



Proposal

Dean Collins
Phone (239) 566-9795
Dean.Collins@US.Schindler.com

September 06, 2016

Project Information
Ferrara Group LLC
Attn:Georgios Agrapidaki
2700 Biscayne Blvd
Miami, FL 33137

Offer #: 0200464257

Thank you for the opportunity to bid on Ferrara Group LLC
Schindler Elevator Corporation's industry leading and knowledgeable construction superintendents, sales team and project managers will work closely with you to ensure your elevator is delivered as planned and installed on time with no surprises. We look forward to partnering with you on this project and being a part of your success!

We are pleased to submit our proposal to furnish and install in the referenced building, our products for the sum of Sixty Eight Thousand One Hundred Dollars and 00/100, (\$68,100.00).

Specification Summary:

Item	Product	Load	Openings	Speed	Stops	Qty
AA	3300 MRL	2100	2 F	100	2	1

Project Specific Qualifications and Clarifications

Schindler 3300 MRL (Machine-Room-Less) Traction Elevator Clarifications

- 1) Proposed elevator is of the Machine Room Less design.
- 2) Proposed elevator requires a minimum pit depth of 5'-0" and a minimum clear overhead of 12'-7" (13'-5" clear from top landing finished floor to underside of slab, add 2" for gap and 8" for hoist beam).
- 3) Pit Ladder is included – (Hoistway width must be => than 8'-6")
- 4) Standard finishes included in this proposal are as follows;
 - a) Baked enamel Hoistway Entrances & Doors
 - b) Flooring is by others (limited to 160lbs of added weight)



- c) handrail will be round and curved - aluminum finish
 - d) Cab will be standard 3300 design – Baked Enamel cab walls with brushed aluminum reveals.
 - e) Ceiling Finish Baked enamel.
 - d) Emergency battery return operation is standard with 3300 model units.
- 5) ADA Telephone (with autodial to Schindler 24-hr Call Center for duration of pre-paid maintenance period) in elevator cab is included. Phone line is by others
- 6) **Pricing is based on available architectural plans and specifications (none available) only, at time of proposal. Please refer to included specification page for included components. Minimum requirements and dimensions in attached proposal and specification must be met for installation of this product.**
- a) **All Schindler processes must be completed prior to release of elevator for manufacturing, including fully executed agreement, down payment received and processed, approval package and design and finish letter completed and returned and all site conditions, including permanent power, verified by a Schindler Superintendent.**
 - b) **Elevators are designed to be fully enclosed and protected from elements. Any design variations that include outside exposure to elements is not guaranteed or recommended for use with the Schindler 3300 MRL Traction Elevator.**
 - c) **Code requires the hoistway and top landing to be a conditioned space not to exceed temperature range of 40-106 F and 90 humidity.**
- 7) **No costs for temporary use of elevator during construction are included in this proposal.**
- 8) Protective cab wall pads are not **included** in this proposal.
- 9) Cost of the 3rd party QEI inspector to schedule and perform the elevator acceptance test is included in this proposal. Any additional re-inspections, fees or costs that occur due to building related items, or other subcontractors are not included. Completed inspection forms will be provided to purchaser. Inspections limited to four team hours per unit.
- 10) Price is based on labor rates for installation by December 31, 2017.
- 11) Price includes 12 months of prepaid warranty maintenance service which includes 8-hour callback coverage.
- 12) No costs have been included for card readers or other restricted floor access security systems.
- 13) No costs for cutting, patching, core-drilling, fire stopping of penetrations, or similar related work are included in this proposal
- 14) OCIP/Wrap-up Insurance Participation and/or Additional Insured's provisions are not included in this proposal. There will be an additional cost to provide these, if required. Add \$450 per elevator for additional insured. Please note we do offer and OCPL policy at no additional increase to the base price.
- 15) Proposal is based on IBC Seismic Design category A or B.



- 1) First Floor Architectural drawing only drawing available for review. Proposal is based on product minimum dimensions and standard manufacturer finishes.
- 2) Below is our lead time for this project:
Approvals 3 weeks
Manufacturing 8-10 weeks (see item 6a)
Installation 4-6 weeks

Additional Fees and rates:

Run time for fire stopping and patching \$1,250 limit 8 hours

Re-inspection: \$1,200 plus applicable travel time – limit 4 hours

Re-Mobilization: \$1,500 plus applicable travel time

Storage fees: \$500 plus \$350 for each additional week

Temporary use: Traction elevator: \$2,250 per month +\$2,500 Clean down plus travel and repair and/or replacement part costs

	Regular Time	Overtime
Elevator Mechanic	\$176	\$292
Installation Team (Mechanic & Helper)	\$308	\$517

Schindler Elevator Corporation
Traction Elevator Specification Summary

Ferrara Group LLC
 2700 Biscayne Blvd
 Miami, FL 33137

Project Information:
Opportunity ID: 0200464257-A-A
Unit(s) in Estimate: 01
Units in Bank: 01
Product Code: 450
Sales Office: 9676
Installation Office: 9676

Sales Rep Information:
 Dean Collins
 1730 Trade Center Way
 Naples, FL 34109
 Phone: (239) 566-9795
 Fax: (239) 566-9259
 Dean.Collins@US.Schindler.com

Product:	Schindler 3300	Opening Size:	3 Ft. 0.00 In. X 7 Ft. 0.00 In.
Application:	3300 MRL	Cab Height:	7 Ft. 9 In.
Service:	General Purpose	Cab Type:	3300
Capacity:	2100 Lbs	Pit Depth:	5 Ft. 0 In.
Speed:	100 FPM	Overhead:	12 Ft. 7 In.
Travel:	14 Ft. 0.00 In.	Platform Width:	5 Ft. 10 11/16 In.
Cwt Location:	Side	Platform Depth:	5 Ft. 1 1/8 In.
Stops:	2 (2 Front / 0 Rear)	Hatch Width:	7 Ft. 6.00 In.
Doors:	Two Speed Side Opening	Hatch Depth:	5 Ft. 9.00 In.
Power Supply:	480 Volts 60 Hz 3 Phase	Seismic Equipment:	N
Sprinklers In Hoistway:	Y	NFPA Code Year:	2010

<u>Cab:</u>	<u>Features:</u>	<u>Entrances:</u>
Cab Walls LH Side: Baked Enamel E999	Follow IBC - 2012	Emergency Escutcheons
Cab Walls RH Side: Baked Enamel E999	Flood Plain Operation	Doors:
Cab Walls Rear: Baked Enamel E999	Audible Gong (Std)	(2) Baked Enamel
Base, Frieze: Aluminum	Infrared Door Protection (Std)	Frames:
Front Return, Transom: #4 Stainless Steel	Phase Monitor Relay (Std)	(2) Baked Enamel
Cab Doors: #4 Stainless Steel	Independent Service/HES (Std)	Sills:
Canopy: Gettysburg	Top Exit Lock	(2) Aluminum
Ceiling: 3300 Baked Enamel	FER Door Operator	Sill Mounting:
Cab Threshold: Aluminum	T127 Rails	(2) Easy Match
Threshold Extensions:	Keyed Emergency Stop Switch	
Handrail Type: Straight	Top Exit Switch	
Handrail Finish: Aluminum	ADA Compliant Phone	
Handrail Location: Rear	Sliding Guide Shoes	
Handrail Row Qty: 1	1 Speed Fan	
Platform Recess: 0.375	2 Hoistway Access Switches	
Protective Pads: None	Firefighter's Service Phase 2	
Protective Pads Source: None	Class B Fire Rating For Cab	
Cab Finished Floor: Carpet By Others	Top Exit Guard	Hall Fixtures:
	Rail Backing	Hall Fixtures Type:
	Rail Backing: 1	Jamb Mounted
	Building Rescue Phone	Hall Fixtures Finish:
	Battery Evacuation	(2)Glass PB w/Metal Accents
	Pit Ladder Source: Gettysburg	(1) Separate FER Switch

New Product Service:

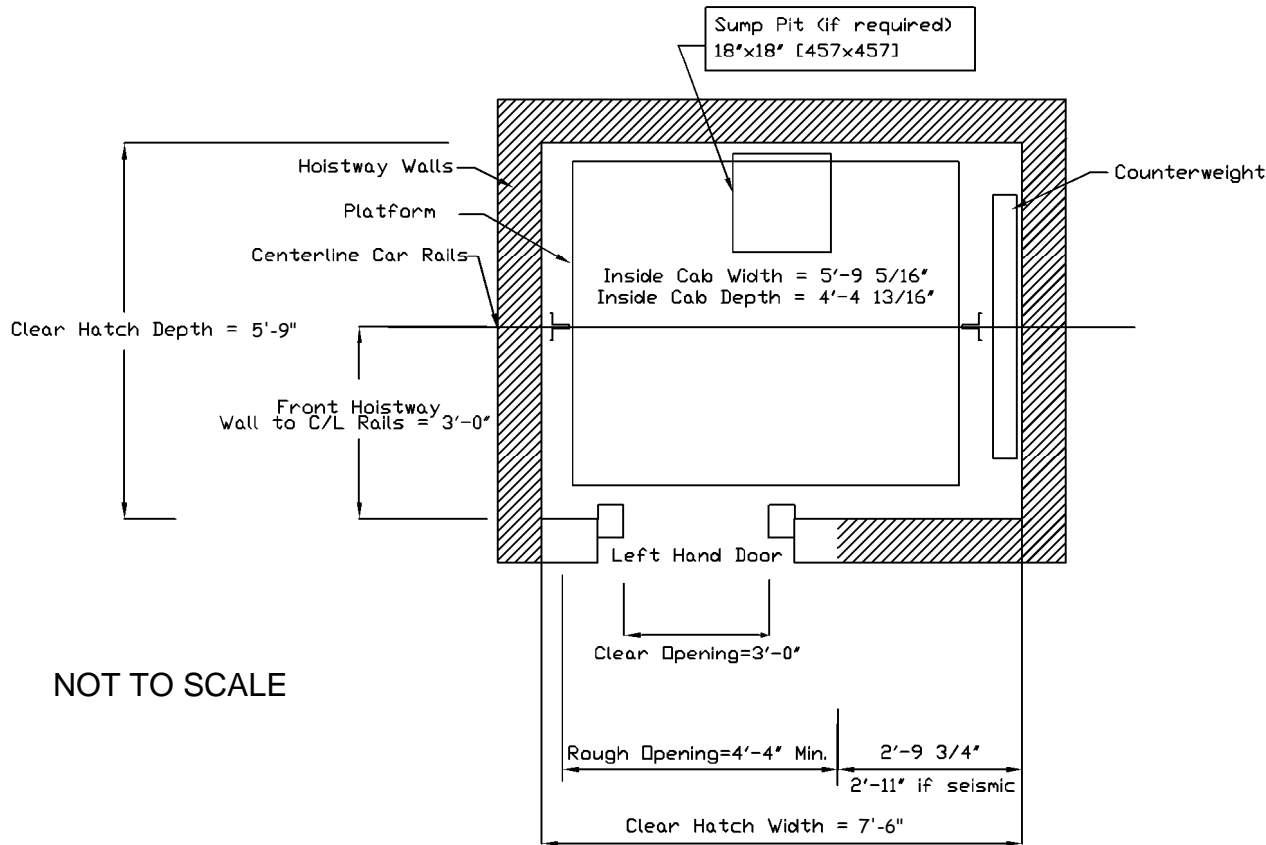
12 Months, 8 Hours Callback

This bid is subject to change after forty-five (45) days.

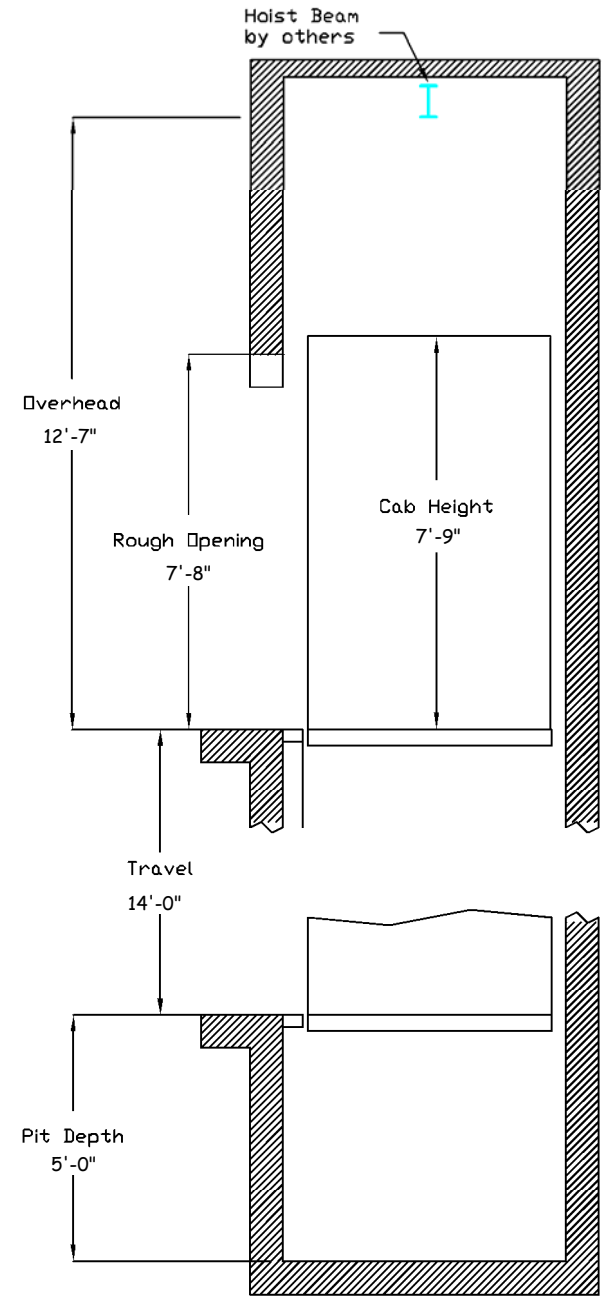
Visit Our Website at www.us.schindler.com



Job Name: Ferrara Grop LLC
 Job Address: 2700 Biscayne Blvd
 Miami, FL 33137
 Speed: 100 fpm
 Capacity: 2100 lbs.



NOT TO SCALE





Contract Requirements:

This proposal is based on furnishing our standard equipment as defined by the specification summary, in accordance with our attached standard terms and conditions. This proposal will become part of our agreement with you for this work.

We will require receipt of this fully executed proposal, including any attached amendments, final approved drawings, along with payment for pre-production and engineering costs equal to 35% of the above price prior to the release of the elevator equipment for fabrication.

You may indicate your acceptance of our proposal by signing below and returning this document to me. Upon execution this will become the final contract and will be binding to all parties.

Attached terms and conditions are fully incorporated.

Please note our proposal is valid for 45 days.

Respectfully submitted,

Dean Collins
Sales Representative

ACKNOWLEDGED AND ACCEPTED BY

[Company Name]

Schindler Elevator Corporation

By _____

By _____

Title _____

Title _____

Date _____

Date _____



TERMS AND CONDITIONS

This Proposal is made subject to the following conditions:

1. A mutually agreeable form of contract (fully executed before a manufacturing date can be established in our factory) which includes the following provisions.
2. Our indemnity obligation will be limited to the extent of our negligence.
3. We will not be liable in any event for direct damages in excess of the amount of our Subcontract, whether in contract or in tort, nor in any event for special, indirect, consequential or liquidated damages of default or delay.
4. The purchaser agrees to accept in satisfaction of insurance requirements for the project a standard Schindler Certificate of Insurance with "per occurrence" limits not to exceed \$2 million. Schindler will not name additional insureds.
5. Schindler will participate as an insured in an OCIP/CCIP (Owner's / Contractor's Insurance Program), provided it is at no cost to Schindler, and under such circumstances we will provide additional insured coverage for offsite operations and auto liability only.
6. Partial waivers of lien for payments received by Schindler will be issued on a mutually agreeable form if the Purchaser so requests in writing. Schindler shall issue a full waiver of lien on a mutually agreeable form after the receipt of all monies to which it is entitled under this Agreement if the Purchaser so requests in writing.
7. Agreeable terms of payment shall be established in accordance with the following payment schedule: 35% of the above sum upon presentation of initial invoice; 95% progress payments based upon work in place and materials delivered and stored on or off site; balance for each unit completed within 30 days on completion on that unit hereunder. Payment of the initial invoice is a condition precedent to manufacture of materials. Payment of at least 95% is a condition precedent to equipment turnover.
8. Work shall be performed by Schindler during regular working hours on regular working days, and overtime by Schindler will be compensated at Schindler's standard rates.
9. You will have the hoistway/wellway in a safe and proper condition and in conformance to the dimensions contained in the final approval drawings.
10. In the case of delay in construction, you agree to pay for off-site storage of \$100 Per Day per equipment and additional handling should on-site storage not be available. Our proposal price assumes one mobilization; the charge for each additional mobilization will be \$3,500. You agree to pay any other increase in cost resulting from delays in construction.
11. If an inground borehole is required to accommodate the jack unit, our bid shall be based on the assumption that the hole is drilled in normal uncontaminated soil, sand or gravel, using a truck mounted drilling rig. Adequate access will be provided for this rig. Should latent or concealed conditions be encountered in the performance of the work below the surface of the ground or should concealed or unknown conditions in an existing structure be at variance with conditions indicated by the contract documents, or differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract be encountered, we will be compensated for all additional costs for labor and material to overcome such obstacles. The additional costs shall be the difference between our estimate for the bid and our actual cost incurred and shall be billed at our standard billing rate. The time to complete the Installation shall be extended to include the additional time required to overcome these obstacles while drilling the hole.
12. Satisfactory reference as to credit must be furnished including bank and bonding company references.
13. You agree to pay, as an addition to the price stated herein, the amount of any tax, or increase of any tax, based upon the sale, use, ownership or possession of equipment imposed by any law enacted after the date of this proposal, or imposed upon you by any existing law.
14. If the work for the above project does not proceed for any reason, we will be paid for costs incurred plus a reasonable mark-up for overhead and profit.



15. Any proprietary material, information, data or devices contained in the equipment or work provided hereunder, or any component or feature thereof, remains our property. This includes, but is not limited to, any tools, devices, manuals, software (which is subject to a limited license for use in this building/premises/equipment only), modems, source/ access/ object codes, passwords and the Schindler Remote Monitoring feature ("SRM") (if applicable) which we will deactivate and remove if the Agreement is terminated.
16. Should latent or concealed conditions be encountered in the performance of the work below the surface of the ground or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Purchaser, or should unknown physical conditions below the surface of the ground or should concealed or unknown conditions in an existing structure of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in this contract be encountered the contract price and time shall be equitably adjusted by change order upon claim by either party made within **20** days after the first observance of the conditions.
17. Neither party shall be responsible for any loss, damage, detention or delay caused by labor trouble or disputes, strikes, lockouts, fire, explosion, theft, lightning, wind storm, earthquake, floods, storms, riot, civil commotion, malicious mischief, embargoes, shortages of materials or workmen, unavailability of material from usual sources, government priorities or requests or demands of the National Defense Program, civil or military authority, war, insurrection, failure to act on the part of either party's suppliers or subcontractors, orders or instructions of any federal, state, or municipal government or any department or agency thereof, acts of God, or by any other cause beyond the reasonable control of either party. Dates for the performance or completion of the work shall be extended by such delay of time as may be reasonably necessary to compensate for the delay.
18. Risk of loss of materials and equipment shall pass to Purchaser upon delivery of materials to the site. Title to materials and equipment shall pass to Purchaser upon payment by Purchaser to Schindler.
19. The amount set forth in Article 2 of the section titled "Project Specific Qualifications and Clarifications" of the Agreement is based upon Schindler's work being performed during regular working hours of regular working days. Purchaser may require overtime subject to Schindler's ability to comply, and Schindler shall be compensated for such work at its standard billing rates. Changes in the scope of work must be agreed upon in writing and the schedule and contract amount adjusted accordingly.
20. Notwithstanding anything to the contrary set forth herein, Schindler warrants that the work supplied hereunder will comply with the specifications and that there will be no defects in materials and workmanship for one year after completion of the work or acceptance thereof by beneficial use, whichever is earlier. The equipment furnished and installed under our Agreement requires maintenance service, such as periodic examinations, lubrication and adjustment by competent mechanics, specially trained to service said equipment. Our guarantee is not intended to take the place of this normal servicing of the equipment and it is not to be construed that we will provide maintenance service of this type, without charge, except as may be provided in our contract, or that we will correct, without charge, breakage, maladjustment or other issues arising out of maintenance provided by others. Schindler's sole duty under the warranty is to correct the nonconformance or defect at Schindler's expense within a reasonable time after the receipt of notice. The express warranties contained herein are in lieu of all other warranties, express or implied, including any warranties of merchantability or fitness for a particular purpose, purchaser's remedies hereunder are exclusive.
21. If either party shall default in the performance of its obligations hereunder, the nondefaulting party may send written notice reasonably describing the default. If the defaulting party does not commence to take reasonable steps to cure the default, within **10** days of the date of such notice, the nondefaulting party may terminate upon **10** days further notice.
22. Schindler shall be responsible for maintaining job progress in accordance with a schedule of performance mutually agreed upon by Schindler and Purchaser. Any change to the schedule of work shall require Schindler's consent.
23. Change Notices must be received and fully executed prior to Schindler Elevator Company performing any additional work outside the scope of the base contract. Written or verbal notices will not be accepted as a substitute for a fully executed change notice.

SCHINDLER BID CLARIFICATIONS PREPARATORY WORK BY OTHERS FOR ELEVATORS.

For delivery and installation dates please look at the specifications summary.

Installation work shall be performed during regular working hours of regular working days after hoistway(s) and machine/control room(s) have been properly prepared as described in the following items. All items must be performed or furnished at no cost to Schindler Elevator Corporation ("Schindler") by the Owner or General Contractor or their agents in accordance with all governing codes. The price and installation schedule of Schindler is based on these job-site conditions existing at the beginning and during the installation of the elevator equipment.

All work must be performed per the latest applicable revision of the national (ASME A17.1 or CSA B44) and/or local codes.

1.0 Job Conditions

1.1 Acceptable material unloading area within 25ft of hoistway with "rollable" access (planked or paved) or uninterrupted use of a crane or forklift and operator at no cost to Schindler. Dry and enclosed storage area of adequate size for elevator materials near hoistway. Any warranties provided by Schindler for elevator equipment are null and void if equipment is stored in a manner that does not comply with the requirements as defined above.

1.2 Power for construction adjacent to hoistways and machine/control rooms (110/220 volt, single phase, for welders and hoists) and sufficient 3-phase power to run elevator(s) at the same time. Refer to section 2.0 electrical and "Schindler Power Data" sheet. The power for construction and permanent 3-phase power must be installed and available prior to the start of elevator installation.

1.3 All work areas, including hoistway, machine/control room and pit, clear of debris. Maintain minimum temperature of 55°F (13°C). Adequate work area in front of ground floor entrance required. Proper lighting of work areas.

1.4 Freestanding and removable construction barricades (per OSHA requirements) either outside of elevator hoistway(s), open hoistway top or between elevators inside of hoistway(s) as required. Barricades located 24" (0.61m) in front of the hoistway openings (refer to the "hoistway preparation" sheet). Openings include landing accesses, open hoistway top (if slab not built) and in general any other opening which may create falling hazard into the hoistway. Barricades shall be erected, maintained, and removed by others.

- a) Protection from Falls - As required by the (OSHA) 1926.502 B) (1-3) a freestanding removable barricade at each hoistway opening at each floor. Barricades shall be 42" high, with mid-rail and kick board, and withstand 200 lbs. of vertical and horizontal pressure
- b) Protection from Falling Objects - As required by the (OSHA) OSHA 1926.502(j) hoistway protection from falling debris and other trades materials by either:
 1. 8 foot screening/mesh in front of all elevator entrances or
 2. Secured/controlled access to all elevator lobbies (lock and Key) with posted Notice "only elevator personnel beyond this protection"

1.5 A temporary work platform is required for installation of the elevator. It is to be constructed at the top floor of each traction elevator. It must comply with applicable governing codes & regulations. The platform shall be securely fastened to the building structure. Erection, maintenance, and removal are by others. (refer to Schindler layout "Hoistway Preparation")

1.6 A crane, provided and paid for by others, may be requested to place the machine, controller, and machine supports (where applicable) into the machine/control room or hoistway overhead prior to enclosing these areas. Coordinate with Schindler field supervisor

1.7 Furnish adequate on-site refuse containers for the proper disposal of elevator packaging material. If adequate containers are not furnished, disposal of packaging material shall become the responsibility of the owner.

2.0 Electrical

2.1 Provide suitable feeder and branch wiring circuits from the building service to the controller, including main line switch, for signal systems, power operated doors, car lighting and convenience outlets. Refer to "Schindler Power Data" sheets and this section.



2.2 A permanent lighting fixture shall be provided and conform to A17.1-2.2.5. It shall provide illumination of 100lx at the pit floor and the pit platform, when provided. The light bulb should be externally guarded against breakage. Light switch to be provided that is accessible to pit access door. In addition to a light in the pit a GFCE convenience outlet shall be installed in the pit (NEC (NFPA 70 Rules 620-85) or (CSA C22.1-03 Section 38-085)).

- a) Pit - A permanent lighting fixture shall be provided and conform to A17.1-2.2.5. It shall provide illumination of 100lx at the pit floor and the pit platform, when provided. The light bulb should be externally guarded against breakage. Pit light located as defined on sheet 3 of 8, no less than 32" [0.81m] below bottom landing. Light switch to be provided that is accessible to pit access door. In addition to a light in the pit a GFCE convenience outlet shall be installed in the pit (NEC (NFPA 70 Rules 620-85) or (CSA C22.1-03 Section 38-085))
- b) Machine / Control Space (if provided) - A permanent lighting fixture shall be provided for machine spaces, machine rooms, control spaces, and control rooms and conform to A17.1 2.7.9.1. It shall provide illumination of 200lx at floor level, standing surface of working platform or at the level of the standing surface when the car is in the blocked position. Light bulb should be externally guarded against breakage. Light switch to be provided that is accessible at the point of entry
- c) Floor Landings - A permanent lighting fixture should be provided for illumination at the landing sill conforming to A17.1 2010 2.11.10.2. It shall provide illumination of 100lx at the landing sill. Refer to "Schindler Power Data" sheets and this section.

2.3 Provide emergency power generator and automatic transfer switch(es) with feeders from ATS contacts to elevator controls. Conduit with fish tape, between control rooms/spaces where sequenced elevator operation is required due to generator capacity.

2.4 Follow Schindler Power data provided with construction layouts. Where specified include main and auxiliary disconnects (JH and JH1) in code-approved location as directed.

2.5 Where appropriate, provide a lockable 13.5" x 15.5" x 3.5" (minimum) metal cabinet with group-1 key to house required electrical schematics and maintenance history documents, wall mounted adjacent to the disconnect switch (by others) at the top landing. The supplier, location, and mounting of the cabinet shall be coordinated with Schindler.

2.6 NFPA 72 (Fire Apparatus Code) req. 6.1.5.2.2 requires the fire control panel relays that provide the dry contacts to the controller not be located more than 3 feet from the inspection and test panel jamb (where provided).

3.0 Hoistway

3.1 Hoistway dimensions are always nominal without building tolerance. Clear, plumb, hoistway with variations not to exceed

- a) Only for a Schindler 3300: +1in – 0in (25mm – 0mm) up to first 100ft (30.5m); Tolerance may increase +1/32in (0.8mm) for each additional 10ft (3.05m) up to a maximum of + 2in (50mm)
- b) Only for a Schindler 5500 / Other: +/-1in (+/-25mm) for the first 262ft (80m) rise. Above 262' (80m), a tolerance +/- 1-3/4in (+/- 45mm) is specified. The tolerance of the shaft hoistway is split evenly between front/rear and left/right from the clear hoistway as defined

3.2 Hoistway enclosure to be fire rated per national code requirements and applicable building codes (Rule 2.1.1). Hoistway, pit, and overhead dimensions to be as specified on Schindler final layout drawings.

3.3 Where there is a blind hoistway, an emergency door shall be installed at every third floor, but not more than 36ft (11m) from sill to sill. The clear opening must be at least 28" (700mm) wide and 80" (2030mm) high (Rule 2.11.1.2 in cars following ANSI 2000 or greater or Rule 110.1 for less than ANSI 2000)

3.4 75° bevel guards on all projections, recesses or setbacks over 4" (100mm), except on side used for loading/unloading.

3.5 Provide venting of the hoistway per national code requirements and applicable building codes (Rule 2.1.4).

3.6 Dried-in hoistway(s) and machine/control room(s).

3.7 If machine room less (MRL) elevator with rear counterweight: Hoistway top open, to allow installation of overhead beams and machine with crane.

3.8 Firefighter elevators are not permitted to have sprinklers in the hoistway or machine room per IBC. Means to prevent water from entering must be installed e.g. lobby construction. A permanent light fixture should be provided to illuminate the entire hoistway, not less than 1 foot-candle (11lx) when a fire protection device is activated per IBC. Emergency power must be provided and protected to maintain a 2-hour fire rating. The building mains and other wiring critical to phase 2 must maintain the 2-hour fire rating.

3.9 Where there is a blind hoistway, an emergency door shall be installed at every third floor, but not more than 36' (11m) from sill to sill. The clear opening must be at least 28" (700mm) wide and 80" (2030 mm) high (Rule 2.11.1.2).



3.10 Clear, flat, vertical or horizontal surfaces for mounting rail brackets at each floor, in overhead, and intermediate levels (if required) in the same vertical plane as the clear hoistway line. This includes divider beams between cars for multiple elevators in a common hoistway. Rail bracket supports shall not intrude into the clear hoistway line. If applicable, intermediate bracket supports between floor(s) and in the overhead area may be required. Refer to Schindler final layout drawings for maximum bracket spacing and actual support locations.

3.11 For masonry block hoistway construction, Schindler will provide rail bracket inserts for installation by others, located in accordance with the Schindler final layout drawings. Where inserts are not used, hollow masonry blocks are not acceptable for bracket fastening: a concrete belt around hoistway or other acceptable support at each floor, in overhead and intermediate levels (if required) has to be provided. Minimum slab thickness ranges from 8 1/4" (210mm) to 18 1/8" (460mm) depending on bracket characteristics.

3.12 For jurisdictions that require access to the governor (MRL applications) from outside the hoistway provide a governor access door for each car. It shall be self-closing, self-locking and operable from inside without a key. It must be located in such a way to allow authorized elevator personnel to access the governor accordingly. Consult final layout drawings for required door sizes and locations.

3.13 For elevators equipped with a rope gripper for ascending car protection, a hoistway access door, minimum 457mm x 457 mm (18" x 18") – maximum 610mm x 610mm (24" x 24"), shall be provided. Locate door at rear of the hoistway side wall on the machine side for accessing the rope gripper pump unit. Locate bottom of door level with top of machine beam. Consult final layout drawings for details.

4.0 Hoistway Front

4.1 Blockout/cutout through wall as required, to accommodate hall button boxes, signal fixtures, and hoistway duct. Provide for any repairs such as grouting, patching, painting, or fire proofing. Coordinate blockout/cutout with Schindler field supervisor.

4.2 If machine room less (MRL) application, hoistway front wall on overhead area has to support the weight of the electrical components fixed to this wall. GC to provide structural reinforcements where necessary (e.g. drywall construction) certain configurations may require a pocket recess above the top landing door. Refer to Schindler layout "Hoistway Preparation" for details.

4.3 Installation of door frames and sills, for masonry hoistway walls at entrances, provide rough opening of 8" (203mm) on each side, and 8" (203mm) on top of clear opening, referenced from the final floor level, for drywall hoistway walls at entrances: If floor height exceeds the clear door height + 28" (+ 700mm), additional structural support at CDH + 28" (+ 700mm) to be installed for entrance strut angle attachment. Walls are to be built after doorframes and sills are set in place.

For sill support fixation: An 8" (203mm) flat vertical surface is required below each landing level to fasten the sill support.

4.4 Entrance wall at the hoisting floor should be open the clear width of the hoistway. The hoisting floor is the floor designated to bring elevator equipment into the hoistway for installation.

4.5 Grouting around entrance frames and finished floor and grout to sill line after installation of entrance.

4.6 If applicable, for vertical bi-parting freight entrances, provide channel frames and sills at all openings along with separate disconnect switch and feeder to door control panel. Channel frames to be plumb within 3.2mm (1/8") for every 2.4m (8ft).

5.0 Machine/Control Room

5.1 Machine/Control rooms shall have clear headroom of not less than 95 3/4" (2.4m). Access to the machine/control room and machinery space (Rule 2.7.3). Door(s) shall be self-closing, self-locking and operable from inside without a key. For machine room less (MRL), a means will be provided to keep the control space door(s) open when required for installation and/or service. Minimum door size 30" x 80" (0.75m x 2.03m) (Rule 2.7.3.4). Consult Schindler final layout drawings for required door sizes.

5.2 Where machine/control room(s) are remote from the hoistway, electrical duct runs will be in the overhead/ceiling area. No provisions are made for underground installation.

5.3 GFCI convenience outlet and telephone outlet located in machine/control room for each elevator (National Electrical Code (NFPA 70 Rule 620-85) or (CSA C22.1-02 Section 38-085)). Dedicated analog telephone line capable of outgoing or incoming calls for emergency phone system (Rules 2.27.1.1 and 2.27.1.2) or Schindler remote monitoring (SRM).

5.4 Lighting, ventilation, and heating of machine/control room, control space and machinery space (Rule 2.7.5)

- a) Minimum lighting to be 200 lux (20fc)
- b) The ambient temperature at the controller location must be maintained between 32 and 104 Fahrenheit (0 to 40 Celsius)
- c) The ambient temperature at the machine location must be maintained between 41 and 104 Fahrenheit (5 to 40 Celsius)
- c) Heating and/or cooling may be required to maintain the required temperatures
- d) Acceptable humidity level shall be maintained at 95% or less non-condensing



- e) For machine room less (MRL) application, a cutout in rear wall of control space closet for ventilation panel is required.
Coordinate size and location with Schindler field supervisor
- f) Refer to section 2.0 electrical and "Schindler power data" sheets for heat emissions.

5.5 For machine room less (MRL) applications, a 42" (1050mm) clear space must be provided in front of control space closet for service barriers. Corridor width must accommodate this requirement as well as any additional requirements imposed by ADAAG or other codes.

5.6 Reinforced concrete machine room floor slab or grating must not be placed until elevator machinery is set in position (Rule 2.1.3). Level machine room floor: differences in levels of machine room and machinery-space floors shall be avoided where practical (Rule 2.1.3.6). Where there is a difference in level in such floors exceeding 16" (0.4m), a standard railing conforming to Rule 2.10.2 shall be provided. Machine/control rooms shall have clear headroom of not less than 84" (2.13m) (Rule 2.7.4.1).

5.7 Hoisting beam(s), trap doors and other means of access to machinery space of adequate size for maintenance and equipment removal (Rules 2.7.3.4 and 2.9.3.3). Hoisting beam(s) in each shaft located and load rated per Schindler final layout drawings. Lifting points or beam(s) shall be visibly marked with the safe working load.

5.8 Adequate supports for machine beams where required, including wall pockets and patching after beams are set in place (Rules 2.9.1 to 2.9.6). Building interface and mounting of beams to be per Schindler requirements as indicated on final layout drawings.

5.9 The allowable deflections of machinery and sheave beams and their immediate supports under static load shall not exceed 1/1666 of the span (Rule 2.9.5).

5.10 When structural concrete slab mounting for machines is specified, the structural engineer (g.c.) must confirm that structural concrete slab (typically 12 inches (0.3m) thick with re-bar) is designed in accordance with ASME A17.1 safety code for elevators and escalators (Section 2.9 Machinery and Sheave Beam, Supports and Foundations). Stress requirements and deflection requirements must meet ASME A17.1 code (Rules 2.9.4 to 2.9.6). Slab blockouts, coordinated with Schindler, to be provided in the structural slab by G.C. to accommodate car & governor rope drops, wire raceway, target holes, and rail stacks (where applicable). Schindler will provide a template indicating where blockouts are to be located in the slab, which must be precisely followed.

5.11 Class "ABC" fire extinguishers in electrical machinery and control space. Extinguishers shall be located convenient to access door (Rule 8.6.1.6.5).

6.0 Pit

6.1 Dry pit reinforced to sustain vertical forces from rails and impact loads on buffers (Rule 2.2.2). Car and counterweight buffer impact loads as calculated (Rule 8.2.3). Refer to Schindler final layout drawings.

6.2 Adequate sealing and waterproofing of pit. Effective prevention of pit exposure to storm water or ground water.

6.3 A pit access door must be provided if the access to the pits is other than the bottom terminal floor. The pit access door provided must be in accordance with A17.1 2010 Section 2.2.4.5 and 2.2.4.6.

6.4 Where there is a difference in level between the floors of adjacent pits, a metal guard shall be installed not less than 79" (2m) above the level of the higher pit floor (Rule 2.2.3.1). Where the difference in level is 24" (0.6m) or less a standard railing conforming to Rule 2.10.2 shall be permitted (Rule 2.2.3.2).

6.5 Drains & sumps in elevator pits, where provided, shall comply with the applicable plumbing code and they shall be provided with a positive means to prevent water, gases and odors from entering the hoistway. Sumps and sump pumps in pits, where provided, shall be covered. The cover shall be secured and level with the pit floor (Rules 2.2.2.4 and 2.2.2.6) and should be located to clear elevator equipment (cannot be connected directly to storm drain or sewer).

6.6 GFCI convenience outlet and light fixture with guard in pit. (National Electrical Code (NFPA 70 Rules 620-85) or (CSA C22.1-02 section 38-085)) Minimum lighting to be 100 lux (10fc). (Rule 2.2.5 in cars following ANSI 2000 or greater or Rule 106.1 for less than ANSI 2000)

6.7 Pit ladder to be provided by general contractor for each elevator in compliance with Rule 2.2.4.2. Locate per Schindler final layout drawings. If the distance between the lone car rail and clear hoistway (sf) is less 3.5" (90mm) then a pocket must be provided for pit ladder. All walk-in pits must follow the requirements of Rule 2.2.4.4. The minimum distance from the pit ladder top rung, cleat or stop to the top of the pit ladder or handhold shall not be less than 48" (1.2m) above first landing.

6.8 In elevators equipped with Firefighter's Emergency Operation, a drain or sump shall be provided, located in a pit floor area free from elevator equipment. The sump pump/drain shall have the capacity to remove a minimum of 50 GPM (11.36m³/hr) per elevator (Rule 2.2.2.5) and has to be covered. The cover shall be secured and level with the pit floor.



7.0 Provisional Handover and Turnover Requirement

7.1 Temporary Service: Schindler shall be reimbursed for any labor and material that is not part of the permanent elevator installation and that is required to provide temporary elevator service. Schindler's temporary acceptance form shall be executed and the elevator inspected before being placed into temporary service. The costs associated with the power, operation, maintenance, and rehabilitation of the equipment and any construction permits or fees required by governing authorities shall be paid for By Others.

7.2 In addition to the above, the following work must be completed before elevator(s) are placed into automatic operation. (Prior to code required municipal authority inspection, refer to Schindler acceptance inspection standard form).

- a) Finished cab flooring and if applicable, fitting of interior cab walls and/or ceiling.
- b) Machine/control room to comply with code and to suit Schindler standard equipment. Proper machine/control room dimensions and safety clearances to be provided as indicated on Schindler final layout drawings with recesses and ducts to be covered as required. Proper stairways or steps and guardrails to be provided. Proper lockable fire rated door, self-closing and self-locking with label to be provided (Rules 2.7.3 & 2.11.14).
- c) If applicable, smoke and/or heat detectors with signals to elevator controller(s).
- d) If applicable, emergency power generator and automatic transfer switch with capacity to run at least one elevator at a time.
- e) Seal all penetrations through 2-hour (or greater) rated walls with code approved material. Drywall liner behind all wall mounted hall fixtures. Penetration permitted by IBC 2012 Section 713.8.1 must be protected according to Section 713. Any penetration due to formed or poured concrete (e.g. block out) must be backfilled according to IBC.
- f) Cab light circuits and all receptacles installed in machine/control rooms, machinery spaces and pits must have ground fault circuit interrupter protection (GFCI) (NEC 620 or CSA 38).
- g) If applicable, conduit and wire runs from elevator(s) to remote status panel.
- h) If applicable, conduit and wiring for fire alarm system to each elevator control in machine/control room.
- i) If applicable, conduit and wire runs for emergency/rescue communications in central alarm & control facility, fire control room, security desk, etc.
- j) If applicable, conduit and wire runs for remote alarm bell from machine/control room to remote location.
- k) Adequate lighting of building corridors so that illumination at the landing sill is minimum 100 lux (10FC) (Rule 2.11.10.2).
- l) Guarding of counterweights in multi-elevator hoistways: when a counterweight is located between elevators, the counterweight runway shall be guarded on the side next to the adjacent elevator (Rule 2.3.2.3).
- m) If applicable, conduit and wiring for ascending car protection(rope gripper) to each elevator control in machine/control room.

You agree to indemnify and save Schindler harmless against any and all liability and costs arising out of your failure to carry out any of the foregoing requirements.

09/06/2016

Schindler Elevator Corporation
Preliminary 3300 Elevator Power Data

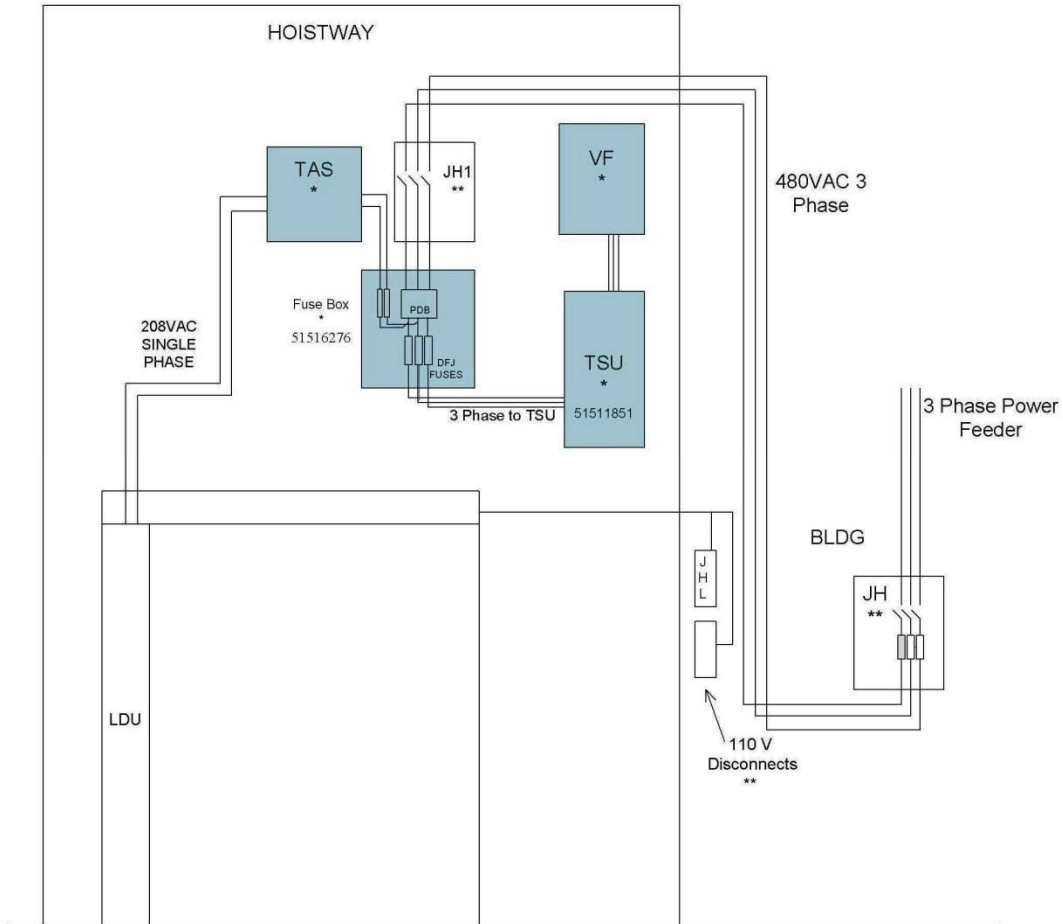
Ferrara Group LLC
2700 Biscayne Blvd
Miami, FL 33137

Opp ID: 0200464257-A-A-01

Unit(s): 01
Product Code: 450
Sales Office: 9676
Installing Office: 9676 9676

Capacity: 2100 lbs
Speed: 100 fpm
Travel: 14 ft. 0 in.

ELECTRICAL SYSTEM LAYOUT – 480 VAC BLDG VOLTAGE



Abbreviations used:

JH – Mainline Disconnect
JH1 – Hoistway Auxiliary Disconnect
JHS – Inspection and Text Panel Switch
KVA – Kilo Volt Amperes
LDU – Inspection and Test Panel
NA – Not Applicable
OCPD – Over Current Protection Device
TA – 3 Phase Auto Transformer

SCCR – Short Circuit Current Rating
TSU – Motor Control
TAS – Test & Inspection Panel Autotransformer
VFD – Variable Frequency Drive
XFMR – Transformer
PDB – Power Distribution Block
M – Motor
(JH, JH1 and 110V disconnects by GC)

* Components provided by Schindler

** Components to be provided by contractor

Table for Electrical Contractor – Elevator Power System Parameters

SECTION 1: BUILDING POWER SUPPLY		
Parameter	Value	Notes
Utility Building Supply (VAC/phase/Freq)	480 Volts 3 Phase 60 Hz	3 Phase, balanced line to line, 3 wire, no neutral, and Ground to be provided. Voltage fluctuation of building service provided by local utility to be within +/- 10% of the specified voltage.3% maximum phase to phase fluctuation.
Permissible Voltage Drop (%) from building to TSU	3%	Not to exceed 3% under any condition in the feeders within the building from the building service provided by the local utility to the motor control (TSU).
SECTION 2: MOTOR CONTROL XFMR		
Motor Control Transformer ident number	NA	If required. (See Sec. 2 of contractor sheet for details)
Motor Control XFMR power rating (KVA)	NA	
Primary Voltage (Input)	NA	Should be same as building supply voltage
TA XFMR Secondary Voltage (Output)	NA	Should be same as Motor Control Input Voltage
Motor Control XFMR Rated Input Current (Amps)	NA	Maximum capability
Motor Control Transformer Inrush Current (Amps)	NA	Motor Control Transformer In-rush (for 0.1 second)
Motor Control Transformer Output Current (Amps)	NA	Maximum capability
SECTION 3: DISCONNECTS AND PROTECTION DEVICES		
Current consumption by Drive (Amps)	18.00 Amps	Drive – Accelerating (non-continuous) <3.5 Secs
	13.00 Amps	Drive – Running (non-continuous) < 60 Secs
Effective Motor Power HP	10.2	Rated Motor HP
Current consumption by LDU	1.6 Amps	Control (continuous component of total current)
	3.4 Amps	Control (maximum non-continuous current)
SCCR rating of system	5000 Amps	Maximum RMS Symmetrical Let-Thru current of fuses at mains disconnect cannot exceed this value.
JH Disconnect Switch (Amps)	Sized by GC	To be determined by GC/EC based on input current to downstream device and rules in NEC/CEC or local code.
JH Disconnect Switch Location		See section 2 of contractor sheet for details
Recommended Overcurrent protection (located within mainline disconnect JH) current rating max: (Amps)	15 Amps	Maximum overcurrent protection device value at mains disconnect (JH). - Dual element time delay characteristic recommended due to Motor Control Autotransformer Inrush current. - Current limiting overcurrent protection required due to: a) Prospective Short Circuit Fault current at mains disconnect and b) SCCR of elevator equipment. Schindler recommends the use of fuses.
JH1 Disconnect Switch (Amps)	Sized by GC	See section 2 of contractor sheet for details. Must be unfused. Must be provided with auxiliary contact per schematics.
Hoistway Disconnect switch (JH1) Location	In Hoistway	See section 2 of contractor sheet for details. Must be provided with auxiliary contact per schematics.
Motor Control Input Voltage	480 VAC	Input Voltage to Motor Drive
Required Motor Control protection fuses (in fuse box)	20 Amps	Type – BUSSMANN DFJ, Qty - 3
Required LDU feeder protection fuses in fuse box)	5 Amps	Type – Class CC, Qty – 2, Location – In fuse box.
Recommended LDU Transformer	51516255	See Section 3 of contractor sheet for details
LDU transformer (TAS) Primary Voltage	480 VAC Single Phase	See Section 3 of contractor sheet for details
LDU transformer (TAS) Secondary Voltage	208 VAC	See section 3 of contractor sheet for details
Recommended LDU transformer (TAS) Sec Fuses	8 Amps	Location – In TAS (LDU Xfmr), in hoistway, Qty 2
SECTION 4: HEAT EMISSIONS		
Motor Control transformer heat emissions(Btu/Hr)	NA	Typically not in hoistway
Hoistway Heat Emissions (Btu/Hr)	5340 BTU/hr	Includes LDU, TSU, VFD, Machine and TAS. Does not include the MOTOR CONTROL XFMR
By _____	Approval _____	Date _____

Table for Electrical Contractor - Physical Wiring & Conduit Limitations

Parameter Description	Motor Control (TSU)	Inspection & Test Panel (LDU)	unit
	value	value	
JH Aux1,2 wire size	-----	18	AWG
Terminal Temperature Rating	60	60	Deg C
Power Input Min AWG *	20	14	AWG
Power Input Max AWG *	4	4	AWG
Equip Ground Conductor Min AWG *	14	26	AWG
Equip Ground Conductor Max AWG *	4	12	AWG
Minimum Input Power Conduit KO trade size	1.00	0.5	inches

- Physical size only. No consideration made for electrical requirements.

Notes:

- To minimize harmonic distortion interference with other equipment, dedicated transformers and feeders shall be provided for elevator use only.
- Electrical contractor to supply feeders and ground of copper conductors, and circuit protective devices from the building service to our Motor Control (TSU) and Test and Inspection panel (LDU) in compliance with local code requirements. All three legs of the 3-phase feeder must be hot with respect to ground. Center-tap grounded leg configuration (a.k.a. wild leg) is not supported.
- The permissible voltage drop for elevator feeders shall not exceed 3% from the service within the building delivered to our motor controller supply terminals. Feeders are to be sized by the electrical contractor to ensure this requirement.
- Schindler does not size feeder wires. All calculations for feeder sizes and insulation type are to be performed by electrical contractor.
- Fusebox, Motor control transformer and test and Inspection panel transformer when required will be supplied by Schindler. All Wiring up to LDU and TSU to be provided by GC.
- The continuous load due to the Control is taken from two phases of the input and will result in an unbalanced load on the line.
- Contractor should size wires from XFMR to secondary (when applicable) to the TSU such that the derated ampacity of the wires can withstand the current output of the XFMR NA. All wiring to be carried out per relevant rules in NEC/CEC or local code.
- The JH and JH1 disconnects each require one auxiliary contact per car to prevent unintended initiation of the automatic evacuation feature. This auxiliary contact in each disconnect a) must open when the disconnect is in the "OFF" state and b) must be wired by the Electrical Contractor in series with each other, and c) must terminate in the Inspection & Test Panel (LDU). Auxiliary contact within JH & JH1 are to be rated for the following: 24Volts DC, 2000 milliamperes (Max), 135 milliamperes (Min) non-inductive.

