

CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT PURCHASING DEPARTMENT

March 25, 2021

Addendum No. 4 INVITATION TO BID No.: B20/21-08 Agriculture Science, Horticulture Facility Project

To: All Prospective Bidders

This Addendum Four (4) is issued to incorporate the following changes, additions or deletions to the Bid No. B20/21-08. Any modifications/changes made by this addendum affect only the portions or paragraphs specifically identified herein; all remaining portions of Bid No. B20/21-08 to remain in force. It is the responsibility of all responders to conform to this addendum.

A. ADDITIONS, CHANGES AND/OR CLARIFICATIONS:

The following Changes have been Added and Changed to the bid documents:

- **1.** Specification Section 00 0110 Table of Contents Updated revision dates where applicable.
- 2. Specification Section 08 7100 Door Hardware Revisions to the following Hardware Group:
 - a. Hardware Group No. 14 Exterior Pair/Storage Delete Floor stop/folder; delete door sweep; delete threshold.
 - b. Hardware Group No. 16 Pair Gates Add self-closing hinge specification.
 - c. Hardware Group No. 17 SGL Gate Add self-closing hinge specification.
 - d. Hardware Group No. 19 SGL Gate Remove from specification.

- e. Hardware Group No. 20 Vehicle Gates Renamed to Hardware Group No. 19 Vehicle Gates.
- 3. Sheet A101 Site Plan: Delete Gate No. 8 from the Gate Schedule.
- 4. Sheet AA121 Classroom Building Floor Plan: Update location of conduit sleeves in IDF Room 107A.
- 5. AA122 Classroom Building Signage & Existing Plan:
 - a. Revised signage type at Door A102B.
 - b. Move signage location at Door A103.
 - c. Deleted unused Keynote 10.86.
 - d. Background update for conduit sleeves in IDF Room 107A.
 - e. Updated location of Max. Occupancy signage to match elevation.

6. Sheet AA141 – Classroom Building Reflected Ceiling Plan:

- a. Depicted exit lights.
- b. Depicted conduit in IDF Room 107A in revised location.
- c. Dimensioned light fixtures in IDF Room 107A.

7. Sheet AA501 – Interior Elevations:

- a. Added detail references at Keynotes 10.54, 10.87 and 10.88.
- b. Depict wall mounted exit light location on Detail 2 Classroom East elevation.
- c. Revised configuration of acoustical wall panel on Detail No. 3 Classroom South elevation.
- d. Depict batt insulation along the ceiling and wall-mounted light fixture on Detail 7 Custodial North elevation.

8. Sheet AA502 – Interior Elevations:

- a. Delete Keynote 08.18 and its reference on Detail No. 12 Lactation Room - North elevation.
- b. Depict wall mounted exit light location on Detail No. 3 Head House
 East elevation.
- **9.** Sheet AD121 Equipment Storage Floor Plan: Add Door Tag D101 to Equipment Storage D101.

10. Sheet A801 – Door and Window Schedules and Types:

- a. Updated Door Schedule.
- b. Added EE door type elevation.

11.Sheet EA141 – Classroom Building Floor Plan Lighting:

- a. Added exit light.
- b. Updated alignment of undercounter lighting.
- c. Deleted stray circuit lines.
- **12. Sheet TA100 Telecom System Diagram:** Revised Keynote TN3 from Single Mode Fiber to Multimode Fiber.

13. Sheet TA101 – Telecom Site Plan:

- a. Updated conduit route.
- b. Revised Keynote TN1.
- c. Added Keynotes TN5, TN6 and TN 7.

14. Sheet TA401 – IDF Room 107A Enlarged Plans and Elevations:

- **a.** Updated Keynote TN6.
- **b.** Revised conduit location on IDF Room 107A, Enlarged Plan 1.
- **c.** Revised conduit route on Elevations B and C.

15. Sheet TN802 – Telecom Site Plan: Added Keynote TN8.

B. RFI QUESTIONS AND RESPONSES:

No Questions.

C. ATTACHMENTS:

Drawings (13 sheet):

Architectural:

- AA121 Classroom Building Floor Plan
- AA122 Classroom Building Signage and Exiting Plan
- AA141 Classroom Building Reflected Ceiling Plan
- AA501 Interior Elevations
- AA502 Interior Elevations
- AD121 Equipment Storage Floor Plan
- A801 Door and Window Schedule

Electrical:

EA141 Classroom Building Floor Plan Lighting

Telecom:

- TA100 Telecom System Diagram
- TA101 Telecom Site Plan
- TA401 IDF Room 107A Enlarged Plans and Elevations
- TN802 Fiber Cabling Single Line Diagram

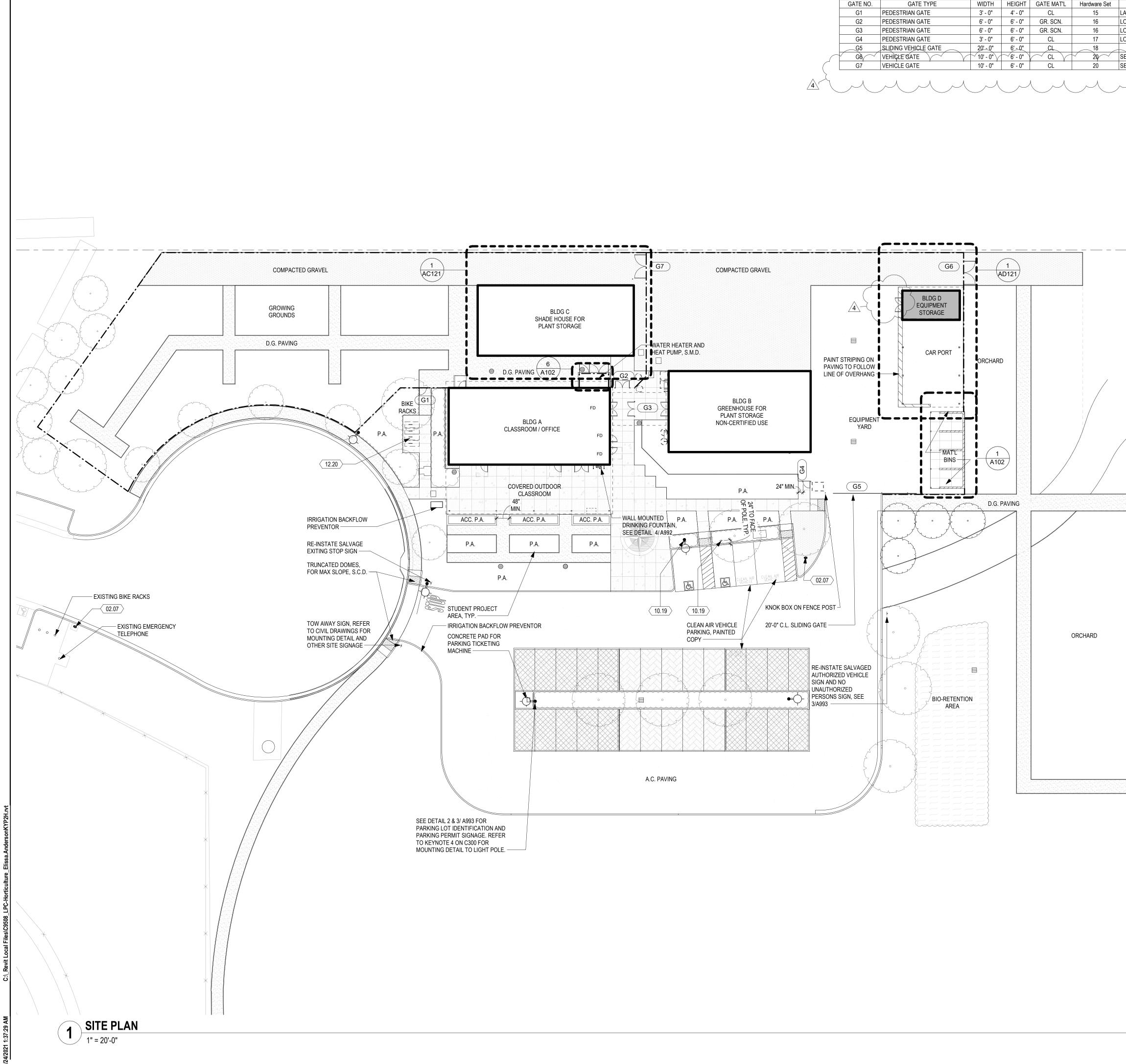
Specification Sections (2 section):

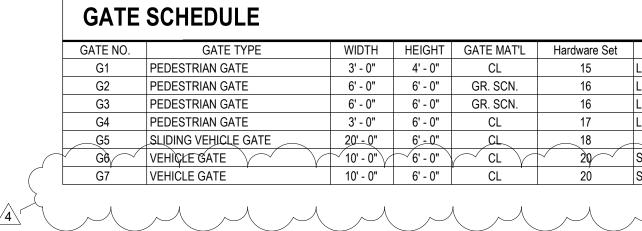
Division 01 – General Requirements:

01 01 10	Table of Contents
08 71 00	Door Hardware

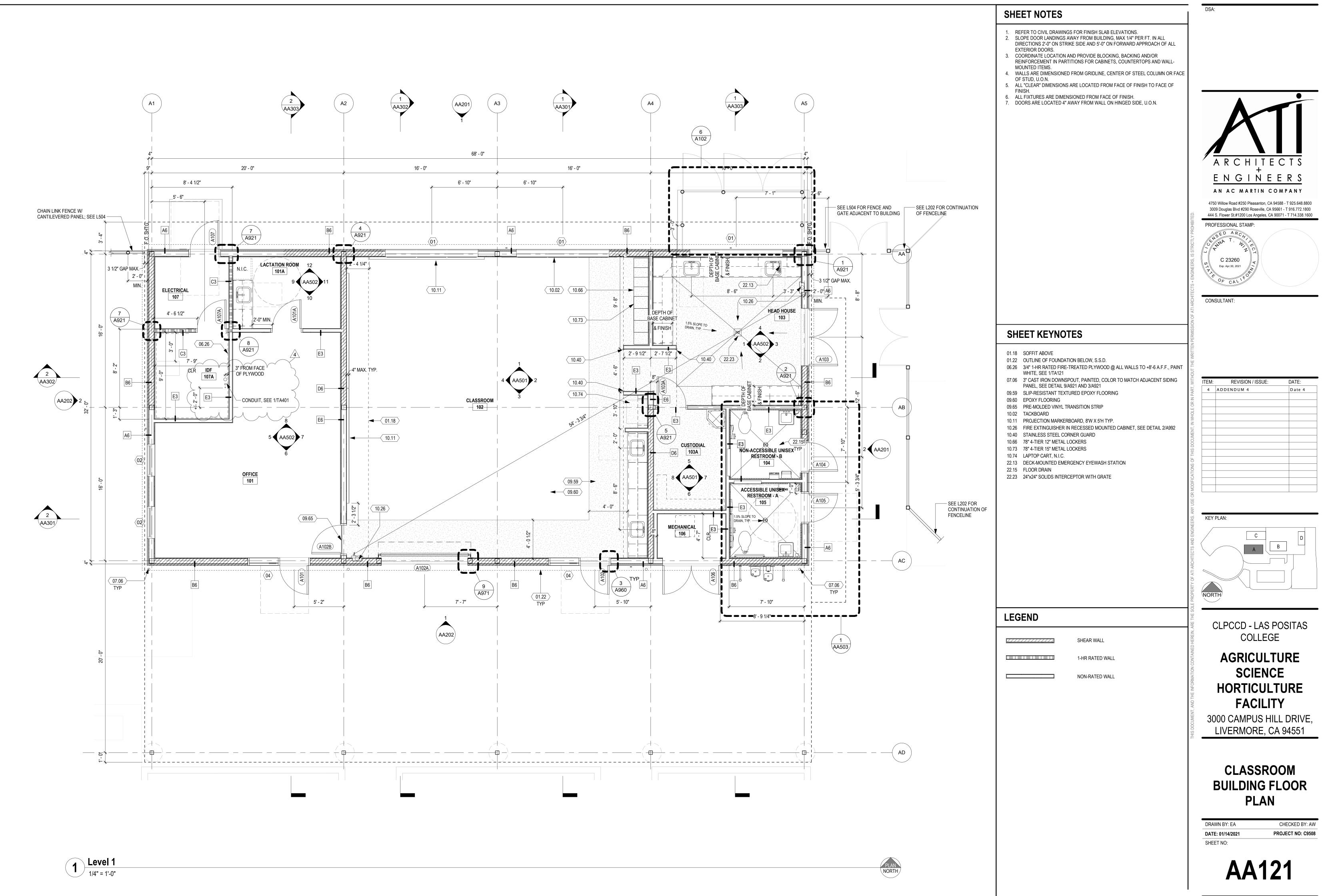
All other terms and conditions remain unchanged.

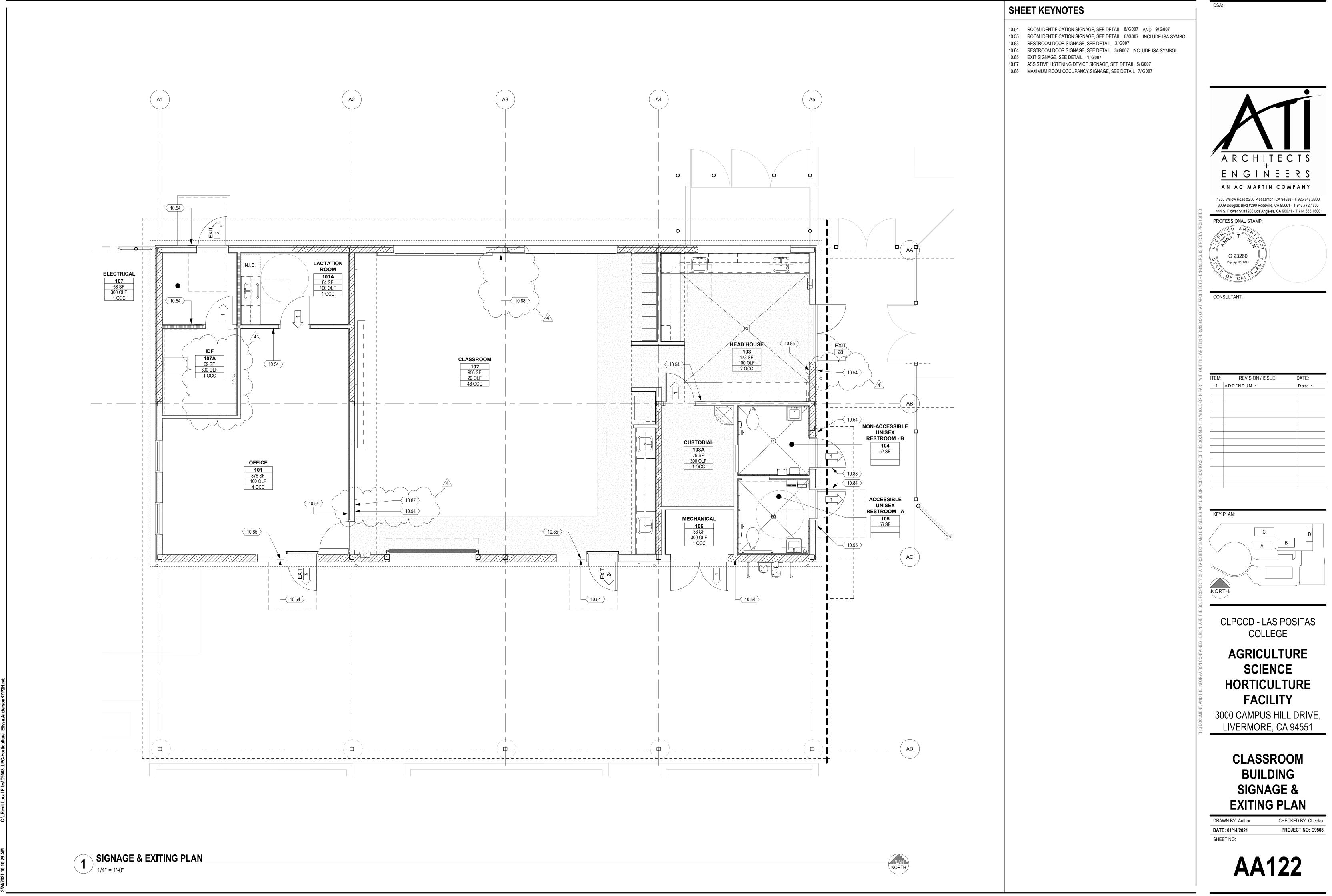
Michael McClung - Buyer, Purchasing and Warehouse Services Chabot-Las Positas Community College District

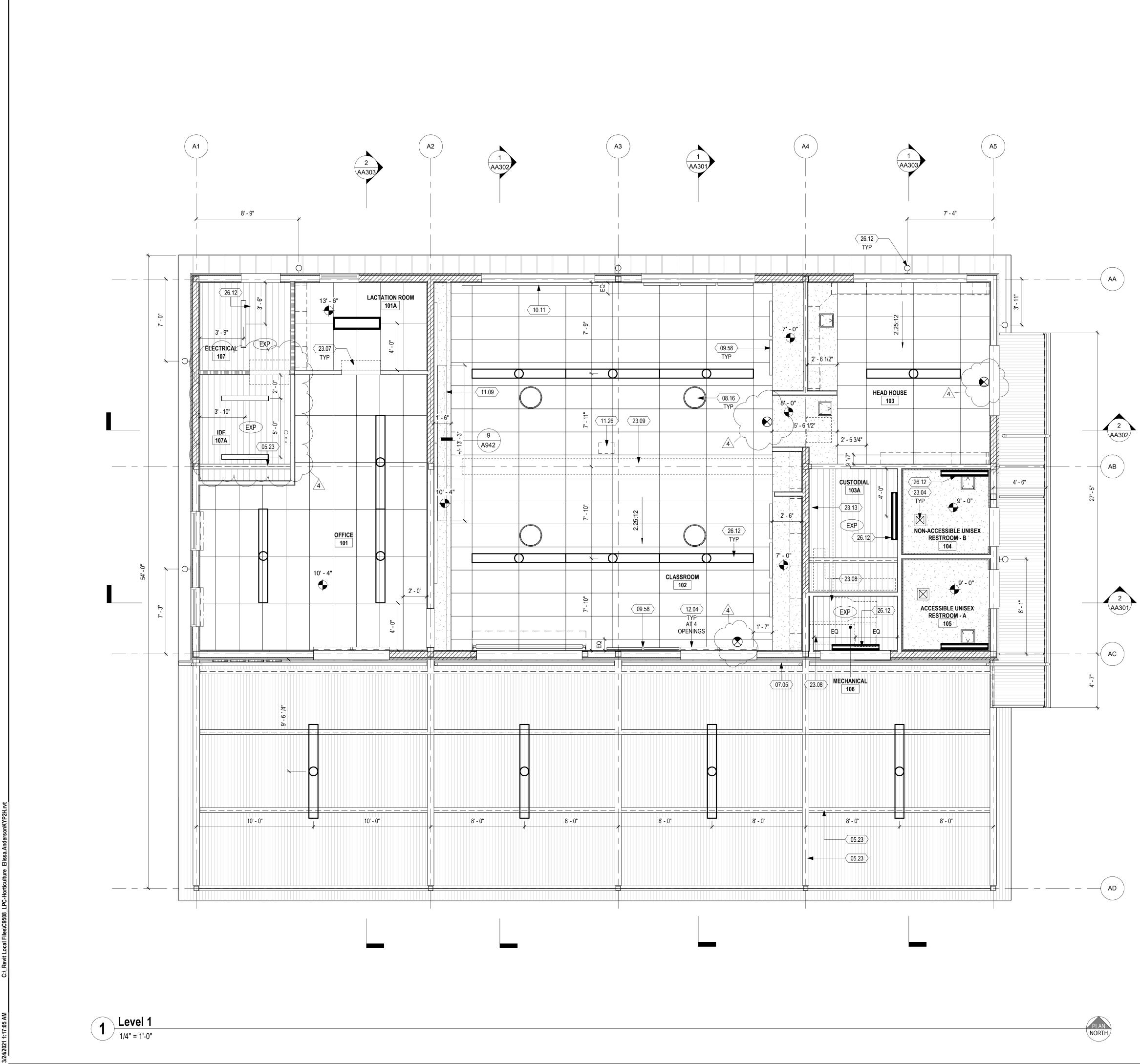


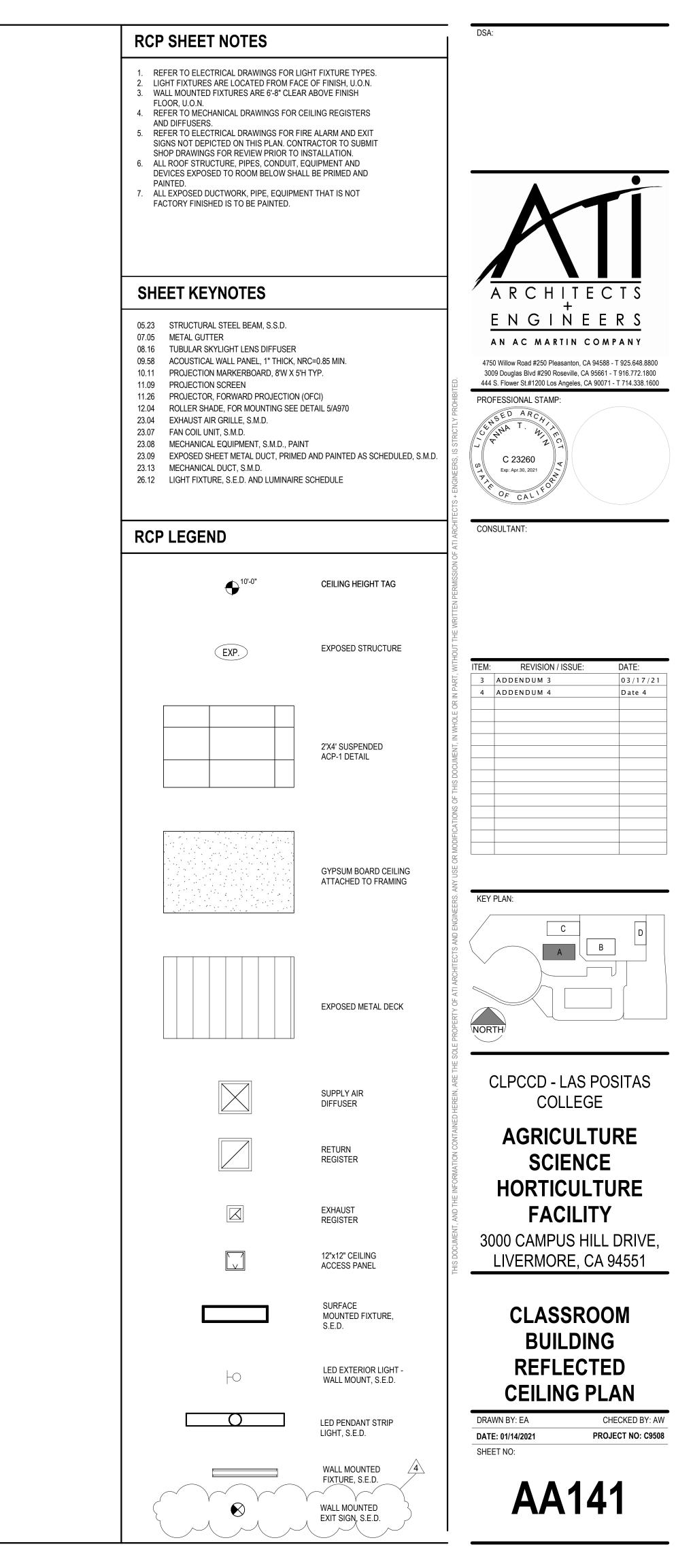


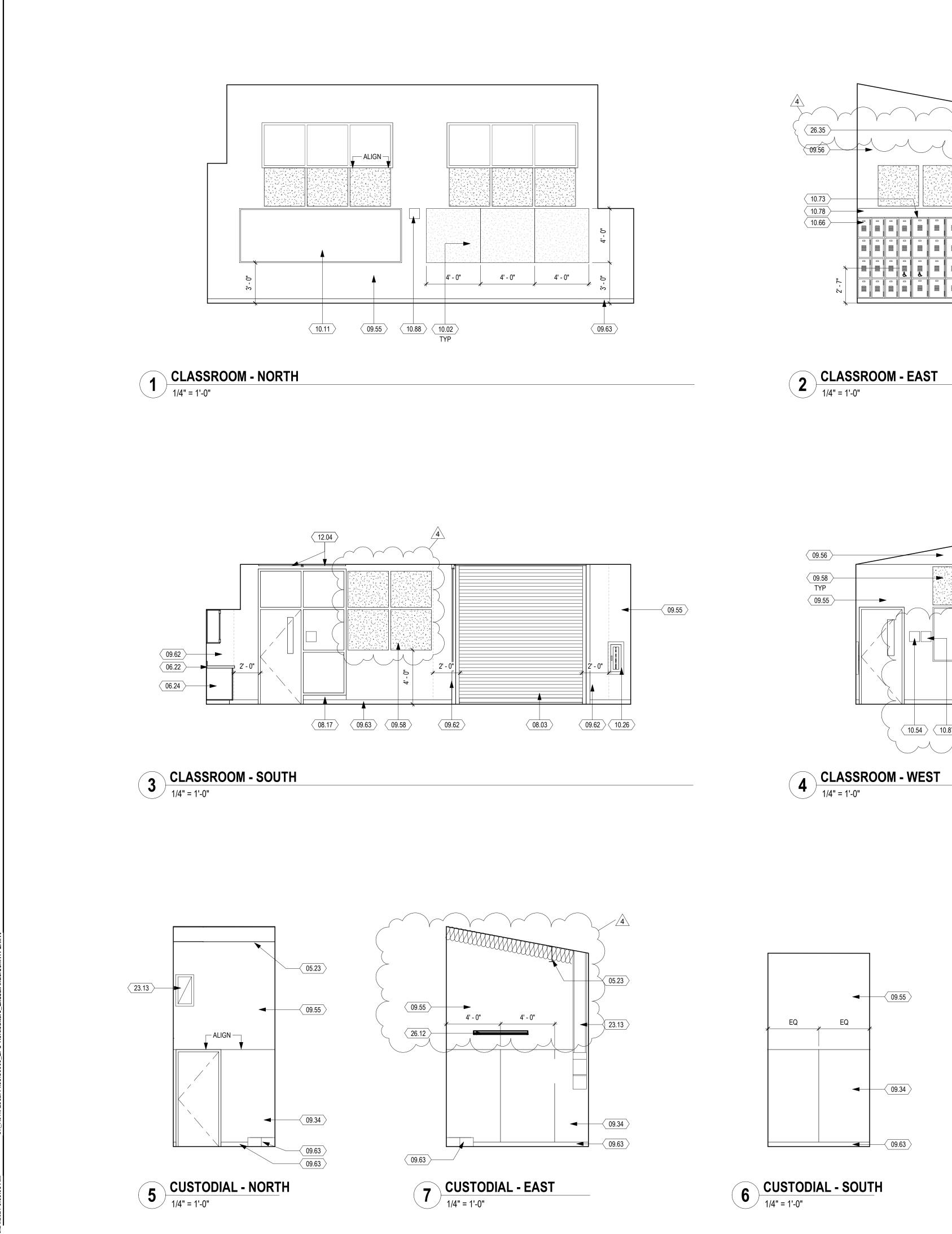
	GENERAL SHEET NOTES	DSA:
COMMENTS ATCH; SEE DETAIL 1/L504 DCK; SEE DETAIL 2/L504 DCK; SEE DETAIL 2/L504 DCK; SEE DETAIL 1/L504	 REFER TO CIVIL SHEET C300 FOR SITE HORIZONTAL CONTROL. REFER TO CIVIL SHEET C801 FOR ENLARGED ACCESSIBLE PARKING AND SIGNAGE DETAILS. REFER TO LANDSCAPE PLAN SHEET L202 FOR HARDSCAPE AND WALKWAY 	
E DETAIL 4/L504	DIMENSIONS.	A R C H I T E C T S E N G I N E E R S A N AC MARTIN COMPANY 4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800 309 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800 44 S. Flower St.#1200 Los Angeles, CA 90071 - T 714.338.1600
	SHEET KEYNOTES	444 S. Flower St.#1200 Los Angeles, CA 90071 - T 714.338.1600 PROFESSIONAL STAMP: $C 23260$ $F C A R C H$
	02.07 NEW FIRE HYDRANT, SEE C803 10.19 VEHICULAR SITE SIGNAGE - ACCESSIBLE PARKING SPACE, SEE C801 12.20 IN-GROUND BICYCLE RACKS, SEE L502	Image: State of the s
		HE SOLE PROPERTY OF ATI ARCHITECTS AND ENGIN
		Image: State of the state
	LEGEND	SITE PLAN DRAWN BY: EA CHECKED BY: AW
TRUE NORTH	AC PAVING AC PAVING EXISTING FENCE NEW FENCE	DATE: 01/14/2021 PROJECT NO: C9508 SHEET NO: A101

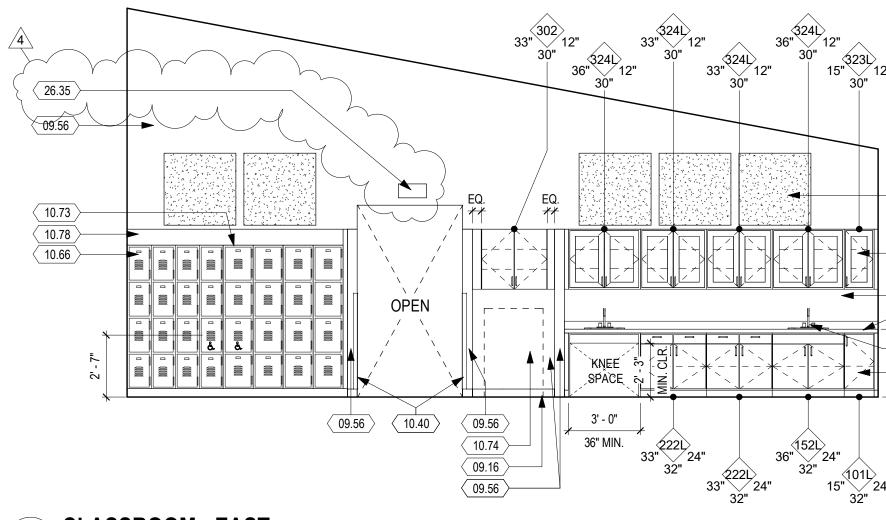




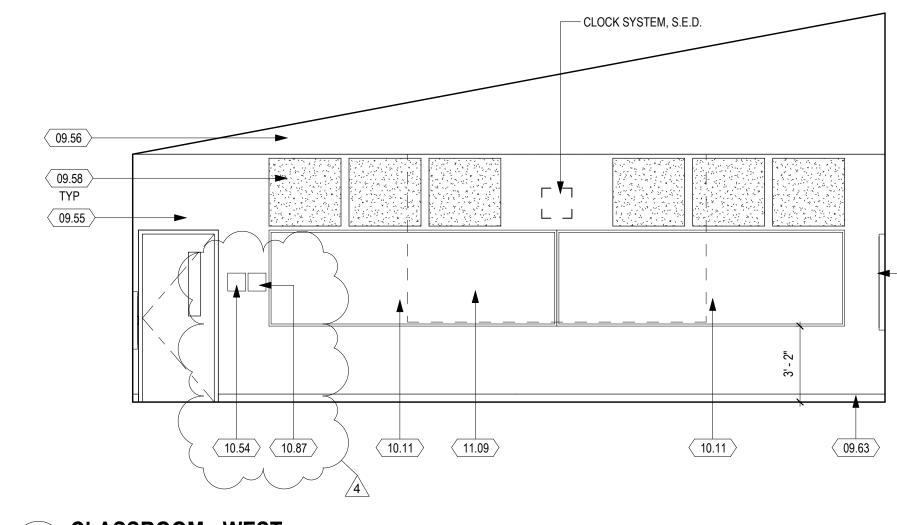


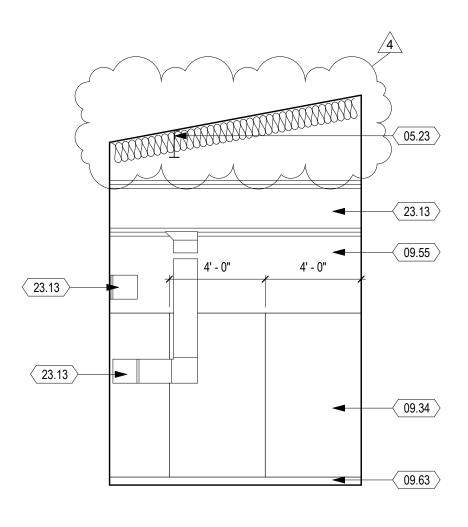






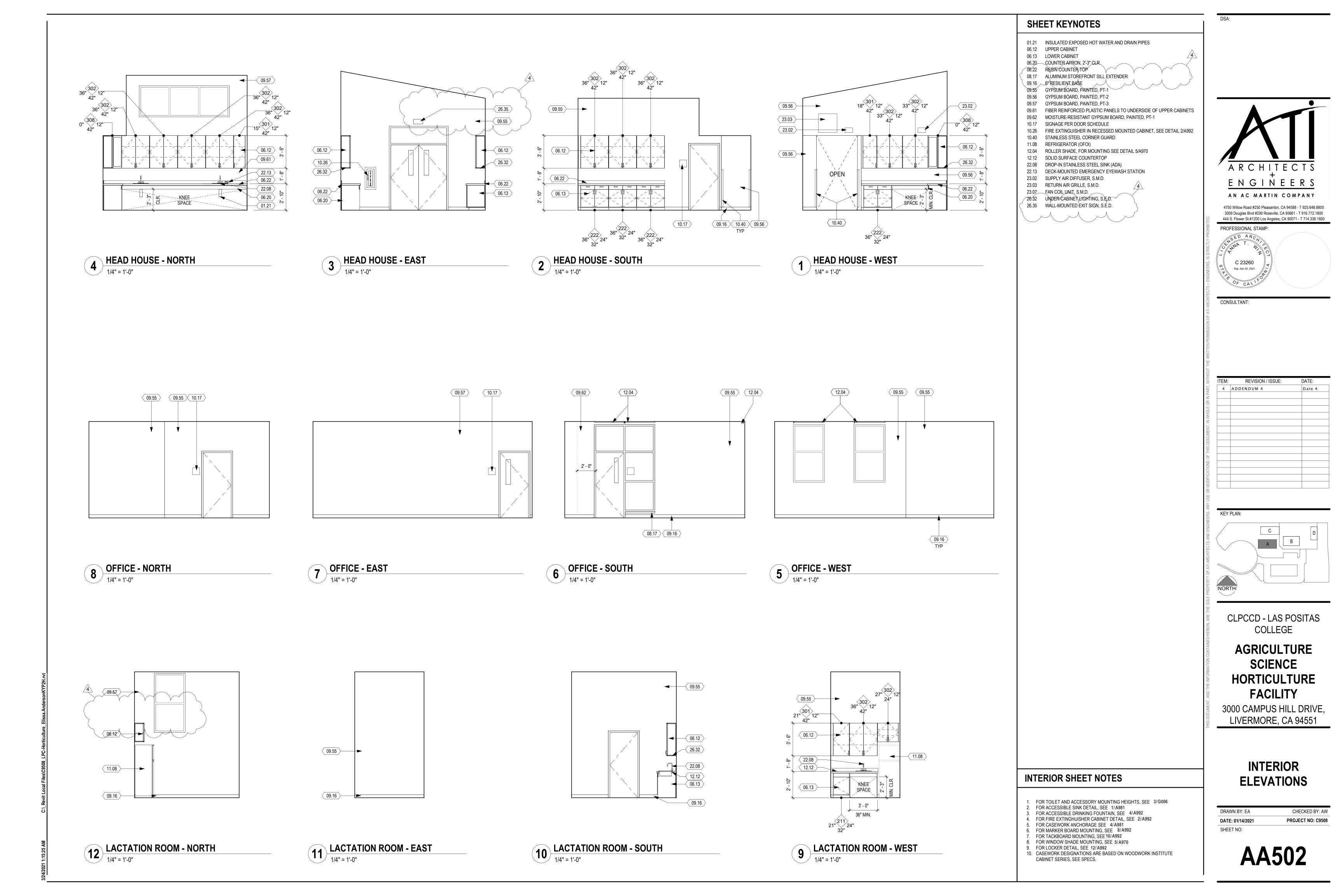


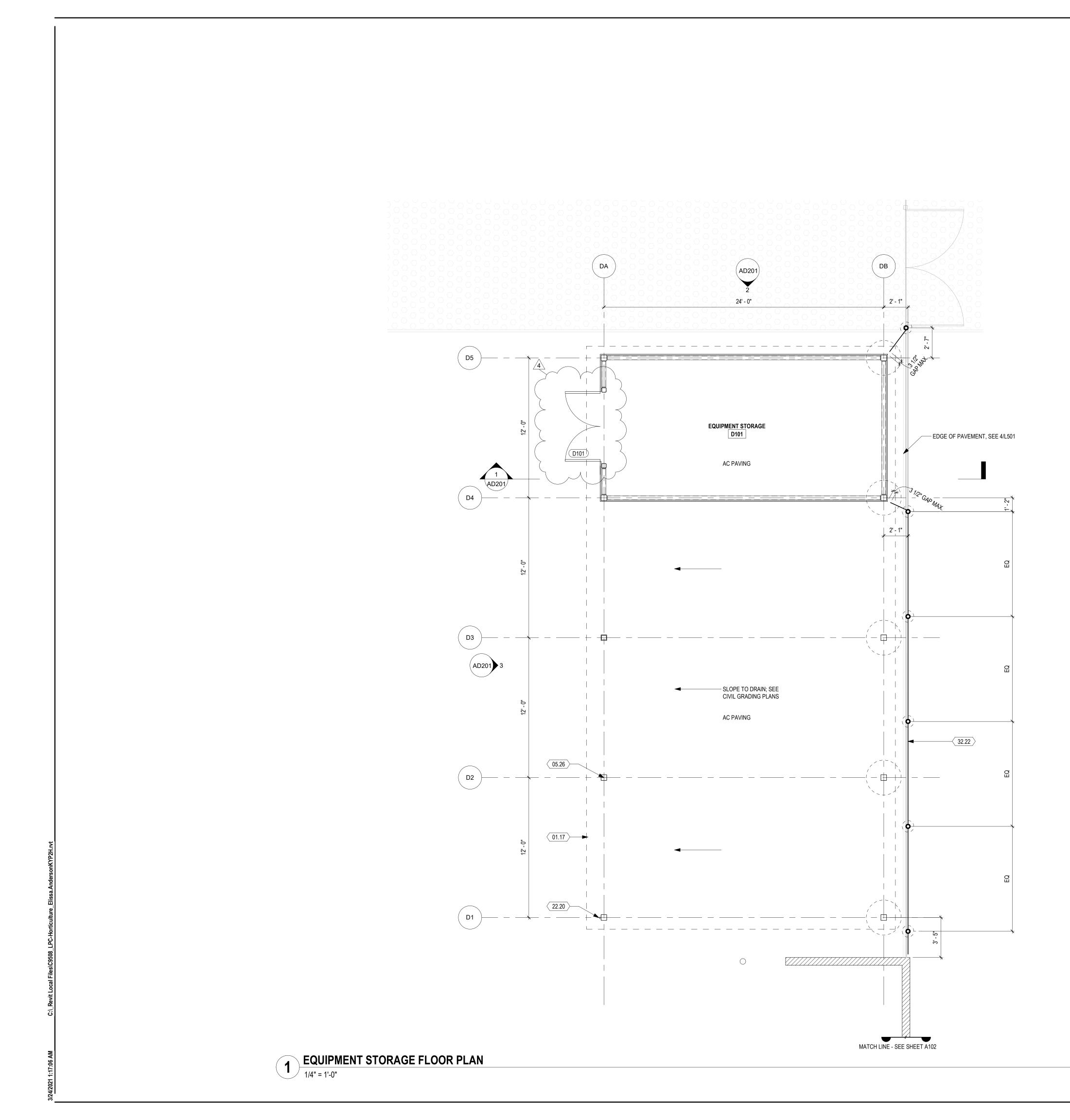






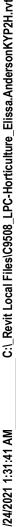
	SHEET KEYNOTES	DSA:
$ \begin{array}{c} \hline 09.58 \\ TYP \\ \hline 06.12 \\ \hline 22.08 \\ 06.24 \\ \hline 22.08 \\ \hline 06.24 \\ \hline xww.xt \\ \hline xw$	05.23 STRUCTURAL STEEL BEAM, S.S.D. 06.12 UPPER CABINET 06.22 RESIN COUNTER TOP 06.24 LOWER CABINET 08.30 OVERHEAD COLING DOOR 08.17 ALUMINUM STOREFRONT SILL EXTENDER 09.16 6* RESILIENT BASE 09.34 FIBER REINFORCED PLASTIC PANELS 09.55 GYPSUM BOARD, PAINTED, PT-1 09.66 GYPSUM BOARD, PAINTED, PT-2 09.58 ACOUSTICAL WALL PANEL, 1" THICK, NRC=0.85 MIN. 0.91 MOISTURE-RESISTANT GYPSUM BOARD, PAINTED, PT-1 09.63 SELF-COVED EPOXY FLOORING 10.21 TACKBOARD 10.21 TACKBOARD 10.22 FIRE EXTINGUISHER IN RECESSED MOUNTED CABINET, SEE DETAIL 2/A992 10.40 STAINGES STEEK CONER GUÁRD 10.41 PROJECTION MARKERBOARD, 8W X 5'H TYP. 10.26 FIRE EXTINGUISHER IN RECESSED MOUNTED CABINET, SEE DETAIL 2/A992 10.43 ROOM IDENTIFICATION SIGNAGE, SEE DETAIL 6/G007 10.47 4.74 TIER 15" METAL LOCKERS 10.74 LAPTOP CART, N.I.C. 10.75 METAL LOCKER TOP CLOSURE PIECE 10.74 ROOM IDENTIFICATION SIGNAGE, SEE	
10.11		
		SN WEY PLAN:
	SIZE QTY ACCESSIBLE 12W X 18H X 15D 16 1 (6%) 15W X 18H X 15D 16 1 (6%)	KEY PLAN:
		CLPCCD - LAS POSITAS COLLEGE
		AGRICULTURE SCIENCE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551
	INTERIOR SHEET NOTES	
	 FOR TOILET AND ACCESSORY MOUNTING HEIGHTS, SEE 3/G006 FOR ACCESSIBLE SINK DETAIL, SEE 1/A981 FOR ACCESSIBLE DRINKING FOUNTAIN, SEE 4/A992 FOR FIRE EXTINGHUISHER CABINET DETAIL, SEE 2/A992 	INTERIOR ELEVATIONS
	 FOR CASEWORK ANCHORAGE SEE 4/A981 FOR MARKER BOARD MOUNTING, SEE 8/A992 FOR TACKBOARD MOUNTING, SEE 10/A992 FOR WINDOW SHADE MOUNTING, SEE 5/A970 	DRAWN BY: EA CHECKED BY: AW DATE: 01/14/2021 PROJECT NO: C9508
	 FOR LOCKER DETAIL, SEE 12/A992 CASEWORK DESIGNATIONS ARE BASED ON WOODWORK INSTITUTE CABINET SERIES, SEE SPECS. 	SHEET NO:
		AA501

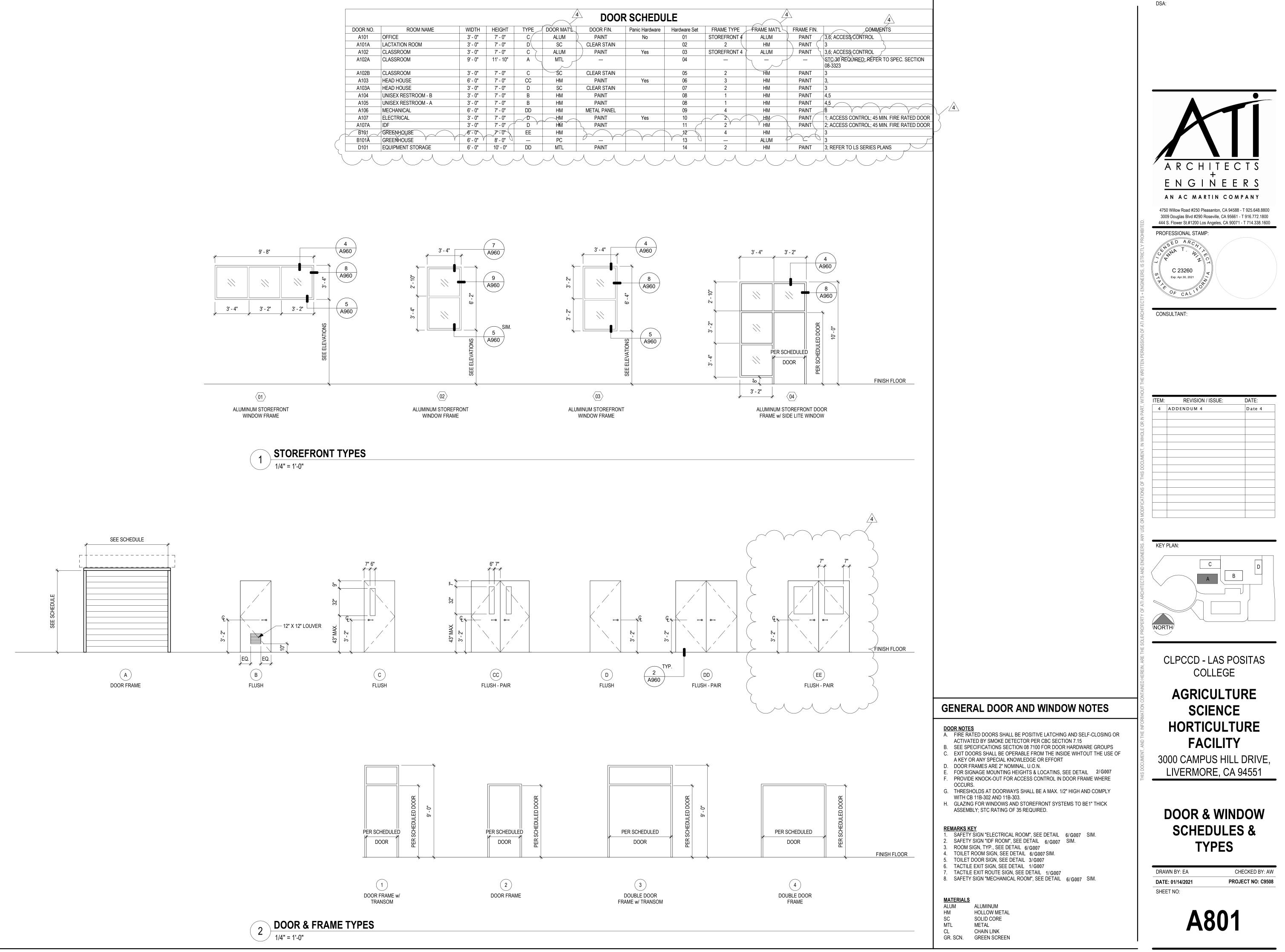


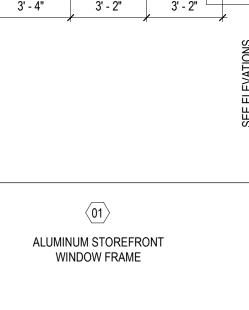


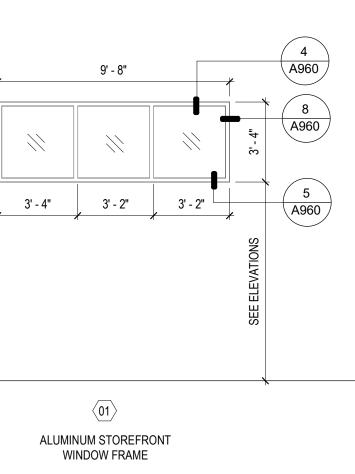
PLAN NORTH

DSA: **GENERAL SHEET NOTES** 1. REFER TO MANUFACTURER DRAWINGS FOR STRUCTURAL FRAMING INFORMATION. ARCHITECTS ENGINEERS AN AC MARTIN COMPANY 4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800 444 S. Flower St.#1200 Los Angeles, CA 90071 - T 714.338.1600 PROFESSIONAL STAMP: C 23260 Exp: Apr.30, 2021 11 CONSULTANT: ITEM: REVISION / ISSUE: DATE: SHEET KEYNOTES 2 ADDENDUM 2 03/10/21 4 ADDENDUM 4 Date 4 01.17 OUTLINE OF ROOF ABOVE 05.26 HSS 6X6 COLUMN, SEE EQUIPMENT STORAGE LS DRAWINGS 22.20 HOSE BIB 32.22 CHAIN LINK FENCE 6'-0" KEY PLAN: NORTH) CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551 EQUIPMENT STORAGE FLOOR PLAN DRAWN BY: EA CHECKED BY: AW PROJECT NO: C9508 DATE: 01/14/2021 SHEET NO: **AD121**



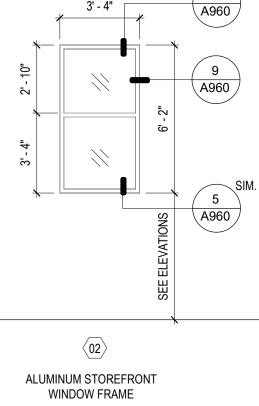


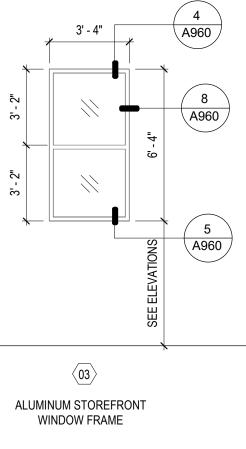


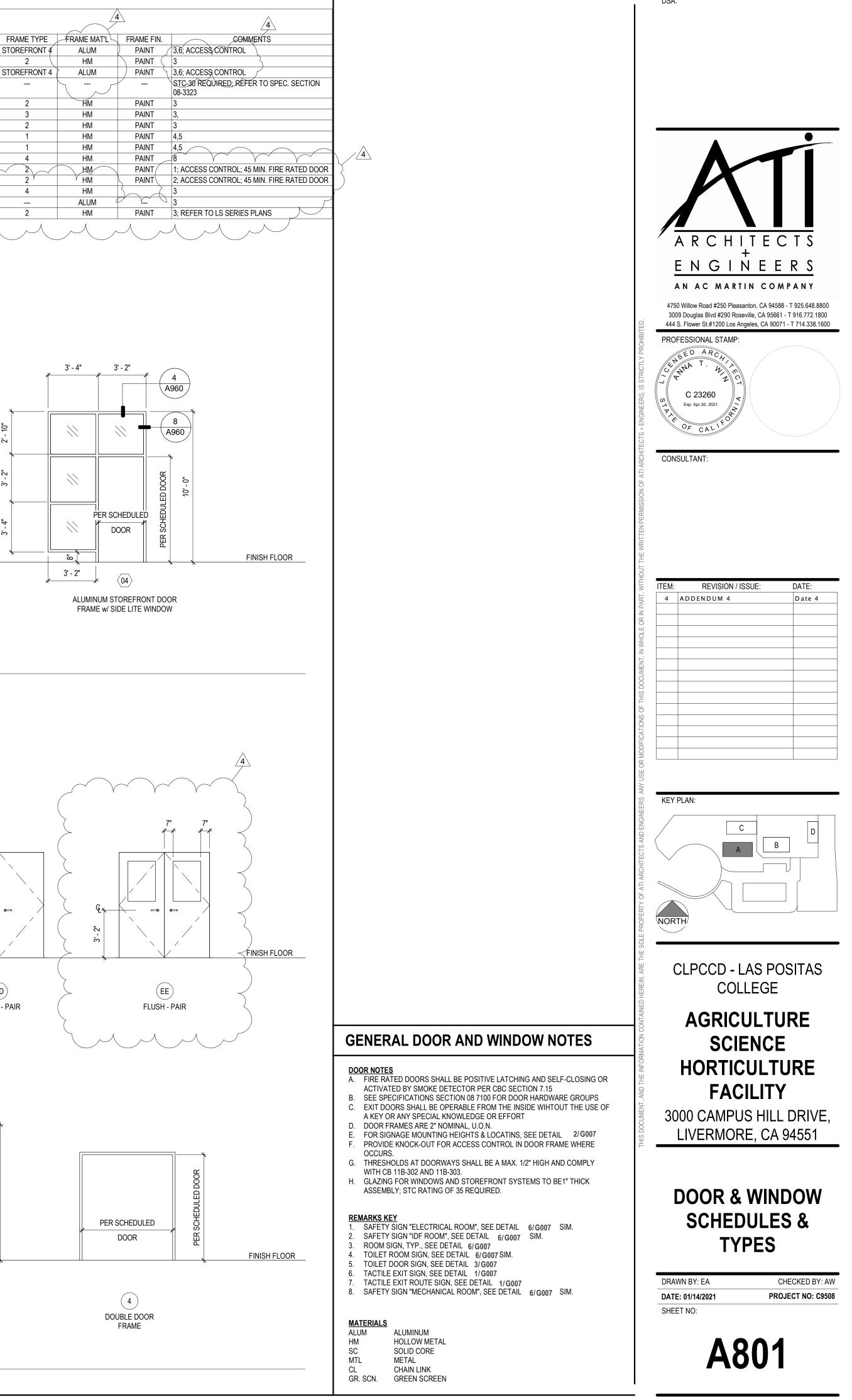


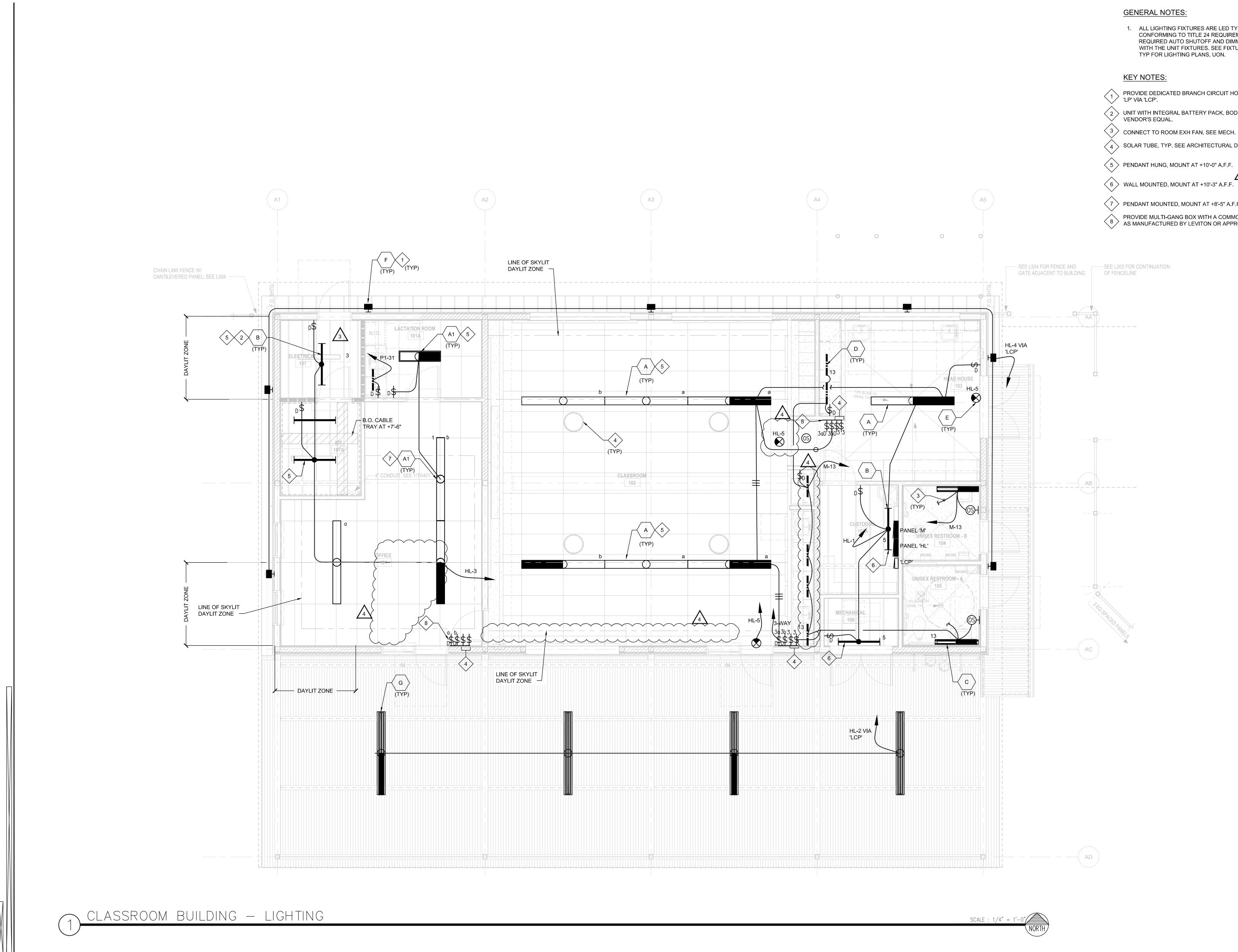


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					4	<u> </u>	R SCHEDU	ILE			<u>•</u>	
DOOR NO.	ROOM NAME	WIDTH	HEIGHT	TYPE	DOOR MATIL	DOOR FIN.	Panic Hardware	Hardware Set	FRAME TYPE	FRAME MAT'L	FRAME FIN.	
A101	OFFICE	3' - 0"	7' - 0"	C	ALUM	PAINT	No	01	STOREFRONT 4	ALUM		3,6; ACCES
A101A	LACTATION ROOM	3' - 0"	7' - 0"	D	SC	CLEAR STAIN		02	2	HM	PAINT	3
A102	CLASSROOM	3' - 0"	7' - 0"	C >	ALUM	PAINT	Yes	03	STOREFRONT 4	ALUM	PAINT 1	3,6; ACCES
A102A	CLASSROOM	9' - 0"	11' - 10"	A	MTL			04		\		STC-30 RE
A102B	CLASSROOM	3' - 0"	7' - 0"	С	SC	CLEAR STAIN		05	2	HM	PAINT	3
A103	HEAD HOUSE	6' - 0"	7' - 0"	CC	HM	PAINT	Yes	06	3	HM	PAINT	3,
A103A	HEAD HOUSE	3' - 0"	7' - 0"	D	SC	CLEAR STAIN		07	2	HM	PAINT	3
A104	UNISEX RESTROOM - B	3' - 0"	7' - 0"	В	HM	PAINT		08	1	HM	PAINT	4,5
A105	UNISEX RESTROOM - A	3' - 0"	7' - 0"	В	HM	PAINT		08	1	HM	PAINT	4,5
A106	MECHANICAL	6' - 0"	7' - 0"	DD	HM	METAL PANEL		09	4	HM	PAINT	8
A107	ELECTRICAL	3' - 0"	7' - 0"		HM	PAINT	Yes	10	2	HM	PAINT	1; ACCESS
A107A	IDF	3' - 0"	7' - 0" 🧹	D Y	НМ	PAINT		11 🦯	2 ^Y	Y HM		2; ACCESS
B101	GREENHOUSE	6-04	7-0	EE	HM	\sum		12	4	HM	$\frac{1}{2}$	3
B101Å	GREENHOUSE Y Y	6' - 0" Y	8' - 0"		PC	Y	Y	13		ALUM 4		3
D101	EQUIPMENT STORAGE	6' - 0"	10' - 0"	DD	MTL	PAINT		14	2	HM	PAINT	3; REFER T
			$\overline{\mathbf{A}}$	$\overline{\mathbf{A}}$								









GENERAL NOTES:

1. ALL LIGHTING FIXTURES ARE LED TYPE AND CONFORMING TO TITLE 24 REQUIREMENTS FOR REQUIRED AUTO SHUTOFF AND DIMMING INTEGRAL WITH THE UNIT FIXTURES. SEE FIXTURE SCHEDULE, TYP FOR LIGHTING PLANS, UON.

KEY NOTES:

- PROVIDE DEDICATED BRANCH CIRCUIT HOMERUN TO PNL 'LP' VIA 'LCP'.
- 2 UNIT WITH INTEGRAL BATTERY PACK, BODINE 50 OR
- $\langle 3 \rangle$ CONNECT TO ROOM EXH FAN, SEE MECH.
- 4 SOLAR TUBE, TYP. SEE ARCHITECTURAL DRAWINGS.
- 5 PENDANT HUNG, MOUNT AT +10'-0" A.F.F.

- 7 PENDANT MOUNTED, MOUNT AT +8'-5" A.F.F
- PROVIDE MULTI-GANG BOX WITH A COMMON FACEPLATE AS MANUFACTURED BY LEVITON OR APPROVED EQUAL.

ARCHITECTS ENGINEERS AN AC MARTIN COMPANY 4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600 PROFESSIONAL STAMP: CONSULTANT: METRO POWER ENGINEERS, INC. 3150 HILLTOP MALL ROAD, SUITE 22 RICHMOND, CA 94806 TEL: 510. 275. 3000 FAX: 510. 275. 3002 **REVISION / ISSUE:** ITEM: DATE: BID ADDENDUM 3 03/17/21 BID ADDENDUM 4 03/24/21 KEY PLAN: С NORTH CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551 CLASSROOM BUILDING FLOOR PLAN LIGHTING DRAWN BY: CHECKED BY: DATE: 11/09/2020 PROJECT NO: C9508 SHEET NO: EA141

BLDG # BUILDING NAME

100	CLASSROOMS			
400	ENGLISH CLASSROOMS & LAB			
500	FINE ARTS			
600	CLASSROOMS, ILC (INTEGRATED LEARNING CENTER)), OPEN MATH LAB		
600	A/B FIRE SERVICE TECHNOLOGY TRAINING			
700	VISUAL COMMUNICATIONS, PHOTOGRAPHY STUDIO, (COMPUTER LAB		
800	LECTURE HALL, COMPUTER LABS, AUTO & WELDING HORTICULTURE VITICULTURE, GARDEN CLASSROOMS	G LABS, SMOG REFEREE CEN 5, GREENHOUSE	TER,	
1000	CLASSROOM BUILDING			
1100	CENTRAL UTILITY PLANT			
1300	BOOKSTORE			
1310	VETERANS RESOURCE CENTER			
1600	STUDENT SERVICES & ADMINISTRATION BUILDING			
1700	CAMPUS SAFETY, STUDENT HEALTH CENTER, COPY	CENTER, MAIL ROOM		
1800	SCIENCE TECHNOLOGY CENTER 1			
1850	SCIENCE TECHNOLOGY CENTER 2			
1900	INFORMATION TECHNOLOGY SERVICES (ITS)			
2000	LIBRARY (LEARNING RESOURCE CENTER)			
2100	FACULTY OFFICES			
2200	CLASSROOMS			
2300	CHILD DEVELOPMENT CENTER			
2400	MULTI-DISCIPLINARY EDUCATION BUILDING			
2500	PHYSICAL EDUCATION COMPLEX (GYM)			
2600	AQUATIC CENTER			
2700	CAMPUS HILL VINEYARD			
3000	MAINTENANCE & OPERATIONS BUILDING			
3100	MAINTENANCE & OPERATIONS BUILDING			
3200	FIELD HOUSE			
4000	MERTES CENTER FOR THE ARTS	(TN1)		
		LOT G	1100 1900A 1850 1100 800 800 800 600 500 700 400 1310 1000 1300	



1 CAMPUS TELECOM SITE PLAN

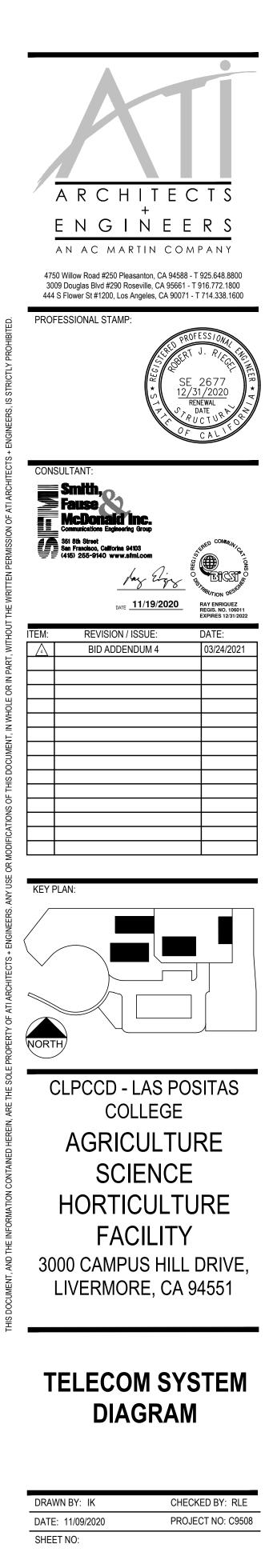


TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.

THE CAMPUS MDF IS IN B1900A. PROVIDE 48 STRAND SINGLE MODE TO IDF ROOM, HORTICULTURE BLDG. SEE SHEET TA101, TN801 AND TN802.

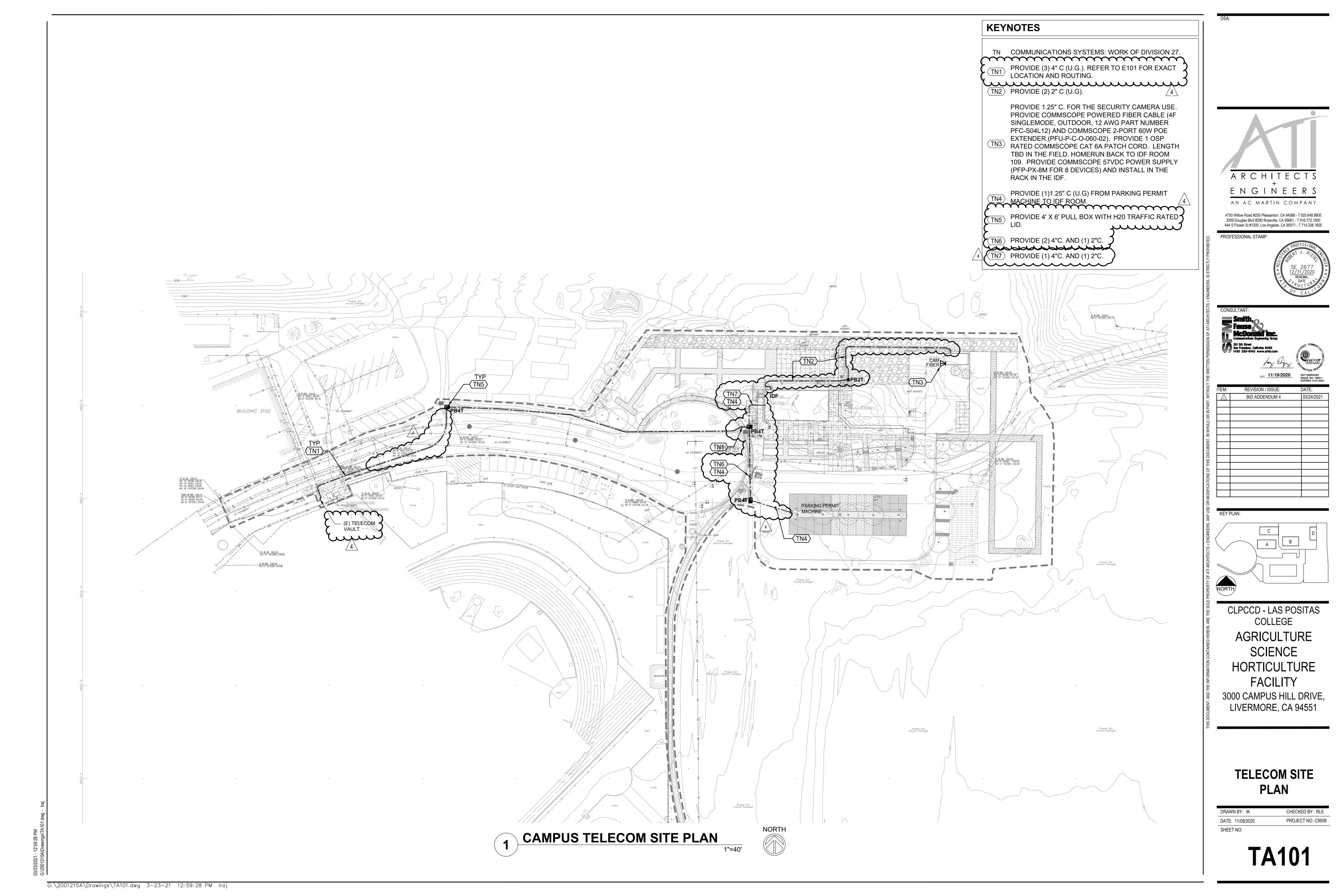
(E) COMM VAULT TO BE USED TO CONNECT TO IDFROOM IN HORTICULTURE BLDG. SEE E101 AND TA101FOR CONTINUATION. REFER TO SHEET TN505 FOR $OUTSIDE PLANT DETAILS. <math display="block"> / _{4}$

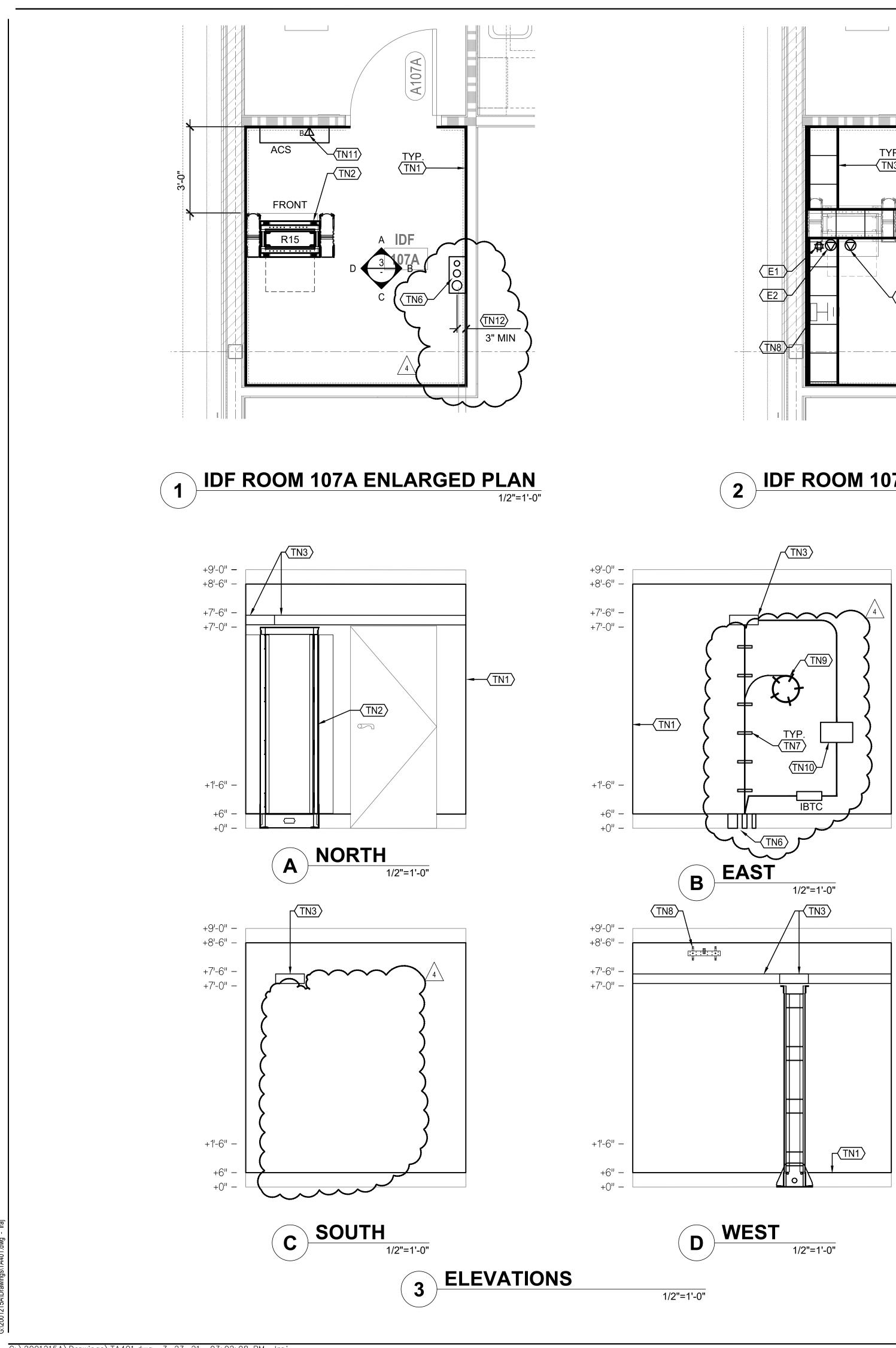
(E) FMO FIRE ALARM CONTROL PANEL 'FACP-FMO'. PROVIDE 12 STRAND MULTIMODE FIBER FOR FIRE ALARM USE FROM ELEC ROOM B3100 TO ELEC ROOM, HORTICULTURE BLDG. SEE SHEET E101, TA101 AND TN802.

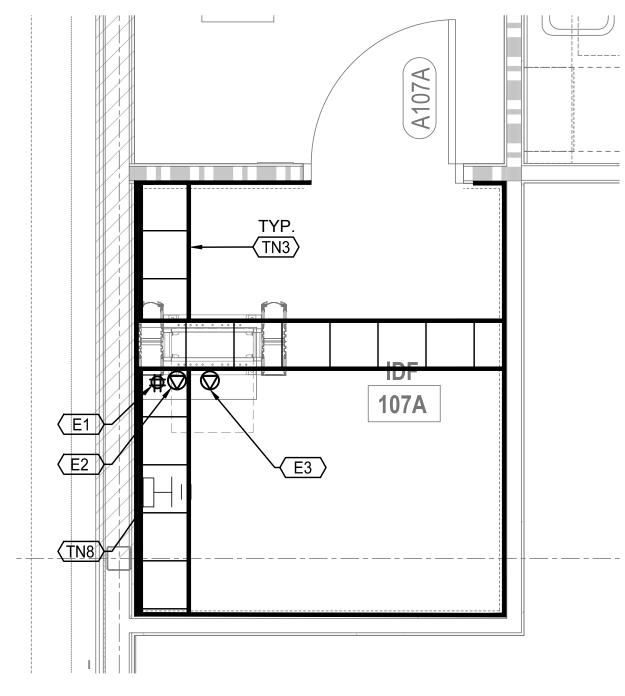


DSA



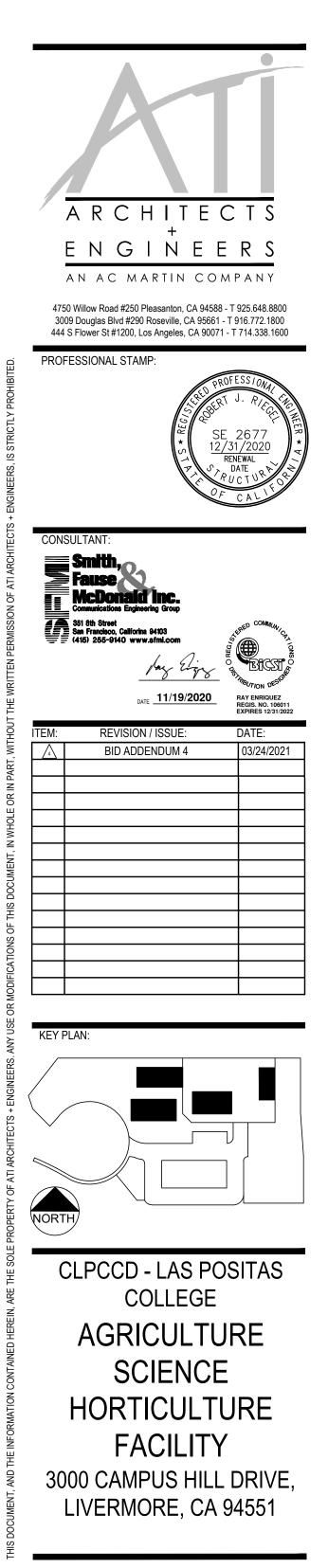








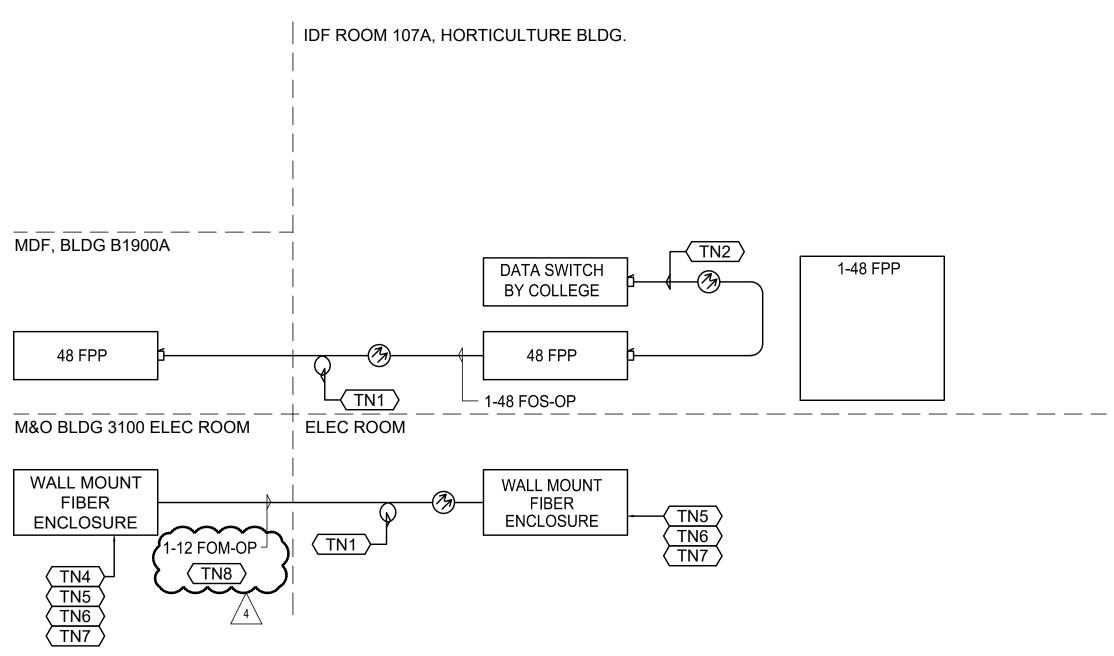
3HE	ET NOTE
1.	CLPCCD ITS WILL APPROVE PLACEMENT OF ALL IDF EQUIPMENT PRIOR TO FINAL INSTALLATION.
(EY	NOTES
Е	ELECTRICAL: WORK OF DIVISION 26
E1	PROVIDE ONE QUAD 5-20R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
E2 >	PROVIDE ONE L6-20R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
E3	PROVIDE ONE L5-30R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
TN	COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.
TN1	PROVIDE 3/4" THICK, 1-HR RATED FIRE-RESISTANT TREATED PLYWOOD BACKBOARD FROM 6" A.F.F. TO 8'-6" A.F.F. PROVIDE AS MANY AS SHOWN ON PLAN. PAINT, COLOR WHITE. TRIM TO FIT. COORDINATE WITH ARCH DRAWINGS.
TN2	2 POST, ZONE 4 - STATION CABLING RACK. PROVIDE 12" WIDE CABLE MANAGER ON BOTH SIDES AS SHOWN AND AS SPECIFIED.
$TN3\rangle$	PROVIDE 12"W CABLE RUNWAY, CR-12 MOUNT BOTTOM @ 7'-6" A.F.F.
TN4 angle	PROVIDE 4" CONDUIT SPILLWAY AT THE END OF EACH SLEEVE EQUAL TO BEJED BJ-2049B.
$\overline{TN5}$	PROVIDE (2) 4"C SLEEVES.
TN6	PROVIDE (1) 4"C., (1) 2" C. AND (1)1.25" C. (U.G).
$TN7\rangle$	PROVIDE 4" D-RINGS AT 2' O.C.
TN8	PROVIDE GROUNDING BUS BAR EQUIVALENT TO B-LINE SB-477-K. MOUNT ON TOP OF THE BACKBOARD AT APPROX +96" A.F.F.
TN9	PROVIDE 30' OF SLACK FIBER AND COIL IN A FIBER MANAGEMENT RING (FMR)EQUAL TO LEVITON 48900-OFR.
TN10	LP-110TB100.
TN11	DATA FOR SECURITY ACCESS CONTROL PANEL. PROVIDE A 2-PORT MSB MOUNTED ON THE WALL, OUTSIDE THE PANEL. COORDINATE LOCATION WITH DIV 28 CONTRACTOR.
TN12 〉	COORDINATE WITH STRUCTURAL DRAWINGS REGARDING REBAR SPACING REQUIREMENTS. INSTALL CONDUITS TO MISS REBARS.

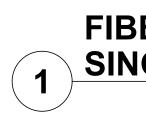


IDF ROOM 107A ENLARGED PLANS AND ELEVATIONS

DRAWN BY: IK	CHECKED BY: RLE
DATE: 11/09/2020	PROJECT NO: C9508
SHEET NO:	



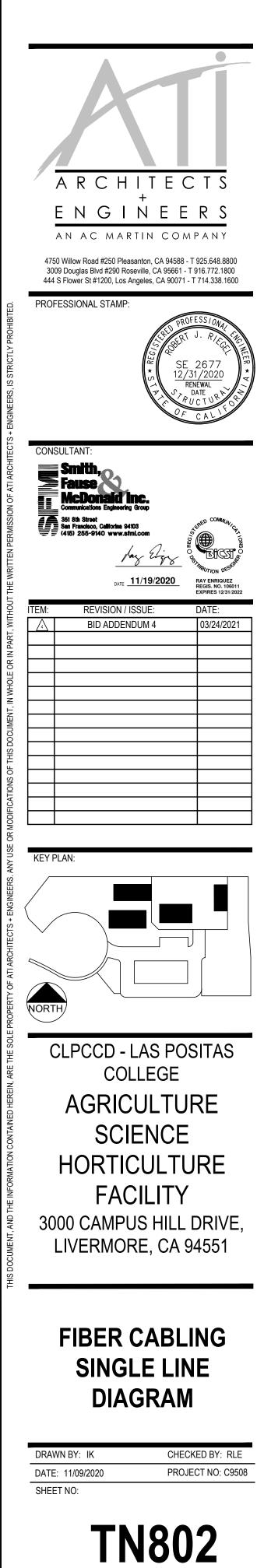




FIBER CABLING SINGLE LINE DIAGRAM

NTS

KE	KEYNOTES					
TN	TELECOMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.					
TN1	PROVIDE 30' MIN. SLACK CABLE COILED IN AN FIBER MANAGEMENT RING (FMR) MOUNTED ON THE BACKBOARD.					
$\langle TN2 \rangle$	PROVIDE SIX (6) 10 ' SC-LC YELLOW TERASPEED PATCH CORDS.					
$\langle TN3 \rangle$	NOT USED.					
TN4	FIRE ALARM. VERIFY PATHWAYS AND LOCATION IN THE FIELD WITH DISTRICT'S REPRESENTATIVE					
$\langle TN5 \rangle$	PROVIDE SYSTIMAX SME-4-G2 WITH 12 LC CONNECTORS.					
$\langle TN6 \rangle$	FOR FIRE ALARM USE.					
	PROVIDE TEN (10) 1M LC-LC AND EIGHT (8) 3M LC-LC RED TERASPEED PATCH CORDS.					
	PROVIDE COMMSCOPE LAZRSPEED 700012354 OM3 MULTIMODE FIBER.					



SECTION 00 0110

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01 2300	3/17/2021	Alternates
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01 3100		Project Coordination
01 3119		Project Meetings
01 3200		Progress Schedules and Reports
01 3300		Submittal Procedures
01 4100		Regulatory Requirements
01 4110 01 4113		Regulatory Requirements – Hazardous Waste Additional Requirements for DSA Reviewed Projects
01 4200		References and Definitions
01 4200		Quality Control
01 4520		Concrete Moisture Testing
01 5000	2/1/2021	Temporary Facilities
01 5639	2/1/2021	Temporary Tree and Plant Protection
01 6100		Material and Equipment
01 6200	3/5/2021	Product Options and Substitutions
01 7000		Contract Closeout
01 7329		Cutting and Patching
01 7419		Construction Waste Management
01 7800		Project Record Documents
01 8113		Sustainable Certification Requirements
		LEED NC v4.2 Project Checklist
01 9113		General Commissioning Requirements
Division 02		Existing Conditions
02 3200		Geotechnical Investigations
Division 03		Concrete
03 1100		Concrete Forming
03 2000		Concrete Reinforcing
03 3000		Cast-In-Place Concrete
03 3500		Concrete Finishing
03 5415		Portland Cement Underlayment
Division 04		Maganni
Division 04		Masonry

04 2200		Reinforced Unit Masonry System
Division 05		Metals
05 1200 05 3000 05 4100 05 5000		Structural Steel Framing Metal Decking Structural Metal Stud Framing Metal Fabrications
Division 06		Wood, Plastics and Composites
06 2013 06 4100 06 6420	3/10/2021	Site Carpentry Architectural Wood Casework Reinforced Plastic Wall Paneling
Division 07		Thermal and Moisture Protection
07 2100 07 2200 07 2616 07 2620 07 4000 07 4110 07 6113 07 6200 07 6500 07 8400 07 9200	3/17/2021 3/17/2021 3/17/2021 3/17/2021	Thermal Insulation Roof Board Below-Grade Vapor Retarder Concrete Vapor Emission Control Cladding Support System Preformed Metal Wall Panels Standing Seam Sheet Metal Roofing Sheet Metal Flashing and Trim Flexible Flashing and Underlayment Firestopping Joint Sealants
Division 08		Openings
08 1113 08 1416 08 3100 08 3323 08 4113 08 4213 08 6223 08 7100 08 8000 08 9000	3/24/2021	Hollow Metal Doors and Frames Flush Wood Doors Access Doors and Panels Overhead Coiling Doors Aluminum-Framed Storefronts Aluminum-Framed Entrances Tubular Skylights Door Hardware Glazing Louvers and Vents
Division 09		Finishes
09 2900 09 3000 09 5100 09 6120 09 6500 09 6723 09 8200		Gypsum Board Tiling Acoustic Tile Ceilings Concrete Floor Sealer Resilient Tile Flooring Resinous Flooring Acoustical Insulation and Sealants

09 8319 09 9000		Acoustical Wall Panels Painting and Coating
Division 10		Specialties
10 1100 10 1400 10 2600 10 2813 10 4400 10 5113		Visual Display Surfaces Signage Wall Protection Toilet Accessories Fire Protection Specialties Metal Lockers
Division 11		Equipment
11 1630	3/10/2021	Lock Boxes
Division 12		Furnishings
12 2413 12 3661	3/10/2021	Roller Shades Solid Surfacing Countertops
Division 13		Special Construction
13 3413	3/10/2021	Greenhouse Systems
Division 14		Conveying Equipment
NOT USED		
Division 21		Fire Suppression
NOT USED	3/10/2021	
Division 22		Plumbing
22 0000	3/10/2021	Plumbing Plumbing Fixture Cut Sheets
Division 23		Heating Ventilating and Air Conditioning
23 0000		Heating, Ventilating and Air Conditioning Mechanical Equipment Cut Sheets
23 0500 23 0593 23 0923		General Mechanical Testing, Adjusting and Balancing for HVAC Direct Digital Controls System for HVAC
Division 26		Electrical

26 0000		Electrical Basic Requirements
		Electrical Cut Sheets
26 0500		Basic Electrical Materials and Methods
26 0519		Low-Voltage Electrical Power Conductors and Cables
26 0533		Raceways
26 0534		Boxes
26 0541		Underground Electrical Construction
26 0553		Identification for Electrical System
26 0600		Grounding and Bonding
26 0700		Electrical Hangers and Supports
26 0710		Electrical Supports and Seismic Restraints
26 0800		Commissioning of Electrical
26 0923		Occupancy and Vacancy Sensors
26 0924		Daylighting Controls
26 0925		Digital Lighting Controls
26 0926		Lighting Control Panelboard
26 1490		Lighting Control Devices
26 2413		Switchboards
26 2416		Panelboards
26 2716		Electrical Cabinets and Enclosures
26 2726		Wiring Devices
26 4200		Cathodic Protection
26 4760		Enclosed Switches and Circuit Breakers
26 5100		Lighting
Division 27		Communications
27 0500 27 0526 27 0529 27 0533 27 0536 27 0543 27 0548 27 0553 27 1000 27 1113 27 1116 27 1119 27 1123 27 1300 27 1400 27 1500 27 4116	3/10/2021	Common Work Results for Communications Systems Grounding and Bonding for Communications Systems Hangers and Supports for Communications Systems Conduits and Backboxes for Communications Systems Cable Trays for Communications Systems Underground Ducts and Raceways for Communications Systems Noise And Vibration Controls For Communications Systems Identification for Communications Systems Structured Cabling, Basic Materials and Methods Communication Entrance Protection Communications Cabinets, Racks, Frames and Enclosures Communications Termination Blocks and Patch Panels Communications Indoor Backbone Cabling Communications Outside Plant Backbone Cabling Communications Horizontal Cabling Integrated Audio-Video Systems And Equipment
27 0526 27 0529 27 0533 27 0536 27 0543 27 0548 27 0553 27 1000 27 1113 27 1116 27 1119 27 1123 27 1300 27 1400 27 1500	3/10/2021	Grounding and Bonding for Communications Systems Hangers and Supports for Communications Systems Conduits and Backboxes for Communications Systems Cable Trays for Communications Systems Underground Ducts and Raceways for Communications Systems Noise And Vibration Controls For Communications Systems Identification for Communications Systems Structured Cabling, Basic Materials and Methods Communication Entrance Protection Communications Cabinets, Racks, Frames and Enclosures Communications Termination Blocks and Patch Panels Communications Indoor Backbone Cabling Communications Outside Plant Backbone Cabling Communications Horizontal Cabling
27 0526 27 0529 27 0533 27 0536 27 0543 27 0548 27 0553 27 1000 27 1113 27 1116 27 1119 27 1123 27 1300 27 1400 27 1500 27 4116 Division 28	3/10/2021	Grounding and Bonding for Communications Systems Hangers and Supports for Communications Systems Conduits and Backboxes for Communications Systems Cable Trays for Communications Systems Underground Ducts and Raceways for Communications Systems Noise And Vibration Controls For Communications Systems Identification for Communications Systems Structured Cabling, Basic Materials and Methods Communication Entrance Protection Communications Cabinets, Racks, Frames and Enclosures Communications Termination Blocks and Patch Panels Communications Indoor Backbone Cabling Communications Indoor Backbone Cabling Communications Horizontal Cabling Integrated Audio-Video Systems And Equipment
27 0526 27 0529 27 0533 27 0536 27 0543 27 0548 27 0553 27 1000 27 1113 27 1116 27 1119 27 1123 27 1300 27 1400 27 1500 27 4116 Division 28 28 1300	3/10/2021	Grounding and Bonding for Communications Systems Hangers and Supports for Communications Systems Conduits and Backboxes for Communications Systems Cable Trays for Communications Systems Underground Ducts and Raceways for Communications Systems Noise And Vibration Controls For Communications Systems Identification for Communications Systems Structured Cabling, Basic Materials and Methods Communication Entrance Protection Communications Cabinets, Racks, Frames and Enclosures Communications Termination Blocks and Patch Panels Communications Cable Management Communications Indoor Backbone Cabling Communications Outside Plant Backbone Cabling Communications Horizontal Cabling Integrated Audio-Video Systems And Equipment Electronic Safety and Security Access Control and Intrusion Detection
27 0526 27 0529 27 0533 27 0536 27 0543 27 0548 27 0553 27 1000 27 1113 27 1116 27 1119 27 1123 27 1300 27 1400 27 1500 27 4116 Division 28	3/10/2021	Grounding and Bonding for Communications Systems Hangers and Supports for Communications Systems Conduits and Backboxes for Communications Systems Cable Trays for Communications Systems Underground Ducts and Raceways for Communications Systems Noise And Vibration Controls For Communications Systems Identification for Communications Systems Structured Cabling, Basic Materials and Methods Communication Entrance Protection Communications Cabinets, Racks, Frames and Enclosures Communications Termination Blocks and Patch Panels Communications Indoor Backbone Cabling Communications Indoor Backbone Cabling Communications Horizontal Cabling Integrated Audio-Video Systems And Equipment
27 0526 27 0529 27 0533 27 0536 27 0543 27 0548 27 0553 27 1000 27 1113 27 1116 27 1119 27 1123 27 1300 27 1400 27 1500 27 4116 Division 28 28 1300	3/10/2021	Grounding and Bonding for Communications Systems Hangers and Supports for Communications Systems Conduits and Backboxes for Communications Systems Cable Trays for Communications Systems Underground Ducts and Raceways for Communications Systems Noise And Vibration Controls For Communications Systems Identification for Communications Systems Structured Cabling, Basic Materials and Methods Communication Entrance Protection Communications Cabinets, Racks, Frames and Enclosures Communications Termination Blocks and Patch Panels Communications Cable Management Communications Indoor Backbone Cabling Communications Outside Plant Backbone Cabling Communications Horizontal Cabling Integrated Audio-Video Systems And Equipment Electronic Safety and Security Access Control and Intrusion Detection

31 1413 31 2000 31 2333		Topsoil Stripping and Stockpiling Earthwork and Grading Trenching, Backfilling and Compacting
Division 32		Exterior Improvements
32 1233 32 1313 32 1315 32 1443 32 1540 32 1723 32 3113 32 3116 32 3126 32 8100 32 8700 32 9110 32 9120 32 9300		Paving and Resurfacing Site Concrete Pervious Concrete Porous Unit Paving Crushed Stone Surfacing Pavement Marking Chain Link Fencing and Gates Welded Wire Fence and Gates Wire Fences and Gates Plant Support System Irrigation Site Furnishings Topsoil Import Topsoil Planting
Division 33		Site Utilities
33 1000 33 3000 33 4000 33 4300 33 4727		Water Systems Sanitary Sewer Storm Drainage Bio Treatment Soil Mix Bioretention
Appendices		
Appendix 1	02/01/2021	DSA 103-19: Listing of Structural Tests & Special Inspections

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SECTION 08 7100

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions of Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.
- B. This Section includes the following, but is not necessarily limited to:
 - 1. Door Hardware, including electric hardware.
 - 2. Storefront and Entrance door hardware.
 - 3. Gate Hardware.
 - 4. Digital keypad access control devices.
 - 5. Hold-open closers with smoke detectors.
 - 6. Wall or floor-mounted electromagnetic hold-open devices.
 - 7. Power supplies for electric hardware.
 - 8. Low-energy door operators plus sensors and actuators.
 - 9. Thresholds, gasketing and weather-stripping.
 - 10. Door silencers or mutes.
- C. Related Sections: The following sections are noted as containing requirements that relate to this Section, but may not be limited to this listing.
 - 1. Division 8: Section Steel Doors and Frames.
 - 2. Division 8: Section Wood Doors.
 - 3. Division 8: Section Aluminum Storefront
 - 4. Division 28: Section Fire/Life-Safety Systems & Security Access Systems.

1.3 REFERENCES (USE DATE OF STANDARD IN EFFECT AS OF BID DATE.)

- A. 2019 California Building Code, CCR, Title 24.
- B. BHMA Builders' Hardware Manufacturers Association
- C. CCR California Code of Regulations, Title 24, Part 2, California State Accessibility Standards.
- D. DHI Door and Hardware Institute
- E. NFPA National Fire Protection Association.
 - 1. NFPA 80 Fire Doors and Other Opening Protectives
 - 2. NFPA 105 Smoke and Draft Control Door Assemblies

- F. UL Underwriters Laboratories.
 - 1. UL 10C Fire Tests of Door Assemblies
 - 2. UL 305 Panic Hardware
- G. WHI Warnock Hersey Incorporated
- H. SDI Steel Door Institute

1.4 SUBMITTALS & SUBSTITUTIONS

- A. General: Submit in accordance with Conditions of the Contract and Division 1 Specification sections.
- B. Submit product data (catalog cuts) including manufacturers' technical product information for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
- C. Submit six (6) copies of schedule organized vertically into "Hardware Sets" with index of doors and headings, indicating complete designations of every item required for each door or opening. Include following information:
 - 1. Include a Cover Sheet with;
 - a. Job Name, location, telephone number.
 - b. Architects name, location and telephone number.
 - c. Contractors name, location, telephone number and job number.
 - d. Suppliers name, location, telephone number and job number.
 - e. Hardware consultant's name, location and telephone number.
 - 2. Job Index information included;
 - a. Numerical door number index including; door number, hardware heading number and page number.
 - b. Complete keying information (referred to DHI hand-book "Keying Systems and Nomenclature"). Provision should be made in the schedule to provide keying information when available; if it is not available at the time the preliminary schedule is submitted.
 - c. Manufacturers' names and abbreviations for all materials.
 - d. Explanation of abbreviations, symbols, and codes used in the schedule.
 - e. Mounting locations for hardware.
 - f. Clarification statements or questions.
 - g. Catalog cuts and manufacturer's technical data and instructions.

3. Vertical schedule format sample:

Headi	Heading Number 1 (Hardware group or set number – HW -1)				
			(a) 1 Single Door #1 - Exterior from Corridor 101	(b) 90°	(c) RH
			(d) 3' 0"x7' 0" x 1-3/4" x (e) 20 Minute (f) WD x HM		
(g) 1	(h)	(i) ea	(j) Hinges - (k) 5BB1HW 4.5 x 4.5 NRP (l) ½ TMS	(m) 626	(n) IVE
2	6AA	1 ea	Lockset - ND50PD x RHO x RH x 10-025 x JTMS	626	SCH

(a) - Single or pair with opening number and location. (b) - Degree of opening (c) - Hand of door(s) (d) - Door and frame dimensions and door thickness. (e) - Label requirements if any. (f) - Door by frame material. (g) - (Optional) Hardware item line #. (h) - Keyset Symbol. (i) - Quantity. (j) - Product description. (k) - Product Number. (l) - Fastenings and other pertinent information. (m) - Hardware finish codes per ANSI A156.18. (n) - Manufacture abbreviation.

- D. Make substitution requests in accordance with Division 1. Substitution requests must be made prior to bid date. Include product data and indicate benefit to the project. Furnish samples of any proposed substitution.
- E. Wiring Diagrams: Provide product data and wiring and riser diagrams for all electrical products listed in the Hardware Schedule portion of this section.
- F. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.
- G. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- H. Furnish as-built/as-installed schedule with close-out documents, including keying schedule and transcript, wiring/riser diagrams, manufacturers' installation and adjustment and maintenance information.
- I. Fire Door Assembly Testing: Submit a written record of each fire door assembly to the Owner to be made available to the Authority Having Jurisdiction (AHJ) for future building inspections.
- J. LEED Certification Points: Submit information and certifications necessary to achieve maximum points for LEED certification; coordinate and cooperate with Owner and Architect in providing information necessary for required LEED rating.

1.5 QUALITY ASSURANCE

- A. Obtain each type of hardware (latch and lock sets, hinges, closers, exit devices, etc.) from a single manufacturer.
- B. Supplier Qualifications: A recognized architectural door hardware supplier, with warehousing facilities in the project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this project and that employs an experienced architectural hardware consultant (AHC) who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation.
 - 1. Responsible for detailing, scheduling and ordering of finish hardware.
 - 2. Meet with Owner to finalize keying requirements and to obtain final instructions in writing.
 - 3. Stock parts for products supplied and are capable of repairing and replacing hardware items found defective within warranty periods.
- C. Hardware Installer: Company specializing in the installation of commercial door hardware with five years documented experience.

- D. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and tested by UL or Warnock Hersey for given type/size opening and degree of label. Provide proper latching hardware, door closers, approved-bearing hinges and seals whether listed in the Hardware Schedule or not.
 - 1. Where emergency exit devices are required on fire-rated doors, (with supplementary marking on doors' UL labels indicating "Fire Door to be Equipped with Fire Exit Hardware") provide UL label on exit devices indicating "Fire Exit Hardware".
- E. Exit Doors: Operable from inside with single motion without the use of a key or special knowledge or effort.
- F. Product packaging to be labelled in compliance with CA Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Coordinate delivery of packaged hardware items to the appropriate locations (shop or field) for installation.
- B. Hardware items shall be individually packaged in manufacturers' original containers, complete with proper fasteners. Clearly mark packages on outside to indicate contents and locations in hardware schedule and in work.
- C. Provide locked storage area for hardware, protect from moisture, sunlight, paint, chemicals, etc.
- D. Contractor to inventory door hardware jointly with representatives of hardware supplier and hardware installer until each all are satisfied that count is correct.

1.7 WARRANTY

- A. Provide warranties of respective manufacturers' regular terms of sale from day of final acceptance as follows:
 - 1. Locksets: "L" Series (3) years "ND" Ten (10) years.
 - 2. Electronic: One (1) year.
 - 3. Closers: Thirty (30) years –1260 twenty (20) years –Concealed High Security fifteen (15) years --except electronic closers shall be two (2) years.
 - 4. Exit devices: Three (3) years.
 - 5. All other hardware: Two (2) years.

1.8 MAINTENANCE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

1.9 PRE-INSTALLATION CONFERENCE

A. Convene a pre-installation conference at least one week prior to beginning work of this section.

- B. Attendance: Architect, Construction Manager, Contractor, Security Contractor, Hardware Supplier, Installer, Key Owner Personnel, and Project Inspector.
- C. Agenda: Review hardware schedule, products, installation procedures and coordination required with related work. Review Owner's keying standards.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

<u>ltem</u>	Manufacturer	Acceptable Substitutes
Hinges	lves	District Standard
Locks, Latches & Cylinders	Schlage	District Standard
Exit Devices	Von Duprin	District Standard
Closers	LCN	District Standard
Push, Pulls & Protection Plates	lves	Trimco, BBW, DCI
Flush Bolts	lves	Trimco, BBW, DCI
Dust Proof Strikes	lves	Trimco, BBW, DCI
Coordinators	lves	Trimco, BBW, DCI
Stops	lves	Trimco, BBW, DCI
Overhead Stops	Glynn-Johnson	Or Approved Equal
Thresholds	Zero	Pemko, National Guard
Seals & Bottoms	Zero	Pemko, National Guard

2.2 MATERIALS

- A. Hinges: Exterior out-swinging door butts shall be non-ferrous material and shall have stainless steel hinge pins. All doors to have non-rising pins.
 - 1. Hinges shall be sized in accordance with the following:
 - a. Height:
 - 1) Doors up to 42" wide: 4-1/2" inches.
 - 2) Doors 43" to 48" wide: 5 inches.
 - b. Width: Sufficient to clear frame and trim when door swings 180 degrees.
 - c. Number of Hinges: Furnish 3 hinges per leaf to 7'-5" in height. Add one for each additional 2 feet in height.
 - 2. Furnish non-removable pins (NRP) at all exterior out-swing doors and interior key lock doors with reverse bevels.

- B. Floor Closers: Shall be equipped with compression springs, cam and roller operating mechanism and a one piece spindle-cam for maximum operating performance and longevity.
- C. Pivots: High strength forgings and castings with precision bearings for smooth operation. Positive locking vertical adjustment mechanism to allow installer to precisely position the door and balance the load.
- D. Continuous Hinges: As manufactured by Ives, an Allegion Company. UL rated as required.
- E. Heavy Duty Cylindrical Locks and Latches: Schlage "ND" Series as scheduled with "Rhodes" design, fastened with through-bolts and threaded chassis hubs.
 - 1. Provide cylindrical locksets exceeding the ANSI/BHMA A156.2 Grade 1 performance standards for strength, security, and durability in the categories below:
 - a. Abusive Locked Lever Torque Test minimum 3,100 inch-pounds without gaining access
 - b. Offset lever pull minimum 1,600 foot pounds without gaining access
 - c. Vertical lever impact minimum 100 impacts without gaining access
 - 2. Cycle life tested to minimum 16 million cycles per ANSI/BHMA A156.2 Cycle Test with no visible lever sag or use of performance aids such as set screws or spacers
 - 3. UL 10C for 4'-0" x 10'-0" 3-hour fire door.
 - 4. Cylinders: Refer to "KEYING" article, herein.
 - 5. Provide solid steel anti-rotation through bolts and posts to control excessive rotation of lever.
 - 6. Provide lockset that allows lock function to be changed to over twenty other common functions by swapping easily accessible parts.
 - Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2 inch latch throw capable of UL listing of 3 hours on a 4' x 10' opening. Provide proper latch throw for UL listing at pairs.
 - 8. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
 - 9. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
 - 10. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
 - 11. Provide wired electrified options as scheduled in the hardware sets.
 - a. 12 through 24 volt DC operating capability, auto-detecting
 - b. Selectable EL (fail safe)/EU (fail secure) operating mode via switch on chassis
 - c. 0.230A (230mÅ) maximum current draw
 - d. 0.010A (10mA) holding current
 - e. Modular / "plug in" request to exit switch
 - 12. Lever Trim: Solid cast levers without plastic inserts, and wrought roses on both sides.
- F. Schlage "L" Series as scheduled with "06" Style Lever and "A" Style Rose.
 - Locksets to comply with ANSI A156.13, Series 1000, Operational Grade 1 and Security Grade 1 with all standard trims. Locksets shall also comply with UL10C Positive Pressure requirements
 - Lock case shall be manufactured with heavy 12 gauge steel with fully wrapped design. Lock cases with exposed edges are not acceptable. Lock case shall be multi-functional allowing transformation to a different function without opening lock case.
 - 3. Latchbolt shall have ³/₄" throw and be non-handed, field reversible without opening the lock case. Solid latchbolts and / or plastic anti-friction devices are not acceptable.
 - 4. The deadbolt, when used, shall be 1" throw stainless steel with a ³/₄" internal engagement when fully extended.

- 5. All trim shall be through-bolted with the spring cages supporting the trim attached to the lock cases to prevent torqueing.
- 6. Levers to have independent rotation in both directions. Exterior lever assembly to be one-piece design attached by threaded bushing. Interior lever assembly shall be attached by screwless shank
- 7. Thru-bolt lever assemblies through the door for positive interlock. Locks using a through the door spindle for attachment are not acceptable. Spindles shall be independent, designed to "break-away" at a maximum of 75psi torque.
- 8. Hand of lock chassis to be changeable by simply moving one screw from one side to the case to the other and pulling and reversing the latchbolt.
- 9. Cylinders to be secured by a cast stainless steel, dual retainer. Locks utilizing screws and / or stamped retainers are not acceptable.
- G. Deadlocks: Rotating cylinder trim rings of attack-resistant design. Mounting plates and actuator shields of plated cold-rolled steel. Mounting screws of ¼" diameter steel and protected by drill-resistant ball bearings. Steel alloy deadbolt with hardened steel roller. Strike alloy deadbolt with reinforcer and two 3" long screws. ANSI A156.5, 2001 Grade 1 certified.
- H. Exit devices: Von Duprin as scheduled.
 - 1. Provide certificate by independent testing laboratory that device has completed over 1,000,000 cycles and can still meet ANSI/BHMA A156.3 2001 standards.
 - 2. All internal parts shall be of cold-rolled steel with zinc dichromate coating.
 - 3. Mechanism case shall have an average thickness of .140".
 - 4. Compression spring engineering.
 - 5. Non-handed basic device design with center case interchangeable with all functions.
 - 6. All devices shall have quiet return fluid dampeners.
 - 7. All latchbolts shall be deadlocking with ³/₄" throw and have a self-lubricating coating to reduce friction and wear.
 - 8. Device shall bear UL label for fire and or panic as may be required.
 - 9. All surface strikes shall be roller type and utilize a plate underneath to prevent movement.
 - 10. Lever Trim: "Breakaway" design, forged brass or bronze escutcheon with a minimum of .130" thickness, match lockset lever design.
 - 11. Removable Mullions: Removable with single turn of building key. Securely reinstalled without need for key.
 - 12. Furnish glass bead kits for vision lites where required.
 - 13. All Exit Devices to be sex-bolted to the doors.
 - 14. Panic Hardware shall comply with CBC Section 11B.404.2.7 and shall be mounted between 34" and 44" above the finished floor surface.
 - a. Provide exit devices UL certified to meet maximum 5 pound requirements according to the California Building Code section 11B-309.4, and UL listed for Panic Exterior Fire Exit Hardware.
 - 15. Hardware (including panic hardware) shall not be provided with "Night Latch" (NL) function for any accessible doors or gates unless the following conditions are met per DSA Interpretation 10-08 DSA/AC (External), revised 4/28/09). Such conditions must be clearly demonstrated and indicated in the specification:
 - a. Such hardware has a 'dogging' feature.
 - b. It is dogged during the time the facility is open.
 - c. Such 'dogging' operation is performed only by employees as their job function (non-public use).
- I. Closers: LCN as scheduled. Place closers inside building, stairs, room, etc.
 - 1. Door closer cylinders shall be of high strength cast iron construction with double heat treated pinion shaft to provide low wear operating capabilities of internal parts throughout

the life of the installation. All door closers shall be tested to ANSI/BHMA A156.4 test requirements by a BHMA certified testing laboratory. A written certification showing successful completion of a minimum of 10,000,000 cycles must be provided.

- 2. All door closers shall be fully hydraulic and have full rack and pinion action with a shaft diameter of a minimum of 11/16 inch and piston diameter of 1 inch to ensure longevity and durability under all closer applications.
- 3. All parallel arm closers shall incorporate one piece solid forged steel arms with bronze bushings. 1-9/16" steel stud shoulder bolts, shall be incorporated in regular arms, hold-open arms, arms with hold open and stop built in. All other closers to have forged steel main arms for strength, durability, and aesthetics for versatility of trim accommodation, high strength and long life.
- 4. All parallel arm closers so detailed shall provide advanced backcheck for doors subject to severe abuse or extreme wind conditions. This advanced backcheck shall be located to begin cushioning the opening swing of the door at approximately 45 degrees. The intensity of the backcheck shall be fully adjustable by tamper resistant non-critical screw valve.
- 5. Closers shall be installed to permit doors to swing 180 degrees.
- All closers shall utilize a stable fluid withstanding temperature range of 120 degrees F. to -30 degrees F. without requiring seasonal adjustment of closer speed to properly close the door.
- 7. Provide the manufactures drop plates, brackets and spacers as required at narrow head rails and special frame conditions. NO wood plates or spacers will be allowed.
- 8. Maximum effort to operate closers shall not exceed 5 lbs., such pull or push effort being applied at right angles to hinged doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the closer may be increased but shall not exceed 15 lbs. when specifically approved by fire marshal. All closers shall be adjusted to operate with the minimum amount of opening force and still close and latch the door. These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. Per 11B-404.2.8.1, door shall take at least 5 seconds to move from an open position of 90 degrees to a position of 12 degrees from the latch jamb.
- J. Flush Bolts & Dust Proof Strikes: Automatic Flush Bolts shall be of the low operating force design. Utilize the top bolt only model for interior doors where applicable and as permitted by testing procedures.
 - 1. Manual flush bolts only permitted on storage or mechanical openings as scheduled.
 - 2. Provide dust proof strikes at openings using bottom bolts.
- K. Door Stops:
 - 1. Unless otherwise noted in Hardware Sets, provide floor type with appropriate fasteners. Where wall type cannot be used, provide floor type. If neither can be used, provide overhead type.
 - 2. Do not install floor stops more than four (4) inches from the face of the wall or partition (CBC Section 11B-307).
 - 3. Overhead stops shall be made of stainless steel and non-plastic mechanisms and finished metal end caps. Field-changeable hold-open, friction and stop-only functions.
- L. Protection Plates: Fabricate either kick, armor, or mop plates with four beveled edges. Provide kick plates 10" high and 2" LDW. Sizes of armor and mop plates shall be listed in the Hardware Schedule. Furnish with machine or wood screws of bronze or stainless to match other hardware.
- M. Thresholds: As Scheduled and per details.

- 1. Thresholds shall not exceed 1/2" in height, with a beveled surface of 1:2 maximum slope.
- 2. Set thresholds in a full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements in Division 7 "Thermal and Moisture Protection".
- 3. Use ¼" fasteners, red-head flat-head sleeve anchors (SS/FHSL).
- 4. Thresholds shall comply with CBC Section 11B-404.2.5.
- N. Seals: Provide silicone gasket at all rated and exterior doors.
 - Fire-rated Doors, Resilient Seals: UL10C Classified complies with NFPA 80 & NFPA 252. Coordinate with selected door manufacturers' and selected frame manufacturers' requirements.
 - Fire-rated Doors, Intumescent Seals: Furnished by selected door manufacturer. Furnish fire-labeled opening assembly complete and in full compliance with UL10C Classified complies with NFPA 80 & NFPA 252. Where required, intumescent seals vary in requirement by door type and door manufacture -- careful coordination required.
 - 3. Smoke & Draft Control Doors, Provide UL10C Classified complies with NFPA 80 & NFPA 252 for use on "S" labeled Positive Pressure door assemblies.
- O. Door Shoes & Door Top Caps: Provide door shoes at all exterior wood doors and top caps at all exterior out-swing doors.
- P. Silencers: Furnish silencers for interior hollow metal frames, 3 for single doors, 2 for pairs of doors. Omit where sound or light seals occurs, or for fire-resistive-rated door assemblies.

2.3 KEYING INSTRUCTIONS PER THE DISTRICT

- A. Owner will provide the Facilities Team (PM/CM) Construction Cores and keys required for the project. PM/CM will provide to Maintenance & Operations the number of construction cores required and number of keys requested by the contractor.
- B. Owner will purchase all permanent cores & keys required for new buildings.
- C. PM/CM will provide the required list of cores needed for the project to the Maintenance & Operations maintenance supervisor for ordering.
- D. Owner will provide the Buildings Permanent Cores to the Facilities Team (PM/CM) for turn over to the Contractors Superintendent for installation.
- E. Contractor will return to the Facilities Team (PM/CM) all construction cores at one time. PM/CM will verify all construction cores are accounted for and number of keys issued are returned prior to returning to Maintenance & Operations.
- F. Owner will cut and issue all required building permanent keys.

2.4 FINISHES

- A. Generally to be satin chrome US26D (626 on bronze and 652 on steel) unless otherwise noted.
- B. Furnish push plates, pull plates and kick or armor plates in satin stainless steel US32D (630) unless otherwise noted.
- C. Door closers shall be powder-coated to match other hardware, unless otherwise noted.

D. Aluminum items to be finished anodized aluminum except thresholds which can be furnished as standard mill finish.

2.5 FASTENERS

- A. Screws for strikes, face plates and similar items shall be flat head, countersunk type, provide machine screws for metal and standard wood screws for wood.
- B. Screws for butt hinges shall be flathead, countersunk, full-thread type.
- C. Fastening of closer bases or closer shoes to doors shall be by means of sex bolts and spray painted to match closer finish.
- D. Provide expansion anchors for attaching hardware items to concrete or masonry.
- E. All exposed fasteners shall have a phillips head.
- F. Finish of exposed screws to match surface finish of hardware or other adjacent work.
- G. All Exit Devices and Lock Protectors shall be fastened to the door by the means of sex bolts or through bolts.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify that doors and frames are square and plumb and ready to receive work and dimensions are as instructed by the manufacturer.
- B. Beginning of installation means acceptance of existing conditions.
- C. Fire-Rated Door Assembly Inspection: Upon completion of the installation, all fire door assemblies shall be inspected to confirm proper operation of the closing device and latching device and that only the manufacturer's furnished fasteners are used for installation and that it meets all criteria of a fire door assembly per NFPA 80 (Standard for Fire Doors and Other Opening Protectives) 2016 Edition. A written record shall be maintained and transmitted to the Owner to be made available to the Authority Having Jurisdiction (AHJ). The inspection of the swinging fire doors shall be performed by a certified FDAI (Fire Door Assembly Inspector) with knowledge and understanding of the operating components of the type of door being subjected to the inspection. The record shall list each fire door assembly throughout the project and include each door number, an itemized list of hardware set components at each door opening, and each door location in the facility.

3.2 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and requirements of DHI.
- B. Use the templates provided by hardware item manufacturer.
- C. Mounting heights for hardware shall be as recommended by the Door and Hardware Institute. Operating hardware will to be located between 34" and 44" AFF.
- D. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

- E. Drill and countersink units that are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- F. Set thresholds for exterior doors in full bed of butyl-rubber sealant.
- G. If hand of door is changed during construction, make necessary changes in hardware at no additional cost.
- H. Hardware Installer shall coordinate with security contractor to route cable to connect electrified locks, panic hardware and fire exit hardware to power transfers or electric hinges at the time these items are installed so as to avoid disassembly and reinstallation of hardware.
- I. Hardware Installer shall also be present with the security contractor when the power is turned on for the testing of the electronic hardware applications. Installer shall make adjustments to solenoids, latches, vertical rods and closers to insure proper and secure operation.
- J. All wiring for electro-mechanical hardware mounted on the door shall be connected through the power transfer and terminated in the interface junction box specified for in the Electrical Section.
- K. Conductors shall be minimum 18 gage stranded, multicolored. A minimum 12 in. loop of conductors shall be coiled in the interface junction box. Each conductor shall be permanently marked with its function.
- L. If a power supply is specified in the hardware sets, all conductors shall be terminated in the power supply. Make all connections required for proper operation between the power supply and the electro-mechanical hardware. Provide the proper size conductors as specified in the manufacturer's technical documentation.

3.3 ADJUST AND CLEAN

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.
- B. Clean adjacent surface soiled by hardware installation.
- C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy, return to that work area and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- D. Instruct Owner's Personnel in proper adjustment and maintenance of hardware finishes, during the final adjustment of hardware.
- E. Continued Maintenance Service: Approximately six months after the completion of the project, the Contractor accompanied by the Architectural Hardware Consultant, shall return to the project and re-adjust every item of hardware to restore proper functions of doors and hardware. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures. Replace hardware items which have deteriorated or failed due to faulty design, materials or installation of hardware units. Prepare a written report of current and predictable problems (of substantial nature) in the performance of the hardware.

3.4 HARDWARE LOCATIONS

A. Conform to CCR, Title 24, Part 2; and ADAAG; and the drawings for access-compliant positioning requirements for the disabled.

3.5 FIELD QUALITY CONTROL

A. Contractor is responsible for providing the services of an Architectural Hardware Consultant (AHC) or a proprietary product technician to inspect installation and certify that hardware and its installation have been furnished and installed in accordance with manufacturers' instructions and as specified herein.

3.6 SCHEDULE

- A. The items listed in the following schedule shall conform to the requirements of the foregoing specifications.
- B. While the hardware schedule is intended to cover all doors, and other movable parts of the building, and establish type and standard of quality, the contractor is responsible for examining the Plans and Specifications and furnishing proper hardware for all openings whether listed or not. If there are any omissions in hardware groups in regard to regular doors they shall be called to the attention of the Architect prior to bid opening for instruction; otherwise, list will be considered Complete. No extras will be allowed for omissions.
- C. The Door Schedule on the Drawings indicates which hardware set is used with each door.

Manufacturers Abbreviations (Mfr.)

GLY	=	Glynn-Johnson Corporation	Overhead Door Stops
IVE	=	lves	Hinges, Pivots, Bolts, Coordinators, Dust Proof
			Strikes, Push Pull & Kick Plates, Door Stops &
			Silencers
LCN	=	LCN	Door Closers
SCE	=	Schlage Electronics	Electronic Door Components
SCH	=	Schlage Lock Company	Locks, Latches & Cylinders
VON	=	Von Duprin	Exit Devices
ZER	=	Zero International	Thresholds, Gasketing & Weather-stripping

HARDWARE GROUP NO. 01 - EXTERIOR / ACCESS CONTROL A101

QTY 3 1	EA EA	DESCRIPTION HINGE VANDL STOREROOM LOCK	CATALOG NUMBER 5BB1HW 4.5 X 4.5 NRP ND96JD RHO	FINISH 630 626	MFR IVE SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
1	EA	ELECTRIC STRIKE	6211AL FSE EB 12/16/24/28 VAC/VDC	630	VON
1	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBWMS	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP/HOLDER	FS43	626	IVE
1	EA	GASKETING	188SBK PSA	BK	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	PER DETAIL		
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC		VON
1	EA	CARD READER	CARD READER - WORK OF DIVISION 28		

HARDWARE GROUP NO. 02 - INTERIOR / LACTATION ROOM A101A

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE W/SIM RETRACT	L9056J 06A L583-363 L283-722	626	SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS401/402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 03 - EXTERIOR / PANIC HARDWARE / ACCESS CONTROL A102

QTY 3	EA	DESCRIPTION HINGE	CATALOG NUMBER 5BB1HW 4.5 X 4.5 NRP	FINISH 630	MFR IVE
1	EA	POWER TRANSFER	EPT10 CON	689	VON
1	EA	ELEC PANIC HARDWARE	LD-RX-PA-AX-99-L-E996-06-FSE- CON 24 VDC	626	VON
1	EA	RIM HOUSING	20-079 (LESS CORE)	626	SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
1	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBWMS	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP/HOLDER	FS43	626	IVE
1	EA	GASKETING	188SBK PSA	BK	ZER
1	EA	DOOR SWEEP	39A	А	ZER
1	EA	THRESHOLD	PER DETAIL		
1	EA	WIRE HARNESS	CON-XX (LENGTH AS REQUIRED)		SCH
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC		VON
1	EA	CARD READER	CARD READER - WORK OF DIVISION 28		

HARDWARE GROUP NO. 04 - EXTERIOR / ROLL-UP DOOR A102A

QTY	DESCRIPTION	CATALOG NUMBER	FINISH MFR
1		HARDWARE BY DOOR	
		MANUFACTURER	

HARDWARE GROUP NO. 05 - INTERIOR / CLASSROOM A102B

QTY 3 1 2	EA EA EA	DESCRIPTION HINGE VANDL CLASSROOM SEC PERMANENT CORE	CATALOG NUMBER 5BB1HW 4.5 X 4.5 NRP ND95JD RHO XN12-035 PERMANENT CORE PROVIDED	FINISH 652 626 626	MFR IVE SCH SCH
1	EA	SURFACE CLOSER	BY OWNER 4040XP REG OR PA AS REQ TBWMS	689	LCN
1 1 1	EA EA EA	KICK PLATE FLOOR STOP GASKETING	8400 10" X 2" LDW B-CS FS436 188SBK PSA	630 626 BK	IVE IVE ZER

HARDWARE GROUP NO. 06 - EXTERIOR PAIR / PANIC HARDWARE A103

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	REMOVABLE MULLION	KR4954 STAB	689	VON
1	EA	PANIC HARDWARE	CDSI-PA-AX-99-L-06	626	VON
1	EA	PANIC HARDWARE	CDSI-PA-AX-99-L-DT-06	626	VON
1	EA	RIM HOUSING	20-079 (LESS CORE)	626	SCH
1	EA	MORTISE CYLINDER	26-094 (LESS CORE)	626	SCH
2	EA	MORTISE CYLINDER	26-094 XQ11-948 (LESS CORE)	626	SCH
4	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
2	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBWMS	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	FLOOR STOP/HOLDER	FS43	626	IVE
1	EA	GASKETING	188SBK PSA	BK	ZER
1	EA	MULLION SEAL	8780NBK PSA	BK	ZER
2	EA	DOOR SWEEP	39A	А	ZER
1	EA	THRESHOLD	PER DETAIL		
2	EA	DOOR CONTACT	679-05HM	BLK	SCE

HARDWARE GROUP NO. 07 - INTERIOR / CUSTODIAL A103A

QTY 3 EA 1 EA		CATALOG NUMBER 5BB1 4.5 X 4.5 ND96JD RHO	FINISH 652 626	MFR IVE SCH
1 EA		PERMANENT CORE PROVIDED BY OWNER	626	SCH
1 EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBWMS	689	LCN
1 EA	OH STOP	100S	630	GLY
1 EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
3 EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 08 - EXTERIOR / UNISEX RESTROOM

A104 A105

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	OFFICE W/SIM RETRACT	L9056T 06A L583-363 L283-722	626	SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
1	EA	LOCK GUARD	LG12	630	IVE
1	EA	OH STOP	100S	630	GLY
1	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBWMS	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	GASKETING	188SBK PSA	BK	ZER
1	EA	DOOR SWEEP	39A	А	ZER
1	EA	THRESHOLD	PER DETAIL		
1	EA	DOOR CONTACT	679-05HM	BLK	SCE

HARDWARE GROUP NO. 09 - EXTERIOR PAIR / MECH

A106

QTY 6 2 1 1	EA EA EA EA	DESCRIPTION HINGE MANUAL FLUSH BOLT DUST PROOF STRIKE VANDL STOREROOM LOCK	CATALOG NUMBER 5BB1HW 4.5 X 4.5 NRP FB458 DP1 ND96JD RHO	FINISH 630 626 626 626	MFR IVE IVE IVE SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	FLOOR STOP/HOLDER	FS43	626	IVE
1	EA	GASKETING	188SBK PSA	BK	ZER
2	EA	DOOR SWEEP	39A	А	ZER
1	EA	ASTRAGAL	43SP	SP	ZER
1	EA	THRESHOLD	PER DETAIL		
2	EA	DOOR CONTACT	679-05HM	BLK	SCE

HARDWARE GROUP NO. 10 - EXTERIOR / ELECTRICAL / PANIC HARDWARE A107

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	PANIC HARDWARE	PA-AX-99-L-06	626	VON
1	EA	RIM HOUSING	20-079 (LESS CORE)	626	SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
1	EA	SURFACE CLOSER	4040XP REG OR PA AS REQ TBWMS	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP/HOLDER	FS43	626	IVE
1	EA	GASKETING	188SBK PSA	BK	ZER
1	EA	DOOR SWEEP	39A	А	ZER
1	EA	THRESHOLD	PER DETAIL		
1	EA	DOOR CONTACT	679-05HM	BLK	SCE

HARDWARE GROUP NO. 11 - INTERIOR / IDF / ACCESS CONTROL A107A

QTY 3 1	EA EA	DESCRIPTION HINGE VANDL STOREROOM LOCK	CATALOG NUMBER 5BB1HW 4.5 X 4.5 NRP ND96JD RHO	FINISH 652 626	MFR IVE SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
1	EA	ELECTRIC STRIKE	6211 FSE 12/16/24/28 VAC/VDC	630	VON
1	EA	FLOOR STOP	FS436	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC		VON
	EA	CARD READER	CARD READER - WORK OF DIVISION 28		

HARDWARE GROUP NO. 12 - EXTERIOR PAIR / GREENHOUSE B101

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	224XY	628	IVE
1	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	DUST PROOF STRIKE	DP1	626	IVE
1	EA	VANDL STOREROOM LOCK	ND96JD RHO	626	SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	FLOOR STOP/HOLDER	FS43	626	IVE
1	EA	GASKETING	188SBK PSA	BK	ZER
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	ASTRAGAL	43SP	SP	ZER
1	EA	THRESHOLD	PER DETAIL		

HARDWARE GROUP NO. 13 - EXTERIOR / SLIDING B101A

QTY 1		DESCRIPTION	CATALOG NUMBER HARDWARE BY DOOR MANUFACTURER	FINISH	MFR
HARDV D101	VARE G	GROUP NO. 14 - EXTERIOR P	AIR / STORAGE		
QTY 6 1 1 1	EA EA EA EA	DESCRIPTION HINGE MANUAL FLUSH BOLT DUST PROOF STRIKE VANDL STOREROOM LOCK	CATALOG NUMBER 5BB1HW 4.5 X 4.5 NRP FB458 DP1 ND96JD RHO	FINISH 630 626 626 626	MFR IVE IVE IVE SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
	EA EA EA VARE G	KICK PLATE GASKETING ASTRAGAL GROUP NO. 15 - SGL GATE / I	8400 30" X 2" LDW B-CS 188SBK PSA 43SP	630 BK SP	IVE ZER ZER
G1 QTY 1 1	EA	DESCRIPTION PASSAGE SET	CATALOG NUMBER ND10S RHO BALANCE OF HARDWARE BY GATE MANUFACTURER	FINISH 613	MFR SCH
HARDV G2	VARE G	GROUP NO. 16 - PAIR GATES G3			
QTY 1	EA	DESCRIPTION VANDL STOREROOM LOCK	CATALOG NUMBER ND96JD RHO	FINISH 626	MFR SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
2 1	EA	SELF-CLOSING HINGE	MAMMOTH 180 BALANCE OF HARDWARE BY GATE MANUFACTURER	SLVR	LOX

HARDWARE GROUP NO. 17 - SGL GATE G4

QTY 1	EA	DESCRIPTION VANDL STOREROOM LOCK	CATALOG NUMBER ND96JD RHO	FINISH 626	MFR SCH
1	EA	PERMANENT CORE	PERMANENT CORE PROVIDED BY OWNER	626	SCH
1 1	EA	SELF-CLOSING HINGE	MAMMOTH 180 BALANCE OF HARDWARE BY GATE MANUFACTURER	SLVR	LOX
HARD\ G5	WARE G	ROUP NO. 18 - SLIDING GAT	Ē		
QTY 1		DESCRIPTION	CATALOG NUMBER HARDWARE BY GATE MANUFACTURER	FINISH	MFR
HARD\ G6	WARE G	ROUP NO. 19 - VEHICLE GA G7	TES		
QTY 1		DESCRIPTION	CATALOG NUMBER HARDWARE BY GATE MANUFACTURER	FINISH	MFR

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