BIDDING AND CONTRACT DOCUMENTS
ADDENDUM NUMBER ONE
STATE PROJECT NO. 23-013A-1

DATE: JUNE 18, 2024

CAMERON MEMORIAL AIRPORT

CRAWFORD, MURPHY, TILLY, INC.
1627 MAIN STREET, SUITE 600
KANSAS CITY, MISSOURI 64108

TO: ALL PLANHOLDERS AND POTENTIAL BIDDERS

SUBJECT: ADDENDUM NUMBER ONE TO THE BIDDING DOCUMENTS FOR: RECONSTRUCT RUNWAY 17-35

This addendum forms a part of the bidding and contract documents, and modifies the original bidding documents dated May 31, 2024. This addendum must be signed on the last page and included with the submitted Bid Package. An acknowledgement sheet is also attached. This must be signed and returned to Crawford, Murphy, & Tilly, Inc via e-mail by June 19, 2024. FAILURE TO NOT RECOGNIZE THE ADDENDUM ON THE BID FORM MAY SUBJECT THE BIDDER TO DISQUALIFICATION.

The Contract Documents are revised as follows:

CONTRACT PROPOSAL

Page iii

REVISE in the first sentence of the first paragraph the words "**City of Cameron at City Hall, 205 North Main St.**" with "**City of Cameron at the Public Safety Building Training Room, 101 W. Second St.**". Bids shall still be mailed to the address listed in the Instructions to Bidders but the actual bid opening will take place one block west of City Hall at the Public Safety Building.

REVISE in the paragraph regarding questions the words "**Wednesday, June 17, 2024 at 5:00 PM**" to "**Monday, June 17, 2024 at 5:00 PM**".

Page 87

REPLACE in Supplementary Provisions, Part D, the State Wage Rates for Jackson County with the State Wage Rates for Clinton County.

Page 163-170

REPLACE Item P-152 (pages 163-170) with the revised version of Item P-152 (pages 163A-170A). The payment is being switched to embankment in place to account for the shoulder adjustment.

Page 177-182

REPLACE Item P-209 (pages 177-182) with Item P-208 (pages 177A-182A).

Page 188

REVISE the last sentence of the first paragraph of Section 501-3.3 on Page 188 to read as follows:

Concrete shall be proportioned to achieve a 28-day compressive strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a compressive strength of 4,400 psi per ASTM C39.

REVISE the first sentence of the third paragraph of Section 501-3.3 on Page 188 to read as follows:

Compressive strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C39.

Page 189
REPLACE in section 501-3.4 the first reference to "flexural" with the word "compressive".

Page 196
REVISE the second sentence of section 501-4.10.d.(3)(c) to read as follows:

The concrete shall have cured for seven (7) days or reached a minimum compressive strength of 3,100 psi (21.4 MPa) before drilling begins.

Page 198
REVISE the second sentence of the second paragraph of Section 501-4.17 on Page 198 to read as follows:

Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches a compressive strength of 3,100 psi (21.4 MPa), based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed.

Page 205
REPLACE in section 501-6.5.a.(2) the words "ASTM C78" with "ASTM C39".

Page 280
ADD to the first sentence of 125-2.6 after the word "L-853" the words ", 24" height,".

Page 293-295
REPLACE pages 293-295 with 293A-295A.

PLANS
Sheet 2 of 79
REPLACE Sheet 2 with Sheet 2, Revision 1.

Sheet 3 of 79
REPLACE Sheet 3 with Sheet 3, Revision 1.

Sheet 11 of 79
REPLACE Sheet 11 with Sheet 11, Revision 1.

Sheets 50-53
DELETE General Notes 1.

CLARIFICATION
Note: Clarifications are not formal changes to the contract documents but rather are intended to clarify existing contract requirements from questions received and to clarify the intent of the changes listed in this addendum.

1. The P-152 method of measurement and basis of payment are being switched from unclassified excavation to embankment in place. The earthwork table on Sheet 3 of 79 shows the volume of the pavement removal as cut and the volume of shoulder adjustment as fill. This table has been updated in the revised plan sheet to show the total cut and fill volumes from the shoulder adjustment as calculated from the cross sections using the average end area method with no adjustment for shrinkage.

2. The Item P-501 testing and acceptance requirements are being changed as part of Addendum No. 1 from flexural testing to compressive testing.

3. The L-853 retroreflective markers are to be 24" tall to match the proposed lights.

4. During the pre-bid meeting it was mentioned that allowing cement as a stabilization option was being considered in response to a bidder question. After reviewing the geotechnical report and the notes to Engineer in FAA specification P-156, it was determined to not allow cement as an alternative to LKD. The existing soils are fine grained soils and FAA allows cement for granular soils combined with granular pavement material and for coarse grained soils. The geotechnical report mentions that cement is being considered for this project but stops short of recommending cement.

CRAWFORD, MURPHY & TILLY, INC.

This Addendum consists of 3 pages, an acknowledgment transmittal sheet, revised state wage rates, a revised Item P-152, Item P-208, a revised proposal form, and 3 revised plan sheets.

_____ _____

Signed (Contractor) Date

Contractor to sign and date this Addendum #1 to acknowledge receipt. This signed Addendum must be included with the submitted Bid Package.

TRANSMITTAL

To: Crawford, Murphy & Tilly, Inc
Attention: **Brian Garkie**
Re: Addendum #1
E-mail: bgarkie@cmtengr.com

From:
(name)_____

(company)_____

Date:

_____

To verify that all contractors are in receipt of this addendum, Contractors are asked to sign and date this acknowledgement sheet. The Contractor should e-mail to Brian Garkie of Crawford, Murphy, & Tilly, Inc. at the e-mail address listed below by **June 19, 2024.**

Phone: (314) 436-5500
E-mail : bgarkie@cmtengr.com

BY: CRAWFORD, MURPHY, & TILLY, INC.

Missouri
Division of Labor Standards
WAGE AND HOUR SECTION

MICHAEL L. PARSON, Governor

Annual Wage Order No. 31

Section 025
CLINTON COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by
Todd Smith, Director
Division of Labor Standards

Filed With Secretary of State: **March 8, 2024**

Last Date Objections May Be Filed: **April 8, 2024**

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	$25.82*
Boilermaker	$25.82*
Bricklayer-Stone Mason	$25.82*
Carpenter	$59.49
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	$25.82*
Plasterer	
Communication Technician	$25.82*
Electrician (Inside Wireman)	$57.26
Electrician Outside Lineman	$25.82*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	$25.82*
Glazier	$25.82*
Ironworker	$25.82*
Laborer	$25.82*
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	$25.82*
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	$25.82*
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	$25.82*
Plumber	$25.82*
Pipe Fitter	
Roofer	$25.82*
Sheet Metal Worker	$25.82*
Sprinkler Fitter	$25.82*
Truck Driver	$25.82*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. The public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.
**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title as defined in RSMo Section 290.210.

Heavy Construction Rates for
CLINTON County

Section 025

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	$25.82*
Millwright	
Pile Driver	
Electrician (Outside Lineman)	$25.82*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	$25.54
General Laborer	
Skilled Laborer	
Operating Engineer	$59.26
Group I	
Group II	
Group III	
Group IV	
Truck Driver	$25.82*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

**The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title.

OVERTIME
and
HOLIDAYS

OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, **"overtime work"** shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

HOLIDAYS

January first;
The last Monday in May;
July fourth;
The first Monday in September;
November eleventh;
The fourth Thursday in November; and
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

Item P-152 Excavation, Subgrade, and Embankment

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

A geotechnical report was previously prepared for design purposes and shall not be considered part of the contract documents. The report is available upon request by the Contractor/Bidder only as available information. The Contractor/Bidder may draw his or her own conclusions from the data shown. The soils information provided is not represented as or representative of all soil which might be encountered within the limits of the project. The Contractor/Bidder shall by his or her own means, satisfy himself or herself as to the existing site and geotechnical conditions for determining cost, means, methods, techniques and sequences of construction.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items. Unclassified excavation shall specifically include the removal of stone in ledges of any thickness, shale, fire clay, chert (joint flint rock), plain or bituminous bound bases or surface courses of macadam, gravel, broken stone, sandstone, or igneous rock.

b. Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Resident Project Representative (RPR) within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

All unsuitable material shall be disposed of by the Contractor. Prior to excavating from borrow areas the Contractor shall strip all existing sod and topsoil to the satisfaction of the RPR and stockpile this material for re-use upon the completion of borrow operations. The finished borrow areas shall have a uniform layer of topsoil placed and spread to a similar thickness of what was removed.

There shall be no measurement of any kind for payment of borrow excavation. Borrow will be classified as Unclassified Excavation regardless of the nature of the materials excavated.

c. Unsuitable Substrate. Any material containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for existing soils upon which embankment construction is to occur.

If at any time during the initial excavation of topsoil over the areas to receive embankment the Contractor encounters material that may be classified as Unsuitable Substrate the Contractor shall notify the RPR. The Contractor shall not proceed with excavation of this material until the RPR has classified the material as Unsuitable Substrate and taken measurements to quantify the quantity of material to be removed and replaced.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed on airport property as directed by the RPR. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR.

CONSTRUCTION METHODS

152-2.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of in waste areas as shown on the plans. All waste areas and borrow areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Digital terrain model (DTM) files of the existing surfaces, finished surfaces and other various surfaces were used to develop the design plans.

Volumetric quantities were calculated using design cross sections which were created for this project using the DTM files of the applicable design surfaces and generating End Area Volume Reports. Paper copies of design cross sections and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot of the stated elevations for ground surfaces, or within 0.04 foot for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least two weeks before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated including borrow areas shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes **as** shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material impacting the construction of pavement typical sections shall be excavated to the depth required to construct the pavement to the typical section. This excavated material shall be utilized in the required embankments or wasted in the borrow areas as noted. The excavated material shall not be measured for payment but shall be considered incidental to the contract. Areas where the proposed finished grade is shown as turf will not require undercutting.

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

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152-2.3 Borrow excavation. Borrow areas will be identified on the airport property prior to the start of construction ~~within the airport property are indicated on the plans~~. Borrow excavation shall be made only at these designated locations and within the horizontal and vertical limits as staked or as directed by the RPR. All unsuitable material shall be disposed of by the Contractor as shown on the plans. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

~~The Contractor shall also locate and obtain borrow sources, subject to the approval of the RPR. The Contractor shall notify the RPR at least 15 days prior to beginning the excavation so necessary measurements and tests can be made by the RPR. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.~~

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans necessary to allow for temporary drainage during construction.. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted. There shall be no measurement for payment for any temporary ditches required to allow for drainage of each work area during construction but instead this work shall be considered incidental to the contract.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top **12 inches** of subgrade shall be compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by **ASTM D698**. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within **±3% of optimum moisture content** before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the contractor for every **3,000 square yards** of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM **D698**. Under all areas to be paved, the embankments shall be compacted to a depth of **12 inches** and to a density of not less than **95** percent of the maximum density as determined by **ASTM D698**. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches which shall be prepared for a seedbed in accordance with Item T-901.

The in-place field density shall be determined in accordance with ASTM 6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. The **Contractor's laboratory shall perform all density tests in the RPR's presence** and provide the test results upon completion to the RPR for acceptance. If the specified density is not attained, the area represented by the test or as designated by the RPR shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached. At any time during the formation of embankments the RPR may perform density testing to verify the results of the Contractor's testing laboratory.

Compaction areas shall be kept separate, and no lift shall be covered by another lift until the proper density is obtained by testing.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each lift is placed. Lift placement shall begin in the deepest portion of the embankment fill. As placement progresses, the lifts shall be constructed approximately parallel to the finished pavement grade line.

When rock, concrete pavement, asphalt pavement, and other embankment material are excavated at approximately the same time as the subgrade, the material shall be incorporated into the outer portion of the embankment and the subgrade material shall be incorporated under the future paved areas. Stones, fragmentary rock, and recycled pavement larger than 4 inches (100 mm) in their greatest dimensions will not be allowed in the top 12 inches (300 mm) of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall not be disposed of except at places and in the manner designated on the plans or by the RPR.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet (60 cm) in thickness. Each lift shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The lift shall not be constructed above an elevation 4 feet (1.2 m) below the finished subgrade.

Payment for compacted embankment will be made under embankment in-place and no payment will be made for excavation, borrow, or other items. Payment for compacted embankment shall include all costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, testing, and other operations necessary for construction of embankments.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade after compaction is completed, the subgrade area shall be proof rolled with a 20 ton Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 80 psi in the presence of the RPR. Apply a minimum of **one** coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item. Proof rolling shall be considered incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches and to a density of not less than **95** percent of the maximum dry density as determined by ASTM D698**.** The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698.

The material to be compacted shall be within ±3% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, follow the procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of **3,000** S.Y. of subgrade. All quality assurance testing shall be done by the **Contractor's laboratory in the presence of the RPR**, and density test results shall be furnished upon completion to the RPR for acceptance determination.

The in-place field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work. Any haul that requires travel over public roads shall be accomplished in accordance with all local, state, and federal regulations.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes. The use of flaggers, when required, shall be considered incidental to the associated item of work.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

- **a. Smoothness.** The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.
- **b. Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

On safety areas, turfed areas and other designated areas within the grading limits where no subbase or base is to placed, grade shall not vary more than 0.10 feet (30 mm) from specified grade. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

The Contractor shall be responsible for constructing the embankment to the lines and grades shown on the plans. Once the Contractor has constructed the embankment to the lines and grades shown on the plans, these lines and grades shall be documented by the Contractor through a survey with cross sections taken at each of the cross section locations provided in the plan sheets with survey shots taken at every break in grade as shown on the cross sections in the plan sheets. The Contractor shall provide the RPR for review and acceptance a summary table, sealed by a licensed surveyor, which shows plan grade vs. actual grade and the difference for each offset point on each cross section. For areas that do not meet the tolerance requirements provided herein shall be corrected at the Contractor's expense and re-surveyed by the Contractor upon completion until the specified tolerance is met. Upon acceptance of the lines and grades by the RPR, the Contractor shall protect the slopes from erosion and other forces and final seeding, mulching and erosion control blankets shall be installed within the time limitations provided within the Storm Water Pollution and Prevention Plan. The Contractor shall remain responsible for correcting any portions of the work that are disturbed through erosive forces or by the Contractor's operations in accordance with the acceptance and warranty provisions of the contract at no additional expense to the Owner. If an area does not have cross section the Contractor shall take survey shots at locations that match the provided staking plan.

152-2.14 Topsoil. When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905.

If, at the time of stripping in the judgment of the RPR, it is practical to place the salvaged topsoil at the time of stripping, the material shall be placed in its final position without stockpiling or further re-handling.

Upon completion of grading operations, stockpiled topsoil shall be handled and placed as shown on the plans and as required in Item T-905. Topsoil shall be paid for as provided in Item T-905. No direct payment will be made for topsoil under Item P-152.

METHOD OF MEASUREMENT

1

~~**152-3.1** Measurement for payment specified by the cubic yard shall be computed by the comparison of digital terrain model (DTM) surfaces for computation of neat line design quantities. For areas to be surface graded, the Contractor shall conduct a field survey in the presence of the Engineer to record elevations at ground line beneath existing pavements. Upon completion of final grading operations, Engineer will complete a topographic survey of final surface grades. The end area is that bound by the original ground line established by field cross sections and the final theoretical pay line established by cross sections shown on the plans, subject to verification by the Engineer. Volume measurements derived from load counts is not an acceptable method of measurement.~~

152-3.1 Contract Quantity Payment. The quantity of Embankment in Place for which payment will be made is that shown in the contract for the embankment in place pay item, provided the project is constructed essentially to the lines and grades shown on the plans. A check of existing ground elevations will be made by the Contractor prior to commencement of earthwork activities, and of the finished work for deviations in the grade, width or slope from the authorized grade or typical section, and shall be verified by the RPR. Embankment in Place will be measured by the volume between the original ground prior to stripping, topsoil removal or clearing and grubbing and the final embankment shown in the plans as calculated by the average end areas of design cross sections. No adjustments will be made to the Embankment in Place contract quantity due to topsoil removal or clearing and grubbing.

Contract quantities will be used for final payment of Embankment in Place except when:

a. Errors are found in original computations.
b. An original cross section is found to have an average deviation from the true elevation in excess of one foot.
c. An authorized change in grade, slope, or typical section is made.
d. Unauthorized deviations decrease the quantities on the plans.
e. Quantities are determined by measurement as specified in Section 152-3.2.

152-3.1.1 If the plans have been altered or when a disagreement exists between the contractor and the RPR as to the accuracy of the plan quantities of any balance, or the entire project, either party has the right to request a re-computation of contract quantities of excavation within any area by written notice to the other party. The written

notice shall contain evidence that an error exists in the original groundline elevation or in the original computations which will materially affect the final payment quantity. If such final measurement is required, it will be made from the latest available ground surface and the design section.

BASIS OF PAYMENT

152-4.1 For embankment in place ~~unclassified excavation~~, payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, hauling, testing, and incidentals necessary to complete the item.

152-4.2 No direct payment will be made for stockpiling of materials for later reuse. Any cost involved in stockpiling of materials, withdrawal from the stockpile(s) will be at the Contractors expense.

152-4.3 No direct payment will be made for water required in compaction work. Any costs involved in reducing moisture content in soils will be at the contractor's expense.

Payment will be made under:

Item P-152-4.1	Embankment in place - per cubic yard	(Base Bid)
Item P-152-4.1b	Embankment in place - per cubic yard	(Add Alt 2)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

Item P-208 Aggregate Base Course

DESCRIPTION

208-1.1 This item shall consist of a base course composed of course aggregate bonded with fine aggregate base. It shall be constructed on a prepared subgrade or subbase course per these specifications and shall conform to the dimensions and typical cross-section shown on the plans.

MATERIALS

208-2.1 Aggregate base. The aggregate base material shall consist of both fine and coarse aggregate. Material shall be clean, sound, durable particles and fragments of stone or gravel, crushed stone, or crushed gravel mixed or blended with sand, screenings, or other materials. Materials shall be handled and stored in accordance with all federal, state, and local requirements. The aggregate shall be free from clay lumps, organic matter, or other deleterious materials or coatings. The method used to produce the crushed gravel shall result in the fractured particles in the finished product as nearly constant and uniform as practicable. The fine aggregate portion, defined as the portion passing the No. 4 (4.75 mm) sieve produced in crushing operations, shall be incorporated in the base material to the extent permitted by the gradation requirements. Aggregate base material requirements are listed in the following table.

Aggregate Base Material Requirements

Material Test	Requirement	Standard
Coarse Aggregate		
Resistance to Degradation	Loss: 50% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Percentage of Fractured Particles	Minimum 60% by weight of particles with at least two fractured faces and 75% with at least one fractured face[1]	ASTM D5821
Flat Particles, Elongated Particles, or Flat and Elongated Particles	10% maximum, by weight, of flat, elongated, or flat and elongated particles [2]	ASTM D4791
Fine Aggregate		
Liquid limit	Less than or equal to 25	ASTM D4318
Plasticity Index	Not more than five (5)	ASTM D4318

[1] The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

[2] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

208-2.2 Gradation requirements. The gradation of the aggregate base material shall meet the requirements of the gradation given in the following table when tested per ASTM C117 and ASTM C136. The gradation shall be well graded from coarse to fine and shall not vary from the lower limit on one sieve to the high limit on an adjacent sieve or vice versa.

Gradation of Aggregate Base

Sieve Size	Design Range Percentage by Weight passing	Contractor's Final Gradation	Job Control Grading Band Tolerances for Contractor's Final Gradation[1] Percent
2 inch (50 mm)	100		±0
1-1/2 inch (37.5 mm)	70-100		±5
1 inch (25.0 mm)	55-85		±8
3/4 inch (19.0 mm)	50-80		±8
No. 4 (4.75 mm)	30-60		±8
No. 40 (425 µm)	10-30		±5
No. 200 (75 µm)	5-15		±3

1 The "Job Control Grading Band Tolerances for Contractor's Final Gradation" in the table shall be applied to "Contractor's Final Gradation" to establish a job control grading band. The full tolerance still applies if application of the tolerances results in a job control grading band outside the design range.

208-2.3 Sampling and testing.

a. Aggregate base materials. The Contractor shall take samples of the aggregate base in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraphs 208-2.1 and 208-2.2. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

b. Gradation requirements. The Contractor shall take at least two aggregate base samples per day in the presence of the Resident Project Representative (RPR) to check the final gradation. Sampling shall be per ASTM D75. Material shall meet the requirements in paragraph 208-2.2. The samples shall be taken from the in-place, un-compacted material at sampling points and intervals designated by the RPR.

208-2.4 Separation Geotextile. Not used.

CONSTRUCTION METHODS

208-3.1 Control strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved by the RPR.

208-3.2 Preparing underlying subgrade and/or subbase. The underlying subgrade and/or subbase shall be checked and accepted by the RPR before base course placing and spreading operations begin. Re-proof rolling of the subgrade or proof rolling of the subbase in accordance with Item P-152, at the Contractor's expense, may be

required by the RPR if the Contractor fails to ensure proper drainage or protect the subgrade and/or subbase. Any ruts or soft, yielding areas due to improper drainage conditions, hauling, or any other cause, shall be corrected before the base course is placed. To ensure proper drainage, the spreading of the base shall begin along the centerline of the pavement on a crowned section or on the high side of the pavement with a one-way slope.

208-3.3 Production. The aggregate shall be uniformly blended and, when at a satisfactory moisture content per paragraph 208-3.5, the approved material may be transported directly to the placement.

208-3.4 Placement. The aggregate shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. **Dumping from vehicles that require re-handling shall not be permitted.** Hauling over the uncompacted base course shall not be permitted.

The aggregate shall meet gradation and moisture requirements prior to compaction. The base course layer shall be constructed in lifts as established in the control strip, but not less than 4 inches (100 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications at the Contractor's expense.

208-3.5 Compaction. Immediately upon completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers shall be sufficient to compact the material to the required density within the same day that the aggregate is placed on the subgrade.

The field density of each compacted lift of material shall be at least **100%** of the maximum density of laboratory specimens prepared from samples taken by the Contractor of the base material delivered to the jobsite. The laboratory specimens shall be compacted and tested by the Contractor in accordance with ASTM D1557. The moisture content of the material during placing operations shall be within ±3 percentage points of the optimum moisture content as determined by ASTM D1557. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

208-3.6 Weather limitations. Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on base course shall not be conducted when the subgrade or subbase is wet or frozen or the base material contains frozen material.

208-3.7 Maintenance. The base course shall be maintained in a condition that will meet all specification requirements. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. Equipment may be routed over completed sections of base course, provided that no damage results and the equipment is routed over the full width of the completed base course. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at their expense.

208-3.8 Surface tolerances. After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and recompacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

a. Smoothness. The finished surface shall not vary more than 3/8-inch (9 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +0 and -1/2 inch (12 mm) of the specified grade.

208-3.9 Acceptance sampling and testing. Aggregate base course shall be accepted for density and thickness on an area basis. Two tests will be made for density and thickness for each **[** 1200 square yards (1000 square meters) **]**. Sampling locations will be determined on a random basis per ASTM D3665.

a. **Density.** The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance.

Each area shall be accepted for density when the field density is at least **100%** of the maximum density of laboratory specimens compacted and tested per **ASTM D1557**. The in-place field density shall be determined per ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the area represented by the failed test must be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. Depth tests shall be made by test holes at least 3 inches (75 mm) in diameter that extend through the base. The thickness of the base course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (75 mm), adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

In lieu of thickness cores the contractor may elect to determine the thickness of the base course by survey. If this method is used a survey shall be required before and after placement of the base. The survey shots shall be every 50' along a proposed base line and shall be taken along all crowns or grade breaks and at 25 foot wide intervals. The contractor shall provide an electronic file that shows stations and offset of shots with before and after shots with the difference between shots clearly shown and whether or not it meets specifications.

METHOD OF MEASUREMENT

208-4.1 The quantity of aggregate base course shall be measured by the number of square yards of material actually constructed and accepted by the RPR as complying with the plans and specifications. Base materials shall not be included in any other excavation quantities.

BASIS OF PAYMENT

208-5.1 Payment shall be made at the contract unit price per square yard for aggregate base course. This price shall be full compensation for furnishing all materials and for all operations, hauling, placing, and compacting of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-208-5.1	6" Aggregate Base Course - per square yard (Base Bid)
Item P-208-5.1B	6" Aggregate Base Course - per square yard (Add Alt 2)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate

ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4491	Standard Test Methods for Water Permeability of Geotextiles by Permittivity
ASTM D4643	Standard Test Method for Determination of Water Content of Soil and Rock by Microwave Oven Heating
ASTM D4751	Standard Test Methods for Determining Apparent Opening Size of a Geotextile
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
ASTM D7928	Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis

American Association of State Highway and Transportation Officials (AASHTO)

M288	Standard Specification for Geosynthetic Specification for Highway Applications

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PROPOSAL FORM
CITY OF CAMERON
State Block Grant Project No. **23-013A-1**

TO: City Administrator

The undersigned, in compliance with the request for bids for construction of the following Project:

RECONSTRUCT RUNWAY 17-35

hereby proposes to furnish all labor, permits, material, machinery, tools, supplies and equipment to faithfully perform all work required for construction of the Project in accordance with the project manual, project drawings and issued Addenda within the specified time of performance for the following prices:

Base Bid: Runway 17-35 Reconstruction

ITEM	DESCRIPTION	UNIT	QUANT.	UNIT PRICE	TOTAL COST
C-100-14.1	CONTRACTOR QUALITY CONTROL PROGRAM	LS	1		
C-102-5.1	SILT FENCE	LF	14,700		
C-102-5.2	INLET PROTECTION	EA	1		
C-105-6.1	MOBILIZATION	LS	1		
P-101-5.1	PAVEMENT REMOVAL, FULL DEPTH - 7" PCC	SY	34,000		
P-152-4.1	EMBANKMENT IN PLACE	CY	1,316		
P-157-5.1	12" LIME KILN DUST TREATED SUBGRADE (SOIL STABILIZATION)	SY	36,350		
P-157-5.2	LIME KILN DUST (SOIL STABILIZATION)	TON	1,073		
P-209-5.1	6" CRUSHED AGGREGATE BASE COURSE	SY	36,350		
P-501-8.1	PORTLAND CEMENT CONCRETE PAVEMENT - 6"	SY	34,020		
P-620-5.1	WATERBORNE PAINT, WHITE, WITH REFLECTIVE MEDIA	SF	22,860		
P-620-5.2	WATERBORNE PAINT, YELLOW, WITH REFLECTIVE MEDIA	SF	1,470		
P-620-5.3	WATERBORNE PAINT, BLACK, WITHOUT REFLECTIVE MEDIA	SF	7,140		
P-620-5.4	PAVEMENT MARKING REMOVAL	SF	300		
D-701-5.1	30" RCP, CLASS IV	LF	16		
D-701-5.2	REMOVE FLARED END SECTION-30" RCP	EA	1		
D-701-5.3	INSTALL NEW FLARED END SECTION-30" RCP	EA	1		

D-705-5.1	6" PERFORATED PIPE FOR UNDERDRAINS	LF	8,250		
D-705-5.2	6" NON-PERFORATED PIPE FOR UNDERDRAINS	LF	91		
D-751-5.1	UNDERDRAIN CLEANOUTS	EA	16		
D-751-5.2	UNDERDRAIN COLLECTION STRUCTURES	EA	1		
D-751-5.3	DIRECT CONNECT	EA	7		
T-901-5.1	SEEDING	AC	15.5		
T-908-5.1	HYDRAULICALLY APPLIED MULCHING	AC	15.5		
L-108-5.1	1/C #8, L-824, TYPE C, 5KV CABLE IN 1" UNIT DUCT	LF	9,415		
L-108-5.2	COUNTERPOISE, COPPER GUARD WIRE	LF	8,725		
L-108-5.3	PAPI 17 CIRCUIT, 3-1/C #6, 1-1/C #8 GND. 600V, XLP-USE CABLE, IN 1-1/4" UNIT DUCT	LF	1,890		
L-108-5.4	PAPI 35 CIRCUIT, 3-1/C #4, 1-1/C #8 GND. 600V, XLP-USE CABLE, IN 1-1/2" UNIT DUCT	LF	3,385		
L-108-5.5	WIND CONE CIRCUIT, 2-1/C #10, 1-1/C #10 GND. 600V, XLP-USE CABLE, IN 1" UNIT DUCT	LF	1,103		
L-109-7.1	NEW PREFABRICATED VAULT SHELTER	LS	1		
L-109-7.2	NEW L-828 REGULATOR - RUNWAY 7.5 KW	EA	1		
L-110-5.1	ELECTRICAL DEMOLITION	LS	1		
L-125-5.1	L-862 ELEVATED RUNWAY EDGE LIGHT INSTALLED ON LIGHT BASE	EA	38		
L-125-5.2	INSTALL RUNWAY PAPI, 4 BOX SYSTEM	EA	2		
L-125-5.3	INSTALL REILS	PAIR	2		
L-125-5.4	INSTALL RUNWAY THRESHOLD LIGHT ON LIGHT BASE	EA	16		
L-125-5.5	TAXIWAY GUIDANCE SIGNS, UNLIGHTED - ON NEW PCC BASE	EA	3		
				Total:	

Additive Alternate 1: Taxiway Lighting Replacements

ITEM	DESCRIPTION	UNIT	QUANT.	UNIT PRICE	TOTAL COST
T-901-5.1a	SEEDING	AC	4.0		
T-908-5.1a	HYDRAULICALLY APPLIED MULCHING	AC	4.0		
L-108-5.1a	1/C #8, L-824, TYPE C, 5KV CABLE IN 1" UNIT DUCT	LF	11,750		

L-108-5.2a	COUNTERPOISE, COPPER GUARD WIRE	LF	10,850		
L-109-7.3a	NEW L-828 REGULATOR - TAXIWAY 7.5 KW	EA	1		
L-110-5.1a	ELECTRICAL DEMOLITION	LS	1		
L-125-5.6a	L-861 ELEVATED TAXIWAY EDGE LIGHT INSTALLED ON LIGHT BASE	EA	37		
L-125-5.7a	L-861 ELEVATED TAXIWAY EDGE LIGHT STAKE MOUNTED	EA	81		
				Total:	

Additive Alternate 2: Taxiway Connectors Reconstruction

ITEM	DESCRIPTION	UNIT	QUANT.	UNIT PRICE	TOTAL COST
C-100-14.1b	CONTRACTOR QUALITY CONTROL PROGRAM (TWY CONNECTORS)	LS	1		
P-101-5.1b	PAVEMENT REMOVAL, FULL DEPTH- 7" PCC	SY	2,445		
P-152-4.1b	EMBANKMENT IN PLACE	CY	182		
P-157-5.1b	12" LIME KILN DUST TREATED SUBGRADE (SOIL STABILIZATION)	SY	2,445		
P-157-5.2b	LIME KILN DUST (SOIL STABILIZATION)	TON	73		
P-209-5.1b	6" CRUSHED AGGREGATE BASE COURSE	SY	2,840		
P-501-8.1b	PORTLAND CEMENT CONCRETE PAVEMENT - 6"	SY	2,440		
T-901-5.1b	SEEDING	AC	1.0		
T-908-5.1b	HYDRAULICALLY APPLIED MULCHING	AC	1.0		
L-110-5.2b	EXTEND 2-WAY- 4" PVC CONCRETE-ENCASED DUCT BANK	LF	85		
				Total:	

BASE BID + ADDITIVE ALTERNATE NO. 1 TOTAL:	
BASE BID + ADDITIVE ALTERNATE NO. 2 TOTAL:	
BASE BID + AA NO. 1 + AA NO. 2 TOTAL:	

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2	INDEX TO SHEETS AND SUMMARY OF QUANTITIES	GI002
3	AIRPORT SITE PLAN	GI101
4	CONSTRUCTION ACTIVITY NOTES	GC001
5	CONSTRUCTION ACTIVITY DETAILS	GC002
6	CONSTRUCTION ACTIVITY PLAN	GC101
7	EXISTING CONDITIONS & REMOVALS 1	CD101
8	EXISTING CONDITIONS & REMOVALS 2	CD102
9	EXISTING CONDITIONS & REMOVALS 3	CD103
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11	EXISTING TYPICAL SECTIONS	CD301
12	PROPOSED IMPROVEMENTS 1	CP101
13	PROPOSED IMPROVEMENTS 2	CP102
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15	PROPOSED IMPROVEMENTS 4	CP104
16	RUNWAY PLAN & PROFILE 1	CP201
17	RUNWAY PLAN & PROFILE 2	CP202
18	RUNWAY PLAN & PROFILE 3	CP203
19	RUNWAY PLAN & PROFILE 4	CP204
20	TAXIWAY PLAN & PROFILE	CP205
21	NEW TYPICAL SECTIONS	CP301
22	TYPICAL DETAILS	CP501
23	JOINTING PLAN 1	CJ101
24	JOINTING PLAN 2	CJ102
25	JOINTING PLAN 3	CJ103
26	JOINTING DETAILS 1	CJ501
27	JOINTING DETAILS 2	CJ502
28	STAKING PLAN	CS101
29	UNDERDRAIN PLAN 1	CU101
30	UNDERDRAIN PLAN 2	CU102
31	UNDERDRAIN PLAN 3	CU103
32	UNDERDRAIN PLAN 4	CU104
33	UNDERDRAIN SCHEDULE	CU105
34	UNDERDRAIN DETAILS 1	CU501
35	UNDERDRAIN DETAILS 2	CU502
36	FES DETAILS 1	CU503
37	ELECTRICAL PLAN 1	CE101
38	ELECTRICAL PLAN 2	CE102
39	ELECTRICAL PLAN 3	CE103
40	ELECTRICAL PLAN 4	CE104
41	ELECTRICAL PLAN 5	CE105
42	ELECTRICAL DETAILS 1	CE501
43	ELECTRICAL DETAILS 2	CE502
44	ELECTRICAL DETAILS 3	CE503
45	ELECTRICAL DETAILS 4	CE504
46	ELECTRICAL DETAILS 5	CE505
47	ELECTRICAL VAULT DETAILS 1	CE506
48	ELECTRICAL VAULT DETAILS 2	CE507
49	L-821 PANEL LAYOUT	CE508
50	MARKING AND SIGNAGE PLAN 1	CM101
51	MARKING AND SIGNAGE PLAN 2	CM102
52	MARKING AND SIGNAGE PLAN 3	CM103
53	MARKING AND SIGNAGE PLAN 4	CM104
54	MARKING AND SIGNAGE DETAILS 1	CM501
55	MARKING AND SIGNAGE DETAILS 2	CM502

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58	EROSION CONTROL PLAN 3	LG103
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62	CROSS SECTIONS RUNWAY 17-35 01	CG301
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66	CROSS SECTIONS RUNWAY 17-35 05	CG305
67	CROSS SECTIONS RUNWAY 17-35 06	CG306
68	CROSS SECTIONS RUNWAY 17-35 07	CG307
69	CROSS SECTIONS RUNWAY 17-35 08	CG308
70	CROSS SECTIONS RUNWAY 17-35 09	CG309
71	CROSS SECTIONS RUNWAY 17-35 10	CG310
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76	CROSS SECTIONS RUNWAY 17-35 15	CG315
77	TAXIWAY CROSS SECTIONS 1	CG321
78	TAXIWAY CROSS SECTIONS 2	CG322
79	TAXIWAY CROSS SECTIONS 3	CG323

⚠1

BASE BID

ITEM	DESCRIPTION	UNIT	QUANTITY
C-100-14.1	CONTRACTOR QUALITY CONTROL PROGRAM	LS	1
C-102-5.1	SILT FENCE	LF	14,700
C-102-5.2	INLET PROTECTION	EA	1
C-105-6.1	MOBILIZATION	LS	1
P-101-5.1	PAVEMENT REMOVAL, FULL DEPTH - 7" PCC	SY	34,000
P-152-4.1	EMBANKMENT IN PLACE	CY	1,316
P-157-5.1	12" LIME KILN DUST TREATED SUBGRADE (SOIL STABILIZATION)	SY	36,350
P-157-5.2	LIME KILN DUST (SOIL STABILIZATION)	TON	1,073
P-209-5.1	6" CRUSHED AGGREGATE BASE COURSE	SY	36,350
P-501-8.1	PORTLAND CEMENT CONCRETE PAVEMENT - 6"	SY	34,020
P-620-5.1	WATERBORNE PAINT, WHITE, WITH REFLECTIVE MEDIA	SF	22,860
P-620-5.2	WATERBORNE PAINT, YELLOW, WITH REFLECTIVE MEDIA	SF	1,470
P-620-5.3	WATERBORNE PAINT, BLACK, WITHOUT REFLECTIVE MEDIA	SF	7,140
P-620-5.4	PAVEMENT MARKING REMOVAL	SF	300
D-701-5.1	30" RCP, CLASS IV	LF	16
D-701-5.2	REMOVE FLARED END SECTION-30" RCP	LF	1
D-701-5.3	INSTALL NEW FLARED END SECTION-30" RCP	EA	1
D-705-5.1	6" PERFORATED PIPE FOR UNDERDRAINS	LF	8,250
D-705-5.2	6" NON-PERFORATED PIPE FOR UNDERDRAINS	LF	91
D-751-5.1	UNDERDRAIN CLEANOUTS	EA	16
D-751-5.2	UNDERDRAIN COLLECTION STRUCTURES	EA	1
D-751-5.3	DIRECT CONNECT	EA	7
T-901-5.1	SEEDING	AC	15.5
T-908-5.1	HYDRAULICALLY APPLIED MULCHING	AC	15.5
L-108-5.1	1/C #8, L-824, TYPE C, 5KV CABLE IN 1" UNIT DUCT	LF	9,415
L-108-5.2	COUNTERPOISE, COPPER GUARD WIRE	LF	8,725
L-108-5.3	PAPI 17 CIRCUIT, 3-1/C #6, 1-1/C #8 GND. 600V, XLP-USE CABLE, IN 1-1/4" UNIT DUCT	LF	1,890
L-108-5.4	PAPI 35 CIRCUIT, 3-1/C #4, 1-1/C #8 GND. 600V, XLP-USE CABLE, IN 1-1/2" UNIT DUCT	LF	3,385
L-108-5.5	WINDCONE CIRCUIT, 2-1/C #10, 1-1/C #10 GND. 600V, XLP-USE CABLE, IN 1" UNIT DUCT	LF	1,103
L-109-7.1	NEW PREFABRICATED VAULT SHELTER	LS	1
L-109-7.2	NEW L-828 REGULATOR - RUNWAY 7.5 KW	EA	1
L-110-5.1	ELECTRICAL DEMOLITION	LS	1
L-125-5.1	L-862 ELEVATED RUNWAY EDGE LIGHT INSTALLED ON LIGHT BASE	EA	38
L-125-5.2	INSTALL RUNWAY PAPI, 4 BOX SYSTEM	EA	2
L-125-5.3	INSTALL REILS	PAIR	2
L-125-5.4	INSTALL RUNWAY THRESHOLD LIGHT ON LIGHT BASE	EA	16
L-125-5.5	TAXIWAY GUIDANCE SIGNS, UNLIGHTED - ON NEW PCC BASE	EA	3

ADDITIVE ALTERNATE #1

ITEM	DESCRIPTION	UNIT	QUANTITY
T-901-5.1a	SEEDING	AC	4.0
T-908-5.1a	HYDRAULICALLY APPLIED MULCHING	AC	4.0
L-108-5.1a	1/C #8, L-824, TYPE C, 5KV CABLE IN 1" UNIT DUCT	LF	11,750
L-108-5.2a	COUNTERPOISE, COPPER GUARD WIRE	LF	10,850
L-109-7.3a	NEW L-828 REGULATOR - TAXIWAY 7.5 KW	EA	1
L-110-5.1a	ELECTRICAL DEMOLITION	LS	1
L-125-5.6a	L-861 ELEVATED TAXIWAY EDGE LIGHT INSTALLED ON LIGHT BASE	EA	37
L-125-5.7a	L-861 ELEVATED TAXIWAY EDGE LIGHT STAKE MOUNTED	EA	81

ADDITIVE ALTERNATE #2

ITEM	DESCRIPTION	UNIT	QUANTITY
C-100-14.1b	CONTRACTOR QUALITY CONTROL PROGRAM (TWY CONNECTORS)	LS	1
P-101-5.1b	PAVEMENT REMOVAL, FULL DEPTH- 7" PCC	SY	2,445
P-152-4.1b	EMBANKMENT IN PLACE	CY	182
P-157-5.1b	12" LIME KILN DUST TREATED SUBGRADE (SOIL STABILIZATION)	SY	2,445
P-157-5.2b	LIME KILN DUST (SOIL STABILIZATION)	TON	73
P-209-5.1b	6" CRUSHED AGGREGATE BASE COURSE	SY	2,840
P-501-8.1b	PORTLAND CEMENT CONCRETE PAVEMENT - 6"	SY	2,440
T-901-5.1b	SEEDING	AC	1.0
T-908-5.1b	HYDRAULICALLY APPLIED MULCHING	AC	1.0
L-110-5.2b	EXTEND 2-WAY- 4" PVC CONCRETE-ENCASED DUCT BANK	LF	85

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CONSULTANTS

STATE OF MISSOURI
BRIAN W. GARKIE
NUMBER PE-2004017171
PROFESSIONAL ENGINEER
6/18/24

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ISSUED FOR BID SUBMITTAL
MAY 31, 2024

RECONSTRUCT RUNWAY 17-35

OWNER

CITY OF CAMERON
CAMERON MEMORIAL AIRPORT
CAMERON, MISSOURI

MARK	DATE	DESCRIPTION
⚠1	6/18/24	ADDENDUM NO. 1

MODOT PROJ.	23-013A-1
CMT PROJECT NO:	230058-49-00
CAD DWG FILE:	23005849-GI002.DWG
DESIGNED BY:	DJR
DRAWN BY:	DPA
CHECKED BY:	MJD
APPROVED BY:	CBG
COPYRIGHT:	

SHEET TITLE

INDEX TO SHEETS AND SUMMARY OF QUANTITIES

GI002

SHEET 2 OF 79

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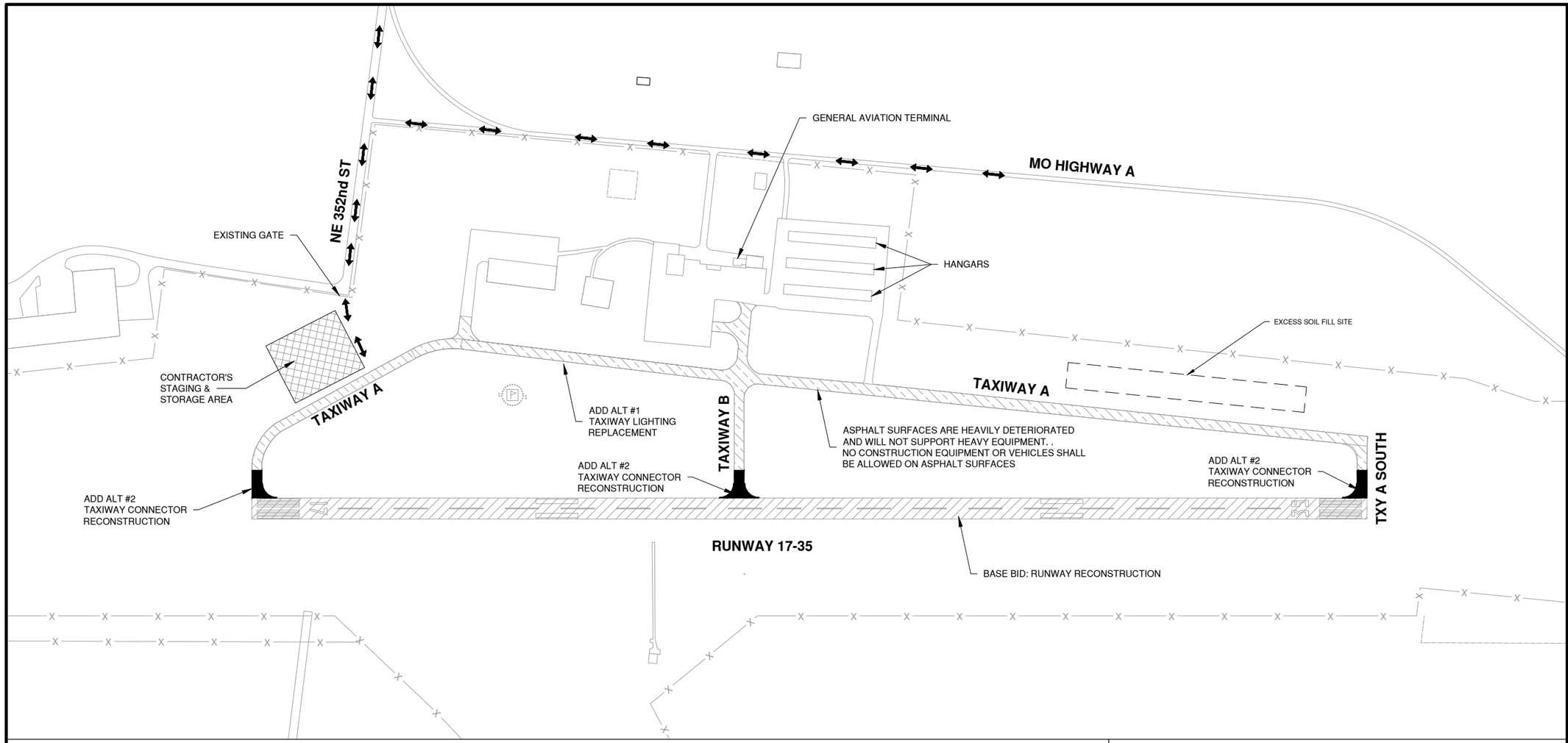

NOTES

1. THE CONTRACTOR WILL BE PERMITTED TO STORE EQUIPMENT AND MATERIALS IN THE AREAS IDENTIFIED AS CONTRACTOR STAGING, STORAGE AND PARKING AREAS SHOWN ON THIS SHEET. THE MAXIMUM HEIGHT OF EQUIPMENT, MATERIALS, AND STOCKPILES SHALL BE 25 FEET ABOVE GROUND ELEVATION AND SHALL BE STORED A MINIMUM OF 10 FEET FROM THE AIRPORT FENCE.
2. WHEN CONFLICTS ARISE BETWEEN CONSTRUCTION ACTIVITIES AND AIRCRAFT OPERATIONS AND SAFETY, AIRCRAFT OPERATIONS AND SAFETY SHALL TAKE PRECEDENCE AND SHALL GOVERN. FINAL AUTHORITY IN THE APPROVAL OF CONSTRUCTION SEQUENCING LIES WITH THE AIRPORT DIRECTOR OF OPERATIONS.
3. ⚠ BROKEN ASPHALT AND CONCRETE NOT TO BE INCORPORATED INTO THE PROJECT SHALL BE DISPOSED OF BY THE CONTRACTOR OFF AIRPORT PROPERTY UNLESS OTHERWISE DIRECTED BY THE AIRPORT.
4. ROADS OR STORAGE AREAS SHALL BE MAINTAINED AND REPAIRED IN KIND BY THE CONTRACTOR TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE AIRPORT. NO ADDITIONAL COMPENSATION SHALL BE MADE TO THE CONTRACTOR FOR THIS WORK.
5. ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS SHALL BE SEEDED AND STABILIZED. ANY AREAS DISTURBED BY THE CONTRACTOR OUTSIDE THE LIMITS SHOWN SHALL BE SEEDED & STABILIZED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE AIRPORT.
6. THE CONTRACTOR SHALL CONTINUOUSLY CLEAN CONSTRUCTION AREAS WHICH WILL BE OPENED TO AIR TRAFFIC.
7. IT WILL BE NECESSARY FOR THE CONTRACTOR TO MAKE HIS OWN FIELD INVESTIGATION TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES AT CRITICAL POINTS SO AS TO AVOID ANY DAMAGE. ANY UTILITY, INCLUDING AIRFIELD ELECTRICAL CABLE AND LIGHTS, DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY HIM AT HIS OWN EXPENSE IN A MANNER WHICH IS SATISFACTORY TO THE RESIDENT ENGINEER AND TO THE OWNER OF THE UTILITY. ANY REPAIRS THAT MUST BE MADE BY THE OWNER OF THE UTILITY SHALL HAVE THE COST REIMBURSED TO THE UTILITY BY THE CONTRACTOR. AIRFIELD LIGHTING CABLES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY A QUALIFIED ELECTRICIAN WITH THE COSTS TO BE BORNE BY THE CONTRACTOR.
8. SEE CONSTRUCTION ACTIVITY PLAN NOTES AND DETAILS SHEET AND CONSTRUCTION ACCESS SHEET FOR NOTES REGARDING THE CONTRACTOR'S ACCESS AND CONSTRUCTION ACTIVITY PLANS FOR DETAILED WORK AREA REQUIREMENTS.
9. CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL BE LIGHTED, MARKED, AND FLAGGED PER FAA ADVISORY CIRCULAR AC 150/5210-5D. MAXIMUM HEIGHT OF CONTRACTOR'S EQUIPMENT WILL BE 25 FEET.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT PUBLIC AND PRIVATE PROPERTY INCLUDING UTILITIES AND STRUCTURES TO REMAIN. IF AT ANY TIME, THE CONTRACTOR DAMAGES OR DESTROYS ANY OTHER PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, RESTORE SUCH PROPERTY TO A CONDITION EQUAL TO THAT OF EXISTING BEFORE SUCH DAMAGE. PUBLIC ROADWAYS, PRIVATE ENTRANCES, AND OTHER FACILITIES SHALL REMAIN ACCESSIBLE AND FREE OF CONSTRUCTION DEBRIS. ANY MATERIAL TO BE STAGED OR STOCKPILED SHALL BE COORDINATED WITH THE AIRPORT THROUGH THE RESIDENT ENGINEER.
11. IF EXISTING ROADWAY SIGNS INTERFERE WITH THE INSTALLATION OF THE WORK FOR THIS PROJECT, SUCH SIGNS AND POSTS SHALL BE REMOVED AND REPLACED AFTER CONSTRUCTION. THE COST OF REMOVING AND STORING EXISTING SIGNS WILL NOT BE PAID FOR DIRECTLY. THE COST SHALL BE INCLUDED IN OTHER PAY ITEMS.
12. ACCESS TO ALL ENTRANCES SHALL BE MAINTAINED AT ALL TIMES UNLESS NOTED OTHERWISE ON THE PLANS.
13. ⚠ ANY TEMPORARY BATCH PLANTS ERECTED BY THE CONTRACTOR AT THE CONTRACTOR'S STAGING AND STORAGE AREA THAT EXCEED 25' IN HEIGHT, SHALL FIRST RECEIVE AIRSPACE APPROVAL FROM THE FAA. THE ENGINEER WILL SUBMIT TO THE FAA THROUGH THE OE/AAA WEBSITE THE STRUCTURE HEIGHTS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES REQUIRED TO SUPPORT THE BATCH PLANT.

LEGEND

- BASE BID: RUNWAY 17-35 RECONSTRUCTION
- ADDITIVE ALTERNATE #1: TAXIWAY LIGHTING REPLACEMENT
- ADDITIVE ALTERNATE #2: TAXIWAY CONNECTOR RECONSTRUCTION
- CONTRACTOR'S STAGING, STORAGE & PARKING AREA
- CONTRACTORS ACCESS

⚠ EARTHWORK TABLES

BASE BID: RECONSTRUCT RUNWAY 17-35

UNCLASSIFIED EXCAVATION:	243 CY
EMBANKMENT:	1,316 CY
DIFFERENCE:	-1,073 CY

ADDITIVE ALTERNATE #2: TAXIWAY CONNECTORS RECONSTRUCTION

UNCLASSIFIED EXCAVATION:	25 CY
EMBANKMENT:	182 CY
DIFFERENCE:	-157 CY

DO NOT HAUL ANY EXCESS SOIL OFF SITE. ALL EXCESS SOIL IS TO BE HAULED, SPREAD AND COMPACTED IN DESIGNATED FILL-SITE SHOWN ON THIS DRAWING.

EARTHWORK NUMBERS ARE FOR THE SHOULDER ADJUSTMENT SHOWN ON THE CROSS SECTIONS.

CMT

License No. 184-000613

CONSULTANTS

N

0 200' 400'

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

STATE OF MISSOURI
BRIAN W. GARKIE
NUMBER PE-2004017171
PROFESSIONAL ENGINEER
6/18/24

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ISSUED FOR BID SUBMITTAL
MAY 31, 2024

RECONSTRUCT RUNWAY 17-35

OWNER

CITY OF CAMERON
CAMERON MEMORIAL AIRPORT
CAMERON, MISSOURI

MARK	DATE	DESCRIPTION
⚠ 1	6/18/24	ADDENDUM NO. 1

MODOT PROJ.	23-013A-1
CMT PROJECT NO:	230058-49-00
CAD DWG FILE:	23005849-GI101.DWG
DESIGNED BY:	DJR
DRAWN BY:	DPA
CHECKED BY:	MJD
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AIRPORT SITE PLAN

GI101

SHEET 3 OF 79

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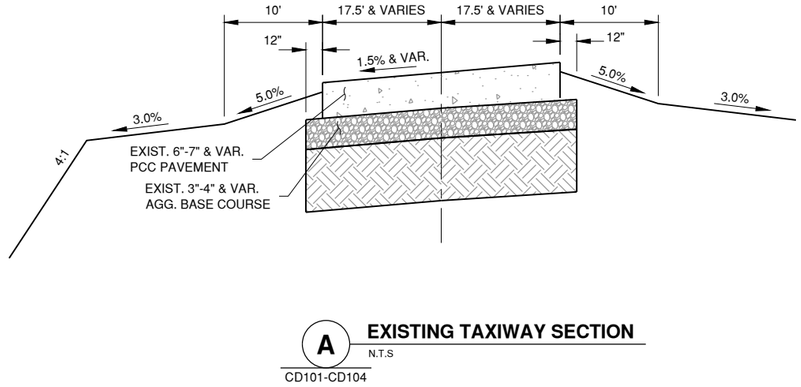
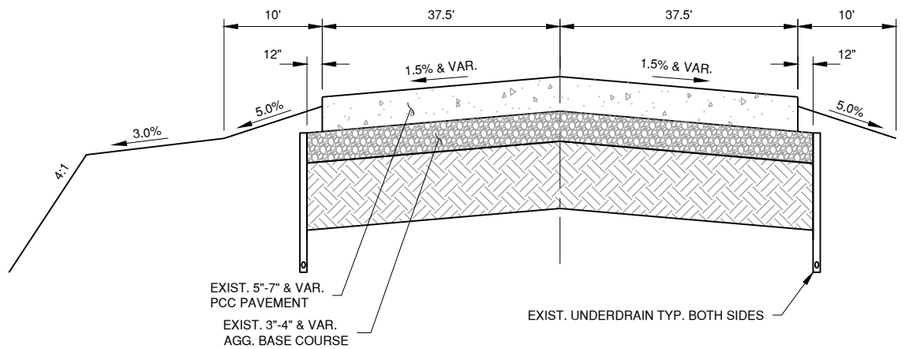


A **EXISTING TAXIWAY SECTION**
N.T.S
CD101-CD104



B **EXISTING RUNWAY 17-35 SECTION**
N.T.S
CD101-CD104

PAVEMENT STRUCTURE DISCLAIMER

PAVEMENT STRUCTURES SHOWN WERE TAKEN FROM RECORD DRAWINGS AND PAVEMENT CORING AND ARE CONSIDERED GENERALLY REPRESENTATIVE OF THE "AS CONSTRUCTED" PAVEMENT SECTION WITH SOME VARIABILITY FROM THE THICKNESS INDICATED TO BE EXPECTED. THERE WILL BE NO ADDITIONAL PAYMENT TO THE CONTRACTOR DUE TO VARIATIONS IN SIZE OR QUANTITY OF EXISTING FEATURES.

CMT

License No. 184-000613

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THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

STATE OF MISSOURI
BRIAN W. GARKIE
NUMBER PE-2004017171
PROFESSIONAL ENGINEER
6/18/24

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RECONSTRUCT RUNWAY 17-35

OWNER

CITY OF CAMERON
CAMERON MEMORIAL AIRPORT
CAMERON, MISSOURI

MARK	DATE	DESCRIPTION
1	6/18/24	ADDENDUM NO. 1

MODOT PROJ. 23-013A-1	
CMT PROJECT NO:	230058-49-00
CAD DWG FILE:	23005849-CD300.DWG
DESIGNED BY:	CBG
DRAWN BY:	DPA
CHECKED BY:	CHK
APPROVED BY:	APR
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SHEET TITLE

EXISTING TYPICAL SECTIONS

CD301

SHEET 11 OF 79

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