3010 Gaylord Parkway
Suite 190
Frisco, TX 75034

TEL 972.377.7480
FAX 972.377.8380

www.GarverUSA.com

August 3, 2022

2218KINNY - Addendum No. 2
To Plans, Contract Documents and Specifications

McKinney National Airport
Miscellaneous Erosion Repairs
TxDOT CSJ No. 2218KINNY

This addendum shall be a part of the Plans, Contract Documents, and Specifications to the same extent as though it were originally included therein, and it shall supersede anything contained in the Plans, Contract Documents and Specifications with which it might conflict. Acknowledgement of receipt of this Addendum must be provided on TxDOT Bid Form page 6 of 7 included in the Contract Documents.

The pre-bid meeting minutes have been included along with the sign-in sheet. The pre-bid meeting minutes include all questions asked during the pre-bid and the pre-bid site visit.

Bidders can obtain the project technical specifications within Addendum No. 1 on the TxDOT Website 'Plans Online' at:
https://www.dot.state.tx.us/AVN/avninfo/addendum/construct/ntb2218kinny00005ad1.pdf

Questions asked after the Pre-Bid Meeting Include:

1. Can an engineer's estimate be provided for the project?
    a. The engineer's estimate is published in the following location on the TxDOT Aviation website: https://www.dot.state.tx.us/AVN/avninfo/bidlist/construct/ntb2218kinny00005bl.pdf
2. What is the total construction time allotted for this project?
    a. The total contract time is sixty (60) calendar days to complete Phases 1 and 2. Phases 1 and 2 will be performed concurrently. If Bid Schedule 5 is awarded, ten (10) consecutive night closures will be performed during the sixty (60) calendar day construction period.

Revisions or additions made to the Contract Documents and Plans:

TxDOT Bid Form 2506 for 2218KINNY
On page 3 of 5 the following information was clarified in regards to total contract time:

Bidder hereby agrees to commence work under this Contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within ***the number of days listed below***, which time allow for the normal delays associated with inclement weather.

Total Contract Time:
- Sixty (60) Calendar Days for Phases 1 and 2
- Within the sixty (60) calendar day period for Phases 1 and 2, Bid Schedule 5 will award work within the RSA at night to be performed during 10 consecutive night closures
-Bidder further agrees to pay liquidated damages the sum of $1,000.00 for each calendar day to complete the work beyond the allotted time or as extended by and approved change order.

Plans:
Sheet GC-101 – Revision to show the Borrow areas on the project site.

August 1, 2022
2218KINNY
Addendum No.2

Specifications

Item P-152-2.3 for Borrow Excavation. Material properties were clarified within this section and noted borrow locations could be found within the plans.
Item P-152-2.13 clarification was given that surface tolerances for grades will need to be checked with a survey provided by the contractor to the engineer for review.

Attachments:

Pre-Bid Meeting Minutes
TxDOT Bid Form 2506 for 2218KINNY
Revised Specifications:
    P-152 Excavation, Subgrade, and Embankment
Revised Plans:
    GC-101 – Construction Safety and Phasing Plan

PREBID MEETING MINUTES

3010 Gaylord Parkway
Suite 190
Frisco, TX 75034

TEL 972.377.7480
FAX 972.377.8380

www.GarverUSA.com

MEETING MINUTES

To: Attendees **Date:** August 3, 2022

From: Sara Andrews, PE

RE: McKinney National Airport
Miscellaneous Erosion Repairs
TxDOT CSJ No. 2218KINNY
Pre-Bid Meeting Minutes

On Tuesday, July 19 at 9:00am, a Pre-Bid Meeting was held at McKinney National Airport (TKI) Second Floor Conference Room to discuss the McKinney National Airport Miscellaneous Erosion Repairs project for TxDOT CSJ No. 2218KINNY. The following items were discussed:

1. **Introductions & Roles:**
   a) Sign-in sheet is attached.

2. **Bidding Procedures**
   a) Sealed bids need to be addressed and delivered to Ms. Lisa Littrell, Procurement Services Manager, 1550 South College Street – Building D, McKinney, TX 75069. Bids will be received until **2:00 PM on Thursday, August 11th, 2022**, then publicly opened and read.
   b) Technical questions concerning the specifications should be directed to Sara Andrews, PE at SCAndrews@GarverUSA.com or 972-377-7480.
   c) Deadline for questions is 5:00pm on **Friday, July 29th, 2022**. Answers will be provided by 5:00pm on **Wednesday, August 3rd, 2022**.
   d) Bidder Qualifications
      i) Prequalified bidders are to check the prequalified box on the Bid Form
      ii) Each bidder shall submit a physical copy of the bidder's "evidence of competency" and "evidence of financial responsibility" to the TxDOT Aviation division
   e) Instructions to Bidders
      i) Bidder must fill out the Bid Form electronically
      ii) Form must be printed and signed with a wet signature ONLY for submission
   f) Bid Proposal
      i) **Contract Time: 60 Calendar Days**
      ii) $1,000 Liquidated Damages per calendar day
      iii) Addendum No. 1 was posted on Monday, July 18th with the correct Technical Specifications for 2218KINNY.
      iv) Addendum No. 2 will include pre-bid meeting minutes, sign-in sheet, and pre-bid questions.
      v) Only DBE certified businesses will qualify and count towards the DBE goal of this project.

3. **Federal Provisions**
   a) The DBE goal is **9.0%**
      i) Questions regarding goals and Good Faith Efforts should be directed to Eli Lopez at Eli.Lopez@txdot.gov.
      ii) Contractors must submit an acceptable DBE plan and commitment or good faith effort no later than 5 calendar days after bid opening as a matter of responsibility, even if bidder is not the apparent low bidder.
         (1) ***All bidders are encouraged to submit after bid opening. Officially due on August 16th by 5:00pm***
   b) Contractor shall follow all Davis Bacon Wage Rate Requirements
   c) Contractor shall follow all Buy American clauses.

4. TxDOT General Provisions

a) General Provisions are provided in a standalone publication entitled General Provisions.
b) Electronic copies are available on TxDOT Aviation website.
   i) http://www.txdot.gov/inside-txdot/division/aviation/general-provisions.html
c) Contractors shall pay close attention to Section 100 in the General Provisions regarding Contractor Quality Control Program and Contractor Quality Control Testing.
   i) The contractor is required to prepare a quality control program following the specifications where it is required.
   ii) The contractor is not required to perform QC control testing, but it is encouraged.
   iii) Owner will perform quality assurance (QA) testing on all materials.
      (1) ***The QA lab will be STL Engineers.***
   iv) Engineer recommends the contractor QC test prior to calling the QA testing lab.
   v) If QA tests show failing results, the contractor will be responsible for the cost of the test.
d) Any failed tests performed by the QA lab will be deducted from the contractor.

5. Construction Plans

a) Airport Safety and Security
   i) There is a badging requirement for the airport. Persons requiring badging must contact the airport to apply. A training video will be sent to applicants for badging. Badges cost $40.00.
   ii) Prime contractor must have a minimum of two badged persons. There must be a badged person with each crew or in each work area. The badged personnel will be responsible for the non-badged personnel within their work area. Badged personnel are responsible for escorting all crew to work areas to and from rally points.
   iii) Contractor must monitor radio frequency for aircraft traffic. Contractor must call Tower when requesting movement outside of work area in accordance with the airport's procedures.
   iv) Airport safety and security offences are identified within the notes on GC-001.
   v) The prime contractor shall have a superintendent onsite during all construction activities. The RPR is not considers as representative personnel for the prime contractor.
   vi) Separate haul routes shown on GC-101 will be used to access the north work area and south work area from access gates.
   vii) Contractor shall notify the airport and the engineer of a runway or taxiway closure 72 hours prior to closure.
   viii) Fire hydrant locations are provided on GC-101.
b) Project Layout
   i) Work Area 1 – Area North of Taxiway B5 (Bid Schedule 1)
   ii) Work Area 2 – Area South of Taxiway B4 (Bid Schedule 2)
   iii) Work Area 3 – Area between Taxiways B2 and B3 (Bid Schedule 3)
   iv) Work Area 4 – Area North of Taxiway B2 (Bid Schedule 4)
   v) Areas inside of D-II Runway Safety Area (RSA) constitute Bid Schedule 5 (**Night Work**)
   vi) Taxiway B can be utilized as a staging area for each phase designated on GC-101.
c) Safety and Phasing
   i) Contract Time is **60 Calendar Days**
      (1) Phase 1 – Areas 1 and 2
      (2) Phase 2 – Areas 3 and 4
      (3) Phase 1A – RSA areas inside Areas 1 and 2
         (a) 10 consecutive night closures of the runway
      (4) Phase 2A – RSA areas inside Areas 3 and 4
         (a) 10 consecutive night closures of the runway
   ii) Runway night closures shall happen at the same time for Phases 1A and 2A
   iii) Night closures will take place between 10:00 pm and 6:00 am
d) Civil Improvements
   i) Area 1 – Regrading and compaction
   ii) Area 2 – Regrading, joint seal replacement, and concrete slope protection
   iii) Area 3 – Regrading, joint seal replacement, and concrete slope protection
   iv) Area 4 – Regrading, compaction, joint seal replacement, and concrete slope protection

6. Technical Specifications

a) C-100 Contractor Quality Control Program (CQCP)
   i) This specification has a pay item for contractor to develop CQCP
b) C-105 Mobilization
   i) See Section C-105-5 Method of Measurement for payment percentages
c) D-754 Concrete Gutters, Ditches, and Flumes
   i) 5-inch concrete slope protection including all reinforcement and jointing materials
d) P-152 Excavation, Subgrade, and Embankment
   i) Volumetric quantities were calculated using design cross sections which were created for this project using the DTM files of the applicable design surfaces and generating End Area Volume Reports. This method does not account for shrinkage or swell and relies on computer interpolation.
   ii) The Engineer will provide DTM files of the original applicable design surfaces for generating the volume reports to the contractor.
   iii) Prior to disturbing original grade, the contractor shall verify the accuracy of the existing ground surface by verifying spot elevations where original field survey data was obtained as indicated on the topographical map.
   iv) No adjustment has been made to the plan quantities for the construction or demolition of existing drainage structures. The Contractor shall make their own determination as to the amount of unsuitable excavated material which may be encountered and the resulting additional borrow material required construction of the embankment. There will be no adjustment for additional embankment.
   v) *Addendum No. 2 clarifies the material properties of borrow fill and directs contractor to the plans for borrow areas.*
   vi) *Borrow areas are shown on plan sheet GC-101 within Addendum No. 2*
e) P-605 Joint Sealants for Pavements
   i) Areas 2, 3 and 4 have joint removal and replacement
   ii) New concrete slope protection joints are not included in this specification but are subsidiary to D-754
f) T-904 Sodding
   i) Tx-162 provides guidance for T-904 sod sources
g) T-905 Top Soil
   i) Top soil is considered subsidiary to Item P-152
h) Tx-162 Sodding for Erosion Control
   i) Specifies the sod sources for T-904
i) Tx-360 Concrete Pavement
   i) Guidance for concrete used in the concrete slope protection for D-754
j) Tx-421 Hydraulic Cement Concrete
   i) Guidance for the cement specified within Tx-360 and is subsidiary to Tx-360

7. Pre-Bid Meeting and Site Visit Questions: The following questions were asked during the pre-bid meeting and site visit:

a) What is the Plasticity Index (PI) required for the fill?
   i) Please refer to Addendum No. 2 Item P-152-2.3 for borrow excavation requirements.
   ii) The material used for the common fill must be tested to confirm that they meet the criteria specified as Type C fill in accordance with TxDOT Standard Specification Item 132, Type C, common fill soil. Type C soil shall be soil with the following properties: cohesion of zero, a long-term friction angle of 30 degrees, and a unit weight of 120pcf, maximum of 5% passing the #200 sieve, 0% passing the 3” sieve, Plasticity Index (PI) less than 60, and standard compaction of 95% per ASTM 1557. Fill should be placed in lifts and moisture/density controlled. Acceptable material sources have been identified in the plans on sheet GC-101.

b) Is there fill available on-site?
   i) Three (3) acceptable material sources have been identified in the plans on sheet GC-101. Before the contractor uses any fill, they must obtain a proctor on the material to ensure material properties meet P-152-5.3.

c) How many badges are required?
   i) Minimum of two persons should be badge on the project

d) Does the AOA gate require a gate code?
   i) Badges are scanned to gain access to the airfield

e) Are beacons and flags required on construction equipment?
   i) Contractor shall review plans GC-001 and GC-002 for construction and safety procedure notes pertaining to this project.
   ii) To operate within airport movement areas during daylight hours, vehicles must have a flag or beacon attached to it. Any vehicle operating on the movement areas during hours of darkness or reduced visibility must be equipped with a flashing dome-type light, the color of which is in accordance with local or state codes.
   iii) All construction vehicles shall be clearly identified for control purposes by prominently displaying the company name on each side of the vehicle. The identification symbols should be a minimum 8-inch block-type characters of a contrasting color and easy to read. They may be applied either by using tape or a water-soluble paint to facilitate removal. Magnetic signs are also acceptable. In addition, vehicles must display identification media, as specified in the approved security plan.

f) Is there any weight loading issues on the access routes for heavy equipment?
   i) No, there are no weight loading issues on identified access routes.

g) Does the contractor pay for the Resident Project Representative (RPR)?
   i) No. RPRs are paid by Garver under the construction phase services contract with TxDOT Aviation.

h) Can RPRs escort or count as a badged member?
   i) No, RPRs cannot escort any deliveries and are not responsible for any non-badged personnel associated with the Prime Contractor or their subcontractors.

i) Are radios required on the airfield?
   i) Yes, radios are required. Contractor will have to contact the Tower to gain access onto the movement areas to access the work areas on the project.

j) Where are fire hydrants located?
   i) Fire hydrants are identified on sheet GC-101 on the plans. There are fire hydrants located on the north and south side of the terminal apron area.

k) Are crack repairs required on the existing concrete slope protection?
   i) No there is no crack repairs were identified as part of this project. Only joint repairs have been identified. If contractor believes there is a serious enough crack that needs correcting, please notify the Engineer.

l) How will the earthwork grades be checked against the plans?
   i) The contractor will need to survey the final grades and provide them to the engineer for final grade approval as specified in Item P-152-2.13, Addendum No. 2.

Attachments: Sign-In Sheet — **Pages(incl.): 9**
GI-101 Project Layout
GC-101 Construction Safety and Phasing
CP-501 Typical Sections and Details I

Copy to File: 21A11175 **Copies to Garver: ARH, SCA, MRM**

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McKinney National Airport – Miscellaneous Erosion Repairs (TxDOT CSJ No. 2218KINNY)
McKinney, Texas

Pre-Bid Meeting
July 19, 2022, 9:00 AM

SIGN-IN SHEET

Name	Representing	Phone #	Email
Sara Andrews	Garver	972-377-7480	SCAndrews@GarverUSA.com
Austin Hayes	Garver	214-619-0961	ARHayes@GarverUSA.com
Eric Terry	McMahon Contracting	972-263-6907	estimation@mcmahoncontracting.com
Jeff Patterson	TKI	972-562-4096	jpatterson@flytki.com
Sal Marillo	Nu-Way Construction	817-821-8358	sal@nu-wayconstruction.net
Ken Carley	TKI	972-562-4053	kcarley@flytki.com
Ryan Hindman	TxDOT	512-520-7467	ryan.hindman@txdot.gov
Benjamin Squire	TKI	972-562-4214	bsquire@flytki.com

Pre-Bid Meeting
July 19, 2022, 9:00 AM

SIGN-IN SHEET

Name	Representing	Phone #	Email

0 150' 300' 600' 900'

(IN FEET)

LEGEND

- GRADING LIMITS
- RUNWAY CLOSURE GRADING LIMITS (BID SCHEDULE 5)
- PROPOSED CONCRETE SLOPE PROTECTION
- EXISTING CONCRETE
- — D-III RSA — D-III RUNWAY SAFETY AREA (PERMANENT)
- — D-II RSA — D-II RUNWAY SAFETY AREA (TEMPORARY)
- —— TSA —— TAXIWAY SAFETY AREA

AIRPORT DRIVE

WATTLEY WAY

INDUSTRIAL BLVD.

AIR TRAFFIC CONTROL TOWER

TERMINAL APRON

TW A

TW A1

TW A2

TW A3

TW B

TW B1

TW B2

TW B3

TW B4

TW B5

TSA

D-III RSA

D-II RSA

PROPOSED CONCRETE SLOPE PROTECTION

REGRADE, FILL, AND COMPACT ERODED AREAS

CONTRACTOR TO CLEAR SILT & DEBRIS FROM EXISTING PILOT CHANNEL

RUNWAY 36-18

D-III RSA 500.00'

D-II RSA 400.00'

REGRADE GREATER THAN 3.0% SLOPES

BID SCHEDULE 5 WORK (TYP.)

REGRADE GREATER THAN 6:1 SLOPES

REGRADE GREATER 3.0% THAN SLOPES

CONTRACTOR TO CLEAR SILT & DEBRIS FROM EXISTING PILOT CHANNEL (TYP. ALL AREAS)

AREA 1: B5

SCALE: 1" = 100'

5,030 S.Y.

AREA 2: B4

SCALE: 1" = 100'

9,600 S.Y.

AREA 3: B2-B3

SCALE: 1" = 100'

19,200 S.Y.

AREA 4: NORTH B2

SCALE: 1" = 100'

16,930 S.Y.

ITEMS OF WORK

BID SCHEDULE 1: AREA 1 (NORTH OF TAXIWAY B5)

- REGRADE RSA AND SLOPES GREATER THAN 6:1, FILL, AND COMPACT ERODED AREAS, CLEAR SILT AND DEBRIS FROM EXISTING DRAINAGE STRUCTURES, SODDING AND SITE RESTORATION.

BID SCHEDULE 2: AREA 2 (SOUTH OF TAXIWAY B4)

- REGRADE RSA AND SLOPES GREATER THAN 6:1, FILL, AND COMPACT ERODED AREAS, PLACE CONCRETE SLOPE PROTECTION, CLEAR SILT AND DEBRIS FROM EXISTING DRAINAGE STRUCTURES, JOINT REPAIR, SODDING AND SITE RESTORATION.

BID SCHEDULE 3: AREA 3 (BETWEEN TAXIWAYS B2 AND B3)

- REGRADE RSA AND SLOPES GREATER THAN 6:1, FILL, AND COMPACT ERODED AREAS, PLACE CONCRETE SLOPE PROTECTION, CLEAR SILT AND DEBRIS FROM EXISTING DRAINAGE STRUCTURES, JOINT REPAIR, SODDING AND SITE RESTORATION.

BID SCHEDULE 4: AREA 4 (NORTH OF TAXIWAY B2)

- REGRADE RSA AND SLOPES GREATER THAN 6:1, FILL, AND COMPACT ERODED AREAS, PLACE CONCRETE SLOPE PROTECTION, CLEAR SILT AND DEBRIS FROM EXISTING DRAINAGE STRUCTURES, JOINT REPAIR, SODDING AND SITE RESTORATION.

BID SCHEDULE 5: INSIDE D-II RSA WORK

- REGRADE RSA TO FAA STANDARDS, SODDING AND SITE RESTORATION FOR AREAS 1-4 INSIDE OF THE D-II RSA. WORK WILL REQUIRE A RUNWAY CLOSURE

GARVER

3010 Gaylord Parkway
Suite 190
Frisco, TX 75034
(972) 377-7480

STATE OF TEXAS
SARA C. ANDREWS
126832
LICENSED PROFESSIONAL ENGINEER

Digitally Signed 02/10/2022

REV	DATE	DESCRIPTION	BY

MCKINNEY NATIONAL AIRPORT
MCKINNEY, TX

MISCELLANEOUS EROSION REPAIRS

PROJECT LAYOUT PLAN

JOB NO.: 21A11175
DATE: FEB. 2022
DESIGNED BY: SCA
DRAWN BY: MSL

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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER
GI-101

SHEET NUMBER 3

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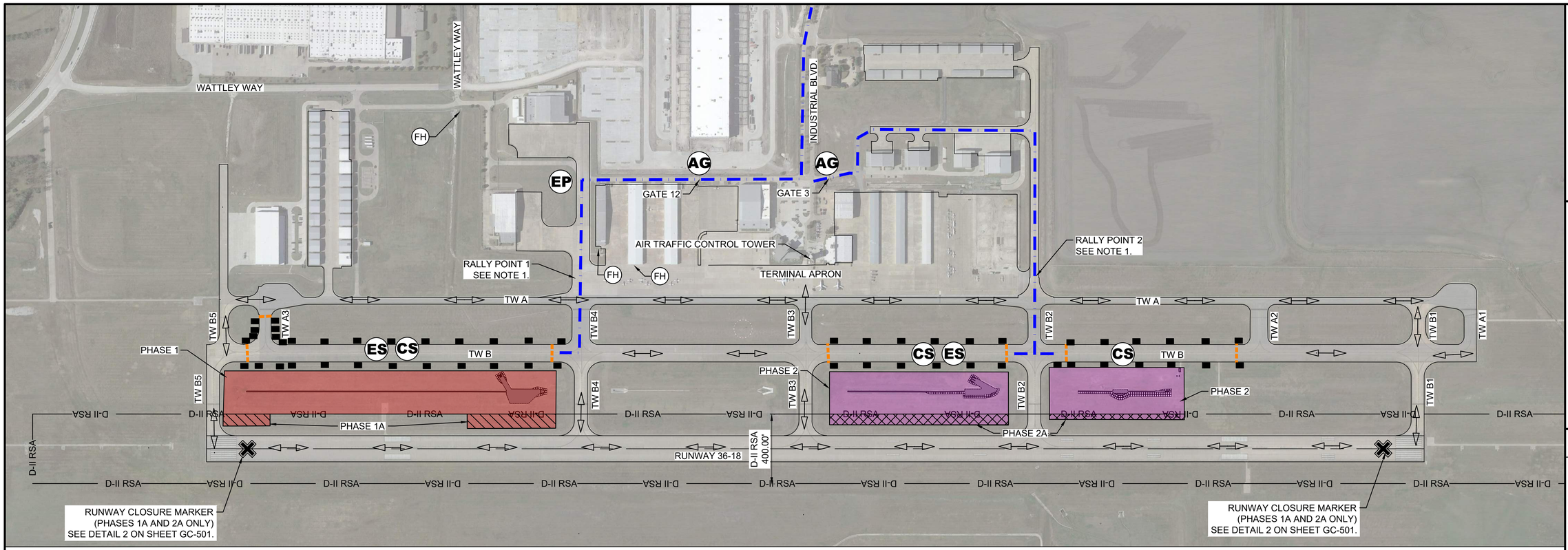

0 150' 300' 600' 900'

(IN FEET)

LEGEND

- PHASE 1 WORK AREA
- PHASE 1A WORK AREA
- PHASE 2 WORK AREA
- PHASE 2A WORK AREA
- RSA — RUNWAY SAFETY AREA
- ES — EQUIPMENT STORAGE
- EP — EMPLOYEE PARKING
- AG — ACCESS GATE
- CS — CONTRACTOR STAGING
- AIRCRAFT ROUTE
- CONTRACTOR ROUTE
- LIGHTED BARRICADE (1 / GC-501)
- LIGHTED RUNWAY CLOSURE MARKER (2 / GC-501)
- FIXTURE COVER (3 / GC-501)
- FH — EXISTING FIRE HYDRANT LOCATIONS (SEE NOTE 4)

SEQUENCE OF CONSTRUCTION

1. REGRADE ERODED AREAS, CLEAR SILT AND DEBRIS FROM EXISTING DRAINAGE STRUCTURES, JOINT REPAIR, AND SITE RESTORATION.

1A. REGRADE NON-COMPLIANT AREAS WITHIN THE D-II RSA

2. REGRADE ERODED AREAS, PLACE CONCRETE SLOPE PROTECTION, CLEAR SILT AND DEBRIS FROM EXISTING DRAINAGE STRUCTURES, JOINT REPAIR, AND SITE RESTORATION.

2A. REGRADE NON-COMPLIANT AREAS WITHIN THE D-II RSA

CONTRACT TIME

	CALENDAR DAYS	AIRFIELD IMPACTS
PHASE 1 (60 DAYS)		TAXIWAY B CLOSURE BETWEEN TAXIWAYS B2 & B3 AND BETWEEN TAXIWAY A2 AND B2; RUNWAY 18-36 WILL BE CLASSIFIED AS A D-II RUNWAY WITH A 400-FOOT WIDE RSA.
PHASE 1A (10 NIGHTS)		RUNWAY CLOSURE *
PHASE 2 (60 DAYS)		TAXIWAY A3 CLOSURE AND TAXIWAY B CLOSURE BETWEEN TAXIWAYS B4 & B5; RUNWAY 18-36 WILL BE CLASSIFIED AS A D-II RUNWAY WITH A 400-FOOT WIDE RSA.
PHASE 2A (10 NIGHTS)		RUNWAY CLOSURE*

0 20 40 60 80 100

NOTES:

1. RALLY POINTS: CONTRACTOR TO ESTABLISH ESCORTS AT EACH RALLY POINT TO ALL CONSTRUCTION VEHICLES AND SUBCONTRACTORS TO ACCESS STAGING AREAS ALONG TAXIWAY B.
2. LIGHTED BARRICADES SHOWN ARE FOR GRAPHIC PURPOSES ONLY. THE CONTRACTOR SHALL DETERMINE THE QUANTITY OF LIGHTED BARRICADES REQUIRED TO COMPLETE THE WORK AS SHOWN AND MUST BE IN ACCORDANCE WITH CURRENT FAA ADVISORY CIRCULARS.
3. CONTRACTOR SHALL HAVE AN APPROVED PAVEMENT BROOM OR VACUUM TRUCK AVAILABLE ON SITE AT ALL TIMES. HYDRANTS TO FILL VACUUM TRUCK WILL BE AVAILABLE ON AIRPORT PROPERTY.
4. FIRE HYDRANT LOCATIONS ARE SHOWN FOR REFERENCE TO PROVIDE THE CONTRACTOR ACCESS FOR IRRIGATION. THE CONTRACTOR SHALL SUBMIT AN IRRIGATION PLAN FOR ESTABLISHING SOD.
5. CONTRACTOR SHALL NOTIFY THE AIRPORT AND ENGINEER 72 HOURS PRIOR TO CONSTRUCTION IN ORDER TO COMPLETE ALL NECESSARY NOTAMS.
6. RUNWAY 18-36 SHALL BE RECLASSIFIED AS A D-II RUNWAY WITH A 400-FOOT WIDE RUNWAY SAFETY AREA (RSA) FOR THE DURATION OF THE PROJECT.
7. ALL WORK WITHIN THE D-II RSA SHALL BE PERFORMED WITH RUNWAY CLOSURES AT NIGHT ONLY.
8. DURING NIGHTLY CLOSURES, THE CONTRACTOR IS REQUIRED TO PLACE THE AIRPORT OWNED LIGHTED RUNWAY CLOSURE MARKERS AT THE RUNWAY DESIGNATION NUMBERS AS SHOWN ABOVE.
9. AT THE COMPLETION OF EACH NIGHT, THE CONTRACTOR SHALL REMOVE THE AIRPORT OWNED LIGHTED RUNWAY CLOSURE MARKERS PRIOR TO THE RE-OPENING OF THE RUNWAY.
10. A NOTAM WILL BE ISSUED TO REQUIRE ALL AIRCRAFT WITH WINGSPANS GREATER THAN 79-FEET REQUEST A PRIOR PERMISSION REQUEST (PPR) TO LAND ON RUNWAY 18-36. IF AN AIRCRAFT SUBMITS A PPR, THE CONTRACTOR WILL BE REQUIRED TO PULL BACK FROM WORK TO ALLOW FOR THE AIRCRAFT TO LAND.
11. ALL NOTICE TO AIRMEN (NOTAMS) WILL BE ISSUED BY THE AIRPORT.
12. THE CONTRACTOR SHALL INSTALL ALL SIGNS IN ACCORDANCE WITH THE MOST RECENT EDITION OF FAA AC 150/5345-44 AND 150/5340-18. ANY SIGN THAT IS NOT PERFORMING ITS NORMAL FUNCTION MUST BE COVERED OR REMOVED TO PREVENT MISLEADING PILOTS.

* CONTRACTOR SHALL PERFORM NIGHT WORK BETWEEN 2200 AND 0600. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL PROPOSE THE TIMEFRAME IN WHICH THE AIRPORT SHALL BE CLOSED FOR PHASES 1A AND 2A. THE CONTRACTOR SHALL PROVIDE THIS DATE WITHIN THE PROPOSED CONSTRUCTION SCHEDULE AND NOTIFY THE AIRPORT 72 HOURS PRIOR TO THE BEGINNING OF PHASES 1A OR 2A.

3010 Gaylord Parkway
Suite 190
Frisco, TX 75034
(972) 377-7480

STATE OF TEXAS
SARA C. ANDREWS
126832
LICENSED PROFESSIONAL ENGINEER
Digitally Signed 02/10/2022

REV.	DATE	DESCRIPTION	BY

MCKINNEY NATIONAL AIRPORT
MCKINNEY, TX

MISCELLANEOUS EROSION REPAIRS

CONSTRUCTION SAFETY AND PHASING PLAN

JOB NO.: 21A11175
DATE: FEB. 2022
DESIGNED BY: SCA
DRAWN BY: MSL

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER
GC-101

SHEET NUMBER 7

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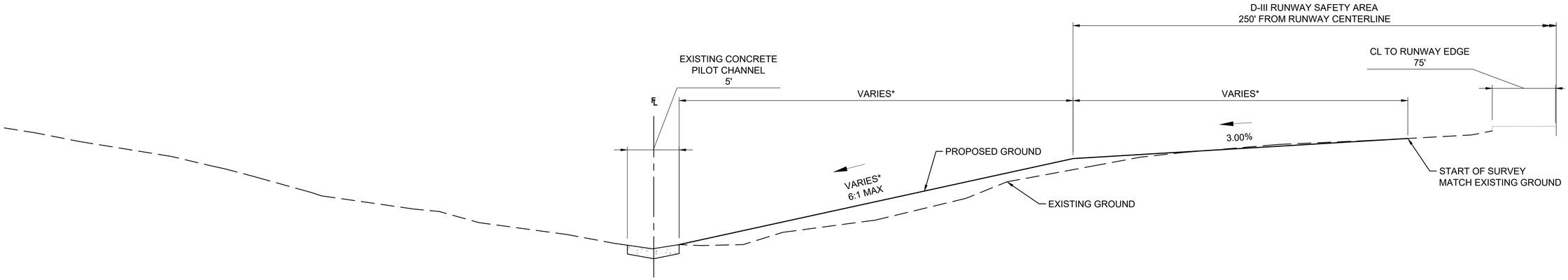
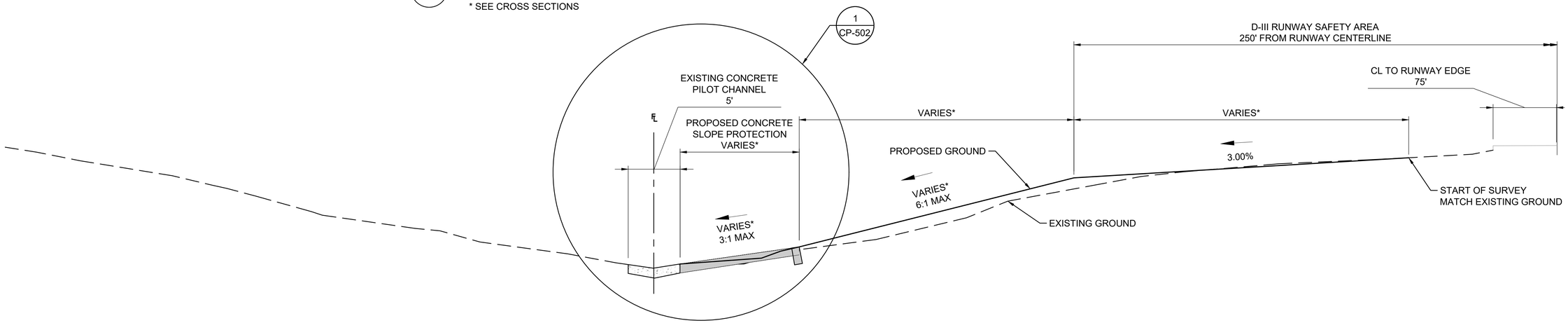


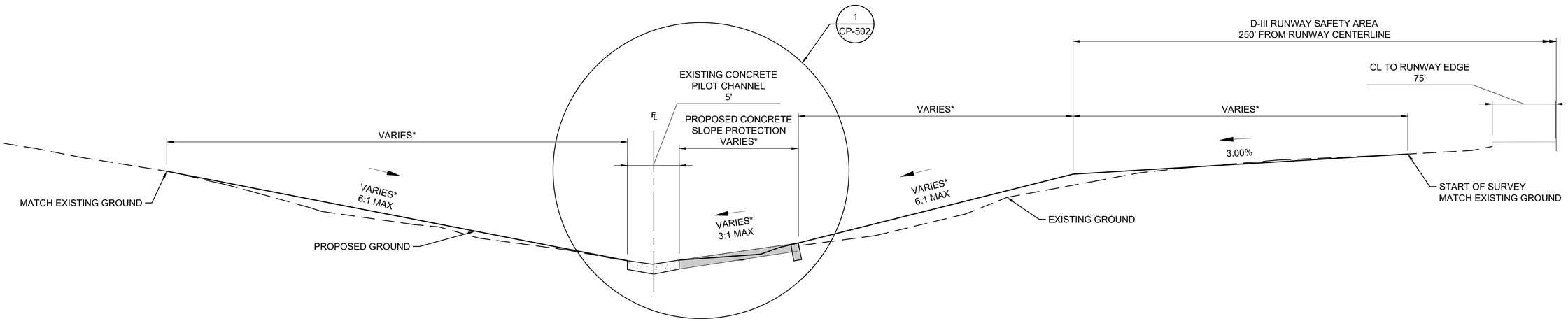
1 CP-501 **AREA 1 AND AREA 2 TYPICAL EROSION CONTROL CONCRETE SLOPE STABILIZATION**

SCALE: NONE
* SEE CROSS SECTIONS



2 CP-501 **AREA 3 TYPICAL EROSION CONTROL CONCRETE SLOPE STABILIZATION**

SCALE: NONE
* SEE CROSS SECTIONS



3 CP-501 **AREA 4 TYPICAL EROSION CONTROL CONCRETE SLOPE STABILIZATION**

SCALE: NONE
* SEE CROSS SECTIONS

GARVER

3010 Gaylord Parkway
Suite 190
Frisco, TX 75034
(972) 377-7480

STATE OF TEXAS
SARA C. ANDREWS
126832
LICENSED
PROFESSIONAL ENGINEER

Digitally Signed 02/10/2022

REV.	DATE	DESCRIPTION	BY

MCKINNEY NATIONAL AIRPORT
MCKINNEY, TX

MISCELLANEOUS
EROSION REPAIRS

TYPICAL SECTIONS
AND DETAILS I

JOB NO.: 21A11175
DATE: FEB. 2022
DESIGNED BY: SCA
DRAWN BY: MSL

BAR IS ONE INCH ON ORIGINAL DRAWING
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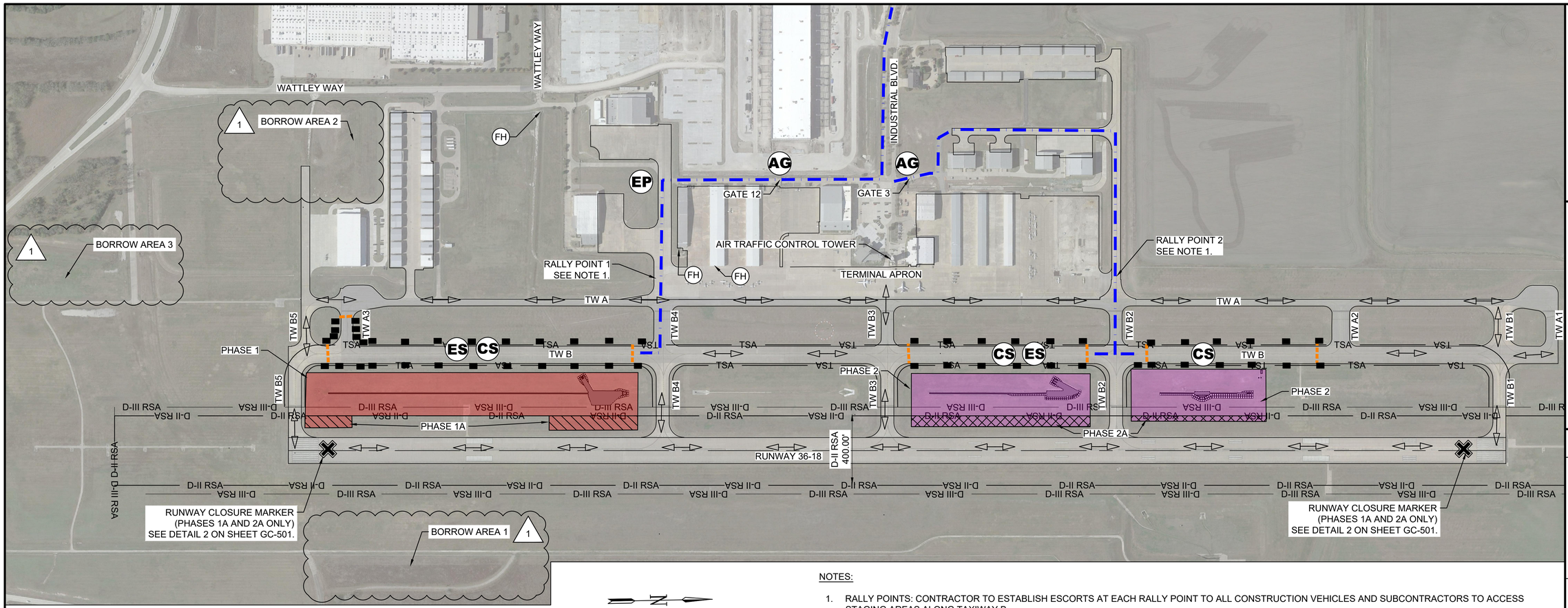
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

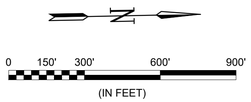
DRAWING NUMBER
CP-501

SHEET NUMBER **12**

REVISED PLAN SHEETS

ADDENDUM NO. 2





LEGEND

- PHASE 1 WORK AREA
- PHASE 1A WORK AREA
- PHASE 2 WORK AREA
- PHASE 2A WORK AREA
- RSA — RUNWAY SAFETY AREA
- ES — EQUIPMENT STORAGE
- EP — EMPLOYEE PARKING
- AG — ACCESS GATE
- CS — CONTRACTOR STAGING
- AIRCRAFT ROUTE
- CONTRACTOR ROUTE
- LIGHTED BARRICADE (1 / GC-501)
- LIGHTED RUNWAY CLOSURE MARKER (2 / GC-501)
- FIXTURE COVER (3 / GC-501)
- FH — EXISTING FIRE HYDRANT LOCATIONS (SEE NOTE 4)

SEQUENCE OF CONSTRUCTION

1. REGRADE ERODED AREAS, CLEAR SILT AND DEBRIS FROM EXISTING DRAINAGE STRUCTURES, JOINT REPAIR, AND SITE RESTORATION.
1A. REGRADE NON-COMPLIANT AREAS WITHIN THE D-II RSA
2. REGRADE ERODED AREAS, PLACE CONCRETE SLOPE PROTECTION, CLEAR SILT AND DEBRIS FROM EXISTING DRAINAGE STRUCTURES, JOINT REPAIR, AND SITE RESTORATION.
2A. REGRADE NON-COMPLIANT AREAS WITHIN THE D-II RSA

CONTRACT TIME

CALENDAR DAYS	AIRFIELD IMPACTS
PHASE 1 (60 DAYS)	TAXIWAY B CLOSURE BETWEEN TAXIWAYS B2 & B3 AND BETWEEN TAXIWAY A2 AND B2; RUNWAY 18-36 WILL BE CLASSIFIED AS A D-II RUNWAY WITH A 400-FOOT WIDE RSA.
PHASE 1A (10 NIGHTS)	RUNWAY CLOSURE *
PHASE 2 (60 DAYS)	TAXIWAY A3 CLOSURE AND TAXIWAY B CLOSURE BETWEEN TAXIWAYS B4 & B5; RUNWAY 18-36 WILL BE CLASSIFIED AS A D-II RUNWAY WITH A 400-FOOT WIDE RSA.
PHASE 2A (10 NIGHTS)	RUNWAY CLOSURE*

0 20 40 60 80 100

NOTES:

1. RALLY POINTS: CONTRACTOR TO ESTABLISH ESCORTS AT EACH RALLY POINT TO ALL CONSTRUCTION VEHICLES AND SUBCONTRACTORS TO ACCESS STAGING AREAS ALONG TAXIWAY B.
2. LIGHTED BARRICADES SHOWN ARE FOR GRAPHIC PURPOSES ONLY. THE CONTRACTOR SHALL DETERMINE THE QUANTITY OF LIGHTED BARRICADES REQUIRED TO COMPLETE THE WORK AS SHOWN AND MUST BE IN ACCORDANCE WITH CURRENT FAA ADVISORY CIRCULARS.
3. CONTRACTOR SHALL HAVE AN APPROVED PAVEMENT BROOM OR VACUUM TRUCK AVAILABLE ON SITE AT ALL TIMES. HYDRANTS TO FILL VACUUM TRUCK WILL BE AVAILABLE ON AIRPORT PROPERTY.
4. FIRE HYDRANT LOCATIONS ARE SHOWN FOR REFERENCE TO PROVIDE THE CONTRACTOR ACCESS FOR IRRIGATION. THE CONTRACTOR SHALL SUBMIT AN IRRIGATION PLAN FOR ESTABLISHING SOD.
5. CONTRACTOR SHALL NOTIFY THE AIRPORT AND ENGINEER 72 HOURS PRIOR TO CONSTRUCTION IN ORDER TO COMPLETE ALL NECESSARY NOTAMS.
6. RUNWAY 18-36 SHALL BE RECLASSIFIED AS A D-II RUNWAY WITH A 400-FOOT WIDE RUNWAY SAFETY AREA (RSA) FOR THE DURATION OF THE PROJECT.
7. ALL WORK WITHIN THE D-II RSA SHALL BE PERFORMED WITH RUNWAY CLOSURES AT NIGHT ONLY.
8. DURING NIGHTLY CLOSURES, THE CONTRACTOR IS REQUIRED TO PLACE THE AIRPORT OWNED LIGHTED RUNWAY CLOSURE MARKERS AT THE RUNWAY DESIGNATION NUMBERS AS SHOWN ABOVE.
9. AT THE COMPLETION OF EACH NIGHT, THE CONTRACTOR SHALL REMOVE THE AIRPORT OWNED LIGHTED RUNWAY CLOSURE MARKERS PRIOR TO THE RE-OPENING OF THE RUNWAY.
10. A NOTAM WILL BE ISSUED TO REQUIRE ALL AIRCRAFT WITH WINGSPANS GREATER THAN 79-FEET REQUEST A PRIOR PERMISSION REQUEST (PPR) TO LAND ON RUNWAY 18-36. IF AN AIRCRAFT SUBMITS A PPR, THE CONTRACTOR WILL BE REQUIRED TO PULL BACK FROM WORK TO ALLOW FOR THE AIRCRAFT TO LAND.
11. ALL NOTICE TO AIRMEN (NOTAMS) WILL BE ISSUED BY THE AIRPORT.
12. THE CONTRACTOR SHALL INSTALL ALL SIGNS IN ACCORDANCE WITH THE MOST RECENT EDITION OF FAA AC 150/5345-44 AND 150/5340-18. ANY SIGN THAT IS NOT PERFORMING ITS NORMAL FUNCTION MUST BE COVERED OR REMOVED TO PREVENT MISLEADING PILOTS.

* CONTRACTOR SHALL PERFORM NIGHT WORK BETWEEN 2200 AND 0600. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL PROPOSE THE TIMEFRAME IN WHICH THE AIRPORT SHALL BE CLOSED FOR PHASES 1A AND 2A. THE CONTRACTOR SHALL PROVIDE THIS DATE WITHIN THE PROPOSED CONSTRUCTION SCHEDULE AND NOTIFY THE AIRPORT 72 HOURS PRIOR TO THE BEGINNING OF PHASES 1A OR 2A.

3010 Gaylord Parkway
Suite 190
Frisco, TX 75034
(972) 377-7480

STATE OF TEXAS
SARA C. ANDREWS
126832
LICENSED
PROFESSIONAL ENGINEER
Digitally Signed 08/01/2022

REV.	DATE	DESCRIPTION	BY
1	08/01/2022	ADDENDUM NO. 2	SCA

MCKINNEY NATIONAL AIRPORT
MCKINNEY, TX

MISCELLANEOUS EROSION REPAIRS

CONSTRUCTION SAFETY AND PHASING PLAN

JOB NO.: 21A11175
DATE: FEB. 2022
DESIGNED BY: SCA
DRAWN BY: MSL

BAR IS ONE INCH ON ORIGINAL DRAWING
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER
GC-101

SHEET NUMBER 7

File: L:\2021\21A11175 - TKI - Misc Erosion Repairs\Drawings\TKI_MER-GC-101.dwg Last Save: 2/8/2022 9:54 AM Last saved by: MSLang
Last plotted by: Tierney, R. (Jim) Plot Style: AECmono.ctb Plot Scale: 1:1 Plot Date: 8/1/2022 4:15 PM Plotter used: DWG To PDF.pc3

REVISED SPECIFICATIONS

ADDENDUM NO. 2

ITEM P-152 EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

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

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

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature which is not otherwise classified and paid for under one of the following items.

~~**b. Rock excavation.** Rock excavation shall include all solid rock in ledges, in bedded deposits, in unstratified masses, and conglomerate deposits which are so firmly cemented they cannot be removed without blasting or using rippers. All boulders containing a volume of more than 1/2 cubic yard (0.4 m3) will be classified as "rock excavation."~~

~~**c. Muck excavation.** Muck excavation shall consist of the removal and disposal of deposits or mixtures of soils and organic matter not suitable for foundation material. Muck shall include materials that will decay or produce subsidence in the embankment. It may consist of decaying stumps, roots, logs, humus, or other material not satisfactory for incorporation in the embankment.~~

~~**d. Drainage excavation.** Drainage excavation shall consist of all excavation made for the primary purpose of drainage and includes drainage ditches, such as intercepting, inlet or outlet ditches; temporary levee construction; or any other type as shown on the plans.~~

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

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed in designated waste areas as shown on the plans. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR. *Undercutting of material unsatisfactory for subgrade foundation, roads, shoulders, or areas intended for turfing shall be considered unsuitable excavation and shall be excavated to the depth specified by the Engineer below the subgrade.*

CONSTRUCTION METHODS

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

The suitability of material to be placed in embankments shall be subject to approval by the *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 *Engineer* ~~RPR~~ notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

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

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

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~~. 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 described in paragraph 152-1.3* ~~shown on the plans~~.

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

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

a. Selective grading. When *the quality of material varies significantly* ~~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. 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 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 for **[** Unsuitable Excavation **]**. 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 *necessary part of Unsuitable Excavation* 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 **[** Unsuitable Excavation **]**.~~

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the *Engineer* ~~RPR~~. All over-break shall be graded or removed by the Contractor and disposed of as directed by the *Engineer* ~~RPR~~. The *Engineer* ~~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 someone other than the Contractor. All existing foundations shall be excavated at least 2 feet below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans. *All work associated with the excavation, removal, backfill, disposal, and/or stockpiling of existing structures and culverts will not be measured for separate payment but will be considered subsidiary to "Unclassified Excavation".*~~

152-2.3 Borrow excavation.

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 unsuitable material shall be disposed of by the Contractor as shown in the plans. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

The material used for the common fill must be tested to confirm that they meet the criteria specified as Type C fill in accordance with TxDOT Standard Specification Item 132, Type C, common fill soil. Type C soil shall be soil with the following properties: cohesion of zero, a long-term friction angle of 30 degrees, and a unit weight of 120pcf, maximum of 5% passing the #200 sieve, 0% passing the 3" sieve, Plasticity Index (PI) less than 60, and standard compaction of 95% per ASTM 1557. Fill should be placed in lifts and moisture/density controlled. Acceptable material sources have been identified in the plans on sheet GC-101.

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 **[** 12 inches **]** of subgrade shall be compacted to not less than **[** 100 % **]** of maximum density for non-cohesive soils, and **[** 95% **]** of maximum density for cohesive soils as determined by ASTM **[** ___ **]**. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.~~

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches 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 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 *Engineer* ~~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 upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The *Engineer* ~~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 nor more than 12 inches 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.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

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

The Contractor will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with D 1557. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the Contractor for every 3,800 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the *Engineer* ~~RPR~~.

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

Rolling operations shall be continued until the embankment is compacted to not less than 95% of maximum density for non-cohesive soils, and 90% of maximum density for cohesive soils as determined by ASTM **698.** ~~Under all areas to be paved, the embankments shall be compacted to a depth of **[___]** and to a density of not less than **[___]** percent of the maximum density as determined by ASTM **[___]**. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.~~

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches which shall be prepared for *sodding in accordance with T-904.* ~~a seedbed in accordance with~~ **[** ~~Item T-901~~ **] [** ~~T-906~~ **]**.

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

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 in their greatest dimensions will not be allowed in the top 12 inches of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall not be disposed of except at places and in the manner designated on the plans or by the RPR.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet 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 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, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 15-ton heavy pneumatic tire roller having four or more tires abreast, with each tire inflated to 125 psi in the presence of the Engineer. Apply a minimum of **50%** coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch or show permanent deformation greater than 1 inch shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

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

The material to be compacted shall be within ±2% 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 ASTM D698**.** Tests for moisture content and compaction

will be taken at a minimum of **3,000** S.Y. of subgrade. All quality assurance testing shall be done by the Engineer.

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 *Engineer* ~~RPR~~ and the finished subgrade shall be maintained.

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

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the *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, reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the *Engineer* ~~RPR~~. The Contractor shall perform all final smoothness and grade checks in the presence of the *Engineer* ~~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 when tested with a 12-foot 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-footstraightedge for the full length of each line on a 50-foot grid.

- **b. Grade.** The grade and crown shall be measured on a 50-foot grid and shall be within +/-0.05 feet of the specified grade.

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

The final finished surface of the grading for the completed project shall be surveyed by the contractor and the survey be provided to the engineer to verify that the grades do not deviate more than the specified tolerances allowed within this section.

152-2.14 Topsoil. When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905. If, at the time of excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. 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 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 not be paid separately, but shall be considered subsidiary to Item P-152.*

METHOD OF MEASUREMENT

152-3.1 The quantity of embankment in place shall be the number of cubic yards measured in its final position *as a plan quantity*.

BASIS OF PAYMENT

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

Payment will be made under:

Item P-152-4.1	Embankment in place - 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/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

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

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

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

END OF ITEM P-152

TXDOT BID FORM 2506

ADDENDUM NO. 2

This is a printed PDF of the TxDOT Bid Form 2506.
Please download the TxDOT Bid Form 2506 that is editable in Adobe

Bid Form

Bid: TxDOT CSJ No. 2218KINNY

Project Description:
MISCELLANEOUS EROSION REPAIR AND CONCRETE SLOPE PROTECTION INSTALLATION WITHIN THE EXISTING DRAINAGE SWALES BETWEEN TAXIWAY B & RUNWAY 18-36

Bid by: Name of Bidder _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone: _____ Fax: _____

Email Address: _____

To the Texas Department of Transportation hereinafter called the Agent.

Pursuant to the foregoing Instruction to Bidders, the undersigned bidder having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all the conditions surrounding the construction of the project hereby proposes to furnish all necessary superintendence, labor, machinery, equipment, tools materials and supplies to complete all the work upon which is bid in accordance with the contract documents, within the time set forth and at the prices stated below.

Bid Schedule 1

Item	Qty	Unit	Description	Unit Price	Total Price
C-102-5.1	1	L.S.	TEMPORARY EROSION CONTROL		$0.00
C-102-5.2	1,270	L.F.	CLEARING		$0.00
C-105-6.1	1	L.S.	MOBILIZATION		$0.00
P-152-4.1	197	C.Y.	EMBANKMENT IN PLACE		$0.00
T-904-5.1	4,000	S.Y.	SODDING		$0.00

Total Bid Schedule 1: $0.00

Bid Schedule 2

Item	Qty	Unit	Description	Unit Price	Total Price
C-102-5.1	1	L.S.	TEMPORARY EROSION CONTROL		0.00
C-102-5.2	523	L.F.	CLEARING		0.00
C-105-6.1	1	L.S.	MOBILIZATION		0.00

Item	Qty	Unit	Description	Unit Price	Total Price
D-754-5.1	2,829	S.F.	5" REINFORCED CONCRETE SLOPE PROTECTION		0.00
P-152-4.1	425	C.Y.	EMBANKMENT IN PLACE		0.00
P-605-5.1	3,757	L.F.	SILICONE JOINT SEALANT (REMOVED AND REPLACED)		0.00
T-904-5.1	5,163	S.Y.	SODDING		0.00

Total Bid Schedule 2: 0.00

Bid Schedule 3

Item	Qty	Unit	Description	Unit Price	Total Price
C-102-5.1	1	L.S.	TEMPORARY EROSION CONTROL		0.00
C-102-5.2	974	L.F.	CLEARING		0.00
C-105-6.1	1	L.S.	MOBILIZATION		0.00
D-754-5.1	6,772	S.F.	5" REINFORCED CONCRETE SLOPE PROTECTION		0.00
P-152-4.1	2,231	C.Y.	EMBANKMENT IN PLACE		0.00
P-605-5.1	2,103	L.F.	SILICONE JOINT SEALANT (REMOVED AND REPLACED)		0.00
T-904-5.1	15,028	S.Y.	SODDING		0.00

Total Bid Schedule 3: 0.00

Bid Schedule 4

Item	Qty	Unit	Description	Unit Price	Total Price
C-102-5.1	1	L.S.	TEMPORARY EROSION CONTROL		0.00
C-102-5.2	529	L.F.	CLEARING		0.00
C-105-6.1	1	L.S.	MOBILIZATION		0.00
D-754-5.1	11,301	S.F.	5" REINFORCED CONCRETE SLOPE PROTECTION		0.00
P-152-4.1	2,413	C.Y.	EMBANKMENT IN PLACE		0.00
P-605-5.1	535	L.F.	SILICONE JOINT SEALANT (REMOVED AND REPLACED)		0.00
T-904-5.1	14,607	S.Y.	SODDING		0.00

Total Bid Schedule 4: 0.00

Bid Schedule 5

Item	Qty	Unit	Description	Unit Price	Total Price
C-105-6.2	1	L.S.	MOBILIZATION (NIGHT WORK)		0.00

Item	Qty	Unit	Description	Unit Price	Total Price
P-152-4.1	126	C.Y.	EMBANKMENT IN PLACE		0.00
T-904-5.1	9,626	C.Y.	SODDING		0.00

Total Bid Schedule 5: 0.00

BID SUMMARY 1:

	Subtotal
Subtotal Base Bid:	

Subtotal _____

It is understood the quantities of work to be done at unit prices are approximate and are intended for bidding purposes only.

Bidders must entirely fill the bid proposal for the bid schedules. Contract award will be based on the lowest qualified bidder, depending on the availability of funds.

Bidders understand the Agent reserves the right to reject any irregular bid and the right to waive technicalities if such waiver is in the best interest of the Owner or Agent and conforms to State and local laws and ordinances pertaining to the letting of construction contracts. Funding availability will be considered in selecting the bid award. The bidder agrees this bid shall be honored and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

Upon receipt of the written "Notice of Award", the bidder will execute the formal contract agreement within 14 days and deliver a surety bond or bonds as required under the contract documents. The bid security attached, two percent (2%) of the total bid price stated in the bid, in the sum of $ 000.00 is to become the property of the Agent in the event the contract is not executed as set forth in the contract documents as liquidated damages for the delay and additional expense caused thereby.

Bidder hereby agrees to commence work under this Contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within the number of days listed below, which allows for the normal delays associated with inclement weather.

Total Contract Time:
- Sixty (60) Calendar Days for Phases 1 and 2
- Within the sixty (60) calendar day period for Phases 1 and 2, Bid Schedule 5 will award work within the RSA at night to be performed during 10 consecutive night closures
-Bidder further agrees to pay liquidated damages the sum of $1,000.00 for each calendar day to complete the work beyond the allotted time or as extended by and approved change order.

By submission of a bid under this solicitation, bidder certifies the only persons or parties interested in this proposal are those named and the bidder has not directly or indirectly participated in collusion, entered into an agreement or otherwise taken any action in restraint of free competitive bidding in connection with the project.

Signature	Title
Printed Name	Phone
Mailing Address	City, State, Zip Code

Addendum:

The undersigned Bidder certifies that he has acknowledged the addendum(s) to the contract as indicated below.

Addendum No.		Dated:	
Addendum No.		Dated:	
Addendum No.		Dated:	

Qualification Acknowledgment:

The undersigned Bidder certifies they are a prequalified bidder with the Texas Department of Transportation (TxDOT) and is on the current TxDOT "Bidder's List" as indicated below:

☐ Full Prequalification

☐ Bidder's Questionnaire

OR

The undersigned Bidder is not a pre-qualified TxDOT bidder and has enclosed the bidder's qualifications per General Provision 20-02, Prequalification of Bidders.

☐ I have enclosed qualification statements.

Qualification Acknowledgment Signature:

Signature	Title
Mailing Address	City, State, Zip Code

Note: The bidder may also submit an electronically printed bid. The bid must have pay items in the same order and with the exact information as on this bid form. If submitting an electronically printed bid, please submit qualification/signature page. The bidder is responsible for incorrect information and will be considered non-responsive if pay items are incorrect.

Lock Form
(TxDOT Use Only)

Submit by E-mail