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April 23, 2026

Addendum 3

Wharton Regional Airport – Overlay Rehabilitation of Runway 14/32 and Taxiways

TxDOT CSJ 2513WHRTN

This Addendum 3 consists of 33 pages and six (6) plansheets and forms a part of the contract documents and as an addendum it supersedes any requirements or definitions previously included in the contract documents.

Key elements of this addendum include a modification to milling specifications to permit the use of milling to grade to allow for a more normalized (consistent thickness) overlay; removal of one of the two layers of seal coat (chip seal); and reduction of the milling depth from two inches to 1 1/2 inches, but with increased additional depth milling.

The following items are inserted, modified, or removed as follows:

Pre-Bid Meeting Items

1. Insert the attached Pre-Bid Meeting Agenda and Sign-in Sheet. The information in this pre-bid meeting document forms part of the contract for construction.

Modifications to the Contract Documents and Specifications

2. Replace the bid form with the revised bid form.
3. Replace Special Provision to Items P-101 and P-152 with the attached revised Special Provision to Items P-101 and P-152.
4. Replace Items P-101 and P-152 with the attached revised Items P-101 and P-152. Newly added text is identified with special underline, while newly deleted text is ~~double strike through~~.

Modifications to the Plans

5. Replace Plansheet G-003 with the attached revised sheet G-003.
6. Replace Plansheets DC-101 to DC-103, and DC-107 with the attached revised sheets DC-101 to DC-103, and DC-107.
7. Replace Plansheets C-307 to C-308 with the attached revised sheets C-307 to C-308.

Questions and Answers

8. Bidders Questions and Answers.

Q1: Is soil available at the airport for fill?

A1: The material excavated for taxiway connector widening will create some of the soil needed for embankment on the shoulders, but more soil is needed than is available. Contractors will be required to provide embankment material from off the airport. Therefore, Item P-152 has been modified, and a pay item has been added to the project for Borrow Excavation.

Q2: Can stripped topsoil be left right at the edge of the runway?

A2: While the runway is closed (see Phasing Plans), stripped topsoil may be stockpiled along the edge of the runway. Contractor is responsible for preserving the runway edge lights and will be responsible for repairing any damage to the runway edge lights caused by Contractor's activities during the project.

Q3: Are there ride quality requirements?

A3: Longitudinal grades along the runway overlay will be subject to Tx585, Surface Test Type B along both the centerline and the main gear wheel paths. Cross-slope grades on the runway and both longitudinal and cross-slope grades on the taxiways will be subject to Tx585, Surface Test Type A. See new TXDOT 341 Pavement Note 10 on sheet C-307.

Q4: When dropping bids off at the headquarters, which box are we to use?

A4: If a courier or bidder enters the building, they may either place the package in the Aviation Division mailbox, or the security guards will contact staff for assistance.

Q5: Is there a bid item for rubber removal?

A5: The bid item for rubber removal is under Item P-629 as preparation for seal coat on the taxiway. This item is for scraping or otherwise removing thick buildup of rubber crack seal on the surface of the taxiway. This is needed to reduce the susceptibility of "bubbling" of the thermoplastic coal-tar seal coat material that has a known history of doing so when the surface has rubber crack seal material beneath it. The scope of work under this item does NOT require the removal of the material from inside cracks.

Q6: For construction equipment can a weight rating for the pavement be provided?

A6: During design, the pavement sections were checked using the FAA's pavement design software using a 80,000-pound truck to mimic a heavy wheeled vehicle (such as a Material Transfer Device (MTD)). The software confirmed the pavement after milling can accommodate a limited number of passes of such a weight without destroying the pavement, however, the number of passes was low (10), so unlimited travel on the pavement is at the Contractor's risk. Damage to the pavement as a result of heavy construction equipment is to be repaired by the Contractor at no additional expense to the airport or TxDOT Aviation Division.

Q7: Can milling be used to set grades for the overlay?

A7: Yes, at the Contractor's option, the existing pavement can be milled to a set depth below proposed grade to facilitate overlay at a set thickness, rather than milling a consistent depth and paving variable thicknesses to meet proposed grade. Under Item P-101 where milling is specified, the previous strikethrough has been reinstated to allow for milling to correct grade. See paragraph 3.5.b in Item P-101, and new General Note 4 on sheets DC-101 to DC-103.

Q8: Is the Texas Gyrotory method the only way to prepare a mix design following Tx341?

A8: Mix designs are to be prepared following TEX-204-F, using either the Texas or the Super gyrotory methods. See updated TXDOT 341 Pavement Note 1 on sheet C-307.

Q9: Regarding the SAC A surface mix, is this to be 100% SAC A or can we use a blend aggregate?

A9: No. Aggregates are to meet SAC A requirements for this project.

Q10: The plans state that we are to use PG70-16 with no binder substitution. Is this PG correct?

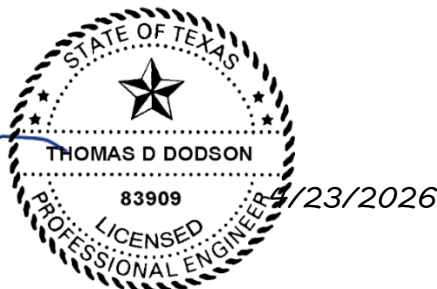
A10: Binder for asphalt to now be PG76-22 due to requirements of the pavement performance but also based on availability. See updated TXDOT 341 Pavement Note 4 on sheet C-307.

Acknowledgement of this addendum is required on page 6 of the Bid Form. Failure to acknowledge this addendum may result in a bid being considered non-responsive.

Civil PEs, LLC



Thomas D Dodson, PE
Project Manager



Attachments – Pre-bid Meeting Notes and Sign-in, Revised Bid Form, Revised Special Provision and Specification Items P-101 and P-152, Revised Plansheets G-003, DC-101, DC-102, DC-103, DC-107, C-307, and C-308.

PREBID MEETING for 2513WHRTN -OVERLAY REHABILITATION OF RUNWAY 14/32 AND TAXIWAYS

April 16, 2026

10:30 am

Wharton Regional Airport

Agenda

1. INTRODUCTIONS

- 1.a. Wharton Airport Management; TxDOT Aviation Division Staff; Civil PEs Staff.
- 1.b. Contractors; Subcontractors; Vendors (see sign in)

2. PROJECT SCOPE

- 2.a. The project includes rehabilitation of the runway and connector taxiway pavement by milling, seal coat, and overlay; runway shoulder grading, removal of a non-standard taxiway connector, widening of the connector taxiways at the runway, and surface treatment of parallel taxiway (BASE BID). The project might include construction of a new connector taxiway pending FAA requirements (ALTERNATE 1), or an asphalt overlay of the parallel taxiway in lieu of surface treatment (ALTERNATE 2).
- 2.b. The runway and taxiway pavement is not rated for heavy construction equipment. See notes on sheet G-002. See also *Questions and Answers for additional information on Construction Equipment Weights*.
- 2.c. The edges of the most connector taxiways are to be widened with the runway rehabilitation. See Sheets DC-102 to DC-103, and Sheet C-303 and C-304. This work also involves changes to the taxiway lighting system.
- 2.d. Milling equipment will also be subject to weight requirements. See also *Questions and Answers for additional information on Construction Equipment Weights*.
- 2.e. *Water for use during construction is not available at the airport. However, bulk water for construction will be available from the City of Wharton Fire Station, which is about a 10-minute drive from the airport.*
- 2.f. There is *not* a stockpile of soil available on the airport for shoulder grading under item P-152. *The pavement widening will generate some soil (as unclassified excavation) that can be used for shoulder grading. The addendum will specify options for needed soil.*
- 2.g. See plans and specifications for topsoil stockpiling and placement, sodding, and seeding of runway shoulder area. *Since the runway will be closed to airport use, windrowing of stripped topsoil is permitted.*
- 2.h. Pavement markings. Due to phasing, there are multiple mobilizations for paint markings on this project. Temporary markings are not required to be reflective but must be applied before the runway can be re-opened. All final markings are to be placed, full thickness and bead coat painted in the opposite direction from the temporary coat.

3. CONTRACT REQUIREMENTS

- 3.a. This is a 150-calendar day project under Base Bid. Should Alternates be executed, Contract time extends up to 10 additional days depending on the alternate or combination thereof. See bid form page 5. Included rain days, listed by month, are shown on Plansheet G-002. Days where work cannot be carried out that are outside the Contractor's and any subcontractor's control that exceed the amount granted in each month will be considered for extended time for that month.
- 3.b. This will be a unit price contract within eGrants electronic contract management. Pay items are listed in specifications matching the bid form. *Robert Johnson noted that using some .pdf editing software can cause problems with the functionality of the bid form and said that Adobe Acrobat or Reader should not have problems. Ask questions if during preparation of your bid you see something inconsistent between them. If a pay item is not listed, it is to be considered subsidiary to other pay items that are listed.*
- 3.c. Payment and Performance bonds are required for this project, each in the full amount of the contract price, executed by a surety company or surety companies authorized to execute surety bonds under and in accordance with the laws of the State of Texas.
- 3.d. DBE requirement: 0%. *Eli Lopez noted that since there is no DBE participation requirement, there is no DBE plan requirement after the bid opening.*
- 3.e. Pre-award equal opportunity compliance reviews: to determine Contractor's ability to comply with the equal opportunity clauses in the Contract.
- 3.f. Self-performance requirements: 30% in contracts exceeding \$500,000.
- 3.g. Davis-Bacon wage rates: TX20260300 (Highway) construction apply and are included in the bid documents. Wage interviews and certified payroll will be required.

4. BID REQUIREMENTS

- 4.a. See checklist for required items in the bid per Notice to Bidders.
- 4.b. Bid form filename "NTB2513WHRTN00024BF.PDF". The bid consists of ONE Base Bid plus TWO Alternates in the Form. The base bid is for pavement rehabilitation via milling and overlay of the runway. The first alternate is to install a new connector taxiway, and the second is to overlay the parallel taxiway and connectors between the parallel taxiway and the runway. Provide a bid price for each item listed in base bid and alternates. The bid form should be filled electronically before printing to sign and submit. Please check addenda to make sure the most updated form is used. The bid form is to be signed in ink.
- 4.c. Lowest qualified bidder will be selected for award and contract execution from base bid and possibly one alternate based on available funding.
- 4.d. Bid Bond or other security in the amount of 2% of the total bid price.
- 4.e. Bids are due at Texas Department of Transportation (Brandy Schwettmann, TxDOT Aviation Division, 6230 E. Stassney Lane, 2nd Floor, Austin, Texas 78744.) on Thursday, April 30, 2026, at 1:00 p.m. CDT. DO NOT bring bid packages to the Airport. *Bid packages can be mailed (allow time) or hand delivered. Hand deliveries are to a specific mailbox located in the lobby at TxDOT Offices listed above; see further clarification in the Questions and Answers.*

5. CONSTRUCTION SAFETY AND PHASING

- 5.a. There is a procurement phase at the beginning of the project to facilitate product submittals and mobilization prior to closing the runway. There is also a cure time phase prior to applying final pavement markings. Both phases count in total Contract Time.
- 5.b. During runway closures, the airport may be open to helicopter traffic. This means the project will be carried out on an ACTIVE AIRPORT. *Dwayne Pospisil noted that helicopter traffic will navigate directly to the apron but can overfly the work area.* Runway Closure Markers, access, safety, and security requirements will apply as outlined in the Plans and Item SS-106.
- 5.c. Construction Access. There is one access gate available for the contractor's exclusive use. No crossing of active taxiways or runways will be permitted without advance notice and adequate precautions.
- 5.d. Staging Areas. There is an area available for construction stockpiles and staging. See Sheet G-402. *After the meeting there was a tour of the staging area.*
- 5.e. Changes to the phasing plan will require significant review time for FAA approval prior to any changes to the plan.

6. CLOSING / OPEN DISCUSSION

- 6.a. Question posed in the meeting and afterward are attached under the Questions and Answers.
- 6.b. Questions are to be emailed to tdodson@civil-pes.com on or before close of business on Wednesday, April 22, 2026.

7. SITE TOUR

- 7.a. *A tour of the taxiway, runway, and staging area was conducted after the close of the meeting.*

Prebid Meeting for 2513WHRN – OVERLAY REHABILITATION OF RUNWAY 14/32 AND TAXIWAYS

April 16, 2026

10:30 am

Wharton Regional Airport

1. SIGN-IN SHEET

NAME	REPRESENTING	PHONE NO.	EMAIL	PRIME	SUB
Dwight Dwight Pospisil D.P	Wharton Regional Airport	979-244-5037	dpospisil@cityofwharton.com		
David Allen	Wharton Regional Airport	979-533-0011	dallen@cityofwharton.com		
Robert Johnson RWJ	TxDOT – Aviation Division	512-416-4549	Robert.N.Johnson@txdot.gov		
Caitlin McGunigle	TxDOT – Aviation Division	737-256-9075	Caitlin.McGunigle@txdot.gov		
Tom Dodson TD	Civil PEs	281-630-1888	TDodson@Civil-PEs.com		
Zach Zapata	Atser	346-524-7793	zzapata@atser.com		
Serry Davile	Atser	213-259-2416	gdavile@atser.com		
Luis Ortiz	Atser	281-806-1136	lortiz@atser.com		
Robert Gillio	Frost Construction	281-740-07	robert@frostcontractingservices.com		
Tommy Kalke	Don Jackson Construction	254-644-7935	info@DJCTX.com		
Jonathan Undie	SpawGlass	832-920-9156	Jonathan.Undie@spawglass.com		
Bob Fitzner	GRANTE	512-436-0766	Bob.Fitzner@grante.com	X	
Robert Garcia					
Robert Garcia	Craig Heidt, Inc.	832-309-9653	Robert@Craig-Heidt.com		
Earl Spudeck	TX dot		Earl.Spudeck@txdot.gov		

INSERT BID FORM HERE

Special Provision to Item P-101 Preparation / Removal of Existing Pavements

The following notations indicate changes, additions, deletions to the standard specification list above. They are specified in the document but are highlighted here for the bidder and contractor's convenience.

- General:** there are several, but not all instances where "RPR" has been replaced with "Engineer".
- 101-1.1:** Add the following as a second sentence to the paragraph: "References to "cold milling" herein are to be understood as milling of asphalt pavement to the depth as noted in the Plans."
- 101-1.2:** Add the following paragraph: "This item also includes removal of airfield lighting equipment when shown in the Plans. The affected equipment may be critical to safe operation of the airport and Contractor is to follow the Construction Safety and Phasing Plan for sequence of work involving disconnection and removal of airfield lighting equipment. Additionally, proper security of the airfield lighting power supply is to be carried out following safety protocols including but not limited to CFR 29 Parts 1926 and 1910 to ensure safety of personnel prior to any work on or near the affected circuits."
- 101-3.1:** Add the following sentences to the paragraph: "The landside and airside pavements to remain in this project are NOT capable of handling heavy construction equipment. Contractor is to consider the weight-carrying capacity of the pavement in the selection of pavement removal equipment. Repositioning of pavement removal equipment will not be permitted to move along existing runway pavement without using methods to prevent existing runway and distribute load(s). Damage to pavement that is to remain resulting from the Contractor's equipment is to be repaired IMMEDIATELY by the Contractor at no additional cost to the Owner or Agent."
- 101-3.1.a:** Insert the following after the fourth sentence in the first paragraph as follows: "Removed concrete pavement slabs are to become property of the Contractor and are to be removed from the airport. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of []".
- 101-3.1.b:** Modify the paragraph as follows: "Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the ultimate exposed edge perimeter of the area to be removed. Contractor is to take all precautions to prevent damage to the sawcut edges through the installation of the replacement pavement. In no case is the removal of asphalt to risk the delamination or separation of asphalt layer(s) in the existing adjacent pavement. REMOVED ASPHALT REMAINS PROPERTY OF THE OWNER. Collect, haul, and dispose of removed asphalt on airport property to location as shown on the Plans. If the material is to be wasted on the airport site, it shall be broken to a maximum particle size of 1 inch (25 mm). When shown on the Plans, remove asphalt surfacing by sawcutting the full-depth of asphalt and removing all asphalt and the underlying base. Grade to new edge of asphalt following items P-152 and revegetation specifications."
- 101-3.2:** Modify the first paragraph as follows: "Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm), regardless of whether the cracks are repaired under section 101-3.9 or not. If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR-Engineer, and allow manufacturer's recommended time for the herbicide to kill the vegetation before removing the vegetation. When directed by the Engineer, fill all open cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall

be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.”

- 101-3.2:** Modify the first sentence in the third paragraph as follows: “When directed by the Engineer, wider cracks (up to 1 inch wide) may are to be filled with a mixture of emulsified asphalt and aggregate.”
- 101-3.2:** Modify the last paragraph to remove references to overlay since a seal coat will be placed over the existing pavement, and remove references to concrete overlay.
- 101-3.3:** Remove this paragraph as there is no foreign substance to remove.
- 101-3.3.a:** Remove this paragraph as there are no concrete pavement spalls to repair
- 101-3.5:** Modify the second sentence in the paragraph as follows: “The milling machine or grinder shall operate without tearing or gouging the underlying surface or breaking up the underlying asphalt layer(s).”
- 101-3.5:** Modify the fifth sentence in the paragraph as follows: “If the Contractor mills or grinds deeper or wider than the plans specify or the milling dislodges patches of underlying asphalt, the Contractor shall replace the material removed with new material at the Contractor’s Expense.”
- 101-3.5.a:** Modify the paragraph as follows: **“Patching Transition for Overlay.** The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The ~~RPR Contractor~~ shall layout the area to be milled, based on the Plans, which are for milling to provide at least 1 1/2 inches of overlay, with a straightedge in increments of 1-foot (30 cm) widths. The RPR will review the laid-out limits of each area with the Contractor before the Contractor begins milling. ~~The area to be milled shall cover only the failed area.~~ Any excessive area that is milled because the Contractor doesn’t have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor’s Expense.”
- 101-3.5.b:** Replace this paragraph with the following: At the Contractor’s option, milling to finished grade minus 2 3/4 inches can be carried out to normalize the asphalt overlay thickness. Payment for such milling will be based on plan quantities for milling and additional depth milling unless otherwise approved by the Engineer. The milling machine shall have a minimum width of 7 feet (2 m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of in areas designated on the plans.”
- 101-3.6.b:** Modify the paragraph as follows: “Repair joints and open cracks in accordance with paragraph 101-3.2. Open cracks to be repaired under this item are to be identified by the RPR in advance of beginning the repairs.”
- 101-3.8:** Remove this paragraph as joint sealing is not applicable.
- 101-3.9:** Modify the first sentence in the paragraph to add removal of vegetation and delete removal of old joint sealants to the required elements to be addressed before application of crack sealant.
- 101-3.9.1:** Remove requirements to widen existing cracks.

- 101-3.9.2:** Remove requirements to remove existing crack sealant from existing sealed cracks.
- 101-3.9.4.c:** Add the following paragraph: “c. **Removal of airfield lighting conduit conductor and counterpoise.** When shown on the Plans or when previously abandoned conduit, conductor, or counterpoise requires removal for carrying out the work, remove conduit, conductor, and/or counterpoise wire. At circuit cuts that become splices for new work, make the cut within an existing junction box and at the proposed location of a new junction box, providing sufficient slack for connection and maintenance of the spliced conductors. Removed materials become property of the Contractor and are to be disposed of off airport property following proper codes and laws.”
- 101-3.9.4.d:** Add the following paragraph: “d. **Removal of edge lighting.** When shown on the Plans, remove existing stake-mounted edge light fixture and adjacent junction box – including secondary transformer. Removed materials become property of the Contractor and are to be disposed of off airport property following proper codes and laws.”
- 101-3.9.4.e:** Add the following paragraph: “e. **Removal of airfield signs.** When shown on the Plans, remove existing airfield sign fixture, concrete base, and associated junction box(es) – including secondary transformer. Contractor is to verify the condition of the existing sign(s) and its connection to the lighting circuitry prior to removal. This verification is to occur prior to preparing shop drawings, fabrication, or installation of equipment to enable proper tie-in of new equipment to the existing lighting circuitry. Existing signs are to be carefully removed from the foundation for re-use. **SIGNS THAT ARE IDENTIFIED FOR RE-USE THAT ARE REMOVED FROM THE PROJECT AND/OR DAMAGED DUE TO INSUFFICIENT PROTECTION WILL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.** Demolish the foundation, junction box, and appurtenances. Removed materials (except for the sign) become property of the Contractor and are to be disposed of off airport property following proper codes and laws. Store the sign in a safe location on the airport for re-use.”
- 101-4.2** Modify the measurement of joint and crack repair as follows: “The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint, crack, for each size of open cracks as measured by the RPR.”
- 101-4.4** Add the following section: “**Removal of airfield lighting conduit, conductor and/or counterpoise.** The unit of measure for removing conduit, conductor (insulated wire), and counterpoise (bare wire) shall be by the linear foot of each and all in any combination on the same alignment, approved by the RPR.”
- 101-4.5** Add the following section: “**Removal of airfield edge lights.** The unit of measure for edge lighting removal shall be by each light fixture location, approved by the RPR. If the light fixture is missing from the location of the fixture, the measure will still be by each for removal of the junction box, secondary transformer, and other appurtenance associated with the light fixture.”
- 101-4.6** Add the following section: “**Removal of airfield signs.** The unit of measure for airfield sign removal shall be by each sign, approved by the RPR.”
- 101-5.1** Update the pay item descriptions for milling to specify 1 1/2” depth and additional depth

END OF SPECIAL PROVISION TO ITEM P-101

Item P-101 Preparation / Removal of Existing Pavements

from FAA Specifications for Construction of Airports – AC 150/5370-10H

DESCRIPTION

101-1.1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement and other miscellaneous items. References to “cold milling” herein are to be understood as milling of asphalt pavement to the depth as noted in the Plans. The work shall be accomplished in accordance with these specifications and the applicable plans.

101-1.2 This item also includes removal of airfield lighting equipment when shown in the Plans. The affected equipment may be critical to safe operation of the airport and Contractor is to follow the Construction Safety and Phasing Plan for sequence of work involving disconnection and removal of airfield lighting equipment. Additionally, proper security of the airfield lighting power supply is to be carried out following safety protocols including but not limited to CFR 29 Part 1926 and 1910 to ensure safety of personnel prior to any work on or near the affected circuits.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR) Engineer. The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 **Removal of existing pavement.** The Contractor’s removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement. The landside and airside pavements to remain in this project are NOT capable of handling heavy construction equipment. Contractor is to consider the weight-carrying capacity of the pavement in the selection of pavement removal equipment. Repositioning of pavement removal equipment will not be permitted to move along existing runway pavement without using methods to prevent existing runway and distribute load(s). Damage to pavement that is to remain resulting from the Contractor’s equipment is to be repaired IMMEDIATELY by the Contractor at no additional cost to the Owner or Agent.

- a. Concrete pavement removal.** Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. Removed concrete pavement slabs are to become property of the Contractor and are to be removed from the airport. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of []. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlying material that is to remain in place, shall be recompact and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor’s expense.

- b. Asphalt pavement removal.** Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the ultimate exposed edge perimeter of the area to be removed. Contractor is to take all precautions to prevent damage to the sawcut edges through the installation of the replacement pavement. In no case is the removal of asphalt to risk the delamination or separation of asphalt layer(s) in the existing

adjacent pavement. REMOVED ASPHALT REMAINS PROPERTY OF THE OWNER. Collect, haul, and dispose of removed asphalt on airport property to location as shown on the Plans. If the material is to be wasted on the airport site, it shall be broken to a maximum particle size of 1 inch (25 mm). When shown on the Plans, remove asphalt surfacing by sawcutting the full-depth of asphalt and removing all asphalt and the underlying base. Grade to new edge of asphalt following items P-152 and revegetation specifications.

- c. **Repair or removal of Base, Subbase, and/or Subgrade.** All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR Engineer. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm), regardless of whether the cracks are repaired under section 101-3.9 or not. If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR Engineer, and allow manufacturer's recommended time for the herbicide to kill the vegetation before removing the vegetation. When directed by the Engineer, fill all open cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed 1/4 inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

Wider cracks (over 1-1/2 inches wide (38 mm)), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below.

When directed by the Engineer, wider cracks (up to 1 inch wide) may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	90-100
No. 16 (1.18 mm)	65-90
No. 30 (600 µm)	40-60
No. 50 (300 µm)	25-42
No. 100 (150 µm)	15-30
No. 200 (75 µm)	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the RPR Engineer.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inches (+0 to -3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay overlying course. ~~Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.~~

101-3.3 Removal of foreign substances/contaminates NOT USED. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR Engineer in the field during construction.

~~Chemicals, heater scarifier (asphaltic concrete only), and/or rotary grinding may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR Engineer that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR Engineer.~~

~~Removal of foreign substances shall not proceed until approved by the RPR Engineer. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.~~

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

~~a. **Repair of concrete spalls in areas to be overlaid with asphalt.** The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.~~

~~b. **Asphalt pavement repair.** The Contractor shall repair all failed asphalt as shown on the plans or as directed by the RPR Engineer. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.~~

101-3.5 Cold milling (also known as milling). Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlying surface ~~or breaking up the underlying asphalt layer(s)~~. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed of into areas designated on the Plans. If the Contractor mills or grinds deeper or wider than the plans specify ~~or the milling dislodges patches of underlying asphalt~~, the Contractor shall replace the material removed with new material at the Contractor's Expense.

~~a. **Patching Transition for Overlay**. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR Contractor shall layout the area to be milled, based on the Plans, which are for milling to provide at least 1 1/2 inches of overlay, with a straightedge in increments of 1-foot (30 cm) widths. The RPR will review the laid-out limits of each area with the Contractor before the Contractor begins milling. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.~~

- b. **Profiling, grade correction, or surface correction.** At the Contractor's option, milling to finished grade minus 2 3/4 inches can be carried out to normalize the asphalt overlay thickness. Payment for such milling will be based on plan quantities for milling and additional depth milling unless otherwise approved by the Engineer. The milling machine shall have a minimum width of 7 feet (2 m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of in areas designated on the plans.
- c. **Clean-up.** The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment (see Item Tx-316) shall be prepared as follows:

- a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.
- b. Repair joints and open cracks in accordance with paragraph 101-3.2. Open cracks to be repaired under this item are to be identified by the RPR in advance of beginning the repairs.
- c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer recommended by the surface treatment binder manufacturer to be compatible with the surface treatment products.
- d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR Engineer. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. NOT USED. ~~Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.~~

101-3.8.1 Removal of Existing Joint Sealant. NOT USED. ~~All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

101-3.8.2 Cleaning prior to sealing. NOT USED. ~~Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface dry prior to installation of sealant.~~

- 101-3.8.3** ~~Joint sealant.~~ Joint material and installation will be in accordance with Not Applicable.
- 101-3.9** **Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean the joint of vegetation and dry the joints of all scale, dirt, dust, ~~old sealant~~, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.
- 101-3.9.1** **Preparation of Crack.** ~~Widen crack with [router] [random crack saw] by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil- and water-free compressed air.~~
- 101-3.9.2** **Removal of Existing Crack Sealant.** NOT USED. ~~Existing sealants will be removed by [routing] [random crack saw]. Following [routing] [sawing] any remaining debris will be removed by use of a hot lance combined with oil and water free compressed air.~~
- 101-3.9.3** **Crack Sealant.** Crack sealant material and installation will be in accordance with Item P-605.
- 101-3.9.4** **Removal of Pipe and other Buried Structures.**
- a. **Removal of Existing Pipe Material.** Not Used.
 - b. **Removal of Inlets/Manholes.** Not Used.
 - c. **Removal of airfield lighting conduit conductor and counterpoise.** When shown on the Plans or when previously abandoned conduit, conductor, or counterpoise requires removal for carrying out the work, remove conduit, conductor, and/ or counterpoise wire. At circuit cuts that become splices for new work, make the cut within an existing junction box and at the proposed location of a new junction box, providing sufficient slack for connection and maintenance of the spliced conductors. Removed materials become property of the Contractor and are to be disposed of off airport property following proper codes and laws.
 - d. **Removal of edge lighting.** When shown on the Plans, remove existing stake-mounted edge light fixture and adjacent junction box – including secondary transformer. Removed materials become property of the Contractor and are to be disposed of off airport property following proper codes and laws.
 - e. **Removal of airfield signs.** When shown on the Plans, remove existing airfield sign fixture, concrete base, and associated junction box(es) – including secondary transformer. Contractor is to verify the condition of the existing sign(s) and its connection to the lighting circuitry prior to removal. This verification is to occur prior to preparing shop drawings, fabrication, or installation of equipment to enable proper tie-in of new equipment to the existing lighting circuitry. Existing signs are to be carefully removed from the foundation for re-use. SIGNS THAT ARE IDENTIFIED FOR RE-USE THAT ARE REMOVED FROM THE PROJECT AND/OR DAMAGED DUE TO INSUFFICIENT PROTECTION WILL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. Demolish the foundation, junction box, and appurtenances. Removed materials (except for the sign) become property of the Contractor and are to be disposed of off airport property following proper codes and laws. Store the sign in a safe location on the airport for re-use.

METHOD OF MEASUREMENT

- 101-4.1** **Pavement removal.** The unit of measurement for pavement removal shall be the number of square yards (square meters) removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

- 101-4.2** **Joint and crack repair.** The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint, crack, for each size of open cracks as measured by the RPR.
- 101-4.3** **Cold milling.** The unit of measure for cold milling shall be per square yard (square meter). The location and average depth of the cold milling shall be as shown on the plans. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid as additional depth per square yard for the total depth of milling.
- 101-4.4** **Removal of airfield lighting conduit, conductor and/or counterpoise.** The unit of measure for removing conduit, conductor (insulated wire), and counterpoise (bare wire) shall be by the linear foot of each and all in any combination on the same alignment, approved by the RPR.
- 101-4.5** **Removal of airfield edge lights.** The unit of measure for edge lighting removal shall be by each light fixture location with removal of the junction box, secondary transformer, and other appurtenance associated with the light fixture, approved by the RPR. If the light fixture is missing from the location of the fixture, the measure will still be by each for removal of the junction box, secondary transformer, and other appurtenance associated with the light fixture.
- 101-4.6** **Removal of airfield signs.** The unit of measure for airfield sign removal shall be by each sign, approved by the RPR.

BASIS OF PAYMENT

- 101-5.1** **Payment.** Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, **sawcutting at limits (when a component)**, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item P-101-1	Mill asphalt pavement (1 1/2") – per Square Yard
Item P-101-2	Mill asphalt pavement (1 1/2" additional depth) – per Square Yard
Item P-101-3	Seal open cracks in existing asphalt up to 1 inch wide – per Linear Foot
Item P-101-4	Demolish asphalt pavement – per Square Yard
Item P-101-5	Demolish concrete pavement – per Square Yard
Item P-101-6	Remove airfield lighting conduit, conductor, and counterpoise – per Linear Foot
Item P-101-7	Remove airfield edge light and Brooks-style junction box – per Each
Item P-101-8	Salvage airfield sign and demolish concrete foundation – per Each

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.

	Advisory Circulars (AC)
AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.
	ASTM International (ASTM)
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

Special Provision to Item P-152 Excavation, Subgrade, and Embankment

The following notations indicate changes, additions, deletions to the standard specification list above. They are specified in the document but are highlighted here for the bidder and contractor's convenience.

- General:** there are several, but not all instances where "RPR" has been replaced with "Engineer".
- 152-1.2.b:** Delete a portion of the last sentence: "~~or from areas outside the airport boundaries.~~" Contractor is required to utilize borrow from on-airport stockpiles and sources of soil for shoulder grading as borrow.
- 152-1.3:** Modify the paragraph as follows: "Any material containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. The Contractor shall excavate areas suspected to be unsuitable to uncover the limits of the material in question. Engineer is to classify and delineate material as unsuitable. Unsuitable material, that is suitable for topsoil may be used on the embankment slope when approved by the Engineer RPR. Replacement of unsuitable materials will be embanked from the stockpile areas as needed to replace unsuitable materials."
- 152-2.1:** Modify the first paragraph as follows: "Before beginning excavation, grading, and embankment operations in any area, the area shall be completely cleared and stripped of sod and topsoil in accordance with Item T-905, grubbed, in accordance with Item P-151."
- 152-2.2:** Modify the second paragraph as follows: "All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the Engineer RPR. Stockpile the top 2 inches of topsoil in accordance with item T-905 from areas to be excavated or embanked, storing the topsoil in a location acceptable to the Engineer and Owner. Protect stockpiles from wind erosion. 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."
- 152-2.2:** Remove subparagraphs **b.** through **d.**
- 152-2.2:** Add the following NEW subparagraph: "**b. Shoulder grading. Adjacent to overlaid pavement, approximately ten (10) feet off the pavement edge is to be regraded to meet the new elevation of the overlaid pavement. This is accomplished by removing the top two inches of topsoil in accordance with item T-905, and embanking material obtained from stockpiles (borrow areas) on the airport to meet new grade requirements by "shoulder grading."**"
- 152-2.3:** Delete the paragraph and replace it with the following: **Stockpile and Grading Excavation Borrow excavation.** ~~Borrow areas 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 Engineer. 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. There are no borrow sources within the boundaries of the airport property. The Contractor shall locate and obtain borrow sources, subject to the approval of the Engineer RPR. The Contractor shall notify the Engineer RPR at least 15 days prior to beginning the excavation so necessary measurements and tests can be~~

made by the Engineer 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.

- 152-2.5:** Add the following sentence to the paragraph: “Contractor is to obtain proctor values of subgrade soils to use in determination of compaction requirements. Share results of proctor values with RPR and Engineer for use in acceptance testing.”
- 152-2.8:** Modify the last sentence of fourth paragraph as follows: “. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times, including the cutting of temporary swales if needed to drain areas in the construction that are susceptible to holding water.”
- 152-2.8:** Add the following sentence to the end of the sixth paragraph: “Contractor is to observe weather conditions and confirm soil temperatures are above dew point temperature to prevent additional moisture from entering any soil being aerated.”
- 152-2.8:** Add the following sentence to the end of the seventh paragraph: “Contractor is to share the results of the Proctor test(s) with the RPR and Engineer for use in acceptance testing.”
- 152-2.8:** Modify the eighth paragraph as follows: “Density tests will be taken by the Engineer RPR for every 3,000 square yards or each day’s production of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the Engineer RPR. Density tests as a percentage of standard compaction will require Contractor to provide proctor test results to Engineer.”
- 152-2.10:** Modify the paragraph as follows, adding the following to the end of the first paragraph: “The subgrade under areas to be paved shall be compacted to a depth of 8 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 (300 mm) 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 ~~±2~~ -2 to 0% 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 methods in ASTM D698. Tests for moisture content and compaction will be taken at a minimum of 3000 S.Y. of subgrade. All quality assurance testing shall be done by the RPR Engineer. CONDUCT TESTS ON SUBGRADE PRIOR TO LIME STABILIZATION. Failed tests conducted by the Engineer will be back charged to the Contractor.”
- 152-2.14:** Modify the first paragraph as follows: “During the course of work under this item – including shoulder grading, Contractor is to isolate topsoil to re-spread per Item T-905 to re-establish vegetation as soon as possible. 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 excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. Stockpiles will not be allowed within 250 feet of any existing or proposed runway or taxiway, whether closed to aircraft traffic or not. Stockpiles shall be located as shown on the plans and the approved CSPP, and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the Engineer RPR, it is practical to place the salvaged topsoil at the time of excavation or stripping, the material shall be placed in its final position without stockpiling or further re-handling.”

- 152-3.1:** Replace the paragraph with: “Measurement for shoulder grading and subgrade compaction will be by the square yard of shoulder, typically, inclusive of the width of the work conducted by the running length.”
- 152-3.2:** Modify the paragraph as follows: “Measurement for payment specified by the cubic yard (cubic meter) shall be computed by the average end areas of design cross sections. 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 generated by the Contractor shown on the plans, subject to verification by the Engineer RPR. The Contractor is to conduct surveyed cross-sections at any location(s) before excavation begins and for each pay application that includes a quantity for payment under this Item. The cross-sections, both before and after excavation, will be used to determine the excavation quantity for payment. At the Contractor’s option, measurement of excavation may be based on plan quantity. The quantity listed on the bid form may be accepted by the Contractor as correct and as the total amount for payment under this pay item. Contractor has the option to accept the plan quantity and will not be required to conduct field cross-sections in support of pay requests. Contractor is to provide a written acceptance of plan quantity to Engineer before beginning any activities under this item. Upon executing this option, it is considered final and not subject to reversion.”
- 152-4.1:** Modify the first sentence of the paragraph as follows: “Shoulder grading” and “subgrade compaction” payment shall be made at the contract unit price per square yard.
- 152-4.2:** Modify the paragraph as follows: “Payment for unclassified excavation and borrow excavation shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, hauling, labor, equipment, tools, and incidentals necessary to complete the item.”

END OF SPECIAL PROVISION TO ITEM P-152

Item P-152 Excavation, Subgrade, and Embankment

from FAA Specifications for Construction of Airports – AC 150/5370-10H

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.
- 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 .
 - 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 Engineer within the limits of the airport property but outside the normal limits of necessary grading, ~~or from areas outside the airport boundaries.~~
- 152-1.3** **Unsuitable excavation.** Any material containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. The Contractor shall excavate areas suspected to be unsuitable to uncover the limits of the material in question. Engineer is to classify and delineate material as unsuitable. Unsuitable material, that is suitable for topsoil may be used on the embankment slope when approved by the Engineer RPR. Replacement of unsuitable materials will be embanked from the stockpile areas as needed to replace unsuitable materials.

CONSTRUCTION METHODS

- 152-2.1** **General.** Before beginning excavation, grading, and embankment operations in any area, the area shall be completely cleared and stripped of sod and topsoil in accordance with Item T-905. ~~grubbed in accordance with Item P-151.~~
- The suitability of material to be placed in embankments shall be subject to approval by the Engineer RPR. All unsuitable material shall be disposed of in waste areas as shown on the plans. All waste 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 Engineer RPR.
- When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR, Agent, Owner and Engineer notified per Section 70, paragraph 70-20. At the direction of the Engineer 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 Engineer 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 Engineer 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.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the Engineer RPR. Stockpile the top 2 inches of topsoil in accordance with item T-905 from areas to be excavated or embanked, storing the topsoil in a location acceptable to the Engineer and Owner. Protect stockpiles from wind erosion. 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 Engineer 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 Engineer 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. Shoulder grading. Adjacent to overlaid pavement, approximately ten (10) feet off the pavement edge is to be regraded to meet the new elevation of the overlaid pavement. This is accomplished by removing the top two inches of topsoil in accordance with item T-905, and embanking material obtained from stockpiles (stockpile and grading areas) on the airport to meet new grade requirements by "shoulder grading".

~~**b. Undercutting.** Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be [disposed of at locations shown on the plans.] [disposed off the airport. The cost is incidental to this item.] This excavated material shall be paid for at the contract unit price per cubic yard (per cubic meter) for [—]. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as [unclassified excavation] [rock excavation]~~

~~**c. Overbreak.** 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 grade top of subgrade or as indicated on the plans, and the material disposed of as directed by the Engineer RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

- 152-2.3 Stockpile and Grading Excavation Borrow excavation.** ~~Borrow areas 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 Engineer. 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. There are no borrow sources within the boundaries of the airport property. The Contractor shall locate and obtain borrow sources, subject to the approval of the Engineer RPR. The Contractor shall notify the Engineer RPR at least 15 days prior to beginning the excavation so necessary measurements and tests can be made by the Engineer 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. 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 Engineer 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.

- 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 8 inches (300 mm) 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 D-698. 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. Contractor is to obtain proctor values of subgrade soils to use in determination of compaction requirements. Share results of proctor values with RPR and Engineer for use in acceptance testing.

- 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 Engineer 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 Engineer 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 Engineer 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, including the cutting of temporary swales if needed to drain areas in the construction that are susceptible to holding water.

The material in each lift shall be within -2 to 0% 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. If nuclear density machines are to be used for density determination, the machines shall be calibrated in accordance with ASTM D6938.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density. Contractor is to observe weather conditions and confirm soil temperatures are above dew point temperature to prevent additional moisture from entering any soil being aerated.

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 D698. A new Proctor shall be obtained for each soil type based on visual classification. Contractor is to share the results of the Proctor test(s) with the RPR and Engineer for use in acceptance testing.

Density tests will be taken by the Engineer RPR for every 3,000 square yards or each day's production of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the Engineer RPR. Density tests as a percentage of standard compaction will require Contractor to provide proctor test results to Engineer.

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 8 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 2 inches (100 mm) which shall be prepared for a seedbed in accordance with Item T-905 and Items T-901 and T-904.

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 RPR Engineer shall perform all in-place density tests. If the specified density is not attained, the area represented by the test or as designated by the Engineer, RPR shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

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

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 Engineer, 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 Engineer, 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.~~

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, shoulder grading, or other items.

152-2.9 **Proof rolling.** Not Used. See 2.10 below for subgrade compaction.

152-2.10 **Compaction requirements.** The subgrade under areas to be paved shall be compacted to a depth of 8 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 (300 mm) 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 ± 2 -2 to 0%~~ 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 methods in ASTM D698. Tests for moisture content and compaction will be taken at a minimum of 3000 S.Y. of subgrade. All quality assurance testing shall be done by the RPR Engineer. CONDUCT TESTS ON SUBGRADE PRIOR TO LIME STABILIZATION. Failed tests conducted by the Engineer will be back charged to the Contractor.

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 Engineer 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 Engineer. 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.

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.

- 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 R Engineer. 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) cross-section interval 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 be 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.

- 152-2.14 Topsoil.** During the course of work under this item – including shoulder grading, Contractor is to isolate topsoil to re-spread per Item T-905 to re-establish vegetation as soon as possible. ~~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 excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. Stockpiles will not be allowed within 250 feet of any existing or proposed runway or taxiway, whether closed to aircraft traffic or not. Stockpiles shall be located as shown on the plans and the approved CSPP, and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the Engineer, RPR, it is practical to place the salvaged topsoil at the time of excavation or 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

- 152-3.1** Measurement for shoulder grading and subgrade compaction will be by the square yard: typically, inclusive of the width of the work conducted by the running length.
- 152-3.2** Measurement for payment specified by the cubic yard (cubic meter) shall be computed by the average end areas of design cross sections. 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 generated by the Contractor shown on the plans, subject to verification by the Engineer, RPR. The Contractor is to conduct surveyed cross-sections at any location(s) before excavation begins and for each pay application that includes a quantity for payment under this item. The cross-sections, both before and after excavation, will be used to determine the excavation quantity for payment. At the Contractor's option, measurement of excavation may be based on plan quantity. The quantity listed on the bid form may be accepted by the Contractor as correct and as the total amount for payment under this pay item. Contractor has the option to accept the plan quantity and will not be required to conduct field cross-sections in support of pay requests. Contractor is to provide a written acceptance of plan quantity to Engineer before beginning any activities under this item. Upon executing this option, it is considered final and not subject to reversion.

BASIS OF PAYMENT

- 152-4.1** "Shoulder grading" and "subgrade compaction" payment shall be made at the contract unit price per square yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.
- 152-4.2** Payment for unclassified excavation and borrow excavation shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, hauling, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-152-1 Shoulder Grading per square yard.

Item P-152-2	Subgrade Compaction per square yard.
Item P-152-3	Unclassified Excavation per cubic yard.
Item P-152-4	Borrow Excavation per cubic yard.

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/ft³ (600 kN-m/m³))

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/ft³ (2700 kN-m/m³))

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

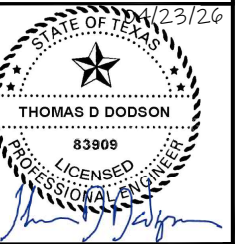
Software

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



WHARTON REGIONAL AIRPORT
 2513WHRTN:
OVERLAY REHABILITATION OF RUNWAY 14/32 AND TAXIWAYS

PROJ MGR TDD

DRAWN BY TDD

CHECKED BY JHD

PROJ NO 2513WHRTN

CIVIL PEs PROJ NO 2413WHRTN

TITLE

QUANTITIES

SHEET
G-003

BASE BID: RUNWAY AND TAXIWAY REHABILITATION

ITEM	DESCRIPTION	UNIT	BID QTY	FINAL QTY
TX-247-1	8" TY A GR 1 CRUSHED AGG BASE	SY	530	
TX-260-1	8" LIME SUBGRADE TREATMENT (EXISTING MATERIAL)	SY	530	
TX-260-2	COMMERCIAL OR QUICKLIME (SLURRY)	TON	7	
TX-316-1	ASPHALT FOR SEAL COAT (A-R Type II)	GAL	22,720	
TX-316-2	SEAL COAT APPLICATION (TYPE B or PB, GR-3 or -3S)	SY	0	
TX-316-3	SEAL COAT APPLICATION (TYPE B or PB, GR-4 or -4S)	SY	42,860	
TX-341-1	ASPHALT SURFACING (OVERLAY AT 2.5 INCHES (NOMINAL))	TON	6,434	
TX-341-2	ASPHALT SURFACING (WIDENED AT 3 INCHES)	TON	80	
C-100-1	CONTRACTOR QUALITY CONTROL PROGRAM	LS	1	
C-102-1	INSTALL AND MAINTAIN AND REMOVE REINFORCED FILTER FABRIC FENCE (TYPE 2)	LF	1,500	
C-102-2	INSTALL AND MAINTAIN AND REMOVE CONSTRUCTION EXIT (TYPE 3)	SY	200	
C-105-1	MOBILIZATION	LS	1	
P-101-1	MILL ASPHALT PAVEMENT (1 1/2 INCH DEPTH)	SY	42,860	
P-101-2	MILL ASPHALT PAVEMENT (ADDITIONAL 1 1/2 INCH DEPTH)	SY	7,700	
P-101-3	SEAL OPEN CRACKS IN EXISTING ASPHALT PAVEMENT	LF	4,000	
P-101-4	DEMOLISH ASPHALT PAVEMENT	SY	1,010	
P-101-5	DEMOLISH CONCRETE PAVEMENT	SY	100	
P-101-6	REMOVE AIRFIELD LIGHTING CONDUIT, CONDUCTOR AND COUNTERPOISE	LF	1,500	
P-101-7	REMOVE AIRFIELD EDGE LIGHT AND JUNCTION BOX	EA	20	
P-101-8	SALVAGE AIRFIELD SIGN AND REMOVE FOUNDATION	EA	3	
P-152-1	SHOULDER GRADING	SY	11,500	
P-152-2	SUBGRADE COMPACTION	SY	530	
P-152-3	UNCLASSIFIED EXCAVATION	CY	120	
P-152-4	BORROW EXCAVATION	CY	360	
P-603-1	EMULSIFIED ASPHALT TACK COAT	GAL	8,300	
P-620-1	PAINT MARKING REMOVAL	SF	4,200	
P-620-2	BLACKOUT/BLACK OUTLINE	SF	660	
P-620-3	RETRO REFLECTIVE PAVEMENT MARKING (YELLOW)	SF	4,200	
P-620-4	RETRO-REFLECTIVE PAVEMENT MARKING (WHITE)	SF	25,630	
P-620-5	NON-REFLECTIVE PAVEMENT MARKING (YELLOW)	SF	4,200	
P-620-6	NON-REFLECTIVE PAVEMENT MARKING (WHITE)	SF	25,630	
P-629-1	REMOVE SURFACE RUBBER CRACK SEAL FOR SURFACE TREATMENT	LF	10,600	
P-629-2	THERMOPLASTIC COAL TAR EMULSION SAND SLURRY SEAL	SY	18,400	
L-108-1	NO 8 AWG L-824C CABLE, IN CONDUIT	LF	250	
L-108-2	NO 6 AWG BARE COUNTERPOISE WIRE, IN TRENCH	LF	230	
L-110-1	2 IN NON ENCASED ELECTRICAL CONDUIT IN TURF	LF	230	
L-115-1	PRECAST AIRFIELD BASE CAN	EA	4	
L-125-1	L-861(L) BASE MOUNTED RUNWAY EDGE LIGHT WITH AMBER/WHITE LENS ON NEW CONCRETE ENCASED BASE CAN	EA	1	
L-125-2	L-861(T) BASE MOUNTED TAXIWAY EDGE LIGHT ON NEW CONCRETE ENCASED BASE CAN	EA	14	
T-901-1	SEEDING WITH HYDROMULCH	AC	2	
T-904-1	BLOCK SOD	SY	4,095	
T-904-2	WATERING	K GAL	200	
T-905-1	2 INCH DEEP TOPSOIL OBTAINED ON SITE	CY	650	
SS-106-1	CONSTRUCTION SAFETY PLAN COMPLIANCE	LS	1	
SS-106-2	LOW PROFILE BARRIERS	LF	750	
SS-106-3	RUNWAY CLOSURE MARKERS (LIGHTED)	EA	2	

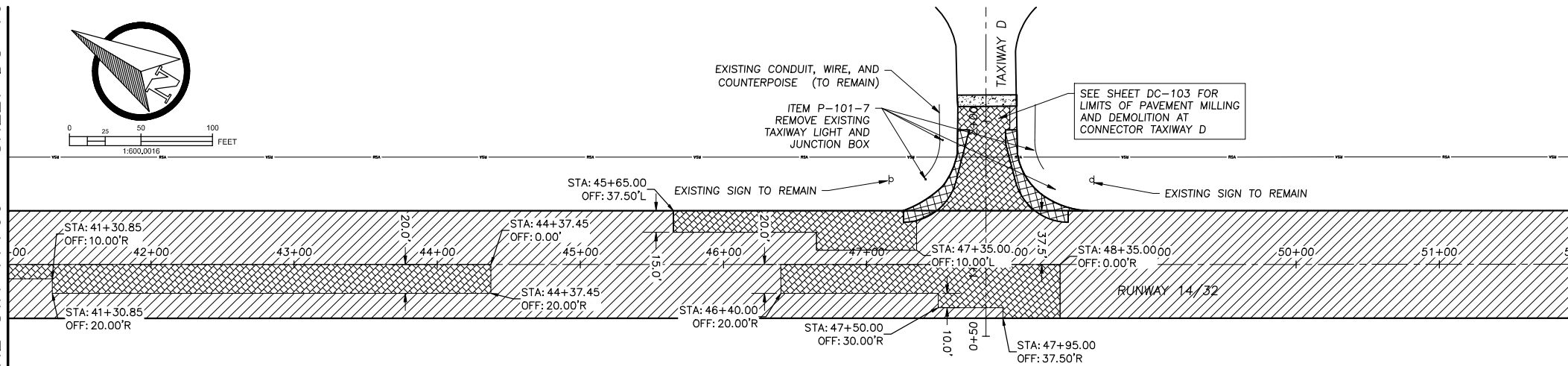
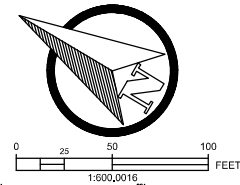
ALTERNATE 1: CONSTRUCTION OF TAXIWAY B

ITEM	DESCRIPTION	UNIT	BID QTY	FINAL QTY
TX-247-1	8" TY A GR 1 CRUSHED AGG BASE	SY	990	
TX-260-1	8" LIME STABILIZED SUBGRADE	SY	990	
TX-260-2	COMMERCIAL OR QUICKLIME (SLURRY)	TON	20	
TX-341-2	ASPHALT SURFACING (NEW AT 3 INCH)	TON	180	
TX-464-1	RC PIPE (CL IV) 18"	LF	222	
TX-467-1	SET (TY II)(18")(CONC)(6:1)	EA	4	
C-102-1	INSTALL AND MAINTAIN AND REMOVE REINFORCED FILTER FABRIC FENCE (TYPE 2)	LF	350	
P-101-4	DEMOLISH ASPHALT PAVEMENT	SY	40	
P-101-5	DEMOLISH CONCRETE PAVEMENT	SY	40	
P-101-6	REMOVE AIRFIELD LIGHTING CONDUIT, CONDUCTOR AND/OR COUNTERPOISE	LF	480	
P-101-7	REMOVE AIRFIELD EDGE LIGHT	EA	1	
P-152-2	SUBGRADE COMPACTION	SY	990	
P-152-3	UNCLASSIFIED EXCAVATION	CY	1,400	
P-603-1	EMULSIFIED ASPHALT TACK COAT	GAL	200	
P-620-2	BLACKOUT/BLACK OUTLINE	SF	230	
P-620-3	RETRO-REFLECTIVE PAVEMENT MARKING (YELLOW)	SF	545	
L-108-1	NO 8 AWG L-824C CABLE, IN CONDUIT	LF	1,000	
L-108-2	NO 6 AWG BARE COUNTERPOISE WIRE, IN TRENCH	LF	1,000	
L-110-1	2 IN NON-ENCASED ELECTRICAL CONDUIT IN TURF	LF	850	
L-110-2	4 WAY 2 IN CONCRETE ENCASED ELECTRICAL DUCT	LF	55	
L-115-1	PRECAST AIRFIELD BASE CAN	EA	1	
L-125-2	L-861(T) BASE MOUNTED TAXIWAY EDGE LIGHT ON NEW CONCRETE ENCASED BASE CAN	EA	12	
L-125-3	INSTALL SALVAGED AIRFIELD SIGN ON NEW CONCRETE BASE FOUNDATION, 1 MODULE	FA	2	
L-125-4	INSTALL SALVAGED AIRFIELD SIGN ON NEW CONCRETE BASE FOUNDATION, 2 MODULE	EA	1	
T-901-1	SEEDING WITH HYDROMULCH	AC	1	
T-904-1	BLOCK SOD	SY	120	
T-905-1	2 INCH DEEP TOPSOIL OBTAINED ON SITE	CY	15	

ALTERNATE 2: OVERLAY REHABILITATION OF TAXIWAY A

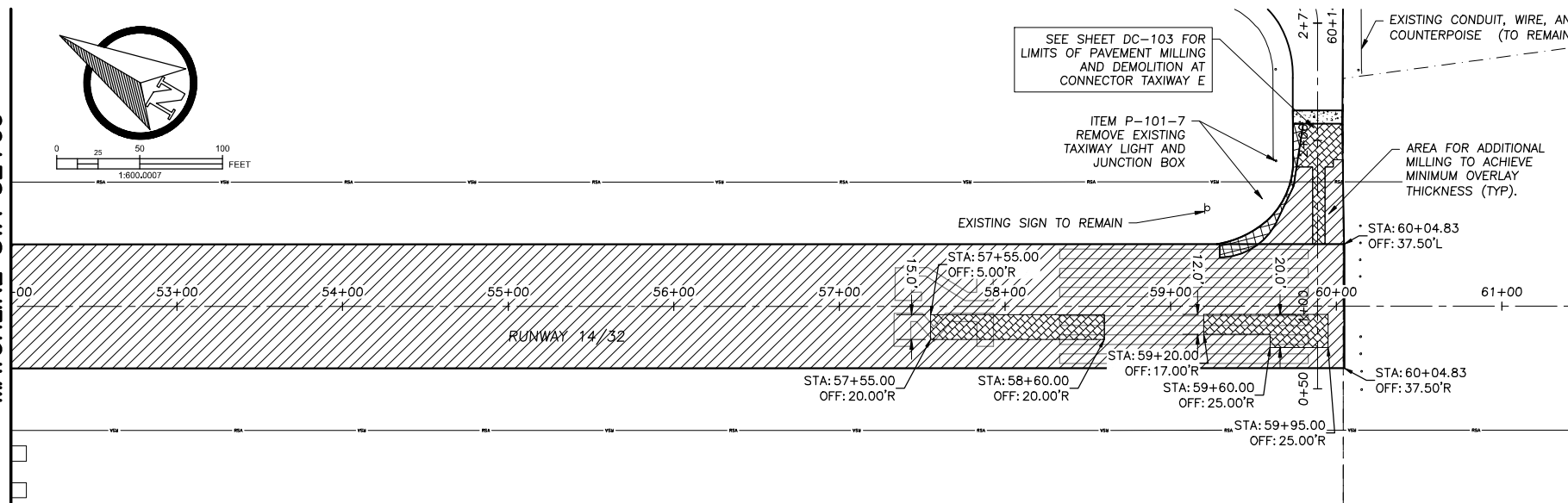
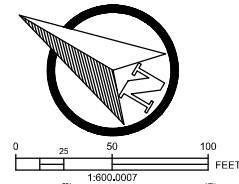
ITEM	DESCRIPTION	UNIT	BID QTY	FINAL QTY
TX-316-1	ASPHALT FOR SEAL COAT (A-R Type II)	GAL	9,850	
TX-316-2	SEAL COAT APPLICATION (TYPE B or PB, GR-3 or -3S)	SY	0	
TX-316-3	SEAL COAT APPLICATION (TYPE B or PB, GR-4 or -4S)	SY	18,580	
TX-341-3	ASPHALT SURFACING (OVERLAY AT 2 INCHES (NOMINAL))	TON	2,300	
P-101-1	MILL ASPHALT PAVEMENT (1 1/2 INCH DEPTH)	SY	1,220	
P-152-1	SHOULDER GRADING	SY	10,900	
P-603-1	EMULSIFIED ASPHALT TACK COAT	GAL	2,300	
P-620-1	PAINT MARKING REMOVAL	SF	220	
P-620-2	BLACKOUT/BLACK OUTLINE	SF	660	
P-620-3	RETRO-REFLECTIVE PAVEMENT MARKING (YELLOW)	SF	4,200	
P-620-5	NON-REFLECTIVE PAVEMENT MARKING (YELLOW)	SF	4,200	
P-629-1	DEDUCT REMOVE SURFACE RUBBER CRACK SEAL FOR SURFACE TREATMENT	LF	-10,600	
P-629-2	DEDUCT THERMOPLASTIC COAL TAR EMULSION SAND SLURRY SEAL	SY	-18,400	
T-901-1	SEEDING WITH HYDROMULCH	AC	1	
T-904-1	BLOCK SOD	SY	3,820	
T-904-2	WATERING	K GAL	200	
T-905-1	2 INCH DEEP TOPSOIL OBTAINED ON SITE	CY	390	

MATCHLINE STA 41+00 - SHEET DC-101







MATCHLINE STA 52+00

MATCHLINE STA 52+00



LEGEND

-  ITEM P-101-1: EXISTING ASPHALT PAVEMENT TO BE MILLED 1 1/2 INCHES DEEP (NOMINAL)
-  ITEM P-101-2: 1 1/2 INCH ADDITIONAL DEPTH MILLING OF ASPHALT PAVEMENT
-  ITEM P-101-4: DEMOLISH AND REMOVE ASPHALT PAVEMENT AND BASE
-  ITEM P-101-5: DEMOLISH AND REMOVE CONCRETE PAVEMENT AND BASE

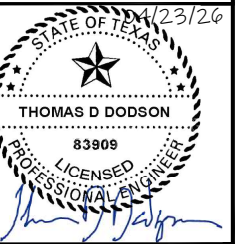
GENERAL NOTES:

1. STATION AND OFFSET ARE BASED ON RW CENTERLINE.
2. SEE SHEETS G-401 TO G-407 FOR PHASING REQUIREMENTS OF PAVEMENT REMOVAL AND LIGHTING MODIFICATIONS. WORK CAN ONLY OCCUR IN THE PHASE(S) IN WHICH THE WORK ITEMS ARE CONTAINED.
3. TO PROVIDE A MINIMUM SINGLE LIFT OF ASPHALT IN OVERLAY, SOME AREAS MAY REQUIRE DEEPER MILLING THAN SHOWN ON THESE SHEETS. LIMITS OF ADDITIONAL MILLING ARE BASED ON SURFACE MODELS AND MAY VARY. COORDINATE WITH RPR AND PROPOSE ANY ADDITIONAL AREAS OF MILLING TO THE ENGINEER FOR APPROVAL BEFORE MILLING.
4. AT CONTRACTOR'S OPTION, MILLING TO FINISHED GRADE MINUS 2 3/4 INCHES CAN BE CARRIED OUT TO NORMALIZE THE OVERLAY THICKNESS.

FOR BIDDING: 1/15/26

REVISIONS

ADDENDUM 3: 4/23/2026



WHARTON REGIONAL AIRPORT
2513WHRTN:
OVERLAY REHABILITATION OF RUNWAY 14/32 AND TAXIWAYS

PROJ MGR TDD

DRAWN BY TDD

CHECKED BY JHD

PROJ NO 2513WHRTN

CIVIL PEs PROJ NO 2413WHRTN

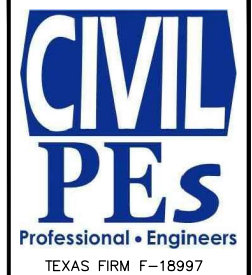
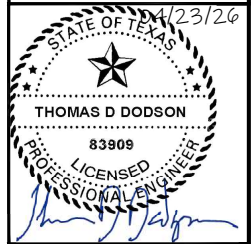
TITLE

DEMOLITION LAYOUT (BASE BID)

SHEET 2

SHEET DC-102

ENTIRE SHEET REVISED







WHARTON REGIONAL AIRPORT
2513WHRTN:
OVERLAY REHABILITATION OF RUNWAY 14/32 AND TAXIWAYS

PROJ MGR TDD
DRAWN BY TDD
CHECKED BY JHD
PROJ NO 2513WHRTN
CIVIL PEs PROJ NO 2413WHRTN

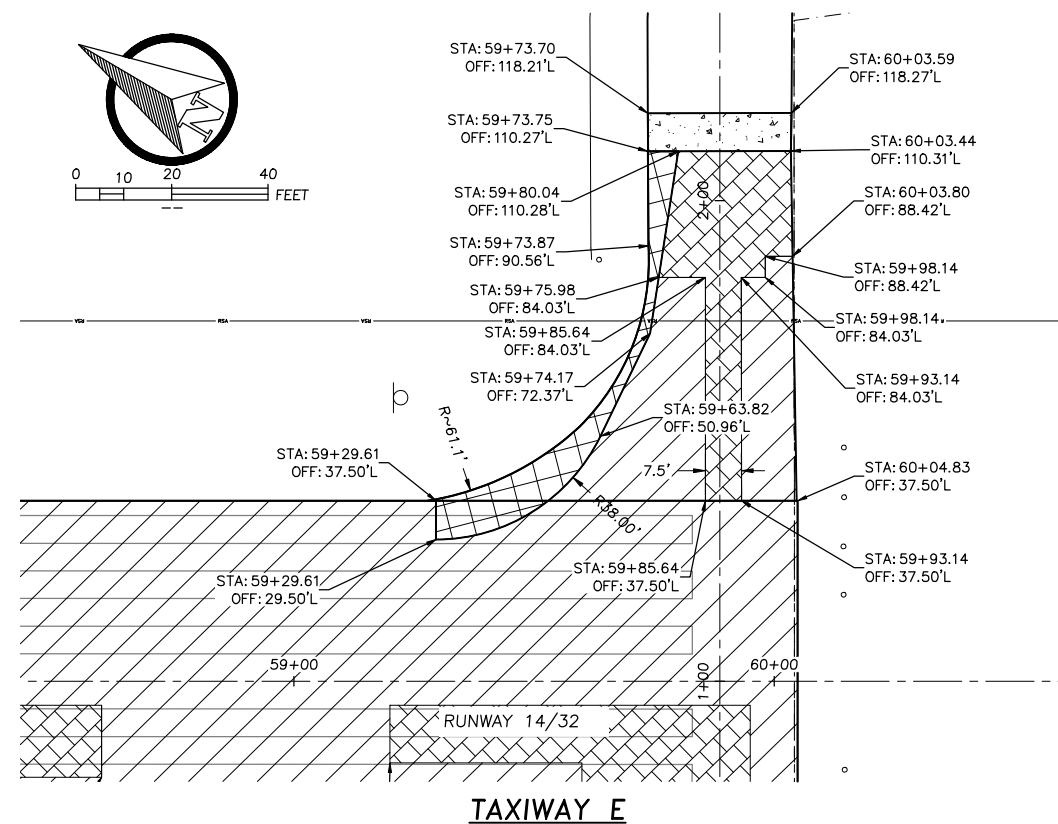
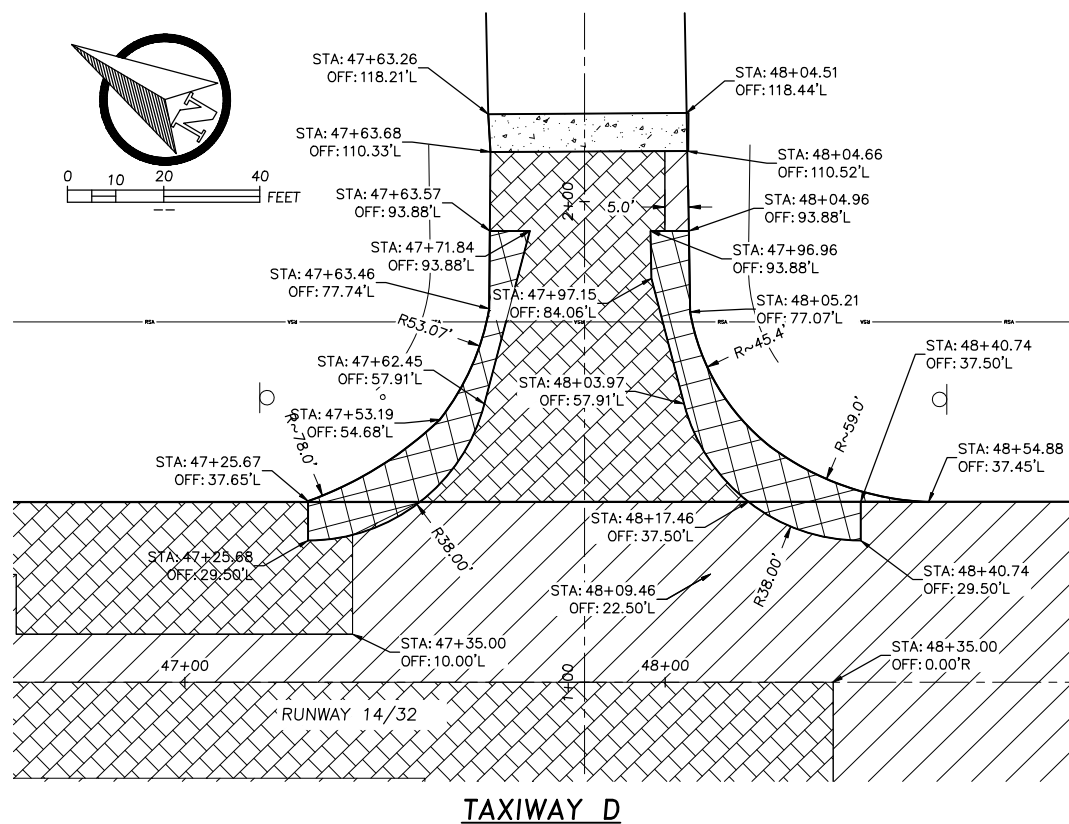
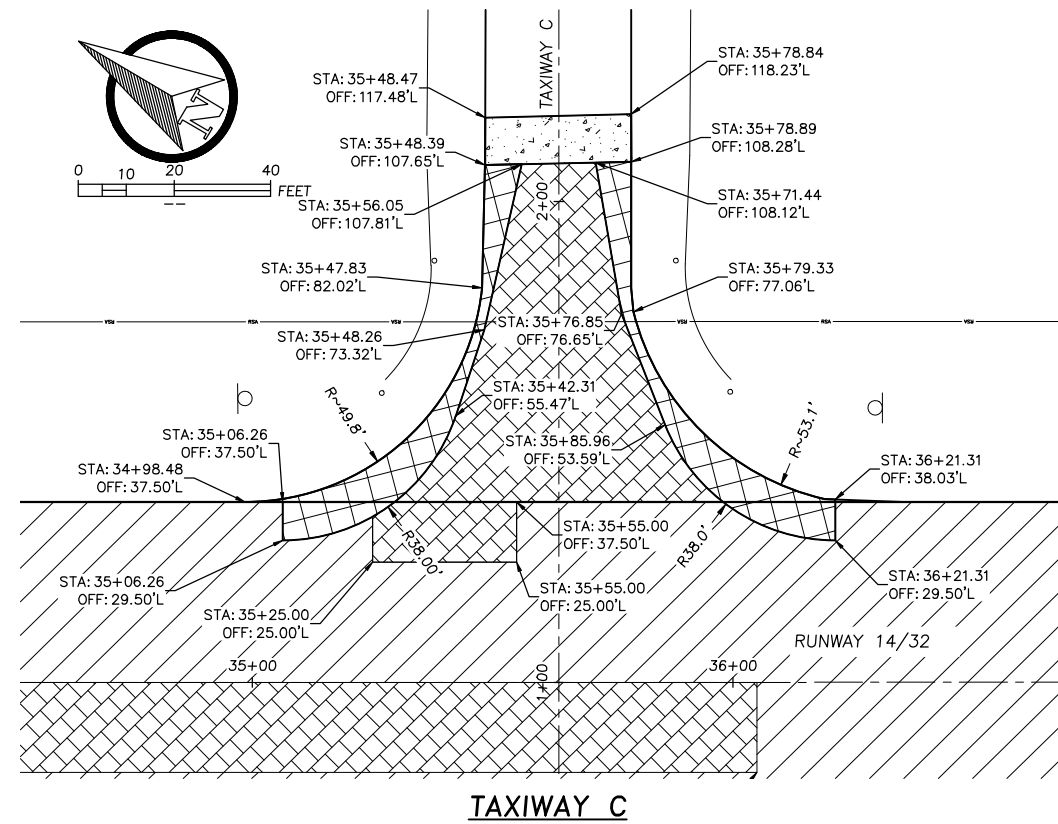
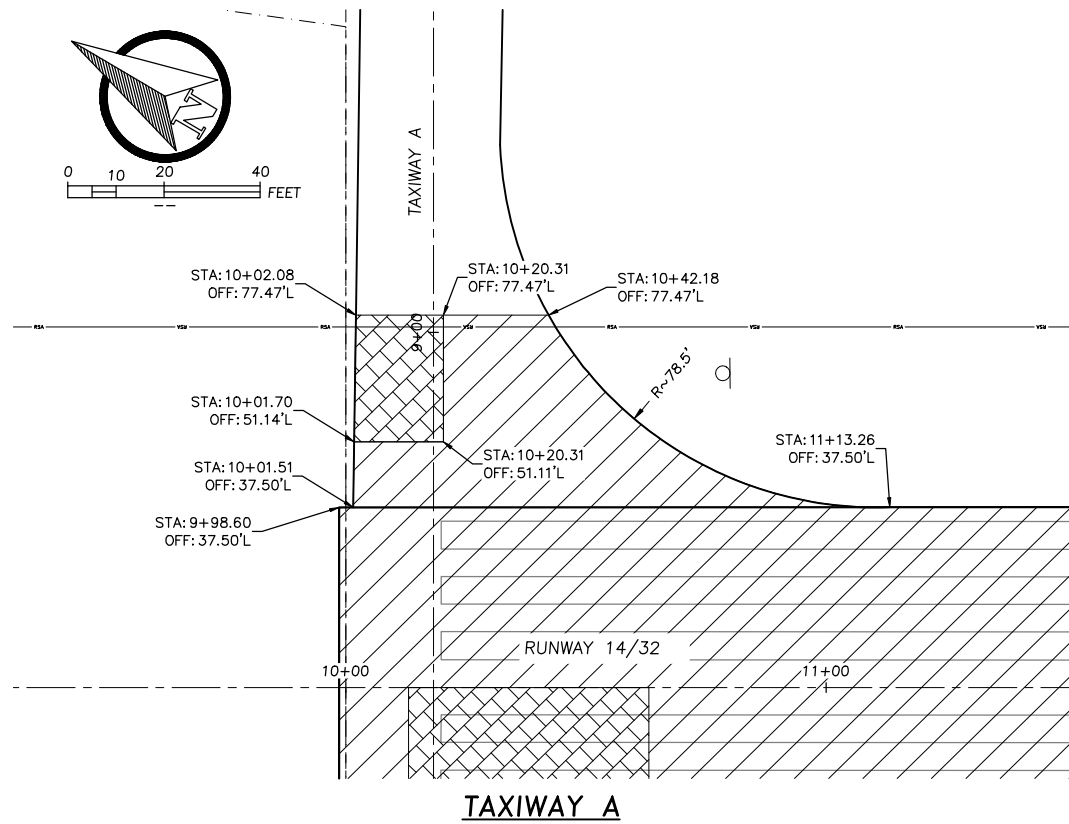
TITLE
DEMOLITION LAYOUT (BASE BID)

SHEET 3

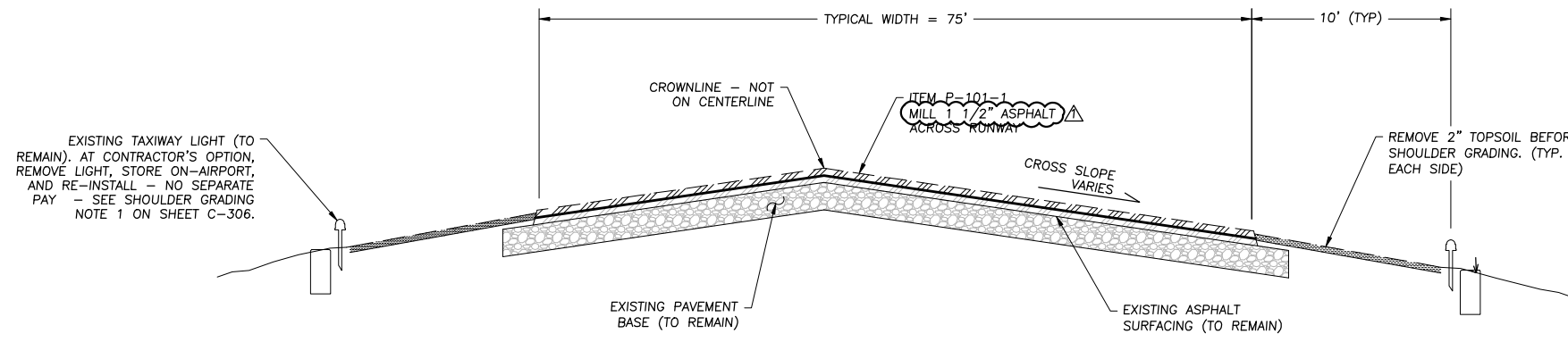
SHEET DC-103

- LEGEND**
-  ITEM P-101-1: EXISTING ASPHALT PAVEMENT TO BE MILLED 1 1/2 INCHES DEEP (NOMINAL)
 -  ITEM P-101-2: 1 1/2 INCH ADDITIONAL DEPTH MILLING OF ASPHALT PAVEMENT
 -  ITEM P-101-4: DEMOLISH AND REMOVE ASPHALT PAVEMENT AND BASE
 -  ITEM P-101-5: DEMOLISH AND REMOVE CONCRETE PAVEMENT AND BASE

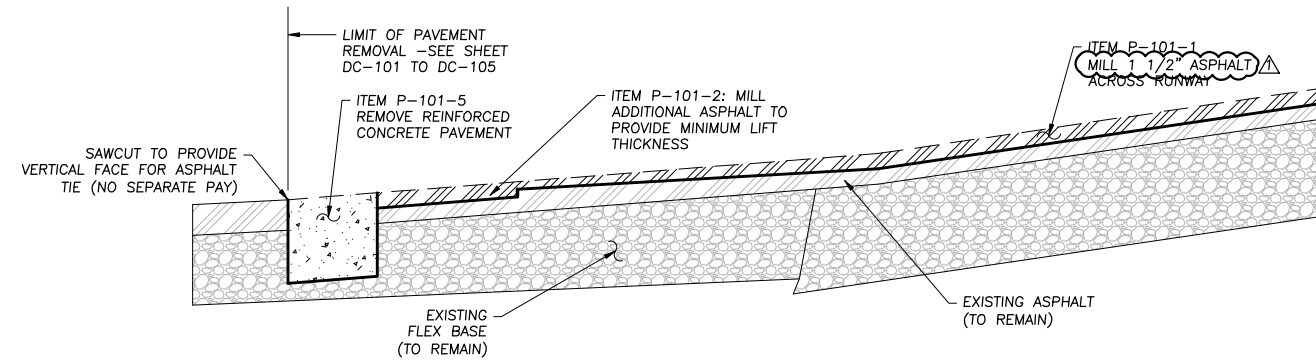
- GENERAL NOTES:**
1. STATION AND OFFSET ARE BASED ON RW CENTERLINE.
 2. SEE SHEETS G-401 TO G-407 FOR PHASING REQUIREMENTS OF PAVEMENT REMOVAL AND LIGHTING MODIFICATIONS. WORK CAN ONLY OCCUR IN THE PHASE(S) IN WHICH THE WORK ITEMS ARE CONTAINED.
 3. TO PROVIDE A MINIMUM SINGLE LIFT OF ASPHALT IN OVERLAY, SOME AREAS MAY REQUIRE DEEPER MILLING THAN SHOWN ON THESE SHEETS. LIMITS OF ADDITIONAL MILLING ARE BASED ON SURFACE MODELS AND MAY VARY. COORDINATE WITH RPR AND PROPOSE ANY ADDITIONAL AREAS OF MILLING TO THE ENGINEER FOR APPROVAL BEFORE MILLING.
 4. AT CONTRACTOR'S OPTION, MILLING TO FINISHED GRADE MINUS 2 3/4 INCHES CAN BE CARRIED OUT TO NORMALIZE THE OVERLAY THICKNESS.



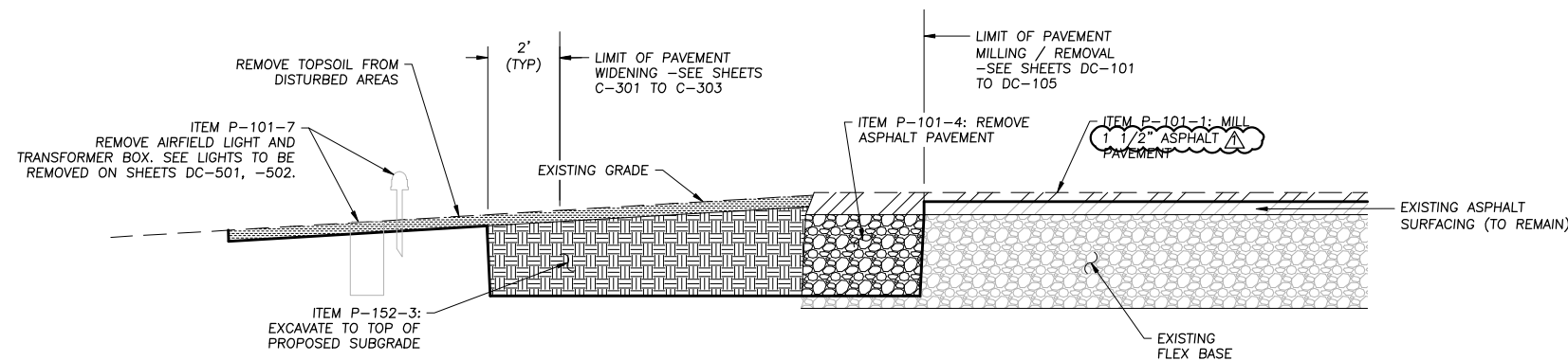
△ ENTIRE SHEET REVISED



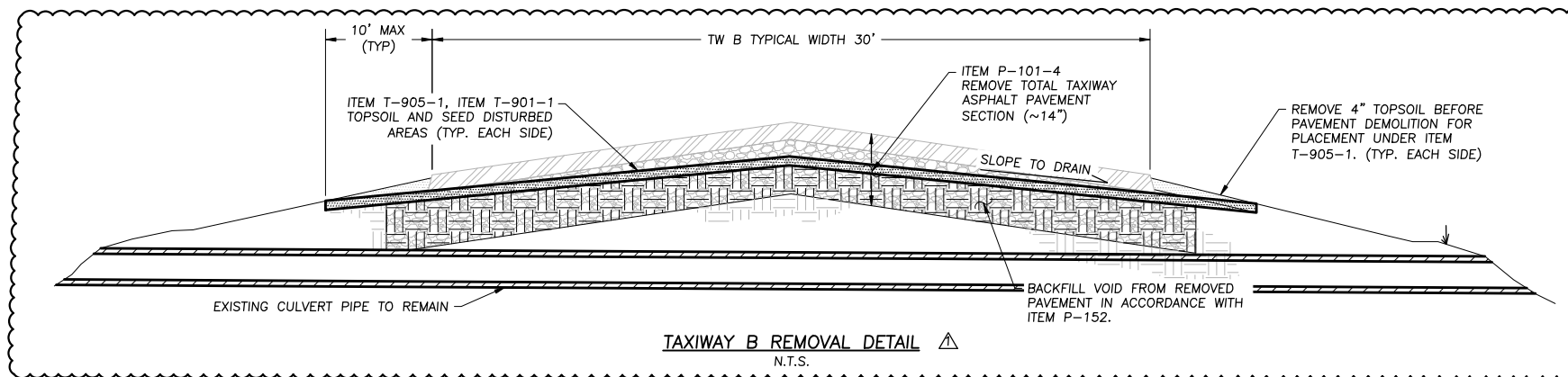
TYPICAL ASPHALT MILLING SECTION (LOOKING DOWN-STATION)
N.T.S.



PAVEMENT CONNECTION - TYPE 1
N.T.S.



PAVEMENT REMOVAL AT TAXIWAY WIDENING
N.T.S.



TAXIWAY B REMOVAL DETAIL
N.T.S.

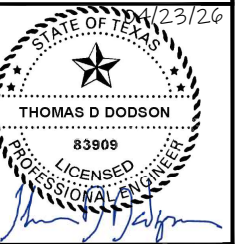
ASPHALT DEMOLITION NOTES:

- SOME PAVEMENTS MAY NOT SUPPORT ALL PAVEMENT DEMOLITION EQUIPMENT. CONTRACTOR IS TO TAKE PRECAUTIONS WITH HEAVY MACHINERY AND IMMEDIATELY MAKE REPAIRS TO ANY DAMAGED PAVEMENT THAT IS TO REMAIN AT NO ADDITIONAL EXPENSE TO THE OWNER.
- REMOVED ASPHALT REMAINS PROPERTY OF THE AIRPORT AND IS TO BE STOCKPILED ON THE AIRPORT. SEE SHEET G-101 FOR LOCATION.

FOR BIDDING: 1/15/26

REVISIONS

ADDENDUM 3: 4/23/2026



WHARTON REGIONAL AIRPORT
2513WHRTN:
OVERLAY REHABILITATION OF RUNWAY 14/32 AND TAXIWAYS

PROJ MGR TDD

DRAWN BY TDD

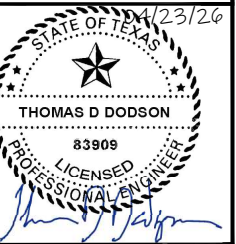
CHECKED BY JHD

PROJ NO 2513WHRTN

CIVIL PEs PROJ NO 2413WHRTN

TITLE
PAVEMENT REMOVAL SECTIONS AND DETAILS

SHEET
DC-107



WHARTON REGIONAL AIRPORT
 2513WHRTN:
 OVERLAY REHABILITATION OF RUNWAY 14/32 AND TAXIWAYS

PROJ MGR	TDD
DRAWN BY	--
CHECKED BY	TDD
PROJ NO	2513WHRTN
CIVIL PEs PROJ NO	2413WHRTN

TITLE
PAVING SECTIONS AND DETAILS
 SHEET 1

TXDOT 341 ASPHALT PAVEMENT NOTES:

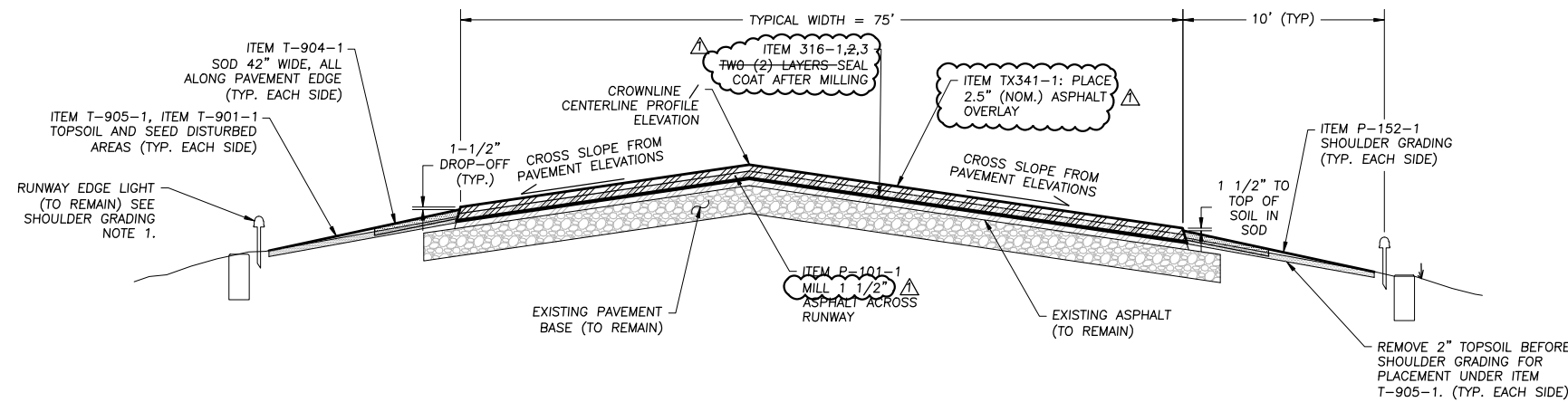
- PREPARE ASPHALT MIX DESIGN FOLLOWING TEX-204-E USING TEXAS GYRATORY COMPACTOR.
- BINDER FOR LEVEL-UP TO BE PG64-22 UNDER ITEM TX306.
- AS 2-INCH LIFT, AGGREGATE FOR ASPHALT TO BE GRADE DG-D FINE SURFACE. AGGREGATE TO BE SAC B OR BETTER UNDER ITEM TX302.
- BINDER FOR ASPHALT SURFACING TO BE PG76-22 PG76-16 UNDER ITEM TX300. NO BINDER SUBSTITUTIONS WILL BE PERMITTED.
- AGGREGATE FOR ASPHALT SURFACING TO BE GRADE DG-D FINE SURFACE. AGGREGATE TO BE SAC A OR BETTER UNDER ITEM TX302.
- NEITHER RAP NOR RAS ARE PERMITTED IN ANY ASPHALT LIFTS.
- FOR ASPHALT UNDER BASE BID AND ALTERNATE 1, GRADE CONTROL FOR FIRST LIFT (LEVEL-UP) AND SECOND LIFT (SURFACE) EACH WILL BE BY STRINGLINE BASED ON DESIGN PROFILE ALONG EACH SIDE OF THE PAVEMENT OR SIMILAR. SKIS WILL NOT BE PERMITTED DUE TO PROFILE REQUIREMENTS. SEE SHEETS C-101 TO C-103, AND C-311 TO C-315.
- FOR ASPHALT UNDER ALTERNATE 2, GRADE CONTROL CAN BE BY SKI OR OTHER THICKNESS CONTROL METHOD, BUT SMOOTHNESS REQUIREMENTS WILL STILL APPLY.
- METHODS FOR PAVEMENT GRADE CONTROL MUST BE SUBMITTED WITH CONTRACTOR QUALITY CONTROL PROGRAM (CQCP: ITEM C-100) BEFORE CONSTRUCTION FOR ENGINEER REVIEW.
- SMOOTHNESS OF FINISHED GRADE TO MEET REQUIREMENTS OF ITEM TX585. UNDER BASE BID, LONGITUDINAL SMOOTHNESS TO MEET REQUIREMENTS FOR TYPE B ON RUNWAY CENTERLINE AND WHEEL-PATH AREAS, TAXIWAYS AND CROSS-SLOPES ON THE RUNWAY AND THE TAXIWAYS UNDER ALTERNATES 1 AND 2 ARE TO MEET REQUIREMENTS FOR TYPE A.

TXDOT 316 SEAL COAT NOTES:

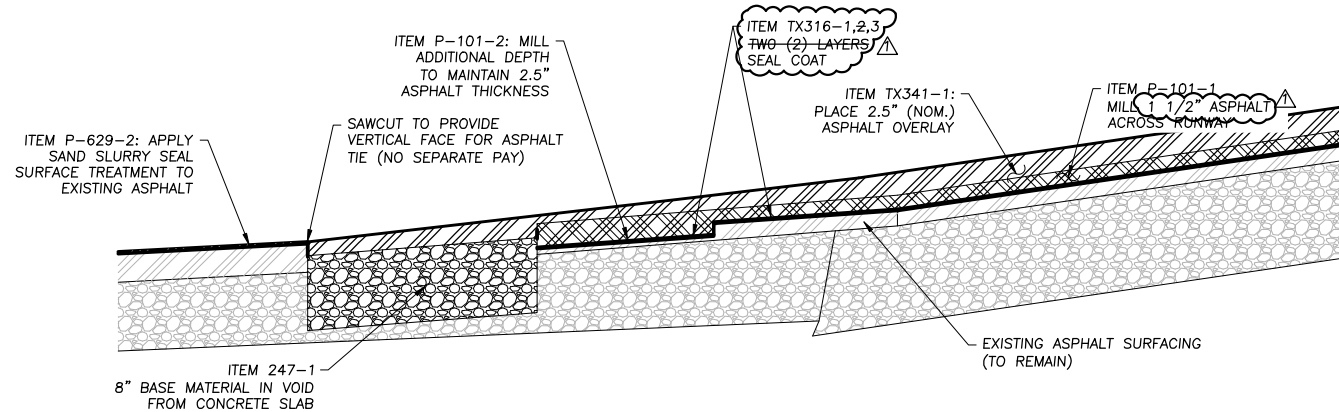
- ALL AGGREGATE FOR SEAL COAT TO BE SAC B MINIMUM; TYPE B OR PB.
- BINDER FOR FIRST APPLICATION DESIGNED AT 0.53 GAL / SY RATE.
- AGGREGATE FOR FIRST APPLICATION TO BE GRADE 4 OR 4S, DESIGNED AT 0.013 CY / SY.
- BINDER FOR SECOND APPLICATION DESIGNED AT 0.19 GAL / SY RATE.
- AGGREGATE FOR SECOND APPLICATION TO BE GRADE 4 OR 4S, AT 0.010 CY / SY.
- PREPARE EXISTING PAVEMENT SURFACE FOR SEAL COAT BY REMOVING ALL LOOSE SURFACE MATERIAL OR ANY MATERIAL THAT MAY AFFECT THE BONDING OF ITEM TX316 TO THE MILLED PAVEMENT SURFACE.

SHOULDER GRADING NOTES:

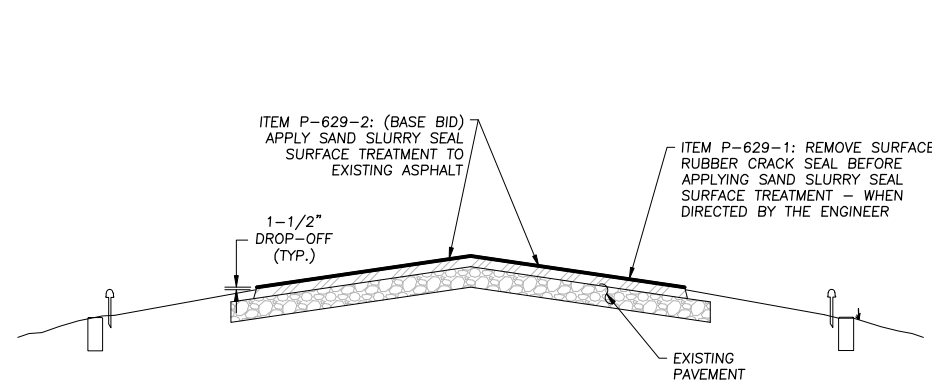
- TEMPORARY REMOVAL OF RUNWAY EDGE LIGHTS FOR STORAGE WILL REQUIRE MAKING REPAIRS, IF NECESSARY, TO THE EXISTING LIGHT(S) FOR RETURN TO OPERATION AT NO ADDITIONAL EXPENSE TO THE OWNER OR SPONSOR.
- PER ITEM T-905, STRIP 2" TOPSOIL ALONG PAVEMENT EDGES ADJACENT TO OVERLAY. STOCKPILE TOPSOIL FOR RE-USE ON SHOULDERS.
- AFTER STRIPPING, EMBANK SOIL TO FINISHED GRADE MINUS 2" TO MEET GRADES. PROVIDE CONSISTENT SLOPE WITHIN THE 10 FOOT WIDE AREA PER ITEM P-152-1. COMPACT TO SPECIFICATION.
- SPREAD 2" TOPSOIL ON EMBANKMENT TO SET FINAL GRADE, LIGHTLY COMPACT BEFORE INSTALLING SOD OR SEEDING.
- SEED REMAINING DISTURBED AREA PER ITEM T-901-1.



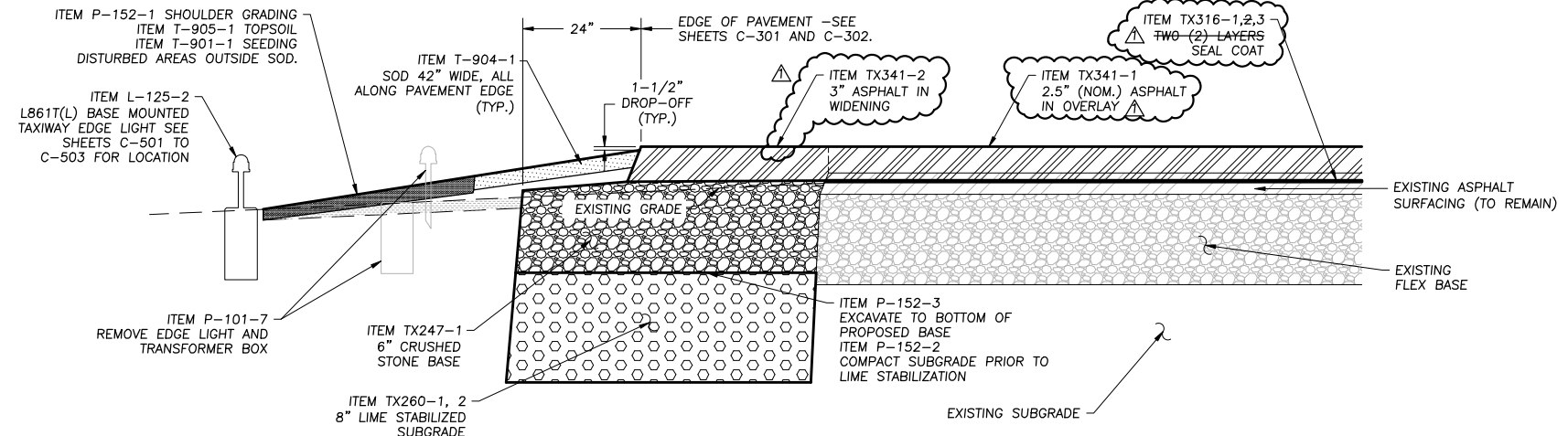
TYPICAL ASPHALT OVERLAY SECTION (LOOKING DOWN-STATION)
 N.T.S.



OVERLAY CONNECTION - (BASE BID)
 N.T.S.

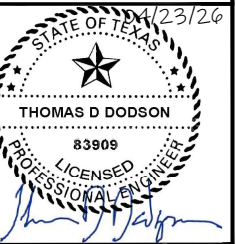


TAXIWAY A AND CONNECTORS SURFACE TREATMENT
 N.T.S.



PAVEMENT EDGE RECONSTRUCTION AND REALIGNMENT
 N.T.S.

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WHARTON REGIONAL AIRPORT
 2513WHRTN:
 OVERLAY REHABILITATION OF RUNWAY 14/32 AND TAXIWAYS

PROJ MGR TDD
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 CIVIL PEs PROJ NO 2413WHRTN

TITLE
PAVING SECTION AND DETAILS
SHEET 2

SHEET
C-308

