

DO NOT USE FOR FINAL CONSTRUCTION

SHEET TITLE: 2/8/2024 3:24 PM

PRELIMINARY FLOOR PLAN

SHEET NUMBER: FP1

QUOTE NUMBER: R202409

PROJECT NAME:

CENTRAL DISPOSAL

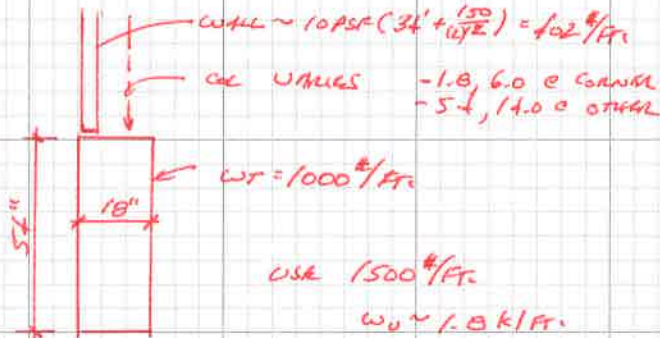
WAUKESHA, WI

CUSTOMER NAME:

REDHAWK

RICHFIELD, WI





@ 25'-0" oc

$$25(1.5) + 14 = 51.5 \text{ K}$$

KNOW 1

ALT 1 & 2 FOR STABILITY

IF USE (3) #7 T&B

$$A_s = 1.80$$

$$1.00(18 \times 54) = 1.75$$

$$T = 100 \text{ KIIPS}$$

$$a = \frac{100}{1.85(4)(18)} = 1.76"$$

$$\phi_{MN} = 100 \left( 48 - \frac{1.76}{12} \right) \left( .9 \right) \left( \frac{1}{12} \right) = 30 \text{ K-FT}$$

$$\frac{1.8(2)L}{8} = 301$$

$$L = 41'$$

$$(18 \times 48)(2) \sqrt{3000} (.75) = 71 \text{ KIIPS}$$

$$71 \leq 1.8 \left( \frac{L}{2} \right)$$

$$L \geq 78$$

$$150/4 = 37.5$$

R3B OR T40 HOLLOWBOLT MICROPILE CHANNEL TAC = 60 KIIPS

$$\text{MAX SWAYING LOAD } L_{AT} = 49 \text{ K}$$

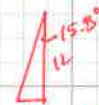
$$4.25:12 = 19.5^\circ$$

$$60 \sin 19.5 = 20 \text{ KIIPS}$$

$$\frac{49}{3} = 16.33$$

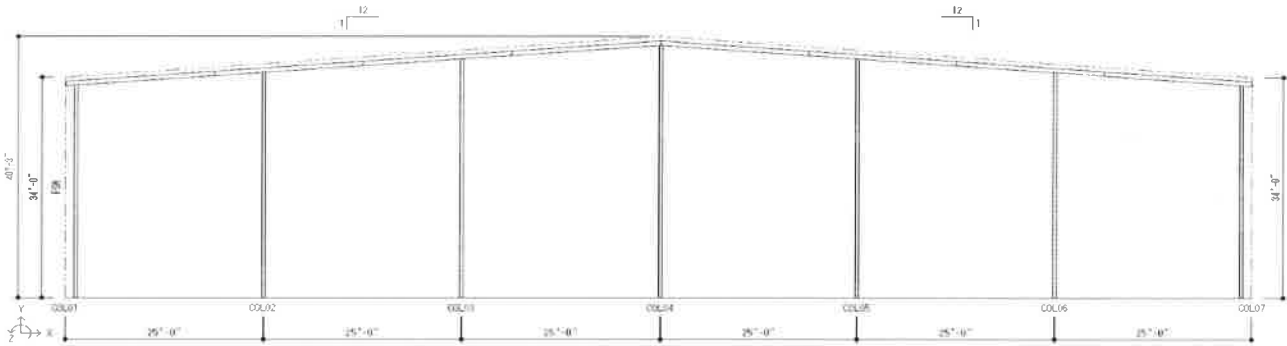
$$60 (\sin x) = 16.33$$

$$x = 15.8^\circ$$



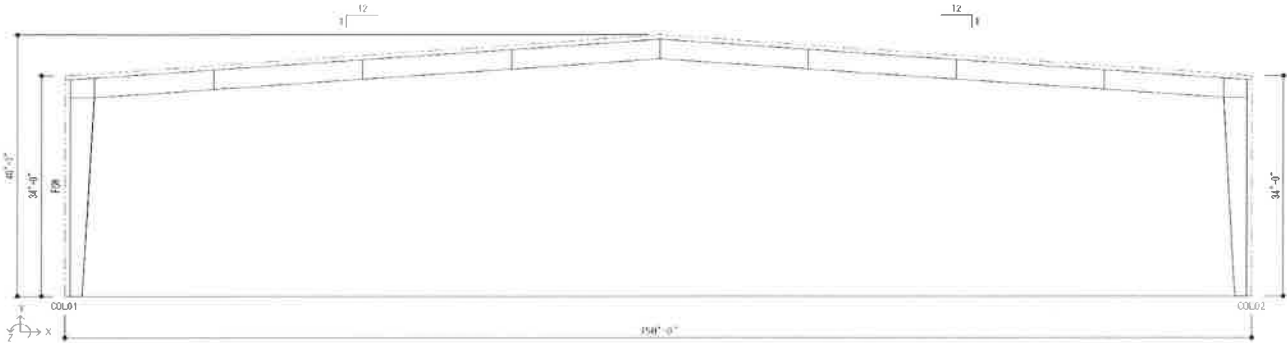
3.4 min make 3.5:12

\*\*\* Design Summary - Frame Reactions by Load Case \*\*\*



Member	X (kips)	Y (kips)	Z (kips)	Member	X (kips)	Y (kips)	Z (kips)
LOAD CASE 1 - DEAD				LOAD CASE 7 - WIND CASE 2 TO RIGHT			
COL01	0	1	0	COL01	0	-5	0
COL02	0	2	0	COL02	0	-12	0
COL03	0	2	0	COL03	0	-13	0
COL04	0	2	0	COL04	0	-8	0
COL05	0	2	0	COL05	0	-9	0
COL06	0	2	0	COL06	0	-9	0
COL07	0	1	0	COL07	0	-4	0
LOAD CASE 2 - COLLATERAL				LOAD CASE 8 - WIND CASE 2 TO LEFT			
COL01	0	1	0	COL01	0	-4	0
COL02	0	2	0	COL02	0	-9	0
COL03	0	2	0	COL03	0	-9	0
COL04	0	1	0	COL04	0	-7	0
COL05	0	0	0	COL05	0	-13	0
COL06	0	0	0	COL06	0	-12	0
COL07	0	1	0	COL07	0	-6	0
LOAD CASE 3 - ROOF LIVE				LOAD CASE 9 - LONG. WIND 1 TO BACK			
COL01	0	3	0	COL01	0	-5	-5
COL02	0	8	0	COL02	0	-13	-9
COL03	0	8	0	COL03	0	-13	-10
COL04	0	6	0	COL04	0	-9	-11
COL05	0	8	0	COL05	0	-13	-10
COL06	0	8	0	COL06	0	-13	-9
COL07	0	3	0	COL07	0	-5	-5
LOAD CASE 4 - SNOW				LOAD CASE 10 - LONG. WIND 1 TO FRONT			
COL01	0	4	0	COL01	0	-5	5
COL02	0	9	0	COL02	0	-13	10
COL03	0	10	0	COL03	0	-13	11
COL04	0	7	0	COL04	0	-9	11
COL05	0	10	0	COL05	0	-13	11
COL06	0	9	0	COL06	0	-13	10
COL07	0	4	0	COL07	0	-5	5
LOAD CASE 5 - WIND CASE 1 TO RIGHT				LOAD CASE 11 - SEISMIC TO RIGHT			
COL01	0	-2	0	COL01	0	0	0
COL02	0	-4	0	COL02	0	0	0
COL03	0	-4	0	COL03	0	0	0
COL04	0	-3	0	COL04	0	-1	0
COL05	0	1	0	COL05	0	0	0
COL06	0	1	0	COL06	0	0	0
COL07	0	1	0	COL07	0	1	0
LOAD CASE 6 - WIND CASE 1 TO LEFT				LOAD CASE 12 - SEISMIC TO LEFT			
COL01	0	0	0	COL01	0	0	0
COL02	0	0	0	COL02	0	0	0
COL03	0	1	0	COL03	0	0	0
COL04	0	-2	0	COL04	0	1	0
COL05	0	-4	0	COL05	0	0	0
COL06	0	-4	0	COL06	0	0	0
COL07	0	-2	0	COL07	0	-1	0

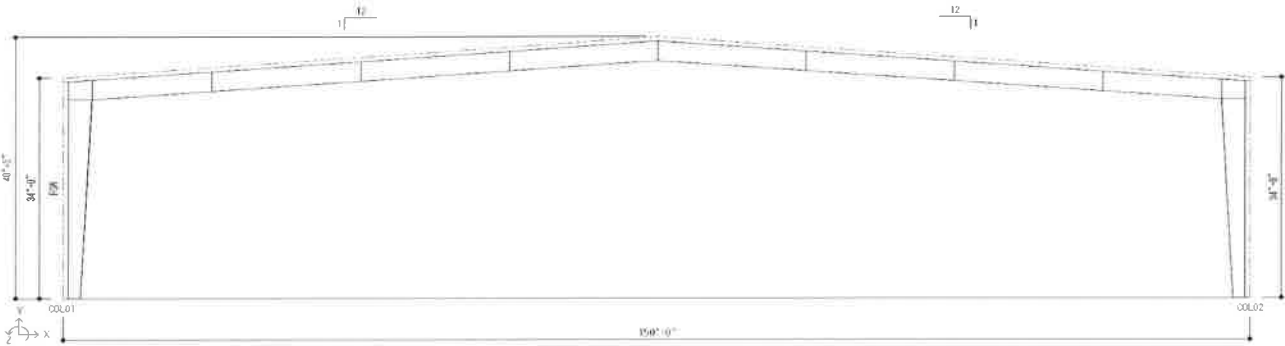
\*\*\* Design Summary - Frame Reactions by Load Case \*\*\*



Member	X (kips)	Y (kips)	Z (kips)	Member	X (kips)	Y (kips)	Z (kips)
LOAD CASE 1 - DEAD				LOAD CASE 8 - WIND CASE 2 TO LEFT			
COL01	7	13	0	COL01	-22	-39	0
COL02	-7	13	0	COL02	36	-50	0
LOAD CASE 2 - COLLATERAL				LOAD CASE 9 - LONG. WIND 1 TO BACK			
COL01	5	6	0	COL01	1	-3	0
COL02	-5	6	0	COL02	1	4	0
LOAD CASE 3 - ROOF LIVE				LOAD CASE 10 - LONG. WIND 1 TO FRONT			
COL01	18	24	0	COL01	-1	4	0
COL02	-18	24	0	COL02	-1	-3	0
LOAD CASE 4 - SNOW				LOAD CASE 11 - LONG. WIND 2 TO BACK			
COL01	37	50	0	COL01	-25	-48	0
COL02	-37	50	0	COL02	26	-42	0
LOAD CASE 5 - WIND CASE 1 TO RIGHT				LOAD CASE 12 - LONG. WIND 2 TO FRONT			
COL01	-11	0	0	COL01	-26	-42	0
COL02	-4	0	0	COL02	25	-48	0
LOAD CASE 6 - WIND CASE 1 TO LEFT				LOAD CASE 13 - SEISMIC TO RIGHT			
COL01	4	7	0	COL01	-1	-1	0
COL02	11	-5	0	COL02	-1	1	0
LOAD CASE 7 - WIND CASE 2 TO RIGHT				LOAD CASE 14 - SEISMIC TO LEFT			
COL01	-36	-50	0	COL01	1	1	0
COL02	22	-39	0	COL02	1	-1	0

Preliminary Reactions

\*\*\* Design Summary - Frame Reactions by Load Case \*\*\*

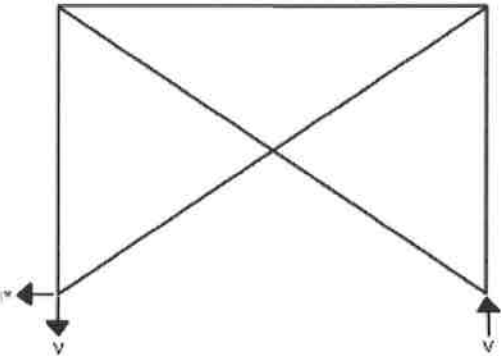


Member	X (kips)	Y (kips)	Z (kips)	Member	X (kips)	Y (kips)	Z (kips)
LOAD CASE 1 - DEAD				LOAD CASE 8 - WIND CASE 2 TO LEFT			
COL01	4	8	0	COL01	-16	-25	0
COL02	-4	8	0	COL02	23	-32	0
LOAD CASE 2 - COLLATERAL				LOAD CASE 9 - LONG. WIND 1 TO BACK			
COL01	3	3	0	COL01	-4	-8	0
COL02	-3	3	0	COL02	5	-3	0
LOAD CASE 3 - ROOF LIVE				LOAD CASE 10 - LONG. WIND 1 TO FRONT			
COL01	9	12	0	COL01	-5	-3	0
COL02	-9	12	0	COL02	4	-8	0
LOAD CASE 4 - SNOW				LOAD CASE 11 - LONG. WIND 2 TO BACK			
COL01	19	25	0	COL01	-17	-31	0
COL02	-19	25	0	COL02	18	-26	0
LOAD CASE 5 - WIND CASE 1 TO RIGHT				LOAD CASE 12 - LONG. WIND 2 TO FRONT			
COL01	-11	9	0	COL01	-18	-26	0
COL02	3	-2	0	COL02	17	-31	0
LOAD CASE 6 - WIND CASE 1 TO LEFT				LOAD CASE 13 - SEISMIC TO RIGHT			
COL01	-3	-2	0	COL01	-1	-1	0
COL02	11	-9	0	COL02	-1	1	0
LOAD CASE 7 - WIND CASE 2 TO RIGHT				LOAD CASE 14 - SEISMIC TO LEFT			
COL01	-23	-32	0	COL01	1	1	0
COL02	16	-25	0	COL02	1	-1	0

Preliminary Reactions

LONGITUDINAL X-BRACING REACTIONS

(These reactions must be combined with the appropriate longitudinal frame reactions)



Horizontal bracing reactions are orthogonal to horizontal frame reactions.

Line:	Bay:	H (kips)	V (kips)	Case
A	F.L. 1 - 2	12	16	WIND
A	F.L. 1 - 2	1	2	SEISMIC
A	F.L. 4 - 5	12	16	WIND
A	F.L. 4 - 5	1	2	SEISMIC
N	F.L. 2 - 3	12	16	WIND
N	F.L. 2 - 3	1	2	SEISMIC
N	F.L. 3 - 4	12	16	WIND
N	F.L. 3 - 4	1	2	SEISMIC
N	F.L. 4 - 5	12	16	WIND
N	F.L. 4 - 5	1	2	SEISMIC





### Frames 2, 3 & 4

[illegible]



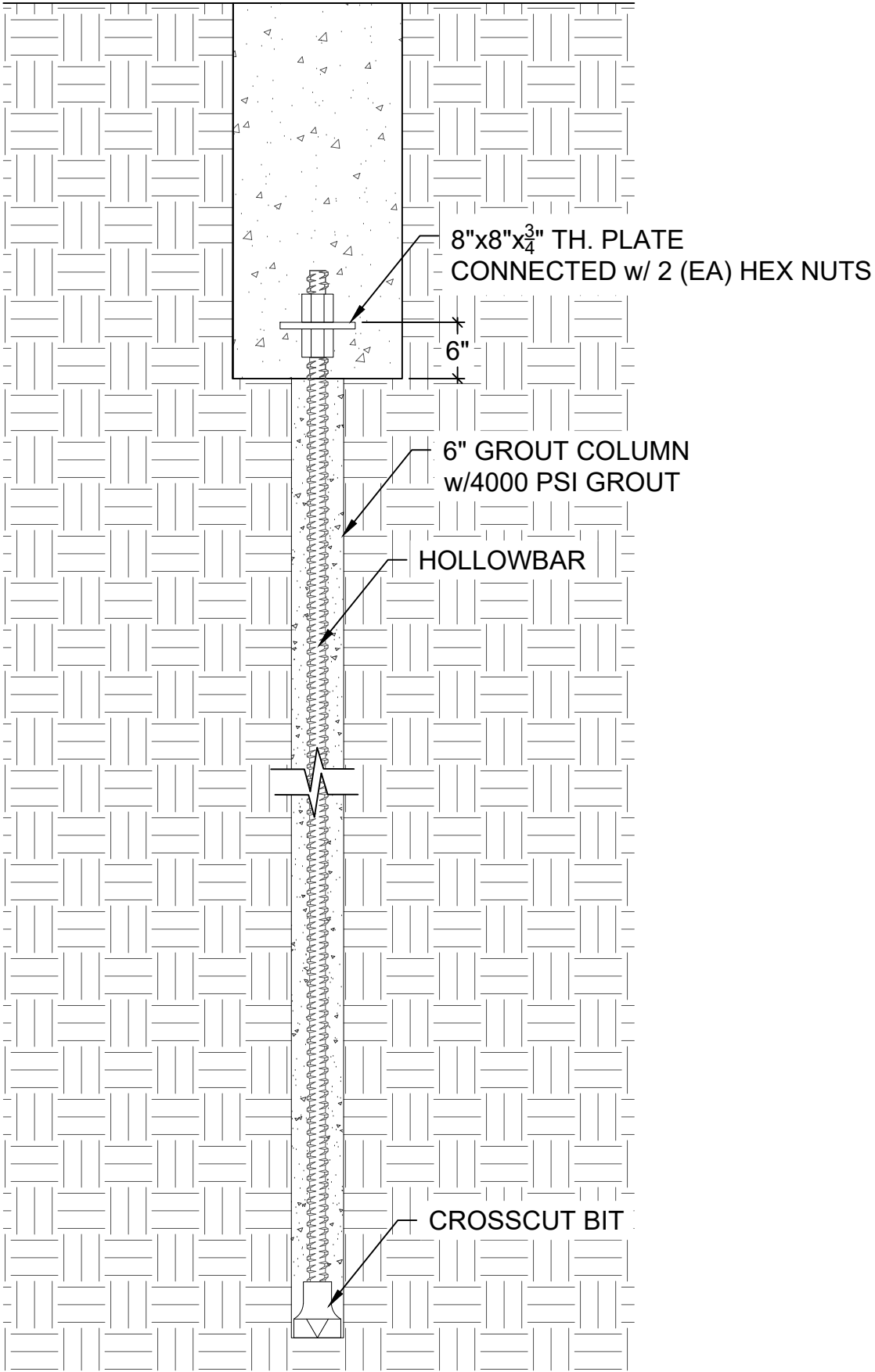






## Braced Frame Line

[illegible]



Midwest Drilled Foundations  
& Engineering, Inc.  
200 S. Prairie Avenue  
Waukesha, WI 53186

Subject  
Micropiles

Notes  
Typical Micropile Detail

Revision #	Description of Revision	By	Date	Job No.	Date	Drawn By
				23-000	3/03/2023	I.S.
				Contractor	Scale	Sheet
				MDF&E	3/4"=1'-0"	1 of 1