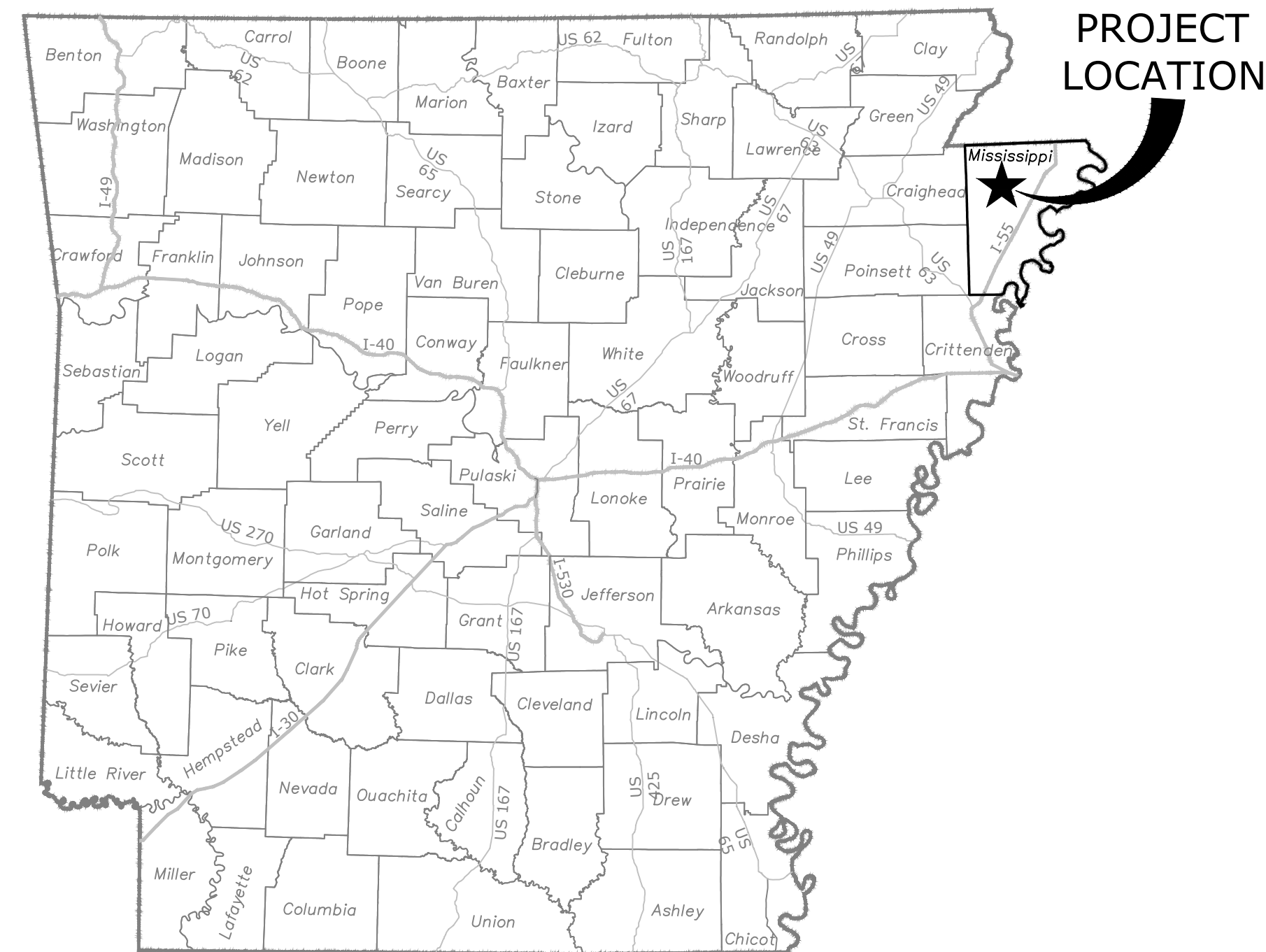
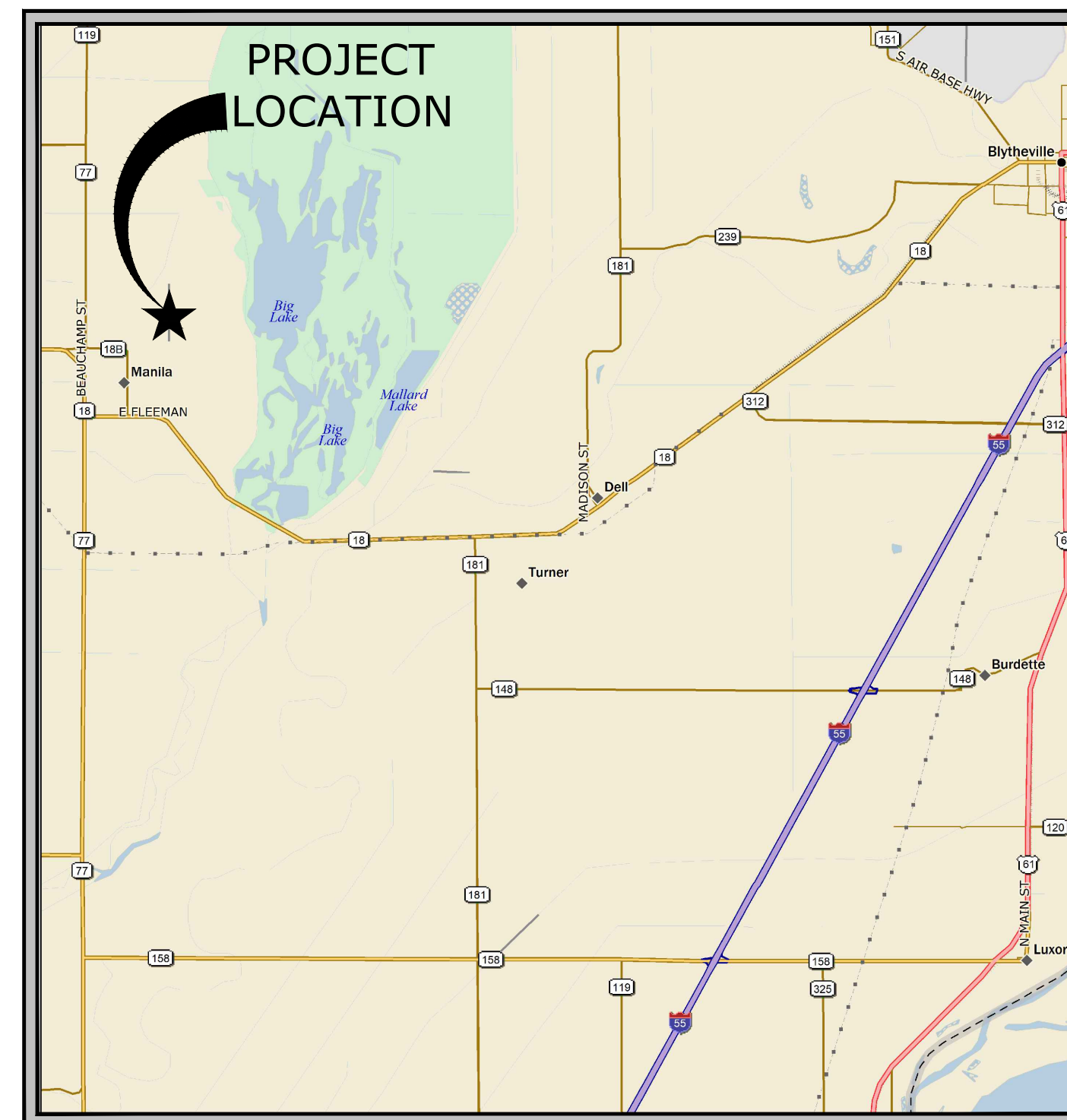


# MANILLA MUNICIPAL AIRPORT (MXA) CONSTRUCT HELIPAD

SPONSOR: CITY OF MANILLA, ARKANSAS



LOCATION MAP



VICINITY MAP

SHEET INDEX

- 1 COVER
- 2 CONSTRUCTION SAFETY AND PHASING PLAN - PHASE I
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- 9 MARKING AND LIGHTING PLAN
- 10 MISCELLANEOUS DETAILS I
- 11 MISCELLANEOUS DETAILS II

APRIL, 2025  
MCE PROJECT NUMBER 24-5838



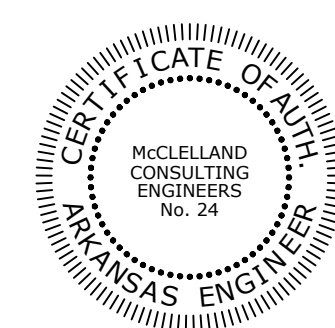
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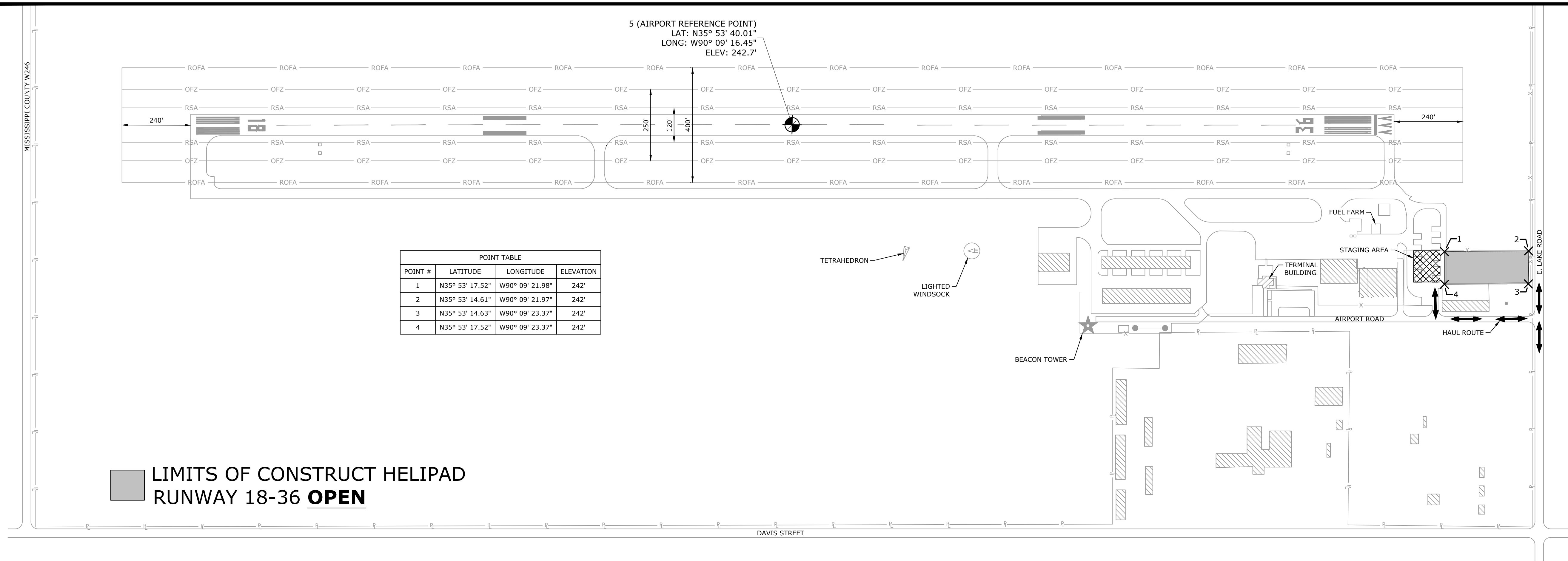


REVISIONS		
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ORIGINAL SIGNATURE ON FILE

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**CONTRACTOR SAFETY REQUIREMENTS**

- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ADVISORY CIRCULAR 150/5370-2G, "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION. THE ADVISORY CIRCULAR CAN BE FOUND ON THE FAA'S WEBSITE. (WWW.FAA.GOV)
- ALL CHANGES TO THIS SAFETY PLAN MUST BE APPROVED BY ENGINEER, AND FAA PROGRAM MANAGER.
- PRIOR TO CONSTRUCTION, THE OWNER, CONTRACTOR, AND ENGINEER WILL MEET TO REVIEW CONSTRUCTION SAFETY PLAN. FAILURE TO COMPLY WITH THIS CONSTRUCTION SAFETY PLAN WILL RESULT IN IMMEDIATE CORRECTIVE ACTIONS. (SEE CONSTRUCTION SAFETY AND PHASING PLAN IN SPECIFICATIONS).
- THE RUNWAY MUST BE CLOSED WHILE THE CONTRACTOR IS PRESENT IN THE RUNWAY OBSTACLE FREE ZONE (OFZ). THE OFZ IS 250 FEET WIDE CENTERED ON THE RUNWAY CENTERLINE AND EXTENDS 240 FEET BEYOND EACH END OF THE RUNWAY.
- CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE AIRPORT MANAGER PRIOR TO COMMENCING CONSTRUCTION SO THAT THE MANAGER CAN ISSUE THE APPROPRIATE NOTAMS.
- CONTRACTOR SHALL VERIFY WITH THE OWNER THAT THE APPROPRIATE NOTAMS ARE IN PLACE PRIOR TO INSTALLING AIRFIELD MARKINGS AND LIGHTED BARRICADES. PERSONNEL AND EQUIPMENT SHALL NOT BE PERMITTED INSIDE THE WORK AREA UNTIL THE NOTAMS HAVE BEEN CONFIRMED TO BE IN PLACE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ANY EXISTING FENCES OR GATES IN ORDER TO MAINTAIN A SECURED AREA DURING CONSTRUCTION.
- CONSTANT MONITORING OF AIRCRAFT RADIO COMMUNICATIONS DURING CONSTRUCTION ARE REQUIRED FOR THIS CONTRACT BY THE CONTRACTOR. THE LOCAL AIRPORT COMMON TRAFFIC ADVISORY FREQUENCY IS 122.8.
- CONTRACTOR'S GROUND VEHICLE OPERATIONS SHALL BE IN ACCORDANCE WITH AC 150/5210-20.
- ALL CONSTRUCTION EQUIPMENT SHALL BE MARKED WITH 3'x3' ORANGE AND WHITE CHECKER FLAG (DAY ONLY) OR FLASHING LIGHTS OF AMBER, YELLOW OR RED (DAY OR NIGHT) OR ESCORTED BY A VEHICLE SO EQUIPPED.
- ALL EQUIPMENT AND MATERIALS NOT IN USE SHALL BE STORED IN THE STAGING AREA.
- RUNWAY, TAXIWAY, & APRON SHALL BE KEPT CLEAR OF ALL DEBRIS & EQUIPMENT. AREAS SHALL BE SWEEP AS REQUIRED.
- CLOSED AIRFIELD MARKINGS SHALL BE INSTALLED AS THE FIRST TASK OF ANY WORK PHASE. CLOSED AIRFIELD MARKING SHALL BE REMOVED AS THE LAST TASK IN ANY WORK PHASE. PAVEMENT SHALL NOT BE REOPENED UNTIL RUNWAY, TAXIWAY, AND AOA PAVEMENT AREAS HAVE BEEN SWEEP CLEAR OF GRAVEL AND OTHER DEBRIS.
- CONSTRUCTION TRAFFIC SHALL NOT ENTER THE RUNWAY OBSTACLE FREE ZONE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT EXISTING FACILITIES, WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE. ALL SUCH FACILITIES, STRUCTURES, OR NAVAIDS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED, SATISFACTORILY TO THE OWNER, AT THE EXPENSE OF THE CONTRACTOR.
- ANY DAMAGE TO SURROUNDING APRONS, TAXIWAYS, RUNWAYS, OR HAUL ROUTES CAUSED BY CONSTRUCTION EQUIPMENT SHALL BE RESTORED BY THE CONTRACTOR TO ORIGINAL OR BETTER CONDITION, AT NO COST TO THE OWNER.

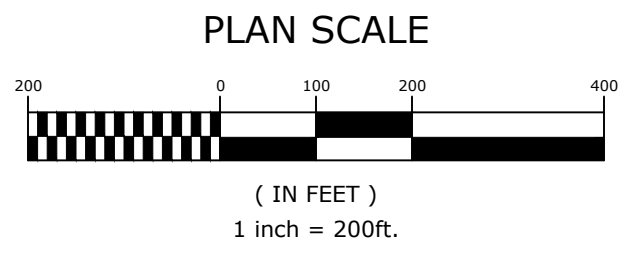
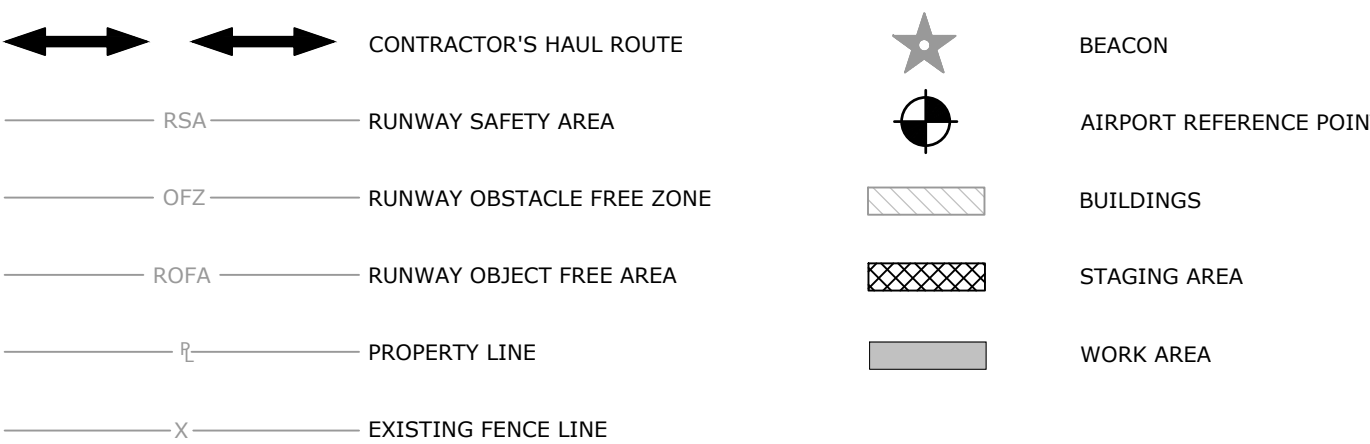
**GENERAL SITE NOTES**

- PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO GROUND TRAFFIC AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND AIRPORT USERS AT OR NEAR THE AIRPORT IN AN ADEQUATE AND SATISFACTORY MANNER IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- CONTRACTOR SHALL RETAIN A FULL SET OF LATEST APPROVED CONSTRUCTION PLANS ON SITE DURING CONSTRUCTION ACTIVITIES.
- CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE SITE WORK SPECIFICATIONS PROVIDED BY McCLELLAND CONSULTING ENGINEERS, INC. OR AS SPECIFIED BY THE OWNER'S RESIDENT REPRESENTATIVE.
- ALL OSHA REGULATIONS SHALL BE STRICTLY FOLLOWED AND SPECIAL CARE TAKEN TO PREVENT INTERACTION W/ OVERHEAD OR UNDERGROUND POWER SOURCES.
- THE LOCATION OF KNOWN SUBSURFACE STRUCTURES, PIPE, POWER, GAS, PHONE, RUNWAY/TAXIWAY LIGHTING AND CABLES, ETC. ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INFORMATION AND SATISFYING HIMSELF AS TO THE LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE. THE COST OF SUCH REPAIRS OR RELOCATIONS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE ONE CALL CENTER AT (800) 482-8998 AT LEAST 48 HOURS PRIOR TO EXCAVATING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR COORDINATION WITH THE FAA UTILITIES / FACILITIES MANAGER TO LOCATE ANY UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. ANY REQUIRED FEES AND COSTS ASSOCIATED WITH UTILITY LOCATING SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, LICENSES, ETC. REQUIRED BY ALL LOCAL, STATE, AND FEDERAL AGENCIES.
- ALL PAVEMENTS, LIGHTING SYSTEMS, SIGNS, FACILITIES, DRAINAGE STRUCTURES, FENCES, ETC. THAT ARE DISTURBED SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION USING LIKE MATERIALS. COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR UNLESS PROVISIONS FOR PAYMENT ARE MADE IN THE CONTRACT DOCUMENTS.
- UPON NOTIFICATION OF A DECLARED AIRCRAFT EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE RUNWAY AND / OR TAXIWAY OF EQUIPMENT AND PERSONNEL.
- ALL CONCRETE SHALL DEVELOP 4,000 PSI COMPRESSIVE STRENGTH IN 28 DAYS UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND STAKING.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LAYOUT COORDINATES IN THE FIELD. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER FOR DIRECTION PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND STAKING.
- THE CONTRACTOR SHALL KEEP ALL AOA SURFACES CLEAN AND SWEEP FREE OF DEBRIS. WORK AREAS WILL NOT BE OPENED FOR USE UNTIL THEY HAVE BEEN SWEEP FREE OF ALL TRASH AND DEBRIS.
- CARE SHOULD BE TAKEN TO APPLY PAINT FOR PAVEMENT MARKINGS AT THE PROPER YIELD TO PREVENT DAMAGE TO THE PAVEMENT. APPLICATION RATES SHOULD NOT EXCEED MANUFACTURER'S RECOMMENDATIONS. IF DAMAGE TO THE PAVEMENT OCCURS, CONTRACTOR SHALL REPAIR AT THEIR OWN EXPENSE.
- GLASS BEADS ARE TO BE APPLIED TO ALL MARKINGS IN ACCORDANCE WITH THE SPECIFICATIONS (UNLESS OTHERWISE NOTED.)

**PHASING NOTES**

**PHASE I** CONSISTS OF ALL WORK NECESSARY TO COMPLETE THIS PROJECT. ALL WORK WILL BE LOCATED OUTSIDE OF RUNWAY 18-36 OFZ; THEREFORE, RUNWAY 18-36 WILL REMAIN OPEN FOR THE DURATION OF PHASE I. PHASE I CONTRACT TIME IS 90 CALENDAR DAYS. LIQUIDATED DAMAGES OF \$350 PER DAY WILL BE ASSESSED FOR EACH DAY PHASE I EXCEEDS CONTRACT TIME.

**LEGEND**



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STATE OF ARKANSAS  
 LICENSED PROFESSIONAL ENGINEER  
 No. 23088  
 J. BRET BULLOY  
 ORIGINAL SIGNATURE ON FILE

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 CONSTRUCT HELIPAD  
 MANILLA, ARKANSAS

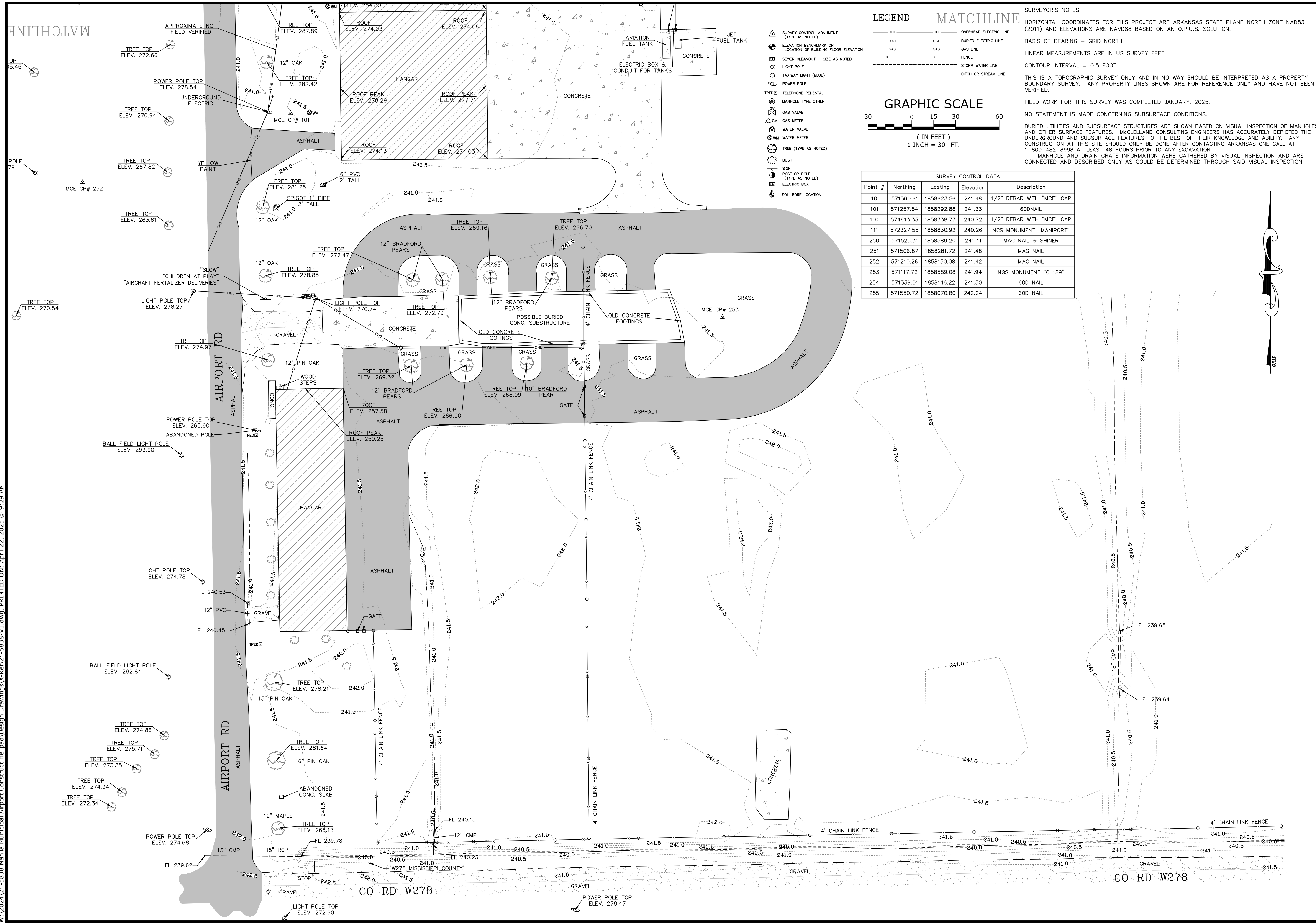
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**CONSTRUCTION SAFETY AND PHASING PLAN - PHASE I**

DESIGNED BY: JME	DRAWN BY: SJM
DATE: APRIL, 2025	REVISION:
SCALE: 1" = 200'	JOB NUMBER: 24-5838

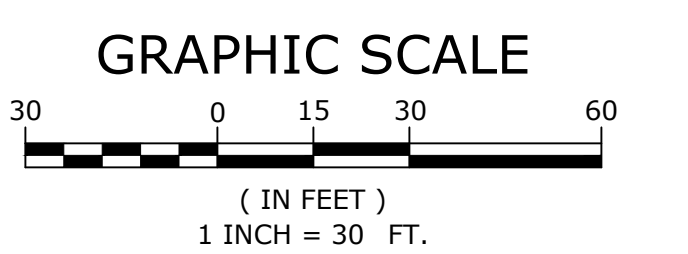
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**LEGEND**

- OHE — OVERHEAD ELECTRIC LINE
- - - - - BURIED ELECTRIC LINE
- - - - - GAS LINE
- - - - - STORM WATER LINE
- - - - - DITCH OR STREAM LINE

**MATCHLINE**



**SURVEY CONTROL DATA**

Point #	Northing	Easting	Elevation	Description
10	571360.91	1858623.56	241.48	1/2" REBAR WITH "MCE" CAP
101	571257.54	1858292.88	241.33	60DNAIL
110	574613.33	1858738.77	240.72	1/2" REBAR WITH "MCE" CAP
111	572327.55	1858830.92	240.26	NGS MONUMENT "MANIPORT"
250	571525.31	1858589.20	241.41	MAG NAIL & SHINER
251	571506.87	1858281.72	241.48	MAG NAIL
252	571120.26	1858150.08	241.42	MAG NAIL
253	571117.72	1858589.08	241.94	NGS MONUMENT "C 189"
254	571339.01	1858146.22	241.50	60D NAIL
255	571550.72	1858070.80	242.24	60D NAIL

**SURVEYOR'S NOTES:**

HORIZONTAL COORDINATES FOR THIS PROJECT ARE ARKANSAS STATE PLANE NORTH ZONE NAD83 (2011) AND ELEVATIONS ARE NAVD88 BASED ON AN O.P.U.S. SOLUTION.

BASIS OF BEARING = GRID NORTH

LINEAR MEASUREMENTS ARE IN US SURVEY FEET.

CONTOUR INTERVAL = 0.5 FOOT.

THIS IS A TOPOGRAPHIC SURVEY ONLY AND IN NO WAY SHOULD BE INTERPRETED AS A PROPERTY BOUNDARY SURVEY. ANY PROPERTY LINES SHOWN ARE FOR REFERENCE ONLY AND HAVE NOT BEEN VERIFIED.

FIELD WORK FOR THIS SURVEY WAS COMPLETED JANUARY, 2025.

NO STATEMENT IS MADE CONCERNING SUBSURFACE CONDITIONS.

BURIED UTILITIES AND SUBSURFACE STRUCTURES ARE SHOWN BASED ON VISUAL INSPECTION OF MANHOLES AND OTHER SURFACE FEATURES. MCCLELLAND CONSULTING ENGINEERS HAS ACCURATELY DEPICTED THE UNDERGROUND AND SUBSURFACE FEATURES TO THE BEST OF THEIR KNOWLEDGE AND ABILITY. ANY CONSTRUCTION AT THIS SITE SHOULD ONLY BE DONE AFTER CONTACTING ARKANSAS ONE CALL AT 1-800-482-8998 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.

MANHOLE AND DRAIN GRATE INFORMATION WERE GATHERED BY VISUAL INSPECTION AND ARE CONNECTED AND DESCRIBED ONLY AS COULD BE DETERMINED THROUGH SAID VISUAL INSPECTION.

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CONSTRUCT HELIPAD**

MANILA, ARKANSAS

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**REVISIONS**

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**TOPOGRAPHIC SURVEY**

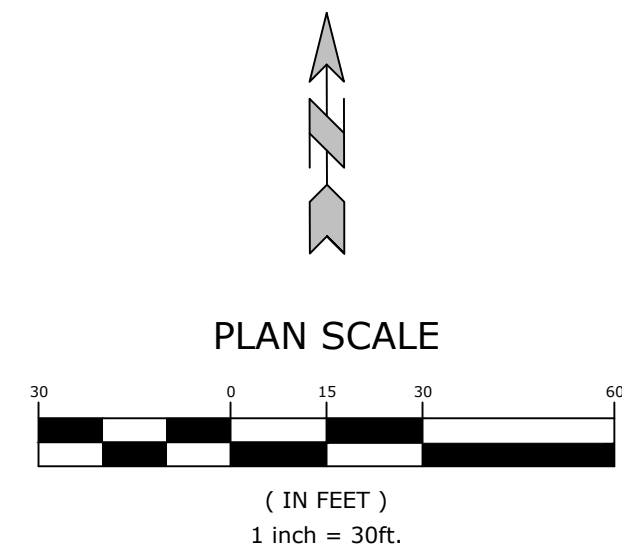
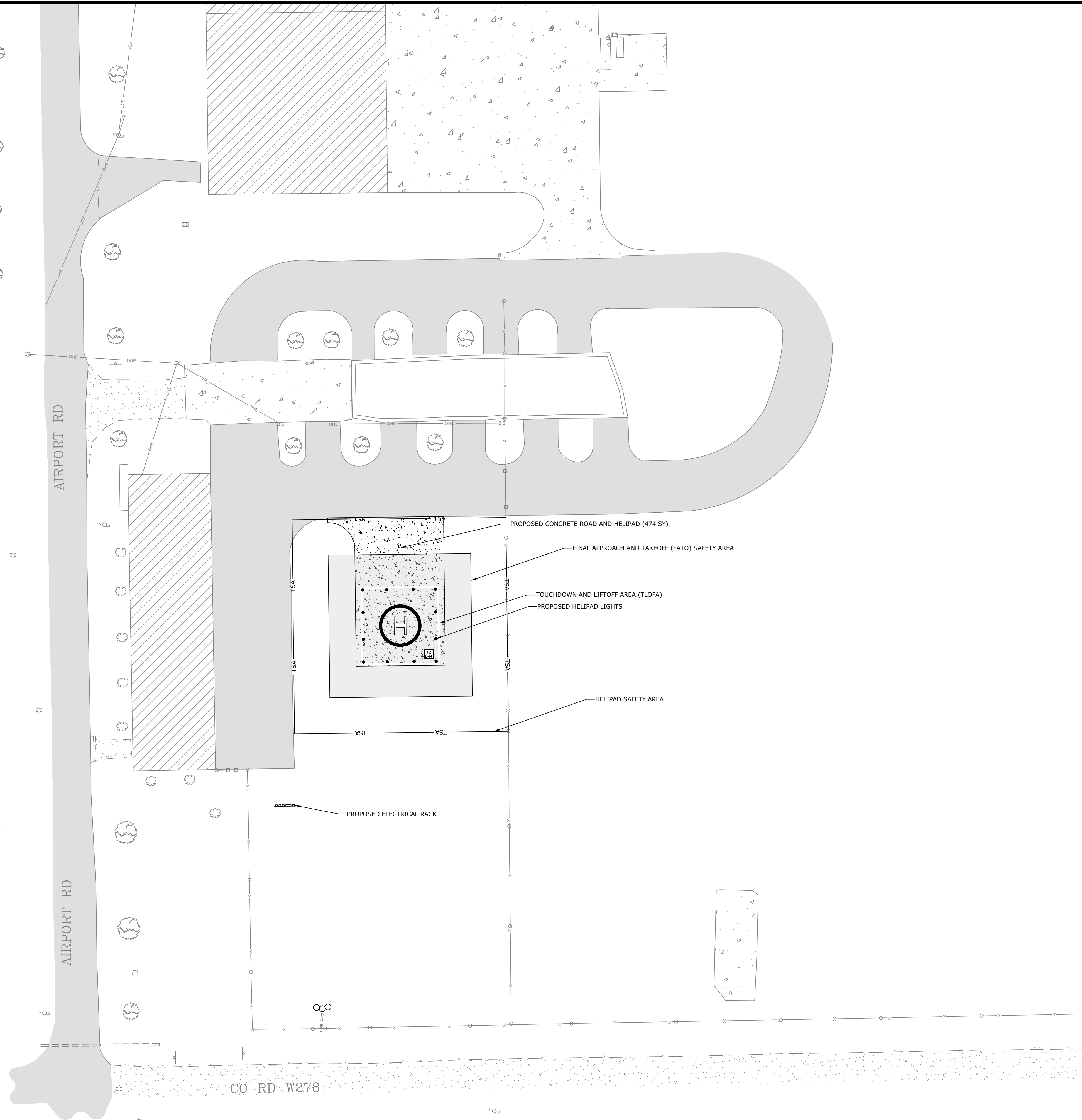
SURVEY MANAGER: AWM DRAWN BY: JDM

DATE: 01/27/2025 REVISION:

SCALE: 1" = 30' JOB NUMBER: 24-5838

**3**

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**GENERAL SITE NOTES**

1. PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO GROUND TRAFFIC AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND AIRPORT USERS AT OR NEAR THE AIRPORT IN AN ADEQUATE AND SATISFACTORY MANNER IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
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3. CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE SITE WORK SPECIFICATIONS PROVIDED BY McCLELLAND CONSULTING ENGINEERS, INC. OR AS SPECIFIED BY THE OWNER'S RESIDENT REPRESENTATIVE.
4. CONTRACTOR SHALL REFER TO PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT DETAILS FOR PAVING DESIGN AND PROPER MATERIALS.
5. ALL OSHA REGULATIONS SHALL BE STRICTLY FOLLOWED AND SPECIAL CARE TAKEN TO PREVENT INTERACTION W/ OVERHEAD OR UNDERGROUND POWER SOURCES.
6. THE LOCATION OF KNOWN SUBSURFACE STRUCTURES, PIPE, POWER, GAS, PHONE, RUNWAY/TAXIWAY LIGHTING AND CABLES, ETC. ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INFORMATION AND SATISFYING HIMSELF AS TO THE LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE. THE COST OF SUCH REPAIRS OR RELOCATIONS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.
7. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ONE CALL CENTER AT (800) 482-8998 AT LEAST 48 HOURS PRIOR TO EXCAVATING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR COORDINATION WITH THE FAA UTILITIES / FACILITIES MANAGER TO LOCATE ANY UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. ANY REQUIRED FEES AND COSTS ASSOCIATED WITH UTILITY LOCATING SHALL BE BORNE BY THE CONTRACTOR.
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9. ALL PAVEMENTS, LIGHTING SYSTEMS, SIGNS, FACILITIES, DRAINAGE STRUCTURES, FENCES, ETC. THAT ARE DISTURBED SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION USING LIKE MATERIALS. COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR UNLESS PROVISIONS FOR PAYMENT ARE MADE IN THE CONTRACT DOCUMENTS.
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11. ALL CONCRETE SHALL DEVELOP 4,000 PSI COMPRESSIVE STRENGTH IN 28 DAYS UNLESS OTHERWISE SPECIFIED.
12. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LAYOUT COORDINATES IN THE FIELD. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER FOR DIRECTION PRIOR TO COMMENCING CONSTRUCTION.
13. CARE SHOULD BE TAKEN TO APPLY PAINT FOR PAVEMENT MARKINGS AT THE PROPER YIELD TO PREVENT DAMAGE TO THE PAVEMENT. APPLICATION RATES SHOULD NOT EXCEED MANUFACTURER'S RECOMMENDATIONS. IF DAMAGE TO THE PAVEMENT OCCURS, CONTRACTOR SHALL REPAIR AT THEIR OWN EXPENSE.
14. GLASS BEADS ARE TO BE APPLIED TO ALL MARKINGS IN ACCORDANCE WITH THE SPECIFICATIONS (UNLESS OTHERWISE NOTED).
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND STAKING.
16. THE CONTRACTOR SHALL KEEP ALL AOA SURFACES CLEAN AND SWEEPED FREE OF DEBRIS. WORK AREAS WILL NOT BE OPENED FOR USE UNTIL THEY HAVE BEEN SWEEPED FREE OF ALL TRASH AND DEBRIS.

**LEGEND**

	EXISTING BUILDING
	HELIPAD SAFETY AREA
	PROPOSED CONCRETE PAVEMENT
	PROPOSED HELIPAD LIGHTS
	FINAL APPROACH AND TAKEOFF (FATO) AREA
	EXISTING ASPHALT
	EXISTING CONCRETE
	EXISTING GRAVEL
	EXISTING TREE
	EXISTING OVERHEAD LINE
	EXISTING FENCE
	EXISTING SIGN
	EXISTING POWER POLE
	EXISTING DRAINAGE PIPE
	EXISTING STADIUM LIGHT

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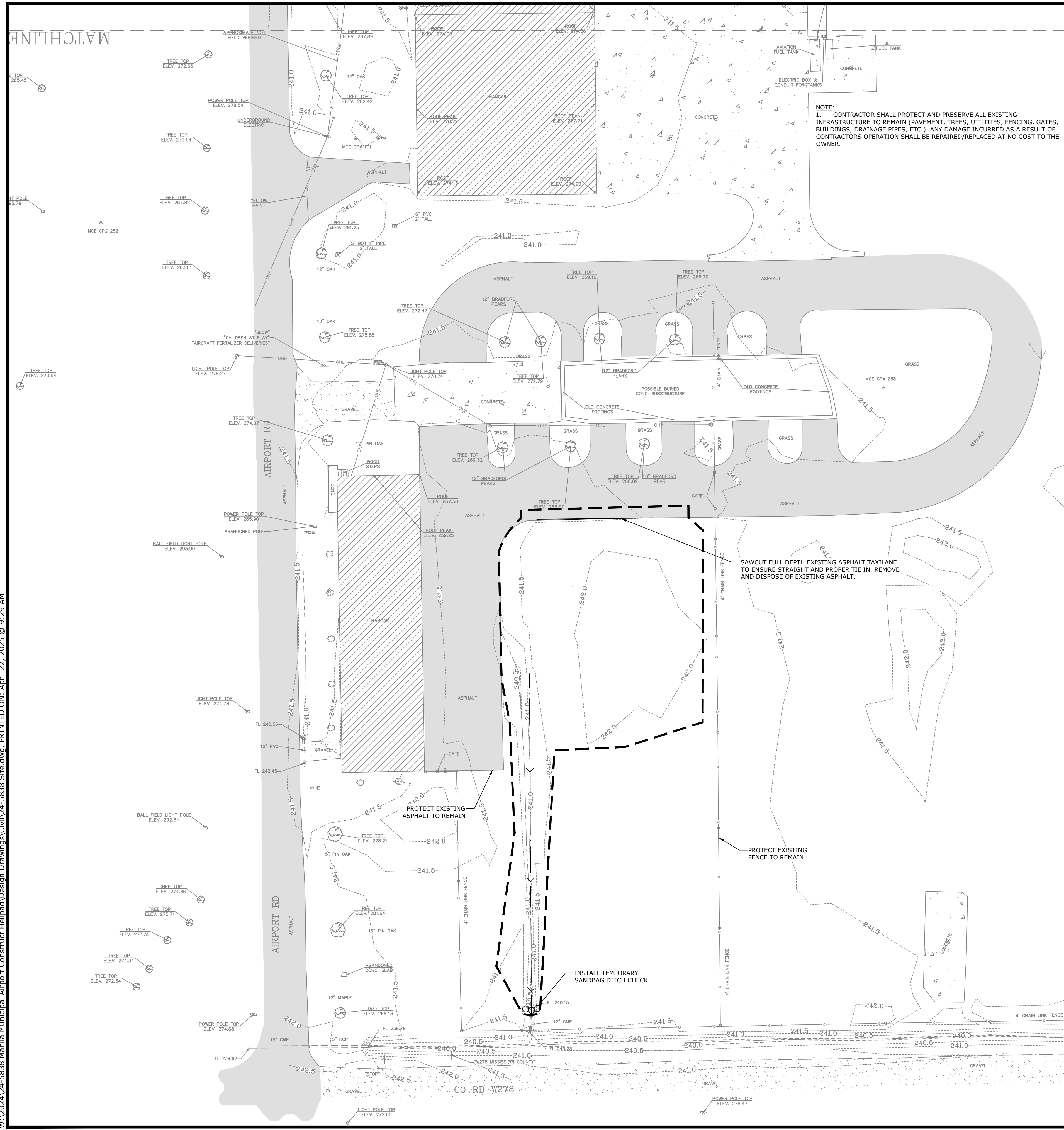


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**SITE OVERVIEW**

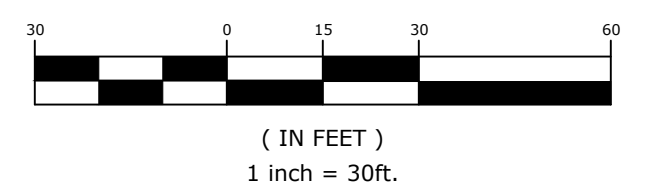
DESIGNED BY: JME	DRAWN BY: SJM
DATE: APRIL, 2025	REVISION:
SCALE: 1" = 30'	JOB NUMBER: 24-5838

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**NOTE:**  
 1. CONTRACTOR SHALL PROTECT AND PRESERVE ALL EXISTING INFRASTRUCTURE TO REMAIN (PAVEMENT, TREES, UTILITIES, FENCING, GATES, BUILDINGS, DRAINAGE PIPES, ETC.). ANY DAMAGE INCURRED AS A RESULT OF CONTRACTORS OPERATION SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER.

**PLAN SCALE**



**LEGEND**

	EXISTING BUILDING		POWER POLE
	LIMITS OF DISTURBANCE		GUY LINE
	PROPOSED FLOW LINE		TELEPHONE PEDESTAL
	SURVEY CONTROL MONUMENT (TYPE AS NOTED)		WATER VALVE
	ELEVATION BENCHMARK OR LOCATION OF BUILDING FLOOR ELEVATION		FIRE HYDRANT
	FOUND SURVEY BOUNDARY MARKER		TREE (TYPE AS NOTED)
	STORM DRAIN GRATE		SIGN
	SANITARY SEWER MANHOLE		POST OR POLE (TYPE AS NOTED)
	SEWER CLEANOUT - SIZE AS NOTED		OHEH ELECTRIC LINE
	STADIUM LIGHT		FENCE
	EXISTING ASPHALT PAVEMENT		EXISTING DRAINAGE PIPE
	EXISTING CONCRETE PAVEMENT		EXISTING DITCH LINE
	EXISTING GRAVEL		EXISTING MAJOR CONTOUR
	TEMPORARY SANDBAG DITCH CHECK		EXISTING MINOR CONTOUR

**GENERAL DEMOLITION NOTES**

- ALL AREAS AND ITEMS WITHIN THE LIMITS OF DISTURBANCE ARE TO BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED ON THIS PLAN.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE ONE CALL CENTER AT (800) 482-8998 AT LEAST 48 HOURS PRIOR TO EXCAVATING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED.
- THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE TOPOGRAPHICAL SURVEY FOR REFERENCE. THE LOCATION OF KNOWN SUBSURFACE STRUCTURES, PIPES, POWER, GAS, PHONE, RUNWAY / TAXIWAY LIGHTING AND CABLES, ETC. ARE SHOWN ON THE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INFORMATION AND SATISFYING HIMSELF TO AS TO THE LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE. THE COST OF SUCH REPAIRS OR RELOCATIONS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.
- CONTRACTOR SHALL DISPOSE OF ALL MATERIALS RESULTING FROM DEMOLITION IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS THAT GOVERN SUCH OPERATIONS.
- ALL ABANDONED SERVICE LINES SHALL BE DISCONNECTED AND CAPPED PER UTILITY COMPANIES REQUIREMENTS. COORDINATE ALL DISCONNECTIONS WITH UTILITY COMPANIES.
- CONTRACTOR IS TO BRING TO THE ATTENTION OF THE CIVIL ENGINEER ANY AREA OF DEMOLITION IN QUESTION BEFORE PROCEEDING WITH WORK.
- CONTRACTOR TO REVIEW AND COORDINATE DEMOLITION LIMITS WITH PROPOSED CONSTRUCTION PLANS.
- EXISTING CLEAN TOPSOIL TO BE STOCKPILED FOR FUTURE USE ON THIS SITE AND IS TO BE COORDINATED WITH THE RESIDENT PROJECT REPRESENTATIVE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING ALL TREES, STUMP REMOVAL, CLEARING AND GRUBBING PER THE PROJECT SPECIFICATIONS.

**GENERAL EROSION CONTROL NOTES**

- CONTRACTOR SHALL PROVIDE AND MAINTAIN STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND UTILIZE BEST MANAGEMENT PRACTICES TO CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DIRECTED BY PERMITTING AGENCY AND OWNER OR AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- PERMIT FOR ANY CONSTRUCTION ACTIVITY MUST BE MAINTAINED ON SITE AT ALL TIMES.
- CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- GENERAL CONTRACTOR SHALL USE THE STAGING AREAS AS SHOWN ON THE CONSTRUCTION SAFETY AND PHASING PLAN SHEETS FOR THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- ALL WASH WATER SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE. ALL SUCH MATERIALS SHALL BE KEPT OFF OF THE AIRPORT OPERATIONS AREA.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDDED. THESE AREAS SHALL BE SEEDDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
- IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- CONTRACTOR SHALL DESIGNATE/IDENTIFY AREAS INSIDE THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
- ALL BMP'S SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED BY A MINIMUM OF 80% GRASS COVERAGE.
- ALL DEWATERING ACTIVITIES SHALL CONFORM TO ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. DISCHARGED WATER MUST BE PROPERLY TREATED BEFORE RELEASING FROM THE SITE.

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STATE OF ARKANSAS  
 LICENSED PROFESSIONAL ENGINEER  
 No. 23088  
 J. P. BRETHERTON  
 ORIGINAL SIGNATURE ON FILE

MANILLA MUNICIPAL AIRPORT (MXA)  
 CONSTRUCT HELIPAD  
 MANILLA, ARKANSAS

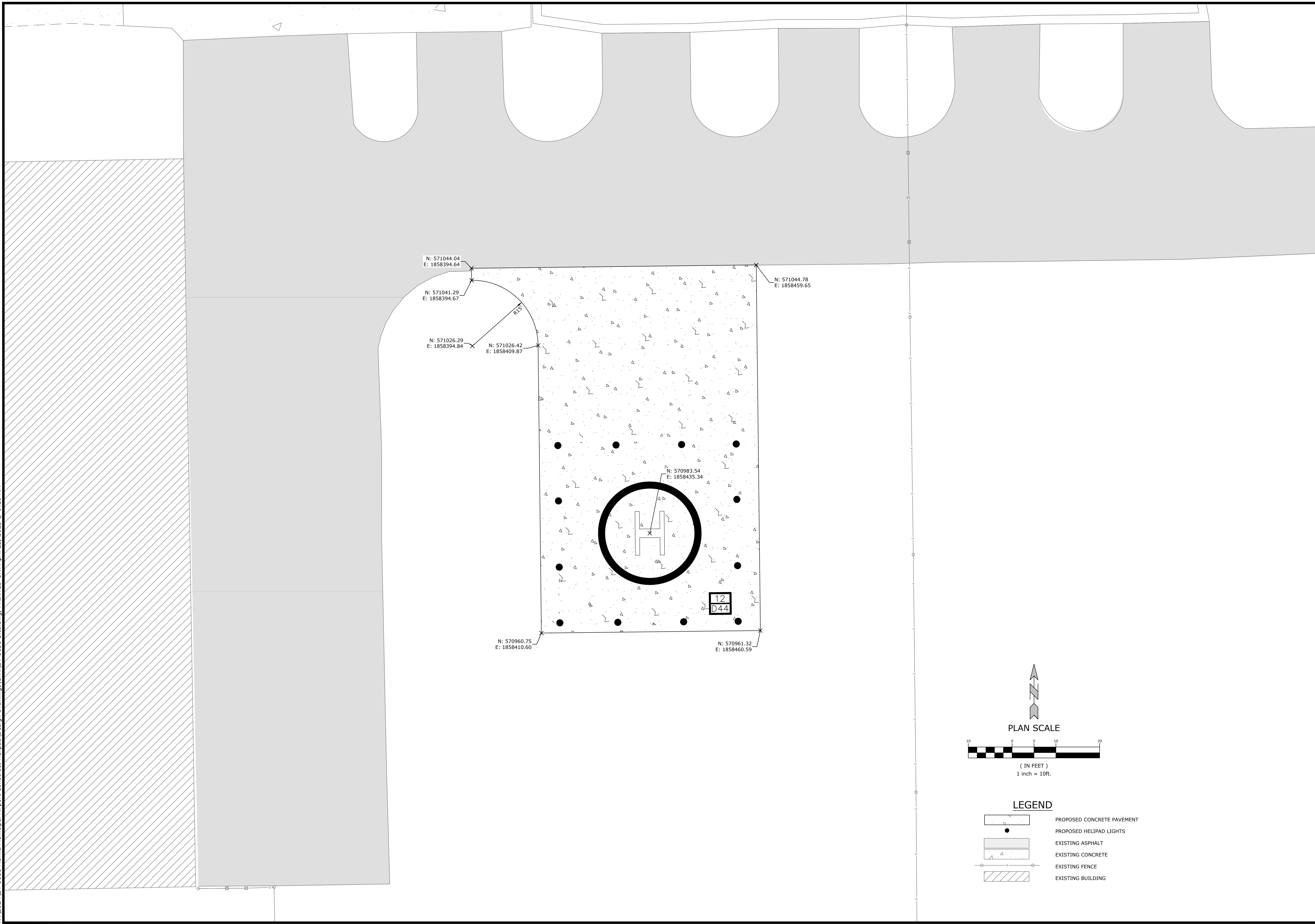
**811**  
 Know what's below.  
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REV	DATE	DESCRIPTION

**DEMOLITION AND EROSION CONTROL PLAN**

DESIGNED BY: JME	DRAWN BY: SJM
DATE: APRIL, 2025	REVISION:
SCALE: 1" = 30'	JOB NUMBER: 24-5838

W:\2024\24-5838 -Manilla Municipal Airport Construct Helipad\Design Drawings\Civil\24-5838 Site.dwg, PRINTED ON: April 22, 2025 @ 9:29 AM



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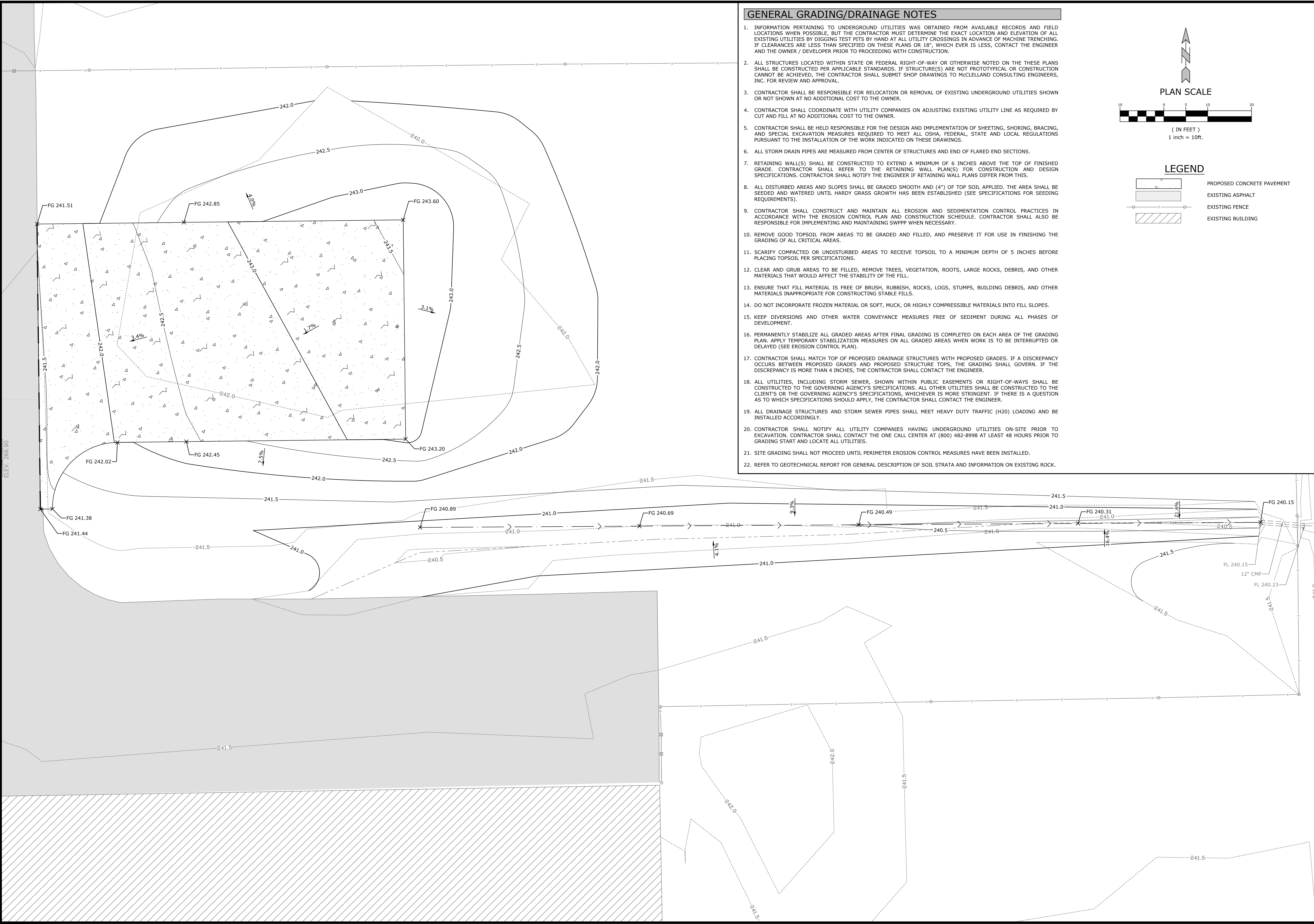
**COORDINATE PLAN**

DESIGNED BY: JME	DRAWN BY: SJM
DATE: APRIL, 2025	REVISION:
SCALE: 1" = 10'	JOB NUMBER: 24-5838

**6**

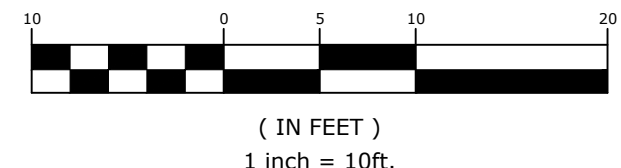
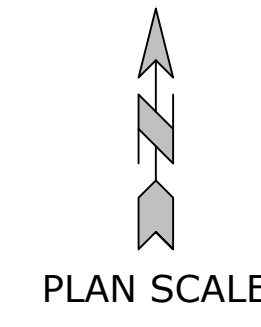
W:\2024\24-5838 Manilla Municipal Airport Construct Helipad\Design Drawings\Civil\24-5838 Grading.dwg, PRINTED ON: April 22, 2025 @ 9:29 AM

ELEV. 266.90



**GENERAL GRADING/DRAINAGE NOTES**

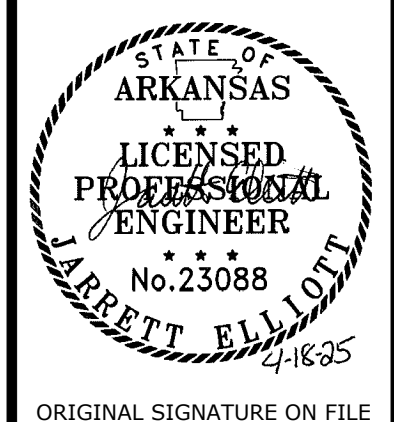
1. INFORMATION PERTAINING TO UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD LOCATIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS IN ADVANCE OF MACHINE TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THESE PLANS OR 18", WHICH EVER IS LESS, CONTACT THE ENGINEER AND THE OWNER / DEVELOPER PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. ALL STRUCTURES LOCATED WITHIN STATE OR FEDERAL RIGHT-OF-WAY OR OTHERWISE NOTED ON THESE PLANS SHALL BE CONSTRUCTED PER APPLICABLE STANDARDS. IF STRUCTURE(S) ARE NOT PROTOTYPICAL OR CONSTRUCTION CANNOT BE ACHIEVED, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO MCCLELLAND CONSULTING ENGINEERS, INC. FOR REVIEW AND APPROVAL.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OR REMOVAL OF EXISTING UNDERGROUND UTILITIES SHOWN OR NOT SHOWN AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES ON ADJUSTING EXISTING UTILITY LINE AS REQUIRED BY CUT AND FILL AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF SHEETING, SHORING, BRACING, AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS.
6. ALL STORM DRAIN PIPES ARE MEASURED FROM CENTER OF STRUCTURES AND END OF FLARED END SECTIONS.
7. RETAINING WALL(S) SHALL BE CONSTRUCTED TO EXTEND A MINIMUM OF 6 INCHES ABOVE THE TOP OF FINISHED GRADE. CONTRACTOR SHALL REFER TO THE RETAINING WALL PLAN(S) FOR CONSTRUCTION AND DESIGN SPECIFICATIONS. CONTRACTOR SHALL NOTIFY THE ENGINEER IF RETAINING WALL PLANS DIFFER FROM THIS.
8. ALL DISTURBED AREAS AND SLOPES SHALL BE GRADED SMOOTH AND (4") OF TOP SOIL APPLIED. THE AREA SHALL BE SEEDED AND WATERED UNTIL HARDY GRASS GROWTH HAS BEEN ESTABLISHED (SEE SPECIFICATIONS FOR SEEDING REQUIREMENTS).
9. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL PRACTICES IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND CONSTRUCTION SCHEDULE. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING SWPPP WHEN NECESSARY.
10. REMOVE GOOD TOPSOIL FROM AREAS TO BE GRADED AND FILLED, AND PRESERVE IT FOR USE IN FINISHING THE GRADING OF ALL CRITICAL AREAS.
11. SCARIFY COMPACTED OR UNDISTURBED AREAS TO RECEIVE TOPSOIL TO A MINIMUM DEPTH OF 5 INCHES BEFORE PLACING TOPSOIL PER SPECIFICATIONS.
12. CLEAR AND GRUB AREAS TO BE FILLED, REMOVE TREES, VEGETATION, ROOTS, LARGE ROCKS, DEBRIS, AND OTHER MATERIALS THAT WOULD AFFECT THE STABILITY OF THE FILL.
13. ENSURE THAT FILL MATERIAL IS FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER MATERIALS INAPPROPRIATE FOR CONSTRUCTING STABLE FILLS.
14. DO NOT INCORPORATE FROZEN MATERIAL OR SOFT, MUCK, OR HIGHLY COMPRESSIBLE MATERIALS INTO FILL SLOPES.
15. KEEP DIVERSIONS AND OTHER WATER CONVEYANCE MEASURES FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
16. PERMANENTLY STABILIZE ALL GRADED AREAS AFTER FINAL GRADING IS COMPLETED ON EACH AREA OF THE GRADING PLAN. APPLY TEMPORARY STABILIZATION MEASURES ON ALL GRADED AREAS WHEN WORK IS TO BE INTERRUPTED OR DELAYED (SEE EROSION CONTROL PLAN).
17. CONTRACTOR SHALL MATCH TOP OF PROPOSED DRAINAGE STRUCTURES WITH PROPOSED GRADES. IF A DISCREPANCY OCCURS BETWEEN PROPOSED GRADES AND PROPOSED STRUCTURE TOPS, THE GRADING SHALL GOVERN. IF THE DISCREPANCY IS MORE THAN 4 INCHES, THE CONTRACTOR SHALL CONTACT THE ENGINEER.
18. ALL UTILITIES, INCLUDING STORM SEWER, SHOWN WITHIN PUBLIC EASEMENTS OR RIGHT-OF-WAYS SHALL BE CONSTRUCTED TO THE GOVERNING AGENCY'S SPECIFICATIONS. ALL OTHER UTILITIES SHALL BE CONSTRUCTED TO THE CLIENT'S OR THE GOVERNING AGENCY'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT. IF THERE IS A QUESTION AS TO WHICH SPECIFICATIONS SHOULD APPLY, THE CONTRACTOR SHALL CONTACT THE ENGINEER.
19. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
20. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON-SITE PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT THE ONE CALL CENTER AT (800) 482-8998 AT LEAST 48 HOURS PRIOR TO GRADING START AND LOCATE ALL UTILITIES.
21. SITE GRADING SHALL NOT PROCEED UNTIL PERIMETER EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
22. REFER TO GEOTECHNICAL REPORT FOR GENERAL DESCRIPTION OF SOIL STRATA AND INFORMATION ON EXISTING ROCK.



**LEGEND**

- PROPOSED CONCRETE PAVEMENT
- EXISTING ASPHALT
- EXISTING FENCE
- EXISTING BUILDING

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**GRADING PLAN**

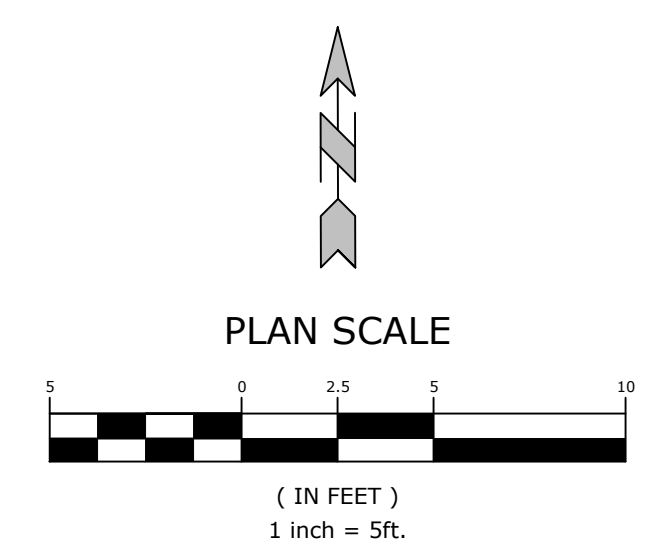
DESIGNED BY: JME  
 DATE: APRIL, 2025  
 SCALE: 1" = 10'  
 DRAWN BY: SJM  
 REVISION:  
 JOB NUMBER: 24-5838

EXISTING ASPHALT TAXILANE



**LEGEND**

	PROPOSED CONCRETE PAVEMENT
	EXISTING ASPHALT PAVEMENT
	CONSTRUCTION JOINT
	CONTRACTION JOINT
	THICKENED EDGE ISOLATION JOINT
	REINFORCED PANEL



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 No. 23088  
 J. BRETT BILLOTT  
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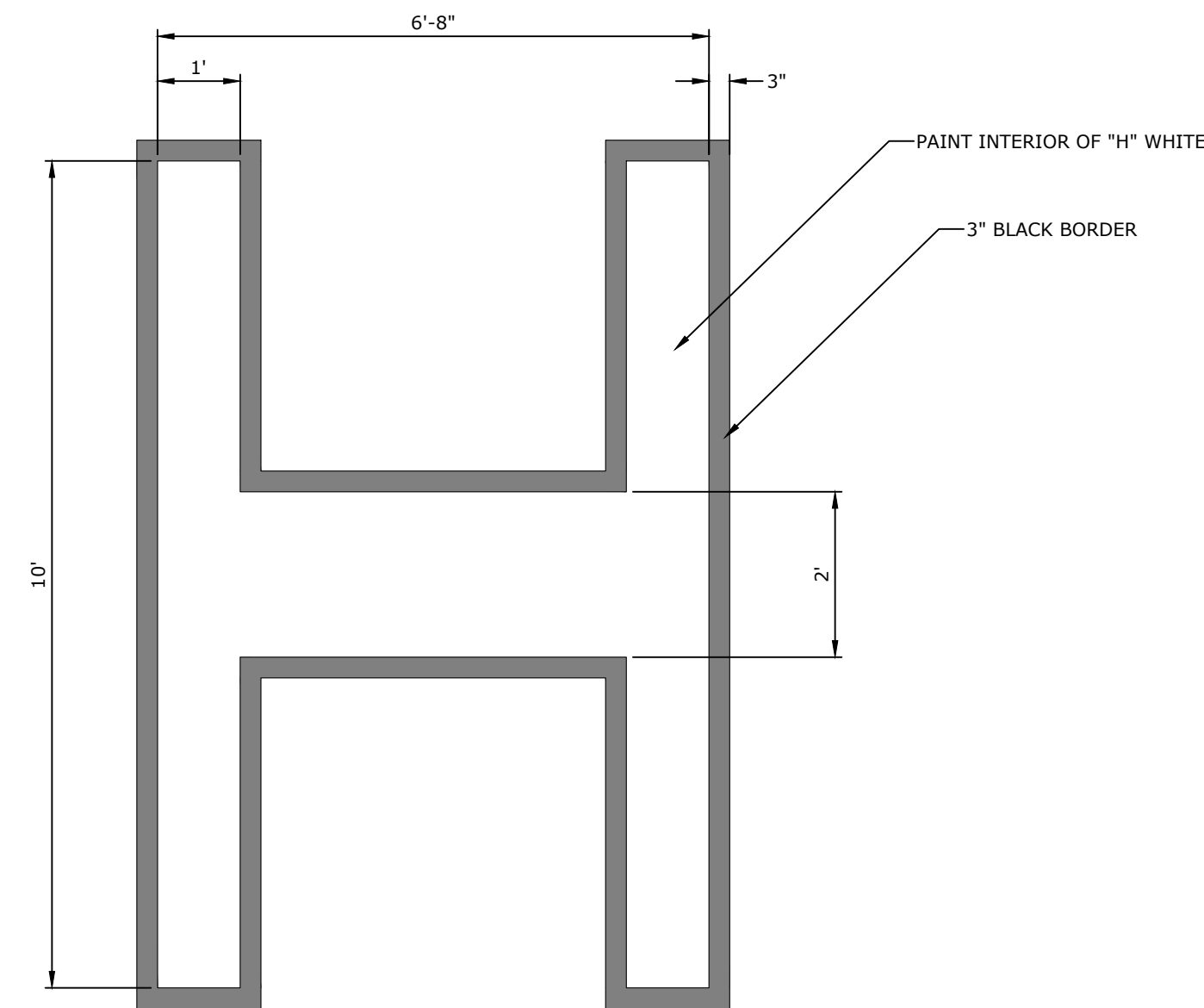
REV	DATE	DESCRIPTION

**JOINTING AND ELEVATION PLAN**

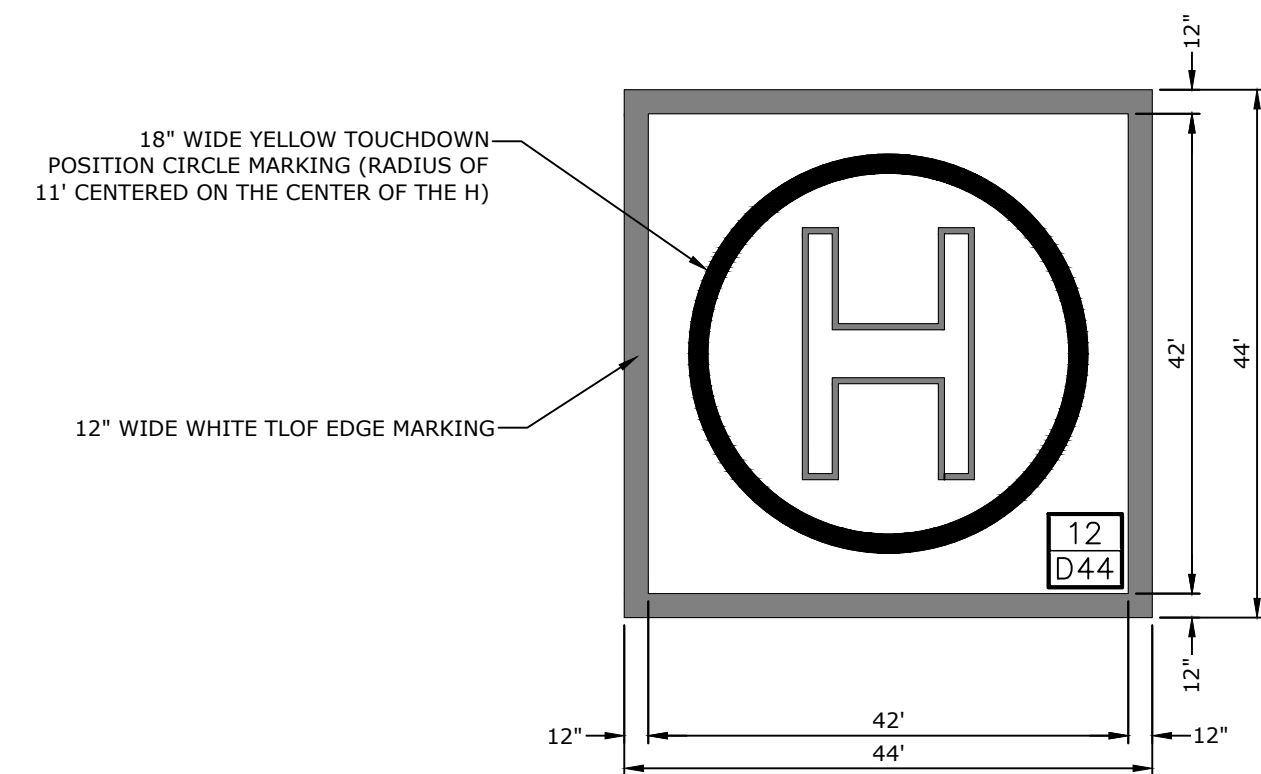
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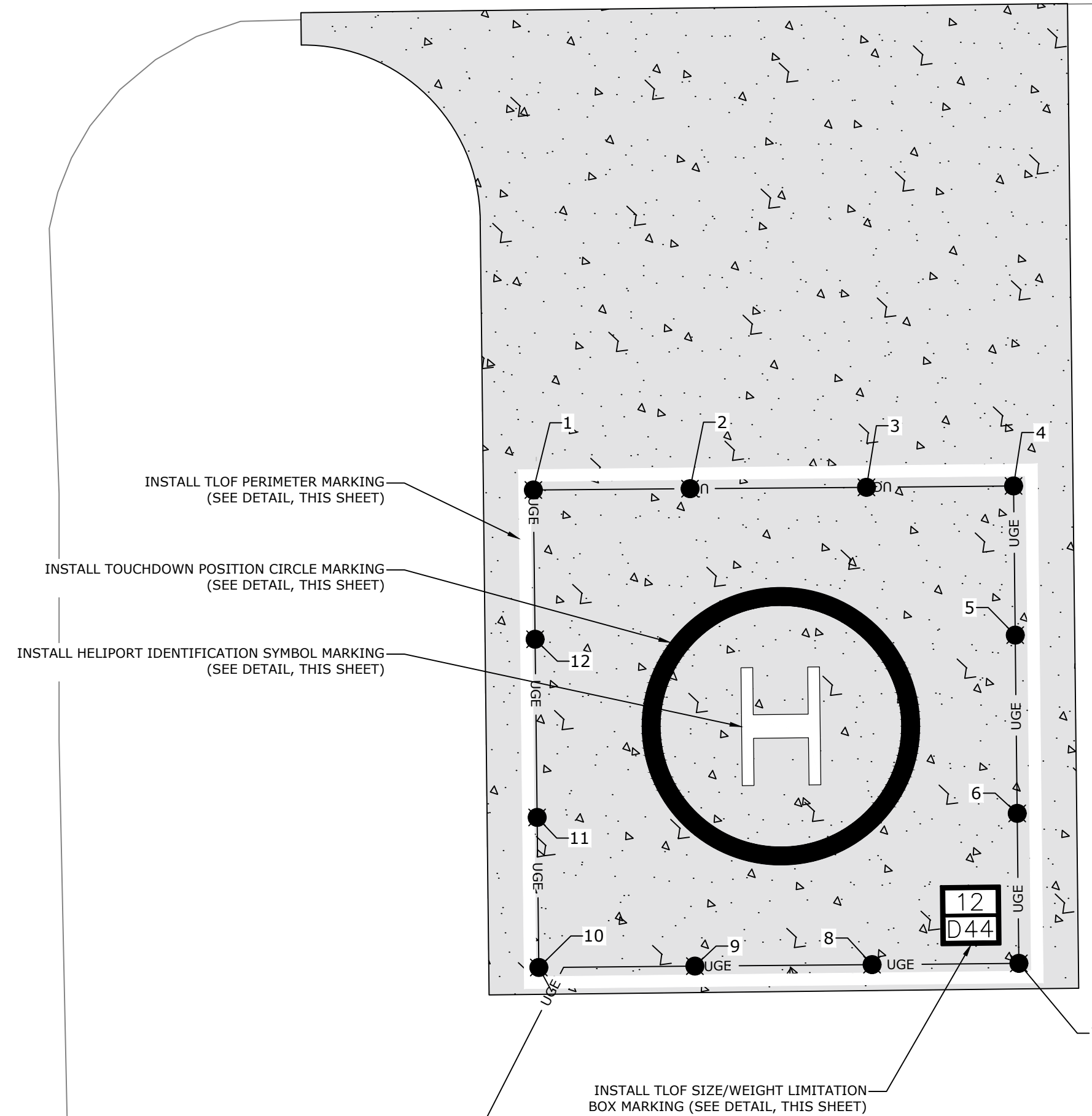
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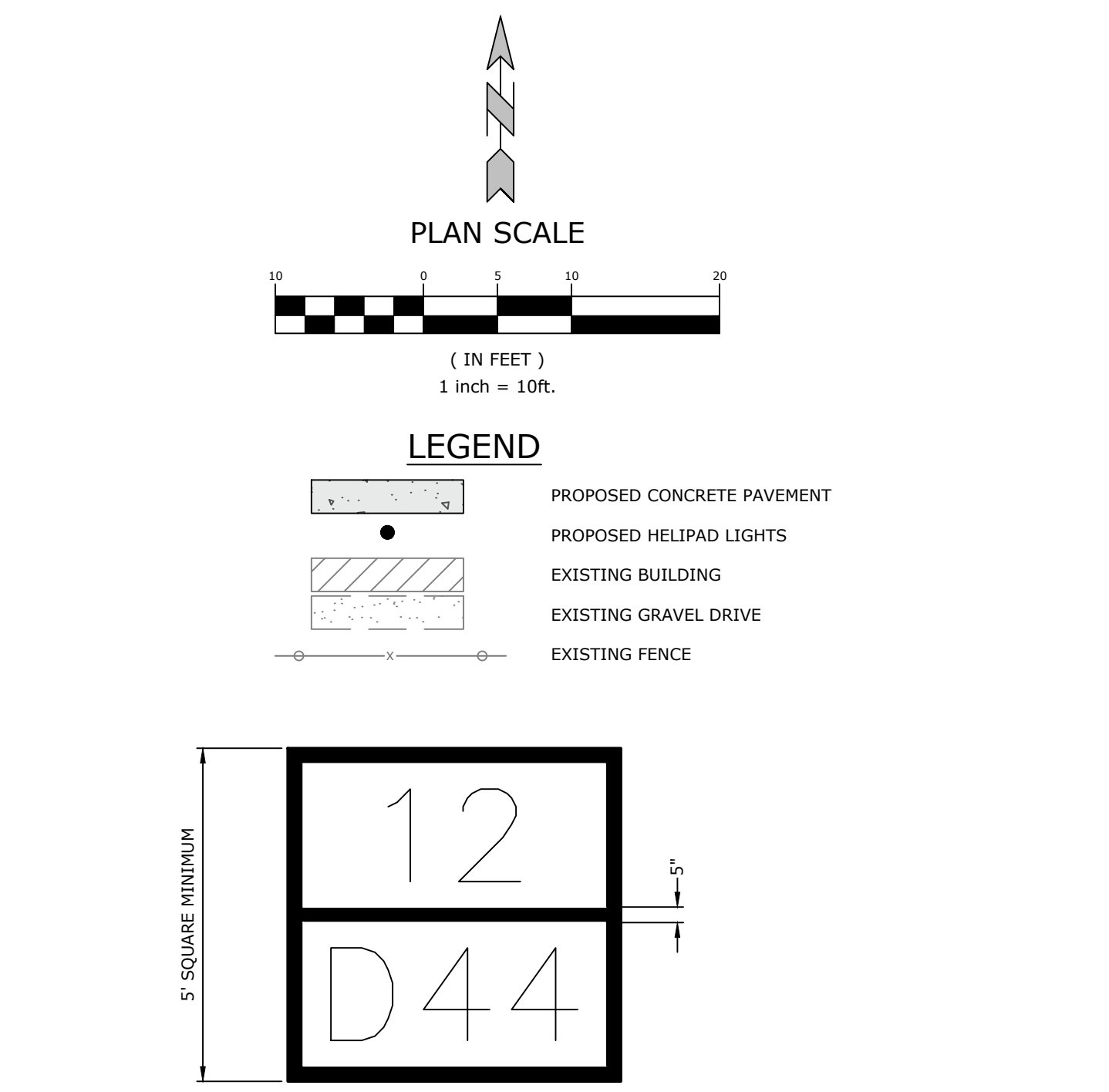
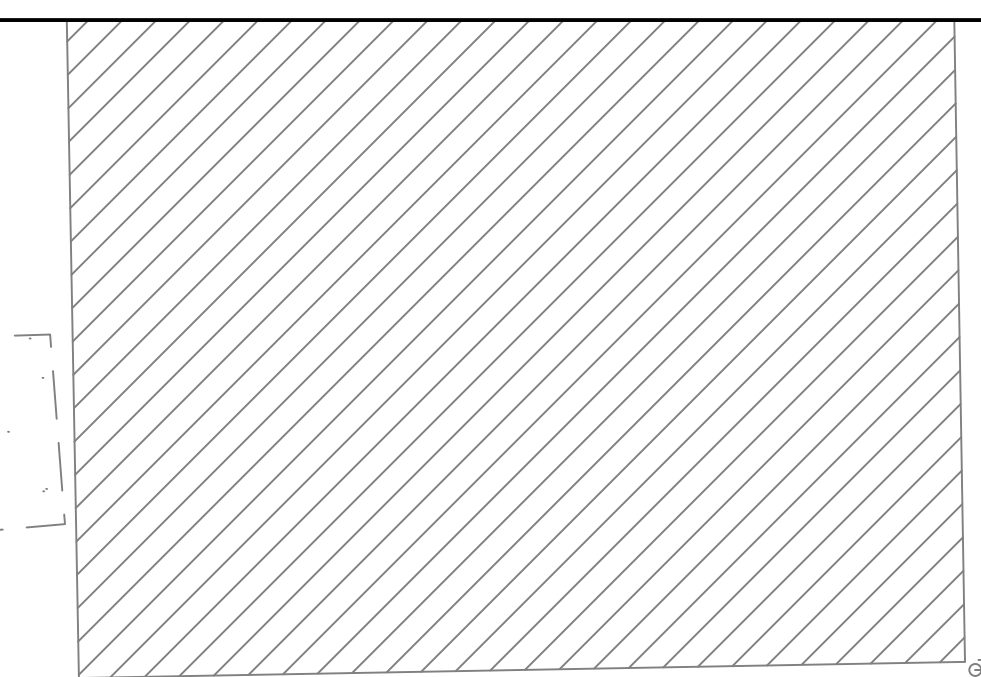
**HELIPORT IDENTIFICATION SYMBOL DETAIL**  
N.T.S.



**TLOF MARKING DETAIL**  
N.T.S.

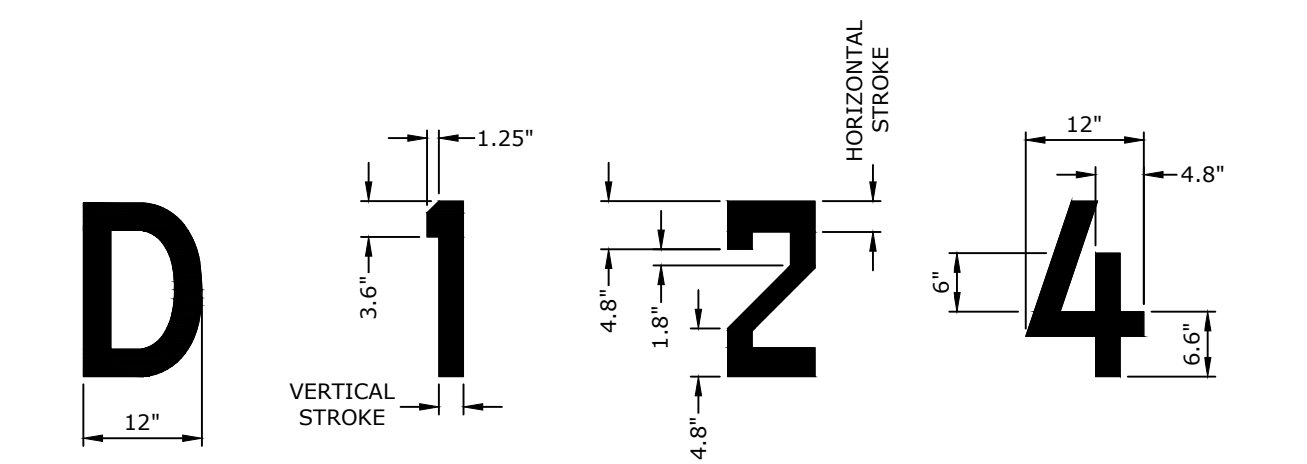


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9	570963.1958	1858428.0470
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11	570975.8014	1858414.6692
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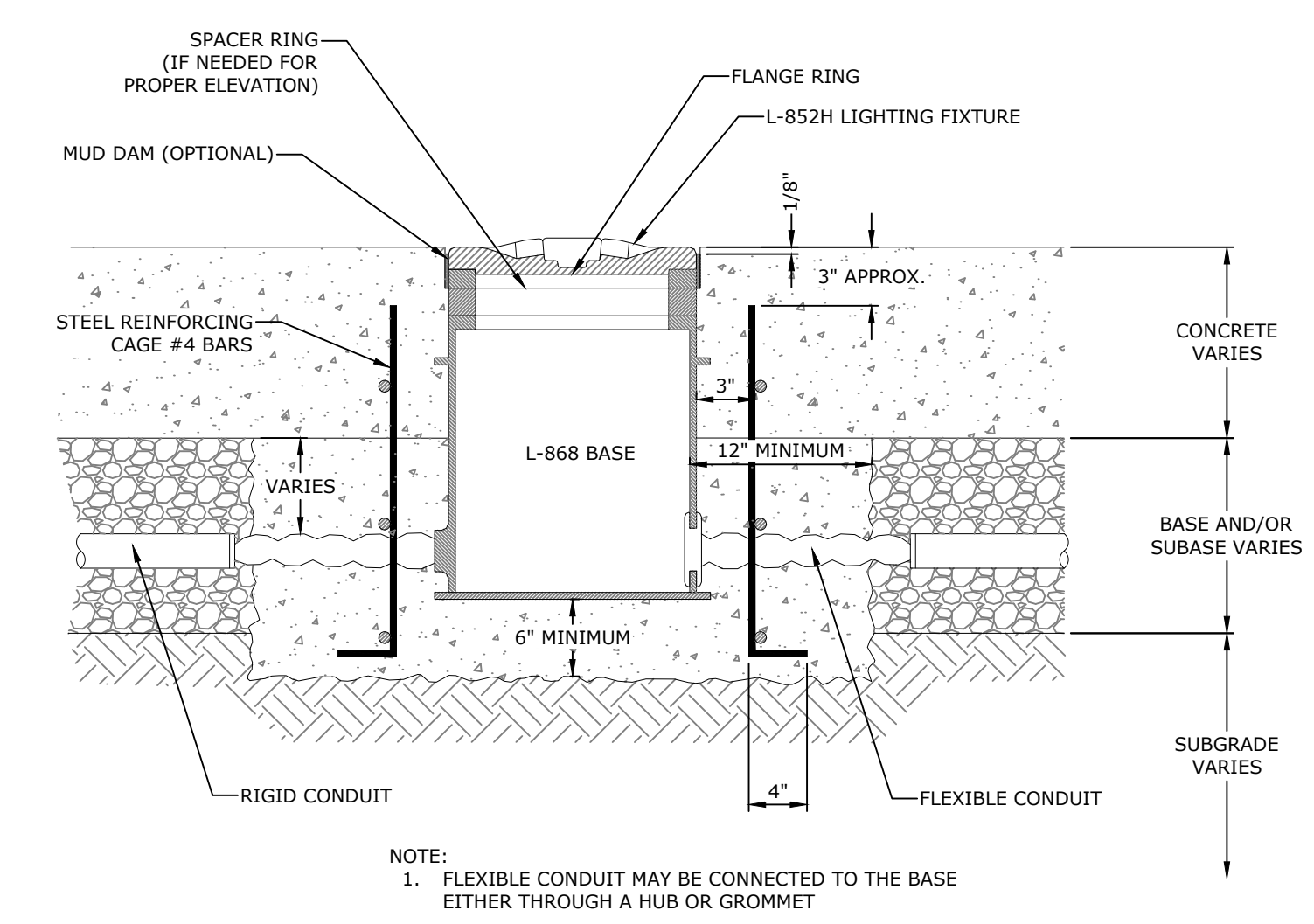
- NOTE:**
1. MAKE THE MINIMUM SIZE OF BOX 5' SQUARE. WHERE POSSIBLE, INCREASE THIS DIMENSION TO A 10' SQUARE FOR IMPROVED VISIBILITY.
  2. CHARACTERS WITHIN THE TLOF SIZE AND WEIGHT LIMITATION BOX ARE BLACK ON A WHITE BACKGROUND.
  3. "12" INDICATES THE MAXIMUM TAKEOFF WEIGHT (12,000 LBS) OF THE TLOF DESIGN HELICOPTER, IN UNITS OF THOUSANDS OF POUNDS.
  4. "44" INDICATES THE CONTROLLING DIMENSION OF THE LARGEST HELICOPTER (44 FT) FOR WHICH THE TLOF IS DESIGNED.

**TLOF SIZE/WEIGHT LIMITATION BOX DETAIL**  
N.T.S.



ALL CHARACTERS HAVE THE FOLLOWING CHARACTERISTICS (UNLESS OTHERWISE SPECIFIED):  
1.5" HIGH  
5" WIDE  
VERTICAL STROKE OF 2.5"  
HORIZONTAL STROKE OF 6"

**FORM AND PROPORTIONS OF 18-INCH NUMBERS FOR MARKING SIZE AND WEIGHT LIMITATION DETAIL**  
N.T.S.



**NOTE:**  
1. FLEXIBLE CONDUIT MAY BE CONNECTED TO THE BASE EITHER THROUGH A HUB OR GROMMET

**NON ADJUSTABLE BASE AND ANCHOR, BASE AND CONDUIT SYSTEM, RIGID PAVEMENT DETAIL**  
N.T.S.

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J. P. BRETHERTON  
4-16-25  
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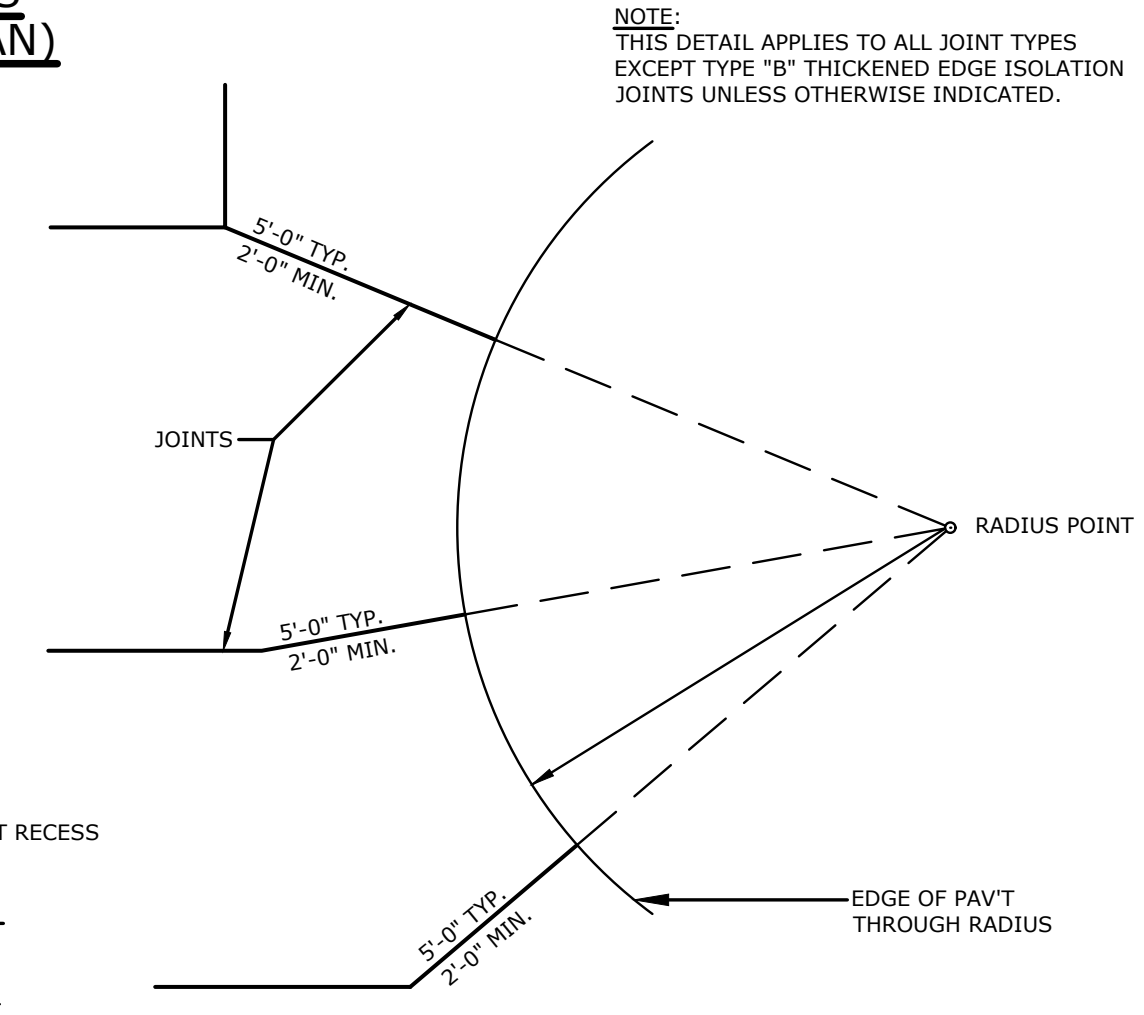
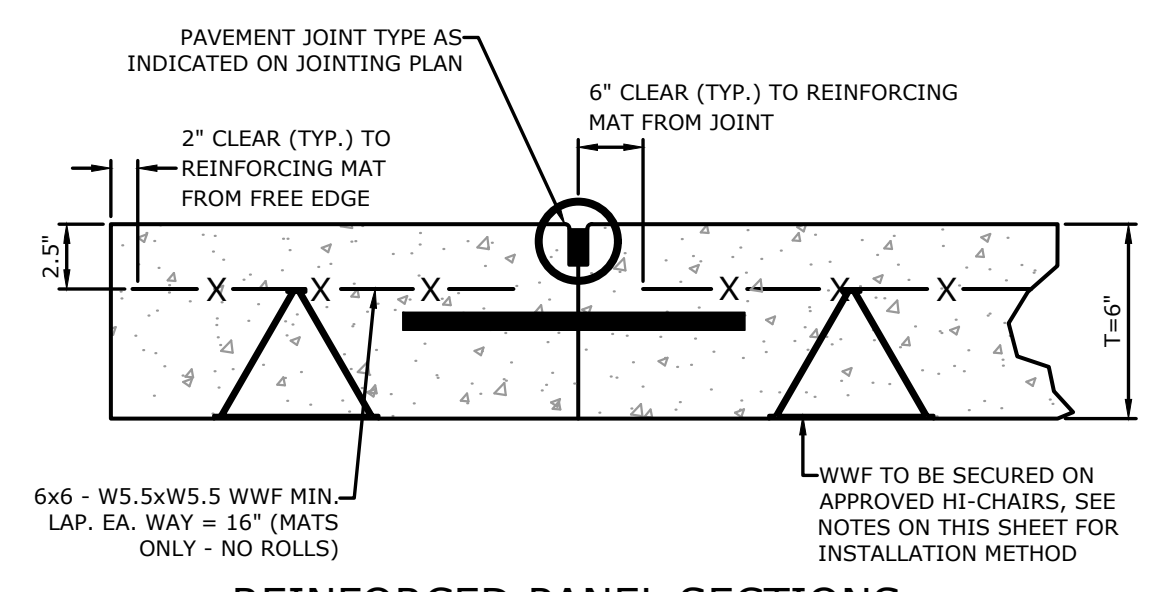
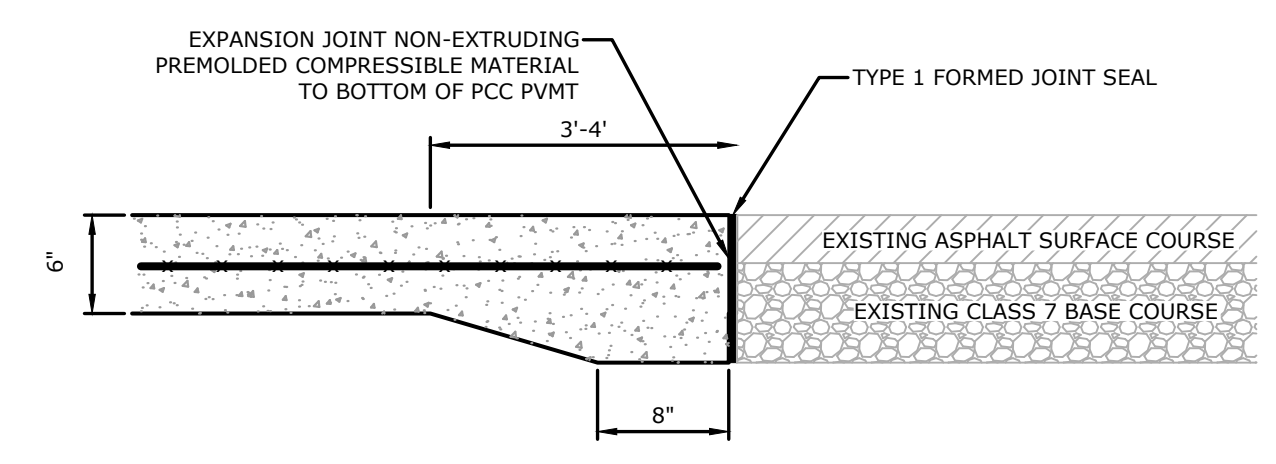
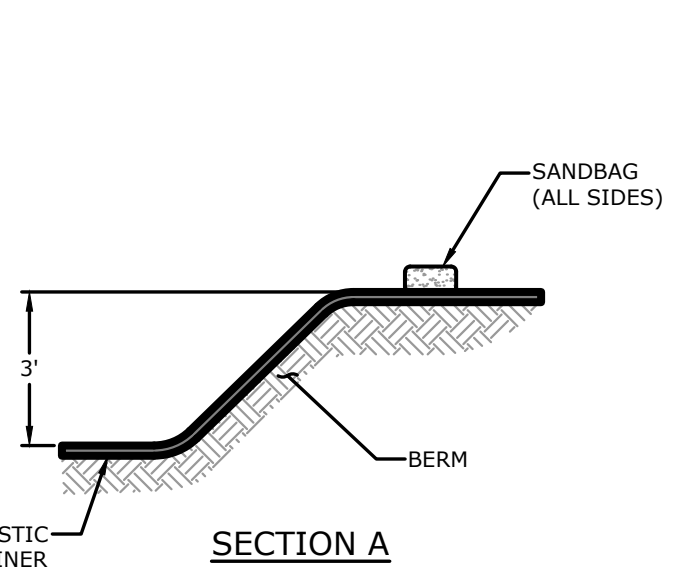
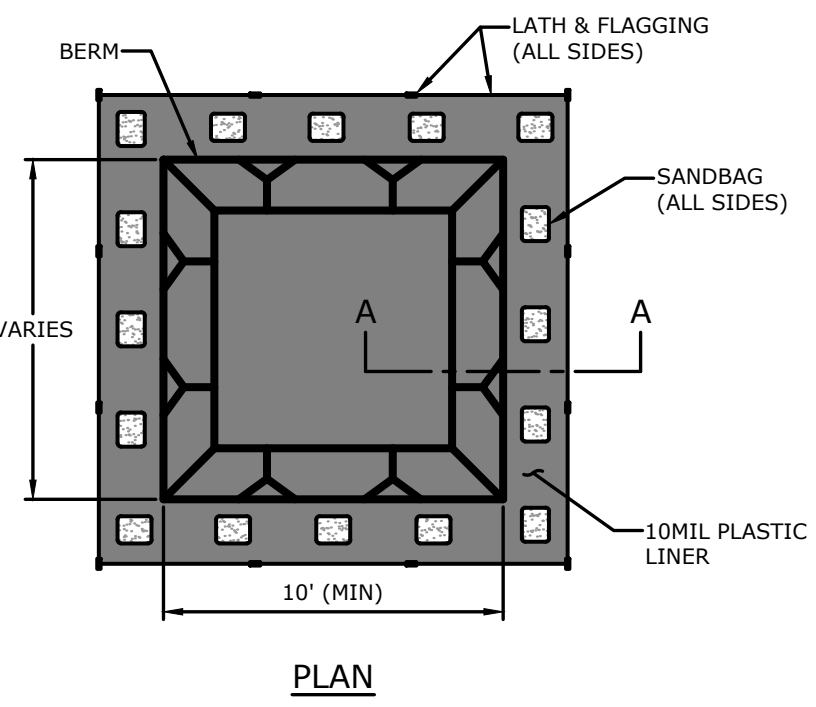
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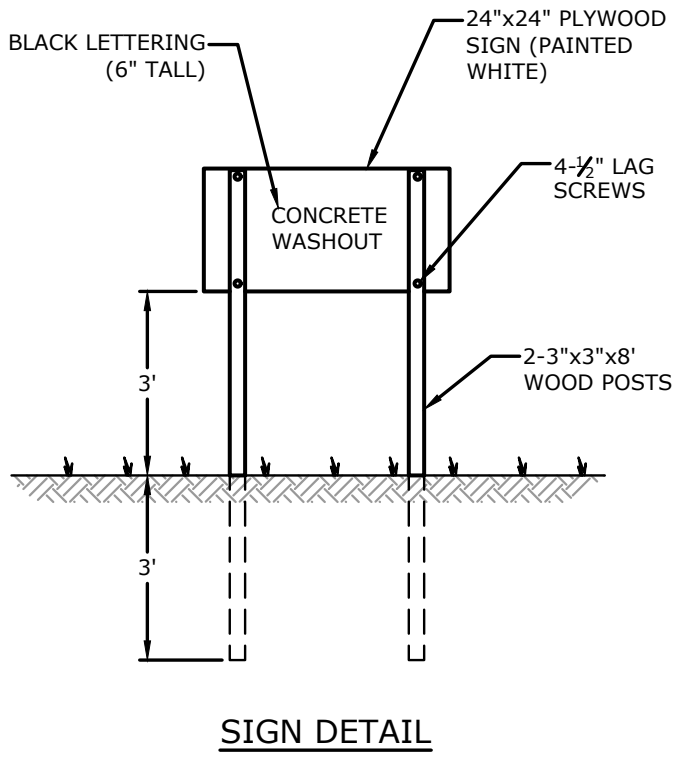
REVISIONS	DESCRIPTION
REV	DATE

**MARKING AND LIGHTING PLAN**

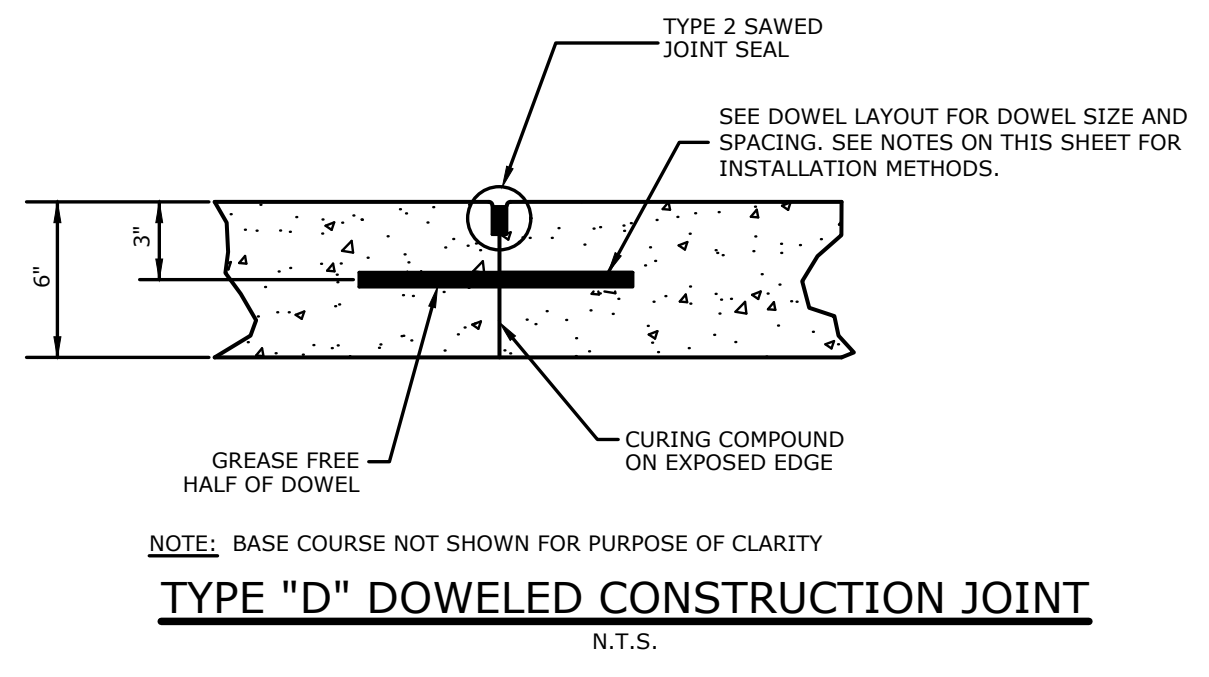
DESIGNED BY: JME	DRAWN BY: SJM
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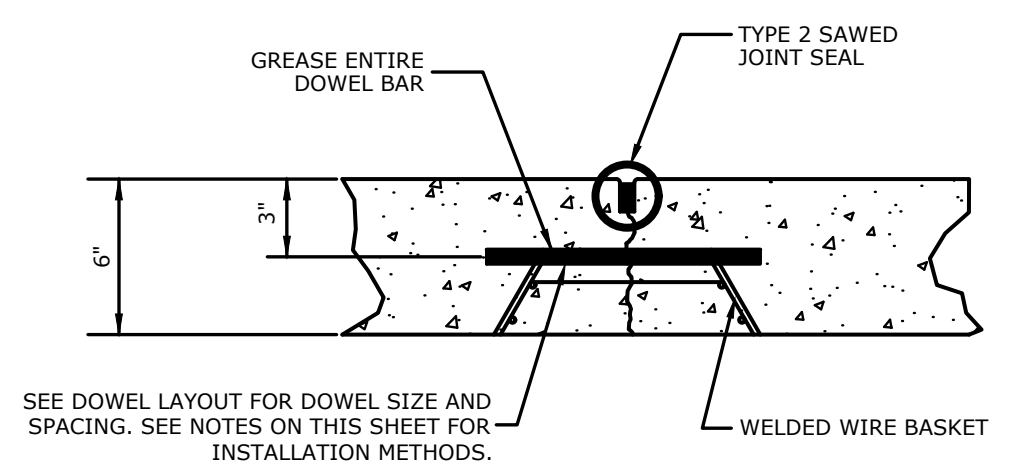
- NOTES:**
- NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
  - EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
  - ON-SITE TEMPORARY CONCRETE WASHOUT AREAS WILL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES AS DETERMINED IN THE FIELD.
  - THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
  - TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
  - WASHOUT FACILITIES WILL BE CLEANED OUT ONCE THE WASHOUT IS 75% FULL. PLASTIC LINING MATERIAL WILL BE MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
  - WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE WILL BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF.



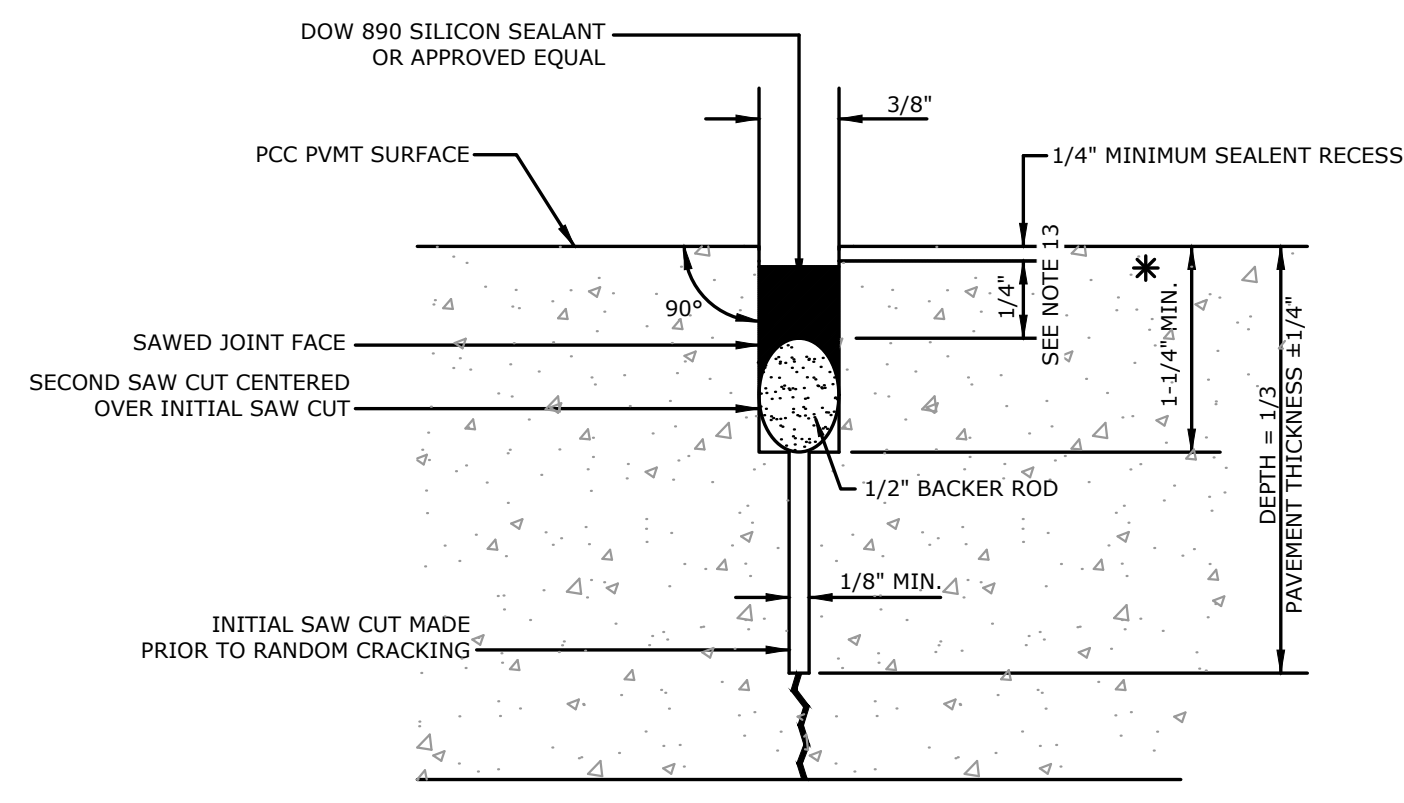
**TEMPORARY CONCRETE WASHOUT**  
N.T.S.



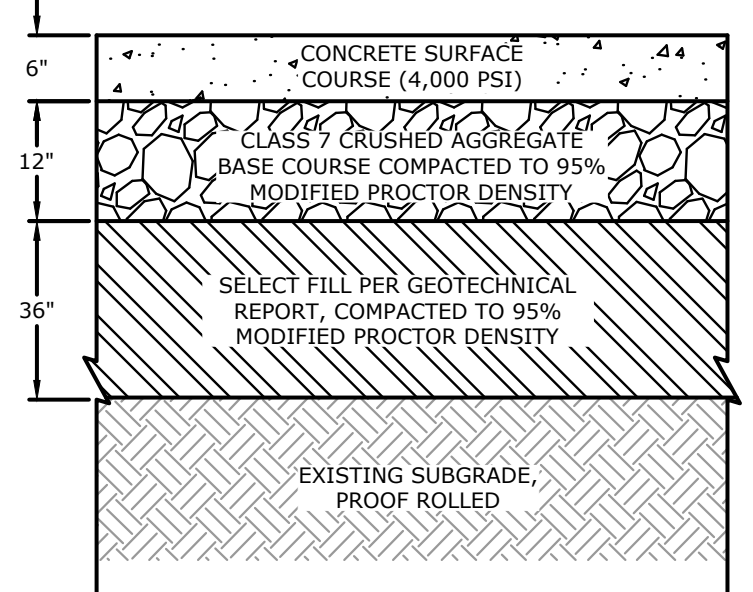
**TYPE "D" DOWELED CONSTRUCTION JOINT**  
N.T.S.



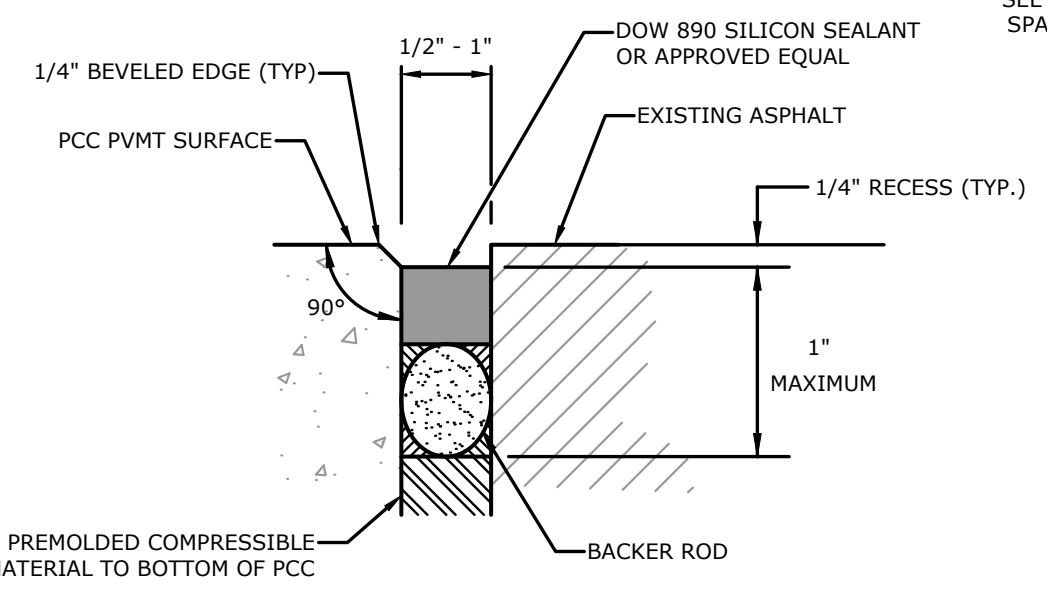
**TYPE "F" DOWELED CONTRACTION JOINT**  
N.T.S.



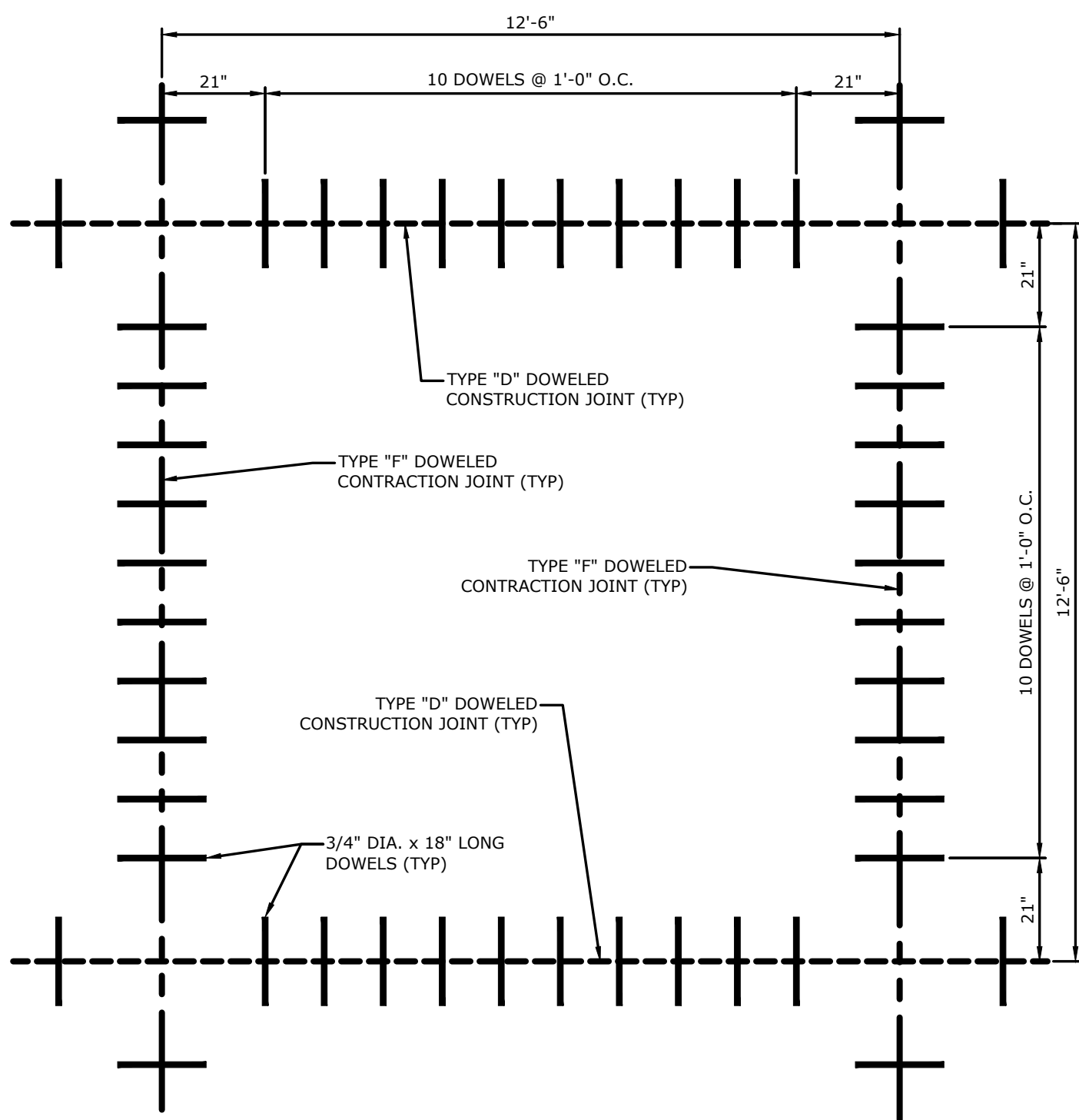
**SAWED CONSTRUCTION JOINT SEAL-TYPE 2**  
N.T.S.



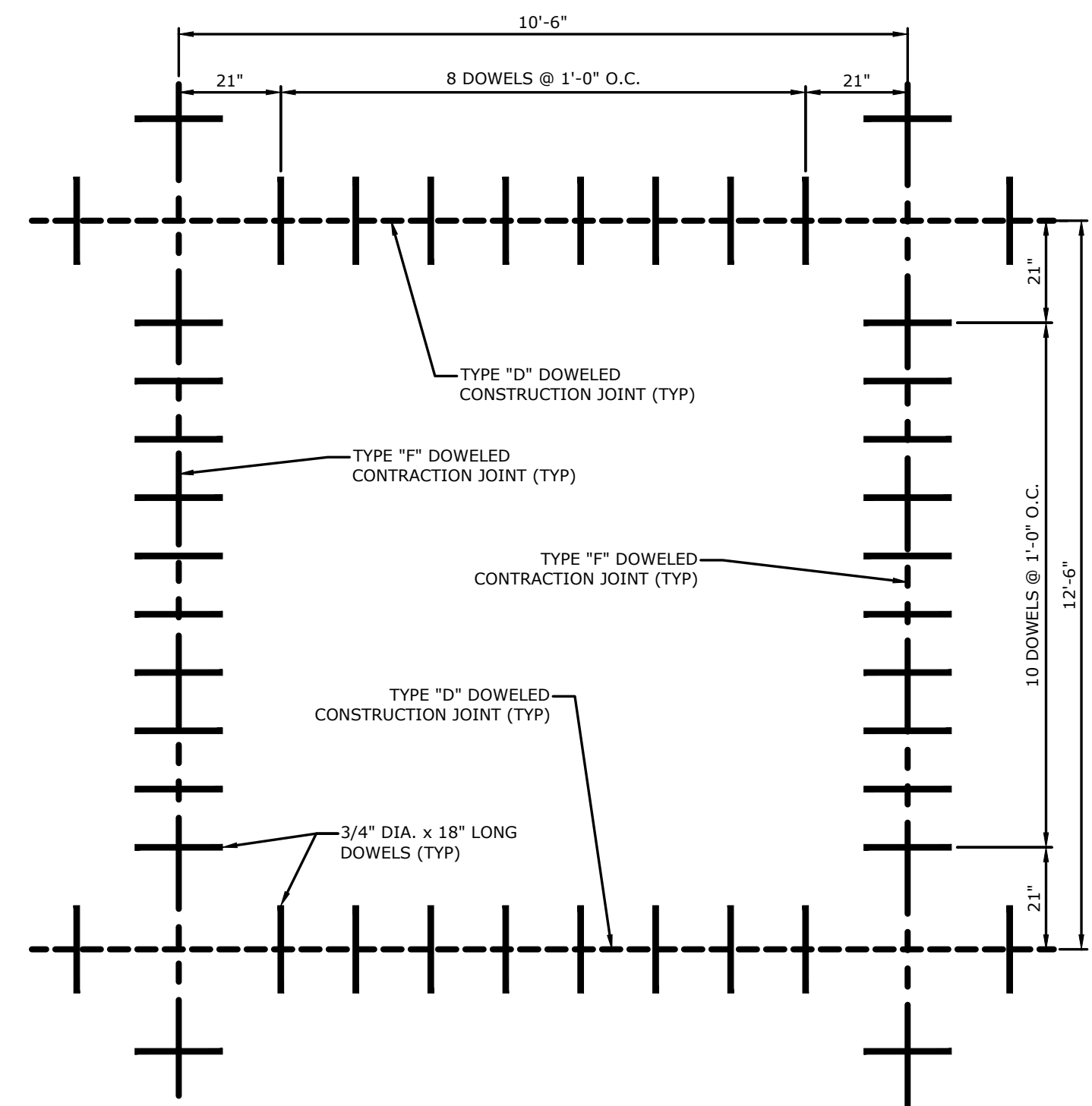
**CONCRETE PAVEMENT SECTION DETAIL**  
N.T.S.



**FORMED ISOLATION JOINT SEAL-TYPE 1**  
N.T.S.



**TYPICAL 12'-6" x 12'-6" PANEL DOWEL LAYOUT**  
N.T.S.



**TYPICAL 10'-6" x 12'-6" PANEL DOWEL LAYOUT**  
N.T.S.

- DOWELS SHALL BE FULLY SHOP PAINTED WITH ONE COAT OF CORROSION INHIBITING PRIMER.
- DOWELS SHALL BE SOLID SMOOTH STEEL BARS.
- PRIOR TO INSTALLATION IN CONTRACTION JOINTS DOWELS SHALL BE LIGHTLY GREASED WITH A THIN COAT OF HIGH MELTING POINT GREASE OR APPROVED EQUAL AS INDICATED. IN CONSTRUCTION JOINT, ONLY THE FREE END SHALL BE GREASED, AND ONLY AFTER INSERTION AND GROUTING INTO PLACE.
- ALL CONSTRUCTION JOINT DOWELS SHALL BE GANG-DRILLED AND EPOXY GROUTED. INSERTION EQUIPMENT WILL NOT BE ALLOWED.
- DRILLING METHOD FOR DOWELS SHALL BE CAPABLE OF MAINTAINING DRILL HOLES PARALLEL TO THE CONCRETE SURFACE AND NORMAL TO THE JOINT LINES. DRILL HOLES SHALL BE ACCURATELY LAID OUT SO THAT THE MAXIMUM HORIZONTAL DEVIATION DOES NOT EXCEED 1". DRILL HOLE DIAMETER TO BE OF SUFFICIENT SIZE TO ACCEPT THE TYPE AND SIZE OF DOWEL REQUIRED.
- AFTER DRILLING IS COMPLETE AND PRIOR TO THE INSTALLATION OF THE DOWELS, THE HOLES SHALL BE THOROUGHLY CLEANED TO REMOVE DRILLING DUST, CONCRETE CHIPS AND ANY OTHER MATERIAL DETRIMENTAL TO DEVELOPING BOND.
- EPOXY GROUT SHALL BE INJECTED UNIFORMLY INTO THE DOWEL HOLE (CONTRACTOR SHALL NOT DIP AND INSERT DOWEL) AND SUFFICIENT MATERIAL SHALL BE PLACED IN THE HOLE SO THAT A SLIGHT AMOUNT WILL BE FORCED OUT FROM AROUND THE DOWEL WHEN THE DOWEL IS INSERTED AND TAPPED TO THE CORRECT POSITION. SMALL WEDGES MAY BE USED TO SUPPORT THE DOWEL IN CORRECT ALIGNMENT UNTIL THE MATERIAL HARDENS. THE TOLERANCE FOR DOWEL ALIGNMENT IN EITHER THE HORIZONTAL OR VERTICAL PLANE IS 1/4" PER FOOT OF DOWEL BAR.
- ALL LONGITUDINAL AND TRANSVERSE CONTRACTION JOINT DOWELS SHALL BE INSTALLED USING AN ENGINEER-APPROVED WELDED BASKET ASSEMBLY ANCHORED TO THE BASE WITH A MINIMUM OF 4 GALVANIZED STRAPS AND NAILS PER ASSEMBLY. POSITION ANCHOR STRAPS ON ALTERNATING SIDES OF THE BASKET ASSEMBLY.
- A TRANSVERSE CONSTRUCTION JOINT (TYPE D) SHALL BE INSTALLED AT A PLANNED JOINT WHEN PAVING OPERATIONS ARE INTERRUPTED FOR MORE THAN 30 MINUTES. IF THE INTERRUPTION OCCURS BETWEEN PLANNED JOINTS, THE FRESH CONCRETE SHALL BE REMOVED BACK TO THE PREVIOUSLY INSTALLED JOINT. UNLESS OTHERWISE APPROVED, NO JOINTS WILL BE ALLOWED BETWEEN THE JOINTS SHOWN ON THE JOINTING PLAN.

- EDGES OF CONCRETE SLABS SHALL BE COVERED WITH AN APPROVED CURING MATERIAL AT THE SAME TIME AS SURFACE IS CURED. AT FORMED LOCATIONS, SLAB SIDES SHALL BE CURED WHEN FORMS ARE REMOVED.
- IN THICKENED EDGE AREAS WHERE DOWELS OR REINFORCING STEEL IS REQUIRED, PROVIDE ADDITIONAL SUPPORT, AS APPROVED BY THE ENGINEER, TO MAINTAIN THE SAME DEPTH FROM THE SURFACE AS FOR 6" THICK CONCRETE PAVEMENT.
- CONCRETE IN REINFORCED PANELS SHALL BE PLACED IN ONE COURSE. ALL WWF SHALL BE INSTALLED USING ENGINEER-APPROVED HI-CHAIRS. THE WWF SHALL RETAIN ITS SPECIFIED POSITION DURING CONCRETE PLACEMENT. WWF VIBRATED DOWN FROM THE TOP AFTER CONCRETE IS PLACED WILL NOT BE ALLOWED.
- SEALANT RESERVOIR SHAPE FACTOR, W/D, SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS.
- ALL JOINT SEALANT RESERVOIRS SHOWN ON THIS SHEET SHALL BE VERIFIED BY THE SEALANT MANUFACTURER PRIOR TO CONSTRUCTION.
- THE PREFORMED JOINT SEAL IN TRANSVERSE CONTRACTION JOINTS SHALL BE INSTALLED IN ONE CONTINUOUS PIECE ACROSS THE DRIVE. THE CONSTRUCTION JOINT SEALANT SHALL BE INTERRUPTED AT EVERY TRANSVERSE JOINT.
- ALL WORK AND MATERIALS REQUIRED FOR JOINTS IS INCIDENTAL TO PAVEMENT PAY ITEMS.
- COST OF MODIFYING UNDERLYING PAVEMENT COURSES TO ACCOMMODATE THE CONCRETE PAVEMENT THICKENED EDGE TO BE INCLUDED IN THE COST OF OTHER ITEMS. NO SEPARATE PAYMENT WILL BE MADE FOR SAID MODIFICATIONS. THE BASE COURSE LAYERS SHALL BE CONSTRUCTED FULL THICKNESS UNDER THE THICKENED EDGE.
- THE CONTRACTOR HAS THE OPTION TO POUR A MONOLITHIC SLAB IN WHICH ALL JOINTS WILL BE TYPE "F" DOWELED CONTRACTION JOINTS.

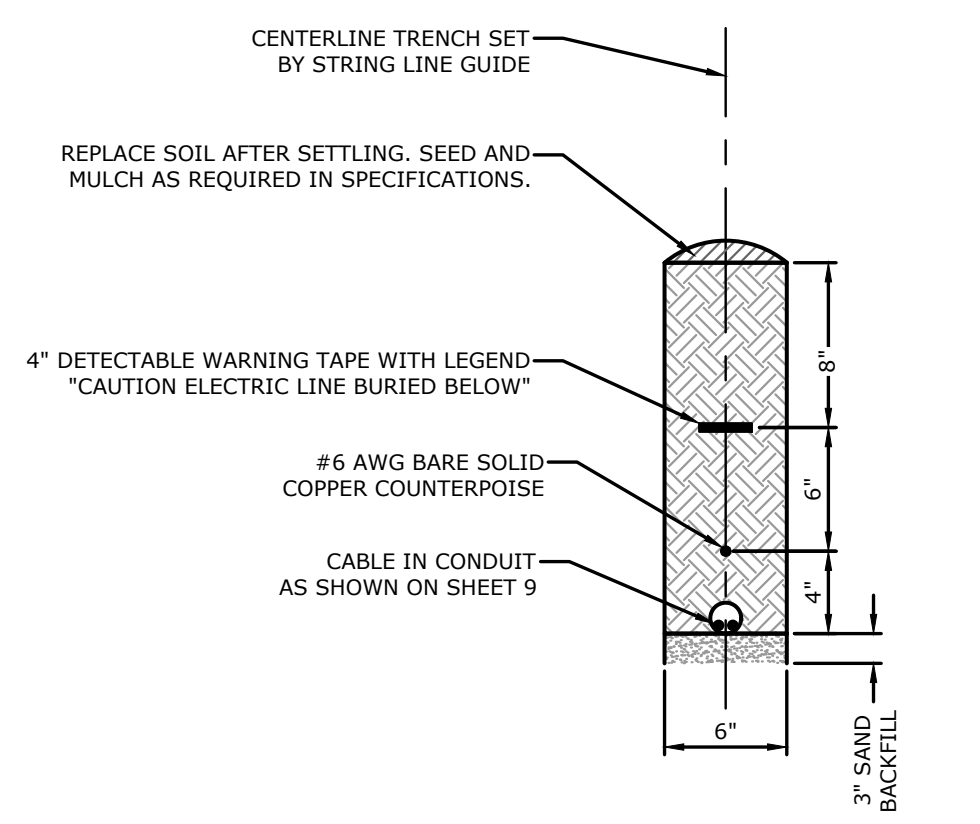
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**MISCELLANEOUS DETAILS I**

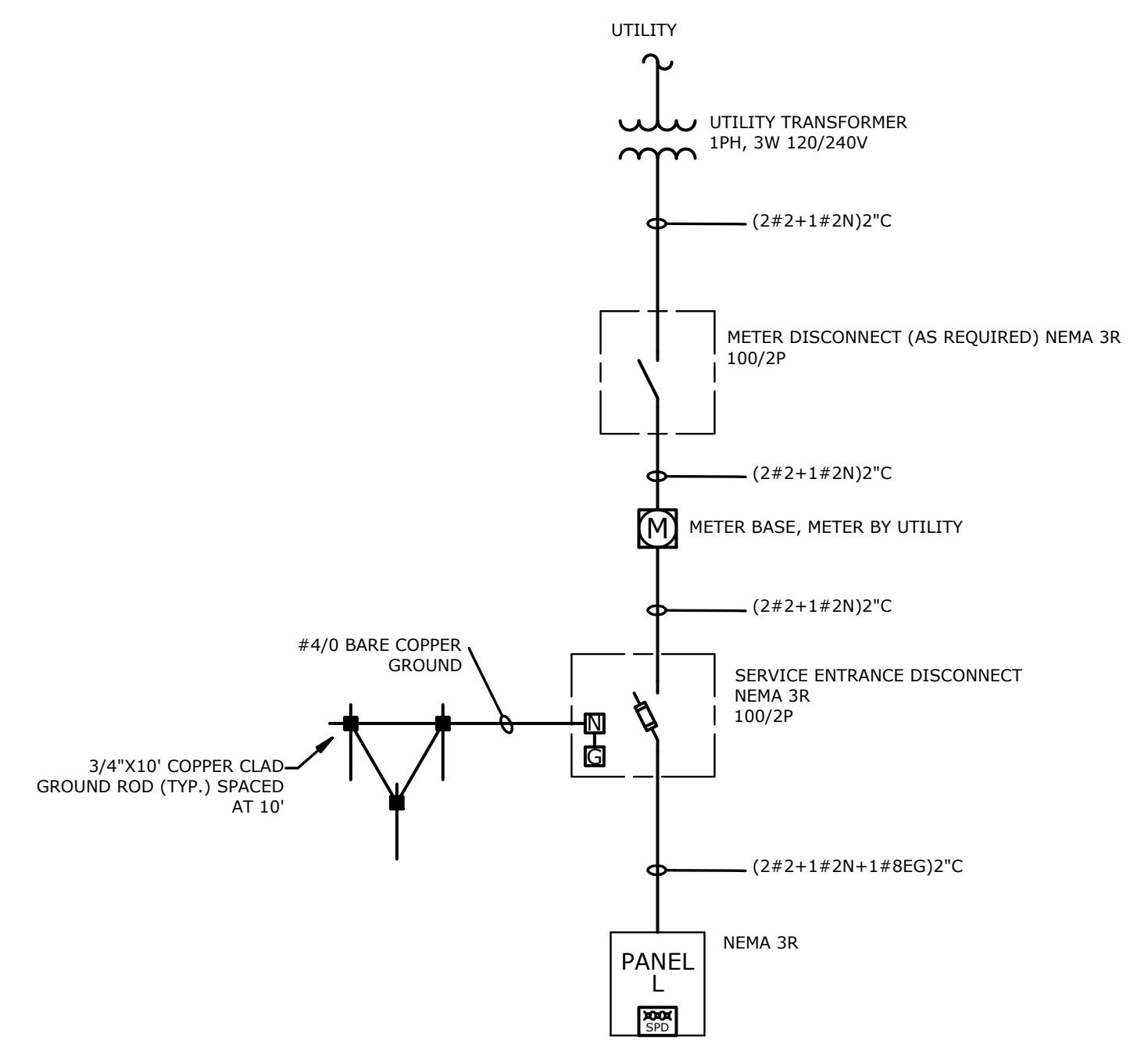
DESIGNED BY: JME	DRAWN BY: SJM
DATE: APRIL, 2025	REVISION: 
SCALE: N.T.S.	JOB NUMBER: 24-5838

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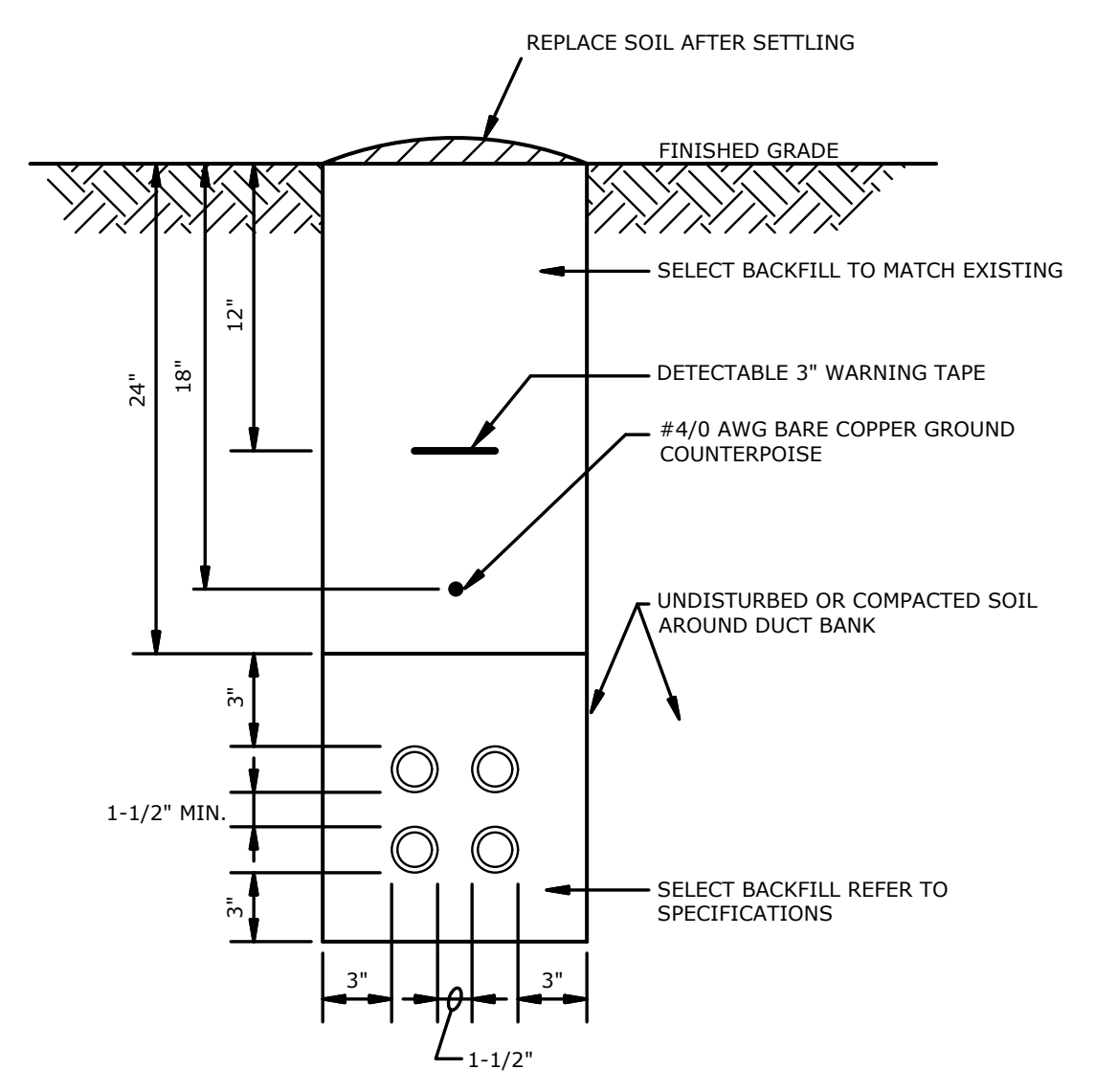
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**CONDUIT TRENCH DETAIL**  
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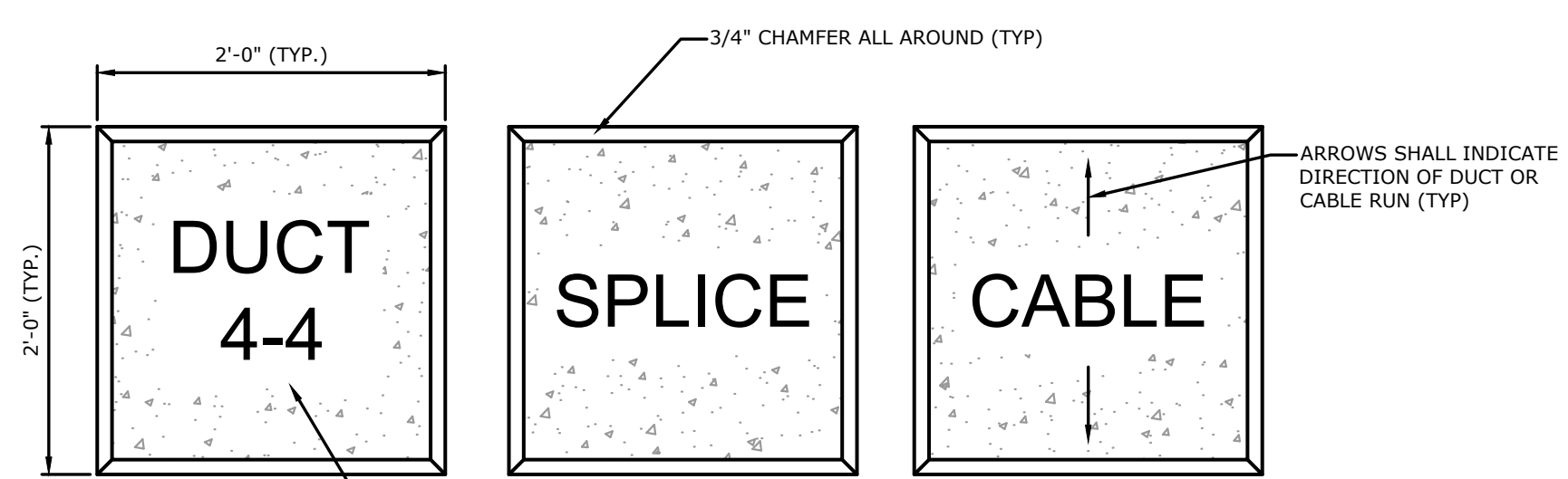


**ONE-LINE DIAGRAM**  
N.T.S.



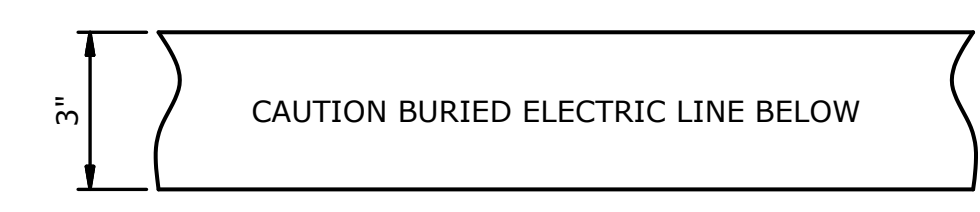
**TRENCH DETAIL**  
N.T.S.

- ELECTRICAL DUCT NOTES:**
1. CONTRACTOR SHALL STAKE THE DUCT INSTALLATION IN PLAN AND ELEVATION FOR NEW ELECTRICAL DUCTS TO AVOID EXISTING UTILITIES.
  2. CONTRACTOR SHALL ADJUST THE DEPTH OF THE ELECTRICAL DUCTS AS REQUIRED TO MAINTAIN THE MINIMUM COVER REQUIREMENT INDICATED AND AVOID EXISTING UTILITIES.
  3. SIMILAR CONSTRUCTION FOR OTHER DUCT SIZES. SEE DUCT BANK SCHEDULE FOR QUANTITY AND SIZES.
  4. INSTALL DUCT CONDUIT SUPPORTS AT 5'-0" O.C. MAXIMUM SPACING (TYPICAL ALL DUCTS).
  5. OFFSETS AND BENDS OVER 10 DEGREES AND ELBOWS IN PVC CONDUIT RUNS SHALL BE PVC COATED GALVANIZED RIGID STEEL CONDUIT.
  6. NO PVC SHALL EMERGE FROM THE GROUND OR CONCRETE SLAB OR ENCASEMENT, PVC SHALL CONVERT TO PVC COATED GALVANIZED RIGID STEEL CONDUIT PRIOR TO ITS EMERGENCE.
  7. INSTALL GROUND RODS AT ENDS OF ELECTRICAL DUCT OR CONNECT TO GROUND RING.
  8. INSTALL CONDUCTORS AND CABLES AS NOTED ON DRAWING. INSTALL PULLWIRE IN ALL SPARE DUCTS.
  9. MINIMUM COVER REQUIREMENT FOR DUCT BANKS UNDER ROADS, DRIVEWAYS AND PARKING LOTS SHALL BE 24".
  10. MINIMUM COVER REQUIREMENTS FOR ELECTRICAL SECONDARY SERVICE DUCT BANKS SHALL BE 30".
  11. MINIMUM COVER REQUIREMENTS FOR ELECTRICAL PRIMARY SERVICE DUCT BANKS SHALL BE 36".



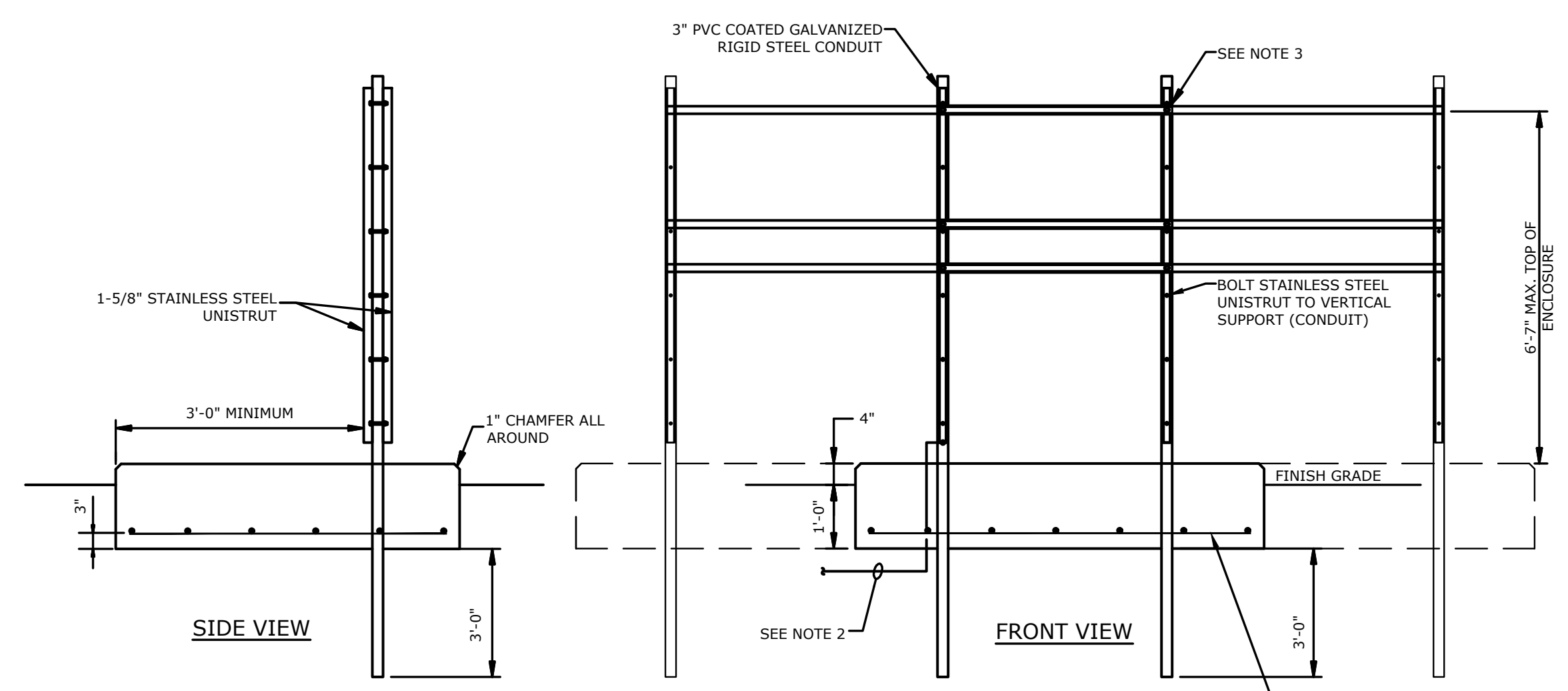
- NOTES:**
1. LETTERS SHALL BE 4" HIGH, 3" WIDE, STROKE 1/2" WIDE, IMPRESSED 1/4" DEEP, LETTERS SHALL BE STENCILED.
  2. MARKERS SHALL BE 4" THICK MINIMUM AND PROJECT 1" A.F.G. MAXIMUM.
  3. MARKERS SHALL BE PAINTED AVIATION ORANGE.
  4. STERILIZE SOIL 2' ALL AROUND.
  5. COST OF CONCRETE MARKERS IS INCIDENTAL TO THE ASSOCIATED ITEMS OF DUCT OR CABLE.
  6. CABLE AND SPLICE MARKERS SHALL IDENTIFY THE CIRCUITS WHICH THE CABLES BELONG TO.
  7. REFER TO PROJECT SPECIFICATIONS FOR PLACEMENT OF CONCRETE MARKERS.

**CONCRETE MARKER DETAILS**  
N.T.S.



- GENERAL NOTES:**
1. POWER MARKING TAPES SHALL BE DETECTABLE TYPE CONSTRUCTION WITH RED BACKGROUND AND BLACK LETTERING.
  2. COMMUNICATION MARKING TAPES SHALL BE DETECTABLE TYPE CONSTRUCTION WITH ORANGE BACKGROUND AND BLACK LETTERING, "TELEPHONE LINE" OR "FIBER OPTIC LINE" RESPECTIVELY.
  3. TAPE SHALL BE DETECTABLE, DURABLE, HIGHLY VISIBLE, RESISTANT TO ELEMENTS, MEETING AND/OR EXCEEDING ALL INDUSTRY STANDARDS.

**UNDERGROUND DETECTABLE WARNING TAPE**  
N.T.S.



- NOTES:**
1. ALL BOLTS, NUTS, WASHERS, ANCHORS, PLATES, AND OTHER MOUNTING STEMS SHALL BE CORROSION RESISTANT, STAINLESS STEEL.
  2. BOND ELECTRICAL EQUIPMENT SUPPORT FRAME TO COUNTERPOISE AND GROUND RINGS USING 1#4/0 AND EXOTHERMIC WELDS.
  3. PROVIDE VERTICAL SUPPORTS EVERY 3 FEET.

**MISC. SUPPORT DETAIL**  
N.T.S.

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