

**195 District Park Pavilion
RFP I19561 - General Contracting Services
Addendum 003**

Responses to Requests for Information Due June 10, 2024

Q: Is this project publicly funded.

A: Yes.

Q: Drawing SC-200 indicates 2 data switches 1 for CCTV and 1 for Data /Wi-Fi, Shouldn't the Wi-Fi at a minimum be on a POE switch?

A: The specified network switch (Manufacturer: Netgear Model: GS316P) consists of POE ports.

Q: How many credentials should be provided with Access Control?

A: This exact quantity is still to be determined but for this bid assume no more than 30 credentials.

Q: Will there be a specification on the manufacturers guidelines and BOD sets? The hardware set page in the plans does not fully describe requirements. The note states there will be final hardware sets issued in an amendment and indicates an allowance. Will the hardware specs be issued or will an allowance be provided for all GCs?

A: See attached BSK-02 for reference. The document includes development of door types, door schedules, door hardware sets, and door hardware specification to be used by bidders to estimate labor and materials costs for this scope of work. This material is in-progress, but is expected to closely represent the final hardware strategy. An amendment will be provided upon final completion of the hardware specification as needed.

Q: Are switches being provided by owner for Video Surveillance Cameras and Telecommunications? Switch part numbers are listed on plan set, but not specified as to who is supplying.

A: Switches for video surveillance cameras and telecommunications to be furnished by contractor as specified on the design documents.

Q: Please confirm CAT6 is acceptable or whether plenum-rated cable is needed.

A: SC-001 general note #9 states "use only plenum rated cables." These are to be plenum rated CAT6 cables.

Q: Is there a project specification section for the sitework or are we to refer only to the geotech report?

A: There are no Civil specification sections in the Project Manual. See specifications on Civil Plans as well as geotechnical reports. There are specification sections in the Project Manual for sitework related to Landscape Architect scope.

Q: Please confirm vibration monitoring is by Owner per C300.

A: Vibration monitoring will be by Owner. Contractor shall coordinate with Owner to schedule vibration monitoring.

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- Q: Door #'s 151B, 181B, 191A & B are calling for 20 minute rating, is this correct?
- A: The listed door numbers do not exist in the project plans or schedules. No fire rated doors are required in the project.
- Q: Follow-up to the RFI question issued in addendum #1 regarding plumbing fixtures, the response indicated that those items are in the fixture schedule on A706, but the initial question was asking if those items (WC, UR) are furnished by the architect.
- A: Fixtures, including WCs and urinals, are to be furnished by the contractor.
- Q: There's a note in the geotech report indicate that the GCC installer must be approved by the Owner's geotech representative (RMA Environmental) no less than 2 weeks before bid opening. Is this accurate?
- A: The GCC installer shall meet the qualifications outlined in the project documents. Approval of a GCC installer prior to bid-opening is not required.
- Q: Spec section 102600 mentions wood bumper rails, but aren't shown on any interior elevations. Please clarify.
- A: No wood bumper rails are required in the project.
- Q: No allowances listed in the project manual, please confirm.
- A: The only allowance to be included is that for the custom scrim noted in the RFP bid form.
- Q: RFP page 8 indicates District is applying for the building permit, please confirm no permit costs are to be included in the GC proposals.
- A: The construction permit cost should be carried by the General Contractor per the 195 District permit fee noted on the RFP bid form (which is a different fee than that of other state building permits). The District has submitted plans for review via the State Agency Review process. Once approved, the General Contractor will pull the permits and pay the related fee.
- Q: Power pedestal / light bollard quantities and locations appear to differ between E-101, L200, and electrical site plans / civil utility plans. Please indicate which plans take precedence.
- A: There are 4 light bollards, 1 in-ground receptacle, and 3 power pedestals proposed. Their locations shall be per the Landscape Architecture Plans. Two of proposed power pedestals west of the Pavilion are mislabeled as "in-ground receptacles on Sheet ES-101.

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Q: Roof slopes called out in A-103 and A-301 are in conflict. Please confirm all roof slopes in the Green Roof area (GR-1). See pages A103 and A301.

A: The base of the green roof and the top of the green roof are level, +24'3" for the base of the green roof and +27'1" for the top of the green roof. When the base of the green roof and the top of the green roof are parallel, the slope is consistent across that field of green roof. When the base of the green roof and the top green roof are not parallel, such as on the west and east sides of the building, a ruled curve is produced, creating different slopes depending on where the slope is measured. See attached sketch BSK-01 for reference.

Q: Industry standards have established that a green roof installed over a roof slope exceeding 2"/12" requires an engineered slope stabilization system. Please provide the required engineered slope stabilization plan for all green roof areas with a slope greater than 2"/12". See attached mark-up on pages A-702 detail 2, A-604 details 1&3.

A: The specified roof/green roof assembly is intended to be comprised of the following elements:

1. Flat structural plywood decking installed above the building's steel and wood roof structural elements
2. Built-up roof insulation to produce the green roof shape and slope
3. A PVC roof membrane
4. A layer of pre-planted green roof trays

Pre-planted trays bear against the perimeter roof curb by virtue of a PVC pipe rail assembly as indicated in 1/A-606. The planted trays interlock with one another using LiveRoof's WindDisc system as indicated in the project manual. Additional green roof support elements required to realize the intended green roof design are to be provided by the contractor and/or their subcontractors as a matter of delegated design to be coordinated with the building structure and roofing assembly. Related work will be subject to typical submittal protocols and will be subject to review by members of the design team as appropriate.

The noted "engineered slope stabilization plan" is unfamiliar to our contacts at LiveRoof. Outreach to the authors of this RFI did not produce additional information about how this might apply to this project. Our independent research of this item found engineered slope stabilization plans to largely refer to civil engineering projects whose extents differ greatly from the proposed green roof.

The specified manufacturer, LiveRoof, has successfully produced sloped green roofs at slopes greater than 2"/12" using their pre-planted tray systems.

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- Q: A-103 calls out a "continuous perimeter gravel filled roof drainage trench" at the perimeter area of the green roof. Specification 07 71 100 2.2 specifies "clean washed pea gravel"
Design Team to confirm that the specified stone, pea gravel, meets Mass Building Code 780 CMR 1504.4. See attached mark-up on A-103 and section 07 71 100.
- A: Referenced code section is from Massachusetts building code, which does not pertain to this project. Additionally, the specified roof and roof design are not a ballasted low slope roof. The noted stone "clean washed pea gravel" is intended primarily to provide roof membrane protection, pre-roof drain debris filtering, and coverage protection of the PVC green roof tray support and roof drain covers. Larger format gravels typically utilized for low slope roof ballast may be used in lieu of the noted stone upon submittal, review, and approval by architect and landscape architect.
- Q: Recover Green Roofs recommends a built in place, Sika Sarnafil approved, green roof assembly in lieu of the specified LiveRoof trays. This is due to the above concern (item 2) regarding the slope stabilizations requirements in addition to perform.
- A: The specified manufacturer, LiveRoof, has successfully produced sloped green roofs at slopes greater than 2"/12" using their pre-planted tray systems. Pre-planted tray systems, in their perspective, by their very nature provide a degree of structure to the green roof. Built-in-place systems, in their perspective, have a tendency to require more numerous supports (when required at all) that produce more numerous and frequent roof membrane penetrations and flashing. Given the previous notes, the design team prefers the specified pre-planted green roof tray system with additional supports as required to achieve the design. Additional green roof support elements required to realize the intended green roof design are to be provided by the contractor and/or their subcontractors as a matter of delegated design to be coordinated with the building structure and roofing assembly. Related work will be subject to typical submittal protocols and will be subject to review by members of the design team as appropriate.
- Any green roof system utilized on the project should be approved by and installation coordinated with the roofing manufacturer. The design team is amenable to alternate green roof systems that achieve the intended design and provide the intended soil depth and planting if the specified system is determined to be incapable of achieving the intended design.
- Q: Please confirm no light fixtures are in the highlighted areas on A-110 (see attachment).
- A: Lighting in rooms 1.01, 1.02, 1.10, and 1.12 are to be provided and installed by tenant(s).
- Q: A703 indicates Dining/FOH west wall to be PTW-1 (Painted).
A501 Elevation 21 & 22 at Dining/FOH indicate TPW-1 (Taped/Primed). Which is correct?
- A: TPW-1 (taped/primed) is the correct finish for this wall. Additional finishing of this wall to be provided by tenant(s).
- Q: A703 MTL6a/b, the intent is to field paint these sheets of aluminum?
- A: The intent is to paint these aluminum elements in field such that they can be touched-up in field by maintenance staff using a similar methodology to provide a similar appearance.

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Q: MTL-5 is indicated at structural steel beams/columns at the interior FOH. It is also indicated at exposed structural steel at the exterior (Columns/Canopy Steel). What is the extent of structure to be painted at the exterior? All structural steel at canopy as shown on S-102? (It is hard to tell how much to carry by exterior elevations.)

A: All structural steel for the canopy as shown in S-102 to be painted.

Q: Please provide further clarification to quantify scope for "Coordination with tenant" as defined in Addendum # 1 received on 6/3/24? As stated in Addendum #1: "Some coordination will be required for placement of under slab utilities. Coordination will also be required with tenant contractors for tenant fit-out." Please provide clarification to quantify scope.

A: Coordination with tenant is expected to be minimal, however the Owner's contractor may be required to coordinate some sub-slab utility work prior to the pour of the concrete slab. The tenant's contractor may begin work prior to the completion of the Owner's contractor's work. The Owner's contractor's work is expected to take precedence over that of the tenant. Any such coordination will need to be acceptable to the Owner, Owner's contractor, and the tenant.

Q: Is an under slab passive venting system required?

A: No.

Q: Please verify per RFP #119561 dated May 16, 2024, section 4.0 Scope of Work – ISBE Participation; is the total combined requirement for WBE and MBE 10%? Is this a requirement or a good faith effort?

A: 10% is the combined ISBE goal. Whatever figures, however, are provided in the proposer's RFP Appendix C ISBE certification form will be the hiring goals to which the selected General Contractor is contractually held.

220-RICR-80-10-2.7.G states:

"Compliance: A Proposer that achieves its contractual proposed ISBE Participation Rate shall be deemed to be in compliance with R.I. Gen. Laws Chapters 37-14.1 and 37-2.2. A Proposer that fails to achieve its contractual proposed ISBE Participation Rate, refuses to submit a proposed ISBE Participation Rate, or otherwise fails to comply with these Regulations shall be in non-compliance with R.I. Gen. Laws Chapters 37-14.1 and 37-2.2 and shall be subject to the sanctions as prescribed in R.I. Gen. Laws § 37-14.1-8."

Q: Please advise if cost associated with sidewalk shutdowns and off street parking shutdown costs are provided by the owner or CM?

A: By the General Contractor.

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Q: Per ES-101 in Addendum #1 dated 6/3/24; please provide a number of bollards to be carried in the lump sum proposal since final coordination with RI Energy would not be possible prior to proposal due date.

A: Include 28 bollards as shown on Sheets C-300 and ES-101.

Q: Please verify that the secondary side wire and conduit from transformer to building is to be furnished and installed by contractor and not RI Energy.

A: Secondary wire and conduit from transformer to building shall be furnished and installed by the Contractor.

Q: Please provide work order as denoted on drawing ES-00, "SP2" Notes: 1. REFERENCE WORK ORDER #30957818 WHEN COORDINATING WITH RI ENERGY."

A: Refer to ES-001/1 "SP2" Notes and "Pavilion" Notes for each work order number.

Attachments

BSK-01-Green Roof Slopes

BSK-02-Door Hardware and Related Hardware Spec

NOT FOR CONSTRUCTION

Seal and Signature

Issue Revision

195 District Park
Pavilion

195 District Park
120 Peck St.
Providence, RI 02903

Drawing

Bid Sketch - Green
Roof Slopes

Project 2214

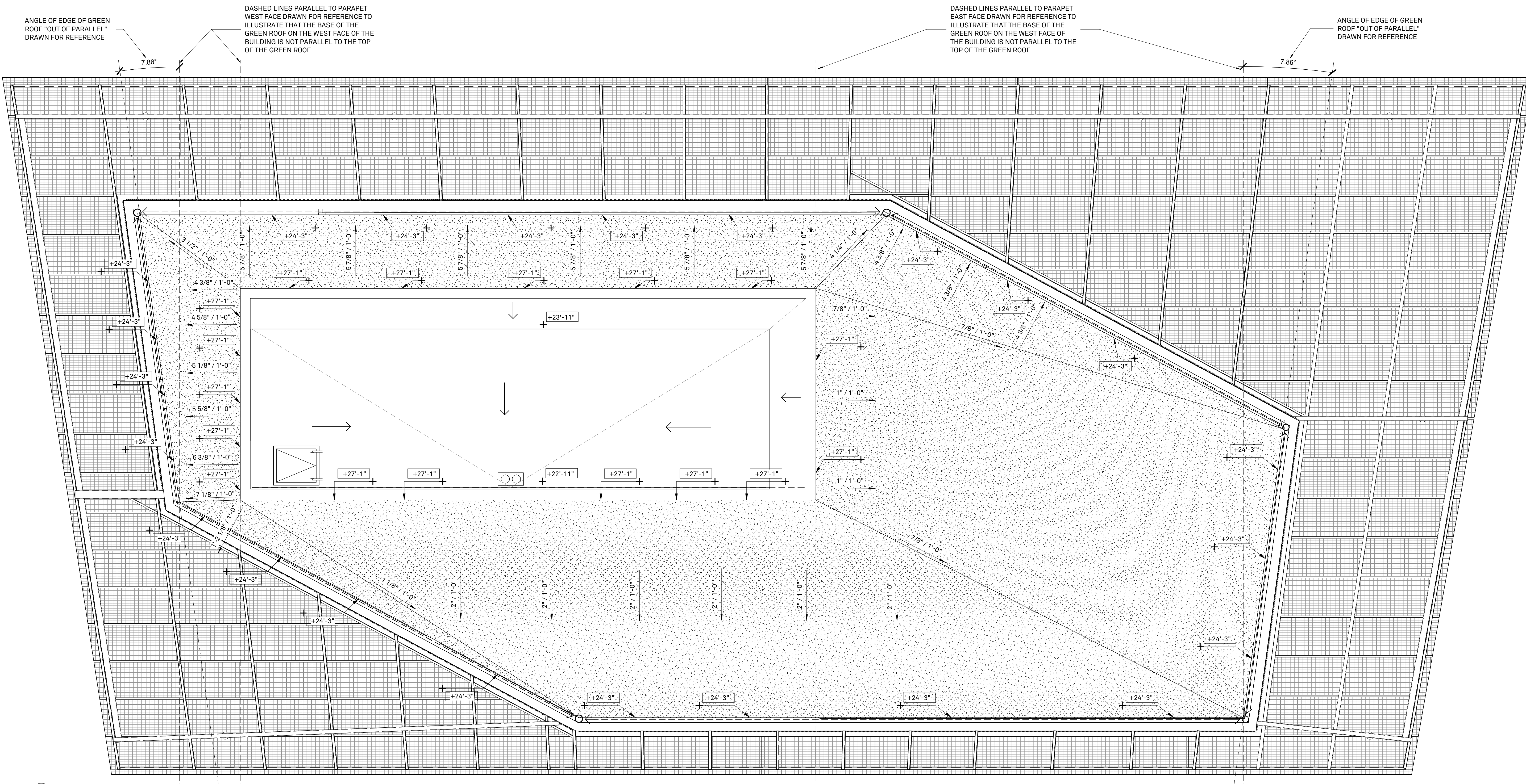
Drawn by ARO

Date 06.12.2024

Scale 1/4" = 1'-0"

Sheet

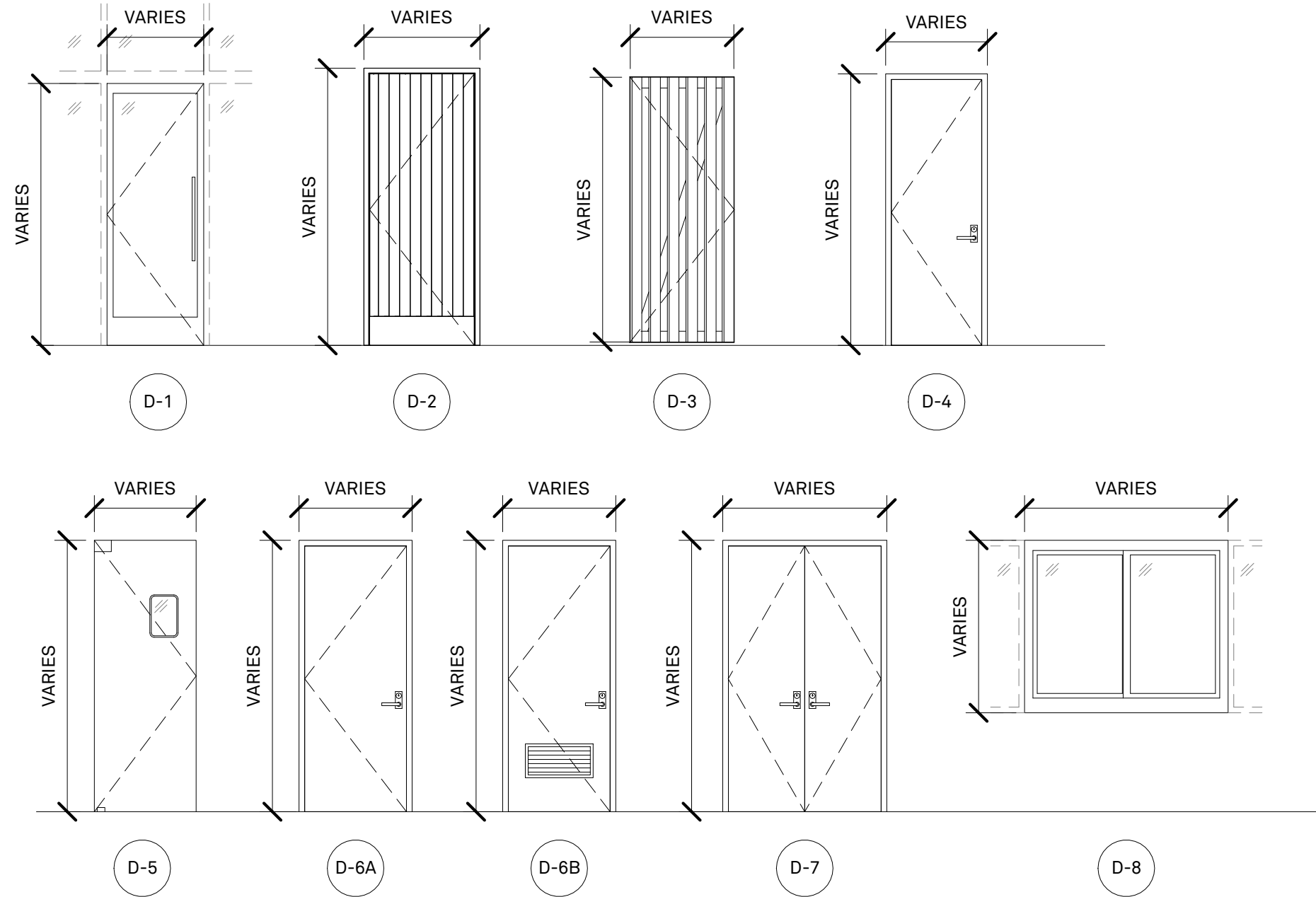
BSK-01



1 Roof Plan Slope Sketch
1/4" = 1'-0"

DOOR TYPES SCHEDULE

Type	Description	Door Manufacturer / Product	Frame Manufacturer / Product	Notes
D-1	Storefront Door	Kawneer Insulpour 250T	Kawneer	
D-2	Custom Clad Exterior Hollow Metal Door	Custom	Steelcraft	
D-3	Cedar Post Gate	Custom	N/A	
D-4	Exterior Hollow Metal Single Door	Steelcraft	Steelcraft	
D-5	Stainless Steel Double Swinging Traffic Door	Curtron Service-Pro Series 30	Curtron	With vision lite
D-6A	Interior Hollow Metal Single Door	Steelcraft	Steelcraft	
D-6B	<i><varies></i>	<i><varies></i>	Steelcraft	<i><varies></i>
D-7	Interior Hollow Metal Double Door	Steelcraft	Steelcraft	
D-8	Exterior Sliding Service Window	Kawneer 8470TL	Kawneer	
D-9	Insulated Roof Access Hatch	Babcock Davis ThermalMAX	Babcock Davis ThermalMAX	With drop down roof access ladder



DOOR SCHEDULE

Door Number	Room Number	Door Type	Width	Height	Thickness	Action	Finish Panel	Frame	Undercut	Hardware Set	Notes
2.01	1.08/2.01	D-9	2'-6"							#06	Roof access hatch
1.01A	1.01	D-1	3'-0"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#18	Storefront egress door with deadbolt, ancillary tenant main door
1.01B	1.01	D-1	2'-10"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#17	Storefront door with card reader and panic hardware
1.01C	1.01	D-1	2'-9 1/4"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#18	Storefront egress door with deadbolt, ancillary tenant main door
1.01D	1.01	D-1	2'-9 1/4"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01EL	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01ER	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01FL	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01FR	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01GL	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01GR	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01HL	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01HR	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01IL	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01IR	1.01	D-1	2'-10 1/4"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01JL	1.01	D-1	2'-10"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01JR	1.01	D-1	2'-9"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01KL	1.01	D-1	2'-10"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01KR	1.01	D-1	2'-10"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01LL	1.01	D-1	2'-9 1/2"	7'-8 3/4"	2 1/4"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.01LR	1.01	D-1	2'-10"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#01	Storefront fair weather patio door with deadbolt
1.02	1.02	D-1	2'-9"	7'-8 3/4"	2 1/4"	RHRB	GL-1, MTL-2	MTL-2	Per detail	#18	Storefront egress door with deadbolt, ancillary tenant main door
1.04B	1.04B	D-1	3'-0 1/2"	7'-9 1/2"	2"	LHRB	GL-1, MTL-2	MTL-2	Per detail	#10	Storefront restroom door with door operator, exterior restroom door
1.03A	1.03A	D-6B	3'-0"	7'-10"	2"	LH	PTD-1	PTD-1	Per detail	#02	Restroom push/pull door with door louver
1.03B	1.03B	D-6B	3'-0"	7'-10"	2"	LH	PTD-1	PTD-1	Per detail	#02	Restroom push/pull door with door louver
1.04A	1.04A	D-6A	3'-0"	7'-10"	2"	LH	PTD-1	PTD-1	Per detail	#13	Restroom corridor push/pull door
1.05	1.05	D-6B	2'-10"	7'-10"	2"	LHRB	PTD-1	PTD-1	Per detail	#04	Janitor closet door with card reader
1.06A	1.06A	D-3	5'-10"	8'-0"	2"	RHRB	WD-2	See detail	Per detail	#08	Custom exterior gate with card reader
1.07	1.07	D-4	2'-8"	7'-10"	2"	RH	PTD-1	PTD-1	Per detail	#03	Exterior door with card reader/keypad
1.08A	1.08A	D-4	2'-8"	7'-10"	2"	LHRB	PTD-1	PTD-1	Per detail	#03	Exterior door with card reader/keypad
1.08B	1.08B	D-6A	3'-0"	7'-10"	2"	RH	PTD-1	PTD-1	Per detail	#11	Office/primary tenant communicating door with card reader
1.08C	1.08B	D-7	4'-6"	7'-10"	2"	LHRB	PTD-1	PTD-1	Per detail	#12	Closet double doors
1.09A	1.09A	D-2	3'-4 3/4"	8'-0"	1 3/4"	RHRB	WD-1, CN-5	PTD-1	Per detail	#14	Custom wood clad exterior push/pull doors with card readers
1.09B	1.12	D-7	5'-2"	7'-10"	2"	LHRB	PTD-1	PTD-1	Per detail	#12	Closet double doors
1.09C	1.09A	D-6A	3'-0"	7'-10"	2"	RH	PTD-1	PTD-1	Per detail	#09	Trash room communicating door
1.10A	1.10	D-2	3'-4 3/4"	8'-0"	1 3/4"	RHRB	WD-1, CN-5	PTD-1	Per detail	#14	Custom wood clad exterior push/pull doors with card readers
1.10B	1.10	D-5	3'-0"	8'-0"	2"	RH/LH	Stainless	PTD-1	Per detail	#16	Double acting traffic door with vision window
1.12A	1.12	D-2	3'-1"	8'-0"	2"	RHRB	WD-1, CN-5	PTD-1	Per detail	#14	Custom wood clad exterior push/pull doors with card readers
1.12B	1.12	D-8	6'-0"	5'-1"		Sliding	GL-1, MTL-2	MTL-2	Per detail	#07	Ancillary tenant service window
1.12C	1.12	D-6A	3'-0"	7'-10"	2"	RHRB	PTD-1	MTL-2	Per detail	#15	Ancillary tenant/primary tenant communicating door with card reader

NOTE:
1. FOR ALUMINUM STOREFRONT ALL DIMENSIONS ARE APPROXIMATE. FINAL DIMENSIONS SHALL CONFORM WITH DESIGN INTENT NOTED ON ELEVATIONS AND PLANS OF EQUAL DIMENSIONS, EXCEPT DESIGNATED ENTRY DOORS TO PROVIDE CLEARANCES FOR ACCESSIBLE ACCESS.

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NOT FOR CONSTRUCTION

Seal and Signature

Issue Revision

Bulletin #1 TBD

195 District Park Pavilion

195 District Park
120 Peck St.
Providence, RI 02903

Drawing Bit Sketch - Door Types, Door Details & Schedules

Project 2214
Drawn by ARO
Date 6.12.2024
Scale 1/4" = 1'-0"
Sheet

BSK-02

DOOR HARDWARE SCHEDULE

Hardware Set	Lever/Pulls/Push Bars/Push Plates	Closer/Operator	Hinges	Lockset	Lockset Function	Strike	Cylinder 1	Cylinder 2	Core	Louver	Plates	Seats/Silencers	Flush Bolt	Sweep/Door Bottom	Threshold	Stops	Wire Harness	Card Reader	Door Contact	Power Supply	Notes
#01	10" Ives 8102HD Pull (interior only)	LCN 1261	Ives 112HD	Adamsrite MS1850	Interior thumb turn deadbolt	-	Schlage 20-062-ICX	Adamsrite 4066	Schlage 23-030 CKC EV29 S	-	-	By manufacturer	-	By manufacturer	Zero 566A	-	-	-	-	-	Storefront fair weather patio door with deadbolt
#02	Ives 8302 10" 4"x16" Push Plate, Ives 8302 10" 4"x16" Pull Plate	LCN 4040XP	Ives 5BB1 4.5X4.5	-	-	-	-	-	-	Yes, 24"x12"	Ives 8400 Kick and Mop Plates	Ives SR64	-	-	-	Ives FS439	-	-	-	-	Restroom push/pull door with door louver
#03	Schlage M53 Levers	LCN 4040XP	Ives 112HD	Schlage L9092EU	Electrically locking/unlocking outside lever, outside cylinder	-	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	-	Ives 8400 Kick Plate	Zero 188SBK PSA	-	Zero 8198AA	Zero 566A	-	Schlage Con-6W	By security	Schlage 679-05HM	By security	Exterior door with card reader/keypad
#04	Ives 8302 10" 4"x16" Push Plate, Schlage M53 Lever	LCN 4040XP	Ives 5BB1 4.5X4.5	Schlage L9026	Exit lock with cylinder	-	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	Yes, 24"x12"	Ives 8400 Kick and Mop Plates	Zero 188SBK PSA	-	Zero 8198AA	-	Ives FS439	-	By security	-	By security	Janitor closet door with card reader
#06	Interior latches and levers by manufacturer	-	By manufacturer	-	Interior latching/locking	-	-	-	-	-	-	By manufacturer	-	-	-	-	-	-	-	-	Roof access hatch
#07	Interior latches and pulls by manufacturer	-	-	By manufacturer	Interior latching/locking	-	-	-	-	-	-	By manufacturer	-	-	-	-	-	-	-	-	Ancillary tenant service window
#08	Custom 10" Stainless Steel Edge Pull (see 10/A-802)	LCN 4040XP	Rixson 370 Pivot Hinges	Schlage M490/M490P	Surface mounted magnetic lock with motion sensing and push REX. Fail safe.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Custom exterior gate with card reader
#09	Ives 8302 10" 4"x16" Push Plate, Ives 8302 10" 4"x16" Pull Plate	LCN 4040XP	Ives 5BB1 4.5X4.5	Schlage L9460	Cylinder x thumbturn mortise deadbolt	-	-	-	Schlage 23-030 CKC EV29 S	-	Ives 8400 Kick and Mop Plates	Zero 188SBK PSA	-	Zero 8197AA	-	Ives FS439	-	-	-	-	Trash room communicating door
#10	Ives 9100 Push Bar, Schlage M53 Lever	Stanley MForce	Ives 112HD	Schlage L9026 or sim. narrow storefront	Exit lock with cylinder	Von Duprin 4211 FSAFSE 12/24 VDC	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	-	-	By manufacturer	Ives FB458 with DP2 strike	By manufacturer	Zero 566A	Ives FS439	-	By security	Schlage 679-05HM	By security	Storefront restroom door with door operator, exterior restroom door
#11	Schlage L9493EU	LCN 4040XP	Ives 5BB1 4.5X4.5 (incl. matching electric hinge)	Schlage L9493EU	Electrically locking/unlocking both levers, outside cylinder, inside thumbturn with deadbolt	-	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	-	Ives 8400 Kick Plate	Zero 188SBK PSA	-	Zero 8197AA	-	Ives FS439	Schlage Con-6W	By security	Schlage 679-05HM	By security	Office/primary tenant communicating door with card reader
#12	Schlage M53 Levers	Glenn-Johnson 90H	Ives 5BB1 4.5X4.5	Schlage L9465	Closet/storeroom lock	-	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	-	Ives 8400 Kick Plates	Ives SR64	Ives FB458 with DP2 strike	-	-	Ives FS439	-	-	-	-	Closet double doors
#13	Ives 8302 10" 4"x16" Push Plate, Ives 8302 10" 4"x16" Pull Plate	LCN 4040XP	Ives 5BB1 4.5X4.5	Schlage L9460	Cylinder x thumbturn mortise deadbolt	-	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	-	Ives 8400 Kick and Mop Plates	Zero 188SBK PSA	-	Zero 8198AA	-	Ives FS439	-	-	-	-	Restroom corridor push/pull door
#14	Ives 8302 10" 4"x16" Push Plate, Custom 10" Stainless Steel Edge Pull (see 10/A-802)	LCN 4040XP	Ives 040XY	Schlage M490/M490P	Surface mounted magnetic lock with motion sensing and push REX. Fail safe.	-	-	-	-	-	Ives 8400 Kick Plate	Zero 328AA	-	Zero 8198AA	Zero 566A	-	-	By security	Schlage 679-05HM	By security	Custom wood clad exterior push/pull doors with card readers
#15	Schlage M53 Levers	LCN 4040XP	Ives 5BB1 4.5X4.5 (incl. matching electric hinge)	Schlage L9493EL	Electrically locking/unlocking both levers, outside cylinder, inside thumbturn with deadbolt	-	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	-	Ives 8400 Kick and Mop Plates	Ives SR64	-	-	-	Ives FS439	Schlage Con-6W	By security	-	By security	Ancillary tenant/primary tenant communicating door with card reader
#16	By manufacturer	-	By manufacturer	By manufacturer	Keyed deadbolt with thumbturn	-	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	-	By manufacturer	By manufacturer	-	By manufacturer	-	Ives FS439	-	-	-	-	Double acting traffic door with vision window
#17	10" Ives 8102HD Pull, Von Duprin 55 or sim electrified panic bar	LCN 4040XP	Ives 112HD EPT (incl. EPT 10 COM power transfer)	Panic bar electrified latchset	Electrified rim strike push bar panic hardware	-	Schlage 20-062-ICX	-	Schlage 23-030 CKC EV29 S	-	-	By manufacturer	-	By manufacturer	Zero 566A	Ives FS439	Schlage Con-6W	By security	Schlage 679-05HM	By security	Storefront door with card reader and panic hardware
#18	10" Ives 8102HD Pull, Ives 9100 Push Bar	Stanley MForce (door 1.02 only), LCN 4040XP (doors 1.01A, 1.01C)	Ives 112HD	Adamsrite MS1850 (1.01C and 1.02, to be confirmed)	Interior thumb turn deadbolt with lock status indicator	-	Schlage 20-062-ICX	Adamsrite 406													

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware
2. Electronic access control system components

B. Section excludes:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 "General Requirements" sections for Allowances, Alternates, Owner Furnished Contractor Installed, Project Management and Coordination.
2. Division 06 Section "Rough Carpentry"
3. Division 06 Section "Finish Carpentry"
4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
5. Division 08 Sections:
 - a. "Metal Doors and Frames"
 - b. "Flush Wood Doors"
 - c. "Stile and Rail Wood Doors"
 - d. "Interior Aluminum Doors and Frames"
 - e. "Aluminum-Framed Entrances and Storefronts"
 - f. "Stainless Steel Doors and Frames"
 - g. "Special Function Doors"
 - h. "Entrances"
6. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.
7. Division 28 "Electronic Safety and Security" sections for coordination with other components of electronic access control system and fire alarm system.

1.02 REFERENCES

A. UL LLC

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Keying Systems and Nomenclature
4. Installation Guide for Doors and Hardware

C. NFPA – National Fire Protection Association

1. NFPA 70 – National Electric Code
2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives
3. NFPA 101 – Life Safety Code
4. NFPA 105 – Smoke and Draft Control Door Assemblies
5. NFPA 252 – Fire Tests of Door Assemblies

D. ANSI - American National Standards Institute

1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

1.03 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
2. Prior to forwarding submittal:
 - a. Review drawings and Sections from related trades to verify compatibility with specified hardware.
 - b. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.

B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
 - a. Wiring Diagrams: For power, signal, and control wiring and including:
 - 1) Details of interface of electrified door hardware and building safety and security systems.
 - 2) Schematic diagram of systems that interface with electrified door hardware.
 - 3) Point-to-point wiring.
 - 4) Risers.
3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.
 - a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule:
 - a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
 - b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
 - c. Indicate complete designations of each item required for each opening, include:
 - 1) Door Index: door number, heading number, and Architect's hardware set number.
 - 2) Quantity, type, style, function, size, and finish of each hardware item.
 - 3) Name and manufacturer of each item.
 - 4) Fastenings and other pertinent information.
 - 5) Location of each hardware set cross-referenced to indications on Drawings.
 - 6) Explanation of all abbreviations, symbols, and codes contained in schedule.
 - 7) Mounting locations for hardware.
 - 8) Door and frame sizes and materials.
 - 9) Degree of door swing and handing.
 - 10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.
5. Key Schedule:
 - a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
 - b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
 - c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
 - d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
 - e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
 - f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

C. Informational Submittals:

1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
2. Provide Product Data:
 - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
 - b. Include warranties for specified door hardware.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:
 - a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
 - b. Catalog pages for each product.
 - c. Final approved hardware schedule edited to reflect conditions as installed.
 - d. Final keying schedule

- e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
- f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

E. Inspection and Testing:

- 1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:
 - a. Fire door assemblies, in compliance with NFPA 80.
 - b. Required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

- 1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
- 2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
- 3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:
 - a. For door hardware: DHI certified AHC or DHC.
 - b. Can provide installation and technical data to Architect and other related subcontractors.
 - c. Can inspect and verify components are in working order upon completion of installation.
 - d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.
- 4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

- 1. Fire-Rated Door Openings:
 - a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.
 - b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
- 2. Smoke and Draft Control Door Assemblies:
 - a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105

- b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.
 - 3. Electrified Door Hardware
 - a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.
 - 4. Accessibility Requirements:
 - a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.
- C. Pre-Installation Meetings
 - 1. Keying Conference
 - a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
 - 1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 - 2) Preliminary key system schematic diagram.
 - 3) Requirements for key control system.
 - 4) Requirements for access control.
 - 5) Address for delivery of keys.
 - 2. Pre-installation Conference
 - a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Inspect and discuss preparatory work performed by other trades.
 - c. Inspect and discuss electrical roughing-in for electrified door hardware.
 - d. Review sequence of operation for each type of electrified door hardware.
 - e. Review required testing, inspecting, and certifying procedures.
 - f. Review questions or concerns related to proper installation and adjustment of door hardware.
 - 3. Electrified Hardware Coordination Conference:
 - a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping.
- B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
- C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
- D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

- E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.06 COORDINATION

- A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.
- B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

1.07 WARRANTY

- A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.
 - 1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
 - 2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.
 - a. Mechanical Warranty
 - 1) Locks
 - a) Schlage L Series: 10 years
 - 2) Exit Devices
 - a) Von Duprin: 10 years
 - 3) Closers
 - a) LCN 4000 Series: 30 years
 - b. Electrical Warranty
 - 1) Locks
 - a) Schlage: 3 year
 - 2) Exit Devices
 - a) Von Duprin: 3 year

1.08 MAINTENANCE

- A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- B. Turn over unused materials to Owner for maintenance purposes.

PART 2 - PRODUCTS

DOOR HARDWARE

087100-6
04/17/2024

2.01 MANUFACTURERS

- A. Approval of alternate manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category are only to be considered by official substitution request in accordance with section 01 25 00.
- B. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
- C. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

- A. Fabrication
 - 1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer's recognized installation standards for application intended.
 - 2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
 - 3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with "Metal Doors and Frames", "Flush Wood Doors", "Stile and Rail Wood Doors" to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.
- B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.
 - 1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.
- C. Cable and Connectors:
 - 1. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with number and gage of wires enough to accommodate electric function of specified hardware.
 - 2. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices.
 - 3. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

2.03 HINGES

- A. Manufacturers and Products:
 - 1. Scheduled Manufacturer and Product:
 - a. Ives 5BB series
- B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. Provide five knuckle, ball bearing hinges.
3. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
 - a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
 - b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high
4. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
 - a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
5. 2 inches or thicker doors:
 - a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
6. Adjust hinge width for door, frame, and wall conditions to allow proper degree of opening.
7. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
8. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - a. Steel Hinges: Steel pins
 - b. Non-Ferrous Hinges: Stainless steel pins
 - c. Out-Swinging Exterior Doors: Non-removable pins
 - d. Out-Swinging Interior Lockable Doors: Non-removable pins
 - e. Interior Non-lockable Doors: Non-rising pins
9. Provide hinges with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component. Provide mortar guard for each electrified hinge specified.

2.04 CONTINUOUS HINGES

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Ives

B. Requirements:

1. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
2. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
3. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
4. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
5. On fire-rated doors, provide aluminum geared continuous hinges classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
6. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
7. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.05 ELECTRIC POWER TRANSFER

A. Manufacturers:

1. Scheduled Manufacturer and Product:
 - a. Von Duprin EPT-10

B. Requirements:

1. Provide power transfer with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
2. Locate electric power transfer per manufacturer's template and UL requirements, unless interference with operation of door or other hardware items.

2.06 PIVOT SETS

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Ives

B. Requirements:

1. Provide pivot sets complete with oil-impregnated top pivot, unless indicated otherwise.
2. Where offset pivots are specified, Provide one intermediate pivot for doors less than 91 inches (2311 mm) high and one additional intermediate pivot per leaf for each additional 30 inches (762 mm) in height or fraction thereof. Intermediate pivots spaced equally not less than 25 inches (635 mm) or not more than 35 inches (889 mm) on center, for doors over 121 inches (3073 mm) high.
3. Provide appropriate model where pivot sets are scheduled at fire rated openings.
4. Provide pivots with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware. Locate electrified pivot nearest to electrified locking component. If manufacturer of electrified locking component requires another device for power transfer, then provide recommended power transfer device and appropriate quantity of pivots.
5. Provide mortar guard for each electric pivot specified, unless specified in hollow metal frame specification.

2.07 FLUSH BOLTS

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Ives

B. Requirements:

1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless-steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch (305 mm) steel or brass rods at doors up to 90 inches (2286 mm) in height. For doors over 90 inches (2286 mm) in height increase top rods by 6 inches (152 mm) for each additional 6 inches (152 mm) of door height. Provide dust-proof strikes at each bottom flush bolt.

2.08 MORTISE LOCKS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Schlage L9000 series

B. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1, and UL Listed for 3-hour fire doors.
2. Indicators: Where specified, provide indicator window measuring a minimum 2-3/5-inch x 3/5 inch with 180-degree visibility. Provide messages color-coded using ANSI Z535 Safety Red with full text and/or symbols, as scheduled, for easy visibility. When applicable allows for lock status indication on both sides of the door.
3. Provide locks manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
4. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to "KEYING" article, herein.
5. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1-inch (25 mm) throw, constructed of stainless steel.
6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide switches and sensors integrated into the locks and latches.
7. Provide motor based electrified locksets that comply with the following requirements:
 - a. Universal input voltage – single chassis accepts 12 or 24VDC to allow for changes in the field without changing lock chassis.
 - b. Fail Safe/Fail Secure – changing mode between electrically locked (fail safe) and electrically unlocked (fail secure) is field selectable without opening the lock case.
 - c. Low maximum current draw – maximum 0.4 amps to allow for multiple locks on a single power supply.
 - d. Low holding current – maximum 0.01 amps to produce minimal heat, eliminate "hot levers" in electrically locked applications, and to provide reliable operation in wood doors that provide minimal ventilation and air flow.
 - e. Connections – provide quick-connect Molex system standard.
8. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.
 - a. Lever Design: M53A

2.09 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Von Duprin 98/35A series

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to "KEYING" article, herein.

3. Provide smooth touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide exit devices with weather resistant components that can withstand harsh conditions of various climates and corrosive cleaners used in outdoor pool environments.
7. Provide flush end caps for exit devices.
8. Provide exit devices with manufacturer's approved strikes.
9. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
10. Mount mechanism case flush on face of doors or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Top latch mounting: double- or single-tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
16. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.10 ELECTRIC STRIKES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Von Duprin 6000 Series

B. Requirements:

1. Provide electric strikes designed for use with type of locks shown at each opening.
2. Provide electric strikes UL Listed as burglary resistant that are tested to a minimum endurance test of 1,000,000 cycles.
3. Where required, provide electric strikes UL Listed for fire doors and frames.
4. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

2.11 PASSIVE INFRARED MOTION SENSORS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Schlage SCAN II Series

B. Requirements:

1. Provide motion sensors as specified in hardware groups.

2.12 POWER SUPPLIES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Schlage/Von Duprin PS900 Series

B. Requirements:

1. Provide power supplies approved by manufacturer of supplied electrified hardware.
2. Provide appropriate quantity of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.
3. Provide regulated and filtered 24 VDC power supply, and UL class 2 listed.
4. Provide power supplies with the following features:
 - a. 12/24 VDC Output, field selectable.
 - b. Class 2 Rated power limited output.
 - c. Universal 120-240 VAC input.
 - d. Low voltage DC, regulated and filtered.
 - e. Polarized connector for distribution boards.
 - f. Fused primary input.
 - g. AC input and DC output monitoring circuit w/LED indicators.
 - h. Cover mounted AC Input indication.
 - i. Tested and certified to meet UL294.
 - j. NEMA 1 enclosure.
 - k. Hinged cover w/lock down screws.
 - l. High voltage protective cover.

2.13 CYLINDERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Schlage Everest 29 T

B. Requirements:

1. Provide cylinders/cores compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset; manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.
 - a. Patented Restricted: cylinder with interchangeable core with patented, restricted keyway.
3. Patent Protection: Cylinders/cores requiring use of restricted, patented keys, patent protected.
4. Nickel silver bottom pins.

2.14 KEYING

A. Scheduled System:

1. New factory registered system:
 - a. Provide a factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.
- B. Requirements:
1. Construction Keying:
 - a. Replaceable Construction Cores.
 - 1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
 - a) 3 construction control keys
 - b) 12 construction change (day) keys.
 - 2) Owner or Owner's Representative will replace temporary construction cores with permanent cores.
 2. Permanent Keying:
 - a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
 - 1) Master Keying system as directed by the Owner.
 - b. Forward biting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
 - c. Provide keys with the following features:
 - 1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
 - 2) Patent Protection: Keys and blanks protected by one or more utility patent(s).
 - d. Identification:
 - 1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
 - 2) Identification stamping provisions must be approved by the Architect and Owner.
 - 3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
 - 4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
 - 5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
 - e. Quantity: Furnish in the following quantities.
 - 1) Permanent Control Keys: 3.
 - 2) Master Keys: 6.
 - 3) Change (Day) Keys: 3 per cylinder/core that is keyed differently
 - 4) Key Blanks: Quantity as determined in the keying meeting.

2.15 KEY CONTROL SYSTEM

- A. Manufacturers:
1. Scheduled Manufacturer:
 - a. Telkee
- B. Requirements:

1. Provide key control system, including envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet, all as recommended by system manufacturer, with capacity for 150% of number of locks required for Project.
 - a. Provide complete cross index system set up by hardware supplier, and place keys on markers and hooks in cabinet as determined by final key schedule.
 - b. Provide hinged-panel type cabinet for wall mounting.

2.16 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. LCN 4040XP series

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2-inch (38 mm) diameter piston with 5/8-inch (16 mm) diameter double heat-treated pinion journal. QR code with a direct link to maintenance instructions.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards. Provide snap-on cover clip, with plastic covers, that secures cover to spring tube.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck. Provide graphically labelled instructions on the closer body adjacent to each adjustment valve. Provide positive stop on reg valve that prevents reg screw from being backed out.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.17 CONCEALED DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. LCN 6030 series

B. Requirements:

1. Provide concealed door closers at doors conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory.

2. Provide heavy duty, double-acting closers with single lever arm and roller assembly.
3. Provide closers capable of being mounted in a minimum 1-3/4-inch header.
4. Provide concealed door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
5. Cylinder Body: 1-1/8-inch (29 mm) piston diameter, with 5/8-inch (16 mm) diameter heat-treated pinion journal.
6. Provide all-weather hydraulic fluid, fireproof, passing requirements of UL10C.
7. Pressure Relief Valve (PRV) Technology: Not permitted.
8. Provide special template, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.18 DOOR TRIM

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Ives

B. Requirements:

1. Provide push plates, push bars, pull plates, pulls, and hands-free reversible door pulls with diameter and length as scheduled.

2.19 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Ives

B. Requirements:

1. Provide protection plates with a minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Size plates 2 inches (51 mm) less width of door on single doors, pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch (25 mm) less width of door on pairs without a mullion or edge guards.
3. At fire rated doors, provide protection plates over 16 inches high with UL label.

2.20 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers:
 - a. Glynn-Johnson

B. Requirements:

1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents tripping hazard.

2.21 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Ives

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide concave type where lockset has a push button or thumbturn.
2. Where a wall stop cannot be used, provide universal floor stops.
3. Where wall or floor stop cannot be used, provide overhead stop.
4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

2.22 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Zero International

B. Requirements:

1. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
4. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specified in the hardware sets or detailed in the drawings.

2.23 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Ives

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.24 DOOR POSITION SWITCHES

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Schlage

B. Requirements:

1. Provide recessed or surface mounted type door position switches as specified.
2. Coordinate door and frame preparations with door and frame suppliers. If switches are being used with magnetic locking device, provide minimum of 4 inches (102 mm) between switch and magnetic locking device.

2.25 FINISHES

A. FINISH: BHMA 630 (US32D); EXCEPT:

1. Aluminum Geared Continuous Hinges: BHMA 628 (US28)
2. Door Closers: Powder Coat to Match
3. Weatherstripping: Clear Anodized Aluminum
4. Thresholds: Mill Finish Aluminum

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 2. Custom Steel Doors and Frames: HMMA 831.
 3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
 4. Installation Guide for Doors and Hardware: DHI TDH-007-20
- B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
- C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.

- D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
- E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
- H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.
- I. Lock Cylinders:
 - 1. Install construction cores to secure building and areas during construction period.
 - 2. Furnish permanent cores to Owner for installation.
- J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:
 - 1. Conduit, junction boxes and wire pulls.
 - 2. Connections to and from power supplies to electrified hardware.
 - 3. Connections to fire/smoke alarm system and smoke evacuation system.
 - 4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
 - 5. Connections to panel interface modules, controllers, and gateways.
 - 6. Testing and labeling wires with Architect's opening number.
- K. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- L. Continuous Hinges: Re-locate the door and frame fire rating labels where they will remain visible so that the hinge does not cover the label once installed.
- M. Door Closers & Auto Operators: Mount closers/operators on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers/operators so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.
- N. Overhead Stops/Holders: Mount overhead stops/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
- O. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
- P. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
- Q. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.

- R. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- S. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- T. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.03 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - 1. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30 degrees.
 - 2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
 - 3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
- B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.04 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items per manufacturer's instructions to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.05 DOOR HARDWARE SCHEDULE

- A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.
- B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application.
- C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.
- D. Hardware Sets:

Abbreviation	Name
ACC	Accurate Lock & Hardware Co
ADA	Adams Rite Manufacturing Co
BYO	By Others
GLY	Glynn-Johnson Corp
IVE	H.B. Ives
LCN	Lcn Commercial Division
MIS	Misc - Out-Sourced Items
SCE	Schlage Electronic Security
SCH	Schlage Lock Company
VON	Von Duprin
ZER	Zero International Inc