OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

ADDENDUM NO. 2
ISSUED: SEPTEMBER 1, 2021

PROJECT NO. 43-22-03
BRIDGE DECK REPLACEMENT AND BRIDGE REMOVAL
OHIO TURNPIKE OVER ABANDONED RAILROAD M.P. 98.9,
OHIO TURNPIKE OVER STATE ROUTE 510 M.P. 99.1
SANDUSKY COUNTY, OHIO

OPENING DATE: 2:00 P.M. (EASTERN TIME), SEPTEMBER ~~3~~ 20, 2021

ATTENTION OF BIDDERS IS DIRECTED TO:
ANSWERS TO QUESTIONS RECEIVED THROUGH 2:00 P.M. ON SEPTEMBER 1, 2021

MODIFICATIONS TO CONTRACT DOCUMENTS

Plan Sheets: Title Sheet, 15, 17, 29, 49, and 50 of 50.
OTIC Standard Drawing CB-2 and ODOT Standard Drawing MT-96.26.

-AND-

Bid Schedule of Items and Estimated Quantities Worksheet Reference Nos.:
15, 16, 18, 19, 23, 26, 27, 35, 36, 41-43, 62, 70, 71, 83, and 90.

-AND-

43-22-03_Embankment Quantities; Geotechnical Investigation Report for M.P. 98.9

-AND-

EXTENSION OF THE BID OPENING TO 2:00 PM ON SEPTEMBER 20, 2021

Issued by the Ohio Turnpike and Infrastructure Commission through Jennifer L. Stueber, Esq., General Counsel.

Jennifer L. Stueber, Esq.,
General Counsel

September 2, 2021
Date

Q#6 Bid item 62- Detour Signing, LUMP SUM: plan sheets 3-5 have notes indicating that traffic on SR 510 is to be maintained by means of temporary traffic signals and nowhere on sheets 3-12 are there notes or plan sheets for detours. Please verify how traffic is to be maintained on SR 510 and if it is necessary to have this item in the first place.

A#6 The Bid Item 62 refers to State Route 510 traffic when a single lane closure is needed for bridge repairs and form installation. A signalized lane closure for bidirectional traffic is to be provided (no detour). The work zone signal control requirements are in accordance with the Standard Construction Drawings MT-96.11, MT-96.20, and MT-96.26. Per note on Plan Sheet 5/50 payment is incidental to the lump sum bid for SP 614 Maintaining Traffic. Ohio Department of Transportation Standard Drawing MT-96.26 has been added as part of this Addendum.

Q#7 Plan sheet 34 of 50 details a neat cut line directly over the center beam that can only be accomplished by sawing. This is in conflict with SP 202 which states longitudinal sawing over a beam shall be limited to 1.5 inches. Please confirm that the intent is to saw the longitudinal joint.

A#7 The requirements of SP 202 must be followed. Sawing over a beam shall be limited to 1.5"

Q#8 The General Summary in the plans and BidExpress items list 448 asphalt items but the Typical Sections show SP402 & SP404 asphalt items. Can you please clarify which material is to be used?

A#8 Both quantities of Item 448 have been removed and replaced with a quantity of SP 402 and SP 404. Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#10 On plan sheet 29/50 under the pre-phase construction sequence and phase 1 construction sequence, Note 5 is cut short within both of those sequence outlines. Please provide the wording for the remainder of each note.

A#10 See revised Plan Sheet 29/50 included with Addendum No. 1.

Q#11 On plan sheet 29/50 under the phase 1 construction sequence, Note 3 directs the contractor to submit details and design calculations for the MSE system to support the embankment. How is the work for the MSE system to be paid?

A#11 MSE temporary walls shall be incidental to Item 203 – Embankment, As Per Plan. Plan Sheets 15/50 and 29/50 have been revised and are included as part of this Addendum.

Q#12 Since the pavement replacements are staggered in both EB and WB directions, please provide beginning and ending stations for placement of B-50 barrier wall.

A#12 The beginning and ending stations for the barrier wall have been added. Plan Sheet 17/50 has been revised and is included as part of this Addendum.

Q#13 There is no bid item for removal of approach slabs. Please verify which bid item this is to be considered incidental to.

A#13 Removal of the approach slabs shall be included in Item SP 202 – Portions of Structure Removed.

Q#14 Note 5 of the Pre-Phase Construction Sequence and Note 5 of the Phase 1 Construction Sequence notes on plan sheet 29 appear to have been cut off after "Accepted By". Please revise plan sheet 29 to show the entire notes.

A#14 See the response to Q#10.

Q#15 Plan Note 3 for Pre-Phase, Phase 1, and Phase 2 notes instruct to install the embankment per ODOT CMS 203 and Project Geotechnical Report. Please provide the Project Geotechnical Report.

A#15 See Geotechnical Investigation Report for M.P. 99.1 included with Addendum No. 1. The Geotechnical Investigation Report for the bridge at MP 98.9 is included as part of this Addendum.

Q#16 Is the MSE Wall shown on plan sheet 29 incidental to Item 203 Embankment? If so, please add an As per Plan designation to the Embankment Item.

A#16 See the response to Q#11.

Q#17 Plan Note 4 for Pre-Phase, Phase 1, and Phase 2 notes instruct to install Settlement Platforms to monitor the embankment settlement. Please provide a Bid Item for Settlement Platforms along with a quantity and location for the settlement platforms to be installed in each phase.

A#17 See the response to Q#4 in Addendum No. 1.

Q#18 The Estimated Quantities Sheet shows Excavation quantities of 1,200 CY for M.P. 98.9 and 1,200 CY for M.P. 99.1. Please provide X-sections and/or calculations showing where the excavation is to be performed.

A#18 The excavation quantity is for the excavation of unbound aggregate and subgrade beneath the pavement and approach slab removal. Excavation quantities have been updated in Plan Sheet 15/50 and is included as part of this Addendum.

Q#19 The Estimated Quantities Sheet shows Embankment quantities of 20,000 CY for M.P. 98.9 and 2,400 CY for M.P. 99.1. Please provide X-sections and/or calculations showing where the embankment is to be performed.

A#19 The embankment calculations are provided with this addenudum in the document titled "43-22-03_Embankment Quantities". Embankment quantities have been updated in Plan Sheet 15/50 and is included as part of this Addendum.

Q#20 The Estimated Quantities Sheet shows Excavation of Subgrade quantities of 334 CY for M.P. 98.9 and 333 CY for M.P. 99.1. Are there specific locations for the excavation of subgrade or are these contingency quantities to be performed as directed by the Engineer?

A#20 This bid item has been removed in Plan Sheet 15/50 and is included as part of this Addendum.

Q#21 SP103.C says "The Commission anticipates providing the Contractor access to the Turnpike on April 4, 2022 at which time the Contractor may begin the Work for this Project." Access to the bridge underside is from State Route 510 and there will be no disruption of traffic. Will the Commission consider allowing the Contractor access to the Pre-Phase fill area prior to April 4, 2022?

A#21 The Commission will respond to this question in a future addendum.

Q#22 There are no detour route plan sheets provided or any notes on the detour route or limits of closure duration. Can the Commission provide more detail on Ref. No. 62, 614 Detour Signing?

A#22 See the response to Q#6.

Q#23 The Estimated Quantities Sheet calls for 50 Feet of Concrete Barrier, Type D at the SR 510 Bridge. Plan sheet 30 shows 25 Feet of Median Barrier per OTIC CBR-1 to meet existing at each end of the bridge. Should this 50 feet of Concrete Barrier be Type B-50, not Type D?

A#23 The 50 feet of Concrete Barrier for MP 99.1 should be paid under item Item 70 - Concrete Barrier, Type B-50, As Per Plan. Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#24 The Estimated Quantity for Ref. No. 23, Aggregate Base is 2,070 CY (1,652 CY of aggregate base for full depth pavement at M.P. 98.9; 24 CY of aggregate base for the shoulder repair at the Slope Repair; and 394 CY of Aggregate Toe Key at the Slope Repair). Aggregate Toe Key work is not comparable to #304 aggregate base work and should be split into a separate bid item. Will the Commission consider separating the 394 CY of Aggregate Toe Key into its own new bid item?

A#24 A quantity of Item SP 304 – Aggregate Base (Toe Key) has been added. Plan Sheets 15/50 and 49/50 have been revised and are included as part of this Addendum.

Q#25 The bridge at MP 98.9 plans call for construction of a temporary MSE wall to support embankment placed in phase 1. There is no bid item set up for this work. Please either add a bid item for this work or clarify what bid item this work is to be incidental to.

A#25 See the response to Q#11.

Q#26 MOT notes regarding construction access points refer to the Ohio Department of Transportation (ODOT) Standard Construction Drawing (SCD) MT-103.10. Access between the bridges is needed; however, given the distance between the structures and the distance required for an access point per the SCD, the contractor is left with virtually no work area at the structures. Will an alternate method for construction access be allowed by the Commission in order to provide an adequate work area to the Contractor?

A#26 No, there are significant areas available for access and storage for each stage. Additionally, space is available at the Erie Islands Service Plaza located Eastbound at milepost 100.00.

Q#27 Does the Commission have embankment material available to the Contractor at the nearest service plaza and/or either toll plaza east or west of the project?

A#27 The Commission will respond to this question in a future addendum.

Q#28 Bid item 18- Excacation of Subgrade: plan sheet 15 estimated quantities show a total of 667 cy being performed at MP 98.9 and 99.1. What is going to be used to replace the excavated material?

A#28 This bid item has been removed. Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#29 Items 42 and 43 appear to be for drainage behind the abutment slab grade beam. Per OTIC Standard Drawing AS-1 the cost to provide and install the underdrain pipe shall be included in the cost of the approach slab. Please clarify where the cost of the underdrain pipe should be included.

A#29 The cost to provide and install the underdrain pipe behind the abutment slab grade beam shall be included in the cost of the approach slab per the standard drawing. Duplicate quanittites for Items 42 and 43 have been removed from Estimated Quantities and Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#30 Information describing Item 35 Elastomeric Bearing Pad could not be found in the plans. Please provide more information as to location, dimensions, etc.

A#30 Refer to proposed structure description on Plan Sheet 30/50 and Bearing Detail on Plan Sheet 46/50.

Q#31 Bid item 19- "Subgrade Compaction": estimated quantity on sheet 15 doesn't have anything covered for replaced shoulder pavement at MP 99.9 (sheets 48-50). Please review this and verify whether or not subgrade compaction is required or not required at 99.9 and if so, then please revise plan quantity accordingly.

A#31 A quantity of 139 square yards has been added to Item 204 – Subgrade Compaction. Plan Sheets 15/50 and 49/50 have been revised and are included as part of this Addendum

Q#32 At structure MP 99.1, bid item 45 is set up for approach slab replacement but there is no corresponding aggregate base called for underneath. Does OTIC want aggregate base/subgrade compaction under approach slabs?

A#32 Include Subgrade Compaction and 6" of Item SP 304 - Aggregate Base below the proposed approach slabs. 433 square yards of Item 204 - Subgrade Compaction and 72 cubic yards of Item SP 304 – Aggregate Base have been added to the General Summary for MP 99.1. Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#33 Plan sheet 29/50 under Phase 1 Construction Sequence states " Install remaining fill embankment per ODOT CMS 203 and project geotechnical report to proposed subgrade elevation for Phase 1 using a mechanically stabilized earth (MSE) or similar system to support the embankment adjacent to the remaining superstructure. Contractor to submit details and design calculations for the MSE for approval prior to start of phase 1 construction." Is the cost for the MSE system to be included in BID REF #29 Cofferdams and Excavation Bracing? If not, where are contractors to include this pricing?

A#33 See Response to Q#11.

Q#34 Plan sheet 29/50 states "Install settlement platforms to monitor the embankment settlement". There is no BID REF # for settlement platforms. Can OTIC provide estimated quantity for settlement platforms? Is there a drawing indicating the location of settlement platforms? Where are contractors to include the settlement platforms in the Bid Pricing.

A#34 See revised Plan Sheets 27/50 and 29/50 included with Addendum No. 1.

Q#35 Plan Sheet 3/50 states Phase 1 Maintenance of Traffic shall remain in place through the winter shutdown period. All costs associated with maintaining the work zone through the winter shutdown period shall be included in the Lump Sum Bid for Item SP 614-Maintaing Traffic. Will OTIC require a Zone Person 24 hrs a day through the winter shutdown period?

A#35 The Commission will respond to this question in a future addendum.

Q#36 Bid REF #66 Zone Person has a quantity of 13,872 Hrs. Does this quantity take into account the Phase 1 winter shut down period?

A#36 The Commission will respond to this question in a future addendum.

Q#37 Plan sheet 3/50 states "Two way traffic on State Route 510 will be maintained by use of temporary traffic signals only during the installation and removal of falsework and during substructure and superstructure repairs". There is no BID REF# for temporary traffic signals or duration. Will OTIC be providing a BID REF #? Where are contractors to include the temporary traffic signals in the Bid Pricing?

A#37 See the response to Q#6.

Q#38 Specification SP 614- Maintaining Traffic states "A copy of each WTS's certification and 24-hour contact information shall be provided to the Engineer at the preconstruction conference. If the designated WTS will not be available full time (24/7), the contractor may designate an alternate WTS to be available when the primary is off duty." Is OTIC requiring a full time WTS on site while work is being performed?

A#38 The contractor shall have a WTS available 24/7 to perform the duties of the WTS as described in SP 614.

Q#39 Specification SP 110- Project Safety states "The contractor shall have a safety representative for the Project on-site while work is being performed." Please provide further clarification to "on-site while work is being performed"? If the contractor is working 50 hrs a week is OTIC requiring the safety representative to be on site 50 hrs a week?

A#39 Yes, the safety representative shall be on site while work is being performed. If the contractor is working 50 hours, the safety representative shall be on site for all 50 hours.

Q#40 Is the Turnpike aware of a ready-mix supplier who is willing and capable of supplying concrete per OTIC specifications for this project? At this time, the ready-mix suppliers in the vicinity of the project have all declined pricing this project. Please advise.

A#40 The Commission will respond to this question in a future addendum.

Q#41 Bid items 15, 16, and 18- Embankment, Excavation, and Excavation of Subgrade: plan sheet 15 shows 2,400 cy of Embankment , 1,200 cy of Excavation, and 333 cy of Excavation of Subgrade at the MP 99.1 bridge. There are no subsummary sheets/calculations and no cross sections available on the plans. Outside of bridge deck replacement and related resurfacing work, it appears that there isn't any grading work to be done at MP 99.1. Please provide calculations and/or description of what these items are for and/or review if these quantities are necessary.

A#41 See the responses to questions 18, 19, and 20 regarding excavation and embankment quantity updates.

Q#42 Bid item 10- Pavement Removed: Proposed total depth of stone and asphalt is 25". Existing asphalt pavement is 15" thick per plan sheet 16. This is an ODOT specification and not labeled as an "As Per Plan" bid item. How will the removal of the remaining 10" of material below existing pavement to get to subgrade be paid for?

A#42 The removal of the aggregate base shall be paid under Item 203 – Excavation. Excavation quantities have been updated in revised Plan Sheet 15/50 included as part of this Addendum.

Q#43 Bid item 16- Excavation: plan sheet 15 estimated quantities show 1,200 cy being performed at MP 98.9. There are no calculations/subsummary sheets with information on this quantity. How is this 1,200 cy being used?

A#43 See the response to Q#18.

Q#44 What does bid item 35 Elastomeric Bearing Pad include? The elastomeric bearing pads are typically paid for under the Replace Expansion and Replace Fixed Bearing Device bid items (39 and 40). Please verify if there are duplications here and/or clarify what costs are to be included in what bid items.

A#44 Item 516 - Elastomeric Bearing Pad has been eliminated. Furnishing of new bearings to be included with respective SP516 G and J items. Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#45 OTIC Standard Drawing AS-1 sheet 1/3 Note 17 states that the porous backfill with geotextile fabric, 6" perforated and non-perforated pipe and HMWM sealer shall be included in the Reinforced Concrete Approach Slab bid item, however it appears they have their own bid items (41, 42, 43). Please clarify what all is to be included in bid item 45 – Reinforced Concrete Approach Slabs.

A#45 The cost to provide and install the porous backfille, and underdrain piping behind the abutment slab grade beam shall be included in the cost of the approach slab per the standard drawing. Duplicate quanittites for Items 41, 42, and 43 have been removed from Estimated Quantities. Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#46 Item 36 – Reset Bearing: What is the intended scope of work for this bid item? This is typically an APP bid item with plan notes detailing the procedure. There are no plan notes regarding the resetting of the pier bearings. ODOT CMS 516 also does not provide any work scope for resetting bearings.

A#46 The estimated quantity of Reference No. 36 Reset Bearing has been reduced to 20 each and are to be performed only when As Directed by the Chief Engineer. Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#47 Plan sheet 28, note 1 says to refer to the Geotechnical Investigation for detailed information (MP 98.9). The geotechnical report provided in addendum 1 addresses only the slope repair at MP 99.9. Please provide the Geotechnical Investigation Report for MP 98.9.

A#47 The Geotechnical Investigation Report for the bridge at MP 98.9 is included as part of this Addendum.

Q#48 Bid item 88- Benching Slope Drain: plan sheet 50 shows a detail and provide notes for all items incidental to this bid item which include the Type E longitudinal and outlet pipes. No diameter is given for these pipes, please provide pipe diameter.

A#48 The pipe diameters for the Type E longitudinal and outlet pipes shall be 6". Plan Sheet 50/50 has been revised and is included as part of this Addendum.

Q#49 Bid item 61- SP611 Catch Basin Adjusted to Grade: no OTIC standard drawing for drainage structures was provided with original plans, please provided this missing information.

A#49 Ohio Turnpike and Infrastructure Commission Standard Drawing CB-2, dated October 20, 2017, is included as part of this Addendum.

Q#50 Plan sheet 49 notes (second paragraph) call for Portable Barrier between Sta. 950+00 to 953+00 (MP 99.9) to protect the slope repair and is to be paid as incidental to the MOT Lump Sum per this note. There are already Portable Concrete Barrier bid items (72 and 73) which have quantities set up but without any source of quantity or subsummary. Is this run of barrier paid for under the MOT Lump Sum bid item (2) or in the Temporary Portable Barrier pay item (72)?

A#50 Portable Concrete Barrier for Slope Repair shall be paid under Reference Item 72 "Temporary Portable Barrier". The Estimated Quantity has been updated, and Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#51 SP 516G.A.4 and SP 516J.A.5 state "Clean and/or repair bearing seat area as required". During a site visit it was found that a significant number of pedestals are in need of complete replacement at the MP 99.1 bridge. This work is beyond the intent of the specification. Please add a bid item to replace the pedestal.

A#51 The Commission will respond to this question in a future Addendum.

Q#52 After reviewing the Geotechnical Subsurface Investigation Report issued with addendum No. 1, we have a follow up question to our original question #11 below.

The Geotechnical Report recommends the Toe Key to be backfilled with No. 1 and No. 2 stone (not #304).Will the Commission consider separating the 394 CY of Aggregate Toe Key into its own new bid item?

A#52 See the response to Q#24.

Q#53 Will OTIC be providing the 3rd party QC/QA for concrete, compaction and asphalt testing on the project? If not, Where are contractors to include the necessary testing requirements in the Bid Pricing

A53# The Commission will be contracting with a firm to provide material testing and quality control.

Q#54 Bid item 71- Concrete Barrier, Type D: Plan sheet 15 estimated quantities show 50' at MP 99.1. Plan sheet shows 2 at 25' of barrier transitions per OTIC CBR-1. OTIC CBR-1 does not refer to D-Wall but refers to B-50 and C-50 wall. Typically Type D Concrete Barrier is used for pier protection and not median wall. Please review this and revise as needed.

A#54 See the response to Q#23.

Q#55 For 849 Straightening Damaged Members, how will 849 damage assessment, 849 surface preparation and 849 repairing damaged members by grinding be paid?

A#55 Item 849 Damage Assessment, Surface Preparation, and Repairing Damaged Members by Grinding are considered incidental to the lump sum bid price for Item 849 – Straightening Damaged Members and no separate payment will be made.

Q#56 Sheet 28/50 Plan Note 4 states "The exposed portions of substructure elements shall be covered with low viscosity bituminous asphalt and then covered or wrapped with a durable thick plastic (visqueen) to reduce the effect of down drag from the proposed fill." Are the existing exposed faces of the abutment walls, pier columns, pier caps and crash walls all included under this note?

A#56 The Commission will respond to this question in a future addendum.

Q#57 Bid Reference No. 83 provides a topsoil quantity for the slope repair at M.P. 99.9. Will topsoil be required anywhere else?

A#57 Topsoil is also required at the M.P. 98.9 bridge. 486 CY of Reference No. 83 "Topsoil" has been added for work at M.P. 98.9. The Estimated Quantity has been updated, and Plan Sheet 15/50 has been revised and is included as part of this Addendum.

Q#58 Please add bid items for construction zone markers required for SP614 maintaining traffic.

A#58 Construction Zone Markers shall be included in the Lump Sum bid price for Item 614 – Maintaining Traffic.

Q#59 How is the contractor expected to maintain construction zone markers through the winter shutdown? Should raised pavement markers be installed during Phase 1 in lieu of construction zone markers? If so, please add the necessary quantity to reference number 69.

A#59 The Commission will respond to this question in a future addendum.

Q#60 Please provide beginning and ending stations for placement of Concrete Barrier, Type D.

A#60 See the response to Q#12.

Q#61 Please allow Q2 mix design in lieu of the HP4 mix in the bridge deck concrete. The smaller local concrete suppliers will not quote the HP mix. The larger concrete suppliers are not in delivery range to quote this project. It is much easier to make this change pre-bid versus trying to negotiate a change order post bid.

A#61 The Commission will respond to this question in a future addendum.

Q#62 The new rear abutment bearings have dowel rods in line with the centerline of bearing. There are existing end diaphragm channels directly above the proposed location of the dowels. Is it the OTC intent to have the contractor remove and reinstall the existing channels in order to install the new dowels?

A#62 The Commission will respond to this question in a future addendum.

Q#63 Some of the older existing pier bearings that are scheduled to be reset are connected to the existing beams with bolts thru the bottom flange. They are also pinned with dowels thru the bottom masonry plate to the existing pier cap. How does the OTC propose to realign these bearings? The masonry plates should not be relocated. New bolt hole locations may conflict with the existing holes. Please clarify.

A#63 The Commission will respond to this question in a future addendum.

Q#64 Ref. No. 39 & 40 are for replacing the bearing units at the rear (fixed) and forward (expansion) abutments at structure MP 99.1. The elastomeric bearing pad is a bonded portion of the new bearing unit. Clarify why the elastomeric pads for these bearing units that are to be replaced are being paid under a separate pay item, Ref. No. 35? Should Ref. No. 35 be deleted?

A#64 *The Commission will respond to this question in a future addendum.*

Q#65 SP 511B Section D requires a 36" walkway width for inspection access. A standard C-49 overhang jack with a C-54 extender gives 66 ¼" of useable surface on the top of the jack. Taking away 28" for the bridge overhang leaves 38 ¼" between the edge of deck and face of handrail. Is the 36" dimension from the edge of deck to the face of handrail, or is it measured from the end of the form kicker to give 36" of unobstructed walkway?

A#65 The Commission will respond to this question in a future addendum.

Q#66 Where is the work associated with note 4 on page 28/50 to be paid?

A#66 The Commission will respond to this question in a future addendum.

Q#67 Bid item 89- Strengthening Damaged Members: plan sheet 45 notes refer to SP514A- Field Painting of Existing Structural Steel (OZEU). in the "Basis Of Payment" note, the final sentence calls for the painting to be incidental to bid item 89. Please clarify the limits required for this incidental painting along the existing WB fascia beam.

A#67 The Commission will respond to this question in a future addendum.

Q#68 We are having difficulty finding a ready mix supplier that is willing to produce the HP4 concrete. Will the commission please reconsider allowing QC2 in lieu of HP4? This has been allowed on numerous projects in the past.

A#68 The Commission will respond to this question in a future addendum.

Changes to the Specifications: Deletions are shown with strikethrough text.
Changes / Additions are shown with bold italicized text.

Changes to the Drawings: Additions and deletions are indicated with a cloud and revision triangle thus:

END OF ADDENDUM NO. 2