



TRAFFIC ANALYSIS REPORT FOR

Aedifica - Soeurs de Sainte-Anne (Project: Aedifica)

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Type: Residential

Status: Prospect

Version: Excellent

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1. Summary

People flow in Aedifica - Soeurs de Sainte-Anne is analyzed. The building has 2 floors and the travel height is 47 (ft) 0 (in). The assumed population is 400 persons.

Building type:Residential

1.1. Elevator analysis

Design criteria

| | Up-peak | Two-way |
|--------------------------------------|-------------|-------------|
| Target design criteria | Excellent | Excellent |
| Average car load factor no more than | 80% | 80% |
| Average waiting time | 30 s | 30 s |
| Average time to destination | 90 s | 90 s |
| Interval | 60 s | 60 s |
| Nominal travel time | 25 s | 25 s |
| Peak passenger demand | 9 % / 5 min | 9 % / 5 min |

Calculation results

Elevator group: Chapel elevator **Group control:** Full collective control

No of Elevators 1 Floors/Stops 0 - 1 / 2 Load(lbs) 4000 Speed (ft/min) 350 NTT (s) 8.1 Population 400

| Traffic type | Demand (% / 5 min) | Demand (persons / 5 min) | CLF at demand (%) | Interval (s) | Meets the criteria |
|--------------|--------------------|--------------------------|-------------------|--------------|--------------------|
| Up-peak | 9 | 36 | 23 | 45 | Yes |

Disclaimer

The results of the report are valid exploring theoretical vertical-traffic planning scenarios which involve KONE products, services, and people flow planning tools. The results of the report are sensitive to the parameter values used and data which is used as input, and are applicable only with the input values shown in the report. Therefore, results should not be interpreted as any kind of representation or warranty of the performance of any actual elevator installation. KONE shall in no event be liable for any damage caused by or incurred in connection with the use of the results. The user shall have no right to make copies of, or reproduce, disassemble, decompile, reverse engineer or modify the results of the report or disclose it to any third party.

2. Building data

Assumed population is 400 persons

| Floor No. | Comment | Height | | Travel | | Population | Entry % |
|-----------|---------|--------|------|--------|------|------------|---------|
| | | Feet | Inch | Feet | Inch | | |
| 1 | | | | 47 | 0 | 400 | 0 |
| 0 | | 47 | 0 | 0 | 0 | 0 | 100 |

3. Elevators

3.1. Elevator parameters

Elevator group parameters

| | |
|------------------------------|-----------------------|
| Number of elevators in group | 1 |
| Rated speed | 350 ft/min |
| Acceleration | 2 ft/s ² |
| Jerk | 2.6 ft/s ³ |
| Rated passenger capacity | 4000 lbs |

Door parameters

| | |
|-----------------------------|-----------|
| Type | High duty |
| Opening | Center |
| Width | 48 in |
| Closing time | 3.4 s |
| Opening time | 1.4 s |
| Transfer time per passenger | 1.9 s |
| Photocell delay | 0.9 s |
| Start delay | 0.7 s |

Advance door opening

| | |
|----------|-----------|
| Distance | 0.25 ft |
| Speed | 75 ft/min |

3.2. Speed selection

Recommended speeds

| | |
|--------------|---------------------------|
| Satisfactory | 59 ft - 79 ft (per min) |
| Good | 79 ft - 118 ft (per min) |
| Excellent | 118 ft - 138 ft (per min) |

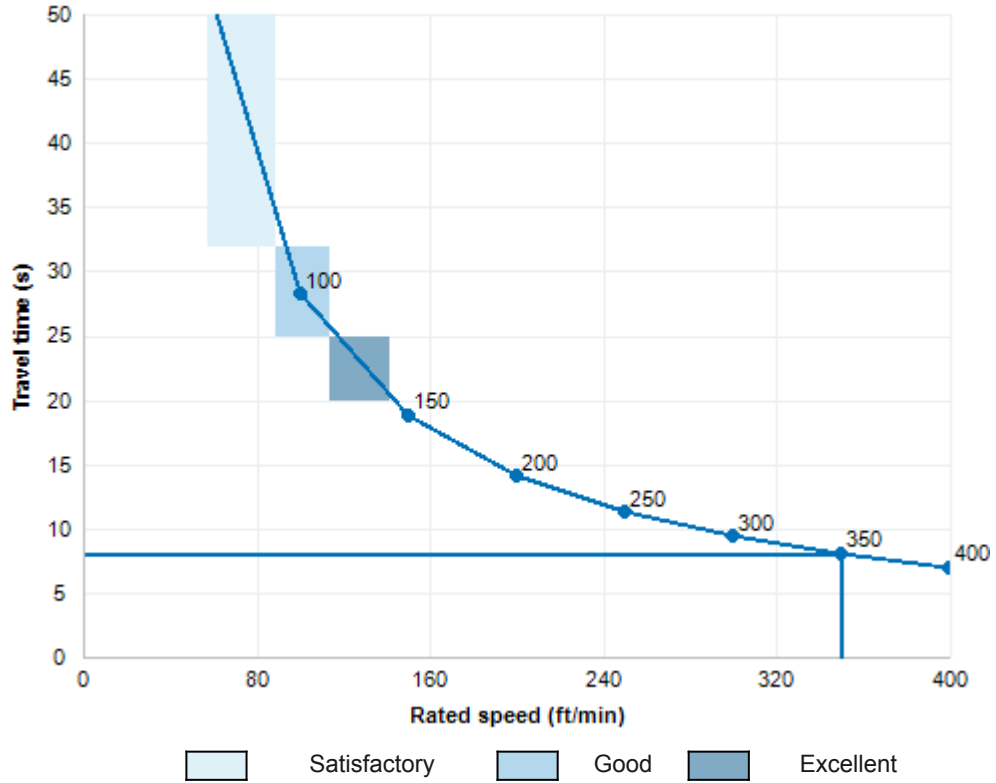
Rated speed classification

| | |
|---------------------|------------|
| Rated speed | 350 ft/min |
| Travel height | 47 ft 0 in |
| Served floors | 0 - 1 |
| Nominal travel time | 8.1 s |

Nominal travel time graph - Full collective control

Nominal travel time graph for Chapel elevator

NTT = 8.1 s, FlightTime = 11.74 s, $v = 350$ ft/min, $a = 2$ ft/s², $j = 2.6$ ft/s³, Total travel = 47 ft 0 in



3.3. Elevator calculation results

Overall classification

| | |
|------------------------|------------------|
| Target design criteria | KONE - Excellent |
| Overall performance | Excellent |

Up-peak results

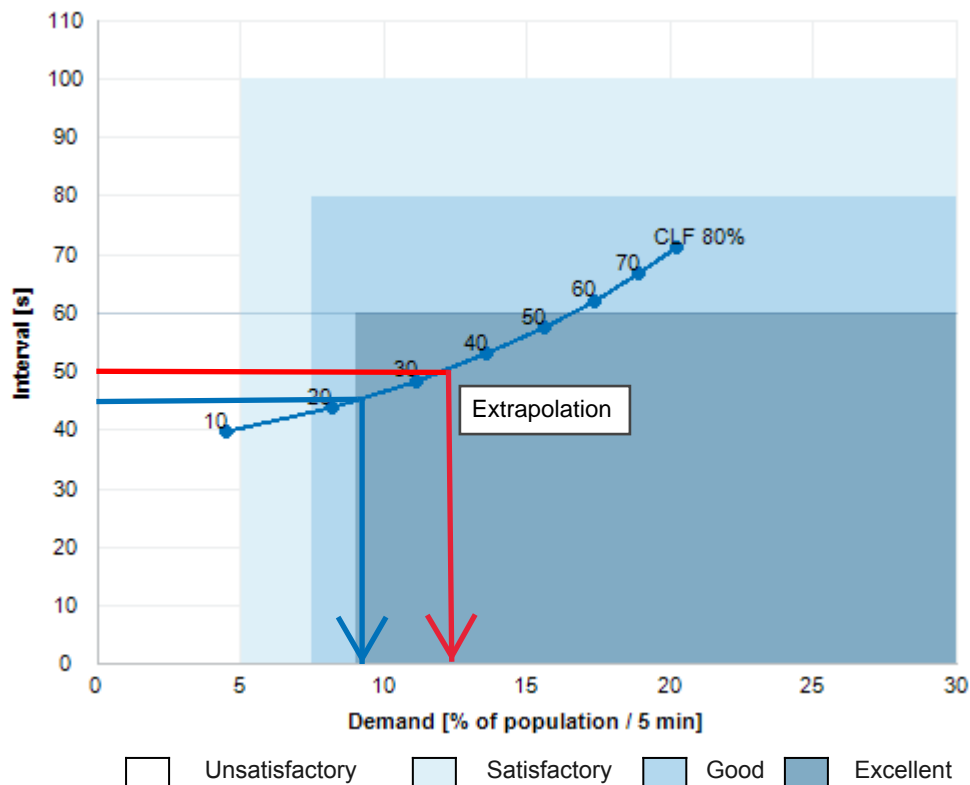
| | |
|-----------------------------------|--------------------------|
| Car Load Factor (CLF) | 80% (19.2 persons) |
| Handling Capacity (HC5) | 81 persons / 5 min |
| Relative Handling Capacity (%HC5) | 20.3 % / 5 min Excellent |
| Average Round Trip Time | 71.1 s |
| Average Interval | 71.1 s- Good |

Note: Handling capacity, interval and round trip time are only for Full collective control.

Performance graph - Full collective control

Performance Graph

Total population 400 (persons), 1 elevators, 4000 (lb), 350 ft/min



4. Terms

Handling Capacity (HC) is 80% of the theoretical Transportation Capacity considering randomness in passenger arrivals and saturation in queuing.

Transportation Capacity (TC) is the theoretical number of persons per hour the system can transport.

Car Load Factor (CLF) is the maximum load in percent of nominal load reached during elevator round trip

Utilization Factor (UF) is the actual demand in percent of transportation capacity

Level of Service (LOS) shows the pedestrian space around, classified to A-F. Level A is spacious, level F is very tight.

Interval shows how often elevators leave the lobby during up-peak.

Nominal Travel Time (NTT) is obtained by dividing the travel height by the elevator rated speed

Average Waiting Time (AWT) is the time from when a passenger either registers a landing call, or joins a queue, until the responding elevator begins to open its doors at the boarding floor

Average Time to Destination (ATTD) is the time from when a passenger either registers a landing call or joins a queue until the passenger alights at the destination floor

Percentage of long waits is the proportion of passengers whose waiting time exceeds 60 seconds.

Percentage of long journeys is the proportion of passengers whose Time to destination exceeds 120 seconds.

Average Queue Length (AQL) shows the line of people with constant traffic.

Full Collective (FC) control with up and down call buttons at landings and elevator serves the landing calls according to the running direction

Destination Control System (DCS) with Destination Operation Panels at the landings and people with the same destination calls are allocated in the same cars

Destination Operation Panel (DOP) is a keypad at a landing where passenger can directly give the destination floor call to the elevator group.