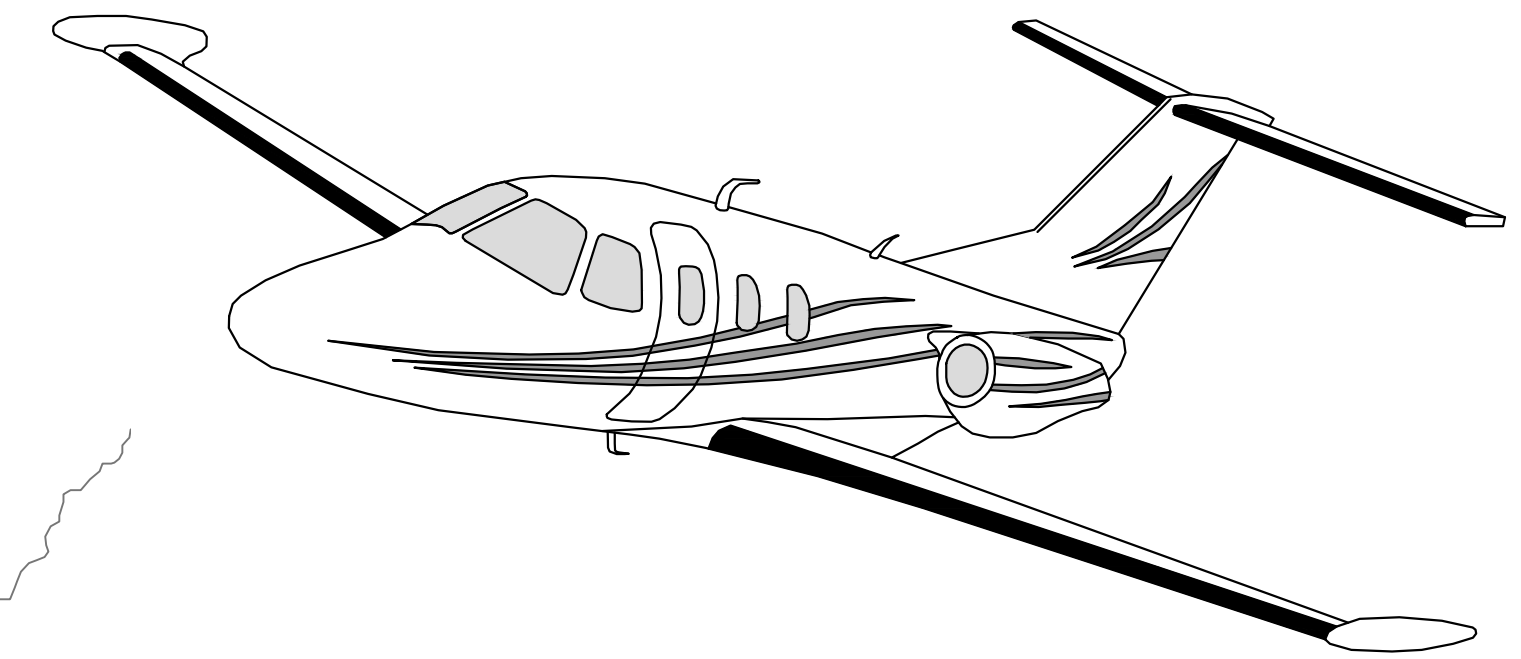


CONSTRUCTION PLANS FOR LAWRENCE MUNICIPAL AIRPORT

TAXIWAY C IMPROVEMENTS (#PW1617) APRON IMPROVEMENTS (#PW1715)

LAWRENCE, KS

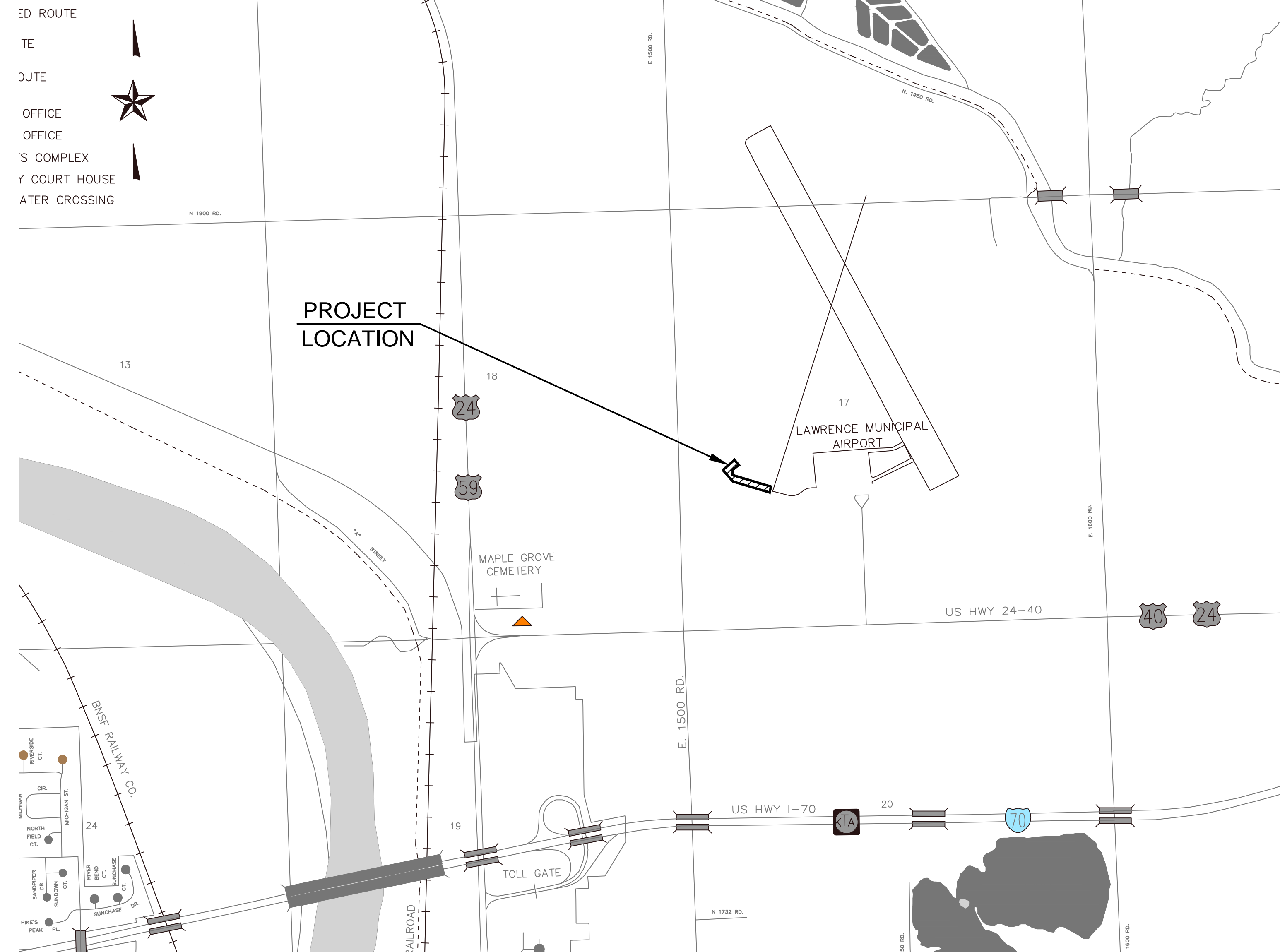


INDEX OF SHEETS

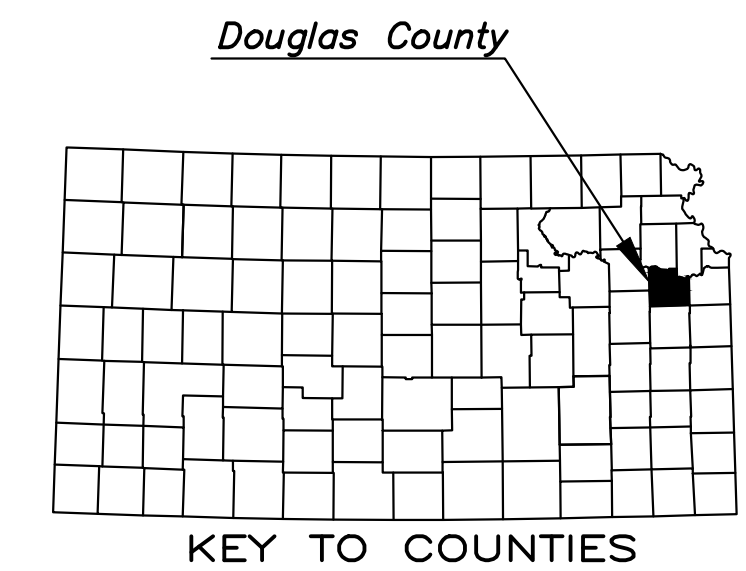
1. TITLE SHEET
2. GENERAL NOTES AND PROJECT CONTROL
3. SAFETY PLAN
4. TAXIWAY C PLAN AND PROFILE
5. APRON SITE AND GRADING PLAN
6. PAVEMENT JOINTING PLAN AND DETAILS

LEGEND OF SYMBOLS

- E — EXISTING ELECTRIC LINE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- ST — EXISTING STORM SEWER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- TS — EXISTING TRAFFIC SIGNAL LINE
- T — EXISTING TELEPHONE LINE
- TV — EXISTING CABLE LINE
- EXISTING TREE
- EXISTING EDGE OF TIMBER
- EXISTING STREAM OR DRAINAGE CHANNEL
- x — EXISTING FENCE
- ⊕ EXISTING TELEPHONE MANHOLE
- ⊞ EXISTING TELEPHONE PEDESTAL
- ⊠ EXISTING CABLE TELEVISION PEDESTAL
- ⊡ EXISTING POWER POLE
- EXISTING GUY ANCHOR
- ⊙ EXISTING LIGHT POLE
- ⊙ EXISTING SANITARY SEWER MANHOLE
- ⊙ EXISTING SANITARY SEWER CLEANOUT
- ⊙ EXISTING FIRE HYDRANT
- ⊙ EXISTING WATER VALVE
- ⊙ EXISTING WATER METER
- ⊙ SURVEY BENCH MARK
- ⊙ SURVEY TRAVERSE POINT



Not to Scale



UTILITY COMPANIES

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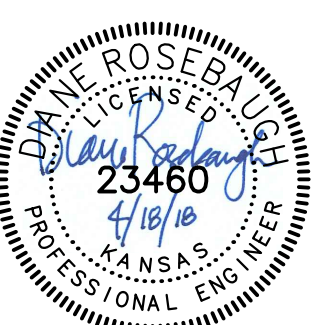
**FOR
CONSTRUCTION**

David Parnell 4/20/2018
CITY ENGINEER

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Diane Rosebaugh 4/19/18
PROJECT ENGINEER

NO.	REVISIONS	DATE	INITIALS



BG CONSULTANTS
ENGINEERS - ARCHITECTS - SURVEYORS

Plans Prepared by:

LAWRENCE MUNICIPAL AIRPORT IMPROVEMENTS
LAWRENCE, KS PROJECTS #PW1617 & #PW1715

TITLE SHEET

BG Project No. 18-1168L	Total Shhs. 6
Shh. No. 1	

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO COMMENCING CONSTRUCTION.
2. THE PROJECT IS SUBJECT TO INSPECTION BY THE LAWRENCE MUNICIPAL AIRPORT BOARD AND THE FEDERAL AVIATION AUTHORITY (FAA) AT ANY TIME.
3. ALL MATERIALS REMOVED FROM THE SITE SHALL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL MANNER OFF OF THE AIRPORT PROPERTY.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS, OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE.
5. THE CONTRACTOR IS RESPONSIBLE FOR PROPER CLEAN-UP OF ANY SPILLED FUEL, DIESEL FUEL, OR OTHER CONTAMINATES. CONTAMINATES SHALL NOT BE ALLOWED TO ENTER ANY WATER COURSE.
6. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE FAA.
7. ALL DISTURBED AREAS NOT TO BE PAVED SHALL BE FINISHED GRADED TO MAINTAIN POSITIVE DRAINAGE AND SEEDED, FERTILIZED, AND MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS. FINISH GRADING SHALL BE SUBSIDIARY.
8. UTILITY INFORMATION SHOWN HEREIN IS BASED ON THE BEST INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF DESIGN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING, IDENTIFYING, AND MAKING THEIR OWN DETERMINATIONS OF UTILITY LOCATIONS, DEPTHS, SIZES, ETC. ANY DAMAGE TO THE KNOWN LINES, OR ANY OTHERS NOT SHOWN, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
9. CARE MUST BE TAKEN TO NOT DAMAGE ANY AIRSIDE SIGNS, LIGHTS, OR PAVEMENTS.
10. THE CONTRACTOR SHALL HAVE (1) SIGNED COPY OF THE PLANS (APPROVED BY THE CITY OF LAWRENCE) AND (1) COPY OF THE PROJECT SPECIFICATIONS ON SITE AT ALL TIMES.
11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING EROSION AND SEDIMENT CONTROL TO PREVENT SEDIMENT FROM REACHING PAVED AREAS, STORM SEWER SYSTEMS, DRAINAGE COURSES AND ADJACENT PROPERTIES. IN THE EVENT THE PREVENTION MEASURES ARE NOT EFFECTIVE, THE CONTRACTOR SHALL REMOVE ANY DEBRIS, SILT, OR MUD AND RESTORE ALL DISTURBED AREAS TO ORIGINAL OR BETTER CONDITION.
12. ALL ASPHALT AND CONCRETE TO BE REMOVED SHALL BE NEATLY SAW CUT. SAW CUTS SHALL BE FULL DEPTH AND SHALL BE SUBSIDIARY TO RELATED BID ITEMS. IF THE CONTRACTOR EXCEEDS THE PAVEMENT REMOVAL LIMITS WITHOUT APPROVAL FROM THE ENGINEER, IT SHALL BE AT THE CONTRACTOR'S EXPENSE.
13. ALL CONCRETE SHALL BE KCMMB UNLESS OTHERWISE NOTED IN THE PLANS.

PROJECT SURVEY CONTROL

PROJECT SURVEY CONTROL DATA FROM TIME OF TOPOGRAPHIC SURVEY TO BE SUPPLIED TO THE CONTRACTOR FROM THE CITY.

TAXIWAY "A" CENTERLINE FILE

TAXIWAY C CENTERLINE FILE				
STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
9+00.00	℄	257,066.3970	2,101,696.1470	Begin Centerline
9+60.74	℄	257,021.8352	2,101,737.4150	PI
15+00.00	℄	256,867.1910	2,102,254.0300	End Centerline

**SUMMARY OF QUANTITIES (#PW1617)
TAXIWAY C IMPROVEMENTS**

Mobilization	1	LS
Unclassified Excavation	666	CY
Contractor Construction Staking	1	LS
PCCP (KCMMB 4K)(6") (Fiber Reinforced)	1,999	SY
AB-3	1,999	SY
Geogrid	1,999	SY
Pavement Markings (Yellow Reflectorized)	295	SF
Pavement Markings (Black Non-Reflectorized)	320	SF
Seeding, Fertilizing, Mulching	1	LS
Airport Traffic Control	1	LS

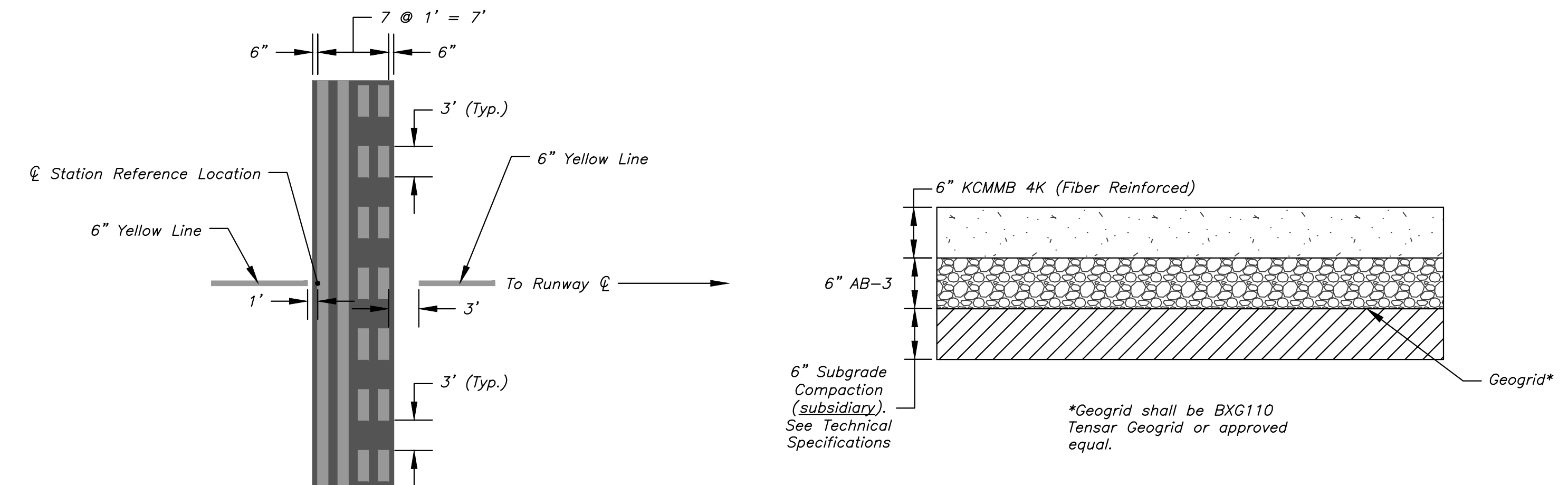
**SUMMARY OF QUANTITIES (#PW1715)
APRON IMPROVEMENTS**

Mobilization	1	LS
Unclassified Excavation	550	CY
Contractor Construction Staking	1	LS
PCCP (KCMMB 4K)(6") (Fiber Reinforced)	1,650	SY
AB-3	1,650	SY
Geogrid	1,650	SY
Nyloplast Drainage Basin	2	Ea
18" Storm Sewer (HDPE, RCP)	101	LF
Seeding, Fertilizing, Mulching	1	LS
Airport Traffic Control	1	LS



PROJECT LOCATION

SCALE: Not to Scale

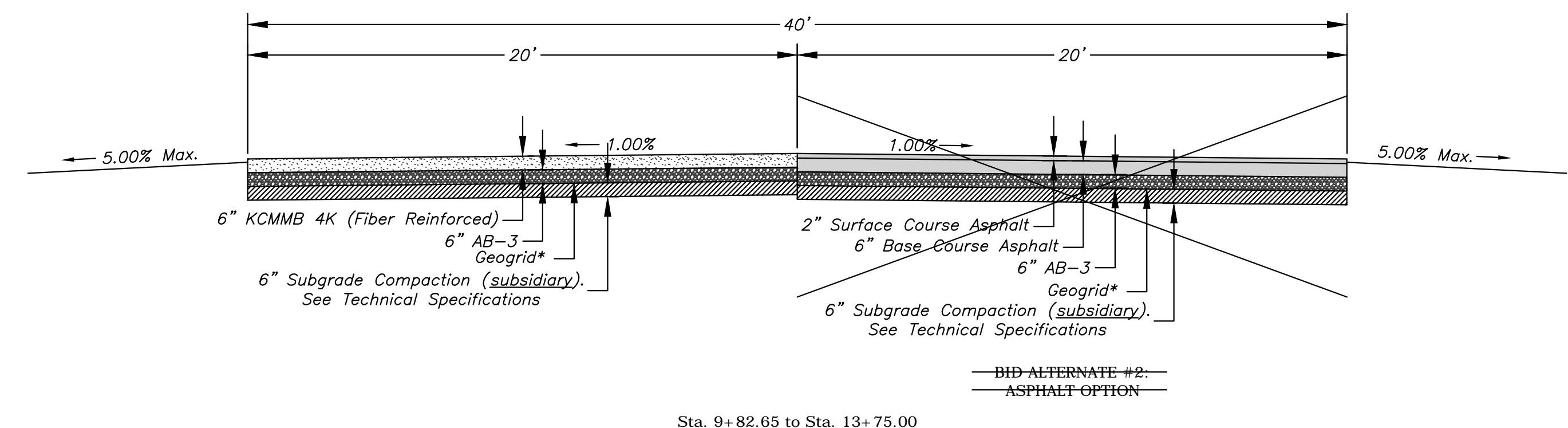


TYPICAL HOLDING LINE DETAIL

SCALE: NOT TO SCALE

TYPICAL SECTION: TAXIWAY C

SCALE: NOT TO SCALE

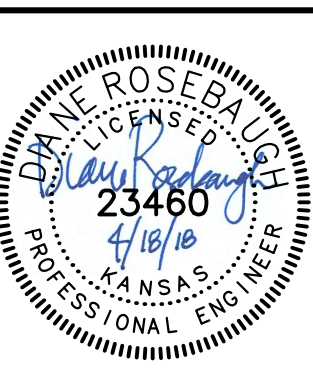


TYPICAL SECTION: APRON

SCALE: NOT TO SCALE

*Geogrid shall be BXG110 Tensor Geogrid or approved equal.

NO.	REVISIONS	DATE	INITIALS



Plans Prepared by:
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ENGINEERS - ARCHITECTS - SURVEYORS

LAWRENCE MUNICIPAL AIRPORT IMPROVEMENTS
LAWRENCE, KS PROJECTS #PW1617 & #PW1715

GENERAL NOTES AND SUMMARY OF QUANTITIES

BG Project No. 18-1168L	Total Shets. 6
Shet. No. 2	



GENERAL NOTES

1. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE STANDARDS PRESENTED IN CHAPTER 3 OF FAA ADVISORY CIRCULAR 150-5370-2G OR MOST RECENT, "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION." PRIOR TO THE COMMENCEMENT OF ACTUAL WORK OPERATIONS, THE CONTRACTOR SHALL SUBMIT TO THE OWNER DETAILS AND INFORMATION ON HOW THEY INTEND TO COMPLY WITH THE MINIMUM SAFETY PROVISIONS NOTED ON THIS SHEET.
2. THE CONTRACTOR SHALL BRIEF ALL VEHICLE OPERATORS ON CONSTRUCTION OPERATIONS PRIOR TO BEING ALLOWED ON THE PROJECT SITE. ALL ONSITE PERSONNEL SHALL BE FAMILIAR WITH FAA ADVISORY CIRCULAR 150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION" OR MOST RECENT.
3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS FOR LIGHTING OF VEHICLES USED ON AN AIRPORT AS ESTABLISHED BY AC 150/5210-5C OR MOST RECENT. SPECIFICALLY, A YELLOW FLASHING BEACON SHALL BE MOUNTED ON THE UPPERMOST PART OF THE VEHICLE.
4. CONTRACTOR SHALL REVIEW AND UPDATE THE SAFETY/PHASING PLAN AND PROJECT SCHEDULE DURING COORDINATION MEETINGS WITH THE AIRPORT MANAGER AND THE LAWRENCE MUNICIPAL AIRPORT BOARD. PROPOSED REVISIONS OR MODIFICATIONS TO THE APPROVED SAFETY PLAN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
5. CONTRACTOR SHALL UTILIZE THE HAUL ROUTE SHOWN ON THIS PLAN.
6. HAUL ROUTE CONDITIONS SHALL BE MONITORED BY THE CONTRACTOR. IN THE EVENT THE PAVEMENT BEGINS TO SHOW SIGNS OF YIELDING OR FAILURE, CONSTRUCTION TRAFFIC SHALL BE STOPPED, THE ENGINEER NOTIFIED, AND AN ALTERNATE ROUTE WILL BE APPROVED BY THE ENGINEER.
7. NOTICES TO AIRMEN (NOTAM) SHALL BE ISSUED TO NOTIFY AIRPORT USERS OF CONSTRUCTION ACTIVITIES AND CONDITIONS THAT MAY ADVERSELY AFFECT THE OPERATIONAL SAFETY OF THE AIRPORT. THE AIRPORT MANAGER SHALL HAVE AT LEAST 48 HOURS NOTICE PRIOR TO ANY TAXIWAY AND/OR APRON CLOSURE.
8. CONTRACTOR SHALL LIMIT WORK ACTIVITIES TO THE APPROVED WORK AREA LIMITS. SAFE MOVEMENT OF TAXIING AIRCRAFT SHALL TAKE PRECEDENCE OVER CONTRACTOR'S ACTIVITIES. THE AIRPORT MANAGER MAY ORDER THE CONTRACTOR TO SUSPEND OPERATIONS AND MOVE PERSONNEL AND EQUIPMENT TO ACCOMMODATE THE SAFE MOVEMENT OF AIRCRAFT.
9. LOW PROFILE BARRICADES SHALL BE USED TO MARK THE CLOSURE OF TAXIWAY "C" AND APRON TO KEEP AIRCRAFT FROM ATTEMPTING TO USE THE CLOSED AREAS DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL IDENTIFY AN EMERGENCY CONTACT AVAILABLE ON A 24-HOUR BASIS FOR THE PURPOSE OF MAINTAINING HAZARDOUS LIGHTING AND BARRICADES.
11. CONSTRUCTION TRAFFIC IS NOT ALLOWED OUTSIDE THE IMMEDIATE AREA OF CONSTRUCTION.
12. PAVED AREAS SHALL BE FREE OF DEBRIS AND LOOSE AGGREGATE BEFORE THE PAVEMENT IS OPENED FOR AIRCRAFT OPERATIONS.
13. THE OWNER SHALL NOT BE RESPONSIBLE FOR EQUIPMENT OR SUPPLIES LEFT ON AIRPORT GROUNDS.
14. CARE SHALL BE TAKEN NOT TO DAMAGE OR OBSCURE ANY AIRSIDE SIGNS, LIGHTS, OR PAVEMENTS.

RUNWAY SAFETY AREA
 15. NO EQUIPMENT OR PERSONNEL IS ALLOWED WITHIN THE RUNWAY SAFETY AREA (RSA) WHILE THE RUNWAY IS OPEN FOR AIRCRAFT OPERATIONS.

RUNWAY OBJECT FREE AREA
 16. CONSTRUCTION, INCLUDING EXCAVATIONS, MAY BE PERMITTED IN THE RUNWAY OBJECT FREE AREA (ROFA). HOWEVER, EQUIPMENT MUST BE REMOVED FROM THE ROFA WHEN NOTE IN USE, AND MATERIAL SHOULD NOT BE STOCKPILED IN THE ROFA.
 17. WHEN CONSTRUCTION ACTIVITIES ENCRROACH WITHIN THE ROFA, THE CONTRACTOR MUST HAVE AN AIRCRAFT SPOTTER WITH A VHF RADIO (123.0 MHZ) TO HALT VEHICLES WHEN AIRCRAFT ARE IN OPERATION. THE CONTRACTOR WILL MAINTAIN CONSTANT CONTACT WITH THE AIRPORT OPERATOR AS WELL.

RUNWAY OBSTACLE FREE ZONE
 18. PERSONNEL, MATERIAL, AND/OR EQUIPMENT MAY NOT PENETRATE THE RUNWAY OBSTACLE FREE ZONE (ROFZ) WHILE THE RUNWAY IS OPEN FOR AIRCRAFT OPERATIONS. IF A PENETRATION IS NECESSARY, AIRCRAFT OPERATIONS MAY NEED TO BE RESTRICTED. COORDINATION MUST BE MADE WITH THE ENGINEER AND AIRPORT MANAGER AT LEAST 48 HOURS IN ADVANCE.

19. THE CONTRACTOR SHALL SUBMIT WRITTEN CONCURRENCE WITH THIS CONSTRUCTION SAFETY AND PHASING PLAN PRIOR TO THE PRECONSTRUCTION CONFERENCE. THE CONTRACTOR SHALL PARTICIPATE IN, BUT NOT BE LIMITED TO, THE LOCATION OF ALL CONSTRUCTION TRAFFIC ROUTES, SAFETY MARKINGS, BARRICADES AND ITEMS FROM THE OPERATIONS PLAN IN THE SPECIFICATIONS. THIS PLAN SHALL BE SIGNED BY THE CONTRACTOR AND SHALL BECOME PART OF THE CONTRACT.

CONCUR: _____ CONTRACTOR _____ DATE _____

RUNWAY 1-19 INFORMATION:
 RSA: 4,381' x 150'
 ROFA: 4,381' x 400'
 ROFZ: 4,381' x 400'

CONSTRUCTION SEQUENCING

1. DEMOLITION OF TAXIWAY "C" AND APRON MAY HAPPEN CONCURRENTLY BUT RESTORATION OF TAXIWAY "C" WILL COMMENCE PRIOR TO APRON SO THAT TAXIWAY "C" CAN BE OPEN TO AIRCRAFT TRAFFIC ASAP.

PROJECT LAYOUT PLAN

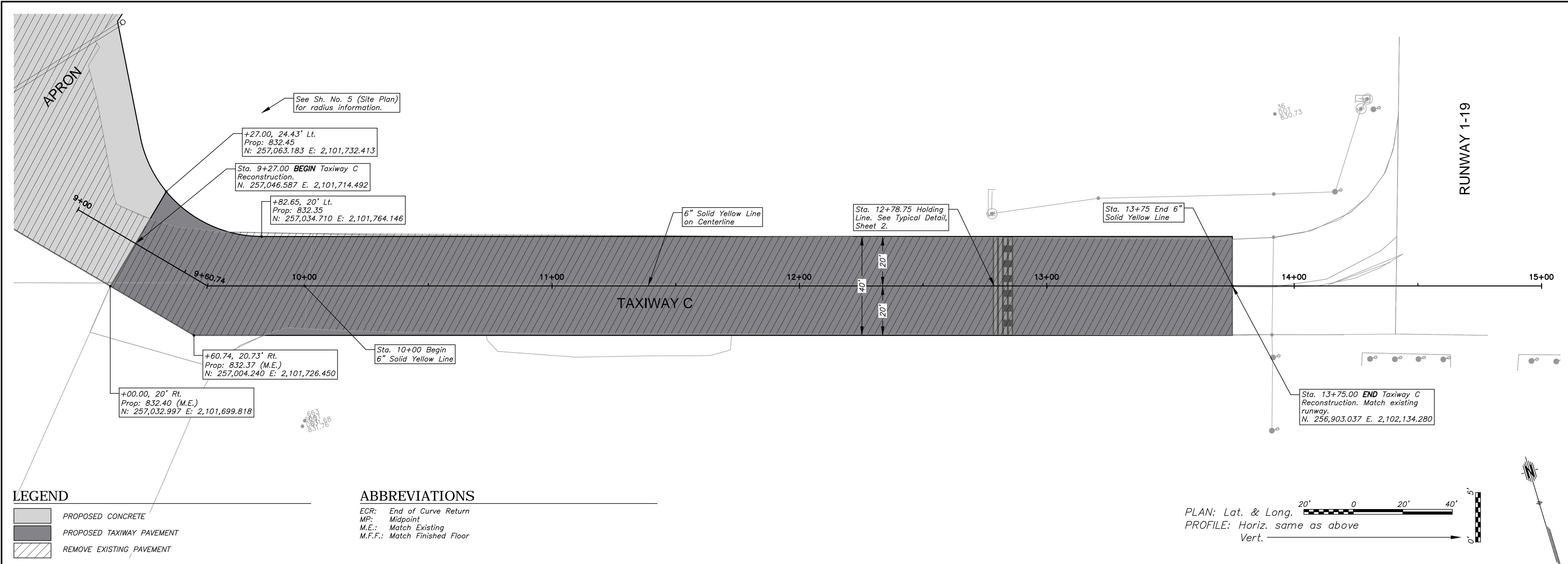
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NO.	REVISIONS	DATE	INITIALS



Plans Prepared by:
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 ENGINEERS - ARCHITECTS - SURVEYORS

LAWRENCE MUNICIPAL AIRPORT IMPROVEMENTS LAWRENCE, KS PROJECTS #PW1617 & #PW1715		CONSTRUCTION SAFETY AND PHASING PLAN
BG Project No. 18-1168L	Total Shhs. 6	
Shh. No. 3		

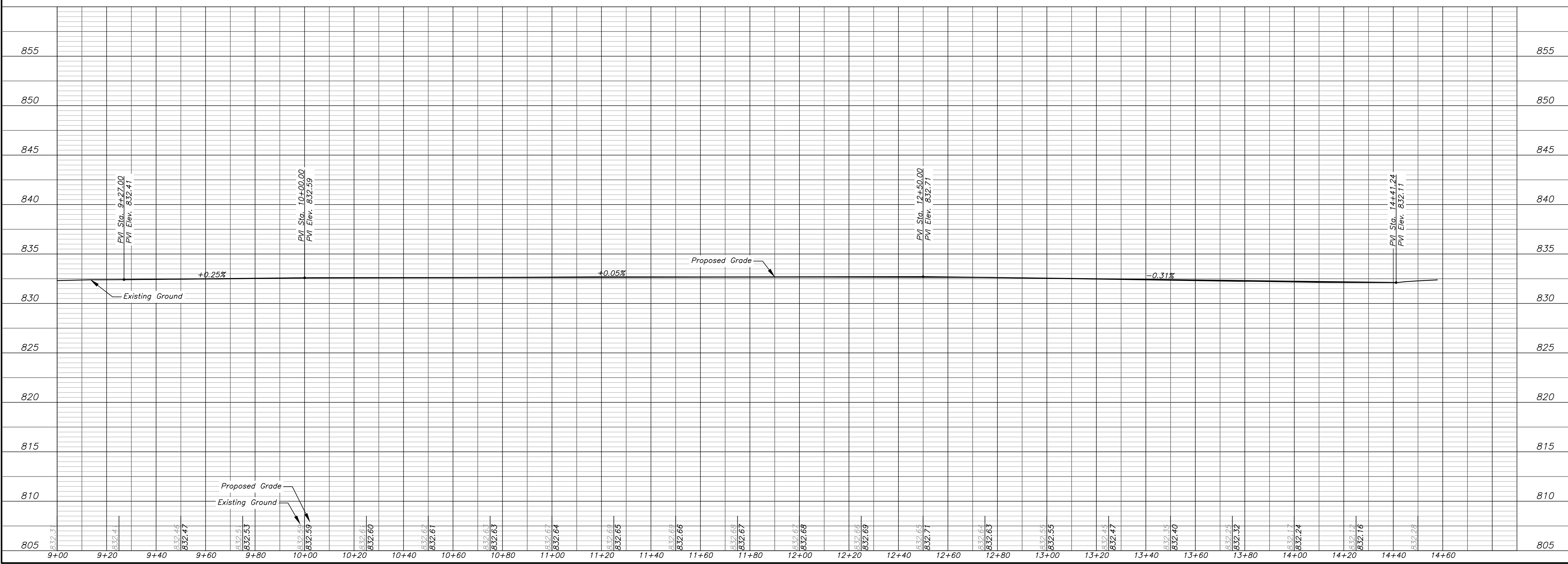
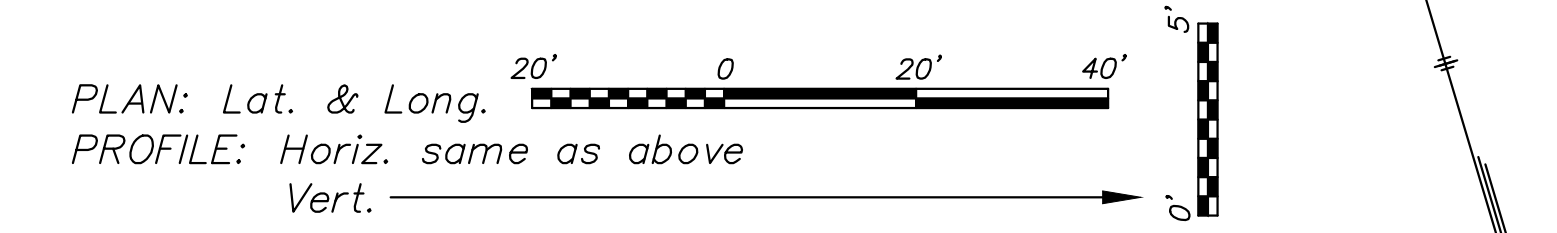


LEGEND

- PROPOSED CONCRETE
- PROPOSED TAXIWAY PAVEMENT
- REMOVE EXISTING PAVEMENT

ABBREVIATIONS

- ECR: End of Curve Return
- MP: Midpoint
- M.E.: Match Existing
- M.F.F.: Match Finished Floor



	NO.	REVISIONS	DATE	INITIALS

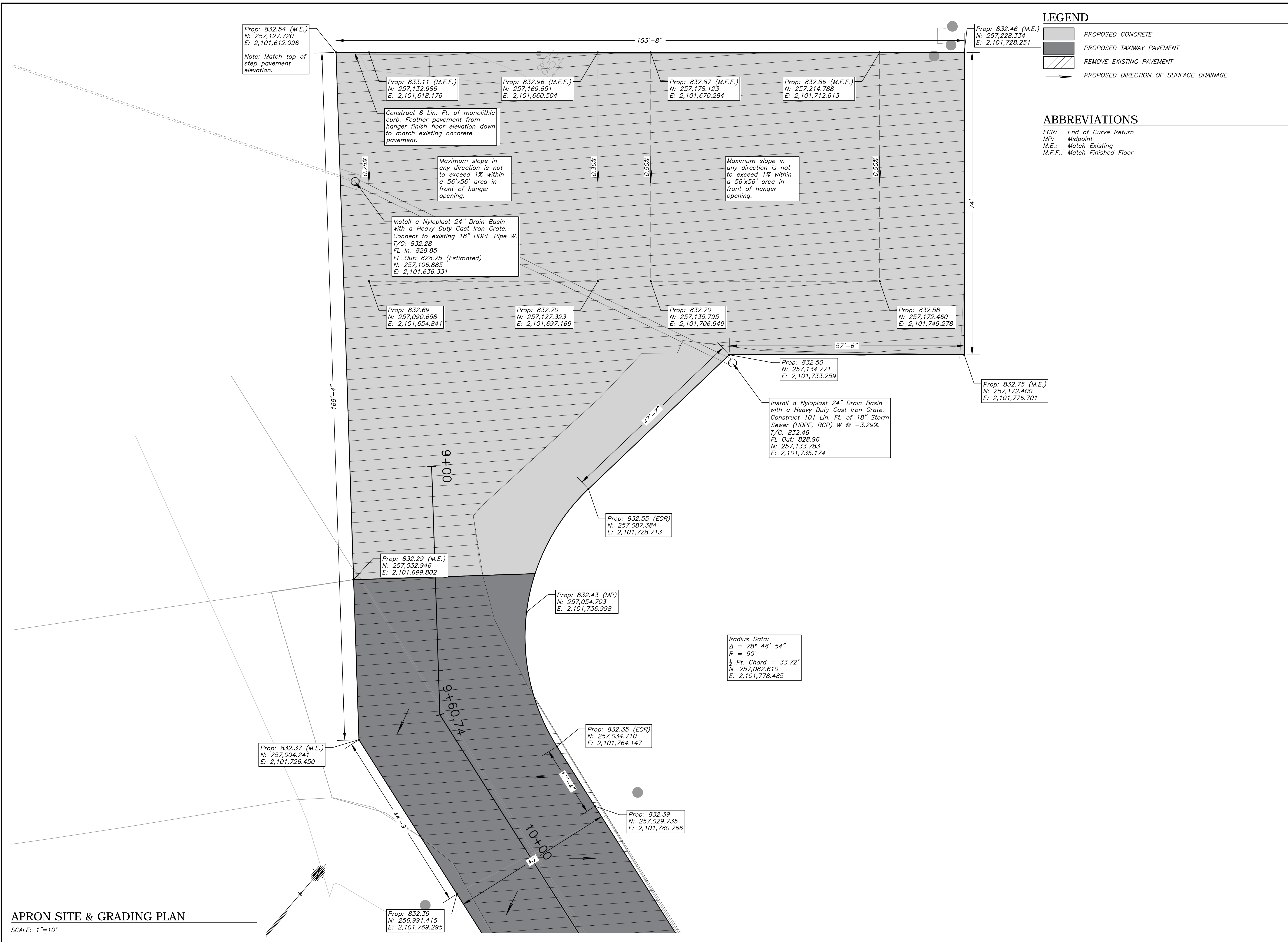
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LAWRENCE, KS PROJECTS #PW1617 & #PW1715

TAXIWAY C PLAN AND PROFILE

BG Project No. 18-1168L	Total Shis. 6
Sht. No. 4	



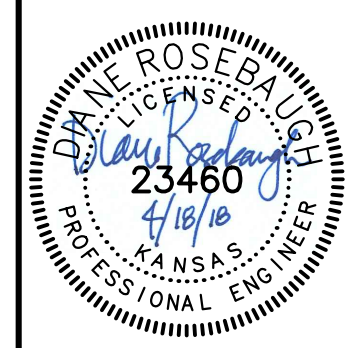
LEGEND

	PROPOSED CONCRETE
	PROPOSED TAXIWAY PAVEMENT
	REMOVE EXISTING PAVEMENT
	PROPOSED DIRECTION OF SURFACE DRAINAGE

ABBREVIATIONS

ECR: End of Curve Return
MP: Midpoint
M.E.: Match Existing
M.F.F.: Match Finished Floor

NO.	REVISIONS	DATE	INITIALS



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LAWRENCE MUNICIPAL AIRPORT IMPROVEMENTS
LAWRENCE, KS PROJECTS #PW1617 & #PW1715
APRON SITE & GRADING PLAN

APRON SITE & GRADING PLAN
SCALE: 1"=10'

BG Project No. 18-1168L	Total Sheets 6
Sheet No. 5	

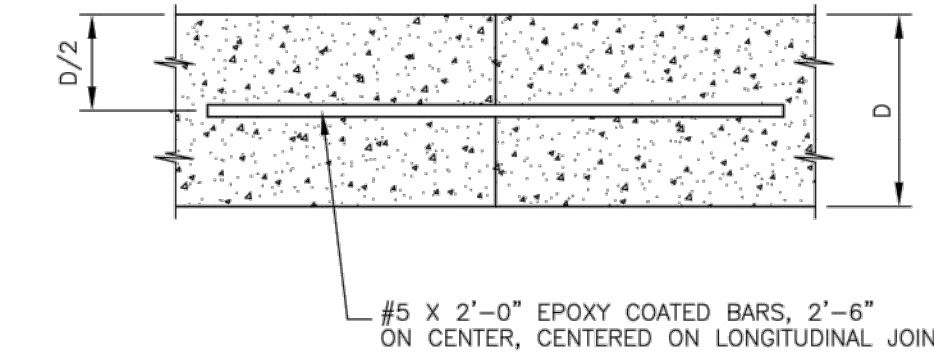
LEGEND

- PROPOSED CONCRETE
- PROPOSED TAXIWAY PAVEMENT
- REMOVE EXISTING PAVEMENT

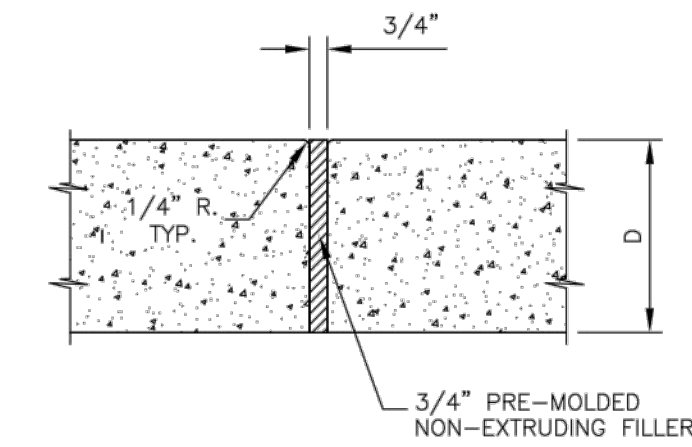


NOTE: It is the intent of this jointing plan that the joints through the hanger apron are to line up and continue with the existing joint pattern to the south. The Contractor shall field verify the measurements. Any variation to what is shown is to be confirmed by the Engineer.

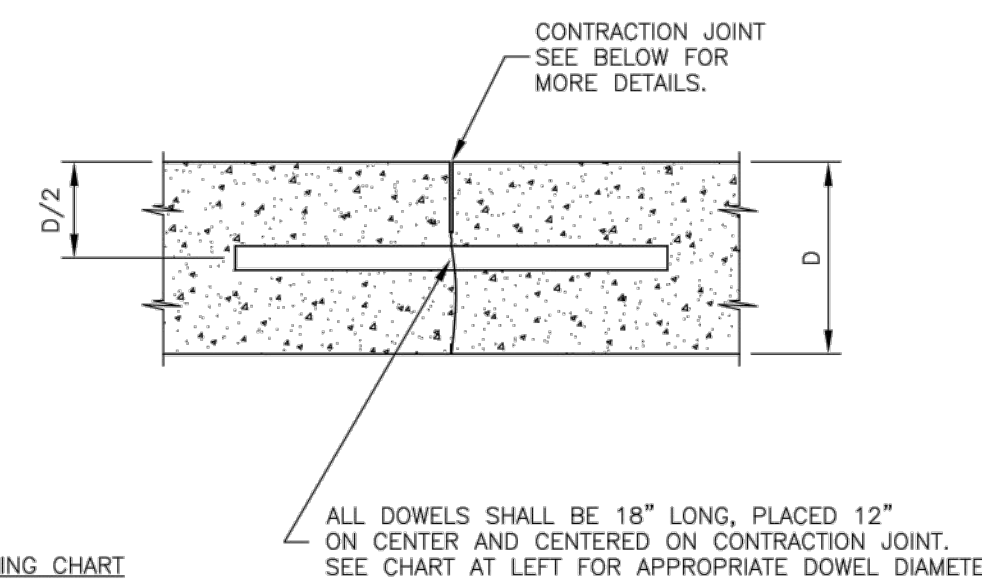
APRON
SCALE: 1" = 20'-0"



LONGITUDINAL CONSTRUCTION JOINT



ISOLATION JOINT

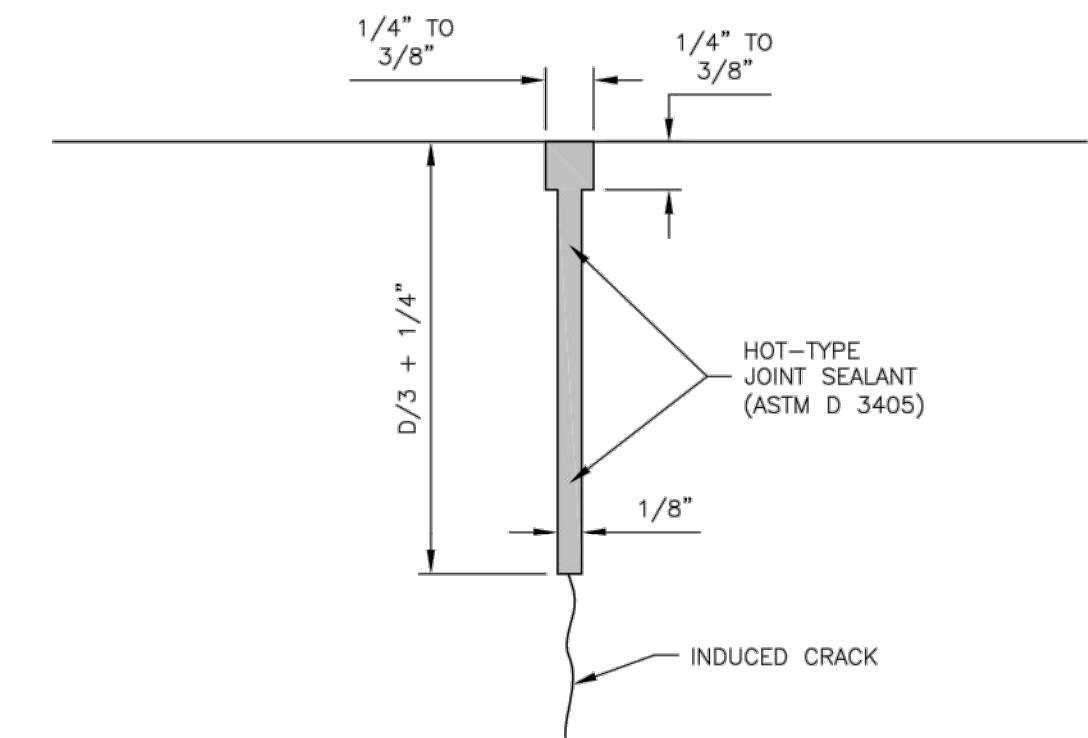


DOWEL SIZING CHART

BAR DIAMETER	PAVEMENT DEPTH (D)
1"	8"
1 1/4"	10"
1 1/2"	12"
1 3/4"	14"
2"	16"

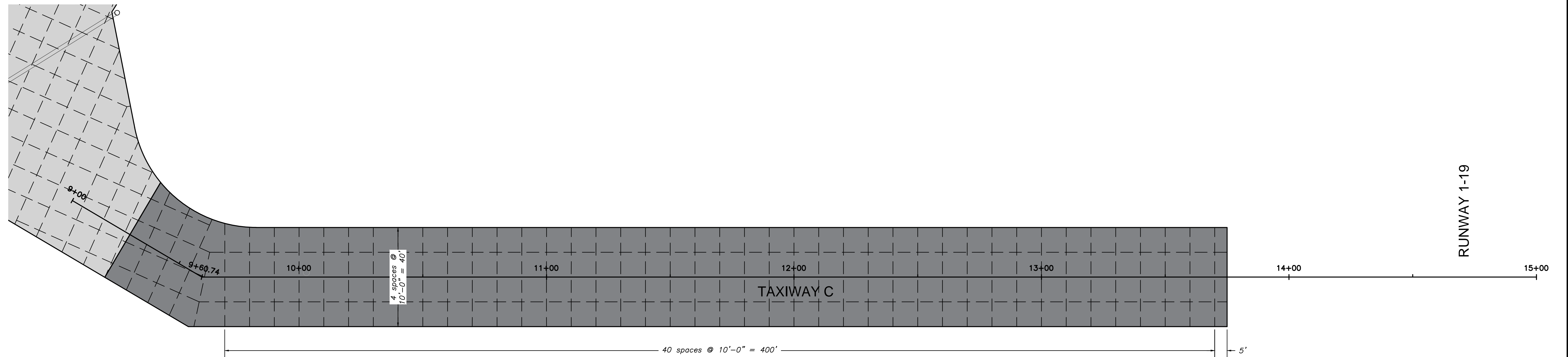
ALL DOWELS SHALL BE 18" LONG, PLACED 12" ON CENTER AND CENTERED ON CONTRACTION JOINT. SEE CHART AT LEFT FOR APPROPRIATE DOWEL DIAMETER.

DOWELED CONTRACTION JOINT



ENLARGED VIEW OF CONTRACTION JOINT

CITY OF LAWRENCE CONCRETE DETAILS
SCALE: Not to Scale



TAXIWAY C
SCALE: 1" = 20'-0"



NO.	REVISIONS	DATE	INITIALS



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LAWRENCE, KS PROJECTS #PW1617 & #PW1715

PAVEMENT JOINTING PLAN

BG Project No.	18-1168L
Sht. No.	6
Total Shts.	6