STRUCTURAL LOADING CRITERIA

1. STRUCTURAL BUILDING CODE - 2021 INTERNATIONAL BUILDING CODE
2. FLOOR/ROOF DEAD AND LIVE LOADS: SEE "SCHEDULE OF BUILDING DESIGN LOADS"
3. WIND LOADS:
   - A. BASIC WIND SPEED (3 SECOND GUST) - V = 106 MPH
   - B. RISK CATEGORY = II
   - C. IMPORTANCE FACTOR I =
   - D. EXPOSURE CATEGORY = C
   - E. INTERNAL PRESSURE COEFFICIENT = ±0.18
   - F. MAIN FORCE RESISTING SYSTEM
     1. WINDWARD WALLS (@ HIGH POINT)
        - a. EAST/WEST WIND = 21.8 PSF
        - b. NORTH/SOUTH WIND = 21.8 PSF
     2. LEEWARD WALLS
        - a. EAST/WEST WIND = 15.4 PSF
        - b. NORTH/SOUTH WIND = 13.3 PSF
     3. SIDE WALLS = 19.7 PSF
     4. ROOF = 23.9 PSF
   - G. COMPONENTS TRANSFERRING WIND LOAD TO PRIMARY STRUCTURAL SYSTEM - SEE REFERENCED CODE ABOVE.
4. SNOW LOADS:
   - A. GROUND SNOW LOAD - Pg = 10 PSF
   - B. RISK CATEGORY = II
   - C. IMPORTANCE FACTOR I = 1.0
   - D. EXPOSURE FACTOR Ce = 0.9
   - E. THERMAL FACTOR Ct = 1.0
   - F. ROOF SNOW LOAD Pf = 10 PSF
   - G. SNOW DRIFT LOADS = SEE SNOW DRIFT DIAGRAM(S)

     NOTE: DRIFT LOAD IS IN ADDITION TO ROOF LIVE LOAD IN SCHEDULE OF BUILDING DESIGN LOADS.
5. RAIN LOADS:
   - A. ROOF DRAINAGE SYSTEM
     1. ROOF IS DRAINED FROM ITS HIGH POINTS TO (X) PRIMARY SCUPPERS [DRAINS] AT LOW POINTS.
     2. EACH PRIMARY SCUPPER [DRAIN] IS X" WIDE BY X" TALL [X" DIAMETER] LOCATED AT THE ROOF LOW POINTS
     3. EACH PRIMARY SCUPPER [DRAIN] IS ACCOMPANIED BY (1) X" WIDE x X" TALL [X" DIAMETER] SECONDARY SCUPPER [DRAIN] LOCATED X" ABOVE EACH ROOF LOW POINT.
     4. DRAINAGE SYSTEM AND SCUPPER [DRAIN] DESIGN NOT BY TGRWA.
     5. REFER TO ARCHITECTURAL & PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
     6. ROOF SLOPE = 1/4 INCH PER FOOT MINIMUM SO PONDING INSTABILITY DOES NOT OCCUR. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
   - B. RAINFALL INTENSITY = X.XX INCHES/HOUR FOR 100 YEAR STORM WITH 60 MINUTE DURATION.
   - C. DESIGN RAIN LOAD = A MAXIMUM OF X.X" OF WATER ABOVE THE ROOF SURFACE AT THE DRAINAGE LOW POINTS, EQUATING TO A RAIN LOAD = XX PSF.
6. SEISMIC LOADS:
   - A. SHORT PERIOD MAPPED SPECTRAL ACCELERATION Ss = 0.23g
   - B. 1-SECOND PERIOD MAPPED SPECTRAL ACCELERATION S1 = 0.11g
   - C. SITE CLASS = C
   - D. RISK CATEGORY = II
   - E. IMPORTANCE FACTOR I = 1.0
   - F. SHORT PERIOD SITE COEFFICIENT Fa = 1.3
   - G. 1-SECOND PERIOD SITE COEFFICIENT Fv = 1.5
   - H. SHORT PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION SDS = 0.20
   - I. 1-SECOND PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION SD1 = 0.11
   - J. SEISMIC DESIGN CATEGORY = B
   - K. BASIC SEISMIC FORCE RESISTING SYSTEM = STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
   - L. RESPONSE MODIFICATION COEFFICIENT R = 3

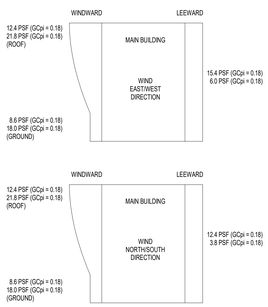
SCHEDULE OF BUILDING DESIGN LOADS

LOCATION	FLOOR / ROOF	FLOOR / ROOF AREA	LOADING LEGEND	FLOOR / ROOF CONSTRUCTION	FLOOR / ROOF CONSTRUCTION WEIGHT (PSF)	SUPERIMPOSED DEAD LOAD (PSF)	PARTITION LOAD (PSF)	SUSPENDED LIVE LOAD (PSF)	LIVE LOAD (PSF)	SEISMIC LIVE LOAD (PSF)	REMARKS
MAIN BUILDING	LEVEL 01	DATA HALL	A	SLAB-ON-GRADE	75	-	-	100	350	-	-
		GALLERY	B	SLAB-ON-GRADE	75	-	-	50	200	-	-
		CORRIDORS	C	SLAB-ON-GRADE	75	-	-	100	100	-	-
		ELECTRICAL	D	SLAB-ON-GRADE	75	-	-	50	250	-	-
		STAIRS & ELEVATORS	E	SLAB-ON-GRADE	75	-	-	-	100	-	-
		OFFICE	F	SLAB-ON-GRADE	75	15	-	20	100	-	-
		STORAGE	G	SLAB-ON-GRADE	75	-	-	50	125	110	-
		WATER ENTRY	H	SLAB-ON-GRADE	75	-	-	50	250	180	-
		VALVE ROOM	J	SLAB-ON-GRADE	75	-	-	50	250	180	-
		LOADING DOCK	K	SLAB-ON-GRADE	75	-	-	10	250	-	-
	LEVEL 02	DATA HALL	A	COMPOSITE SLAB-ON-METAL DECK	78	-	-	100	350	270	-
		GALLERY	B	COMPOSITE SLAB-ON-METAL DECK	78	-	-	50	200	150	-
		CORRIDORS	C	COMPOSITE SLAB-ON-METAL DECK	78	-	-	100	100	120	-
		ELECTRICAL	D	COMPOSITE SLAB-ON-METAL DECK	78	-	-	50	250	180	-
		STAIRS & ELEVATORS	E	COMPOSITE SLAB-ON-METAL DECK	78	-	-	-	100	-	-
		OFFICE	F	COMPOSITE SLAB-ON-METAL DECK	78	-	-	10	100	10	-
		STORAGE	G	COMPOSITE SLAB-ON-METAL DECK	75	-	-	50	125	110	-
		VALVE ROOM	J	COMPOSITE SLAB-ON-METAL DECK	75	-	-	50	250	180	-
		CANOPY	L	METAL ROOF DECK	2	5	-	-	20 (ROOF LIVE)	-	-
		ROOF	P	METAL ROOF DECK	2	5	-	-	20 (ROOF LIVE)	-	-
	MAIN ROOF	ROOF	P	COMPOSITE SLAB-ON-METAL DECK	66	5	-	-	20 (ROOF LIVE)	-	SEE "MEP EQUIPMENT SUPPORT TABLE" FOR PIPING LOAD
		STAIRS & ELEVATORS	E	COMPOSITE SLAB-ON-METAL DECK	66	-	-	-	100	-	-
	EQUIPMENT PLATFORM	ACCESS PLATFORM	K	BAR GRATING	15	-	-	25 + 100 AT PIPE LOOPS OR EQUIPMENT WEIGHT	60	-	-
		CHILLERS	N	COMPOSITE SLAB-ON-METAL DECK	-	-	-	-	EQUIPMENT WEIGHT	-	SEE PLAN FOR EQUIPMENT LOADING
	PENTHOUSE ROOF	ROOF	P	METAL ROOF DECK	3	-	-	-	20 (ROOF LIVE)	-	-
EQUIPMENT YARDS	GENERATORS	GENERATORS	Q	MAT SLAB	225	-	-	-	EQUIPMENT WEIGHT	-	SEE PLAN FOR EQUIPMENT LOADING
		ACCESS PLATFORM	R	BAR GRATING	15	-	-	-	60	-	-

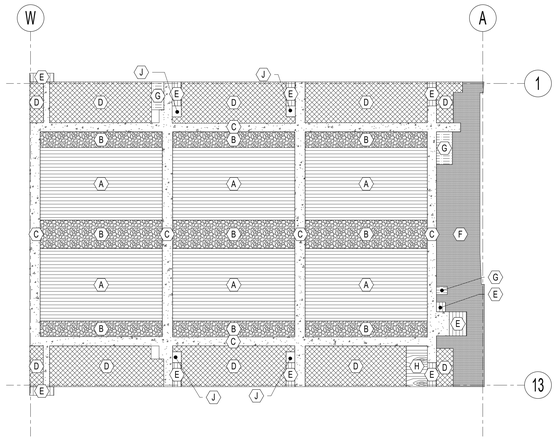
NOTES:
1. DURING CONSTRUCTION ALL CONSTRUCTION LOADS ON ANY AREA OF THE FLOOR SHALL NOT EXCEED THE LOADS SHOWN IN THE TABLE.

MEP EQUIPMENT SUPPORTS

EQUIPMENT	LOCATION	OPERATING WEIGHT	SUPPORT APPROACH	DETAIL REFERENCE
GENERATOR AND BELLY TANKS	EQUIPMENT YARDS	200,000 LBS (ESTIMATED)	CONCRETE MAT SLABS	23/S04-01
TRANSFORMERS	EQUIPMENT YARDS	10,000 LBS (ESTIMATED)	CONCRETE MAT SLABS	22/S04-01
CHILLERS	EQUIPMENT PLATFORMS ON ROOF	24,000 LBS (ESTIMATED)	STEEL EQUIPMENT PLATFORM ABOVE ROOF	-
WATER TANKS	EQUIPMENT PLATFORMS ON ROOF	21,000 LBS (ESTIMATED)	STEEL EQUIPMENT PLATFORM ABOVE ROOF	-
CHILLED WATER PIPING	ROOF	210 PLF (FILLED ESTIMATED)	STEEL POSTS DOWN TO ROOD SLAB OR HUNG FROM EQUIPMENT PLATFORM (DELEGATED TO MECHANICAL CONTRACTOR)	-
	CORRIDORS AND GALLERIES	210 PLF (FILLED ESTIMATED)	SUSPENDED FROM LEVEL 02 AND ROOF FRAMING	-
CABLE TRAY	DATA HALLS	50 LBS (PER TRAY ESTIMATED)	SUSPENDED FROM STRUCTURAL CEILING GRID OR FLOOR SUPPORTING HACS	-
CABLE BUS, BUSWAY, CONDUIT	EQUIPMENT YARDS	50 LBS (PER TRAY ESTIMATED)	STEEL SUPPORTS ON CONCRETED DRILLED PIERS OR SLAB (DELEGATED TO ELECTRICAL CONTRACTOR)	-
			METAL WALL FRAMING (DELEGATED TO WALL MANUFACTURER)	-
	CORRIDORS, ELECTRIC ROOMS, GALLERIES	VARIES	SUSPENDED FROM LEVEL 02 AND ROOF STEEL FRAMING	-



1 MAIN WIND FORCE RESISTING SYSTEM DIAGRAMS
SCALE: NTS



2 LEVEL 01 LOADING DIAGRAM
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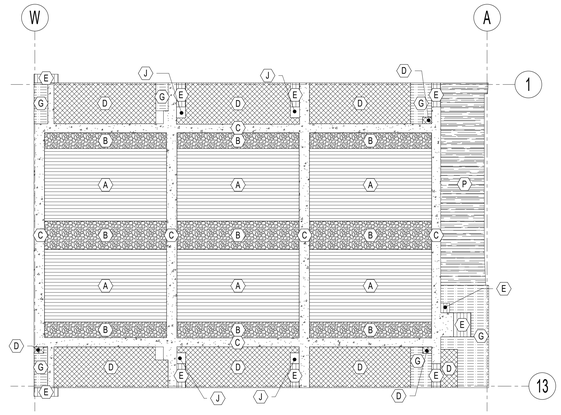

3 LEVEL 02 LOADING DIAGRAM
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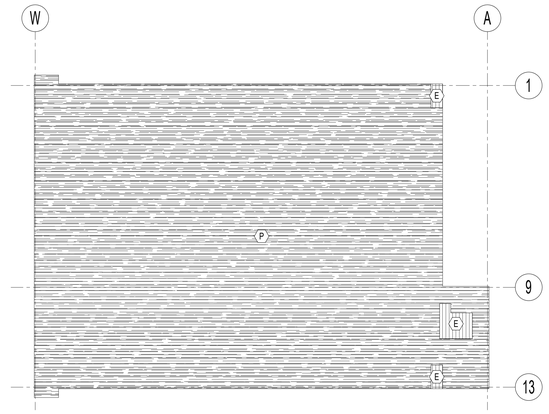
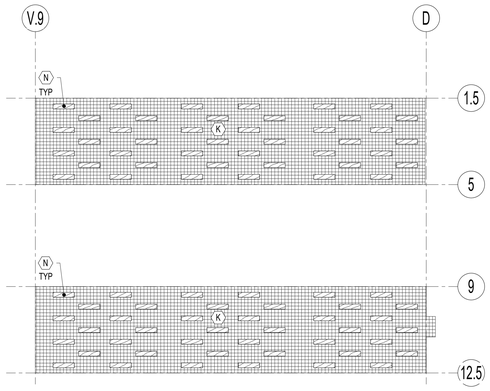
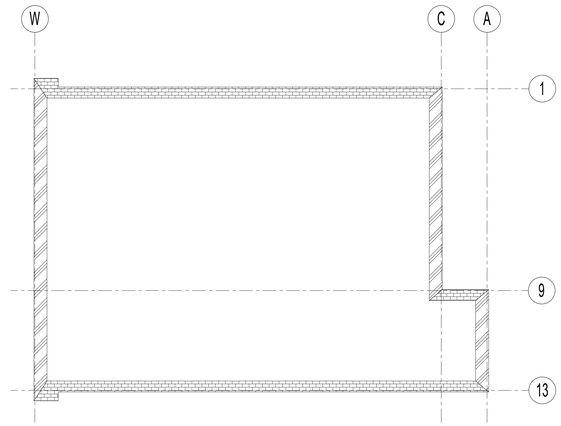


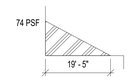
4 ROOF LOADING DIAGRAM
SCALE: NTS



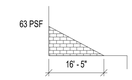
5 EQUIPMENT PLATFORM LOADING DIAGRAM
SCALE: NTS



6 SNOW DRIFT DIAGRAM
SCALE: NTS



6A DRIFT



6B DRIFT

serverfarm
CORGAN
TGRWA STRUCTURAL ENGINEERS
kW Mission Critical Engineering Member of WSP
EP ENGINEERING PLUS
Kimley»Horn

	ISSUES	
1		
2	12/12/2025	SCHEMATIC DESIGN
3	12/17/2025	STEEL MILL ORDER
4	01/23/2026	DESIGN DEVELOPMENT
5		
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12		
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REVISIONS

NOT FOR CONSTRUCTION

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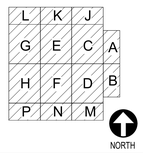
Date of issue:
01/23/2026

SF - ARK01
DESIGN DEVELOPMENT
CLARKSVILLE, AR 72830



STRUCTURAL LOADING

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1/22/2026 4:20:26 PM S00-03 STRUCTURAL LOADING