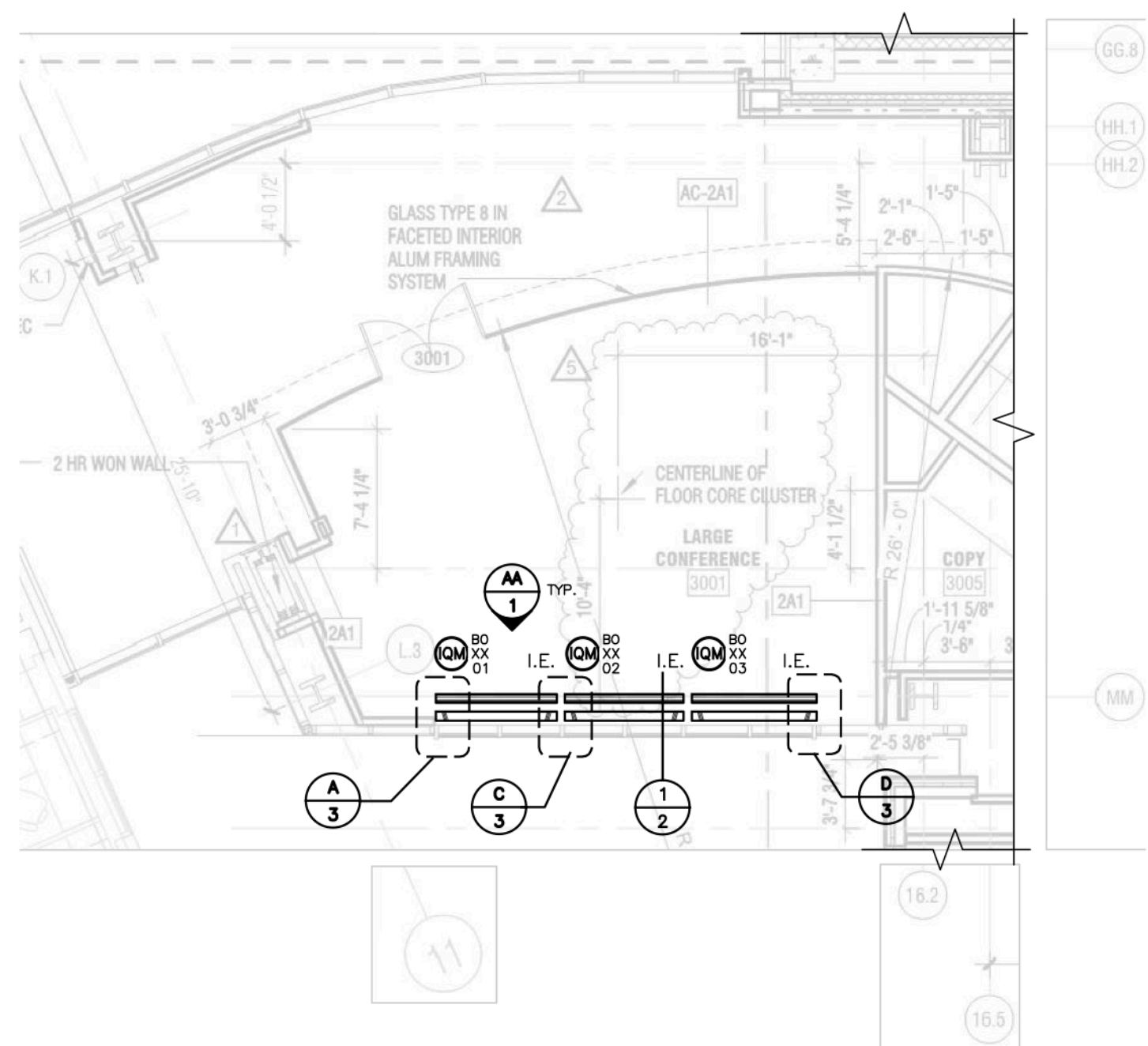
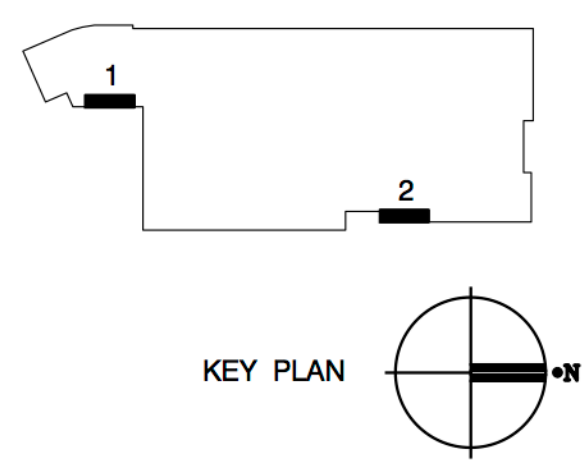


REV	BY	FOR	TO	DATE
4	1	APPL	DLR	08/27
4	1	APPL	DLR	09/25
4	1	APPL	DLR	10/23

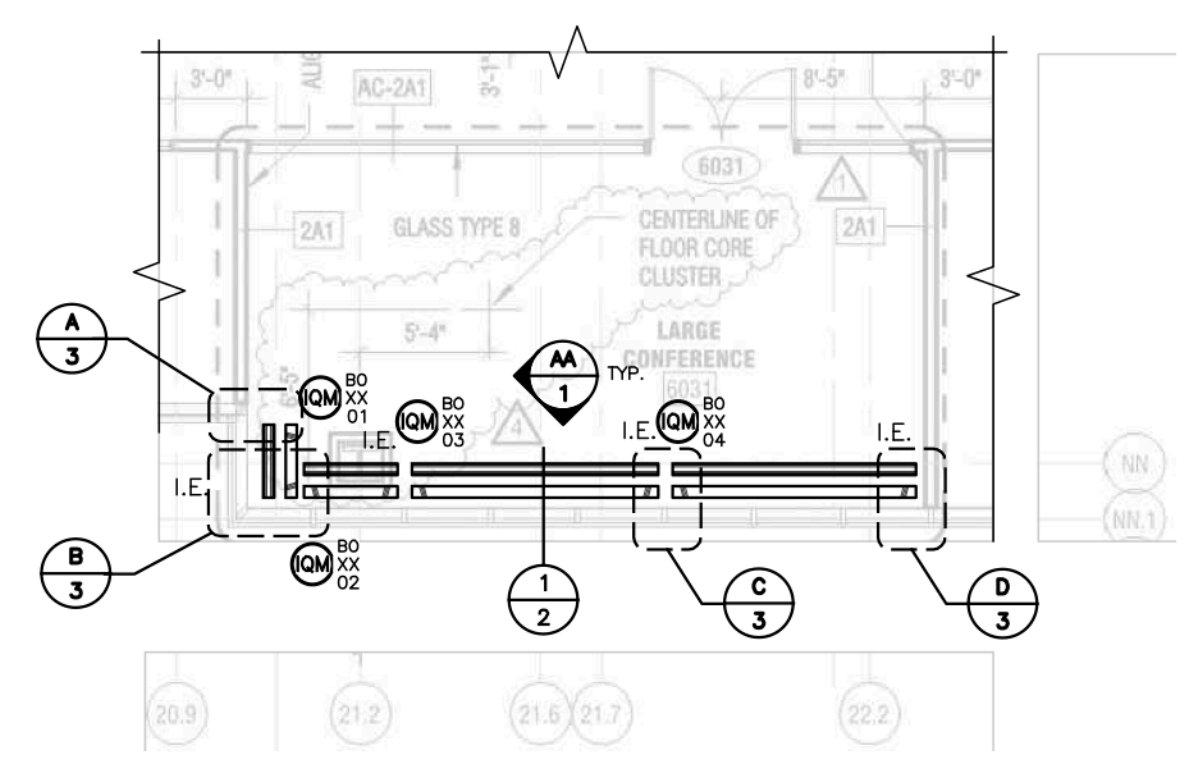


**1-TYPICAL SHADE LOCATION PLAN @ 3rd - 5th FLOORS**

SCALE: 1/8"=1'-0"

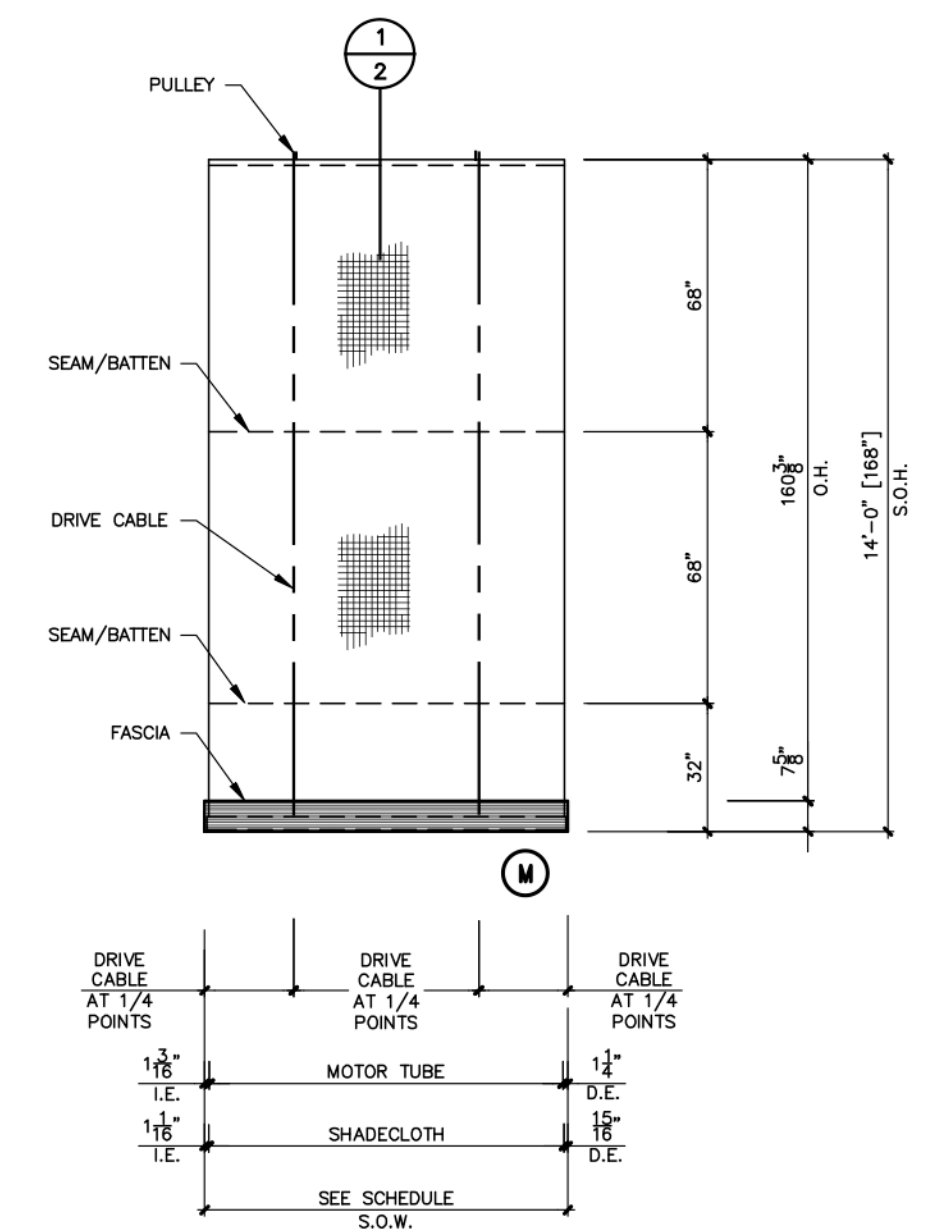


KEY PLAN



**2-TYPICAL SHADE LOCATION PLAN @ 6th, 8th - 11th FLOORS**

SCALE: 1/8"=1'-0"

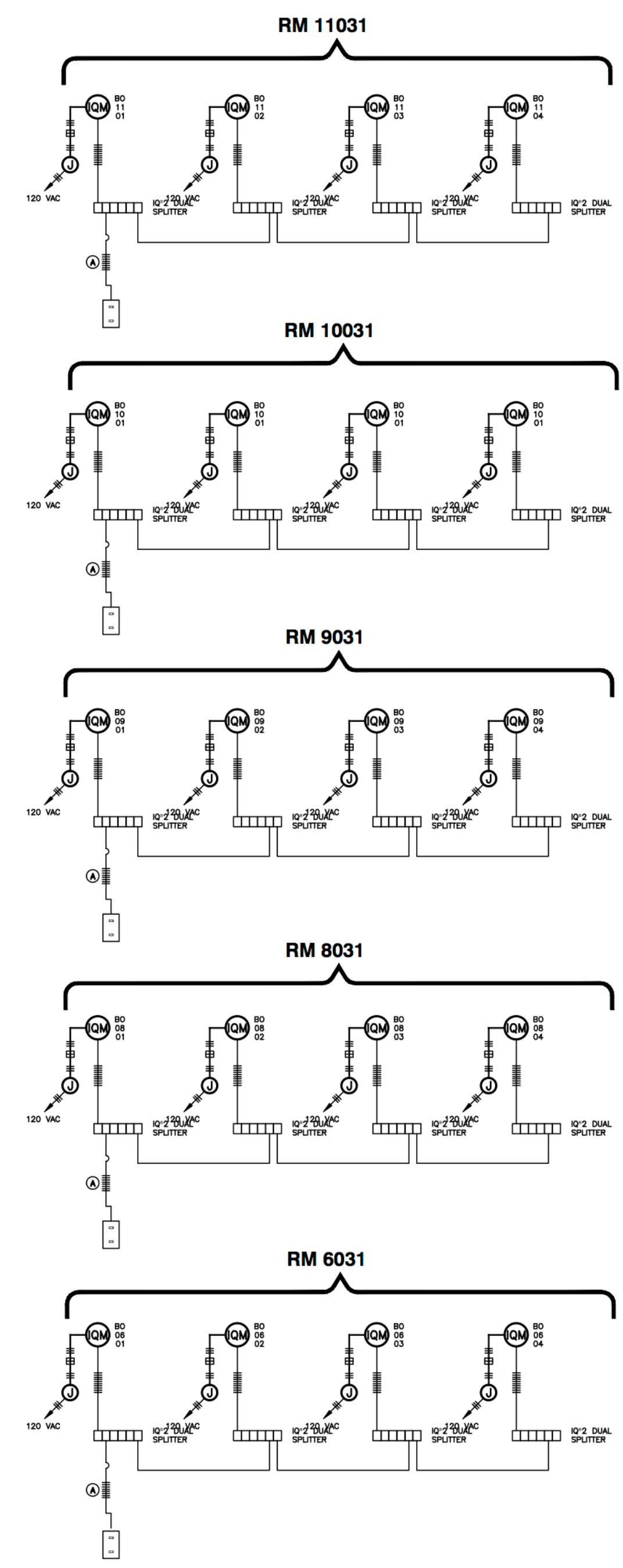


**AA INTERIOR ELEVATION**

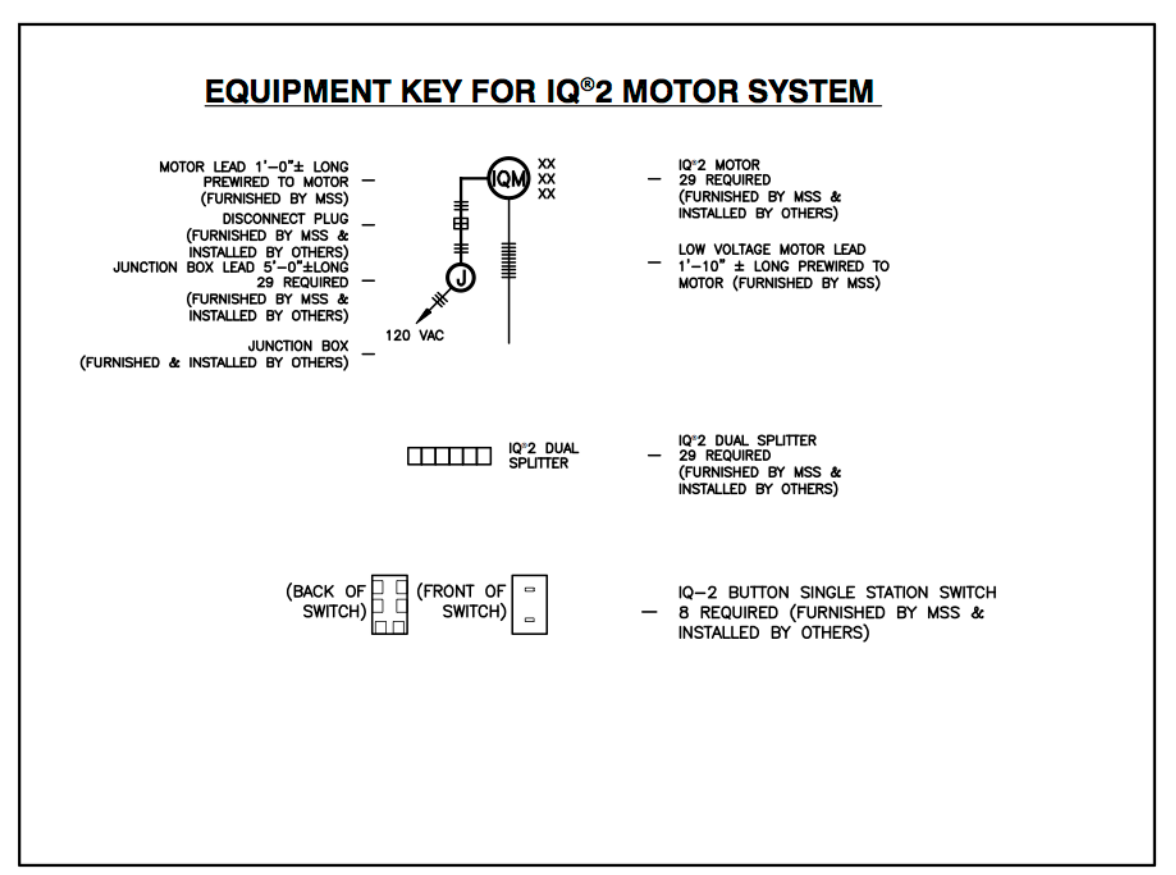
SCALE: 1/4"=1'-0"

**MOTORIZED BOTTOM-UP SPRING ROLLER SHADE TABLE**

SHADE SCHEDULE							
ITEM #	ROOM	FABRIC	QTY.	S.O.W. (V.I.F.)	TUBE DIA.	R.U.D.	REMARKS
1		0700	3	80.375	2 1/2	3.36	SPRING ROLLER
2			3	80.375	2 1/2		MOTOR TUBE
3	3001, 4001, 5001	0700	3	80.375	2 1/2	3.36	SPRING ROLLER
4			3	80.375	2 1/2		MOTOR TUBE
5		0700	3	80.375	2 1/2	3.36	SPRING ROLLER
6			3	80.375	2 1/2		MOTOR TUBE
7		0700	5	50	2 1/2	3.36	SPRING ROLLER
8			5	50	2 1/2		MOTOR TUBE
9		0700	5	69 1/4	2 1/2	3.36	SPRING ROLLER
10	6031, 8031, 9031, 10031, 11031		5	69 1/4	2 1/2		MOTOR TUBE
11		0700	5	132	2 1/2	3.36	SPRING ROLLER
12			5	132	2 1/2		MOTOR TUBE
13		0700	5	129	2 1/2	3.36	SPRING ROLLER
14			5	129	2 1/2		MOTOR TUBE
15	TOTAL B-UP SHADES		29				
16	TOTAL MOTOR TUBES		29				



**WIRING SCHEMATICS**



KEY	
C.S.	- CENTER SUPPORT
D.E.	- DRIVE END
I.E.	- IDLE END
O.H.	- OPENING HEIGHT
O.O.W.	- OVERALL OPENING WIDTH
O.W.	- OPENING WIDTH
R.U.D.	- ROLL UP DIAMETER
S.C.	- SHADECLOTH
S.O.H.	- SHADE OPENING HEIGHT
S.O.W.	- SHADE OPENING WIDTH
V.I.F.	- VERIFY IN FIELD
N.I.C.	- NOT IN CONTRACT

AA	ELEVATION NUMBER
3	SHEET NUMBER
M	SHADECLOTH
TV	FLOOR NUMBER (OPTIONAL)
01	MOTOR NUMBER
1223	ROOM NUMBER
[Symbol]	MOTORIZED
[Symbol]	BOTTOM-UP SHADE

**NOTES:**  
 1 - ALL DIMENSIONS AND JOB CONDITIONS TO BE FIELD VERIFIED BY DEALER BEFORE FABRICATION.  
 2 - ALL MATERIALS, COLORS, FINISHES, ETC. ARE TO BE MechoShade STANDARDS UNLESS OTHERWISE NOTED.  
 3 - MechoSystems RESERVES THE RIGHT TO MAKE DESIGN MODIFICATIONS AND TECHNICAL CHANGES WITHOUT PRIOR NOTICE.  
 4 - BLACKOUT SHADECLOTH TO BE No. 0700 SERIES - 72" WIDTH - RAILROADED WIDTH FOR HEIGHT WITH SEAM/BATTEN AS SHOWN ON ABOVE ELEVATION - STANDARD MechoShade COLOR AS APPROVED BY ARCHITECT.

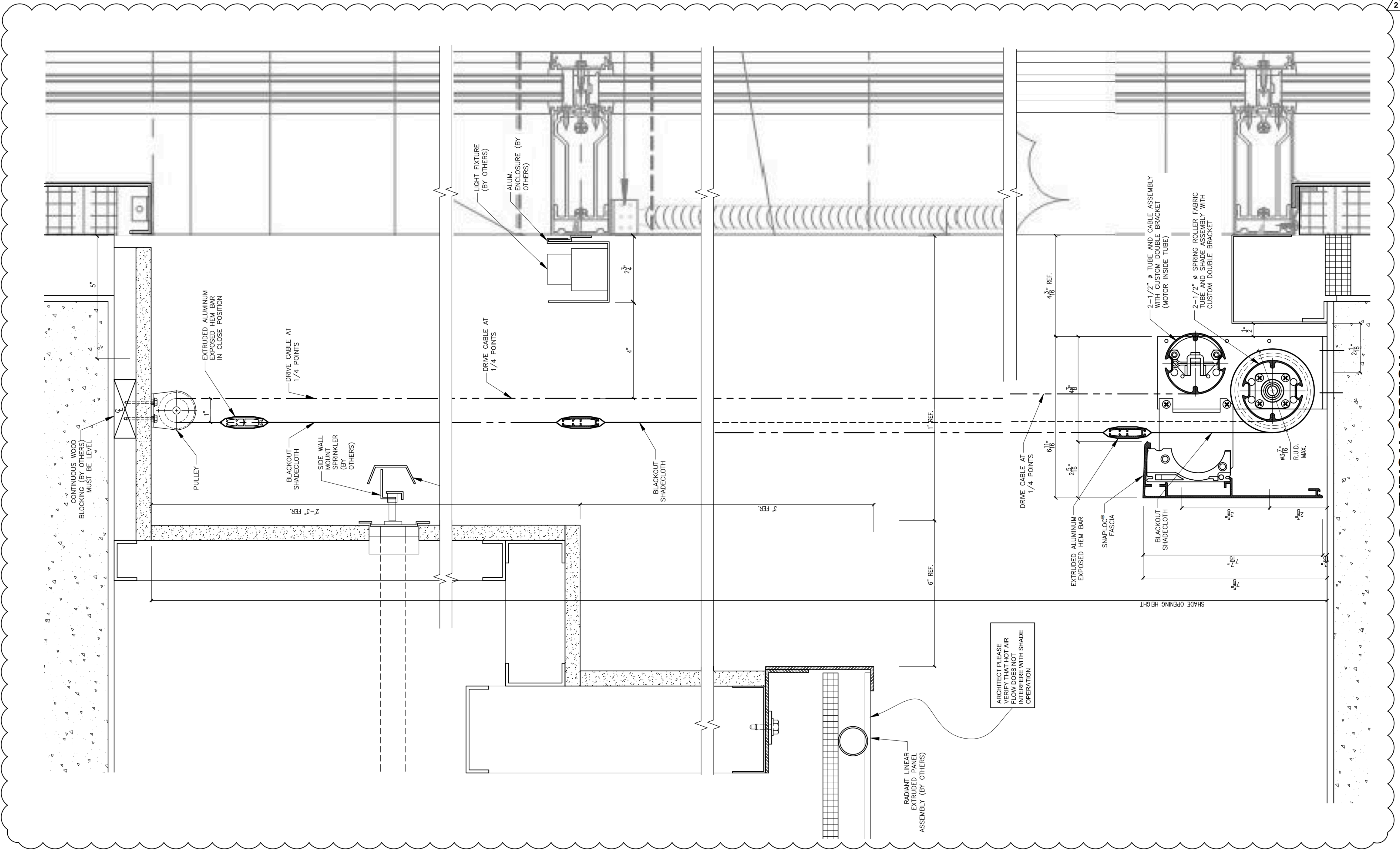
**SHOP DRAWING DIMENSIONS**  
 DETAILS: HARDWARE SIZES ± 1/32" (0.79mm)  
 ROLL DIAMETER SIZES ± 1/8" (3.18mm)  
 EDGE CLEARANCE ± 3/16" (4.76mm)  
**SHADE BANDS:**  
 RollerShade width and height dimensions (W x HT) are approximate, subject to final field dimensions to be scheduled by the Dealer/Contractor and provided to MechoShade Systems for fabrication in accordance with Contract Documents. Shop drawings are for typical details and shade locations only. Final sizes are not included. All blocking and supports are shown for reference only. Blocking design is not included in this Shop Drawing. Blocking is Not In Contract.

4			
3			
10/23/13	NO CHANGE	N.W.	
09/25/13	PER ARCHITECT'S REVISION	J.L.R.	
NO.	DATE	DESCRIPTION	BY

**MechoSystems**  
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 Long Island City, NY 11101  
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 W: mechosystems.com

JOB	BROAD INSTITUTE CAMBRIDGE, MA	DWG NO.	M-3758EB	REV.	2
JOB NO.	656001	PROPOSAL NO.	192749-4-4	SCALE	AS NOTED
DATE	08/27/13	DWN. BY	D.M.	CHKD. BY	K.D.
ARCHITECT	VER-TEX CONSTRUCTION SPECIALTIES, INC	SHEET NO.	1	OF	4

PRINTS				
NO.	DATE	BY	REV.	DATE
4	1	APPL	DLR	08/27
4	1	APPL	DLR	09/25
4	1	APPL	DLR	10/23



**1** TYPICAL SECTION  
SCALE: 6" = 1'-0" ARCH. REF. 5, 6, 8/A625

NOTES:  
SEE NOTES ON SHEET #1

**SHOP DRAWING DIMENSIONS**  
 DETAILS: HARDWARE SIZES ± 1/32" (0.79mm)  
 ROLL DIAMETER SIZES ± 1/8" (3.18mm)  
 EDGE CLEARANCE ± 3/16" (4.76mm)

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FILE NAME: i:\Shop DWG Current\M-3758EB - Broad Institute\Rev-2\DETAILS.dwg

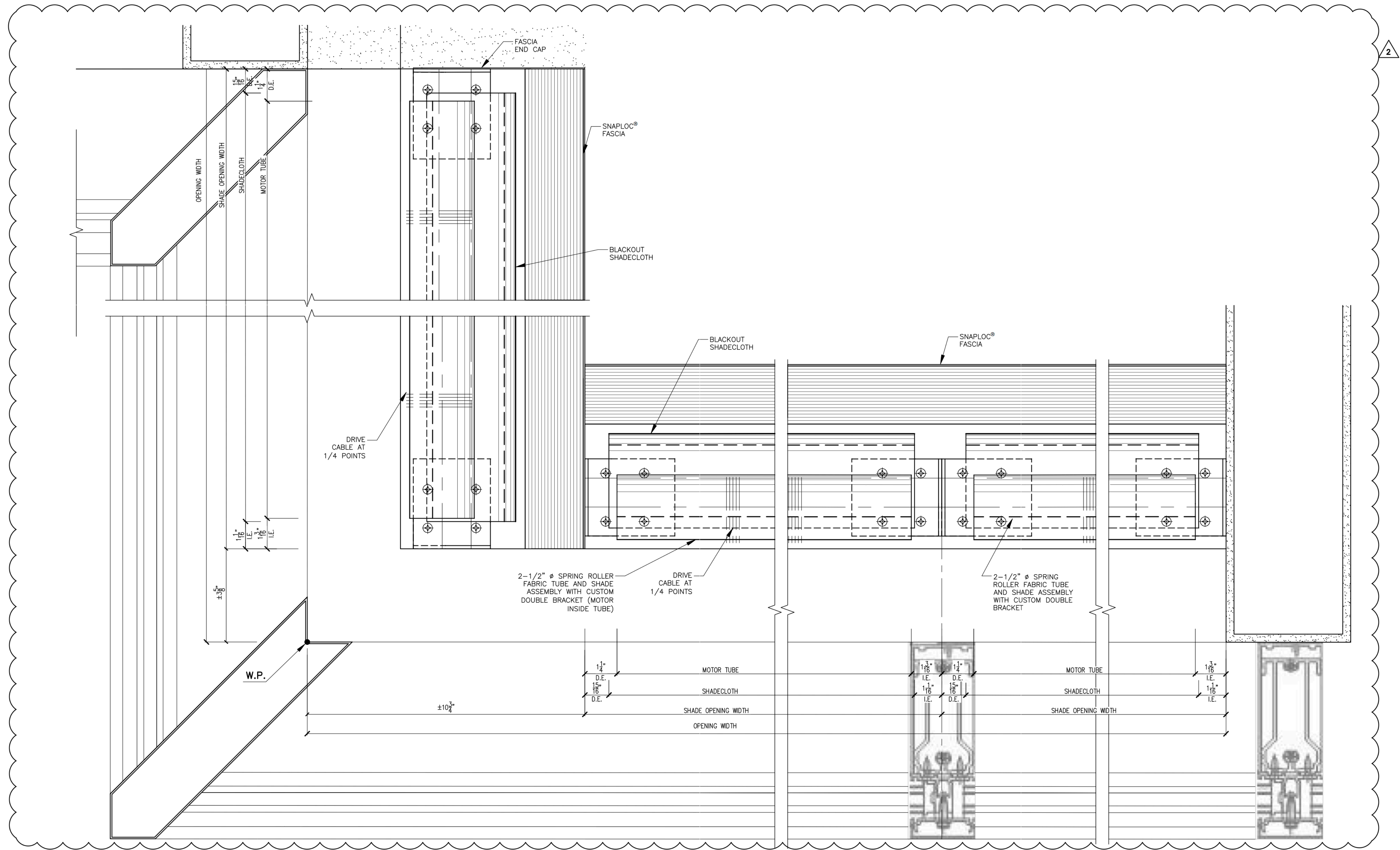
NO.	DATE	DESCRIPTION	BY
4			
3			
2	10/23/13	PER ARCHITECT'S REVISION	N.W.
1	09/25/13	PER ARCHITECT'S REVISION	J.L.R.

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JOB	BROAD INSTITUTE CAMBRIDGE, MA	DWG NO.	M-3758EB	REV.	2
TITLE	PROPOSED DETAILS "ELECTRO" SHADES	PROPOSAL NO.	192749-4-4	SCALE	AS NOTED
ARCHITECT	VER-TEX CONSTRUCTION SPECIALTIES, INC	DATE	08/27/13	DWN. BY	D.M.
		CKD. BY	K.D.	SHEET NO.	2 OF 4

PRINTS				
NO.	DATE	BY	REV.	DATE
4	1	APPL	DLR	08/27
4	1	APPL	DLR	09/25
4	1	APPL	DLR	10/23

**A REFLECTED**  
SCALE: 6" = 1'-0"



**B REFLECTED**  
SCALE: 6" = 1'-0"

**C REFLECTED**  
SCALE: 6" = 1'-0"

**D REFLECTED**  
SCALE: 6" = 1'-0"

NOTES:  
SEE NOTES ON SHEET #1

**SHOP DRAWING DIMENSIONS**  
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 ROLL DIAMETER SIZES ± 1/8" (3.18mm)  
 EDGE CLEARANCE ± 3/16" (4.76mm)  
 SHADE BANDS, RollerShade width and height dimensions (W x HT) are approximate, subject to final field dimensions to be scheduled by the Dealer/Contractor and provided to MechoShade Systems for fabrication in accordance with Contract Documents. Shop drawings are for typical details and shade locations only. Final sizes are not included. All blocking and supports are shown for reference only. Blocking design is not included in this Shop Drawing. Blocking is Not In Contract.  
 FILE NAME: I:\Shop DWG Current\M-3758EB - Broad Institute\Rev-2\DETAILS.dwg

NO.	DATE	DESCRIPTION	BY
4			
3			
2	10/23/13	PER ARCHITECT'S REVISION	N.W.
1	09/25/13	PER ARCHITECT'S REVISION	J.L.R.

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JOB	BROAD INSTITUTE CAMBRIDGE, MA	DWG NO.	M-3758EB	REV.	2
TITLE	PROPOSED DETAILS "ELECTRO" SHADES	JOB NO.	656001	PROPOSAL NO.	192749-4-4
ARCHITECT	DEALER/VER-TEX CONSTRUCTION SPECIALTIES, INC	DATE	08/27/13	SCALE	AS NOTED
		DWN. BY	D.M.	CKD. BY	K.D.
		SHEET NO.	3	OF	4

PRINTS				
REV	DATE	BY	NO.	DATE
4	1	APPL	DLR	08/13
4	1	APPL	DLR	09/25
4	1	APPL	DLR	10/23

### STANDARD ELECTRICAL NOTES

All electrical control equipment as indicated is furnished-only by MechoSystems, installed and wired by the Electrical Contractor.

Electrical control equipment may contain electromechanical relays, adjustment points, fuses, indicator lights, and other interface electronics. These must be conveniently accessible for future servicing and adjustments during normal working hours and without disruption to the existing operations. This equipment shall be coded by the Electrical Contractor indicating shade locations and specific motors which are controlled, and it shall be coded at the control equipment and circuit breaker.

Some point-to-point diagrams may not include motor disconnect plugs, junction boxes and cable raceways that may otherwise be essential for a complete installation. The point-to-point diagrams may also not depict a complete or accurate wiring arrangement that meets all applicable national and local codes for a given project location.

**Caution:**  
- Read all instructions before installing. It is important for the safety of each person to follow these instructions. If you are unsure of any part, stop and contact a qualified installer.  
- Save all instructions.

**Warning:**  
- All electrical control equipment must be wired in accordance with the wiring diagrams prepared by MechoSystems, and in accordance with all applicable national (i.e. United States: N.E.C.) and local codes.  
- Before installing or servicing remove any unnecessary cords and disable any equipment not needed for powered operation.

- To avoid the risk of fire, shock or death turn off the power at the circuit breaker or fuse before wiring or servicing equipment. Test that power is off before proceeding.  
- Make sure that the motor voltage matches the ratings on the product labels.  
- Line voltage wiring should only be connected using copper or copper-clad aluminum wire with the CC-CU or CU-CC markings.  
- An outlet or terminal box to which connections to the power supply circuit will be made shall be located so that, after the appliance has been installed, such connections are accessible for inspection.  
- The leads intended to be spliced in the field shall have insulation not less than 1/32 in. (0.8mm) thick.  
- A hole through which insulated wires pass in a sheet metal wall shall be provided with a smooth, rounded protective bushing.

Green motor wires are to be fastened to the grounding point on grounded junction boxes, conduits or other suitable building ground locations as required by code.

**Canada:** The impedance of the bonding connection to the shade motor must be at least 0.1 Ohms.

Except for the drapery operator (shade motor), all exposed dead metal parts and all dead metal parts within the enclosure shall be reliably connected to the equipment-bonding terminal or lead.

Code requires an accessible, detachable power cord or switch at the point of installation and away from moving parts for the shade motor.

**Europe:** The actuating member of a biased-off switch shall be located within direct sight of the shade assembly but away from moving parts. It shall be installed at a minimum height of 4.92 ft. (1.5m) and possess an opening distance between contacts of at least 0.12 in. (3mm). Controls are all certified in installation up to 6562 ft. (2000m) above sea level.

All tubular shade motors are limited duty cycle motors that are not rated for continuous use. They possess built-in thermal overload protection which limits their continuous use to approximately five (5) minutes. Once protection activates, operation will resume again after the internal temperatures within the motor return to below the thermal limit. Up to a thirty (30) minute rest may be required in order for the motor to sustain regular operation once again.

- Do not connect low voltage wires to high voltage power. Improper wiring can result in personal injury and/or damage to the equipment.
- Low voltage cables should not be routed near power lines or electrical devices such as lighting ballasts, dimmers and LED drivers that may expose the system to excessive electrical noise.
- When crimping RJ connectors on modular cable or CAT5/6 cable, care must be taken to follow crimping instructions in order to ensure a reliable connection. The outer jacket must be captured within the crimp on the connection in order to ensure proper strain relief.
- Pre-crimped telephone cables will not work.
- Observe wiring guidelines in the low voltage cabling legend in order to ensure maximum cable lengths and maximum node count are properly followed.
- **Europe:** Do not permit children to play with the appliance (shade motors) or fixed controls. Keep remote controls away from children.
- **Europe:** The appliance (shade motor) is not intended for use by children or people with reduced physical, sensory or mental capabilities or lack of experience and knowledge unless given proper instruction or supervision.

#### STANDARD (BI-DIRECTIONAL) LINE VOLTAGE TUBULAR MOTORS (a.k.a. "Standard Motors")

ElectroShade® and WhisperShade® standard motors possess a line voltage motor lead which is a 4-conductor (line1, line2, neutral, earth), 18 AWG stranded, PVC-jacketed cable approximately one foot (1 ft. or 305mm) long with a 4-conductor disconnect plug.

The standard ElectroShade® and WhisperShade® junction box lead is a 4-conductor (line1, line2, neutral, earth), 18 AWG stranded, PVC-jacketed cable approximately five feet (5 ft. or 1525mm) long with a mating 4-conductor disconnect plug.

For all standard motors:

- Shade motors must not be wired in parallel or series "daisy chained" fashion. Only one motor may be wired to each set of motor connections or it will cause premature motor burnout and void any applicable warranty.
- Do not wire two (2) or more motors to one (1) SPDT (single-pole, double-throw) switch.
- A single DPDT (double-pole, double-throw) switch may be wired to up to two (2) standard motors if each is wired to a separate pole of the switch. Please refer to Drawing No. M-160 for a point-to-point connection.
- Do not wire two (2) or more switches to one (1) motor.

All wiring diagrams have been prepared for right-hand motors, regular roll or left-hand motors, reverse roll which are wired similarly. Right-hand motors, reverse roll and left-hand motors, regular roll require switching the red and black motor wires at the controller or switch wiring connections. This will prevent the motors from running in the opposite directions. (NOTE: for the IQ/MLC2 the direction of rotation can be changed in the programming of the controller without changing the wiring.)

#### INTELLIGENT (BI-DIRECTIONAL) LINE VOLTAGE TUBULAR MOTORS (a.k.a. "Intelligent Motors")

The ElectroShade® and WhisperShade® intelligent motors possess a line voltage motor leads which is a 3-conductor (line, neutral, earth), 18 AWG stranded, PVC-jacketed cable approximately one foot (1 ft. or 305mm) long with a 4-conductor or 3-conductor disconnect plug.

The standard ElectroShade® and WhisperShade® junction box lead is a 4-conductor (line1, line2, neutral, earth) or 3-conductor (line, neutral, earth), 18 AWG stranded, PVC-jacketed cable approximately five feet (5 ft. or 1525mm) long with a mating 4-conductor or 3-conductor disconnect plug.

For all intelligent motors such as I-Con®, IQ®, IQ2, RTS, ILT and ILT2; parallel or series "daisy-chained" wiring is permitted up to the capacity of the branch circuit relative to code requirements.

#### FTS MOTORS

The ElectroShade® FTS motors possess a line voltage motor lead which is a 5-conductor, 18 AWG stranded, PVC-jacketed cable approximately one foot (1 ft. or 305mm) long with a 6-conductor disconnect plug.

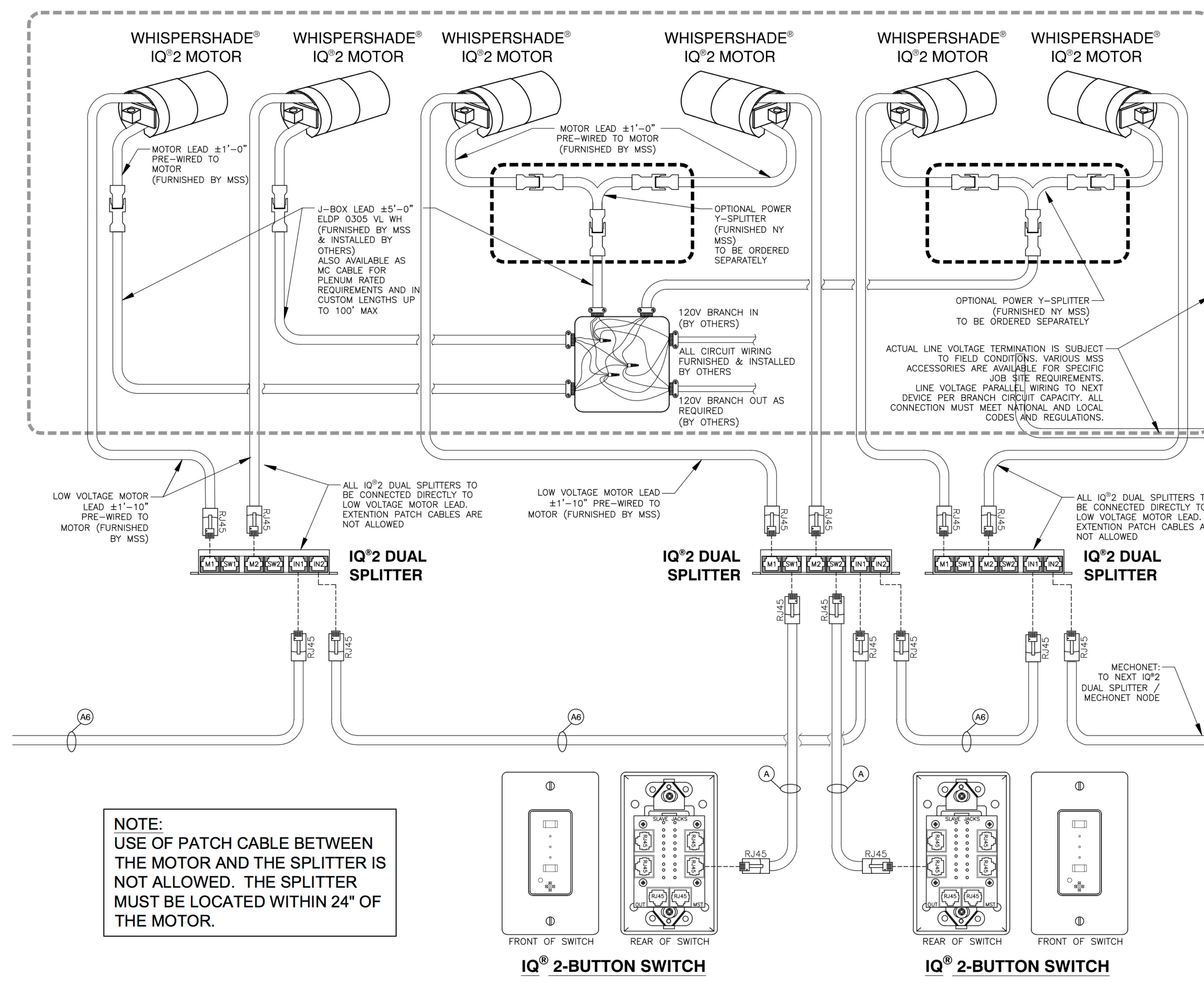
The standard ElectroShade® FTS junction box lead is a 5-conductor, 18 AWG stranded, PVC-jacketed cable approximately five feet (5 ft. or 1525mm) long with a mating 6-conductor disconnect plug.

One of four FTS systems can be wired on a single push-button switch. Please refer to Drawing No. XXXXX for point-to-point connection.

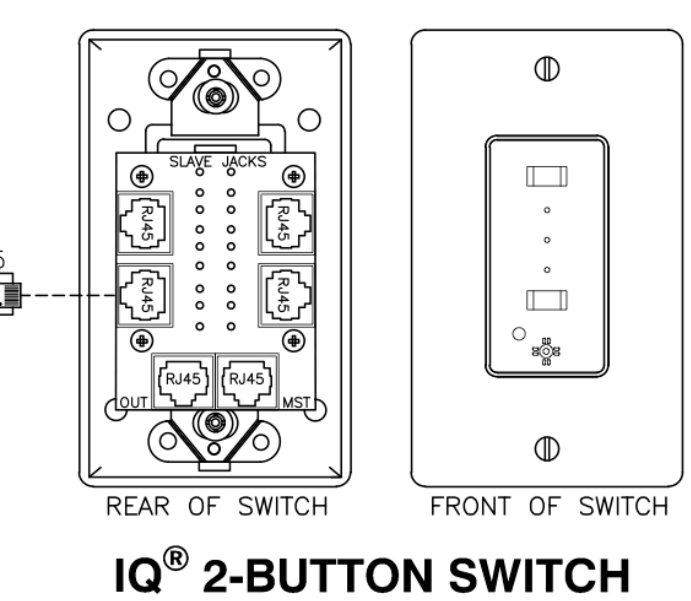
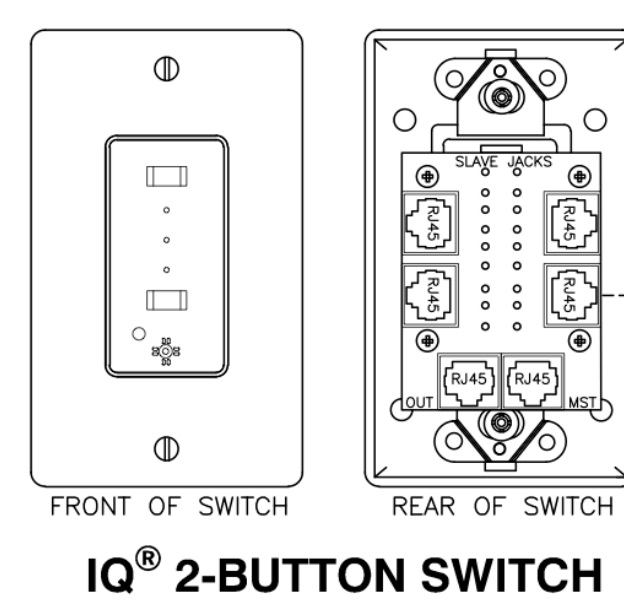
09/26/2012

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JOB	BROAD INSTITUTE CAMBRIDGE, MA	DWG NO.	M-3758EB	REV.	2
TITLE	PROPOSED DETAILS "ELECTRO" SHADES	PROPOSAL NO.	192749-4-4	SCALE	AS NOTED
ARCHITECT	DEALER/VER-TEX CONSTRUCTION SPECIALTIES, INC	DATE	08/13/13	DWN. BY	D.M.
		CHECKED BY	N.W.	SHEET NO.	4 OF 4



**NOTE:**  
USE OF PATCH CABLE BETWEEN THE MOTOR AND THE SPLITTER IS NOT ALLOWED. THE SPLITTER MUST BE LOCATED WITHIN 24" OF THE MOTOR.

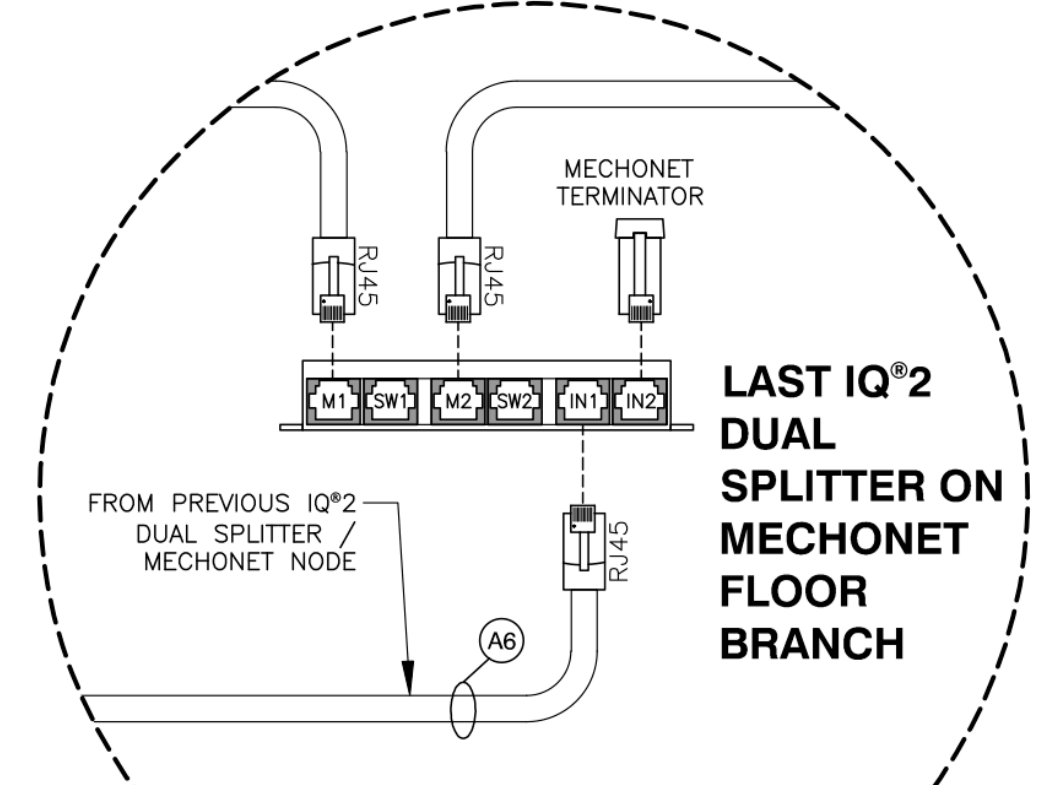


### WHISPERSHADE® IQ2 MOTOR NETWORK WIRING DETAILS

#### LOW VOLTAGE CABLE LEGEND

<b>A</b>	CATS/6E - FOR LOW VOLTAGE DRY CONTACT CONNECTIONS 24AWG 4UTP (8-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUG CRIMPED (USOC) ON BOTH ENDS  SOLID CONDUCTOR RJ-45 MODULAR PLUGS CRIMPED (USOC) ON BOTH ENDS DISTANCE LIMITATION: 400' CUMULATIVE (FURNISHED & INSTALLED BY OTHERS)	<b>A6</b>	CATS/6E - CABLE FOR MECHONET 24 AWG 4UTP (8-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUGS CRIMPED (USOC) ON BOTH ENDS DISTANCE LIMITATION: 4000' CUMULATIVE. MAX. NODES: 250. (FURNISHED & INSTALLED BY OTHERS)
<b>A1</b>	CATS/6E - CABLE FOR SDNET 24AWG 4UTP (8-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUGS CRIMPED (USOC) ON BOTH ENDS. DISTANCE LIMITATION: 4000' CUMULATIVE. MAX. NETWORK NODES: 16. (FURNISHED & INSTALLED BY OTHERS)	<b>A7</b>	CATS/6E - FOR LOW VOLTAGE DRY CONTACT CONNECTIONS 24 AWG 3UTP (6-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-12 MODULAR PLUGS CRIMPED (USOC) ON BOTH ENDS DISTANCE LIMITATION: 400' CUMULATIVE (FURNISHED & INSTALLED BY OTHERS)
<b>A2</b>	CATS/6E - CABLE FOR ETHERNET CONNECTIONS 24AWG 4UTP (8-CONDUCTOR STRANDED UNSHIELDED TWISTED PAIR) TERMINATION: RJ-45 MODULAR PLUGS CRIMPED (EIA568A) ON BOTH ENDS DISTANCE LIMITATION: 325'. MAX. NODES: 2. (FURNISHED & INSTALLED BY OTHERS)		1. PARALLEL WIRING TO NEXT DEVICE PER BRANCH CIRCUIT CAPACITY. ALL CONNECTION MUST MEET NATIONAL AND LOCAL CODES AND REGULATIONS. 2. ADDRESS SCHEDULES REQUIRED. 3. MAXIMUM VOLTAGE FOR ALL UNMARKED CABLE IS 43.5 VDC. 4. LOW VOLTAGE CABLES SHOULD NOT BE ROUTED NEAR POWER LINES OR ELECTRICAL DEVICES SUCH AS LIGHTING BALLASTS, DIMMERS AND LED DRIVERS THAT MAY EXPOSE THE SYSTEM TO EXCESSIVE ELECTRICAL NOISE.

#### MECHONET FLOOR BRANCH TERMINATION DETAIL



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**SHOP DRAWING DIMENSIONS**  
DETAILS: HARDWARE SIZES ± 1/32" (0.79mm)  
ROLL DIAMETER SIZES ± 1/8" (3.18mm)  
EDGE CLEARANCE ± 3/16" (4.76mm)

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FILE NAME: I:\Shop DWG Current\M-3758EB - Broad Institute\Rev-2\IQ2 MOTOR TO SWITCH POINT-TO-POINT J-BOX PAGE - D-PROT.dwg REVISIONS

4				
3				
10/23/13	PER ARCHITECT'S REVISION			N.W.
09/25/13	NO CHANGE			J.L.R.
NO.	DATE	DESCRIPTION		BY