

CONSTRUCTION DATA

PRIME CONTRACTOR

MAJOR SUBCONTRACTORS AND/OR SUPPLIERS

WORK COMMENCED _____ COMPLETED _____

PROJECT ENGINEER

ALL CONSTRUCTION PERFORMED UNDER THIS CONTRACT HAS BEEN COMPLETED IN FULL CONFORMITY WITH THE DRAWINGS, NOTES AND SPECIFICATIONS CONTAINED IN THESE PLANS. ALL CHANGES FROM PLANS AS BID, HAVE BEEN NOTED.

(Certified)

PROJECT ENGINEER

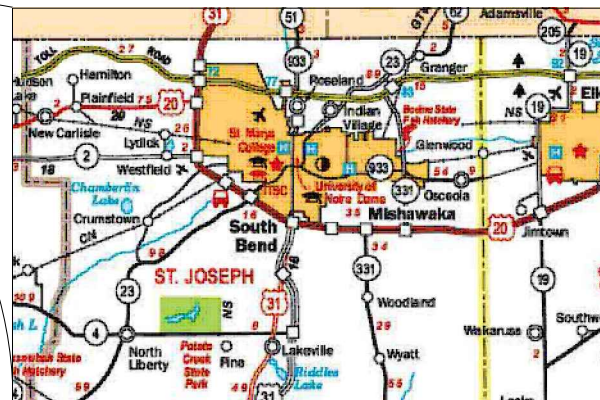
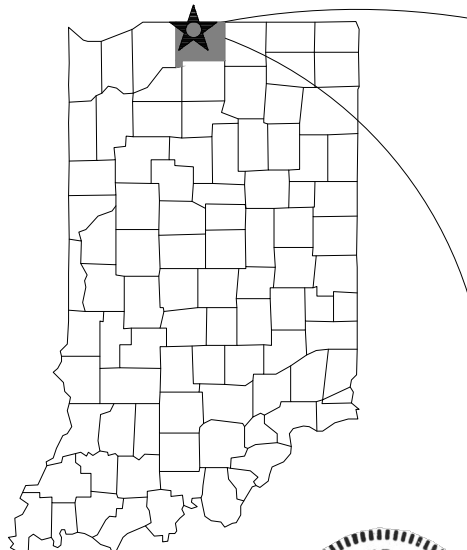
DATE

SOUTH BEND INTERNATIONAL AIRPORT

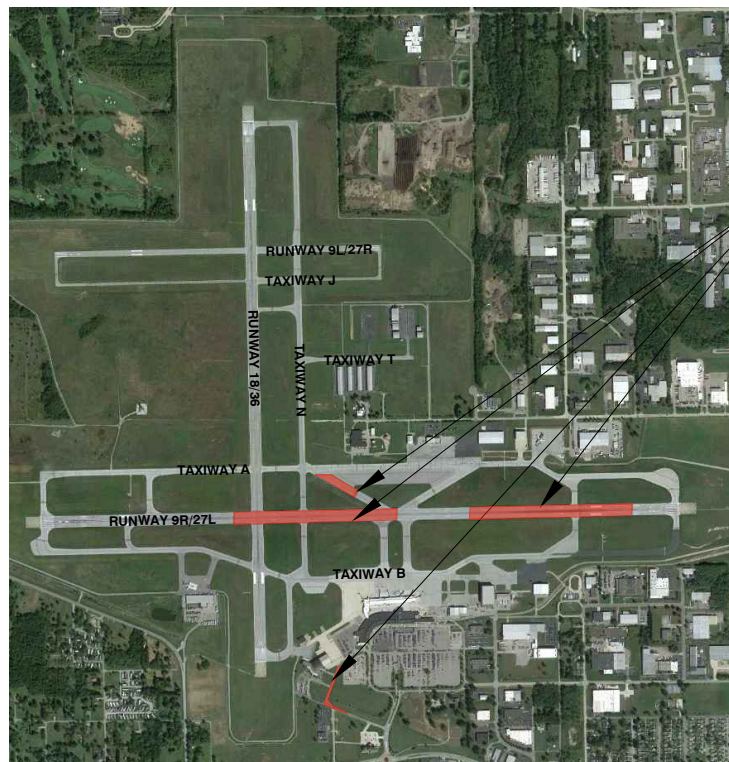
ST JOSEPH COUNTY
 4477 PROGRESS DRIVE, SOUTH BEND, IN

MILL & FILL VARIOUS LOCATIONS

CONSTRUCTION PLANS - ISSUED FOR BID 06-12-20



(VICINITY MAP)



(LOCATION MAP)

PROJECT LOCATION(S)

ABBREVIATIONS

- (E) EXISTING
- TWY TAXIWAY
- RWY RUNWAY
- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- OFZ OBSTACLE FREE ZONE

10	CONSTRUCTION DETAILS	
9	PROJECT LAYOUT & PAVEMENT SECTIONS - WORK AREA 3	
8	PROJECT LAYOUT & PAVEMENT SECTIONS - WORK AREA 2	
7	PROJECT LAYOUT & PAVEMENT SECTIONS - WORK AREA 1	
6	CONSTRUCTION SAFETY PHASING PLAN NOTES	
5	CONSTRUCTION SAFETY PHASING PLAN - PHASE MATRIX	
4	CONSTRUCTION SAFETY PHASING PLAN SHEET 2 OF 2	
3	CONSTRUCTION SAFETY PHASING PLAN SHEET 1 OF 2	
2	SUMMARY OF CONTRACT QUANTITIES	
1	TITLE SHEET	
SHEET NUMBER	INDEX TO SHEETS	LATEST REVISION DATE

ST. JOSEPH COUNTY



DESIGNERS & CONSULTANTS

Mead & Hunt

LANSING OFFICE
 2805 PORT LANSING ROAD
 LANSING, MICHIGAN 48906
 (517) 321-8334
 (517) 321-8932 FAX

APPROVED *Jeff Thoman* 6/12/20
 JEFFREY E. THOMAN, P.E. #11300141 DATE

ST. JOSEPH COUNTY AIRPORT AUTHORITY

sbn
 south bend INTERNATIONAL

SOUTH BEND INTERNATIONAL AIRPORT
 4477 PROGRESS DRIVE
 SOUTH BEND, INDIANA 46628
 (574) 282-4590

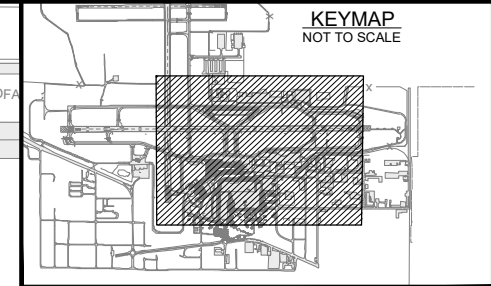
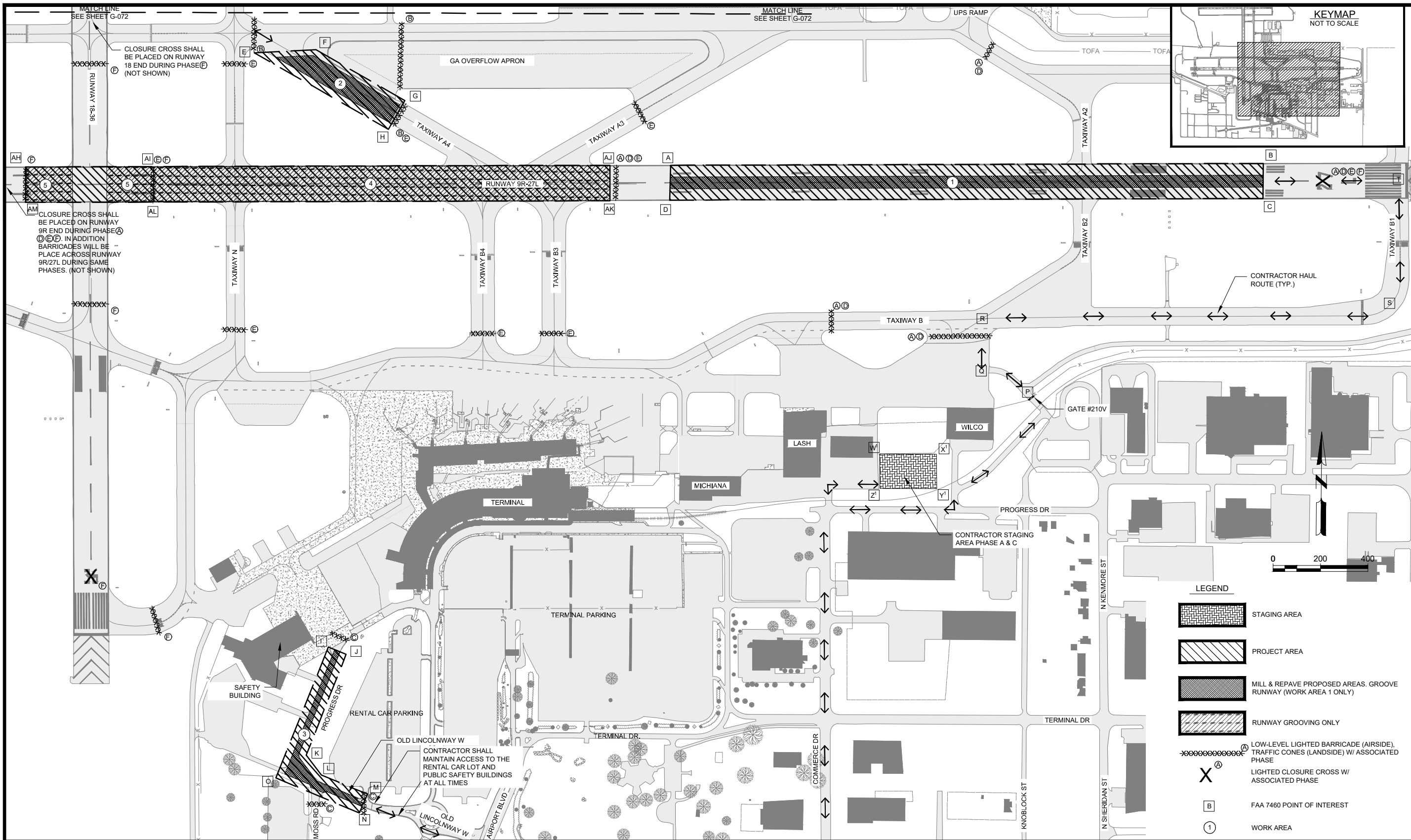
APPROVED _____
 MIKE DAIGLE, A.A.E., EXECUTIVE DIRECTOR DATE

Date: JUNE 12, 2020

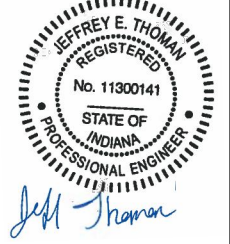
AIP Project No.: N/A

Project Description: MILL & FILL VARIOUS LOCATIONS

Airport: SOUTH BEND INTERNATIONAL AIRPORT



Mead & Hunt
 Mead and Hunt, Inc.
 2605 Port Lansing Road
 Lansing, MI 48906
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 meadhunt.com



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SOUTH BEND INTL. AIRPORT
MILL & FILL VARIOUS LOCATIONS
 ST JOSEPH COUNTY
 4477 PROGRESS DRIVE, SOUTH BEND, IN

ISSUED FOR BID - 06/12/20

AP NO: N/A
 MAH NO: 2892200-201379.01
 DATE: JUNE 12, 2020
 DESIGNED BY: JET
 DRAWN BY: JET
 CHECKED BY: JET
 DO NOT SCALE DRAWINGS

SHEET CONTENTS
 CONSTRUCTION SAFETY PHASING PLAN SHEET 1 OF 2

SHEET NO: 3 of 10

G-071

X:\2892200\201379.01\TECHCAD\DRAWINGS\G-081 CONSTRUCTION SAFETY PHASING PLAN.DWG
 6/12/2020 10:40:29 AM

STAGING AREA-PHASE 1 & 3

POINT	LATITUDE	LONGITUDE
W ¹	41° 42' 5.5473"	86° 18' 24.1279"
X ¹	41° 42' 5.5765"	86° 18' 20.9709"
Y ¹	41° 42' 4.1368"	86° 18' 20.9212"
Z ¹	41° 42' 4.1075"	86° 18' 24.0778"

STAGING AREA-PHASES 2

POINT	LATITUDE	LONGITUDE
W ²	41° 42' 43.1381"	86° 18' 50.1766"
X ²	41° 42' 43.1726"	86° 18' 47.5493"
Y ²	41° 42' 39.2239"	86° 18' 47.4374"
Z ²	41° 42' 39.1955"	86° 18' 50.0753"

WIDTHS PER RUNWAY

RUNWAY	ROFA	RSA
9R	800'	500'
27L	800'	500'
18	800'	500'
36	800'	500'
9L	500'	150'
27R	500'	150'

WIDTHS PER TAXIWAY

DESIGN GROUP	II'	IV'
TAXIWAY SAFETY AREA WIDTH	79'	171'
TAXIWAY OBJECT FREE AREA WIDTH	131'	259'

*APPLIES TO TAXIWAY "J" ONLY

SAFETY PHASING NOTES:

- NO SURVEY PROVIDED. CONTRACTOR TO FIELD VERIFY DIMENSIONS AND PROJECT LIMITS WITH THE AIRPORT PRIOR TO CONSTRUCTION.
- ALL COSTS ASSOCIATED WITH WORK SHOWN ON SHEETS G-071 THROUGH G-081 SHALL BE INCLUDED IN ITEMS C-105 MOBILIZATION OR SP-1 SAFETY AND SECURITY.
- ACCESS SHALL BE THROUGH MAINTENANCE ACCESS GATES AS SHOWN ABOVE UNLESS GIVEN WRITTEN PERMISSION BY THE AIRPORT OR ENGINEER. ANY WORK NECESSARY TO IMPROVE THE STAGING AREA SITE OR HAUL ROAD FOR THE CONTRACTOR'S OPERATIONS SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.
- ALL LIGHTS AND SIGNS IN THE CONSTRUCTION AREA OR SIGNS THAT LEAD OR DIRECT TRAFFIC TOWARD THE CLOSED AREAS SHALL BE DISABLED OR COVERED BY THE AIRPORT.
- ALL BARRICADES SHOWN ARE LOW-LEVEL LIGHTED BARRICADES DESIGNED FOR AVIATION USES. ALL BARRICADES SHALL BE FILLED WITH WATER OR OTHER APPROVED LIQUID SOLUTION SO THAT THEY WILL RESIST MOVEMENT DUE TO HIGH WINDS OR JET BLAST. THE CONTRACTOR SHALL CHECK THE LIQUID LEVEL DAILY AND SHALL FILL AS NEEDED THROUGHOUT THE PROJECT. LANDSIDE BARRICADING WILL BE IMPLEMENTED WITH THE USE OF TRAFFIC CONES. ALL AIRSIDE & LANDSIDE BARRICADE PLACEMENT WILL BE COMPLETED BY THE AIRPORT.
- THE CONTRACTOR SHALL BE STRICTLY LIMITED TO THE STAGING, HAUL ROAD, AND PROJECT AREA AT ALL TIMES. AT NO POINT SHALL THE CONTRACTOR OR THEIR SUBCONTRACTORS LEAVE THE DESIGNATED AREAS WITHOUT APPROVAL FROM THE AIRPORT OR ENGINEER.
- ALL VEHICLES ENTERING OR EXITING THE SITE SHALL BE DRIVEN BY EMPLOYEES THAT HAVE OBTAINED AIRFIELD DRIVING PRIVILEGES THROUGH THE AIRPORTS BADGING PROCESS OR SHALL BE ESCORTED TO THE CONSTRUCTION SITE BY A VEHICLE DRIVEN BY AN EMPLOYEE THAT HAS OBTAINED AIRFIELD DRIVING PRIVILEGES THROUGH THE AIRPORT'S BADGING PROCESS. ALL PERSONNEL WORKING ON THE PROJECT SHALL EITHER OBTAIN A VALID BADGE FROM THE AIRPORT OR BE UNDER THE DIRECT SUPERVISION OF A BADGED EMPLOYEE AT ALL TIMES. A BADGED EMPLOYEE SHALL NOT BE RESPONSIBLE FOR THE SUPERVISION OF MORE THAN 6 UNBADGED PERSONNEL. DIRECT SUPERVISION REQUIRES LINE OF SIGHT AT A DISTANCE NO GREATER THAN CAN BE REASONABLY EXPECTED TO HEAR VOCAL COMMANDS FROM THE BADGED EMPLOYEE.
- THE MAXIMUM EQUIPMENT HEIGHT SHALL BE LIMITED TO 25' IN BOTH THE STAGING AREA AND CONSTRUCTION AREA UNLESS OTHERWISE NOTED.
- IT IS ANTICIPATED THAT THE AIRPORT WILL PROVIDE ESCORTS FOR MATERIAL DELIVERY TRUCKS ENTERING AND LEAVING THE JOB SITE.



Jeff Thoman

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SOUTH BEND INTL. AIRPORT MILL & FILL VARIOUS LOCATIONS ST JOSEPH COUNTY 4477 PROGRESS DRIVE, SOUTH BEND, IN

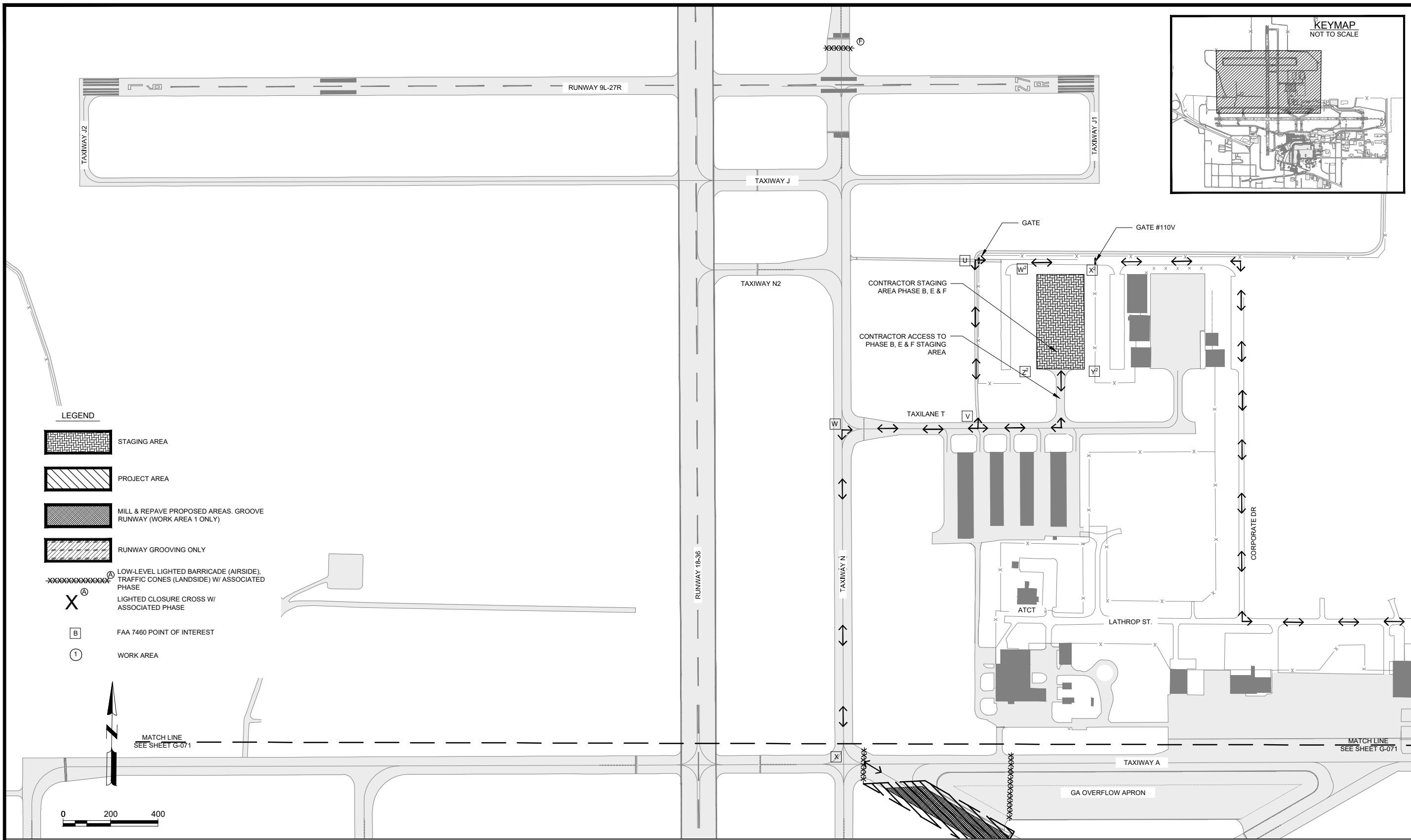
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SHEET CONTENTS
CONSTRUCTION
SAFETY PHASING
PLAN SHEET 2 OF 2

SHEET NO: 4 of 10

G-072



LEGEND

- STAGING AREA
- PROJECT AREA
- MILL & REPAVE PROPOSED AREAS. GROOVE RUNWAY (WORK AREA 1 ONLY)
- RUNWAY GROOVING ONLY
- LOW-LEVEL LIGHTED BARRICADE (AIRSIDE), TRAFFIC CONES (LANDSIDE) W/ ASSOCIATED PHASE
- LIGHTED CLOSURE CROSS W/ ASSOCIATED PHASE
- FAA 7460 POINT OF INTEREST
- WORK AREA

MATCH LINE
SEE SHEET G-071

STAGING AREA-PHASE 1 & 3

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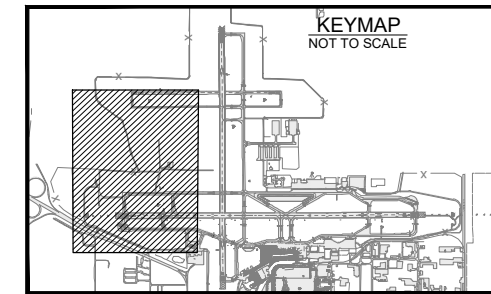
RUNWAY END COORDINATES			
RUNWAY	LATITUDE	LONGITUDE	ELEVATION
9R	41° 42' 15.5809"	86° 19' 45.8978"	789.8'
27L	41° 42' 17.3215"	86° 17' 55.0272"	769.0'
18	41° 43' 07.5132"	86° 19' 09.8235"	798.3'
36	41° 41' 57.3817"	86° 19' 07.7690"	759.3'
9L	41° 42' 50.1942"	86° 19' 43.6026"	787.9'
27R	41° 42' 51.0947"	86° 18' 46.9227"	780.2'

TEMPORARY 7460 POINTS OF INTEREST		
POINT	LATITUDE	LONGITUDE
A	41° 42' 17.4127"	86° 18' 36.0448"
B	41° 42' 17.9307"	86° 18' 03.0839"
C	41° 42' 16.4684"	86° 18' 03.0791"
D	41° 42' 15.9593"	86° 18' 36.0555"
E	41° 42' 21.7859"	86° 18' 59.2934"
F	41° 42' 21.9598"	86° 18' 55.8759"
G	41° 42' 19.9049"	86° 18' 50.8711"
H	41° 42' 18.6919"	86° 18' 51.7580"
I	41° 41' 57.0827"	86° 18' 54.5816"
J	41° 41' 56.7968"	86° 18' 53.5857"
K	41° 41' 52.5718"	86° 18' 55.7047"
L	41° 41' 51.7485"	86° 18' 54.8338"

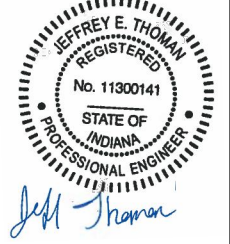
TEMPORARY 7460 POINTS OF INTEREST		
POINT	LATITUDE	LONGITUDE
M	41° 41' 50.9926"	86° 18' 52.2643"
N	41° 41' 50.1995"	86° 18' 52.6987"
O	41° 41' 51.5972"	86° 18' 57.3711"
P	41° 42' 08.0821"	86° 18' 15.8761"
Q	41° 42' 09.1379"	86° 18' 18.2448"
R	41° 42' 11.2733"	86° 18' 18.2907"
S	41° 42' 12.2705"	86° 17' 55.7371"
T	41° 42' 17.3285"	86° 17' 55.5250"
U	41° 42' 43.6669"	86° 18' 53.6139"
V	41° 42' 36.6926"	86° 18' 53.2591"
W	41° 42' 36.5174"	86° 19' 00.8443"
X	41° 42' 22.5760"	86° 19' 00.4333"

TEMPORARY 7460 POINTS OF INTEREST		
POINT	LATITUDE	LONGITUDE
Y	41° 42' 11.9412"	86° 19' 55.0806"
Z	41° 42' 14.8478"	86° 20' 00.3754"
AA	41° 42' 21.6849"	86° 20' 00.5586"
AB	41° 42' 23.6931"	86° 19' 54.9382"
AC	41° 42' 28.3298"	86° 19' 55.0100"
AD	41° 42' 27.9182"	86° 19' 45.5530"
AE	41° 42' 27.7554"	86° 19' 40.2869"
AF	41° 42' 25.7809"	86° 19' 40.4137"
AG	41° 42' 25.9512"	86° 19' 45.6711"
AH	41° 42' 18.8583"	86° 19' 11.8979"
AI	41° 42' 16.9702"	86° 19' 04.7805"
AJ	41° 42' 17.3692"	86° 18' 39.4082"

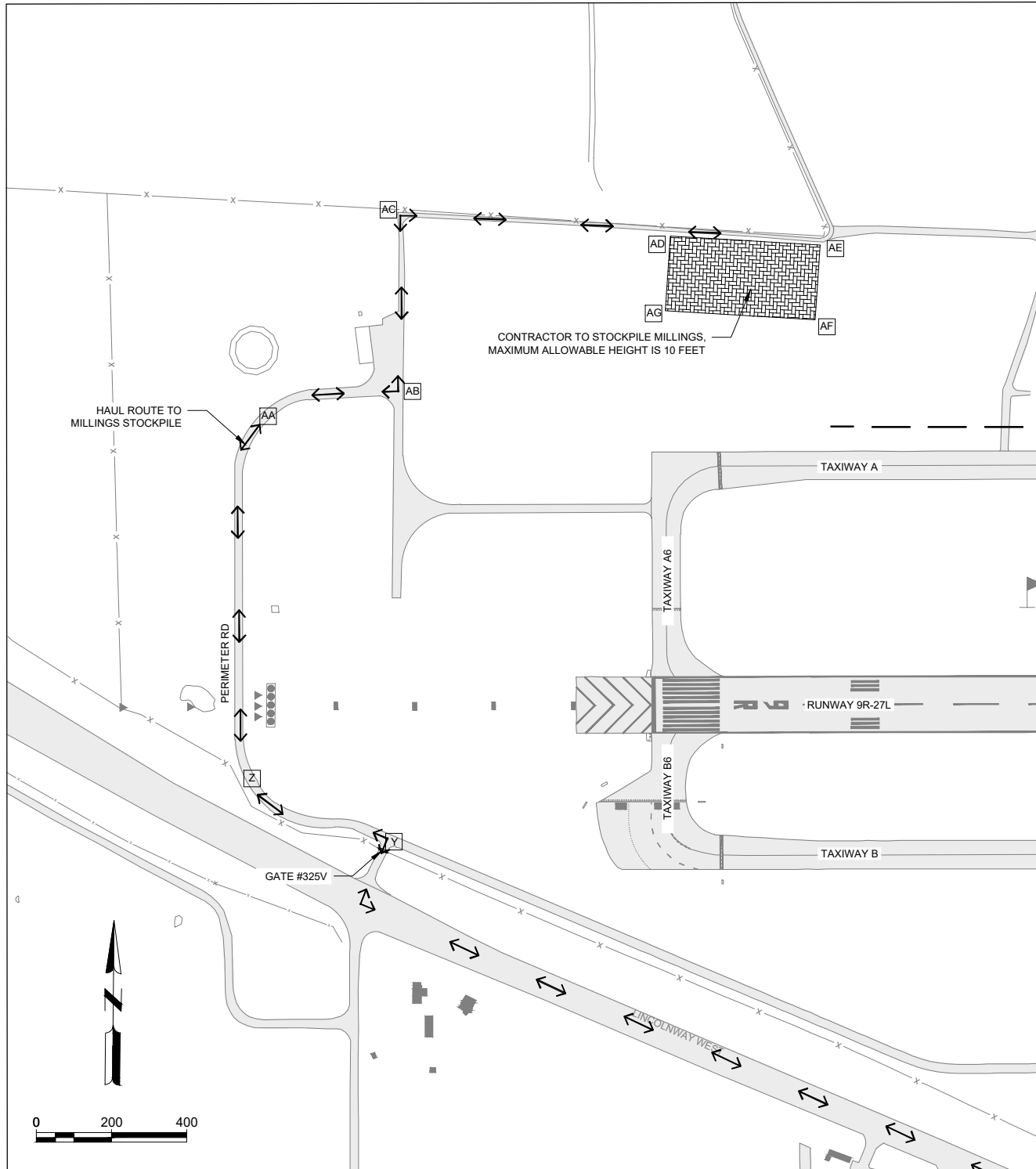
TEMPORARY 7460 POINTS OF INTEREST		
POINT	LATITUDE	LONGITUDE
AK	41° 42' 15.8866"	86° 18' 39.3669"
AL	41° 42' 15.4886"	86° 19' 04.7390"
AM	41° 42' 15.3777"	86° 19' 11.8564"



Mead & Hunt
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 Lansing, MI 48906
 phone: 517-321-8334
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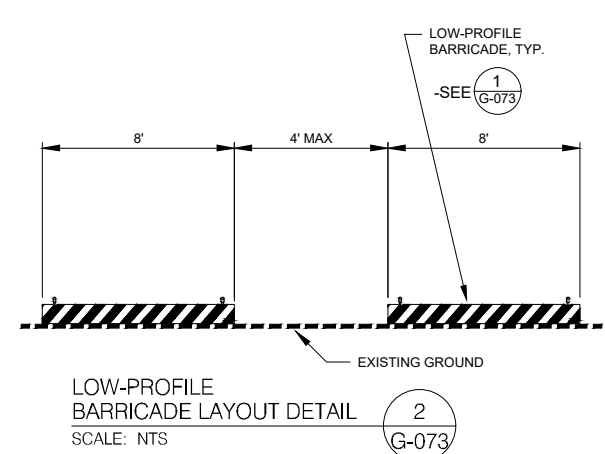
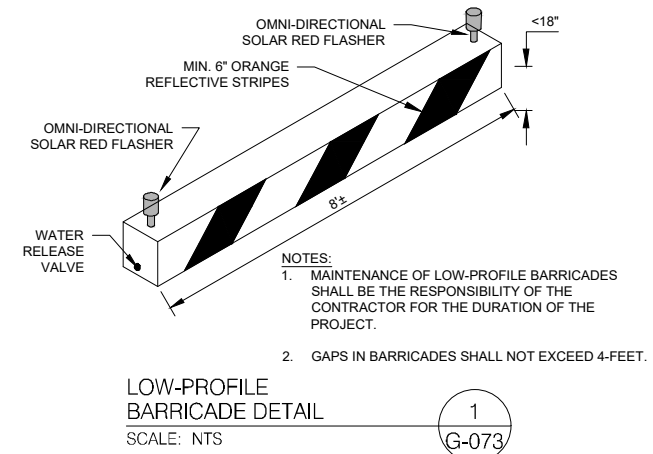


PHASE**	CONSTRUCTION	AFFECTED AOA'S	WORK HOURS	SAFETY AND SECURITY	ALLOWABLE CONTRACT TIME (CALENDAR DAYS)
A	CONTRACTOR SHALL MILL AND REPAVE THE PAVEMENT ON RUNWAY 9R/27L. (WORK AREA 1 ON SHEET G-071). APPROX. 13,890 SYD	- RUNWAY 9R/27L CLOSED - TAXIWAY A CLOSED EAST OF UPS - TAXIWAY B CLOSED EAST OF LASH - A1 CLOSED - A2 CLOSED - B1 CLOSED - B2 CLOSED	ANY	THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT 3 DAYS PRIOR TO START OF CONSTRUCTION. THE AIRPORT SHALL INSTALL LOW-LEVEL LIGHTED BARRICADES AND CLOSURE CROSSES AS SHOWN ON G-071. ALL NOTES THAT APPEAR ON THIS SHEET OR SHEETS G-071 AND/OR G-081 SHALL BE ADHERED TO. GATES SHALL REMAIN LOCKED AT ALL TIMES WHEN NOT IN USE OR GUARDED.	2
B	CONTRACTOR SHALL MILL AND REPAVE THE PAVEMENT ON TAXIWAY CONNECTOR A4. (WORK AREA 2 ON SHEET G-071). APPROX. 4,640 SYD.	- TAXIWAY A CLOSED B/T TAXIWAY N AND GA OVERFLOW PARKING - A4 CLOSED	ANY	THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT 3 DAYS PRIOR TO START OF CONSTRUCTION. THE AIRPORT SHALL INSTALL LOW-LEVEL LIGHTED BARRICADES AND CLOSURE CROSSES AS SHOWN ON G-071. ALL NOTES THAT APPEAR ON THIS SHEET OR SHEETS G-071 AND/OR G-081 SHALL BE ADHERED TO. GATES SHALL REMAIN LOCKED AT ALL TIMES WHEN NOT IN USE OR GUARDED.	1
C	CONTRACTOR SHALL MILL AND REPAVE PORTIONS OF OLD LINCOLNWAY W & PROGRESS DR. (WORK AREA 3 ON SHEET G-071). APPROX. 2890 SYD.	NO IMPACT	ANY	THE AIRPORT SHALL INSTALL BARRICADES AS SHOWN ON G-071. ALL NOTES THAT APPEAR ON THIS SHEET OR SHEETS G-071 AND/OR G-081 SHALL BE ADHERED TO. CONTRACTOR MUST MAINTAIN A MINIMUM OF A 12' WIDE ACCESS LANE DURING THIS PHASE TO ALLOW FOR VEHICULAR TRAFFIC DURING CONSTRUCTION.	2
D	CONTRACTOR SHALL COMPLETE RUNWAY GROOVING ON RUNWAY 9R/27L. (WORK AREA 1 ON SHEET G-071). WORK MUST TAKE PLACE AT LEAST 30 DAYS, BUT NO MORE THAN 60 DAYS, AFTER THE COMPLETION OF PHASE 1.	- RUNWAY 9R/27L CLOSED - TAXIWAY A CLOSED EAST OF UPS - TAXIWAY B CLOSED EAST OF LASH - A1 CLOSED - A2 CLOSED - B1 CLOSED - B2 CLOSED	11 PM - 6 AM*	THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT TO ISSUE NOTAMS 3 DAYS PRIOR TO START OF CONSTRUCTION. AIRPORT SHALL INSTALL LOW-LEVEL LIGHTED BARRICADES AS SHOWN ON G-071. ALL NOTES THAT APPEAR ON THIS SHEET OR SHEETS G-071 AND/OR G-081 SHALL BE ADHERED TO. GATES SHALL REMAIN LOCKED AT ALL TIMES WHEN NOT IN USE OR GUARDED.	4
E	CONTRACTOR SHALL COMPLETE RUNWAY GROOVING ON RUNWAY 9R/27L. (WORK AREA 4 ON SHEET G-071). AREA TO GROOVE INCLUDES THIRTY SIX 40" WIDE CRACK REPAIRED SECTIONS	- RUNWAY 9R/27L CLOSED - TAXIWAY N CLOSED B/T TWY A & B - A3 CLOSED - A4 CLOSED - B3 CLOSED - B4 CLOSED	11 PM - 6 AM*	THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT TO ISSUE NOTAMS 3 DAYS PRIOR TO START OF CONSTRUCTION. AIRPORT SHALL INSTALL LOW-LEVEL LIGHTED BARRICADES AS SHOWN ON G-071. ALL NOTES THAT APPEAR ON THIS SHEET OR SHEETS G-071 AND/OR G-081 SHALL BE ADHERED TO. GATES SHALL REMAIN LOCKED AT ALL TIMES WHEN NOT IN USE OR GUARDED.	1
F	CONTRACTOR SHALL COMPLETE RUNWAY GROOVING ON RUNWAY 9R/27L. (WORK AREA 5 ON SHEET G-071). APPROX. TWO 2,890 SYD SECTIONS.	- RUNWAY 9R/27L CLOSED - RUNWAY 18/36 CLOSED - TWY N CLOSED NORTH OF RWY 9L/27R - N1 CLOSED - N3 CLOSED	11 PM - 6 AM*	THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT TO ISSUE NOTAMS 3 DAYS PRIOR TO START OF CONSTRUCTION. AIRPORT SHALL INSTALL LOW-LEVEL LIGHTED BARRICADES AS SHOWN ON G-071. ALL NOTES THAT APPEAR ON THIS SHEET OR SHEETS G-071 AND/OR G-081 SHALL BE ADHERED TO. GATES SHALL REMAIN LOCKED AT ALL TIMES WHEN NOT IN USE OR GUARDED.	2

* WORK SHALL NOT BEGIN UNTIL LAST DAILY FLIGHT HAS ARRIVED.
 ** PHASES A-C, D & F CAN BE COMPLETED IN ANY ORDER. PHASE A MUST BE COMPLETED ON TWO CONSECUTIVE ANTICIPATED VFR CONDITION DAYS (AS DETERMINED BY THE AIRPORT)
 TOTAL TIME: 12 CALENDAR DAYS

X:\2892200\201379\01\TECH\CAD\DRAWINGS\G-081 CONSTRUCTION SAFETY PHASING PLAN.DWG
 6/12/2020 10:41:30 AM

MILLING STOCKPILE LOCATION



**SOUTH BEND INTL. AIRPORT
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 SHEET CONTENTS
 CONSTRUCTION SAFETY PHASING PLAN - PHASE MATRIX
 SHEET NO. 5 of 10
G-073

THE FOLLOWING NOTES ARE IN ACCORDANCE WITH FAA AC 5370-2F, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.

GENERAL CONSIDERATIONS:

AIRPORT OPERATORS, OR TENANTS CONDUCTING CONSTRUCTION ON LEASED PROPERTIES, SHALL USE THE PRE-DESIGN, PRE-BID, AND PRE-CONSTRUCTION MEETINGS TO INTRODUCE AIRPORT OPERATIONAL SAFETY DURING CONSTRUCTION. COORDINATE THE FOLLOWING AS REQUIRED:

A. OPERATIONAL SAFETY SHALL BE A STANDING AGENDA ITEM DURING EVERY PROGRESS MEETING.

B. CHANGES IN THE SCOPE OR DURATION OF THE PROJECT MAY REQUIRE REVISIONS TO THE SAFETY PHASING PLAN (AND REVIEW AND APPROVAL BY THE AIRPORT OPERATOR AND FAA). **REVISIONS WILL BE THE RESPONSIBILITY OF THE AIRPORT OR ENGINEER.**

C. EARLY COORDINATION WITH FAA TO IS REQUIRED TO SCHEDULE AIRWAY FACILITY SHUTDOWNS AND RESTARTS. RELOCATION OR ADJUSTMENTS TO NAVAIDS OR THEIR CRITICAL AREAS MAY REQUIRE A FAA FLIGHT INSPECTION PRIOR TO RESTARTING THE FACILITY. FLIGHT INSPECTIONS MUST BE COORDINATED WELL IN ADVANCE AND MAY REQUIRE A REIMBURSABLE AGREEMENT BETWEEN THE AIRPORT AND FAA ATO. REIMBURSABLE AGREEMENTS SHOULD BE COORDINATED A MINIMUM OF 12 MONTHS PRIOR TO THE START OF CONSTRUCTION. **COORDINATION WILL BE THE RESPONSIBILITY OF THE AIRPORT OR ENGINEER.**

AREAS AND OPERATIONS AFFECTED BY CONSTRUCTION ACTIVITY:

SEE THE CONSTRUCTION SAFETY PHASING PLAN (CSPP) FOR A DEPICTION OF THE CONSTRUCTION. THIS DRAWING INCLUDES ALL AFFECTED AREAS AND THE DESCRIPTION OF MITIGATION FOR ALL CONSTRUCTION PHASES.

NAVAIDS:

A. IF THIS PROJECT AFFECTS RUNWAY NAVAIDS, COORDINATION WITH LOCAL TECHNICAL OPERATIONS WILL BEGIN AT THE PRECONSTRUCTION MEETING. A LIST OF RESPONSIBLE PARTY REPRESENTATIVES, INCLUDING PROCEDURES FOR CONTACT AFTER-HOURS, SHALL BE PROVIDED TO THE CONTRACTOR PRIOR TO CONSTRUCTION. A 45-DAY MINIMUM NOTICE SHALL BE PROVIDED TO FAA ATO/TECH OPS REGARDING SHUT-DOWN OF A NAVAID MORE THAN 24 HOURS OR MORE THAN 4 HOURS ON CONSECUTIVE DAYS. **ALL COORDINATION WITH THE FAA ATO/TECH OPS WILL BE THE RESPONSIBILITY OF THE AIRPORT OR ENGINEER.**

B. BEFORE COMMENCING CONSTRUCTION ACTIVITY, PARKING VEHICLES, OR STORING CONSTRUCTION EQUIPMENT AND MATERIALS NEAR A NAVAID, COORDINATE WITH THE APPROPRIATE FAA ATO/TECH OPS OFFICE TO EVALUATE THE EFFECT OF CONSTRUCTION ACTIVITY AND THE REQUIRED DISTANCE AND DIRECTION FROM THE NAVAID. SEE THE CSPP FOR APPLICABLE NAVAID CRITICAL AREAS. **ALL COORDINATION WITH THE FAA ATO/TECH OPS WILL BE THE RESPONSIBILITY OF THE AIRPORT OR ENGINEER.**

C. INTERFERENCE FROM CONSTRUCTION EQUIPMENT AND ACTIVITIES MAY REQUIRE NAVAID SHUTDOWN OR ADJUSTMENT OF INSTRUMENT APPROACH MINIMUMS FOR LOW VISIBILITY OPERATIONS. THIS REQUIRES THAT A NOTAM BE FILED.

CONTRACTOR ACCESS:

A. ALL GATES MUST BE LOCKED WHEN NOT IN USE OR NOT GUARDED BY THE CONTRACTOR. AIRPORT OPERATORS AND CONTRACTORS MUST TAKE CARE TO MAINTAIN A HIGH LEVEL OF SAFETY AND SECURITY DURING CONSTRUCTION WHEN ACCESS POINTS ARE CREATED IN THE SECURITY FENCING TO PERMIT THE PASSAGE OF CONSTRUCTION VEHICLES OR PERSONNEL. TEMPORARY GATES SHOULD BE EQUIPPED SO THEY CAN BE SECURELY CLOSED AND LOCKED TO PREVENT ACCESS BY ANIMALS AND PEOPLE. PROCEDURES SHOULD BE IN PLACE TO ENSURE THAT ONLY AUTHORIZED PERSONS AND VEHICLES HAVE ACCESS TO THE AOA, AND TO PROHIBIT PIGGYBACKING BEHIND ANOTHER VEHICLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER OPERATION AND PRESERVATION OF ALL AIRFIELD PERIMETER GATES, EITHER MANUAL OR AUTOMATED. FOR THE PURPOSES OF THIS CONTRACT, ALL FENCING/GATES SHALL BE CONSIDERED PART OF CONTRACTOR HAUL ROUTES. AS SUCH, ANY DAMAGE TO FENCING/GATES AS A RESULT OF CONSTRUCTION TRAFFIC SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

B. STOCKPILED MATERIALS AND EQUIPMENT STORAGE ARE NOT PERMITTED WITHIN THE SAFETY AREA OR OBJECT FREE AREA OF AN OPERATIONAL RUNWAY OR TAXIWAY (OFA STOCKPILES REQUIRE FAA APPROVAL). IF THE CONTRACTOR WISHES TO STOCKPILE MATERIALS OR EQUIPMENT ADJACENT TO AN OFA, HE MUST FIRST COORDINATE WITH THE ENGINEER AND AIRPORT OPERATOR TO ENSURE THAT 1) APPROPRIATE LIGHTING AND BARRICADES ARE IN PLACE, AND 2) THE STOCKPILED MATERIALS DO NOT CREATE A WILDLIFE ATTRACTANT OR FOREIGN OBJECT DEBRIS (FOD) HAZARD. EXCAVATION AND RESULTANT STOCKPILES ADJACENT TO OTHER PAVED SURFACES MUST BE APPROPRIATELY MARKED WITH BARRICADES, AS DIRECTED BY THE ENGINEER.

C. THE CONTRACTORS' EQUIPMENT IS STRICTLY LIMITED TO THE CONSTRUCTION AREAS DURING CONSTRUCTION AND TO THE CONTRACTOR STORAGE AREA DURING NON-CONSTRUCTION PERIODS, EXCEPT AS PROVIDED ON THE PLANS, IN THE CONTRACT SPECIAL PROVISIONS, OR AS MAY BE AUTHORIZED BY THE ENGINEER IN WRITING. CONTRACTOR PARKING SHALL BE LIMITED TO THE STAGING AREA, EXCEPT AS ALLOWED BY THE AIRPORT.

D. HAUL ROUTES AND ACCESS TO THE CONSTRUCTION SITE(S) SHALL BE AS SHOWN ON THE CONSTRUCTION PHASING SHEET AND DISCUSSED AT THE PRE-BID MEETING. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL HAUL ROADS, PLANT SITES, STAGING AND STORAGE AREAS TO ORIGINAL CONDITION OR TO THE SATISFACTION OF THE ENGINEER/AIRPORT. THIS WILL INCLUDE BUT NOT BE LIMITED TO GRADING (FILLING IF NECESSARY) AND SEEDING AND MULCHING ALL TURF AREAS USED BY THE CONTRACTOR. ANY PAVEMENT AREAS USED BY THE CONTRACTOR AS A HAUL ROUTE WHICH ARE DAMAGED WILL BE RE-PAVED AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL INSPECT ALL HAUL ROUTES PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DOCUMENTATION OF EXISTING HAUL ROUTES, EITHER WITH PICTURES OR VIDEO. ANTICIPATED COSTS ASSOCIATED WITH DOCUMENTING HAUL ROUTE CONDITIONS, OR RECONSTRUCTING OR RESTORING HAUL ROUTES AND STORAGE AREAS, WILL BE INCLUDED IN ITEM NO. 105001 - MOBILIZATION.

E. CONSTRUCTION EQUIPMENT:

ALL CONSTRUCTION EQUIPMENT MUST BE MARKED WITH A 3 FEET BY 3 FEET ORANGE AND WHITE CHECKERED FLAG AND/OR AMBER BEACON. FOR NIGHT CONSTRUCTION, ALL EQUIPMENT MUST BE EQUIPPED WITH AN AMBER BEACON. ALL CONSTRUCTION VEHICLES MUST BE CLEARLY MARKED WITH THE COMPANY NAME/LOGO AT ALL TIMES. MARKING AND LIGHTING SHALL OTHERWISE BE IN ACCORDANCE WITH AC 150/5210-5.

F. AIRPORT RADIOS, FLAG PERSON AND DRIVER TRAINING:

THE CONTRACTOR SHALL COMPLY WITH ALL SECURITY REQUIREMENTS OF THE AIRPORT AND AS SHOWN ON THE CSPP. THE AIRPORT IS CONSIDERED A CONTROLLED AIRPORT BETWEEN THE HOURS OF 5:30 AM & MIDNIGHT. THE CONTRACTOR MUST DESIGNATE ONE OF THE SUPERINTENDENTS ON-SITE TO MAINTAIN CONTACT WITH THE AIR TRAFFIC CONTROL TOWER (ATCT) VIA RADIO AT ALL TIMES WORK IS BEING DONE ON THE AIRFIELD. THAT INCLUDES DAYS WHEN SUBCONTRACTORS MAY BE WORKING BUT THE PRIME CONTRACTOR IS NOT. THE RADIO FREQUENCY FOR THE AIRPORT GROUND CONTROL IS 121.7. WHEN WORK IS BEING COMPLETED WHEN THE ATCT IS CLOSED, THE CONTRACTOR SHALL MONITOR THE CTAF (118.9) AT ALL TIMES. RADIOS ARE NOT AVAILABLE FROM THE AIRPORT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AN ADEQUATE NUMBER OF RADIOS FOR THEIR OPERATIONS. TRAINING OF CONTRACTORS ON PROPER COMMUNICATION PROCEDURES IS ESSENTIAL FOR MAINTAINING AIRPORT OPERATIONAL SAFETY. IF THE AIRPORT PROVIDES RADIO COMMUNICATION TRAINING, CONTRACTOR ATTENDANCE WILL BE REQUIRED PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO HAVE A TRAINED FLAG PERSON EQUIPPED WITH AN AIRPORT RADIO OPERATING ON 121.7 MHz TO ESCORT ANY CONTRACTOR VEHICLES WHEN CROSSING ACTIVE AOA'S. COST OF MAINTAINING THE FLAG PERSON SHALL BE INCLUDED IN ITEM NO. 105002 - SAFETY AND SECURITY. KEY CONTRACTOR PERSONNEL MAY BE EXPECTED TO TRAVEL ON OR NEAR ACTIVE AOA'S. THESE INDIVIDUALS MUST COMPLY WITH THE AIRPORT OPERATOR'S RULES AND REGULATIONS BY PARTICIPATING IN ANY APPLICABLE AIRFIELD DRIVER'S TRAINING PROCEDURES PROVIDED BY THE AIRPORT.

G. MAINTENANCE OF THE SECURED AREA: SEE ITEM (A) ABOVE.

WILDLIFE MANAGEMENT:

A. THE CSPP AND SPCD MUST BE IN COMPLIANCE WITH THE AIRPORT'S WILDLIFE MANAGEMENT PLAN, IF APPLICABLE.

B. CONTRACTORS MUST CAREFULLY CONTROL AND CONTINUOUSLY REMOVE WASTE OR LOOSE MATERIALS THAT CAN CREATE WILDLIFE HAZARDS OR ATTRACTANTS. THESE INCLUDE TRASH, STANDING WATER, TALL GRASS, SCATTERED SEEDS, POORLY MAINTAINED FENCING, AND DISRUPTION OF EXISTING HABITAT.

FOREIGN OBJECT DEBRIS MANAGEMENT:

A. DEBRIS SHALL NOT BE DEPOSITED ON ANY PORTION OF AN OPERATIONAL RUNWAY, TAXIWAY OR APRON. SHOULD ANY DEBRIS BE ACCIDENTALLY DEPOSITED ON ACTIVE OPERATIONAL AREAS, IT SHALL BE REMOVED IMMEDIATELY. THE CONTRACTOR SHALL HAVE SWEEPING AND/OR VACUUMING CAPABILITIES ON-SITE IN ORDER TO CONTINUOUSLY REMOVE DEBRIS FROM ACTIVE OPERATIONAL AREAS DURING THE CONSTRUCTION PROJECT. PRIOR TO OPENING AIRCRAFT MOVEMENT AREAS CLOSED FOR THIS PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE, INCLUDING ADJACENT PAVEMENTS AND HAUL ROUTES, IS CLEAR OF ANY FOREIGN OBJECT DEBRIS (FOD) AND IS ACCEPTABLE TO THE AIRPORT. THE CONTRACTOR SHALL CONDUCT DAILY INSPECTIONS OF THE WORK AND ADJACENT AREAS FOR SAFETY AND CLEANLINESS. THE AIRPORT MAY ALSO PERFORM DAILY INSPECTIONS. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE, INCLUDING ADJACENT PAVEMENTS AND HAUL ROUTES, IS RETURNED TO ORIGINAL CONDITION.

B. CONTRACTOR SHALL USE ALL MEANS NECESSARY TO MINIMIZE DUST DURING CONSTRUCTION OPERATIONS. IF THE AIRPORT OR ENGINEER REQUESTS DUST CONTROL, IT SHALL BE APPLIED IMMEDIATELY.

HAZARDOUS MATERIALS MANAGEMENT:

A. ANY TYPE OF FUELING SUPPORT FACILITY OR DEVICE USED TO REFUEL CONSTRUCTION EQUIPMENT IS SUBJECT TO LOCAL FIRE INSPECTION. LOCAL FIRE CODES AND SAFETY STANDARDS SHALL BE MET PRIOR TO COMMENCEMENT OF WORK.

B. CONTRACTORS OPERATING CONSTRUCTION VEHICLES AND EQUIPMENT ON THE AIRPORT MUST BE PREPARED TO EXPEDITIOUSLY CONTAIN AND CLEAN UP SPILLS RESULTING FROM FUEL OR HYDRAULIC FLUID LEAKS.

C. TRANSPORT AND HANDLING OF OTHER HAZARDOUS MATERIALS ALSO REQUIRE SPECIAL PROCEDURES (SEE AC 150/5320-15, MANAGEMENT OF AIRPORT INDUSTRIAL WASTE).

NOTIFICATION OF CONSTRUCTION ACTIVITIES:

A. THE CONTRACTOR SHALL INCLUDE IN THE SPCD A PROCEDURE FOR IMMEDIATE NOTIFICATION OF THE AIRPORT AND LOCAL FAA OF ANY ADVERSE CONDITIONS AFFECTING SAFETY ON THE AIRPORT. THE CONTRACTOR SHALL OBTAIN CONTACT INFORMATION FOR ALL INVOLVED PARTIES AND PROCEDURES FOR CONTACTING THEM 24 HOURS A DAY, 7 DAYS A WEEK.

B. IF APPLICABLE A LIST OF LOCAL FAA ATO PERSONNEL, ATCT MANAGERS ON DUTY, AUTHORIZED REPRESENTATIVES TO THE FAA OPERATIONS CONTROL CENTER (OCC) WILL BE DISTRIBUTED.

C. THE AIRPORT SHALL ISSUE ALL NOTAMS RELEVANT TO THE CONSTRUCTION PROGRESS. THE AIRPORT OPERATOR SHALL PROVIDE INFORMATION ON CLOSED OR HAZARDOUS CONDITIONS TO THE OCC.

D. THE CONTRACTOR SHALL PREPARE AND SUBMIT CONTACT INFORMATION FOR LOCAL MEDICAL, FIRE FIGHTING, AND POLICE RESPONSE IN CASE OF EMERGENCIES DURING CONSTRUCTION.

E. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE WITH AIRPORT ARFF PERSONNEL (IF APPLICABLE) EVEN FOR NON-EMERGENCIES.

F. PER 14 CFR PART 77, THIS CSPP HAS BEEN SUBMITTED TO THE FAA BY THE TIME OF CONSTRUCTION. 14 CFR PART 157 IS NOT APPLICABLE TO THIS PROJECT.

INSPECTION REQUIREMENTS:

A. AIRPORT SAFETY SELF-INSPECTIONS SHOULD BE CONDUCTED BY THE CONTRACTOR AT LEAST DAILY, BUT MORE FREQUENTLY IF NECESSARY TO CONFORM WITH THE CSPP. A SAMPLE DAILY INSPECTION CHECKLIST IS AVAILABLE IN APPENDIX 4 OF AC 150/5370-2F.

B. A FINAL INSPECTION MEETING WILL ALSO BE HELD FOR THIS PROJECT.

UNDERGROUND UTILITIES:

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING AIRPORT UTILITIES, AND ELECTRICAL CIRCUITS, WHETHER OWNED BY THE AIRPORT OR OTHER AGENCIES OPERATING AT THE AIRPORT (SEE GENERAL PROVISION 70-15). LOCATIONS OF EXISTING CABLE SHOWN IN THE PLANS ARE BASED ON AVAILABLE AS-BUILT DATA AND ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ANY CROSSING OF UNDERGROUND ELECTRICAL CIRCUITS WITH THE AIRPORT AND FAA FACILITIES PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PROVIDE TONING EQUIPMENT CAPABLE OF DETECTING A 60 HZ SIGNAL FOR LOCATING CABLES IN THE CONSTRUCTION AREA. WORKING IN CONJUNCTION WITH THE AIRPORT, THE CONTRACTOR SHALL LOCATE EXISTING CABLES PRIOR TO START OF CONSTRUCTION. COST OF LOCATING THE CABLES AND PROVIDING THE TONING EQUIPMENT SHALL BE INCLUDED IN ITEM NO. 1050015 - MOBILIZATION. ANY ELECTRICAL CIRCUITS TO BE CROSSED SHALL THEN BE TESTED FOR RESISTANCE TO GROUND BY THE CONTRACTOR UNDER SUPERVISION OF THE ENGINEER AND THE READINGS RECORDED. FOLLOWING CONSTRUCTION, THE CONTRACTOR, UNDER THE SUPERVISION OF THE ENGINEER, SHALL CHECK ALL CIRCUITS CROSSED DURING THE PROJECT. ANY CIRCUITS SHOWING A DECREASE IN RESISTANCE TO GROUND SHALL BE CORRECTED BY THE CONTRACTOR SO AS TO PROVIDE AT LEAST 50 MEGOHMS RESISTANCE IN THAT CIRCUIT. NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY CORRECTIVE ELECTRICAL WORK DUE TO CONTRACTOR'S OPERATIONS. SEE ELECTRICAL CABLE SPECIFICATIONS FOR REPAIR AND SPLICING REQUIREMENTS.

PENALTIES:

A. THIS PROJECT INVOLVES WORK NEAR ACTIVE AIRCRAFT OPERATIONAL AREAS. ANY RUNWAY OR TAXIWAY INCURSIONS OCCURRING DURING THE PROJECT, AS DETERMINED BY THE JUDGEMENT OF THE ENGINEER AND/OR AIRPORT, MAY BE SUBJECT TO FAA FINES IN EXCESS OF \$10,000. FAA DEFINES A RUNWAY INCURSION AS "ANY OCCURRENCE AT AN AERODROME INVOLVING THE INCORRECT PRESENCE OF AN AIRCRAFT, VEHICLE OR PERSON ON THE PROTECTED AREA OF A SURFACE DESIGNATED FOR THE LANDING AND TAKE OFF OF AIRCRAFT."

SPECIAL CONDITIONS:

A. SPECIAL INSURANCE PROVISIONS: CONTACT THE ST JOSEPH COUNTY AIRPORT AUTHORITY FOR SPECIAL INSURANCE REQUIREMENTS.

RUNWAY & TAXIWAY VISUAL AIDS-MARKING, LIGHTING, SIGNS, AND VISUAL NAVAIDS:

A. AIRPORT MARKINGS, LIGHTING, SIGNS, AND VISUAL NAVAIDS MUST BE CLEARLY VISIBLE TO PILOTS, NOT MISLEADING, CONFUSING OR DECEPTIVE. ALL MUST BE SECURED IN PLACE TO PREVENT MOVEMENT BY PROP WASH, JET BLAST, WING VORTICES OR OTHER WIND CURRENTS, BUT FRANGIBLE AND CONSTRUCTED OF MATERIALS THAT WOULD MINIMIZE DAMAGE TO AN AIRCRAFT IN THE EVENT OF INADVERTENT CONTACT.

B. THE FOLLOWING ARE APPLICABLE STANDARDS FOR ANY TEMPORARY OR PERMANENT INSTALLATIONS OF THESE RESPECTIVE ITEMS:

AIRCRAFT MARKINGS: AC 150/5340-1
LIGHTING: AC 150/5340-30, 150/5345-50, 150/5345-53
SIGNAGE: AC 150/5345-44, 150/5340-18, 150/5345-53

C. SHOULD A RUNWAY BE TEMPORARILY CLOSED AND REQUIRE A CLOSURE CROSS, THE AIRPORT SHALL MARK THE AFFECTED RUNWAY WITH A CLOSURE CROSS IN ACCORDANCE WITH THE CLOSURE CROSS SPECIFICATIONS FOUND IN THE PLANS. CLOSURE CROSSES SHALL REMAIN IN PLACE UNTIL NORMAL RUNWAY OPERATIONS RESUME. WHEN NECESSARY TO CLOSE, OR CHANGE THE STANDARD OPERATIONS OF A RUNWAY OR TAXIWAY, THE CONTRACTOR SHALL, THROUGH THE ENGINEER, NOTIFY THE AIRPORT 72 BUSINESS HOURS IN ADVANCE OF THE PROPOSED CHANGE IN OPERATIONS.

MARKING AND SIGNS FOR ACCESS ROUTES:

A. PAVEMENT MARKINGS AND SIGNS INTENDED FOR CONSTRUCTION PERSONNEL SHOULD CONFORM TO AC 150/5340-18, AND WITH THE MUTCD AND/OR STATE HIGHWAY SPECIFICATIONS AS PRACTICAL.

HAZARD MARKING AND LIGHTING:

A. IF ANY AIRCRAFT MOVEMENT AREAS MUST BE CLOSED, THE CONTRACTOR SHALL FURNISH AND PLACE PORTABLE BARRICADES ACROSS RUNWAYS OR TAXIWAYS TO KEEP VEHICLES FROM ENTERING ACTIVE OPERATION AREAS AND TO KEEP AIRCRAFT FROM TAXIING INTO CONSTRUCTION AREAS. BARRICADES SHALL BE HIGHLY-REFLECTIVE, MARKED WITH DIAGONAL, ALTERNATING ORANGE AND WHITE STRIPES AND SUPPLEMENTED WITH EITHER FLASHING OR STEADY-BURNING LIGHTS DURING HOURS OF RESTRICTED VISIBILITY OR DARKNESS. LIGHTS SHALL BE BARRICADE TYPE TYPICAL FOR CONSTRUCTION ZONES AND RED IN COLOR, MEETING ALL STATE HIGHWAY REQUIREMENTS. BARRICADES LOCATED WITHIN AIRCRAFT MOVEMENT AREAS (RUNWAYS, TAXIWAYS, APRONS) SHALL BE LOW LEVEL AVIATION BARRICADES (NO HIGHER THAN 18") SPECIFICALLY MANUFACTURED AND DESIGNED FOR SUCH PURPOSE. THEY SHALL BE ALTERNATING ORANGE AND WHITE IN COLOR 10" HIGH AND 96" LONG, MADE OF UV-RESISTANT POLYETHYLENE AS MANUFACTURED BY MULTI-BARRIER (MODEL AR 10x96 HDPE), OR APPROVED EQUAL. ENOUGH BARRICADES MUST BE PROVIDED TO SAFELY DELINEATE ALL CONSTRUCTION BOUNDARIES. BARRICADES SHALL BE PLACED CLOSELY ENOUGH TO PREVENT TRAFFIC FROM ENTERING THE CONSTRUCTION AREA, GENERALLY NO MORE THAN 4 FEET APART. BARRICADES SHALL BE FILLED WITH WATER TO PREVENT MOVEMENT BY JET BLAST. BARRICADES LOCATED OUTSIDE OF AIRCRAFT MOVEMENT AREAS MAY BE MADE FROM VARIOUS MATERIALS, INCLUDING RAILROAD TIES, SAWHORSES, JERSEY BARRICADES, BARRELS, OR OTHER STANDARD HIGHWAY BARRICADES. IF BARRICADES ARE SUBJECT TO PROP WASH, JET BLAST, WIND VORTEX OR ANY OTHER SURFACE WIND CURRENTS, THE BARRICADES WILL BE WEIGHTED OR FASTENED TO THE GROUND TO PREVENT DISPLACEMENT.

B. HAZARDS SUCH AS OPEN MANHOLES, AREAS UNDER REPAIR, STOCKPILE AND WASTE AREAS SHOULD ALSO BE MARKED.

C. THE CONTRACTOR MUST ALSO PROVIDE AN EMERGENCY CONTACT AVAILABLE 24 HOURS FOR MAINTENANCE OF CONSTRUCTION LIGHTING AND BARRICADING.

D. USE HIGHLY REFLECTIVE BARRICADES WITH LIGHTS TO CLOSE TAXIWAYS LEADING TO CLOSED RUNWAYS. CLOSE RUNWAY/TAXIWAY INTERSECTIONS WITH BARRICADES EVEN FOR SHORT (TEMPORARY) CLOSURES.

E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MOVEMENT OF BARRICADES BETWEEN PHASES, OR AS OTHERWISE CRITICAL TO AIRPORT OPERATIONS. ALL BARRICADE LIGHTS MUST BE CHECKED NIGHTLY, AND REPLACED BY THE CONTRACTOR IF NOT FUNCTIONING. CONTRACTOR SHALL BE COMPENSATED FOR COST OF ALL BARRICADES, THEIR MAINTENANCE AND MOVEMENT UNDER ITEM NO. 105002 - SAFETY AND SECURITY.

PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS:

A. CONSTRUCTION ACTIVITY ADJACENT TO ACTIVE RUNWAYS, TAXIWAYS, AND APRONS SHALL BE COORDINATED WITH AIRPORT OPERATIONS THROUGH THE ENGINEER. CONSTRUCTION ACTIVITY IN THESE AREAS WILL BE AUTHORIZED AFTER 1) NOTICES TO AIRMEN (NOTAM'S) HAVE BEEN ISSUED BY THE AIRPORT, 2) BARRICADING AND LIGHTING PROVISIONS HAVE BEEN IMPLEMENTED BY THE CONTRACTOR, AND 3) IT HAS BEEN DETERMINED THAT THE HEIGHT OF EQUIPMENT AND MATERIALS IS BEYOND THE REACH, OR SAFELY BELOW, AIRCRAFT USING ADJACENT OPERATION AREAS. THE ENGINEER WILL SUPPLY INFORMATION FOR RUNWAY APPROACHES AND OTHER AREAS IF REQUIRED.

B. NO CONSTRUCTION MAY OCCUR WITHIN AN EXISTING RUNWAY OR TAXIWAY SAFETY AREA WHILE THE RUNWAY/TAXIWAY IS OPEN TO AIRCRAFT OPERATIONS. OPEN TRENCHES OR EXCAVATIONS ARE NOT PERMITTED WITHIN THE SAFETY AREA OF AN OPEN RUNWAY/TAXIWAY. IF THE RUNWAY/TAXIWAY MUST BE OPENED BEFORE EXCAVATIONS ARE BACKFILLED, THE EXCAVATIONS MUST BE COVERED IN SUCH A WAY AS TO ALLOW THE HEAVIEST AIRCRAFT OPERATING ON THE RUNWAY/TAXIWAY TO CROSS THE COVERING WITHOUT DAMAGE. THE SAFETY AREA MUST BE GRADED WITH NO POTENTIALLY HAZARDOUS RUTS, HUMPS, DEPRESSIONS, OR OTHER SURFACE VARIATIONS UPON OPENING. OPEN TRENCHES AND EXCAVATIONS WITHIN THE CONSTRUCTION AREA(S) MUST BE PROMINENTLY MARKED.

C. CONSTRUCTION MAY BE PERMITTED IN THE RUNWAY OBJECT FREE AREA, BUT EQUIPMENT MUST BE REMOVED FROM THE ROFA WHEN NOT IN USE AND MATERIAL SHOULD NOT BE STOCKPILED WITHIN THE ROFA. UNLIKE THE ROFA, NO CONSTRUCTION MAY TAKE PLACE WITHIN THE OBJECT FREE AREA OF AN OPEN TAXIWAY, UNLESS 1) THE TOFA DIMENSION IS TEMPORARILY ADJUSTED FOR USE BY SMALLER AIRCRAFT ONLY; 2) TEMPORARY OFFSET TAXIWAY MARKINGS ARE USED; OR 3) CONSTRUCTION PROCEEDS WITH THE FOLLOWING RESTRICTIONS: APPROPRIATE NOTICES TO AIRMEN (NOTAM'S) HAVE BEEN ISSUED BY THE AIRPORT, BARRICADING AND LIGHTING PROVISIONS HAVE BEEN IMPLEMENTED BY THE CONTRACTOR, AND FLAGGERS AND WINGWALKERS ARE UTILIZED TO MAINTAIN A FIVE-FOOT SEPARATION BETWEEN AIRCRAFT AND ALL EQUIPMENT OR MATERIALS. ANY ADJUSTMENT OF RSA OR TSA DIMENSIONS SHALL BE COORDINATED WITH THE ATCT AND/OR APPROPRIATE FAA REGIONAL/ADO OFFICE.

D. PERSONNEL, MATERIAL, AND/OR EQUIPMENT MAY NOT PENETRATE THE RUNWAY OBSTACLE FREE ZONE (OFZ) OR THRESHOLD SIGHTING SURFACES WHILE THE RUNWAY IS OPEN. RUNWAY APPROACH/DEPARTURE AREAS AND CLEARWAYS MUST BE PROTECTED.

E. BLASTING OPERATIONS: N/A.

OTHER LIMITATIONS ON CONSTRUCTION:

A. THE FOLLOWING ARE PROHIBITED FROM USE ON THE AIRFIELD: TALL EQUIPMENT BEYOND THE MAXIMUM EQUIPMENT HEIGHT SHOWN ON THE SAFETY/PHASING PLAN, OPEN-FLAME WELDING/TORCH CUTTING (UNLESS PROPER PRECAUTIONS ARE TAKEN AND AIRPORT APPROVAL IS OBTAINED), ELECTRICAL BLASTING CAPS (WITHIN 1000' OF AIRPORT PROPERTY), AND FLARE POTS.

SAFETY PLAN COMPLIANCE DOCUMENT:

THE CONTRACTOR SHALL PREPARE A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) DESCRIBING HOW THE REQUIREMENTS OF THE CONSTRUCTION SAFETY AND PHASING PLAN WILL BE MET. THE SPCD SHALL INCLUDE A CERTIFICATION STATEMENT BY THE CONTRACTOR THAT: 1) INDICATES FULL UNDERSTANDING OF THE OPERATIONAL SAFETY REQUIREMENTS OF THE CONSTRUCTION SAFETY AND PHASING PLAN AND 2) ASSERTS NO DEVIATIONS SHALL BE MADE FROM THE APPROVED SAFETY PHASING PLAN AND SPCD UNLESS WRITTEN APPROVAL IS GRANTED BY THE AIRPORT OPERATOR. THE SPCD SHALL FOLLOW THE FORMAT OF FAA AC 150/5370-2F, SECTION 204(b) AND SHALL ADDRESS ITEMS (1)-(18) PER THE REQUIREMENTS OF THE AC.

THE CONTRACTOR SHALL SUBMIT THE SPCD TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL BY THE AIRPORT SPONSOR FOURTEEN (14) DAYS PRIOR TO THE ANTICIPATED ISSUE OF THE NOTICE TO PROCEED. COPIES OF THE APPROVED CONSTRUCTION SAFETY PHASING PLAN AND SAFETY PLAN COMPLIANCE DOCUMENT SHALL BE MAINTAINED AT THE PROJECT SITE.

OTHER CONSTRUCTION NOTES:

A. CRITICAL AIRCRAFT DURING CONSTRUCTION OPERATIONS CONSIST OF DESIGN GROUP IV AIRCRAFT.

B. CONSTRUCTION IS ANTICIPATED TO BEGIN IN JULY 13, 2020. THERE SHALL BE 9 CALENDAR DAYS FOR THE PROJECT. THE PROJECT IS BROKEN INTO 6 PHASES AS SHOWN ON SHEET G-071 THRU G-073.

C. LIQUIDATED DAMAGES SHALL BE ASSESSED FOR EACH CALENDAR DAY CONSTRUCTION EXCEEDS 9 DAYS FOR THE TOTAL PROJECT OR THE ALLOWABLE TIME IN EACH INDIVIDUAL PHASE. LIQUIDATED DAMAGES SHALL BE \$2,000 PER CALENDAR DAY FOR PHASES WHICH DO NOT REQUIRE THE CLOSURE OF RUNWAY 9R/27L AND \$5,000 PER CALENDAR DAY FOR PHASES WHICH DO REQUIRE THE CLOSURE OF RUNWAY 9R/27L.

D. ALL SAFETY AND SECURITY ITEMS REQUIRED ON THE SAFETY PHASING PLAN OR IN CONSTRUCTION AND SAFETY NOTES WILL BE INCLUDED IN THE COST FOR ITEM NO. 105002 - SAFETY AND SECURITY UNLESS OTHERWISE STATED.

Mead & Hunt

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Jeff Thoman

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**SOUTH BEND INTL. AIRPORT
MILL & FILL VARIOUS LOCATIONS**

**ST JOSEPH COUNTY
4477 PROGRESS DRIVE, SOUTH BEND, IN**

ISSUED FOR BID - 06/12/20

AP NO.: N/A
MSH NO.: 2892200-201379.01
DATE: JUNE 12, 2020
DESIGNED BY: JET
DRAWN BY: JET
CHECKED BY: JET
DO NOT SCALE DRAWINGS

SHEET CONTENTS
CONSTRUCTION
SAFETY PHASING
PLAN NOTES

SHEET NO. 6 of 8

G-081



Jeff Thoman

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**SOUTH BEND INTL. AIRPORT
MILL & FILL VARIOUS LOCATIONS**
ST JOSEPH COUNTY
4477 PROGRESS DRIVE, SOUTH BEND, IN

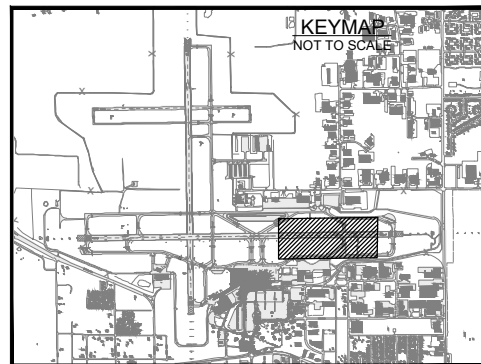
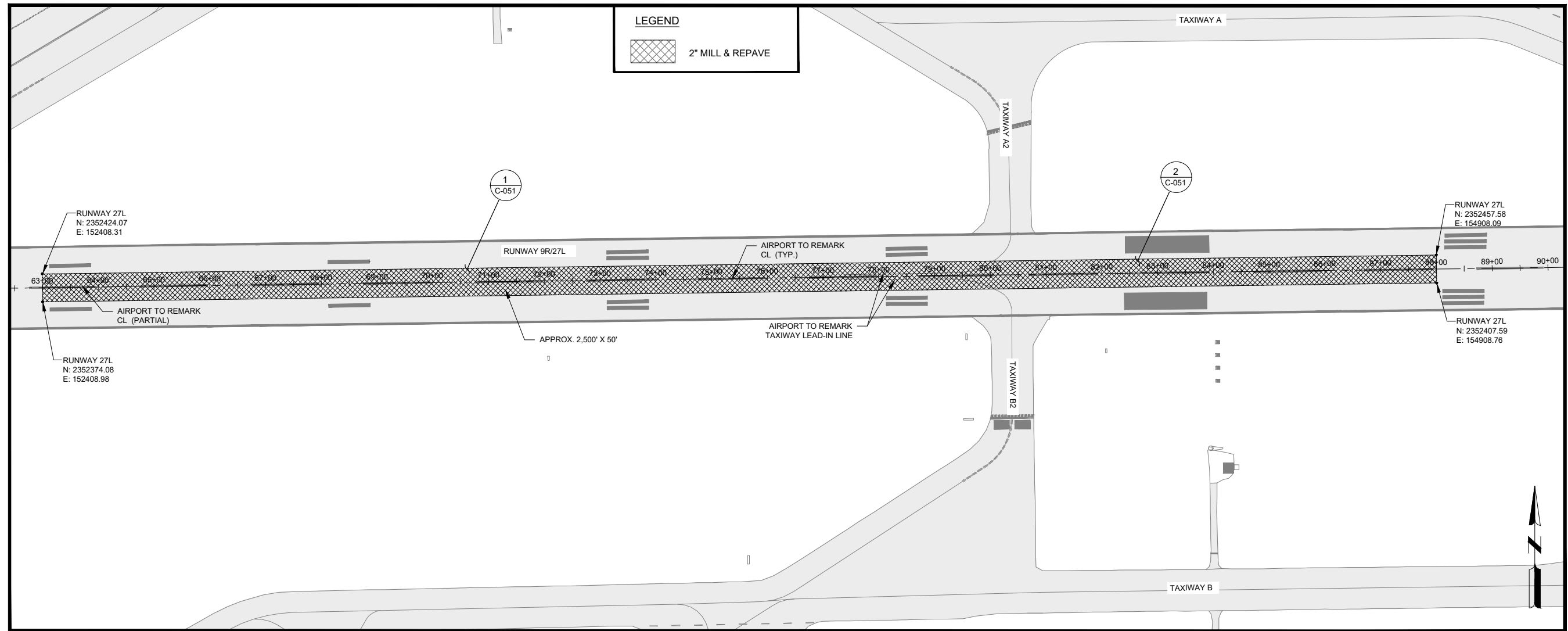
ISSUED FOR BID - 06/12/20

AP NO.: N/A
M&H NO.: 2892200-201379.01
DATE: JUNE 05, 2020
DESIGNED BY: JET
DRAWN BY: JET
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SHEET CONTENTS
PROJECT LAYOUT & PAVEMENT SECTIONS - WORK AREA 1

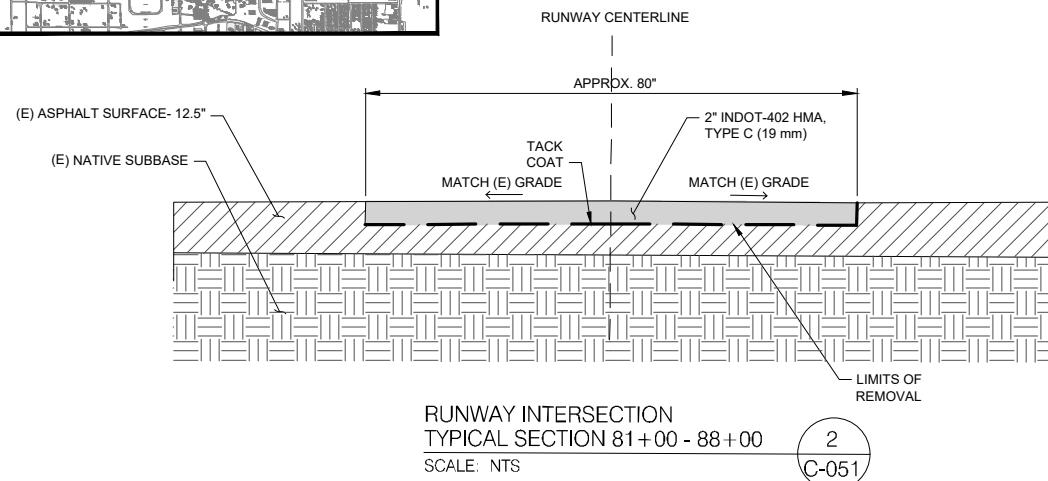
SHEET NO. 7 of 10

C-051



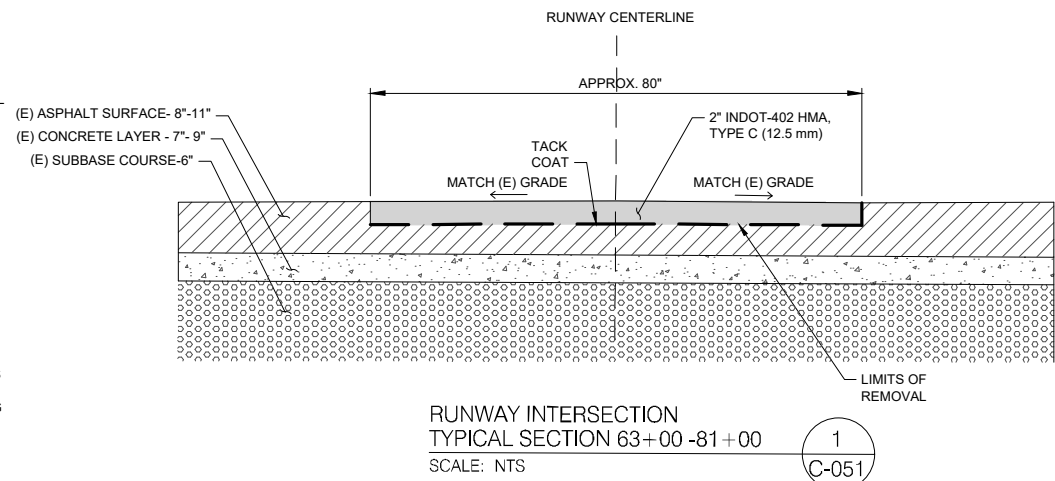
1
RUNWAY INTERSECTION
MILL & REPAVE LIMITS
SCALE: 1" = 100'

WORK AREA 1



NOTES:

- WHERE APPLICABLE, ALL LIMITS OF PAVEMENT REMOVAL SHALL BE SAWCUT. SAWCUTTING SHALL BE INCIDENTAL TO PAVEMENT REMOVAL.
- LIMITS OF REMOVAL AND PAVING CALLED OUT BELOW MAY VARY AT TIME OF CONSTRUCTION. EXACT LOCATIONS WILL BE DETERMINED ONSITE BY THE AIRPORT PRIOR TO CONSTRUCTION ACTIVITY.
- THE EXISTING AIRFIELD ASPHALT PAVEMENT DEPTHS ARE UNKNOWN. IF ASPHALT DEPTH IS DENOTED, THE EXISTING PAVEMENT THICKNESS IS APPROXIMATE AND BASED ON RECORD DRAWINGS.
- IN MILL AND REPAVE AREAS, CRACKS EXCEEDING 1" IN WIDTH SHALL BE FILLED WITH INDOT #53 GRAVEL PRIOR TO PAVING (INCIDENTAL TO PAVING).
- ALL RUNWAY MARKINGS SHALL BE SOLID, WHITE, 50% RATE, EXCEPT TAXIWAY LEAD-IN LINES, WHICH SHALL BE YELLOW (AIRPORT TO MARK).
- ALL NEW MARKINGS SHALL INCLUDE 6" BLACK OUTLINE UNLESS OTHERWISE DETAILED (AIRPORT TO MARK).
- CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE MARKING LAYOUT FOR AIRPORT STAFF.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MEASURING AND RECREATING EXISTING TAXIWAY LEAD-IN LINE RADII.
- ALL HAUL ROADS, STAGING AREAS AND ALL OTHER AREAS WHERE EXISTING SOD/VEGETATION IS DISTURBED OR DAMAGED AS PART OF HAULING OR CONSTRUCTION OPERATIONS SHALL BE RESTORED PER SPECIFICATION T-901 & T-908.



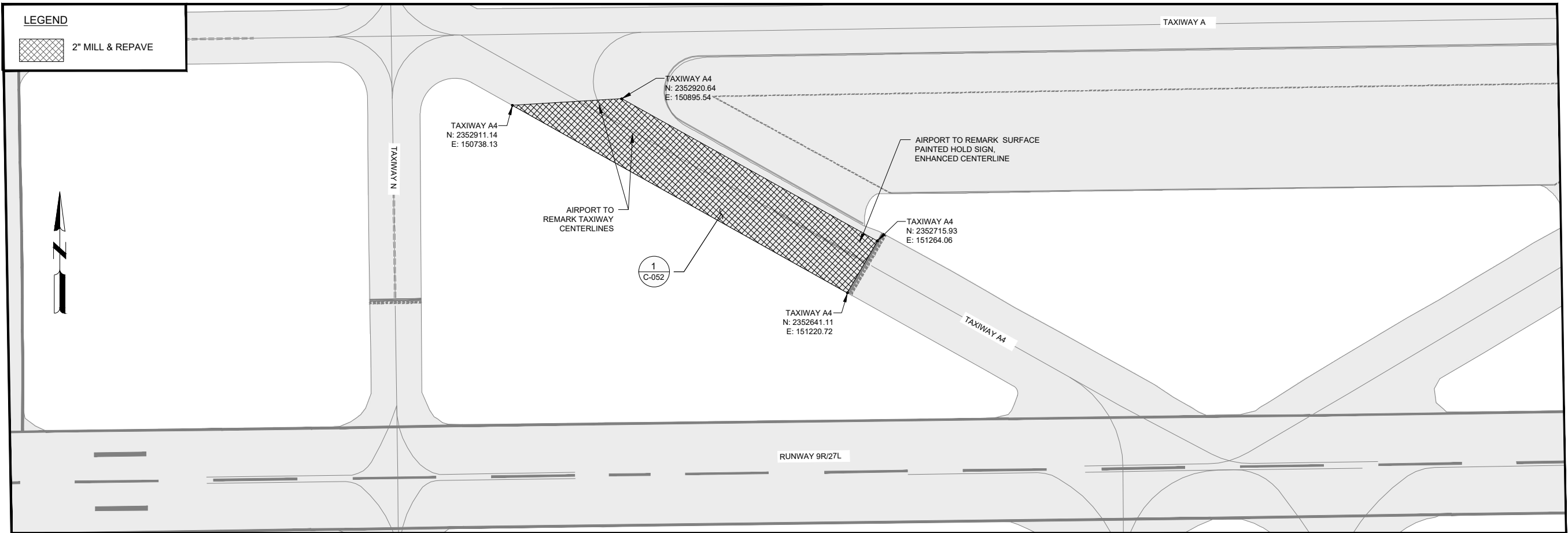


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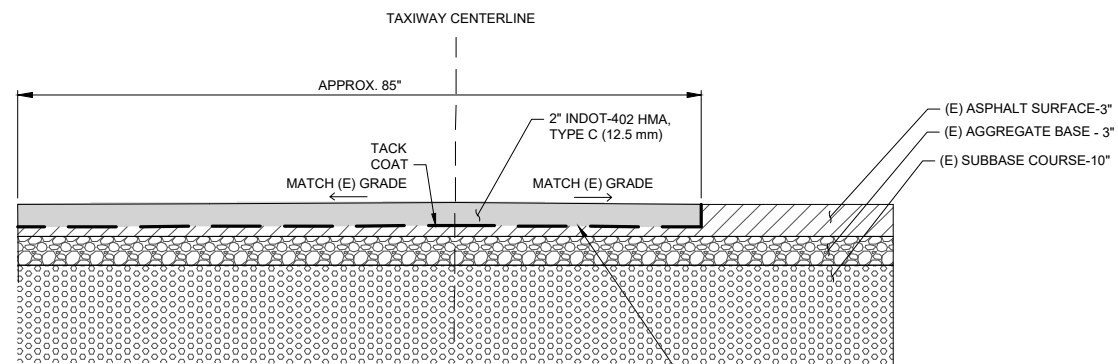
**SOUTH BEND INTL. AIRPORT
MILL & FILL VARIOUS LOCATIONS**
ST JOSEPH COUNTY
4477 PROGRESS DRIVE, SOUTH BEND, IN

ISSUED FOR BID - 06/12/20

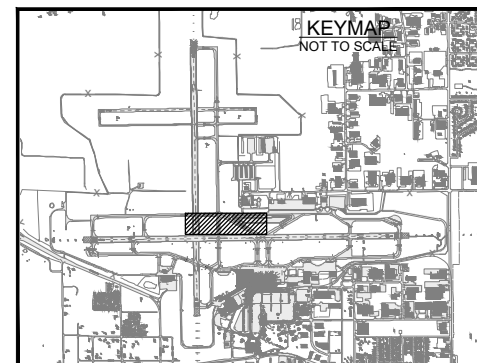


TAXIWAY A4
MILL & REPAVE
SCALE: 1" = 80'

2 WORK AREA 2



RUNWAY INTERSECTION
TYPICAL SECTION
SCALE: NTS



NOTES:

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AP NO: N/A
MSH NO: 2892200-201379.01
DATE: JUNE 12, 2020
DESIGNED BY: JET
DRAWN BY: JET
CHECKED BY: JET
DO NOT SCALE DRAWINGS

SHEET CONTENTS
PROJECT LAYOUT &
PAVEMENT SECTIONS
- WORK AREA 2

SHEET NO: 8 of 10

C-052



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**SOUTH BEND INTL. AIRPORT
MILL & FILL VARIOUS LOCATIONS**

ST JOSEPH COUNTY
4477 PROGRESS DRIVE, SOUTH BEND, IN

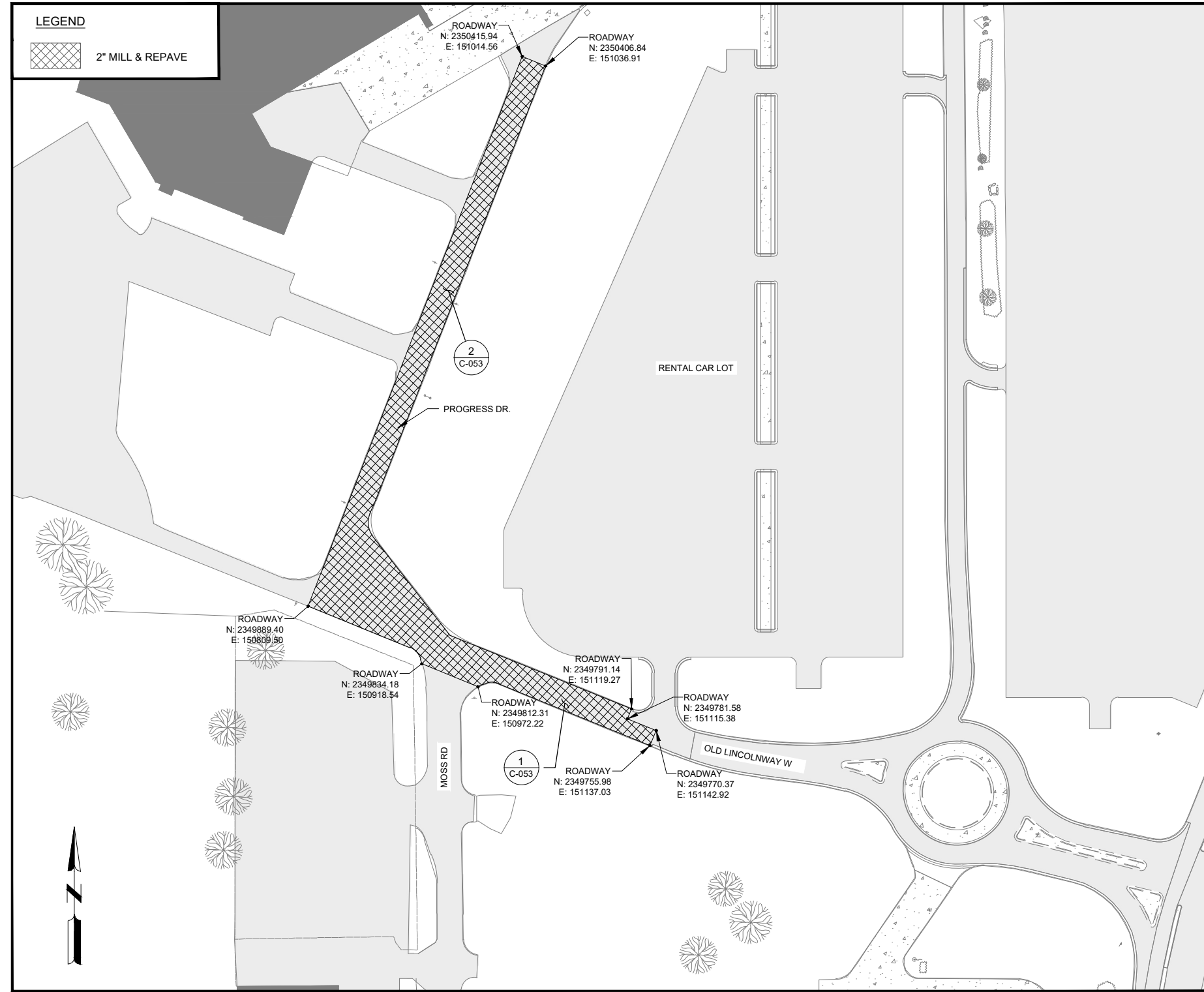
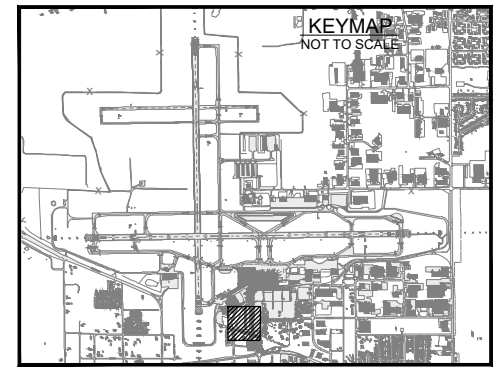
ISSUED FOR BID - 06/12/20

AP NO.: N/A
MSH NO.: 2892200-201379.01
DATE: JUNE 12, 2020
DESIGNED BY: JET
DRAWN BY: JET
CHECKED BY: JET

SHEET CONTENTS
PROJECT LAYOUT &
PAVEMENT SECTIONS
- WORK AREA 3

SHEET NO. 9 of 10

C-053



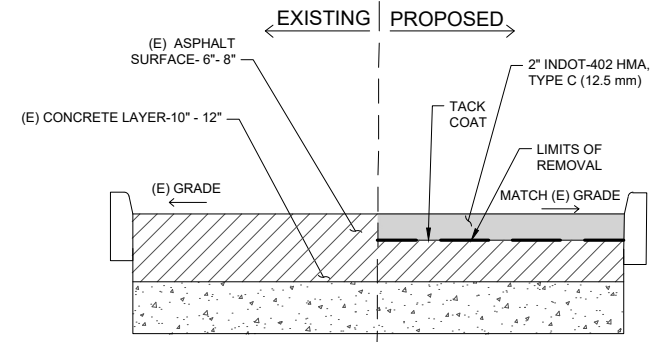
LEGEND

2" MILL & REPAVE

ROADWAY
MILL & REPAVE LIMITS
SCALE: 1" = 60'

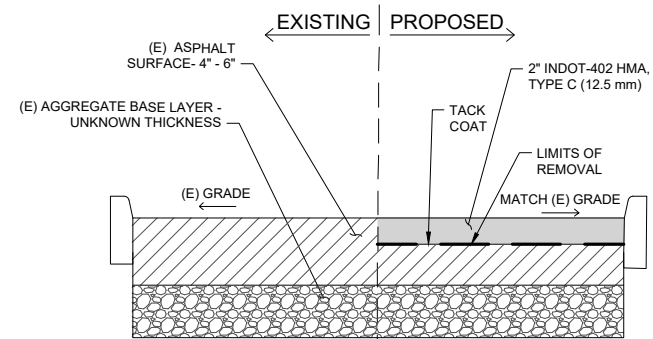
3

WORK AREA 3



OLD LINCOLNWAY W
TYPICAL SECTION
SCALE: NTS

1
C-053



PROGRESS DR
TYPICAL SECTION
SCALE: NTS

2
C-053

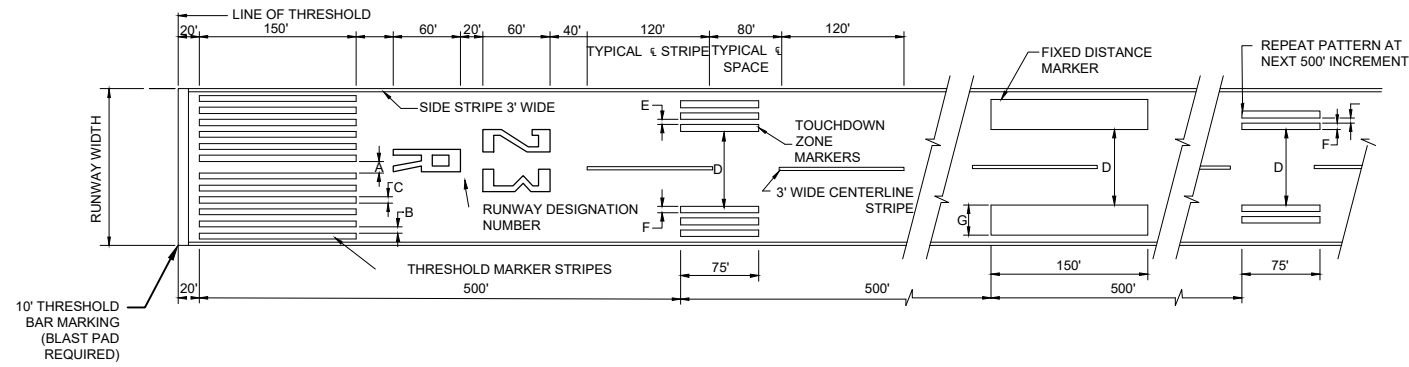
NOTES:

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6. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE MARKING LAYOUT FOR AIRPORT STAFF.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR MEASURING AND RECREATING EXISTING ROADWAY MARKINGS.
8. ALL HAUL ROADS, STAGING AREAS AND ALL OTHER AREAS WHERE EXISTING SOD/VEGETATION IS DISTURBED OR DAMAGED AS PART OF HAULING OR CONSTRUCTION OPERATIONS SHALL BE RESTORED PER SPECIFICATION T-901 & T-908.

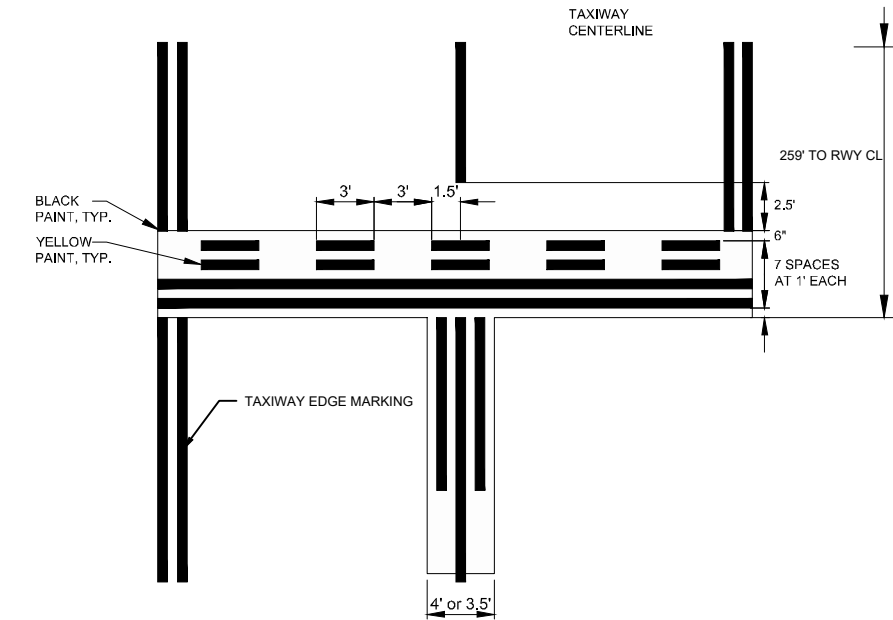
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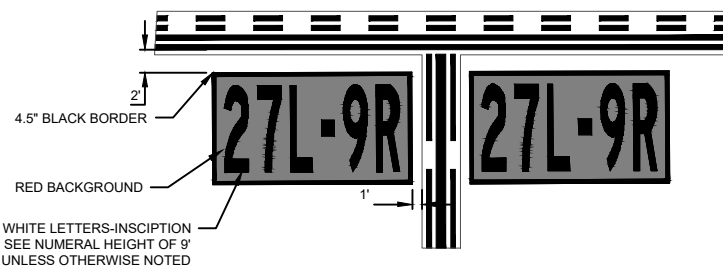
RUNWAY WIDTH	THRESHOLD MARKER STRIPES			# OF STRIPES	AREA FOR STRIPES	TOUCH ZONE MARKERS			FIXED DISTANCE MARKERS				
	A	B	C			D	E	F	6 STRIPES	4 STRIPES	2 STRIPES	DIM. G	AREA FOR 2 MARKERS
150'	11.5'	5.75'	5.75'	12	10,350 FT ²	72'	5'	6'	1,800 FT ²	1,200 FT ²	600 FT ²	30'	9,000 FT ²



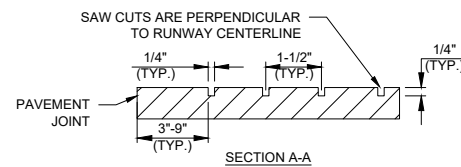
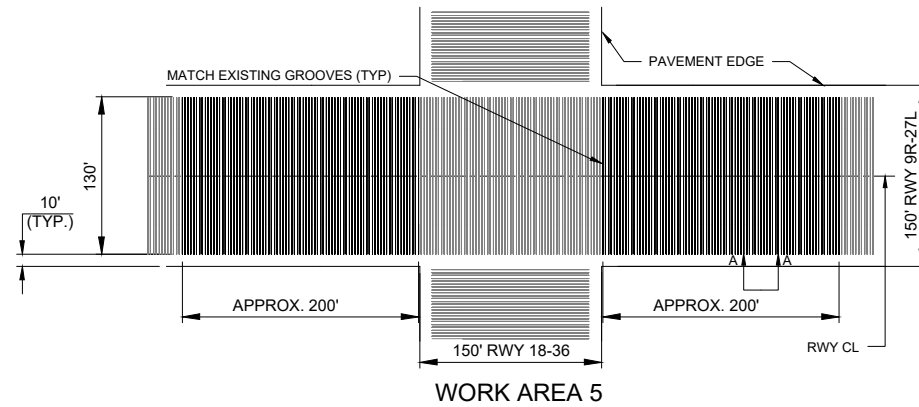
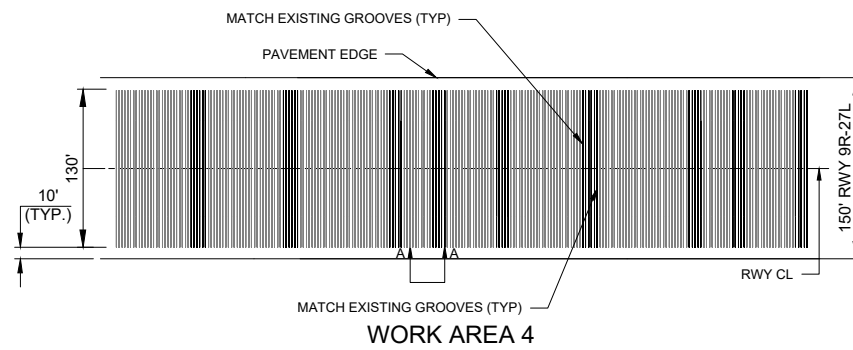
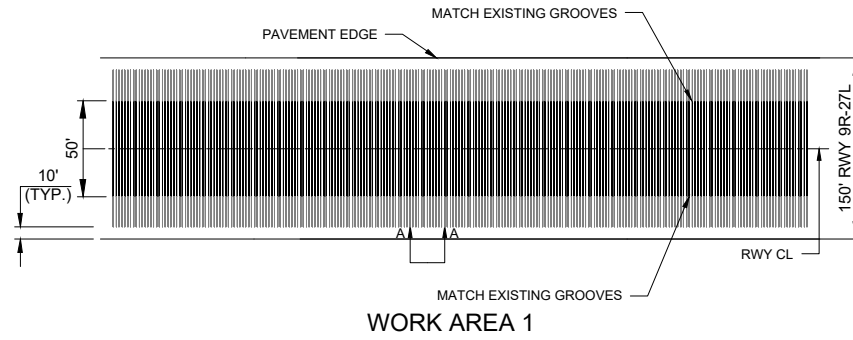
PRECISION APPROACH TYPICAL RUNWAY MARKINGS
SCALE: NTS
C-501



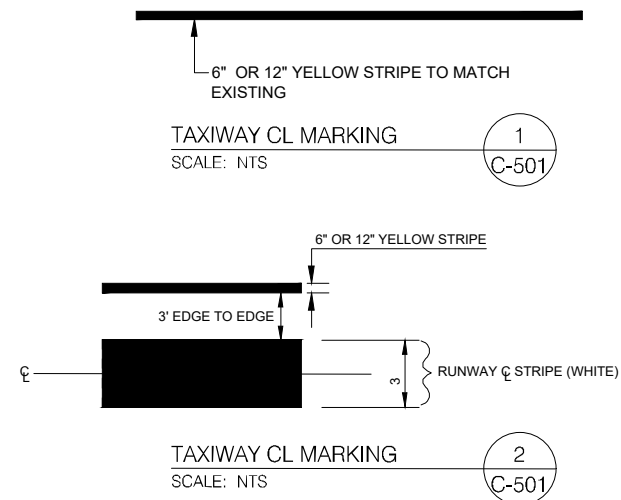
HOLD LINE DETAIL
SCALE: NTS
C-501



SURFACE PAINTED HOLDING POSITION MARKING
SCALE: NTS
C-501



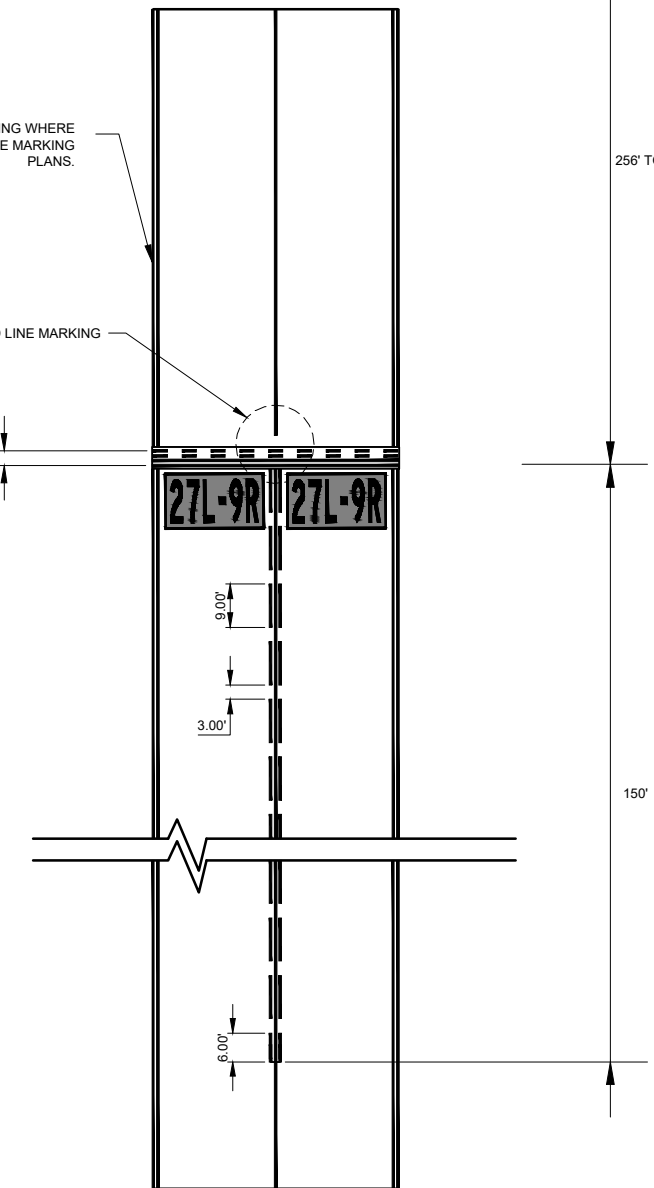
RUNWAY 9R/27L GROOVING DETAIL
SCALE: NTS
C-501



PROVIDE NEW MARKING WHERE INDICATED ON THE MARKING PLANS.

HOLD LINE MARKING

4 LINES (YELLOW) AND SPACES AT 12" EACH



ENHANCED RUNWAY HOLD LINE MARKING
SCALE: NTS
C-501

Mead & Hunt
Mead and Hunt, Inc.
2605 Port Lansing Road
Lansing, MI 48906
phone: 517-321-8334
meadhunt.com



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**SOUTH BEND INTL. AIRPORT
MILL & FILL VARIOUS LOCATIONS**
ST JOSEPH COUNTY
4477 PROGRESS DRIVE, SOUTH BEND, IN

ISSUED FOR BID - 06/12/20

AP NO.: N/A
MSH NO.: 2892200-201379.01
DATE: JUNE 12, 2020
DESIGNED BY: JET
DRAWN BY: JET
CHECKED BY: JET
DO NOT SCALE DRAWINGS

SHEET CONTENTS
CONSTRUCTION DETAILS

SHEET NO. 10 of 10

C-501

X:\2892200\201379.01\TECH\CAD\DRAWINGS\C-051 PROJECT LAYOUT.DWG 6/12/2020 10:45:01 AM

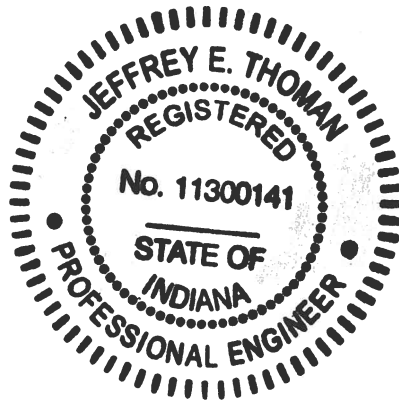
**Contract Legal Documents
and
Specifications
Mill & Repave Various Locations
at
South Bend International Airport**

**Prepared for
St Joseph County Airport Authority**

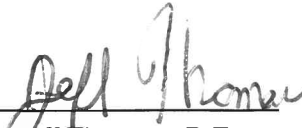
Prepared by
**Mead
& Hunt**

June 12, 2020
Issued for Bid

SPECIFICATIONS FOR
MILL & REPAVE VARIOUS LOCATIONS
AT THE
SOUTH BEND INTERNATIONAL AIRPORT
SOUTH BEND, INDIANA



I hereby certify that these specifications were prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Indiana.



Jeff Thoman, P.E

Registration No. PE 11300141

INDEX TO SPECIFICATIONS FOR
MILL & REPAVE VARIOUS LOCATIONS
AT THE
SOUTH BEND INTERNATIONAL AIRPORT

TABLE OF CONTENTS

	PAGE
PART 1 – ADVERTISEMENT AND BIDDERS INSTRUCTIONS	
Notice of Public Hearing and Letting (Advertisement for Bids).....	1-1
Instructions to Bidders.....	1-3
PART 2 – PROPOSAL AND CONTRACT FORMS	
Contractor's Bid For Public Work – Form 9.2-1	
E-Verify Affidavit.....	2-7
Schedule of Bid Prices.....	2-9
Acknowledgements by Bidder.....	2-11
Performance Bond	2-15
Payment Bond	2-17
Form of Contract Agreement.....	2-19
PART 3 – PROVISIONS	
General Provisions.....	3-1
Special Provisions.....	3-49
PART 4 – TECHNICAL SPECIFICATIONS	
Item P-101 Surface Preparation	
Item C-105 Mobilization	
Section 402 – Hot Mix Asphalt, HMA, Pavement	
Item P-603 Bituminous Tack Coat	
Item P-621 Saw-cut Grooves	
Item T-901 Seeding	
Item T-908 Mulching	

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Part 1

Advertisement and Bidders Instructions

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ADVERTISEMENT FOR BIDS

1.01 PROJECT INFORMATION

- A. Notice to Bidders: Qualified bidders may submit bids for project as described in this Document. Submit bids according to the Instructions to Bidders.
1. Regulatory Requirements: All rules and regulations pursuant to the State of Indiana Public Works Projects shall govern submittal, opening, and award of bids.
- B. Project Identification
- Mill & Repave Various Locations
South Bend International Airport
4477 Progress Drive
South Bend, IN 46628
- C. Owner
- St. Joseph County Airport Authority
4477 Progress Drive
South Bend, IN 46628
- D. Architect/Engineer
- Mead & Hunt, Inc.
2605 Port Lansing Road
Lansing, MI 48906
Contact: Jeff Thoman, PE
E-mail: jeff.thoman@meadhunt.com
Phone: (517) 321-8334
- E. Project Description
1. This project consists of milling and repaving multiple areas in various locations around the airport.
2. Construction Contract: Project will be constructed under a single prime contract.

1.02 BID SUBMITTAL AND OPENING

- A. Owner will receive sealed bids until the bid time and date at the location given below.
1. The bids are due no later than Monday, June 22, 2020 at 10:00 a.m. (local time) to the South Bend International Airport, Attention: Tim O'Donnell to the address listed in item B below.
2. The bids will be opened and read aloud publicly in the Airport Board Room, South Bend International Airport at 10:00 a.m. (local time)
- B. Envelopes containing bids must be sealed and addressed to:
- South Bend International Airport
Airport Information Desk
Attn: Tim O'Donnell
4477 Progress Dr
South Bend, IN 46628

Bid envelope shall be marked as follows:
Contract Proposal
Name of Contractor
Mill & Repave Various Locations
To be opened at 10:00 a.m.(local time) on June 22, 2020

1.03 BID SECURITY

- A. Bid security shall be submitted with each bid in the amount of 5 percent of the bid amount. No bids may be withdrawn for a period of 60 days after opening of bids. Owner reserves the right to reject any and all bids and to waive informalities and irregularities.

1.04 PREBID MEETING

- A. A Pre-bid teleconference call for all prospective bidders will be held at the on June 15, 2020, 11am (local time) Please contact Jeff Thoman, Mead & Hunt for details, 517-321-8334 and/or Jeff.Thoman@meadhunt.com. Prospective bidders are requested to attend.

1.05 BIDDING DOCUMENTS

- A. Bidding documents will be available on Friday, June 12, 2020 at 5:00 p.m. per the following directions.
- B. Digital (.pdf format) Proposal Forms, Plans, Specifications and other bidding documents may be downloaded for an on-line non-refundable payment of \$15 through the Mead & Hunt, Inc. website www.meadhunt.com under "Electronic eBids" or on www.QuestCDN.com.
 1. Input Quest CDN eBidDoc Number **#7129054** to access the documents for this project.
 2. Contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, and working with this digital information.
 3. No paper plans and specifications will be provided.

1.06 TIME OF COMPLETION AND LIQUIDATED DAMAGES

- A. Successful bidder shall begin the Work on receipt of the Notice to Proceed and shall complete the Work within the Contract Time. Work is subject to liquidated damages.

1.07 BIDDER'S QUALIFICATIONS

- A. Bidders must be properly licensed under the laws governing their respective trades and be able to obtain insurance and bonds required for the Work. A Performance Bond, separate Labor and Material Payment Bond, and Insurance in a form acceptable to Owner will be required of the successful Bidder.

1.08 NOTIFICATION

- A. This Advertisement for Bids document is issued by Mr. Michael A. Daigle, Executive Director, St. Joseph County Airport Authority.

INSTRUCTIONS TO BIDDERS

Owner and Owner's Representative

The Owner as stated herein refers to the following agency: **St. Joseph County Airport Authority**. The Owner's authorized representative as stated herein refers to the Owner's Consultant, **Mead & Hunt, Inc.**, herein referred to as Engineer.

Bidder Representations

By submittal of a proposal (bid), the BIDDER represents the following:

- The Bidder has read and thoroughly examined the project documents.
- The Bidder has a complete understanding of the terms and conditions required for the satisfactory performance of project work.
- The Bidder has fully informed themselves of the project site, the project site conditions and the surrounding area.
- The Bidder has familiarized themselves of the requirements of working on an operating airport and understands the site conditions that may in any manner affect cost, progress or performance of the work
- The Bidder has correlated their observations with that of the project documents.
- The Bidder has found no errors, conflicts, ambiguities or omissions in the project documents, except as previously submitted in writing to the owner that would affect cost, progress or performance of the work.
- The Bidder is familiar with all applicable State and local laws, rules and regulations pertaining to execution of the contract and the project work.
- The Bidder has complied with all requirements of these instructions and the associated bid documents.

Bid Documents/Project Manual

The bid documents are comprised of the following; Advertisement for Bids, Instructions-to-Bidders, General Provisions, Special Provisions, Technical Specifications, Project Drawings, Proposal Form with attachments, Form of Contract Agreement, any authorized addenda issued by the Owner and any document incorporated in whole or in part by reference therein.

All documents comprising the Bid Documents are complementary to one another and together establish the complete terms, conditions and obligations of the successful bidder.

Those individual elements of the Contract Documents that are provided together shall also be referred to as the Project Manual.

Prospective bidders may obtain a copy of the project manual and project drawings from the designated office identified within the Notice-to-Bidders.

Modifications to Project Documents

Modifications to the project documents may only be made by written addendum issued by the Owner or the Engineer. Verbal explanations, interpretations or comments made by the Owner or Owner's representative shall not be binding. Addenda will be transmitted to all known official plan holders. Each bidder shall certify at the time of bid submittal that they acknowledge receipt of all issued addenda.

Errors and Discrepancies in Project Documents

Should Bidder find an error, discrepancy, ambiguity or omission in the project documents prior to submittal of a proposal, the Bidder is obligated to contact the Owner or Engineer with written notice of the error, discrepancy, ambiguity or omission. The written notice shall identify the nature and location of the error, discrepancy, ambiguity or omission. Corrections or modifications to the project documents will only be made by written addendum as prescribed herein. By submittal of a Bid Proposal, Bidder represents that they have thoroughly reviewed the project documents and that they have not identified any error,

discrepancy, ambiguity or omission that would affect cost, progress or performance of the project work.

Clarifications and Interpretations

A bidder requiring a clarification or interpretation of the project documents shall make a written request to the Engineer at the following address:

Mead & Hunt, Inc.
Attention: Jeff Thoman, PE
2605 Port Lansing Road
Lansing, MI 48906
(O) 517-321-8334
jeff.thoman@meadhunt.com

Interpretations of Estimated Proposal Quantities

An estimate of quantities of work to be accomplished and materials to be furnished under these specifications is stated within the project manual. This estimate is a result of careful calculations and is believed to be correct. The estimated quantities are given only as a basis for comparison of proposals and the award of contract. The Owner does not expressly or impliedly agree that the actual quantities involved will correspond exactly with the estimated quantities.

The Bidder shall not plead misunderstandings or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection titled "Alteration of Work and Quantities" of the general provisions without in any way invalidating the unit bid prices.

Examination of Plans, Specifications and Site Conditions

As stated within the "Bidder Representations" and reaffirmed herein, the Bidder is expected to carefully examine the site of the proposed work, the proposal, drawings, specifications, terms and conditions of the proposed agreement and the form of agreement. The Bidder shall satisfy themselves as to the character, quality, and quantities of work to be performed, materials to be furnished and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans and specifications.

Issuance of Proposal Forms

The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should the bidder be in default for any of the following reasons:

- Failure to pay, or satisfactory settle, all bills due for labor and materials on former contracts in force (with the owner) at the time the owner issues the proposal to a prospective bidder.
- Contractor default under previous contracts with the owner
- Unsatisfactory work on previous contracts with the owner

Form of Proposal

All bid proposals shall be made on the forms provided by the Owner within the provided Project Manual. No bidder may submit more than one proposal. All proposals are to be written in ink and shall be clearly legible. All blank spaces in the proposal forms shall be legibly completed for each and every bid item. The Bidder shall not qualify any bid item. The Bidder shall initial any erasures and alterations made on the proposal form by the bidder.

In case of a conflict between a unit price and the corresponding extended amount, or in the absence of an extended amount, the unit price will govern.

Signature of Proposal

An authorized representative of the Bidder must sign and date the proposal. The Bidder's authorized representative shall use an ink pen when applying their signature to the proposal. The Bidder's representative shall have the legal authority to obligate and bind the Bidder to the terms and conditions of the contract. The Bidder shall legibly state the name of the Bidder's representative, the legal name of the Bidder, the address of the Bidder including City, State and Zip Code, and the telephone number of the Bidder.

- For bids by corporations, an officer of the corporation shall sign the bid; Bidder shall identify the State of incorporation and affix their corporate seal.
- For bids submitted by an agent, Bidder shall attach to the proposal evidence of the power of attorney.
- For bids submitted by a partnership or joint venture, the proposal shall identify the name of all firms and the authorized parties of all firms. The bidder shall attach a copy of the partnership/joint-venture agreement to the proposal.

Modification or Withdrawal of Bid Proposal

Bidder may modify or withdraw their proposal at any point up to the specified time and date identified for receipt of proposals. Any request for bid withdrawal or modification by the Bidder that is received after the specified time and date for receipt of proposals will be returned unopened to the sender.

Any modification a Bidder desires to make to their proposal, subject to the time constraint noted herein, must be made on the proposal forms contained in the project manual. The Bidder's authorized representative must sign the modification. The modification shall be placed in a sealed envelope and the statement "Modification to Proposal" shall be legibly marked in the upper left hand corner. Withdrawal of a proposal may be made, subject to the time constraint noted herein, only with written confirmation under signature of the Bidder.

Bid Guaranty

Each bid proposal must include a bid guaranty in the amount of five percent (5%) of the total amount of the bid. The bid guaranty may be by bid bond or certified check made payable to the Owner. The bid bond shall be from a responsible surety qualified to conduct business within the State the project is located. If Bidder uses a certified check, the certified check must be issued from a responsible and solvent bank or trust company.

Disadvantaged Business Enterprise

DBE participation is encouraged but is not required for this project. DBE participation achieved should be submitted to the airport for their records and use is achieving the airport's overall DBE goal.

Bidder Qualifications

Each Bidder shall furnish the owner satisfactory evidence of their competency and financial capability to perform the proposed work. The Bidder shall demonstrate that they are a responsible firm that possesses the skills, abilities, and integrity to faithfully perform the project work. To be determined responsible, a prospective contractor must:

- Have adequate resources (financial, technical, etc.) to perform the contract, or the ability to obtain them;
- Be able to comply with the required or proposed delivery or performance schedule, considering all existing business commitments;
- Have a satisfactory performance record;
- Have a satisfactory record of integrity and business ethics; and
- Be otherwise qualified and eligible to receive an award under applicable laws and regulations.

Evidence of competency shall consist of statements covering the Bidder's past experience on similar work, a listing of plant and equipment immediately available for use on the project, and a listing of key personnel that are available for the project.

Evidence of financial responsibility shall consist of a confidential statement or report of the Bidder's financial resources and liabilities as of the last calendar year.

Each bidder shall show "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening on "Form 96".

E-Verify Program

Each bidder shall comply with the requirements of Indiana Code 22-5-1.7-11 and include "E-Verify Affidavit" form included in the contract forms.

Submission of Bid Proposal

Prospective bidders must submit their proposal to arrive at the office location below at the specified time and date for receipt of bids. The owner will not give consideration to any proposal received after the specified time. Owner will return late proposals in an unopened manner to the return address identified on the envelope.

South Bend International Airport
Airport Information Desk
Attn: Tim O'Donnell
4477 Progress Dr
South Bend, IN 46628

Prospective bidders shall enclose their proposal in a sealed envelope. The upper left hand corner of the envelope shall be marked as follows:

CONTRACT PROPOSAL

Name of Contractor
Mill & Repave Various Locations
To be opened at: 10:00 a.m. (local time) on June 22, 2020

For a modification to a previously submitted proposal, insert "Modification to Proposal" in place of "Contract Proposal."

Bid Protest Procedure

Any potential bidder wishing to file a protest concerning alleged improprieties with this solicitation must submit the protest in written format 96 hours prior to the specified time of the bid opening. The formal written protest must identify the name of vendor contesting the solicitation, the project name and number, and the specific grounds for the protest. All determinations made by the Owner are final. Bidders desiring a complete copy of the Owners protest procedures must make a written request to the Owner.

Bid Opening

The Owner or the Owner's representative will publicly open and read aloud all proposals submitted prior to the stated time and date for receipt of bids. Bidders, their authorized agents, and other interested parties may attend the bid opening. Owner will automatically reject any proposal without consideration that arrives after the stated time and date for receipt of bids. Owner will return late proposals in an unopened manner to the return address indicated on the envelope.

Evaluation of Proposals

The Owner reserves the rights to hold all proposals for purpose of review and evaluation by the Owner for a period not to exceed 60 calendar days from the stated date for receipt of bids. The Owner will tabulate all bids and verify proper extension of unit costs. The Bidder shall honor their proposal for the duration of this period of review and evaluation. The bid guaranty will be held by the Owner until this period of review has expired or a contract has been formally executed or a purchase order has been issued.

Bid Informalities and Irregularities

The Owner reserves the right to waive any informality or irregularity discovered in any proposal, which in the owner's judgment best serves the Owner's interest. In the situation where an extension of a unit price is found to be incorrect, the stated unit price and correct extension will govern.

Irregular Proposals

Proposals meeting the following criteria are subject to consideration as being irregular:

- If the proposal is on a form other than that furnished by the Owner or Owner's representative.
- If the form furnished by the Owner or Owner's representative is altered from the original document.
- If there are unauthorized additions, conditional or alternate pay items or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.
- If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized pay items, for which the Bidder is not required to furnish a unit price.
- If the proposal contains unit prices that are obviously unbalanced.
- If the proposal is not accompanied by the bid guarantee specified herein.

Disqualification of Bid Proposals

The Owner reserves the right to reject any or all bids, as determined to be in the best interest of the Owner.

Causes for rejection of proposals include but are not limited to:

- Submittal of an irregular proposal;
- Submittal of more than one proposal from the same partnership, firm or corporation;
- Failure by Bidder to submit the bid prior to the stated time and date for receipt of bids;
- Failure by Bidder to furnish satisfactory bid guarantee;
- Failure by Bidder to provide all information required of the bid forms;
- Failure by Bidder to comply with the requirements of bid instructions;
- Determination by the Owner that Bidder is not qualified to accomplish the project work;
- Determination by the Owner that the Bidder has placed conditions on or qualified their proposal;
- Discovery of any alteration, interlineations or erasure of any project requirement by the Bidder;
- Inclusion of the Bidder on the "Excluded Parties Listing System" as maintained and published by the General Services Administration;
- Evidence of collusion among bidders.

Cancellation of Award

At any time prior to execution of a contract agreement, the Owner reserves the right to cancel the award for any reason without liability to the Bidder, with the exception of the return of the bid guaranty, at any time prior to execution of the contract.

Notice of Award of Contract

It is the intent of the Owner, after a period of review and evaluation, to award a contract to the responsible bidder that submits the lowest responsive proposal. The owner will notify the successful bidder their bid is acceptable through the Owner's issuance of a Notice-of-Award. The successful Bidder shall not construe issuance of the Notice-of-Award as a binding agreement. The proper execution of a contract agreement shall serve as the binding agreement.

Return of Bid Guaranty

The Owner will return the bid guaranty of the successful Bidder upon successful execution of the contract agreement or issuance of a purchase order. Failure by the successful Bidder to execute the contract documents or commence with the purchase order within the specified time shall result in forfeiture of the bid guaranty.

The Owner will retain the bid guaranty of the second lowest responsible bidder for a period of 90 calendar days after bid opening pending the execution of the contract documents by the successful bidder or the acceptance of the purchase order. Except as noted above, the bid guaranty of unsuccessful bidders will be returned at the point the Owner rejects their proposal.

Contract Agreement

The successful Bidder shall execute the contract agreement in accordance with the accepted bid proposal within fifteen (15) days of the date of the Notice-of-Award. Failure to execute the contract agreement within the specified time frame may result in the bid being awarded to the next low bidder and shall result in the forfeiture of the Bidder's bid guarantee as a liquidated damage.

Performance and Payment Bonds

The successful Bidder shall furnish separate performance and payment bonds each in the amount of 100% of the contract price. The bonds shall be made payable to the Owner as security for faithful performance of the contract and for the payment of all persons, firms or corporations to whom the Bidder may become legally indebted for labor, materials, tools, equipment or services in the performance of the project work. The form of the bond shall be that provided within the project manual. The current power of attorney for the person signing the bond as a representative of the surety shall be attached to the bonds.

The successful bidding must deliver the executed bonds to the Owner within five (5) calendar days from the date of contract execution. Bonds should not be executed prior to execution of the contract agreement. Owner will only accept bonds issued by a solvent Surety, which is certified to operate within the State the project work is located and which is listed in the current issue of the U.S. Treasury Circular 570. If specifically requested by the Owner, the successful Bidder shall obtain and submit information on the surety's financial strength rating.

Certificates of Insurance

The successful Bidder shall furnish to the Owner all required certificates of insurance as specified with the project manual.

Approval of the Contract

Upon receipt of the Contract Agreement, Contract Bonds and Certificate of Insurance as executed from the successful Bidder, the Owner will complete execution of the contract conditioned upon the Owner's judgment that it remains in their best interest to enter into the Agreement.

Delivery of the fully executed Contract Agreement to the successful Bidder shall constitute the Owner's approval to be bound by the successful Bidder's proposal and all terms and conditions of the Contract Agreement. Upon satisfactory execution of the contract by the successful Bidder and the Owner, all references to "Bidder" in the bid documents become equivalent to the term "Contractor".

Time for Completion

The work under this contract for this construction shall be started within ten (10) days or as notified by the Owner after the "Construction Notice to Proceed" is issued.

Liquidated Damages

Liquidated damages for failure to complete the project within the specified time period shall be as referenced in Article 6 - Liquidated Damages.

Pre-bid Conference

A Pre-bid teleconference call for all prospective bidders will be held at the on June 15, 2020, 11am (local time) Please contact Jeff Thoman, Mead & Hunt for details, 517-321-8334 and/or Jeff.Thoman@meadhunt.com. Prospective bidders are requested to attend.

Pre-Construction Conference

When the low bidder has been determined and award of contract made, the Contractor, Owner, and Engineer, and other interested persons will be requested to attend and participate in a pre-construction conference. Specific details of safety requirements, administrative, details, construction procedures, construction materials, and other pertinent factors of the project will be discussed.

Construction Activities and Aircraft Operations

Project contains areas of construction that are inside of the Aircraft Operations Area (AOA). See plans for notes on security and badging requirements.

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Part 2

Proposal and Contract Forms

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CONTRACTOR'S BID FOR PUBLIC WORK – FORM 96

PART I

(To be completed for all bids. Please type or print)

Date: _____

1. Governmental Unit (Owner): _____

2. County : _____

3. Bidder (Firm): _____

Address: _____

City/State: _____

4. Telephone Number: _____

5. Agent of Bidder (if applicable): _____

Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the public works project of _____

(Governmental Unit) in accordance with plans and specifications prepared by _____ and dated _____

for the sum of _____ \$ _____

The undersigned further agrees to furnish a bond or certified check with this bid for an amount specified in the notice of the letting. If alternative bids apply, the undersigned submits a proposal for each in accordance with the notice. Any addendums attached will be specifically referenced at the applicable page.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(If applicable)

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ACCEPTANCE

The above bid is accepted this _____ day of _____, _____, subject to the following conditions: _____

Contracting Authority Members:

PART II

(For projects of \$100,000 or more – IC 36-1-12-4)

Governmental Unit: _____

Bidder (Firm) _____

Date: _____

These statements to be submitted under oath by each bidder with and as a part of his bid. Attach additional pages for each section as needed.

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Complete Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Expected Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you? _____ If so, where and why?

4. List references from private firms for which you have performed work.

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed work. (Examples could include a narrative of when you could begin work, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)
2. Please list the names and addresses of all subcontractors (i.e. persons or firms outside your own firm who have performed part of the work) that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.
3. If you intend to sublet any portion of the work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.
4. What equipment do you have available to use for the proposed project? Any equipment to be used by subcontractors may also be required to be listed by the governmental unit.
5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which would corroborate the prices listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the bidder's capability for completing the project if awarded.

BID OF

(Contractor)

(Address)

FOR

PUBLIC WORKS PROJECTS

OF

Filed _____, _____

Action taken _____

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PRICE FORM

Failure to complete this form and submit by the Bid Deadline shall result in your Bid being deemed nonresponsive and rejected without any further evaluation.

The Airport Authority reserves the right to change the Estimated Quantities and their respective Item Sub-total and Total Price based on requirements of the Project. The successful Bidder (Contractor) will be paid for quantities installed in accordance with the Basis of Payment section of the Specifications. Unit Prices provided on this Price Form will be the prices used for any quantity additions and deductions required. **The Bidder must complete the Price Form either by hand writing in ink or typing prices in the spaces provided. Bidders must provide a Unit Price for all items.**

BID ITEMS

Spec	ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ITEM SUBTOTAL
P-101	101001	Cold Milling, 2" Depth	SYD	21,845		
C-105	105001	Mobilization	LS	1		
C-105	105002	Safety & Security	LS	1		
C-105	105003	Permits	DLR	5,000	\$1.00	\$5,000.00
InDOT 402	402001	HMA , Type C (12.5mm Intermediate PG 64-22)	TON	2,625		
P-621	621001	Runway Grooving	SYD	21,850		

LIST ITEMS BELOW THIS LINE BY ADDENDUM

Bid Total Price = \$ _____
(Amount in Numerals)

Bid Total Price = \$ _____
(Amount in Written Words)

Bidder Signature: _____

Title: _____

Company: _____

Date: _____

Email: _____

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ACKNOWLEDGEMENTS BY BIDDER

- a. By submittal of a proposal, the BIDDER acknowledges and accepts that the quantities established by the OWNER are an approximate estimate of the quantities required to fully complete the Project and that the estimated quantities are principally intended to serve as a basis for evaluation of bids. The BIDDER further acknowledges and accepts that payment under this contract will be made only for actual quantities and that quantities will vary in accordance with the General Provisions subsection entitled "Alteration of Work and Quantities".
- b. The BIDDER acknowledges and accepts that the Bid Documents are comprised of the documents identified within the Instructions to Bidders. The BIDDER further acknowledges that each the individual documents that comprise the Bid Documents are complementary to one another and together establishes the complete terms, conditions and obligations of the successful BIDDER.
- c. As evidence of good faith in submitting this proposal, the undersigned encloses a bid guaranty in the form of a certified check or bid bond in the amount of 5% of the bid price. The BIDDER acknowledges and accepts that refusal or failure to accept award and execute a contract within the terms and conditions established herein will result in forfeiture of the bid guaranty to the owner as a liquidated damage.
- d. The BIDDER acknowledges and accepts the OWNER'S right to reject any or all bids and to waive any minor informality in any Bid or solicitation procedure.
- e. The BIDDER acknowledges and accepts the OWNER'S right to hold all Proposals for purposes of review and evaluation and not issue a notice-of-award for a period not to exceed **sixty (60) calendar days** from the stated date for receipt of bids.
- f. The undersigned agrees that upon written notice of award of contract, he or she will execute the contract within fifteen (15) days of the notice-of-award and furthermore and provide executed payment and performance bonds within five (5) days from the date of contract execution. The undersigned accepts that failure to execute the contract and provide the required bonds within the stated timeframe shall result in forfeiture of the bid guaranty to the owner as a liquidated damage.
- g. Time of Performance: By submittal of this proposal, the undersigned acknowledges and agrees to commence work within **ten (10) calendar days** of the date specified in the written "Notice-to-Proceed" as issued by the OWNER. The undersigned further agrees to substantially complete the Project within **twelve (12) Calendar days** from the commencement date specified in the Notice-to-Proceed.
- h. The undersigned acknowledges and accepts that for each and every Calendar day the project remains incomplete beyond the contract time of performance, the Contractor shall pay the non-penal amount(s) as referenced in **Article 6 Liquidated Damages** to the OWNER.
- i. The undersigned acknowledges receipt of the following addenda:

Addendum Number ___ dated _____	Received _____
Addendum Number ___ dated _____	Received _____
Addendum Number ___ dated _____	Received _____
Addendum Number ___ dated _____	Received _____

REPRESENTATIONS BY BIDDER

By submittal of a proposal (bid), the BIDDER represents the following:

1. The BIDDER has read and thoroughly examined the bid documents including all authorized addenda.
2. The BIDDER has a complete understanding of the terms and conditions required for the satisfactory performance of project work.
3. The BIDDER has fully informed themselves of the project site, the project site conditions and the surrounding area.
4. The BIDDER has familiarized themselves of the requirements of working on an operating airport and understands the conditions that may in any manner affect cost, progress or performance of the work
5. The BIDDER has correlated their observations with that of the project documents.
6. The BIDDER has found no errors, conflicts, ambiguities or omissions in the project documents, except as previously submitted in writing to the owner that would affect cost, progress or performance of the work.
7. The BIDDER is familiar with all applicable Federal, State and local laws, rules and regulations pertaining to execution of the contract and the project work.
8. The BIDDER has complied with all requirements of these instructions and the associated project documents.

CERTIFICATIONS BY BIDDER

1. The undersigned hereby declares and certifies that the only parties interested in this proposal are named herein and that this proposal is made without collusion with any other person, firm or corporation. The undersigned further certifies that no member, officer or agent of OWNER’S has direct or indirect financial interest in this proposal.
2. **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion:** (49 CFR Part 29)

The Bidder certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any State or Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the Bidder or any lower tier participant is unable to certify to this statement, it shall attach an explanation to this solicitation/proposal.

ATTACHMENTS TO THIS BID

The following documents are attached to and made a part of this Bid:

1. Bid Guaranty _____
2. Evidence of BIDDER’S qualifications per the requirements of the Instructions-to-Bidders.

SIGNATURE OF BIDDER

IF AN INDIVIDUAL:

Name: _____
By: _____
(Signature of Individual)
Doing Business as: _____
Business Address: _____

Telephone Number: _____

IF A PARTNERSHIP:

Partnership Name: _____
By: _____
(Authorized Signature)
(Attach Evidence of Authority to sign as a Partnership)
Name and Title: _____
Business Address: _____

Telephone Number: _____

IF A CORPORATION:

Corporation Name: _____
By: _____
(Authorized Signature)
(Attach Evidence of Authority to sign)
Name and Title: _____
Business Address: _____ (CORPORATE SEAL)

Telephone Number: _____

ATTEST:

By: _____
(Authorized Signature)
Name and Title: _____

IF A JOINT VENTURE: *(Attach copy of Joint Venture Agreement)*

Joint Venture Name: _____

By: _____

(Authorized Signature)

(Attach Evidence of Authority to sign)

Name and Title: _____

Business Address: _____

Telephone Number: _____

Joint Venture Name: _____

By: _____

(Authorized Signature)

(Attach Evidence of Authority to sign)

Name and Title: _____

Business Address: _____

Telephone Number: _____

PERFORMANCE BOND

Bond Number

PRINCIPAL *(Legal Name and Business Address)*

STATE OF INCORPORATION

SURETY *(Legal Name and Business Address)*

CONTRACT NO.

CONTRACT DATE

PENAL SUM OF BOND *(Expressed in words and numerals)*

OBLIGATION

KNOW ALL PERSONS BY THESE PRESENTS, that the above named PRINCIPAL, hereinafter referred to and called CONTRACTOR, and the above named SURETY hereby bind themselves unto St. Joseph County Airport Authority, as OBLIGEE, hereinafter referred to and called OWNER, in the penal sum stated above, in lawful money of the United States of America to be paid to OWNER. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has entered into the written contract agreement identified hereinabove with the OWNER for the following project:

Project Name: Mill & Repave Various Locations

Project Location: South Bend International Airport

which said contract and associated contract documents, including any present or future amendment thereto, is incorporated herein by reference and is hereinafter referred to as the Contract.

CONDITION

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly and faithfully perform all undertakings, covenants, terms, conditions and agreements of the Contract during the original term of the Contract and any extensions thereof that are granted by the OWNER, with or without notice to the SURETY, and during the period of any guarantee or warranties required under the Contract, and if CONTRACTOR shall perform and fulfill all undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that hereafter are made, then this obligation shall be void; otherwise it shall remain in full force and effect subject to the following additional conditions:

1. SURETY, for value received, hereby stipulates and agrees that no change, extension of time, modification, omission, addition or change in or to the Contract, or the work performed thereunder or the specifications accompanying the same, shall in any way affect the SURETY'S obligation on this bond; and SURETY hereby agrees to waive notice of any and all such extensions, modifications, omissions, alterations, and additions to the terms of the Contract, work or specifications.
2. Whenever CONTRACTOR shall be and declared by the OWNER to be in default under the Contract, the Surety shall promptly and at the SURETY'S expense remedy the default by implementing one or more of the following actions:
 - a. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or
 - b. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - c. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract; arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER'S concurrence, to be secured with

performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract; and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the penal sum of the bond. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by OWNER to CONTRACTOR under the Contract and any amendments thereto, disbursed at the rate provided in the original contract, less the amount properly paid by OWNER to CONTRACTOR.

- d. With written consent of the OWNER, SURETY may waive its right to perform and complete, arrange for completion or obtain a new contractor and with reasonable promptness, investigate and determine the amount the SURETY is liable to the OWNER and tender payment therefor to the OWNER.
- 3. CONTRACTOR and SURETY agree that if in connection with the enforcement of this Bond, the OWNER is required to engage the services of an attorney, that reasonable attorney fees incurred by the OWNER, with or without suit, are in addition to the balance of the contract price.
- 4. No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the successors or assigns of the OWNER.

WITNESS

In witness whereof, this instrument is executed this the _____ day of _____, 20__.

INDIVIDUAL PRINCIPAL:

Company Name: _____
Signature: _____
Name and Title: _____

CORPORATE PRINCIPAL:

ATTEST:
Signature: _____
Name and Title: _____
(Affix Corporate Seal)

Corporate Name: _____
Signature: _____
Name and Title: _____

SURETY:

ATTEST:
Signature: _____
Name and Title: _____
(Affix Seal)

Surety Name: _____
Signature: _____
Name and Title: _____
(Attach Power of Attorney)

OWNER ACCEPTANCE

The OWNER approves the form of this Performance Bond.

Date: _____
ATTEST:
Signature: _____
Name and Title: _____
(Affix Seal)

Signature: _____
Name and Title: _____

PAYMENT BOND

Bond Number

PRINCIPAL *(Legal Name and Business Address)*

STATE OF INCORPORATION

SURETY *(Legal Name and Business Address)*

CONTRACT NO.

CONTRACT DATE

PENAL SUM OF BOND *(Expressed in words and numerals)*

OBLIGATION

KNOW ALL PERSONS BY THESE PRESENTS, that the above named PRINCIPAL, hereinafter referred to and called CONTRACTOR, and the above named SURETY hereby bind themselves unto St. Joseph County Airport Authority, as OBLIGEE, hereinafter referred to and called OWNER, in the penal sum stated above, in lawful money of the United States of America to be paid to OWNER. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has entered into the written contract agreement identified hereinabove with the OWNER for the following project:

Project Name: Mill & Repave Various Locations

Project Location: South Bend International Airport

which said contract and associated contract documents, including any present or future amendment thereto, is incorporated herein by reference and is hereinafter referred to as the Contract.

CONDITION

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly make payment to all employees, persons, firms or corporations for all incurred indebtedness and just claims for labor, supplies, materials and services furnished for or used in connection with the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect subject to the following additional conditions:

1. CONTRACTOR and SURETY indemnify and hold harmless the OWNER for all claims, demands, liens or suits that arise from performance of the Contract
2. SURETY, for value received, hereby stipulates and agrees that no change, extension of time, modification, omission, addition or change in or to the Contract, or the work performed thereunder or the specifications accompanying the same, shall in any way affect the SURETY'S obligation on this bond; and SURETY hereby agrees to waive notice of any and all such extensions, modifications, omissions, alterations, and additions to the terms of the Contract, work or specifications.
3. No final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.
4. The amount of this bond shall be reduced by and to the extent of any payments made in good faith hereunder.
5. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing

and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the SURETY under this Bond, subject to the OWNER'S priority to use the funds for the completion of the project.

WITNESS

In witness whereof, this instrument is executed this the _____ day of _____, 20__.

INDIVIDUAL PRINCIPAL:

Company Name: _____

Signature: _____

Name and Title: _____

CORPORATE PRINCIPAL:

ATTEST:

Corporate Name: _____

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

(Affix Corporate Seal)

SURETY:

ATTEST:

Surety Name: _____

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

(Affix Seal)

(Attach Power of Attorney)

OWNER ACCEPTANCE

The OWNER approves the form of this Payment Bond.

Date: _____

Signature: _____

Name and Title: _____

ATTEST:

Signature: _____

Name and Title: _____

(Affix Seal)

FORM OF CONTRACT AGREEMENT

St. Joseph County Airport Authority

THIS AGREEMENT, made as of _____, 2020 is

BY AND BETWEEN

the OWNER: **St. Joseph County Airport Authority**

And the CONTRACTOR:

WITNESSETH:

WHEREAS it is the intent of the Owner to make improvements at South Bend International Airport generally described as the Mill & Repave Various Locations, hereinafter referred to as the Project.

NOW THEREFORE in consideration of the mutual covenants hereinafter set forth, OWNER and CONTRACTOR agree as follows:

Article 1 - Work

It is hereby mutually agreed that for and in consideration of the payments as provided for herein to the CONTRACTOR by the OWNER, CONTRACTOR shall faithfully furnish all necessary labor, equipment, and material and shall fully perform all necessary work to complete the Project in strict accordance with this Contract Agreement and the Contract Documents.

Article 2 – Contract Documents

CONTRACTOR agrees that the Contract Documents consist of the following: this Agreement, General Provisions, Special Provisions, Specifications, Drawings, all issued addenda, Notice-to-Bidders, Instructions-to-Bidders, Proposal and associated attachments, Performance Bond, Payment Bond, Insurance certificates, documents incorporated by reference, documents incorporated by attachment, and all OWNER authorized change orders issued subsequent to the date of this agreement. All documents comprising the Contract Documents are complementary to one another and together establish the complete terms, conditions and obligations of the CONTRACTOR. All said Contract Documents are incorporated by reference into the Contract Agreement as if fully rewritten herein or attached thereto.

Article 3 – Contract Price

In consideration of the faithful performance and completion of the Work by the CONTRACTOR in accordance with the Contract Documents, OWNER shall pay the CONTRACTOR an amount equal to:

\$ _____

(Amount in Written Words)

(\$ _____)

(Amount in Numerals)

subject to the following:

- a. Said amount is based on the schedule of prices and estimated quantities stated in CONTRACTOR'S Bid Proposal, which is attached to and made a part of this Agreement;
- b. Said amount is the aggregate sum of the result of the CONTRACTOR'S stated unit prices multiplied by the associated estimated quantities;
- c. CONTRACTOR and OWNER agree that said estimated quantities are not guaranteed and that the determination of actual quantities is to be made by the OWNER'S ENGINEER;
- d. Said amount is subject to modification for additions and deductions as provided for within the Contract General Provisions.

Article 4 – Payment

Upon the completion of the work and its acceptance by the OWNER, all sums due the CONTRACTOR by reason of faithful performance of the work, taking into consideration additions to or deductions from the Contract price by reason of alterations or modifications of the original Contract or by reason of "Extra Work" authorized under this Contract, will be paid to the CONTRACTOR by the OWNER after said completion and acceptance.

The acceptance of final payment by the CONTRACTOR shall be considered as a release in full of all claims against the OWNER, arising out of, or by reason of, the work completed and materials furnished under this Contract.

OWNER shall make progress payments to the CONTRACTOR in accordance with the terms set forth in the General Provisions. Progress payments shall be based on estimates prepared by the ENGINEER for the value of work performed and materials completed in place in accordance with the Contract Drawings and Specifications.

Progress payments are subject to retainage requirements as set forth in the General Provisions.

Article 5 – Contract Time

The CONTRACTOR agrees to commence work within **five (5) calendar days** of the date specified in the OWNER'S Notice-to-Proceed. CONTRACTOR further agrees to substantially complete said work within **seven (7) calendar days** of the commencement date stated within the Notice-to-Proceed.

It is expressly understood and agreed that the stated Contract Time is reasonable for the completion of the Work, taking all factors into consideration. Furthermore, extensions of the Contract Time may only be permitted by execution of a formal modification to this Contract Agreement in accordance with the General Provisions and as approved by the OWNER.

Article 6 – Liquidated Damages

The CONTRACTOR and OWNER understand and agree that time is of essence for completion of the Work and that the OWNER will suffer additional expense and financial loss if said Work is not completed within the authorized Contract Time. Furthermore, the CONTRACTOR and OWNER recognize and understand the difficulty, delay, and expense in establishing the exact amount of actual financial loss and additional expense. Accordingly, in place of requiring such proof, the CONTRACTOR expressly agrees to pay the OWNER as liquidated damages the non-penal sum of **\$2,000.00 per day** for each calendar day in excess of the authorized Contract Time for phases that do not require the closure of Runway 9L/27R and **\$5,000.00 per day** for each calendar day in excess of the authorized Contract Time for phases that do require the closure of Runway 9L/27R.

Furthermore, the CONTRACTOR understands and agrees that;

- a. the OWNER has the right to deduct from any moneys due the CONTRACTOR, the amount of said liquidated damages;
- b. the OWNER has the right to recover the amount of said liquidated damages from the CONTRACTOR, SURETY or both.

Article 7 – CONTRACTOR'S Representations

The CONTRACTOR understands and agrees that all representations made by the CONTRACTOR within the Proposal shall apply under this Agreement as if fully rewritten herein.

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Part 3
Provisions

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Part 1 – General Contract Provisions

Section 10 Definition of Terms

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

Paragraph Number	Term	Definition
10-01	AASHTO	The American Association of State Highway and Transportation Officials.
10-02	Access Road	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
10-03	Advertisement	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
10-04	Airport	Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport.
10-05	Airport Improvement Program (AIP)	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
10-06	Air Operations Area (AOA)	The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.
10-07	Apron	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
10-08	ASTM International (ASTM)	Formerly known as the American Society for Testing and Materials (ASTM).

Paragraph Number	Term	Definition
10-09	Award	The Owner's notice to the successful bidder of the acceptance of the submitted bid.
10-10	Bidder	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.
10-11	Building Area	An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.
10-12	Calendar Day	Every day shown on the calendar.
10-13	Certificate of Analysis (COA)	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
10-14	Certificate of Compliance (COC)	The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.
10-15	Change Order	A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.
10-16	Contract	<p>A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment.</p> <p>The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.</p>
10-17	Contract Item (Pay Item)	A specific unit of work for which a price is provided in the contract.
10-18	Contract Time	The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including

Paragraph Number	Term	Definition
		authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.
10-19	Contractor	The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
10-20	Contractors Quality Control (QC) Facilities	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
10-21	Contractor Quality Control Program (CQCP)	Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.
10-22	Control Strip	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
10-23	Construction Safety and Phasing Plan (CSPP)	The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
10-24	Drainage System	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
10-25	Engineer	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.
10-26	Equipment	All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.
10-27	Extra Work	An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner's Engineer or

Paragraph Number	Term	Definition
		Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.
10-28	FAA	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
10-29	Federal Specifications	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
10-30	Force Account	<p>a. Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</p> <p>b. Owner Force Account - Work performed for the project by the Owner's employees.</p>
10-31	Intention of Terms	<p>Whenever, in these specifications or on the plans, the words “directed,” “required,” “permitted,” “ordered,” “designated,” “prescribed,” or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident Project Representative (RPR) is intended; and similarly, the words “approved,” “acceptable,” “satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner.</p> <p>Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.</p>
10-32	Lighting	A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
10-33	Major and Minor Contract Items	A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than

Paragraph Number	Term	Definition
		20% of the total amount of the award contract. All other items shall be considered minor contract items.
10-34	Materials	Any substance specified for use in the construction of the contract work.
10-35	Modification of Standards (MOS)	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
10-36	Notice to Proceed (NTP)	A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.
10-37	Owner	The term "Owner" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Owner" is capitalized in this document, it shall mean airport Sponsor only. The Owner for this project is the South Bend International Airport
10-38	Passenger Facility Charge (PFC)	Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.
10-39	Pavement Structure	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
10-40	Payment bond	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.
10-41	Performance bond	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.
10-42	Plans	The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.'

Paragraph Number	Term	Definition
10-43	Project	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.
10-44	Proposal	The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.
10-45	Proposal guaranty	The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.
10-46	Quality Assurance (QA)	Owner's responsibility to assure that construction work completed complies with specifications for payment.
10-47	Quality Control (QC)	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
10-48	Quality Assurance (QA) Inspector	An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
10-49	Quality Assurance (QA) Laboratory	The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory.
10-50	Resident Project Representative (RPR)	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.
10-51	Runway	The area on the airport prepared for the landing and takeoff of aircraft.
10-52	Runway Safety Area (RSA)	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.

Paragraph Number	Term	Definition
10-53	Safety Plan Compliance Document (SPCD)	Details how the Contractor will comply with the CSPP.
10-54	Specifications	A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.
10-55	Sponsor	A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.
10-56	Structures	Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.
10-57	Subgrade	The soil that forms the pavement foundation.
10-58	Superintendent	The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.
10-59	Supplemental Agreement	A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%; (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.
10-60	Surety	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.
10-61	Taxilane	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.

Paragraph Number	Term	Definition
10-62	Taxiway	The portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.
10-63	Taxiway/Taxilane Safety Area (TSA)	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.
10-64	Work	The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.
10-65	Working day	A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.
10-66	Owner Defined terms	None

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders). Included in Section 1 of the Proposal.

20-02 Qualification of bidders. All contractors and subcontractors shall be currently prequalified by the Indiana of Transportation

20-03 Contents of proposal forms. The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

Mobilization is limited to 10 percent of the total project cost.

A prebid conference is required on this project to discuss as a minimum, the following items: material requirements; submittals; Quality Control/Quality Assurance requirements; the construction safety and phasing plan including airport access and staging areas; and unique airfield paving construction requirements. The prebid conference location, date and time are included in the Advertisement (Notice to Bidders)

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

- a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.
- b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.
- c. Documented record of Contractor default under previous contracts with the Owner.
- d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans,

specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from their own examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 Preparation of proposal. The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Owner's invitation for bid. It is the Owner's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.
- f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked as shown in the in the Instructions to Bidders. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before

the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner/Owner's Representative by email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in paragraph 20-04, *Issuance of Proposal Forms*, of this section.

20-15 Discrepancies and Omissions. A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than 7 days prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

END OF SECTION 20

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Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

a. If the proposal is irregular as specified in Section 20, paragraph 20-09, *Irregular Proposals*.

b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within 90 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 *Approval of Contract*.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the paragraph 30-01, *Consideration of Proposals*. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in paragraph 30-05, *Requirements of Contract Bonds*.

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, *Requirements of Contract Bonds*, of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the

fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, *Execution of Contract*, of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Owner.

END OF SECTION 30

Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

40-03 Omitted items. The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, *Payment for Omitted Items*.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. Extra work that is necessary for acceptable completion of the project but is not within the general scope of the work covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (<http://mutcd.fhwa.dot.gov/>), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

- a. Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,
- b. Remove such material from the site, upon written approval of the RPR; or
- c. Use such material for the Contractor's own temporary construction on site; or,
- d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR's approval in advance of such use.

Should the RPR approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Owner.

END OF SECTION 40

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Section 50 Control of Work

50-01 Authority of the Resident Project Representative (RPR). The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR's written orders.

The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

50-04 List of Special Provisions.

Special Provision to General Contract Provisions

Special Provision to Technical Specifications

50-05 Cooperation of Contractor. The Contractor shall be supplied with five hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

50-06 Cooperation between Contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-07 Construction layout and stakes. The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): Microsoft Excel & Autocad Drawing

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

50-08 Authority and duties of Quality Assurance (QA) inspectors. QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, *Maintenance during Construction*, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be recovered as a liquidated damage against the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such

inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

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Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR's option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program and Addendum*, that is in effect on the date of advertisement.

60-02 Samples, tests, and cited specifications. All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the RPR.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

60-03 Certification of compliance/analysis (COC/COA). The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by “brand name or equal” and the Contractor elects to furnish the specified “or equal,” the Contractor shall be required to furnish the manufacturer’s certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
- b. Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed “or equal” is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

- a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.
- b. The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.
- c. If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer/ Resident Project Representative (RPR) field office. An Engineer/RPR field office is not required.

60-06 Storage of materials. Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor’s plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Owner’s permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The

Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

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Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) must be shown on the plans and is indicated as follows: None.

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal Participation. The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

70-07 Public convenience and safety. The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic*, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

70-08 Construction Safety and Phasing Plan (CSPP). The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is contained in the project plans.

70-09 Use of explosives. The use of explosives is not permitted on this project.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such “phasing” of the work must be specified below or indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor’s responsibility for work. Until the RPR’s final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor’s responsibility for utility service and facilities of others. As provided in paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities

during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's "Person to Contact" no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

70-15.1 FAA facilities and cable runs. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA/MDOT. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA/MDOT maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA/MDOT owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport Owner a minimum of
General Contract Provisions Section 70

Part 3 Provisions
Mill & Repave Various Locations

South Bend International Airport
Issued for Bid
June 12, 2020

seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA/MDOT cables, access roads, or FAA/MDOT facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA/MDOT facilities to FAA/MDOT requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA/MDOT.

e. If the project work requires the cutting or splicing of FAA/MDOT owned cables, the FAA/MDOT Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA/MDOT reserves the right to have a FAA/MDOT representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA/MDOT Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA/MDOT restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA/MDOT, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the RPR. The RPR will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, *Extra Work*, and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

70-21 Insurance Requirements. Insurance requirements are included in Special Provisions

END OF SECTION 70

Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least 25 percent of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

The Contractor shall provide copies of all subcontracts to the RPR 14 days prior to being utilized on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

80-02 Notice to proceed (NTP). The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within 10 days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR's review and acceptance at least 10 days prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include

information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

80-04 Limitation of operations. The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least 72 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) or as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the contract, plans, or specifications.

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The number of calendar days shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

80-07.1 Contract time based on calendar days. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the Notice to Proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract.

80-09 Default and termination of contract. The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the execution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or

- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

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Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term “lump sum” when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Measurement and Payment Terms

Term	Description
Excavation and Embankment Volume	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
Measurement and Proportion by Weight	The term “ton” will mean the short ton consisting of 2,000 pounds (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark.
Measurement by Volume	Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level

Term	Description
	capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
Asphalt Material	Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
Cement	Cement will be measured by the ton (kg) or hundredweight (km).
Structure	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
Timber	Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.
Plates and Sheets	The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.
Miscellaneous Items	When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
Scales	<p>Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.</p> <p>Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.</p> <p>In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials</p>

Term	Description
	<p>received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%.</p> <p>In the event inspection reveals the scales have been under-weighting (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded.</p> <p>Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.</p> <p>Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.</p> <p>All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.</p>
Rental Equipment	<p>Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 <i>Payment for Extra Work</i>.</p>
Pay Quantities	<p>When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.</p>

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

When the “basis of payment” subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, *Alteration of Work and Quantities*, will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or

indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in Section 40, paragraph 40-03, *Omitted Items*, the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the Owner for the initial 50 percent of the total contract work, and then 0 percent thereafter, for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

- (1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-14. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.
- (2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Owner evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, *Acceptance and Final Payment*.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the RPR at or on an approved site.
- b. The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the RPR with satisfactory evidence that the material and transportation costs have been paid.
- d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.
- e. The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 *Partial Payments*, the Contractor may request

General Contract Provisions Section 90
 Part 3 Provisions
 Mill & Repave Various Locations

South Bend International Airport
 Issued for Bid
 June 12, 2020

that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

- a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.
- b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.
- c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.
- d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, *Claims for Adjustments and Disputes*, or under the provisions of this paragraph, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work. Light Emitting Diode emitting diode (LED) light fixtures with the exception of obstruction lighting, must be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal

property, when that damage is the result of the Contractor's failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 Contractor Final Project Documentation. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with Section 40, paragraph 40-08, *Final Cleanup*.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual(s).

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

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SPECIAL PROVISIONS

THE FOLLOWING ARE MODIFICATIONS TO THE GENERAL CONTRACT PROVISIONS.

10-67 SUBSTANTIAL COMPLETION.

Add the following new definition:

10-53 SUBSTANTIAL COMPLETION. "Substantial Completion" refers to the date when the construction of a structure is sufficiently completed, in accordance with the plans and specifications, as modified by any complete change orders agreed to by the parties, so that it can be used for which it was intended.

20-02 PREQUALIFICATION OF BIDDERS.

Add the following:

Each bidder shall furnish to the owner with his bid executed Form 96 as prescribed by the Indiana State Board of Account accompanied by all other information specified in the "INSTRUCTIONS TO BIDDERS" Section in front of Document.

Any successful Bidder on Municipal, Township, County or State work in the State of Indiana, whose official address and/or place of business is outside the State of Indiana, must register with the Indiana State Department of Revenue and make arrangements for payment of State Gross or Adjusted Gross Income Tax. Satisfactory evidence of the registration must be submitted to the Owner prior to receipt of any progress payment.

20-05 INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES.

Add the following:

Work necessary for the completion of the project, which is not included as a contract item in the itemized proposal, shall be considered incidental and will not be paid for directly but shall be spread over other contract items.

30-07 APPROVAL OF CONTRACT.

Replace with the following:

30-07 APPROVAL OF CONTRACT. Upon receipt of the contract, insurance certificates and contract bond or bonds that have been executed by the successful bidder, the owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

40-01 ALTERATION OF WORK AND QUANTITIES.

Replace with the following:

40-02 ALTERATION OF WORK AND QUANTITIES. The owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. No change order shall be issued, which, in the aggregate, would exceed 20 percent of the original amount set forth in the Contract. Alterations which do not exceed the 20 percent limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations which are for work within the general scope of the contract shall be covered by "Change Orders" issued by the engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

40-05 MAINTENANCE OF TRAFFIC.

Add the following:

The Contractor will be assigned staging area(s) as shown on the plans. Materials and equipment remaining on the airport overnight will be moved to this location. Employees' vehicles will also be parked in this area during working hours only.

The Contractor shall construct and maintain all haul roads and staging areas required on airport property in bringing materials to the site. All haul roads and staging areas shall be restored to existing conditions, including removal of any stone or objectionable materials, topsoiling, seeding and sodding as required.

No separate payment for haul roads and their staging areas and their restoration will be included in the contract, except as indicated, but such work as necessary shall be spread over the various items in the contract.

The Contractor will prepare a weekly Safety and Phasing Report documenting that daily inspections by the Contractor have been made. This report is to be transmitted to the Engineer weekly. At a minimum the placement, condition and functionality of barricades and warning lights will be recorded. If any excavation or electrical work is completed during a day's operations, the airfield lighting must be powered on and its function verified.

40-06 REMOVAL OF EXISTING STRUCTURES.

Add the following:

All waste, pipe, wood, wire, brick, asphalt, fencing, structures, etc., not accepted by the Owner shall be disposed of off the Airport property, unless otherwise specified. The Contractor shall notify the Engineer of the dump site location. A release from the property owner will be required if this is not a public landfill.

50-03 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS.

Add the following:

Shop drawings shall govern all details of the work taking precedence over all other drawings.

50-05 COOPERATION OF CONTRACTOR.

Add the following:

The Contractor shall be responsible for keeping a legible and accurate field set of "Record" drawings. These drawings shall be submitted to the Engineer upon completion of the project.

50-12 MAINTENANCE DURING CONSTRUCTION.

Add the following:

The Contractor shall supply all temporary heat and light at his own expense for such periods of time and to maintain such temperature or light as is required for the proper protection and execution of the work.

60-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS.

Add the following:

The Contractor shall, at his own expense, prior to the manufacture or fabrication of any materials which he is to furnish and which are not built from detailed designs shown in the contract documents, submit for the approval of the Engineer, three (3) complete sets of detailed drawings of such material. These drawings shall be accurate and distinct and shall give all working dimensions, kinds of material to be used, kinds of machine work, finish to be applied and all like information. One (1) set of drawings furnished by the Contractor will be returned after approval by the Engineer. If required by the Engineer, the drawings shall be revised and three (3) sets of revised drawings shall be furnished until the approval of the Engineer has been obtained. The approval of the submitted drawings shall not be interpreted in any way to classify any particular work for payment.

If shop drawings show variations from the work required by the contract, because of standard shop practice or other similar reasons, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken by the engineer for proper price adjustment; otherwise, the Contractor will not be relieved of his responsibility for executing the work in accordance with the contract even though such shop drawings are approved by the Engineer.

The approval of such drawings by the Engineer relate only to the requirements for strength and detail and such approval will not relieve the contractor from responsibility for errors, or responsibility for the adequacy or safety or falsework, cofferdams, or other temporary work. Authorized alterations will be endorsed on approval plans or shown on supplementary sheets. Any work done or material ordered prior to the approval of such plans and drawings shall be at the Contractor's risk.

When detailed plans are required, they shall be submitted to the Engineer for approval. They shall be signed by and bear the seal of a Registered Professional Engineer.

Only shop drawings officially stamped as approved by the Engineer will be permitted for use during construction.

60-06 STORAGE OF MATERIALS.

Add the following:

No shanties, garages, buildings for storage of materials, or any other purpose shall be erected on land owned or leased by the Owner, unless a permit in writing is secured from the owner, allowing their construction. Should permission be asked and granted, the Contractor must comply with all local regulations regarding the construction and maintenance of such buildings.

Shipments of materials to be used by the Contractor or any subcontractor shall be delivered to the job site only during regular working hours. All shipments and shipping papers shall be addressed and consigned to the Contractor. Under no circumstances shall shipments be delivered to or in care of the owner or his representatives.

The Owner shall not be responsible for the loss of, or the security of, the materials, tools or equipment of the Contractor or subcontractors.

70-02 PERMITS, LICENSES, AND TAXES.

Add the following:

The Contractor will be required to furnish a certificate from the Indiana State Industrial Board as evidence that he has complied with the provisions of the "Indiana Workmen's Compensation Act", and also the "Indiana Workmen's Occupational Diseases Act", Chapter 69 of the Acts of the Indiana General Assembly, 1937.

If the Contractor is a foreign (out of State) corporation, he shall be required to furnish a certificate from the Secretary of the State of Indiana showing that the corporation is registered and authorized to transact business in the State of Indiana, as required by the Indiana General Corporation Act as stated therein and expressed in the Attorney General's Opinion #2, dated January 13, 1958.

70-06 SANITARY, HEALTH, AND SAFETY PROVISIONS.

Add the following:

The Contractor shall be responsible for all obligations prescribed as employer obligations under Chapter XVII of Title 29, Code of Federal Regulations, Part 1926, otherwise known as "Safety and Health Regulations for Construction."

The Contractor shall also be responsible for all obligations under 29 CFR Part 1926 Occupational Safety and Health Standards, as part of the Contract Documents.

The Contractor shall provide sanitary facilities for employees at the construction areas. No airport facilities will be used.

All employees of the Contractor shall be of a legal age as set out in the Federal, State or local Statutes (whichever is binding). Only those persons associated with the construction of said project will be permitted on the construction site. No under age persons will be allowed on site under any circumstances. The Engineer shall have the authority to ask these persons to leave the site.

70-10 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE.

Add the following:

All debris deposited on any active aircraft operation pavement due to construction activities shall be removed immediately. Methods for removal of large debris such as gravel, dirt clods, concrete pieces, material containers, etc., shall be subject to the approval of the Engineer. Dust control for debris shall be performed with hand tools and self-propelled truck-type vacuum cleaners as approved by the Engineer.

Seeding for areas of restoration shall be in accordance with Item T-901, " Seeding".

70-11 RESPONSIBILITY FOR DAMAGE CLAIMS.

Add the following:

TYPE OF INSURANCE		LIMITS
GENERAL LIABILITY-	EACH OCCURRENCE	\$2,000,000
	FIRE DAMAGE (Any one person)	\$2,000,000
	MEDICAL EXPENSE (Any one person)	\$5,000
	PERSONAL & ADV INJURY	\$2,000,000
	GENERAL AGGREGATE	\$2,000,000
	PRODUCT-COMP/OP AGG	\$2,000,000
AUTOMOBILE LIABILITY-	COMBINED SINGLE LIMIT (ea accident)	\$2,000,000
EXCESS LIABILITY-	EACH OCCURRENCE	\$5,000,000
	AGGREGATE	\$5,000,000
WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		WC STATUTORY LIMITS

The Contractor shall carry in full force and effect during the period of contractual operations, insurance necessary to comply with the requirements of Indiana Workmen's Compensation Act of the State of Indiana. Also, the Contractor shall carry in full force and effect during the period of contractual operations, Occupations Diseases Insurance, as set out in the Indiana Workman's Occupational Diseases Act, and shall file with the Owner an Indiana Industrial Board Form 18A showing that the said Workmen's Compensation and Occupational Diseases Insurance are in force during the period of contractual operations. The Contractor shall use his insurance carriers to furnish certificates for Compensation and Occupational Diseases Insurance to the Owner, showing names of companies, expiration date(s) and policy number(s). If an expiration date on any of these policies occurs prior to the completion and acceptance of the project, an addendum certificate shall be furnished showing the expiration date.

The Contractor shall purchase and maintain until final payment, property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided herein or required by Laws and Regulations). This insurance shall include the interest of Owner, Contractor, Subcontractors, Engineer and Engineer's Consultants in the Work (all of whom shall be listed as insureds or additional insured parties), shall insure against the perils of fire and extended coverage, shall include "all-risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in Herein, and shall include damages, losses and expenses arising out

of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all-risk" insurance or otherwise provided in Herein, Contractor shall purchase and maintain similar property insurance on portions of the work stored on and off the site or in transit when such portions of the work are to be included in an Application for Payment.

Insurance is required as a measure of protection and the Contractor's liability is not to be limited by the amounts specified in the required insurance policies. There shall be no additional compensation for complying with these insurance requirements. The Contractor is assumed to have included costs of such insurance in his bid items.

70-19 ENVIRONMENTAL PROTECTION.

Add the following:

To minimize the adverse environmental effects of construction operations, the following restrictions will be placed upon the Contractor's carrying out the work:

- a. All drilling apparatus which may be necessary to carry out the work will be equipped with dust controlling systems.
- b. Minimum areas of land will be exposed for minimum lengths of time reasonably necessary to carry out the construction processes.
- c. Temporary mulch, with or without seeding, will be used on disturbed earth areas.
- d. The use of water sprinkler trucks may be required during certain periods if reasonably necessary to control the amount of dust raised during the earthwork items.
- e. Application rates of herbicides will be restricted to recommended dosages.
- f. Construction materials will be covered when not in use to protect the materials from the natural elements, and to protect the surrounding areas from pollution by escape of the materials.
- g. Application equipment and empty containers will not be rinsed or discharged in a place or manner so as to pollute natural or underground water channels or flows.
- h. Bituminous mixing plants will be equipped with a dust collector, which will waste or uniformly return to the hot elevator, all or any part of the material so collected.
- i. Construction operations may be delayed until climate and wind conditions will reasonably dissipate or inhibit the potential pollutants in a manner satisfactory to the Engineer.
- j. Appropriate gradients will be selected for backslopes and channels and proper provision of berms, drainage features, soil stabilization, pavement, and turf will be made to control or prevent erosion due to wind or water.
- k. Construction of berms, dikes, dams, drains and sediment basins, or use of fiber mats, woven plastic filter cloths, gravel, mulches, quick growing grasses, sod, bituminous spray,

and other erosion control devices will be required where necessary to reasonably insure that soil erosion that might cause water pollution is kept to a minimum.

l. The Contractor will be required to submit to the Engineer for acceptance, schedules for accomplishment of temporary erosion and pollution control work. The Contractor will also be required to submit for acceptance by the Engineer, his proposed method of operation for control of erosion on construction or haul roads and borrow pits, and his plan for disposal of waste materials or erosion control details for other potential sources of pollution.

m. The Contractor will be required to complete all permanent erosion control features at the earliest practicable time.

n. Temporary pollution control features and measures will be used to correct unforeseen conditions that occur during construction or those that are needed prior to completion of the permanent measures.

o. The surface area of erodible earth material to be exposed by clearing and grubbing, excavation, or borrow and fill shall be limited to reasonable areas.

p. Temporary bridges over surface watercourses will be required wherever crossings would otherwise adversely affect sediment levels and an appreciable number of watercourse crossings are necessary.

q. All waterways will be promptly cleared by the Contractor of falsework, piling, debris, or other obstructions placed during construction work and not a part of the finished work.

r. Water from aggregate washing or other operations containing sediment will be treated by filtration, a settling basin or other means sufficient to reduce the sediment content to not more than that of the waterway into which the water will be discharged.

s. Pollutants, such as fuels, lubricants, bitumens, raw sewage, and other harmful materials will not be discharged into or near surface waterways or into natural or manmade channels leading thereto. Wash water or waste from concrete mixing or curing operations will not be allowed to enter the waterways.

t. Controls to minimize dust, erosion and sedimentation will be instituted as required by the guidelines set forth in the Federal Aviation Administration Circulars 150/5370-10, "Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control", and 150/5370-7 "Airport Construction Controls to Prevent Air and Water Pollution".

u. Runway closure conditions will be kept to a minimum in an effort to minimize inconvenience to users of the Airport.

The erosion control features installed by the Contractor will be acceptably maintained by the Contractor during the time that construction work is being done. The Owner reserves the right to employ outside assistance to provide necessary corrective pollution control measures in case of repeated failures on the part of the Contractor to do so.

Guidelines as cited in Federal Aviation Administration Circular 150/5370-2, current edition, "Operational Safety on Airports During Construction", will be enforced where applicable. In the event of conflict between these requirements and pollution control laws, State or local agencies, the more restrictive laws, rules or regulations will apply.

80-03 EXECUTION AND PROGRESS.

Add the following:

Any employee of a Contractor or Subcontractor considered by the Owner to be a risk to public safety and security will be prohibited from entering the security area.

The Contractor shall be responsible for maintaining existing security fencing in the construction area for the duration of the project. All unmanned gates shall be closed and locked.

The Contractor assures that no action by his operation will cause a safety and/or security violation. The Contractor shall be responsible for any penalty fees levied the airport by the FAA due to the construction area not being secured.

Any safety and security work as described herein and on the Construction Plans shall be measured and paid for by the contract unit price per month or fraction thereof based on a 30 day month. If safety and security does not have a separate pay item, it shall be considered a necessary incidental to the work and not paid for directly, but included in the cost of other work.

80-05 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT.

Replace the second paragraph of this subsection with the following:

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily. Any person employed by the Contractor or by a subcontract or who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer. Should the Contractor fail to remove such person or persons or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

90-06 PARTIAL PAYMENTS.

Add the following:

The Airport will include in each application for payment of the prime contract, which performs a DOT-assisted project the following clause:

“The undersigned CONTRACTOR certifies that (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with Work covered by all prior Applications for Payments inclusive; (2) title to all materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all liens, claims, security interests and encumbrances (except such as covered by Bond acceptable to OWNER); (3) any delay or postponement of payment among the parties, except for normal retainage amounts withheld by the OWNER, may take place only for good cause, with OWNER prior written approval; (4) appropriate alternative dispute resolution mechanisms, such as non-binding mediation, Indiana Rules of Alternative Dispute Resolution and Arbitration Rules of the American Arbitration

Association, is implemented to resolve payment disputes; and (5) appropriate provisions are inserted in all subcontracts binding Subcontractors to the terms and conditions of the Contract Documents.

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from the Owner. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Owner. {This clause applies to both DBE and non-DBE subcontractors. Prompt Payment (49 CFR 26 §26.29)}”

90-08 PAYMENT OF WITHHELD FUNDS.

Replace with the following:

90-08 PAYMENT OF WITHHELD FUNDS. The retainage will be withheld from each progress payment in accordance with Indiana Code 36-1-12-14. The retainage amount shall equal to ten percent (10%) of the value of the work for the initial fifty percent (50%) of the total contact, and then 0% thereafter.

THE FOLLOWING ARE MODIFICATIONS TO THE TECHNICAL PROVISIONS.

ITEM INDOT-402 HOT MIX ASPHALT (HMA) PAVEMENTS.

INDOT 402 Type C, 12.5.0 mm Intermediate, PG 64-22 HMA shall be used and applied in accordance with Indiana Department of Transportation Standard Specifications most current edition, Section 402.

Modify table "HMA mixtures utilizing RAP or RAS or a blend of RAP and RAS" in Section 402.8 Recycled Materials to allow a MAXIMUM BINDER REPLACEMENT, % of 20%

END OF SPECIAL PROVISIONS

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Part 4

Technical Provisions

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Item P-101 Preparation/Removal of Existing Pavements

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

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). 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.

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. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of 2". 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 perimeter of the area to be removed. If the material is to be wasted on the airport site or incorporated into embankment, it shall meet the following gradation:

Sieve	Minimum Percentage by weight passing sieves
2 inch (51 mm)	100
No. 4 (4.75 mm)	55
No. 200 (75 µm)	0-15

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. 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). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all 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 inch 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.

Cracks and joints 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.

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. 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 prior to remarking. 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 in the field during construction.

High-pressure water, wire brush, and sandblasting may be used. 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 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.

Removal of foreign substances shall not proceed until approved by the RPR. 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 spalled concrete as shown on the plans or as directed by the RPR. 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. 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. 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 off Airport property or in areas designated on the plans. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense. If the material is to be wasted on the airport site or incorporated into embankment, it shall meet the following gradation:

Sieve	Minimum Percentage by weight passing sieves
2 inch (51 mm)	100
No. 4 (4.75 mm)	55
No. 200 (75 μ m)	0-15

a. Patching. 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 shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm)

widths. 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. 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 off the airport or as designated on the plans. If the material is to be wasted on the airport site or incorporated into embankment, it shall meet the gradation shown in 101-3.5.

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 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 cracks in accordance with paragraph 101-3.2.

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.

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. 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. 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. 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. 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 Item P-605.

101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing. 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 cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with router 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. Existing sealants will be removed by routing. Following routing 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.

METHOD OF MEASUREMENT

101-4.1 Cold Milling. The unit of measurement for pavement cold milling shall be the number of square yards (square meters) milled and 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.

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, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item 101001	Cold Milling, 2" Depth - per square yard
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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.
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ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
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END OF ITEM P-101

Item C-105 Mobilization

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to 10 percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster “Equal Employment Opportunity is the Law” in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL “Notice to All Employees” Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 Construction Safety and Phasing. All materials required for Contractor compliance with the approved Construction Safety and Phasing Plan and Safety Plan Compliance Document shall be as indicated on the plan sheets and as directed by the Engineer.

105-5 Safety & Security. Unless otherwise noted, the Contractor shall erect and maintain all traffic control devices - signs, barricades, gates, flagman, etc., as indicated in the contract documents and on the construction plans. This shall include both airside and landside barricades. Landside barricades shall adhere to the Manual of Uniform Traffic Control Devices or Streets and Highways. Airside Barricades shall adhere to FAA AC 150/5370-2 (current edition). All barricades and traffic control devices shall be placed as shown on the Construction Safety Phasing Plan and as detailed in the Construction Safety Phasing Notes. The number and placement of standard or modified barricades may be altered as determined by the Engineer at no additional cost to the Owner.

All safety and security work including guards, escort service, temporary marking and lighting, equipment and personnel hauling, equipment marking and lighting and equipment, such as radios for monitoring air traffic ground control necessary to maintain construction traffic shall be included.

105-6 Production Staking by Contractor. The Contractor shall be required to perform production staking as indicated on the plans. At a minimum local control should be set by the contractor to establish a before and after grade to verify the amount of asphalt placed. The contractor is also to stake or mark the pavement markings to assist the owner in re-establishing the pavement markings.

METHOD OF MEASUREMENT

105-6.1 Mobilization and General Conditions shall be measured as a lump sum item and shall include preparatory, continuing, and close out operations which are necessary direct costs to the Contractor but are of a general nature and not directly attributable to, or specified as incidental to, other contract pay items. This item shall include, but is not limited to, movement of personnel, equipment, supplies and incidentals to the project sites; establishment of the Contractor’s offices, buildings, and facilities necessary to undertake the work; operations which must be performed and costs incurred prior to beginning work on other pay items; preconstruction costs exclusive of bidding costs, including public and private utility investigation and locating; continuing general conditions and general maintenance of the contract; restoration and general clean-up of the contract areas; and other similar costs.

105-6.2 Safety and Security shall be measured as a lump sum item and shall include direct costs to the Contractor involving safety of aircraft, on site surface transportation, and the general public, which costs are not directly attributable to, or specified as incidental to, other contract pay items. This item shall

include, but is not limited to, furnishing, installing, maintaining, moving and removing of all necessary temporary signs, flags, barricades, lights, and devices, to protect air traffic in active air operations areas, and affected pedestrians and surface transportation in contract areas; operations and vehicle identification devices on controlled airports; providing security of Contractor's areas and openings in boundaries of airports; and other similar costs.

105-6.3 Permit applications and payments will be made by the Contractor. A \$5,000 allowance has been made in this item for obtaining permits and must be bid accordingly. Once the actual permits have been determined and receipts submitted to the Engineer, the amount for this item will be adjusted to the actual cost. It is the responsibility of the contractor to determine if other permits are required.

105-6.4 Production Staking by Contractor shall not be measured for separate payment.

BASIS OF PAYMENT

105-7.1 Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

- a. With first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, Contractor Final Project Documentation, the final 10%.

The total sum of all payments for this item shall not exceed the original contract amount bid for Mobilization and General Conditions, regardless of the fact that the Contractor may have to for any reason, shut down work on the project, move equipment away from the project and then back again, or for additional quantities or items of work added to the contract.

105-7.2 Based upon the contract lump sum price for Safety and Security, partial payments will be allowed as follows:

- a. When 5% or more of the original contract is earned, 15%.
- b. When 15% or more of the original contract is earned, an additional 5%.
- c. When 25% or more of the original contract is earned, an additional 5%.
- d. When 50% or more of the original contract is earned, an additional 25%.
- e. When 75% or more of the original contract is earned, an additional 25%.
- f. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by 90-11, the final 25%.

105-7.3 The Contractor will be reimbursed at the actual per dollar cost of permit fees required for completion of the project, as determined by the Contractor and submitted to the Engineer.

105-7.4 There will be no direct payment for production staking by contractor. The work shall be considered incidental to other items.

105-6 Payment will be made under:

- | | |
|-------------|------------------------------------|
| Item 105001 | Mobilization – per lump sum |
| Item 105002 | Safety and Security – per lump sum |

Item 105003 Permits – per dollar

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.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

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SECTION 402 – HOT MIX ASPHALT, HMA, PAVEMENT

402.1 Description

This work shall consist of one or more courses of miscellaneous mixtures constructed in accordance with 105.03.

402.2 Quality Control

The HMA shall be supplied from a certified HMA plant in accordance with ITM 583; Certified Hot Mix Asphalt Producer Program. The HMA shall be transported and placed according to a Quality Control Plan, QCP, prepared and submitted by the Contractor in accordance with ITM 803; Contractor Quality Control Plans for Hot Mix Asphalt Pavements. The QCP shall be submitted to the Engineer at least 15 days prior to commencing HMA paving operations.

When a safety edge is required for a project, the QCP shall identify the device or devices in accordance with 409.03(c) to be used for constructing the safety edge.

MATERIALS

402.03 Materials

Materials shall be in accordance with the following:

- Asphalt Materials
 - PG Binder 902.01(a)
 - Coarse Aggregates 904
 - Base Mixtures – Class D or Higher Intermediate
 - Mixtures – Class C or Higher Surface Mixtures*
 - Class B or Higher
 - Fine Aggregates..... 904
- * Surface aggregate requirements are listed in 904.03(d).

402.3 Design Mix Formula

A DMF shall be prepared in accordance with 402.05 and submitted in a format acceptable to the Engineer one week prior to use. The DMF shall state the maximum particle size in the mixture, the calibration factor and test temperature to be used for the determination of binder content using ITM 586 or ITM 571, and a MAF. Approval of the DMF will be based on the ESAL and mixture designation as follows.

Mixture Type	Type A	Type B	Type C	Type D
Design ESAL	200,000	2,000,000	9,000,000	11,000,000
Surface	4.75 mm	4.75 mm	4.75 mm	4.75 mm
	9.5 mm	9.5 mm	9.5 mm	9.5 mm
	12.5 mm	12.5 mm	12.5 mm	12.5 mm
Surface – PG Binder	64-22	64-22	70-22	70-22
Intermediate	9.5 mm	9.5 mm	9.5 mm	9.5 mm
	12.5 mm	12.5 mm	12.5 mm	12.5 mm
	19.0 mm	19.0 mm	19.0 mm	19.0 mm

	25.0 mm	25.0 mm	25.0 mm	25.0 mm
Intermediate – PG Binder	64-22	64-22	64-22	70-22
Base	19.0 mm	19.0 mm	19.0 mm	19.0 mm
	25.0 mm	25.0 mm	25.0 mm	25.0 mm
Base – PG Binder	64-22	64-22	64-22	64-22

Surface 4.75 mm mixtures shall not be used when the required lay rate shown on the plans is greater than 100 lb/sq yd. Surface 12.5 mm mixtures shall not be used when the required lay rate shown on the plans is less than 195 lb/sq yd.

The plant discharge temperature for any mixture shall not be more than 315°F whenever PG 58-28, PG 64-22, PG 64-28 or PG 70-22 binders are used or 325°F whenever PG 70-28 or PG 76-22 binders are used. HMA may be produced using a water-injection foaming device. The DMF shall list the minimum and maximum plant discharge temperatures as applicable to the mixture.

The Engineer will assign a mixture number. No mixture will be accepted until the DMF has been approved.

402.4 Volumetric Mix Design

The DMF shall be determined for each mixture from a volumetric mix design in accordance with 401.05.

A DMF developed for a QC/QA HMA mixture may be used and the source or grade of the binder may be changed; however, the high temperature grade shall meet the minimum requirements of 402.04.

The MAF equals the Gmm from the mixture design divided by the following: 2.465 for 9.5 mm mixtures and 2.500 for 12.5 mm, 19.0 mm, and 25.0 mm mixtures. If the MAF calculation results in a value where $0.980 \leq \text{MAF} \leq 1.020$, then the MAF shall be considered to be 1.000. If the MAF is greater than 1.020, the calculated MAF value shall have 0.020 subtracted from the value. If the MAF is less than 0.980, the calculated MAF value shall have 0.020 added to the value.

402.6 Job Mix Formula

The job mix formula, JMF, shall be an approved JMF in accordance with 401.08 of the same gyratory compaction effort ESAL category or higher, and submitted in a format acceptable to the Engineer and shall use the same MAF as the DMF. The JMF shall state the maximum particle size in the mixture and the calibration factor and test temperature to be used for the determination of binder content using the ignition oven. Approval of the JMF will be based on the ESAL and mixture designation. No mixture will be accepted until the JMF has been approved.

All changes in the type or source of aggregate shall require the submittal of a new DMF for approval.

402.7 Mix Criteria

~~(a) Composition Limits for HMA Transverse Rumble Strip Mixtures~~

~~Transverse rumble strip mixtures shall be type A surface in accordance with 402.04. A MAF in accordance with 402.05 will not apply. Aggregate requirements of 904.03(d) do not apply.~~

~~(b) Composition Limits for HMA Wedge and Leveling Mixtures~~

~~The mixture shall consist of surface or intermediate mixtures in accordance with 402.04. Aggregate requirements of 904.03(d) do not apply when the wedge and leveling mixture is covered by a surface or intermediate mixture.~~

~~(c) Composition Limits for Temporary HMA Mixtures~~

~~Temporary HMA mixtures shall be the type specified in accordance with 402.04. A MAF in accordance with 402.05 will not apply.~~

~~(d) Composition Limits for HMA Curbing Mixes~~

~~The mixture shall be HMA surface type A in accordance with 402 except 402.05 shall not apply and RAP shall not be used. The binder content shall be 7.0% and the gradations shall meet the following.~~

HMA CURBING GRADATIONS	
Sieve Size	Percent Passing
1/2 in. (12.5 mm)	100.0
3/8 in. (9.5 mm)	80.0 – 100.0
No. 4 (4.75 mm)	73.0 ± 5.0
No. 30 (600 µm)	20.0 – 50.0
No. 200 (75 µm)	6.0 – 12.0

~~A DMF shall be prepared in accordance with the above table and submitted in a format acceptable to the Engineer one week prior to use. The DMF shall state the calibration factor and test temperature to be used for the determination of binder content using ITM 586 or ITM 571.~~

402.8 Recycled Materials

Recycled materials may consist of reclaimed asphalt pavement, RAP, or reclaimed asphalt shingles, RAS or a blend of both. RAP shall be the product resulting from the cold milling or crushing of an existing HMA pavement. The RAP shall be processed so that 100% will pass the 2 in. (50 mm) sieve when entering the HMA plant. The RAP coarse aggregate shall pass the maximum size sieve for the mixture being produced and the RAS shall be 100% passing the 1/2 in. (12.5 mm) sieve. RAP for the type C and D surface mixtures shall be 100% passing the 3/8 in. (9.5 mm) sieve and 95 to 100% passing the No. 4 (4.75 mm) sieve.

Recycled materials may be used as a substitute for a portion of the new materials required to produce HMA mixtures. The amount of total binder replaced by binder in the recycled

material shall be computed as follows:

$$\text{Binder Replacement, \%} = \frac{(A \times B) + (C \times D)}{E} \times 100\%$$

where:

- A = RAP, % Binder Content
- B = RAP, % in Mixture
- C = RAS, % Binder Content
- D = RAS, % in Mixture
- E = Total, % Binder Content in Mixture

RAS may be obtained from either pre-consumer or post-consumer asphalt shingles. Post-consumer asphalt shingles shall be in accordance with AASHTO MP 15 and prepared by a processing company with an IDEM Legitimate Use Approval letter. A copy of this letter shall be submitted to the Engineer. Deleterious material present in post-consumer asphalt shingles shall be limited to the percentages stated in AASHTO MP 15. Pre-consumer and post-consumer asphalt shingles shall not be blended for use in HMA mixtures and shall be stockpiled separately from other materials.

The recycled material percentages shall be as specified on the DMF. HMA mixtures utilizing recycled materials shall be limited to the binder replacement percentages in the following table:

HMA mixtures utilizing RAP or RAS or a blend of RAP and RAS

MAXIMUM BINDER REPLACEMENT, %							
Mixture Category	Base and Intermediate				Surface		
	Dense Graded				Dense Graded		
	25.0 mm	19.0 mm	12.5 mm	9.5 mm	12.5 mm	9.5 mm	4.75 mm
A	40.0*				40.0*		
B	40.0*				40.0*		
C	40.0*				25.0		
D	40.0*				25.0		

*RAS materials shall not contribute more than 25% by weight of the total binder content for any HMA mixture.

The combined aggregate properties shall be in accordance with 904. The combined aggregate bulk specific gravity shall be determined in accordance with ITM 584 and the combined aggregate gradation shall be in accordance with 401.05 for the HMA mixture specified.

HMA mixtures with a binder replacement less than or equal to 25.0% by weight of the total binder content by utilizing RAP or RAS or a blend of RAP and RAS materials shall use the specified binder grade.

HMA mixtures with a binder replacement greater than 25.0% and less than or equal to 40.0% by weight of the total binder content by utilizing RAP or a blend of RAP and RAS shall

use a binder grade with upper and lower temperature classifications reduced by 6°C from the specified binder grade. RAS materials shall not contribute more than 25.0% by weight of the total binder content for any HMA mixture.

402.9 Acceptance of Mixtures

Acceptance of mixtures will be in accordance with the Frequency Manual on the basis of a type D certification in accordance with 916. The test results shown on the certification shall be the quality control tests representing the material supplied and include air voids and binder content. Air voids tolerance shall be $\pm 1.5\%$ and binder content tolerance shall be $\pm 0.7\%$ from DMF or JMF.

Single test values and averages will be reported to the nearest 0.1%. Rounding will be in accordance with 109.01(a).

Test results exceeding the tolerance limits will be considered as a failed material and adjudicated in accordance with 105.03.

CONSTRUCTION REQUIREMENTS

402.10 General

Equipment for HMA operations shall be in accordance with 409. The Contractor shall submit to the Engineer prior to use a written Certificate of Compliance that the proposed paving equipment has been modified in accordance with 401.10 or is new and includes the modifications.

Fuel oil, kerosene, or solvents shall not be transported in open containers on any equipment at any time. Cleaning of equipment and tools shall not be accomplished on the pavement or shoulder areas.

Segregation, flushing or bleeding of HMA mixtures will not be allowed. Corrective action shall be taken to prevent continuation of these conditions. Areas of segregation, flushing or bleeding shall be corrected, if directed. All areas showing an excess or deficiency of asphalt materials shall be removed and replaced.

All mixtures that become loose and broken, mixed with dirt, or is in any way defective shall be removed and replaced.

Mixture shall not be dispatched from the plant that cannot be spread and compacted before sundown of that day, unless otherwise specified.

402.11 Preparation of Surfaces to be Overlaid

The subgrade shall be shaped to the required grade and sections, free from all ruts, corrugations, or other irregularities, and uniformly compacted and approved in accordance with 207. Milling of an existing surface shall be in accordance with 306. Surfaces on which a mixture is placed shall be free from objectionable or foreign materials at the time of placement.

Prior to placing an open graded mixture, the underlying HMA course shall have a full width base seal applied in accordance with 415. The base seal materials shall be applied within three calendar days upon completion of paving the underlying HMA course.

Compacted aggregate bases and rubblized bases shall be primed in accordance with 405. PCCP, milled asphalt surfaces, and asphalt surfaces shall be tacked in accordance with 406. Contact surfaces of curbing, gutters, manholes, and other structures shall be tacked in accordance with 406.

402.12 Weather Limitations

HMA courses less than 110 lb/sq yd are to be placed when the ambient and surface temperatures are 60°F or above. HMA courses equal to or greater than 110 lb/sq yd but less than 220 lb/sq yd are to be placed when the ambient and surface temperatures are 45°F or above. HMA courses equal to or greater than 220 lb/sq yd and HMA curbing are to be placed when the ambient and surface temperatures are 32°F or above. Mixture shall not be placed on a frozen subgrade. However, HMA courses may be placed at lower temperatures, provided the density of the HMA course is in accordance with 402.16.

All partially completed sections of roadway that are 8 in. or less in thickness shall be proofrolled prior to the placement of additional materials unless otherwise directed by the Engineer. Proofrolling shall be accomplished in accordance with 203.26. The contact pressure shall be 70 to 80 psi. Soft yielding areas shall be removed and replaced.

402.13 Spreading and Finishing

The mixture shall be placed upon an approved surface by means of laydown equipment in accordance with 409.03(c). Prior to paving, both the planned quantity and lay rate shall be adjusted by multiplying by the MAF. When mixture is produced from more than one DMF or JMF for a given pay item, the MAF will be applied to the applicable portion of the mixture for each. Mixtures in areas inaccessible to laydown equipment or mechanical devices may be placed by other methods.

The temperature of each mixture at the time of spreading shall not be more than 18°F below the minimum mixing temperature as shown on the DMF or JMF.

Planned HMA courses greater than 220 lb/sq yd placed under traffic shall be brought up even with each adjacent lane at the end of each work day. Planned HMA courses less than or equal to 220 lb/sq yd shall be brought forward concurrently, within practical limits, limiting the work in one lane to not more than one work day of production before moving back to bring forward the adjacent lane. Traffic shall not be allowed on open graded mixtures.

Hydraulic extensions on the paver will not be allowed for continuous paving operations. Fixed extensions or extendable screeds shall be used on courses greater than the nominal width of the paver except in areas where the paving widths vary. Hydraulic extensions may be used on approaches, tapers, and added lanes less than 250 ft in length.

HMA shoulders which are 8 ft or more in width shall be placed with automatic paving equipment.

HMA mixtures in hauling equipment shall be protected by tarps from adverse weather conditions or foreign materials. Adverse weather conditions include, but will not be limited to, precipitation or temperatures below 45°F.

The speed of the paver shall not exceed 50 ft per minute when spreading mixtures.

Automatic slope and grade controls shall be required except when placing mixtures on roadway approaches which are less than 200 ft in length or on miscellaneous work. The use of automatic controls on other courses where use is impractical due to project conditions may be waived by the Engineer.

The finished thickness of each course shall be at least two times but not more than four times the maximum particle size as shown on the DMF or JMF. The finished thickness of wedge and level mixtures shall be at least 1 1/2 times but not more than six times the maximum particle size as shown on the DMF or JMF. Feathering may be less than the minimum thickness requirements.

~~Transverse rumble strips shall be placed to ensure uniformity of height, width, texture, and the required spacing between strips. A tack coat in accordance with 406 shall be applied on the pavement surface prior to placing the mixture. The tack coat may be applied with a paint brush or other approved methods.~~

A safety edge shall be constructed at locations where an intermediate mixture or a surface mixture is constructed adjacent to an aggregate or earth shoulder.

~~Vibratory rollers in accordance with 409.03(d)4 shall not be operated in vibratory mode at locations indicated on the plans. Oscillatory rollers in accordance with 409.03(d)5 will be allowed for use but the vertical impact force capability shall not be used. Density acceptance shall be in accordance with 402.15.~~

402.14 Joints

Longitudinal joints in the surface shall be at the lane lines of the pavement. Longitudinal joints below the surface shall be offset from previously constructed joints by approximately 6 in., and be located within 12 in. of the lane line.

Transverse joints shall be constructed by exposing a near vertical full depth face of the previous course.

~~If constructed under traffic, temporary transverse joints shall be feathered to provide a smooth transition to the driving surface.~~

402.15 Compaction

The HMA mixture shall be compacted with equipment in accordance with 409.03(d) immediately after the mixture has been spread and finished. Rollers shall not cause undue displacement, cracking, or shoving.

A roller application is defined as one pass of the roller over the entire mat. Compaction operations shall be completed in accordance with one of the following options.

NUMBER OF ROLLER APPLICATIONS							
Rollers	Courses ≤ 440 lb/sq yd					Courses > 440 lb/sq yd	
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 1	Option 2
Three Wheel	2		4			4	
Pneumatic Tire	2	4				4	
Tandem	2	2	2			4	
Vibratory				6			8
Oscillatory					6	-	-

A reduced number of applications on a course may be approved if detrimental results are being observed.

Compaction equipment shall be operated with the drive roll or wheels nearest the paver and at speeds not to exceed 3 mph. However, vibratory rollers will be limited to 2.5 mph. Rolling shall be continued until applications are completed and all roller marks are eliminated.

Compaction operations shall begin at the low side and proceed to the high side of the mat. The heaviest roller wheel shall overlap its previous pass by a minimum of 6 in.

Longitudinal joints shall be compacted in accordance with the following:

- (a) For confined edges, the first pass adjacent to the confined edge, the compaction equipment shall be entirely on the hot mat 6 in. from the confined edge.
- (b) For unconfined edges, the compaction equipment shall extend 6 in. beyond the edge of the hot mat.

All displacement of the HMA mixture shall be corrected at once by the use of lutes or the addition of fresh mixture as required. The line and grade of the edges of the HMA mixture shall not be displaced during rolling.

The wheels shall be kept properly moistened with water or water with detergent to prevent adhesion of the materials to the wheels.

Areas inaccessible to rollers shall be compacted thoroughly with hand tampers or other

mechanical devices in accordance with 409.03(d)7 to achieve the required compaction. A trench roller, in accordance with 409.03(d)6, may be used to obtain compaction in depressed areas.

The final two roller applications shall be completed at the highest temperature where the mixture does not exhibit any tenderness.

Vehicular traffic will not be allowed on a course until the mixture has cooled sufficiently to prevent distortions.

~~Transverse rumble strips shall be compacted with vibratory compacting equipment in accordance with 409.03(d)7 unless otherwise stated.~~

402.16 Low Temperature Compaction Requirements

Compaction for mixtures placed below the temperatures listed in 402.12 shall be controlled by density determined from MSG of the plate samples and cores cut from the compacted pavement placed during a low temperature period. Samples shall be obtained in accordance with ITM 580. Acceptance will be based on a plate sample and two cores. The Engineer will randomly select the locations in accordance with ITM 802. The transverse core location will be located so that the edge of the core will be no closer than 3 in. from a confined edge or 6 in. from a non-confined edge of the course being placed.

For compaction of HMA during low temperature periods with quantities less than 100 t per day, acceptance may be visual.

The Contractor shall obtain cores in the presence of the Engineer with a device that shall produce a uniform 6 in. diameter pavement sample. Coring shall be completed prior to the random location being covered. The final HMA course shall be cored within one work day of placement. Damaged cores shall be discarded and replaced with a core from a location selected by adding 1 ft to the longitudinal location of the damaged core using the same transverse offset.

The Contractor and the Engineer shall mark the core to define the course to be tested. If the core indicates a course thickness of less than two times the maximum particle size, the core will be discarded and a core from a new random location will be selected for testing.

The Engineer will take immediate possession of the cores. If the Engineer’s cores are subsequently damaged, additional coring within a specific section will be the responsibility of the Department. Subsequent core locations will be determined by subtracting 1 ft from the random location using the same transverse offset.

The density for the mixture shall be expressed as:

$$\text{Density} = 100 \times \text{BSG/MSG}$$

where:

BSG = average bulk specific gravity MSG = maximum specific gravity

The Engineer will determine the bulk specific gravity of the cores in accordance with AASHTO T 166 Method A or AASHTO T 275, if required. The maximum specific gravity will be mass determined in water in accordance with AASHTO T 209. Density shall not be less than 92.0%.

Within one work day of coring operations, the Contractor shall clean, dry, refill, and compact the core holes with suitable HMA of similar or smaller size particles.

402.17 ~~Pavement Corrugations~~

~~Pavement corrugations shall be in accordance with 606.~~

402.18 Pavement Smoothness

Pavement smoothness will be in accordance with 401.18 except profilograph requirements will not apply.

402.19 Method of Measurement

HMA mixtures will be measured by the ton of the type specified, in accordance with 109.01(b). The measured quantity will be divided by the MAF to determine the pay quantity.

~~HMA rumble strips will be measured by the linear foot of each transverse strip, complete in place.~~

~~Milled pavement corrugations will be measured in accordance with 606.02.~~

402.20 Basis of Payment

The accepted quantities for this work will be paid for at the contract unit price per ton for HMA, of the type specified complete in place.

~~HMA rumble strips will be paid for at the contract unit price per linear foot, of each transverse strip complete in place.~~

~~Milled pavement corrugations will be paid for in accordance with 606.03.~~ Payment will be made under:

Pay Item	Pay Unit Symbol
Item# 402001 HMA, Type C (12.5 mm Intermediate PG 64 -22)	TON

Preparation of surfaces to be overlaid shall be included in the cost of other pay items in this section.

No payment will be made for additional anti-stripping additives.

The cost of removing and replacing soft yielding areas shall be included in the cost of other pay items in this section.

No payment will be made for coring operations and related traffic control expenditures required in 402.16.

Corrections for pavement smoothness including removal and replacement of pavement, shall be included in the cost of other pay items in this section.

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Item P-603 Emulsified Asphalt Tack Coat

DESCRIPTION

603-1.1 This item shall consist of preparing and treating an asphalt or concrete surface with asphalt material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

603-2.1 Asphalt materials. The type, grade, controlling specifications, and application temperatures for the bituminous materials allowed are given in Table 1.

Table 1: Bituminous Material

Type & Grade	Specification	Application Temperature
AE-T	INDOT Sec. 902.01 ¹	Per INDOT

¹ INDOT refers to Indiana Department of Transportation Standard Specifications, most recent edition

CONSTRUCTION METHODS

603-3.1 Weather limitations. The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is 50°F (10°C) or above; the temperature has not been below 35°F (2°C) for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

603-3.2 Equipment. The Contractor shall provide equipment for heating and applying the emulsified asphalt material. The emulsion shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the emulsion. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour (13 km per hour) or seven (700) feet per minute (213 m per minute).

The equipment will be tested under pressure for leaks and to ensure proper set-up before use to verify truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application, spray-bar height and pressure and pump speed, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use.

The distributor truck shall be equipped with a minimum 12-foot (3.7-m) spreader spray bar with individual nozzle control with computer-controlled application rates. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the emulsion, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper.

The distributor truck shall be equipped to effectively heat and mix the material to the required temperature prior to application as required. Heating and mixing shall be done in accordance with the manufacturer's recommendations. Do not overheat or over mix the material.

The distributor shall be equipped with a hand sprayer.

Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

A power broom and/or power blower suitable for cleaning the surfaces to which the asphalt tack coat is to be applied shall be provided.

603-3.3 Application of emulsified asphalt material. The emulsified asphalt shall not be diluted. Immediately before applying the emulsified asphalt tack coat, the full width of surface to be treated shall be swept with a power broom and/or power blower to remove all loose dirt and other objectionable material.

The emulsified asphalt material shall be uniformly applied with an asphalt distributor at the rates appropriate for the conditions and surface specified in the table below. The type of asphalt material and application rate shall be approved by the RPR prior to application.

Table 2: Emulsified Asphalt

Surface Type	Residual Rate, gal/SY (L/square meter)	Emulsion Application Bar Rate, gal/SY (L/square meter)
New asphalt	0.02-0.05 (0.09-0.23)	0.03-0.07 (0.13-0.32)
Existing asphalt	0.04-0.07 (0.18-0.32)	0.06-0.11 (0.27-0.50)
Milled Surface	0.04-0.08 (0.18-0.36)	0.06-0.12 (0.27-0.54)
Concrete	0.03-0.05 (0.13-0.23)	0.05-0.08 (0.23-0.36)

After application of the tack coat, the surface shall be allowed to cure without being disturbed for the period of time necessary to permit drying and setting of the tack coat. This period shall be determined by the RPR. The Contractor shall protect the tack coat and maintain the surface until the next course has been placed. When the tack coat has been disturbed by the Contractor, tack coat shall be reapplied at the Contractor's expense.

603-3.4 Freight and waybills The Contractor shall submit waybills and delivery tickets, during progress of the work. Before the final statement is allowed, file with the RPR certified waybills and certified delivery tickets for all emulsified asphalt materials used in the construction of the pavement covered by the contract. Do not remove emulsified asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

METHOD OF MEASUREMENT

603-4.1 No measurement for bituminous tack coat material will be made.

BASIS OF PAYMENT

603.5-1 No Payment shall be made directly for Bituminous Tack Coat. Materials and placement of Tack Coat shall be considered incidental to placement of the HMA.

REFERENCES

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

ASTM International (ASTM)

ASTM D1250	Standard Guide for Use of the Petroleum Measurement Tables
ASTM D2995	Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors
ASTM D3628	Standard Practice for Selection and Use of Emulsified Asphalts

END ITEM P-603

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Item P-621 Saw-Cut Grooves

DESCRIPTION

621-1.1 This item consists of constructing saw-cut grooves to minimize hydroplaning during wet weather, providing a skid resistant surface in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR).

CONSTRUCTION METHODS

621-2.1 Procedures. The Contractor shall submit to the RPR the grooving sequence and method of placing guide lines to control grooving operation. Transverse grooves saw-cut in the pavement must form a 1/4 inch (+1/16 inch, -0 inch) wide by 1/4 inch ($\pm 1/16$ inch) deep by 1-1/2 inch (-1/8 inch, +0 inch) center-to-center configuration. The grooves must be continuous for the entire runway length. They must be saw-cut transversely (perpendicular to centerline) in the runway and high-speed taxiway pavement to not less than 10 feet from the runway pavement edge to allow adequate space for equipment operation.

The saw-cut grooves must meet the following tolerances. The tolerances apply to each day's production and to each piece of grooving equipment used for production. The Contractor is responsible for all controls and process adjustments necessary to meet these tolerances. The Contractor shall routinely spot check for compliance each time the equipment aligns for a grooving pass.

a. Alignment tolerance. The grooves shall not vary more than $\pm 1/2$ inch (38 mm) in alignment for 75 feet (23 m) along the runway length, allowing for realignment every 500 feet (150 m) along the runway length.

b. Groove tolerance.

(1) Depth. The standard depth is 1/4 inch (6 mm). At least 90% of the grooves must be at least 3/16 inch (5 mm), at least 60% of the grooves must be at least 1/4 inch (6 mm), and not more than 10% of the grooves may exceed 5/16 inch (8 mm).

(2) Width. The standard width is 1/4 inch (6 mm). At least 90% of the grooves must be at least 3/16 inch (5 mm), at least 60% of the grooves must be at least 1/4 inch (6 mm), and not more than 10% of the grooves may exceed 5/16 inch (8 mm).

(3) Center-to-center spacing. The standard spacing is 1-1/2 inch (38 mm). Minimum spacing 1-3/8 inch (34 mm). Maximum spacing 1-1/2 inch (38 mm).

Saw-cut grooves must not be closer than 3 inches (8 cm) or more than 9 inches (23 cm) from transverse joints in concrete pavements. Grooves must not be closer than 6 inches (150 mm) and no more than 18 inches (0.5 m) from in-pavement light fixtures. Grooves may be continued through longitudinal construction joints. Where neoprene compression seals have been installed and the compression seals are recessed sufficiently to prevent damage from the grooving operation, grooves may be continued through the longitudinal joints. Where neoprene compression seals have been installed and the compression seals are not recessed sufficiently to prevent damage from the grooving operation, grooves must not be closer than 3 inches (8 cm) or more than 5 inches (125 mm) from the longitudinal joints. Where lighting cables are installed, grooving through longitudinal or diagonal saw kerfs shall not be allowed.

621-2.2 Environmental requirements. Grooving operations will not be permitted when freezing conditions prevent the immediate removal of debris and/or drainage of water from the grooved area. Discharge and disposal of waste slurry shall be the Contractor's responsibility.

621-2.3 Control strip. Groove a control strip in an area of the pavement outside of the trafficked area, as approved by the RPR. The area shall be 10 feet long by two lanes wide. Demonstrate the setup and alignment process, the grooving operation, and the waste slurry disposal.

621-2.4 Existing pavements. Bumps, depressed areas, bad or faulted joints, and badly cracked and/or spalled areas in the pavement shall not be grooved until such areas are adequately repaired or replaced.

621-2.5 New pavements. New asphalt and Portland cement concrete pavements shall be allowed to cure for a minimum of 30 days before grooving, to allow the material to become stable enough to prevent closing of the grooves under normal use. All grade corrections must be completed prior to grooving. Spalling along or tearing or raveling of the groove edges shall not be allowed.

621-2.6 Grooving machine. Provide a grooving machine that is power driven, self-propelled, specifically designed and manufactured for pavement grooving, and has a self-contained and integrated continuous slurry vacuum system as the primary method for removing waste slurry. The grooving machine shall be equipped with diamond-saw cutting blades, and capable of making at least 18 inches (0.5 m) in width of multiple parallel grooves in one pass of the machine. Thickness of the cutting blades shall be capable of making the required width and depth of grooves in one pass of the machine. The cutting head shall not contain a mixture of new and worn blades or blades of unequal wear or diameter. Match the blade type and configuration with the hardness of the existing airfield pavement. The wheels on the grooving machine shall be of a design that will not scar or spall the pavement. Provide the machine with devices to control depth of groove and alignment.

621-2.7 Water supply. Water for the grooving operation shall be provided by the Contractor.

621-2.8 Clean-up. During and after installation of saw-cut grooves, the Contractor must remove from the pavement all debris, waste, and by-products generated by the operations to the satisfaction of the RPR. Cleanup of waste material must be continuous during the grooving operation. Flush debris produced by the machine to the edge of the grooved area or pick it up as it forms. The dust coating remaining shall be picked up or flushed to the edge of the area if the resultant accumulation is not detrimental to the vegetation or storm drainage system. Accomplish all flushing operations in a manner to prevent erosion on the shoulders or damage to vegetation. Waste material must be disposed of in an approved manner. Waste material must not be allowed to enter the airport storm sewer system. The Contractor must dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations

621-2.9 Repair of damaged pavement. Grooving must be stopped and damaged pavement repaired at the Contractor's expense when directed by the RPR.

ACCEPTANCE

621-3.1 Acceptance testing. Grooves will be accepted based on results of zone testing. All acceptance testing necessary to determine conformance with the groove tolerances specified will be performed by the RPR.

Instruments for measuring groove width and depth must have a range of at least 0.5 inch (12 mm) and a resolution of at least 0.005 inch (0.13 mm). Gauge blocks or gauges machined to standard grooves width, depth, and spacing may be used.

Instruments for measuring center-to-center spacing must have a range of at least 3 inches (8 cm) and a resolution of at least 0.02 inch (0.5 mm).

The RPR will measure grooves in five zones across the pavement width. Measurements will be made at least three times during each day's production. Measurements in all zones will be made for each cutting head on each piece of grooving equipment used for each day's production.

The five zones are as follows:

- Zone 1 Centerline to 5 feet (1.5 m) left or right of the centerline.
- Zone 2 5 feet (1.5 m) to 25 feet (7.5 m) left of the centerline.
- Zone 3 5 feet (1.5 m) 25 feet (7.5 m) right of the centerline.
- Zone 4 25 feet (7.5 m) to edge of grooving left of the centerline.
- Zone 5 25 feet (7.5 m) to edge of grooving right of the centerline.

At a random location within each zone, five consecutive grooves sawed by each cutting head on each piece of grooving equipment will be measured for width, depth, and spacing. The five consecutive measurements must be located about the middle blade of each cutting head ± 4 inches (100 mm). Measurements will be made along a line perpendicular to the grooves.

- Width or depth measurements less than 0.170 inch (4 mm) shall be considered less than 3/16 inch (5 mm).
- Width or depth measurements more than 0.330 inch (8 mm) shall be considered more than 5/16 inch (8 mm).
- Width or depth measurements more than 0.235 inch (6 mm) shall be considered more than 1/4 inch (6 mm).

Production must be adjusted when more than one groove on a cutting head fails to meet the standard depth, width, or spacing in more than one zone.

METHOD OF MEASUREMENT

621-4.1 The quantity of grooving to be paid for shall be the number of square yards (square meters) of grooving performed in accordance with the specifications and accepted by the RPR per paragraph 621-3.1.

BASIS OF PAYMENT

621-5.1 Payment for saw-cut grooving. Payment for saw-cut grooving will be made at the contract unit price per square yard (square meter) for saw-cut grooving. This price shall be full compensation for furnishing all materials, and for all preparation, delivering, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item 621001	Runway Grooving - per square yard
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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 150/5320-12	Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces
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END OF ITEM P-621

Item T-901 Seeding

DESCRIPTION

901-1.1 This item shall consist of soil preparation, seeding and fertilizing the areas shown on the plans or as directed by the RPR in accordance with these specifications.

MATERIALS

901-2.1 Seed. The species and application rates of grass, legume, and cover-crop seed furnished shall be those stipulated herein. Seed shall conform to the requirements of Federal Specification JJJ-S-181, Federal Specification, Seeds, Agricultural.

Seed shall be furnished separately or in mixtures in standard containers labeled in conformance with the Agricultural Marketing Service (AMS) Seed Act and applicable state seed laws with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the RPR duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within six (6) months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed. Wet, moldy, or otherwise damaged seed will be rejected.

Seeds shall at be applied at 220 lbs/acre as follows:

SEED PROPERTIES AND RATE OF APPLICATION

Seed	Minimum Seed Purity (Percent)	Minimum Germination (Percent)	Rate of Application lb/acre
Spartan II Hard Fescue	98	85	55
Bornito Sheeps Fescue	96	85	55
Jasper II Red Fescue	97	85	110

Seeding shall be performed during the period between April 1 to October 16 inclusive, unless otherwise approved by the RPR.

901-2.2 Lime. Not required .

901-2.3 Fertilizer. Fertilizer shall be standard commercial fertilizers supplied separately or in mixtures containing the percentages of total nitrogen, available phosphoric acid, and water-soluble potash. They shall be applied at the rate and to the depth specified, and shall meet the requirements of applicable state laws. They shall be furnished in standard containers with name, weight, and guaranteed analysis of contents clearly marked thereon. No cyanamide compounds or hydrated lime shall be permitted in mixed fertilizers.

The fertilizers may be supplied in one of the following forms:

- a. A dry, free-flowing fertilizer suitable for application by a common fertilizer spreader;
- b. A finely-ground fertilizer soluble in water, suitable for application by power sprayers; or
- c. A granular or pellet form suitable for application by blower equipment.

Fertilizers shall be 12-12-12 commercial fertilizer and shall be spread at the rate of 400 lbs per acre.

901-2.4 Soil for repairs. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be relatively free from large stones, roots, stumps, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the RPR before being placed.

CONSTRUCTION METHODS

901-3.1 Advance preparation and cleanup. All seed areas disrupted by the contractor's operation outside the paving/grooving limits shall be prepared and seeded in accordance with this item at no additional cost. Seeding to restore the haul roads shall be incidental to other items.

After grading of areas has been completed and before applying fertilizer and ground limestone, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches (50 mm) in any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches (125 mm) as a result of grading operations and, if immediately prior to seeding, the top 3 inches (75 mm) of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

When the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches (125 mm). Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

901-3.2 Dry application method.

a. Liming. Not required.

b. Fertilizing. Following advance preparations and cleanup fertilizer shall be uniformly spread at the rate that will provide not less than the minimum quantity stated in paragraph 901-2.3.

c. Seeding. Grass seed shall be sown at the rate specified in paragraph 901-2.1 immediately after fertilizing. The fertilizer and seed shall be raked within the depth range stated in the special provisions. Seeds of legumes, either alone or in mixtures, shall be inoculated before mixing or sowing, in accordance with the instructions of the manufacturer of the inoculant. When seeding is required at other than the seasons shown on the plans or in the special provisions, a cover crop shall be sown by the same methods required for grass and legume seeding.

d. Rolling. After the seed has been properly covered, the seedbed shall be immediately compacted by means of an approved lawn roller, weighing 40 to 65 pounds per foot (60 to 97 kg per meter) of width for

clay soil (or any soil having a tendency to pack), and weighing 150 to 200 pounds per foot (223 to 298 kg per meter) of width for sandy or light soils.

901-3.3 Wet application method.

a. General. The Contractor may elect to apply seed and fertilizer (and lime, if required) by spraying them on the previously prepared seedbed in the form of an aqueous mixture and by using the methods and equipment described herein. The rates of application shall be as specified in the special provisions.

b. Spraying equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge calibrated to read in increments not larger than 50 gallons (190 liters) over the entire range of the tank capacity, mounted so as to be visible to the nozzle operator. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The unit shall also be equipped with a pressure pump capable of delivering 100 gallons (380 liters) per minute at a pressure of 100 lb / sq inches (690 kPa). The pump shall be mounted in a line that will recirculate the mixture through the tank whenever it is not being sprayed from the nozzle. All pump passages and pipe lines shall be capable of providing clearance for 5/8 inch (16 mm) solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. There shall be an indicating pressure gauge connected and mounted immediately at the back of the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture delivered to the nozzle. At least three different types of nozzles shall be supplied so that mixtures may be properly sprayed over distance varying from 20 to 100 feet (6 to 30 m). One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For case of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings.

In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet (15 m) in length shall be provided to which the nozzles may be connected.

c. Mixtures. Lime, if required, shall be applied separately, in the quantity specified, prior to the fertilizing and seeding operations. Not more than 220 pounds (100 kg) of lime shall be added to and mixed with each 100 gallons (380 liters) of water. Seed and fertilizer shall be mixed together in the relative proportions specified, but not more than a total of 220 pounds (100 kg) of these combined solids shall be added to and mixed with each 100 gallons (380 liters) of water.

All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. The Contractor shall identify to the RPR all sources of water at least two (2) weeks prior to use. The RPR may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the RPR following such tests.

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within two (2) hours from the time they were mixed or they shall be wasted and disposed of at approved locations.

d. Spraying. Lime, if required, shall be sprayed only upon previously prepared seedbeds. After the applied lime mixture has dried, the lime shall be worked into the top 3 inches (75 mm), after which the seedbed shall again be properly graded and dressed to a smooth finish.

Mixtures of seed and fertilizer shall only be sprayed upon previously prepared seedbeds on which the lime, if required, shall already have been worked in. The mixtures shall be applied by means of a high-pressure spray that shall always be directed upward into the air so that the mixtures will fall to the ground like rain in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner as might produce erosion or runoff.

Particular care shall be exercised to ensure that the application is made uniformly and at the prescribed rate and to guard against misses and overlapped areas. Proper predetermined quantities of the mixture in accordance with specifications shall be used to cover specified sections of known area.

Checks on the rate and uniformity of application may be made by observing the degree of wetting of the ground or by distributing test sheets of paper or pans over the area at intervals and observing the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the RPR, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

901-3.4 Maintenance of seeded areas. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the RPR. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work.

When either the dry or wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the RPR. A grass stand shall be considered adequate when bare spots are one square foot (0.01 sq m) or less, randomly dispersed, and do not exceed 3% of the area seeded.

METHOD OF MEASUREMENT

901-4.1 The quantity of seeding shall not be measured.

BASIS OF PAYMENT

901-5.1 No direct payment will be made for seeding. It shall be considered incidental to other items.

REFERENCES

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

ASTM International (ASTM)

ASTM C602 Standard Specification for Agricultural Liming Materials

Federal Specifications (FED SPEC)

FED SPEC JJJ-S-181, Federal Specification, Seeds, Agricultural

Advisory Circulars (AC)

AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

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Item T-908 Mulching

DESCRIPTION

908-1.1 This item shall consist of furnishing, hauling, placing, and securing mulch on surfaces indicated on the plans or designated by the RPR.

MATERIALS

908-2.1 Mulch material. Acceptable mulch shall be the materials listed below or any approved locally available material that is similar to those specified. Mulch shall be free from noxious weeds, mold, and other deleterious materials. Mulch materials, which contain matured seed of species that would volunteer and be detrimental to the proposed overseeding, or to surrounding farm land, will not be acceptable. Straw or other mulch material which is fresh and/or excessively brittle, or which is in such an advanced stage of decomposition as to smother or retard the planted grass, will not be acceptable.

a. Manufactured mulch. Cellulose-fiber or wood-pulp mulch shall be products commercially available for use in spray applications.

908-2.2 Inspection. The RPR shall be notified of sources and quantities of mulch materials available and the Contractor shall furnish him with representative samples of the materials to be used 30 days before delivery to the project. These samples may be used as standards with the approval of the RPR and any materials brought on the site that do not meet these standards shall be rejected.

CONSTRUCTION METHODS

908-3.1 Mulching. Before spreading mulch, all large clods, stumps, stones, brush, roots, and other foreign material shall be removed from the area to be mulched. Mulch shall be applied immediately after seeding. The spreading of the mulch may be by hand methods, blower, or other mechanical methods, provided a uniform covering is obtained.

Mulch material shall be furnished, hauled, and evenly applied on the area shown on the plans or designated by the RPR. Straw or hay shall be spread over the surface to a uniform thickness at the rate of 2 to 3 tons per acre (1800 - 2700 kg per acre) to provide a loose depth of not less than 1-1/2 inches (38 cm) nor more than 3 inches (75 mm). Other organic material shall be spread at the rate directed by the RPR. Mulch may be blown on the slopes and the use of cutters in the equipment for this purpose will be permitted to the extent that at least 95% of the mulch in place on the slope shall be 6 inches (150 mm) or more in length. When mulches applied by the blowing method are cut, the loose depth in place shall be not less than one inch (25 mm) nor more than 2 inches (50 mm).

908-3.2 Securing mulch. The mulch shall be held in place by light discing, a very thin covering of topsoil, pins, stakes, wire mesh, asphalt binder, or other adhesive material approved by the RPR. Where mulches have been secured by either of the asphalt binder methods, it will not be permissible to walk on the slopes after the binder has been applied. When an application of asphalt binder material is used to secure the mulch, the Contractor must take every precaution to guard against damaging or disfiguring structures or property on or adjacent to the areas worked and will be held responsible for any such damage resulting from the operation.

If the "peg and string" method is used, the mulch shall be secured by the use of stakes or wire pins driven into the ground on 5-foot (1.5-m) centers or less. Binder twine shall be strung between adjacent stakes in

straight lines and crisscrossed diagonally over the mulch, after which the stakes shall be firmly driven nearly flush to the ground to draw the twine down tight onto the mulch.

908-3.3 Care and repair.

a. The Contractor shall care for the mulched areas until final acceptance of the project. Care shall consist of providing protection against traffic or other use by placing warning signs, as approved by the RPR, and erecting any barricades that may be shown on the plans before or immediately after mulching has been completed on the designated areas.

b. The Contractor shall be required to repair or replace any mulch that is defective or becomes damaged until the project is finally accepted. When, in the judgment of the RPR, such defects or damages are the result of poor workmanship or failure to meet the requirements of the specifications, the cost of the necessary repairs or replacement shall be borne by the Contractor.

c. If the “asphalt spray” method is used, all mulched surfaces shall be sprayed with asphalt binder material so that the surface has a uniform appearance. The binder shall be uniformly applied to the mulch at the rate of approximately 8 gallons (32 liters) per 1,000 square feet (100 sq m), or as directed by the RPR, with a minimum of 6 gallons (24 liters) and a maximum of 10 gallons (40 liters) per 1,000 square feet (100 sq m) depending on the type of mulch and the effectiveness of the binder securing it. Asphalt binder material may be sprayed on the mulched slope areas from either the top or the bottom of the slope. An approved spray nozzle shall be used. The nozzle shall be operated at a distance of not less than 4 feet (1.2 m) from the surface of the mulch and uniform distribution of the asphalt material shall be required. A pump or an air compressor of adequate capacity shall be used to ensure uniform distribution of the asphalt material.

d. If the “asphalt mix” method is used, the mulch shall be applied by blowing, and the asphalt binder material shall be sprayed into the mulch as it leaves the blower. The binder shall be uniformly applied to the mulch at the rate of approximately 8 gallons (32 liters) per 1,000 square feet (100 sq m) or as directed by the RPR, with a minimum of 6 gallons (24 liters) and a maximum of 10 gallons (40 liters) per 1,000 square feet (100 sq m) depending on the type of mulch and the effectiveness of the binder securing it.

METHOD OF MEASUREMENT

908-4.1 Mulching shall not be measured.

BASIS OF PAYMENT

908-5.1 No direct payment will be made for mulching. It shall be considered incidental to other items.

REFERENCES

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

ASTM International (ASTM)

ASTM D977 Standard Specification for Emulsified Asphalt

Advisory Circulars (AC)

AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

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