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CITY COUNCIL MEMEBERS AT-LARGE

JULIAN RAMIREZ
WILLIE DAVIS
TWILA CARTER
LETITIA PLUMMER
SALLIE ALCORN

CONSTRUCTION PLANS FOR

## TERMINAL A NORTH RON PARKING

2800 NORTH TERMINAL ROAD

AT

## GEORGE BUSH INTERCONTINENTAL AIRPORT

PROJECT NO. 973
TIP NO. 23-311-IAH
BSG NO. 2023-356-IAH
CIP NO. A-000713
AIP NO. 3-48-0111-XX

PREPARED BY



IEA, INC.

IN ASSOCIATION WITH

FERGUSON CONSULTING, INC. \* LANDTECH, INC. \* RODS SUE, INC. \* AVILES ENGINEERING CORP.

JUNE 3, 2024

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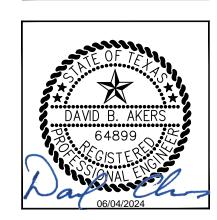
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SCALE:	NTS
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PROJECT NO.

PN 973

C.I.P. NO.

A-000713

H.A.S. NO.

SHEET NO.

G0.01

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REVISIONS

NO. DESCRIPTION DATE BY

CITY OF HOLSTON
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Report System

Director or Designated Representative

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PROJECT NO.
PN 973

C.I.P. NO. A-000713

H.A.S. NO.

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MARY OF NTITIES				
PAY ITEM	SPEC ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	01-35-13.14	SAFETY AND SECURITY	LS	1
2	C-105	MOBILIZATION	LS	1
3	01410	SWPPP, TPDES REQUIREMENTS	LS	1
4	01575	INSTALLATION AND REMOVAL OF STABILIZED CONSTRUCTION EXIT	EA	1
5	01-59-01	MISCELLANEOUS TEMPORARY CONSTRUCTION ITEMS	LS	1
6	32-01-90.34	PAVEMENT MARKING OBLITERATION	SF	25000
7	P-101	16"-16.75" CONCRETE PAVEMENT REMOVAL	SY	3280
8	P-101	2" ASPHALT BOND BREAKER REMOVAL	SY	1640
9	P-101	16"-16.5" CEMENT TREATED BASE REMOVAL	SY	3280
10	P-101	4" ASPHALT SHOULDER PAVEMENT REMOVAL	SY	2580
11	P-101	12" CRUSHED CONCRETE BASE REMOVAL (SHOULDER)	SY	2580
12	02221	REMOVE AND DISPOSE 8" NON-PERFORATED PVC	LF	68
13	P-152	UNCLASSIFIED EXCAVATION EXCESS	CY	10505
14	31 32 13.26	8" LIME / FLY ASH TREATED SUBGRADE	SY	13850
15	31 32 13.26	LIME (FOR LIME / FLY ASH TREATED SUBGRADE)	TN	202.5
16	31 32 13.26	FLY ASH (FOR LIME / FLY ASH TREATED SUBGRADE)	TN	298.5
17	P-209	12" AGGREGATE BASE (BENEATH ASPHALT SHOULDER)	SY	850
18	P-304	6" CEMENT TREATED BASE COURSE (BENEATH CONCRETE PAVEMENT)	SY	13100
19	P-501	17" PORTLAND CEMENT CONCRETE PAVEMENT	SY	12750
20	P-501	FULL DEPTH REPLACEMENT OF CONCRETE PANELS ON TAXIWAY NR	EA	2
21	P-403	4" BITUMINOUS SURFACE COURSE (ASPHALT SHOULDER)	SY	850
22	P-602	EMULSIFIED PRIME COAT	LS	1
23	P-603	EMULSIFIED TACK COAT	LS	1
24	P-604	COMPRESSION JOINT SEAL	LF	12850
25	P-605	HOT POUR SEALANT AND BACKER ROD	LF	520
26	P-620	YELLOW PAVEMENT MARKING WITH GLASS BEADS	SF	13000
27	P-620	BLACK PAVEMENT MARKING	SF	17600
28	P-620	WHITE PAVEMENT MARKING WITH GLASS BEADS	SF	1650
29	P-620	RED PAVEMENT MARKING WITH GLASS BEADS	SF	1650
30	T-904	SODDING, FERTILIZER	SY	2850
31	T-905	TOPSOIL - 4" DEPTH	SY	2850
32	02260	TRENCH SAFETY, ALL DEPTHS	LF	600
33	D-701	42" STORM SEWER RCP (CLASS V)	LF	25
34	D-701	36" STORM SEWER RCP (CLASS V)	LF	330
35	D-701	24" STORM SEWER RCP (CLASS V)	LF	45
36	D-701	18" STORM SEWER RCP (CLASS V)	LF	30
37	D-705	6" UNDERDRAIN, PERFORATED PVC	LF	500
38	D-705	8" UNDERDRAIN, PERFORATED PVC	LF	5
39	D-705	8" UNDERDRAIN, NON-PERFORATED PVC	LF	45
40	D-751	INSTALL AIRCRAFT RATED TY-A INLETS, PRE-CAST	EA	8
41	D-751	ADJUST EXISTING STRUCTURE TO NEW GRADE AND MAKE AIRCRAFT RATED	EA	5
42	D-751	UNDERDRAIN INSPECTION PIT	EA	1
43	D-751	UNDERDRAIN CLEANOUT	EA	2
44	D-751	JUNCTION BOX	EA	2
44 45	D-731 D-701	CONNECTION TO EX. INLET	EA	1
46	D-701	STORMCEPTOR STORMCEPTOR	EA	2
46	D-701 D-751	TRENCH DRAIN CAST IN PLACE	LF	130
48	D-751 D-751	DUAL TRENCH DRAINS CAST IN PLACE	LF	78

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PAY ITEM	SPEC ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
49	X-105-5.1	REMOVE NO. 8 AWG, L-824C IN DUCT	LF	675
50	X-105-5.2	REMOVE 2-INCH CONDUIT (INCLUDING CABLE)	LF	2015
51	X-105-5.3	REMOVE AND DISPOSE OF EXISTING BASE CAN, SALVAGE ELEVATED FIXTURE	EA	27
52	X-105-5.4	REMOVE AND SALVAGE IN-PAVEMENT CENTERLINE LIGHT, BASE TO REMAIN	EA	14
53	X-105-5.5	REMOVE AND DISPOSE OF EXISTING GUIDANCE SIGN INCLUDING FOUNDATION	EA	5
54	X-105-5.6	REMOVE AND SALVAGE GUIDANCE SIGN, REMOVE SIGN FOUNDATION	EA	2
55	X-105-5.7	REMOVE GUIDANCE SIGN FOUNDATION	EA	1
56	X-105-5.8	REMOVE EXISTING MANHOLE	EA	3
57	X-105-5.9	REMOVE CONCRETE ENCASED DUCT IN EARTH	LF	100
58	L-108-5.1	NO. 8 AWG, L-824C CABLE, INSTALLED IN CONDUIT	LF	3610
59	L-108-5.2	NO. 6 AWG BARE COUNTERPOISE WIRE, INSTALLED IN CONDUIT TRENCH	LF	555
60	L-108-5.3	TEMPORARY ELECTRICAL PROVISIONS	LS	1
61	L-110-5.1	PROCURE AND INSTALL 1-WAY, 2" SCHED 40 PVC CONDUIT, CONCRETE ENCASED IN NEW SHOULDER PAVEMENT		545
62	L-110-5.2	PROCURE AND INSTALL 1-WAY, 2" SCHED 40 PVC CONDUIT IN TURF	LF	20
63	L-110-5.3	PROCURE AND INSTALL 2-WAY, 4" SCHED 40 PVC CONDUIT, CONCRETE ENCASED IN NEW PAVEMENT SECTION	LF	415
64	L-110-5.4	PROCURE AND INSTALL 4-WAY, 4" SCHED 40 PVC CONDUIT, CONCRETE ENCASED IN NEW PAVEMENT SECTION	LF	30
65	L-110-5.5	PROCURE AND INSTALL 4-WAY, 4" SCHED 40 PVC CONDUIT, CONCRETE ENCASED IN EARTH	LF	375
66	L-115-5.1	ADJUST EXISTING STRUCTURE TO NEW GRADE AND MAKE AIRCRAFT RATED	EA	12
67	L-125-5.1	INSTALL NEW ELEVATED LED TAXIWAY EDGE LIGHT FIXTURE ON NEW L-867B BASE CAN	EA	6
68	L-125-5.2	INSTALL BLANK COVER ON EXISTING L-868B BASE CAN	EA	14
69	L-125-5.3	NEW GUIDANCE SIGN ON NEW SIGN FOUNDATION, 3 MODULE	EA	2
70	L-125-5.4	INSTALL NEW SIGN PANEL ON EXISTING GUIDANCE SIGN, 3 MODULE	EA	2
71	L-125-5.5	INSTALL SALVAGED SIGN PANEL ON EXISTING GUIDANCE SIGN	EA	3

GEORGE BUSH INTERCONTINENTAL

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HOUSTON, TEXAS

TBPE Firm Registration No. F-10161 REVISIONS

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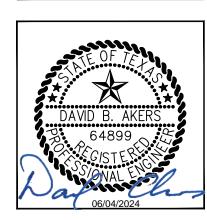
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DEPARTMENT OF AVIATION APPROVED BY: HOUSTON AIRPORT SYSTEMS AUTHORIZED REPRESENTATIVE

PROJECT NO. PN 973 C.I.P. NO.

A-000713 H.A.S. NO.

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### GENERAL CONTRACT NOTES

- 1. THE TERM "CITY" USED THROUGHOUT THE PLANS AND SPECIFICATIONS SHALL REFER TO THE CITY OF HOUSTON, TEXAS.
- 2. THE TERM "AIRPORT" USED THROUGHOUT THE PLANS AND SPECIFICATIONS SHALL REFER TO THE GEORGE BUSH INTERCONTINENTAL AIRPORT. THE TERM "AIRPORT" SHALL ALSO BE INTERPRETED TO MEAN "AIRPORT MANAGEMENT AND/OR OPERATIONS STAFF".
- 3. THE TERM "OWNER" USED THROUGHOUT THE PLANS AND SPECIFICATIONS SHALL REFER TO THE LEGAL OWNER OF THE AIRPORT. THE TERM "OWNER" SHALL ALSO BE INTERPRETED TO MEAN "OWNER'S REPRESENTATIVE". THE TERM "OWNER" MAY ALSO BE USED INTERCHANGEABLY WITH THE TERM "CITY", "HOUSTON AIRPORT SYSTEM (HAS)", AND/OR "AIRPORT", AS APPLICABLE.
- 4. ALL EQUIPMENT REQUIRED TO COMPLETE THE PROJECT SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS PAY ITEMS OF THE PROJECT.
- 5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL APPLICABLE PERMITS FOR CONSTRUCTION AND EQUIPMENT. COPIES OF ALL PERMITS SHALL BE PROVIDED AS SUBMITTALS, IN ACCORDANCE WITH SUBMITTAL PROCEDURES PROVIDED BY THE OWNER. PERMITS SHALL BE CONSIDERED PART OF THE EQUIPMENT PROVIDED BY THE CONTRACTOR AND SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS PAY ITEMS OF THE PROJECT.
- 6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING CONSTANT COORDINATION BETWEEN ANY AND ALL SUBCONTRACTORS AND THE OWNER'S REPRESENTATIVE. ALL CONSTRUCTION ACTIVITIES PLANNED BY THE CONTRACTOR SHALL BE REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
- A. COORDINATION WITH AIRPORT OPERATIONS SHALL BE PERFORMED BY PHONE (281) 233-1131.
- B. CONTACT HAS IT COMMUNICATIONS A MINIMUM OF 48 HOURS PRIOR TO EXCAVATION IN THE VICINITY OF FAA INFRASTRUCTURE LINES TO MARK LINES. SHAWN SUSKI (281) 233-1900, EMAIL: HAS.SERVICEDESK@HOUSTONTX.GOV
- 7. THE CONTRACTOR'S PROJECT SUPERINTENDENT OR HIS/HER DESIGNATED ASSISTANT MUST BE ON SITE DURING ALL WORK ACTIVITIES, INCLUDING THOSE BY SUBCONTRACTORS, SUPPLIERS, OR ANY PERSON UNDER CONTRACTOR CONTROL. THE CONTRACTOR'S PROJECT SUPERINTENDENT SHALL BE THE DESIGNATED RESPONSIBLE CONTRACTOR REPRESENTATIVE AND SHALL BE AVAILABLE IN CASE OF EMERGENCIES ON A 24-HOUR BASIS.
- 8. THROUGHOUT THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL SHAPE EACH CONSTRUCTION AREA TO MAINTAIN POSITIVE (CONTINUOUS AND FLOWING) DRAINAGE OF SURFACE WATER DURING EACH CONSTRUCTION OPERATION AND NOT RESTRICT THE EXISTING DRAINAGE FLOW PATTERNS.
- A. IF NECESSARY, THE CONTRACTOR SHALL PROVIDE AND INSTALL DRAINAGE PROVISIONS (I.E. STRUCTURES) NECESSARY TO MEET THESE REQUIREMENTS.
- B. IF NECESSARY, SURFACE WATER SHALL BE PUMPED IMMEDIATELY AFTER A RAIN EVENT FROM EACH
- CONSTRUCTION AREA.

  C. ALL TEMPORARY DRAINAGE AND DEWATERING ACTIONS SHALL BE IN ACCORDANCE WITH SECTION

01578 - CONTROL OF GROUND AND SURFACE WATER.

- D. AT THE END OF THE PROJECT, THE CONTRACTOR SHALL RESTORE ALL GRADES, PER DESIGN
- PLANS, AND REMOVE ALL TEMPORARY DRAINAGE PROVISIONS.
- E. THE COST OF TEMPORARY DRAINAGE AND DEWATERING SHALL BE SUBSIDIARY TO THE CONTRACT.
- 9. THE EXISTING CONDITIONS SHOWN IN THE PLANS WERE DEVELOPED FROM AS-BUILT INFORMATION SUPPLEMENTED BY CASUAL VISUAL OBSERVATIONS, TOPOGRAPHIC SURVEY, AND GEOTECHNICAL INVESTIGATIONS. THE ENGINEER DOES NOT WARRANT THE EXISTING CONDITIONS AS ALL INCLUSIVE OR EXACT, BUT RATHER AS THE BEST AVAILABLE KNOWLEDGE AT THE TIME OF PROJECT DESIGN. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMMEDIATELY WHEN FOUND, PRIOR TO PERFORMING ANY CONSTRUCTION ACTIVITIES.
- 10. ALL COORDINATES PROVIDED WITHIN THESE PLANS SHALL BE FIELD VERIFIED BEFORE THEIR USE. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
- 11. THE PROJECT PAY ITEMS PROVIDED SHALL BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THE PLANS OR DESCRIBED IN THE SPECIFICATIONS. ANY WORK DESCRIBED IN THE PLANS OR SPECIFICATIONS THAT IS NOT PAID FOR DIRECTLY BY A SPECIFIC BID ITEM SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF PROJECT PAY ITEMS OF WHICH IT IS A COMPONENT.

### DEMOBILIZATION NOTES

- 1. CONDITIONS OF THE PROJECT AREA AND SURROUNDING AREAS UPON COMPLETION OF THE PROJECT SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK, IN ADDITION TO THE WORK ITEMS LISTED.
- 2. THE PROJECT SHALL BE FREE OF ANY CONTRACTOR STOCKPILE MATERIALS UPON COMPLETION OF THE PROJECT, UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
- 3. UPON COMPLETION OF THE PROJECT, ALL HAUL ROUTES SHALL BE PROPERLY CLEANED TO PREVENT OBSTRUCTION AND/OR CAUSE INCONVENIENCE TO NORMAL REGULAR TRAFFIC. ALL TEMPORARY HAUL ROUTES SHALL BE REMOVED.
- 4. THE CONTRACTOR SHALL RESTORE ANY STAGING/STORAGE AREAS UPON COMPLETION OF THE PROJECT INCLUDING, AT MINIMUM, REPAIR OF EXISTING FACILITIES, REGRADING, AND TOPSOILING AND ESTABLISHING VEGETATION, AS APPLICABLE.
- 5. ALL CONSTRUCTION EQUIPMENT AND ANY FACILITIES TEMPORARILY PLACED ON SITE FOR THE PROJECT SHALL BE REMOVED FROM THE SITE.
- 6. ANY PROPERTIES BELONGING TO THE OWNER SHALL BE RETURNED TO THE OWNER.
- 7. PROPER DRAINAGE (NO LOCALIZED PONDING) SHALL BE MAINTAINED, PRIOR TO, DURING, AND AFTER MOBILIZATION/DEMOBILIZATION.
- 8. DEMOBILIZATION SHALL BE COMPLETED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, AS APPROPRIATE, AND SHALL BE COMPLETED IN A MANNER THAT WILL MINIMIZE INCONVENIENCE TO AIRPORT OPERATIONS. ANY DAMAGE TO THE AIRPORT FACILITIES DURING DEMOBILIZATION SHALL BE REPAIRED AND PAID FOR AT THE CONTRACTOR'S EXPENSE. THE COST OF DEMOBILIZATION SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF MOBILIZATION.

### CONTRACTOR'S STAGING/STORAGE AREA, STOCKPILE AREA, DISPOSAL AREA AND BATCH PLANT SITE NOTES

- 1. STOCKPILES, STAGING/STORAGE AREAS, AND/OR DISPOSAL AREAS SHALL BE AS SHOWN IN THE PLANS, OR AS COORDINATED/NEGOTIATED WITH THE OWNER. THESE AREAS SHALL NOT CREATE ANY PONDING OF WATER OR ALTER DRAINAGE PATTERNS OF THE AIRPORT PROPERTY.
- 2. STOCKPILES, STAGING/STORAGE AREAS, AND/OR DISPOSAL AREAS WILL NOT BE PLACED WITHIN ANY WATER OF THE UNITED STATES, INCLUDING WETLANDS, WATER BODIES, AND STREAM BEDS. THESE AREAS SHALL BE CONSTRUCTED IN A MANNER TO PROHIBIT THE RUNOFF OF POLLUTANTS AND CONTROL SILT/SEDIMENT MOVEMENT. ALL WATERWAYS SHALL BE CLEARED AS SOON AS PRACTICAL OF TEMPORARY EMBANKMENTS, TEMPORARY BRIDGES, MATTING, FALSE WORK, PILING, DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT PART OF THE FINISHED WORK.
- 3. STOCKPILED MATERIALS AND EQUIPMENT STORAGE ARE NOT PERMITTED WITHIN ANY RUNWAY/TAXIWAY SAFETY AREA OR OBJECT FREE AREA.
- 4. MATERIALS STORED OR STOCKPILED ON THE AIRPORT SHALL BE SO PLACED AND THE WORK SHALL, AT ALL TIMES, BE CONDUCTED SO AS TO CAUSE NO GREATER OBSTRUCTION TO THE AIR AND GROUND TRAFFIC THAN IS ALLOWED IN THE PLANS OR APPROVED BY THE OWNER. STOCKPILES MUST COMPLY WITH OBSTRUCTION HEIGHT REQUIREMENTS FOR PROTECTED AIRSPACE (TRANSITIONAL SURFACE OR PRIMARY SURFACE) AS PROVIDED IN THE CODE OF FEDERAL REGULATIONS, PART 77, SAFE, EFFICIENT USE, AND PRESERVATION OF THE NAVIGABLE AIRSPACE.
- 5. STOCKPILE GEOMETRIES MUST COMPLY WITH ALL APPLICABLE OSHA REGULATIONS.
- 6. STOCKPILED MATERIAL AND OPEN EXCAVATIONS SHALL BE TREATED IN SUCH A MANNER AS TO PREVENT MOVEMENT RESULTING FROM AIRCRAFT BLAST OR WIND CONDITIONS IN EXCESS OF 10 MILES PER HOUR.
- 7. STOCKPILED MATERIALS SHALL BE SEGREGATED FROM UNDERLYING MATERIALS BY IMPERVIOUS MEANS APPROVED BY THE OWNER'S REPRESENTATIVE.
- 8. CONTRACTOR STAGING/STORAGE AREAS
- A. THE CONTRACTOR MAY STORE CONSTRUCTION EQUIPMENT AND MATERIALS IN THE CONTRACTOR'S STAGING AREA. THE CONTRACTOR SHALL LIMIT ANY EQUIPMENT AND MATERIAL STORAGE TO THE SMALLEST POSSIBLE FOOTPRINT.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF HIS/HER OWN EQUIPMENT AND MATERIALS, AND ANY ASSOCIATED SECURITY APPURTENANCES. ANY SECURITY MEASURES DEEMED NECESSARY BY THE CONTRACTOR IN THE PROTECTION OF HIS/HER OWN EQUIPMENT AND MATERIALS SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PERFORMANCE OF THE WORK ASSOCIATED WITH THE PROJECT.
- C. THE CONTRACTOR SHALL MAKE MODIFICATIONS WITHIN THE STAGING AREA WHEN DEEMED NECESSARY BY AIRPORT OPERATIONS OR OWNER PERSONNEL. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL RESTORE ALL STAGING AREAS TO ORIGINAL CONDITIONS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OVERALL PERFORMANCE OF THE WORK ASSOCIATED WITH THE PROJECT.
- D. ANY AREAS UTILIZED AS CONSTRUCTION STAGING AREAS SHALL BE MAINTAINED AT ALL TIMES IN A CLEAN AND ENVIRONMENTALLY SAFE CONDITION.
- 9. NO CONTRACTOR EMPLOYEE VEHICLES WILL BE ALLOWED WITHIN THE AOA. CONTRACTOR EMPLOYEE PARKING SHALL BE OR AS DIRECTED BY THE OWNER. THE CONTRACTOR SHALL THEN SHUTTLE HIS/HER EMPLOYEES TO THE PROJECT SITE TO REDUCE VEHICLE TRAFFIC IN THE AOA.
- 10. ALL CONTRACTOR VEHICLES AND EQUIPMENT SHALL BE PARKED IN THE STAGING/STORAGE AREAS WHEN NOT IN USE. NO EQUIPMENT WILL BE ALLOWED TO REMAIN WITHIN ANY OFA OR TOFA WHEN WORK IS NOT BEING PERFORMED.
- 11. STAGING AREAS MAY OR MAY NOT HAVE UTILITIES PRESENT. ANY UTILITIES REQUIRED BY THE CONTRACTOR SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNERS AND SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

### 12. DISPOSAL AREAS

- A. ALL UNSUITABLE MATERIALS, EXCESS EARTHWORK EXCAVATION, WASTE AND/OR SPOIL MATERIALS SHALL BE DISPOSED OF OFF THE AIRPORT PROPERTY BY THE CONTRACTOR IN A LICENSED LANDFILL IN ACCORDANCE WITH LOCAL LAWS AND REGULATIONS, UNLESS OTHERWISE NOTED. NO MATERIAL SHALL BE WASTED ON THE AIRPORT SITE UNLESS APPROVED BY THE OWNER. THIS SHALL BE CONSIDERED SUBSIDIARY TO THE CONTRACT.
- B. ANY APPROVED ON—AIRPORT WASTE AND DISPOSAL AREA SHALL BE SEEDED AND RESTORED IN A SMOOTH, GRADED AND DRAINABLE CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- C. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL SUBMIT, IN ACCORDANCE WITH SECTION 01330 SUBMITTAL PROCEDURES, DOCUMENTATION OF THE QUANTITY TO BE DISPOSED OF, LOCATION OF THE DISPOSAL SITE, AND DOCUMENTATION OF CITY OR LOCAL GOVERNMENT ACCEPTANCE OF THOSE MATERIALS.
- 13. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL RECORD THE EXISTING CONDITIONS OF THE ALL PROPOSED STAGING/STORAGE AREAS, STOCKPILE AREAS, DISPOSAL AREA, AND BATCH PLANT AREAS VIA PHOTOGRAPH OR VIDEO DOCUMENTATION. ALL DOCUMENTATION SHALL BE SUBMITTED TO THE OWNER PRIOR TO DISTURBING THESE AREAS.
- 14. ALL COSTS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, REPAIR, AND REMOVAL OF ONSITE STAGING/STORAGE AREAS, STOCKPILE AREAS, DISPOSAL AREA, AND BATCH PLANT AREAS INCLUDING LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS SHALL BE SUBSIDIARY TO THE CONTRACT.
- 15. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL RECORD THE EXISTING CONDITIONS OF THE ALL PROPOSED HAUL ROUTE VIA PHOTOGRAPH OR VIDEO DOCUMENTATION. ALL DOCUMENTATION SHALL BE SUBMITTED TO THE OWNER PRIOR TO THE CONTRACTOR UTILIZING THE HAUL ROUTE.
- 16. THE CONDITION OF THE HAUL ROUTE UPON COMPLETION OF THE PROJECT SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.

### CONTRACTOR CONSTRUCTION PROCESS NOTES

- 1. CONTRACTOR WILL ADHERE TO THE CODE REQUIREMENTS OF HAS AND THE CITY OF HOUSTON FOR ALL CONSTRUCTION.
- 2. FOR BUILDING AND STRUCTURE CONSTRUCTION, CONTRACTOR SHALL FOLLOW THE 2015 INTERNATIONAL BUILDING CODE AS ADOPTED BY THE CITY OF HOUSTON, CHAPTER 17 REGARDING SPECIAL INSPECTIONS.

#### DEFINITIONS AND ABBREVIATIONS

AC - ADVISORY CIRCULAR

(WITH RESPECT TO PAVEMENTS, RSA, TSA, OFA, TOFA, AND/OR

ACTIVE - OFZ) - NOT CLOSED TO AIRCRAFT TRAFFIC.

AGIS - AIRPORTS GEOGRAPHIC INFORMATION SYSTEM

AGL - ABOVE GROUND LEVEL

ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE

AOA - AIR OPERATIONS AREA

ARFF - AIRPORT RESCUE AND FIRE FIGHTING

ATC - AIR TRAFFIC CONTROL

ATCT - AIRPORT TRAFFIC CONTROL TOWER

BARRICADE — THE TERM "BARRICADE" SHALL BE USED THROUGHOUT THE PLANS AND PROJECT MANUAL TO UNIVERSALLY INDICATE BARRICADES, SIGNS, DANGER SIGNALS, HAZARD LIGHTING, AND/OR ANY OTHER SAFETY MEASURES TO BE INSTALLED BY THE CONTRACTOR PRIOR TO COMMENCING WORK IN AN AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, FILLING WITH WATER AND MAINTAINING THE NECESSARY BARRICADES AS REQUIRED BY THE PLANS AND SPECIFICATIONS (FAA AC 150/5370-2, CURRENT EDITION, LATEST CHANGE) FOR THE PROTECTION OF THE WORK AND THE SAFETY OF THE PUBLIC FOR BOTH LAND AND AIR TRAFFIC.

CAT - CATEGORY

CSPP - CONSTRUCTION SAFETY AND PHASING PLAN

CLL - CENTER LINE LIGHT

CLR - CLEARANCE

COH - CITY OF HOUSTON

TB - CEMENT TREATED BASE

LEC - ELECTRIC

ISEA

MSL

FAA - FEDERAL AVIATION ADMINISTRATION

FOD - FOREIGN OBJECT DEBRIS

GS - GLIDE SLOPE INDICATOR

HAS - HOUSTON AIRPORT SYSTEM

HMAC - HOT MIX ASPHALT CONCRETE

IAH - GEORGE BUSH NTERCONTINENTAL AIRPORT

ILS - INSTRUMENT LANDING SYSTEM

LTS - LIME TREATED SUBGRADE

MEAN SEA LEVEL

MSDS - MATERIAL SAFETY DATA SHEET

NAVAID - NAVIGATIONAL AID

NOTAM - NOTICE TO AIR MISSIONS

ON CENTER

OFA - OBJECT FREE AREA

OFZ - OBJECT FREE ZONE

OSHA - OCCUPATIONAL SAFTEY AND HEALTH ADMINISTRATION

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION

PCC - PORTLAND CEMENT CONCRETE

QA - QUALITY ASSURANCE

ROFA - RUNWAY OBJECT FREE AREA

RPCC - REINFORCED PORTLAND CEMENT CONCRETE

RPZ - RUNWAY PROTECTION ZONE
RSA - RUNWAY SAFTEY AREA

W - RUNWAY

SPCD - SAFETY PLAN COMPLIANCE DOCUMENT

SW3P - STORMWATER POLLUTION PREVENTION PLAN

TOFA - TAXIWAY OBJECT FREE AREA

TLOFA - TAXILANE OBJECT FREE AREA

TSA - TAXIWAY SAFTEY AREA

TW - TAXIWAY

TL - TAXILANE

TYP - TYPICAL

UNDR - UNDERGROUND

UON - UNLESS OTHERWISE NOTIFIED

VSR - VEHICLE SERVICE ROAD

/AN - WORK AREA NOTIFICATION

HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL

HOUSTON, TEXAS

13501 Katy Freeway
Suite 3425
Houston, Texas 77079
(832) 494–3800
TBPE Firm Registration No.
F-10161

REVISIONS

NO. DESCRIPTION DATE BY

CITY OF HOUSTON
HOUSTON AIRPORTS SYSTEM
Recommended

OG-06/2024
Houston Airports System
DATE
Director or Designated Representative

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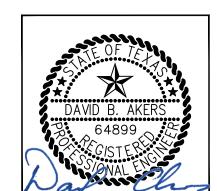
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CHECKED BY: BS

SCALE: NTS

DATE: 06/03/2024



DEPARTMENT OF AVIATION

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HOUSTON AIRPORT SYSTEMS
AUTHORIZED REPRESENTATIVE

PROJECT NO.

PN 973

C.I.P. NO.

A-000713

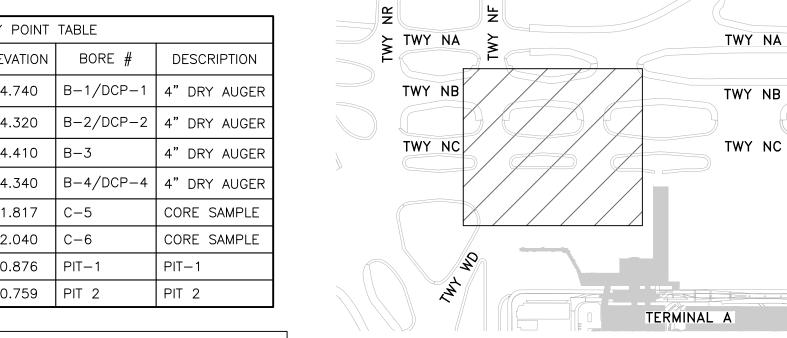
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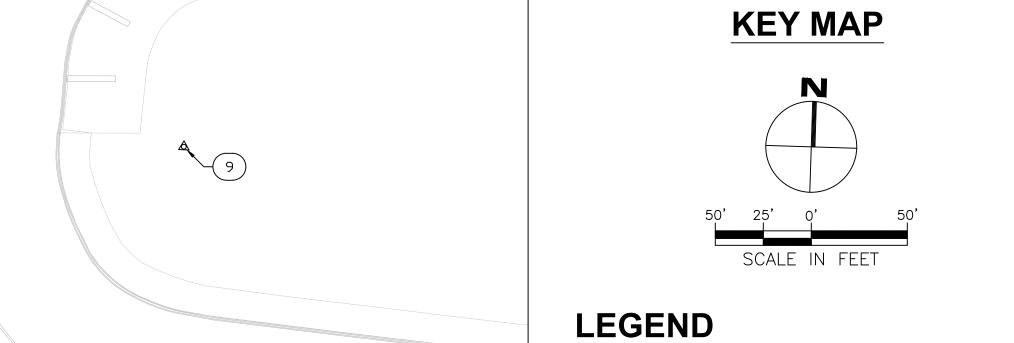
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SURVEY CONTROL POINT TABLE					
PNT NO.	NORTHING	EASTING	ELEVATION	CONTROL POINT NO.	DESCRIPTION
1	13926462.84	3123017.67	90.65	CH-1	SET 5/8"IR W/LANDTECH
2	13926650.20	3123447.50	91.39	CH-2	SET 5/8"IR W/LANDTECH
3	13926488.03	3123907.01	91.67	CH-3	SET 5/8"IR W/LANDTECH
4	13926102.57	3123294.95	93.05	CH-4	SET CUT X IN CONC.
5	13926111.93	3123587.18	93.00	CH-5	SET CUT X IN CONC.
6	13925998.73	3123820.28	93.69	CH-6	SET CUT X IN CONC.
7	13926245.73	3123952.82	93.57	CH-7	SET CUT X IN CONC.
8	13926483.21	3123946.12	90.81	CH-8	SET 5/8"IR W/LANDTECH

SURVEY CONTROL POINT TABLE					
PNT NO.	NORTHING	EASTING	ELEVATION	CONTROL POINT NO.	DESCRIPTION
9	13926744.12	3123889.73	91.85	CH-9	SET 5/8"IR W/LANDTECH
10	13926745.54	6456980.14	91.77	CH-10	SET 5/8"IR W/LANDTECH
11	13926497.51	3123455.33	90.84	CH-11	SET 5/8"IR W/LANDTECH
12	13926724.92	3123256.62	91.71	CH-12	SET 5/8"IR W/LANDTECH
13	13926705.96	3123003.29	91.37	CH-13	SET 5/8"IR W/LANDTECH
14	13926457.10	3122985.05	90.28	CH-14	SET 5/8"IR W/LANDTECH
15	13926110.83	3123013.38	91.29	CH-15	SET 5/8"IR W/LANDTECH
16	13926108.39	3123491.45	93.00	CH-16	SET CUT X IN CONC.

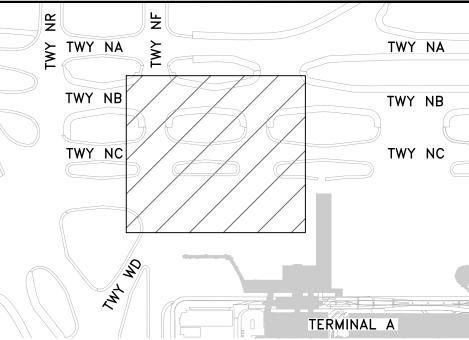
GEOTECH SURVEY POINT TABLE					
BORING	NORTHING	EASTING	ELEVATION	BORE #	DESCRIPTION
17	13926671.14	3123339.02	94.740	B-1/DCP-1	4" DRY AUGE
18	13926677.26	3123544.05	94.320	B-2/DCP-2	4" DRY AUGE
19	13926500.84	3123353.41	94.410	B-3	4" DRY AUGE
20	13926457.91	3123557.59	94.340	B-4/DCP-4	4" DRY AUGE
21	13926359.84	3123361.29	91.817	C-5	CORE SAMPL
22	13926350.28	3123574.43	92.040	C-6	CORE SAMPL
23	13926660.65	3123352.50	90.876	PIT-1	PIT-1
24	13926457.46	3123532.04	90.759	PIT 2	PIT 2





△ -	##)	SURVEY	CONT	ROL	POIN
0 -	##	BORING/	CORE	POI	NT
<b>+</b> -	##	SAMPLE	PIT F	POINT	-

- 1. HORIZONTAL DATUM: TEXAS COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD 83), SOUTH CENTRAL ZONE, EPOCH 2010.00 (2011 ADJUSTMENT), US SURVEY FEET.
- 2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988
- 3. ALL COORDINATES SHOWN ARE SURFACE VALUES, IAH PROJECT SCALE FACTOR = 0.999923616683 (SURFACE MULTIPLIED BY
- 4. SURVEY DATE: APRIL 4, 2022 MAY 27,



TBPE Firm Registration No. F-10161 REVISIONS NO. DESCRIPTION DATE BY

GEORGE BUSH INTERCONTINENTAL

13501 Katy Freeway Suite 3425 Houston, Texas 77079 (832) 494-3800

HOUSTON, TEXAS

TERMINAL A NORTH RON PARKING GEORGE BUSH INTERCONTINENTAL AIR CONTROL LAYOUT

ISSUED FOR PERMIT

PROJECT M	GR: DA
DESIGNER:	ZJ
DRAWN BY:	ZJ
CHECKED B	Y: BS
SCALE:	1" = 50'
DATE:	06/03/2024

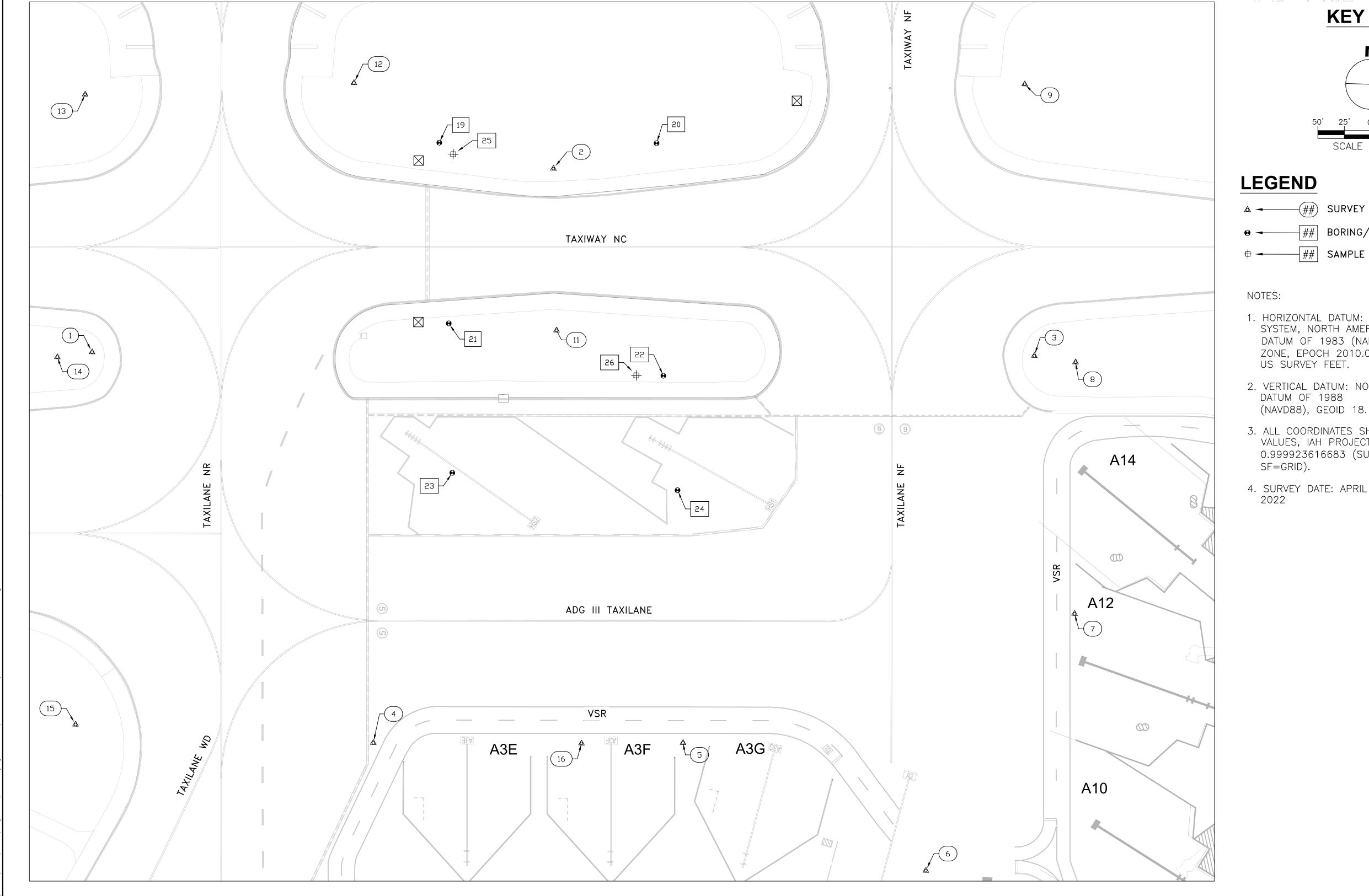


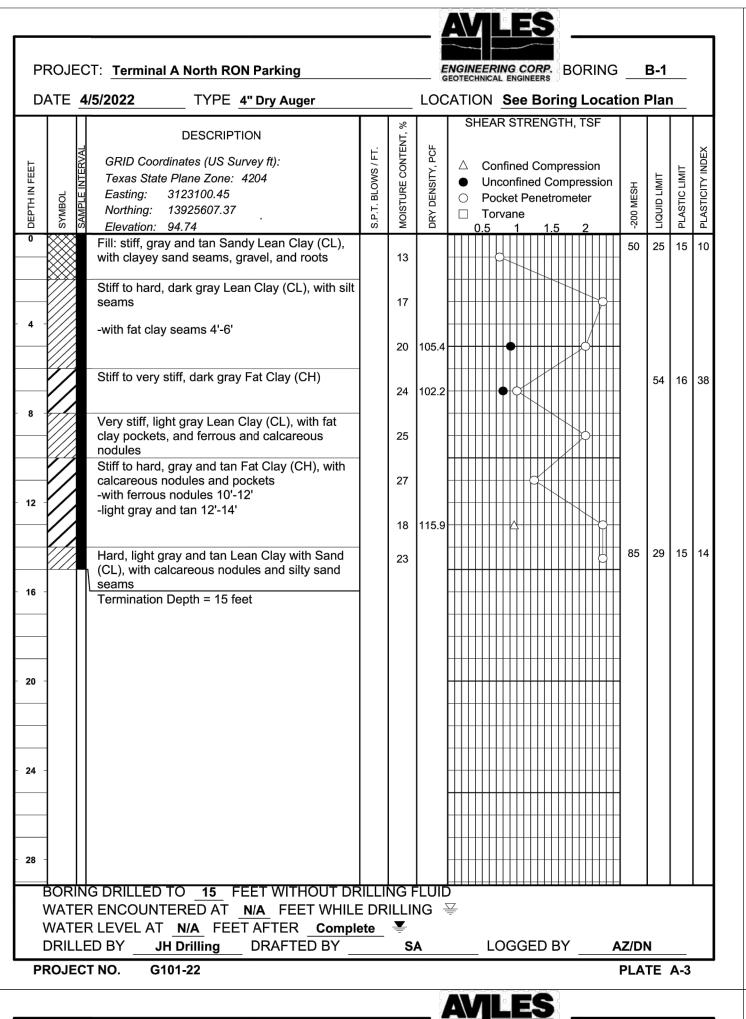
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AUTHORIZED REPRESENTATIVE PROJECT NO. PN 973 C.I.P. NO. A-000713

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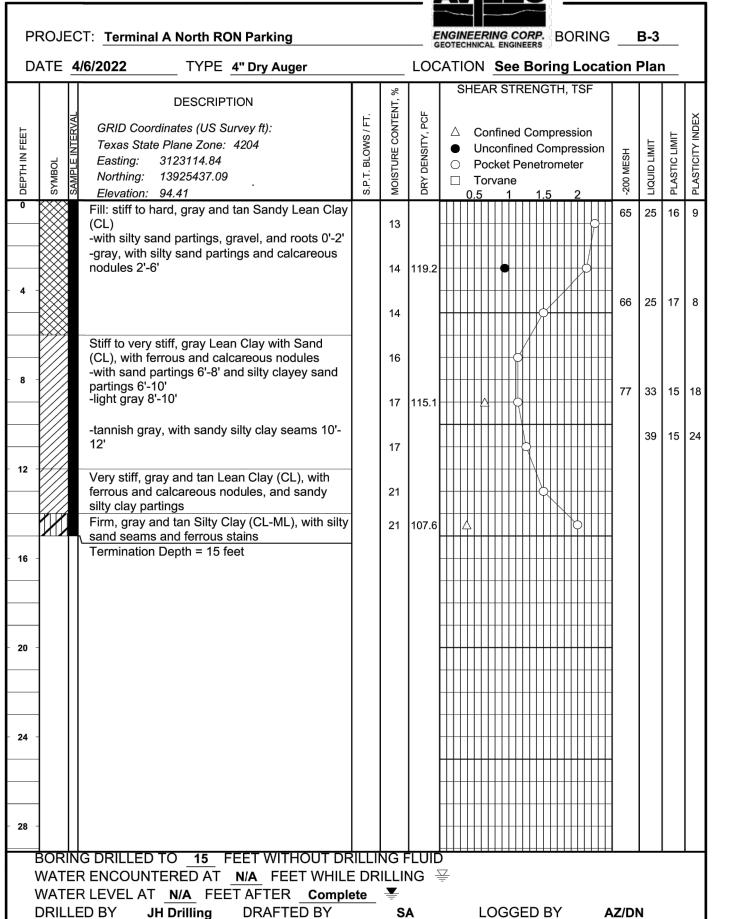
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D/	ATE <u>4</u>	/5/2022 TYPE 4" Dry Auger			LOC	CATION See Boring Location Plan    SHEAR STRENGTH, TSF
O DEPTH IN FEET	SYMBOL SAMPLE INTERVAL	DESCRIPTION  GRID Coordinates (US Survey ft): Texas State Plane Zone: 4204 Easting: 3123305.46 Northing: 13925613.49 Elevation: 94.32	S.P.T. BLOWS / FT.	MOISTURE CONTENT, 9	DRY DENSITY, PCF	△ Confined Compression  ■ Unconfined Compression  ○ Pocket Penetrometer  □ Torvane  0.5 1 1.5 2
		Fill: very stiff, gray and tan Sandy Lean Clay (CL) -with fat clay pockets, ferrous nodules, asphalt pieces, and roots 0'-2' -with calacareous nodules and clayey sand pockets 2'-4'		15 15		58 29 15
4 -		Hard, gray Lean Clay with Sand (CL), with calcareous nodules and pockets -light gray, with silty clayey sand seams 6'-8'		13	122.8	74 28 13
8 -		Firm to very stiff, gray and tan Lean Clay (CL) -with calcareous nodules 8'-10' and ferrous nodules 8'-12'		12 17		
12 -		-with fat clay seams and silty sand partings 12'- 14'		28	99.8	88 49 17
		-with silty sand seams 14'-15'  Termination Depth = 15 feet		28		
16		теппіпацоп Берш – 13 ісец				
20 -						
24 -						
28 -						
\	BORING DRILLED TO <u>15</u> FEET WITHOUT DRILLING FLUID  WATER ENCOUNTERED AT <u>N/A</u> FEET WHILE DRILLING ₩  WATER LEVEL AT <u>N/A</u> FEET AFTER <u>Complete</u> ₩					
		ED BY <b>JH Drilling</b> DRAFTED BY T NO. G101-22		S	A	LOGGED BY AZ/DN PLATE A-4

AYLES



AZ/DN

PLATE A-5

DRILLED BY JH Drilling DRAFTED BY

PROJECT NO. G101-22

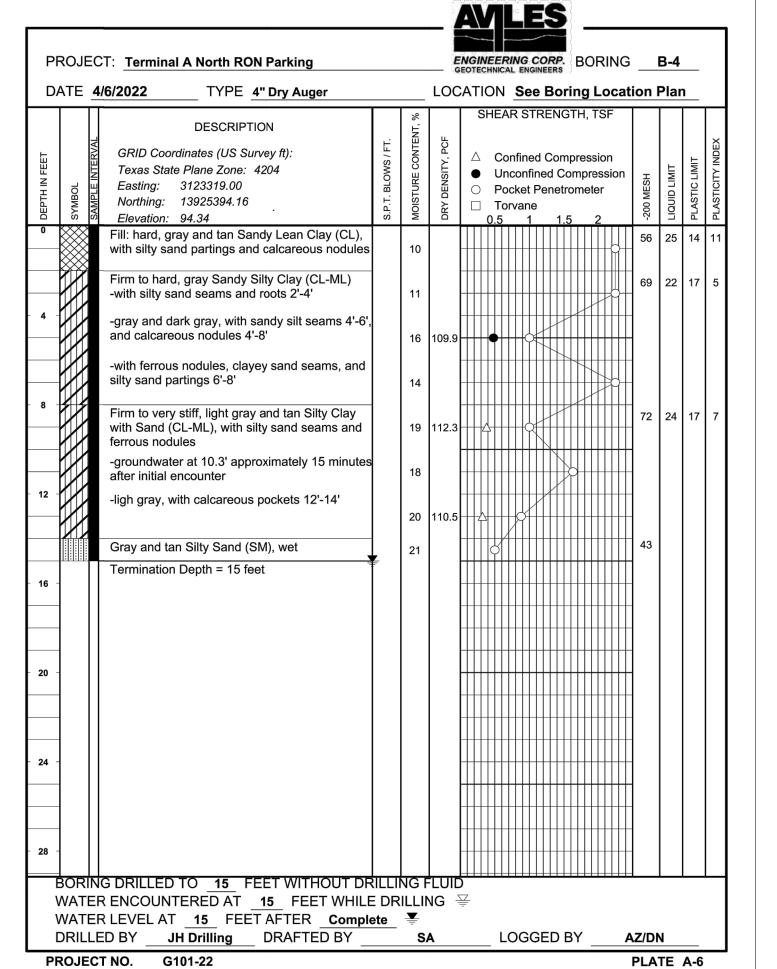






Photo 1 - Core C-5, 16" concrete, 2" asphalt bond breaker, 16" cement-treated base, 4" stabilized clay



Photo 2 - Core C-6, 16.75" concrete, 16.5 cement-treated base

PLATE 1





Houston, Texas 77079 (832) 494-3800 TBPE Firm Registration No F-10161

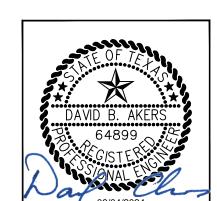
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REVISIONS

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ISSUED FOR PERMIT

PROJECT MGR:	DA
DESIGNER:	DA
DRAWN BY:	ZJ
CHECKED BY:	BS
SCALE:	NTS
DATE:	06/03/2024



DEPARTMENT OF AVIATION	N
APPROVED BY:	DATE:
HOUSTON AIRPORT SYSTEMS	
AUTHORIZED REPRESENTATIVE	

PROJECT NO. PN 973

C.I.P. NO. A-000713

H.A.S. NO.

SHEET NO.

### **AIRPORT SAFETY REQUIREMENTS**

- 1. THE CONTRACTOR SHALL FAMILIARIZE HIS / HER SUPERVISORS AND EMPLOYEES OF THE AIRPORT ACTIVITY AND OPERATIONS THAT ARE INHERENT TO THIS ACTIVE AIR CARRIER AIRPORT. THE CONTRACTOR SHALL CONDUCT ALL CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES ON SAFETY AS SPECIFIED HEREIN OR AS DIRECTED BY THE OWNER.
- 2. ALL CONSTRUCTION PERSONNEL SHALL ATTEND A DAILY SAFETY BRIEFING PRIOR TO COMMENCING WORK FOR THE DAY. THESE 9. EACH FLAGMAN, SUPERVISORY INDIVIDUAL AND CONTRACTOR LEAD MEETINGS SHALL BE MADE OPEN TO THE ENGINEER, OWNER, OWNER'S REPRESENTATIVE. AIRPORT OPERATIONS. AND ANY OTHER GOVERNING AUTHORITY THAT WOULD LIKE TO ATTEND. THERE WILL ALSO BE A MANDATORY WEEKLY CONSTRUCTION MEETING, THE DATE AND TIME OF WHICH WILL BE ESTABLISHED PRIOR TO THE START OF CONSTRUCTION, WITH AIRPORT OPERATIONS THAT MUST BE ATTENDED BY THE CONTRACTOR'S SENIOR FIELD STAFF, INCLUDING BUT NOT LIMITED TO SUPERINTENDENTS AND TEAM LEADERS.
- 3. CONSTRUCTION PERSONNEL AND EQUIPMENT WILL NOT BE ALLOWED WITHIN THE PROJECT WORK AREA UNTIL THE AREA HAS BEEN CLOSED TO AIRCRAFT AND THE APPROPRIATE NOTAMS HAVE BEEN ISSUED.
- 4. THE CONTRACTOR SHALL BE AWARE THAT CONSTRUCTION MAY OCCUR ADJACENT TO ACTIVE AIRFIELD PAVEMENTS. CONSTRUCTION TRAFFIC SHALL YIELD TO AIRCRAFT AT ALL TIMES.
- 5. ALL CONTRACTOR VEHICLES AND TRAFFIC SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION LIMITS OR HAUL ROUTES. ABSOLUTELY NO CONTRACTOR VEHICLES WILL BE ALLOWED ON ACTIVE AIRFIELD PAVEMENTS, UNLESS OTHERWISE APPROVED OR ESCORTED BY AIRPORT OPERATIONS. FLAGMEN WILL BE REQUIRED TO DIRECT THE CONTRACTOR'S VEHICLES AND EQUIPMENT AT ALL TIMES WHENEVER CONSTRUCTION ACCESS IS REQUIRED ACROSS ANY ACTIVE AIRFIELD PAVEMENT. THIS SHALL INCLUDE ALL PREPARATORY OR CONCLUSIVE WORK AT THE BEGINNING OR END OF CONSTRUCTION PHASES, SUCH AS, BUT NOT LIMITED TO: INSTALLING AND / OR REMOVING 12. NO AIRFIELD PAVEMENTS SHALL BE CLOSED WITHOUT WRITTEN BARRICADES OR TEMPORARY PAVEMENT MARKINGS; REMOVAL, TEMPORARY DISABLING OF, AND / OR INSTALLATION OF ELECTRICAL COMPONENTS; AND / OR CLEANING OF WORK AREAS.
- A. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE NUMBER OF SWEEPERS AND / OR VACUUM TRUCKS TO KEEP ALL HAUL AND ANY OTHER PAVEMENT AREAS TRAVERSED BY THE CONTRACTOR'S VEHICLES AND EQUIPMENT CLEAN AND FREE OF MUD, DIRT, DEBRIS, WASTE, LOOSE MATERIAL, AND ANY OTHER FOD CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEARS OR PROPELLERS AND / OR BEING INGESTED IN JET ENGINES. THE PAVEMENT CROSSING, STATIONED OUTSIDE THE OFA. NO LESS THAN 14. PRIOR TO OPENING FOR AIRCRAFT USE AND THE DEPARTURE OF THE 21. CLOSED TAXIWAYS AND / OR RUNWAYS SHALL BE BARRICADED OFF AT TWO (2) SWEEPERS AND TWO (2) VACUUM TRUCKS SHALL BE ONSITE FOR THE DURATION OF THE PROJECT, REGARDLESS OF THE NUMBER OF ACTIVE AIRFIELD PAVEMENT CROSSINGS. THE CONTRACTOR SHALL SWEEP AND / OR VACUUM, IMMEDIATELY AFTER EACH ACTIVE AIRFIELD PAVEMENT CROSSING BY THE CONTRACTOR'S VEHICLES OR EQUIPMENT, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ADDITIONALLY ENSURE THAT ALL ACTIVE AIRFIELD PAVEMENTS AFFECTED BY CONSTRUCTION OPERATIONS ARE KEPT FREE OF ANY AND ALL FOD DEPOSITED AS THE RESULT OF ANY SOURCE.
- 7. ALL CONTRACTOR VEHICLES AND EQUIPMENT THAT ARE AUTHORIZED TO OPERATE ON THE AIRPORT IN THE ACTIVE AOA SHALL MEET THE FOLLOWING REQUIREMENTS AND THE REQUIREMENTS OF 150/5210-5 (LATEST EDITION):
- A. DISPLAY A COMPANY LOGO / PLACARD IDENTIFYING THE VEHICLE WITH BLOCK-TYPE CHARACTERS OF CONTRASTING COLOR THAT ARE EASILY LEGIBLE AT 250 FEET;
- DISPLAY A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO LOCAL CODES FOR MAINTENANCE AND EMERGENCY VEHICLES. LIGHTS MUST FLASH AT 75  $\pm$  15 FLASHES PER MINUTE. A 3 FEET X 3 FEET OR LARGER, ORANGE AND WHITE CHECKERBOARD CONSTRUCTION BE FIXED ABOVE THE VEHICLE TO SUPPLEMENT THE FLASHING LIGHT OR FOR TRANSIENT VEHICLES OR THOSE SPECIFICALLY ONSITE FOR THE DAY TO COMPLETE A SPECIFIC TASK DURING DAYTIME OPERATIONS ONLY.
- C. BE ESCORTED UNDER THE CONTROL OF A CONTRACTOR ESCORT MONITORING GROUND CONTROL RADIO FREQUENCY.
- ANY VEHICLE OPERATING IN THE AOA DURING THE HOURS OF DARKNESS SHALL BE EQUIPPED WITH A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT. ALL COSTS ASSOCIATED WITH VEHICLE AND EQUIPMENT IDENTIFICATION SHALL BE CONSIDERED PART OF THE EQUIPMENT PROVIDED BY THE CONTRACTOR AND SHALL BE SUBSIDIARY TO THE CONTRACT.
- 8. THE CONTRACTOR SHALL SUPPLY AVIATION BAND RADIOS TO EACH SUPERVISORY INDIVIDUAL AND CONTRACTOR LEAD / ESCORT VEHICLE, TO CONTINUOUSLY MONITOR GROUND CONTROL ON FREQUENCIES 118.57 MHz AND 121.7 MHz.
- A. ALL NON-RADIO EQUIPPED CONTRACTOR VEHICLES AND EQUIPMENT THAT ARE REQUIRED TO OPERATE WITHIN THE AOA SHALL DO SO UNDER THE DIRECT CONTROL OF AN AIRPORT—APPROVED AND BADGED ESCORT VEHICLE.
- PORTABLE HAND-HELD RADIOS SHOULD BE PROVIDED TO ANY CONTRACTOR EMPLOYEES THAT MAY BE OPERATING OUTSIDE OF THEIR VEHICLES OR EQUIPMENT, MEANING AWAY FROM HARD-WIRED 18. THE CONTRACTOR SHALL ALSO SUBMIT A DESTRUCTIVE / INCLEMENT 27. THE CONTRACTOR SHALL USE, MANAGE, HANDLE, AND DISPOSE OF ALL RADIO SYSTEMS.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING, IN WORKING ORDER, ALL RADIOS AT ALL TIMES FOR THE DURATION WORKING RADIOS AT ANY POINT DURING CONSTRUCTION OPERATIONS, THE OWNER MAY CHOOSE TO CEASE ALL CONSTRUCTION ACTIVITY UNTIL WORKING RADIOS ARE PROVIDED. SUCH STOPPAGES OF WORK SHALL NOT AFFECT THE OVERALL DURATION OF THE CONTRACT.
- CONTRACTOR RADIOS SHALL BE USED FOR MONITORING PURPOSES ONLY AND SHALL NOT BE USED TO COMMUNICATE WITH THE ATCT. ALL COMMUNICATION WITH THE ATCT OR OTHER ELEMENTS OF THE

- AIRPORT SHALL BE THROUGH THE OWNER'S REPRESENTATIVE AIRPORT OPERATIONS, AS APPROPRIATE.
- EACH FLAGMAN AT THE LOCATION OF THE PROPOSED RON POSITION SITE AND AT THE NON-MOVEMENT AREA CROSSING LOCATED AT TERMINAL A ARE REQUIRED TO BE ISSUED HAND-HELD RADIOS AND BE IN COMMUNICATION FOR MOVEMENT ACROSS AREA.
- ESCORT VEHICLE SHALL BE REQUIRED TO MONITOR TRUCK RADIOS AND OR HAVE MOBILE PHONES FOR SENDING AND RECEIVING INSTRUCTIONS AT ALL TIMES. SUCH RADIOS AND / OR MOBILE PHONES SHALL BE USED ONLY FOR THE CONTRACTOR'S INTERNAL COMMUNICATIONS. USE OF RADIOS SHALL NOT INTERFERE WITH FREQUENCIES USED BY ATCT OR AIRPORT OPERATIONS. USE OF MOBILE PHONES SHALL BE RESTRICTED TO WORK-RELATED CALLS WITHIN THE AOA; NO PERSONAL CALLS WILL BE ALLOWED. THE CONTRACTOR SHALL MAINTAIN AN UP-TO-DATE CONTACT LIST WITH AIRPORT OPERATIONS FOR THE DURATION OF THE PROJECT.
- 10. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL NOT EXCEED 15 MPH WITHIN THE VSR. REQUESTED ADJUSTMENTS TO HAUL ROUTE SPEEDS MAY BE SUBMITTED TO HAS (VIA RFI), REVIEWED, COORDINATED, AND APPROVED BY AIRPORT OPERATIONS.
- 11. PRIOR TO COMMENCING WORK IN ANY AREA OF THE AOA, THE CONTRACTOR SHALL SUBMIT A WAN, TO AIRPORT OPERATIONS FOR APPROVAL. NO WORK IN A NEW AREA SHALL BE PERMITTED WITHOUT AN APPROVED WAN. THE WAN SHALL INCLUDE, AT MINIMUM, A SCOPE AND SCHEDULE FOR THE PROPOSED WORK TO BE PERFORMED IMPACTS TO OPERATIONS FROM THE WORK, AND THE CONTRACTOR'S CONTACT PERSON INFORMATION FOR THE PROPOSED WORK. THE CONTRACTOR SHOULD ATTACH PLAN SHEETS FROM THE CONSTRUCTION CONTRACT SHOWING THE PROPOSED WORK OF THE SPECIFIC WAN.
- APPROVAL OF AIRPORT OPERATIONS. TO ENABLE APPROPRIATE NOTAMS OR ADVISORIES TO AIRPORT SERVICES OR TENANTS, A MINIMUM OF FOURTEEN (14) DAYS WRITTEN NOTICE REQUESTING CLOSING SHALL BE DIRECTED TO AIRPORT OPERATIONS. THIS SHALL INCLUDE THE SUBMISSION OF A WAN.
- ROUTES, ACTIVE AIRFIELD PAVEMENTS WITHIN THE LIMITS OF WORK, 13. AIRPORT OPERATIONS SHALL, AT ALL TIMES, HAVE COMPLETE JURISDICTION OVER THE SAFETY OF ALL AIRCRAFT OPERATIONS DURING THE WORK. WHENEVER THE SAFETY OF AIR TRAFFIC IS CONCERNED. THE DECISIONS OF THE AIRPORT DIRECTOR OR HIS / HER DESIGNATED REPRESENTATIVE, SHALL BE FINAL AS TO METHODS, PROCEDURES AND MEASURES USED.
  - CONTRACTOR'S WORK CREWS, THE OWNER'S REPRESENTATIVE WILL ARRANGE FOR INSPECTION BY AIRPORT OPERATIONS OF ANY AIRFIELD PAVEMENT, RSA, TSA, OFA, OR TOFA THAT HAS BEEN CLOSED FOR WORK, OR THAT HAS BEEN USED FOR A CROSSING POINT OR HAUL ROUTE BY THE CONTRACTOR. THESE AREAS MUST COMPLY WITH THE SAFETY REQUIREMENTS, DEFINED BY FEDERAL AVIATION REGULATIONS PART 139, AS INTERPRETED BY THE DESIGNATED OPERATION'S INSPECTOR, BEFORE PERMISSION FOR THE CONTRACTOR'S WORK CREWS TO DEPART WILL BE GRANTED.
  - 15. THE CONTRACTOR IS DIRECTED TO COMPLY WITH AND ACQUAINT HIS / HER EMPLOYEES WITH CURRENT EDITION, LATEST CHANGE, OF THE FOLLOWING SAFETY FAA ADVISORY CIRCULARS:
  - A. 150 / 5370-2, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION;
  - B. 150 / 5200-18, AIRPORT SAFETY-SELF INSPECTION: AND
  - C. 150 / 5210-5, PAINTING, MARKING AND LIGHTING OF VEHICLES USED ON AIRPORTS.
  - MORE DETAIL IN THE CONTRACT SPECIFICATIONS.
- SAFETY FLAG, EACH CHECKERBOARD COLOR BEING 1-FOOT, MAY 16. THE CONTRACTOR SHALL CONFINE HIS / HER PERSONNEL, EQUIPMENT. OPERATIONS AND TRAVEL TO THE AREA WITHIN THE DEFINED WORK LIMITS SHOWN IN THE PLANS. THE CONTRACTOR SHALL NOT ALLOW CONTRACTOR CONTROL TO ENTER OR REMAIN IN ANY PART OF THE AIRPORT WHICH WOULD BE HAZARDOUS TO PERSONS OR TO AIRCRAFT OPERATIONS. THE CONTRACTOR SHALL INFORM ALL CONSTRUCTION PERSONNEL OF THE PROPER ROUTES, SPEEDS, AND PROCEDURES FOR TRANSPORTING EQUIPMENT AND MATERIALS TO THE CONSTRUCTION SITE 26. ALL CONTRACTOR VEHICLES AND EQUIPMENT BROUGHT INTO THE AOA AND ALL RESTRICTIONS TO MOVEMENT OF EQUIPMENT OR PERSONNEL WITHIN THE AIR OPERATIONS AREA. ON A DAILY BASIS AND MORE OFTEN IF NECESSARY, ALL PERSONNEL SHALL BE ADVISED OF ANY CHANGES IN AIRPORT OPERATIONS THAT MAY FURTHER RESTRICT THEIR MOVEMENT.
  - 17. HAS RESERVES THE RIGHT TO SUSPEND CONSTRUCTION OPERATIONS FOR SHORT PERIODS OF TIME (I.E. WHILE AN AIRCRAFT PASSES), DAILY, OR BETWEEN CONSTRUCTION PHASES, AND / OR CHANGE THE ORDER OF CONSTRUCTION PHASING DURING THE PROJECT IF IT IS DETERMINED TO BE IN THE BEST INTEREST OF AIRPORT OPERATIONS OR SAFETY. THE CONTRACTOR MAY BE DIRECTED TO MOVE PERSONNEL, EQUIPMENT. AND MATERIALS TO A SAFE LOCATION AND / OR EVACUATE THE SITE IN ORDER TO ENABLE AIRCRAFT OPERATIONS. NECESSARY EXTENSIONS IN CONTRACT TIME WILL BE GRANTED OR A STOP WORK ORDER WILL BE ISSUED DUE TO THESE DELAYS. HOWEVER, THERE WILL BE NO ADJUSTMENTS IN CONTRACT PRICE DUE TO THESE DELAYS, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.
  - WEATHER PLAN, TO SET FORTH GENERAL GUIDANCE AND INFORMATION FOR THE CONTRACTOR TO COORDINATE PREPAREDNESS PLANS WHEN DESTRUCTIVE WEATHER THREATENS THE AIRPORT ENVIRONMENT.
- OF THE PROJECT. SHOULD THE CONTRACTOR FAIL TO PROVIDE 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL NECESSARY BARRICADES TO MARK CONSTRUCTION AREAS, HAZARDS, ETC. THE CONTRACTOR MUST PROMINENTLY MARK OPEN TRENCHES AND EXCAVATIONS AT THE CONSTRUCTION SITE WITH WATER FILLED BARRICADES WITH RED LIGHTS 10FT APART, AS APPROVED BY AIRPORT OPERATIONS, AND LIGHT THEM WITH RED LIGHTS DURING RESTRICTED VISIBILITY OR DARKNESS. THE CONTRACTOR SHALL ADDITIONALLY HAVE ALL ACCESS GATES GUARDED 28. CONSTRUCTION EQUIPMENT SHALL HAVE A MAXIMUM HEIGHT OF 25 AND LOCKABLE, AND HAVE ALL VEHICLES AND EQUIPMENT EITHER FLAGGED OR LIGHTED.

THE ENTRANCES TO CLOSED PAVEMENTS SHALL BE BARRICADED TO PREVENT AIRCRAFT FROM ENTERING UNUSABLE OR HAZARDOUS OPERATIONAL AREAS.

CONTRACTOR SHALL INSTALL THE COMPONENTS OF THE PLAN AT THE APPROPRIATE TIMES AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL INSPECT EVERY ASPECT OF THE CSPP ON AT LEAST A DAILY BASIS AND ENSURE ALL COMPONENTS ARE FUNCTIONING PROPERLY. AIRPORT OPERATIONS WILL ALSO FREQUENTLY INSPECT THE SYSTEM AND IF ANY DEFICIENCIES ARE NOTED, THE CONTRACTOR SHALL IMMEDIATELY CORRECT ANY AND ALL DEFICIENCIES. THE 30. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SHEETING, CONTRACTOR SHALL VISUALLY CHECK BARRICADE FLASHING LIGHTS ON A DAILY BASIS, 30 MINUTES BEFORE SUNSET FOR PROPER OPERATIONS. THE CONTRACTOR SHALL IMMEDIATELY REPLACE LIGHTS, BATTERIES. AND / OR LAMPS AS DEEMED NECESSARY BY THE CONTRACTOR OR AIRPORT OPERATIONS. THE SYSTEM ELEMENTS TO BE INSPECTED AND DEFICIENCIES NOTED ARE AS FOLLOWS:

- A. BARRICADES SET PROPERLY AND ALL FLASHING WARNING LIGHTS OPERATING PROPERLY.
- B. ALL CONTRACTOR PERSONNEL AND EQUIPMENT ACCESS GATES MANNED AND SECURITY PROCEDURES IN PLACE.
- C. ALL VEHICLES AND EQUIPMENT LIGHTED. A CONSTRUCTION SAFETY FLAG MAY BE USED TO SUPPLEMENT THE FLASHING LIGHT OR FOR TRANSIENT TRUCKS DELIVERING MATERIALS DURING DAYTIME OPERATIONS ONLY.
- D. CONTRACTOR USE OF UNAUTHORIZED AIRPORT ACCESS GATES CHECKED.
- E. ILLUMINATED RUNWAY CLOSURE LIGHTS IN POSITION AND OPERATIONAL, IF APPLICABLE.

AIRPORT OPERATIONS SHALL NOTIFY THE CONTRACTOR IN WRITING OF ANY OF THE ABOVE SAFETY AND SECURITY ITEMS FOUND TO BE DEFICIENT. ANY DEFICIENCY NOTED BY AIRPORT OPERATIONS SHALL RESULT IN THAT DAY'S PRORATED SAFETY AND SECURITY BID ITEM, ESTABLISHED IN SECTION 01 35 13.14 - SAFETY AND SECURITY, BEING DEDUCTED PERMANENTLY FROM THE CONTRACTOR'S EARNINGS. THE CONTRACTOR SHALL MAKE A CONCERTED EFFORT TO ENSURE ALL SAFETY AND SECURITY ITEMS ARE IN PROPER WORKING ORDER EACH DAY DUE TO THE HEIGHTENED SECURITY STATUS OF THE AIRPORT AND THE CONSIDERABLE LIABILITY ASSOCIATED WITH THE SAFETY AND SECURITY ELEMENTS REQUIRED FOR THE WORK.

- CONTRACTOR SHALL HAVE PERSONNEL ON CALL 24 HOURS PER DAY FOR EMERGENCY MAINTENANCE OF AIRPORT HAZARD LIGHTING AND BARRICADES.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO ENSURE THE SAFETY OF OPERATING AIRCRAFT AS WELL AS HIS / HER OWN EQUIPMENT AND PERSONNEL. SPECIAL CONSIDERATIONS SHOULD BE GIVEN TO FLIGHT SCHEDULES AND MISCELLANEOUS AIRCRAFT OPERATIONS. THE CONTRACTOR SHALL OBEY ALL INSTRUCTIONS AS TO ROUTES TO BE TAKEN BY VEHICLES AND EQUIPMENT TRAVELING WITHIN THE AOA AND KEEP SUCH VEHICLES AND EQUIPMENT MARKED WITH THE SPECIFIED AIRPORT SAFETY LIGHTS OR FLAGS. EQUIPMENT NOT ACTUALLY IN OPERATION SHALL BE PROHIBITED IN ANY ACTIVE RSA, OFZ, OR TOFA. PERSONNEL SHALL NOT ENTER ACTIVE AIRFIELD PAVEMENTS WITHOUT SPECIFIC PERMISSION.
- 23. THE CONTRACTOR SHALL TAKE ALL STEPS TO PROTECT THE EXISTING RUNWAY AND TAXIWAY LIGHTS AND SIGNS, NAVAIDS, UNDERGROUND CABLES, AND ASSOCIATED APPURTENANCES DURING CONSTRUCTION IN ORDER TO ENSURE CONTINUOUS OPERATION, UNLESS OTHERWISE
- THESE DOCUMENTS AND RELATED REQUIREMENTS ARE DESCRIBED IN 24. FOR ANY RESTRICTIONS TO AIRCRAFT OPERATIONS. AIRPORT OPERATIONS SHALL GIVE PROPER NOTICE TO THE NEAREST FAA FLIGHT SERVICE STATION PRIOR TO THE START OF WORK, AND FOR ANY SUBSEQUENT CHANGES NEEDED IN THE NOTAM WHICH MAY BE ISSUED 3. ALL CONTRACTOR TRAFFIC AUTHORIZED TO ENTER THE AOA SHALL DURING THE PERIOD OF WORK.
- EMPLOYEES, SUBCONTRACTORS, SUPPLIERS, OR ANY PERSON UNDER 25. ALL CONSTRUCTION SITE PERSONNEL SHALL WEAR HIGH-VISIBILITY WARNING GARMENTS AND IDENTIFIABLE HARD HATS IN ACCORDANCE WITH ALL APPLICABLE OSHA, ANSI, ISEA, LOCAL, STATE, AND / OR FEDERAL REGULATIONS.
  - SHOULD BE SERVICED AND MAINTAINED PRIOR TO ENTERING THE AOA TO PREVENT FUEL, HYDRAULIC FLUID, OR OTHER CHEMICAL FLUID LEAKS AND EXCESSIVE EXHAUST THAT MAY CAUSE ENVIRONMENTAL ISSUES. VEHICLES AND EQUIPMENT THAT MAY CAUSE ENVIRONMENTALLY DETRIMENTAL CONDITIONS SHALL BE PROHIBITED FROM ENTERING THE AOA. HOWEVER, ALL CONTRACTOR PERSONNEL OPERATING CONSTRUCTION VEHICLES AND EQUIPMENT ON THE AIRPORT MUST NOTIFY AIRPORT OPERATIONS IMMEDIATELY AND EXPEDITIOUSLY CONTAIN AND CLEAN-UP SPILLS RESULTING FROM FUEL, HYDRAULIC FLUID, OR OTHER CHEMICAL FLUID LEAKS IMMEDIATELY AFTER THE SPILL OCCURRING. TRANSPORT AND HANDLING OF OTHER HAZARDOUS MATERIALS ON AN AIRPORT ALSO REQUIRES SPECIAL PROCEDURES. TO THAT END, THE CONTRACTOR IS REQUIRED TO DEVELOP AND IMPLEMENT SPILL PREVENTION AND RESPONSE PROCEDURES FOR 4. VEHICLE OPERATIONS. THE CONTRACTOR SHALL INCORPORATE THESE PROCEDURES INTO THE SPCD. THIS INCLUDES MAINTENANCE OF APPROPRIATE MSDS DATA AND APPROPRIATE PREVENTION AND RESPONSE EQUIPMENT ON-SITE.
  - "HAZARDOUS MATERIALS" IN STRICT ACCORDANCE WITH ALL APPLICABLE ENVIRONMENTAL LAWS. FOR THE PURPOSES OF THIS PROJECT, THE TERM "HAZARDOUS MATERIALS" SHALL BE DEFINED IN THE BROADEST SENSE TO ENCOMPASS ANY AND ALL SUBSTANCES, MATERIALS, WASTES, POLLUTANTS, OR OILS REFERRED TO IN ANY ENVIRONMENTAL LAW AS TOXIC, RADIOACTIVE, DANGEROUS, OR ANY OTHER SIMILAR TERM. ENVIRONMENTAL LAWS SHALL BE DEFINED TO MEAN ALL APPLICABLE FEDERAL, STATE, AND LOCAL STATUTES, ORDINANCES, REGULATIONS, RULES, POLICIES, CODES, AND GUIDELINES IN EFFECT DURING THE TERM OF THE PROJECT.
  - FEET. SHOULD THE USE OF CONSTRUCTION EQUIPMENT WITH HEIGHTS 6. THE LIMITS OF CONSTRUCTION, MATERIAL STORAGE AREAS, PLANT GREATER THAN 25 FEET BE REQUIRED, INCLUDING CRANES, THE SITE, EQUIPMENT STORAGE AREA, PARKING AREA AND OTHER

CONTRACTOR SHALL SUBMIT FAA FORM 7460-1 TO THE OWNER FOR COORDINATION WITH FAA. THE FAA MUST PROVIDE APPROVAL PRIOR TO USE OF THE REQUESTED EQUIPMENT - FAA RESPONSE TIME MAY TAKE

- BARRICADES SHALL BE INTEGRATED AS A PART OF THE CSPP. THE 29. CONSTRUCTION ACTIVITIES ARE PROHIBITED IN ANY ACTIVE RSA, OFZ, OR TSA. WHEN CONSTRUCTION, CONSTRUCTION WORKERS, OR EQUIPMENT ARE WITHIN ANY RSA, OFZ, OR TOFA, THOSE AREAS WILL BE CLOSED TO ALL AIRCRAFT OPERATIONS OR RESTRICTED, UNLESS OTHERWISE INDICATED IN THE PHASING PLAN SHEETS OR AS APPROVED BY AIRPORT OPERATIONS.
  - SHORING AND BRACING IS DONE IN ACCORDANCE WITH CURRENT OSHA REGULATIONS AND REQUIREMENTS. SHEETING, SHORING AND BRACING IS CONSIDERED TO BE AN INCIDENTAL PART OF THE WORK AND SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS PAY ITEMS OF THE PROJECT, EXCEPT AS PROVIDED IN THE PROJECT MANUAL.
  - 31. SPECIAL ATTENTION TO DUST CONTROL IS REQUIRED, PARTICULARLY WHEN EARTHWORK OR HAULING OPERATIONS ARE IN PROGRESS OR WHEN WIND AND WEATHER CONDITIONS CAUSE EXCESSIVE BLOWING OF DUST. THE CONTRACTOR SHALL APPLY WATER TO THE AFFECTED SITES AS DIRECTED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REGULARLY APPLY WATER TO HAUL ROUTES TO KEEP DUST DOWN. THE CONTRACTOR SHALL HAVE PERSONNEL ON CALL 24 HOURS PER DAY FOR EMERGENCY DUST CONTROL OPERATIONS. THE CONTRACTOR PERSONNEL ON CALL FOR DUST CONTROL SHALL RESPOND WITHIN 20 MINUTES DURING TIMES WHEN THE CONTRACTOR IS ON SITE AND WITHIN TWO (2) HOURS WHEN NO WORK IS BEING
  - 32. AT THE COMPLETION OF EACH WORK PERIOD, THE CONTRACTOR SHALL CLEAN THE PROJECT WORK AREA AND REMOVE ALL EQUIPMENT MATERIALS, AND PERSONNEL FROM THE PROJECT WORK AREA. THE CONTRACTOR SHALL SWEEP AND / OR VACUUM ALL PAVEMENTS PRIOR TO VACATING THE WORK AREA, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ENSURE THAT ALL ACTIVE AIRFIELD SURFACES AFFECTED BY CONSTRUCTION OPERATIONS ARE KEPT FREE OF ANY AND ALL FOD DEPOSITED BY EITHER CONSTRUCTION TRAFFIC, CONSTRUCTION OPERATIONS, WINDBLOWN DEBRIS, OR DEBRIS DEPOSITED AS THE RESULT OF ANY OTHER SOURCE. ANY DAMAGE TO AIRCRAFT ATTRIBUTABLE TO FOD FROM THE CONSTRUCTION WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL COSTS ASSOCIATED WITH CLEANING, INCLUDING LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS SHALL BE SUBSIDIARY TO THE CONTRACT.

### **AIRPORT SECURITY** REQUIREMENTS

THE CONTRACTOR SHALL BE REQUIRED TO ATTEND A SPECIAL SECURITY MEETING WITH AIRPORT SECURITY OFFICERS PRIOR TO CONSTRUCTION OPERATIONS. THIS MEETING MUST BE ATTENDED BY THE CONTRACTOR'S SENIOR FIELD STAFF. INCLUDING BUT NOT LIMITED TO SUPERINTENDENTS AND TEAM LEADERS.

THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE AIRPORT SECURITY PLAN AND WITH THE SECURITY REQUIREMENTS SPECIFIED HEREIN AND AS REQUIRED BY AIRPORT OPERATIONS THE CONTRACTOR SHALL DESIGNATE TO THE OWNER AND AIRPORT OPERATIONS, IN WRITING, THE NAME OF HIS / HER "CONTRACTOR SECURITY AND SAFETY OFFICER (CSSO)". THE CSSO SHALL REPRESENT THE CONTRACTOR ON THE SECURITY REQUIREMENTS FOR THE CONTRACT.

- BE EXPERIENCED IN THE ROUTE OR GUIDED BY AN AIRPORT-APPROVED AND BADGED ESCORT VEHICLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE, AND FOR THE OPERATION AND SECURITY OF THE ACCESS GATE TO THE SITE. A CONTRACTOR'S FLAGMAN OR TRAFFIC CONTROL PERSON SHALL MONITOR AND COORDINATE ALL CONTRACTOR TRAFFIC AT THE ACCESS GATE WITH SECURITY. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE AND SHALL PROHIBIT "PIGGYBACKING" OF MULTIPLE VEHICLES BEHIND AN AUTHORIZED VEHICLE. ACCESS GATES TO THE SITE SHALL BE LOCKED AND SECURED AT ALL TIMES WHEN NOT ATTENDED BY THE CONTRACTOR. IF THE CONTRACTOR CHOOSES TO LEAVE ANY ACCESS GATE OPEN, I SHALL BE ATTENDED BY CONTRACTOR PERSONNEL WHO ARE FAMILIAR WITH THE REQUIREMENTS OF THE AIRPORT OPERATIONS SECURITY PROGRAM. DIRECTIONAL SIGNING FROM THE ACCESS GATE ALONG THE DELIVERY ROUTE TO THE STORAGE AREA, PLANT SITE OR WORK SITE SHALL BE AS DIRECTED BY AIRPORT
- THE CONTRACTOR SHALL FURNISH TO THE GATE GUARD A LIST OF AUTHORIZED DELIVERY VEHICLES TO ENTER THE GATE AND RECORD THE VEHICLE LICENSE PLATE, TIME IN, AND TIME OUT FOR EACH VEHICLE USING THE GATE. THE GATE GUARD WILL ISSUE A PLACARD WITH A PROJECT SPECIFIC COLOR TO EACH DELIVERY VEHICLE FOR PLACEMENT IN THE FRONT WINDOW. THIS PLACARD WILL BE ISSUED UPON THE FIRST ENTRY TO THE SITE OF THE DAY, AND COLLECTED UPON THE FINAL EXIT FROM THE SITE AT THE END OF THE DAY.
- ALL CONTRACTOR'S MATERIAL ORDERS FOR DELIVERY TO THE WORK SITE WILL USE AS A DELIVERY ADDRESS, THE STREET NAME ASSIGNED TO THE ACCESS POINT AT THE CONTRACTOR'S STAGING AREA AS SHOWN IN THE PROJECT PLANS. THE NAME "GEORGE BUSH INTERCONTINENTAL AIRPORT", OR ANY SIMILAR NAME, SHALL NOT BE USED IN THE DELIVERY ADDRESS AT ANY TIME. THIS WILL PRECLUDE DELIVERY TRUCKS FROM ENTERING INTO THE TERMINAL COMPLEX, OR TAKING SHORT CUTS THROUGH THE PERIMETER GATES AND INADVERTENTLY ENTERING THE AOA.

AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SECURITY FENCING, MARKINGS, AND WARNING DEVICES TO PROTECT HIS / HER OWN EQUIPMENT AND MATERIALS. ANY SECURITY MEASURES DEEMED NECESSARY BY THE CONTRACTOR IN THE PROTECTION OF HIS / HER OWN EQUIPMENT AND MATERIALS SHALL BE SUBMITTED TO AIRPORT OPERATIONS, IN ACCORDANCE WITH SECTION 01330 - SUBMITTAL PROCEDURES, FOR REVIEW AND APPROVAL. TEMPORARY BARRICADES, FLAGGING AND FLASHING WARNING LIGHTS WILL BE REQUIRED AT CRITICAL ACCESS POINTS. ALL COSTS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE ITEMS INCLUDING LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS SHALL BE SUBSIDIARY TO THE SECTION 01 59 01, TEMPORARY CONSTRUCTION ITEMS.

- 7. ALL CONTRACTOR EMPLOYEES, SUBCONTRACTORS, AGENTS VENDORS, INVITEES, ETC., REQUIRING ACCESS TO THE CONSTRUCTION SITE SHALL, IN ACCORDANCE WITH THE AIRPORT OPERATIONS SECURITY PROGRAM, BE REQUIRED TO DISPLAY AIRPORT ISSUED IDENTIFICATION OR BE UNDER AIRPORT—APPROVED AND BADGED ESCORT PERSONNEL. THESE BADGES WILL BE IDENTIFIED NUMERICALLY AND ISSUED TO INDIVIDUAL EMPLOYEES WITH A PERMANENT RECORD MAINTAINED ON EACH INDIVIDUAL TO WHOM A BADGE IS ISSUED. IN ADDITION, A \$55 NON-REFUNDABLE PROCESSING FEE WILL BE REQUIRED FOR EACH BADGE. THIS FEE MUST BE PAID BEFORE A BADGE IS ISSUED. NO BADGE WILL BE ISSUED TO ANY PERSON UNTIL A REVIEW OF THE REQUIRED PAPERWORK BY AIRPORT SECURITY AND ALL REQUIREMENTS ARE MET. PAPERWORK SHALL BE SUBMITTED A MINIMUM OF 24 HOURS BEFORE ISSUANCE OF A BADGE. THE CONTRACTOR IS RESPONSIBLE FOR PERSONNEL ATTENDING TRAINING AND COMPLETING SECURITY BADGE APPLICATIONS, WHICH WILL INCLUDE AOA MOVEMENT REQUIREMENTS AND AIRPORT FAMILIARIZATION. ESTIMATED TIME FOR COMPLETION IS TWO (2) HOURS. FLAGMEN MUST BE BADGED AND MUST HAVE SUCCESSFULLY COMPLETED THE AIRPORT FLAGMAN TRAINING INSTRUCTED BY AIRPORT OPERATIONS, IN ADDITION TO THE REGULAR BADGE AND AOA MOVEMENT TRAINING, PRIOR TO PERFORMING IN THAT CAPACITY ON AIRPORT PROPERTY. AT THE COMPLETION OF THE CONTRACT ALL BADGES WILL BE RETURNED TO THE AIRPORT. A CHARGE OF \$100 PER BADGE WILL BE ASSESSED FOR ALL UNRETURNED BADGES. GATE GUARDS AND ESCORTS SHALL BE CONSIDERED UNDER THE FLAGMEN CLASSIFICATION AND SHALL BE SUBJECT TO THE SAME REQUIREMENTS AS FLAGMEN.
- 8. THE CONTRACTOR, THROUGH THE CSSO, SHALL ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUBCONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE AND SHALL ISSUE A PERMIT TO EACH VEHICLE TO BE MADE AVAILABLE UPON DEMAND BY AIRPORT OPERATIONS OR ANY AIRPORT REPRESENTATIVES. PERSONAL AND / OR CONTRACTOR EMPLOYEE VEHICLES SHALL BE RESTRICTED TO THE CONTRACTOR'S EMPLOYEE PARKING AREA AND ARE NOT ALLOWED ON THE AOA AT ANY TIME.
- 9. PAYMENT OF ALL FINES ASSESSED TO THE AIRPORT, DUE TO VIOLATIONS BY THE CONTRACTOR OF FAA / TRANSPORTATION SECURITY ADMINISTRATION SECURITY OR SAFETY REQUIREMENTS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DEDUCTED FROM MONIES DUE THE CONTRACTOR.
- A. IF A RESTRICTED AREA GATE IS FOUND TO BE OPEN OR UNLOCKED AND UNATTENDED, AIRPORT SECURITY POLICE AND / OR TRANSPORTATION SECURITY ADMINISTRATION MAY ISSUE THE CONTRACTOR A CITATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COURT COSTS AND IMPOSED FINES. IN ADDITION, A CHARGE OF UP TO \$10,000.00 MAY BE LEVIED BY HAS AND / OR TRANSPORTATION SECURITY ADMINISTRATION FOR EACH VIOLATION SO DOCUMENTED AND UPON THE REQUEST FOR FINAL PAYMENT THE TOTAL OF ANY SUCH CHARGES WILL BE DEDUCTED FROM MONIES DUE THE CONTRACTOR.
- B. IN THE EVENT THE CONTRACTOR DEVIATES FROM THE IDENTIFIED CONSTRUCTION LIMITS AND / OR DESIGNATED HAUL ROUTES ONTO AN ACTIVE AIRFIELD PAVEMENT, THE CONTRACTOR WILL BE FINED \$1,000.00 PER OCCURRENCE WHICH WILL BE DEDUCTED FROM THE FINAL CONTRACT AMOUNT DUE THE CONTRACTOR. IN ADDITION TO FINES, A NOTICE OF VIOLATION (NOV) MAY BE ISSUED, WHICH MAY INCLUDE SUSPENSION OF WORK OR TERMINATION, DEPENDING ON THE LEVEL OF VIOLATION COMMITTED.
- 10. ANYONE FOUND IN VIOLATION OF AIRPORT RULES. REGULATIONS AND SAFETY PLAN MAY BE PROMPTLY AND PERMANENTLY REMOVED FROM THE JOB SITE AND MAY BE SUBJECT TO ARREST FOR ALL PUNISHABLE STATE AND FEDERAL OFFENSES.

FOR ALL EMERGENCIES CONTACT GEORGE BUSH INTERCONTINENTAL AIRPORT RESCUE AND FIRE PERSONNEL AT 911 FOLLOWED BY CALL TO HOUSTON OPERATIONS (281) 233-1131

GEORGE BUSH INTERCONTINENTAL

13501 Katy Freewa

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HOUSTON, TEXAS

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REVISIONS

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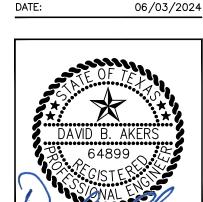
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DEPARTMENT OF AVIATION PROVED BY: HOUSTON AIRPORT SYSTEMS

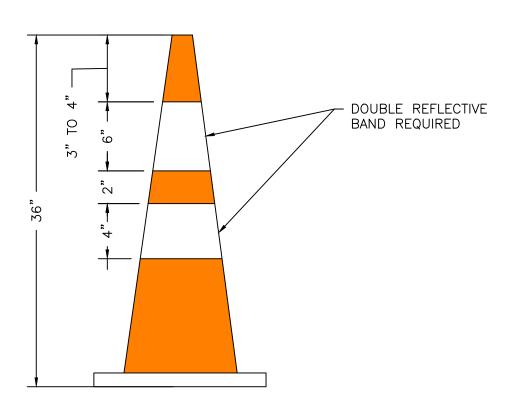
AUTHORIZED REPRESENTATIVE PROJECT NO. PN 973 C.I.P. NO. A-000713 H.A.S. NO.

SHEET NO.

NOTE: FLAGMEN SHALL BE EQUIPPED WITH HAUL ROUTE FLAGS WITH THE PROJECT NUMBER (PN 973) CLEARLY IDENTIFIED ON THE FLAG. THE COLOR OF THE FLAG SHALL MATCH THAT OF THE PROJECT SPECIFIC COLOR ASSIGNED TO THE PROJECT AT THE PRE-CONSTRUCTION MEETING. HAUL ROUTES SHALL BE MARKED AT THE BEGINNING OF EACH PHASE AND MAINTAINED THROUGHOUT.



HAUL ROUTE FLAG SCALE: NTS



TRAFFIC CONE

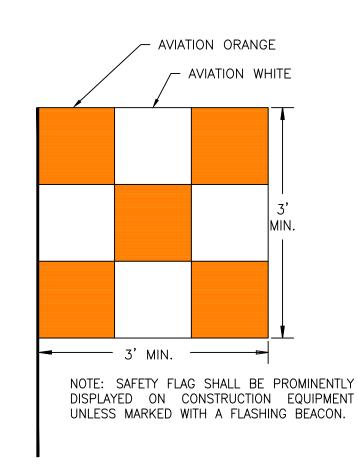
### NOTES:

- 1. TRAFFIC CONES, AND ALL RELATED ITEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT VERSION OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (TMUTCD) AND THE "COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST" (CWZTCD).
- 2. DRUMS, CONES, BASES, AND RELATED MATERIALS SHALL EXHIBIT GOOD WORKMANSHIP AND SHALL BE FREE FROM OBJECTIONABLE MARKS OR DEFECTS THAT WOULD ADVERSELY AFFECT THEIR APPEARANCE OR SERVICEABILITY.
- 3. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN THE PLACEMENT, LOCATION AND OPERATION OF ALL TRAFFIC CONES FOR THE DURATION OF THE PROJECT. BARRICADES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND THE OWNER AND ANY DEFICIENCIES FOUND SHALL BE CORRECTED IMMEDIATELY.
- 4. WARNING LIGHTS OR DIRECTIONAL CHEVRONS MAY BE INSTALLED ON A DRUM.
- 5. WARNING LIGHTS SHALL NOT BE INSTALLED ON A TRAFFIC CONE OR ON A DRUM THAT HAS A SIGN, CHEVRON, OR VERTICAL PANEL.
- 6. TRAFFIC CONES MAY BE USED FOR APPROVED TEMPORARY (LESS THAN 12 HOURS), AIRFIELD PAVEMENT CLOSURES. A MINIMUM OF FIVE TRAFFIC CONES OR ONE FOR EVERY 20 FEET OF PAVEMENT TO BE CLOSED (WHICHEVER IS GREATER) IS REQUIRED TO PROPERLY BARRICADE A SECTION OF PAVEMENT.
- 7. ALL COSTS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND REMOVAL OF TRAFFIC CONES INCLUDING LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS SHALL BE SUBSIDIARY TO SECTION 01 59 01, MISCELLANEOUS TEMPORARY CONSTRUCTION ITEMS.



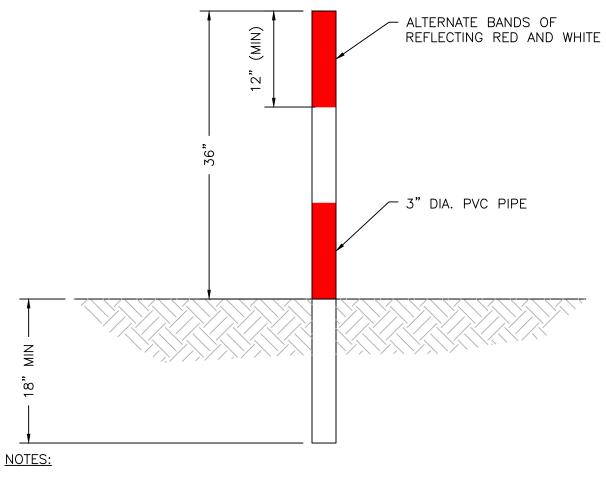
CONSTRUCTION TRAFFIC CONE

SCALE: NTS

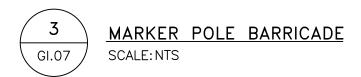


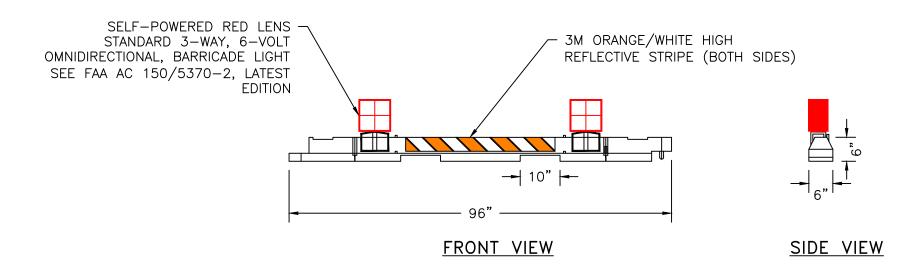
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CONSTRUCTION SAFETY FLAG SCALE: NTS



- 1. INFIELD MARKER POLE BARRICADES TO BE PLACED WHERE NOTED IN THE PLANS OR AS REQUIRED BY THE OWNER, SPACING TO BE 25 FEET MAXIMUM (CENTER
- 2. INFIELD BARRICADES ARE ADEQUATELY SECURED AGAINST MOVEMENT DUE TO WIND AND / OR AIRCRAFT ENGINE THRUST.
- 3. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN THE PLACEMENT, LOCATION AND OPERATION OF ALL BARRICADES FOR THE DURATION OF THE PROJECT. BARRICADES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND THE OWNER AND ANY DEFICIENCIES FOUND SHALL BE CORRECTED IMMEDIATELY.
- 4. ALL COSTS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND REMOVAL OF BARRICADES INCLUDING LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS SHALL BE SUBSIDIARY TO SECTION 01 59 01, MISCELLANEOUS TEMPORARY CONSTRUCTION ITEMS.





- 1. BARRICADES SEPARATING THE CONSTRUCTION AREA FROM THE EXISTING PAVEMENT SHALL BE CONTINUOUSLY CONNECTED END-TO-END WITH NO SPACING BETWEEN THEM. A 20 FT OPENING SHALL BE PROVIDED FOR IAH AIRPORT OPERATIONS AND ARFF ACCESS. CONTRACTOR SHALL COORDINATE LOCATION OF OPENING WITH THE HAS PROJECT MANAGER, IAH AIRPORT OPERATIONS, AND ARFF PRIOR TO EACH INDIVIDUAL PHASE OF WORK.
- 2. ALL LINES OF BARRICADES SHALL BE TERMINATED WITH BARRICADES ANGLED AT 45 DEGREES AWAY FROM AIRFIELD PAVEMENT.
- 3. BARRICADES SHALL NOT BE PLACED FURTHER THAN 3 FT ONTO PAVEMENT FROM EXCAVATION EXCEPT AS SHOWN ON THE PLANS.
- 4. BARRICADES STRIPING SHALL BE ORANGE AND WHITE CONFORMING TO FAA AC 150/5370-2, LATEST EDITION, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
- 5. THE REQUIRED LIGHTS MUST BE RED AND FLASHING. INTENSITIES AND LUMINANCE MUST BE AT LEAST FIVE CANDELAS EFFECTIVE INTENSITY AND FLASH AT A RATE FROM 55 TO 160 FLASHES PER MINUTE.
- 6. LIGHTS MUST BE OPERATIONAL BETWEEN SUNSET AND SUNRISE AND DURING PERIODS OF LOW VISIBILITY WHENEVER THE AIRPORT IS OPEN FOR OPERATIONS.



- 7. ALL BARRICADES SHALL BE FILLED WITH WATER UNLESS OTHERWISE DIRECTED BY IAH AIRPORT OPERATIONS.
- 8. CONTRACTOR SHALL PERFORM DAILY INSPECTIONS BEFORE THE START OF EACH WORK SHIFT AND AT THE COMPLETION OF EACH WORK PERIOD. CONTRACTOR SHALL PROVIDE A WRITTEN CHECKLIST DOCUMENTING THE INSPECTION, DEFICIENCIES, AND CONFIRMATION ALL DEFICIENCIES HAVE BEEN ADDRESSED.
- 9. BARRICADES SHALL BE PLACED TO ACHIEVE A 10 FT MAXIMUM SPACING BETWEEN LIGHTS.
- 10. ALL COSTS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND REMOVAL OF BARRICADES INCLUDING LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS SHALL BE SUBSIDIARY TO SECTION 01 59 01, MISCELLANEOUS TEMPORARY CONSTRUCTION



HOUSTON, TEXAS

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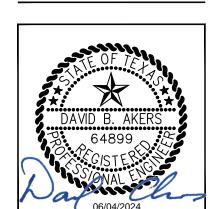
REVISIONS NO. DESCRIPTION DATE BY

CITY OF HOUSTON HOUSTON AIRPORTS SYSTEM

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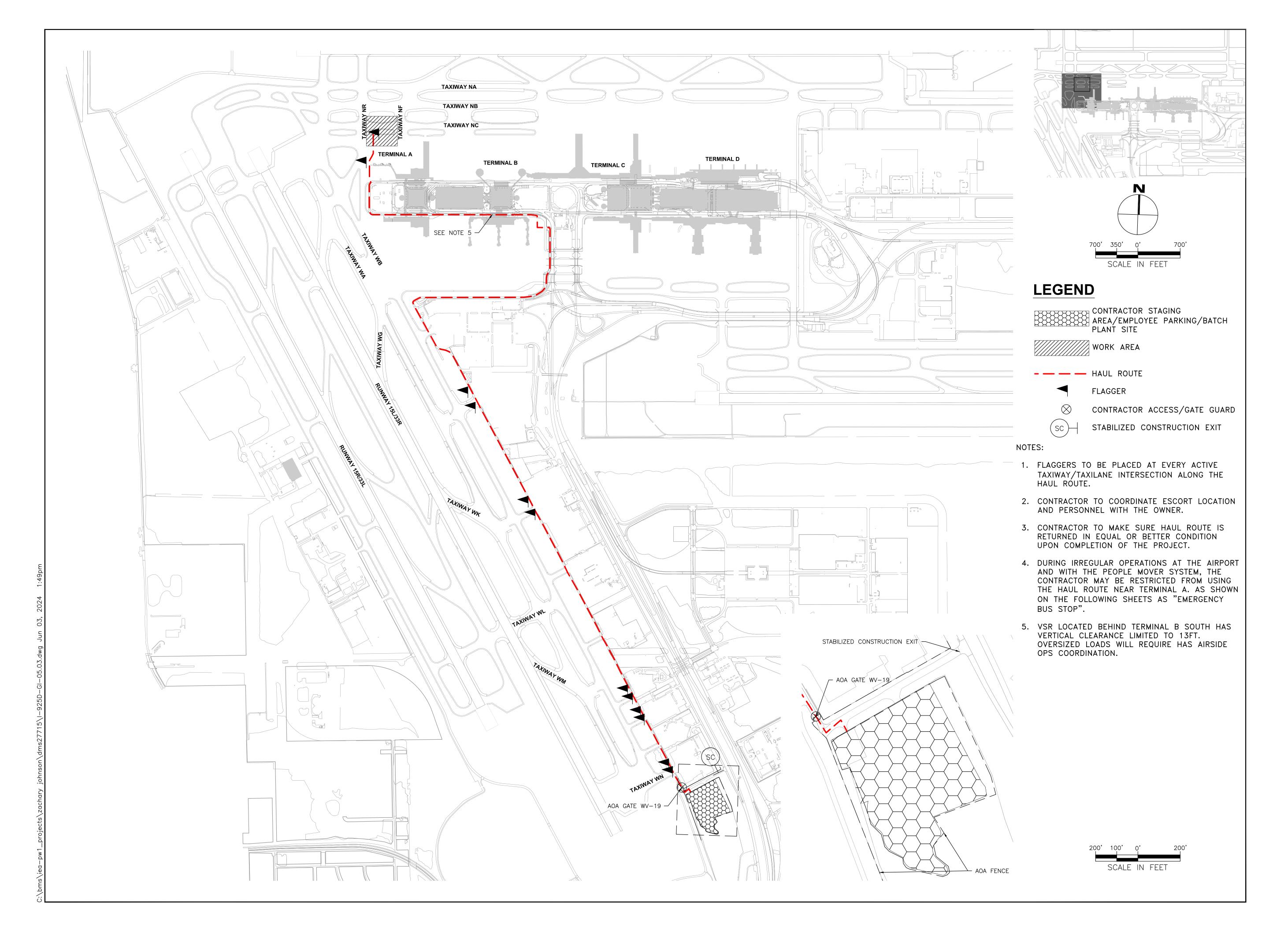


DEPARTMENT OF AVIATION PPROVED BY: HOUSTON AIRPORT SYSTEMS

AUTHORIZED REPRESENTATIVE PROJECT NO. PN 973 C.I.P. NO.

A-000713 H.A.S. NO.

SHEET NO.







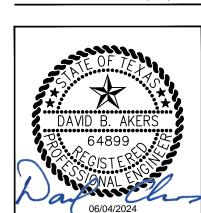
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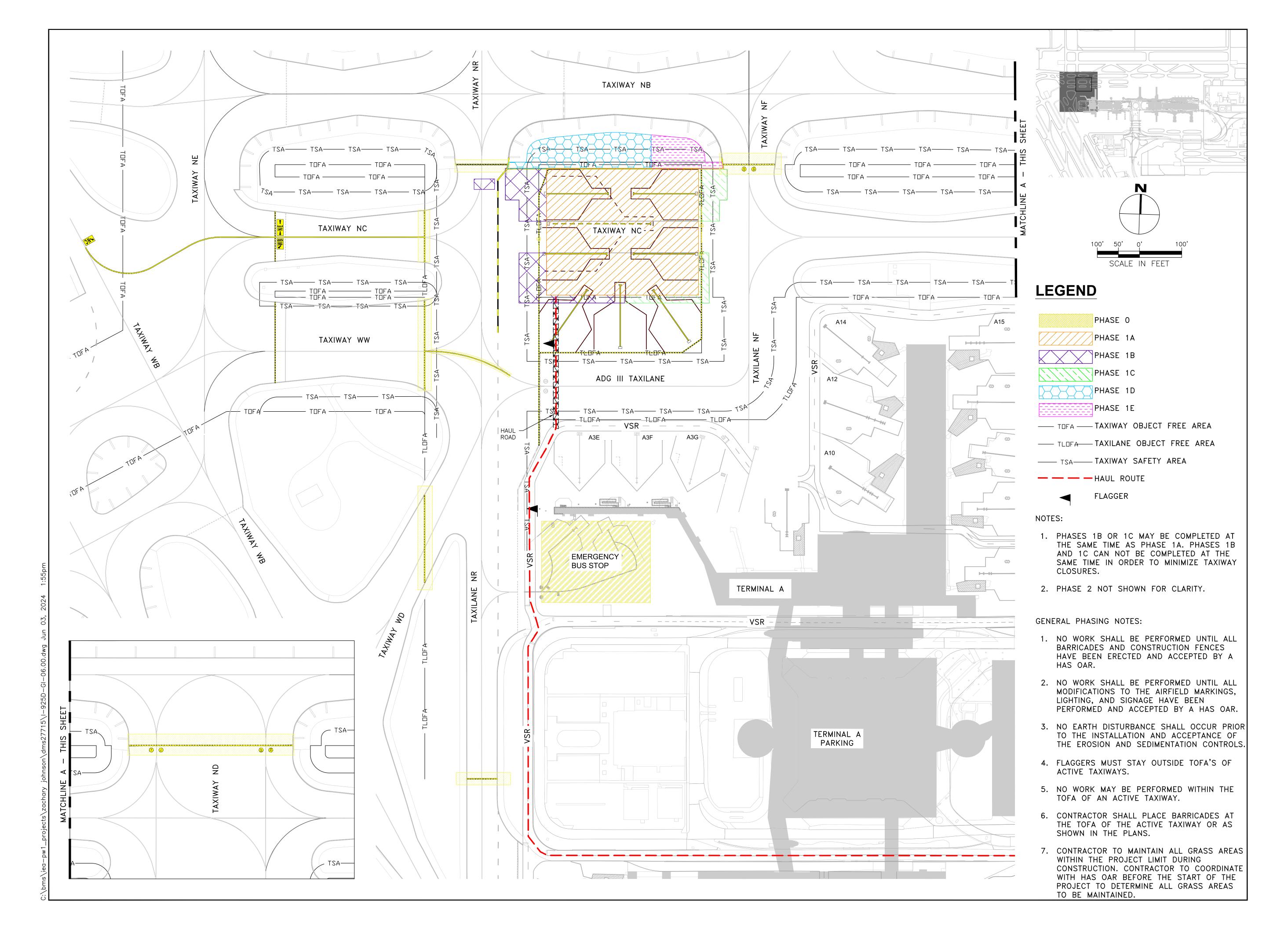


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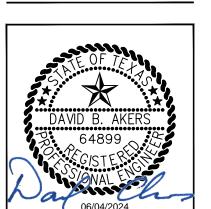
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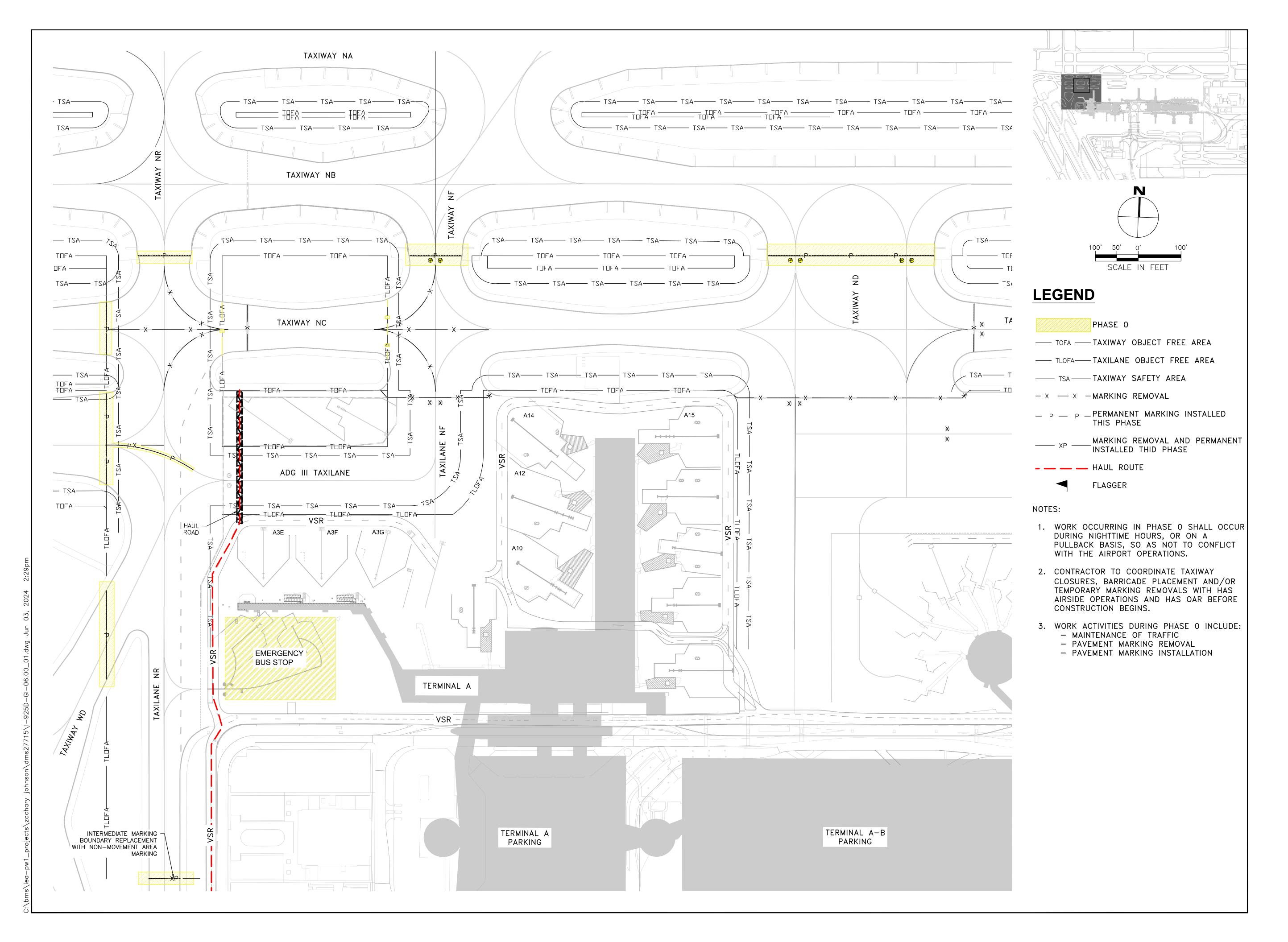
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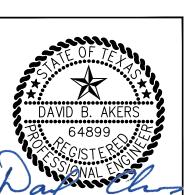
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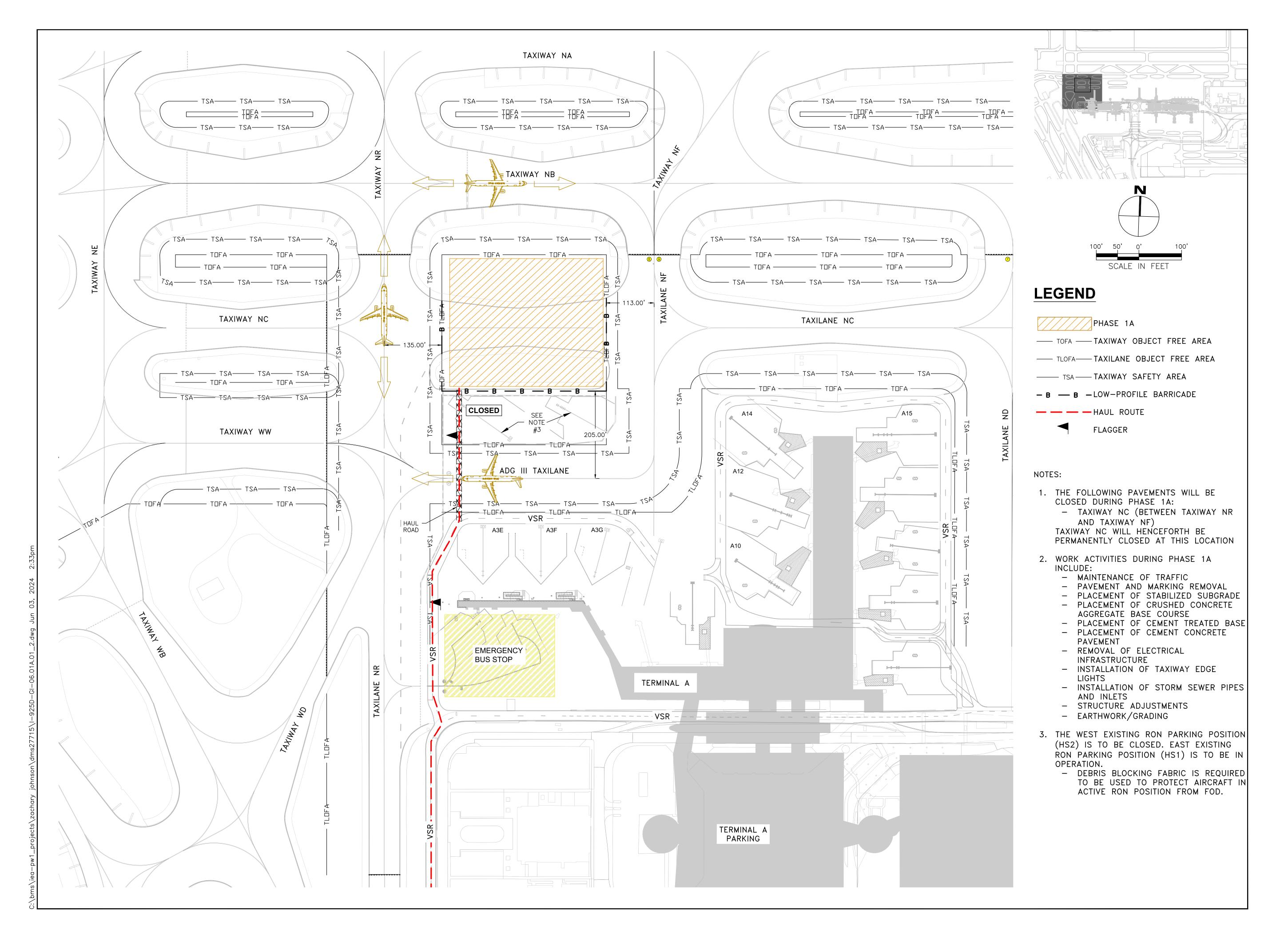
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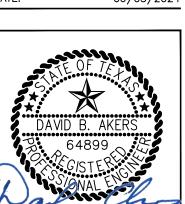




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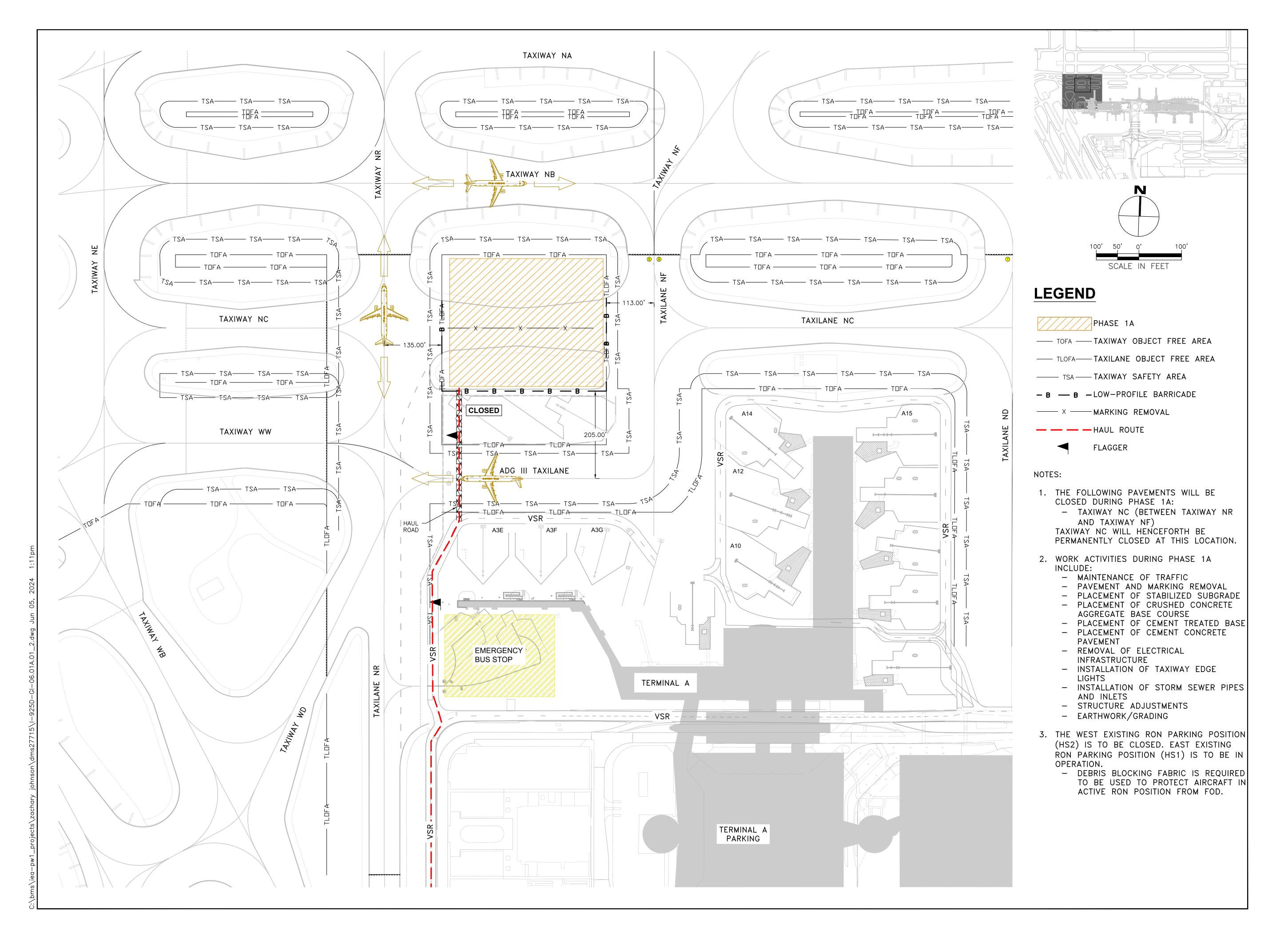


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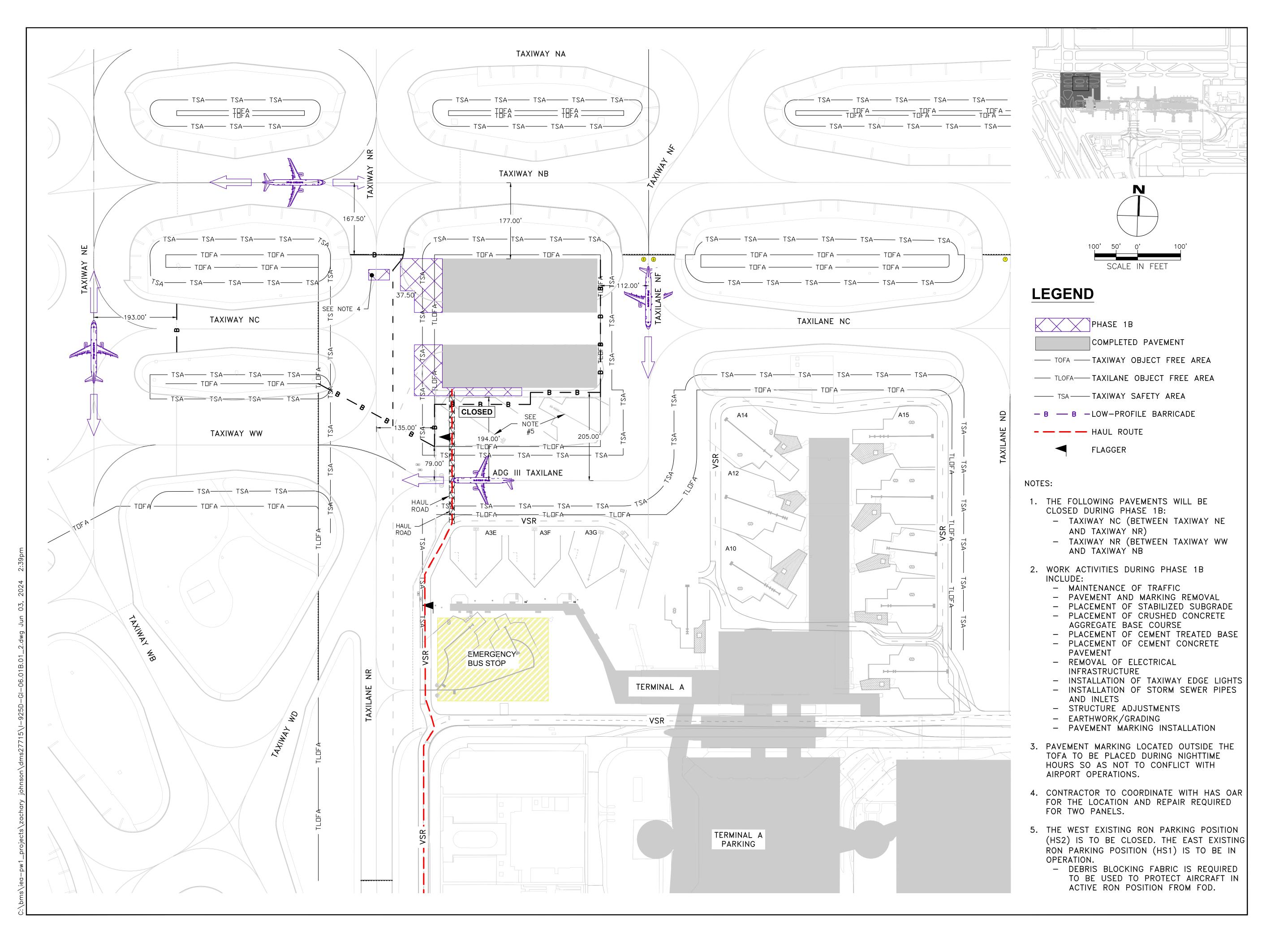
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HOUSTON AIRPORT SYSTEM

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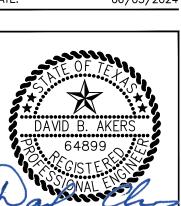
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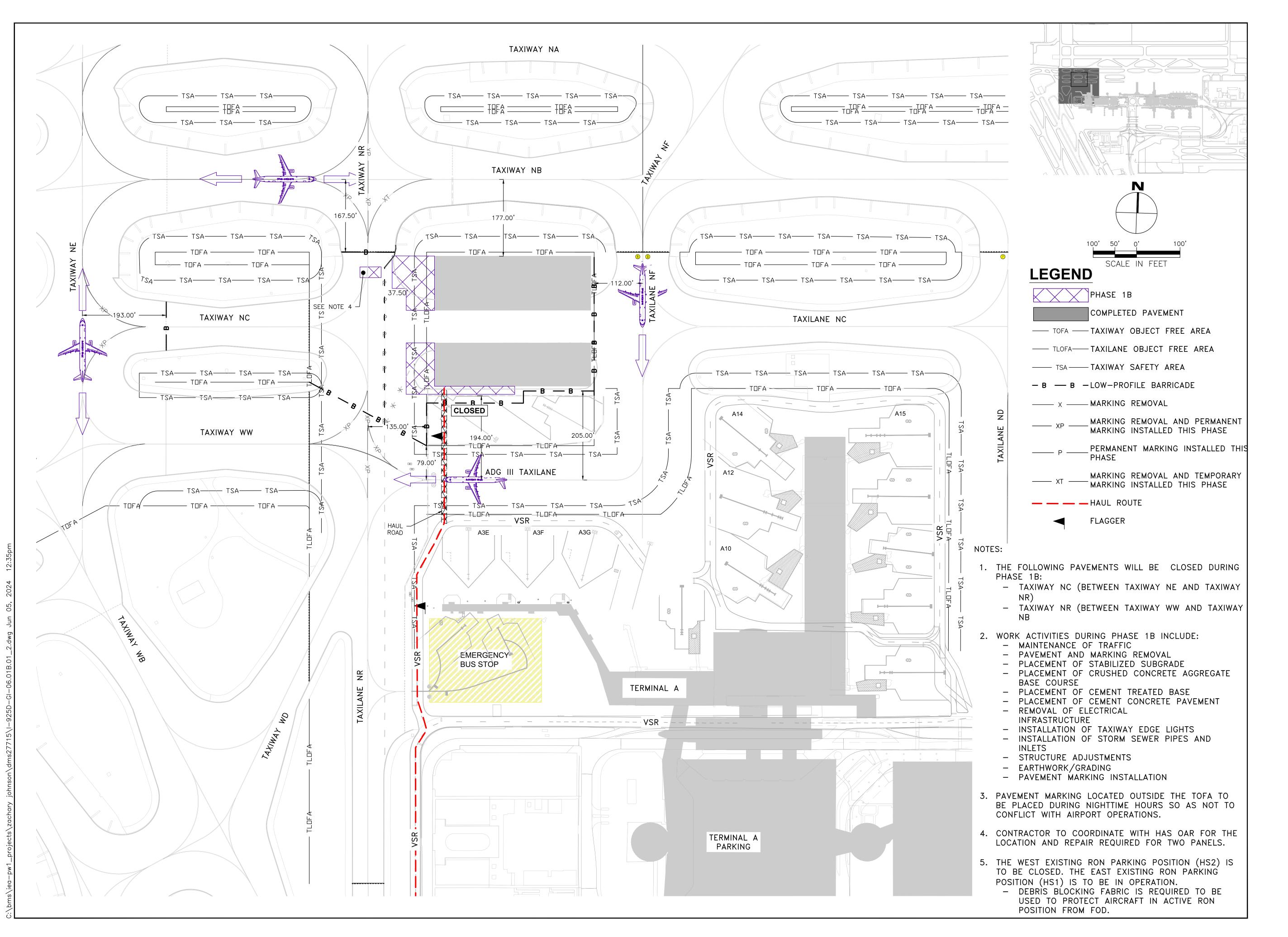
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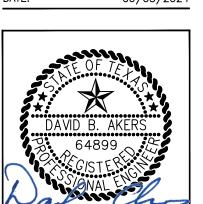
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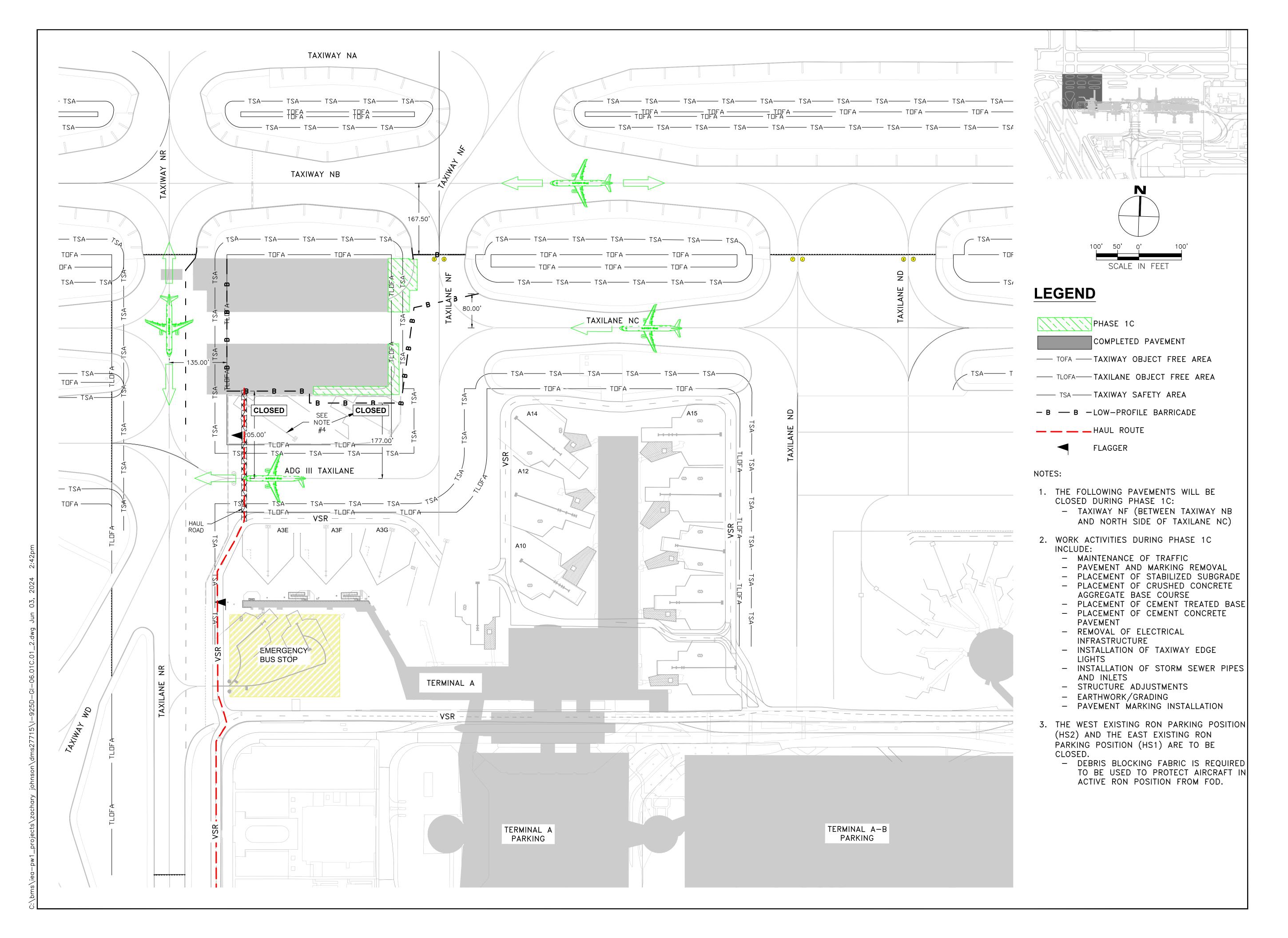
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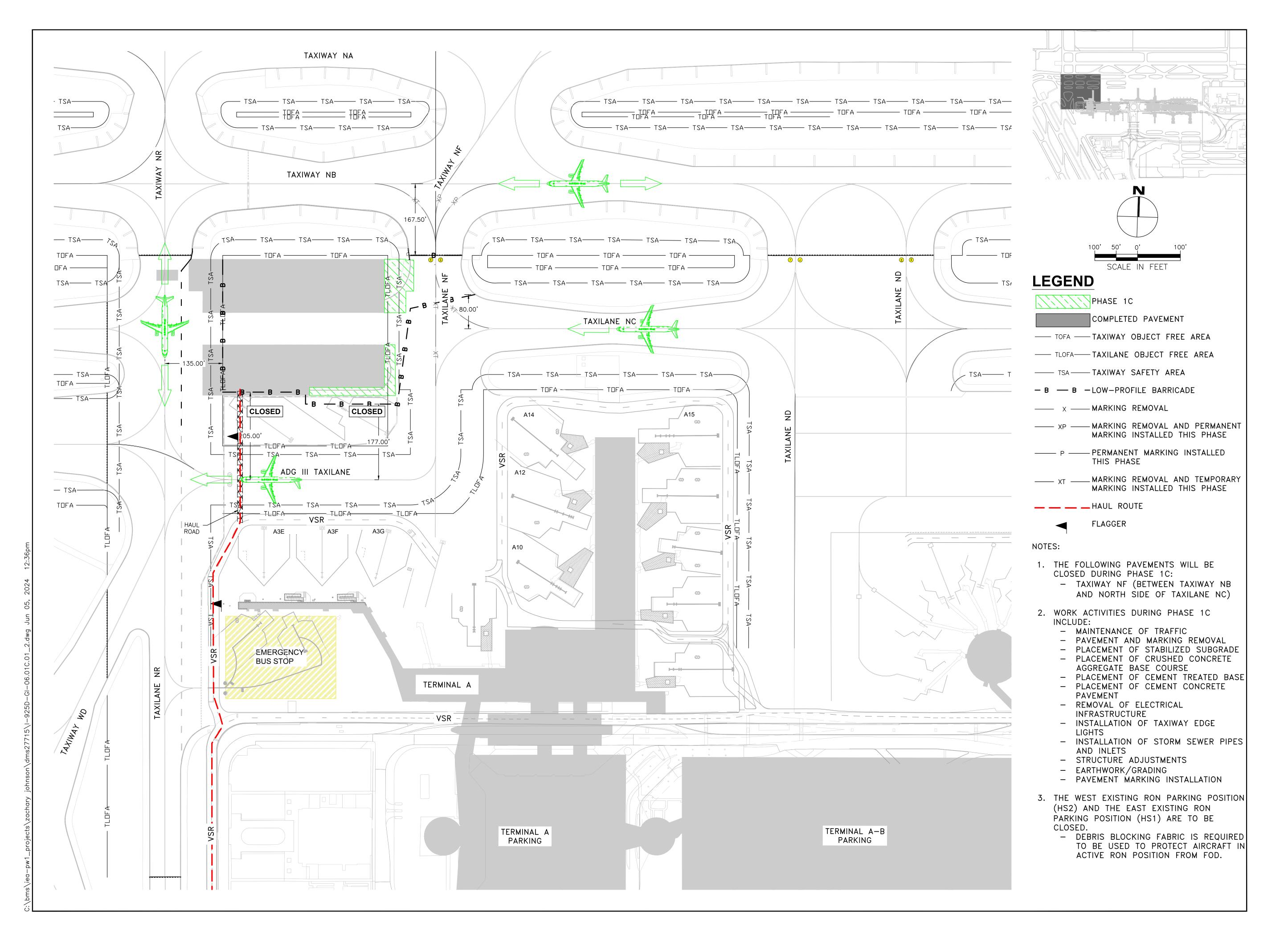
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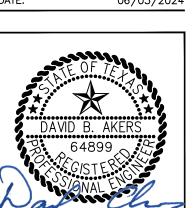
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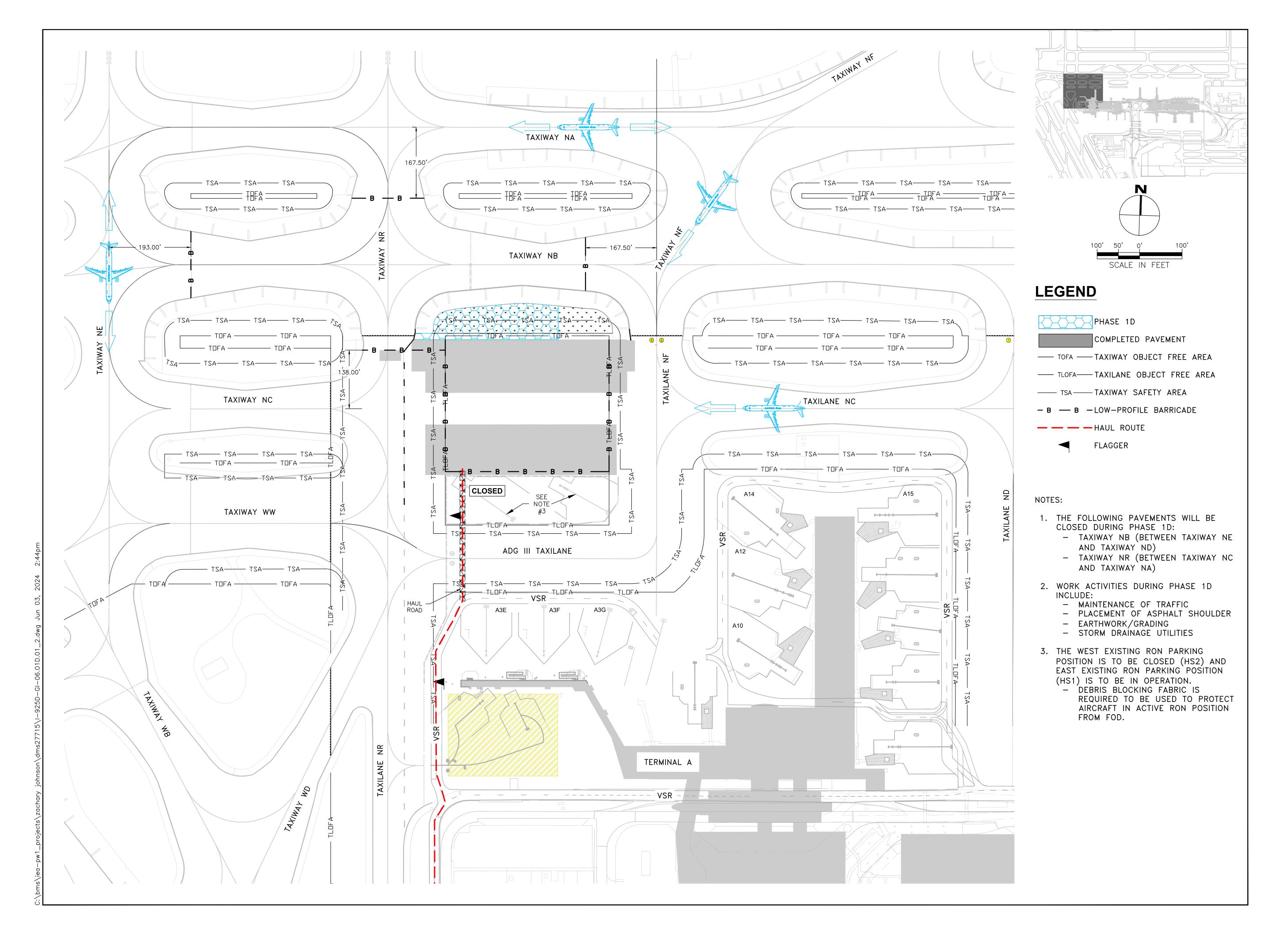
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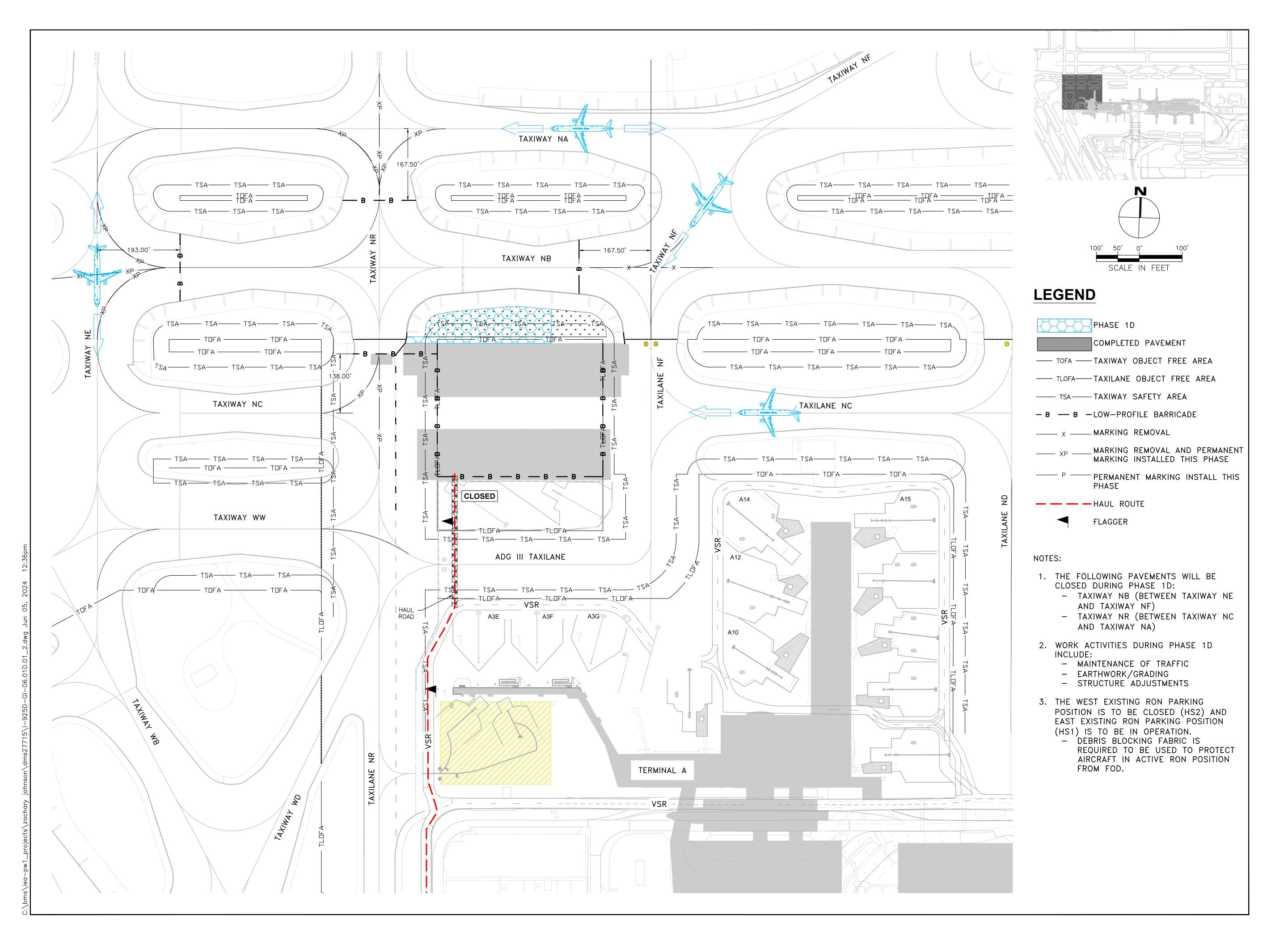
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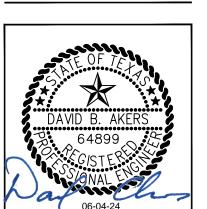
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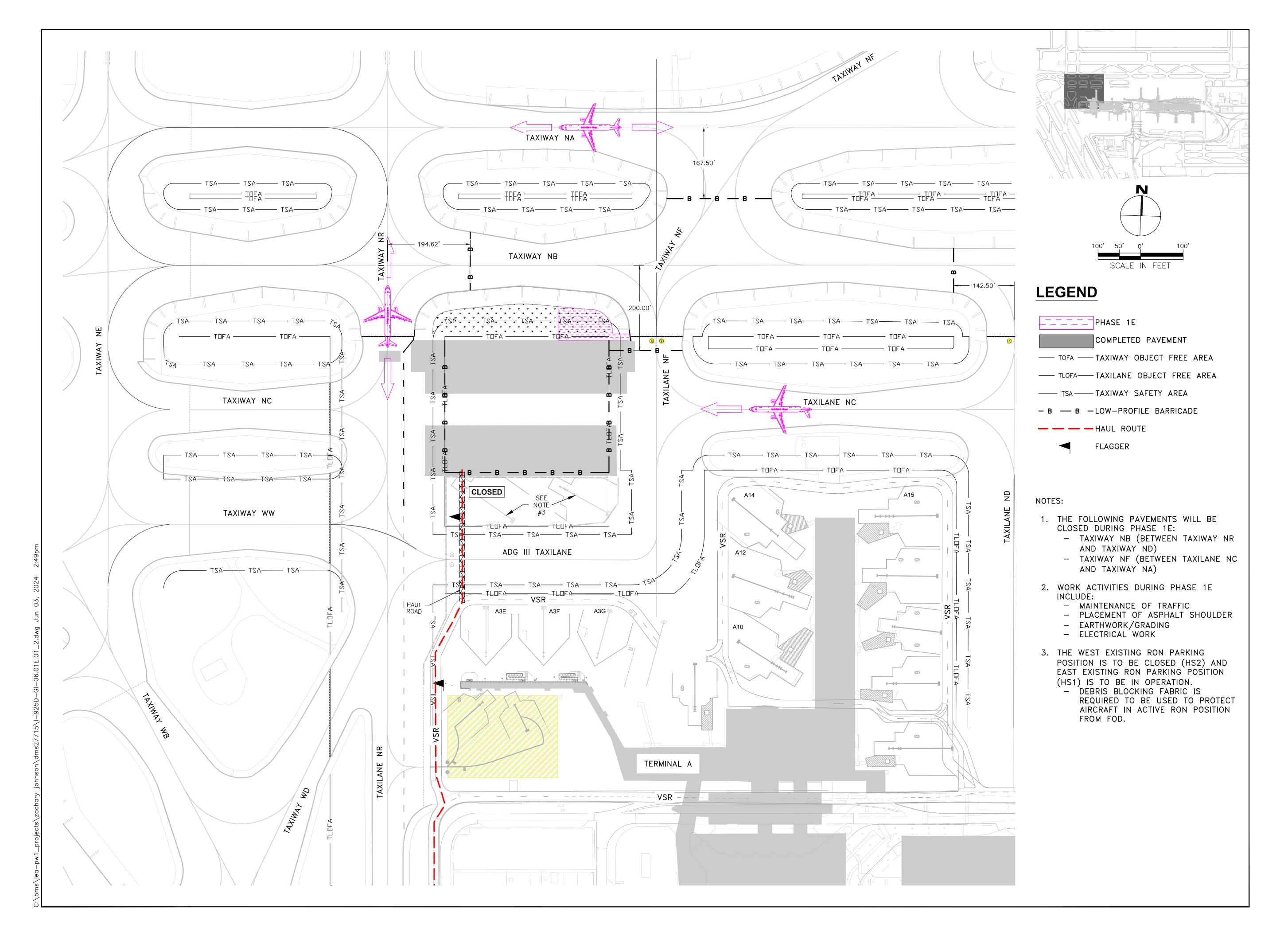
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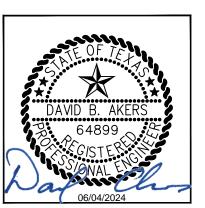
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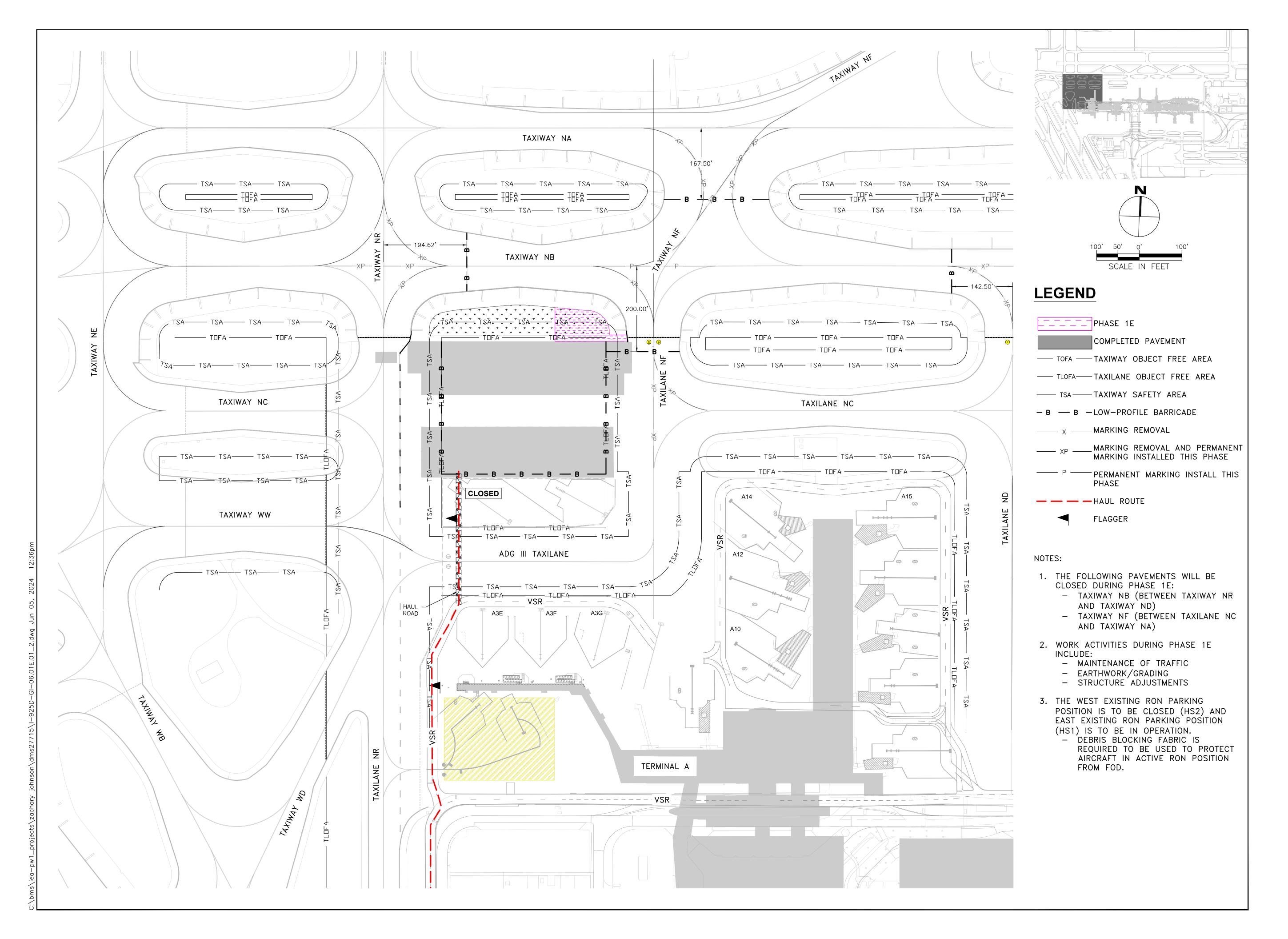
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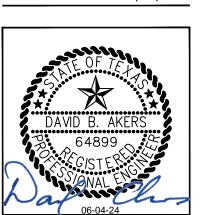






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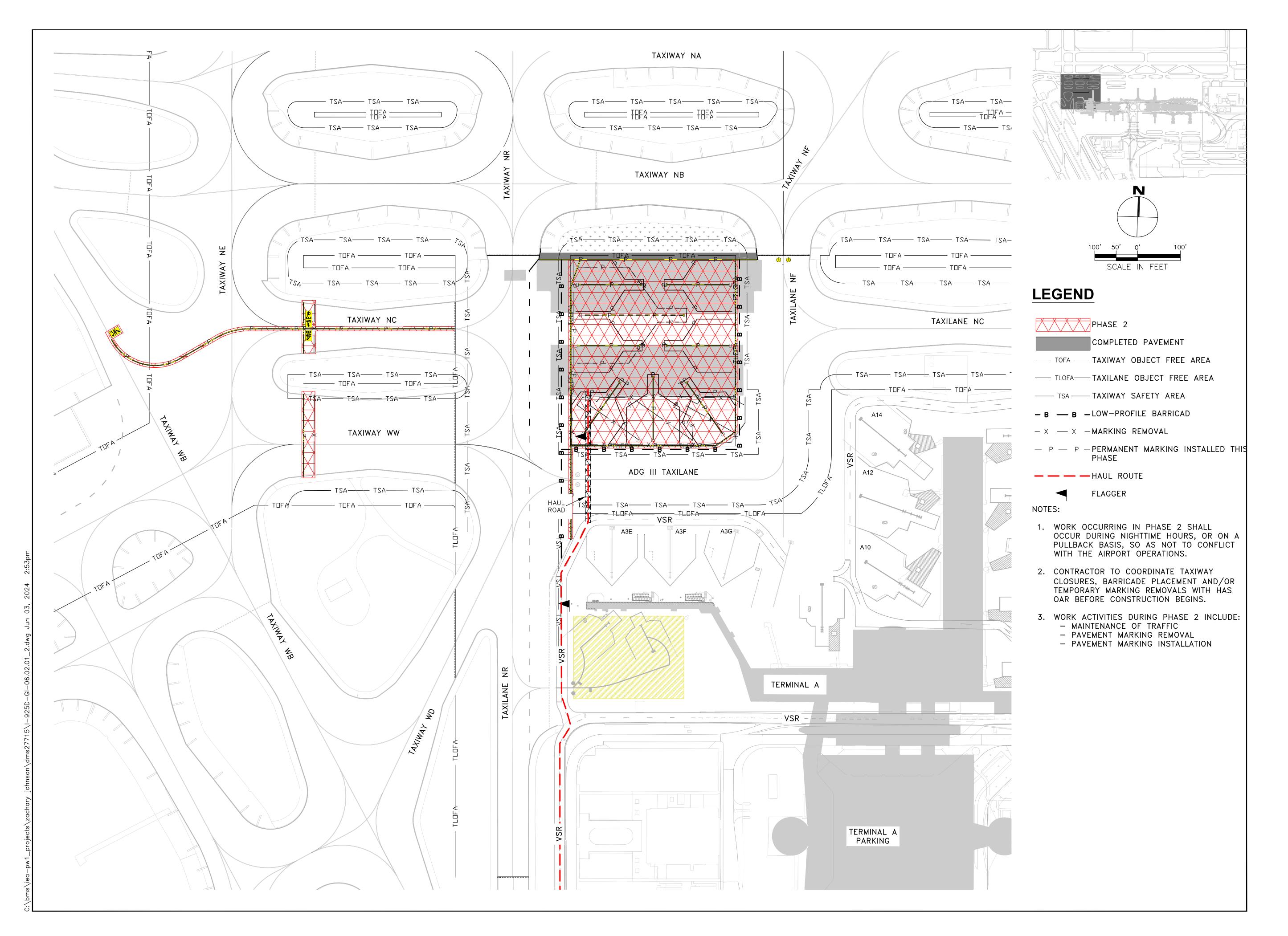
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HOUSTON AIRPORT SYSTEM

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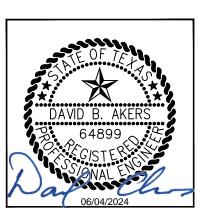
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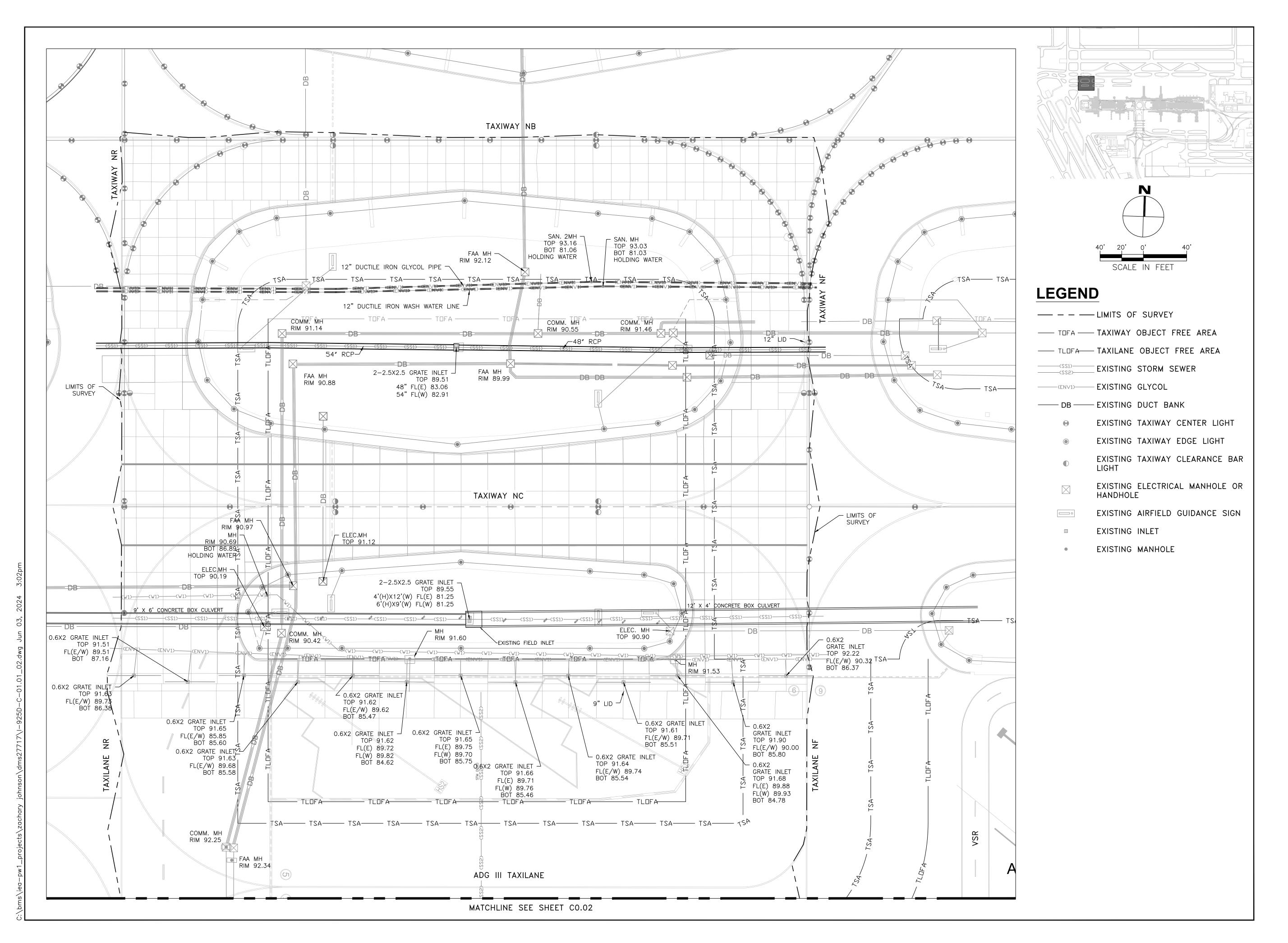
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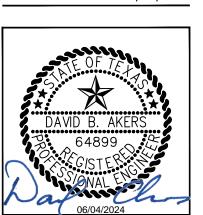
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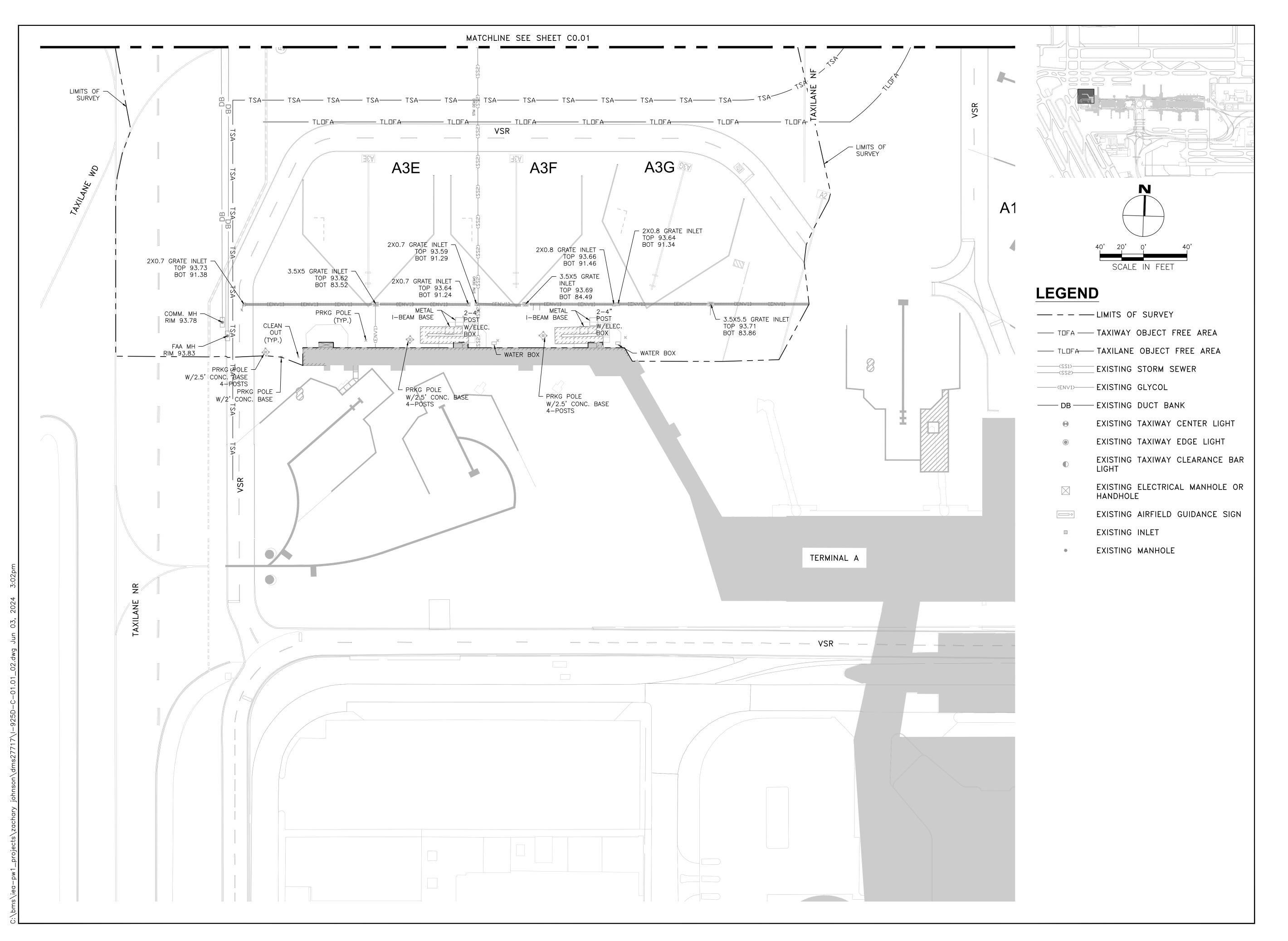
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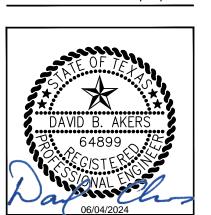
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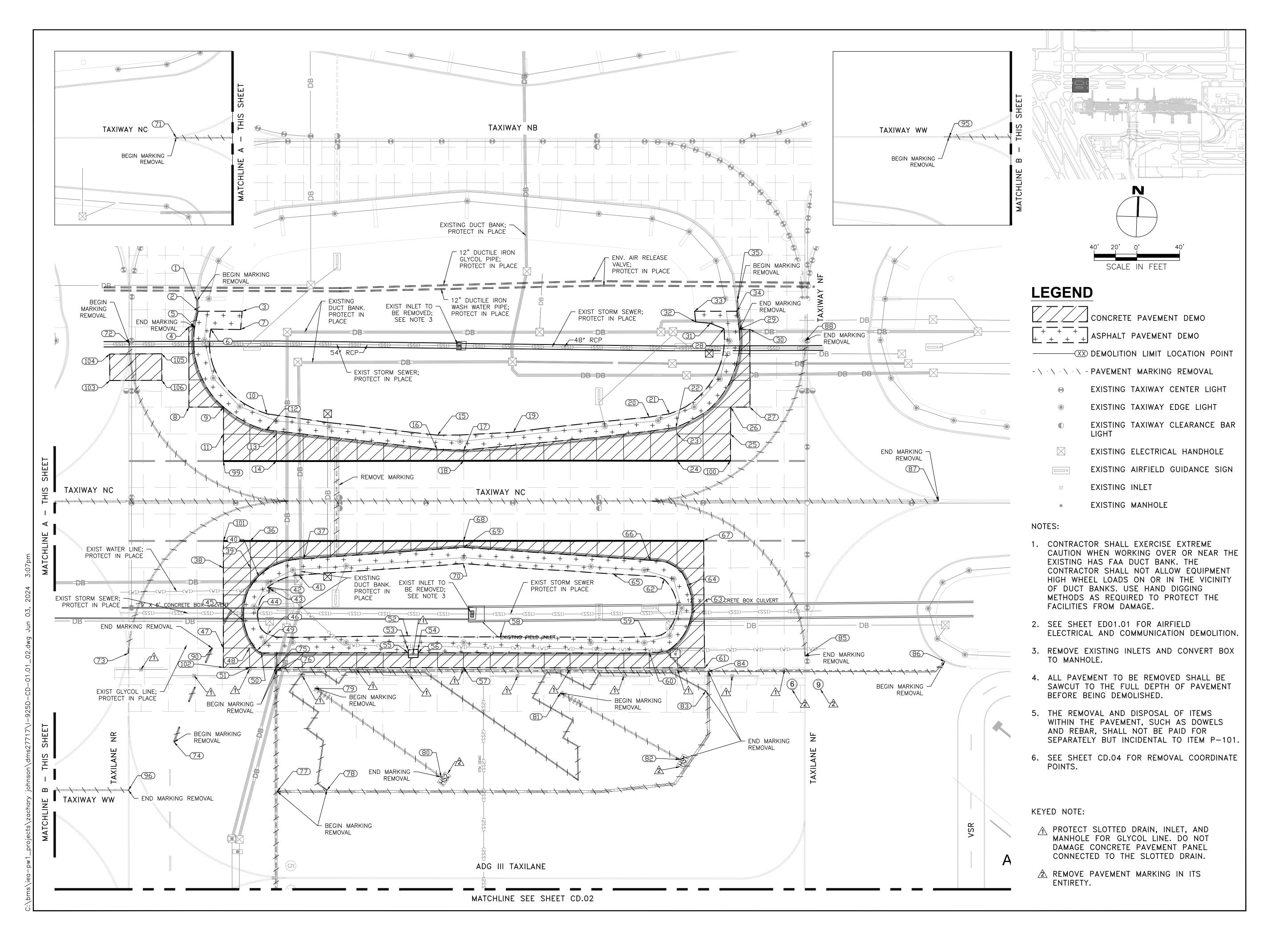
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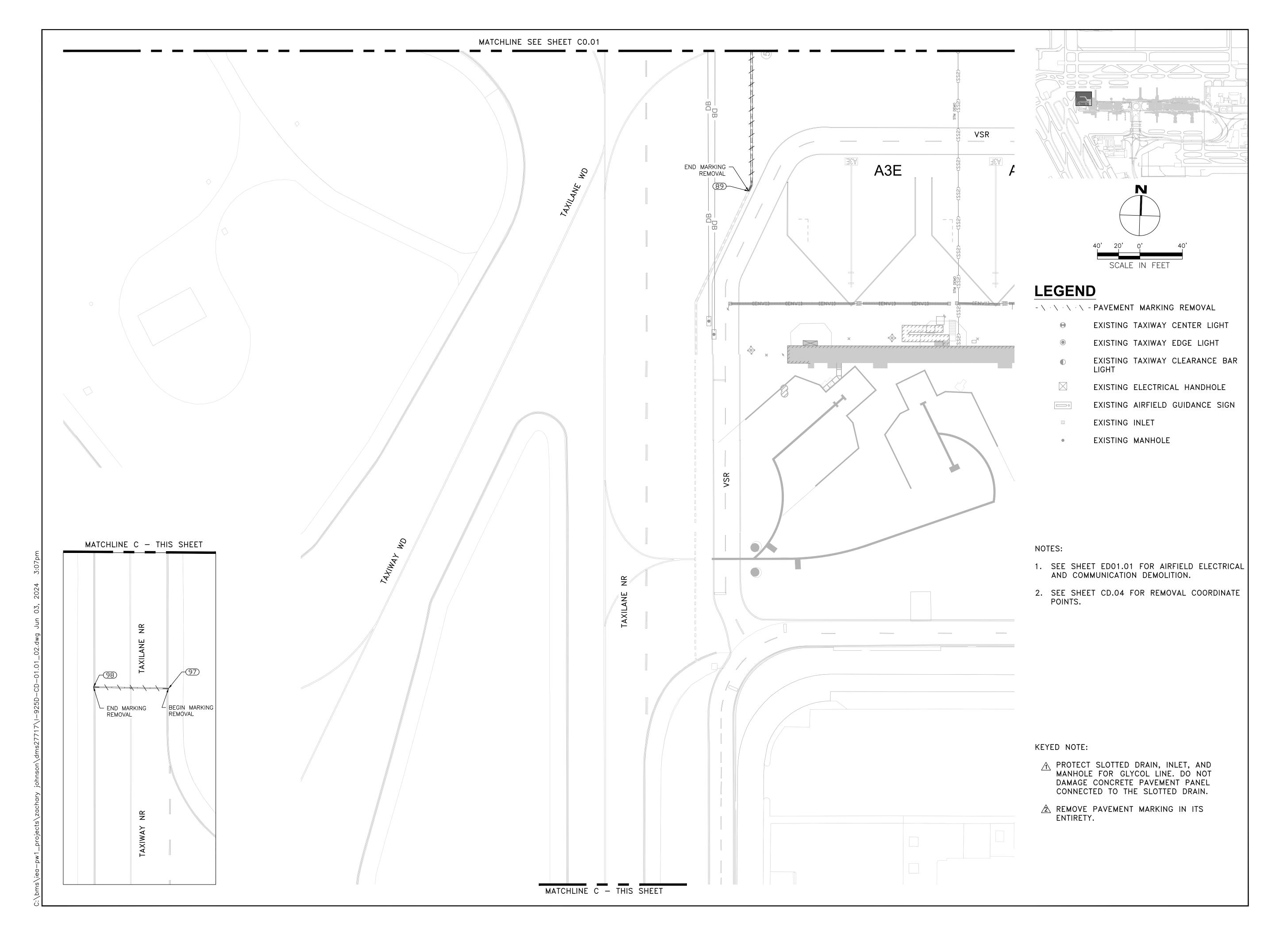
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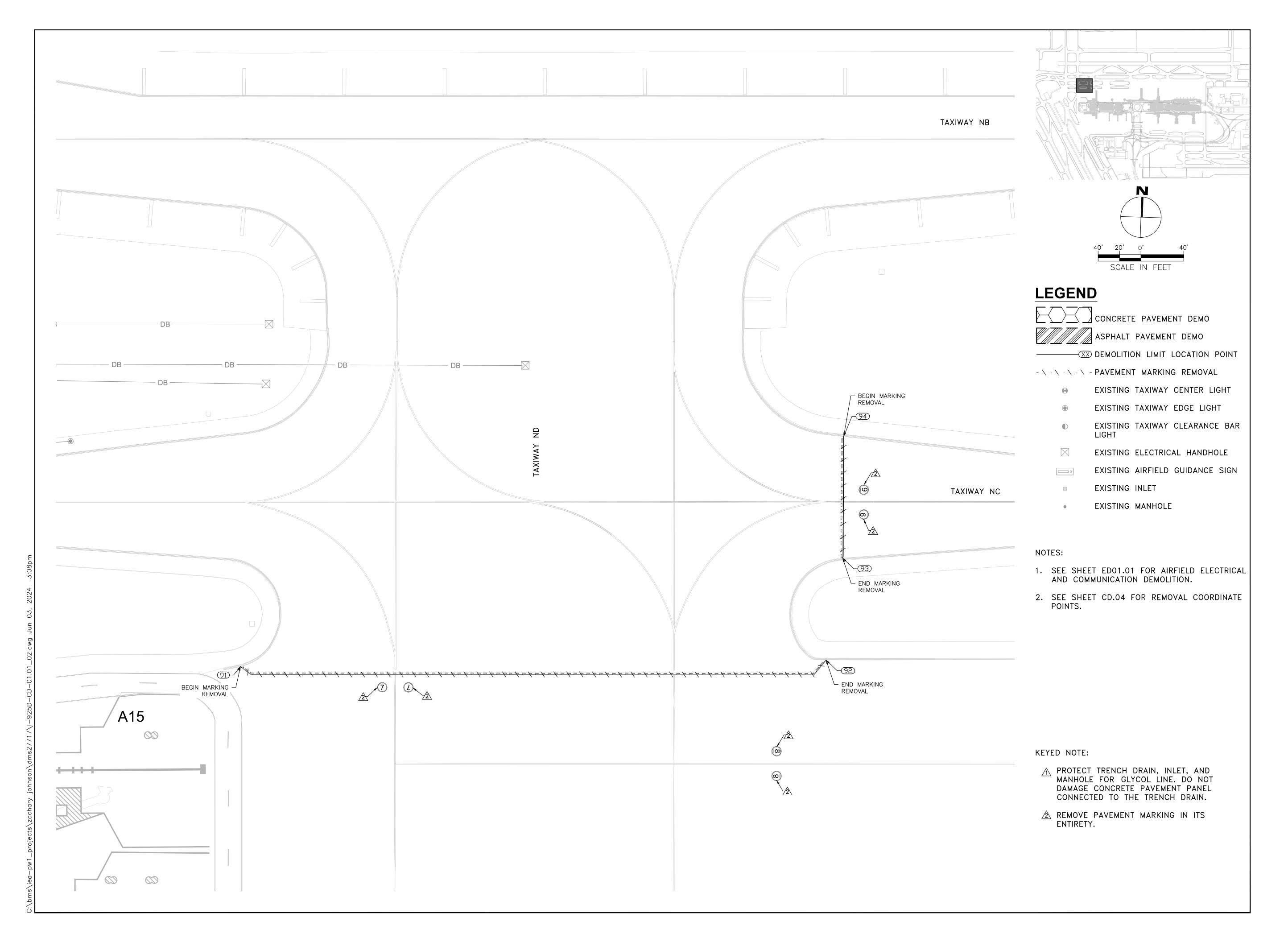
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1	N:13,926,755.51 E:3,123,194.26
2	N:13,926,745.55 E:3,123,195.59
3	N:13,926,746.87 E:3,123,236.85
4	N:13,926,730.71 E:3,123,187.37
5	N:13,926,730.91 E:3,123,192.92
6	N:13,926,729.22 E:3,123,208.20
7	N:13,926,729.74 E:3,123,235.96
8	N:13,926,655.62 E:3,123,189.98
9	N:13,926,656.67 E:3,123,222.31
10	N:13,926,651.64 E:3,123,263.04
11	N:13,926,631.40 E:3,123,223.08
12	N:13,926,636.68 E:3,123,263.41
13	N:13,926,632.88 E:3,123,272.71
14	N:13,926,608.01 E:3,123,273.62
15	N:13,926,636.83 E:3,123,423.44
16	N:13,926,623.54 E:3,123,423.42
17	N:13,926,623.62 E:3,123,448.43
18	N:13,926,613.62 E:3,123,448.79
19	N:13,926,641.85 E:3,123,494.35
20	N:13,926,660.09 E:3,123,621.04
21	N:13,926,663.82 E:3,123,639.85
22	N:13,926,651.17 E:3,123,646.30
23	N:13,926,645.19 E:3,123,647.65
24	N:13,926,620.06 E:3,123,648.51
25	N:13,926,646.82 E:3,123,697.65
26	N:13,926,671.85 E:3,123,697.04
27	N:13,926,672.51 E:3,123,714.77
28	N:13,926,745.13 E:3,123,688.32
29	N:13,926,744.92 E:3,123,702.73
30	N:13,926,745.23 E:3,123,712.58
31	N:13,926,749.72 E:3,123,675.41
32	N:13,926,750.56 E:3,123,661.64
33	N:13,926,760.50 E:3,123,660.34

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35	N:13,926,771.78 E:3,123,700.00
36	N:13,926,531.92 E:3,123,251.15
37	N:13,926,517.06 E:3,123,301.93
38	N:13,926,506.22 E:3,123,226.98
39	N:13,926,507.01 E:3,123,252.48
40	N:13,926,499.42 E:3,123,260.35
41	N:13,926,501.62 E:3,123,298.13
42	N:13,926,489.26 E:3,123,268.79
43	N:13,926,488.27 E:3,123,270.63
44	N:13,926,466.83 E:3,123,260.47
45	N:13,926,457.27 E:3,123,247.79
46	N:13,926,445.51 E:3,123,270.35
47	N:13,926,431.17 E:3,123,229.38
48	N:13,926,432.00 E:3,123,253.84
49	N:13,926,430.10 E:3,123,261.06
50	N:13,926,427.79 E:3,123,265.02
51	N:13,926,413.78 E:3,123,254.52
52	N:13,926,448.17 E:3,123,401.55
53	N:13,926,434.99 E:3,123,402.46
54	N:13,926,435.86 E:3,123,411.72
55	N:13,926,432.53 E:3,123,402.40
56	N:13,926,432.80 E:3,123,411.91
57	N:13,926,420.02 E:3,123,454.48
58	N:13,926,450.00 E:3,123,488.12
59	N:13,926,454.53 E:3,123,624.64
60	N:13,926,439.60 E:3,123,628.28
61	N:13,926,427.14 E:3,123,680.67
62	N:13,926,508.84 E:3,123,639.70
63	N:13,926,477.66 E:3,123,666.63
64	N:13,926,503.97 E:3,123,662.00
65	N:13,926,512.28 E:3,123,592.03
66	N:13,926,526.12 E:3,123,626.28

DEMOL	ITION POINT TABLE
POINT #	NORTHING/EASTING
67	N:13,926,546.01 E:3,123,675.74
68	N:13,926,538.68 E:3,123,451.00
69	N:13,926,532.59 E:3,123,451.22
70	N:13,926,517.46 E:3,123,451.35
71	N:13,926,561.69 E:3,123,009.21
72	N:13,926,713.52 E:3,123,132.15
73	N:13,926,423.50 E:3,123,140.64
74	N:13,926,341.76 E:3,123,186.07
75	N:13,926,414.57 E:3,123,279.28
76	N:13,926,412.14 E:3,123,280.43
77	N:13,926,298.56 E:3,123,284.10
78	N:13,926,301.32 E:3,123,330.66
79	N:13,926,396.36 E:3,123,316.29
80	N:13,926,317.23 E:3,123,437.05
81	N:13,926,399.21 E:3,123,546.11
82	N:13,926,340.69 E:3,123,659.98
83	N:13,926,405.51 E:3,123,682.22
84	N:13,926,423.54 E:3,123,684.16
85	N:13,926,441.21 E:3,123,774.05
86	N:13,926,440.20 E:3,123,905.01
87	N:13,926,590.42 E:3,123,894.40
88	N:13,926,736.40 E:3,123,764.95
89	N:13,926,076.71 E:3,123,287.55
90	N:13,926,430.85 E:3,123,218.87
91	N:13,926,455.07 E:3,124,469.03
92	N:13,926,478.77 E:3,125,015.62
93	N:13,926,574.47 E:3,125,028.04
94	N:13,926,687.93 E:3,125,025.32
95	N:13,926,291.43 E:3,123,011.70
96	N:13,926,295.39 E:3,123,144.87
97	N:13,925,284.69 E:3,123,215.66
98	N:13,925,283.74 E:3,123,141.70

N:13,926,606.17 E:3,123,223.77

DEMOLI <sup>-</sup>	TION POINT TABLE
POINT #	NORTHING/EASTING
100	N:13,926,621.65 E:3,123,698.46
101	N:13,926,531.54 E:3,123,226.30
102	N:13,926,412.99 E:3,123,229.92
103	N:13,926,678.09 E:3,123,115.06
104	N:13,926,702.83 E:3,123,114.12
105	N:13,926,704.66 E:3,123,162.85
106	N:13,926,679.88 E:3,123,163.79





REVISIONS NO. DESCRIPTION DATE BY

TERMINAL A NORTH RON PARKING GEORGE BUSH INTERCONTINENTAL AIRP

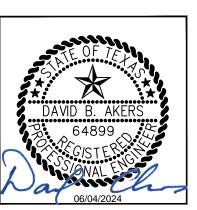
TABLES

TABLES

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ISSUED FOR PERMIT

PROJECT MGR: DESIGNER: DRAWN BY: BS CHECKED BY: NTS SCALE: 06/03/2024



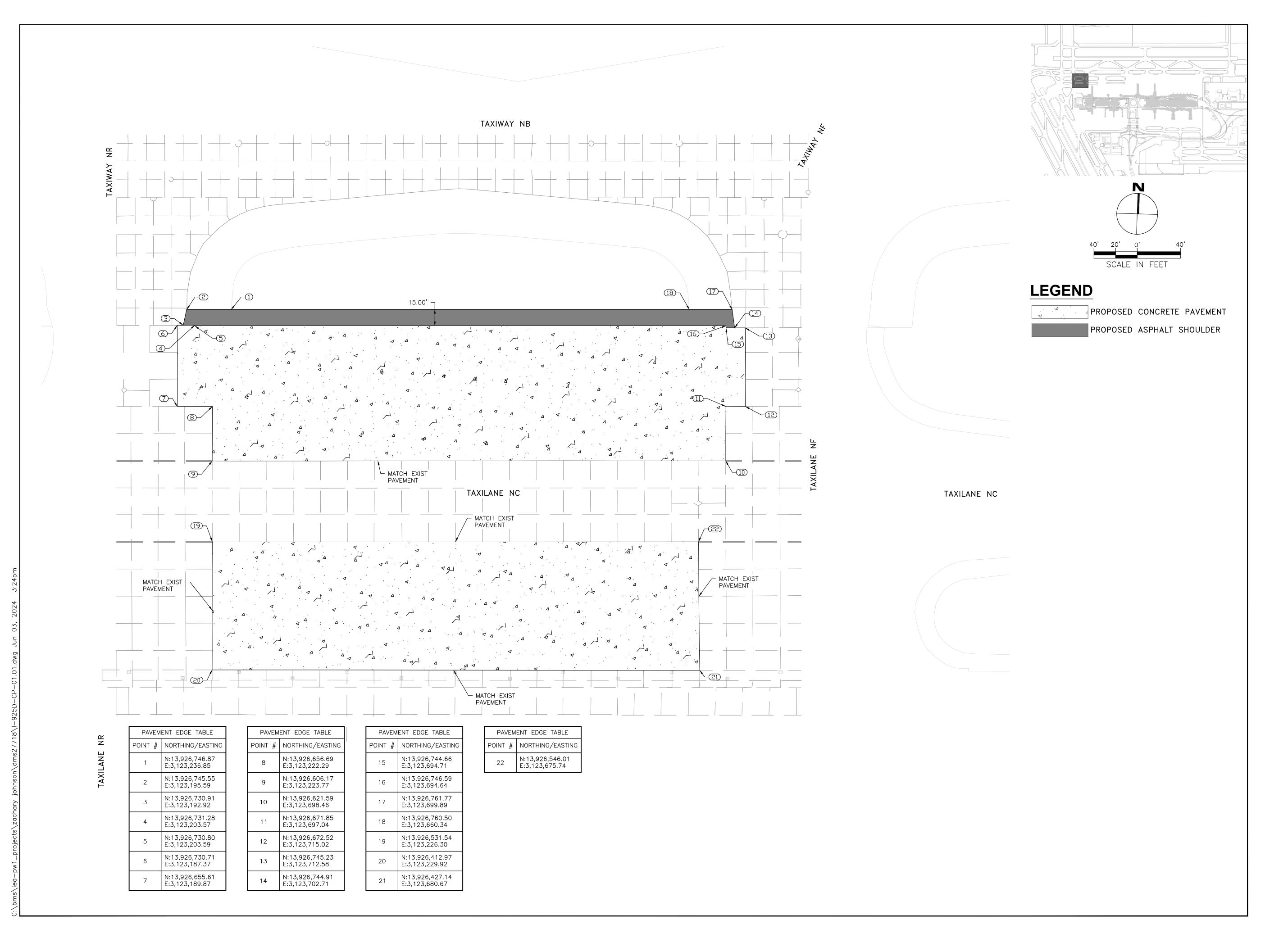
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APPROVED BY:	DATE:
HOUSTON AIRPORT	- · - · - · · · · · · · · · · · · · · ·

PROJECT NO. PN 973 C.I.P. NO.

A-000713

H.A.S. NO.

SHEET NO. CD.04





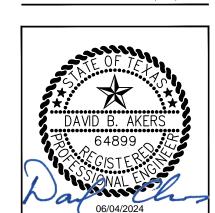


CITY OF HOLSTON
HOUSTON AIRPORTS SYSTEM
Recommended

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DATE
Director of Designated Representative
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DATE:	06/03/2024



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PROJECT NO.

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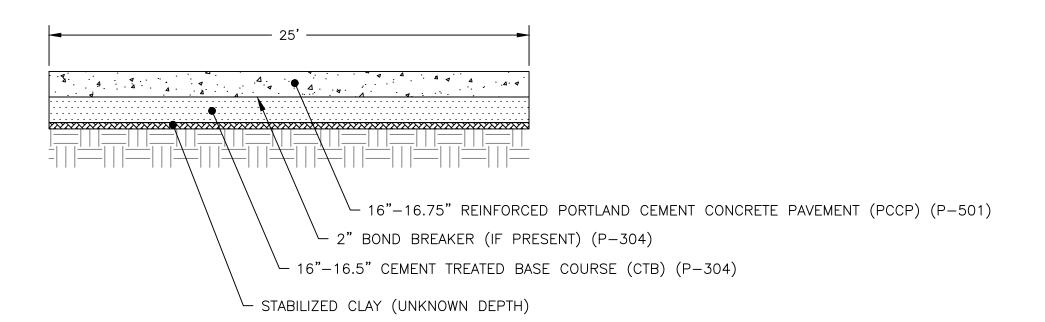
C.I.P. NO.

A-000713

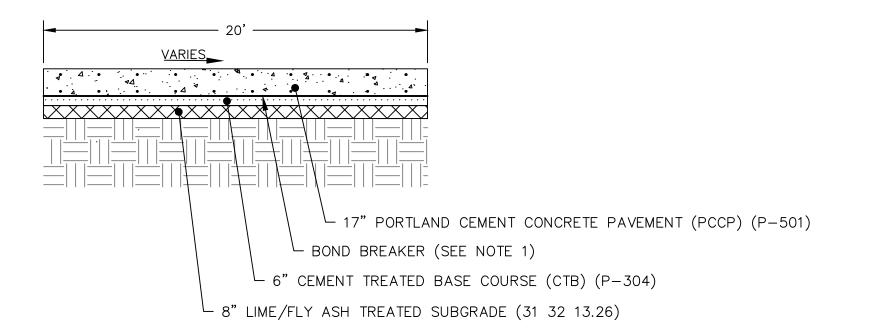
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CP.01

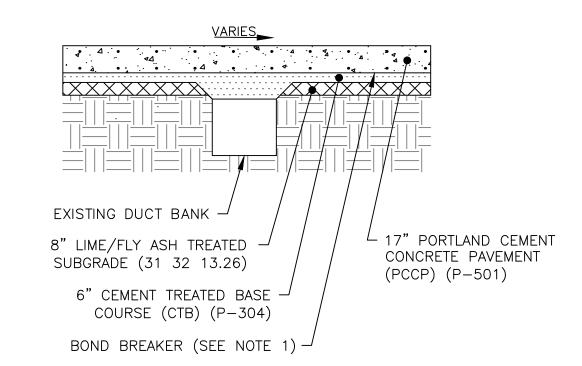


## 1 EXISTING PAVEMENT SECTION CP.02 SCALE:NTS





### PROPOSED PAVEMENT SECTION - SOUTH

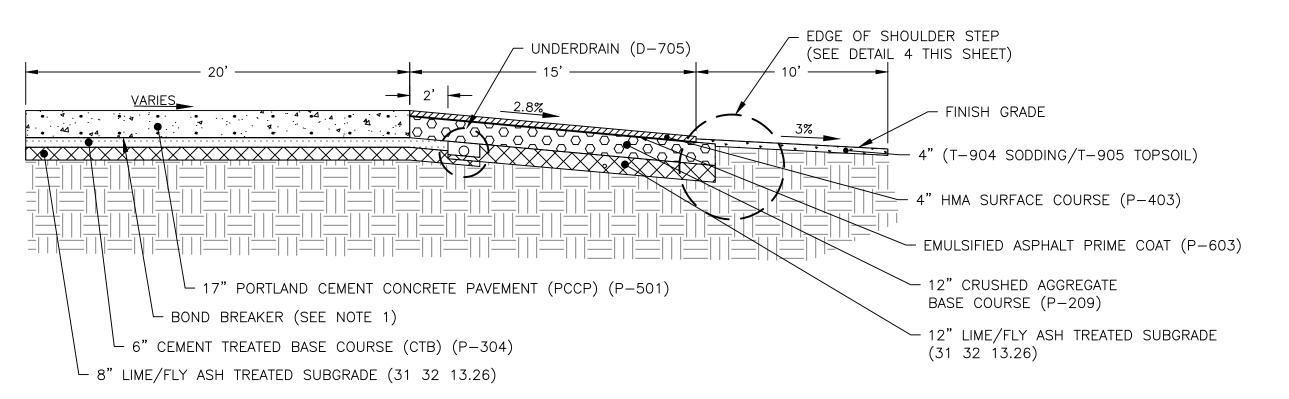


### NOTES:

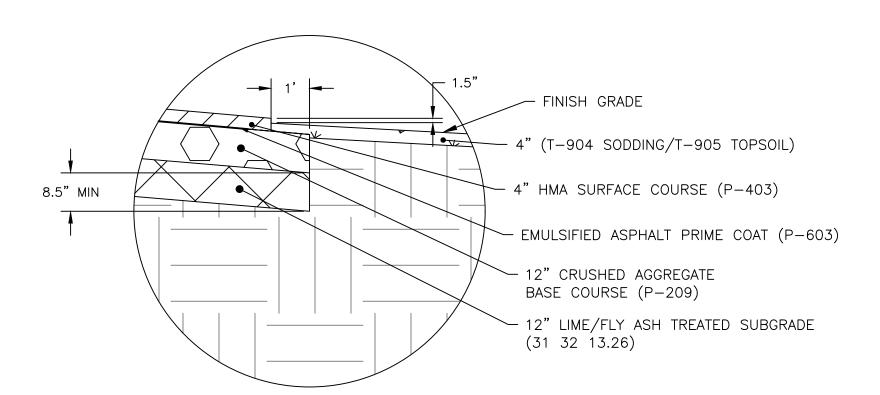
- 1. USE EXTREME CAUTION WHEN WORKING AROUND AND OVER EXISTING DUCT BANKS. USE HAND DIGGING METHODS AS REQUIRED TO PROTECT DUCTS.
- 2. IF THE EXISTING DUCT BANK LIES IN THE PROPOSED PAVEMENT LAYERS, PROVIDE CEMENT—TREATED BASE COURSE OVER THE TOP OF THE DUCT BANK RATHER THAN LIME TREATED SUBGRADE.
- 3. NOTIFY OAR OR OF ALL INSTANCES WHERE DUCT BANK IS LESS THAN 2 FEET BELOW THE BOTTOM OF LIME TREATED SUBGRADE.



### EXISTING DUCT BANK PROTECTION DETAIL SCALE:NTS









### TYPICAL SECTION NOTES:

- 1. BOND BREAKER TO BE LIQUID MEMBRANE FORMING COMPOUND. SEE P-501 SPECIFICATION.
- 2. WHEN THE HMA SURFACE COURSE IS PLACED IN MULTIPLE LIFTS, AN APPLICATION OF EMULSIFIED TACK COAT (P-603) SHALL BE APPLIED TO THE UNDERLYING LIFTS OF MATERIAL. TACK COAT (P-603) SHALL BE APPLIED TO P-501 VERTICAL/EDGE SURFACE (CONCRETE/ASPHALT JOINT) PRIOR TO P-403 PLACEMENT.
- 3. IRREGULAR PANELS OR ONES WITH PENETRATIONS REQUIRE REINFORCEMENT.





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HOUSTON AIRFORTS SYSTEM
Recommended

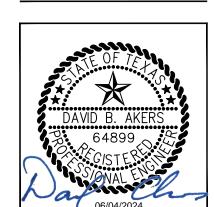
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DRAWN BY:	ZJ
CHECKED BY:	BS
SCALE:	NTS
DATE:	06/03/2024



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PROJECT NO.

PN 973

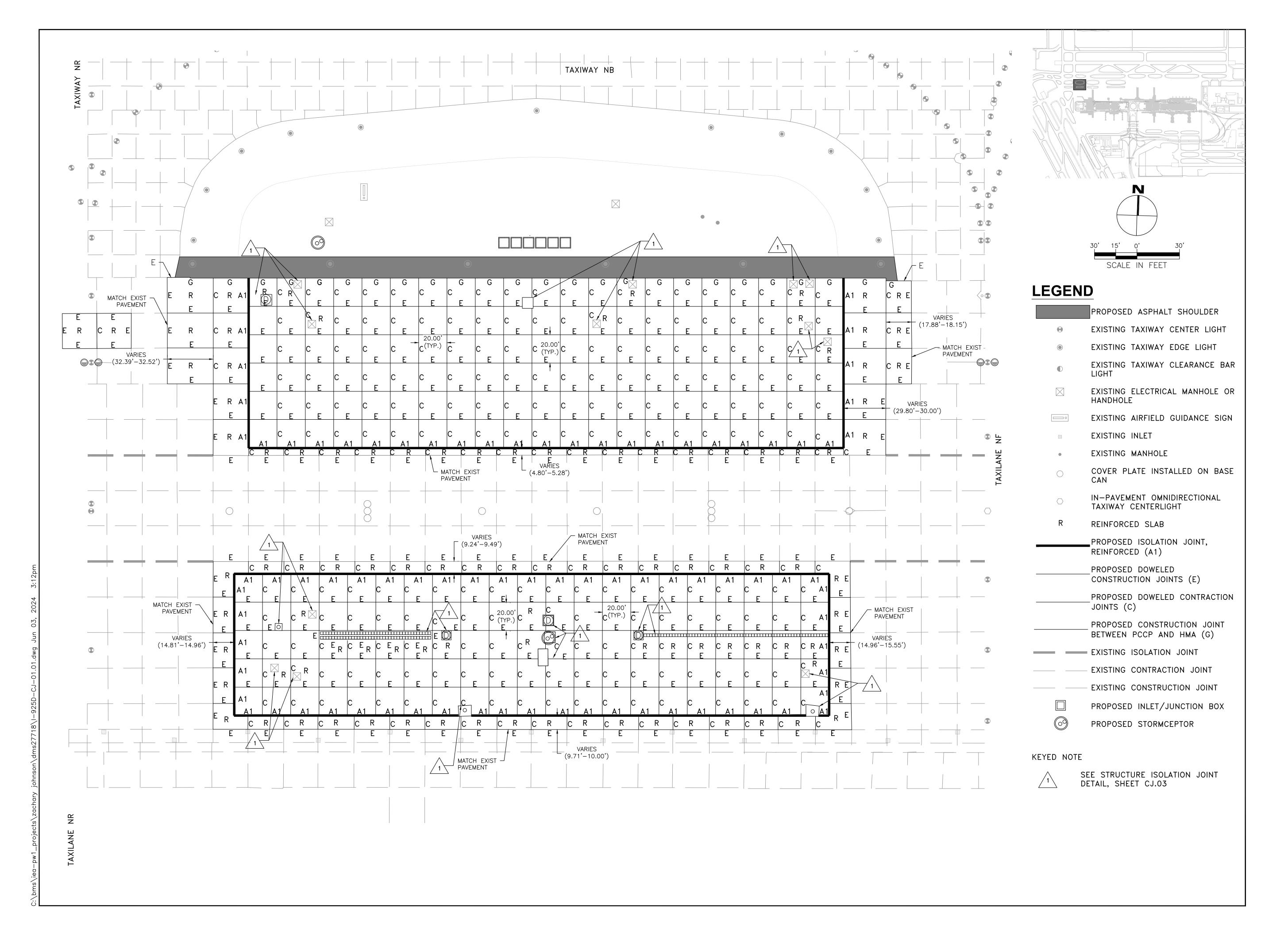
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A-000713

H.A.S. NO.

SHEET NO.

**CP.02** 







NORTH RON PARK INTERCONTINENTAL

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ISSUED FOR PERMIT

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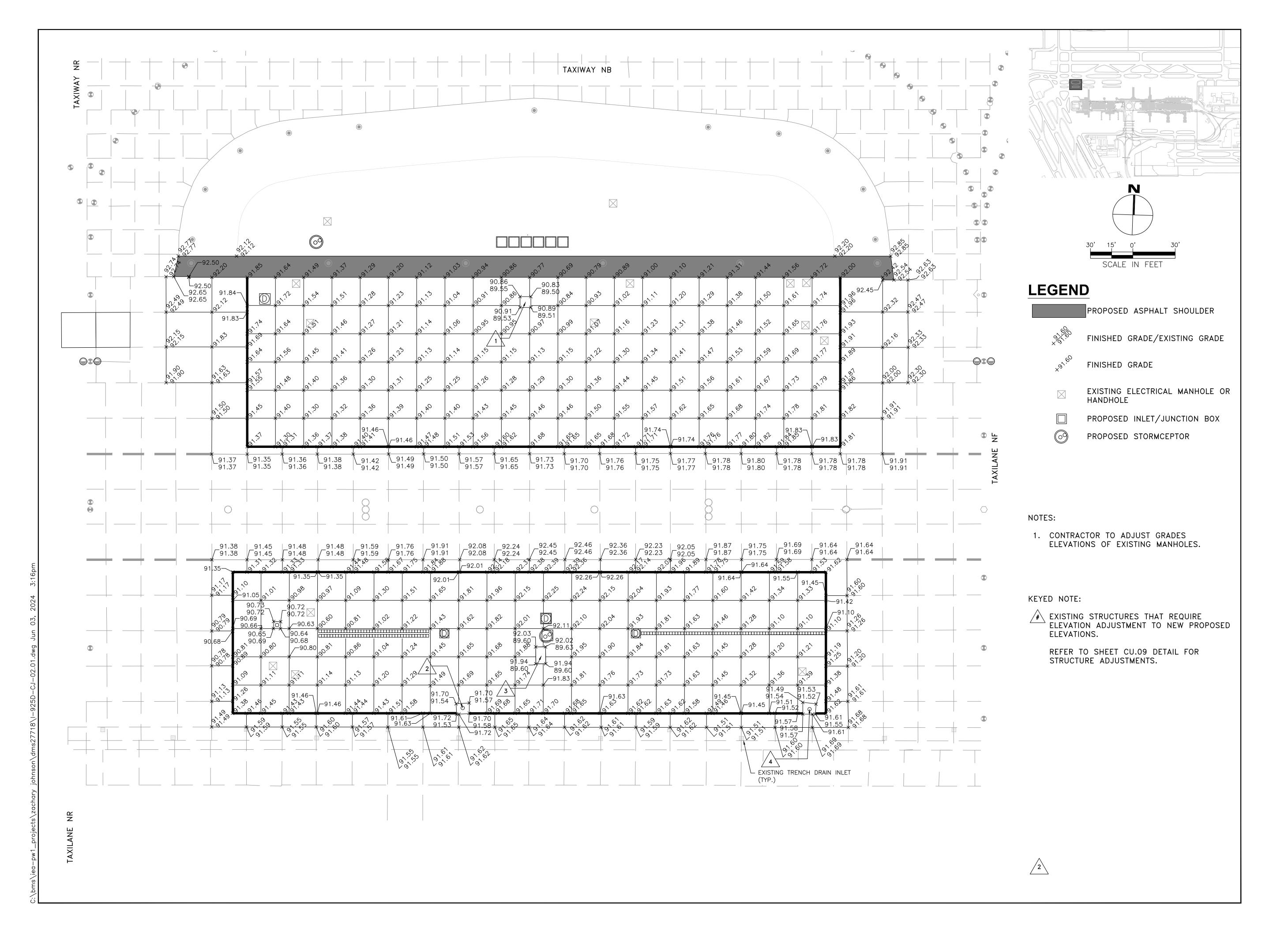


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PROJECT NO. PN 973 C.I.P. NO. A-000713 H.A.S. NO.

SHEET NO.

CJ.01





13501 Katy Freeway
Suite 3425
Houston, Texas 77079
(832) 494–3800
TBPE Firm Registration No.
F-10161

REVISIONS

NO. DESCRIPTION DATE BY

CITY OF HOLSTON
HOUSTON AIRPORTS SYSTEM
Recommended

Houston Airports System
DATE
Director of Designated Representative

REVIEWED NO EXCEPTIONS TAKEN
The designate Superior documents submitted for

CONTROL OF THE PROPERTY OF THE

TERMINAL A NORTH RON PARKING
GEORGE BUSH INTERCONTINENTAL AIRPORT

ISSUED FOR PERMIT

PROJECT MGR: DA

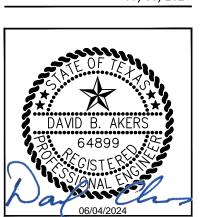
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CHECKED BY: BS

SCALE: 1" = 30'

DATE: 06/03/2024



DEPARTMENT OF AVIATION

APPROVED BY: DATE:

HOUSTON AIRPORT SYSTEMS
AUTHORIZED REPRESENTATIVE

PROJECT NO.
PN 973

C.I.P. NO. A-000713

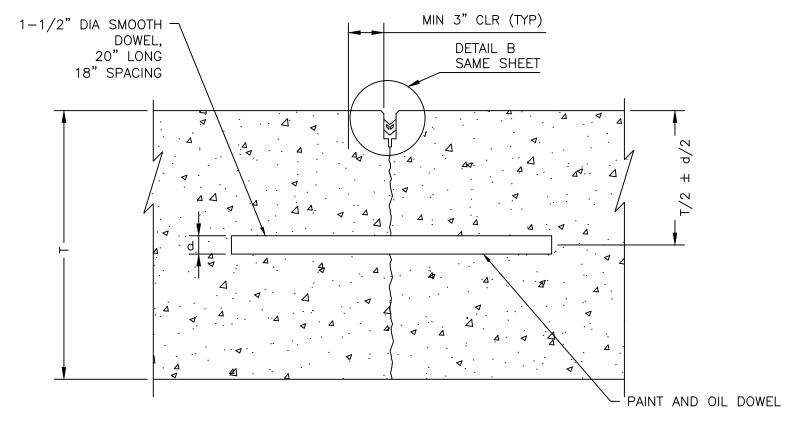
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SHEET NO.

CJ.02

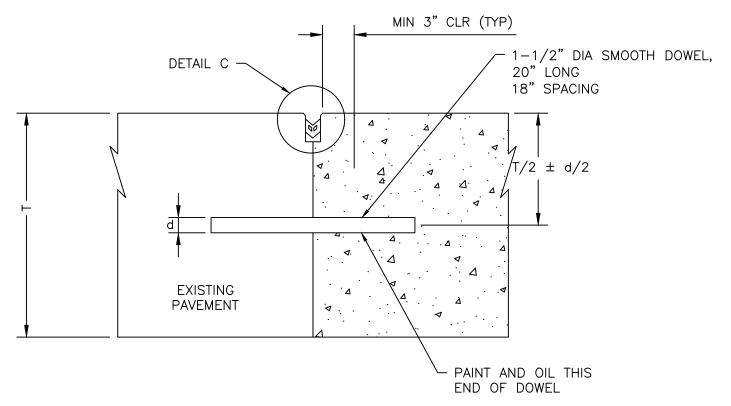
### **TYPE A1 - REINFORCED ISOLATION JOINT**

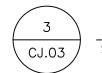
SCALE: NTS ∖ CJ.03



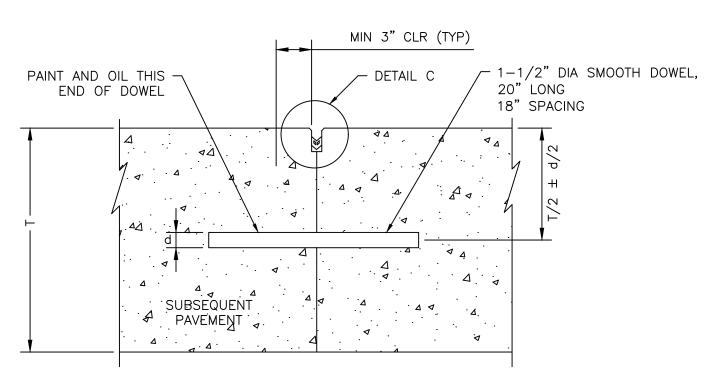


**TYPE C - DOWELED CONTRACTION JOINT** SCALE: NTS



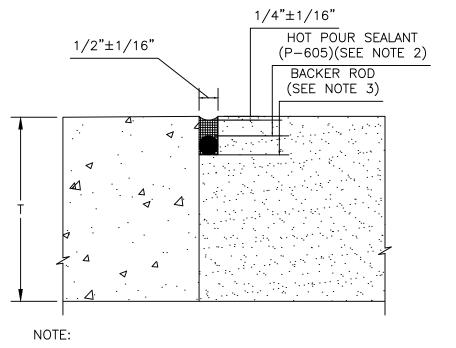


DOWELED CONSTRUCTION JOINT WITH EXISTING PAVEMENT SCALE: NTS





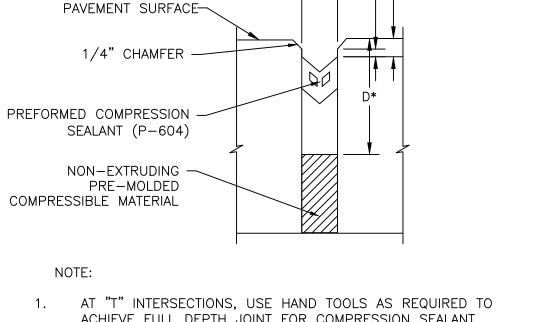
### **TYPE E - DOWELED CONSTRUCTION JOINT** SCALE: NTS



- ASPHALT ELEVATION AT RPCC JOINT SHALL BE 0" TO 1/16" BELOW RPCC EDGE ELEVATION. HOWEVER, THE P-403 GRADE TOLERANCES SHALL STILL APPLY.
- 2. P-605 SEALANT SHALL BE FLUSH WITH TOP OF ASPHALT.
- BACKER ROD MATERIAL MUST BE COMPATIBLE WITH THE TYPE OF SEALANT USED AND SIZED TO PROVIDE THE DESIRED SHAPE FACTOR.
- 4. CONTRACTOR SHALL REPAIR ANY DAMAGE TO PCC PAVEMENT AT NO ADDITIONAL COST TO THE OWNER



### TYPE G - CONSTRUCTION JOINT BETWEEN PCC AND AC SCALE: NTS



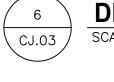
W (SEE NOTE 2)

1/8" (TYP)

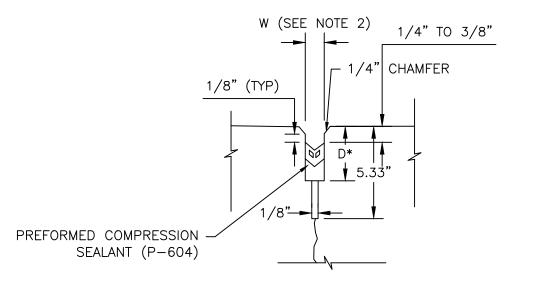
3/8" BELOW TOP OF PAVEMENT

ACHIEVE FULL DEPTH JOINT FOR COMPRESSION SEALANT INSTALLATION.

REFER TO SPECIFICATIONS SECTION P-604 AND MANUFACTURER'S RECOMMENDATIONS FOR WIDTH AND DEPTH REQUIREMENTS.



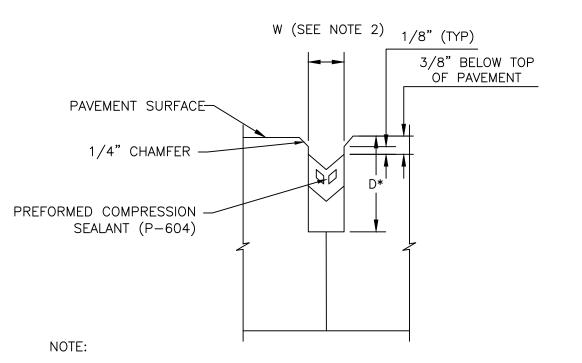
### **DETAIL A - ISOLATION JOINT** SCALE: NTS



- CLOSED CELL RESILIENT FOAM SIZED TO FIT A 1/8" SAWCUT SHALL BE INSTALLED IMMEDIATELY FOLLOWING INITIAL SAWCUT.
- 2. REFER TO SPECIFICATIONS SECTION P-604 AND MANUFACTURER'S RECOMMENDATIONS FOR WIDTH AND DEPTH REQUIREMENTS.



### **DETAIL B - CONTRACTION JOINT** SCALE: NTS



- 1. AT "T" INTERSECTIONS, USE HAND TOOLS AS REQUIRED TO ACHIEVE FULL DEPTH JOINT FOR COMPRESSION SEALANT INSTALLATION.
- 2. REFER TO SPECIFICATIONS SECTION P-604 AND MANUFACTURER'S RECOMMENDATIONS FOR WIDTH AND DEPTH REQUIREMENTS.



### **DETAIL C - CONSTRUCTION JOINT**

SCALE: NTS

GEORGE BUSH INTERCONTINENTAL HOUSTON, TEXAS

> Suite 3425 Houston, Texas 77079 (832) 494-3800

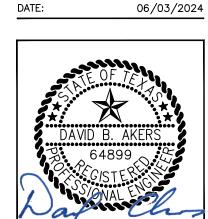
REVISIONS NO. DESCRIPTION DATE BY

TBPE Firm Registration No F-10161

NAL A BUSH

ISSUED FOR PERMIT

PROJECT MGR: DESIGNER: DRAWN BY: CHECKED BY: BS NTS SCALE:



DEPARTMENT OF AVIATION PPROVED BY: HOUSTON AIRPORT SYSTEMS AUTHORIZED REPRESENTATIVE

PROJECT NO. PN 973 C.I.P. NO. A-000713

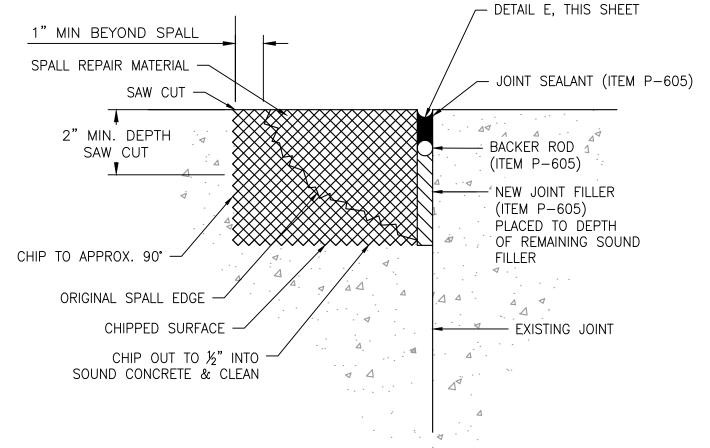
H.A.S. NO.

SHEET NO.

**CJ.03** 

## CJ.04

### **DOWEL BAR ASSEMBLY & CONTRACTION JOINT** SCALE: NTS

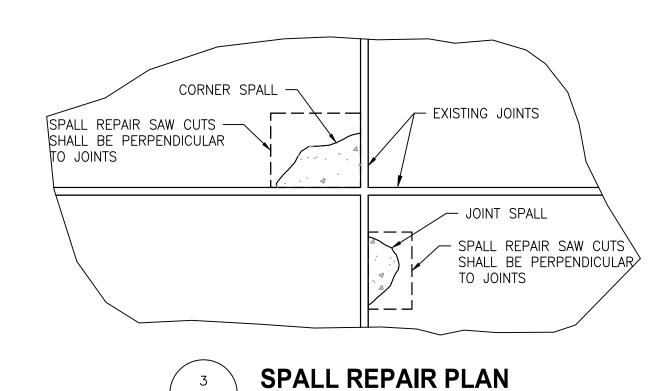


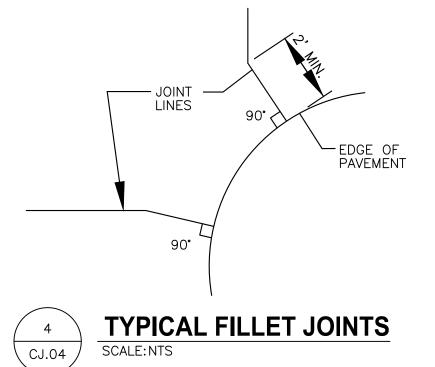
- 1. SPALL REPAIR DETAILS ARE ADDED AS A GUIDE FOR REPAIR OF CONCRETE IN THE EVENT THAT THE CONTRACTOR DAMAGES ANY CONCRETE PANELS.
- 2. SPALL REPAIRS IN EXISTING PAVEMENT SHALL BE PAID FOR UNDER ITEM P-101, "PREPARATION/REMOVAL OF EXISTING PAVEMENTS." SEE PARAGRAPH
- 3. SPALLS IN NEW PAVEMENT ARE TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE PER ITEM P501, "PORTLAND CEMENT CONCRETE PAVEMENT." SEE PARAGRAPH 501-4.19.
- 4. LOCATION OF REPAIR TO BE DETERMINED IN THE FIELD, CLEARLY MARKED, AND APPROVED BY THE HAS OAR.

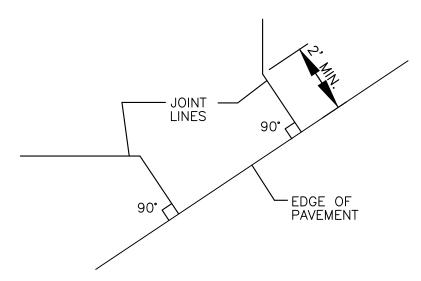


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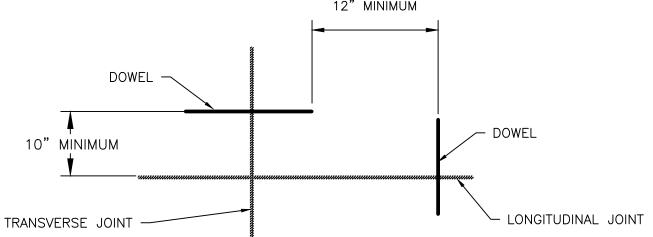
### **SPALL REPAIR SECTION** SCALE: NTS

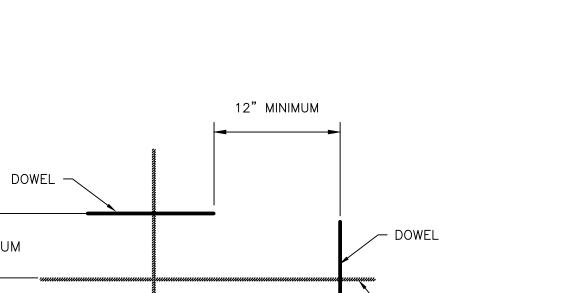


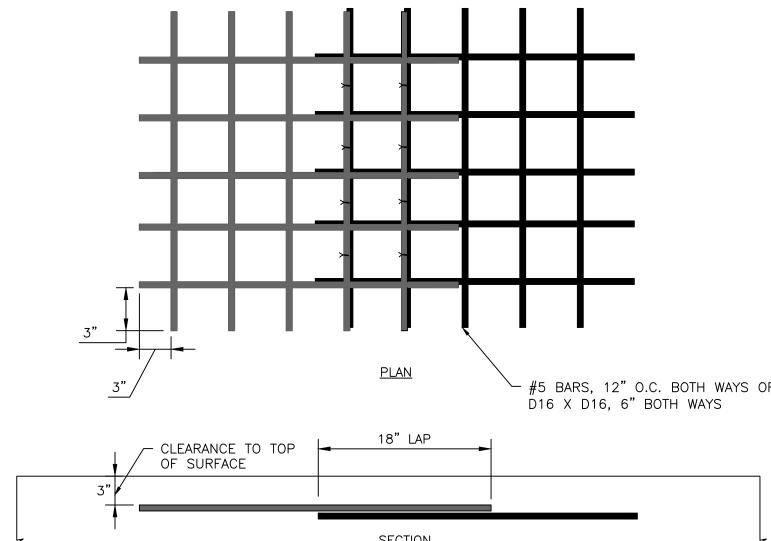


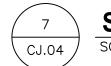






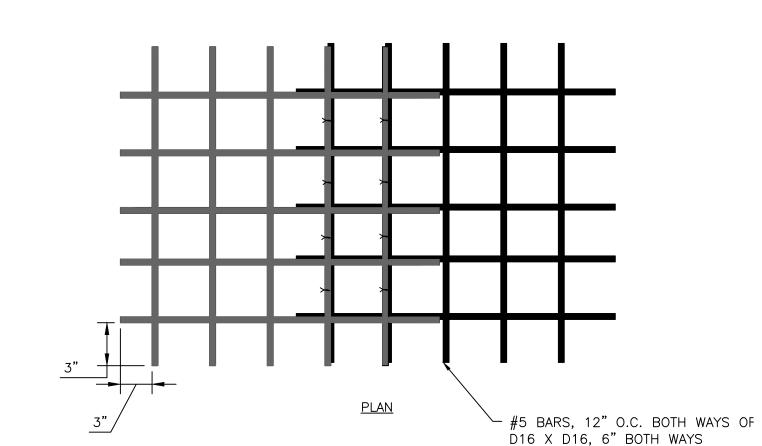


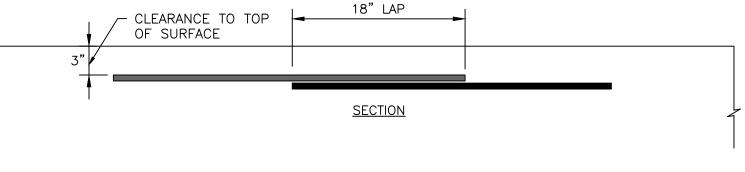




### **SLAB REINFORCEMENT**

ODD SHAPED SLABS OR SLABS WITH PENETRATIONS SHALL BE REINFORCED. ODD-SHAPED SLABS ARE RECTANGULAR SLABS WITH A LENGHT TO WIDTH RATIO GREATER THAN 1.25 OR NON RECTANGULAR SHAPED.







## SCALE: NTS

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GEORGE BUSH INTERCONTINENTAL

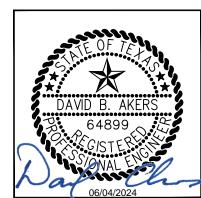
13501 Katy Freeway Suite 3425

Houston, Texas 77079 (832) 494-3800 TBPE Firm Registration No. F—10161

REVISIONS NO. DESCRIPTION DATE BY

HOUSTON, TEXAS

PROJECT MGR: DESIGNER: DRAWN BY: CHECKED BY: BS NTS SCALE: 06/03/2024



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APPROVED BY:	DATE:		
HOUSTON AIRPORT SYSTEMS			
AUTHORIZED REPRESENTATIVE			

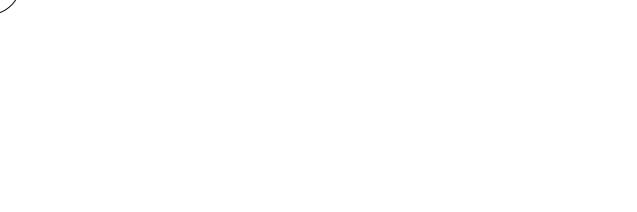
PROJECT NO. PN 973 C.I.P. NO. A-000713 H.A.S. NO.

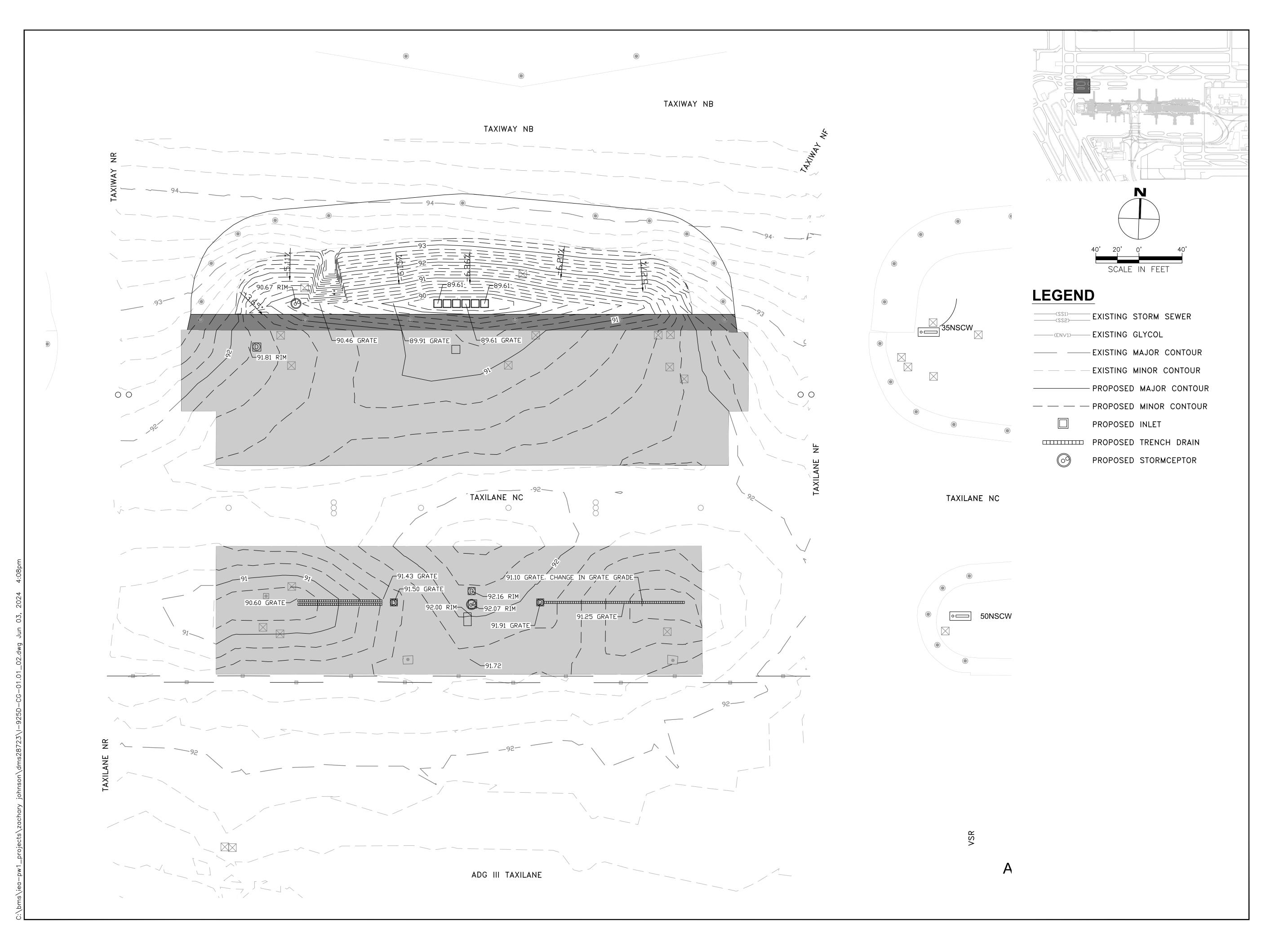
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### DETAIL D - POSITION OF DOWELS AT EDGE OF JOINT (PLAN VIEW) SCALE: NTS





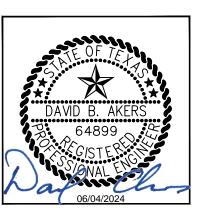




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PROJECT MGR:	DA
DESIGNER:	IK
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CHECKED BY:	BS
SCALE:	1" = 40
DATE:	06/03/2024



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PROJECT NO. PN 973 C.I.P. NO. A-000713

H.A.S. NO.

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### SITE DESCRIPTION

#### PROJECT LIMITS:

EXISTING REMAIN OVER NIGHT (RON) APRON NORTHWEST OF TERMINAL A NORTH CONCOURSE AND SOUTH OF TAXIWAY NB. TAXIWAY NR IS TO THE WEST OF THE RON APRON AND TAXIWAY NF IS TO THE EAST. PAVEMENT MARKING LIMITS TO EXTEND FROM THE INTERSECTION OF TAXIWAY WW AND TAXIWAY WB TO THE WEST OF THE RON APRON AND TAXIWAY ND TO THE EAST.

#### PROJECT DESCRIPTION:

THIS PROJECT WILL RELOCATE AND ADD RON PARKING POSITIONS WITHIN THE NOTED LIMITS ABOVE. THE NON-MOVEMENT AREA FOR TERMINAL A WILL BE INCREASED UP TO TAXIWAY NB. CONCRETE PAVEMENT WILL BE ADDED TO THE ENTIRE SOUTH INFIELD AREA. CONCRETE PAVEMENT WILL BE ADDED TO THE NORTH INFIELD AREA AND GRADING DONE TO IMPROVE DRAINAGE. EXISTING UTILITIES WILL BE DEMOLISHED OR MODIFIED AND NEW UTILITIES INSTALLED AS NEEDED. MODIFICATIONS TO EXISTING TERMINAL A NORTH AND TAXIWAY MARKINGS WILL BE PERFORMED.

### MAJOR SOIL DISTURBING ACTIVITIES:

PAVEMENT REMOVAL AND INSTALLATION, GRADING, AND STORM SEWER INSTALLATION.

#### TOTAL PROJECT AREA AND THE DISTURBED AREAS:

DLIACE	TOTAL AREA	DISTURBED AREA	
PHASE	(Ac)	(Ac)	
0	1.14	0	
1A	2.69	1.27	
1B	0.44	0.16	
1C	0.24	0.06	
1D	0.76	0.73	
2	4.28	0	

### WEIGHTED RUNOFF COEFFICIENT: (AFTER CONSTRUCTION):

COEFFICIENT = 0.95

EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF **EXISTING VEGETATIVE COVER:** 

THE MAJORITY OF THE SITE IS COMPRISED OF CONCRETE PAVEMENT WITH SOME GRASSY INFIELD AREAS. SITE SOILS ARE GENERALLY CLAY WITH SOME SAND IN AREAS OF FILL. VEGETATIVE COVER IS VERY LOW AS THE DRAINAGE AREAS ARE MOSTLY CONCRETE PAVEMENT. VEGETATIVE COVER IS ESTIMATED TO BE LESS THAN 5 PERCENT.

### NAME OF RECEIVING WATERS:

THE AIRPORT, LOCATED ON APPROXIMATELY 9,105 ACRES, DRAINS INTO TWO (2) MAJOR WATERSHEDS: GREENS BAYOU AND TURKEY CREEK. THE AREA DRAINING TO GREENS BAYOU IS FURTHER DIVIDED INTO THREE (3) SUB WATERSHEDS; GARNERS BAYOU, REINHARDT BAYOU, AND HOOD BAYOU.

THE INFIELD AREA IN GARNERS BAYOU IS SERVED BY EXISTING STORM SEWER SYSTEMS THAT EMPTY INTO FOUR (4) 10' X 5' BOXES IN THE APRON AREA AND DITCH G, SOUTH OF TW NA. LIKEWISE, THE AREA IN TURKEY CREEK IS SERVED BY STORM SEWER SYSTEMS THAT DRAIN TO THE WEST TO DITCH C AND NORTH TO DITCHES FW1 AND

### **EROSION AND SEDIMENT CONTROLS**

### SOIL STABILIZATION PRACTICES:

- \_\_\_ TEMPORARY SEEDING \_\_\_ MULCHING (HAY OR STRAW)
- \_\_\_ BUFFER ZONES \_\_\_\_ PLANTING
- SEEDING & MATTING \_\_\_ SEEDING \_X\_ SODDING
- PRESERVATION OF NATURAL RESOURCES
- FLEXIBLE CHANNEL LINER \_\_\_ RIGID CHANNEL LINER
- \_\_\_ SOIL RETENTION BLANKET \_\_\_ COMPOST MANUFACTURED TOPSOIL
- \_\_\_ OTHER: (SPECIFY PRACTICE)

### STRUCTURAL PRACTICES:

- \_X\_ SILT FENCES
- \_\_\_ HAY BALES
- \_\_\_ ROCK FILTER DAMS
- \_\_\_ PIPE SLOPE DRAINS \_\_\_ PAVED FUMES
- \_\_\_ CHANNEL LINERS
- \_\_\_ SEDIMENT TRAPS
- \_\_\_ SEDIMENT BASINS
- \_X\_ STORM SEWERS \_\_\_ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- \_\_\_ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- \_\_\_ DIVERSION DIKE AND SWALE COMBINATIONS \_\_\_ ROCK BEDDING AT CONSTRUCTION EXIT
- \_\_\_ TIMBER MATTING AT CONSTRUCTION EXIT
- \_\_\_ STONE OUTLET STRUCTURES
- \_\_\_\_ VELOCITY CONTROL DEVICES
- \_\_\_ CURBS AND GUTTERS
- \_\_\_ STORM INLET SEDIMENT TRAP
- \_\_\_ ROCK BERM
- \_X\_ OTHER: BIODEGRADABLE EROSION CONTROL LOGS

### NARRATIVE - SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

THE ORDER OF STORMWATER MANAGEMENT ACTIVITIES WILL BE IN ACCORDANCE WITH THE PHASING PLAN AND CONSISTENT WITH SWPPP LAYOUT.

### STORM WATER MANAGEMENT:

THE RE-VEGETATED LANDSCAPING STRIPS WILL BE USED TO THE EXTENT PRACTICABLE FOR FLOW ATTENUATION PURPOSES.

STORM WATER FROM THE PAVEMENT WILL DISCHARGE INTO THE STORM SYSTEM.

### NON-STORMWATER DISCHARGES

NON-STORMWATER DISCHARGES SHOULD BE FILTERED OR HELD IN RETENTION BASINS BEFORE BEING ALLOWED TO MIX WITH STORMWATER. THESE DISCHARGES MAY CONSIST OF CONCRETE, HYDRATED LIME, MOTOR FUEL, MOTOR OIL AND OTHER LUBRICANTS, FERTILIZERS, DETERGENTS, ADHESIVES, WATERPROOFING MATERIAL, WOOD, STEEL, PAINT, SOLVENTS, PLASTIC PIPE, SAND, CLEAN OR PORTLAND CEMENT STABILIZED, CRUSHED AGGREGATES, LIMESTONE, ROCK. SPILL PREVENTION AND GOOD HOUSEKEEPING WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.

### OTHER REQUIREMENTS & PRACTICES

OTHER EROSION AND SEDIMENT CONTROLS:

#### **MAINTENANCE:**

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY IT WILL BE DONE AT THE EARLIEST DATE POSSIBLE, BUT NO LATER THAN 7 CALENDER DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. THE AREA ADJACENT TO CREEKS AND DRAINAGEWAYS SHALL HAVE PRIORITY FOLLOWED BY DEVICES PROTECTING STORM SEWER INLETS.

#### **INSPECTION:**

CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF ONE-HALF (0.5) INCHES OR GREATER.

-DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED. -AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION. -STRUCTURAL CONTROL MEASURES. -LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

AN INSPECTION AND MAINTENANCE REPORT SHOULD BE MADE FOR EACH INSPECTION. BASED ON THE INSPECTION RESULTS. THE CONTROLS SHALL BE REVISED ACCORDING TO THE INSPECTION

#### WASTE MATERIALS:

THE DUMPSTER USED TO STORE ALL WASTE MATERIAL WILL MEET ALL STATE AND LOCAL CITY SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION AND THE TRASH WILL BE HAULED TO A LOCAL DUMP. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON SITE.

### HAZARDOUS WASTE (INCLUDING SPILL **REPORTING**):

IN THE EVENT OF A SPILL WHICH MAY BE CONSIDERED HAZARDOUS, OR FOR ANY OTHER EMERGENCIES CONTACT GEORGE BUSH INTERCONTINENTAL AIRPORT RESCUE AND FIRE PERSONNEL AT 911 FOLLOWED BY A CALL TO HOUSTON OPERATIONS AT (281) 233-1131.

### SANITARY WASTE:

N/A

### OFFSITE VEHICLE TRACKING:

THE CONTRACTOR SHALL BE REQUIRED, ON A REGULAR BASIS OR AS MAY BE DIRECTED BY THE ENGINEER, TO DAMPEN HAUL ROADS FOR DUST CONTROL. STABILIZE CONSTRUCTION ENTRANCES AND TO REMOVE EXCESS DIRT FROM THE ROADWAY.

### **REMARKS:**

DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE SEDIMENT THAT MAY ENTER RECEIVING WATERWAYS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WATERWAY, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER WHICH MINIMIZES THE RUNOFF OF ALL POLLUTANTS. ALL WATERWAYS SHALL BE CLEARED AS SOON AS PRACTICAL OF TEMPORARY EMBANKMENTS, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING, DEBRIS, AND OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT PART OF THE FINISHED WORK.



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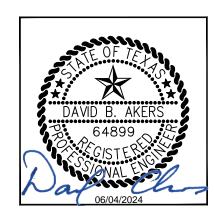
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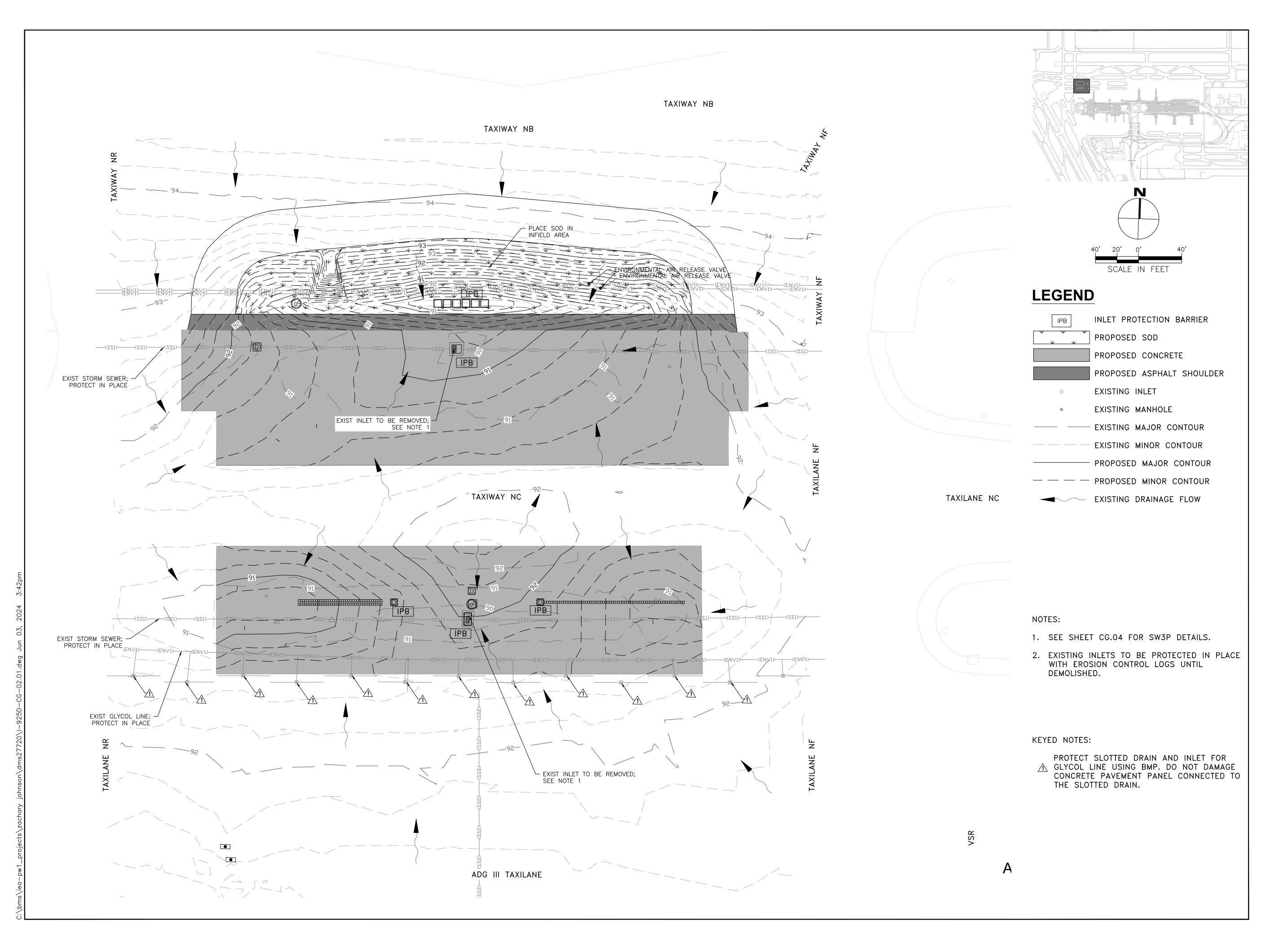
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PROJECT NO. PN 973 C.I.P. NO. A-000713

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HOUSTON AIRPORTS SYSTEM

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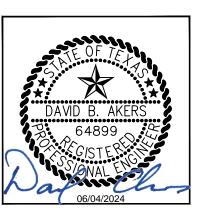
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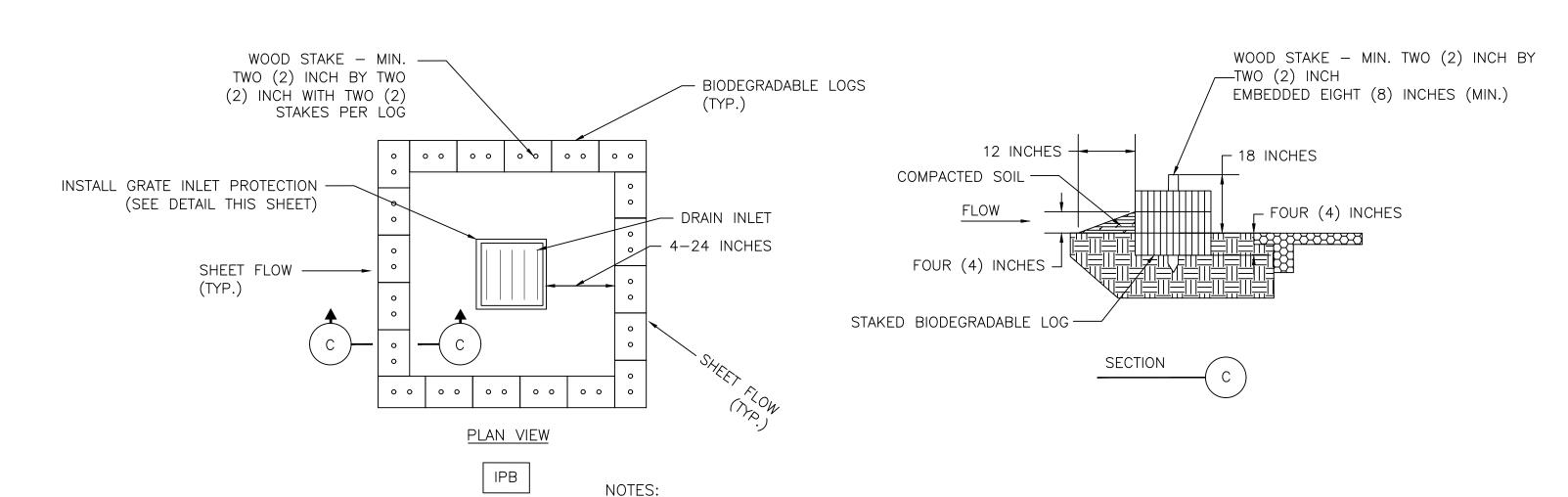
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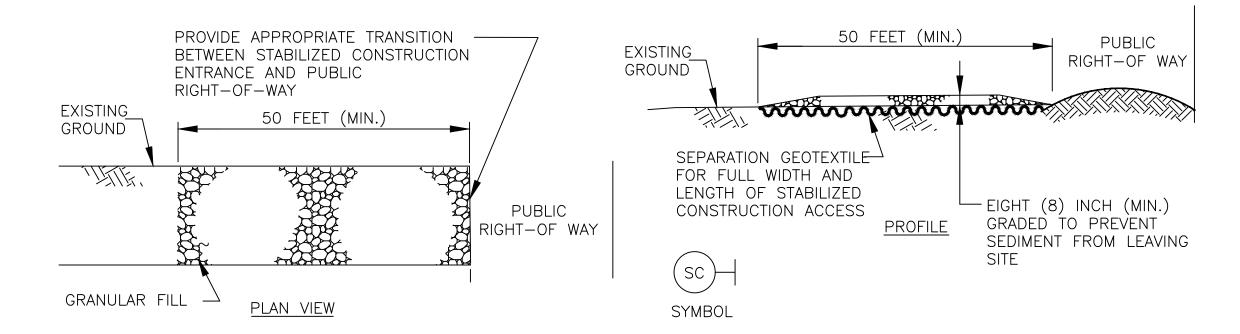
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 REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE—THIRD THE HEIGHT OF THE BARRIER.

2. SEE FAA SPECIFICATION P-156, TEMPORARY AIR AND WATER POLLUTION CONTROL, SOIL EROSION, AND SILTATION CONTROL, FOR IMPLEMENTATION OF INLET PROTECTION BARRIERS.





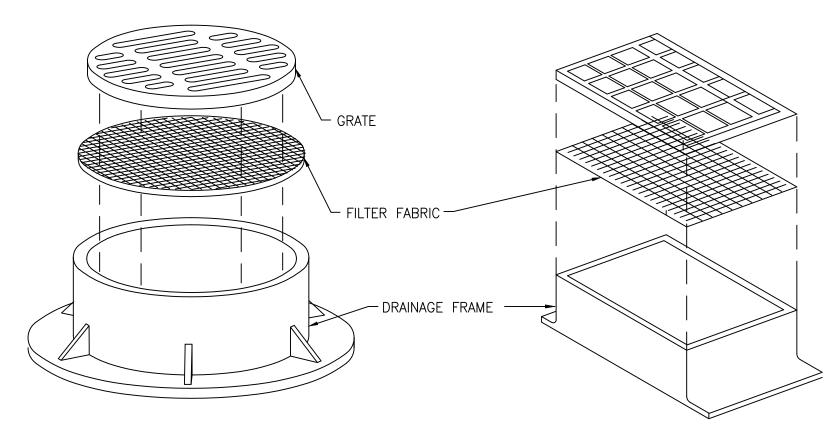
#### NOTES:

- 1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
- 2. THICKNESS SHALL BE NOT LESS THAN EIGHT (8) INCHES.

SYMBOL

- 3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- 4. CONSTRUCTION EXITS SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
- 5. PERIODICALLY TURN AGGREGATE AND / OR PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO EXPOSE CLEAN DRIVING SURFACE WHEN SURFACE BECOMES PACKED WITH MUD.
- 6. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
- 7. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
- 8. SEE SECTION 01575, STABILIZED CONSTRUCTION EXIT, FOR IMPLEMENTATION OF STABILIZED CONSTRUCTION EXITS.
- 9. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.
- 10. STABILIZED CONSTRUCTION EXITS SHALL BE INSTALLED AT ALL LOCATIONS WHERE MOVING FROM UNPAVED TO PAVED SURFACE.

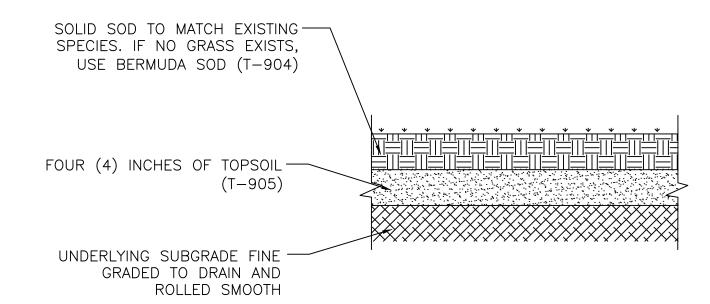




#### NOTES:

- 1. FILTER FABRIC TO BE PLACED IN ALL INLETS, MANHOLES, TRENCH DRAINS AND CATCH BASINS.
- 2. FABRIC SHALL AS SPECIFIED IN FAA SPECIFICATION P-156, TEMPORARY AIR AND WATER POLLUTION CONTROL, SOIL EROSION, AND SILTATION CONTROL.
- 3. FABRIC SHALL OVERLAY FRAME BY TWO (2) INCHES (MIN.).
- 4. CONTRACTOR SHALL CLEAR DEBRIS AND SILT AS REQUIRED FROM FABRIC TO MAINTAIN DRAINAGE THROUGH THE STRUCTURE.





#### NOTES:

- 1. SOD TO BE APPROVED BY HAS QUALIFIED AIRFIELD WILDLIFE BIOLOGIST.
- 2. SOD SHALL BE PLACED WITH NO GAPS BETWEEN ADJACENT SOD BLOCKS.
- 3. AREA TO BE SODDED SHALL BE FINE GRADED TO DRAIN AND ROLLED SMOOTH. ALL FOREIGN OBJECTS SHALL BE REMOVED PRIOR TO SODDING.
- 4. ALL SODDED AREAS SHALL BE ROLLED WITH HEAVY LAWN ROLLERS TO SET THE SOD. THE ROLLED SOD SHALL DRAIN FREELY AND CONTAIN NO RUTS, DEPRESSIONS, OR RIDGES.
- 5. CONTRACTOR SHALL WATER SOD AS NECESSARY TO ESTABLISH GROWTH AND REPLACE ANY SOD WHICH DIES WITHIN A ONE (1) YEAR PERIOD.
- 6. SOD SHALL BE PLACED SUCH THAT A 1-1/2" LIP IS CREATED FROM THE TOP OF THE ADJACENT PAVEMENT TO THE TOP OF THE SOD.







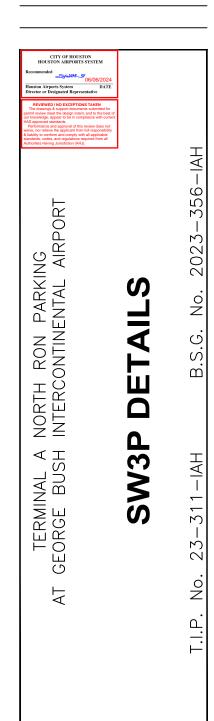
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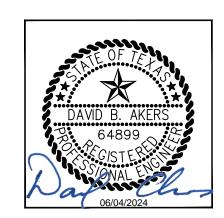
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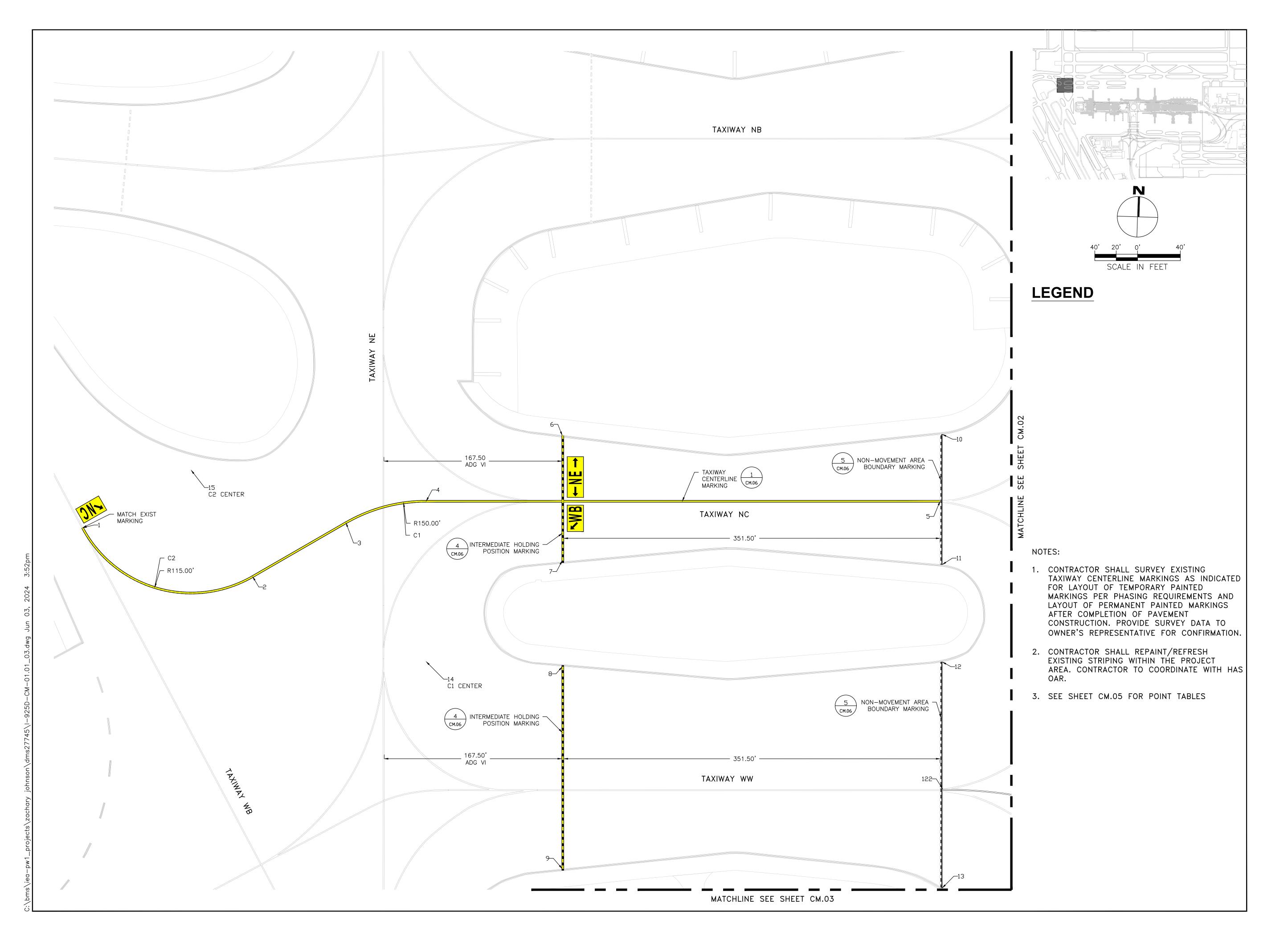
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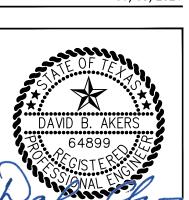
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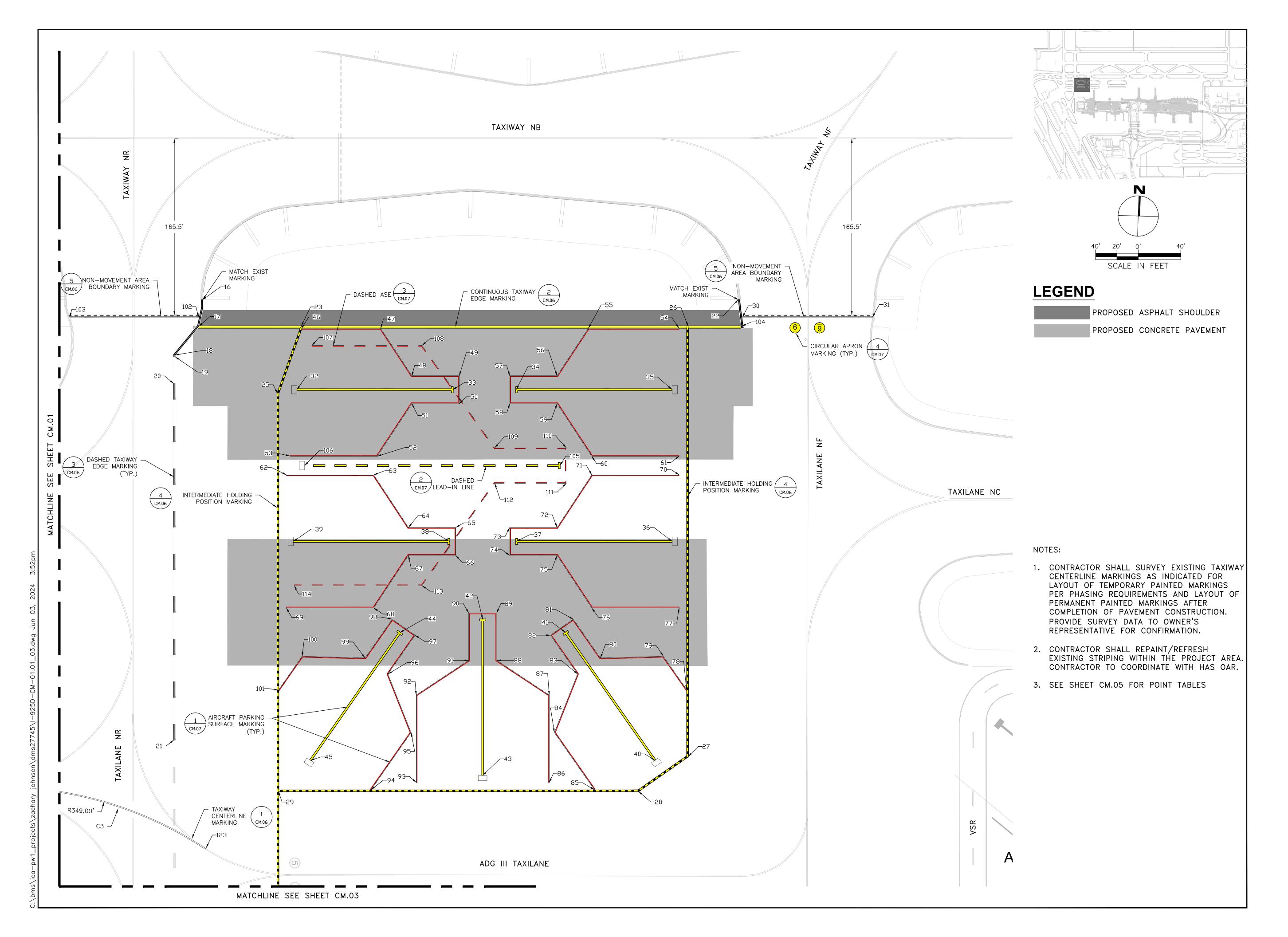
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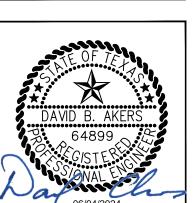
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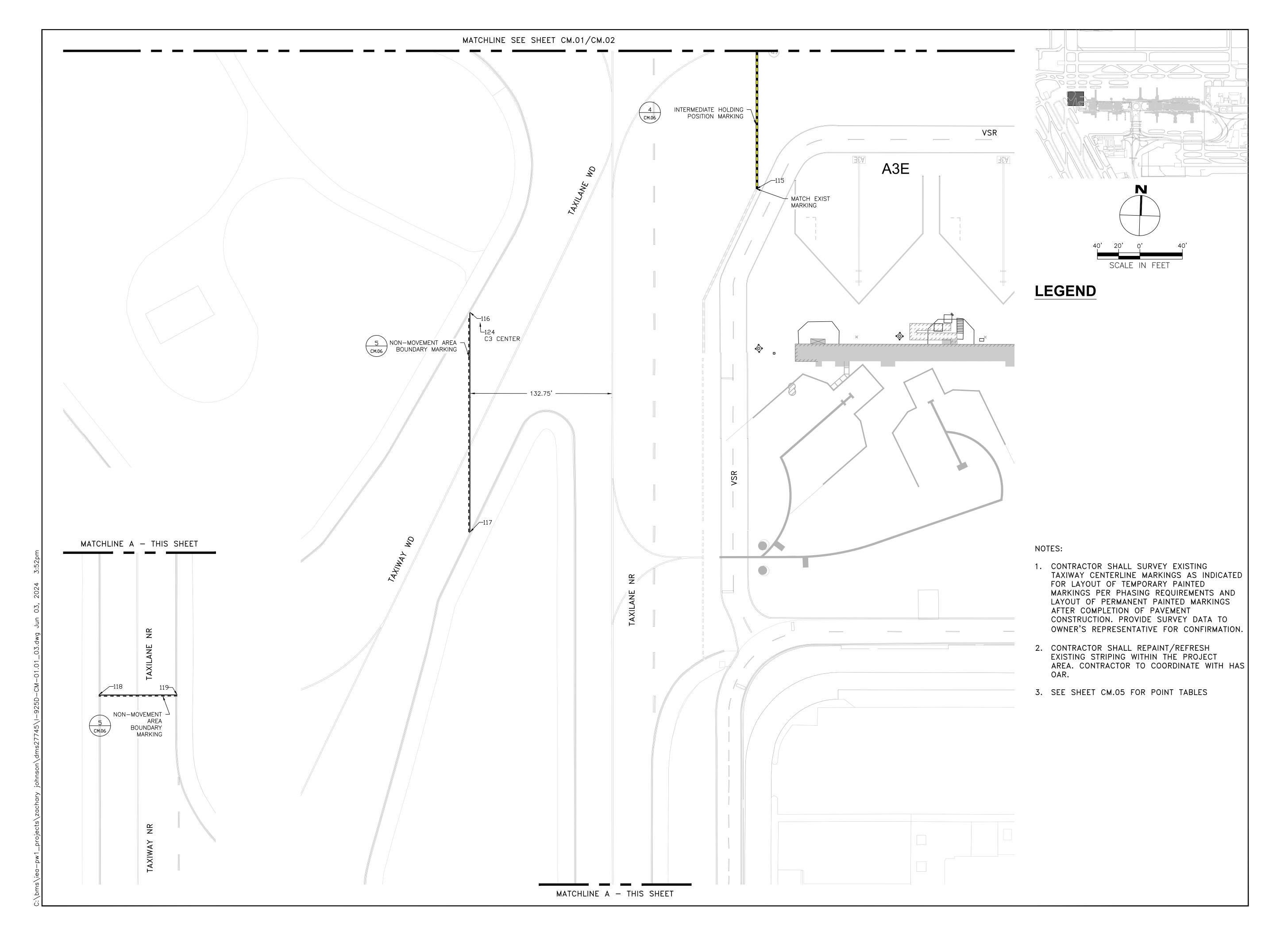
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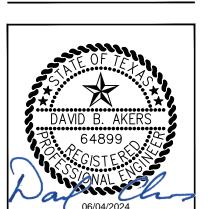
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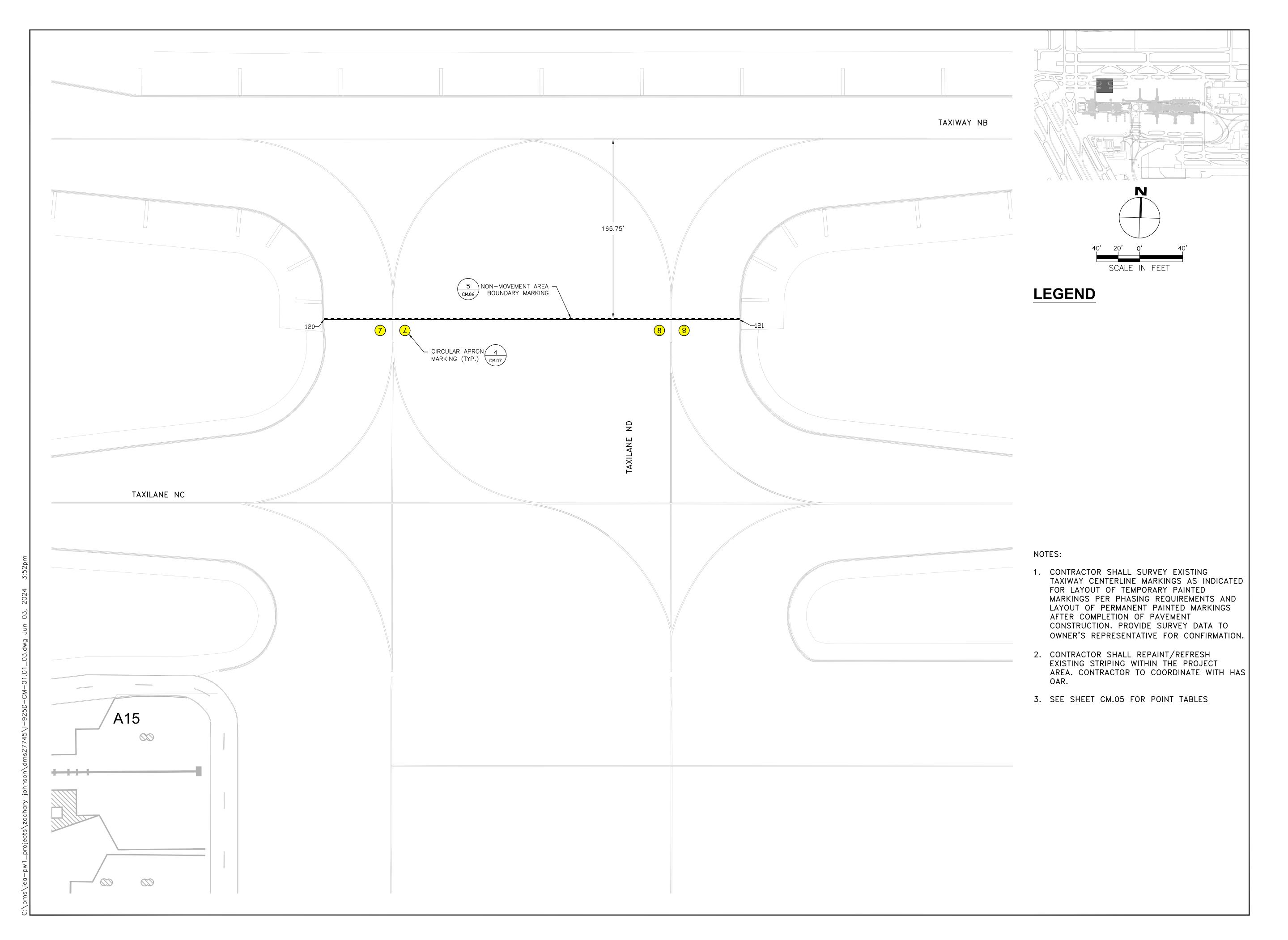


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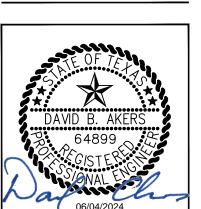
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	PAVEMEN'	T MARKING PC	DINT LOCATION
POINT #	NORTHING	EASTING	DESCRIPTION
1	13926510.89	3122199.66	TAXIWAY CENTERLINE
2	13926470.41	3122360.09	TAXIWAY CENTERLINE
3	13926523.58	3122445.71	TAXIWAY CENTERLINE
4	13926546.08	3122520.03	TAXIWAY CENTERLINE
5	13926561.53	3123000.41	TAXIWAY CENTERLINE
6	13926611.64	3122645.29	INTERMEDIATE HOLDING POSITION
7	13926494.70	3122649.05	INTERMEDIATE HOLDING POSITION
8	13926395.40	3122652.25	INTERMEDIATE HOLDING POSITION
9	13926206.49	3122658.32	INTERMEDIATE HOLDING POSITION
10	13926624.28	3123000.39	NON-MOVEMENT AREA BOUNDARY
11	13926502.33	3123004.31	NON-MOVEMENT AREA BOUNDARY
12	13926411.38	3123007.24	NON-MOVEMENT AREA BOUNDARY
13	13926199.86	3123014.04	NON-MOVEMENT AREA BOUNDARY
14	13926396.16	3122524.85	CENTER OF RADIUS
15	13926568.10	3122299.42	CENTER OF RADIUS
16	13926755.54	3123195.65	CONTINUOUS TAXIWAY EDGE
17	13926730.47	3123192.84	CONTINUOUS TAXIWAY EDGE
18	13926702.74	3123171.46	CONTINUOUS TAXIWAY EDGE
19	13926701.00	3123171.51	CONTINUOUS TAXIWAY EDGE
20	13926675.96	3123170.82	DASHED TAXIWAY EDGE
21	13926341.13	3123181.59	DASHED TAXIWAY EDGE
22	13926771.73	3123698.45	CONTINUOUS TAXIWAY EDGE
23	13926733.54	3123288.91	INTERMEDIATE HOLDING POSITION
25	13926669.80	3123268.57	INTERMEDIATE HOLDING POSITION
26	13926745.23	3123652.15	INTERMEDIATE HOLDING POSITION
27	13926341.26	3123665.15	INTERMEDIATE HOLDING POSITION
28	13926307.11	3123619.57	INTERMEDIATE HOLDING POSITION
29	13926296.24	3123281.58	INTERMEDIATE HOLDING POSITION
30	13926755.38	3123702.99	NON-MOVEMENT AREA BOUNDARY
31	13926759.31	3123824.97	NON-MOVEMENT AREA BOUNDARY
32	13926673.85	3123286.70	LEAD-IN LINE

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POINT #	NORTHING	EASTING	DESCRIPTION	-	POINT #	NORTHING	EASTING	DESCRIPTION
33	13926678.56	3123433.16	LEAD-IN LINE		64	13926547.91	3123395.65	ASE
34	13926680.47	3123492.62	LEAD-IN LINE		65	13926549.34	3123440.12	ASE
35	13926685.18	3123639.08	LEAD-IN LINE		66	13926523.11	3123440.96	ASE
36	13926542.76	3123643.66	LEAD-IN LINE		67	13926521.68	3123396.50	ASE
37	13926538.05	3123497.20	LEAD-IN LINE		68	13926471.28	3123365.52	ASE
38	13926536.03	3123434.48	LEAD-IN LINE		69	13926468.64	3123283.48	ASE
39	13926531.32	3123288.03	LEAD-IN LINE		70	13926605.43	3123648.21	ASE
40	13926336.79	3123634.17	LEAD-IN LINE		71	13926602.80	3123566.17	ASE
41	13926454.06	3123546.31	LEAD-IN LINE		72	13926552.40	3123535.19	ASE
42	13926463.86	3123468.19	LEAD-IN LINE		73	13926550.97	3123490.72	ASE
43	13926317.40	3123472.90	LEAD-IN LINE		74	13926524.74	3123491.57	ASE
44	13926449.06	3123390.88	LEAD-IN LINE		75	13926526.17	3123536.03	ASE
45	13926326.39	3123310.74	LEAD-IN LINE		76	13926477.86	3123570.18	ASE
46	13926731.55	3123289.32	ASE		77	13926480.50	3123652.22	ASE
47	13926733.94	3123363.57	ASE		78	13926404.39	3123661.62	ASE
48	13926690.44	3123394.33	ASE		79	13926434.70	3123638.90	ASE
49	13926691.87	3123438.80	ASE		80	13926431.17	3123579.85	ASE
50	13926665.64	3123439.64	ASE		81	13926466.78	3123553.17	ASE
51	13926664.21	3123395.17	ASE		82	13926451.04	3123532.17	ASE
52	13926613.81	3123364.20	ASE		83	13926415.43	3123558.85	ASE
53	13926611.42	3123282.15	ASE		84	13926359.75	3123538.87	ASE
54	13926742.96	3123643.78	ASE		85	13926307.28	3123578.18	ASE
55	13926740.21	3123558.51	ASE		86	13926312.85	3123535.58	ASE
56	13926694.82	3123530.61	ASE		87	13926394.89	3123532.94	ASE
57	13926693.39	3123486.14	ASE		88	13926425.87	3123482.54	ASE
58	13926667.16	3123486.99	ASE		89	13926470.34	3123481.11	ASE
59	13926668.59	3123531.45	ASE		90	13926469.49	3123454.88	ASE
60	13926620.29	3123565.61	ASE		91	13926425.03	3123456.31	ASE
61	13926622.93	3123647.65	ASE		92	13926390.87	3123408.00	ASE
62	13926593.57	3123279.46	ASE		93	13926308.83	3123410.64	ASE
63	13926596.21	3123361.50	ASE		94	13926300.54	3123368.51	ASE

POINT # NORTHING EASTING			DESCRIPTION
	13926355.43	3123404.37	ASE
96	13926409.71	3123380.85	ASE
97	13926446.95	3123405.18	ASE
98	13926461.31	3123383.21	ASE
99	13926424.06	3123358.88	ASE
100	13926423.79	3123299.72	ASE
101	13926391.35	3123278.52	ASE
102	13926738.96	3123192.35	NON-MOVEMENT AREA BOUNDARY
103	13926735.06	3123071.29	NON-MOVEMENT AREA BOUNDARY
104	13926746.84	3123702.39	CONTINUOUS TAXIWAY EDGE
105	13926610.58	3123535.91	DASHED LEAD-IN LINE
106	13926602.87	3123296.32	DASHED LEAD-IN LINE
107	13926715.90	3123299.60	DASHED ASE
108	13926719.22	3123402.92	DASHED ASE
109	13926625.34	3123474.34	DASHED ASE
110	13926627.50	3123541.43	DASHED ASE
111	13926594.05	3123542.50	DASHED ASE
112	13926591.89	3123475.42	DASHED ASE
113	13926493.61	3123410.18	DASHED ASE
114	13926489.76	3123290.28	DASHED ASE
115	13926077.14	3123287.63	INTERMEDIATE HOLDING POSITION
116	13925952.29	3123022.01	NON-MOVEMENT AREA BOUNDARY
117	13925745.75	3123028.65	NON-MOVEMENT AREA BOUNDARY
118	13925283.48	3123141.86	NON-MOVEMENT AREA BOUNDARY
119	13925285.97	3123215.35	NON-MOVEMENT AREA BOUNDARY
120	13926782.31	3124540.10	NON-MOVEMENT AREA BOUNDARY
121	13926794.76	3124927.06	NON-MOVEMENT AREA BOUNDARY
122	13926292.41	3123011.57	TAXIWAY CENTERLINE
123	13926240.94	3123215.35	TAXIWAY CENTERLINE
124	13925942.99	3123031.71	CENTER OF RADIUS





13501 Katy Freeway Suite 3425 Houston, Texas 77079 (832) 494—3800 TBPE Firm Registration No. F-10161

REVISIONS NO. DESCRIPTION DATE BY

CITY OF HOUSTON HOUSTON AIRPORTS SYSTEM

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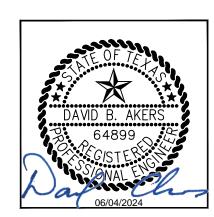
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TERMINAL A NORTH RON PARKI GEORGE BUSH INTERCONTINENTAL

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PROJECT MGR:	DA
DESIGNER:	ZJ
DRAWN BY:	ZJ
CHECKED BY:	BS
SCALE:	1" = 40'
DATE:	06/03/2024

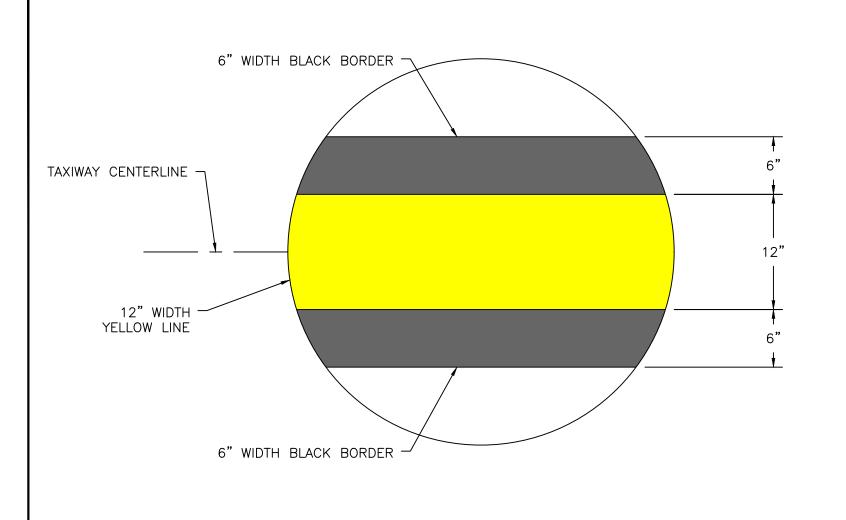


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PROJECT NO. PN 973 C.I.P. NO.

> A-000713 H.A.S. NO.

SHEET NO.



#### NOTES:

- 1. TAXIWAY CENTERLINE MARKINGS TO BE OBLITERATED SHALL BE SURVEYED BEFORE THEY ARE OBLITERATED.
- 2. CONTRACTOR IS TO REPAINT THE TAXIWAY CENTERLINE STRIPES IN THEIR ORIGINAL LOCATIONS ONCE CONSTRUCTION IS COMPLETE



# TAXIWAY CENTERLINE MARKING SCALE:

CM.06 CONTINUOUS TAXIWAY EDGE MARKING
SCALE:

BORDER (TYP.)

TAXIWAY

SHOULDER

TAXIWAY PAVEMENT

BLACK LINE -

YELLOW LINE (TYP.)

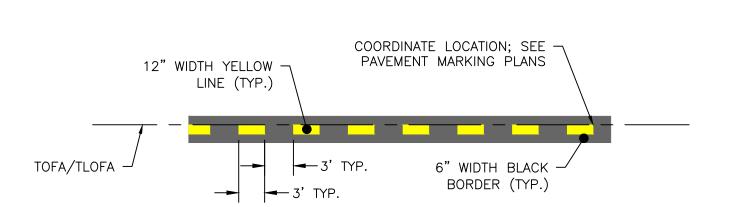


- 6"WIDTH

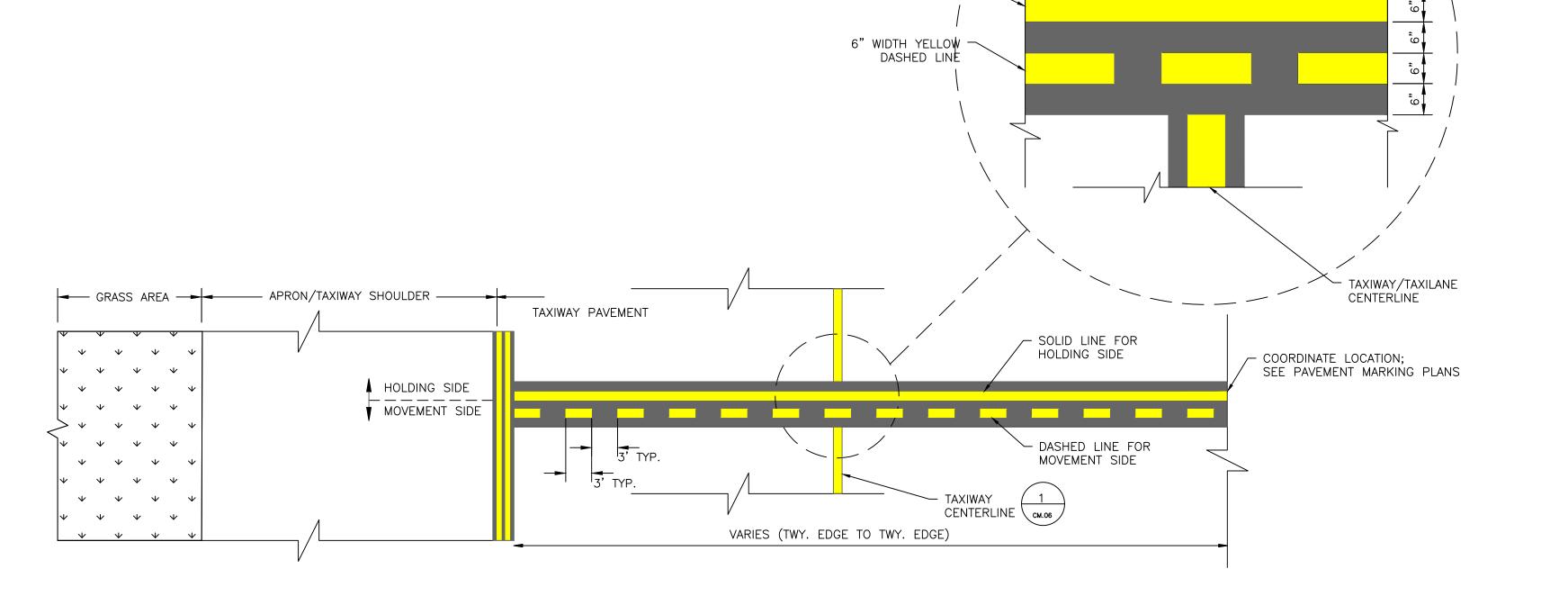
BLACK BORDER (TYP.)

#### **GENERAL NOTE:**

1. ALL MARKINGS TO BE IN COMPLIANCE WITH FAA AC 150/5340-1M.







\ CM.06 /

SCALE:

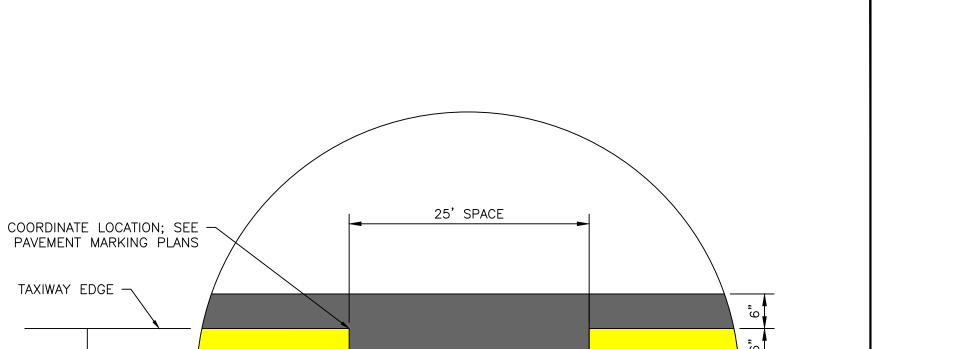
6" WIDTH BLACK BORDER (TYP.)

SOLID LINE

NON-MOVEMENT AREA BOUNDARY MARKING

6" WIDTH YELLOW

COORDINATE LOCATION;SEE PAVEMENT MARKING PLANS



15' LENGTH →

YELLOW LINE (TYP.)

GEORGE BUSH INTERCONTINENTAL

Suite 3425 Houston, Texas 77079

(832) 494-3800

TBPE Firm Registration No. F—10161

REVISIONS

NO. DESCRIPTION DATE BY

HOUSTON, TEXAS

CITT OF HOLSTON
HOLSTON AIRPORTS SYSTEM
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Representative

DATE
Director or Designated Representative

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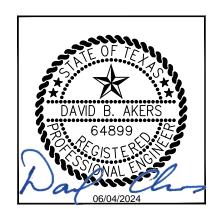
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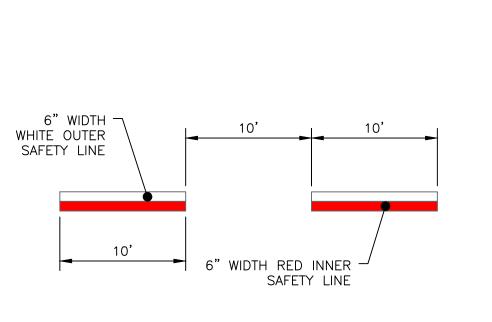
C.I.P. NO.

A-000713

H.A.S. NO.

SHEET NO.

NOTE: 1. CONTRACTOR TO COORDINATE WITH HAS OAR FOR MARKING DESIGNATIONS. CONTRACTOR TO VERIFY WITH HAS OAR WHETHER ADDITIONAL STOP BAR LOCATIONS ARE REQUIRED. YELLOW MARKING; SEE NOTE 1 6" WIDTH RED -INNER SAFETY LINE COORDINATE LOCATION; SEE PAVEMENT MARKING PLANS AIRCRAFT SAFETY 6" WIDTH WHITE ENVELOPE (ASE) OUTER SAFETY LINE 6" WIDTH BLACK -BORDER (TYP.) - 12" WIDTH YELLOW LEAD-IN LINE COORDINATE LOCATION; SEE PAVEMENT MARKING PLANS COORDINATE LOCATION; SEE PAVEMENT MARKING PLANS YELLOW MARKING; -CENTERED AIRCRAFT PARKING SURFACE MARKING \ см.о7 /





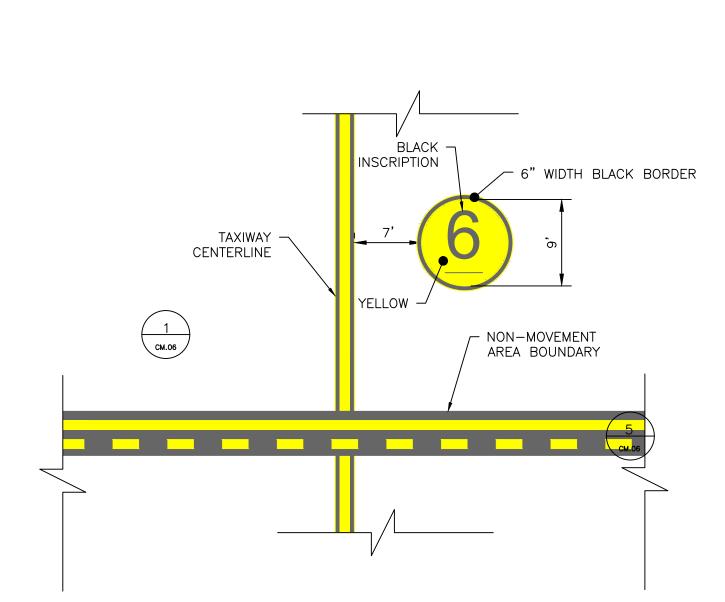
6" WIDTH BLACK — BORDER (TYP.)

12" WIDTH — YELLOW LINE



**GENERAL NOTE:** 

1. ALL MARKINGS TO BE IN COMPLIANCE WITH FAA AC 150/5340-1M.



1. THE DIAMETER OF THE CIRCULAR MARKING IS TO BE A MINIMUM OF 9 FT, EXCLUDING THE BLACK BORDER.

NOTE:

- 2. THE DIAMETER OF THE CIRCULAR MARKING IS TO BE INCREASED SO THAT THE WIDTH AND HEIGHT OF THE BLACK INSCRIPTION IS A MINIMUM OF 1 FT FROM THE EDGE OF THE YELLOW CIRCUMFERENCE.
- 3. CONTRACTOR TO VERIFY THE FONT OF THE BLACK INSCRIPTION WITH HAS OAR BEFORE PLACEMENT OF MARKING.





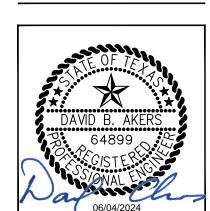


13501 Katy Freeway Suite 3425 Houston, Texas 77079 (832) 494-3800 TBPE Firm Registration No. F—10161

REVISIONS NO. DESCRIPTION DATE BY

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PROJECT MGR:	DA
DESIGNER:	ZJ
DRAWN BY:	ZJ
CHECKED BY:	BS
SCALE:	NTS
DATE:	06/03/2024

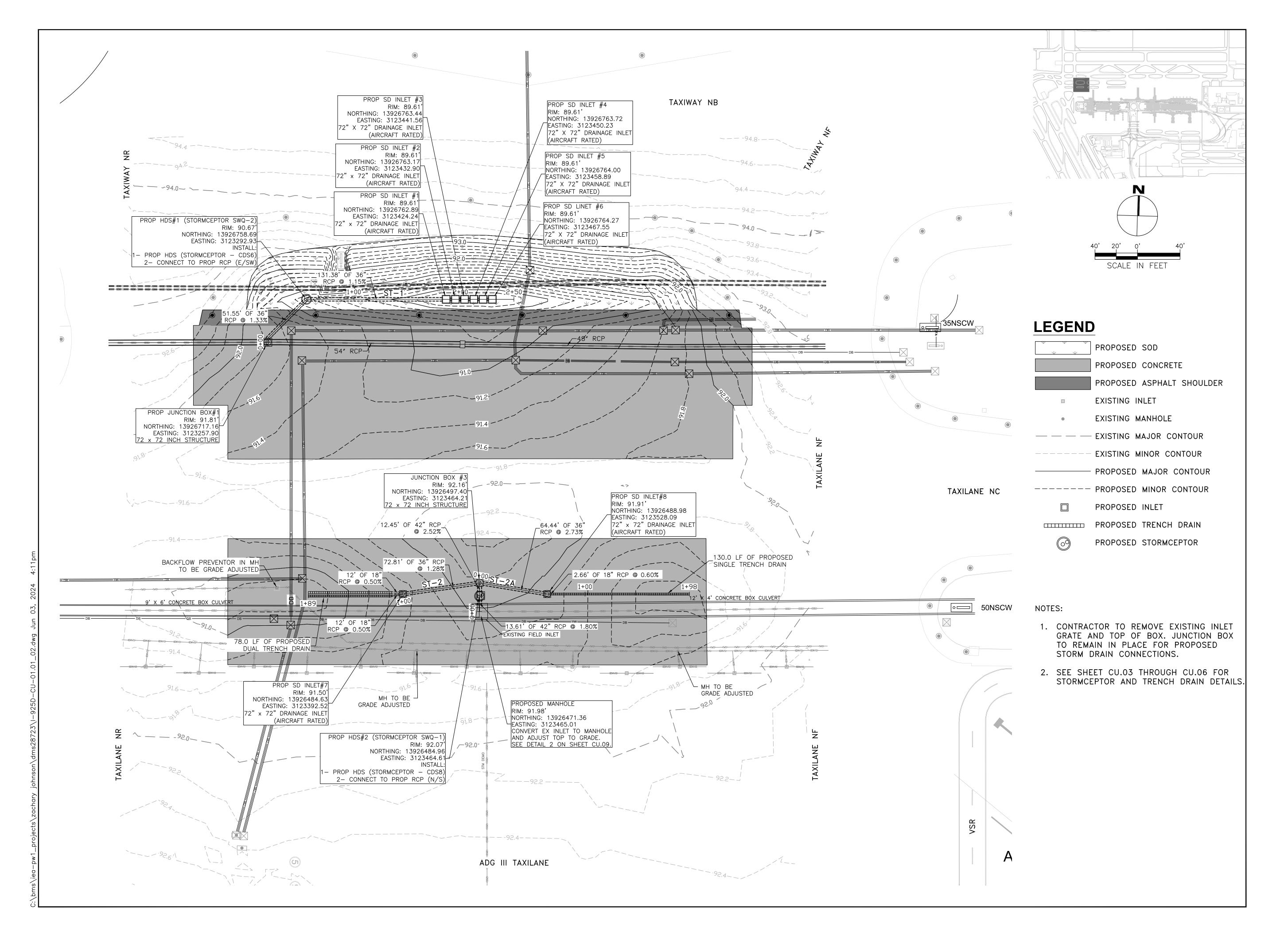


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PROJECT NO. PN 973 C.I.P. NO. A-000713

H.A.S. NO.

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CITY OF HOUSTON
HOUSTON AIRPORTS SYSTEM
Recommended

06/06/2024
Houston Airports System
DATE
Director or belogisated Representative

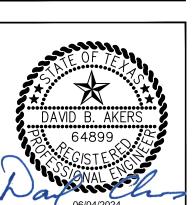
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DRAWN BY:	ZJ
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SCALE:	1" = 40'
DATE:	06/03/2024



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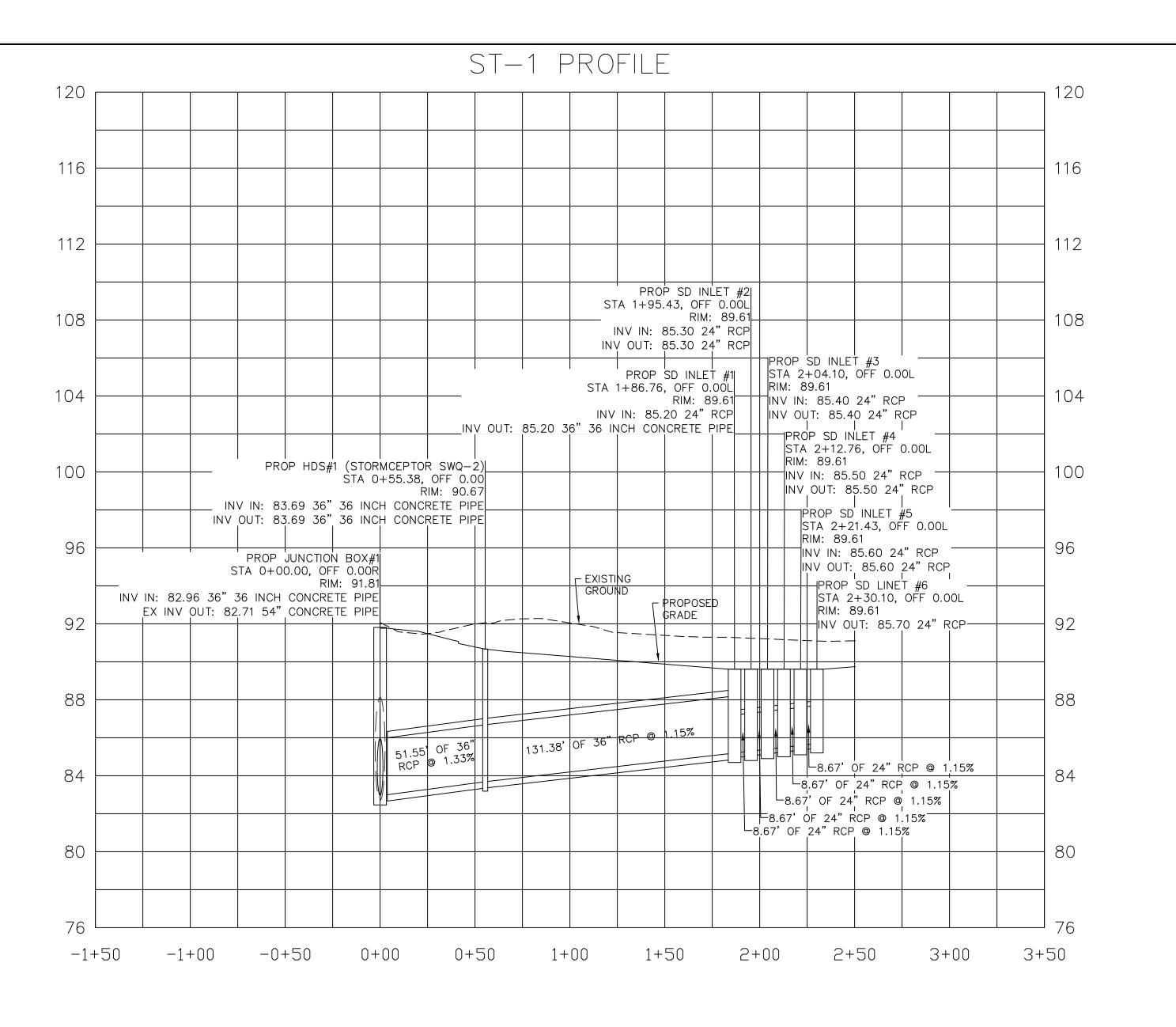
PN 973

C.I.P. NO.

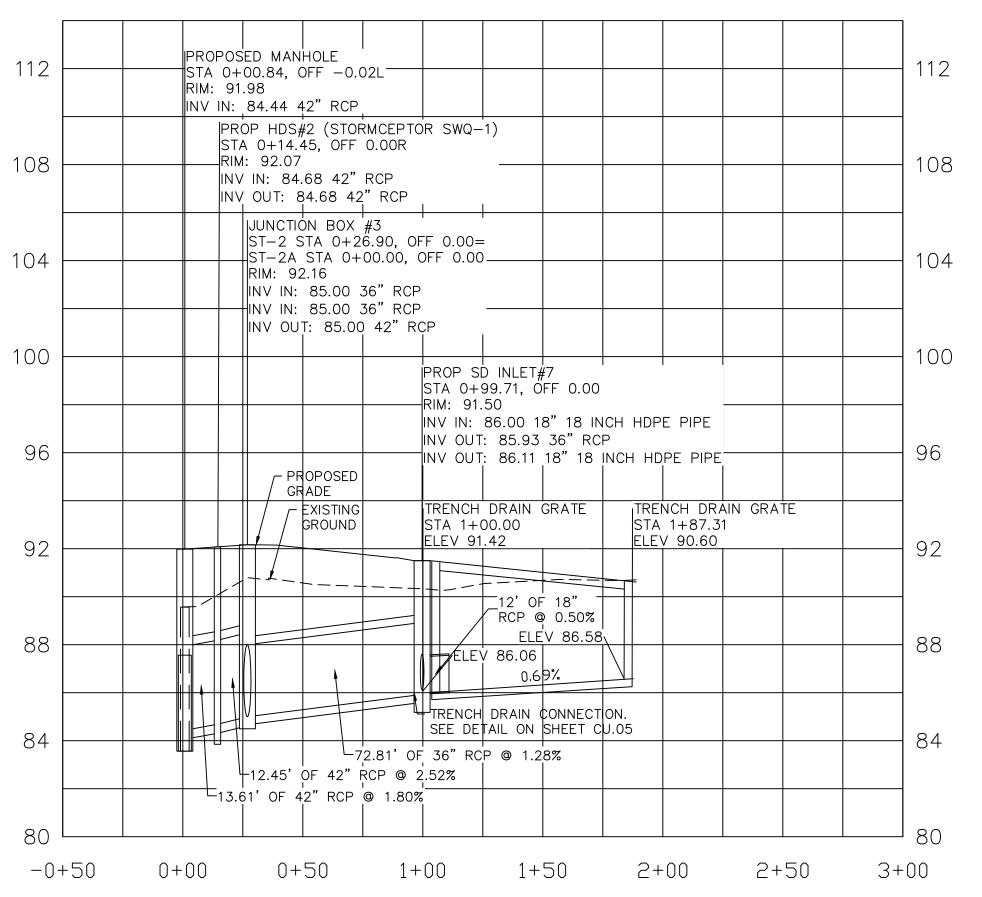
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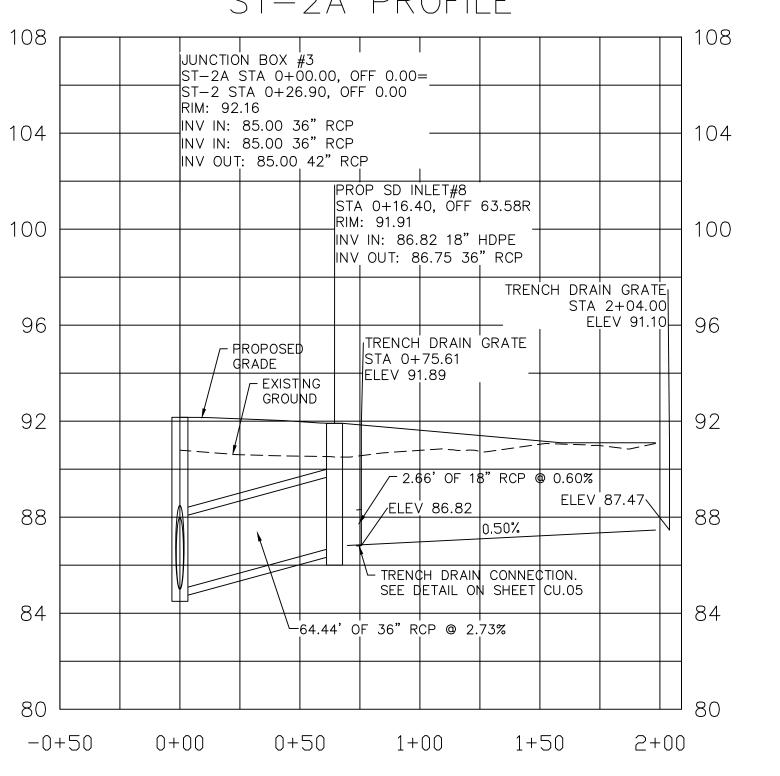
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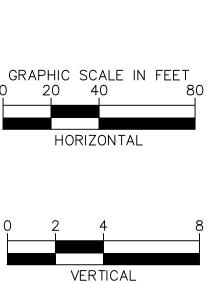


# ST-2 PROFILE



# ST-2A PROFILE





HOUSTON AIRPORT SYSTEM

GEORGE BUSH INTERCONTINENTAL

AIRPORT HOUSTON, TEXAS



REVISIONS

NO. DESCRIPTION DATE BY

HOUSTON AIRPORTS SYSTEM

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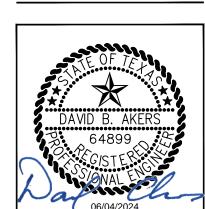
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DRAWN BY:	ZJ
CHECKED BY:	BS
SCALE:	1" = 40'
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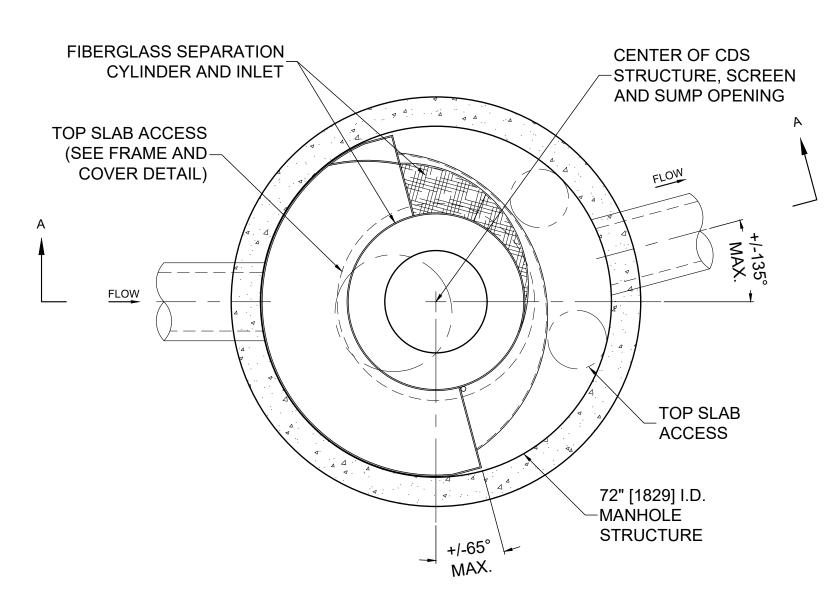
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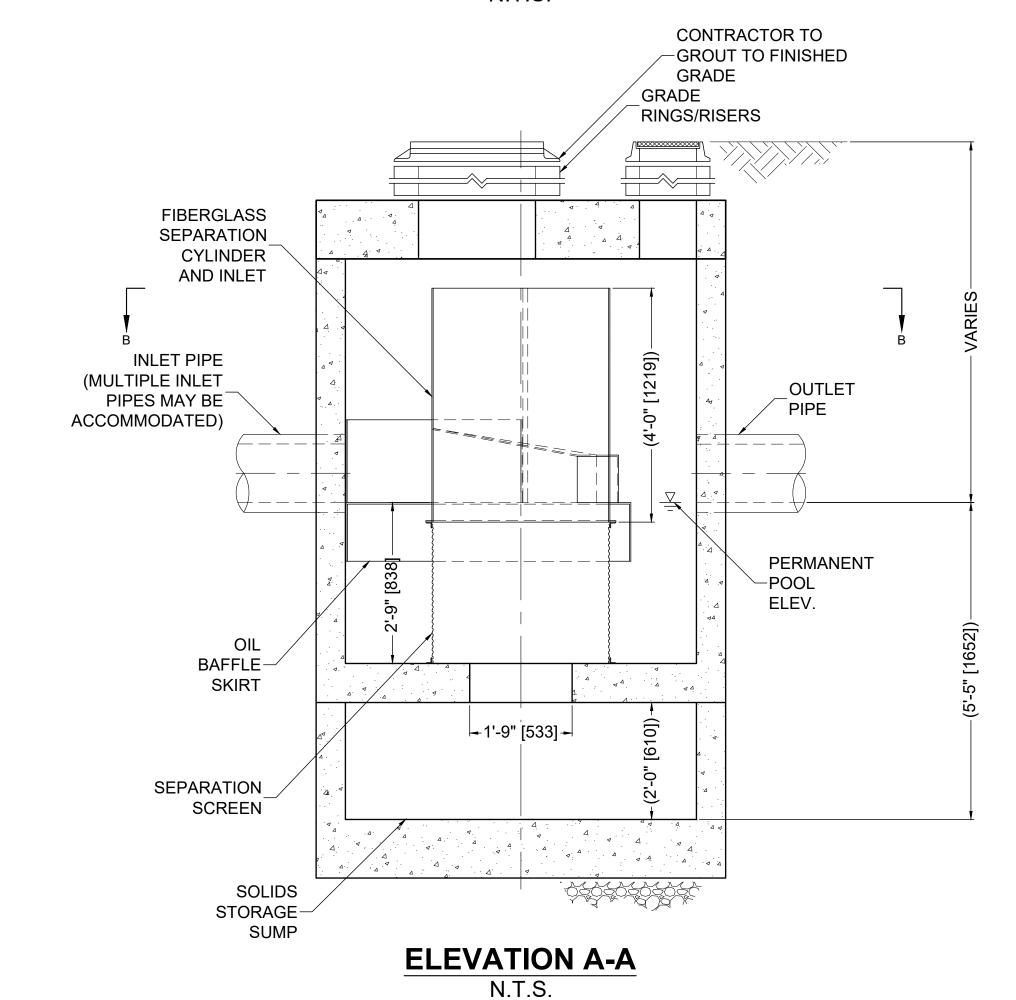
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H.A.S. NO.

SHEET NO.



# **PLAN VIEW B-B** N.T.S.



# CDS3020-6-C DESIGN NOTES

CDS3020-6-C RATED TREATMENT CAPACITY IS 2.0 CFS [56.6 L/s], OR PER LOCAL REGULATIONS. IF THE SITE CONDITIONS EXCEED MAXIMUM HYDRAULIC CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

### CDS3020-6-C STANDARD CONFIGURATION SHOWN.

#### GENERAL NOTES

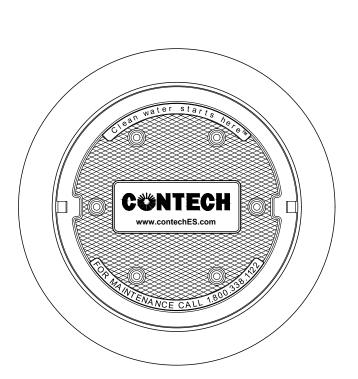
- 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
- 3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- 4. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION.
- ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO. 5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
- 6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

#### **INSTALLATION NOTES**

- A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD WITH FINAL DESIGN.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
- D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

#### **SPECIAL NOTES:**

A. CDS STRUCTURES SHALL BE DESIGNED AND CONSTRUCTED TO WITHSTAND AIRCRAFT LOADING AS SHOWN ON THE STORM DRAIN DETAILS. SHEET CU.06.



FRAME AND COVER

(DIAMETER VARIES)

N.T.S.

# SITE SPECIFIC **DATA REQUIREMENTS**

STRUCTURE ID	SWQ-2
WATER QUALITY FLOW RATE (CFS OR L/s)	1.72
PEAK FLOW RATE (CFS OR L/s)	61
RETURN PERIOD OF PEAK FLOW (YRS)	100YR
SCREEN APERTURE (2400 OR 4700)	*

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	83.69	CLASS V RCP	36"
INLET PIPE 2			
OUTLET PIPE	83.69	CLASS V RCP	36"

RIM ELEVATION		89.86
ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS: SITE SPECIFIC DATA REQUIREMENTS TO BE VERIFIED BY CONTRACTOR IN ACCORDANCE WITH HDS SIZING SHEET INCLUDED WITH CONSTRUCTION DOCUMENTS. \*TO BE SPECIFIED BY CONTECH E.S.



Suite 3425 Houston, Texas 77079 (832) 494-3800

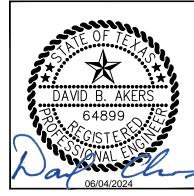
REVISIONS NO. DESCRIPTION DATE BY

TBPE Firm Registration No

ISSUED FOR PERMIT

PROJECT MGR: DESIGNER: DRAWN BY: CHECKED BY: SCALE:

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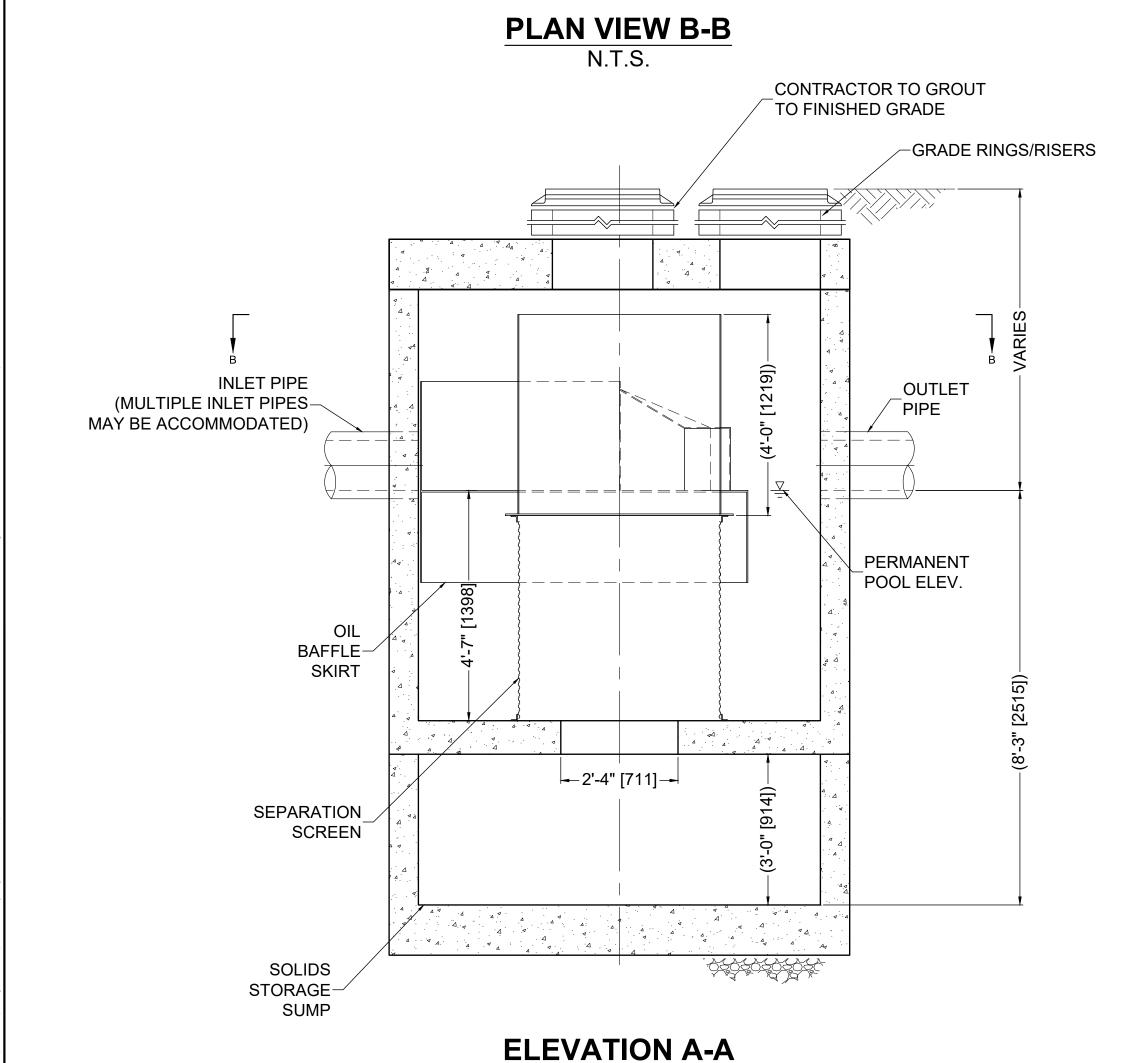
DEPARTMENT OF AVIATION HOUSTON AIRPORT SYSTEMS
AUTHORIZED REPRESENTATIVE

PROJECT NO. PN 973 C.I.P. NO. A-000713 H.A.S. NO.

**CU.03** 

CDS3020-6-C SCALE: NTS 、CU.03 /

# CENTER OF CDS FIBERGLASS SEPARATION -STRUCTURE, SCREEN CYLINDER AND INLET AND SUMP OPENING TOP SLAB ACCESS (SEE FRAME AND-COVER DETAIL) **TOP SLAB** ACCESS 96" [2438] I.D. -MANHOLE STRUCTURE +/-65° \_



N.T.S.

# CDS4040-8-C DESIGN NOTES

CDS4040-8-C RATED TREATMENT CAPACITY IS 6.0 CFS [169.9 L/s], OR PER LOCAL REGULATIONS. IF THE SITE CONDITIONS EXCEED MAXIMUM HYDRAULIC CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CDS4040-8-C STANDARD CONFIGURATION SHOWN.

FOR NJDEP PROJECTS, PLEASE CONTACT YOUR LOCAL CONTECH REPRESENTATIVE FOR APPROVED CONFIGURATIONS

#### **GENERAL NOTES**

- 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE.
- 3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT
- 4. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
- 5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING
- 6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

#### **INSTALLATION NOTES**

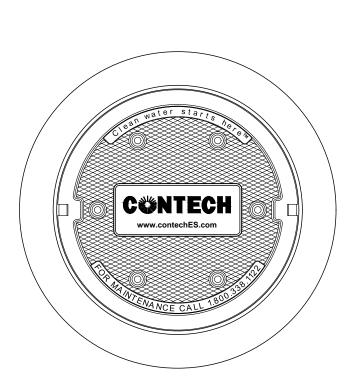
- A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD WITH FINAL DESIGN.
- B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED)
- C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
- D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
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CDS4040-8-C

SCALE: NTS

CU.04 /

A. CDS STRUCTURES SHALL BE DESIGNED AND CONSTRUCTED TO WITHSTAND AIRCRAFT LOADING AS SHOWN ON THE STORM DRAIN DETAILS. SHEET CU.06.



FRAME AND COVER (DIAMETER VARIES) N.T.S.

# SITE SPECIFIC **DATA REQUIREMENTS**

STRUCTURE ID	SWQ-1
WATER QUALITY FLOW RATE (CFS OR L/s)	4.98
PEAK FLOW RATE (CFS OR L/s)	260
RETURN PERIOD OF PEAK FLOW (YRS)	100YR
SCREEN APERTURE (2400 OR 4700)	*
	•

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	84.68	CLASS V RCP	42"
INLET PIPE 2			
OUTLET PIPE	84.68	CLASS V RCP	42"

OUTLETTIL	J	CLASS V INCI	42
RIM ELEVATION			92.08
ANTI-FLOTATION	BALLAST	WIDTH	HEIGHT
		4	4

NOTES/SPECIAL REQUIREMENTS: SITE SPECIFIC DATA REQUIREMENTS TO BE VERIFIED BY CONTRACTOR IN ACCORDANCE WITH HDS SIZING SHEET INCLUDED WITH CONSTRUCTION DOCUMENTS. \*TO BE SPECIFIED BY CONTECH E.S.





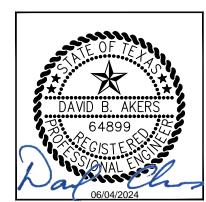
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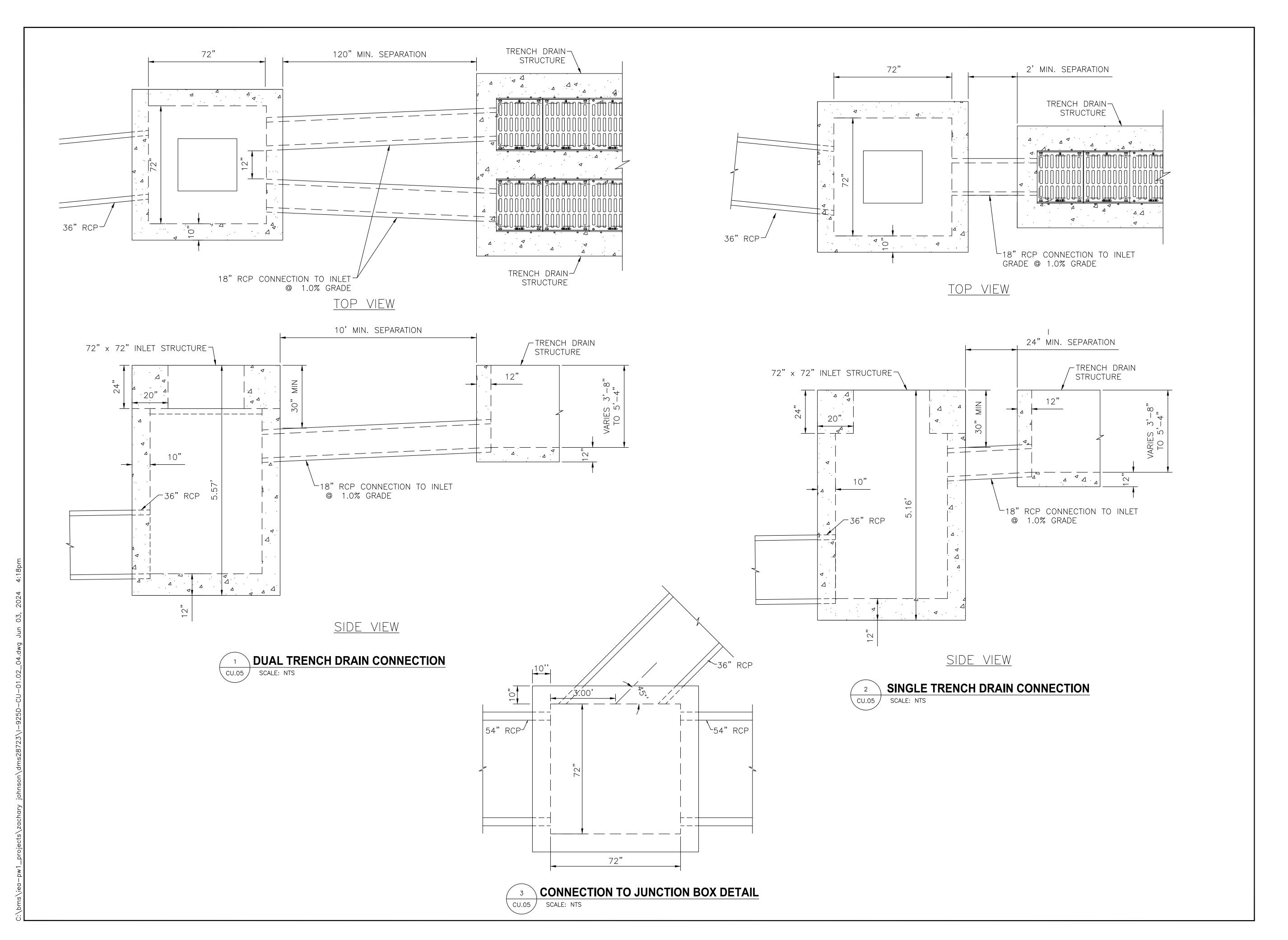
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PROJECT NO. PN 973 C.I.P. NO. A-000713 H.A.S. NO.







CITY OF HOLSTON
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Director or beliginated Representative

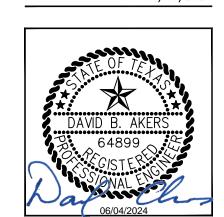
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PROJECT NO.

PN 973

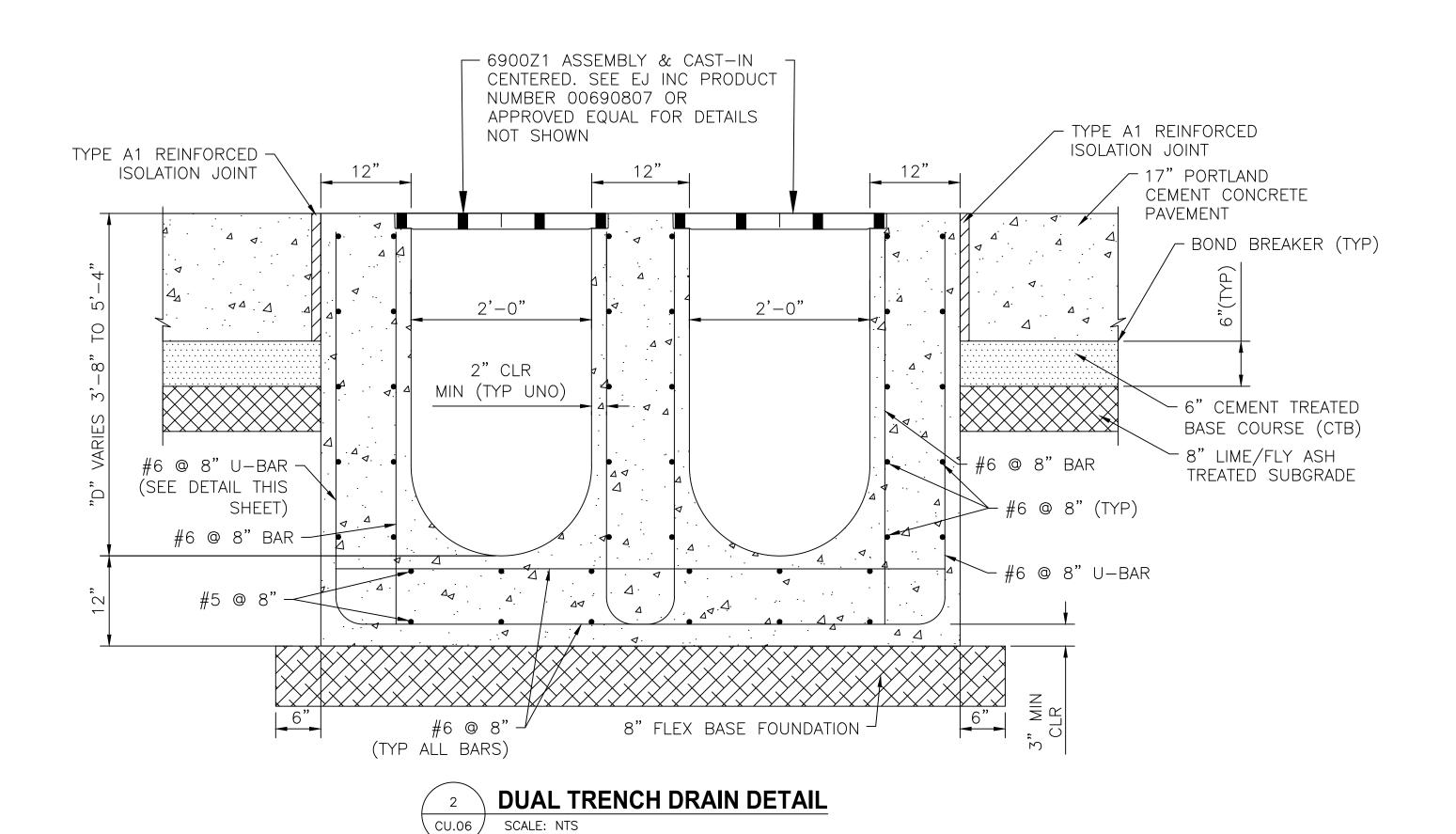
C.I.P. NO.

A-000713

H.A.S. NO.

# 6900Z1 ASSEMBLY & CAST-IN -CENTERED. SEE EJ INC PRODUCT NUMBER 00690807 OR APPROVED EQUAL FOR DETAILS NOT SHOWN TYPE A1 REINFORCED ISOLATION JOINT 17" PORTLAND CEMENT CONCRETE PAVEMENT - BOND BREAKER (TYP) 2'-0" 2"CLR MIN (TYP UNO) ~ 6" CEMENT TREATED BASE COURSE (CTB) -8" LIME/FLY ASH -#6 @ 8" BAR -#6 @ 8" U-BAR TREATED SUBGRADE (SEE DETAIL THIS #6 @ 8" (TYP) SHEET) #6 @ 8" U-BAR #5 @ 8" — #6 @ 8" -8" FLEX BASE FOUNDATION $^{-1}$

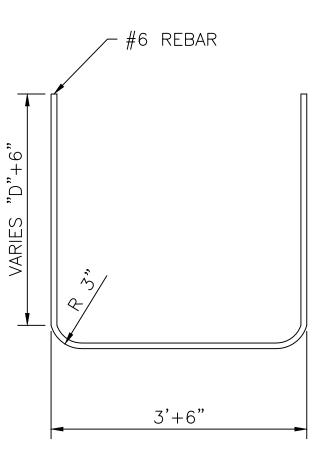
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# STRUCTURAL NOTES

- 1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH f'c = 5000 PSI MINIMUM.
- 2. REBAR: A-615 GRADE 60 STEEL OR EQUIVALENT AREA OF WWR.
- 3. DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION.
- 4. LOADS A. LIVE LOAD = B777 (WHEEL LOAD 80 KIP)
  - B. LIVE LOAD SURCHARGE CALCULATED BASED ON AASHTO EQUATION 3.11.6.2-2
  - C. SOIL DENSITY 110 PCF
  - D. EQUIVALENT SOIL FLUID PRESSURE: 55 PCF HORIZONTAL AND 110 PSF VERTICAL
- 5. ALL BOX CULVERTS AND/OR PIPES PENETRATING THE STRUCTURE MUST BE INSERTED FULLY INSIDE WALL. ALL GAPS MUST BE GROUTED SOLID.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO DESIGN ENGINEER FOR REVIEW









REVISIONS

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PROJECT MGR: DESIGNER: DRAWN BY: FK CHECKED BY: NTS SCALE: DATE: 06/03/2024



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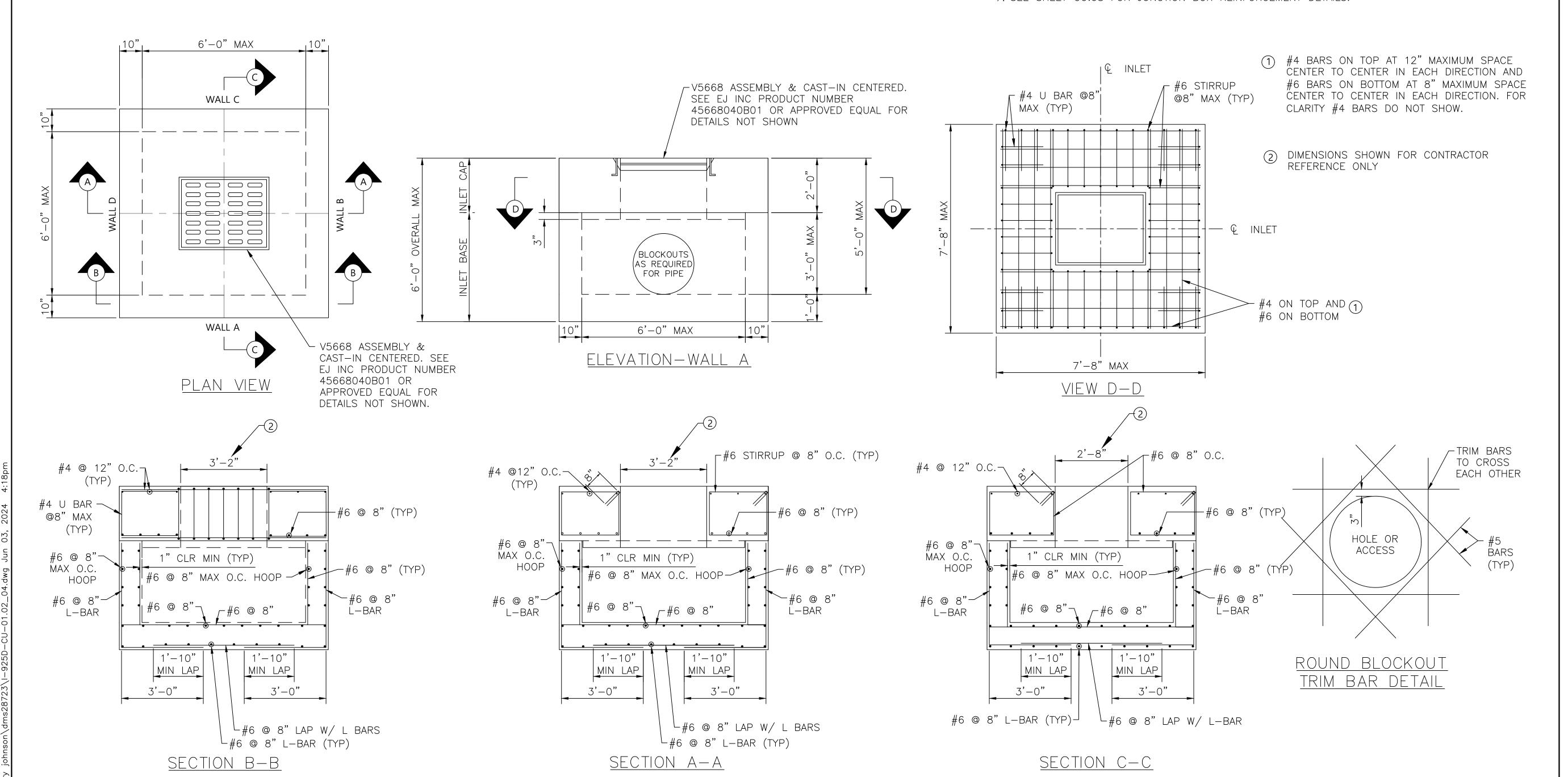
PROJECT NO. PN 973 C.I.P. NO. A-000713

H.A.S. NO.

SHEET NO.

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  - C. SOIL DENSITY 110 PCF
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- INSIDE WALL. ALL GAPS MUST BE GROUTED SOLID.
- 6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO DESIGN ENGINEER FOR REVIEW
- 7. SEE SHEET CU.08 FOR JUNCTION BOX REINFORCEMENT DETAILS.



72" X 72" X 6'-0"(MAX) PRECAST CONCRETE AIRCRAFT RATED INLET scale: 1" = 2'





REVISIONS

NO. DESCRIPTION DATE BY

CTTY OF HOUSTON
HOUSTON AIRPORTS SYSTEM
Recommended 2004444 OS-00-00-2024
Houston Airports System DATE
Director or Designated Representative

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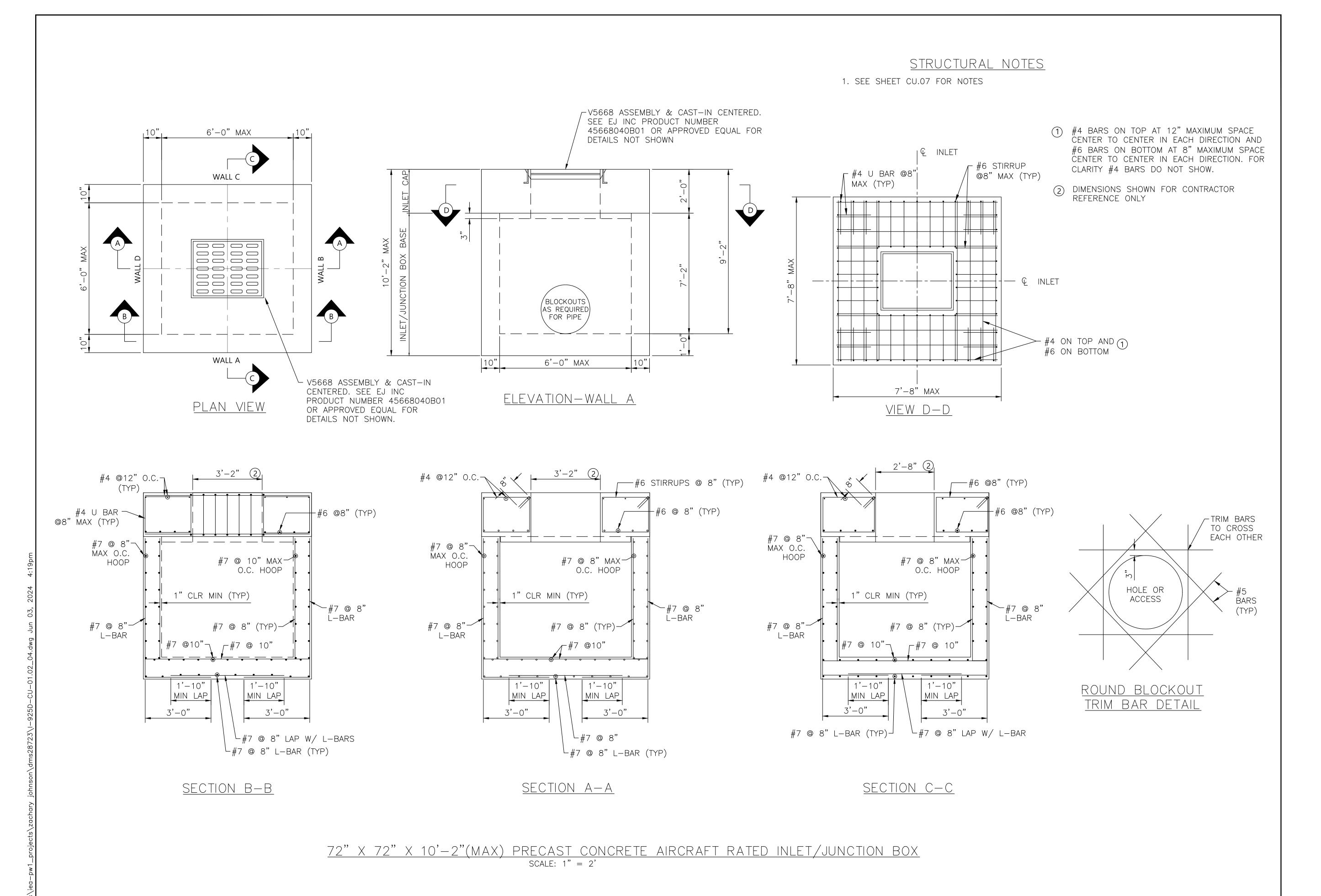
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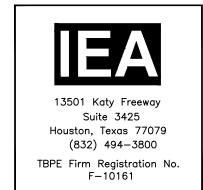
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DESIGNER: DG

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CHECKED BY: FK

SCALE: NTS

DATE: 06/03/2024



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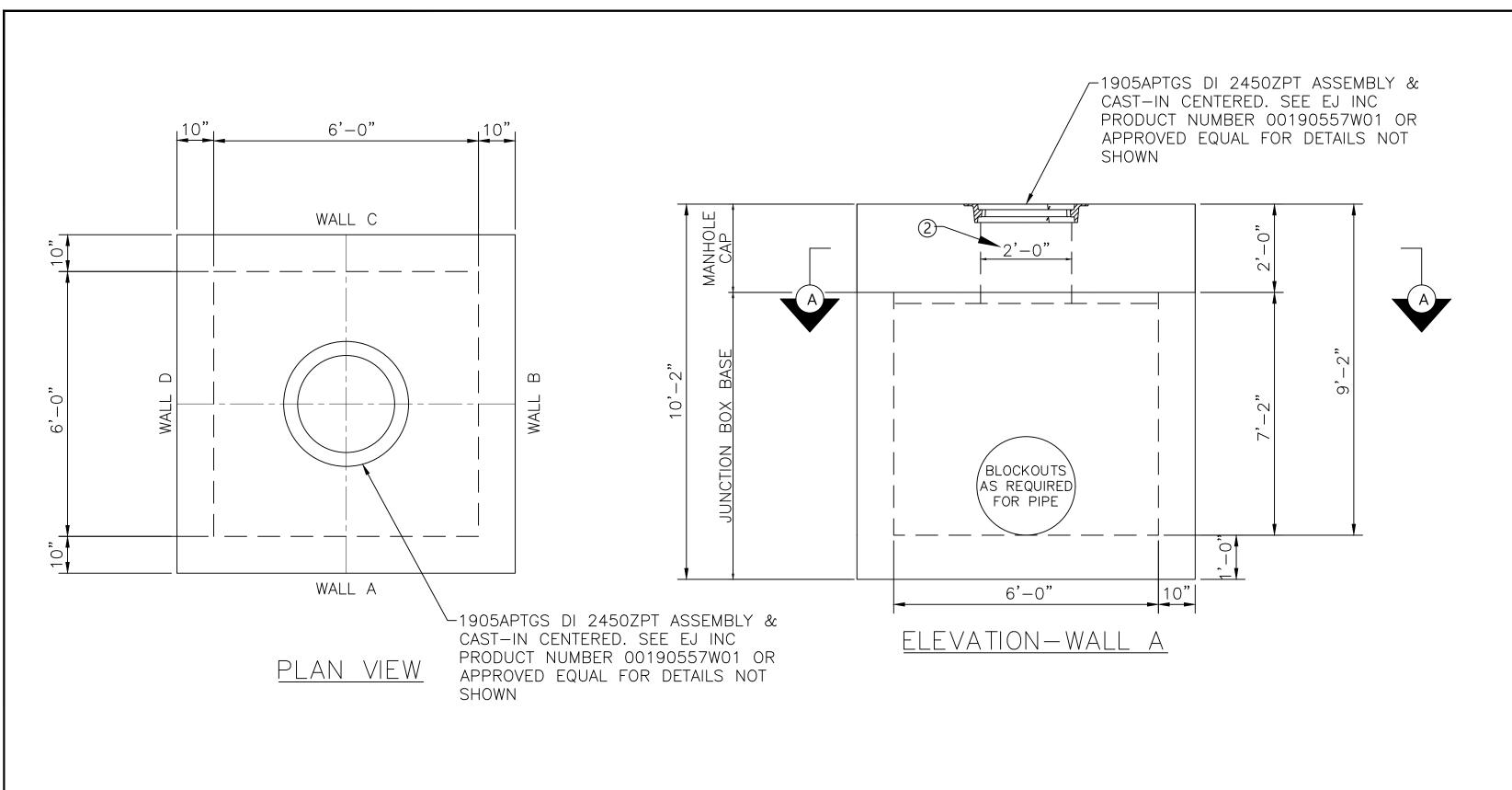
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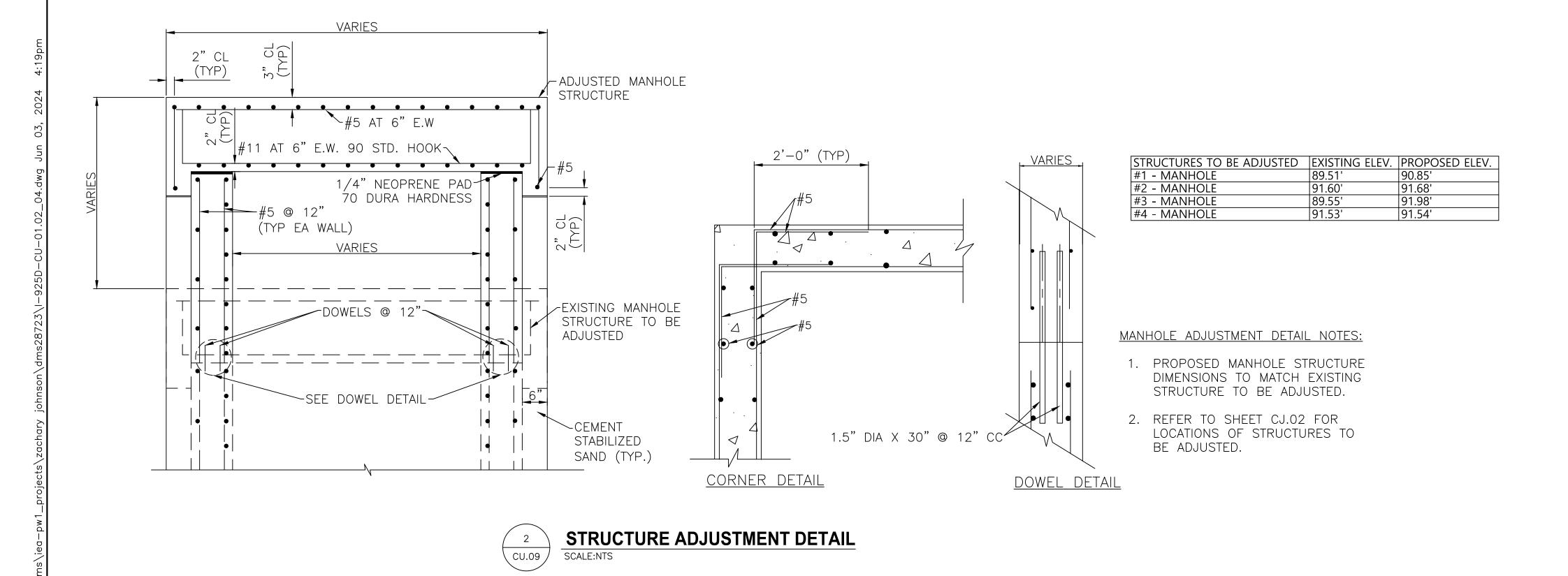
\_#4 U BAR @8" MAX (TYP) 1 #4 BARS ON TOP AT 12" MAXIMUM SPACE Q INLET CENTER TO CENTER IN EACH DIRECTION #6 STIRRUP AND #6 BARS ON BOTTOM AT 8" MAXIMUM SPACE CENTER TO CENTER IN EACH DIRECTION. FOR CLARITY #4 BARS DO NOT SHOW. 1" MIN CLR|<del>|| ||</del> ② DIMENSIONS SHOWN FOR CONTRACTOR REFERENCE ONLY. (TYP)Q INLET — -#4 ON TOP AND #6 ON BOTTOM SECTION A-A SHOWING MANHOLE CAP REINFORCEMENT | Q INLET #6 STIRRUP @8" MAX #4 @12" MAX— #6 @8" MAX\_ -#6 BLOCK OUT "BAR, 5'-0" LONG SECTION B-B

72" X 72" PRECAST CONCRETE AIRCRAFT RATED JUNCTION BOX

SCALE: 1" = 2'

STRUCTURAL NOTES:

1. SEE SHEET CU.07 FOR NOTES





13501 Katy Freeway Suite 3425 Houston, Texas 77079

TBPE Firm Registration No. F-10161

REVISIONS

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(832) 494-3800

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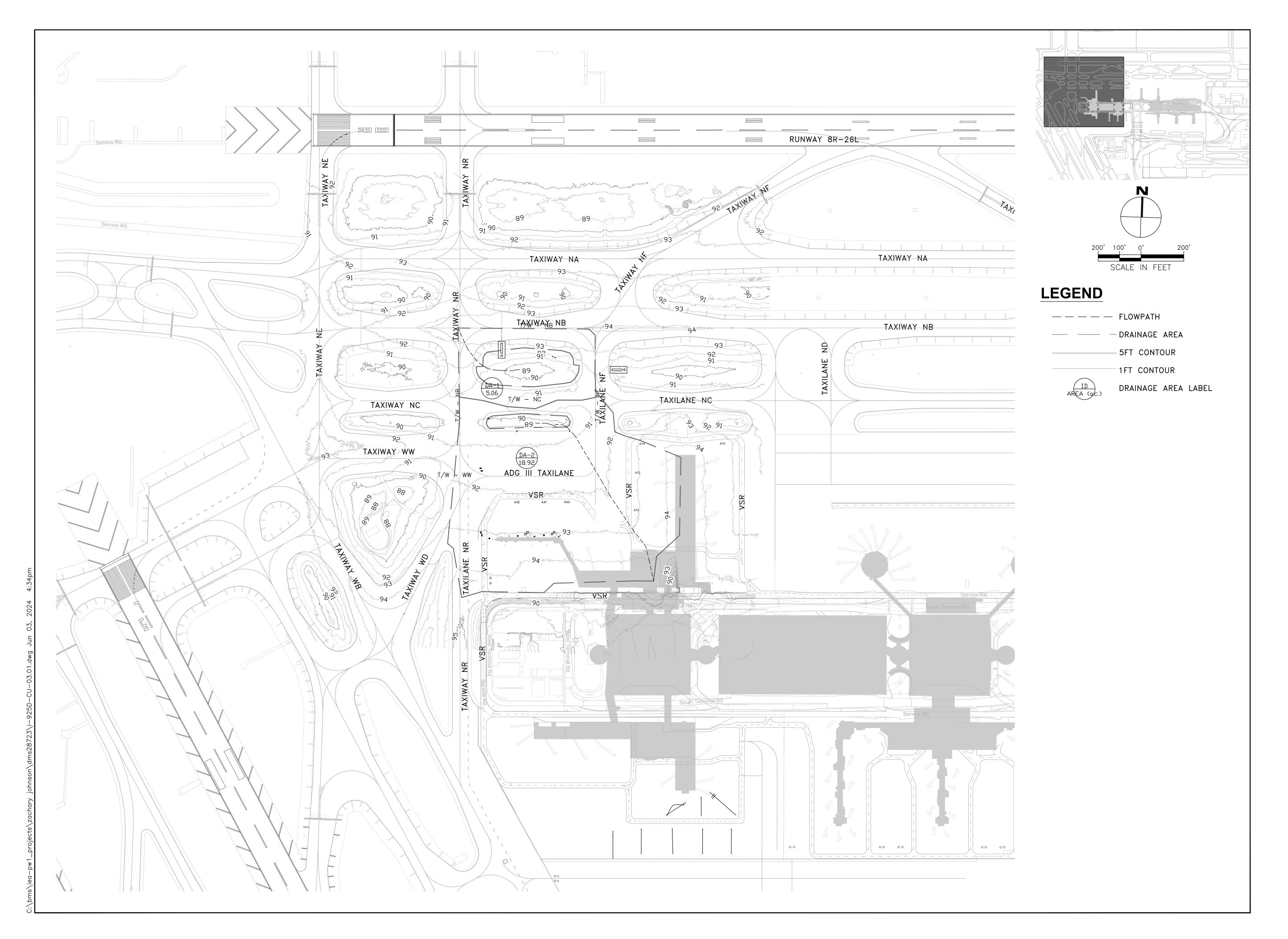
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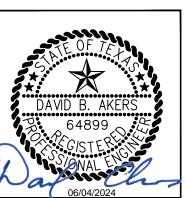
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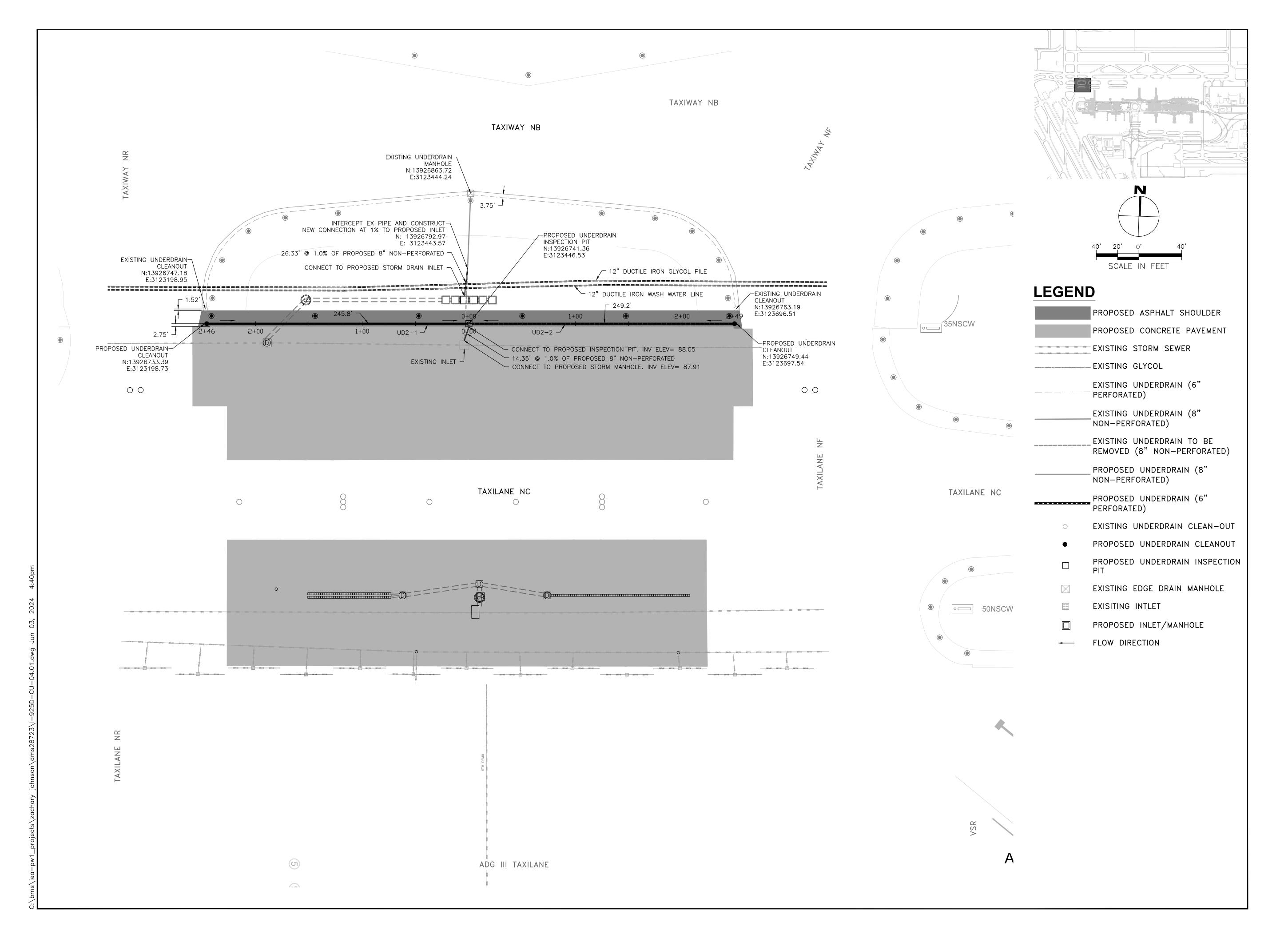
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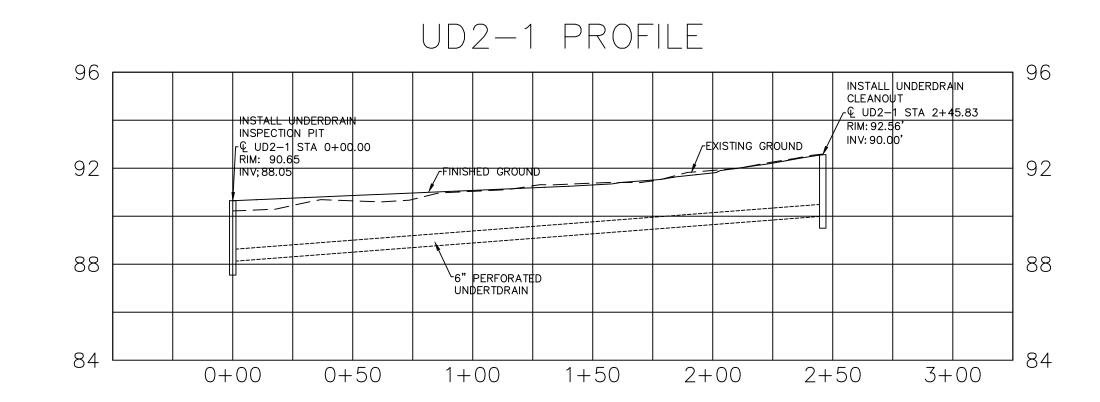
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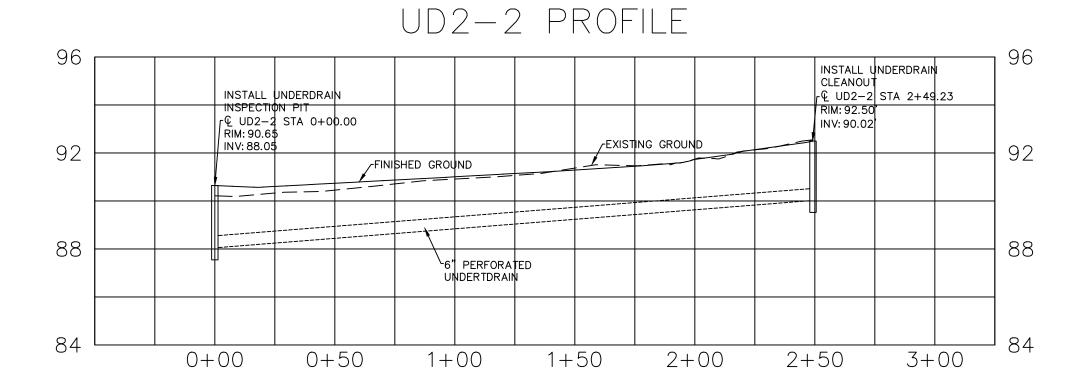
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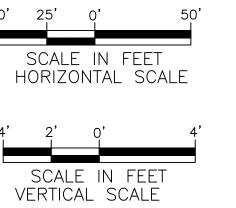
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- INSPECTION PIT FOR UD2-1 AND UD2-2 ARE THE SAME.







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Recommended 06/06/2024	
Houston Airports System DATE	

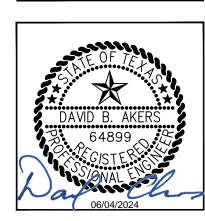
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UNDERDRAIN PROFILE

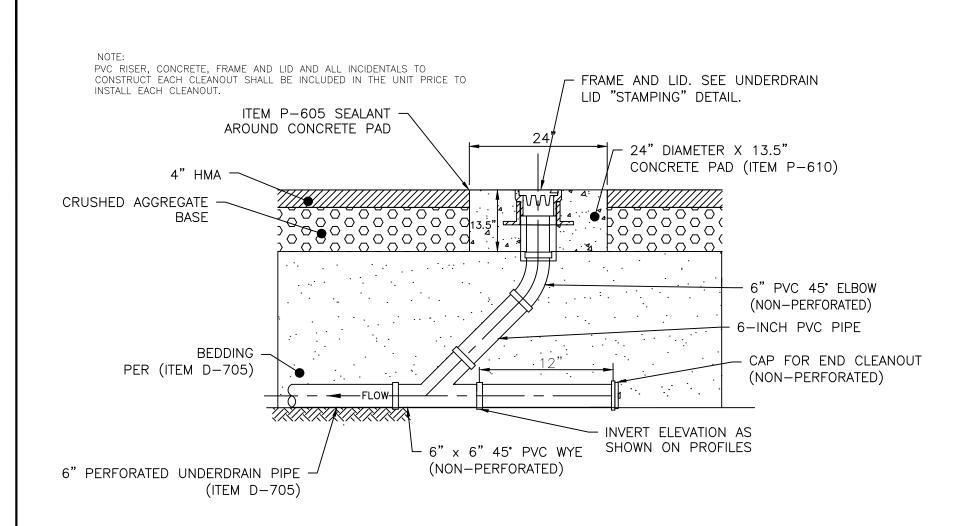
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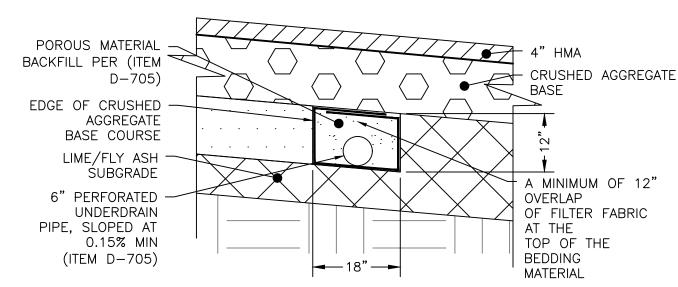
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**PAVEMENT UNDERDRAIN DETAIL** 

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SCALE: NTS

# CORE OPENING IN CONCRETE WALL SEAL AROUND PIPE WITH NON-SHRINK GROUT TERMINAL BACKWATER VALVE PVC SOLVENT WELD 6x6 INSTALL PIPE LEVEL TO ALLOW BACKWATER VALVE COVER TO CLOSE WALL OF CONCRETE STRUCTURE

**UNDERDRAIN CONNECTION TO STRUCTURE - TYPICAL DETAIL** 

EXISTING STRUCTURE

INSTALLATION OF BACKWATER VALVE SHALL BE INCIDENTAL

TO THE 8" NON-PERFORATED UNDERDRAIN PIPE.

─8" DIA. NON-PERFORATED PVC

- NON SHRINK GROUT (HYDRAULIC

GROUT SHALL BE USED IF NECESSARY)

WRAP OPENING/PIPE WITH NON-WOVEN FILTER
FABRIC ATTACH PIPE TO STRUCTURE WITH EPOXY OR

PIPE, SCHEDULE 40 (TYP.)

HELUMASTIC JOINT SEALANT

WALL

CORE OPENING IN CONCRETE -

INSTALLATION

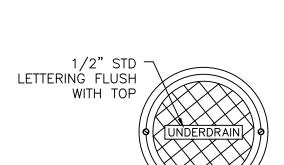
TERMINAL BACKWATER VALVE -

PVC SOLVENT WELD 6 X 6,

INCIDENTAL TO UNDERDRAIN

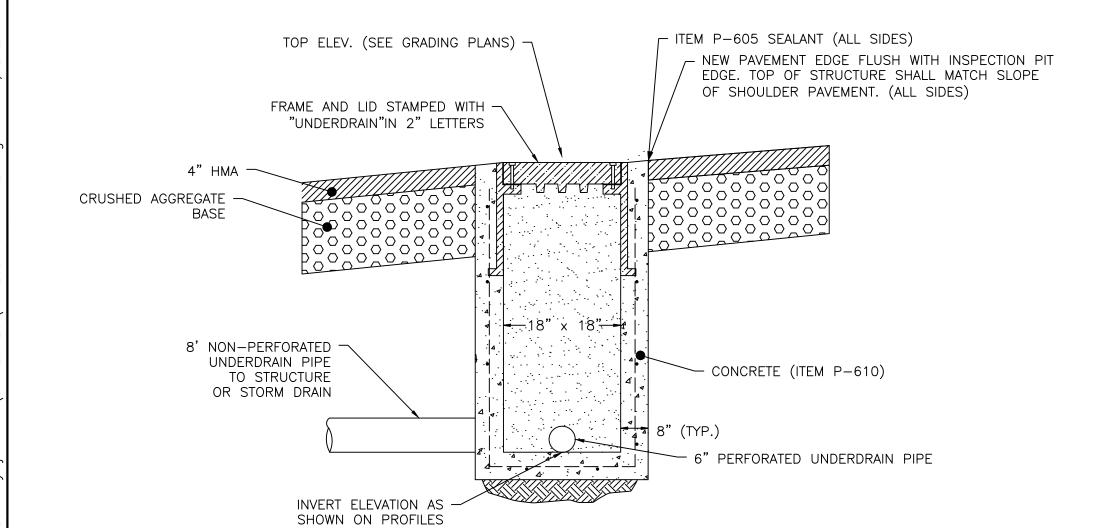
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# 1 CU.13 TYPICAL CLEANOUT DETAIL SCALE: NTS

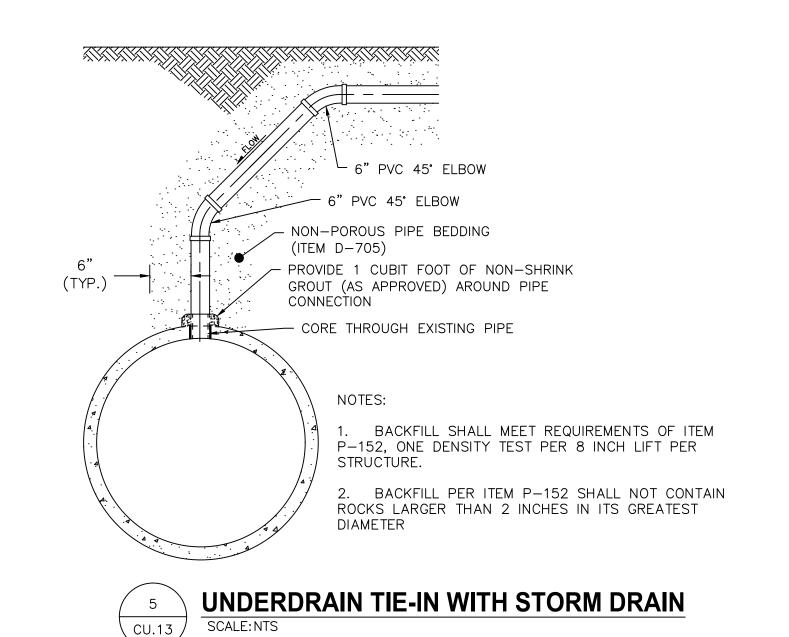


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UNDERDRAIN CLEANOUT LID STAMPING DETAIL









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Suite 3425
Houston, Texas 77079
(832) 494-3800
TBPE Firm Registration No.

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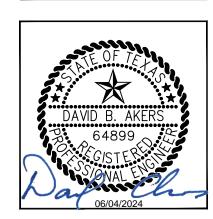
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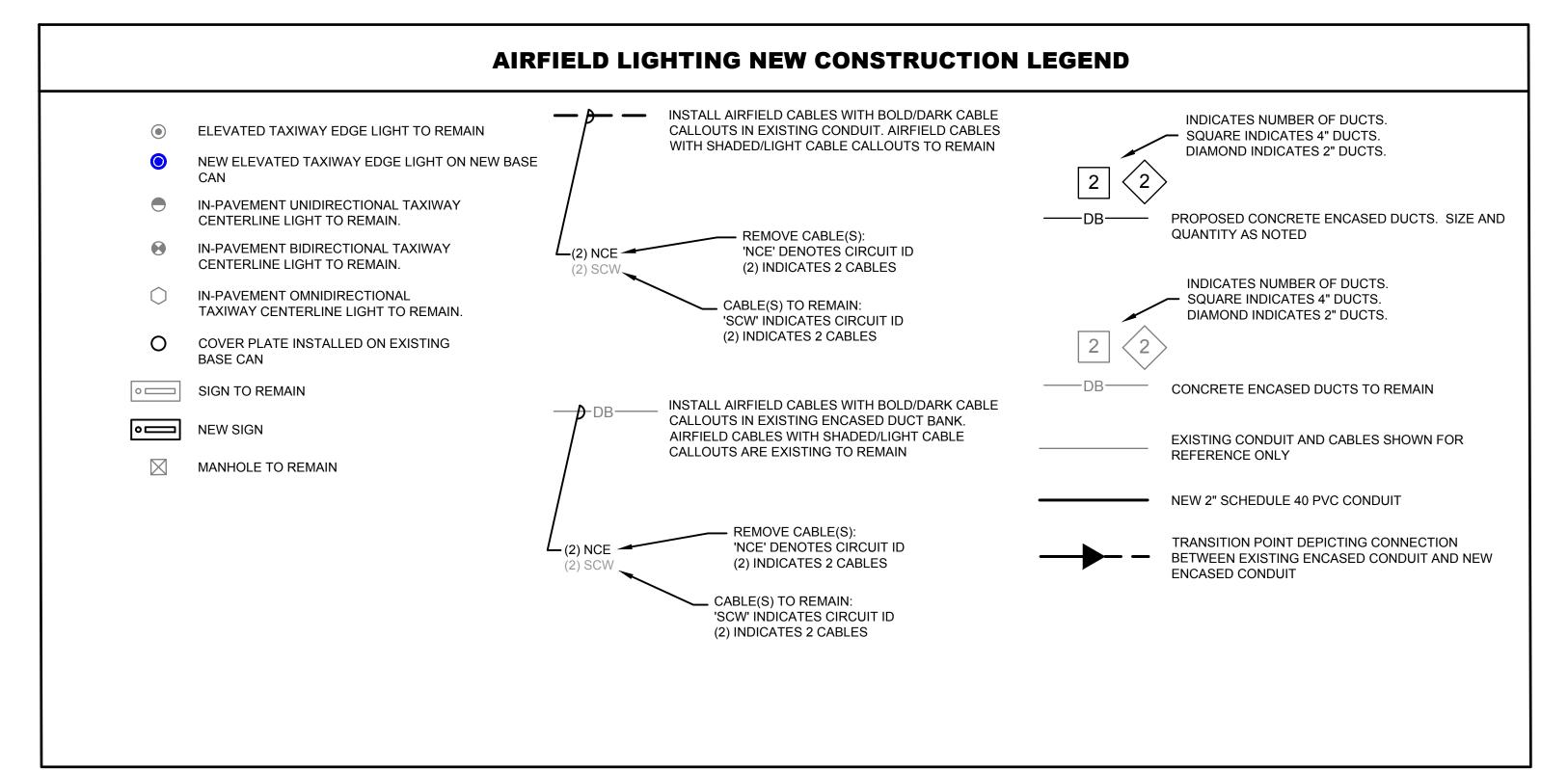
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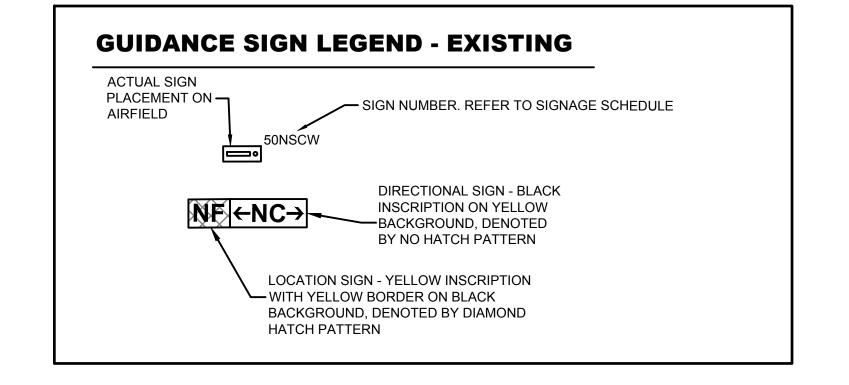
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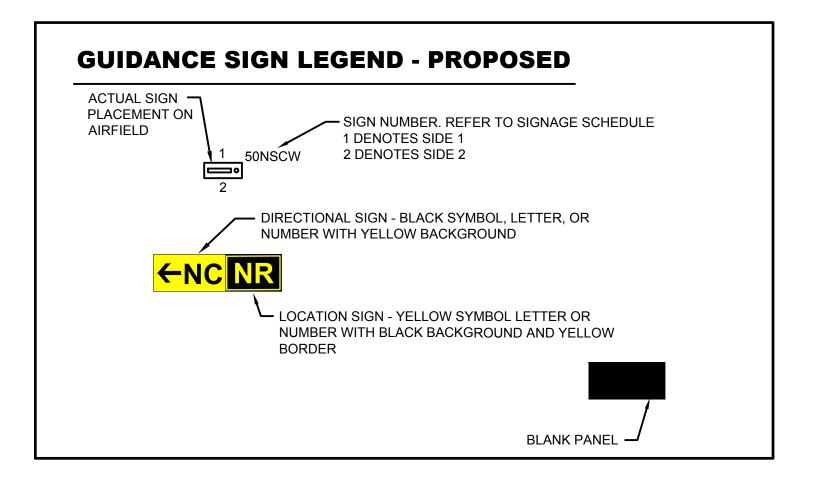
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# **GENERAL NOTES:**

1. PLEASE REFER TO FAA ADVISORY CIRCULAR
150/5345-53D - APPENDIX 1. IT CONTAINS A COMPLETE
LIST OF AIRFIELD LIGHTING EQUIPMENT AND
MANUFACTURERS THAT ARE APPROVED BY THE FAA
FOR USE. THE PROJECT DOCUMENTS WILL NOT ALLOW
ANY LIGHT FIXTURES OR SIGNS TO BE INSTALLED THAT
ARE NOT ON THIS LIST.





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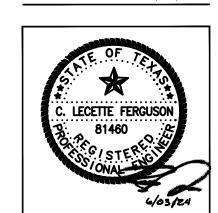
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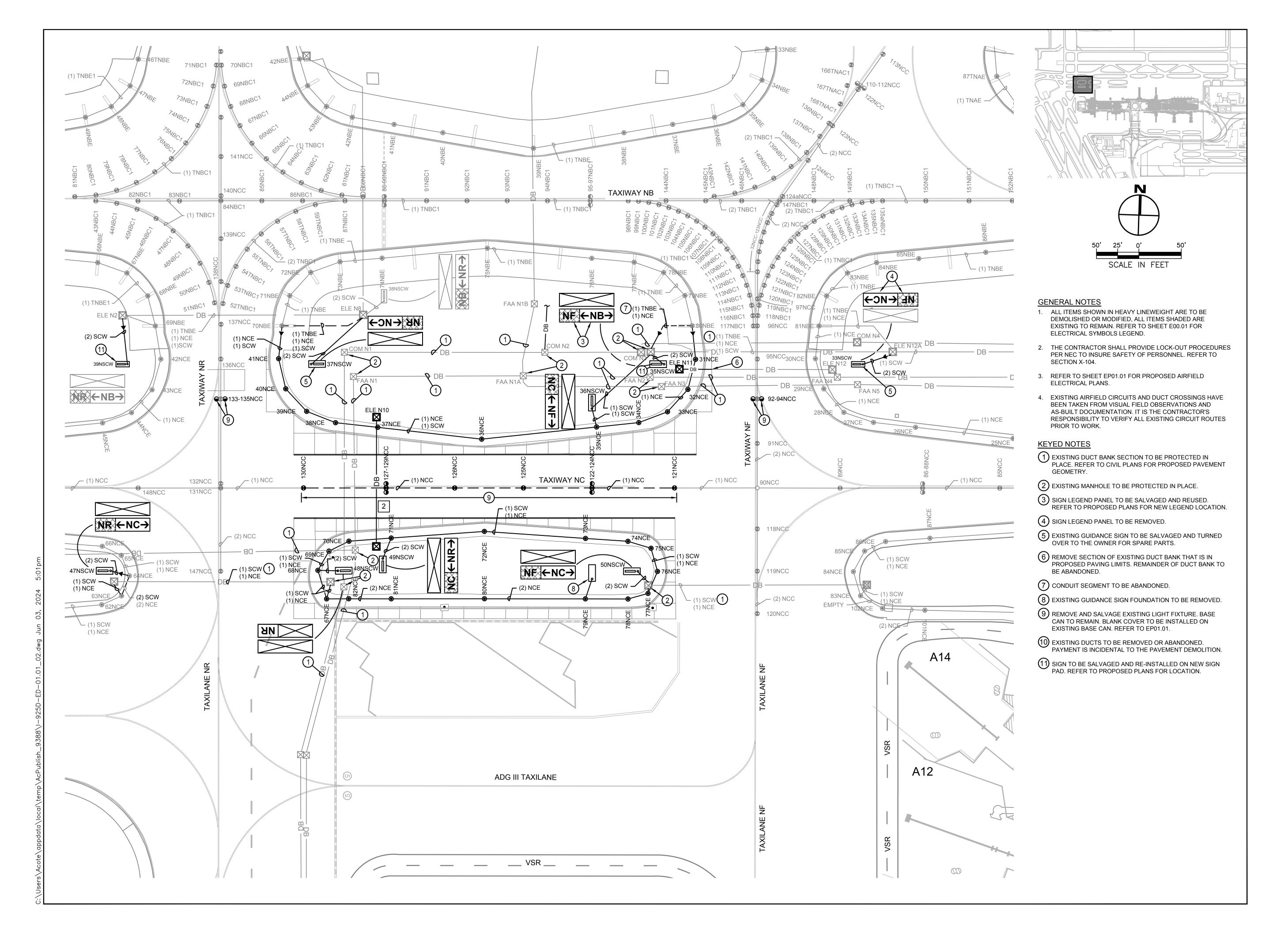
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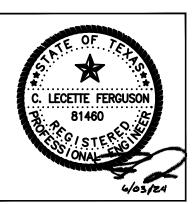
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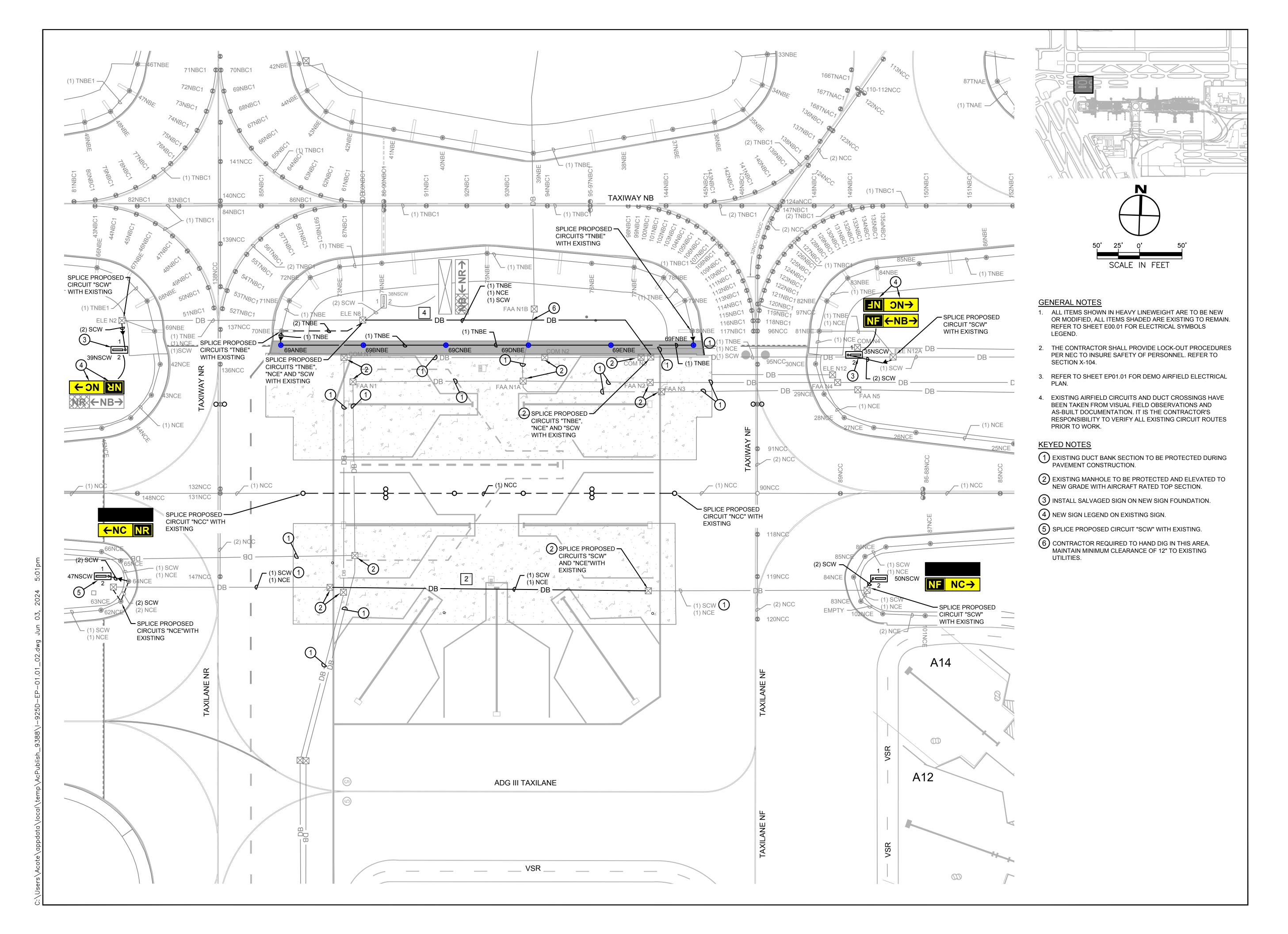
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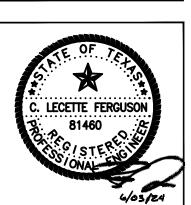
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PROPOSED FIELD TAGGING	PROPOSED S	SIGN LEGEND	_D CKT	SE		DATA	ASS	ISOL XFMR (QTY) (AND SIZE)		LAMP DATA PER MODULE		SHEET NUMBER	NORTHING	EASTING	EDGE MARKING OFFSET	NOTES
PR	SIDE 1	SIDE 2		MODULI	SIZE	STY	CLA	(* 11 13 0122)	QUAN	TYPE	WATT					
35NSCW	←NC NF	NF ←NB→	scw	3	3	5	1	100W	2	INC.	48	EP01.01	13926750.9405	3123875.8657	50.00'	2
39NSCW	NR NC→	NR <mark>←NB→</mark>	SCW	3	3	5	1	100W	2	INC.	48	EP01.01	13926729.3370	3123019.0818	50.00'	2
47NSCW		←NC NR	SCW	3	3	5	1	100W	2	LED	4	EP01.01	13926462.2355	3123008.0715	35.00'	1
50NSCW		NF NC→	SCW	3	3	5	1	100W	2	LED	4	EP01.01	13926488.7020	3123913.6850	35.00'	1

## **GENERAL NOTES - SIGNAGE**

- REFER TO SIGN DETAILS ON EP06.03. ALL SIGN BASE CANS ARE LOCATED ON INBOARD SIDE OF THE SIGN (SIDE NEAREST TO EDGE MARKING) UNLESS OTHERWISE NOTED.
- NORTHINGS & EASTINGS REFER TO THE SIDE OF THE SIGN NEAREST TO EDGE OF PAVEMENT.

	TAXIWAY EDGE LIGHT FIXTURES (NBE)								
FIXTURE NUMBER	FAA TYPE	FAA BASE	NORTHING	EASTING	REGULATOR ID	REGULATOR CIRCUIT NAME	KEYNOTES		
69ANBE	L-861T(L)	L-867B	13926740.843135	3123204.894757	CCR 13	NBE	1		
69BNBE	L-861T(L)	L-867B	13926743.968459	3123302.043408	CCR 13	NBE	1		
69CNBE	L-861T(L)	L-867B	13926747.093782	3123399.192059	CCR 13	NBE	1		
69DNBE	L-861T(L)	L-867B	13926750.219106	3123496.340710	CCR 13	NBE	1		

LIGHT FIXTURE ELECTRICAL INFORMATION:							
FIXTURE TYPE	FAA TYPE	LAMP WATTAGE	ISOLATION TRANSFORMER				
TAXIWAY ELEVATED LED EDGE LIGHT	L-861T(L)	12VA	L-830-16 (10/15W)				

NBE

NBE

#### **KEYED NOTES - LIGHTING**

L-861T(L) L-867B 13926753.344429 3123593.489361 CCR 13

L-861T(L) L-867B 13926756.469752 3123690.638012 CCR 13

69ENBE

1 INSTALL NEW ELEVATED FIXTURE (TYPE AS NOTED) ON NEW BASE CAN WITH NEW ISOLATION TRANSFORMER, CONNECTOR KIT, BOLTING HARDWARE, ETC FOR A COMPLETE AND ACCEPTED SYSTEM.

#### KEYED NOTES - SIGNAGE

- FURNISH AND INSTALL NEW SIGN ON NEW FOUNDATION FOLLOWING PLANS, DETAILS, AND SPECIFICATIONS. COORDINATE FIELD TAG ID WITH OPERATIONS.
- 2 EXISTING SIGN INSTALLED ON NEW FOUNDATION. NEW SIGN PANELS AS NOTED ON EP01.01.
- \* NEW SIGN ISOLATION TRANSFORMER SIZE WILL VARY PER MANUFACTURER. SIZES LISTED ARE FOR SIGN MANUFACTURER - ADB. IF ALTERNATE MANUFACTURER IS USED, PROVIDE ISOLATION TRANSFORMER SIZE PER MANUFACTURER RECOMMENDATIONS. THE CONTRACTOR SHALL BARE ALL THE COSTS ASSOCIATED WITH ANY EQUIPMENT UPGRADES NECESSARY DUE TO THE CONTRACTOR'S PROPOSED EQUIPMENT POWER REQUIREMENTS EXCEEDING THE CONTRACT DESIGN LOADS.



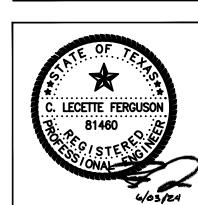


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PROJECT MGR:	CW
DESIGNER:	JGW
DRAWN BY:	JGW
CHECKED BY:	CLF
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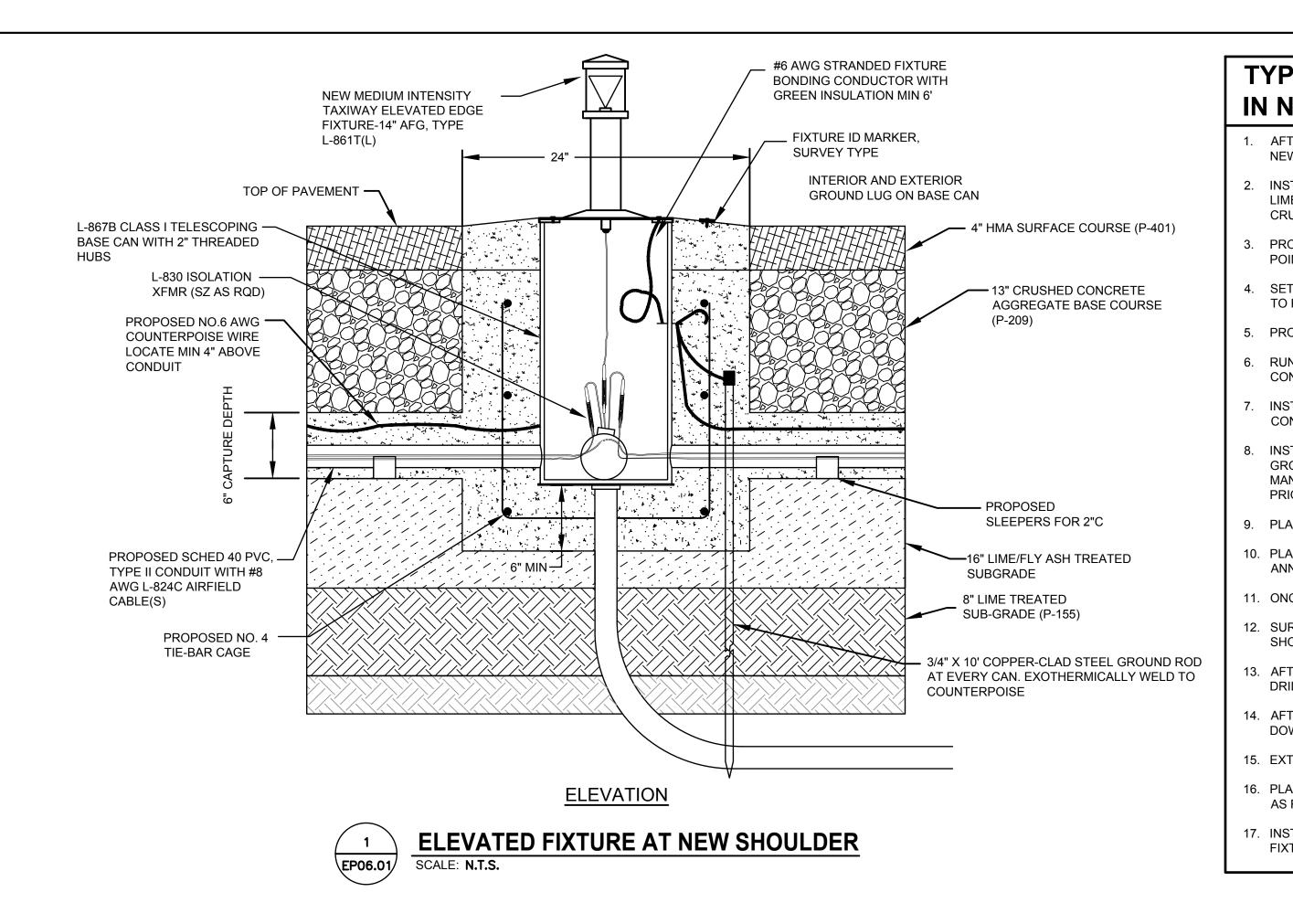


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# TYPICAL ELEVATED EDGE LIGHT INSTALLATION IN NEW SHOULDER (REFER TO CIVIL SECTIONS):

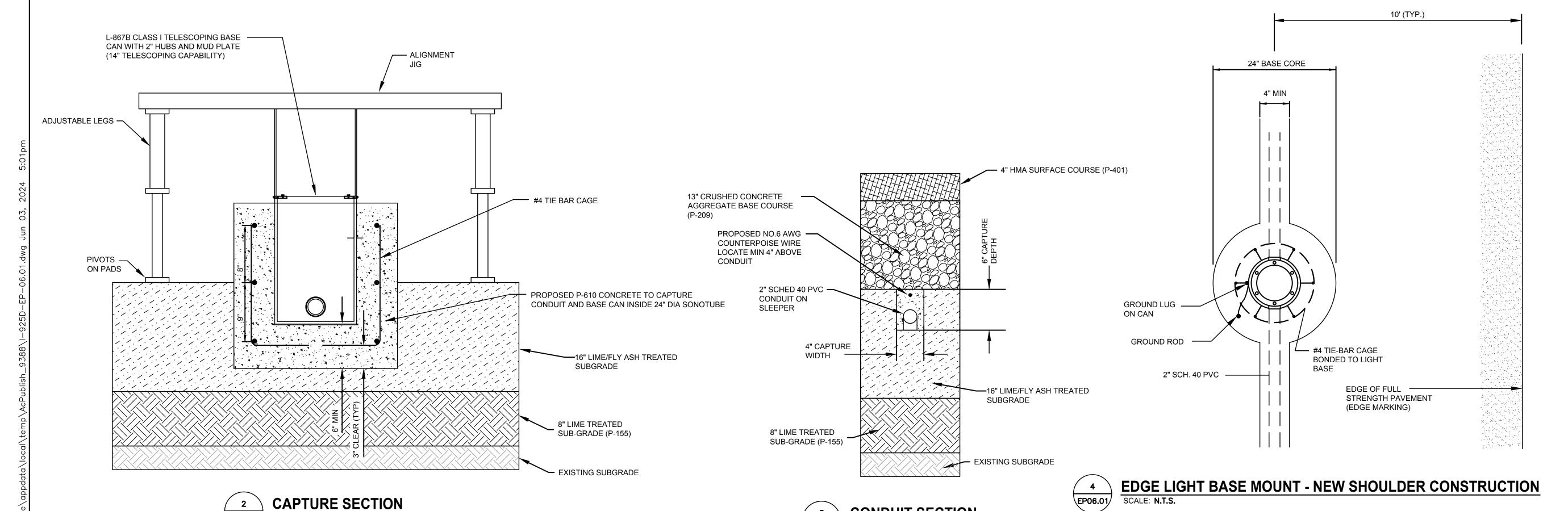
AFTER THE LIME/FLY ASH TREATED SUBGRADE IS PLACED, PREPARE A CAPTURE SECTION FOR A NEW BASE, 24" DIAMETER TO A MINIMUM DEPTH OF 29" BELOW FINAL GRADE.

- 2. INSTALL A 24" DIAMETER SONOTUBE INTO CAPTURE SECTION (APPROXIMATELY 12" INTO LIME/FLY ASH TREATED SUBGRADE). SONOTUBE TO EXTEND TO 1" BELOW TOP OF PROPOSED CRUSHED CONCRETE AGGREGATE BASE COURSE.
- PROVIDE A CONDUIT TRENCH 4" WIDE BY NOMINAL 6" DEEP BETWEEN BASES AND OUTSIDE POINTS FOR NEW 2" PVC CONDUIT PLACEMENT INTO NEW SUBGRADE.
- 4. SET ADJUSTABLE L-867 BASE WITH MUD PLATE INTO CAPTURE SECTION USING ALIGNMENT JIG TO KEEP ALIGNMENT AND ELEVATION PER FAA A/C.
- 5. PROVIDE #4 TIE-BAR CAGE AS DETAILED ON CAPTURE SECTION DETAIL.
- 6. RUN 2" SCHEDULE 40 PVC BETWEEN BASES COMPLETING CONDUIT INSTALLATIONS, PROVIDE CONDUIT SLEEPERS SO CONDUIT CONCRETE AGGREGATES WILL FLOW UNDER CONDUIT.
- 7. INSTALL SEPARATE GROUND ROD FOR EVERY BASE CAN AND AT 500' INTERVALS ALONG CONDUIT ROUTE.
- 8. INSTALL COUNTERPOISE WIRE CENTERED ABOVE CONDUIT. EXOTHERMICALLY WELD TO EACH GROUND ROD AND EXOTHERMIC WELD TO WIRE CAGE AND BASE CAN AT CUSTOM FACTORY MANUFACTURED MECHANICAL TERMINATION POINT WHICH HAS BEEN BONDED TO BASE CAN PRIOR TO GALVANIZATION PROCESS.
- 9. PLACE 1" LAYER OF SAND ON TOP OF MUD PLATE.
- 10. PLACE P-610 CONCRETE INTO TRENCH AND CAPTURE SECTION OF THE BASE CAN FILLING ANNULAR SPACE OF CONDUIT AND BASE CAN LEVELING UP TO TOP OF THE AGGREGATE BASE.
- 11. ONCE P-610 IS SET, REMOVE SONOTUBE.

**CONDUIT SECTION** 

SCALE: N.T.S.

- 12. SURVEY LOCATION OF NEWLY SET BASE CAN FOR EASE OF RECOVERY AFTER PROPOSED FINAL SHOULDER MATERIAL IS PLACED.
- 13. AFTER HMA SURFACE COURSE HAS BEEN PLACED, LOCATE NEW BASE CAN BY SURVEY, THEN DRILL A 4" PILOT HOLE TO LOCATE THE CENTER OF THE BASE.
- 14. AFTER DETERMINING CENTER OF BASE, CENTER A 24" DIAMETER CORE OVER THE BASE, CORE DOWN TO TOP OF BASE AND REMOVE THE CORE.
- 15. EXTEND ADJUSTABLE BASE UP TO 3/4" ABOVE FINISHED SURFACE OF SHOULDER.
- 16. PLACE P-610 CONCRETE INTO VOID, TAPERING OFF CONCRETE BACK TO SHOULDER SURFACE AS REQUIRED.
- 17. INSTALL A 2" DIAMETER BRASS SURVEY MARKER WITH STAMPED FIXTURE ID NUMBER. SEE FIXTURE SCHEDULE.



EP06.01/



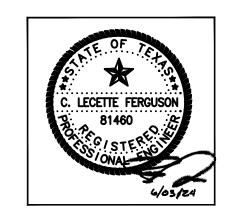


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PROJECT MGR: DESIGNER: JGW DRAWN BY: JGW CLF CHECKED BY: SCALE: AS SHOWN 6/03/2024



DEPARTMENT OF AVIATION HOUSTON AIRPORT SYSTEMS AUTHORIZED REPRESENTATIVE

PROJECT NO. PN 973 C.I.P. NO.

H.A.S. NO.

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**EP06.01** 

PROVIDE 1 LAYER OF SCOTCH #23 HIGH VOLTAGE RUBBER TAPE HALF — LAPPED PLUS ONE LAYER OF SCOTCH #33 HALF LAPPED, FOR 4 TOTAL THICKNESS AT ANY GIVEN POINT, ACROSS CONNECTOR JOINT. EXTEND A MINIMUM OF 1.5" EITHER SIDE OF CONNECTOR JOINT TYPE B RECEPTACLE END -FOR SPLICES FOR USE AT JUNCTION OF PLUG END — HOMERUN WITH LOOP CIRCUIT UNDERGROUND CABLE ----SPEC L-824, TYPICAL FACTORY MOLDED TRANSFORMER LEADS TYPE C

FOR SPLICES AT LIGHTS OR SIGNS

# NOTES:

- 1. PROVIDE STANDARD L-823 KIT FOR SPLICES.
- PROVIDE COLOR CODED CABLE ID AT EVERY SPLICE IN CANS, PULL BOX, HANDHOLE, AND MANHOLE



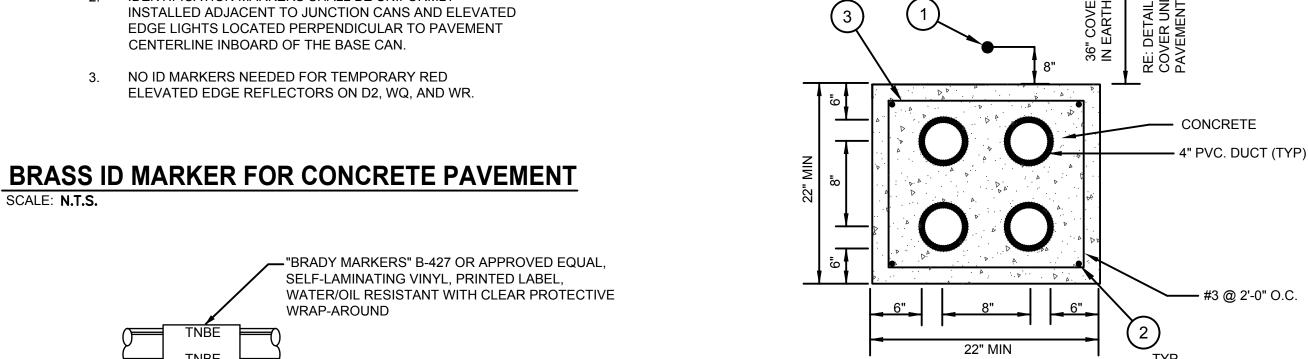


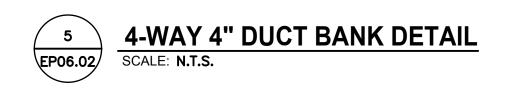
## TYPICAL EDGE LIGHT FIXTURE FINISHING DETAIL SCALE: N.T.S.

TO FULL STRENGTH PAVEMENT TOP OF PAVEMENT 2" DIA. DOMED BRONZE MARKER (BERNTSEN CD2B OR EQUAL) - 3/4" DIA. NOTCHED STEM

# NOTES:

- IDENTIFICATION SHALL BE STAMPED 3/4" LETTERS AND NUMBERS UNIFORMLY SPACED ON THE BRONZE MARKER.
- IDENTIFICATION MARKERS SHALL BE UNIFORMLY EDGE LIGHTS LOCATED PERPENDICULAR TO PAVEMENT





4-WAY

**DETAIL KEYED NOTES** 

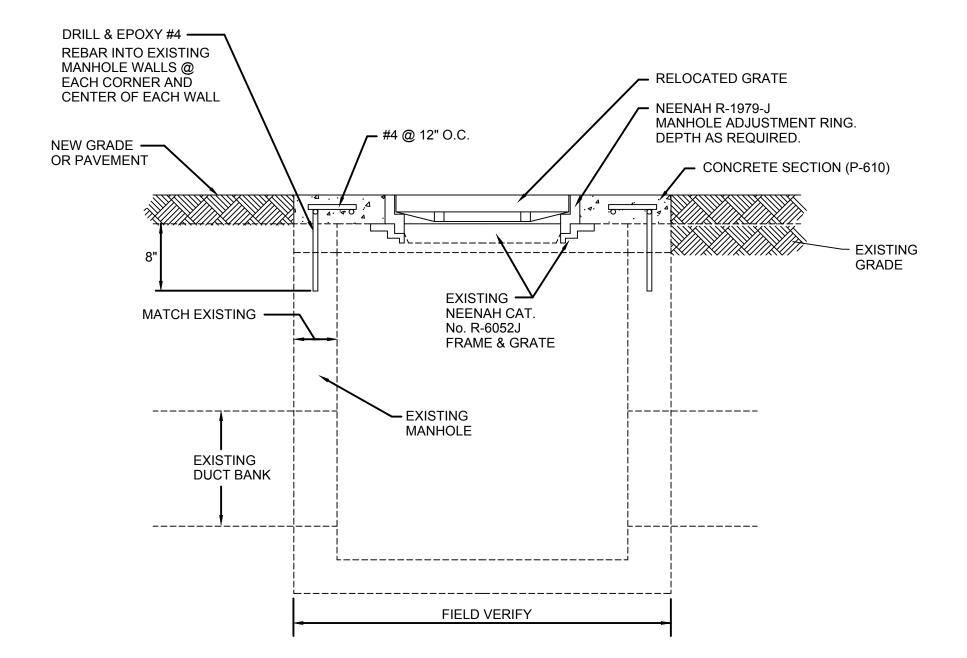
EXTEND 12" EACH END

1 ) INSTALL 1 #6 AWG. BARE COPPER SOLID WIRE

( 3 ) INSTALL STIRRUPS AT EVERY 24" ON CENTER.

4 ) INSTALL CONDUIT SPACERS EVERY 5 FEET.

2 PROVIDE #4 REBAR AT EACH CORNER AND SPACERS EVERY 5 FEET.



EP06.02

AIRCRAFT RATED MANHOLE ADJUSTMENT FOR GRADE MODIFICATION SCALE: N.T.S.



EP06.02

L-824 CABLE IDENTIFICATION LABEL SCALE: N.T.S.

- CIRCUIT NAME IN 1/4"

TEXT, PRINT AT LEAST 3

TIMES AROUND CABLE

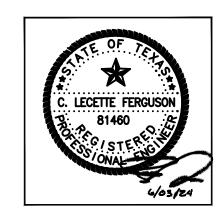
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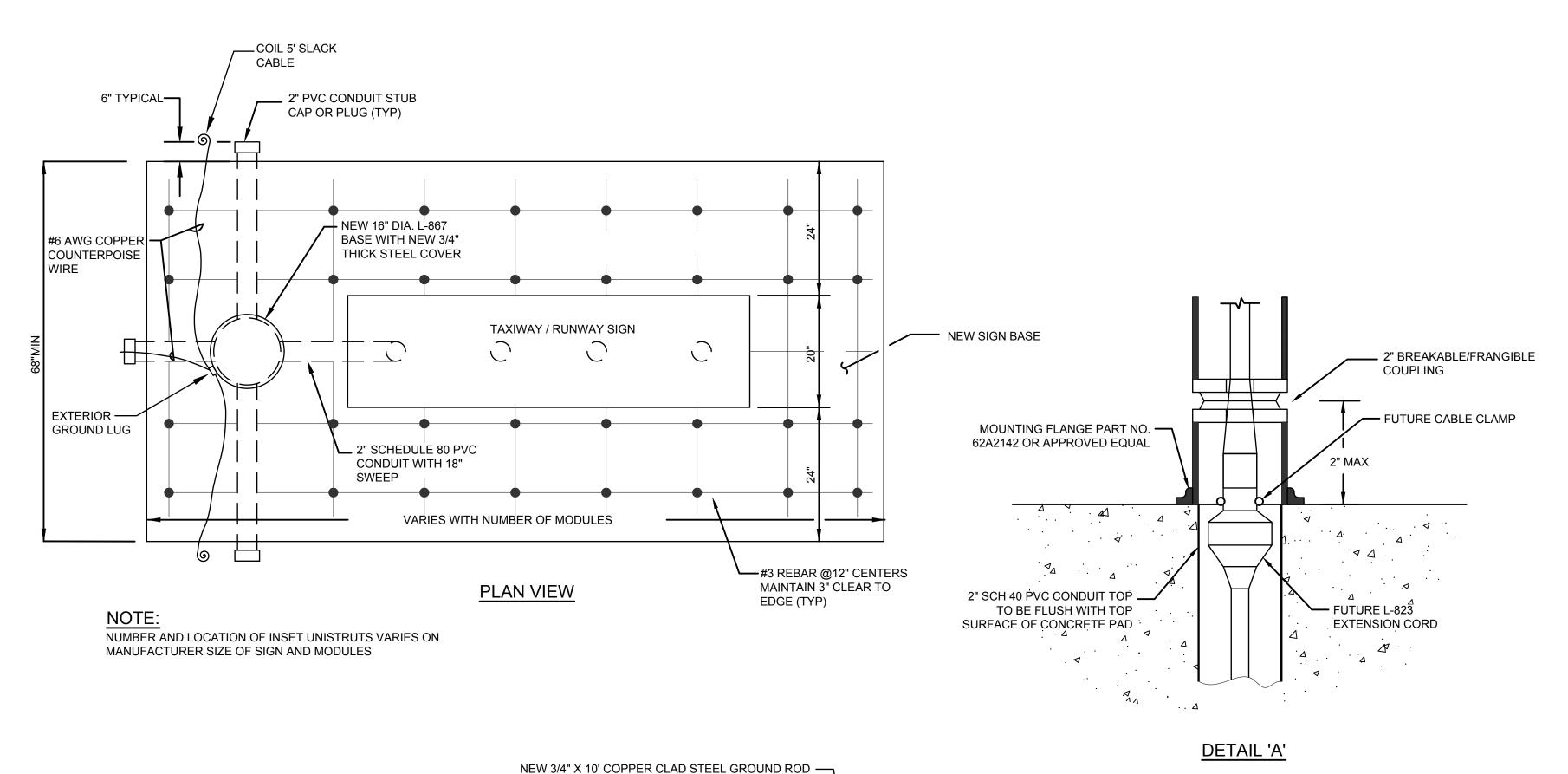
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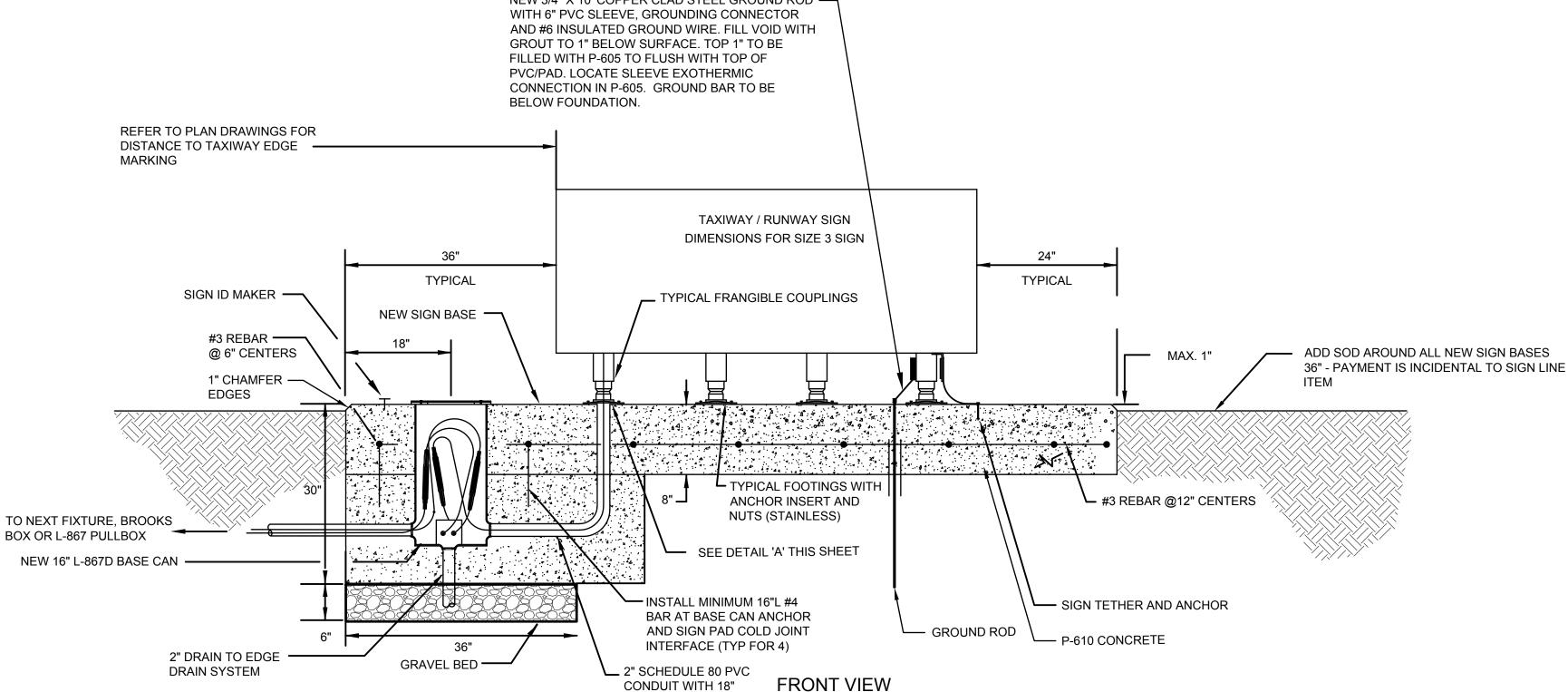
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# TYPICAL NEW SIGN AND BASE DETAIL SCALE: N.T.S.

#### GENERAL SIGN NOTES

- 1. REFER TO PLAN DRAWING FOR SIGN NUMBERS, LEGEND, TYPE AND NUMBER OF MODULES.
- 2. REFER TO PLAN DRAWING FOR SIGN LOCATIONS.
- 3. ALL LETTERS AND SPACINGS OF NEW SIGNS TO BE PER AC 150/5345-44 LATEST REVISION.
- 4. ALL NEW SIGNS, SIGN MODULES AND ANY MODIFICATION TO AN EXISTING SIGN SHALL CONFORM TO AC 150/5340-18 AND 150/5345-44, LATEST EDITIONS AND SIGNAGE AND MARKING SUPPLEMENTS.
- 5. THE SIGNS SHALL BE FRANGIBLE, MEETING THE REQUIREMENTS OF AC 150/5345-44, LATEST REVISION.
- 6. THE DETAILS SHOWN IN THE PLANS PROVIDE THE MINIMUM REQUIREMENTS FOR SIGN INSTALLATIONS. THE CONTRACTOR SHALL USE STANDARDS APPLICABLE FOR THE PARTICULAR SIGN MANUFACTURER. THE BOLTING PATTERN, METHOD OF ANCHORING, ETC., SHALL BE PER SIGN MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE OAR.
- 7. THE ACTUAL SIGN DIMENSIONS WILL VARY PER MANUFACTURER. THE BASE SIZE AS SHOWN SHALL BE ADJUSTED TO MATCH THE SIGN SUBMITTED. THE SUBMITTAL SHALL INCLUDE NEW BASE DIMENSIONS, LAYOUT, ETC.
- 8. FOR LOCATION AND ORIENTATION OF SIGNS AND FOUNDATIONS, SEE PLANS. THE LOCATION SHOWN ON THE PLANS IS THE PERPENDICULAR DISTANCE FROM THE DEFINED TAXIWAY EDGE, TO THE NEAR SIDE OF THE SIGN ON THE SIGN'S LONGITUDINAL CENTERLINE (SEE PLAN VIEW). ALL SIGNS SHALL BE INSTALLED WITH FIXTURE I.D. MARKERS.
- 9. ALL SIGNS SHALL BE ORIENTED SUCH THAT THE LONGITUDINAL CENTERLINE OF THE SIGN IS PERPENDICULAR TO THE RESPECTIVE RUNWAY OR TAXIWAY CENTERLINE, UNLESS NOTED OTHERWISE.
- 10. CONTRACTOR SHALL PROVIDE NEW CONCRETE FOUNDATION, BASE CAN, GROUND ROD AND CONNECTORS, SIGN TAG AND SIGN ID MARKER FOR ALL NEW GUIDANCE SIGNS.
- 11. SITE GRADING AT EACH SIGN IS ANTICIPATED. GRADING AND RESTORATION ARE INCIDENTAL TO THE SIGN LINE ITEM.
- 12. ALL CONCRETE SHALL COMPLY WITH P-610 SPECIFICATION. P-610 CONCRETE STEEL REINFORCEMENT SHALL BE TYPE ASTM A615 GRADE 60. ALL REINFORCEMENT SHALL HAVE A 2" MINIMUM CONCRETE COVER. REINFORCEMENTS MAY BE ADJUSTED TO MISS INTERFERENCES.
- 13. STRUCTURAL BACKFILL, FREE-DRAINING, AS APPROVED BY THE OAR, SHALL BE PLACED IN HORIZONTAL LIFTS NOT TO EXCEED 4" IN LOOSE DEPTH AND COMPACTED TO 95% MAXIMUM DENSITY AT ZERO TO 2% ABOVE OPTIMUM MOISTURE AS DETERMINED BY ASTM D1557. SLOPE SHALL NOT EXCEED 33:1 WITHIN RUNWAY SAFETY AREA. REFER TO P-152.
- 14. SODDING OF DISTURBED AREAS SHALL BE INCLUDED IN THE INDIVIDUAL SIGN PAY ITEM. EXCAVATION, GRADING, FILL ETC. FOR THE SIGNS IS INCIDENTAL TO THE SIGN PAY ITEM.
- 15. ALL AREAS FOR THE SUPPORT PLATES SHALL BE IN THE SAME HORIZONTAL PLANE. WHEN CAST INTEGRALLY WITH THE CONCRETE PAD, THE ANCHOR BOLTS SHALL BE A-36 STEEL, HOT DIP GALVANIZED.
- 16. BASE CAN SHALL BE ON SIDE OF SIGN CLOSEST TO THE POWER SOURCE.
- 17. APPLY ANTI-SEIZE OR APPROVED EQUAL TO ALL THREADED BOLTS AND CONNECTIONS.
- 18. SIGNS TO BE PLACED PLUMB AND LEVEL.
- 19. FRANGIBLE COUPLING SHALL BE LOCATED 1/2" MAX. ABOVE COVER. MANUFACTURER SHALL PROVIDE AT LEAST A 1/4" DIA OPENING OR EQUAL FOR DRAINAGE INTO L-867 BASE. COUPLING SHALL NOT BE SUPPLIED WITH WEEP HOLES TO THE OUTSIDE.
- 20. GROUND RODS SHALL BE 3/4" DIA. X 10'L STAINLESS STEEL ROD. EACH GROUND ROD SHALL BE TESTED PRIOR TO CONNECTION TO THE GROUND SYSTEM. THE EARTH RESISTANCE AT EACH ROD SHALL NOT EXCEED 25 OHMS. INSTALL ADDITIONAL RODS AS NEEDED TO ACHIEVE THE 25 OHM MAX RESISTANCE REQUIREMENT.
- 21. THE #6 AWG COPPER BONDING CONDUCTOR AND SIGN TETHER SHALL NOT BE ATTACHED AT THE SAME ANCHOR BOLT. AN APPROVED IRREVERSIBLE CRIMP SHALL BE USED TO CONNECT THE BONDING CONDUCTOR TO THE SIGN FLANGE AND SIGN.
- 22. USE #6 AWG COPPER COUNTERPOISE WITH TYPE THHW INSULATION WHEN INSTALLED IN CONCRETE. COUNTERPOISE TO BE CONNECTED TO GROUND ROD AT EACH SIGN. THIS CONTRACTOR SHALL VERIFY THAT THE 6" SLEEVE IS LARGE ENOUGH TO ACCOMMODATE THE EXOTHERMIC CONNECTION MOLD. THE TOP OF THE GROUND ROD SHALL BE ± 1" ABOVE THE PAD 1". THE GROUND ROD SHALL NOT BE DRIVEN AFTER THE EXOTHERMIC CONNECTION HAS BEEN MADE.
- 23. ALL SIGNS SHALL BE FURNISHED WITH TWO TETHERS PER SIGN. TETHERS SHALL BE 3/16" STAINLESS STEEL AIRCRAFT CABLE WITH A FORMED EYE ON BOTH ENDS. THE TETHER EYE SHALL BE ATTACHED TO THE SIGN AND BASE BY BEING SANDWICHED BETWEEN TWO STAINLESS STEEL FENDER WASHERS, WITH A 1/2" MINIMUM STAINLESS STEEL BOLT. THE TETHER SHALL BE OF SUFFICIENT LENGTH TO HAVE A MINIMUM OF 6" OF SLACK WHEN ATTACHED BETWEEN THE SIGN AND THE SIGN BASE. THE TETHERS AND BONDING CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO ALLOW THE FRANGIBLE COUPLINGS TO OPERATE WITHOUT RESTRICTIONS AND TO ALLOW THE POWER CABLE TO DISCONNECT IF THE SIGN FALLS OVER.
- 24. SIGNS SHALL BE SEALED AGAINST INFILTRATION BY WATER AND DIRT.





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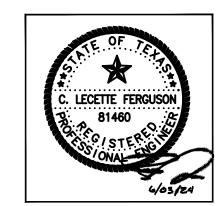
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DRAWN BY: JGW

CHECKED BY: CLF

SCALE: AS SHOWN

DATE: 6/03/2024



DEPARTMENT OF AVIATION

APPROVED BY: DATE

HOUSTON AIRPORT SYSTEMS
AUTHORIZED REPRESENTATIVE

PROJECT NO.
PN 973
C.I.P. NO.

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H.A.S. NO.

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**EP06.03**