CHABOT-LAS POSITAS
COMMUNITY COLLEGE DISTRICT
PURCHASING DEPARTMENT

March 17, 2021

Addendum No. 3

INVITATION TO BID No.: B20/21-08

Agriculture Science, Horticulture Facility Project

To: All Prospective Bidders

This Addendum One (1) 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. **Division 00 Procurement and Contracting Requirements, Instructions For Bidders –** Replace in its entirety Item No.12.3 to read as follows:

   12.3 Selection of Alternate Bid Items. The selection of Alternate Bid Items for inclusion in the scope of the Work in Contract to be awarded at the discretion of the District.

2. **Division 00 Procurement and Contracting Requirements, Bid Proposal -** Replace in its entirety bid proposal section.

3. **Division 01 General Requirements, Specification Section 01 2600 Contract Modification Procedures –** Replace in its entirety Sample Only Cost Breakdown Form for Contract Modification, Sheet 1 of 3.

4. **Specification Section 00 0110 Table of Contents** - Updated revision dates where applicable.
5. **Specification Section 01 2300 Alternates** – Specification section added in its entirety along with Exhibit for Alternate No. 1 – 07 5419 PVC Membrane Roofing.
6. **Specification Section 07 2100 Thermal Insulation –** Define location of blanket insulation under Section 2.1, noted in parentheses to read as follow:

2.1 BLANKET INSULATION

B. Kraft-Faced Miner-Fiber Blankets (exterior and wet interior walls):

C. Unfaced Miner-Fiber Blankets (interior walls w/ no moisture exposure)

7. **Specification Section 07 2100 Thermal Insulation –** Add Item D under Section 2.1 Blanket Insulation to read as follows:

2.1 BLANKET INSULATION

D. Polypropylene-Faced Miner-Fiber Blankets (exposed ceiling locations): Lightweight fiberglass with white reflective PSK interior facing, formaldehyde free conforming to ASTM C665 Type II, Class C Category 1; "PSK Faced" by Owens Corning, "Formaldehyde-free" PSK Faced insulation by Johns Manville, "CertaPro" PSK Faced Thermal Batts by CertainTeed Corporation, or equal.

1. Fire Resistive Requirements: ASTM E84.

a. Smoke Developed: 50 or less.

b. Flame Spread: 25 or less.

2. Thickness: As shown or noted on the Drawings.

3. Extended Flange for overlapping seams.

8. **Specification Section 07 4100 Cladding System Support** – Revised Section 2.3 and Section 3.3 to read as follows:

2.3 CLADDING SUPPORT SYSTEM

A. Cladding Support System:

1. Pre-engineered to support weight of rigid insulation, cladding material, and resist wind loads.

2. Slotted steel material to minimize thermal conductivity, and 1" thermal tape preinstalled on each piece for an integrated continuous thermal break.

a. Steel material and coating: ASTM A1003/A1003M Structural Grade 50 (340) Type H, ST50H (ST340H): 50ksi (340MPa) minimum yield strength, 65ksi(450MPa) minimum tensile strength, 54mil minimum thickness (16-gauge, 0.0566" design thickness) or 33mil minimum thickness (20-gauge, 0.0346" design thickness) with ASTM A653/A653M G90 (Z275) hot dipped galvanized coating.

b. Dimensions: As specified on Architectural Drawings for 1 inch of continuous rigid insulation layer per design.

3. System Components:

a. J- Track used in conjunction with Corner Angle to secure rigid foam insulation at top and bottom of wall.

b. Z-Track used in conjunction with J-Track and Corner Angle to secure rigid foam insulation. Installed every 24" of rigid foam insulation.

3.3 INSTALLATION

A.3. Install end and corner closures as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

9. **Specification Section 07 4110 Preformed Metal Wall Panels** – Revised Sections 1.2, 2.2 and 2.4 to read as follows:

1.2 SUBMITTALS

D. Sustainable Design Submittals: Information necessary to establish and document compliance with USGBC LEED v4 Silver certification and the California Green Building Standards Code (CALGreen) goals for this Project.

2.2 MATERIALS

A. PANELS; 3. Color: a. Refer to Exterior Elevation Legend on drawings.

2.4 CLIPS AND FASTENERS

A. Provide sub-girt system designed to allow panels to thermally expand and contract, and/or allow air movement (standoff) between the substrate and metal panel. Sub-girts will run horizontally to attach

panels vertically & will run vertically to attach panels horizontally.

B. Z-Tracks: Cont.16 gauge galvanized steel track installed every 24" o.c. between rigid foam insulation boards; See Section 07 4100 "Cladding Support System".

10. **Specification Section 07 6113 Standing Seam Sheet Metal Roofing** – Revised Sections 1.3, 1.7, 2.2 and 2.4 to read as follows:

1.3 ACTION SUBMITTALS, E. Sustainable Design Submittals: Information necessary to establish and document compliance with USGBC LEED v4 Silver certification and the California Green Building Standards Code (CALGreen) goals for this Project

1.7 GUARANTEE AND WARRANTY, B. Manufacturer:
1. **System: Furnish Owner with manufacturer's 20-year near "No Dollar Limit" watertight warranty.**

2.2 METAL ROOFING, A. Manufactured System:
1. **Seam Height: Minimum 2 inch**

2.2 METAL ROOFING, B. Acceptable Manufacturers:
1. **AEP Span Span-Lok hp**
2. **Imetco Series 300**
3. **Metal Sales Magna-Loc 180**
4. **Taylor Metal MS-200**

2.4 FACTORY APPLIED PAINT FINISH, A. Finish Coat on Exposed Surfaces:
1. **Colors: Zincalume Plus**

11. **Sheet C200 – Demolition Plan:** Adjust approximate areas for paving demolition.
12. **Sheet C201 – Demolition Plan:** Adjust approximate areas for paving demolition.
13. **Sheet C300 – Site and Horizontal Control Plan:** Adjust background to reflect revised area of paving repair.
14. **Sheet C400 – Grading and Drainage Plan:** Adjust area of paving repair.
15. **Sheet C401 – Grading and Drainage Plan:** Add additional area of paving repair.
16. **Sheet C500 – Utility Plan:** Adjust joint trench and extend to future project site.
17. **Sheet C501 – Utility Plan:** Adjust joint trench and extend to future project site
18. **Sheet AA141 - Reflected Ceiling Plan:** Removed irrelevant dimensions.

19. **Sheet AA141 - Reflected Ceiling Plan:** Orient light fixtures in Elec Room and IDF Room to match Electrical Lighting Plan.
20. **Sheet AA141 - Reflected Ceiling Plan:** Graphically updated plan to depict window location and remove roller shade at Lactation Room.
21. **Sheet AA141 - Reflected Ceiling Plan:** Graphically updated plan to depict return register in soffit.
22. **Sheet AA141 - Reflected Ceiling Plan:** Graphically depicted exposed metal deck where occurs and updated legend to match.
23. **Sheet AA141 - Reflected Ceiling Plan:** Depicted room labels and numbers.
24. **Sheet AA202 - Exterior Elevations:** Corrected B.O. Header elevation on Elevations 1 and 2.
25. **Sheet AA301 – Building Sections:** Graphically updated depiction of metal decking at overhead canopy.
26. **Sheet AA302 – Building Sections:** Graphically updated depiction of metal decking at overhead canopy.
27. **Sheet AA303 – Building Sections:** Graphically updated depiction of metal decking at overhead canopy.
28. **Sheet A920: Wall Types:** Change terminology from Z-Clip to Z-Track at Wall Types A & B and Detail 4.
29. **Sheet A921: Wall Details**: Change terminology from Z-Clip to Z-Track and revised track spacing from 48” o.c. to 24” o.c. at Details 1, 2, 4 and 7.
30. **Sheet A921: Wall Details:** Depicted metal stud blocking at Detail 3.
31. **Sheet A932: Canopy Details:** Change terminology from Z-Clip to Z-Track and adjusted profile of head flashing at Detail 6.
32. **Sheet A960: Opening Details:** Change terminology from Z-Clip to Z-Track at Details 1,3, 4, 5, 8, 9 and 12.
33. **Sheet A960 - Opening Details:** Graphically removed overlapping image.
34. **Sheet A960: Opening Details:** Adjust vertical alignment of roller shade on Details 4 & 7.
35. **Sheet A970 – Section Details**: Update depiction of saddle flashing at Detail 5.
36. **Sheet A970 – Section Details:** Change terminology from Z-Clip to Z-Track at Details 5, 11 and 12.
37. **Sheet A970 – Section Details:** Update fascia metal at Details 11 and 12.
38. **Sheet A970 – Section Details:** Adjust vertical alignment of roller shade on Detail 5.
39. **Sheet A971: Section Details:** Change terminology from Z-Clip to Z-Track and revised spacing from 48” o.c. to 24” o.c. at Details 2 and 9.
40. **Sheet E001 - Schedules:** Update Light Fixture Schedule.
41. **Sheet E001 – Schedules:** Added Greenhouse equipment to Miscellaneous Equipment Schedule.
42. **Sheet E001 – Schedules:** Revised pullbox diagrams.

43. **Sheet E101 - Electrical Site Plan:** Revise Overall Site Plan 1 and Enlarged Site Plan 2 to show UG conduit extensions and pullboxes; update Keynotes and Detail 3 Pullbox Layout Plan.
44. **Sheet EA131 – Classroom Building Floor Plan Security:** Delete keynotes and add detail references.
45. **Sheet EA141 – Classroom Building Floor Plan Lighting:** Graphically update light fixture designations in Electrical and IDF Rooms.
46. **Sheet EA141 – Classroom Building Floor Plan Lighting:** Adjust height of fixture on Keynote 6 to +10'-3" A.F.F.
47. **Sheet EB121 – Greenhouse Building Floor Plan:** Depict circuiting and J-boxes for equipment power as referenced in Bid Addendum 2 RFI response.
48. **Sheet E400 – Single Line Diagram:** Update Panel "PB" designations.
49. **Sheet E400 – Single Line Diagram:** Revise Feeder Schedule
50. **Sheet F101 – Fire Alarm Site Plan:** Add UG conduit extensions to future adjacent project site.
51. **Sheet F101 – Fire Alarm Site Plan:** Change single-mode fiber options to multi-mode fiber.

B. RFI QUESTIONS AND RESPONSES:

Question No. 1: Drawing EA131 shows door latches at the exterior doors. It isn't detailed very clearly but we assume that based on the details on E501 it is intended that the electrical connected to the door latches is for intrusion detection. Please confirm this is correct, and provide a full specification for spec section 28 1300 including preferred manufacturer, products to be used, etc.
RESPONSE: Drawing EA131 is intended for intrusion and access control. Clarifications added to reference details shown on E501 to address the requirements and intended design of the system. See door details with noted devices on the elevations on drawing E501. Please see Specs 28 1300 as part of the bid package, with the owner preferred manufacturers spelled out.

Question No. 2: Please advise what the existing security and CCTV system are that we need to tie into.
RESPONSE: The security management and video surveillance systems that this project will tie into are still in the process of being selected. The systems will be S2 Netbox/NetVRx, Lenel OnGuard/Milestone, or Genetec Synergris/Omnicast.

Question No. 3:
a. What are the current Security Systems we need to integrate with?

b. Should I not include licenses or head end equipment for all security systems being installed?
c. Is this section only for logging in the access control system?
d. If complete intrusion detection system is required, please provide referred manufacturer.

RESPONSE:
a. The security management and video surveillance systems that this project will tie into are still in the process of being selected. The systems will be S2 Netbox/NetVRx, Lenel OnGuard/Milestone, or Genetec Synergris/Omnicast.
b. The campus security system servers and software will be brought on line during construction of this project. All required access control and video channel licenses necessary to support this project are included in the campus wide system. Therefore, there are no additional licenses required by this project.
c. Yes.
d. A separate building intrusion detection system is not required.

C. ATTACHMENTS:

Drawings (25 sheet):

Civil:

C200	Demolition Plan
C201	Demolition Plan
C300	Site and Horizontal Control Plan
C400	Grading and Drainage Plan
C401	Grading and Drainage Plan
C500	Utility Plan
C501	Utility Plan

Architectural:

AA141	Reflected Ceiling Plan
AA202	Exterior Elevations
AA301	Building Sections
AA302	Building Sections
AA303	Building Sections
A920	Wall Types
A921	Wall Details
A932	Canopy Details
A960	Opening Details
A970	Section Details
A971	Section Details

Electrical:

E001	Schedules
E101	Electrical Site Plan
EA131	Classroom Building Floor Plan Security
EA141	Classroom Building Floor Plan Lighting
EB121	Greenhouse Building Floor Plan
E400	Single Line Diagram

Fire Alarm:

Sheet F101	Fire Alarm Site Plan

Specification Sections (7 section):

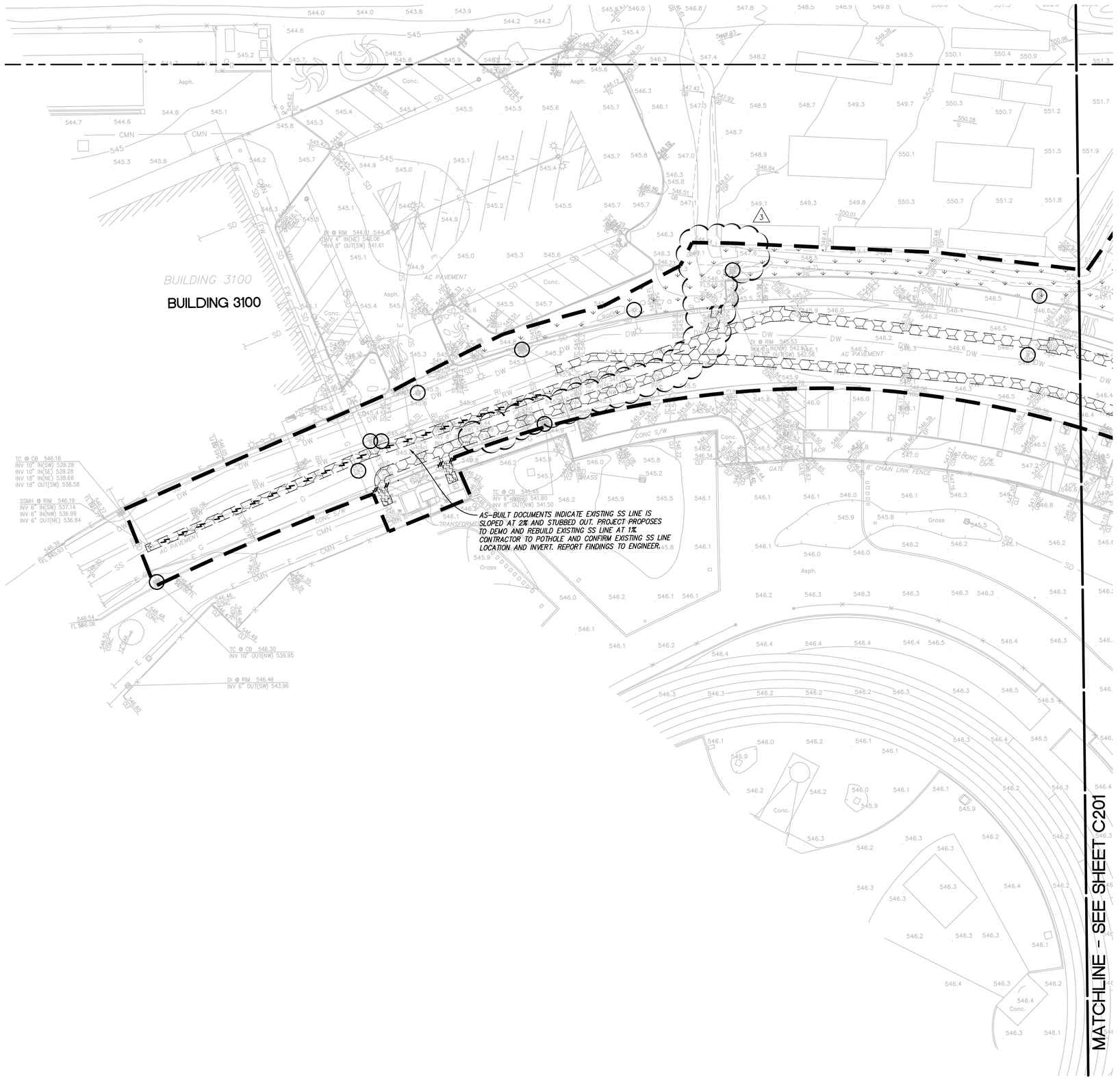
Division 00 – Procurement and Contracting Requirements:
Bid Proposal

Division 01 – General Requirements:

01 26 00	Contract Modification Procedures
01 23 00	Alternates
07 21 00	Thermal Insulation
07 40 00	Cladding Support System
07 41 10	Preformed Metal Wall Panels
07 61 13	Standing Seam Sheet Metal Roofing

***All other terms and conditions remain unchanged*.**

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



SCALE: 1"=20'

LEGEND

- SAWCUT
- APPROXIMATE LIMIT OF DEMOLITION
- DEMO AND REMOVE EX. ASPHALT PAVEMENT AND EX. BASE MATERIAL
- DEMO AND REMOVE EX. CONCRETE AND BASE MATERIAL
- CLEAR AND GRUB
- DEMO & REMOVE EX. CURB AND GUTTER
- PROTECT EXISTING UTILITY TO REMAIN
- DEMO AND REMOVE EX. UTILITY STRUCTURE
- EXISTING TREE TO BE REMOVED
- PROTECT EXISTING TREE TO REMAIN

GENERAL NOTES

A. EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL LOCATIONS PRIOR TO DEMOLITION AND REPORT FINDINGS TO ENGINEER.

B. ALL EXISTING STRUCTURES AND UTILITIES ARE TO BE PROTECTED UNLESS OTHERWISE NOTED.

C. CONTRACTOR TO PLATE ALL OPEN TRENCHES AND MAINTAIN 20-FT WIDE ACCESS AISLE FOR SERVICE VEHICLES AT ALL TIMES EXCEPT WHEN EXCAVATION AND PIPE WORK ARE ON-GOING.

D. EXTENTS OF PAVEMENT REMOVAL FOR UTILITY TRENCHING IS SHOWN FOR CONTEXT ONLY. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL SURFACING NECESSARY TO PROPERLY INSTALL UTILITIES PER PLANS, DETAILS, AND SPECIFICATIONS.

E. ALL MATERIAL STOCKPILES ON SITE WILL BE REMOVED PRIOR TO CONSTRUCTION BY THE CAMPUS M&O STAFF

F. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES. RESTORE TO EXISTING FINISH CONDITION UNLESS OTHERWISE DEPICTED.

DSA:

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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:

DATE _____, 2021

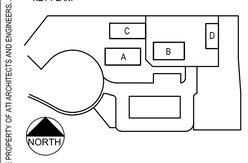
MICHAEL A. KUYKENDALL
R.C.E. NO. 70870, EXPIRES 6-30-21

CONSULTANT:

SANDIS | CIVIL ENGINEERS SURVEYORS PLANNERS
636 Ninth Street | Oakland, CA 94607 | P. 510.873.8866 | www.sandis.net
EAST BAY/SF

ITEM:	REVISION / ISSUE:	DATE:
1	BID ADDENDUM 2	03/10/2021
2	BID ADDENDUM 3	03/17/2021

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

DEMOLITION PLAN

DRAWN BY: JR | CHECKED BY: IW

DATE: 11/09/2020 | **PROJECT NO: C9508**

SHEET NO:

C200

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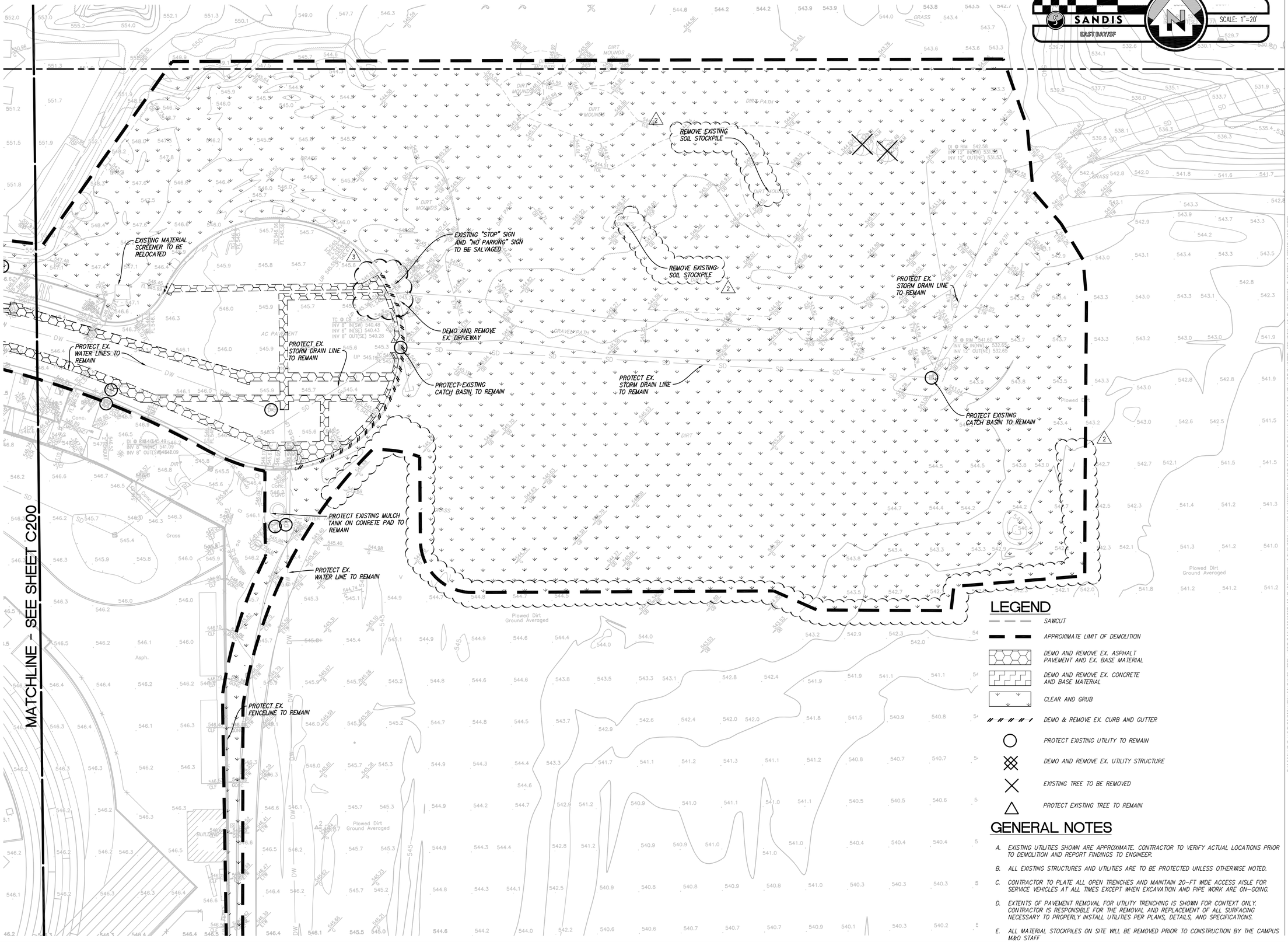

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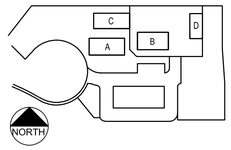
KEY PLAN:



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AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

DEMOLITION PLAN

DRAWN BY: JR | CHECKED BY: IW
DATE: 11/09/2020 | PROJECT NO: C9508
SHEET NO:

C201

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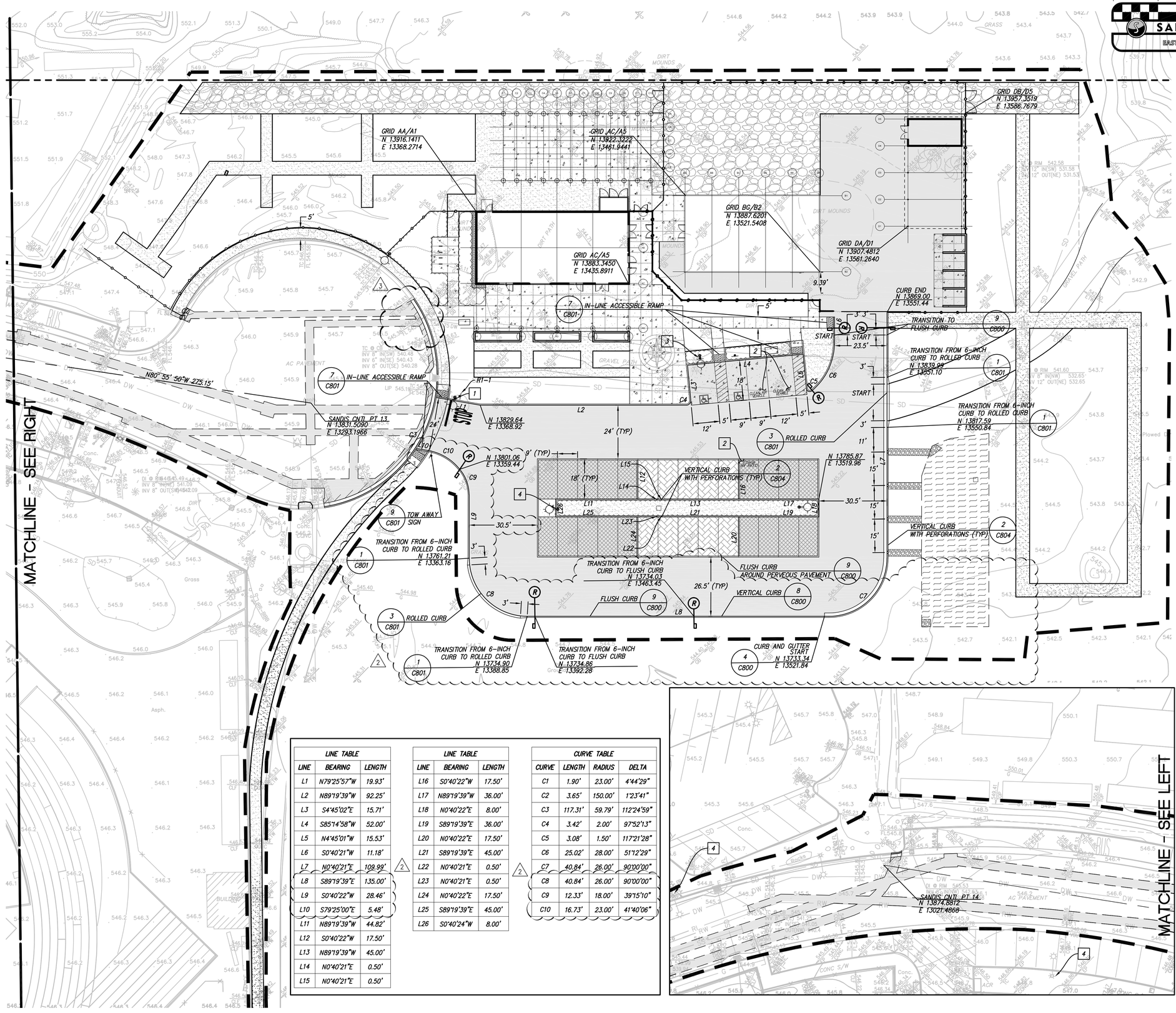


LINE TABLE		
LINE	BEARING	LENGTH
L1	N79°25'57"W	19.93'
L2	N89°19'39"W	92.25'
L3	S4°45'02"E	15.71'
L4	S85°14'58"W	52.00'
L5	N4°45'01"W	15.53'
L6	S0°40'21"W	11.18'
L7	N0°40'21"E	109.99'
L8	S89°19'39"E	135.00'
L9	S0°40'22"W	28.46'
L10	S79°25'00"E	5.48'
L11	N89°19'39"W	44.82'
L12	S0°40'22"W	17.50'
L13	N89°19'39"W	45.00'
L14	N0°40'21"E	0.50'
L15	N0°40'21"E	0.50'

LINE TABLE		
LINE	BEARING	LENGTH
L16	S0°40'22"W	17.50'
L17	N89°19'39"W	36.00'
L18	N0°40'22"E	8.00'
L19	S89°19'39"E	36.00'
L20	N0°40'22"E	17.50'
L21	S89°19'39"E	45.00'
L22	N0°40'21"E	0.50'
L23	N0°40'21"E	0.50'
L24	N0°40'22"E	17.50'
L25	S89°19'39"E	45.00'
L26	S0°40'24"W	8.00'

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	1.90'	23.00'	4°44'29"
C2	3.65'	150.00'	1°23'41"
C3	117.31'	59.79'	112°24'59"
C4	3.42'	2.00'	97°52'13"
C5	3.08'	1.50'	117°21'28"
C6	25.02'	28.00'	51°12'29"
C7	40.84'	26.00'	90°00'00"
C8	40.84'	26.00'	90°00'00"
C9	12.33'	18.00'	39°15'10"
C10	16.73'	23.00'	41°40'06"

LEGEND

- FENCE, SEE LANDSCAPE PLANS FOR DETAILS
- PROPERTY LINE
- APPROXIMATE LIMIT OF WORK
- SAWCUT LINE
- DIRECTION OF STEEP SLOPE
- FLOW LINE
- GRADE BREAK
- 545 EX. CONTOURS
- STOP — INSTALL "STOP" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D WITH 12" LIMIT LINE PER CALTRANS STANDARD PLAN A24E
- R — CURB PAINT CALLOUT. FLAG INDICATES DIRECTION OF CURB PAINT.
- SIGN
- AC PAVEMENT (1 / C800)
- VEHICULAR CONCRETE (3 / C800)
- CONCRETE SIDEWALK (2 / C800)
- DECOMPOSED GRANITE PAVING. SEE LANDSCAPE PLANS FOR DETAILS.
- PERVIOUS CONCRETE (5 / C801)
- PERVIOUS PAVERS (4 / C801)
- CRUSHED STONE PAVING. SEE LANDSCAPE PLANS FOR DETAILS.
- BIO-RETENTION AREA (1 / C804)
- DEEP LIFT (2 / C801)

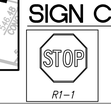
NOTES:

1. PAVEMENT MARKINGS AND STRIPING SHALL BE RETROFLECTIVE THERMOPLASTIC PER CALTRANS SPECIFICATIONS UNLESS OTHERWISE NOTED ON PLANS.
2. ALL SIGNS SHALL BE RETROFLECTIVE DIAMOND GRADE PER 2018 CALIFORNIA MUTCD AND CALTRANS SPECIFICATIONS.
3. FOR ACCESSIBLE PARKING STALL STRIPING AND SIGNAGE, SEE DETAIL 6, SHEET C801.
4. ALL LANE STRIPING AND PAVEMENT MARKERS SHALL MEET CALTRANS STANDARD PLANS.
5. ALL CURB TEXT SHALL BE 3-INCHES IN HEIGHT, SPACED 50-FT APART MAXIMUM.
6. ALL PARKING STALL STRIPES SHALL BE 4-INCH WIDE WHITE PAINT STRIPES SET 9-FT O.C. (TYP.) UNLESS OTHERWISE NOTED.
7. DO NOT PAINT CURBS AT ADA RAMPS AND CROSSWALKS RED.
8. AT FH, PIV AND FDC'S, IF NOT INDICATED IN PLANS, PAINT CURB RED FOR 15-FT CENTERED.

SHEET NOTES:

1. 12" WHITE LIMIT LINE.
2. PAINT "CLEAN AIR VEHICLE" IN 12" WHITE LETTERS.
- (R) RED CURB LIMITS WITH STENCIL "NO PARKING – FIRE LANE" IN WHITE.
3. ADA PARKING SIGN TO BE MOUNTED TO LIGHT POLE PER CALTRANS 2018 STANDARD SIGN INSTALLATION DETAIL (RS4). HEIGHT OF SIGN TO BE SET PER DETAIL 8 ON DRAWING C801
4. 36" x 36" (APPROX.) REFLECTIVE ALUMINUM PARKING SIGN TO BE MOUNTED TO LIGHT POLE PER CALTRANS 2018 STANDARD SIGN INSTALLATION DETAIL (RS4).

SIGN CHART



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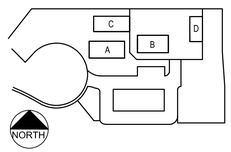

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SITE AND HORIZONTAL CONTROL PLAN

DRAWN BY: JR | CHECKED BY: IW
DATE: 11/09/2020 | PROJECT NO: C9508
SHEET NO:

C300

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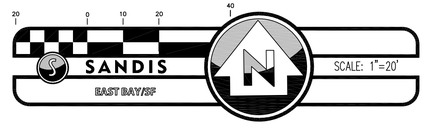


LEGEND

- FENCE, SEE LANDSCAPE PLANS FOR DETAILS
- PROPERTY LINE
- APPROXIMATE LIMIT OF WORK
- SAWCUT LINE
- DIRECTION OF STEEP SLOPE
- FLOW LINE
- GRADE BREAK
- 545 PROPOSED CONTOURS
- 545 EX. CONTOURS
- AC PAVEMENT (1/C800)
- VEHICULAR CONCRETE (3/C800)
- CONCRETE SIDEWALK (2/C800)
- DECOMPOSED GRANITE PAVING. SEE LANDSCAPE PLANS FOR DETAILS.
- PERVIOUS CONCRETE (5/C801)
- PERVIOUS PAVERS (4/C801)
- CRUSHED STONE PAVING. SEE LANDSCAPE PLANS FOR DETAILS.
- BIO-RETENTION AREA (1/C804)
- DEEP LIFT (2/C801)

DSA:

ATI 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:

DATE _____, 2021

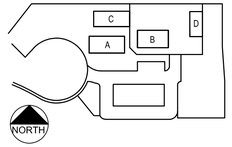
MICHAEL A. KUYKENDALL
R.C.E. NO. 70870, EXPIRES 6-30-21

CONSULTANT:

SANDIS | CIVIL ENGINEERS SURVEYORS PLANNERS
636 Ninth Street | Oakland, CA 94607 | P. 510.873.8866 | www.sandis.net
EAST BAY/SF

ITEM:	REVISION / ISSUE:	DATE:
2	BID ADDENDUM 2	03/10/2021
3	BID ADDENDUM 3	03/17/2021

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

GRADING AND DRAINAGE PLAN

DRAWN BY: JR | CHECKED BY: IW
DATE: 11/09/2020 | PROJECT NO: C9508
SHEET NO:

C400

12/21/2012 12:51:08 PM File Path P:\C\C9500 Chabot-Las Positas_CCC\C9508_LPC_Horticulture\3_Dwgs\+Revit\Classroom-Steel-Reduced.rvt

File: X:\P\618184.B\(4) ENGINEERING\(2) PLAN SETS\(3) SHEET SET\ONSITE\C400.dwg Date:Mar 17, 2021

SCALE: 1"=20'

SANDIS EAST BAY/SF

SLOPE 3:1 MAX. UP FROM BACK OF GRAVEL PATH IN ORDER TO DAYLIGHT TO EXISTING GRADE

FF=546.90-546.70

FF=546.60-547.10 (FUTURE BUILDING PAD)

FF=546.70

FF=546.65

FF=546.50

10' (TYP.) ACCESS PATH

SEE GRADING ENLARGEMENT ON THIS SHEET

SLOPE 3:1 MAX. UP FROM BACK OF CURB IN ORDER TO DAYLIGHT TO EXISTING GRADE

SLOPE 3:1 MAX. UP FROM BACK OF WALK IN ORDER TO DAYLIGHT TO EXISTING GRADE

6" VERTICAL CURB

FLUSH CURB

4" ROLLED CURB

MATCHLINE - SEE SHEET C400

MATCHLINE - SEE RIGHT

MATCHLINE - SEE LEFT

LEGEND

- FENCE, SEE LANDSCAPE PLANS FOR DETAILS
- PROPERTY LINE
- APPROXIMATE LIMIT OF WORK
- SAWCUT LINE
- DIRECTION OF STEEP SLOPE
- FLOW LINE
- GRADE BREAK
- PROPOSED CONTOURS
- EX. CONTOURS
- AC PAVEMENT (1/C800)
- VEHICULAR CONCRETE (3/C800)
- CONCRETE SIDEWALK (2/C800)
- DECOMPOSED GRANITE PAVING. SEE LANDSCAPE PLANS FOR DETAILS.
- PERVIOUS CONCRETE (5/C801)
- PERVIOUS PAVERS (4/C801)
- CRUSHED STONE PAVING. SEE LANDSCAPE PLANS FOR DETAILS.
- BIO-RETENTION AREA (1/C804)
- DEEP LIFT (2/C801)

GRADING ENLARGEMENT

SCALE: 1"=10'

DSA:

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EAST BAY/SF

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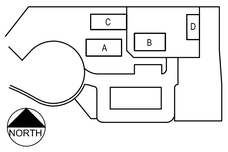

CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

GRADING AND DRAINAGE PLAN

DRAWN BY: JR | CHECKED BY: IW

DATE: 11/09/2020 | PROJECT NO: C9508

SHEET NO:

C401

12/21/2012 12:51:08 PM File Path P:\C\C9500 Chabot-Las Positas_CCC\C9508_LPC_Horticulture\3_Dwgs\4xRev\Classroom-Sheet-Reduced.rvt

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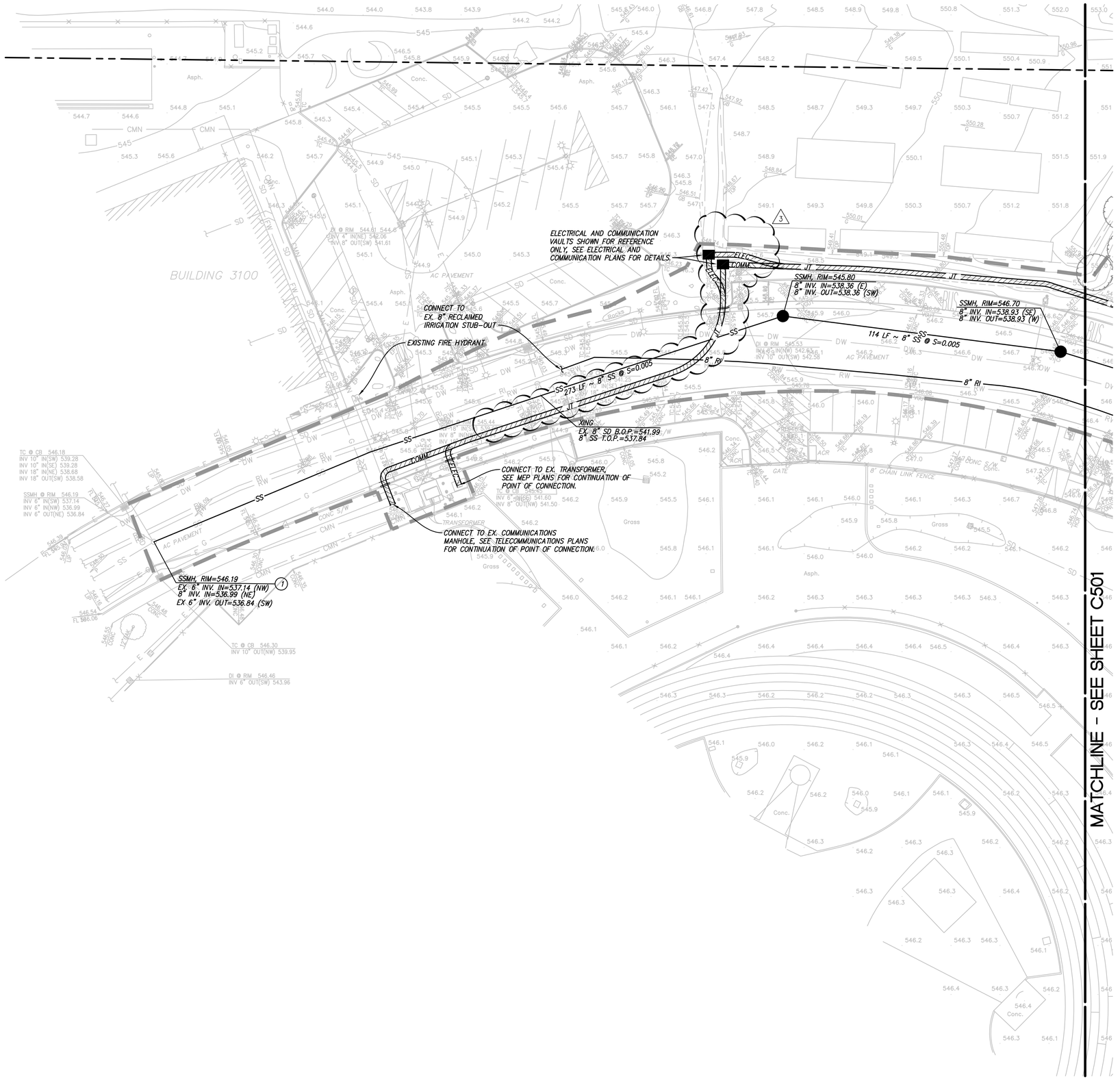

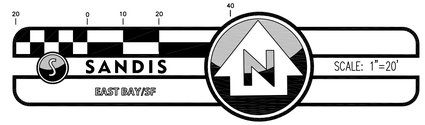

STORM DRAIN NOTES

1. PRIVATE STORM DRAIN LINE 4–INCH THROUGH 12–INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON–TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 GREEN PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034–73 WITH BELLS AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS, 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
2. PRIVATE STORM DRAIN LINE 6–INCH THROUGH 12–INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, OBTUSE ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
3. ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
4. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES. RESTORE TO EXISTING FINISH CONDITION UNLESS OTHERWISE DEPICTED.
5. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
6. DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.
7. INSTALL SEPARATE SUB–DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.
8. ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT PERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.
9. REFER STRUCTURAL DRAWING S–701 FOR DETAIL ON DRAINS CONSTRUCTED UNDER CLASSROOM BUILDINGS STRUCTURAL TIE BEAMS

SANITARY SEWER NOTES

1. ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.
2. PRIVATE SANITARY SEWER MAIN AND SERVICE LINE 4–INCH THROUGH 8–INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 GREEN SEWER PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034–73 WITH BELL AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS OR 45° ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
3. ALL LATERALS SHALL HAVE A TWO WAY CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS.
4. IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL VIDEO INSPECT, PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS.
9. REFER STRUCTURAL DRAWING S–701 FOR DETAIL ON DRAINS CONSTRUCTED UNDER CLASSROOM BUILDINGS STRUCTURAL TIE BEAMS

WATER SYSTEM NOTES

1. MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.
2. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
3. ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
4. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
5. THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.
6. WATER UTILITIES CROSSING UNDER CLASSROOM BUILDINGS STRUCTURAL TIE BEAMS ARE TO BE CONSTRUCTED WITH MIN. 1' COVER BELOW BASE OF TIE BEAM
7. CONTRACTOR TO COORDINATE WITH CAMPUS FACILITY STAFF FOR ASSIGNING IDENTIFICATION NUMBERS TO WATER VALVE BOX LIDS.

UTILITY NOTES:

(1) CONNECT TO EXISTING SANITARY SEWER MANHOLE. CONTRACTOR TO CONFIRM IN FIELD BEFORE CONSTRUCTION. AS–BUILT DOCUMENTS INDICATE EXISTING SANITARY SEWER LINE IS SLOPED AT 2% AND STUBBED OUT. PROJECT PROPOSES TO DEMO AND REBUILDING EXISTING SANITARY SEWER LINE AT SLOPE 1%. CONTRACTOR TO POTHOLE AND CONFIRM EXISTING SANITARY SEWER LINE LOCATION AND INVERT. REPORT FINDINGS TO ENGINEER.

GENERAL NOTES

1. CONSTRUCT SDCO AND SSCO PER DETAIL 4, SHEET C802.
2. CONSTRUCT CATCH BASIN PER DETAIL 2, SHEET C802.
3. CONSTRUCT AREA DRAIN PER DETAIL 1, SHEET C802.

DSA:

ATI ARCHITECTS + ENGINEERS
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PROFESSIONAL STAMP:

DATE _____, 2021

MICHAEL A. KUYKENDALL
R.C.E. NO. 70870, EXPIRES 6–30–21

CONSULTANT:

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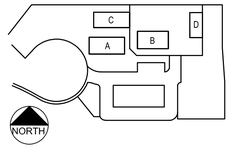

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AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

UTILITY PLAN

DRAWN BY: JR | CHECKED BY: IW
DATE: 11/09/2020 | PROJECT NO: C9508
SHEET NO:

C500

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SCALE: 1"=20'

GENERAL NOTES

1. REFER TO SHEET C500 FOR SANITARY SEWER NOTES, STORM DRAIN NOTES, WATER NOTES, AND UTILITY REFERENCE INFORMATION.

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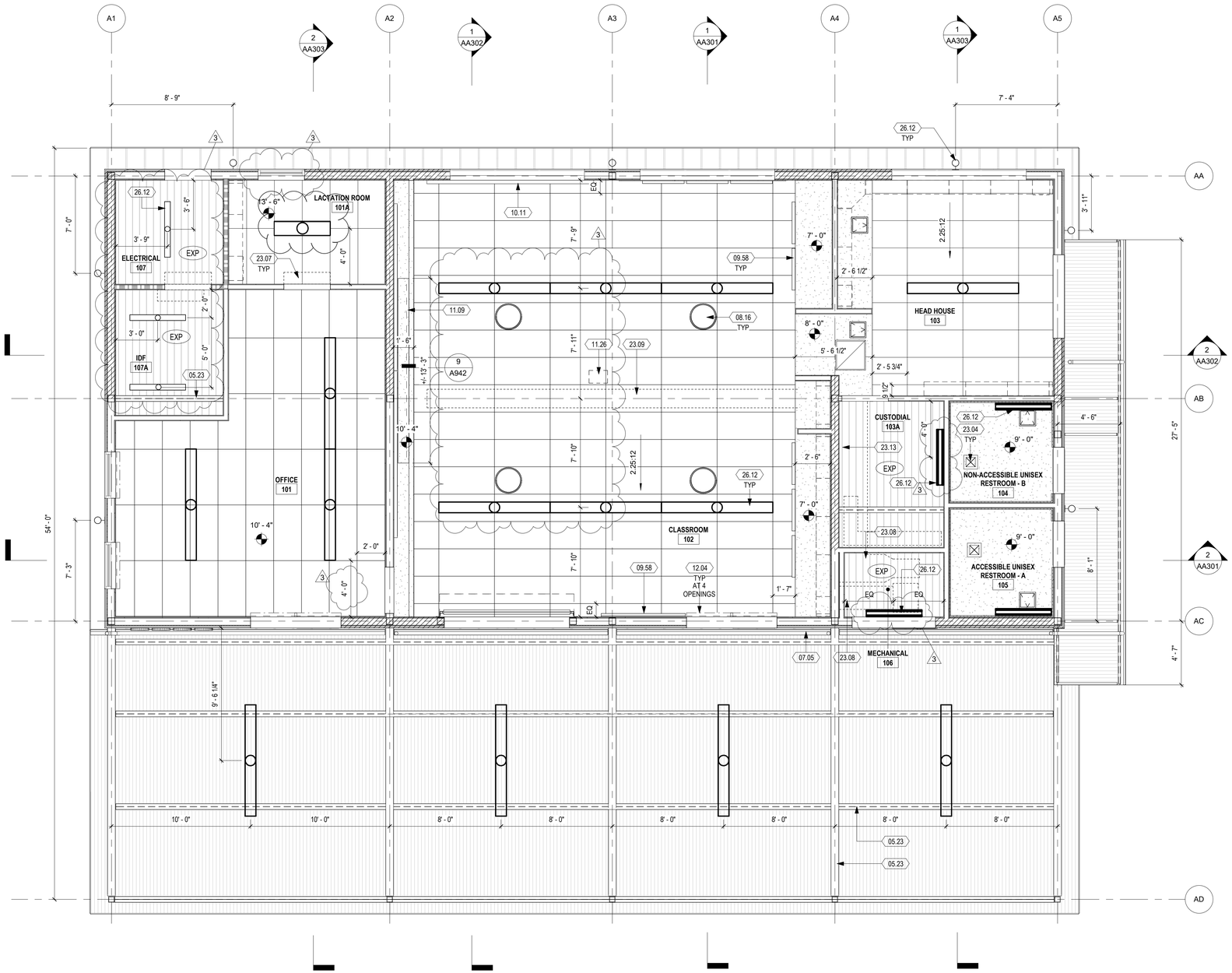
KEY PLAN:

CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

UTILITY PLAN

DRAWN BY: JR | CHECKED BY: IW
DATE: 11/09/2020 | PROJECT NO: C9508
SHEET NO:

C501



1 **Level 1**
1/4" = 1'-0"

RCP SHEET NOTES

1. REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES.
2. LIGHT FIXTURES ARE LOCATED FROM FACE OF FINISH, U.O.N.
3. WALL MOUNTED FIXTURES ARE 6'-8" CLEAR ABOVE FINISH FLOOR, U.O.N.
4. REFER TO MECHANICAL DRAWINGS FOR CEILING REGISTERS AND DIFFUSERS.
5. REFER TO ELECTRICAL DRAWINGS FOR FIRE ALARM AND EXIT SIGNS NOT DEPICTED ON THIS PLAN. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
6. ALL ROOF STRUCTURE, PIPES, CONDUIT, EQUIPMENT AND DEVICES EXPOSED TO ROOM BELOW SHALL BE PRIMED AND PAINTED.
7. ALL EXPOSED DUCTWORK, PIPE, EQUIPMENT THAT IS NOT FACTORY FINISHED IS TO BE PAINTED.

SHEET KEYNOTES

05.23	STRUCTURAL STEEL BEAM, S.S.D.
07.05	METAL GUTTER
08.16	TUBULAR SKYLIGHT LENS DIFFUSER
09.58	ACOUSTICAL WALL PANEL, 1" THICK, NRC=0.85 MIN.
10.11	PROJECTION MARKERBOARD, 8'W X 5'H TYP.
11.09	PROJECTION SCREEN
11.26	PROJECTOR, FORWARD PROJECTION (OFCI)
12.04	ROLLER SHADE, FOR MOUNTING SEE DETAIL 5/A970
23.04	EXHAUST AIR GRILLE, S.M.D.
23.07	FAN COIL UNIT, S.M.D.
23.08	MECHANICAL EQUIPMENT, S.M.D., PAINT
23.09	EXPOSED SHEET METAL DUCT, PRIMED AND PAINTED AS SCHEDULED, S.M.D.
23.13	MECHANICAL DUCT, S.M.D.
26.12	LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

RCP LEGEND

- 10'-0" — CEILING HEIGHT TAG
- EXP. — EXPOSED STRUCTURE
- 2'X4' SUSPENDED ACP-1 DETAIL
- GYPSUM BOARD CEILING ATTACHED TO FRAMING
- EXPOSED METAL DECK
- SUPPLY AIR DIFFUSER
- RETURN REGISTER
- EXHAUST REGISTER
- 12"x12" CEILING ACCESS PANEL
- SURFACE MOUNTED FIXTURE, S.E.D.
- LED EXTERIOR LIGHT - WALL MOUNT, S.E.D.
- LED PENDANT STRIP LIGHT, S.E.D.
- WALL MOUNTED FIXTURE, S.E.D.

DSA:

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PROFESSIONAL STAMP:

LICENSED ARCHITECT ANNA T. WIN C 23260 Exp. Apr 30, 2021 STATE OF CALIFORNIA

CONSULTANT:

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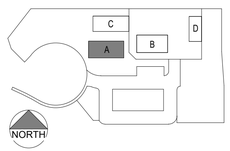

CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

CLASSROOM BUILDING REFLECTED CEILING PLAN

DRAWN BY: EA | CHECKED BY: AW
DATE: 01/14/2021 | **PROJECT NO: C9508**
SHEET NO:

AA141

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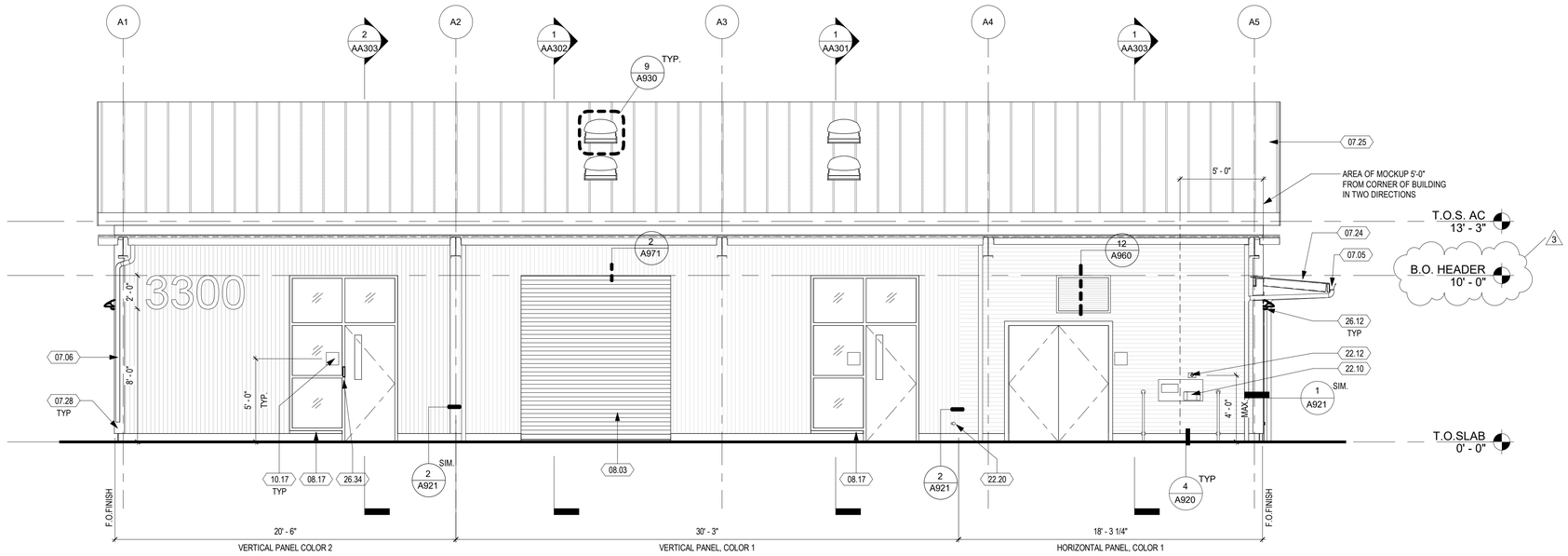
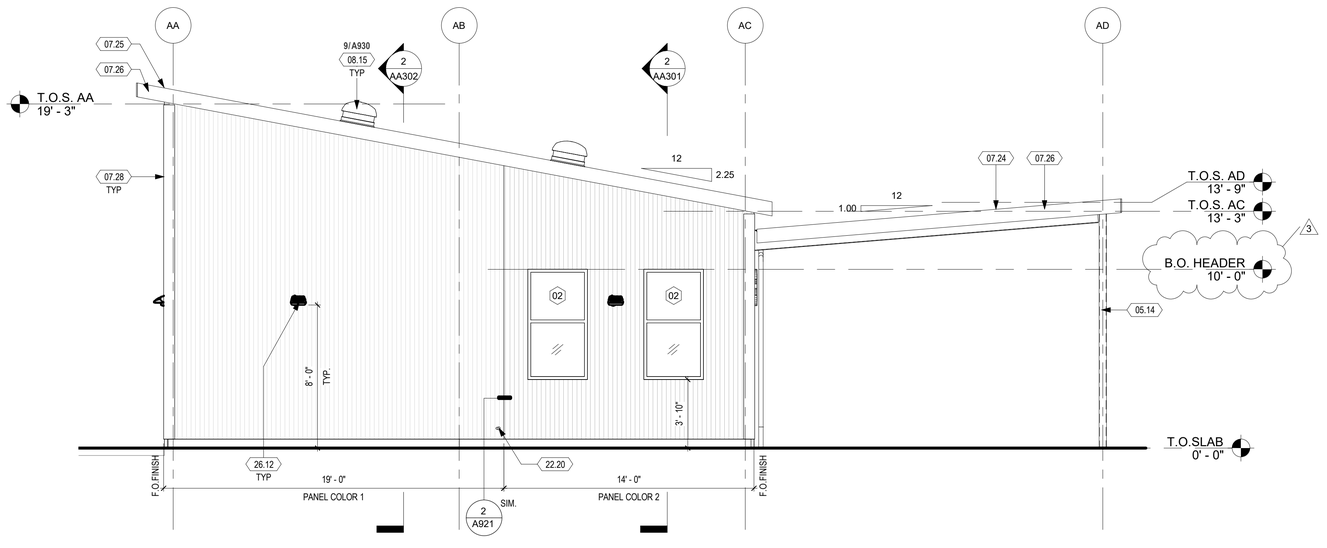


1 SOUTH ELEVATION

1/4" = 1'-0"



2 WEST ELEVATION

1/4" = 1'-0"

SHEET KEYNOTES

05.14 HSS COLUMN, S.S.D., PAINTED - PT-4, SEE FINISH SCHEDULE
07.05 METAL GUTTER
07.06 3" CAST IRON DOWNSPOUT, PAINTED, COLOR TO MATCH ADJACENT SIDING PANEL, SEE DETAIL 9/A921 AND 3/A921
07.24 METAL DECK
07.25 METAL STANDING SEAM ROOF
07.26 ROOF FASCIA, COLOR TO MATCH ROOFING
07.28 CORNER ANGLE, COLOR TO MATCH ADJACENT SIDING PANEL
08.03 OVERHEAD COILING DOOR
08.15 TUBULAR SKYLIGHT, SEE 1/A971
08.17 ALUMINUM STOREFRONT SILL EXTENDER
10.17 SIGNAGE PER DOOR SCHEDULE
22.10 HI-LO WATER FOUNTAIN (ADA), S.P.D., SEE DETAIL 4/A992
22.12 BOTTLE FILLER, S.P.D., SEE DETAIL 4/A992
22.20 HOSE BIB
23.14 GRAVITY RELIEF, S.M.D.
26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE
26.34 ACCESS CARD READER, S.E.D.

EXTERIOR FINISH LEGEND

METAL SIDING PANEL -

PANEL COLOR 1 - AEP SPAN, "REGAL WHITE" (SRI 88)

PANEL COLOR 2 - AEP SPAN, "SAGE GREEN" (SRI 41)

PANEL COLOR 3 - AEP SPAN, "ZINCALUME PLUS" (SRI 64)

XPT-1: KELLY-MOORE PAINT TO MATCH AEP SPAN "IVORY" DOORS, FRAME, AND LOUVER AT MECH. ROOM, DOWNSPOUTS, AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 1.

XPT-2: KELLY-MOORE PAINT TO MATCH AEP SPAN "SAGE GREEN" DOWNSPOUTS AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 2.

XPT-3: KM4909 "METAL CHI" EXTERIOR HOLLOW METAL DOORS AND FRAMES, EXPOSED STEEL BEAMS AND JOISTS (U.O.N.), EXPOSED METAL DECK, CONDUIT, AND MISC/SHEET METALS ADJACENT TO THESE COMPONENTS.

XPT-4: KM AC214-5 "LEAF RUST" EXPOSED STEEL POSTS, FASCIA BEAMS AT OVERHEAD SHADE STRUCTURE, STEEL BOLLARDS

XPT-5: TBD

DSA:

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PROFESSIONAL STAMP:

LICENSED ARCHITECT ANNA T. WAI C 23260 Exp. Apr 30, 2021 STATE OF CALIFORNIA

CONSULTANT:

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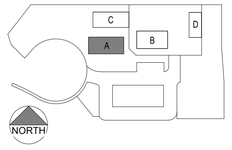

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AGRICULTURE SCIENCE HORTICULTURE FACILITY

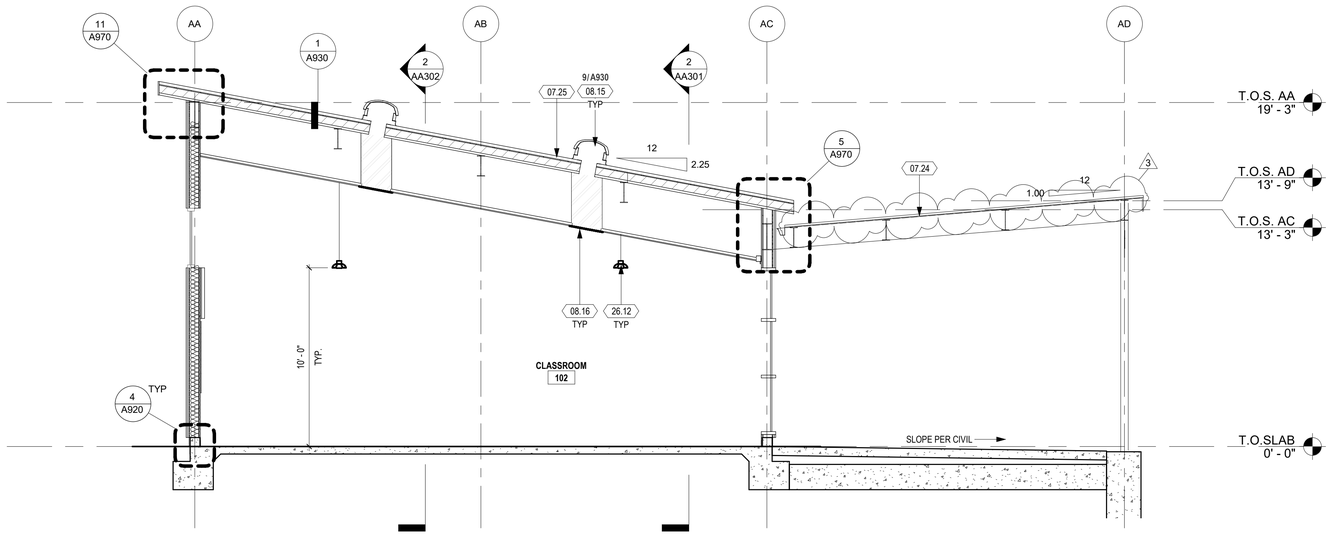
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

EXTERIOR ELEVATIONS

DRAWN BY: EA | CHECKED BY: AW
DATE: 01/14/2021 | **PROJECT NO: C9508**
SHEET NO:

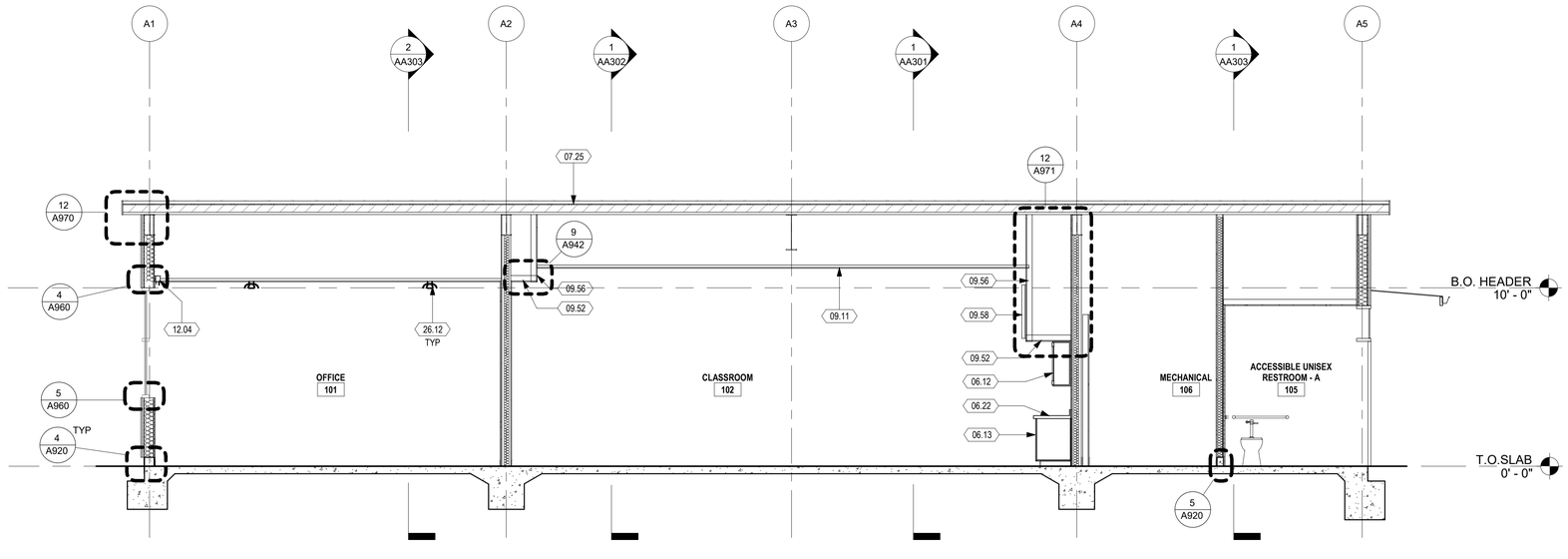
AA202

3/17/2021 11:58:49 AM C:_Revit Local Files\C9508_LPC-Horticulture_ElissaAndersonKYP2H.rvt



1 CROSS SECTION

1/4" = 1'-0"



2 LONGITUDINAL SECTION

1/4" = 1'-0"

SHEET KEYNOTES

06.12 UPPER CABINET
06.13 LOWER CABINET
06.22 RESIN COUNTER TOP
07.24 METAL DECK
07.25 METAL STANDING SEAM ROOF
08.15 TUBULAR SKYLIGHT, SEE 1/A971
08.16 TUBULAR SKYLIGHT LENS DIFFUSER
09.11 ACOUSTICAL CEILING PANEL ACP-1, 24X48
09.52 GYPSUM BOARD CEILING/SOFFIT, PAINTED, SEE FINISH SCHEDULE
09.56 GYPSUM BOARD, PAINTED, PT-2
09.58 ACOUSTICAL WALL PANEL, 1" THICK, NRC=0.85 MIN.
12.04 ROLLER SHADE, FOR MOUNTING SEE DETAIL 5/A970
23.09 EXPOSED SHEET METAL DUCT, PRIMED AND PAINTED AS SCHEDULED, S.M.D.
23.13 MECHANICAL DUCT, S.M.D.
26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

EXTERIOR FINISH LEGEND

METAL SIDING PANEL -

PANEL COLOR 1 - AEP SPAN, "REGAL WHITE" (SRI 88)

PANEL COLOR 2 - AEP SPAN, "SAGE GREEN" (SRI 41)

PANEL COLOR 3 - AEP SPAN, "ZINCALUME PLUS" (SRI 64)

XPT-1: KELLY-MOORE PAINT TO MATCH AEP SPAN "IVORY" DOORS, FRAME, AND LOUVER AT MECH. ROOM, DOWNSPOUTS, AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 1.

XPT-2: KELLY-MOORE PAINT TO MATCH AEP SPAN "SAGE GREEN" DOWNSPOUTS AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 2.

XPT-3: KM4909 "METAL CHI" EXTERIOR HOLLOW METAL DOORS AND FRAMES, EXPOSED STEEL BEAMS AND JOISTS (U.O.N.), EXPOSED METAL DECK, CONDUIT, AND MISC/SHEET METALS ADJACENT TO THESE COMPONENTS.

XPT-4: KM AC214-5 "LEAF RUST" EXPOSED STEEL POSTS, FASCIA BEAMS AT OVERHEAD SHADE STRUCTURE, STEEL BOLLARDS

XPT-5: TBD

DSA:

ATI 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

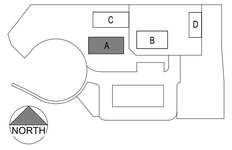
PROFESSIONAL STAMP:

LICENSED ARCHITECT
ANNA T. WIN
C 23260
Exp. Apr 30, 2021
STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
3	ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

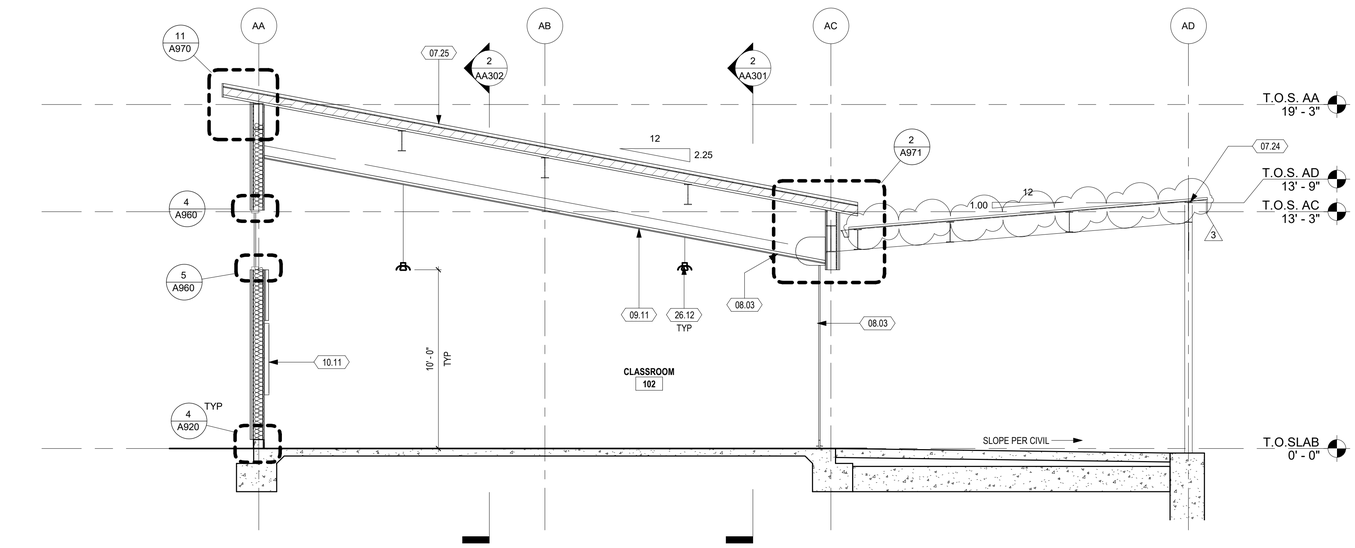
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

BUILDING SECTIONS

DRAWN BY: EA | CHECKED BY: AW
DATE: 01/14/2021 | **PROJECT NO: C9508**
SHEET NO:

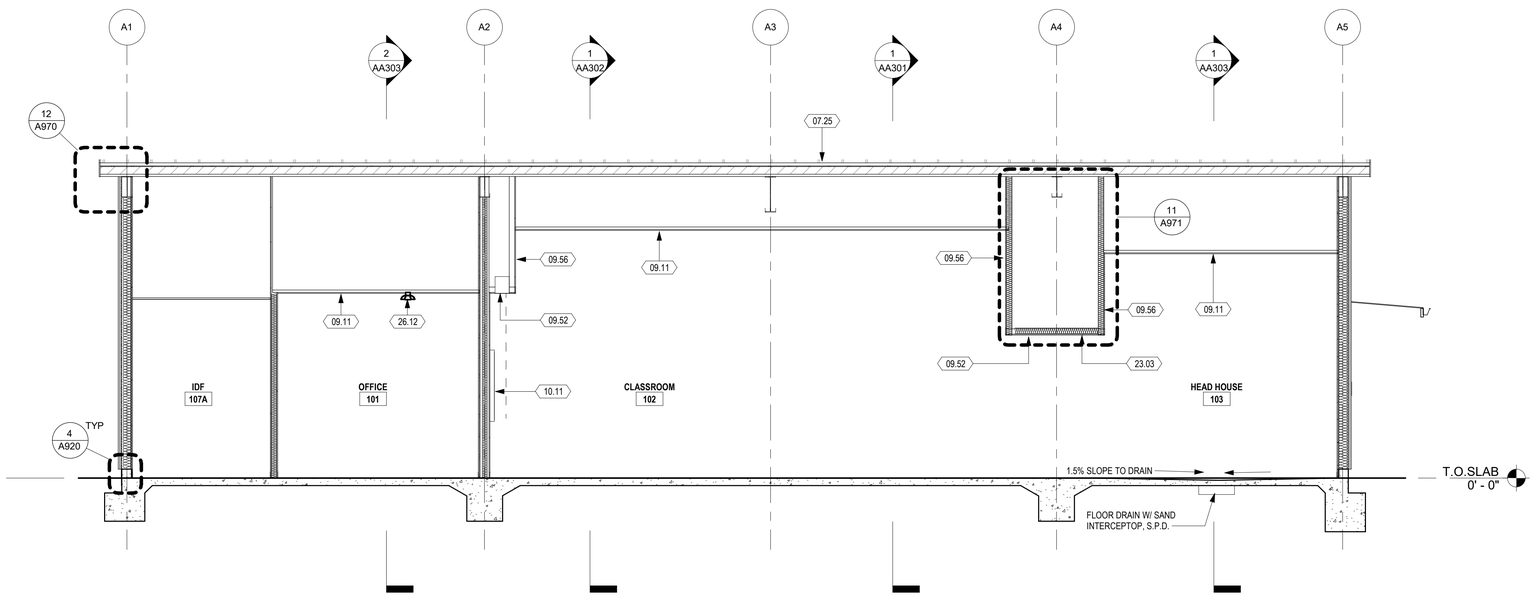
AA301

3/17/2021 12:03:38 PM C:_Revit Local Files\C9508_LPC-Horticulture_ElissaAndersonKY29.rvt



1 BUILDING SECTION - BETWEEN GRIDS 4 & 5

1/4" = 1'-0"



2 BUILDING SECTION - BETWEEN GRIDS A & B

1/4" = 1'-0"

SHEET KEYNOTES

07.24	METAL DECK
07.25	METAL STANDING SEAM ROOF
08.03	OVERHEAD COILING DOOR
09.11	ACOUSTICAL CEILING PANEL ACP-1, 24X48
09.52	GYPSUM BOARD CEILING/SOFFIT, PAINTED, SEE FINISH SCHEDULE
09.56	GYPSUM BOARD, PAINTED, PT-2
10.11	PROJECTION MARKERBOARD, 8'W X 5'H TYP.
23.03	RETURN AIR GRILLE, S.M.D.
23.08	MECHANICAL EQUIPMENT, S.M.D., PAINT
23.09	EXPOSED SHEET METAL DUCT, PRIMED AND PAINTED AS SCHEDULED, S.M.D.
26.12	LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

EXTERIOR FINISH LEGEND

METAL SIDING PANEL -

PANEL COLOR 1 - AEP SPAN, "REGAL WHITE" (SRI 88)

PANEL COLOR 2 - AEP SPAN, "SAGE GREEN" (SRI 41)

PANEL COLOR 3 - AEP SPAN, "ZINCALUME PLUS" (SRI 64)

XPT-1: KELLY-MOORE PAINT TO MATCH AEP SPAN "IVORY" DOORS, FRAME, AND LOUVER AT MECH. ROOM, DOWNSPOUTS, AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 1.

XPT-2: KELLY-MOORE PAINT TO MATCH AEP SPAN "SAGE GREEN" DOWNSPOUTS AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 2.

XPT-3: KM4909 "METAL CHI" EXTERIOR HOLLOW METAL DOORS AND FRAMES, EXPOSED STEEL BEAMS AND JOISTS (U.O.N.), EXPOSED METAL DECK, CONDUIT, AND MISC/SHEET METALS ADJACENT TO THESE COMPONENTS.

XPT-4: KM AC214-5 "LEAF RUST" EXPOSED STEEL POSTS, FASCIA BEAMS AT OVERHEAD SHADE STRUCTURE, STEEL BOLLARDS

XPT-5: TBD

DSA:

ATI 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

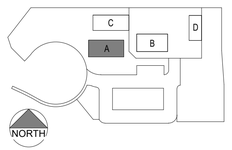
PROFESSIONAL STAMP:

LICENSED ARCHITECT
ANNA T. WIN
C 23260
Exp. Apr 30, 2021
STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
3	ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

BUILDING SECTIONS

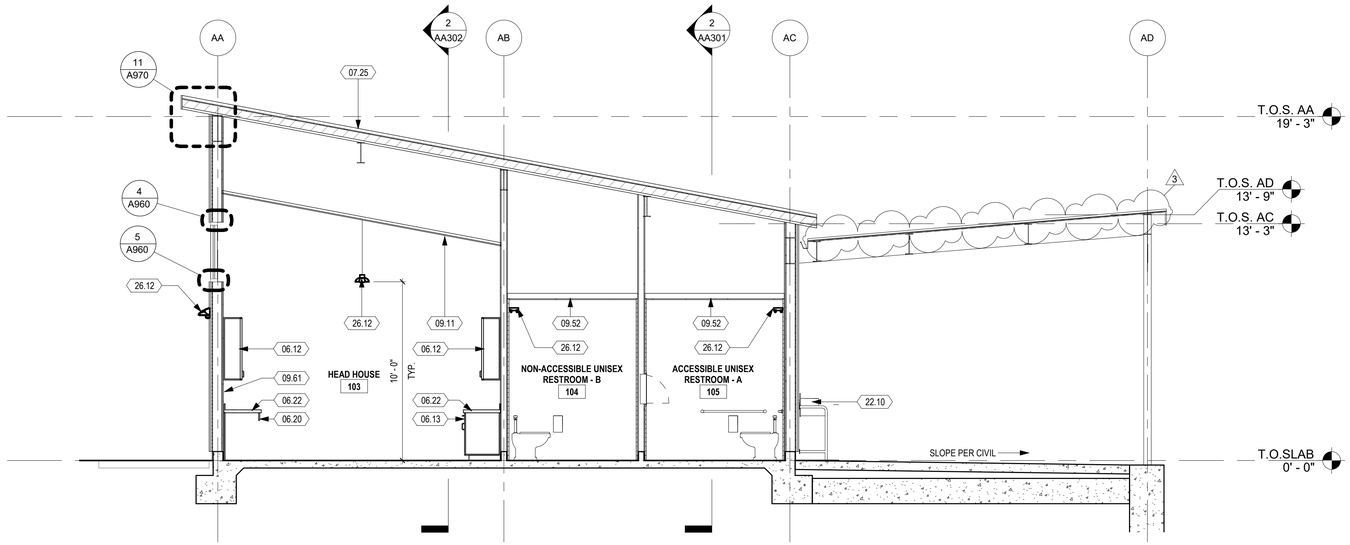
DRAWN BY: EA | CHECKED BY: AW

DATE: 01/14/2021 | **PROJECT NO: C9508**

SHEET NO:

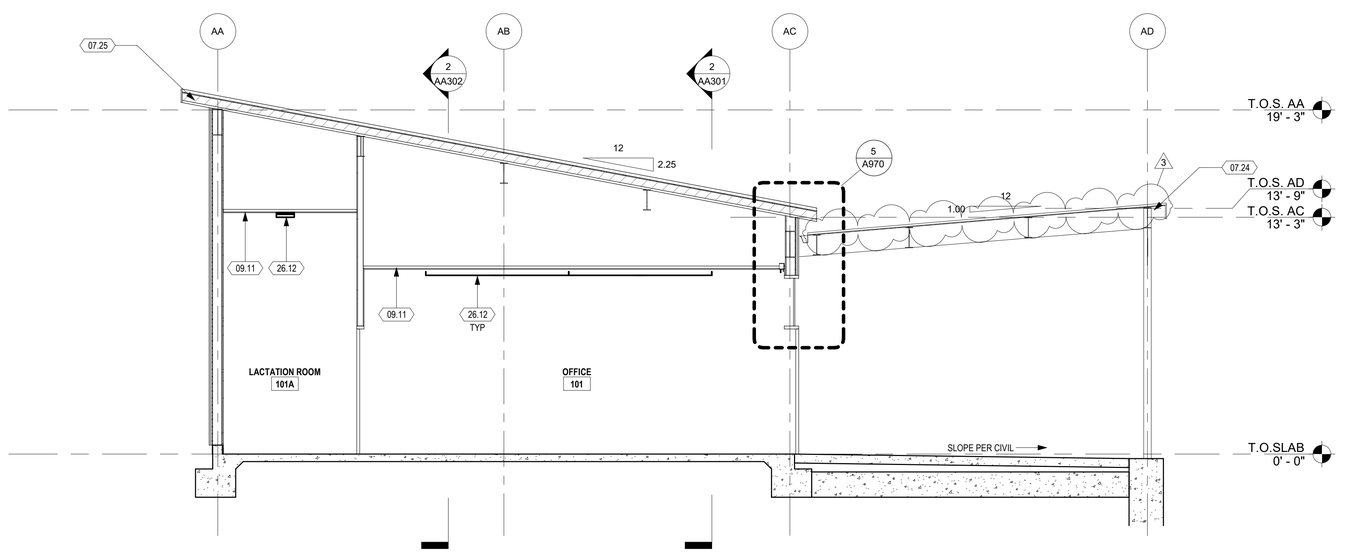
AA302

3/17/2021 12:03:39 PM C:_Revit Local Files\C9508 _LPC-Horticulture_ElissaAndersonKY29.rvt



1 CROSS SECTION

1/4" = 1'-0"



2 CROSS SECTION

1/4" = 1'-0"

SHEET KEYNOTES

06.12 UPPER CABINET
06.13 LOWER CABINET
06.20 COUNTER APRON, 2'-3" CLR
06.22 RESIN COUNTER TOP
07.24 METAL DECK
07.25 METAL STANDING SEAM ROOF
09.11 ACOUSTICAL CEILING PANEL ACP-1, 24X48
09.52 GYPSUM BOARD CEILING/SOFFIT, PAINTED, SEE FINISH SCHEDULE
09.61 FIBER REINFORCED PLASTIC PANELS TO UNDERSIDE OF UPPER CABINETS
22.10 HI-LO WATER FOUNTAIN (ADA), S.P.D., SEE DETAIL 4/A992
23.07 FAN COIL UNIT, S.M.D.
23.08 MECHANICAL EQUIPMENT, S.M.D., PAINT
26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

EXTERIOR FINISH LEGEND

METAL SIDING PANEL -

PANEL COLOR 1 - AEP SPAN, "REGAL WHITE" (SRI 88)

PANEL COLOR 2 - AEP SPAN, "SAGE GREEN" (SRI 41)

PANEL COLOR 3 - AEP SPAN, "ZINCALUME PLUS" (SRI 64)

3

XPT-1: KELLY-MOORE PAINT TO MATCH AEP SPAN "IVORY"
DOORS, FRAME, AND LOUVER AT MECH. ROOM, DOWNSPOUTS, AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 1.

XPT-2: KELLY-MOORE PAINT TO MATCH AEP SPAN "SAGE GREEN"
DOWNSPOUTS AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 2.

XPT-3: KM4909 "METAL CHI"
EXTERIOR HOLLOW METAL DOORS AND FRAMES, EXPOSED STEEL BEAMS AND JOISTS (U.O.N.), EXPOSED METAL DECK, CONDUIT, AND MISC/SHEET METALS ADJACENT TO THESE COMPONENTS.

XPT-4: KM AC214-5 "LEAF RUST"
EXPOSED STEEL POSTS, FASCIA BEAMS AT OVERHEAD SHADE STRUCTURE, STEEL BOLLARDS

XPT-5: TBD

DSA:

ATI 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

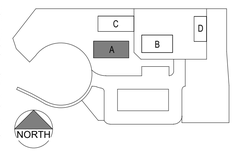
PROFESSIONAL STAMP:

LICENSED ARCHITECT
ANNA T. WIN
C 23260
Exp. Apr 30, 2021
STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
3	ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

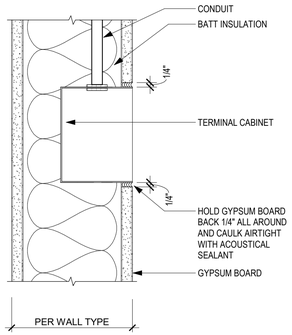
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

BUILDING SECTIONS

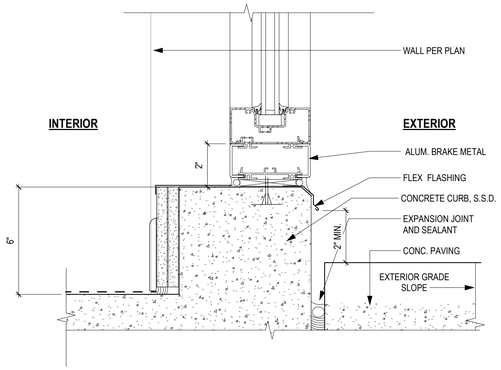
DRAWN BY: EA | CHECKED BY: AW
DATE: 01/14/2021 | **PROJECT NO: C9508**
SHEET NO:

AA303

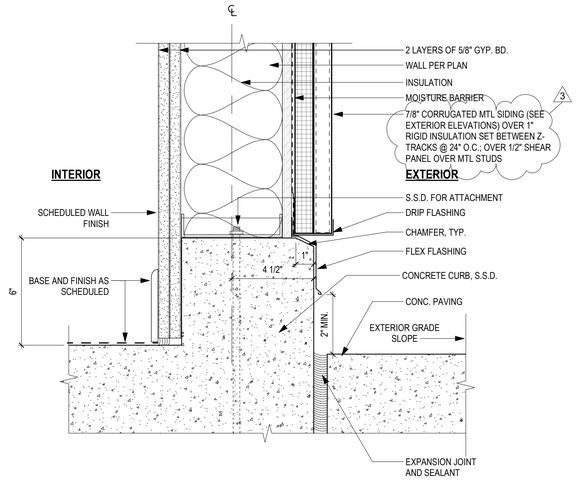
3/17/2021 12:03:40 PM C:_Revit Local Files\C9508_LPC-Horticulture_Elissa.AndersonKYP2H.rvt



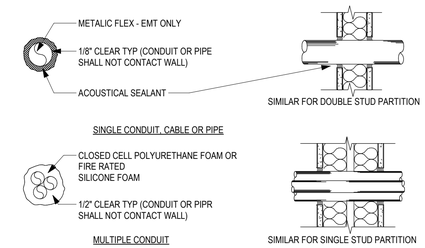
10 LARGE OUTLET BOX PENETRATION
3" = 1'-0"



2 STOREFRONT SILL DETAIL
3" = 1'-0"



4 CONC. CURB AT EXT. METAL STUD WALL
3" = 1'-0"



NOTE:
PENETRATIONS OF ACOUSTICAL PARTITIONS BY CONDUIT, CABLE, PIPES ETC. SHALL BE ACOUSTICALLY SEALED AS SHOWN. ANY GAP LARGER THAN 1/2" SHALL BE COVERED WITH GYPSUM BOARD, LAPPED A MINIMUM OF 2" AND SCREWED BEFORE USING ACOUSTICAL SEALANT.

1 PARTITION PENETRATION DETAILS
1" = 1'-0"

NOTE:
SEPARATE OUTLET BOXES A MINIMUM OF 16 INCHES

11 OUTLET BOX DETAIL
3" = 1'-0"

8 CONCRETE CURB AT INT. METAL STUD SHEAR WALL
3" = 1'-0"

5 CONCRETE CURB AT INT. METAL STUD
3" = 1'-0"

12 ACOUSTIC SEALANT AT FLOOR
3" = 1'-0"

9 CONCRETE SLAB AT INT. METAL STUD SHEAR WALL
3" = 1'-0"

6 CONCRETE SLAB AT INT. METAL STUD
3" = 1'-0"

NOTE:
TYPICAL INTERIOR CURB AT METAL FRAMED WALL PER TYPICAL WALL PENETRATION PER

3 WALL TYPES
1 1/2" = 1'-0"

DSA:

ATI 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:

LICENSED ARCHITECT ANNA T. WIN C 23260 Exp. Apr 30, 2021 STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
3	ADDENDUM 3	03/17/21

KEY PLAN:

CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

WALL TYPES AND TYPICAL DETAILS

DRAWN BY: VL | CHECKED BY: AW
DATE: 01/14/2021 | PROJECT NO: C9508
SHEET NO:

A920

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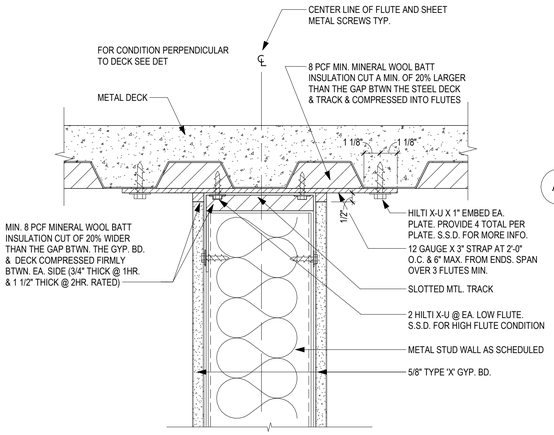
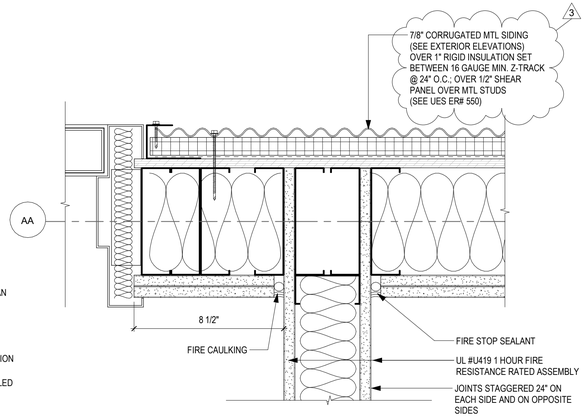
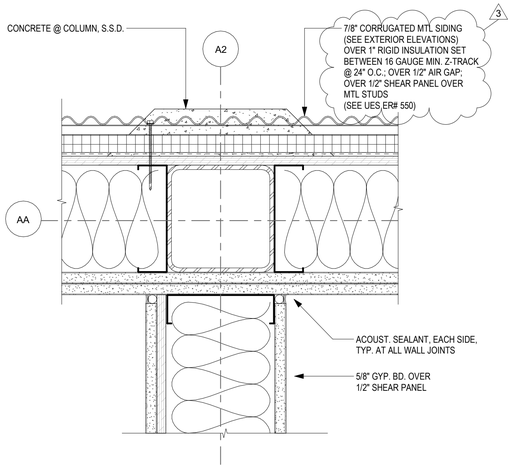


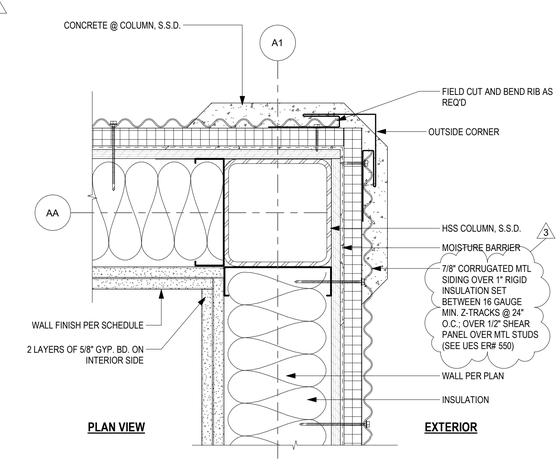
PARALLEL TO METAL DECK



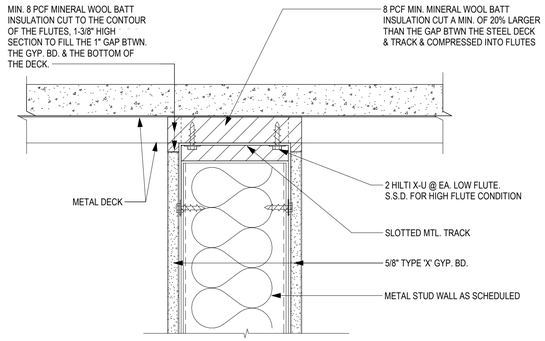
7 1-HR. FIRE RATED WALL AT ELEC ROOM
3" = 1'-0"



4 SHEAR WALL AT LACTATION ROOM
3" = 1'-0"

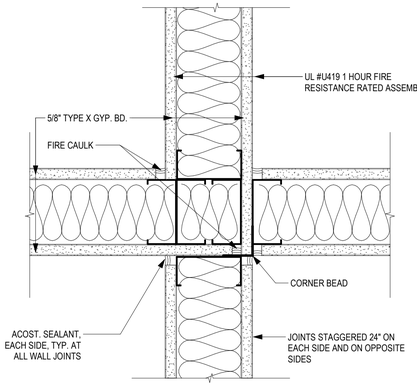


1 EXTERIOR WALL AT CORNER
3" = 1'-0"

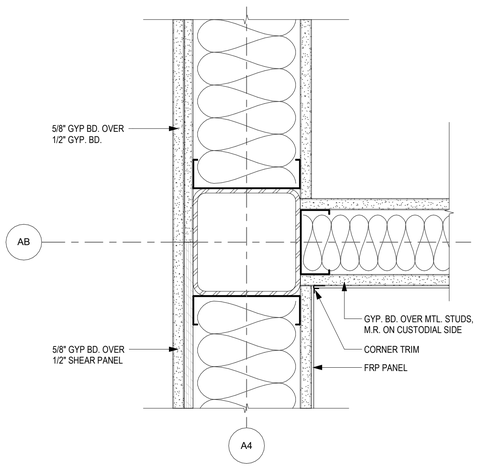


PERPENDICULAR TO METAL DECK

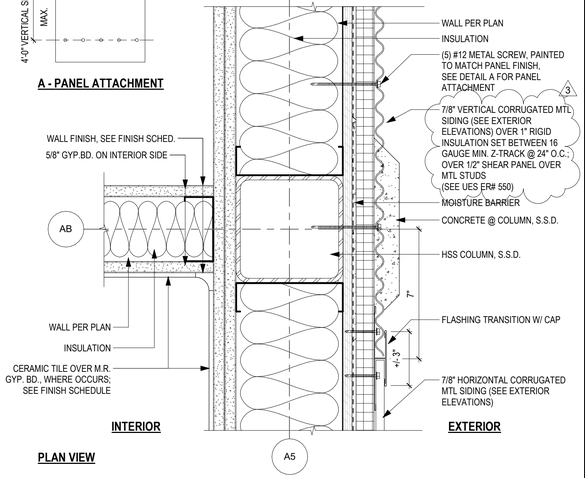
11 1-HR FIRE RATED WALL HEAD DETAIL
3" = 1'-0"



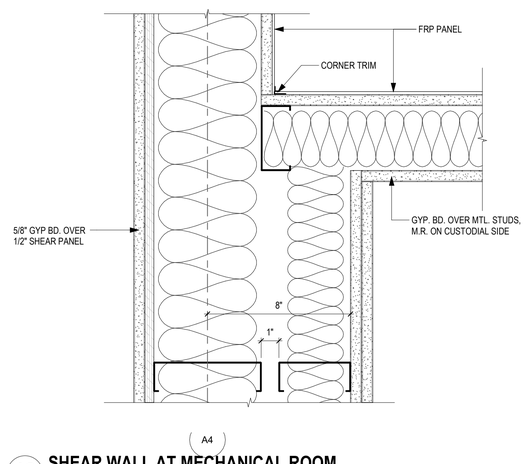
8 1-HR FIRE RATED WALL INTERSECTION AT ELEC ROOM
3" = 1'-0"



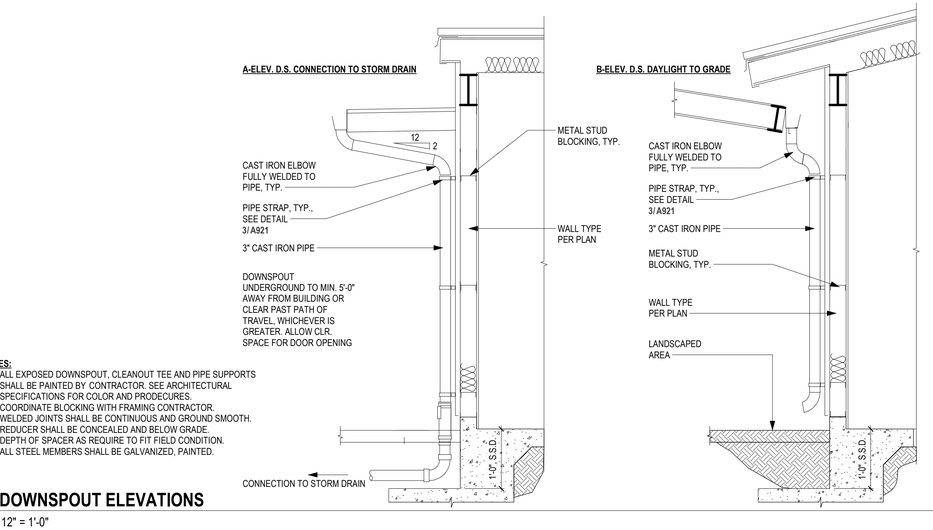
5 SHEAR WALL AT CUSTODIAL ROOM
3" = 1'-0"



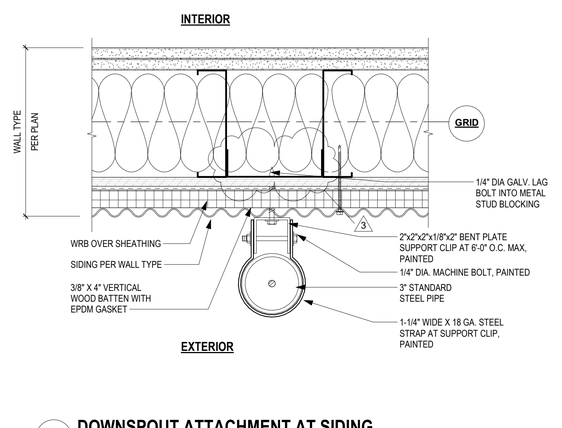
2 EXTERIOR WALL AT INTERSECTION
3" = 1'-0"



12 SHEAR WALL AT MECHANICAL ROOM
3" = 1'-0"



9 DOWNSPOUT ELEVATIONS
12" = 1'-0"



3 DOWNSPOUT ATTACHMENT AT SIDING
3" = 1'-0"

DSA:

ATI ARCHITECTS + ENGINEERS
AN AC MARTIN COMPANY

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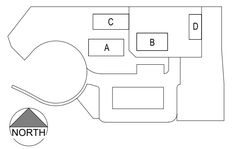
PROFESSIONAL STAMP:

LICENSED ARCHITECT ANNA T. WAI C 23260 Exp: Apr 30, 2021 STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
3	ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

WALL DETAILS

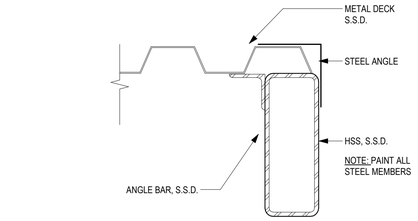
DRAWN BY: Author | CHECKED BY: Checker

DATE: 01/14/2021 | **PROJECT NO: C9508**

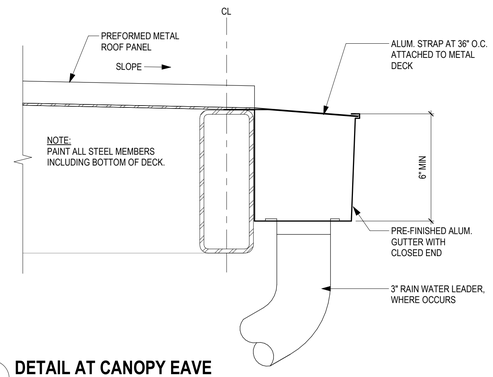
SHEET NO:

A921

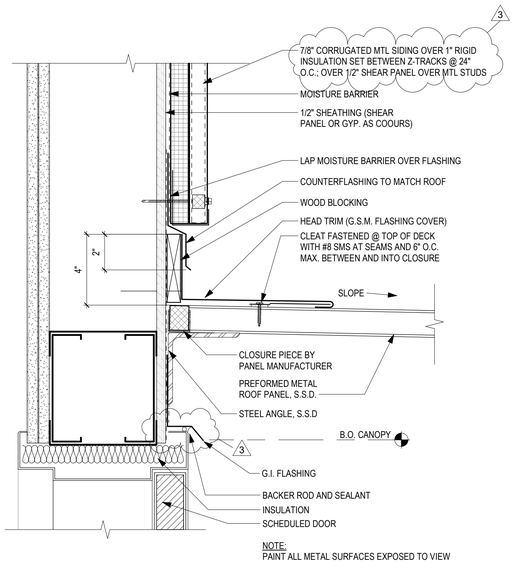
3/17/2021 12:30:59 PM C:\ Revit Local Files\C9508_LPC-Horticulture_Elissa.Anderson\KY29.rvt



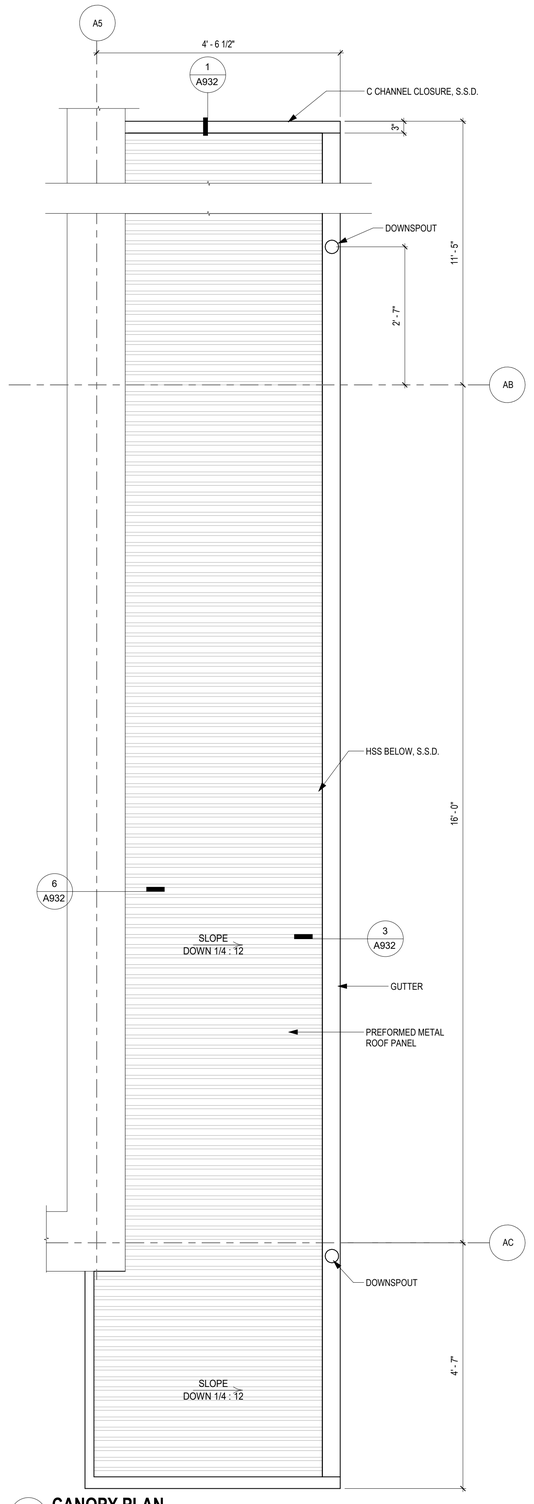
1 CANOPY EDGE
3" = 1'-0"



3 DETAIL AT CANOPY EAVE
3" = 1'-0"



6 CANOPY AT WALL LEDGER
3" = 1'-0"



2 CANOPY PLAN
3/4" = 1'-0"

DSA:

ATI ARCHITECTS + ENGINEERS
AN AC MARTIN COMPANY
4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800
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ANNA T. WIN
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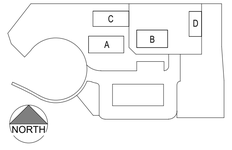
3	ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

CANOPY DETAILS

DRAWN BY: Author | CHECKED BY: Checker
DATE: 01/14/2021 | **PROJECT NO: C9508**
SHEET NO:

A932

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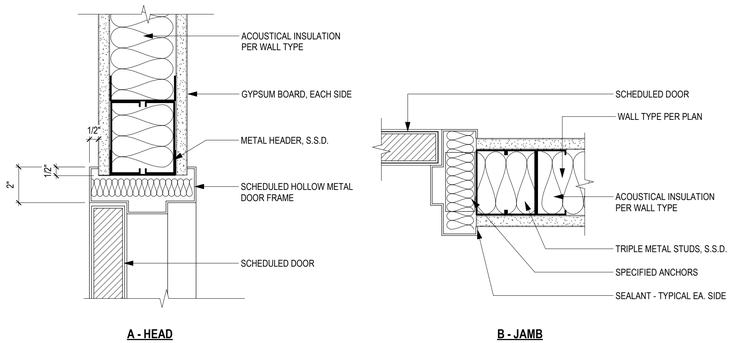
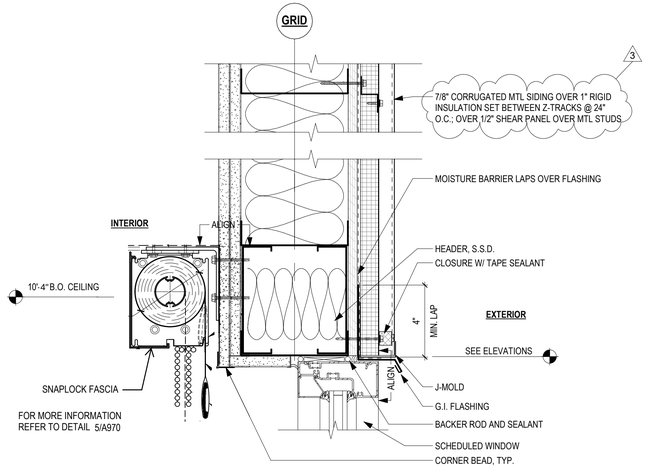
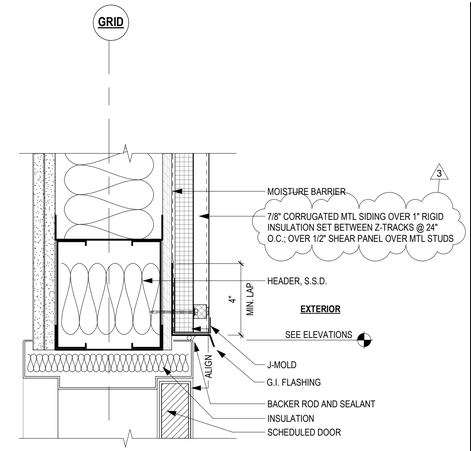


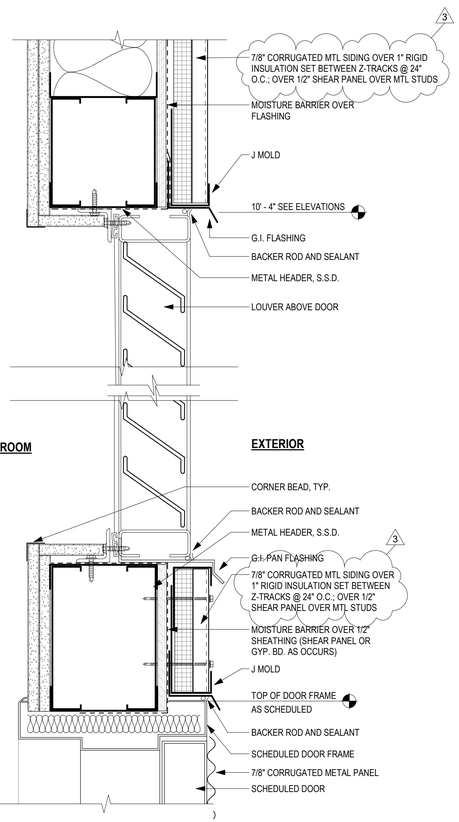
10 INTERIOR DOOR DETAIL
3" = 1'-0"



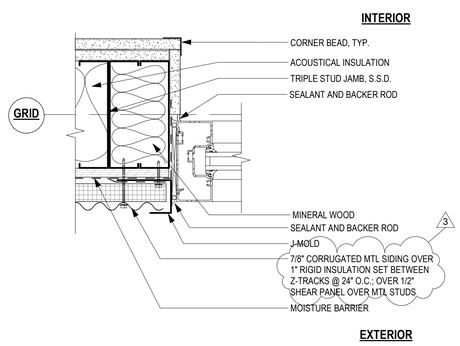
4 STOREFRONT WINDOW - HEAD
3" = 1'-0"



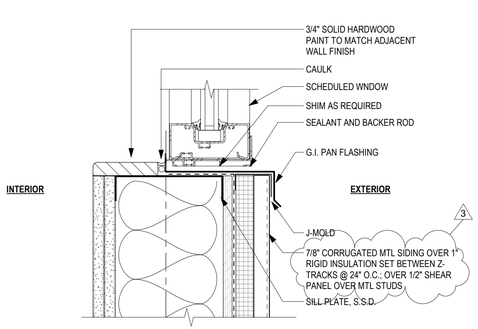
1 EXTERIOR DOOR HEADER
3" = 1'-0"



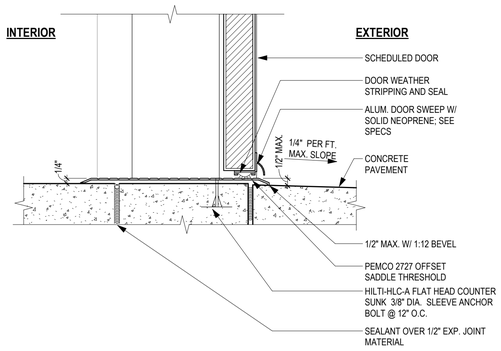
12 LOUVER ABOVE DOOR @ MECH. ROOM
3" = 1'-0"



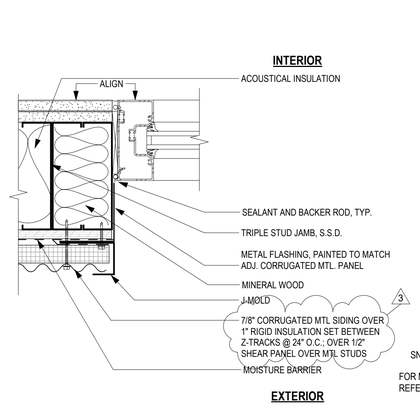
8 STOREFRONT WINDOW - JAMB
3" = 1'-0"



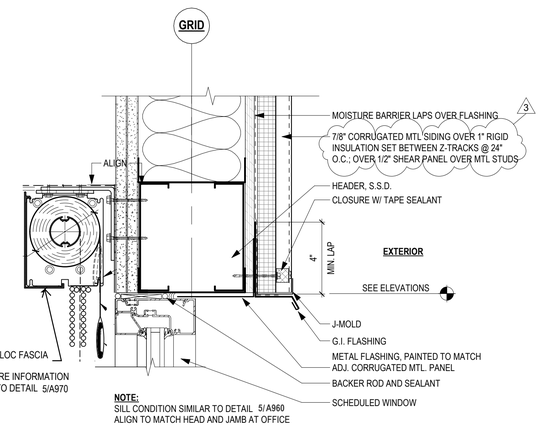
5 STOREFRONT WINDOW - SILL
3" = 1'-0"



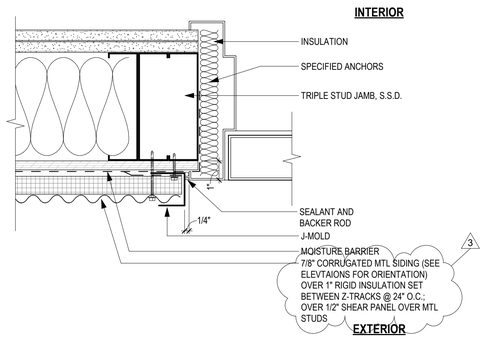
2 EXTERIOR DOOR TRESHOLD
3" = 1'-0"



9 STOREFRONT WINDOW - JAMB AT OFFICE
3" = 1'-0"



7 STOREFRONT WINDOW - HEAD AT OFFICE
3" = 1'-0"



3 TYPICAL EXTERIOR DOOR JAMB
3" = 1'-0"

DSA:

ATI 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

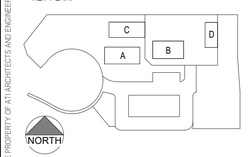
PROFESSIONAL STAMP:

LICENSED ARCHITECT ANNA T. WIN C 23260 Exp. Apr 30, 2021 STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
3	ADDENDUM 3	03/17/21

KEY PLAN:



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AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

OPENING DETAILS

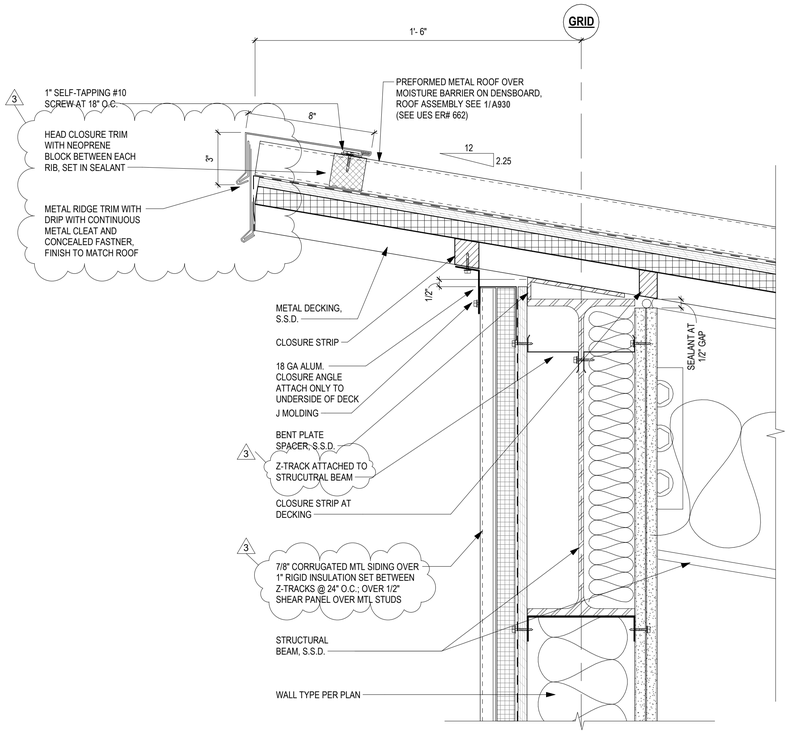
DRAWN BY: VL | CHECKED BY: AW

DATE: 01/14/2021 | **PROJECT NO: C9508**

SHEET NO:

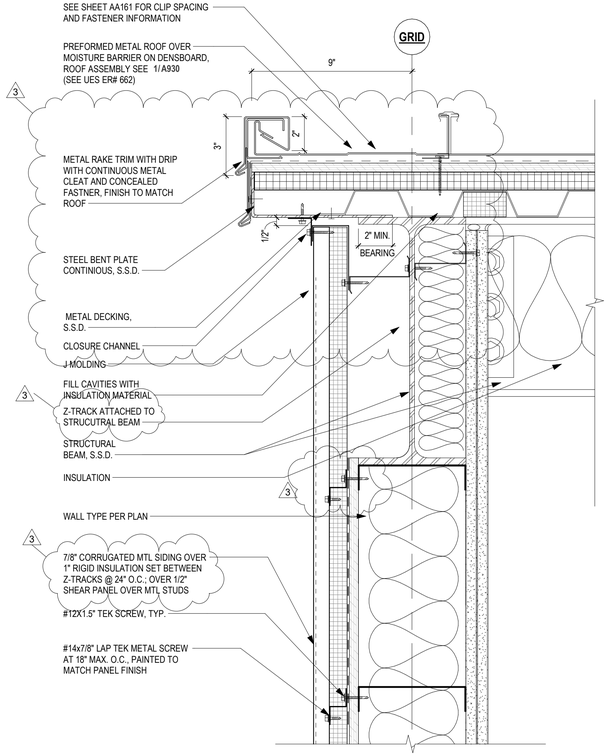
A960

3/17/2021 12:00:03 PM C:\ Revit Local Files\C9508_LPC-Horticulture_Elissa-AndersonKYP2H.rvt



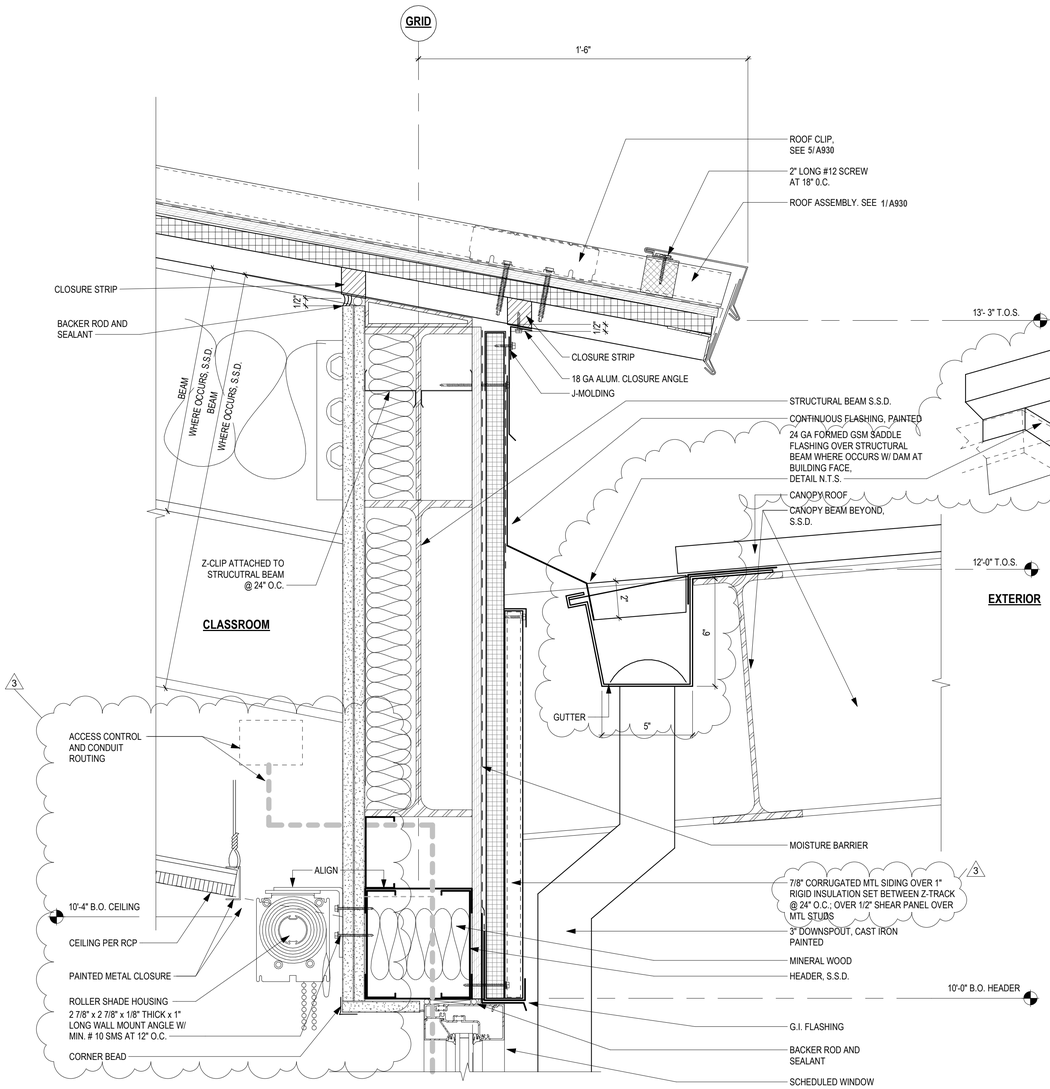
11 TYPICAL EAVE AT HIGH END

3" = 1'-0"



12 STANDING SEAM RAKE

3" = 1'-0"



5 LOW EAVE AT CANOPY GUTTER

3" = 1'-0"

DSA:

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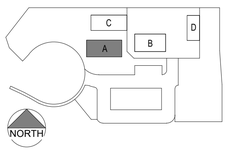
CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
3	ADDENDUM 3	03/17/21

KEY PLAN:



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AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

SECTION DETAILS

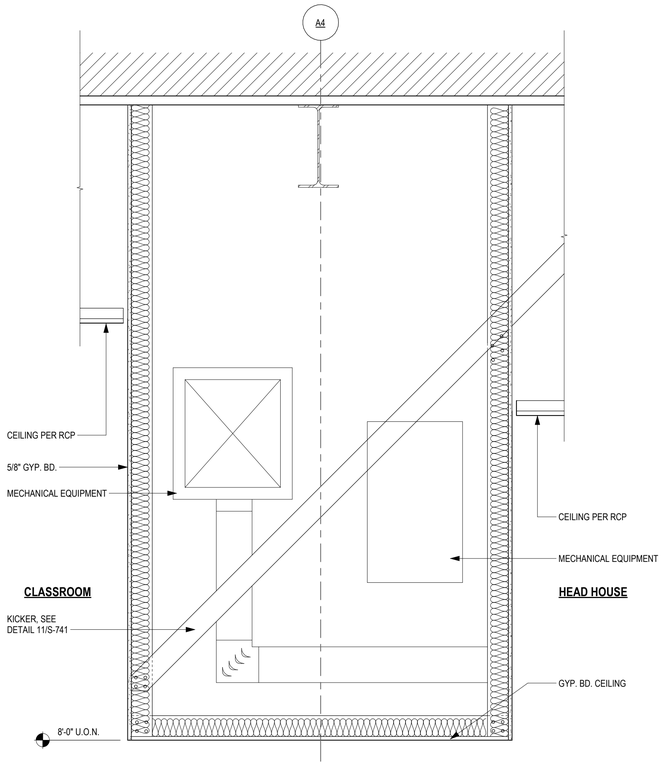
DRAWN BY: Author | CHECKED BY: Checker

DATE: 01/14/2021 | **PROJECT NO: C9508**

SHEET NO:

A970

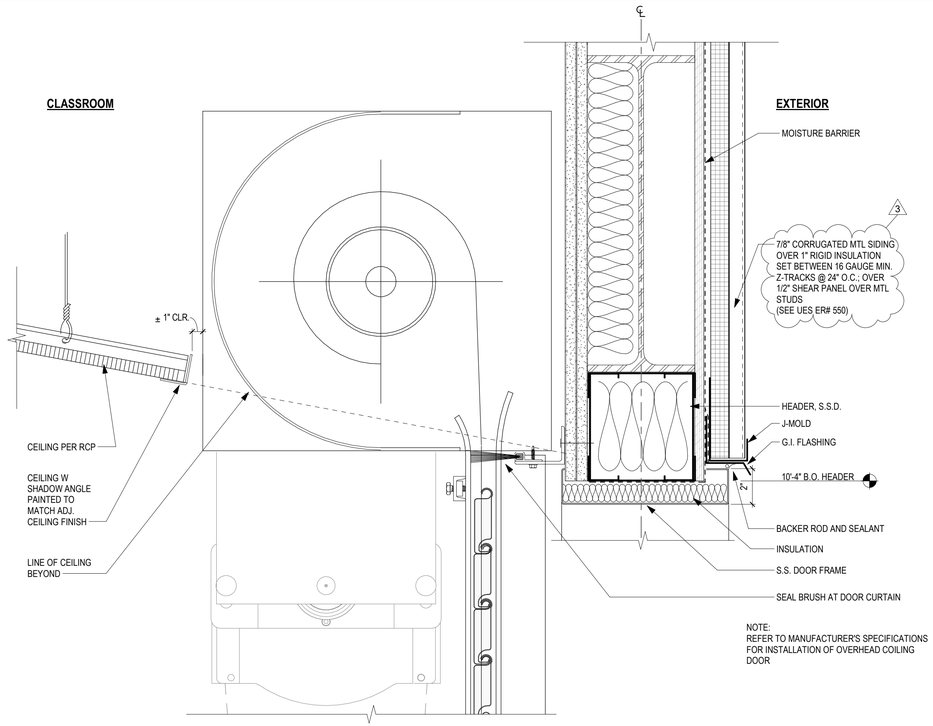
3/17/2021 1:49:55 PM C:\ Revit Local Files\C9508_LPC-Horticulture_Elissa.AndersonKYP2H.rvt



11 MECHANICAL SOFFIT - HALLWAY

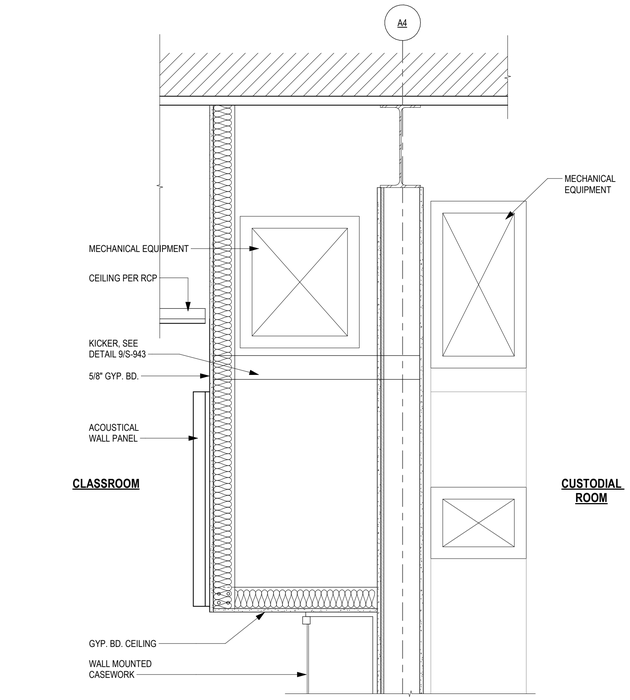
1" = 1'-0"

REFER TO 11/S-741 FOR SOFFIT FRAMING AND CONNCETION INFORMATION



2 OVERHEAD COILING DOOR HEAD DETAIL

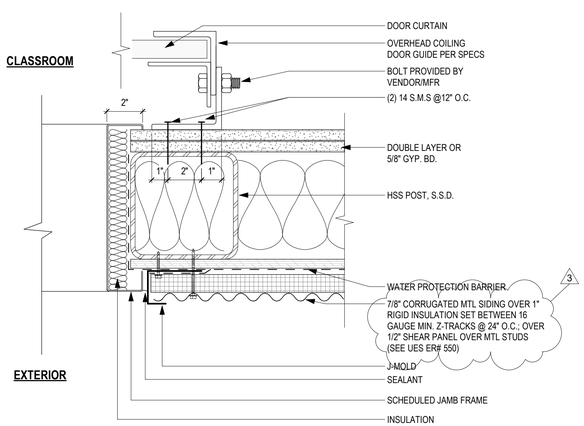
3" = 1'-0"



12 MECHANICAL SOFFIT - CLASSROOM

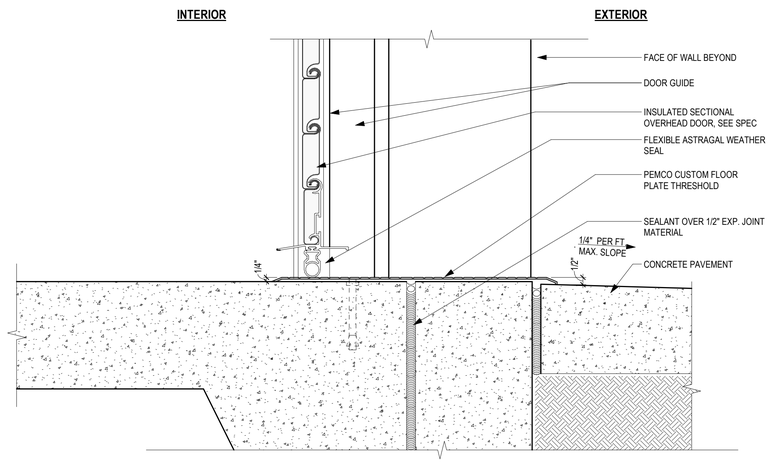
1" = 1'-0"

REFER TO 11/S-741 FOR SOFFIT FRAMING
AND CONNCETION INFORMATION



9 OVERHEAD COILING DOOR JAMB DETAIL

3" = 1'-0"



3 OVERHEAD COILING DOOR SILL DETAIL

3" = 1'-0"

DSA:

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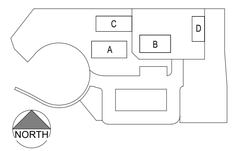
PROFESSIONAL STAMP:

LICENSED ARCHITECT
ANNA T. WINT
C 23260
Exp. Apr 30, 2021
STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
3	ADDENDUM 3	03/17/21

KEY PLAN:



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AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

SECTION DETAILS

DRAWN BY: Author	CHECKED BY: Checker
DATE: 01/14/2021	**PROJECT NO: C9508**
SHEET NO:	

A971

MISCELLANEOUS EQUIPMENT SCHEDULE

TAG	DESCRIPTION	LOAD	VOLT Ø HZ	CONTROLS	STARTER	DISC@MOTOR DISC.	TD	(o) FUSE	REMARKS
FC A1	FAN COIL UNIT – A1	5.63 MCA	208 1Ø 60	BY MECH	–	30	15		
FC A2	FAN COIL UNIT – A2	1.45 MCA	208 1Ø 60	BY MECH	–	30	15		
FC A3	FAN COIL UNIT – A3	0.19 MCA	208 1Ø 60	BY MECH	–	30	15		
FC A4	FAN COIL UNIT – A4	1.0 MCA	208 1Ø 60	BY MECH	–	30	15		
FC A5	FAN COIL UNIT – A5	1.0 MCA	208 1Ø 60	BY MECH	–	30	15		
CU A1	CONDENSING UNIT – A1	19.0 MCA	208 1Ø 60	BY MECH	–	30	26		
HP A1	HEAT PUMP – A1	23 MCA	208 1Ø 60	BY MECH	–	60	35		
BC A1	BRANCH CONTROLLER – A1	0.38 MCA	208 1Ø 60	BY MECH	–	30	15		
SF A1	SUPPLY FAN – A1	12W	115 1Ø 60	BY MECH	☒	–	–		
EF A1	EXHAUST FAN – A1	11W	120 1Ø 60	BY MECH	☒	–	–		
EF A2	EXHAUST FAN – A2	11W	120 1Ø 60	BY MECH	☒	–	–		
EF A3	EXHAUST FAN – A3	11W	120 1Ø 60	BY MECH	☒	–	–		
EF A4	EXHAUST FAN – A4	8W	120 1Ø 60	BY MECH	☒	–	–		
EF A5	EXHAUST FAN – A5	8W	120 1Ø 60	BY MECH	☒	–	–		
ERV A1	ENERGY RECOVERY VENTILATOR	11 MCA	208 1Ø 60	BY MECH	–	30	20		
EWH A1	WATER HEATER 1	3000W	208 1Ø 60	BY MECH	–	30	20		
EQ#2	GREENHOUSE EXH FAN #2a/b	3/4HP	208 1Ø 60	EQPT VENDOR	–	30	20		PROVIDE CONTROLS PER VENDOR
EQ#3	GREENHOUSE EXH FAN #3	1/3HP	208 1Ø 60	EQPT VENDOR	–	30	20		PROVIDE CONTROLS PER VENDOR
EQ#5	GREENHOUSE ACME HAF (a/b)	1/3HP	120V	EQPT VENDOR	☒	–	–		PROVIDE CONTROLS PER VENDOR
EQ#11	WW VC2000	1/3HP	120V	EQPT VENDOR	☒	–	–		PROVIDE CONTROLS PER VENDOR

(o) VERIFY FUSE SIZE WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.

3

LIGHTING FIXTURE SCHEDULE (1)

NOTE: SEE ARCHITECT FOR FIXTURE COLOR SELECTION

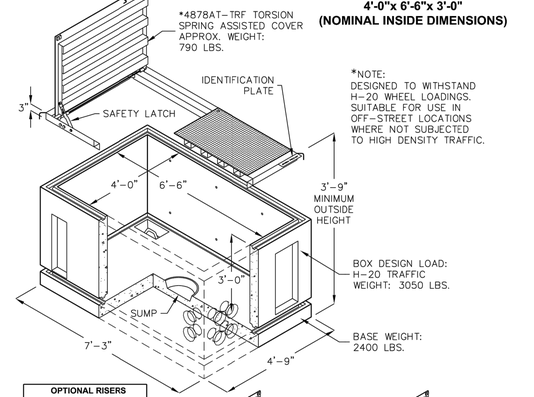
SYM		TAG	DESCRIPTION	MANUFACTURER CATALOG NUMBER	LAMPS	W	VOLTS 120	208	277	480	MOUNTING	WEIGHT (LBS)	REMARKS
A			DIRECT/INDIRECT LINEAR LED, 0–10V DIM, SWIVEL CANOPY AND AC CABLE, WHITE FINISH, INTEGRAL DIMMING AND OCCUPANCY SENSORS	CORELITE DIVIDE SERIES DSI–WS–50L–840–1–D–UNV–STD–FC–W–AC120–T9–8	LED 4000K	9.5W /LF			●		PENDANT	6LB/FT	EL14W FOR UNITS W/EM OPTION
A1			DIRECT/INDIRECT LINEAR LED, 0–10V DIM, WHITE FINISH, INTEGRAL DIMMING AND OCCUPANCY SENSORS	FINELITE SERIES 16 S16LED–ID–DCO–8–4E–H–840–TDO–120–SC–FA–FE–C2–OSB–OBO	LED 4000K	10.8 W/LF			●		PENDANT	3LB/FT	EL14W FOR UNITS W/EM OPTION
B			NARROW SURFACE WRAPAROUND, LED, 0–10V DIM, INTEG BATTERY PACK, DIFFUSED LENS	COOPER LIGHTING HVSL4.4LD4.1.STD.40.UNV.O. EDD1	LED 4000K	39	●		●		PENDANT/WALL (3)	3LB/FT	EL14W FOR UNITS W/EM OPTION
C			4' VANITY LIGHT WITH DIFFUSED LENS, 0–10V DIM	COOPER LIGHTING FVS4.4LD4.1.STD.40.UNV.P125. EDD1 OR WAC EQUAL	LED 4000K	33.6	●				WALL	3LB/FT	EMERGENCY FIXTURE (EL14W) SEE AA201/202FOR MTG HT
D			SLIM UNDERCABINET LED TASK LIGHTING, 0–10 DIM. ACRYLIC LENS	EATON LIGHTING/HALO HU1018D940P	LED 4000K	8W /LF	●				SURFACE	3LB/FT	
E			EDGELIT EXIT SIGN, INTEGRAL BATTERY PACK, SELF DIAGNOSTIC, GREEN TEXT, UNIVERSAL MOUNT, MVOLT	ENVOY LIGHTING EXEL G.C.W.EM.SDT OR EQUAL	LED	5	●		●		UNIVERSAL MOUNTING	2.4LB	EXIT SIGNS
F			EXTERIOR SCONCE WITH INTEGRAL BATTERY PACK, MOTION SENSOR/AUTO DIM, POLY CARBONATE LENS, FULL CUT–OFF	VISIONAIRE LIGHTING PGAS–2–T2–32LC–3–4K–UNV–BP	LED 4000K	42	●		●		WALL	20LB	EMERGENCY EXTERIOR FIXTURES (EBPL) SEE AA201/202FOR MTG HT
G			VAPOR TIGHT LUMINAIRE, LED, 0–10V DIM, POLYCARBONATE LENS, STAINLESS STEEL MOUNTING BRACKET, COMPLETE WITH INTEGRAL OCCUPANCY SENSOR	LITHONIA LIGHTING VAP–4000LM–FST–WD–MVOLT–GZ10–40K–80CRI–	LED 4000K	35	●		●		SURFACE	18LB	EMERGENCY EXTERIOR FIXTURES (E15WCP)
S1			PARKING LOT LIGHTING ON 18' POLE, INTEGRAL AUTO DIM/OCCUPANCY SENSORS, SINGLE HEAD, TYPE III DISTRIBUTION, INTEGRAL GFCI RECEPTACLE AT POLE BASE, COMPLETE	GARDCO LIGHTING GL18.APD–MRO.1.5.160LA–481A.NW.277.BRP.PC (3)	LED 4000K	160				● (3)	POLE/GROUND SEE DETAIL 12/E500	40LB	INTEGRAL XFMR FOR GFCI RECEPT PER MANUFACTURER

(1) NOTES: 1. SHADED FIXTURE INDICATES UNIT WITH EMERGENCY BALLAST, BODINE 50 OR APPROVED EQUAL.

3

466TA-I INTERCEPT PULLBOX

4'-0"x 6'-6"x 3'-0"
(NOMINAL INSIDE DIMENSIONS)



*NOTE:
DESIGNED TO WITHSTAND H–20 WHEEL LOADINGS. SUITABLE FOR USE IN OFF–STREET LOCATIONS WHERE NOT SUBJECTED TO HIGH DENSITY TRAFFIC.

OPTIONAL RISERS (EXTENSIONS)		
MODEL NO.	B	WEIGHT
466–R6	6"	650 LBS.
466–R12	12"	1190 LBS.

ADJUSTABLE TORSION SPRING ASSISTED COVERS (DIAMOND PLATE SURFACE)
*4878AT–TRF, 790 LBS. (H–20 TRAFFIC)
OR
4878AT–PKY, 640 LBS. (NON–TRAFFIC)

ADJUSTABLE TORSION SPRING ASSISTED COVERS (NON–SLIP SURFACE)
*4878AT–TRF–AG, 650 LBS. (H–20 TRAFFIC)
OR
4878AT–PKY–AG, 630 LBS. (NON–TRAFFIC)

FOR COMPLETE DESIGN AND PRODUCT INFORMATION, CONTACT JENSEN PRECAST.

4/10/08
PB466TA_I_B.dwg
© 2008 Jensen Precast

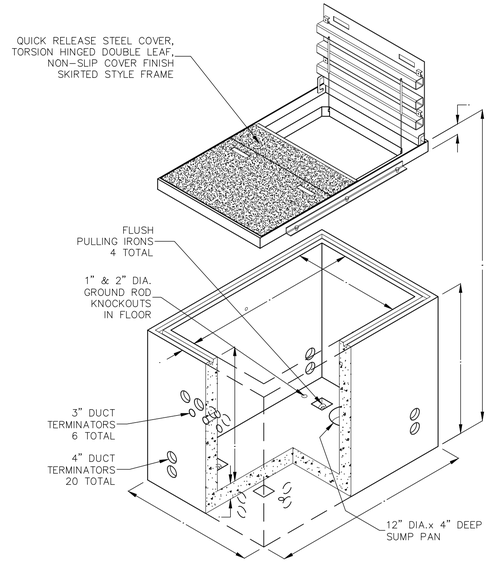
JENSEN PRECAST

2 JENSEN 4'X6' PULLBOX (TELECOM) SCALE : NTS

PG&E

4'-0"x6'-6"x5'-0" (#6) PRIMARY ENCLOSURE EQUIPMENT/SPLICE

PG&E CODE: 041496



MATERIAL LIST (K466T25PG)		
PG&E CODE	DESCRIPTION	WEIGHT (LBS)
041567	ENCLOSURE, 4'x6'–6"x5' PG&E	11,760
360149	COVER 4'x6'–6" SPLICE 25MPH PG&E	1,030

E 3/17/2021 0E00.DWG ©2021

JENSEN PRECAST EST. 1968

Jensen Precast reserves the right to make changes to product design and/or dimensions without notice. Please contact Jensen Precast whenever necessary for confirmation or advice on product design.

1 JENSEN 4'X6' PULLBOX (POWER) SCALE : NTS

DSA:

ATI 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:

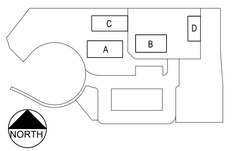
REGISTERED PROFESSIONAL ENGINEER ANTONIO QUIJOBO MORTER No. E 16739 Exp. 09/30/22 ELECTRICAL STATE OF CALIFORNIA

CONSULTANT:

MPE
METRO POWER ENGINEERS, INC.
3150 HILLTOP MALL ROAD, SUITE 22
RICHMOND, CA 94806
TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:
1	BID ADDENDUM 3	03/17/21

KEY PLAN:



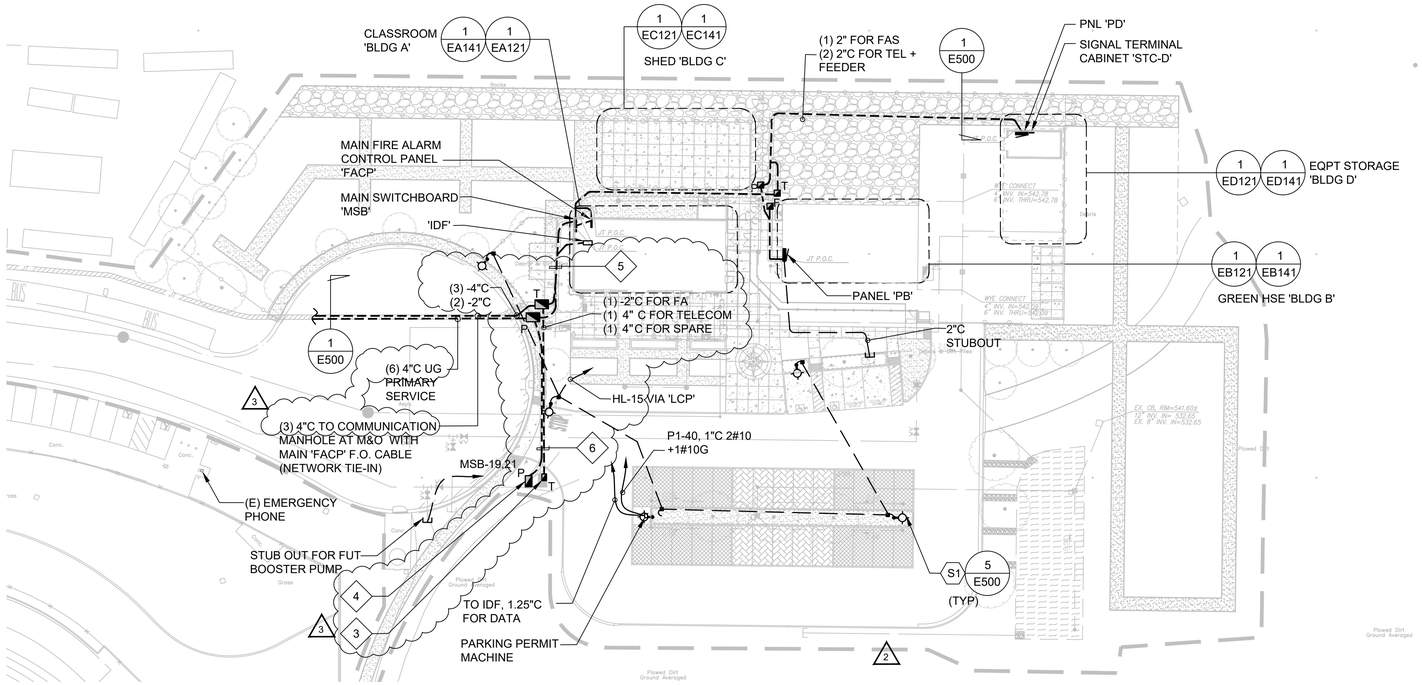
CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

SCHEDULES

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

E001

FOR MINIMUM REQUIRED EGRESS LIGHTING, SEE EGRESS LIGHTING PHOTOMETRICS ON SHEET E103.



2 ENLARGED SITE PLAN

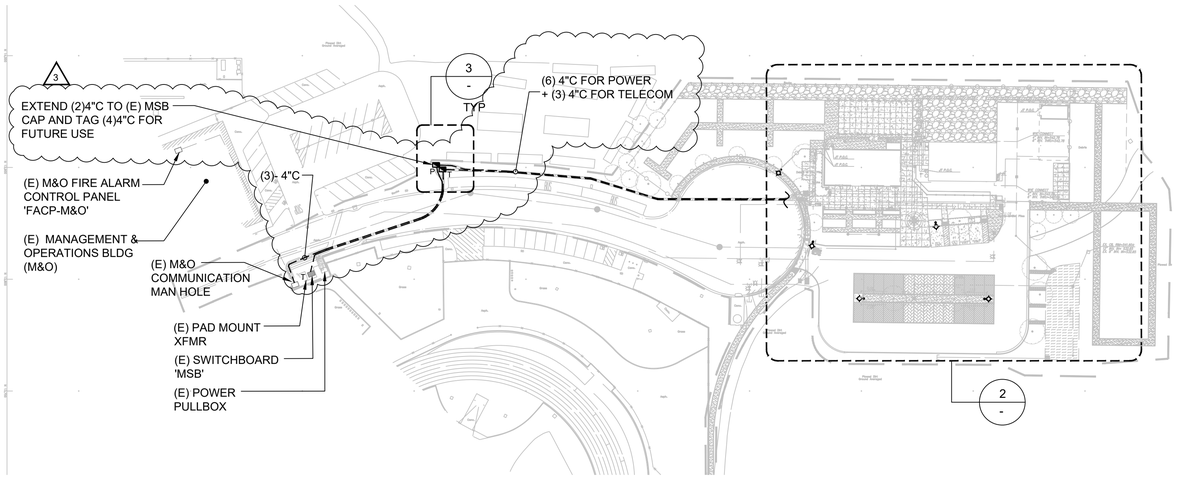
SCALE : 1/32" = 1'-0"

GENERAL NOTES:

1. FOR SITE LIGHTING BRANCH CIRCUIT, USE 2"C WITH (2)#10AWG CU + (1)#10 CU G, TYP, UON.

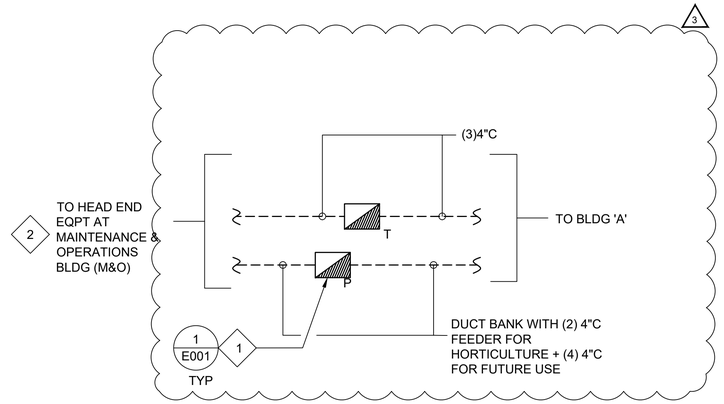
KEY NOTES:

1. PROVIDE THE FOLLOWING TRAFFIC RATED CONCRETE PULLBOX.
   - P: 4'X6' MV CONC BOX FOR POWER, COMPLETE WITH EXTENSION AND COVER WITH MARKED LID 'ELECTRICAL'. SEE DETAIL 1/E001.
   - T: 4' X 6' FOR TELECOM VAULT, TRAFFIC RATED AND MARKED WITH LABEL 'COMMUNICATIONS'. SEE DETAIL 2/E001.
2. PROVIDE HOMERUN TO (E) HEAD END EQUIPMENT. FIELD VERIFY ROUTING OF CONDUIT.
3. SIGNAL PULLBOX PB FOR FA/TEL. SEE 'NT' DWG DETAIL 4/TN505.
4. SIMILAR TO DETAIL 1/E001 EXCEPT 3'X5'.
5. CONDUITS IN TRENCH:
   (2) - 4"C FOR POWER
   (1) - 4"C FOR TELECOM
   (1) - 2"C FOR FA
6. CONDUITS IN TRENCH:
   (2) - 4"C FOR POWER
   (2) - 4"C FOR DATA
   (1) - 2"C FOR FA



1 OVERALL SITE PLAN

SCALE : 1/64" = 1'-0"



3 PULLBOX LAYOUT PLAN

SCALE : NTS

DSA:

ATI 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:

REGISTERED PROFESSIONAL ENGINEER ANTONIO QUIJOCO MORTER No. E 16739 Exp. 09/30/22 ELECTRICAL STATE OF CALIFORNIA

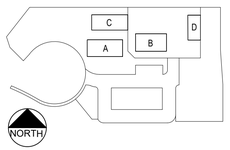
CONSULTANT:

MPE

METRO POWER ENGINEERS, INC.
3150 HILLTOP MALL ROAD, SUITE 22
RICHMOND, CA 94806
TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:
2	BID ADDENDUM 2	03/10/21
3	BID ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

ELECTRICAL SITE PLAN

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

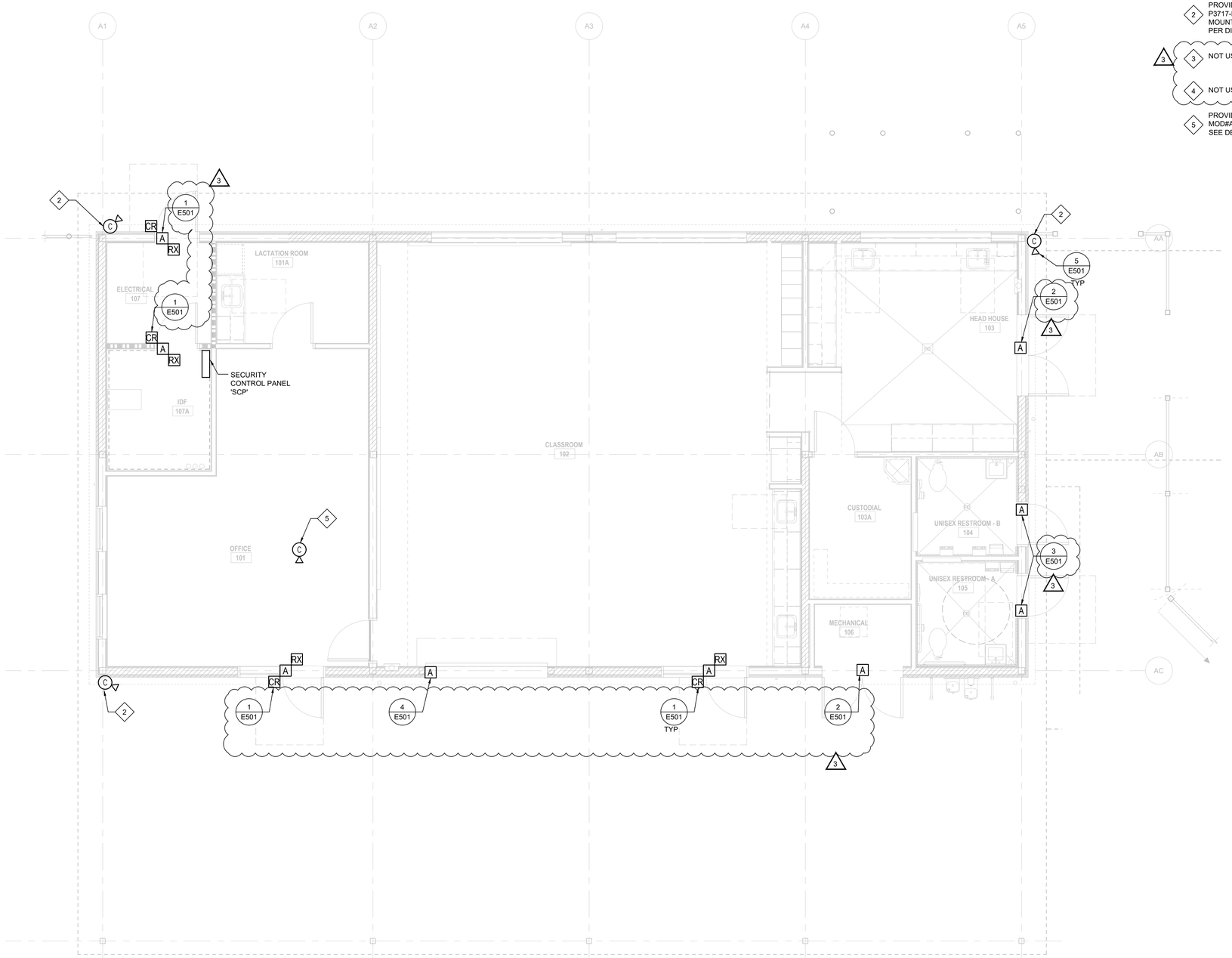
E101

GENERAL NOTES:

1. LOCATE WEATHERPROOF (WP) JUNCTION BOX FOR SECURITY CAMERA. COORDINATE WITH 'TN' DRAWINGS AS REQUIRED, TYP, UON.
2. FOR OTHER BUILDING SECURITY CAMERA, SEE DWG ED121.

KEY NOTES:

1. USE PLENUM RATED CABLING IN LIEU OF THE 1"C WITH REQUIRED LV CABLES. SEE CABLING UNDER 'TN' DRAWINGS.
2. PROVIDE FIXED CAMERA WITH 270° VIEW, MODEL # AXIS P3717-PLE NETWORK CAMERA. PROVIDE CORNER MOUNTING BRACKET, AXIS T91A64 OR EQUAL. CABLING PER DIV 27.
3. NOT USED.
4. NOT USED.
5. PROVIDE CEILING MOUNTED FIXED NETWORK CAMERA MOD#AXIS P3228-LV. ORIENT TO VIEW ENTRANCE DOOR. SEE DETAIL 6/E501. PROVIDE CABLING PER DIV 27.



1 CLASSROOM BUILDING - SECURITY

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

NORTH

DSA:

ATI 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:

REGISTERED PROFESSIONAL ENGINEER ANTONIO QUIJOD MARTIN No. E 16739 Exp. 09/30/22 ELECTRICAL STATE OF CALIFORNIA

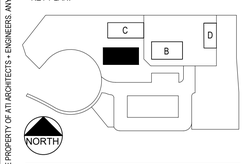
CONSULTANT:

MPE

METRO POWER ENGINEERS, INC.
3150 HILLTOP MALL ROAD, SUITE 22
RICHMOND, CA 94806
TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:
1	BID ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

CLASSROOM BUILDING FLOOR PLAN SECURITY

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

SHEET NO:

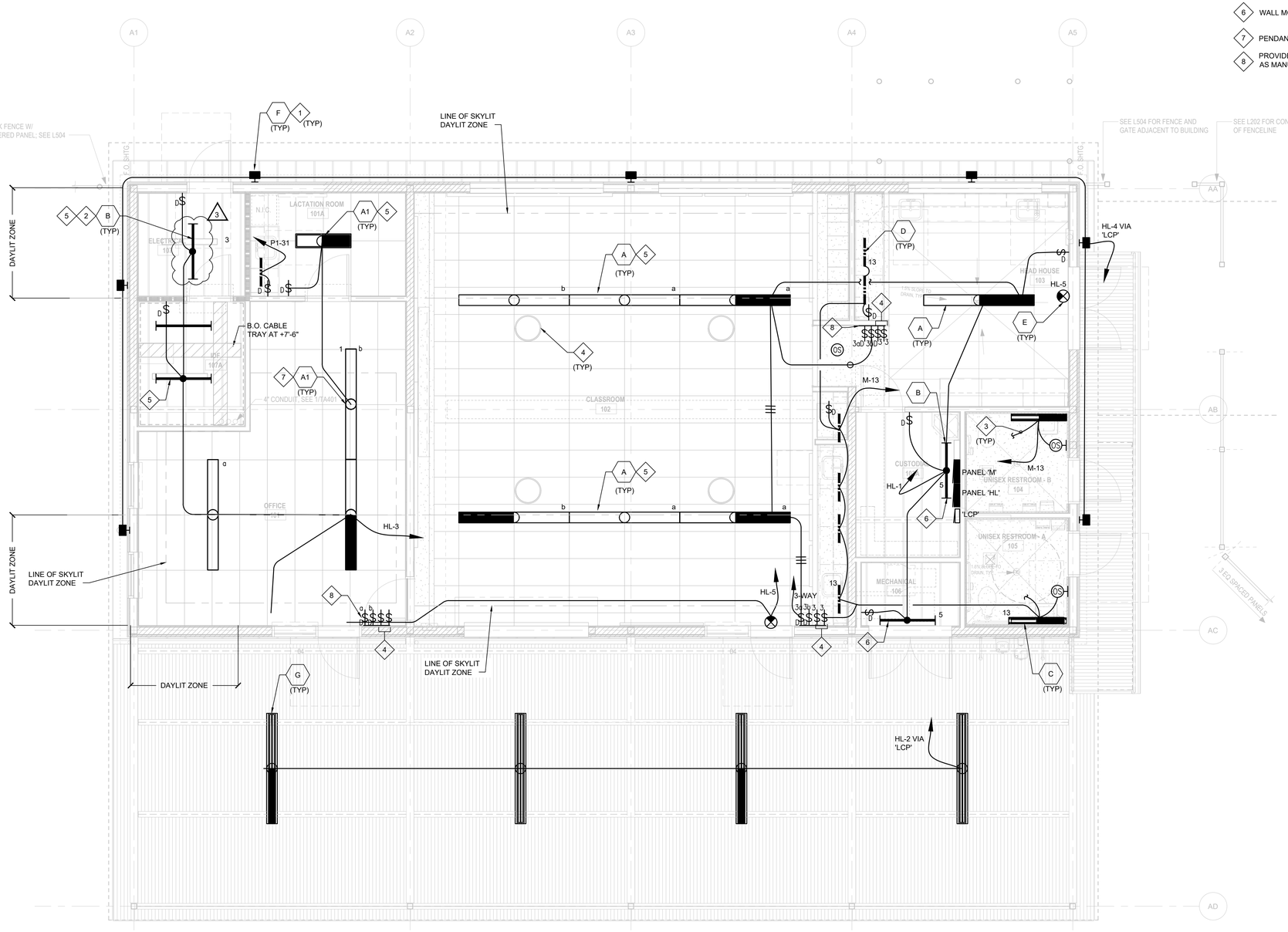
EA131

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:

1. PROVIDE DEDICATED BRANCH CIRCUIT HOMERUN TO PNL 'LP' VIA 'LCP'.
2. UNIT WITH INTEGRAL BATTERY PACK, BODINE 50 OR VENDOR'S EQUAL.
3. CONNECT TO ROOM EXH FAN, SEE MECH.
4. SOLAR TUBE, TYP. SEE ARCHITECTURAL DRAWINGS.
5. PENDANT HUNG, MOUNT AT +10'-0" A.F.F.
6. WALL MOUNTED, MOUNT AT +10'-3" A.F.F. (3)
7. PENDANT MOUNTED, MOUNT AT +8'-5" A.F.F
8. PROVIDE MULTI-GANG BOX WITH A COMMON FACEPLATE AS MANUFACTURED BY LEVITON OR APPROVED EQUAL.



1 CLASSROOM BUILDING – LIGHTING

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

NORTH

DSA:

ATI 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:

REGISTERED PROFESSIONAL ENGINEER ANTONIO QUIJADA MORTER No. E 16739 Exp. 09/30/22 ELECTRICAL STATE OF CALIFORNIA

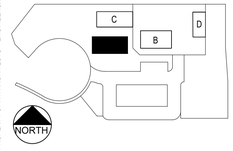
CONSULTANT:

MPE

METRO POWER ENGINEERS, INC.
3150 HILLTOP MALL ROAD, SUITE 22
RICHMOND, CA 94806
TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:
3	BID ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

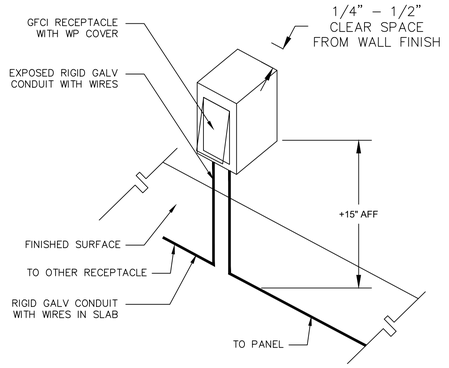
CLASSROOM BUILDING FLOOR PLAN LIGHTING

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

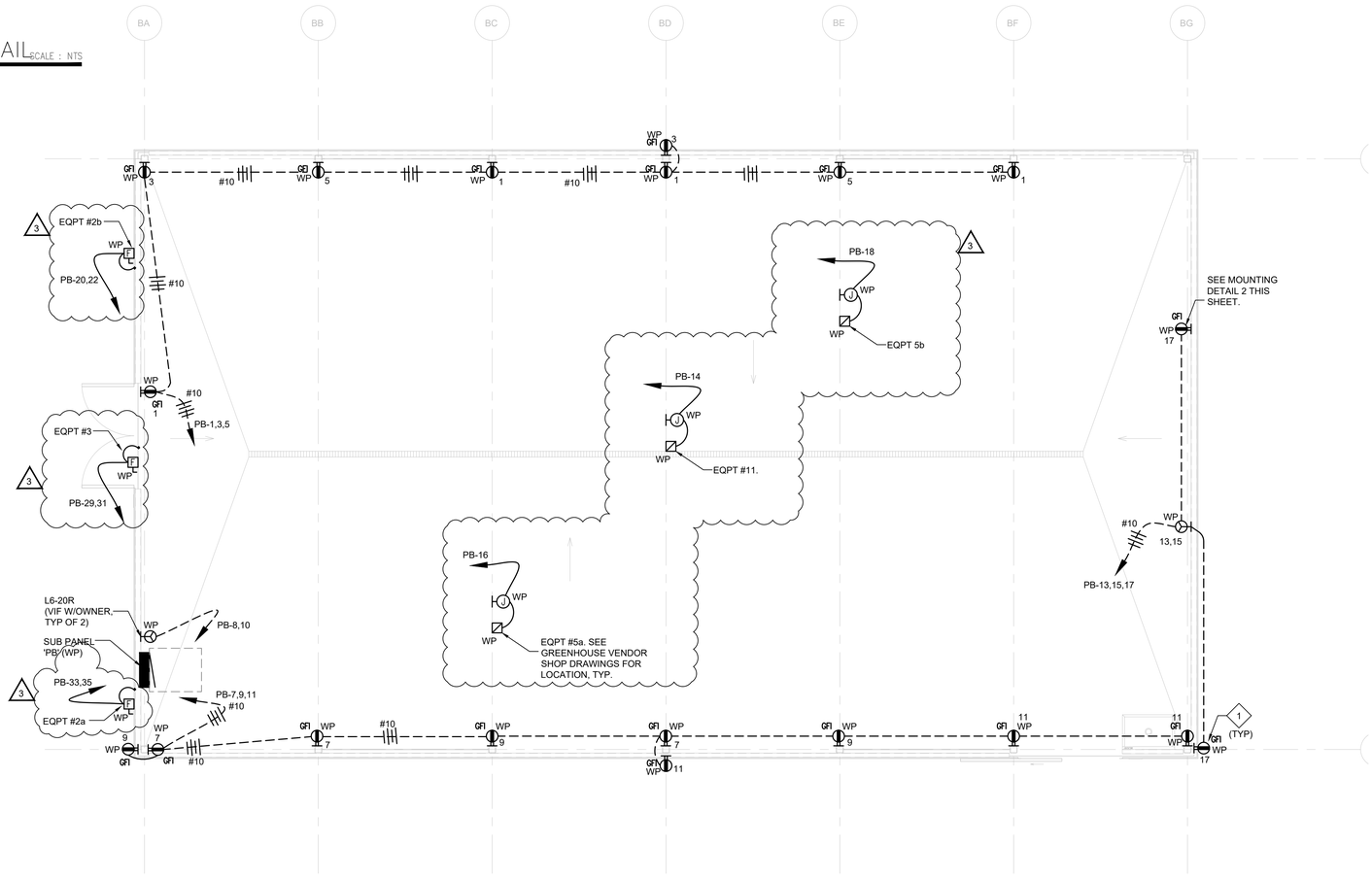
EA141

KEY NOTES:

1 PROVIDE WP METALLIC, PAD LOCKABLE HEAVY DUTY 'WHILE-IN USE' COVER AS MANUF BY HUBBELLOR EQUAL.



2 RECEPTACLE MOUNTING DETAIL SCALE : NTS



1 GREEN HOUSE FLOOR PLAN - POWER & SIGNAL

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

NORTH

DSA:

ATI 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:

REGISTERED PROFESSIONAL ENGINEER ANTONIO QUIJOD MORTER No. E 16739 Exp. 09/30/22 ELECTRICAL STATE OF CALIFORNIA

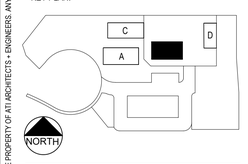
CONSULTANT:

MPE

METRO POWER ENGINEERS, INC.
3150 HILLTOP MALL ROAD, SUITE 22
RICHMOND, CA 94806
TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:
1	BID ADDENDUM 3	03/17/21

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

GREENHOUSE BUILDING FLOOR PLAN

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

EB121

TYPE: BOLT-ON
SERVICE: 208Y/120V 3PH, 4W
BUS: 400A
PANEL: **"P"**
LOCATION: ELEC RM
MAIN: 400A
MTG: RECESSED
AIC: 10 KAIC

LOAD SERVED	LCL	KVA	BREAKER TRIP	POLE	NO.	PHASE	NO	POLE	BREAKER TRIP	KVA	LCL	LOAD SERVED
SPARE			20	1	1	A	2	1	20			SPARE
SPARE			20	1	3	B	4	1	20			SPARE
SPARE			20	1	5	C	6	1	20			SPARE
SPARE			20	1	7	A	8	1	20			SPARE
SPARE			20	1	9	B	10	1	20			SPARE
SPARE			20	1	11	C	12	1	20			SPARE
SPARE			20	1	13	A	14	1	20			SPARE
SPARE			20	1	15	B	16	1	20			SPARE
SPARE			20	1	17	C	18	1	20			SPARE
SPACE			20	1	19	A	20	1				SPACE
SPACE			1	21	B	22	1					SPACE
SPACE			1	23	C	24	1					SPACE
SPACE			1	25	A	26	1					SPACE
SPACE			1	27	B	28	1					SPACE
SPACE			1	29	C	30	1					SPACE
SPACE			1	31	A	32	3	150	10.0			SUB PNL 'PB'
SPACE			1	33	B	34			10.5			-----
SPACE			1	35	C	36			10.7			-----
SUB PNL 'M'		5.1	100	3	37	A	38	3	100	8.7		SUB PNL 'PD'
-----		6.4			39	B	40			2.7		-------
-----		8.3			41	C	42			2.7		-------

SUB TOTAL CONN. LOAD KVA **TOTAL CONN. LOAD=** 59.1

PHASE A 17.8
PHASE B 19.6 **25% LCL =.25(** 2 **KVA):** 0.5
PHASE C 21.7 **TOTAL:** 59.6 **KVA** 165.6 **AMPS**

DOUBLE SECTION WITH FEED THRU LUGS.

3

TYPE: BOLT-ON
SERVICE: 277/408V, 3PH,4W
BUS: 125A
PANEL: **"HL"**
LOCATION: CUST.RM 102A
MAIN: MLO
MTG: SURFACE
AIC: 14 KAIC

LOAD SERVED	LCL	KVA	BREAKER TRIP	POLE	NO.	PHASE	NO	POLE	BREAKER TRIP	KVA	LCL	LOAD SERVED
LTG @ CLASSRM BLDG	X	1.0	20	1	1	A	2	1	20	0.4	X	LTG-OUTDOOR CANOPY
LTG @ OFC/IDF/ELEC	X	0.5	20	1	3	B	4	1	20	0.3	X	LTG-PERIMETER
LTG EMERGENCY	X	0.1	20	1	5	C	6	1	20	0.6	X	LTG-BLDG C-INTERIOR
SPARE			20	1	7	A	8	1	20	0.3	X	LTG-BLDG C-EXTERIOR
SPARE			20	1	9	B	10	1	20			SPARE
SPARE			20	1	11	C	12	1				SPACE
LCP'	X	0.5	20	1	13	A	14	1				SPACE
SITE LIGHTING	X	0.3	20	1	15	B	16	1				SPACE
SPARE			20	1	17	C	18	1				SPACE

2

SUB TOTAL CONN. LOAD KVA **TOTAL CONN. LOAD=** 4.0

PHASE A 2.2
PHASE B 1.1 **25% LCL =.25(** 4.0 **KVA):** 1.0
PHASE C 0.7 **TOTAL:** 5.0 **KVA** 6.0 **AMPS**

3

TYPE: BOLT-ON
SERVICE: 208Y/120V 3PH, 4W
BUS: 400A
PANEL: **"P1"**
LOCATION: ELEC RM
MAIN: MLO
MTG: RECESSED
AIC: 10 KAIC

LOAD SERVED	LCL	KVA	BREAKER TRIP	POLE	NO.	PHASE	NO	POLE	BREAKER TRIP	KVA	LCL	LOAD SERVED
RECEPT ELEC RM		0.4	20	1	1	A	2	1	20	1.0	X	TELCO BOARD 'TTB'
GFCI-WP RECEPT W/EXTR		0.4	20	1	3	B	4	1	20	0.8		QUAD @ IDF RM
GFCI-WP RECEPT W/EXTR		0.4	20	1	5	C	6	1	30	2.8		L5-30R @ IDF RM
REFRIG @ LACTATION		1.0	20	1	7	A	8	1	20	1.0	X	CLNG PROJECTOR
GARBAGE DISPOSER		0.9	20	1	9	B	10	1	20	0.5		MOTORIZED SCREEN
RECEPT @ OFC		0.6	20	1	11	C	12	1	20	0.6		WALL RECEPT @ CLASSRM
RECEPT @ OFC		0.8	20	1	13	A	14	2	20	1.0		L6-20R @ IDF RM
RECEPT @ OFC		0.6	20	1	15	B	16			1.0		-----
FACP	X	0.5	20	1	17	C	18	1	20	0.2	X	LPC CLOCK
BACNET	X	0.5	20	1	19	A	20	1	20			SPARE
RECEPT @ CLASSRM NW		0.6	20	1	21	B	22	2	20	0.2		FC-A4 / FC-A5
RECEPT @ CLASSRM NW		0.4	20	1	23	C	24			0.2		-----
SECURITY PANEL	X	0.5	20	1	25	A	26	2	20	0.2		FC-A2 / FC-A3
RECEPT-BLDG C		1.0	20	1	27	B	28			0.2		-----
RECEPT-BLDG C		1.0	20	1	29	C	30	1	20			SPARE
UC LIGHTING	X	0.1	20	1	31	A	32	1	20			SPARE
SPARE			20	1	33	B	34	1	20			SPARE
SPARE			20	1	35	C	36	1	20			SPARE
SPARE			20	1	37	A	38	1	20			SPARE
SPARE			20	1	39	B	40	1	20	0.5		PARK TICKET EQPT
SPARE			20	1	41	C	42	1	20			SPARE

SUB TOTAL CONN. LOAD KVA **TOTAL CONN. LOAD=** 19.9

PHASE A 6.5
PHASE B 6.7 **25% LCL =.25(** 3.8 **KVA):** 1.0
PHASE C 6.7 **TOTAL:** 20.9 **KVA** 57.9 **AMPS**

3

TYPE: BOLT-ON
SERVICE: 208Y/120V 3PH, 4W
BUS: 225A
PANEL: **"PB"**
LOCATION: GREENHOUSE BLDG
MAIN: 150A/3P
MTG: SURFACE
AIC: 10 KAIC

LOAD SERVED	LCL	KVA	BREAKER TRIP	POLE	NO.	PHASE	NO	POLE	BREAKER TRIP	KVA	LCL	LOAD SERVED
MAINT GFCI RECEPT N.WALL		0.6	20	1	1	A	2	1	20	0.3	X	GENERAL LIGHTING
MAINT GFCI RECEPT N.WALL		0.6	20	1	3	B	4	1	20	0.3	X	GENERAL LIGHTING
MAINT GFCI RECEPT N.WALL		0.6	20	1	5	C	6	1	20	0.4	X	EXTERIOR SCONCE
MAINT GFCI RECEPT S WALL		0.6	20	1	7	A	8	2	20	1.5		SPECIAL OUTLET
MAINT GFCI RECEPT S WALL		0.6	20	1	9	B	10			1.5		SPECIAL OUTLET
MAINT GFCI RECEPT S WALL		0.6	20	1	11	C	12	1	20	0.2	X	TIMESWITCH
SPECIAL OUTLET		1.5	20	2	13	A	14	1	20	0.8		EQPT #11
SPECIAL OUTLET		1.5			15	B	16	1	20	0.9		EQPT #5a
GFCI RECEPT E WALL		0.4	20	1	17	C	18	1	20	0.3		EQPT#5b
SPARE			20	1	19	A	20	2	20	0.8		EQPT#2b
SPARE			20	1	21	B	22			0.8		-----
SPARE			20	1	23	C	24	2	40	3.5		EV CHARGE STATION
SPACE				1	25	A	26			3.5		(FUTURE)
SPACE				1	27	B	28	2	40	3.5		EV CHARGE STATION
EQPT #3		0.4	20	2	29	C	30			3.5		(FUTURE)
-----		0.4			31	A	32					
EQPT #2a		0.8	20	2	33	B	34					
-----		0.8			35	C	36					
					37	A	38					
					39	B	40					
					41	C	42					

SUB TOTAL CONN. LOAD KVA **TOTAL CONN. LOAD=** 31.2

PHASE A 10.0
PHASE B 10.5 **25% LCL =.25(** 1.2 **KVA):** 0.3
PHASE C 10.7 **TOTAL:** 31.5 **KVA** 87.5 **AMPS**

3

TYPE: BOLT-ON
SERVICE: 208Y/120V 3PH, 4W
BUS: 225A
PANEL: **"M"**
LOCATION: CUST.RM 102A
MAIN: 400A
MTG: SURFACE
AIC: 10 KAIC

LOAD SERVED	LCL	KVA	BREAKER TRIP	POLE	NO.	PHASE	NO	POLE	BREAKER TRIP	KVA	LCL	LOAD SERVED
GFCI RECEPT-HEAD HOUSE		0.6	20	1	1	A	2	1	20	0.4		GFCI RECEPT - N WALL
GFCI RECEPT-HEAD HOUSE		0.6	20	1	3	B	4	1	20	0.6		GFCI RECEPT - S WALL
GFCI-HEAD HSE/CUST		0.6	20	1	5	C	6	1	20	0.4		GFCI RECEPT - UNISEX TOIL A
GFCI RECEPT UNISEX TOIL		0.4	20	1	7	A	8	1	20			SPARE
GFCI RECEPT CLASS RM		0.6	20	1	9	B	10	1	20			SPARE
GFCI RECEPT MECH RM		0.4	20	1	11	C	12	1	20			SPARE
UC LIGHTING/VANITY	X	0.2	20	1	13	A	14	1	20			SPARE
SPARE			20	1	15	B	16	1	20			SPARE
SPARE			20	1	17	C	18	1	20			SPARE
FAN COIL A1 @ MECH RM		0.6	20	2	19	A	20	2	20	0.1	X	BC-A1 CONTROLLER
-----		0.6			21	B	22			0.1	X	-----
ERV-VENTILATOR @ CUST		1.1	20	2	23	C	24	2	25	1.9		CU-A1 @ N YARD
-----		1.1			25	A	26			1.9		-----
EWH-A1 @ CUST		1.5	20	2	27	B	28	2	35	2.4		HP-A1 @ N YARD
-----		1.5			29	C	30			2.4		-----

SUB TOTAL CONN. LOAD KVA **TOTAL CONN. LOAD=** 20.0

PHASE A 5.3
PHASE B 6.4 **25% LCL =.25(** 0.4 **KVA):** 0.1
PHASE C 8.3 **TOTAL:** 20.1 **KVA** 55.8 **AMPS**

TYPE: BOLT-ON
SERVICE: 208Y/120V 3PH, 4W
BUS: 225A
PANEL: **"PD"**
LOCATION: EQPT STG
MAIN: 100A/3P
MTG: SURFACE
AIC: 10 KAIC

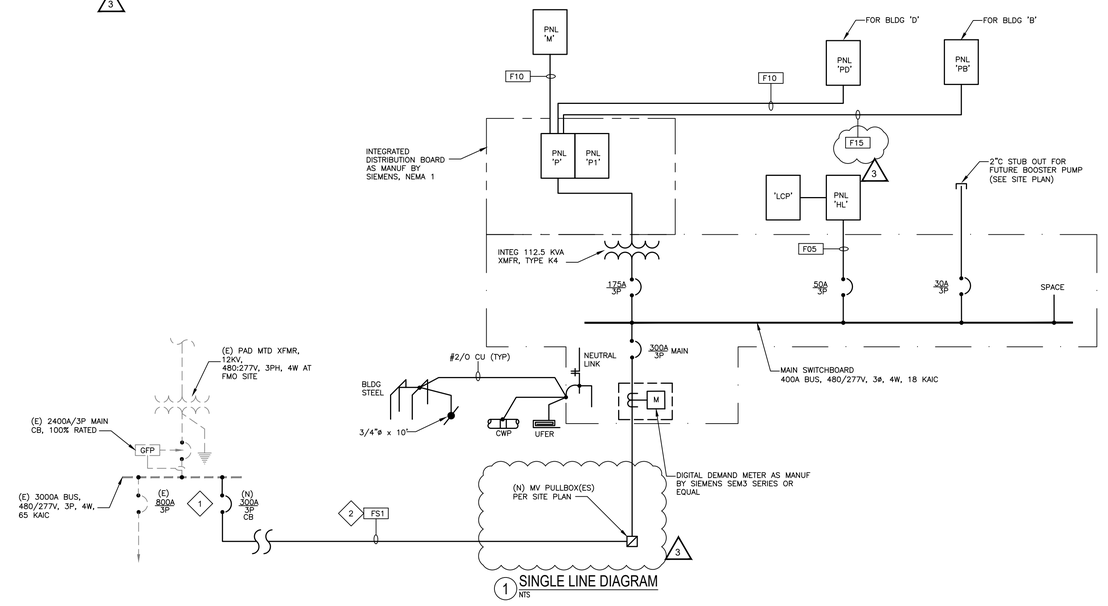
LOAD SERVED	LCL	KVA	BREAKER TRIP	POLE	NO.	PHASE	NO	POLE	BREAKER TRIP	KVA	LCL	LOAD SERVED
MAINT RECEPT STOR		0.4	20	1	1	A	2	1	20	0.2	X	GENERAL LIGHTING
GFCI EXTR RECEPT N WALL		0.4	20	1	3	B	4	1	20	0.6	X	EXTR LIGHTING
L5-30R RECEPT		2.0	30	1	5	C	6	1	30	2.0		L5-30R RECEPT
L5-30R RECEPT		2.0	30	1	7	A	8	1	20	0.4		GFCI EXTR RECEPT S WALL
SPARE		0.6	20	1	9	B	10	1	20	0.4		GFCI EXTR RECEPT MAT'L BIN
SPARE		0.6	20	1	11	C	12	1	20	0.2	X	TIMESWITCH
SPACE		1.5	20	1	13	A	14	1	20			SPARE
SPACE		1.5	20	1	15	B	16	1	20			SPARE
SPACE		0.4	20	1	17	C	18	1	20			SPARE
SPACE				1	19	A	20					SPACE
SPACE				1	21	B	22					SPACE
SPACE				1	23	C	24					SPACE
					25	A	26					
					27	B	28					
					29	C	30					
					31	A	32					
					33	B	34					
					35	C	36					
					37	A	38					
					39	B	40					
					41	C	42					

SUB TOTAL CONN. LOAD KVA **TOTAL CONN. LOAD=** 13.2

PHASE A 4.5
PHASE B 3.5 **25% LCL =.25(** 1.0 **KVA):** 0.3
PHASE C 5.2 **TOTAL:** 13.5 **KVA** 37.4 **AMPS**

FEEDER SCHEDULE

AMPS NOM.	TAG	3-PHASE 3W CONDUCTOR	3-PHASE 4W CONDUCTOR	EQUIPMENT GROUND
20	F02	1/2"C(3)#12 AWG	1/2"C(4)#12 AWG	#12
30	F03	1/2"C(3)#10 AWG	1/2"C(4)#10 AWG	#10
40	F04	3/4"C(3)#8 AWG	3/4"C(3)#8 AWG	#10
50	F05	3/4"C(3)#6 AWG	1"C(4)#6 AWG	#10
70	F07	1"C(3)#4 AWG	1-1/4"C(4)#4 AWG	#6
90	F09	1-1/4"C(3)#3 AWG	1-1/4"C(4)#3 AWG	#6
100	F10	1-1/4"C(3)#2 AWG	1-1/4"C(4)#2 AWG	#6
125	F12	1-1/2"C(3)#1 AWG	1-1/2"C(4)#1 AWG	#6
150	F15	1-1/2"C(3)#1/0 AWG	2"C(4)#1/0 AWG	#6
175	F17	2"C(3)#2/0 AWG	2"C(4)#2/0 AWG	#6
200	F20	2"C(3)#3/0 AWG	2"C(4)#3/0 AWG	#6
225	F22	2"C(3)#4/0 AWG	2-1/2"C(5)#4/0 AWG	#4
250	F25	2-1/2"C(3)#250 KCMIL	2-1/2"C(4)#250 KCMIL	#4
300	F30	2-1/2"C(3)#350 KCMIL	3"C(4)#350 KCMIL	#4
400	F40	3-1/2"C(3)#500 KCMIL	4"C(4)#500 KCMIL	#3
F60	F60	(2)3.5"C(3)#400 KCMIL	(2)3.5"C(4)#350 KCMIL	#1
300	FS1	-	(1)4"C(4)#500 KCMIL +(1)4"C SPARE	#3



1 SINGLE LINE DIAGRAM
NTS

CALL UNDERGROUND SERVICE ALERT (USA) BY DIALING 811, TWO WORKING DAYS MINIMUM PRIOR TO TRENCHING/EXCAVATION.

DETAIL NOTES:

1. PROVIDE (N) CB WITH TYPE/KAIC RATING TO MATCH (E).
2. FIELD VERIFY EXACT ROUTE IN FIELD.

DSA:

ATI 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:

REGISTERED PROFESSIONAL ENGINEER ANTONIO QUIJOCO MORTER No. E 16739 Exp. 09/30/22 ELECTRICAL STATE OF CALIFORNIA

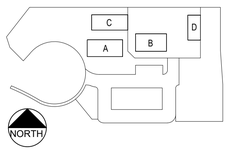
CONSULTANT:

MPE

METRO POWER ENGINEERS, INC.
3150 HILLTOP MALL ROAD, SUITE 22
RICHMOND, CA 94806
TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:
1	BID ADDENDUM 2	03/10/21
2	BID ADDENDUM 3	03/17/21

KEY PLAN:

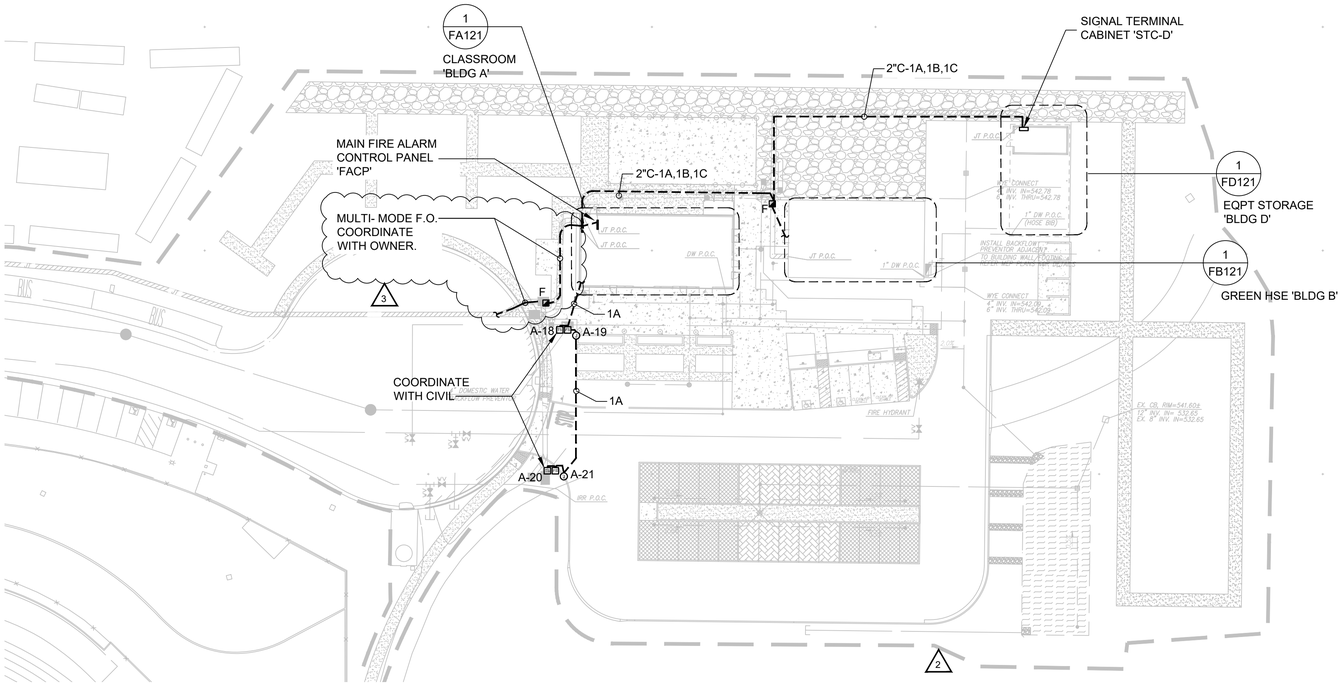


CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

SINGLE LINE DIAGRAM

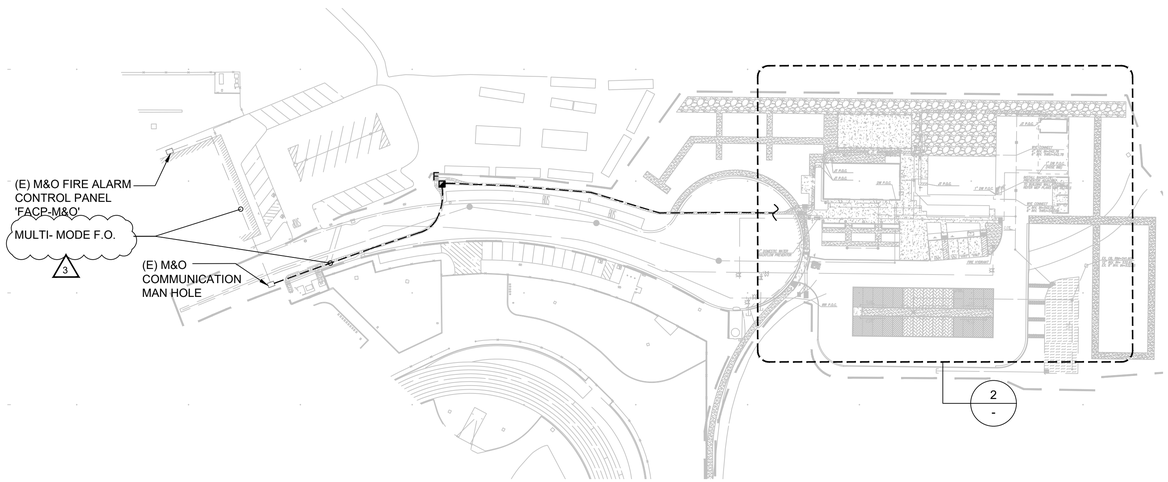
DRAWN BY: CHECKED BY:
DATE: 11/09/2020 PROJECT NO: C9508
SHEET NO:

E400



2 ENLARGED SITE PLAN

SCALE : 1/32" = 1'-0"



1 OVERALL SITE PLAN

SCALE : 1/64" = 1'-0"

NORTH

DSA:

ATI 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:

REGISTERED PROFESSIONAL ENGINEER
ANTONIO QUIJADA MARTIN
No. E 16739
Exp. 09/30/22
ELECTRICAL
STATE OF CALIFORNIA

CONSULTANT:

MPE
METRO POWER ENGINEERS, INC.
3150 HILLTOP MALL ROAD, SUITE 22
RICHMOND, CA 94806
TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:
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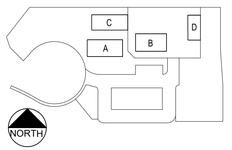

CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE,
LIVERMORE, CA 94551

FIRE ALARM SITE PLAN

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

SHEET NO:

F101

BID PROPOSAL

TO: **CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT**, a California Community College District, acting by and through its Board of Trustees ("the District").

FROM: _____
(Name of Bidder)

_____
(Address)

_____
(City, State, Zip Code)

_____
(Telephone/Fax)

_____
(E-Mail Address of Bidder's Representative(s))

_____
(Name(s) of Bidder's Authorized Representative(s))

1. Bid Proposal

1.	Base Bid	$
2.	Owner's Non-Specified Allowance	$ 250,000.00
3.	Total Bid Amount (Sum of Line 1 + 2)	$

Alternates

4.	Alternate No.1 – PVC Membrane Roofing	$

1.1 Bid Proposal Amount. The undersigned Bidder proposes and agrees to perform the Contract including, without limitation, providing and furnishing any and all of the labor, materials, tools, equipment and services necessary to complete in a workmanlike manner all of the Work and other obligations required by the Contract Documents for the sum of _____ Dollars ($_____) (Line 3 of Table above). The Bidder confirms that it has checked all of the above figures and understands that neither the District nor any of its agents, employees or representatives shall be responsible for any errors or omissions on the part of the undersigned Bidder in preparing and submitting this Bid Proposal. The Bidder confirms that the bid proposal includes the Owner's Non-Specified Allowance in the amount of Two Hundred Fifty Thousand Dollars and No Cents

($250,000.00). The Basis of Award will be the low responsive bidder, which will be determined by the Total Base Bid Amount (Line Item No. 3)

1.2 Owner's Non-Specified Allowance. Bidder shall include in Bid Proposal the stipulated sum of Two Hundred Fifty Thousand Dollars and No Cents ($250,000.00) for non-specified work to be performed ONLY at the determination and direction of the District. Work performed at the determination and direction of the District under this Allowance shall be documented by Contractor and submitted to Construction Manager per the requirements specified in Article 9 of the General Conditions. Contractor shall include a separate line item in Contractor's Schedule of Values as "Allowance" with the value of Two Hundred Fifty Thousand Dollars ($250,000.00). At closeout of Contract, any funds remaining in the Allowance shall be credited to Owner through a Change Order.

1.3 Acknowledgment of Bid Addenda. The Bidder confirms that this Bid Proposal incorporates and is inclusive of, all items or other matters contained in Bid Addenda issued by or on behalf of the District.

_____ **Addenda Nos. _____** received, acknowledged
(initial) and incorporated into this Bid Proposal.

2. Documents Accompanying Bid. The Bidder has submitted with this Bid Proposal the following: (a) Bid Security; (b) Subcontractors List; (c) Statement of Qualifications; (d) Certification of Pre-Bid Site Visit; (e) Non-Collusion Affidavit; and (f) Public Works Contractor Registration Certification Form. The Bidder acknowledges that if this Bid Proposal and the foregoing documents are not fully in compliance with applicable requirements set forth in the Call for Bids, the Instructions for Bidders and in each of the foregoing documents, the Bid Proposal may be rejected as non-responsive.

3. Award of Contract. If the Bidder submitting this Bid Proposal is awarded the Contract, the undersigned will execute and deliver to the District the Contract in the form attached hereto within ten (10) days after notification of award of the Contract. Concurrently with delivery of the executed Agreement to the District, the Bidder awarded the Contract shall deliver to the District: (a) Certificates of Insurance evidencing all insurance coverages required under the Contract Documents; (b) the Performance Bond; (c) the Labor and Material Payment Bond; (d) the Certificate of Workers' Compensation Insurance; and (e) the Drug-Free Workplace Certificate. Failure of the Bidder awarded the Contract to strictly comply with the preceding may result in the District's rescission of the award of the Contract and/or forfeiture of the Bidder's Bid Security. In such event, the District may, in its sole and exclusive discretion elect to award the Contract to the responsible Bidder submitting the next lowest Bid Proposal, or to reject all Bid Proposals.

4. Contractor's License. The undersigned Bidder is currently and duly licensed in accordance with the California Contractors License Law, California Business & Professions Code §§7000 et seq., under the following classification(s) _____ bearing License Number(s)_____, with expiration date(s) of _____. The Bidder certifies that: (a) it is duly licensed, in the necessary class(es), for performing the Work of the Contract Documents; (b) that such license shall be in full force and effect throughout the duration of the performance of the Work under the Contract Documents; and (c) that all Subcontractors providing or performing any portion of the Work shall be so properly licensed to perform or provide such portion of the Work.

5. Acknowledgment and Confirmation. The undersigned Bidder acknowledges its receipt, review and understanding of the Drawings, the Specifications and other Contract Documents

pertaining to the proposed Work. The undersigned Bidder certifies that the Contract Documents are, in its opinion, adequate, feasible and complete for providing, performing and constructing the Work in a sound and suitable manner for the use specified and intended by the Contract Documents. The undersigned Bidder certifies that it has, or has available, all necessary equipment, personnel, materials, facilities and technical and financial ability to complete the Work for the amount bid herein within the Contract Time and in accordance with the Contract Documents.

By: _____

(Signature)

(Corporate Seal)

_____

(Typed or Printed Name)

Title:_____

SAMPLE ONLY
COST BREAKDOWN FORM FOR CONTRACT MODIFICATION

One separate form shall be used by Contractor, each first tier subcontractor and each lower tier subcontractor. One form for each shall be used for each change order. One form for each, for each day shall be used for Force-Account work.

COST BREAKDOWN FOR CONTRACTOR PRICE PROPOSAL

SHEET 1 OF 3

GENERAL CONTRACTOR FORM

PROJECT NUMBER: _____

PROJECT NAME: _____

CONTRACTOR : _____

CHANGE ORDER NUMBER : _____ DATE: _____

CHANGE ORDER DESCRIPTION: _____

SUMMARY OF TOTAL COSTS					
1. TOTAL LABOR COSTS		$ -			
2. Twelve percent (12%) of Line 1		$ -			
3. Sum of Lines 1 & 2			$ -		
4. TOTAL MATERIAL COSTS		$ -			
5. Fifteen percent (15%) of Line 4		$ -			
6. Sum of Lines 4 & 5			$ -		
7. TOTAL EQUIPMENT RENTAL COSTS		$ -			
8. Twelve percent (12%) of line 7		$ -			
9. Sum of lines 7 & 8			$ -		
10. TOTAL OF SUBCONTRACTED COST		$ -			
11. Five percent (5%) of line 10 (excluding subcontractor markup)		$ -			
12. Sum of Lines 10 & 11			$ -		
SUBTOTAL OF DIRECT COSTS & MARK-UP				$ -	
COST OF BONDS (does not apply to subcontractors)				$ -	
TOTAL OF CONTRACT MODIFICATION				$ -	

SECTION 00 0110

TABLE OF CONTENTS

END OF SECTION

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SECTION 01 2300

ALTERNATES

1.1 SUMMARY

A. Section Includes:
   1. Project alternatives to be priced by the Contractor.
   2. Submission procedures for alternatives.

B. Related Requirements:
   1. Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:
      a. General Conditions;
      b. Special Conditions;
      c. Bid Form and Proposal;
      d. Instruction to Bidders.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form to be added to or deducted from Base Bid amount if Owner decides to accept a corresponding change, either in scope of work or in products, materials, equipment, systems or installation methods described in Contract Documents.

B. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate the alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 ALTERNATE SCHEDULE

A. A "List of Alternates" is included at the end of this Section. Each alternate is defined by abbreviated language, recognizing that Drawings and Specification Sections document the requirements.

1.4 PROCEDURES

A. Submit alternates with full descriptions of the proposed alternate and the effect on adjacent or related components.

B. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation, whether or not mentioned as part of the alternate. Modify or adjust affected adjacent Work as necessary to completely and fully integrate that Work into the Project.

C. Execute accepted alternates under the same conditions as other Work of this Contract.

D. Specification Sections referenced in an alternate bid description contain requirements for materials necessary to achieve the Work described under each alternate.

E. Coordination of related work is required to ensure that work affected by each selected alternate is completed and properly interfaced with the overall construction schedule. Modify or adjust affected adjacent Work as necessary to completely and fully integrate an accepted alternate into the Project.

F. Execute accepted alternates under the same conditions as other Work of this Contract.

1.5 SELECTION AND AWARD OF ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted alternates will be identified in the Owner-Contractor Agreement.

B. Indicate variation to bid price for alternates described below, and list in Bid Form and Bid Breakdown Sheet or any supplements to them that request a "difference" in Bid Price by adding to or deducting from the base bid price.

C. Bid will be evaluated on Base Bid Price. After determination of preferred bidder, consideration will be given to alternates and Bid Price adjustments.

1.6 BASE BID

A. The Base Bid includes all work required to construct the Project completely and in accordance with the Contract Documents.

1.7 BID DEDUCT ALTERNATES

A. Alternate No. 1: Provide 20-year NDL warranty PVC Membrane Roofing with heat welded standing seam extruded profile included as an Exhibit to this Section in lieu of roofing system specified in Section 07 6113, “Standing Seam Sheet Metal Roofing.”

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ALTERNATE NO. 1 EXHIBIT

SECTION 07 5419

PVC MEMBRANE ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Fully adhered felt-back PVC membrane roofing system.

B. Related Sections:
   1. Section 07 6200 "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
   2. Section 07 9200 "Joint Sealants" for joint sealants, joint fillers, and joint preparation.

1.3 DEFINITIONS

A. PVC: Poly-vinyl Chloride.

B. Roofing Terminology: See ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

1.4 PERFORMANCE REQUIREMENTS

A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.

C. Roofing system shall comply with the California Building Code.

D. The new roof system shall comply with all mandatory requirements under the California Green Building Standards as listed under Title 24 Part 11.

E. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product specified. Include data substantiating that materials comply with requirements. Include Manufacturer's written instructions for evaluating,

preparing, and treating substrate, technical data, and tested physical and performance properties.
1. Material List: An inclusive list of required materials. Indicate each material and cross-reference the specific material, finish system, and application. Identify each material by Manufacturer's catalog number and general classification.
2. Manufacturer's Information: Technical information including label analysis and instructions for handling, storing, and applying each material.
3. Include Material Safety Data Sheets, if applicable.

B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
1. Base flashings and membrane terminations.
2. Roof plan showing orientation of roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing.
3. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

C. Samples for Verification: For the following products:
1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
2. Walkway pads or rolls.
3. Metal termination bars.

D. Sustainable Design: Information necessary to establish and document compliance with the USGBC LEED v4 Silver certification and California Green Building Standards Code (CALGreen) goals for this Project.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: Submit Qualification Data of firms and persons specified in the “Quality Assurance” Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information.
1. For products required to be installed by workers approved by product manufacturer, include letters of acceptance by product manufacturers certifying that Installers are approved to apply their products.

B. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
1. Submit evidence of compliance with performance requirements.

C. Installer Certificates: Signed by Manufacturer certifying that Installers comply with requirements.

D. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of membrane roofing system.

E. Submit Manufacturer’s certification of products subject to VOC compliance that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).

F. Research/Evaluation Reports: For components of membrane roofing system, from the ICC-ES.

G. Field quality-control reports.

H. Warranties: Sample of special warranties.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: To include in maintenance manuals. Identify substrates and types of products applied. Include recommendations for periodic inspections, cleaning, care, maintenance, and repair.

1.8 QUALITY ASSURANCE

A. Membrane Manufacturer Qualification: Manufacturer shall demonstrate qualifications to supply materials of this Section by certifying the following:
   1. Membrane Manufacturer must show evidence that the specified product has been manufactured by the same source for no less than the warranty duration, in years.
   2. Membrane Manufacturer must not issue warranties for terms longer than they have been manufacturing their membrane.
   3. Membrane Manufacturer shall have available an in-house technical staff to assist the Contractor, when necessary, in application of the products and final inspection of the assembly at no additional cost.
   4. Membrane Manufacturer shall submit the following certifications for review:
      a. Substrates and conditions are acceptable for purposes of providing specified warranty.
      b. Materials supplied shall meet the specified requirements.

B. Installer Qualifications: Engage an experienced Installer to perform Work of this Section who has specialized in installing the specified product; who is approved, authorized, or licensed by the system manufacturer to install Manufacturer's product; and who is eligible to receive the standard manufacturer's warranty.
   1. Company specializing in performing the Work of this Section with minimum five (5) years of experience.
   2. Applicator shall submit documentation from the membrane manufacturer to verify Contractor’s status as a locally based, approved applicator for warranted installations of the product the Installer intends to use.
   3. Workers: Thoroughly skilled and specially trained in the techniques applying the specified product. Applicators shall be able to demonstrate acceptable level of skill for review and acceptance by the Architect.

C. Source Limitations: Obtain components including fasteners, flashings, and accessories for membrane roofing system through one source from a single manufacturer.

D. Preinstallation Roofing Conference: Conduct conference at project site.
   1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
   2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
   3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
   5. Review structural loading limitations of roof deck during and after roofing.
   6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
   7. Review governing regulations and requirements for insurance and certificates if applicable.

8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.

B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
   1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

E. Remove all materials, including cloths, tarps, and empty containers from the area of Work at the close of each day

1.10 REGULATORY REQUIREMENTS

A. Conform to applicable Federal, State, and local regulatory requirements including flame and smoke rating requirements for finishes.

B. Comply with requirements of OSHA, NIOSH or local governing authority for work place safety.

C. Comply with authority or agency “Confined Space Policy” during and throughout all Work to be performed.

D. Flammable Liquids serve all current regulation regarding flammable liquids such as posting “No Smoking” signs. Allow no open flames, welding, or other ignition sources in the Work.

E. Conform to all applicable Laws, Codes, and Regulations for disposal of all materials, debris, and containers.

F. Materials shall be VOC Compliant.

1.11 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.12 COORDINATION & PROTECTION

A. Coordinate the Work with the installation of associated metal flashings, accessories, appurtenances, etc. as the Work of this section proceeds.

B. Building components shall be protected adequately (with tarp or other suitable material) from

soil, stains, or spills at all hoisting points and areas of application. Contractor shall be responsible for preventing damage from any operation under its Contract. Any such damage shall be repaired at Contractor's expense to Owner's satisfaction or be restored to original condition.

C. Provide barricades, retaining ropes, safety elements (active/passive) and any appropriate signage required by OSHA, NIOSH, and NSC and/or the Owner or designated Representative.

D. Protect finished roofing/waterproofing membrane from damage by other trades.

1.13 WARRANTY

A. General: Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Special Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.
   1. Special warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, and roofing accessories and other components of membrane roofing system.
   2. Warranty Period: 20 years from date of Substantial Completion.

C. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of membrane roofing system such as membrane roofing, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:
   1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GENERAL

A. The products herein specified are pre-engineered products of the listed manufacturer and establish criteria for the approval of substitutions. Products must be part of a pre-engineered system, equivalent in function, quality, composition and method of application to be considered for approval as an "Approved Substitute". Substitute materials must meet or exceed the physical performance characteristics of the specified materials.

B. Products: Subject to compliance with requirements. All components must be obtained as a single-source from the membrane manufacturer to ensure total system compatibility and integrity.

2.2 PVC MEMBRANE ROOFING

A. PVC Sheet: ASTM D 4434, Type III, Grade I, Thermoplastic membrane with fiberglass reinforcement, lacquer coating, factory applied felt backing and heat welded standing seam rib extrusions at 18” o.c.
   1. Subject to compliance with requirements, below are acceptable manufacturers:
      a. Soprema Sentinel P200

b. Sika Sarnafil Decor
c. Johns Manville JM PVC KEE

2. Thickness: 80 mils, nominal.
3. Exposed Face Color: Light Grey/Silver.

2.3 AUXILIARY MEMBRANE ROOFING MATERIALS

A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
   1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
   2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
      a. Plastic Foam Adhesives: 50 g/L.
      b. Gypsum Board and Panel Adhesives: 50 g/L.
      c. Multipurpose Construction Adhesives: 70 g/L.
      d. Fiberglass Adhesives: 80 g/L.
      e. Single-Ply Roof Membrane Adhesives: 250 g/L.
      f. Other Adhesives: 250 g/L.
      g. Single-Ply Roof Membrane Sealants: 450 g/L.
      h. Nonmembrane Roof Sealants: 300 g/L.
      i. Sealant Primers for Nonporous Substrates: 250 g/L.
      j. Sealant Primers for Porous Substrates: 775 g/L.
   3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

C. Bonding Adhesive: Manufacturer's standard adhesive.

D. Slip Sheet: Manufacturer's standard, of thickness required for application.

E. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.

F. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick (25 mm wide by 1.3 mm thick), prepunched.

G. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion- resistance provisions in FM Approvals 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.

H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
   1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
   2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
   3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
   4. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
   5. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
   6. Verify that concrete curing compounds that will impair adhesion of roofing components to roof deck have been removed.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and prepare substrate according to Manufacturer's written instructions. Provide clean, dust-free, and dry substrate for roofing application. Thoroughly sweep the substrate, which is to receive the roofing membrane.
   1. The contractor shall determine the condition of the existing structural deck/substrate. All defects in the deck or substrate shall be corrected before new roofing work commences. Areas of deteriorated deck/substrate, porous or other affected materials must be removed and replaced with new to match existing.
   2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
   3. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
   4. Remove all ponded water, snow, frost and/or ice from the work substrate prior to installing new waterproofing materials.
   5. The final substrate for waterproofing shall be clean, dry, smooth, free of loose, spalled or weak material including coatings, mineral aggregate, and flood coat/gravel surfacing, oil, grease, contaminants, abrupt changes in level, waterproofing agents, curing compounds, and free of projections which could damage membrane materials.

B. Other Flashing Surfaces:
   1. Remove all contaminants as required by membrane manufacturer. Surface preparation shall be performed by means approved by Owner or his designated representative.

3.3 ADHERED MEMBRANE ROOFING INSTALLATION

A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.

B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.

C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

D. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.

E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.

F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.

G. Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
   1. Welding equipment shall be provided by or approved by the manufacturer. All mechanics intending to use the equipment shall have successfully completed a training course provided by a manufacturer’s Technical Service Representative prior to welding.
   2. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
   3. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
   4. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

3.4 BASE FLASHING INSTALLATION

A. All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and the manufacturer. Approval shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing, the affected area shall be removed and replaced at the Applicator's expense. Flashing shall be adhered to compatible, dry, smooth, and solvent-resistant surfaces. Use caution to ensure adhesive fumes are not drawn into the building.

B. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.

C. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.

D. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.

E. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.

F. Terminate and seal top of sheet flashings[and mechanically anchor to substrate through termination bars.

G. PVC clad metal flashings shall be formed and installed per the manufacturer’s recommendations.
   1. All metal flashings shall be fastened into solid wood nailers with two rows of post

galvanized flat head annular ring nails, 4 inches (100 mm) on center staggered. Fasteners shall penetrate the nailer a minimum of 1 inch (25 mm).

2. Metal shall be installed to provide adequate resistance to bending and allow for normal thermal expansion and contraction.

H. Adjacent sheets of PVC clad metal flashing shall be spaced 1/4 inch (6 mm) apart. The joint shall be covered with 2 inch (50 mm) wide aluminum tape. A 4 inch minimum (100 mm) wide strip of flashing membrane shall be hot-air welded over the joint. Exercise caution at perimeter of roof.

3.5 FIELD QUALITY CONTROL

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.

B. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.

C. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.6 PROTECTING AND CLEANING

A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements; repair substrates; and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.7 CLEANING

A. Cleanup: At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. Collect waste material that may constitute a fire hazard, place in closed metal containers and remove daily from site.

C. Clean-off excess products smears adjacent surfaces as the Work progresses by methods and with cleaning materials approved in writing by Manufacturers.

D. Clean spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction. Restore to original condition or replace with new materials to the satisfaction of the Architect.

E. Contractor shall replace all materials in kind that are damaged during Work of this Section.

F. Provide continuous dust control to protect all areas of the Work.

G. Legally dispose of debris in accordance with local, State, and Federal regulations.

H. Upon completion of the Work, remove all debris and surplus items from the site.

3.8 CLOSEOUT

A. Correction of Work:
   1. Work that does not conform to specified requirements including tolerances, slopes, and finishes shall be corrected and/or replaced. Any deficiencies of membrane application, termination and/or protection as noted during the membrane manufacturer's inspections shall be corrected and/or replaced at Contractor's expense.

END OF ALTERNATE SECTION 07 5419

SECTION 07 2100

THERMAL INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Thermal blanket insulation.
   2. Foam insulation at exterior wall crevices and spaces requiring a thermal seal.

B. Related Requirements:
   1. Acoustical Insulation and Sealants: Section 09 8200; interior acoustic insulation and sound isolation requirements.
   2. Plumbing: Division 22; plumbing pipe insulation.
   3. Mechanical: Division 23; mechanical pipe and duct insulation.

1.2 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures: Action Submittals shall be submitted in accordance with Section 01 3300, “Submittal Procedures.”

1.3 ACTION SUBMITTALS

A. Product Data: Manufacturer's specifications and installation recommendations for each type of insulation.

B. Sustainable Design: Information necessary to establish and document compliance with the USGBC LEED Silver certification goals for this Project.

1.4 ACTION SUBMITTALS

A. Product Data: Manufacturer's specifications and installation recommendations for each type of insulation required.

1.5 QUALITY ASSURANCE

A. Insulation shall be certified by manufacturer to comply with State standards for insulating materials.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Clearly identify manufacturer, contents, brand name, applicable standard, and R-value.

B. Comply with additional requirements specified in Section 01 6100, "Material and Equipment."

PART 2 - PRODUCTS

2.1 BLANKET INSULATION

A. General: Provide sizes to fit applications indicated, selected from manufacturer's standard thicknesses, widths, and lengths.

B. Kraft-Faced Miner-Fiber Blankets (exterior and wet interior walls): Lightweight fiberglass with non-reflective Kraft facing, formaldehyde free, conforming to ASTM C665 Type II, Class C, Category 2; “EcoTouch PINK Fiberglas Insulation” by Owens Corning, “Formaldehyde-free” Kraft-faced insulation by Johns Manville, “CertaPro” Thermal Kraft Faced Batts by CertainTeed Corporation, or equal.
   1. Fire Resistive Requirements: ASTM E84.
      a. Facing: No requirements.
      b. Blanket:
         1) Smoke Developed: 50 or less.
         2) Flame Spread: 25 or less.
   2. Thickness: As shown or noted on the Drawings.

C. Unfaced Miner-Fiber Blankets (interior walls w/ no moisture exposure): Lightweight fiberglass, formaldehyde free, conforming to ASTM C665 Type I; “EcoTouch PINK Fiberglas Insulation” by Owens Corning, “Formaldehyde-free” insulation by Johns Manville, “CertaPro” Thermal Batts by CertainTeed Corporation, or equal.
   1. Fire Resistive Requirements: ASTM E84.
      a. Smoke Developed: 50 or less.
      b. Flame Spread: 25 or less.
   2. Thickness: As shown or noted on the Drawings.

D. Polypropylene-Faced Miner-Fiber Blankets (exposed ceiling locations): Lightweight fiberglass with white reflective PSK interior facing, formaldehyde free conforming to ASTM C665 Type II, Class C Category 1; “PSK Faced” by Owens Corning, “Formaldehyde-free” PSK Faced insulation by Johns Manville, “CertaPro” PSK Faced Thermal Batts by CertainTeed Corporation, or equal.
   1. Fire Resistive Requirements: ASTM E84.
      a. Smoke Developed: 50 or less.
      b. Flame Spread: 25 or less.
   2. Thickness: As shown or noted on the Drawings.
   3. Extended Flange for overlapping seams

2.2 ACCESSORIES

A. Perimeter Gap Sealant: Gun-dispensed, aerosol foam polyurethane or polyisocyanurate type conforming to ASTM C1620; Hilti “CF 810/812, or equal.

B. Staples, Wire and Straps: Galvanized, to secure insulation in place.

PART 3 - EXECUTION

3.1 INSTALLATION OF THERMAL BLANKETS

A. Install faced blankets with facing to building interior.

B. Install to fill all typical and odd spaces completely in framing where required, other than providing air space where indicated.

C. Install snugly between framing members where occur.

D. Trim to required height and width in place.

E. Carefully cut and fit insulation around pipes, conduit, and other obstructions and penetrations. Split blankets around wires as required.

F. Shim space between framing and window and door jambs shall be filled solid with unfaced batt or foam-in-place insulation. Fill spaces completely to a uniform monolithic density without voids.

G. Where wall blankets are not in contact with gypsum board, provide straps or bands to prevent sagging.

H. At exposed locations, lap facing material at exposed seams for neat and tidy condition. Use wire band

3.2 PROTECTION

A. Coordinate with other Sections for prompt installation of finishes. Where coordination with other Sections is not practical, protect insulation by temporary covering or enclosure.

B. Prior to applying overlying materials, obtain Architect's approval of insulation installation.

END OF SECTION

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SECTION 07 4000

CLADDING SUPPORT SYSTEM

PART 1 – GENERAL

1.1 SUMMARY:

A. Section Includes:
   1. Cladding support system through continuous rigid insulation for exterior walls.

B. Related Sections:
   1. Section 05 4100 "Structural Metal Stud Framing" for exterior and interior structural steel framing members.
   2. Section 07 2200 "Roof Board".
   3. Section 07 4110 "Preformed Metal Wall Panels".

1.2 SUBMITTALS

A. Product Data: For each type of product.
   1. Provide documentation that cladding support system comply with the CBC and relevant ASTM Standards. Mechanical properties, coatings, dimensions, and labeling are checked. Installation instructions are included.

B. Provide engineered design and drawings for attachment and back-up framing to support exterior cladding, including number of screw fasteners. Manufacturer's Certification: Submit manufacturer's certification of product compliance with codes and standards along with product literature and data sheets for specified products.

C. Product Samples: Submit two samples representing actual product for each product specified.

D. Sustainable Design Submittals: Information necessary to establish and document compliance with USGBC LEED v4 Silver certification and the California Green Building Standards Code (CALGreen) goals for this Project.

E. Mock-Up: Provide a mock-up for evaluation of attachment techniques and workmanship.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Provide cladding support system by The Steel Network, Inc. (TSN) (https://www.steelnetwork.com/), or equal.

2.2 PERFORMANCE REQUIREMENTS

A. Thermal Resistance of Exterior Wall Assemblies: Provide thermal performance data (R- and U-values) of the wall assembly that contains the cladding support system through continuous rigid insulation. R- and U-values of the wall assembly must meet requirements of the current ASHRAE code for the geographical zone of the project.

B. Design loads: Wind pressure and self-weight of cladding as indicated on the project's Structural Drawings and as required by the California Building Code.

2.3 CLADDING SUPPORT SYSTEM

A. Cladding Support System:
1. Pre-engineered to support weight of rigid insulation, cladding material, and resist wind loads.
2. Slotted steel material to minimize thermal conductivity, and 1" thermal tape preinstalled on each piece for an integrated continuous thermal break.
a. Steel material and coating: ASTM A1003/A1003M Structural Grade 50 (340) Type H, ST50H (ST340H): 50ksi (340MPa) minimum yield strength, 65ksi(450MPa) minimum tensile strength, 54mil minimum thickness (16-gauge, 0.0566" design thickness) or 33mil minimum thickness (20-gauge, 0.0346" design thickness) with ASTM A653/A653M G90 (Z275) hot dipped galvanized coating.
b. Dimensions: As specified on Architectural Drawings for 1 inch of continuous rigid insulation layer per design.
3. System Components:
a. J- Track used in conjunction with Corner Angle to secure rigid foam insulation at top and bottom of wall.
b. Z-Track used in conjunction with J-Track and Corner Angle to secure rigid foam insulation. Installed every 24" of rigid foam insulation.
c. Corner Angle used in conjunction with Z-Track and J-Track to secure rigid foam insulation at corners.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, for compliance with requirements and other conditions affecting performance of the work. Do not begin installation until substrates have been properly prepared.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and prepare surfaces using the methods recommended by the manufacturer before installation.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved submittals, and in proper relationship with adjacent construction.

1. Attach cladding support system to steel stud backup with minimum (1) #10-16 self-drilling screws to each stud. (2) screws may be required for high design wind pressures per manufacturer’s recommendations.

2. Attach metal wall panels to cladding support system per cladding panels manufacturer’s recommendations.

3. Install end and corner closures as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.

3.4 PROTECTION

A. Protect installed products until completion of project. repair or replace damaged products before Substantial Completion.

END OF SECTION

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SECTION 07 4110

PREFORMED METAL WALL PANELS

PART 1 – GENERAL

1.1 SECTION INCLUDES

The work includes, but is not necessarily limited to, furnishing and installation of all preformed metal walls, and accessories as indicated on the drawings and specified herein.

1.2 RELATED SECTIONS

1. Section 08 1113 Hollow Metal Doors and Frames
2. Section 08 3323 Overhead Coiling Door
3. Section 08 4113 Aluminum Framed Storefronts
4. Section 05 4100 Structural Metal Stud Framing
5. Section 05 1200 Structural Steel Framing

1.3 SUBMITTALS

A. PRODUCT DATA
1. Submit Manufacturer’s technical product data, installation instructions and recommendations for each type of roofing and wall panel required. Include data substantiating that materials comply with requirements.

B. SAMPLES
1. Prior to ordering products, submit Manufacturer’s standard color Samples for Architect’s/Engineer’s selection.
2. Prior to starting work, submit two 12” long Panel Samples showing each shape with representative color chip for Architect’s/Engineer’s acceptance.

C. SHOP DRAWINGS
1. Show panel layout, trim installation, and panel attachment.

D. LEED Submittal Documentation:
1. Product Data for applicable materials and resources credits: Indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Provide a statement indicating cost for each product having recycled content.

E. Mock-up Panel: Provide Panel for verification
1. Size: 8’x8’ panel including full assembly & components for complete installation & finishes.
2. Approval of mockup should be reviewed by district & architect for final approval.

F. SITE CONDITIONS
1. Provide completed site condition form for the specified finish to suit project condition

1.4 QUALITY ASSURANCE

A. INSTALLER’S QUALIFICATIONS

1. Installation of panels and accessories by installers with a minimum of 5 years experience on panel projects of this nature.

B. MANUFACTURER'S QUALIFICATIONS
1. Manufacturer shall have a minimum of 10 years experience supplying metal roofing/siding to the region where the work is to be done.
2. Panel manufacturers without full supporting literature, Flashings & Details Guides, Guide Specifications and Technical Support shall not be considered equal to the specified product.

C. REGULATORY AGENCY REQUIREMENTS
1. Comply with CBC and local Building Code requirements if more restrictive than those specified herein.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Protect against damage and discoloration

B. Handle panels with non-marring slings.

C. Do not bend panels.

D. Store panels above ground, with one end elevated for drainage.

E. Protect panels against standing water and condensation between adjacent surfaces.

F. If panels become wet, immediately separate sheets, wipe dry with clean cloth, and allow to air dry.

G. Remove any strippable film coating prior to installation and do not allow it to remain on the panels in extreme cold, heat or in direct sunlight.

1.6 WARRANTY
A. MANUFACTURER'S PRODUCT WARRANTY
1. Manufacturer's standard coating performance warranty, as available for specified installation and environmental conditions. (Contact product representative to determine actual warranty criteria.)

B. CONTRACTOR'S WARRANTY
1. Warrant panels, flashings, sealants, fasteners and accessories against defective materials and/or workmanship, to remain watertight and weatherproof with normal usage for two (2) years following Project Substantial Completion date.

PART 2 – PRODUCTS

2.1 MANUFACTURER
A. AEP Span, A Division of ASC Profiles Inc, 2110 Enterprise Boulevard, West Sacramento, Calif 95691 800-733-4955
Fontana: 10905 Beech Avenue, Fontana, California 92337

B. Acceptable Manufacturers:
   1. Metal Sales Manufacturing Corporation: 1326 Paddock Pl, Woodland, CA 95776 https://www.metalsales.us.com
   2. Taylor Metal Products: 4566 Ridge Dr NE, Salem, OR 97301 https://www.Taylormetal.com

C. PANEL DESIGNATION
   1. Nu-Wave® Corrugated Wall. Net coverage 34-2/3" rib depth 7/8" @ 2-2/3" O.C.

2.2 MATERIALS

A. PANELS
   1. Base Metal:
      a. Material:
         (1) Steel conforming to ASTM A792 Zincalume®/Galvalume®, minimum yield 50,000 psi, thickness 20 gauge.
         (2) Steel conforming to ASTM A653 (formerly ASTM A446), G-90 Galvanized, minimum yield 40,000 psi, thickness 20 gauge.
      b. Protective Coating:
         (1) Conform to ASTM A792, AZ50 (Zincalume®/Galvalume®).
         (2) For primers thicker than 0.5 mil Conform to ASTM A924 (formerly ASTM A525) G-90 Galvanized.
   2. Exterior Finish:
      a. Zincalume®/Galvalume® Plus protective coating.
   3. Color:
      a. Panel Color 1 – Regal White (SRI 88)
      b. Panel Color 2 – Sage Green (SRI 41)

B. FABRICATION
   1. Unless otherwise shown on drawings or specified herein, panels shall be full length. Fabricate flashings and accessories in longest practical lengths.
   2. Roofing panels shall be factory formed. Field formed panels are not acceptable.

2.3 MISCELLANEOUS METAL FRAMING

A. Metal Framing: See Section 05 4100 "Structural Metal Stud Framing Metal Framing".

2.4 CLIPS AND FASTENERS

A. Provide sub-girt system designed to allow panels to thermally expand and contract, and/or allow air movement (standoff) between the substrate and metal panel. Sub-girts will run horizontally to attach panels vertically & will run vertically to attach panels horizontally.

B. Z-Tracks: Cont.16 gauge galvanized steel track installed every 24" o.c. between rigid foam insulation boards; See Section 07 4100 "Cladding Support System".

PART 3 – EXECUTION

3.1 EXAMINATION

A. EXISTING CONDITIONS
   1. Inspect installed work of other trades and verify that such work is complete to a point where this work may continue.
   2. Verify that installation may be made in accordance with approved shop drawings and manufacturer's instructions.

3.2 PREPARATION

A. FIELD MEASUREMENTS
   1. Verify prior to fabrication.
   2. If field measurements differ from drawing dimensions, notify Architect/Engineer prior to fabrication.

B. PROTECTION
   1. Treat, or isolate with protective material, and contacting surfaces of dissimilar materials to prevent electrolytic corrosion.
   2. Require workmen who will be walking on Roofing Panels to wear clean, soft-soled work shoes that will not pick up stones or other abrasive material, which could cause damage or discoloration.
   3. Protect work of other trades against damage and discoloration.

C. SURFACE PREPARATION
   1. Clean and dry surfaces prior to applying sealant.

3.3 INSTALLATION

A. PANELS
   1. Follow wall panel manufacturer's directions.
   2. Install panel seams (choose one) vertically.
   3. Lap panels away from prevailing wind direction.
   4. Do not stretch or compress panel side-laps.
   5. Secure panels without warp or deflection.
   6. Sealant for Field Application: high grade non-curing butyl or curing urethane sealant as recommended by panel manufacturer.

B. ALLOWABLE ERECTION TOLERANCE
   1. Maximum Alignment Variation: 1/4 inch in 40 feet.

C. FLASHING
   1. Follow manufacturer's directions and architect approved Shop Drawings.
   2. Overlap wall panels at least 6 inches.
   3. Install flashings to allow. for thermal movement.
   4. Finish to match panels
   5. Remove strippable protective film, if used, immediately preceding flashing installation.

D. CUTTING AND FITTING
   1. Neat, square and true. Torch cutting is prohibited where cut is exposed to final view.
   2. Openings 6 inches and larger in any direction: Shop fabricate and reinforce to maintain original load capacity.
   3. Where necessary to saw-cut panels, debur cut edges.

3.4 CLEAN UP AND CLOSE OUT

A. PANEL DAMAGE AND FINISH SCRATCHES
   1. Do not apply touch-up paint to damaged paint areas that involve minor scratches.
   2. Panels or flashings that have severe paint and/or substrate damage shall be replaced as directed by the Architect's or Owner's representative.

B. CLEANING AND REPAIRING
   1. At completion of each day's work and at work completion, sweep panels, flashings and gutters clean. Do not allow fasteners, cuttings, filings or scraps to accumulate.
   2. Remove debris from project site upon work completion or sooner, if directed.

END OF SECTION

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SECTION 07 6113

STANDING SEAM SHEET METAL ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Prefinished, standing seam sheet metal roofing including associated anchorage and connection devices, flashings, and other components.
   2. Drainage mat.

B. Related Requirements:
   1. Alternates: Section 01 2300; alternates affecting the work of this Section.
   2. Sheet Metal Flashing and Trim: Section 07 6200.
   3. Flexible Flashing and Underlayment: Section 07 6500.
   4. Joint Sealants: Section 07 9200.

1.2 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:
   1. Action and Informational Submittals shall be submitted in accordance with Section 01 3300, “Submittal Procedures.”
   2. Closeout Submittals shall be submitted in accordance with Section 01 7000, “Contract Closeout,” and Section 01 7800, “Project Record Documents.”

1.3 ACTION SUBMITTALS

A. Shop Drawings: Plan of each roof showing seam layout and location of unavoidable exposed fasteners.

B. Product Data: Manufacturer's specifications, data, and installation instructions for roofing system.

C. Samples: Metal roofing assembly, approximately 24 inches square, in selected color, illustrating material, gage, seaming, and fasteners.

D. Sustainable Design:
   1. Product Data: For adhesives, sealants, fillers and primers, documentation including printed statement of VOC contents to verify compliance with specified limits.
   2. Product Test Reports: Documentation verifying metal roofing complies with Solar Reflectance Index requirement and demonstrates a Cool Roof Rating Council (CRRC) listing.

E. Sustainable Design: Information necessary to establish and document compliance with the USGBC LEED v4 Silver certification and California Green Building Standards Code (CALGreen) goals for this Project.

1.4 INFORMATIONAL SUBMITTALS

A. Fabricator and installer qualifications.

B. Verification of conformance with specified structural, seismic, and wind loads.

1.5 CLOSEOUT SUBMITTALS

A. Extended warranties.

1.6 QUALITY ASSURANCE

A. Qualifications:
   1. Installer: Minimum 5 years' experience in sheet metal roofing and approved by roofing material manufacturer.
   2. Mechanics: Skilled and thoroughly trained and experienced with the materials, equipment, and methods required in this Section.

B. Mockup:
   1. First installed area of sheet metal roofing shall serve as a mockup for review and approval by the Architect.
   2. Mockup shall be a minimum of 3 panels wide and include eave, hip, head, and sidewall condition at applicable to the roof system.

1.7 GUARANTEE AND WARRANTY

A. Contractor: Furnish District with an extended 5-year guarantee for roofing system installation against defective workmanship and for roof system to remain watertight and weatherproof with normal usage.

B. Manufacturer:
   1. System: Furnish Owner with manufacturer's 20-year near "No Dollar Limit" watertight warranty.
   2. Finish: Furnish Owner with manufacturer's warranty on finish for 20 years that includes, but is not limited to, the following:
      a. Will not chip, crack or peel (lose adhesion) but this does not include minute fracturing which may occur in proper fabrication of building parts.
      b. Will not chalk in excess of ASTM D4214 Number 8 rating, determined by procedure outlines in ASTM D4214.
      c. Will not change color more than seven Delta-E Hunter units (square root of the sum of square Delta L, Delta a, and Delta b) as determined by ASTM D2244, Method 6.3.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. Structural, Seismic, and Wind Loads: Conform to loads specified in the CBC and with UL 580 for Class 90 wind-uplift resistance.

B. Industry Standard: Conform to applicable provisions of the "Architectural Sheet Metal Manual," as issued by the Sheet Metal and Air Conditioning Contractors' National Association, Inc. (SMACNA Manual), latest edition.

C. Thermal Movement: Provide for noiseless expansion and contraction of components and assemblies caused by an external temperature range of plus 20 degrees F to plus 180 degrees F.

D. Installation and design of the sheet metal roofing system shall conform to FM Global Property Loss Prevention Data Sheet 1-31, "Metal Roof System."

E. Roofing system shall have an UL Class A fire rating per UL 790 and tested in accordance with UL 580 test procedures.

F. Energy Performance: Provide roofing system with initial Solar Reflectance not less than 0.70 when tested according to ASTM C1549 and Thermal Emittance not less than 0.75 when tested according to ASTM C1371 and listed on Cool Roof Rating Council's CRRC-1 Method #1.
   1. SpanEnergy Performance: ENERGY STAR and Cool Roof Rating Council (CRRC) rated.
   2. Packaging shall bear the UL and Cool Roof Rating Council label.

2.2 METAL ROOFING

A. Manufactured System: Prefabricated, integrated roofing system with factory applied sealant and concealed engineered anchor clips:
   1. Seam Height: Minimum 2 inch.
   2. Panel Width: 18 inches, unless otherwise shown.
   3. Panel Texture: Profiled with mesas or minor ribs throughout the pan.
   4. Sheet Metal: Specified sheet aluminum, 0.040 inch thick aluminum.
   5. Sealant: Factory-applied side lap sealant.

B. Acceptable Manufacturers:
   1. AEP Span Span-Lok hp
   2. Imetco Series 300
   3. Metal Sales Magna-Loc 180
   4. Taylor Metal MS-200

2.3 MATERIALS AND COMPONENTS

A. Sheet Metal: Aluminum, ASTM B209.

B. Fastening:
   1. Clips: Concealed, galvanized, minimum 18-gage steel one-piece, ASTM A653, Grade A, with G60 coating. Clips shall bear UL 90 imprint.
   2. Fasteners:
      a. Concealed: Manufacturer's standard, non-corroding.
      b. Exposed: Stainless steel, Type 316.

C. Sealant Tape: Butyl or neoprene, as recommended by panel manufacturer.

D. Self-Adhering Sheet Underlayment: 60-mil-thick composite of fiberglass mat and modified rubber compound backed by self-adhesive layer; “"Polystick MTS” by Polyglass U.S.A., Inc. as specified, or equal complying with ASTM D1970 and with a service temperature of up to 265 degrees F.
   1. Roll Width: Minimum 34 inches.
   2. Minimum Exposure Limit: 180 days.

E. Vent Penetration Flashing: Ethylene propylene diene monomer (EPDM) boot with aluminum reinforcing ring bonded to base flange; “Dektite” by ITW Buildex, “Master Flash,” or equal. Provide stainless steel drawband for securing top of vent penetration boot flashing to pipe.

F. Metal Closures, Rain Drainage, Flashings and Other Sheet Metal: Provide as required for a complete installation finished to match roofing panels.

2.4 FACTORY APPLIED PAINT FINISH

A. Finish Coat on Exposed Surfaces: Manufacturer's baked-on primer plus shop-applied, 3-coat, high-performance polyvinylidene fluoride (PVDF) coating meeting or exceeding AAMA 2605 weatherability and chemical resistance requirements.
   1. Colors: Zincalume Plus.

B. The back side of the roofing shall receive a 0.25 mil primer and 0.25 mil polyester wash coat.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.

B. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking, that tops of fasteners are flush with surface, and that installation is within flatness tolerances required for finished roofing installation.

C. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and completely anchored, and that provision has been made for drainage, flashings, and penetrations through sheet metal roofing.

D. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

3.2 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Membrane: Refer to manufacturer's literature for recommendations on installation except where more rigorous requirements are specified.

B. Install directly over sheathing board perpendicular to slope of roof working from low point to the high point of the roof.

C. Following placement along the eaves, continue application of the membrane up the roof. Membrane may be installed either vertically or horizontally after the first horizontal course.

D. Side laps minimum 3-1/2 inches and end laps minimum 6 inches following lap lines marked on underlayment.

E. Detail all edges and terminations with detailing sealant.

F. Integrate underlayment with metal flashings as detailed or as required to shed water.

3.3 ROOFING INSTALLATION

A. Remove protective strippable film prior to installation of panels.

B. Install roofing system as shown and in conformance with SMACNA and roofing manufacturer's standards, in accordance with reviewed submittals, and to match accepted field mockup.

C. Maintain visually uniform panel modules and coating appearance.

1. Run roof panels full length parallel to slope. Cross seams are not acceptable.
2. Apply panels sequentially in accordance with panel numbering applied during shop fabrication if numbering method is used to assure uniform appearance of finish coating.

D. Hem exposed edges of flashing on underside, 1/2 inch.

E. Fasten cleats and clips securely to substrate. Space cleats and clips as required by sheet metal roofing manufacturer to meet the wind uplift requirements.

F. Cutting and Fitting:
1. Cut panels neat, square, and true with shearing action cutters. Do not torch or cut with power saw.
2. Shop fabricate and reinforce openings 6 inches and larger to maintain original load capacity. Reinforce as recommended by system manufacturer.
3. Field cutting of openings less than 6 inches is acceptable.

G. Provide closures at eaves and terminations to ensure a watertight assembly.

H. Dissimilar Metals:
1. Where sheet metal is in contact with dissimilar metals, execute juncture to facilitate drainage and minimize possibility of galvanic action.
2. At point of contact with dissimilar metal, coat metal with protective paint or tape which can be placed between metals.

3.4 CLEANING AND TOUCH-UP

A. Field touch-up of factory-applied finish will not be allowed unless specifically approved by the Architect. If approved, an acceptable touch-up shall be unnoticeable in completed installation.

B. Clean finished surfaces in accordance with manufacturer's instructions.

END OF SECTION

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