

Grove RT530E-2

Product Guide



Features



Boom shape

The RT530E-2 incorporates a rectangular boom shape made from 100 k.s.i. steel which eliminates weight and maximizes structural capacities.

Tip height

Maximum tip height of 44,5 m (146 ft) w ith 13,7 m (45 ft) telescopic extension.



CraneSTXR

CraneSTAR is an exclusive and innovative crane asset management system that helps improve your profitability and reduce costs by remotely monitoring critical crane data. Visit www.cranestar. com for more information.

Vision cab

Designed to optimize operator comfort and visibility, the Vision cab features acoustical lining, tinted safety glass and a deluxe seat with single-axis controllers.

The tilt/telescoping steering wheel and automotive style dash control panel are designed to offer a less cluttered look while still offering full instrumentation.



Contents

Specifications	4
Dimensions and weights	7
Working range: Bi-fold swingaway	8
Load charts	9
Load handling	13
Notes	14

Specifications

Superstructure



Boom

8,8 m - 29,0 m (29 ft - 95 ft) four-section, synchronized full power boom.

Maximum tip height: 31,2 m (102.5 ft).



* Optional telecopic swingaway extension

7,9 m - 13,7 m (26 ft - 45 ft) offsettable telescopic lattice swingaway extension. Offsets at 0° and 30°. Stows alongside base boom section.

Maximum tip height: 44,5 m (146 ft).



Boom nose

Three nylatron sheaves mounted on heavy duty tapered roller bearings with removable pin-type rope guards. Quick reeve type boom nose.



Boom elevation

One double-acting hydraulic cylinder with integral holding valve provides elevation from -3° to +76°.



Load moment and anti-two block system

Standard "Graphic Display" load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition. The standard Work Area Definition System allows the operator to pre-select and define safe working areas. If the crane approaches the pre-set limits, audio-visual warnings aid the operator in avoiding job-site obstructions.



Cab

Full-vision, all-steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe seat incorporates armrest-mounted hydraulic single-axis controllers. Tilt/telescoping steering wheel with various controls incorporated into the steering column. Other standard features include:, hot water heater, cab circulating air fan, sliding side and rear windows, sliding skylight with electric wiper and sunscreen, electric windshield wash/wipe, fire extinguisher, seat belt, air conditioning, and dual cab mounted work light.



Swing

Single speed, planetary swing drive with foot applied multi-disc wet brake. Spring applied, hydraulically released swing brake. Single position mechanical house lock, operated from cab.

Maximum speed: 2.0 rpm



Counterweight

3817 kg (8416 lb) pinned to superstructure.



Hydraulic system

Two main pumps ([1] piston and [1] gear) with a combined capacity of 316,5 LPM (83.6 GPM). Maximum operating pressure: 275,7 bar (4000 psi). Three section pressure compensated valve bank. Return line type filter with full flow by-pass protection and service indicator. Replaceable cartridge with micron filtration rating of 5/12/16. 396 L (104.6 gal) hydraulic reservoir. System pressure test ports.



Hoist specifications (HP15C-17G) main and auxiliary hoist

Planetary reduction with automatic spring applied multi-disc wet brake. Electronic hoist drum rotation indicators, and hoist drum cable followers.

Maximum single line pull:

1st layer: 5280 kg (11,640 lb) 3rd layer: 4323 kg (9530 lb) 5th layer: 3656 kg (8060 lb)

Maximum permissible line pull:

5280 kg (11,640 lb) with 6 x 37 class rope 5280 kg (11,640 lb) with 35 x 7 class rope

Maximum single line speed: 136 m/min (445 fpm)

Rope construction:

6 x 36 EIPS IWRC, Special Flexible 35 x 7 Flex-X, Rotation Resistant

Rope diameter: 16 mm (5/8 in)

Rope length:

Main hoist: 137,0 m (450 ft) Auxillary hoist: 137,0 m (450 ft)

Maximum Rope Stowage: 181 m (596 ft)

Specifications

Carrier



Chassis

Box section frame fabricated from high-strength, low alloy steel. Front/rear towing, lifting, and tie down lugs.



Outrigger system

Four hydraulic telescoping single-stage double box beam outriggers with inverted jacks and integral holding valves.

Three position setting, 0%, 50% and fully extended. All steel fabricated quick release type outrigger floats, 362 mm (14.25 in) square.

Maximum outrigger pad load: 24 857 kg (54,800 lb) Outrigger monitoring comes standard (required in North America and Canada.



Outrigger controls

Controls and crane level indicator located in cab.



Engine (Tier IV)

Cummins QSB 6.7 L diesel, six cylinders, turbocharged with Cummins Diesel Oxidation Catalyst filter/muffler. Meets emissions per U.S.E.P.A. Tier IV and E.U. Stage III B. 112 kW (164 bhp) at 2300 rpm. Maximum torque: 731 N-m (539 ft lb) at 1500 rpm. Fuel requirement: Maximum of 15 ppm sulphur content (Ultra Low Diesel Fuel).

Note: Tier IV engine Required in North American and European Union countries.



Engine (Tier III)

Cummins QSB 6.7 L diesel, six cylinders, 119 kW (160 bhp) (Gross) at 2500 rpm.

Maximum torque: 732 Nm (540 ft lb) at 1500 rpm.



Fuel tank capacity

219 L (58 gal)



Transmission

Range-shift 6 speed (3 speeds x 2 range, both forward and reverse).

Front axle disconnect for 4 x 2 travel.



Electrical system

Four (4) 12V maintenance free batteries. 24V starting and lighting. Battery disconnect. Full CanBus diagnostic system.



4 x 4



Steering

Fully independent power steering:

Front: Full hydraulic steering wheel controlled.

Rear: Full hydraulic switch controlled.

Provides infinite variations four main steering modes: front only, rear only, crab, and coordinated.

Rear steer indicator.

Outside turning radius: 5,8 m (19.1 ft) Inside turning radius: 4,0 m (13.1 ft)



Axles

Front: Drive/steer with differential and planetary reduction hubs rigid mounted to frame. Rear: Drive/steer with differential and planetary reduction hubs pivot mounted to frame.

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Oscillation lockouts

Automatic full hydraulic lockouts on rear axle permits 25,4 cm (10 in) oscillation with boom centered over the front only.



Brakes

Full hydraulic split circuit disc-type brakes operating on all wheels. Spring-applied, hydraulically released parking brake mounted on front axle.



Tires

Standard: 20.5 x 25 - 24 bias ply *Option: 16.0 x 25-28 bias ply

Specifications

Carrier continued



Lights

Full lighting including turn indicators, head, tail, brake and hazard warning lights.



Maximum speed

40 kph (25 mph) at 2500 rpm



Gradeability (theoretical)

119% (at engine stall) (Based on 27 006 kg [59,537 lb] GVW) 20.5 x 25 tires, 29,0 m (95 ft) main boom, plus 13,7 m (45 ft) telescopic swingaway, 3817 kg (8416 lb) counterweight, 27 t (30 USt) hookblock and 6,8 t (7.5 USt) headache ball.

Miscellaneous standard equipment

Full width steel fenders, full length steel decking with anti-skid, dual rear view mirrors, hook-block tiedown, electronic back-up alarm, light package, front stowage well, tachometer/hourmeter, rear wheel position indicator, 36,000 Btu hot water cab heater, air conditioning (28,500 Btu), hoist mirrors, engine distress A/V warning system, front/rear tie down and tow lugs, coolant sight level indicator, CraneSTAR asset management system.

*Optional equipment

- ➤ VALUE PACKAGE: Includes 7,92 m 13,7 m (26 ft - 45 ft) telescoping swingaway and 360° NYC style positive swing lock
- AUXILIARY HOIST PACKAGE: Includes Model HP15C-17G auxiliary hoist with electronic hoist drum rotation indicator, hoist drum cable follower, 137,0 m (450 ft) of 16 mm (5/8 in) 35 x 7 class wire rope and auxiliary single sheave boom nose.
- AUXILIARY LIGHTING PACKAGE: Includes S/S mounted amber flashing light and dual base boom mounted halogen floodlights, LMI light bar (in cab) and rubber mat for stowage trough.
- LMI light bar (in cab)
- ≥ 360° NYC style mechanical swing lock
- Rear Pintle hook
- Cab-controlled cross axle differential locks (front and rear)
- PAT Data logger down-load kit
- Single axis electric controllers
- Third wrap indicator with hoist cut-out for main hoist or main and auxiliary hoist

Dimensions and weights

Dimensions Notes: (All dimensions are in mm) Tire Size C D F G 1. All dimensions are for reference only 20.5 X 25 12 838 12 428 10 899 10 236 10 007 8138 7021 2055 25.0° 22.5° 17.3° 2606 Wheel 2. Boom elevation is -3° to +76° 16.0 X 25 steer 3. Dimensions shown are based on 20.5 X 25 8967 8630 6732 6061 5832 4000 3498 2055 25.0° 22.5° 17.3° 2606 20.5 x 25 tires. Add 34,5 mm for 16.0 x Wheel 16.0 X 25 5806 4000 2093 18.3° steer 6147 mm (20'2") 2387 mm (94") retracted 4267 mm (168") mid extend 6096 mm (240") full extend H-Track 641 mm (25.25") Boom nose width Outside turning radius Inside turning radius Outside curb Inside curb clearance S/S Overall 10 921 mm (35' 10") 8814 mm (28' 11") Retracted 29 007 mm (95' 2") Extended 1173 mm (46.19") 3550 mm (139.77") O.A. 3235 mm (127.37") 3348 mm (131.82") Boom 429 mm (16.91") horizontal

Weights							
	G\	GVW		Front		Rear	
	kg	(lb)	kg	(lb)	kg	(lb)	
RT530E-2 Basic Machine: Basic Machine including 31,0 m (95 ft) main boom, main hoist with 137,0 m (450 ft) of rope, full counterweight + IPO, 6,8 t (7.5 USt) headache ball, and 27 t (30 USt) hookblock:	26 273	57,921	11 727	25,853	14 546	32,068	
ADD: Auxiliary hoist + 137,0 m (450 ft) of 35x7 hoist cable and auxiliary boom nose ILO IPO C/W	26 494	58,409	11 794	26,001	14 700	32,408	
ADD: 7,9 m - 13,7 m (26 ft - 45 ft) telescopic boom extension + extension hangers	27 404	60,415	13 161	29,015	14 243	31,400	

394 mm (15.52")

7098 mm (279.46")

370 mm (14.56") 472 mm (18.57")

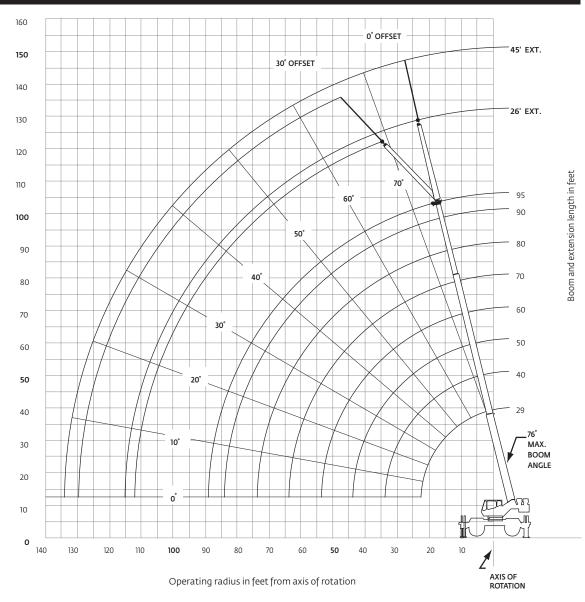
(147.00")

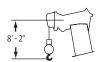
Grove RT530E-2

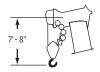
Working range

95 ft main boom + 26 ft - 45 ft extension

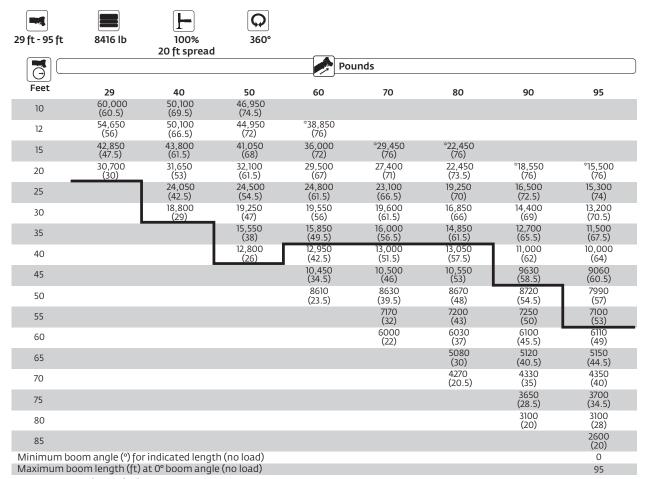
Height from the ground in feet







Dimensions are for largest Grove furnished hookblock and headache ball, with anti-two block activated.



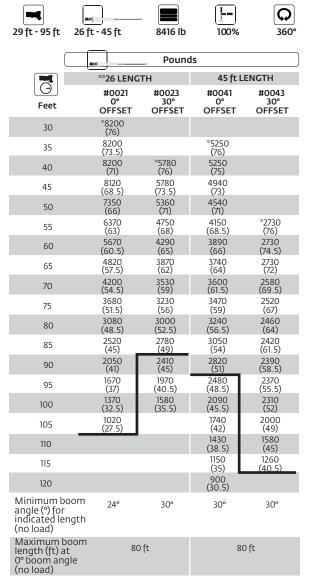
Note: Boom angles are in degrees. #LMI operating code. Refer to LMI manual for operating instructions.

*This capacity is based on maximum boom angle.

Lifting capacities at zero degree boom angle On outriggers fully extended - 360°								
Boom angle	man soon length in jees					95.2		
0°	26,100 (22.8)	15,800 (33.8)	11,000 (43.8)	7430 (53.8)	5220 (63.8)	3730 (73.8)	2660 (83.8)	2220 (89)

Note () Reference radii in feet.

A6-829-101755



#LMI operating code. Refer to LMI manual for instructions.

*This capacity is based on maximum boom angle.
**26 ft capacities are also applicable to fixed offsettable ext. However, the LMI codes will change to #0051 and #0053 for 0° and 30° offset, respectively.

	VAVAAAA.		H	Q
29 ft - 95 ft 26 ft	- 45 ft	8416 lb	50% 4 ft spread	360°
		Pound	s	
	°°26 LENGTH		45 ft	: LENGTH
Feet	#4021 0° OFFSET	#4023 30° OFFSET	#4041 0° OFFSET	#4043 30° OFFSET
30	*8200 (76)			
35	8200 (73.5)		*5250 (76)	
40	6940 (71)	*5780 (76)	5250 (75)	
45	5580 (68.5)	5780 (73.5)	4940 (73)	
50	4490 (66)	5360 (71)	4540 (71)	
55	3600 (63)	4350 (68)	4150 (68.5)	*2730 (76)
60	2860 (60.5)	3430 (65)	3490 (66)	2730 (74.5)
65	2190 (57.5)	2670 (62)	2870 (64)	2730 (72)
70	1610 (54.5)	2030 (59)	2340 (61.5)	2580 (69.5)
75	1120 (51.5)	1490 (56)	1840 (59)	2520 (67)
80		1020 (52.5)	1400 (56.5)	2260 (64)
85			1020 (54)	1760 (61.5)
90				1310 (58.5)
0.1A(lb)	570	540	500	460
Minimum boom angle (°) for indicated length (no load)	44°	46°	48°	49°
Maximum boom length (ft) at 0° boom angle (no load)	60	Oft		50ft
Note: () Boom angles are in degrees. #LMI operating code. Refer to LMI manual for instructions. *This capacity is based on maximum boom angle. **26 ft capacities are also applicable to fixed offsettable ext. However, the LMI codes will change to #4051 and #4053 for 0° and 30° offset, respectively.				

BOOM EXTENSION CAPACITY NOTES:

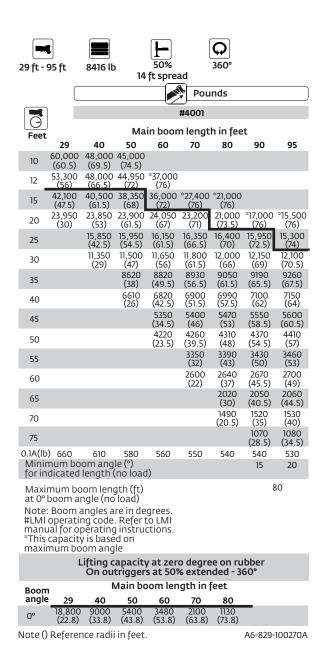
- 1. All capacities above the bold line are based on structural strength of boom extension.
- 2. 26 ft and 45 ft boom extension lengths may be used for single line lifting service.
- 3. Radii listed are for a fully extended boom with the boom extension erected. For main boom lengths less than fully extended, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is configured. For boom angles not shown, use the rating of the next lower boom angle.

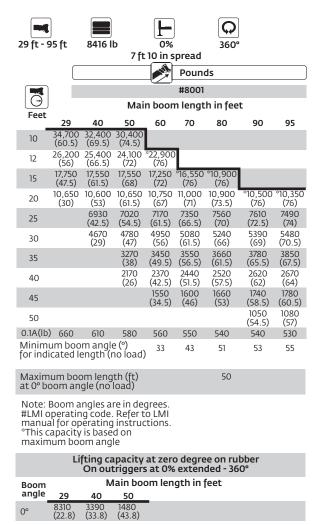
WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.

4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.

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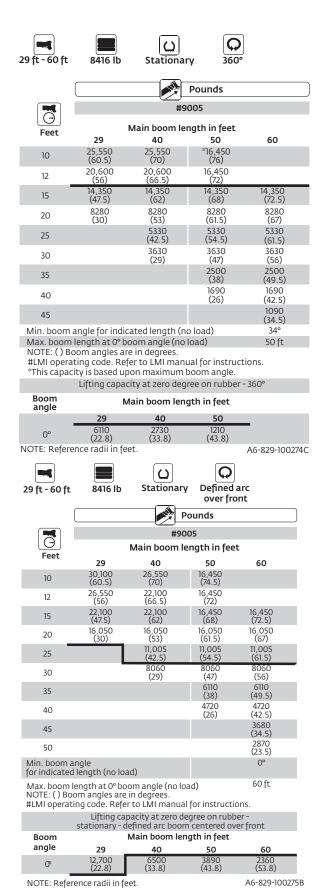
5. Capacities listed are with outriggers fully extended and vertical jacks set only.





Note () Reference radii in feet.

A6-829-100271A



29 ft - 60 ft	8416 lb	Pick & Car (max. 2.5 m 20.5 x 25 ti	ph) over res	entered front
			Pounds)
		#9	006	
Feet		⁄Iain boom le	ngth in feet	
	29	40	50	60
10	25,900 (60.5)	25,900 (70)	18,250 (74.5)	
12	22,350 (56)	22,350 (66.5)	18,250 (72)	
15	18,250 (47.5)	18,250 (62)	18,250 (68)	13,350 (72.5)
20	13,350 (30)	13,350 (53)	13,350 (61.5)	13,350 (67)
25	(EE)	10,350 (42.5)	10,350 (54.5)	10,350 (61.5)
30		8060 (29)	8060 (47)	8060 (56)
35	'		4810 (38)	4810 (49.5)
40			3770 (26)	3770 (42.5)
45				2930 (34.5)
50				2240 (23.5)
	oom angle (° d length (no l			0°
Maximum boom length (ft) 60 ft at 0° boom angle (no load) Note: Boom angles are in degrees. #LMI operating code. Refer to LMI manual for operating instructions.				

Lifting capacity at zero degree on rubber Pick & Carry - boom centered over front					
Boom	Boom Main boom length in feet				
angle	29 _ 40 50 60				
0°	11,400 (22.8)	5090 (33.8)	3110 (43.8)	1800 (53.8)	
Note () Reference radii in feet. A6-829-100276B					

NOTES TO ALL RUBBER CAPACITY CHARTS:

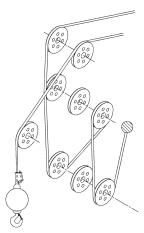
- Capacities are in pounds and do not exceed 75% of tipping loads as determined by test in accordance with SAE J765.
- Capacities are applicable to machines equipped with 20.5 x 25 (24 ply) tires at 75 psi cold inflation pressure, and 16.00 x 25 (28 ply) tires at 100 psi cold inflation pressure.
- 3. Defined Arc Over front includes 6° on either side of longitudinal centerline of machine (ref. drawing C6-829-003529).
- 4. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- 5. Capacities are applicable only with machine on firm level surface.
- 6. On rubber lifting with boom extensions not permitted.
- 7. For pick and carry operation, boom must be centered over front of machine, mechanical swing lock engaged and load restrained from swinging. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speeds.
- 8. Axle lockouts must be functioning when lifting on rubber.
- All lifting depends on proper tire inflation, capacity and condition.
 Capacities must be reduced for lower tire inflation pressures. See lifting capacity chart for tire used. Damaged tires are hazardous to safe operation of crane.
- 10. Creep Not over 200 ft of movement in any 30 minute period and not exceeding 1 mph.

Load handling

Weight reductions for load handling devices				
26 ft Offsettable boom extension	Pounds			
*Erected	2960			
26 ft - 45 ft Telescopic boom extnesion	Pounds			
*Erected (retracted)	4220			
*Erected (extended) 5780				
* Reduction of main boom capacities				
Auxiliary boom nose	Pounds			
	142			
Hookblocks and headache balls	Pounds			
30 USt, 3-sheave	580+			
15 USt, 2-sheave	425+			
7.5 USt overhaul ball	354+			
7.5 USt headache ball	338+			
+ Refer to rating plate for actual weight				

When lifting over swingaway and/or jib combinations, deduct total weight of all load handling devices reeved over main boom nose directly from swingaway or jib capacity.

NOTE: All load handling devices and boom attachments are considered part of the load and suitable allowances MUST BE MADE for their combined weights. Weights are for Grove furnished equipment.



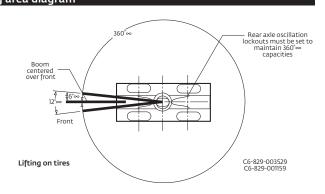
Line pulls and reeving information					
Hoists	Cable specs	Permissable line pulls	Nominal cable length		
Main and auxiliary	16 mm (5/8 in) Flex-X35 35 x 7 Rotation Resistant (non rotating) Min. Breaking Str. 61,200 lb	11,640 lb	450 ft		
Main	16 mm (5/8 in) 6 x3 7 class EIPS, IWRC Special Flexible Min. Breaking Str. 41,200 lb	11,640 lb	450 ft		

The approximate weight of 3/4 in wire rope is 1.5 lb/ft.

Hoist performance					
Wire rope layer	Hoist line pulls two-speed hoist	Drum rope capacity (ft)			
	Available lb*	Layer	Total		
1	11,640	77	77		
2	10,480	85	162		
3	9530	94	256		
4	8730	102	358		
5	8060	111	469		
6	7490	119	588		

* Max lifting capacity: 6 x 37 class = 11,640 lb 35 x 7 class = 11,640 lb

Centerline of boom Conterline of boom Conterline of cane Conter



Bold lines determine the limiting position of any load for operation within working areas indicated.

Notes

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Grove RT530E-2 15



Manitowoc Cranes

Regional headquarters

Americas

Manitowoc, Wisconsin, USA Tel: +1 920 684 6621 Fax: +1 920 683 6277

Shady Grove, Pennsylvania, USA

Tel: +17175978121 Fax: +17175974062

Europe, Middle East, Africa

Ecully, France Tel: +33 (0)4 72 18 20 20 Fax: +33 (0)4 72 18 20 00

China

Shanghai, China Tel: +86 21 6457 0066 Fax: +86 21 6457 4955

Greater Asia-Pacific

Singapore Tel: +65 6264 1188 Fax: +65 6862 4040

Regional offices

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