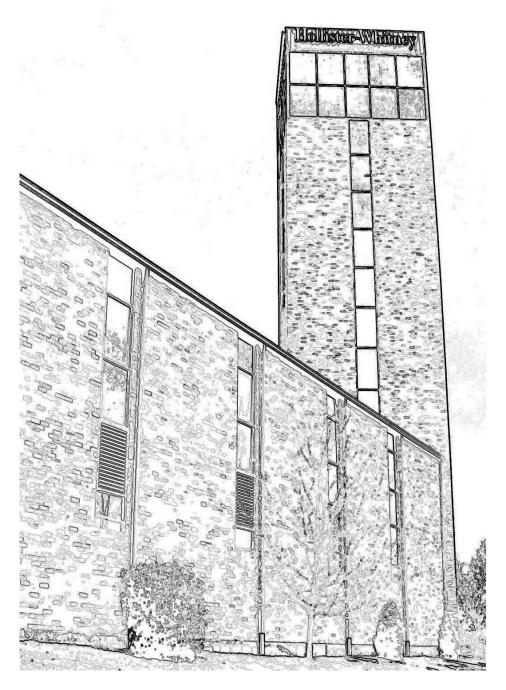


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# BASEMENT GEARED TRACTION DESIGN GUIDE







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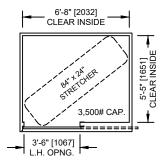


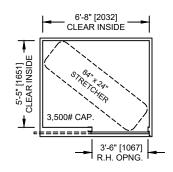


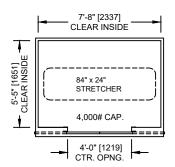
### BASEMENT GEARED TRACTION DESIGN GUIDE IBC Stretcher Access

#### STRETCHER REQUIREMENTS:

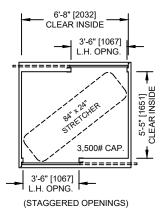
Section 3002.4 of the International Building Code (IBC) states that "where elevators in buildings four or more stories above, or four or more stories below grade plane, at least one elevator shall be provided for Fire Department emergency access to all floors". According to the IBC Code, the elevator should accommodate an open stretcher in the horizontal position 24 inches x 84 inches with not less than 5-inch radius corners. The following configurations and minimum dimensions comply with these IBC requirements:

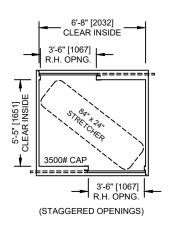


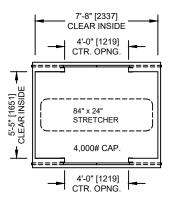




### PASSENGER ELEVATORS WITH FRONT OPENING DOOR





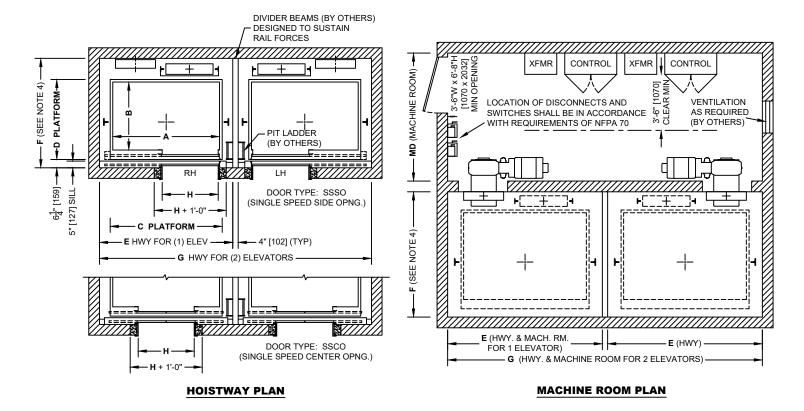


PASSENGER ELEVATORS WITH FRONT & REAR OPENING DOORS





## BASEMENT GEARED TRACTION DESIGN GUIDE Passenger, Front Opening, CWT at Rear, Machine at Rear



- Dimensions shown are based on the H-W GT series BS flange mount machines, standard equipment sizes and capacities for typical building
  installations and should only be used for preliminary planning. Contact H-W for additional information before proceeding with construction or
  for assistance with existing or special conditions.
- Dimensional data complies with the ASME A17.1 / CSA B44 Safety Code for Elevators and Escalators. State or local codes must be used if they differ from national code.
- 3. Interior cab dimensions may vary depending on the interior finishes. The platform and hoistway sizes should be increased accordingly for extra thick cab finishes.
- 4. Counterweight safeties are required if there is "occupied space" below the pit. Add 8" [203] to the hoistway and machine room depths listed.

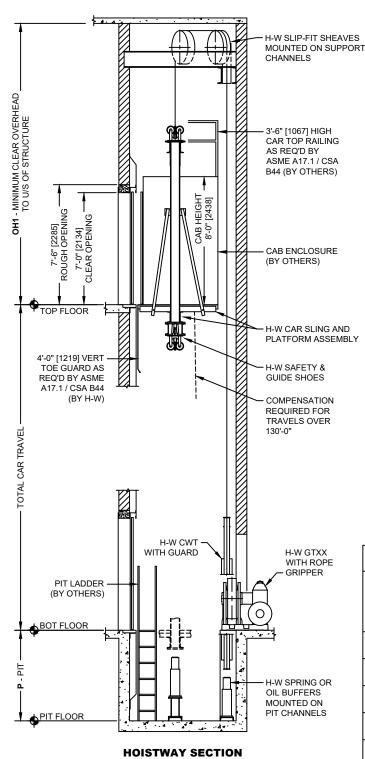
	INSIDE AREA	H CLEAR	DOOR		M CLEAR NSIDE	PLATFO	RM SIZE		OISTWAY SI NON-SEISMI			DISTWAY SI ZONE 2 OR		MACH ROOM
CAPACITY lb [kg]	(MAX SF ALLOWED PER CODE)	OPENING WIDTH ft [mm]	TYPE	A WIDTH ft [mm]	B DEPTH ft [mm]	C WIDTH ft [mm]	D DEPTH ft [mm]	E CLEAR WIDTH ft [mm]	F CLEAR DEPTH ft [mm]	G (DUPLEX) WALL TO WALL ft [mm]	E CLEAR WIDTH ft [mm]	F CLR DEPTH ft [mm]	G (DUPLEX) WALL TO WALL ft [mm]	MD DEPTH ft [mm]
2,000	24.2	3'-0"	SSSO (a)	5'-8"	4'-3"	6'-0"	5'-0"	7'-4"	6'-8"	15'-0"	7'-8"	6'-8"	15'-8"	8'-0"
[900]	[2.25]	[914]		[1727]	[1295]	[1829]	[1524]	[2235]	[2032]	[4572]	[2337]	[2032]	[4775]	[2438]
2,500	29.1	3'-6"	SSSO (b)	6'-8"	4'-3"	7'-0"	5'-0"	8'-4"	6'-8"	17'-0"	8'-8"	6'-8"	17'-8"	8'-0"
[1160]	[2.70]	[1067]	SSCO (a)	[2032]	[1295]	[2134]	[1524]	[2540]	[2032]	[5182]	[2642]	[2032]	[5385]	[2438]
3,000	33.7	3'-6"	SSSO (b)	6'-8"	4'-9"	7'-0"	5'-6"	8'-4"	7'-2"	17'-0"	8'-8"	7'-2"	17'-8"	8'-0"
[1380]	[3.13]	[1067]	SSCO (a)	[2032]	[1448]	[2134]	[1676]	[2540]	[2184]	[5182]	[2642]	[2184]	[5385]	[2438]
3,500	38.0	3'-6"	SSSO (c)	6'-8"	5'-5"	7'-0"	6'-2"	8'-4"	7'-10"	17'-0"	8'-8"	7'-10"	17'-8"	8'-0"
[1600]	[3.53]	[1067]	SSCO (b)	[2032]	[1651]	[2134]	[1880]	[2540]	[2388]	[5182]	[2642]	[2388]	[5385]	[2438]
4,000	42.2	3'-6" [1067]	SSSO (c)	7'-8"	5'-5"	8'-0"	6'-2"	9'-4"	7'-10" (d)	19'-0"	9'-8"	7'-10" (d)	19'-8"	8'-0"
[1815]	[3.92]	4'-0" [1219]	SSCO (c)	[2337]	[1651]	[2438]	[1880]	[2845]	[2388]	[5791]	[2946]	[2388]	[5994]	[2438]

- a. These car dimensions and entrance types provide wheelchair accessibility.
- b. These car dimensions and entrance types provide wheelchair accessibility and accommodate an ambulance type stretcher of (76"x24") in the horizontal position.
- c. These car dimensions and entrance types provide wheelchair accessibility and accommodate an ambulance type stretcher of (84"x24") in the horizontal position as required by the IBC.
- . At 450-500fpm add 6" [152] to the hoistway clear depth.

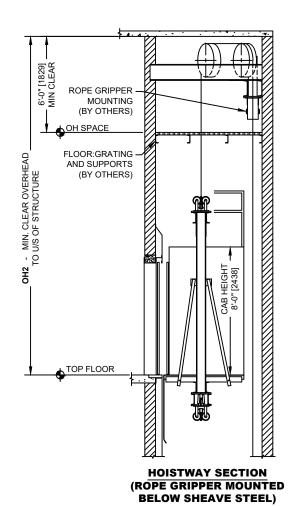




## BASEMENT GEARED TRACTION DESIGN GUIDE Passenger, Front Opening, CWT at Rear, Machine at Rear



(BASEMENT SET MACHINE WITH ROPE GRIPPER MOUNTING)



PIT AND OVERHEAD DIMENSIONS											
RATED SPEED fpm [m/s]	PIT DEPTH	MINIMUM OVERHEAD (MACHINE MOUNTED ROPE GRIPPER)	MINIMUM OVERHEAD (OVERHEAD MOUNTED ROPE GRIPPER)								
	P	0Н1	OH2								
100 - 200 fpm [.50 - 1.00 m/s]	5'-6" [1676]	16'-2" [4928]	20'-2" [6147]								
250 - 350 fpm [1.25 - 1.75m/s]	5'-8" [1727]	16'-9" [5104]	20'-9" [6325]								
400 fpm [2.00 m/s]	6'-0" [1829]	17'-3" [5258]	21'-3" [6477]								
450 fpm * [2.25 m/s]	6'-8" [2032]	18'-3" [5563]	22'-3" [6782]								
500 fpm * [2.50 m/s]	6'-8" [2032]	18'-6" [5639]	22'-6" [6858]								

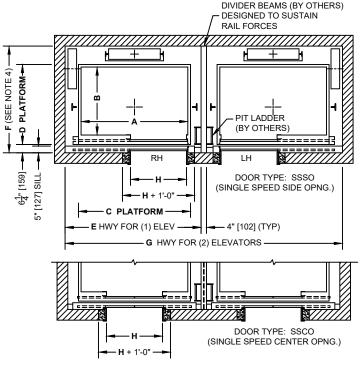
Overhead dimensions (OH) are based on an 8'-0" [2438mm] cab height with a 7'-0" [2134mm] door. For 9'-0" [2745] cab use OH + 1'-0" [305]. For 10'-0" [3050] cab use OH + 2'-0" [610].

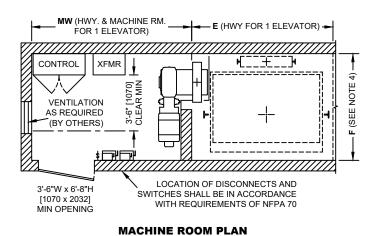
Additional depth will be required for machine room and hoistway at 4000# capacity.





### **BASEMENT GEARED TRACTION DESIGN GUIDE** Passenger, Front Opening, CWT at Rear, Machine at Side





### **HOISTWAY PLAN**

- Dimensions shown are based on the H-W GT series BS flange mount machines, standard equipment sizes and capacities for typical building installations and should only be used for preliminary planning. Contact H-W for additional information before proceeding with construction or for assistance with existing or special conditions.
- Dimensional data complies with the ASME A17.1 / CSA B44 Safety Code for Elevators and Escalators. State or local codes must be used if 2. they differ from national code.
- Interior cab dimensions may vary depending on the interior finishes. The platform and hoistway sizes should be increased accordingly for 3. extra thick cab finishes.
- Counterweight safeties are required if there is "occupied space" below the pit. Add 8" [203] to the hoistway and machine room depths listed.

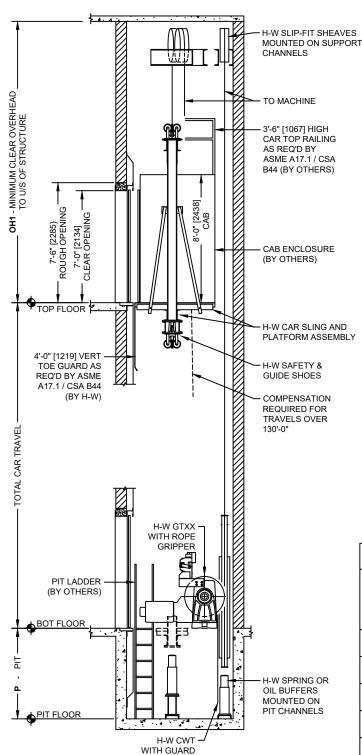
	INSIDE AREA	H CLEAR OPENING			M CLEAR NSIDE	PLATFO	RM SIZE		OISTWAY SI NON-SEISMI			OISTWAY SI ZONE 2 OR		MACH ROOM
CAPACITY lb [kg]	(MAX SF ALLOWED PER CODE)	OPENING WIDTH ft [mm]	TYPE (1)	A WIDTH ft [mm]	B DEPTH ft [mm]	C WIDTH ft [mm]	D DEPTH ft [mm]	E CLR WIDTH ft [mm]	F CLR DEPTH ft [mm]	G (DUPLEX) WALL TO WALL ft [mm]	E CLR WIDTH ft [mm]	F CLR DEPTH ft [mm]	G (DUPLEX) WALL TO WALL ft [mm]	MW WIDTH ft [mm]
2,000	24.2	3'-0"	SSSO (a)	5'-8"	4'-3"	6'-0"	5'-0"	8'-0"	6'-8"	16'-4"	8'-2"	6'-8"	16'-8"	10'-0"
[900]	[2.25]	[914]		[1727]	[1295]	[1829]	[1524]	[2438]	[2032]	[4978]	[2489]	[2032]	[5080]	[3048]
2,500	29.1	3'-6"	SSSO (b)	6'-8"	4'-3"	7'-0"	5'-0"	9'-0"	6'-8"	18'-4"	9'-2"	6'-8"	18'-8"	10'-0"
[1160]	[2.70]	[1067]	SSCO (a)	[2032]	[1295]	[2134]	[1524]	[2743]	[2032]	[5588]	[2794]	[2032]	[5690]	[3048]
3,000	33.7	3'-6"	SSSO (b)	6'-8"	4'-9"	7'-0"	5'-6"	9'-0"	7'-2"	18'-4"	9'-2"	7'-2"	18'-8"	10'-0"
[1380]	[3.13]	[1067]	SSCO (a)	[2032]	[1448]	[2134]	[1676]	[2743]	[2184]	[5588]	[2794]	[2184]	[5690]	[3048]
3,500	38.0	3'-6"	SSSO (c)	6'-8"	5'-5"	7'-0"	6'-2"	9'-0"	7'-10"	18'-4"	9'-2"	7'-10"	18'-8"	10'-6"
[1600]	[3.53]	[1067]	SSCO (b)	[2032]	[1651]	[2134]	[1880]	[2743]	[2388]	[5588]	[2794]	[2388]	[5690]	[3200]
4,000	42.2	3'-6" [1067]	SSSO (c)	7'-8"	5'-5"	8'-0"	6'-2"	10'-0" (d)	7'-10"	20'-4" (d)	10'-2" (d)	7'-10"	20'-8" (d)	10'-6"
[1815]	[3.92]	4'-0" [1219]	SSCO (c)	[2337]	[1651]	[2438]	[1880]	[3048]	[2388]	[6198]	[3099]	[2388]	[6299]	[3200]

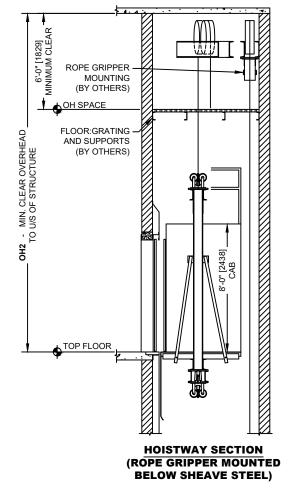
- These car dimensions and entrance types provide wheelchair accessibility.
- These car dimensions and entrance types provide wheelchair accessibility and accommodate an ambulance type stretcher of (76"x24") in the horizontal position
- These car dimensions and entrance types provide wheelchair accessibility and accommodate an ambulance type stretcher of (84"x24") in the horizontal position as required by the IBC. At 450-500fpm add 6" to the hoistway clear width and 1'-0" to the duplex wall to wall.





## BASEMENT GEARED TRACTION DESIGN GUIDE Passenger, Front Opening, CWT at Rear, Machine at Side





PIT AND OVERHEAD DIMENSIONS											
RATED SPEED fpm [m/s]	PIT DEPTH	MINIMUM OVERHEAD (MACHINE MOUNTED ROPE GRIPPER)	MINIMUM OVERHEAD (OVERHEAD MOUNTED ROPE GRIPPER)								
	Р	0Н1	OH2								
100 - 200 fpm [.50 - 1.00 m/s]	5'-6" [1676]	16'-2" [4928]	20'-2" [6147]								
250 - 350 fpm [1.25 - 1.75m/s]	5'-8" [1727]	16'-9" [5105]	20'-9" [6325]								
400 fpm [2.00 m/s]	6'-0" [1829]	17'-3" [5258]	21'-3" [6477]								
450 fpm * [2.25 m/s]	6'-8" [2032]	18'-3" [5563]	22'-3" [6782]								
500 fpm * [2.50 m/s]	6'-8" [2032]	18'-6" [5639]	22'-6" [6858]								

Overhead dimensions (OH) are based on an 8'-0" [2438mm] cab height with a 7'-0" [2134mm] door. For 9'-0" [2745] cab use OH + 1'-0" [305]. For 10'-0" [3050] cab use OH + 2'-0" [610].

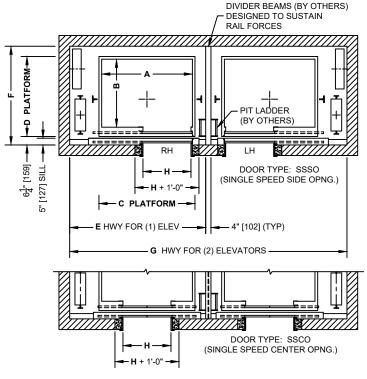
HOISTWAY SECTION
(BASEMENT SET MACHINE
WITH ROPE GRIPPER MOUNTING)

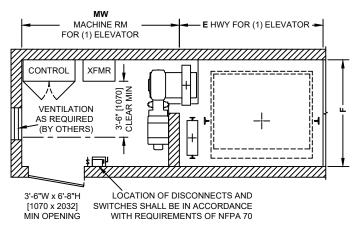
Additional width will be required for machine room and hoistway.





## BASEMENT GEARED TRACTION DESIGN GUIDE Passenger, Front Opening, CWT at Side, Machine at Side





#### **MACHINE ROOM PLAN**

#### **HOISTWAY PLAN**

- Dimensions shown are based on the H-W GT series BS flange mount machines, standard equipment sizes and capacities for typical building
  installations and should only be used for preliminary planning. Contact H-W for additional information before proceeding with construction or
  for assistance with existing or special conditions.
- 2. Dimensional data complies with the ASME A17.1 / CSA B44 Safety Code for Elevators and Escalators. State or local codes must be used if they differ from national code.
- 3. Interior cab dimensions may vary depending on the interior finishes. The platform and hoistway sizes should be increased accordingly for extra thick cab finishes.
- 4. Counterweight safeties are required if there is "occupied space" below the pit. Counterweight safeties are not an option with this configuration.

				H	IOISTW	AY AND	МАСНІ	NE ROOI	M DIMEN	SIONS								
		ADEA CLEAD		CLEAR			CLEAR		M CLEAR NSIDE	PLATFO	RM SIZE		OISTWAY SI NON-SEISMI			DISTWAY SI ZONE 2 OR		MACH ROOM
CAPACITY lb [kg]		OPENING WIDTH ft [mm]	TYPE	A WIDTH ft [mm]	B DEPTH ft [mm]	C WIDTH ft [mm]	D DEPTH ft [mm]	E CLEAR WIDTH ft [mm]	F CLEAR DEPTH ft [mm]	G (DUPLEX) WALL TO WALL ft [mm]	E CLEAR WIDTH ft [mm]	F CLR DEPTH ft [mm]	G (DUPLEX) WALL TO WALL ft [mm]	MW WIDTH ft [mm]				
2,000	24.2	3'-0"	SSSO (a)	5'-8"	4'-3"	6'-0"	5'-0"	8'-4"	6'-10"	17'-0"	8'-6"	6'-10"	17'-4"	10'-0"				
[900]	[2.25]	[914]		[1727]	[1295]	[1829]	[1524]	[2540]	[2083]	[5182]	[2591]	[2083]	[5283]	[3048]				
2,500	29.1	3'-6"	SSSO (b)	6'-8"	4'-3"	7'-0"	5'-0"	9'-4"	6'-10"	19'-0"	9'-6"	6'-10"	19'-4"	10'-0"				
[1160]	[2.70]	[1067]	SSCO (a)	[2032]	[1295]	[2134]	[1524]	[2845]	[2083]	[5791]	[2896]	[2083]	[5893]	[3048]				
3,000	33.7	3'-6"	SSSO (b)	6'-8"	4'-9"	7'-0"	5'-6"	9'-4"	7'-0"	19'-0"	9'-6"	7'-0"	19'-4"	10'-0"				
[1380]	[3.13]	[1067]	SSCO (a)	[2032]	[1448]	[2134]	[1676]	[2845]	[2134]	[5791]	[2896]	[2134]	[5893]	[3048]				
3,500	38.0	3'-6"	SSSO (c)	6'-8"	5'-5"	7'-0"	6'-2"	9'-4"	7'-4"	19'-0"	9'-6"	7'-4"	19'-4"	10'-6"				
[1600]	[3.53]	[1067]	SSCO (b)	[2032]	[1651]	[2134]	[1880]	[2845]	[2235]	[5791]	[2896]	[2235]	[5893]	[3200]				
4,000	42.2	3'-6" [1067]	SSSO (c)	7'-8"	5'-5"	8'-0"	6'-2"	10'-4"	7'-4"	21'-0"	10'-6"	7'-4"	21'-4"	10'-6"				
[1815]	[3.92]	4'-0" [1219]	SSCO (c)	[2337]	[1651]	[2438]	[1880]	[3150]	[2235]	[6401]	[3200]	[2235]	[6502]	[3200]				

- a. These car dimensions and entrance types provide wheelchair accessibility.
- b. These car dimensions and entrance types provide wheelchair accessibility and accommodate an ambulance type stretcher of (76"x24") in the horizontal position
- c. These car dimensions and entrance types provide wheelchair accessibility and accommodate an ambulance type stretcher of (84"x24") in the horizontal position as required by the IBC.





### **BASEMENT GEARED TRACTION DESIGN GUIDE** Passenger, Front Opening, CWT at Side, Machine at Side

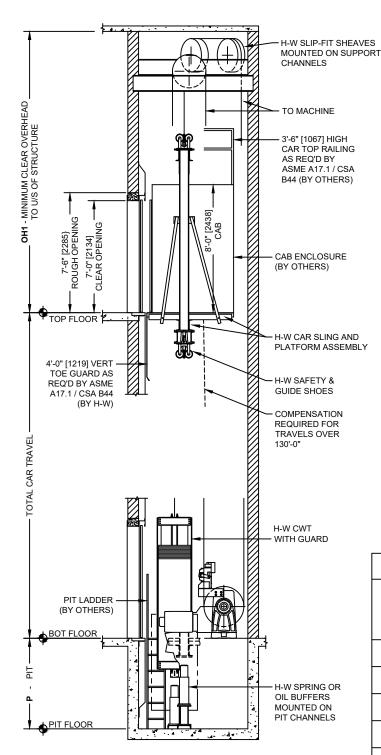
6'-0" [1829] MINIMUM CLEAR

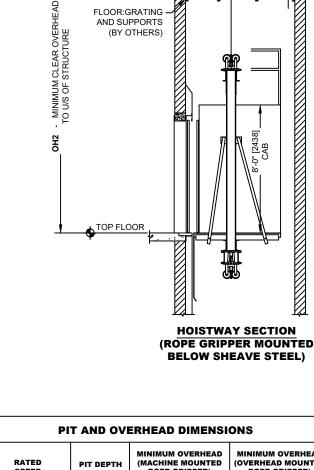
ROPE GRIPPER MOUNTING (BY OTHERS)

OH SPACE

FLOOR:GRATING

AND SUPPORTS





HOISTWAY SECTION
(BASEMENT SET MACHINE
WITH ROPE GRIPPER MOUNTING)

PIT AND OVERHEAD DIMENSIONS											
RATED SPEED fpm [m/s]	PIT DEPTH	MINIMUM OVERHEAD (MACHINE MOUNTED ROPE GRIPPER)	MINIMUM OVERHEAD (OVERHEAD MOUNTED ROPE GRIPPER)								
	P	0Н1	OH2								
100 - 200 fpm [.50 - 1.00 m/s]	5'-6" [1676]	16'-5" [5004]	20'-5" [6223]								
250 - 350 fpm [1.25 - 1.75m/s]	5'-8" [1727]	17'-0" [5182]	21'-0" [6401]								
400 fpm [2.00 m/s]	6'-0" [1829]	17'-6" [5334]	21'-6" [6553]								
450 fpm * [2.25 m/s]	6'-8" [2032]	18'-6" [5639]	22'-6" [6858]								
500 fpm * [2.50 m/s]	6'-8" [2032]	18'-9" [5715]	22'-9" [6934]								

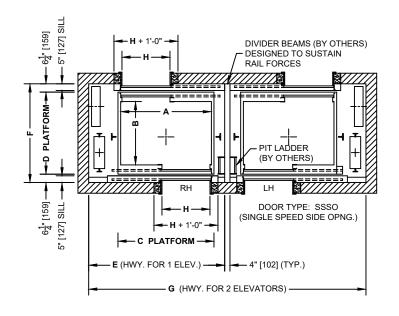
Overhead dimensions (OH) are based on an 8'-0" [2438mm] cab height with a 7'-0" [2134mm] door. For 9'-0" [2745] cab use OH + 1'-0" [305]. For 10'-0" [3050] cab use OH + 2'-0" [610].

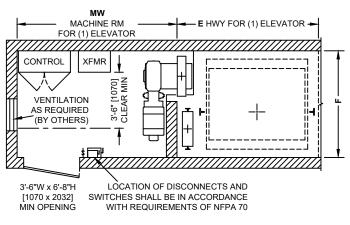
Additional width will be required for machine room and hoistway.





### BASEMENT GEARED TRACTION DESIGN GUIDE Passenger, Front & Rear Opening, CWT at Side, Machine at Side





#### **MACHINE ROOM PLAN**

#### **HOISTWAY PLAN**

- 1. Dimensions shown are based on the H-W GT series BS flange mount machines, standard sizes and capacities for typical building installations and should only be used for preliminary planning. Contact H-W for additional information before proceeding with construction or for assistance with existing or special conditions.
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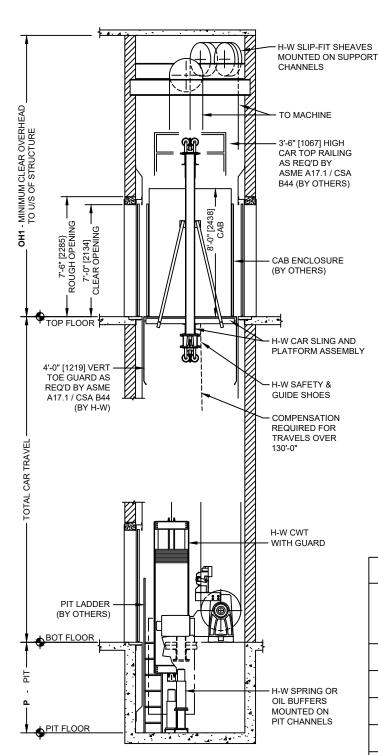
				н	IOISTW	AY AND	МАСНІ	NE ROOI	M DIMEN	SIONS						
	INSIDE AREA	ADEA CLEAD		H CLEAR	TEAD		M CLEAR NSIDE	PLATFO	RM SIZE		OISTWAY SI NON-SEISMI			DISTWAY SI ZONE 2 OR		MACH ROOM
CAPACITY lb [kg]	(MAX SF ALLOWED PER CODE)	OPENING WIDTH ft [mm]	DOOR TYPE	A WIDTH ft [mm]	B DEPTH ft [mm]	C WIDTH ft [mm]	D DEPTH ft [mm]	E CLEAR WIDTH ft [mm]	F CLEAR DEPTH ft [mm]	G (DUPLEX) WALL TO WALL ft [mm]	E CLEAR WIDTH ft [mm]	F CLR DEPTH ft [mm]	G (DUPLEX) WALL TO WALL ft [mm]	MW WIDTH ft [mm]		
2,000	24.2	3'-0"	SSSO (a)	5'-8"	4'-4"	6'-0"	5'-6 1/2"	8'-6"	6'-7"	17'-4"	8'-8"	6'-7"	17'-8"	10'-0"		
[900]	[2.25]	[914]		[1727]	[1321]	[1829]	[1689]	[2591]	[2007]	[5283]	[2641]	[2007]	[5384]	[3048]		
2,500	29.1	3'-6"	SSSO (b)	6'-8"	4'-4"	7'-0"	5'-6 1/2"	9'-6"	6'-7"	19'-4"	9'-8"	6'-7"	19'-8"	10'-0"		
[1160]	[2.70]	[1067]		[2032]	[1321]	[2134]	[1689]	[2896]	[2007]	[5893]	[2946]	[2007]	[5994]	[3048]		
3,000	33.7	3'-6"	SSSO (b)	6'-8"	4'-9"	7'-0"	5'-11 1/2"	9'-6"	7'-0"	19'-4"	9'-8"	7'-0"	19'-8"	10'-0"		
[1380]	[3.13]	[1067]		[2032]	[1448]	[2134]	[1816]	[2896]	[2134]	[5893]	[2946]	[2134]	[5994]	[3048]		
3,500	38.0	3'-6"	SSSO (c)	6'-8"	5'-5"	7'-0"	6'-7 1/2"	9'-6"	7'-8"	19'-4"	9'-8"	7'-8"	19'-8"	10'-6"		
[1600]	[3.53]	[1067]		[2032]	[1651]	[2134]	[2019]	[2896]	[2337]	[5893]	[2946]	[2337]	[5994]	[3200]		
4,000 [1815]	42.2 [3.92]	3'-6" [1067]	SSSO (c)	7'-8" [2337]	5'-5" [1651]	8'-0" [2438]	6'-7 1/2" [2019]	10'-6" [3200]	7'-8" [2337]	21'-4" [6502]	10'-8" [3251]	7'-8" [2337]	21'-8" [6603]	10'-6" [3200]		

- a. These car dimensions and entrance types provide wheelchair accessibility.
- b. These car dimensions and entrance types provide wheelchair accessibility and accommodate an ambulance type stretcher of (76"x24") in the horizontal position.
- c. These car dimensions and entrance types provide wheelchair accessibility and accommodate an ambulance type stretcher of (84\*x24\*) in the horizontal position as required by the IBC.

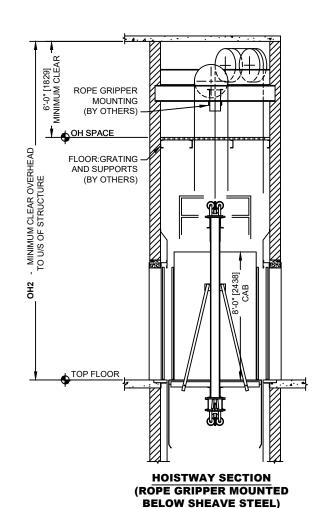




## BASEMENT GEARED TRACTION DESIGN GUIDE Passenger, Front & Rear Opening, CWT at Side, Machine at Side







P	PIT AND OVERHEAD DIMENSIONS											
RATED SPEED fpm [m/s]	PIT DEPTH	MINIMUM OVERHEAD (MACHINE MOUNTED ROPE GRIPPER)	MINIMUM OVERHEAD (OVERHEAD MOUNTED ROPE GRIPPER)									
	Р	0Н1	OH2									
100 - 200 fpm [.50 - 1.00 m/s]	5'-6" [1676]	16'-5" [5004]	20'-5" [6223]									
250 - 350 fpm [1.25 - 1.75m/s]	5'-8" [1727]	17'-0" [5182]	21'-0" [6401]									
400 fpm [2.00 m/s]	6'-0" [1829]	17'-6" [5334]	21'-6" [6553]									
450 fpm * [2.25 m/s]	6'-8" [2032]	18'-6" [5639]	22'-6" [6858]									
500 fpm * [2.50 m/s]	6'-8" [2032]	18'-9" [5715]	22'-9" [6934]									

Overhead dimensions (OH) are based on an 8'-0" [2438mm] cab height with a 7'-0" [2134mm] door. For 9'-0" [2745] cab use OH + 1'-0" [305]. For 10'-0" [3050] cab use OH + 2'-0" [610].

Additional width will be required for machine room and hoistway.