUTE 480 EASTBOUND OVER OHIO TURNPIKE, M.P. 186.8
PORTAGE COUNTY, OHIO

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION STANDARD DRAWINGS

AS-1	REINFORCED CONCRETE APPROACH SLABS
CB-2	CATCH BASIN, NO. CB-1 RECONSTRUCTED
CB-4	INLET, NO. I-3B50 DOUBLE GRATE
CBM-6	B-50 BARRIER TRANSITION AND MEDIAN WALL DETAILS
CBR-1	CONCRETE BARRIER, TYPE B-50 AND C-50, AS PER PLAN
CL-2	CHAIN LINK SAFETY FENCE (ALL ALUMINUM) DETAILS, TYPE 2
DJ-1	DECK JOINT DETAILS, CELLULAR ABUTMENTS
DJ-2	DECK JOINT DETAILS
DJ-4	DECK JOINT DETAILS, SPILL-THRU ABUTMENTS
RPM-1	RAISED PAVEMENT MARKER AND STRIPING LAYOUT
TC-1	TRAFFIC CONTROL BRIDGE AND BARRIER SIGN SUPPORT DETAILS
TC-3	TRAFFIC CONTROL MAINLINE DELINEATION
TCB-1	REQUIREMENTS FOR PORTABLE BARRIER SETTING AND REMOVAL OPERATIONS
TCB-2	PORTABLE BARRIER STORAGE DETAILS
TCR-1	TEMPORARY TRAFFIC CONTROL GENERAL NOTES
TCR-2	TEMPORARY TRAFFIC CONTROL DETAILS, LEGEND, NOTES AND STANDARD SINGLE LANE CLOSURE
TCR-4	TEMPORARY TRAFFIC CONTROL BI-DIRECTIONAL ROADSIDE DELINEATION
TCR-7	TEMPORARY TRAFFIC CONTROL TWO LANE CROSSOVER DETAILS
TCR-9	TEMPORARY TRAFFIC CONTROL SHORT DURATION/SHORT TERM SHOULDER CLOSURE
TCR-10	TEMPORARY TRAFFIC CONTROL DOUBLE LANE CLOSURE
TCR-11MZ	TEMPORARY TRAFFIC CONTROL FOR SINGLE LANE MOBILE OPERATION
TCR-12.1	TEMPORARY TRAFFIC CONTROL DOUBLE LANE SHIFT ZONE IN 3-LANE SECTION
TCR-13	SONIC NAP ALERT PATTERN (SNAP)
TCR-14	TEMPORARY TRAFFIC CONTROL SINGLE LANE CLOSURE WITH PORTABLE BARRIER
TCR-15	TEMPORARY TRAFFIC CONTROL SIGNS FOR MAINTENANCE AND CONSTRUCTION
XOV-3	MAINTENANCE CROSSOVER DETAILS

OHIO DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS

AS-1-15	REINFORCED CONCRETE APPROACH SLAB	07/17/15
AS-2-15	REINFORCED CONCRETE APPROACH SLAB INSTALLATION	07/17/15
BP-3.1	ASPHALT PAVING	07/18/14
BP-5.1	CONCRETE CURBS AND COMBINED CURB & GUTTER	07/19/13
BP-9.1	SHOULDER RUMBLE STRIPS	07/21/17
CB-2.3	CATCH BASIN NO. 6	01/15/16
DM-1.1	OUTLETS, DRAINS, AND SEWERS	07/21/17
DM-1.3	SLOTTED DRAINS	07/18/14
HL-10.13	POLE BASE DETAILS	01/20/17
HL-20.11	MISCELLANEOUS LIGHT POLE FOUNDATION AND TRENCH DETAILS	04/21/17
MGS-1.1	MGS GUARDRAIL DETAILS	07/21/17
MGS-2.1	STANDARD TYPE MGS	07/19/13
MGS-3.1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	07/21/17
MGS-3.2	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	01/18/13
MGS-4.3	MGS GUARDRAIL TRANSITIONS	01/18/13
MGS-6.1	MGS GUARDRAIL AT BRIDGES	07/19/13
MT-95.30	CLOSING LEFT OR RIGHT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS	07/21/17
MT-95.40	CLOSING LEFT OR RIGHT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE CONCRETE BARRIER	01/20/17
MT-95.45	CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY	07/21/17
MT-95.50	SUPPLEMENTAL ADVANCED SIGNS USED WITH LANE CLOSURES	07/21/17
MT-95.70	MEDIAN CROSSOVER-SINGLE LANE	07/21/17
MT-95.71	MEDIAN CROSSOVER-MULTI LANE	07/21/17
MT-98.10	LANE CLOSURE AT ENTRANCE RAMP	01/20/17
MT-99.30	WORK ZONE DELINEATION	07/21/17
MT-100.00	WORK ZONE CROSSOVER LIGHTING SYSTEM	01/15/16
MT-101.60	ROAD CLOSURE USING TYPE 3 BARRICADES	01/20/17
MT-101.70	BARRIER AND IMPACT ATTENUATOR DELINEATION	01/17/14
MT-101.75	IMPACT ATTENUATOR PLACEMENT	07/15/16
MT-101.80	PCB TO PERMANENT BARRIER TRANSITIONS	01/16/15
MT-101.90	DROP-OFFS IN WORK ZONES	07/21/17
MT-102.10	LANE SHIFT SIGNING INCORPORATION SPEED LIMIT AND PENALTIES SIGNING	01/20/17
MT-104.10	WORK ZONE SPEED ZONES(WZSZs) ON HIGH-SPEED(>=55 MPH) MULTI-LANE HIGHWAYS	10/16/15
MT-105.10	TEMPORARY SIGN SUPPORT	07/19/13
PCB-91	PORTABLE CONCRETE BARRIER DETAILS	01/18/13
RM-4.2	32" PORTABLE CONCRETE BARRIER	04/18/14
SBR-1-13	SINGLE SLOPE CONCRETE BRIDGE RAILING	01/17/14



OHIO DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS (CONTINUED)

TC-12.30	CANTILEVER OVERHEAD SIGN SUPPORT	01/20/17
TC-21.10	SIGN SUPPORT FOUNDATIONS	07/21/17
TC-21.20	SIGN SUPPORT FOUNDATIONS	07/21/17
TC-52.10	SIGN BLANK DETAILS 1	10/18/13
TC-52.20	SIGN BLANK DETAILS 2	07/21/17
TC-65.10	RAISED PAVEMENT MARKER PLACEMENT DETAILS	01/17/14
TC-65.11	RAISED PAVEMENT MARKER SPACING DETAILS	07/21/17
TC-72.20	FREEWAY AND EXPRESSWAY ENTRANCE AND EXIT PAVEMENT MARKINGS	07/15/16

OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS

SS800	REVISIONS TO THE 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS	07/21/17
SS821	ARROW BOARD	04/20/12
SS832	TEMPORARY SEDIMENT AND EROSION CONTROL	01/17/14
SS921	ARROW BOARD	04/20/12

INDEX OF SHEETS

APPROVED FOR
THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

BY: Anthony D. Yanni
CHIEF ENGINEER

12-13-17
DATE

PLAN PREPARED BY:

Palmer ENGINEERING — PALMER ENGINEERING, 460 WHITE POND DRIVE, SUITE 300, AKRON, OHIO 44320
WINCHESTER ■ AKRON ■ LEXINGTON ■ TALLAHASSEE ■ ORLANDO
CINCINNATI ■ NASHVILLE ■ LOUISVILLE ■

ENGINEERS SEAL:
(SHEETS 1-72,104-113)
STATE OF OHIO — MITCHELL A. McCOY — E-53421 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: Mitchell A McCoy
DATED: 10-25-17

ENGINEERS SEAL:
(SHEETS 73-103)
STATE OF OHIO — MATTHEW LEWIS JOHNSON — E-69519 — REGISTERED PROFESSIONAL ENGINEER
SIGNED: Matthew L Johnson
DATED: 10-23-2017

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION
SERVICE NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988
OHIO TURNPIKE DIVISION SUPERINTENDENT: (440) 821-3366

711609_GT001.dwg; 1/10/18 - 10:37am

GENERAL SUMMARY

ITEM NO.	TOTAL	UNIT	DESCRIPTION	GENERAL	M.P. 186.0	M.P. 186.8
			GENERAL			
IB.ART.6	1	LUMP	PREMIUM FOR CONTRACT PERFORMANCE BOND AND PAYMENT BOND	LUMP		
SP 119	1	LUMP	RAILROAD PROTECTIVE LIABILITY INSURANCE	LUMP		
SP 614	1	LUMP	MAINTAINING TRAFFIC		LUMP	
614	1	LUMP	MAINTAINING TRAFFIC			LUMP
SP 619	1	LUMP	FIELD OFFICE	LUMP		
SP 623	1	LUMP	CONSTRUCTION LAYOUT SURVEY	LUMP		
624	1	LUMP	MOBILIZATION	LUMP		
			ROADWAY			
202	690	SQ. YD.	APPROACH SLAB REMOVED		400	290
202	191	SQ. YD.	PAVEMENT REMOVED			191
202	520	FOOT	CURB REMOVED		466	54
202	22	FOOT	PIPE REMOVED, 24" AND UNDER			22
202	675	FOOT	GUARDRAIL REMOVED		525	150
202	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E			1
202	5	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED		4	1
202	1	EACH	CATCH BASIN REMOVED			1
203	225	CU. YD.	EXCAVATION			225
203	6	CU. YD.	EMBANKMENT			6
204	1,741	SQ. YD.	SUBGRADE COMPACTION		1,064	677
204	124	CU. YD.	EXCAVATION OF SUBGRADE		124	
251	500	SQ. YD.	PARTIAL DEPTH PAVEMENT REPAIR	500		
255	500	SQ. YD.	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT	500		
255	500	SQ. YD.	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT (USING RAPID REPAIR CONCRETE MIX MATERIAL)	500		
255	1,500	FOOT	FULL DEPTH PAVEMENT SAWING	1500		
254	14,517	SQ. YD.	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH		13,676	841
254	407	SQ. YD.	PATCHING PLANED SURFACE		365	42
302	95	CU. YD.	ASPHALT CONCRETE BASE , PG64-22			95
304	113	CU. YD.	AGGREGATE BASE, AS PER PLAN			113
SP 304	106	CU. YD.	AGGREGATE BASE		106	
SP 402	557	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, USING CRUSHED STONE, PG64-22		557	
SP 403	165	CU. YD.	ASPHALT CONCRETE LEVELING COURSE, PG70-22		165	
SP 404	342	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED STONE, PG64-22		342	
SP 404	192	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG70-22 (FR)		192	
SP 402	224	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, PG70-22		224	
407	2,550	GAL.	NON-TRACKING TACK COAT		2,378	172
441	11	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN			11
442	51	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, 12.5 mm, TYPE A (448), AS PER PLAN			51
442	59	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A (448)			59
526	426	SQ. YD.	REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN (T=12")		426	
526	292	SQ. YD.	REINFORCED CONCRETE APPROACH SLABS (T=15")			292
526	137	FOOT	TYPE A INSTALLATION			137
601	4	SQ. YD.	TIED CONCRETE BLOCK MAT, TYPE 1			4
605	224	FOOT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC			224
606	713	FOOT	GUARDRAIL, TYPE MGS		538	188
606	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E			1
606	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1		2	1
606	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2		2	
SP 607	600	FOOT	TEMPORARY FENCE (7'-0" CHAIN LINK WITH SPECIALS)		600	
609	460	FOOT	ASPHALT CONCRETE CURB, TYPE 1		460	
609	43	FOOT	CURB, TYPE 4C		6	37
611	75	FOOT	6" CONDUIT, TYPE F, 707.33			75
611	24	FOOT	12" CONDUIT, TYPE F, 707.33			24
611	1	EACH	CATCH BASIN, NO. 3A			1
611	2	EACH	PRECAST REINFORCED CONCRETE OUTLET			2
SP 611	4	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, LESS THAN 4"		4	
614	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE			100
614	16	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)		8	8
614	2	EACH	WORK ZONE INCREASED PENALTY SIGNS			2
614	20	EACH	REPLACEMENT SIGN	20		
614	200	EACH	REPLACEMENT DRUM	200		
614	1	EACH	WORK ZONE LIGHTING SYSTEM			1
614	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM		2	

711609_GG001.dwg; 1/10/18 - 9:21am

DESIGN AGENCY: PALMER ENGINEERING, AKRON, OH 44320

NO.	REVISIONS	BY	DATE
1	ADDENDUM 1	DAM	01/18
-	-	-	-
-	-	-	-

DESIGNED DAM · CHECKED MAM · DRAWN TES · IN CHARGE MAM

GENERAL SUMMARY

PORTAGE COUNTY

M.P. 186.0
M.P. 186.8

PROJECT 43-18-04

DATE: 10/25/17

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

GENERAL SUMMARY

ITEM NO.	TOTAL	UNIT	DESCRIPTION	GENERAL	M.P. 186.0	M.P. 186.8
			ROADWAY, CONTINUED			
614	14	CU. YD.	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC		10	4
614	28	SIGN MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	28		
614	6	SIGN MONTH	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY			6
SP 614C	10.23	MILE	REMOVAL OF PAVEMENT MARKING		10.23	
615	1	LUMP	ROADS FOR MAINTAINING TRAFFIC			LUMP
615	5,162	SQ. YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN			5,162
616	10	M.GAL.	WATER	10		
617	21,300	SQ. YD.	SHOULDER PREPARATION		21,300	
617	1,800	CU. YD.	COMPACTED AGGREGATE USING SP 304		1,800	
617	50	M.GAL.	WATER		50	
618	0.84	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)			1
621	46	EACH	RPM			46
621	35	EACH	RAISED PAVEMENT MARKER REMOVED			35
SP 621	24	EACH	RAISED PAVEMENT MARKER STIMSONITE MODEL 101LPCR (WHITE)		24	
622	4,260	FOOT	PORTABLE BARRIER, 32", AS PER PLAN			4,260
622	400	FOOT	PORTABLE BARRIER, 32", BRIDGE MOUNTED, AS PER PLAN			400
SP 622	5,600	FOOT	32" PORTABLE BARRIER (WITHOUT GLARE SCREEN)	300	5,300	
SP 622	2,270	FOOT	32" PORTABLE BARRIER (WITH GLARE SCREEN)	300	1,970	
626	12	EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY)		4	8
626	12	EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY)		8	4
SP 627	900	CU. YD.	STONE SHOULDER PROTECTION		900	
630	1	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION, AS PER PLAN			1
630	320	SQ. FT.	SIGNING MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	320		
642	2.56	MILE	EDGE LINE, 6", TYPE 1 (WHITE)		2.56	
642	2.56	MILE	EDGE LINE, 6", TYPE 1 (YELLOW)		2.56	
642	5.12	MILE	LANE LINE, 6", TYPE 1 (WHITE)		5.12	
646	1.13	MILE	EDGE LINE, 6"			1.13
646	0.85	MILE	LANE LINE, 6"			0.85
646	964	FOOT	CHANNELIZING LINE, 12"			964
646	1,893	FOOT	DOTTED LINE, 6"			1,893
659	17	CU. YD.	TOPSOIL			17
659	150	SQ. YD.	SEEDING AND MULCHING			150
659	8	SQ. YD.	REPAIR SEEDING AND MULCHING			8
659	1	TON	COMMERCIAL FERTILIZER			1
659	0.1	ACRE	LIME			0.1
659	1	M.GAL.	WATER			1
SPECIAL	1.94	MILE	SONIC NAP ALERT PATTERN (SNAP)		1.94	
SPECIAL	0.21	MILE	RUMBLE STRIP MILL AND FILL			0.21
			STRUCTURES			
SP 202	1	LUMP	PORTIONS OF STRUCTURE REMOVED	1		
509	300	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL		160	140
SP 509	310,227	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60		155,542	154,685
510	66	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT			66
SP 511B	928	CU. YD.	CLASS HP4 CONCRETE, SUPERSTRUCTURE DECK SLAB		472	456
SP 511B	170	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE 1 CEMENT		89	81
SP 511B	109	CU. YD.	CLASS HP4 CONCRETE, ABUTMENT SLABS		109	
SP 511B	12	CU. YD.	CLASS HP4 CONCRETE, FOR PREPLACEMENT TESTING		6	6
511	10	CU. YD.	CLASS QC1 CONCRETE, ABUTMENT			10
513	9,384	EACH	WELDED STUD SHEAR CONNECTORS		7,200	2,184
513	1	LUMP	STRUCTURAL STEEL, MISC.: COVER PLATE FATIGUE RETROFIT		1	
513	1	LUMP	STRUCTURAL STEEL, MISC.: END DIAPHRAGM MODIFICATION		1	
SP 516A	97	FOOT	CRACK REPAIR USING EPOXY INJECTION		7	90
SP 516B	1,555	FOOT	SEALING OF CONSTRUCTION JOINTS		508	1,047
SP 516G	36	EACH	REPLACE EXPANSION BEARING DEVICE		36	
SP 519	719	SQ. FT.	PATCHING OF CONCRETE STRUCTURES		689	30
SP 527	1	LUMP	FALSEWORK, TEMPORARY BRACING AND PROTECTIVE STRUCTURES	1		
SP 533	256	FOOT	3" CONTINUOUS STRIP SEAL IN STRUCTURAL STEEL JOINT		256	
SP 533	142	FOOT	4" CONTINUOUS STRIP SEAL IN STRUCTURAL STEEL JOINT			142
SP 536	4,467	SQ. YD.	CONCRETE WEATHERPROOFING, DECK, ABUTMENT SLABS, AND APPROACH SLABS		2,510	1,957
SP 536	2,358	SQ. YD.	CONCRETE WEATHERPROOFING, SUBSTRUCTURE		1,688	670
SP 607	322	FOOT	TYPE II FENCE, ALL ALUMINUM (6'-0" CHAIN LINK WITH SPECIALS)			322

DESIGN AGENCY: PALMER ENGINEERING, AKRON, OH 44320

NO.	REVISIONS	BY	DATE
1	ADDENDUM 1	DAM	01/18

DESIGNED DM/TS | CHECKED MAM | DRAWN TES | IN CHARGE MAM

GENERAL SUMMARY

PORTAGE COUNTY

M.P. 186.0
M.P. 186.8

PROJECT 43-18-04

DATE: 10/25/17

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

711609_GG001.dwg; 1/10/18 - 3:19pm

TEMPORARY TRAFFIC CONTROL NOTES - M.P. 186.8 (CONTINUED)

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 PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENT 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). SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT 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).

1

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

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 LEOS' 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 RE-TURNED 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 QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 100 HOURS

THE HOURS PAID SHALL INCLUDE ANY 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.

DURING A TRAFFIC INCIDENT OR ANY OTHER OCCURRENCE CAUSING A TRAFFIC QUEUE, THE MAIN PRIORITY OF THE ZONE PERSON IS TO PROTECT THE BACK OF THE QUEUE. THIS SHALL BE ACCOMPLISHED BY POSITIONING THE ZONE VEHICLE ON THE ROADWAY SHOULDER AND APPROXIMATELY 1,000 FEET BEHIND THE REAR OF STOPPED/ SLOWED TRAFFIC, WHILE MOVING FORWARD OR BACKWARD AS NEEDED TO MAINTAIN THE PROPER DISTANCE. THE DISTANCE FROM THE QUEUE SHOULD BE INCREASED IF THERE IS LIMITED SIGHT DISTANCE DUE TO ROADWAY GEOMETRY.

TEMPORARY TRAFFIC CONTROL NOTES - M.P. 186.0 AND M.P. 186.8

THE MAINTENANCE OF TRAFFIC UTILIZED FOR THE BRIDGE AT M.P. 186.0 SHALL BE MODIFIED AS REQUIRED TO FACILITATE THE FALSEWORK INSTALLATION AND REMOVAL AS WELL AS THE DECK SLAB REMOVAL AT THE M.P. 186.8 BRIDGE. ALL PROPOSED MODIFICATIONS SHALL BE SUBMITTED TO, AND APPROVED BY THE CHIEF ENGINEER PRIOR TO IMPLEMENTATION. ALL COST ASSOCIATED WITH THESE MODIFICATIONS SHALL BE CONSIDERED INCIDENTAL TO SP 614 MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 10 M GALLON

WINTER TIME LIMITATIONS

THIS PROJECT SHALL CONSIST OF TWO CONSTRUCTION SEASONS AS FOLLOWS: 1

CONSTRUCTION SEASON	COMMENCEMENT	SUBSTANTIAL COMPLETION
ONE	APRIL 3, 2018	OCTOBER 1, 2018
TWO	APRIL 23, 2019	OCTOBER 1, 2019

1

ALL WORK AS DESCRIBED IN THE PRECEDING TEMPORARY TRAFFIC CONTROL NOTES; AND ALL EXISTING LANES, INCLUDING RAMPS, SHALL BE OPEN AND AVAILABLE TO TRAFFIC IN THE ORIGINAL OR PROPOSED ALIGNMENT BETWEEN OCTOBER 2, 2018 AND APRIL 22, 2019. SHOULD THE CONTRACTOR FAIL TO MEET THESE REQUIREMENTS, LIQUIDATED DAMAGES SHALL BE ASSESSED IN THE AMOUNT OF $10,000 PER HOUR.

SUSPENSION OF WORK

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, THE CHIEF ENGINEER WILL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ALTERNATE MAINTENANCE OF TRAFFIC (MOT) PLANS

IF THE CONTRACTOR SO ELECTS, HE OR SHE MAY PROPOSE AN ALTERNATE METHOD OR METHODS FOR MAINTAINING TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS AND SP 614 ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THERE FROM.

IF THE CONTRACTOR ELECTS TO PROPOSE AN ALTERNATE MOT PHASE, SCHEME OR PLAN FROM THAT INCLUDED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PREPARE TO SCALE PLANS, EQUIVALENT TO THE LEVEL OF DETAIL OR MORE AS PROVIDED IN THE CONTRACT DOCUMENTS, WHICH ILLUSTRATE ALL ADVANCED WARNING AREA SIGNAGE, TRANSITION AREA(S) FOR TAPERS AND SHIFTS, SIGNAGE AND/ OR PAVEMENT MARKINGS, BUFFER SPACE, ACTIVITY OR WORK AREAS WHERE WORK IS TAKING PLACE, STAGING AREAS FOR WORKERS / MATERIALS / EQUIPMENT, AND TERMINATION AREA SHOWING TRAILING BUFFER SPACE AND TRANSITIONS OF TRAFFIC RETURNING TO NORMAL ALIGNMENT.

DETAILS OF ANY VARIATION FROM THE CONTRACT DOCUMENTS, SUCH AS THE PLACEMENT OF TEMPORARY CONCRETE BARRIER, TEMPORARY SHEETING, TEMPORARY BARRIER VEHICLES, TEMPORARY SIGNALS, TEMPORARY IMPACT ATTENUATORS, COVERING OF EXISTING SIGNAGE, REMOVAL OF PAVEMENT MARKINGS, ETC. SHOULD ALSO BE PROVIDED. BOTH MILEPOSTS AND STATIONS SHALL BE PROVIDED TO IDENTIFY ALL LOCATIONS OF SIGNS OR DEVICES.

THE PROPOSED ALTERNATE PLAN IS TO ADDRESS THE ENTIRE PROJECT AND/ OR ADJACENT PROJECT MOT PLANS AND ANY REQUIRED CORRECTIONS TO ALREADY EXISTING MOT. TRAFFIC FLOW ARROWS SHALL BE SHOWN ON THE PLANS TO CLEARLY INDICATE EACH LANE OF TRAFFIC MAINTAINED.

THE ALTERNATE MOT PLANS SHALL BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED AND REGISTERED IN THE STATE OF OHIO WHO IS KNOWLEDGEABLE ABOUT FUNDAMENTAL PRINCIPLES OF TEMPORARY TRAFFIC CONTROL AND WORK ACTIVITIES TO BE PERFORMED. ALTERNATE MOT PLANS SHALL BE SUBMITTED TO THE CHIEF ENGINEER FOR REVIEW AND APPROVAL.

THE CHIEF ENGINEER WILL REQUIRE A 14 DAY REVIEW PERIOD TO EVALUATE THE PROPOSED ALTERNATE MOT PLAN. NO ALTERNATE PLANS SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE CHIEF ENGINEER. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH SP 614 AND ALL OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE CURRENT VERSION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION STANDARDS. ALL COSTS ASSOCIATED WITH THE PROPOSED ALTERNATE MOT PLAN WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR NO ADDITIONAL COMPENSATION WILL BE PROVIDED.

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

COVERING OF GROUND-MOUNTED SIGNS - GENERAL

WHEN REQUIRED BY OTHER ITEMS OR INCIDENTALLY TO ITEM SP 614 MAINTAINING TRAFFIC, OR ITEM 614, MAINTAINING TRAFFIC, COVER EXISTING GROUND-MOUNTED SIGNS WITH PLYWOOD OR OSB BLANKS (1-1/2" MINIMUM THICKNESS) COVERING MINIMUM OF 80% OF THE SIGN AREA AND ALL OF THE SIGN LEGEND. THE USE OF LOW QUALITY MATERIALS SUCH AS DUCT TAPE AND BLACK PLASTIC IS NOT PERMITTED.

RELOCATION OF GROUND-MOUNTED SIGNS - GENERAL

WHEN REQUIRED BY OTHER ITEMS OR INCIDENTALLY TO ITEM SP 614, MAINTAINING TRAFFIC OR ITEM 614, MAINTAINING TRAFFIC, RELOCATE EXISTING GROUND-MOUNTED SIGNS ON NEW POSTS TO LOCATIONS APPROVED BY THE ENGINEER. THE SIGNS SHALL BE REERECTED ON NEW TYPE 2 POSTS PRIOR TO RESTORING THE ORIGINAL TRAFFIC PATTERNS.

ITEM 630, SIGNING MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER

WHEN ADDITIONAL SIGNING IS NEEDED TO MAINTAIN TRAFFIC, THE CONTRACTOR SHALL FURNISH THE SIGN OR SIGNS AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE GROUND MOUNTED AND MEET ALL THE SPECIFICATIONS OF THE PLAN, PROPOSAL AND CURRENT YEAR C&MS.

PAYMENT FOR THIS ITEM SHALL INCLUDE, BUT NOT BE LIMITED TO, THE COST TO FURNISH AND ERECT THE SIGN, INCLUDING DRIVING POSTS OR OTHER APPROVED METHODS OF SIGN SUPPORT, MAINTAINING THE SIGN AND REMOVAL OF THE SIGN. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 630, SIGNING MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER .... 320 SQUARE FEET

ITEM 614, REPLACEMENT SIGN

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 20 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 200 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

PROJECT 43-18-04

DATE: 10/25/17

MAINTENANCE OF TRAFFIC GENERAL NOTES

M.P. 186.0 AND M.P. 186.8 PORTAGE COUNTY

DESIGNED	CHECKED
DAM	MAM
DRAWN	IN CHARGE
TGW	MAM

NO.	REVISIONS	BY	DATE
1	ADDENDUM 1	DAM	01/18
-	-	-	-
-	-	-	-

DESIGN AGENCY: PALMER ENGINEERING, AKRON, OH 44320

8

113

711609_I480_MN001.dwg; 1/10/18 - 2:45pm

TEMPORARY TRAFFIC CONTROL NOTES - M.P. 186.0 AND M.P. 186.8 (CONTINUED)

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS ON THE ROADWAY STANDARDS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, THREE (3) PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS). THE SIGNS SHALL BE LOCATED NEAR THE PROJECT SITES, ONE FOR EACH DIRECTION OF TRAVEL APPROACHING AN ACTIVE WORK ZONE, AS DIRECTED BY THE ENGINEER FOR THE DURATION OF THE PROJECT. THE SIGNS SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED CLASS "A" PCMS UNITS MAINTAINED BY THE ODOT DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT.

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 SHALL BE DELINEATED ON A PERMANENT BASIS IN ACCORDANCE WITH ODOT CMS 614.03.

THE PCMS LOCATIONS, LIMITS FOR THOSE LOCATIONS AND ALL ACTIVATION OF PCMS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE CHIEF ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE CHIEF ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED 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 RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE CHIEF ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE TURNPIKE MAINTENANCE 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 CHIEF ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRE-CONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED 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 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, DEACTIVATED 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 PHONE AREAS) ALLOW REMOTE ACTIVATION, 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 CONTAIN A GPS DEVICE WHICH WILL SHOW ITS LOCATION ON A MAP WHICH CAN BE VIEWED REMOTELY BY THE OTIC COMMUNICATIONS CENTER. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE OTIC COMMUNICATIONS CENTER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

ALL PCMS UNITS SHALL BE EQUIPPED WITH RADAR THAT ENABLES THE MESSAGE BOARD TO DISPLAY THE SPEED OF THE APPROACHING VEHICLES. WHEN A PCMS IS INITIALLY BROUGHT OUT TO THE PROJECT THE CONTRACTOR SHALL CONTACT THE OTIC COMMUNICATIONS CENTER WITH THE PCMS NUMBER AND LOCATION. AT THAT TIME THE OTIC COMMUNICATIONS WILL VERIFY COMMUNICATION WITH THE PCMS.

WHEN A PCMS IS REPLACED OR RELOCATED THE CONTRACTOR SHALL CONTACT THE OTIC COMMUNICATIONS CENTER WITH THE PCMS NUMBER AND LOCATION.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF ODOT CMS 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. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE CHIEF ENGINEER TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON THEIR CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

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. THE CONTRACTOR SHALL ONLY BE PAID FOR PCMS UNITS WHEN THEY ARE IN OPERATION ON THE PROJECT AS SPECIFIED IN THE PLANS OR BY THE CHIEF ENGINEER.

1

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE CHIEF ENGINEER TO PROVIDE THREE (3) PORTABLE CHANGEABLE MESSAGE SIGNS FOR APPROXIMATELY 180 DAYS IN SEASON ONE (1); AND TWO (2) PORTABLE CHANGEABLE MESSAGE SIGNS FOR APPROXIMATELY 157 DAYS IN SEASON TWO (2), FOR AN ESTIMATED TOTAL OF 28 SIGN MONTH.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
28 SIGN MONTH

ITEM SP 622 - PORTABLE BARRIER (WITH GLARE SCREEN)
ITEM SP 622 - PORTABLE BARRIER (WITHOUT GLARE SCREEN)

THE CONTRACTOR SHALL REPLACE ANY DAMAGED PORTABLE BARRIER WITH IN 24 HOURS OF A DAMAGING IMPACT. TO FACILITATE THIS PROMPT REPLACEMENT, AN ADDITIONAL THREE HUNDRED FEET OF EACH TYPE OF BARRIER SHALL BE ON THE PROJECT AT ALL TIMES.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN SHOWN FOR INFORMATIONAL PURPOSES ONLY. A LUMP SUM QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE CHIEF ENGINEER FOR REPLACEMENT OF PORTABLE BARRIER.

ITEM SP 622 - PORTABLE BARRIER, 32"
(WITH GLARE SCREEN) .... 300 FEET

ITEM SP 622 - PORTABLE BARRIER, 32"
(WITHOUT GLARE SCREEN) .... 300 FEET

SP 614, MAINTAINING TRAFFIC - ZONE PERSON

IN ADDITION TO THE REQUIREMENTS OF SP 614, WHEN TRAFFIC IS REDUCED TO ONE LANE EITHER EASTBOUND OR WESTBOUND ON THE TURNPIKE, THE CONTRACTOR'S ZONE PERSON AND ZONE VEHICLE SHALL CONCENTRATE THEIR EFFORTS ON THIS WORK ZONE.

DURING A TRAFFIC INCIDENT OR ANY OTHER OCCURRENCE CAUSING A TRAFFIC QUEUE, THE MAIN PRIORITY OF THE ZONE PERSON IS TO PROTECT THE BACK OF THE QUEUE. THIS SHALL BE ACCOMPLISHED BY POSITIONING THE ZONE VEHICLE ON THE ROADWAY SHOULDER AND APPROXIMATELY 1,000 FEET BEHIND THE REAR OF STOPPED/ SLOWED TRAFFIC, WHILE MOVING FORWARD OR BACKWARD AS NEEDED TO MAINTAIN THE PROPER DISTANCE. THE DISTANCE FROM THE QUEUE SHOULD BE INCREASED IF THERE IS LIMITED SIGHT DISTANCE DUE TO ROADWAY GEOMETRY.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM SP 614, MAINTAINING TRAFFIC. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NEEDED TO PERFORM THE ABOVE DESCRIBED WORK.

PAVEMENT REPAIRS

THE FOLLOWING QUANTITIES ARE INCLUDED AS A CONTINGENCY TO BE USED AS DIRECTED BY THE CHIEF ENGINEER FOR PAVEMENT REPAIR MEASURES TO MAINTAIN TRAFFIC. CONTRACTOR SHALL FOLLOW ODOT CMS FOR ITEM 255, EXCEPT THAT PLACEMENT OF THE DOWEL BARS ARE NOT REQUIRED FOR SHORT TERM REPAIRS, CONCRETE SHALL BE CLASS QC 1 FOR AREAS WHERE TRAFFIC CAN BE DIVERTED FOR 7 DAYS, AREAS THAT HAS TO BE OPENED TO TRAFFIC IN A TIMELY MANNER CONCRETE SHALL BE IN ACCORDANCE WITH ODOT 255.02A, AND MAINTENANCE OF TRAFFIC COSTS INCURRED BY THE CONTRACTOR FOR THESE CURRENTLY UNKNOWN AND UNDEFINED PAVEMENT REPAIRS WILL BE COMPENSATED ON A TIME AND MATERIALS BASIS AS APPROVED BY THE CHIEF ENGINEER. DEPTH FOR PARTIAL REMOVAL WILL BE 5" (+/-) ASPHALT ON CONCRETE TO THE SURFACE OF THE CONCRETE BASE. REPLACEMENT MATERIALS ARE SPECIFIED IN 251.03 UNIT PRICES BID FOR THE ITEMS IMMEDIATELY BELOW SHALL NOT INCLUDE MAINTENANCE OF TRAFFIC COSTS.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR..500 SQ. YD.
ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT......500 SQ. YD.
ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT
(USING RAPID REPAIR CONCRETE MIX MATERIAL)..........................500 SQ. YD.
ITEM 255 - FULL DEPTH PAVEMENT SAWING..1500 FT.

CONTRACTOR STAGING AREA

TOLL PLAZA 187 INFIELD IS AVAILABLE FOR A CONTRACTOR STAGING AREA. IF A CONTRACTOR CHOOSES A STAGING AREA WITHIN THE TURNPIKE RIGHT OF WAY OTHER THAN WHAT IS INDICATED IN THE PLANS, IT MUST BE SUBMITTED TO THE CHIEF ENGINEER FOR APPROVAL PRIOR TO USE.

THE STAGING AREA SHALL BE MAINTAINED BY THE CONTRACTOR AND RESTORED TO ORIGINAL CONDITION TO THE APPROVAL OF THE CHIEF ENGINEER PRIOR TO COMPLETION OF ALL WORK.

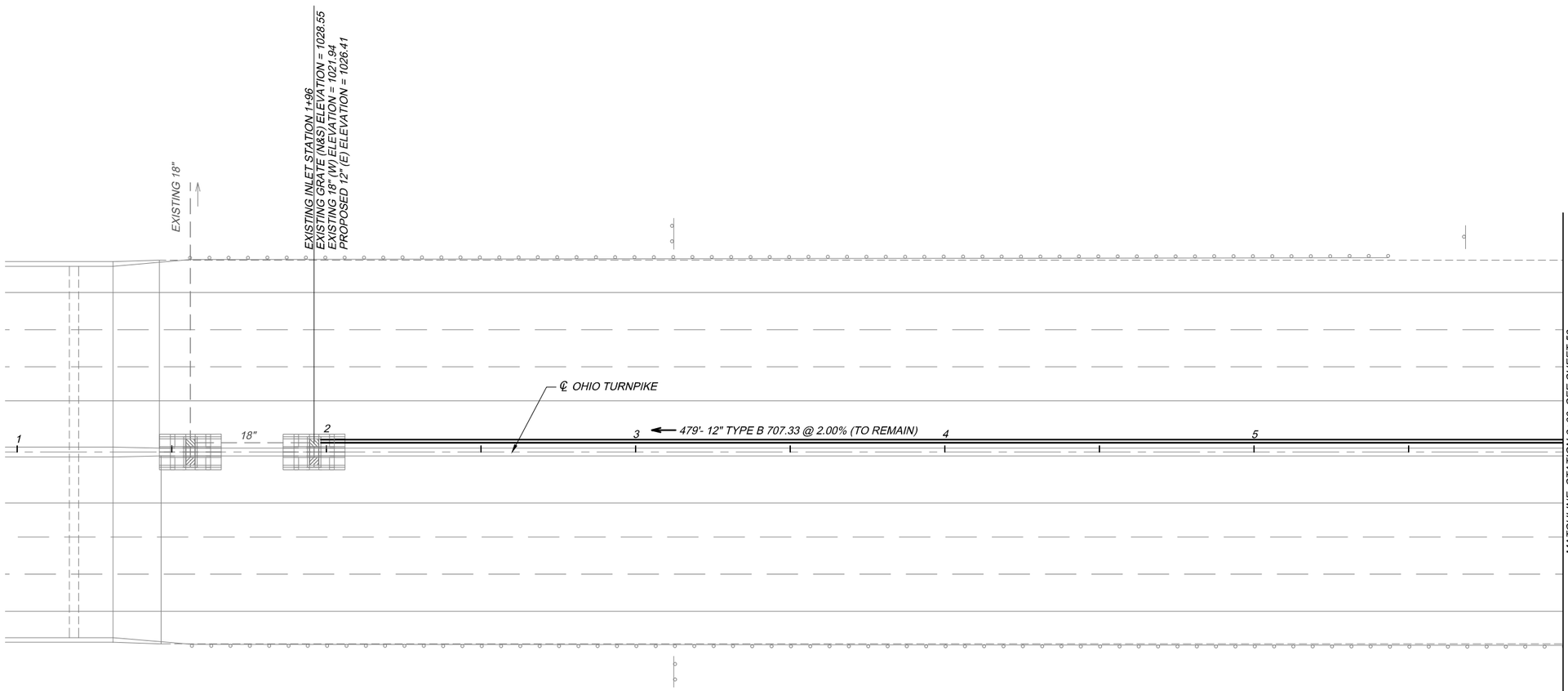
DESIGNED	CHECKED	NO.	REVISIONS	BY	DATE
DAM	MAM	1	ADDENDUM 1	DAM	01/18
DRAWN TGW	IN CHARGE MAM	-	-	-	-

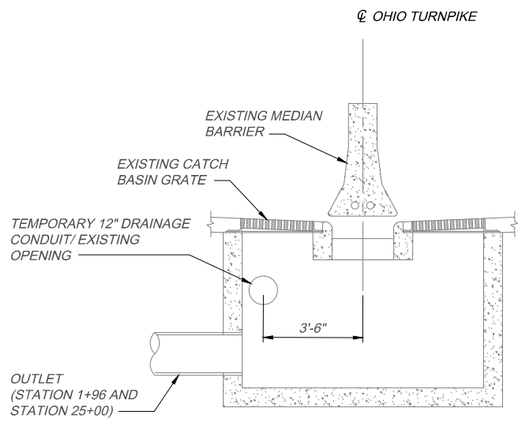
DESIGN AGENCY: PALMER ENGINEERING, AKRON, OH 44320

PROJECT 43-18-04
DATE: 10/25/17

MAINTENANCE OF TRAFFIC GENERAL NOTES
M.P. 186.0 AND M.P. 186.8
PORTAGE COUNTY

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION





TEMPORARY 12" DRAINAGE CONDUIT TIE-IN DETAIL

STATION 1+96 AND STATION 25+00 (EXISTING OPENING)

NOTES:

1. ALL DRAINAGE ITEMS DESIGNATED AS TEMPORARY SHALL BE REMOVED IN PHASE 4.
2. THE INTENTION OF THE LISTED ELEVATIONS ARE TO IDENTIFY THE EXISTING ELEVATIONS AND THE REQUIRED VARIABLE DEPTH TEMPORARY PAVEMENT PLACEMENT REQUIRED TO PROMOTE DRIVER SAFETY THROUGH THE WORK ZONE AND PROVIDE POSITIVE ROADWAY DRAINAGE.
3. ALL ELEVATIONS ARE TO BE CONSIDERED AS RELEVANT TO THE EXISTING CONDITIONS AND SHALL BE VERIFIED FOR ACCURACY AND POSITIVE DRAINAGE BY THE CONTRACTOR PRIOR TO BEGINNING MEDIAN BARRIER WALL REMOVAL AND CROSSOVER CONSTRUCTION ACTIVITIES.
4. THE TEMPORARY SLOTTED DRAIN SHALL BE AS PER ODOT STANDARD CONSTRUCTION DRAWING DM-1.3. PAYMENT FOR INSTALLATION OF THE SLOTTED DRAIN SHALL BE INCLUDED IN ITEM SP 614, MAINTAINING TRAFFIC. (1)
5. TEMPORARY ELEVATION INDICATED AT 3'-6" LEFT IS THE PROPOSED SLOTTED DRAIN GRATE ELEVATION.
6. ALL DRAINAGE SHALL BE IN ACCORDANCE WITH SP 611.

711609_MM017.dwg; 1/09/18 - 1:18pm

DESIGN AGENCY
PALMER ENGINEERING
CONSULTING ENGINEERS AND SURVEYORS
ENGINEERS ■ SURVEYORS ■ PLANNERS
AKRON, OHIO 44320

NO.	REVISIONS	BY	DATE
1	ADDENDUM 1	DAM	01/18
-	-	-	-
-	-	-	-

DESIGNED DAM
CHECKED MAM
DRAWN
IN CHARGE MAM
CHECKED WB

MAINTENANCE OF TRAFFIC TEMPORARY DRAINAGE DETAILS
OHIO TURNPIKE OVER WHEELING AND LAKE ERIE RAILWAY
M.P. 186.0
PORTAGE COUNTY

PROJECT 43-18-04
DATE: 10/25/17

55
113

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

STRUCTURES - GENERAL NOTES

PROPOSED WORK

THE OHIO TURNPIKE BRIDGES OVER THE WHEELING & LAKE ERIE RAILROAD AND THE I-480 EASTBOUND BRIDGE OVER THE OHIO TURNPIKE SHALL BE REHABILITATED UNDER THIS CONTRACT. WORK ITEMS INCLUDE REPLACING THE BRIDGE DECKS, ABUTMENT SLABS, APPROACH SLABS, BEARING DEVICES AND DECK JOINTS, MISCELLANEOUS PATCHING OF SUBSTRUCTURES, SEALING OF CONSTRUCTION JOINTS, PERFORMING CONCRETE WEATHERPROOFING, INSTALLATION OF FENCING AND MAINTENANCE OF TRAFFIC. DETAILS OF THIS WORK ARE SHOWN IN THE PLANS.

DESIGN SPECIFICATIONS

STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, DATED 2002, AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS. THE DESIGN LOADING IS HS20-44 CASE I AND THE ALTERNATE MILITARY LOADING.

THE CLASS OF CONCRETE AND THE GRADES OF REINFORCING STEEL FOR THE CONSTRUCTION ARE AS FOLLOWS:

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4,500 P.S.I.
CONCRETE CLASS HP4 - COMPRESSIVE STRENGTH 4,500 P.S.I.
REINFORCING STEEL - ASTM A615, A616, A617 - GRADE 60

ORIGINAL CONSTRUCTION PLANS

ORIGINAL CONSTRUCTION PLANS, SHOWING THE ORIGINAL ALIGNMENT, PROFILE, AND DETAILS OF THE BRIDGES ARE AVAILABLE FOR INSPECTION AT THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION HEADQUARTERS

682 PROSPECT STREET
BEREA, OHIO 44017
(440) 234-2081

EXISTING STRUCTURE VERIFICATION

DETAILS, DIMENSIONS, AND ELEVATIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO SECTION 501.02 OF THE SPECIFICATIONS AND OTIC INSTRUCTION TO BIDDERS ARTICLE 2.1 AND GENERAL CONDITIONS ARTICLE 1.5.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS, DIMENSIONS, ELEVATIONS, AND SKEW ANGLES WHICH HAVE BEEN FIELD VERIFIED BY THE CONTRACTOR. THE STRUCTURAL STEEL AND STRUCTURAL STEEL DECK JOINTS SHALL NOT BE FABRICATED UNTIL ACTUAL DETAILS, DIMENSIONS, ELEVATIONS, AND SKEW ANGLES HAVE BEEN FIELD VERIFIED BY THE CONTRACTOR.

ANY ADDITIONAL COSTS RESULTING FROM VARIATIONS FROM PLAN DIMENSIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL PAYMENT OVER THE UNIT BID PRICE WILL BE AWARDED BY THE COMMISSION.

REMOVAL

GENERAL:

THE CONTRACTOR SHALL REMOVE THE DESIGNATED PORTIONS OF THE EXISTING STRUCTURE TO THE LIMITS SHOWN ON THE PLANS OR TO THE LIMITS AS DIRECTED BY THE ENGINEER. WHEN SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL WET DOWN THE CONCRETE THOROUGHLY DURING REMOVAL OPERATIONS TO PREVENT SPREAD OF DUST. ALL NECESSARY LABOR, EQUIPMENT AND MATERIAL SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED WITH ITEM SP 202, PORTIONS OF STRUCTURE REMOVED, FOR PAYMENT.

CONCRETE REMOVAL:

CONCRETE SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL EDGED TOOLS AND/OR BY SAW CUTTING THE CONCRETE DECKS AND REMOVING IN SECTIONS.

CARE SHALL BE TAKEN TO ENSURE AGAINST DAMAGE TO THE STEEL AND CONCRETE MEMBERS WHICH ARE TO BE RETAINED AND TO PRESERVE THE BOND OF THE RETAINED REINFORCEMENT TO THE EXISTING CONCRETE. THESE BARS SHALL BE CLEANED OF ALL CONCRETE FRAGMENTS AND FOREIGN MATTER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH THE BARS; HAND TOOLS SHALL BE EMPLOYED FOR FINAL CLEANING. DAMAGED AREAS OF REINFORCEMENT THAT ARE TO REMAIN SHALL BE CUT AND STRESS TRANSFER ACCOMPLISHED BY EITHER A LAPPED OR MECHANICAL SPLICE. ANY ADDITIONAL REINFORCEMENT OR MECHANICAL SPLICES SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE COMMISSION. OTHER EXISTING REINFORCEMENT WITHIN THE REMOVAL LIMITS SHALL BE REMOVED AND DISPOSED OF.

DISPOSAL OF REMOVED MATERIAL:

THE CONTRACTOR SHALL NOT PERMIT ANY REMOVED MATERIAL TO DROP TO THE GROUND. MEANS SHALL BE PROVIDED FOR CATCHING REMOVED MATERIAL. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL DETAILS OF THE METHODS TO BE USED FOR REMOVING AND COLLECTING THE MATERIAL. ALL CONCRETE, STEEL, REINFORCING STEEL, ASPHALT, ETC. REMOVED FROM THE STRUCTURE, UNLESS SPECIFIED, SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED BY HIM FROM THE SITE.

UNDER NO CIRCUMSTANCES SHALL THE MATERIAL BE PERMITTED TO REMAIN ON THE PREMISES, RIGHT OF WAY, OR STREETS PENDING DISPOSAL OF SAME OR FOR ANY OTHER PURPOSES, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

CUTTING OR BENDING OF REINFORCING BARS

ANY CUTTING OR BENDING OF BARS NECESSARY TO ACCOMMODATE ANY ESSENTIAL ELEMENT OF WORK RELATED TO THE PROJECT, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL AND/OR ITEM SP 509 EPOXY COATED REINFORCING STEEL UNLESS OTHERWISE NOTED.

DIMENSIONS

DIMENSIONS GIVEN ARE MEASURED HORIZONTALLY AND AT 60° F UNLESS OTHERWISE NOTED. DIMENSIONS GIVEN FOR THE EXISTING STRUCTURE ARE FROM THE ORIGINAL CONSTRUCTION PLANS. SOME VARIATION FROM PLAN DIMENSIONS ARE EXPECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER FIT-UP BETWEEN THE PROPOSED AND EXISTING CONSTRUCTION. ADEQUATE MEASUREMENTS SHALL BE MADE IN THE FIELD PRIOR TO THE FABRICATION OR INSTALLATION OF ANY PART TO ENSURE THAT ALL PARTS CAN BE PROPERLY ASSEMBLED AS SPECIFIED IN THE PLANS. ANY ADDITIONAL COST RESULTING FROM VARIATIONS FROM PLAN DIMENSIONS IS THE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL PAYMENT WILL BE AWARDED BY THE COMMISSION.

REPAIR OF EXISTING CONCRETE ELEMENTS

EXISTING REINFORCED CONCRETE STRUCTURE ELEMENTS WHICH ARE INCORPORATED IN THIS CONSTRUCTION PROJECT ARE TO BE MODIFIED AND/OR REPAIRED. A CONDITION SURVEY WAS PERFORMED IN FEBRUARY AND APRIL OF 2017. REPAIR AREAS WERE DETERMINED BY VISUAL INSPECTION. THE STRUCTURAL ELEMENTS INSPECTED INCLUDE CONCRETE ABUTMENTS, PIERS, AND CRASH WALLS (EXPOSED SURFACES ONLY). THE RECORDS OF THIS INSPECTION ARE THE BASIS FOR THE REPAIR RECOMMENDATIONS AS DETAILED IN THE PLANS.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE COMMISSION WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. AN ESTIMATED QUANTITY OF 100 POUNDS HAS BEEN INCLUDED FOR THIS WORK. REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE COMMISSION.

ITEM SP 536 - CONCRETE WEATHERPROOFING

ITEM SP 536 - CONCRETE WEATHERPROOFING SHALL BE APPLIED TO THE FOLLOWING NEW EXPOSED CONCRETE SURFACES OF THE BRIDGE:

- THE TOP OF NEW ABUTMENT SLABS, NEW APPROACH SLABS, AND NEW SUPERSTRUCTURE SLABS.
- ALL NEW SLAB SIDE EDGES.
- THE BOTTOM SURFACE OF THE NEW SUPERSTRUCTURE SLAB FROM THE SLAB SIDE EDGE TO THE EXTERIOR STRINGER FLANGE.
- ALL EXPOSED CONCRETE SURFACES OF ALL ABUTMENTS AND PIERS. SEALING SHALL NOT BE DONE UNTIL ALL CONCRETE PATCHING REPAIRS HAVE BEEN COMPLETED AND CURED.

CARE SHALL BE TAKEN NOT TO APPLY WEATHERPROOFING ON CONSTRUCTION JOINT SURFACES, SURFACES TO RECEIVE JOINT SEALER, OR FASCIA BEAM PAINT.

CONCRETE PARAPETS

PARAPET FORMS:

FORMS FOR THE BRIDGE PARAPETS AND SLAB EDGES SHALL BE IN ACCORDANCE WITH 508.03 OF THE SPECIFICATIONS AND THE FOLLOWING:

WHEN WOOD FORMS ARE USED THEY SHALL PROVIDE A SMOOTH SURFACE OF UNIFORM TEXTURE AND COLOR SUBSTANTIALLY EQUAL TO THAT WHICH WOULD BE OBTAINED WITH THE USE OF NEW PLYWOOD CONFORMING TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY PRODUCT STANDARD PSI FOR EXTERIOR B-B CLASS 1 PLYWOOD.

FORMS SHALL BE OF A CONSTRUCTION WHICH WOULD ALLOW FOR THEIR REMOVAL WITHIN 24 HOURS OF THE CONCRETE PLACEMENT WITHOUT CAUSING DAMAGE TO THE DECK CONCRETE.

CONSTRUCTION JOINTS

CONSTRUCTION JOINT SURFACES SHALL BE FREE FROM OIL, LAITANCE, FORM RELEASE AGENT, OR ANY OTHER MATERIAL THAT WOULD PREVENT BONDING TO THE CONCRETE SURFACE. ALL LAITANCE AND OTHER CONTAMINANTS SHALL BE REMOVED BY HIGH PRESSURE WATER BLASTING WITH A MINIMUM PRESSURE OF 5,000 P.S.I. HOWEVER, WATER BLASTING SHALL NOT BE REQUIRED WHERE EXISTING CONCRETE HAS BEEN ROUGHENED BY JACKHAMMERS DURING CONCRETE REMOVAL OPERATIONS. SURFACES SHALL BE THOROUGHLY DRENCHED WITH CLEAN WATER AND ALLOWED TO DRY TO A DAMP CONDITION FREE OF STANDING WATER BEFORE PLACING CONCRETE. PREPARATION OF CONSTRUCTION JOINT SURFACES SHALL NOT BE MEASURED FOR PAYMENT. THE COST THEREOF SHALL BE INCLUDED IN THE CONTRACT PRICE OF THE PERTINENT CONCRETE ITEMS.

EXISTING RIGHT OF WAY FENCE

IT IS THE INTENT OF THE PROJECT FOR THE EXISTING RIGHT OF WAY FENCE NEAR THE BRIDGE TO REMAIN, HOWEVER IF THE CONTRACTOR DEEMS IT NECESSARY TO REMOVE THE FENCE FOR HIS OPERATIONS AS APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL CAREFULLY REMOVE THE FENCE AND REINSTALL THE FENCE IN ACCORDANCE WITH ITEM 607. IF THE FENCE BECOMES DAMAGED DUE TO THE CONTRACTORS OPERATIONS THE FENCE SHALL BE REPLACED AT NO COST TO THE COMMISSION.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED.

EROSION CONTROL

1

THE INTENT OF THE PROJECT IS NOT TO DISTURB ANY SEEDED AREAS AND/OR DRAINAGE ELEMENTS, EXCEPT AS INDICATED ON THE M.P. 186.8 ROADWAY PLANS. ANY WORK INVOLVING SEEDED AREAS, DRAINAGE ELEMENTS OR EROSION CONTROL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT COST AND SHALL BE REPAIRED/PROTECTED AS DIRECTED BY THE ENGINEER.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, INCLUDING IMPLEMENTING EROSION CONTROL MEASURES IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 832 FOR THE ABOVE STATED M.P. 186.8 WORK , SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED.

ITEM 513, STRUCTURAL STEEL, MISC: COVER PLATE FATIGUE RETROFIT

THIS ITEM INCLUDES ALL LABOR, COSTS AND MATERIALS TO INSTALL BOLTED FLANGE SPLICES TO RETROFIT THE EXISTING WELDED COVER PLATES OVER THE PIERS ON THE MP 186.0 STRUCTURE. DETAILS OF THE PROPOSED WORK ARE SHOWN ON SHEET 9 OF 16 AND 10 OF 16. ANY REQUIRED REMOVAL AND REINSTALLATION OF INTERMEDIATE DIAPHRAGM CONNECTION PLATES WHICH INTERFERE WITH THE PROPOSED SPLICE LOCATIONS SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

ITEM 513, STRUCTURAL STEEL, MISC: END DIAPHRAGM MODIFICATION

THIS ITEM INCLUDES ALL LABOR, COSTS AND MATERIALS TO MODIFY EXISTING END DIAPHRAGMS AT LOCATIONS SHOWN ON THE PLANS FOR THE MP 186.0 STRUCTURE. DETAILS OF THE PROPOSED WORK ARE SHOWN ON SHEET 9 OF 16.

OT_MP186.0_SN001.dwg; 1/09/18 - 1:44pm

DESIGN AGENCY
Palmer ENGINEERING
PALMER ENGINEERING COMPANY
50 SOUTH MAIN STREET AKRON, OH 44320
CINCINNATI • AKRON • CLEVELAND • COLUMBUS • DAYTON • PITTSBURGH • WASHINGTON, D.C.

NO.	REVISIONS	BY	DATE
1	ADDENDUM 1	DAM	01/18
-	-	-	-
-	-	-	-

DESIGNED TES | CHECKED JPR | IN CHARGE MLJ
DRAWN TES

PROJECT 43-18-04
DATE: 10/23/17

STRUCTURES GENERAL NOTES
M.P. 186.0 & M.P. 186.8
PORTAGE COUNTY

1 / 1

73
113

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

INTERSTATE 480 EASTBOUND PAVEMENT WIDENING (M.P. 186.8)

THIS WORK SHALL CONSIST OF THE FOLLOWING:
LOCATE THE EDGE OF THE EXISTING CONCRETE BASE.
SAW CUT THE PAVEMENT PER ODOT CMS 203.04(E) DIRECTLY ABOVE THE EDGE OF THE EXISTING CONCRETE BASE. REMOVE THE EXISTING ADJACENT ASPHALT PAVEMENT AND AGGREGATE BASE. EXCAVATION SHALL BE TO THE DEPTH REQUIRED TO PLACE THE NEW FULL DEPTH PAVEMENT. THE COST OF THE SAW CUT AND ASPHALT PAVEMENT REMOVAL SHALL BE INCLUDED WITH ITEM 203 - EXCAVATION.

THE PAVEMENT COMPOSITION FOR THE WIDENING SHALL CONSIST OF:
ITEM 442, 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448), AS PER PLAN; ON
ITEM 442, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448); ON
ITEM 302, 9" ASPHALT CONCRETE BASE, PG64-22; ON
ITEM 304, 6" AGGREGATE BASE.

THE SURFACE AND INTERMEDIATE COURSES SHALL BE PACED IN A VERTICAL PLANE AT THE OUTSIDE EDGE OF THE SURFACE COURSE. THE ASPHALT BASE COURSE SHALL EXTEND 4 INCHES BEYOND THE EDGE OF THE INTERMEDIATE COURSE THE AGGREGATE BASE COURSE SHALL EXTEND 9 INCHES BEYOND THE EDGE OF THE ASPHALT BASE COURSE.

APPLY ITEM 407 - NON-TRACKING TACK COAT BETWEEN THE ASPHALT PAVEMENT COURSES PER ODOT CMS 407.06.

INTERSTATE 480 EASTBOUND FULL DEPTH PAVEMENT (M.P. 186.8)

THIS WORK SHALL CONSIST OF THE FOLLOWING:
SAW CUT THE EXISTING PAVEMENT AT THE LIMITS OF THE FULL DEPTH PAVEMENT PER ODOT CMS 203.04(E). REMOVE THE ASPHALT OVERLAY, CONCRETE BASE/FULL DEPTH ASPHALT PAVEMENT AND AGGREGATE BASE AS REQUIRED (SEE ODOT SCD AS-2-15). EXCAVATION SHALL BE TO THE DEPTH REQUIRED TO PLACE THE NEW FULL DEPTH PAVEMENT. THE COST OF THE SAW CUT, FULL DEPTH ASPHALT PAVEMENT REMOVAL AND BASE REMOVAL SHALL BE INCLUDED WITH ITEM 203, EXCAVATION. THE REMOVAL OF THE ASPHALT OVERLAY AND CONCRETE BASE SHALL BE PAID UNDER ITEM 202, PAVEMENT REMOVED.

THE FULL DEPTH PAVEMENT COMPOSITION SHALL CONSIST OF:
ITEM 442, 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448), AS PER PLAN; ON
ITEM 442, 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448); ON
ITEM 302, 9" TO 11 ¾" ASPHALT CONCRETE BASE, PG64-22; ON
ITEM 304, 6" AGGREGATE BASE, AS PER PLAN

THE THICKNESS OF THE ASPHALT CONCRETE BASE SHALL TRANSITION IN ACCORDANCE WITH ODOT SCD AS-2-15.

APPLY ITEM 407, NON-TRACKING TACK COAT BETWEEN THE ASPHALT PAVEMENT COURSES PER ODOT CMS 407.06.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE OTIC, REPRESENTATIVES OF THE OTIC AND THE CONTRACTOR, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE OTIC REPRESENTATIVE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION OR REVISED AS SHOWN IN THESE PLANS. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE CHIEF ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT SP 611 AND ITEM 611 CONDUIT ITEMS.

EXISTING/PROPOSED UNDERDRAINS (M.P. 186.8)

INSTALL ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC A MINIMUM OF 18 INCHES BELOW THE OUTSIDE EDGES OF AGGREGATE BASE FOR THE PAVEMENT WIDENING AND FULL DEPTH PAVEMENT SECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ODOT LOCATION AND DESIGN MANUAL VOLUME 2. IN ADDITION, INSTALL 6" UNCLASSIFIED UNDERDRAIN IN ACCORDANCE WITH ODOT BRIDGE STANDARD CONSTRUCTION DRAWING AS-2-15 FOR THE FORWARD APPROACH SLAB INSTALLATION.

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER ODOT STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDER-DRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDER-DRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDER-DRAINS.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1 4 SQUARE YARD

ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC 224 FOOT

ITEM 611, 6" CONDUIT, TYPE F 75 FOOT

ITEM 611, PRECAST REINFORCED CONCRETE OUTLET 2 EACH

ITEM 630 - REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION, AS PER PLAN (M.P. 186.8)

AT THE INCEPTION OF MAINTENANCE OF TRAFFIC PHASE 2 FOR INTERSTATE ROUTE 480 EASTBOUND OVER OHIO TURNPIKE, THE CONTRACTOR SHALL REMOVE THE EXISTING CANTILEVER SIGN, SIGN SUPPORT AND ALL APPURTENANCES PER ODOT CMS 630.12. LOCATED AT BASELINE I-480 EASTBOUND 212+00, 31.50' RIGHT. THE FOUNDATION SHALL BE REMOVED TO A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF THE PROPOSED PAVEMENT FOR MAINTAINING TRAFFIC (WIDENING).

AT THE COMPLETION OF MAINTENANCE OF TRAFFIC PHASE 2 FOR INTERSTATE ROUTE 480 EASTBOUND OVER OHIO TURNPIKE, THE CONTRACTOR SHALL REERECT THE SIGN AND SIGN SUPPORT ON A NEW FOUNDATION IN A LOCATION NEAR THE ORIGINAL LOCATION AND APPROVED BY THE ENGINEER PROVIDING A 17'-0" MINIMUM CLEARANCE TO THE ROADWAY PAVEMENT. THE FOUNDATION SHALL BE IN ACCORDANCE WITH ODOT STANDARD CONSTRUCTION DRAWING TC-21.20.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 630 - REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION, AS PER PLAN, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO REMOVE, STORE AND REERECT THE SIGN COMPLETE IN PLACE, INCLUDING ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE ENGINEER.

A QUANTITY OF 1 EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM.

SP 827E - WHEELING AND LAKE ERIE RAILWAY REQUIREMENTS

THE CONTRACTOR SHALL COMPLY WITH ALL WHEELING & LAKE ERIE RAILWAY (WLE) REQUIREMENTS DEFINED IN SP 827E. ALL REQUIRED PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. THE PRIME CONTRACTOR AND EACH SUBCONTRACTOR WORKING ON WLE PROPERTY MUST EXECUTE A PERMIT COVERING RIGHT-OF-ENTRY WITH WLE AND SCHEDULE FLAGGING AS REQUIRED BY THE PERMIT. THE CONTRACTOR SHALL ALSO SUBMIT A PLAN TO WLE FOR APPROVAL ADDRESSING PROTECTION OF THE TRACKS DURING CONSTRUCTION OPERATIONS. CROSSING OF THE RAILROAD TRACK FOR CONSTRUCTION ACCESS IS PROHIBITED.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR PROTECTION OF WLE FACILITIES:

SP 607, TEMPORARY FENCE (7'-0" CHAIN LINK WITH SPECIALS) 600 FOOT
SP 622, 32" PORTABLE BARRIER (WITHOUT GLARE SCREEN) 600 FOOT

SP 119 - RAILROAD PROTECTIVE LIABILITY INSURANCE

THE CONTRACTOR SHALL FURNISH EVIDENCE THAT, WITH RESPECT TO THE OPERATIONS IT OR ANY OF ITS SUBCONTRACTORS PERFORM, IT HAS PROVIDED RAILROAD LIABILITY PROTECTIVE INSURANCE (AAR-AASHTO FORM) IN THE NAME OF WHEELING AND LAKE ERIE RAILWAY, AS DETAILED IN SP 827E.

PAYMENT TO THE CONTRACTOR FOR THE INSURANCE HEREIN SPECIFIED WILL BE MADE UNDER THE LUMP SUM PAYMENT FOR SP 119 - RAILROAD PROTECTION LIABILITY INSURANCE..

1

OHIO TURNPIKE RESURFACING (M.P. 186.0)

THIS WORK SHALL CONSIST OF PERFORMING ITEM 254, PAVEMENT PLANING, ASPHALT; AND RESURFACING THE OHIO TURNPIKE TRAVEL LANES AND SHOULDERS WITHIN THE LIMITS INDICATED ON SHEETS 106 AND 107.

THE RESURFACING PAVEMENT COMPOSITION FOR TRAVEL LANES SHALL EXTEND ONE (1) FOOT INTO BOTH THE MEDIAN AND OUTSIDE SHOULDERS AND SHALL CONSIST OF:
ITEM SP 404, 1½" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED SLAG, PG70-22 (FR); ON
ITEM SP 403, VARIABLE DEPTH ASPHALT CONCRETE LEVELING COURSE, PG70-22; ON
ITEM SP 402, 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, PG70-22

PLACE ITEM SP 403, VARIABLE DEPTH ASPHALT CONCRETE LEVELING COURSE, PG70-22 ONLY WITHIN AREAS NECESSARY TO COMPLY WITH OHIO TURNPIKE SP 400S.

APPLY ITEM 407 - NON-TRACKING TACK COAT BETWEEN THE MILLED SURFACE AND THE OVERLYING ASPHALT PAVEMENT COURSE AND BETWEEN THE ASPHALT PAVEMENT COURSES PER OHIO TURNPIKE SP 400.

THE RESURFACING PAVEMENT COMPOSITION FOR SHOULDERS SHALL MEET THE OUTER EDGES OF THE TRAVEL LANE PAVEMENT (ONE (1) FOOT INTO BOTH THE MEDIAN AND OUTSIDE SHOULDERS) AND SHALL CONSIST OF:
ITEM SP 404, 1½" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED STONE, PG64-22; ON
ITEM SP 403, VARIABLE DEPTH ASPHALT CONCRETE LEVELING COURSE, PG70-22; ON
ITEM SP 402, 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, USING CRUSHED STONE, PG64-22

PLACE ITEM SP 403, VARIABLE DEPTH ASPHALT CONCRETE LEVELING COURSE, PG70-22 ONLY WITHIN AREAS NECESSARY TO COMPLY TO COMPLY WITH OHIO TURNPIKE SP 400S.

APPLY ITEM 407 - NON-TRACKING TACK COAT BETWEEN THE MILLED SURFACE AND THE OVERLYING ASPHALT PAVEMENT COURSE AND BETWEEN THE ASPHALT PAVEMENT COURSES PER OHIO TURNPIKE SP 400.

ALL PERTINENT PROVISIONS OF THE OHIO TURNPIKE SPECIAL PROVISIONS SHALL APPLY .

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

ROADWAY GENERAL NOTES

M.P. 186.0 AND M.P. 186.8

PORTAGE COUNTY

PROJECT 43-18-04

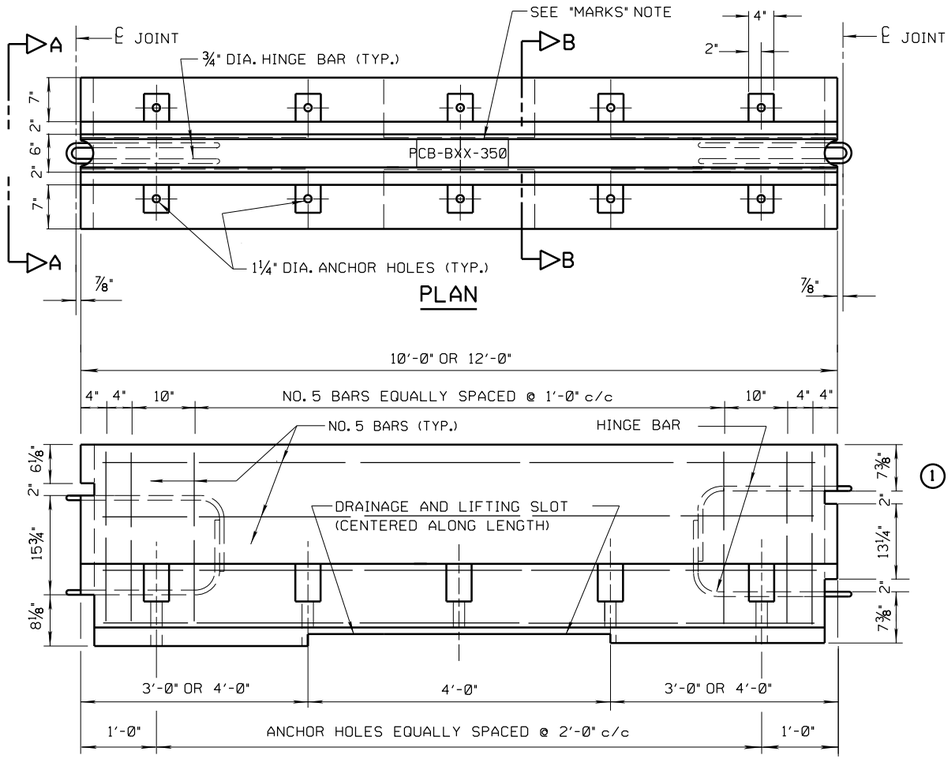
DATE: 10/25/17

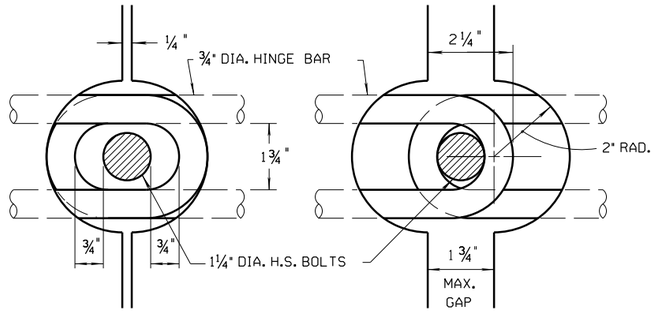
DESIGN AGENCY: PALMER ENGINEERING, AKRON, OH 44320

NO.	REVISIONS	BY	DATE
1	ADDENDUM 1	DAM	01/18
-	-	-	-
-	-	-	-

DESIGNED: DAM | CHECKED: MAM | DRAWN: TGW | IN CHARGE: MAM

711609_I480_GN001.dwg; 1/10/18 - 10:53am

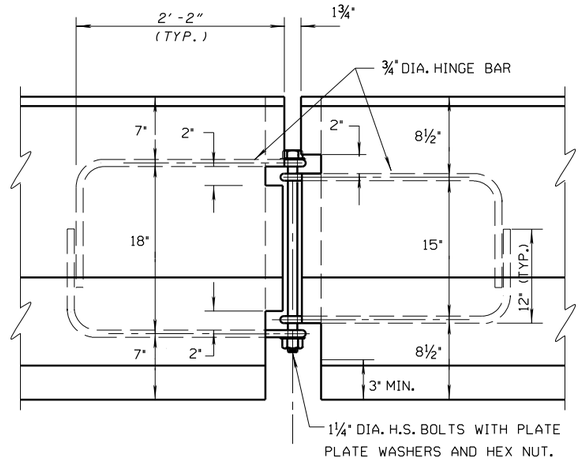




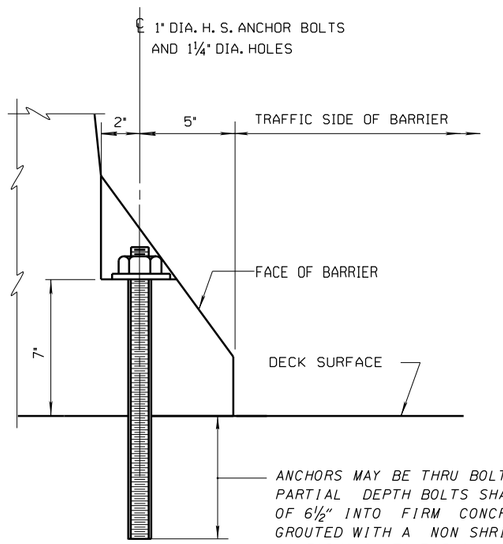
JOINT CONNECTION DETAILS

① **BARRIERS** SHALL INITIALLY BE PLACED CLOSER TOGETHER SO BOLTS CAN BE EASILY INSERT-THROUGH HINGE BAR LOOPS.

② **BARRIER JOINTS** SHALL BE FULLY OPEN BEFORE NUT IS TIGHTENED ONTO BOLT



DETAIL AT HINGED CONNECTION



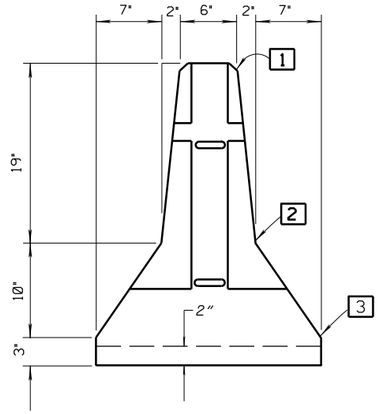
ANCHORS MAY BE THRU BOLTS OR PARTIAL DEPTH BOLTS. PARTIAL DEPTH BOLTS SHALL BE EMBEDDED A MINIMUM OF 6½" INTO FIRM CONCRETE ACCORDING TO 510 AND GROUTED WITH A NON SHRINK, NON METALLIC GROUT CONFORMING TO 705.20. WHEN NO LONGER NEEDED, REMOVE ANCHORS AS DIRECTED BY THE ENGINEER. WHERE DECK IS TO REMAIN, FILL HOLES WITH GROUT, 705.20.

DETAIL C

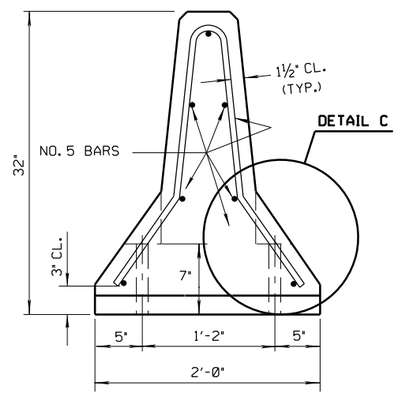
1 1" RADIUS OR ¾" CHAMFER ALL TOP AND END CORNERS

2 PERMISSIBLE 10" RADIUS

3 PERMISSIBLE 1" RADIUS



VIEW A-A



SECTION B-B

GENERAL NOTES

DESCRIPTION: *THE BRIDGE MOUNTED PORTABLE CONCRETE BARRIER IS COMPLIANT WITH NCHRP REPORT 350. UNANCHORED, THE BARRIER HAS BEEN SUCCESSFULLY CRASH TESTED TO THE TEST LEVEL 3 CRITERIA. FULLY ANCHORED ON THE TRAFFIC SIDE, THE BARRIER SATISFIES THE TEST LEVEL 4 CRITERIA.*

HARDWARE: *ALL BOLTS, ANCHORS, NUTS AND WASHERS SHALL CONFORM TO 711.09 (ASTM A325) AND SHALL BE GALVANIZED ACCORDING TO 711.02.*

REINFORCING STEEL: *FURNISH ALL REINFORCING STEEL, INCLUDING THE ¾" DIA. HINGE BARS, ACCORDING TO 509.02. GALVANIZE THE HINGE BARS ACCORDING TO 711.02 AFTER FABRICATION.*

CONCRETE: *FURNISH CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.*

BRIDGE DECK SURFACE PREPARATION: *THE CONCRETE SURFACE, WHERE THE BARRIER IS TO BE PLACED, SHALL BE FREE OF LOOSE SAND, GRAVEL, DIRT OR OTHER FOREIGN MATERIAL. LEVEL ALL SURFACE IRREGULARITIES TO THE SATISFACTION OF THE ENGINEER WITH GROUT OR ASPHALT. PLACE ROLLED ASPHALT ROOFING MATERIAL ON THE SURFACE AREAS THAT, AT THE DISCRETION OF THE ENGINEER, HAVE INSUFFICIENT ROUGHNESS TO PROVIDE THE REQUIRED FRICTION CONTACT BETWEEN THE BARRIER SEGMENTS AND THE DECK.*

ANCHORS: *ONCE ALL BARRIER SECTIONS HAVE BEEN PROPERLY SECURED, REMOVE ALL PORTIONS OF THE ANCHORS THAT PROTRUDE BEYOND THE FACE OF THE BARRIER.*

MARKS: *CLEARLY MARK ALL BARRIER SEGMENTS ON THE TOP AS SHOWN. XX INDICATES THE YEAR THE BARRIER WAS CAST. THESE MARKINGS SHALL BE PERMANENTLY IMPRESSED IN THE BARRIER USING A MINIMUM OF 2" HIGH LETTERING. EACH SEGMENT SHALL HAVE ON ITS TOP, A UNIQUE IDENTIFICATION AS TO ITS MANUFACTURER; AND, SOMEWHERE ON THE BARRIER, THE DAY AND MONTH THE BARRIER WAS MANUFACTURED.*

HANDLING DEVICES *MAY BE USED IN LIEU OF THE LIFTING SLOT FOR MOVING THE BARRIER. THE DESIGN OF THE DEVICES SHALL BE SUFFICIENT TO HANDLE THE WEIGHT OF THE SECTION BEING LIFTED. REMOVE ALL PORTIONS OF HANDLING DEVICES THAT PROTRUDE ABOVE THE BARRIER SURFACE.*

PROJECT PLANS: *THE DESIGNERS SHALL INDICATE THE FOLLOWING INFORMATION ON THE PROJECT PLANS: THE NUMBER OF ANCHORS PER SEGMENT, SPECIAL ANCHORAGE REQUIREMENTS (IF NECESSARY) AND THE LOCATION OF THE BARRIER ON THE BRIDGE DECK.*

"J-J HOOKS" *END CONNECTIONS MAY BE UTILIZED IN LIEU OF THE END CONNECTIONS DETAILED. NO MODIFICATIONS TO THE REINFORCING STEEL LAYOUT DETAILED HEREIN WILL BE ALLOWED. TRANSITION BARRIER SECTIONS WITH PIN AND LOOP CONNECTIONS ON ONE END AND "J-J HOOKS" ON THE OTHER SHALL BE USED TO CONNECT RUNS OF "J-J HOOKS" BARRIER TO OTHER PERMITTED BARRIER TYPES. THE HEIGHTS OF THE TRANSITION SECTIONS SHALL BE THE SAME AS THE BARRIER RUNS BEING CONNECTED. "J-J HOOKS" IS A TRADEMARK OF:*
EASI-SET INDUSTRIES,
P.O. BOX 300,
MIDLAND, VA 22728.
(540)439-8911 OR (800)547-4045.

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
4-24-92 DATE
ADMINISTRATOR

REVIEWED	CHECKED	DESIGNED	DRAWN
LMW	WTF	AJM	GFJ

PCB-91

REVISIONS
07-06-99
07-19-02
01-18-13

STANDARD
PORTABLE CONCRETE BARRIER DETAILS

1 / 1