Oakton College District 535

Procurement Department, Room 1240
1600 E. Golf Rd., Des Plaines, IL 60016
847-635-1635

Invitation to Bid # 0922-23-05
Addendum #2
Issue Date: September 22, 2023

Mandatory Pre-Bid Date: Wednesday, September 27, 2023 at 2:00 PM

Bids will be received in the Procurement Office at the above address until Friday, October 13, 2023 at 12PM
Bids will be publicly opened at this time. Late bids will not be accepted.

Oakton College Skokie Campus Library & Learning Commons

Description of Project: Interior demolition and buildout of existing 3,146 SF 1st floor suite and existing 7,402 SF 2nd Floor suite to join Testing, Tutoring, IT and Library into one common learning center connected by an interior elevator. Scope of Work includes Architectural, Structural, Mechanical, Electrical, Technology, Plumbing, and fire protection renovation.

This bid consists of 4 documents:

1) Business Specifications (this document)
2) PLA Document Example
3) Oakton College Skokie Campus Library & Learning Commons – Drawings 9.20.23
4) Oakton College Skokie Campus Library & Learning Commons –Manual – Specs 9.20.23

A mandatory pre-bid meeting will be held on September 27, 2023 starting at 2:00 pm at the College's Skokie campus
7701 Lincoln Ave, Skokie, IL 60077, Room C133.
Only contractors who attend the pre-bid meeting will be allowed to submit a bid.

Any questions regarding this bid must be submitted in writing via email by 11:00 am on Friday, September 29 ,2023. All questions will be answered through an addendum and must be submitted to the following individuals:
Joe Scifo, Director of Facilities, jscifo@oakton.edu
Rich Schwass, Construction Manager at rschwass@oakton.edu
Jamie Boller, Cotter Consulting Senior Project Manager at j.boller@cotterconsulting.com
Kari Berg, UrbanWorks Senior Project Manager at kberg@urbanworksarchitecture.com
Trinh Than, Purchasing Manager at tthan@oakton.edu

Oakton College District 535 is exempt from all Federal, State, and Municipal Taxes.

I have examined the specifications and instructions included herein and agree, provided I am awarded a contract within 60 days of the bid due date, to provide the specified items for the sum shown in accordance with the terms stated herein. All deviations from the specifications and terms are in writing and attached hereto. I offer the following discount terms _____

Company Name: _____ Date: _____

Address: _____ City/St/Zip: _____

Name: _____ Title: _____

Phone #: _____ Fax #: _____

Signature: _____ E-mail:_____

RESPONSE TO BIDDER RFIs – Skokie Library Learning Commons

1. Please verify the glass type on swing doors 135 and 200.Door Schedule A7.21 calls for doors 135 and 200 to have glass type GL11 Plans sheet A6.12 Detail 11 and sheet A6.15 Detail 5 call for the doors to have glass type GL-21
   Please advise which is correct.
   Answer:
   Glass Type on swing doors 135 and 200 is GL-11. Refer to attached revised sheet A6.12 Detail 11 and sheet A6.12 Detail 5 to reflect GL-11 for reference.

2. Please see attached Substitution Request for the visual display units.
   Answer: Substitution is approved. Refer to Specification Section 101100 Visual Display Units for information of added substitution in Article 2.01, Paragraph A, Sub-paragraph d. See attached Approved Substitution Form for reference.

3. Please refer to our RFIs for this PROJECT. Demo – please confirm if there is millwork scheduled to be removed prior to the start of construction that is not indicated on the drawing sheet.
   Answer: UW will revise the laminate millwork currently in place that needs to be demolished by the Contractor on attached sheets A0.02 and A0.03 for reference.

   Please confirm if the school is responsible for moving loose items to be stored during construction.
   Answer– Oakton College has confirmed the loose items that are left in the space now will be removed prior to the start of construction.

   Millwork - Please confirm the specification for QZ-1 is.
   Answer: Specification and color are shown on previously issued Sheet G1.11 under 12 36 00 and is also in the previously issued Specification Manual – Section 12 36 00.
   :
4. Please clarify the following prior to bidding: Casework specifications, 064100, call for the fabricator to be a participant of a quality certification program and that the project will be inspected and certified by one of the governing agencies. Can you please confirm if these requirements are intended and will be enforced? The list of certified woodworking firms is relatively short, so it will be helpful for all bidders to be aware if these requirements are intended.
   Answer: We will eliminate the requirement that the millwork subcontractor must be AWI QCP licensed or a WI CCP participant. Further, we will eliminate the requirement that products installed receive certificates or stickers from AWI QCP or WI CCP/MCP.
   However, We will continue to require all work covered in section 06 40 00 (Architectural Wood Casework) & 06 41 00 (Wood Paneling) be provided in

compliance with applicable AWI Standard, AWS 2014, or NAAWS 2021. The contractor shall affirm compliance with the standards with a signed statement on the shop drawing submittals. We also will continue to require a statement of qualifications demonstrating a minimum of 5 years of experience fabricating millwork of a similar nature and scale to the Work.

DRAWINGS

The following drawings have been revised and all changes have been clouded:

a. G0.00
b. G0.01
c. G1.01
d. G1.11
e. G2.11
f. A0.01
g. A0.02
h. A0.03
i. A0.04
j. A0.05
k. A1.01
l. A1.02
m. A1.03
n. A2.11
o. A3.01
p. A4.01
q. A4.02
r. A6.01
s. A6.02
t. A6.03
u. A6.04
v. A6.11
w. A6.12
x. A6.13
y. A6.14
z. A6.15
aa. A6.21
bb. A6.23
cc. A6.31
dd. A6.51
ee. A7.01
ff. A7.11

gg. A7.21
hh. E2.1
ii. E2.2
jj. E4.1
kk. E4.2
ll. E6.0
mm. T1.01
nn. T1.02

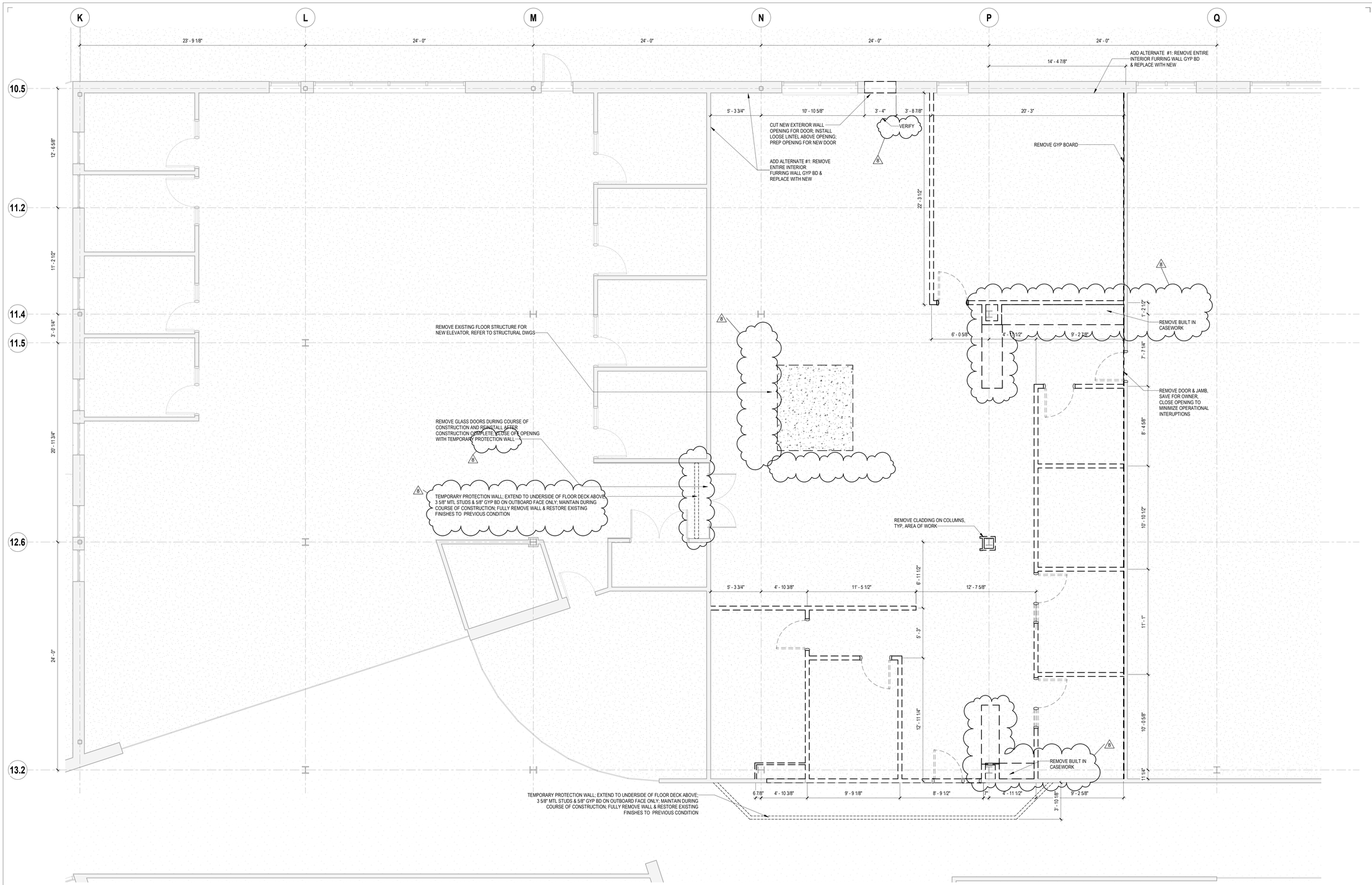
SPECIFICATIONS

Numerous specification sections have been revised. All revisions are indicated with “track changes” in RED.

EXHIBITS ATTACHED

Sheets: A0.02, A0.03, A6.12

Specifications: 101100 – Visual Display Units



1 FIRST FLOOR DEMO PLAN
SCALE: 1/4" = 1'-0"

DEMO NOTES:
1. DEMOLISH INTERIOR PARTITIONS INDICATED
2. REMOVE ALL FINISH FLOORING WITHIN WORK LIMITS
3. REMOVE ALL EXISTING CIELING TILES AND GRID
4. PROPERLY PROTECT ADJACENT EXISTING CONSTRUCTION DURING THE COURSE OF CONSTRUCTION
5. RELOCATE AND PROTECT ITEMS TO BE REMOVED AND REINSTALLED. COORDINATE ON-SITE LOCATIONS FOR TEMPORARY SAFE STORAGE W/ OWNER
6. FULLY RESTORE ADJACENT FINISHES AFTER CONSTRUCTION TO ORIGINAL CONDITION
7. REFER TO MEPFP DRAWINGS FOR ASSOCIATED DEMOLITION SCOPE OF WORK AND REQUIREMENTS
8. REFER TO STRUCTURAL DRAWINGS FOR STRUCTURAL DEMO SCOPE
9. DIMENSIONS SHOWN ON DEMOLITION DRAWINGS ARE APPROXIMATE, ONLY TO AID THE CONTRACTOR IN SCOPING THE DEMOLITION WORK

SCALE: 0' - 0 1/4" = 1' - 0"
0' 2' - 0" 4' - 0" 8' - 0"

Oakton College

CLIENT
OAKTON COLLEGE
SKOKIE CAMPUS
7701 LINCOLN AVE
SKOKIE, IL 60077
(847) 635-1600

UrbanWorks
DESIGN FIRM REGISTRATIONS NO. 184000710-001
ARCHITECT
URBANWORKS, LTD.
125 S CLARK STREET
SUITE 2070
CHICAGO, IL 60603
(312) 202-1200
www.urbanworksarchitecture.com

STRUCTURAL ENGINEER
DAVID MASON & ASSOCIATES INC
333 S DESPLAINES ST
SUITE 200
CHICAGO, IL 60661
(312) 884-5760

MECHANICAL / ELECTRICAL / PLUMBING / FIRE PROTECTION
MEPIS
36 S WABASH AVE
SUITE 310
CHICAGO, IL 60603
(312) 279-1185

REVISION SCHEDULE

NO.	DATE	REVISION
1	4/19/2023	SCHEMATIC DESIGN
2	7/21/2023	DESIGN DEVELOPMENT
3	7/28/2023	DD REPRINT
4	8/23/2023	50% CD
5	9/08/2023	100% CD
6	9/18/2023	ISSUED FOR PERMIT
7	9/20/2023	ISSUED FOR BIDDING
8	10/4/2023	ADDENDUM 2

KEY PLAN

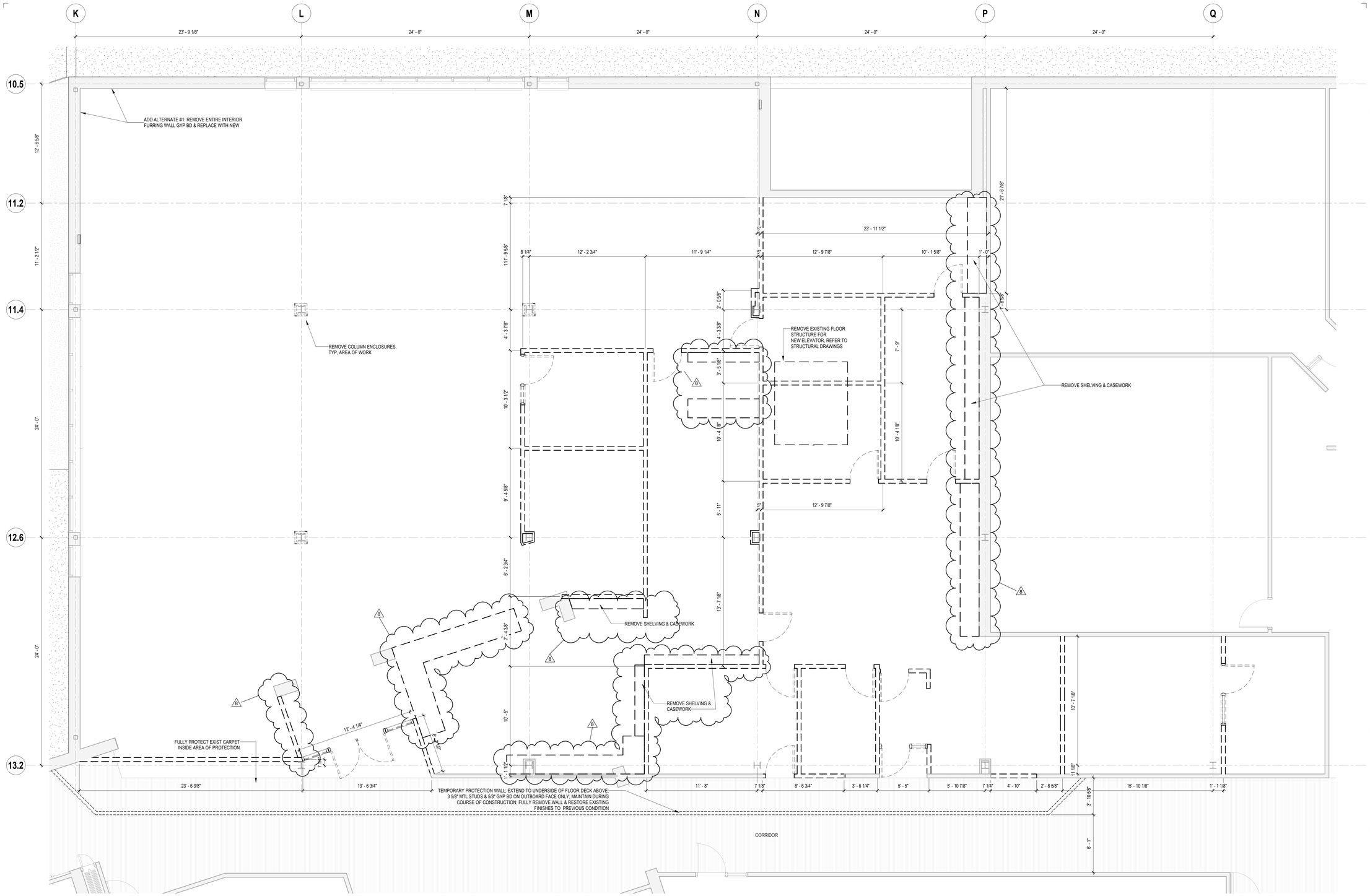
STAMP

LICENSED ARCHITECT
ROBERT E. MATKE
001-012740
STATE OF ILLINOIS

PROJECT NAME
OAKTON COLLEGE SKOKIE CAMPUS LIBRARY & LEARNING COMMONS
PROJECT ADDRESS
7701 LINCOLN AVE
SKOKIE, IL 60077

DRAWING TITLE
FIRST FLOOR DEMO PLAN

SHEET #
A0.02



1 SECOND FLOOR DEMO PLAN
SCALE: 1/4" = 1'-0"

DEMO NOTES:
1. DEMOLISH INTERIOR PARTITIONS INDICATED
2. REMOVE ALL FINISH FLOORING WITHIN WORK LIMITS
3. REMOVE ALL EXISTING CEILING TILES AND GRID
4. PROPERLY PROTECT ADJACENT EXISTING CONSTRUCTION DURING THE COURSE OF CONSTRUCTION
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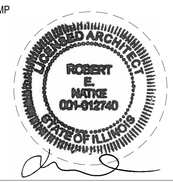
7	9/20/2023	ISSUED FOR BIDDING
8	10/4/2023	ADDENDUM 2

KEY PLAN

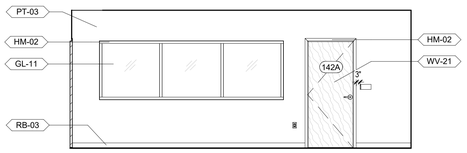
STAMP



PROJECT NAME
OAKTON COLLEGE SKOKIE CAMPUS LIBRARY & LEARNING COMMONS
PROJECT ADDRESS
7701 LINCOLN AVE
SKOKIE, IL 60077

DRAWING TITLE
SECOND FLOOR DEMO PLAN

SHEET #
A0.03



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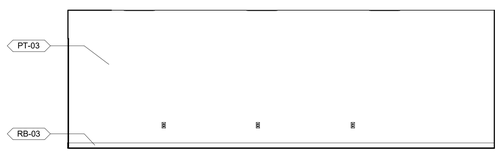
SCALE: 1/4" = 1'-0"



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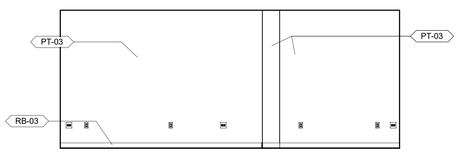

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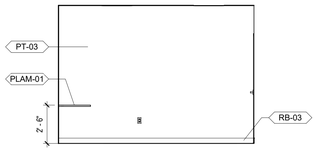
SCALE: 1/4" = 1'-0"

1 INT ELEVATION TESTING A138
SCALE: 1/4" = 1'-0"



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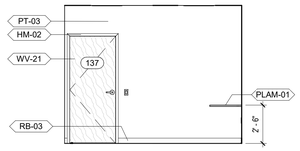

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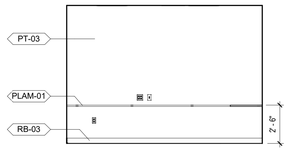

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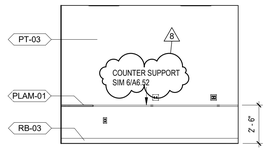

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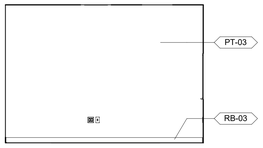

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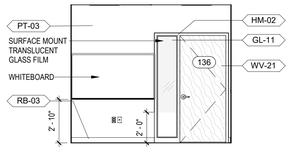

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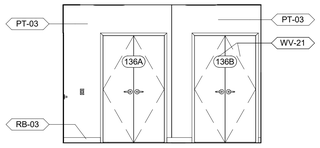

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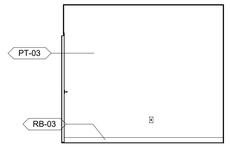

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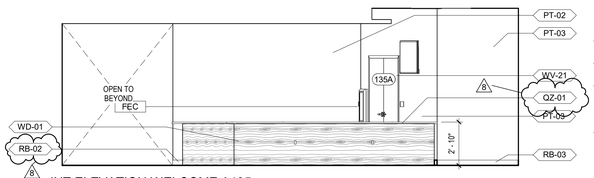

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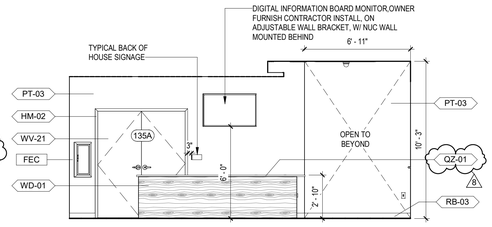

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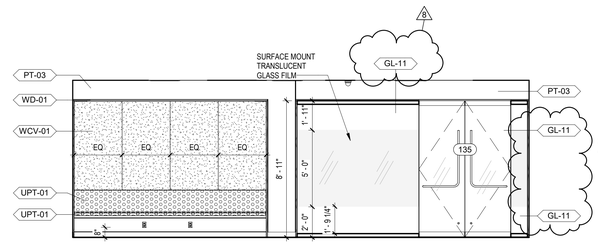

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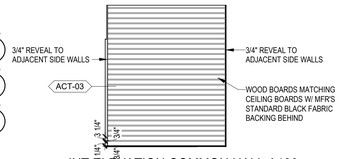

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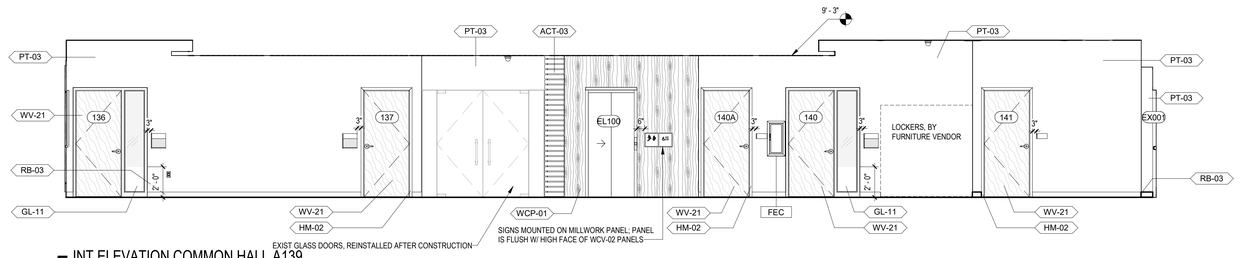

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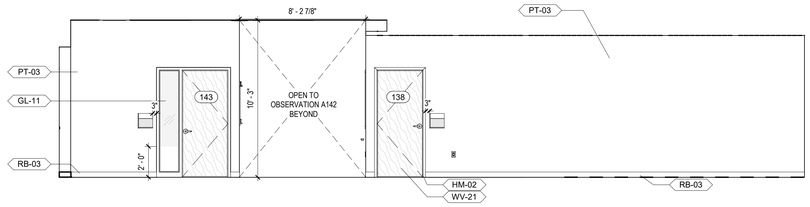

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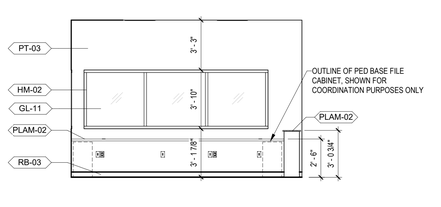
SCALE: 1/4" = 1'-0"



6 INT ELEVATION OBSERVATION A142
SCALE: 1/4" = 1'-0"

SCALE: 0' - 0 1/4" = 1' - 0"
0' 2' - 0" 4' - 0" 8' - 0"

TYPICAL ELEVATION NOTES

- ELECTRICAL / LOW-VOLT DEVICE LOCATIONS ARE SHOWN APPROXIMATELY, VERIFY LOCATIONS W/ ARCHITECT IN FIELD DURING ROUGH-IN. REFER TO MEP DRAWINGS

Oakton College

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36 S WABASH AVE
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6	9/18/2023	ISSUED FOR PERMIT
7	9/20/2023	ISSUED FOR BIDDING
8	10/4/2023	ADDENDUM 2

KEY PLAN

STAMP

LICENSED ARCHITECT
ROBERT
M.
MATICE
001-012740
STATE OF ILLINOIS

PROJECT NAME
OAKTON COLLEGE SKOKIE CAMPUS LIBRARY & LEARNING COMMONS
PROJECT ADDRESS
7701 LINCOLN AVE
SKOKIE, IL 60077

DRAWING TITLE
INTERIOR ELEVATIONS

SHEET #
A6.12

CSI Form 1.5C

SUBSTITUTION REQUEST
(During the Bid Period)

Project: Oakton College Skokie Campus
Library and Learning Commons

To: Urban Works, Ltd.

Re: 101100 Visual Display Boards

Substitution Request Number:

From: Ceil Ann Tomalis

Date: 09/27/2023

A/E Project Number: P2224

Contract For:

Specification Title: Visual Display Units

Description: Markerboards

Section: 101100 Page:

Article/Paragraph:

Proposed Substitution: Platinum Visual systems as equal manufacturer

Manufacturer: Platinum Visual Address: 6632 Telegraph, Bloomfield Hills, MI 48301 Phone: 947-955-6482

Trade Name: Platinum Visual Model No.: DTS Series

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Ashlee Dameron

Signed by: Ashlee Dameron

Firm: Sollitt Construction

Address: 185 Hansen Court, Suite 100
Wood Dale, IL 60191

Telephone: 630-860-7333

A/E's REVIEW AND ACTION

- [x] Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- [ ] Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- [ ] Substitution rejected - Use specified materials.
- [ ] Substitution Request received too late - Use specified materials.

Signed by: Date: 9/29/2023

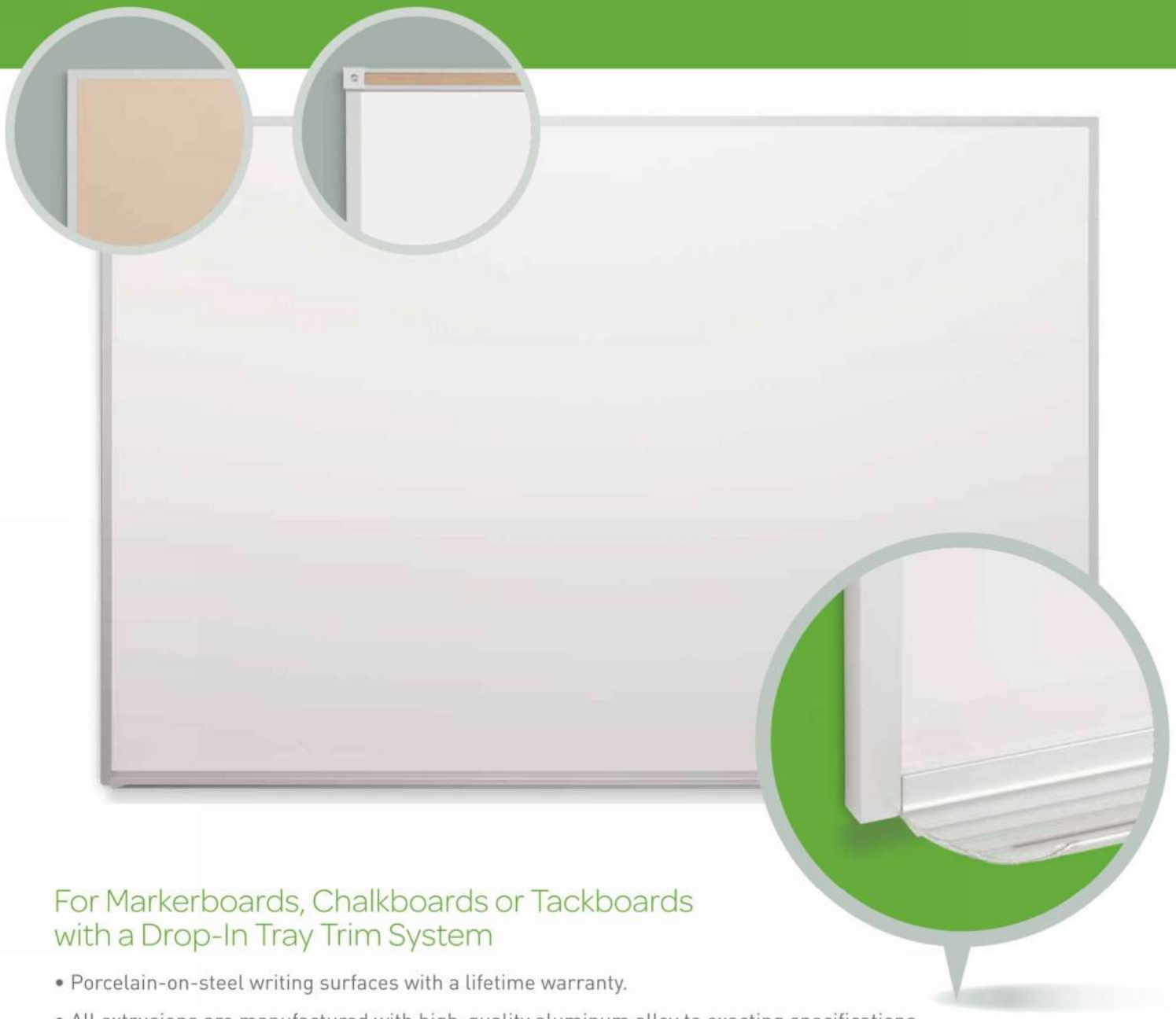
Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☒ Tests ☐ Reports ☐ _____

OAKTON COLLEGE SKOKIE
CAMPUS LIBRARY &
LEARNING COMMONS

101100
VISUAL DISPLAY UNITS

MATERIALS	SPECIFIED	PLATINUM VISUAL SYSTEMS
Markerboards:		
Face Sheet:	Porcelain Steel	Porcelain Steel
Core:	Particleboard	Particleboard
Backer	aluminum foil	aluminum foil
Trim Finish	Satin Anodized	Satin Anodized
Trim Series	Claridge 200	DTS Series
Chalktray	Flat	Flat
Warranty	5 year against crazing, cracking	50 years against crazing, cracking

Boards:
Drop-In Tray Trim System [DTS]



For Markerboards, Chalkboards or Tackboards with a Drop-In Tray Trim System

- Porcelain-on-steel writing surfaces with a lifetime warranty.
- All extrusions are manufactured with high-quality aluminum alloy to exacting specifications.
- Heavy-duty aluminum extrusions come standard in clear satin anodized. Also available in optional dark bronze anodized or a variety of powder coated finishes.
- Safety first: radius blade tray ends equal no sharp edges.

Suggested Specifications

PART 1: general

1.1 SECTION INCLUDES
A. Porcelain-on-Steel Markerboards.
B. Porcelain-on-Steel Chalkboards.
C. Colored Cork Tackboards.
D. Visual Display Board Accessories.

1.2 RELATED SECTIONS
A. Section 06100 – Wood or Steel Blocking.
B. Section 09000 – Gypsum Wall Board.
C. Section 09720 – Vinyl Wall Coverings.
D. Section 09900 – Paints and Coatings.

1.3 REFERENCES
A. ASTM B221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
B. ASTM E84 –Test Method for Surface Burning and Characteristics of Building Materials.
C. ASTM C540 – Gloss Test for Porcelain Enamel Steel (Porcelain Enamel Institute PEI-501).

1.4 SUBMITTALS
A. Submit products and samples under provisions of Section 01300.
B. Product Data: Provide technical data for products specified. Include Material Safety Data Sheets, when applicable.
C. Shop Drawings: Provide shop drawings for each type of visual display board specified including section details indicating trim, face, core and backing materials, dimensions, joint locations and special anchor details.
D. Color Samples: Submit set of color chips displaying manufacturer's full range of colors and finishes.
E. Product Samples: Submit samples not less than twelve inches square and framed on two adjacent sides, to illustrate materials, finish, color, and configuration of each type of visual display board required.
F. Care and Maintenance Data: Provide data on cleaning requirements, stain removal, and recommended maintenance precautions.

1.5 DELIVERY, STORAGE AND HANDLING
A. Comply with manufacturer's instructions for handling and storage of Visual Display Boards.

1.6 PROJECT CONDITIONS
A. Field measure prior to fabrication to ensure proper fit.
B. General contractor to maintain proper climate before, during and after installation.

1.7 WARRANTY
A. Submit manufacturer's "Life of Building" warranty, stating that under normal usage and maintenance, and when installed in accordance with manufacturer's instructions and recommendations, Porcelain-on-Steel Markerboards and Chalkboards are guaranteed for the life of the building.
B. Warranty shall cover replacement of defective Porcelain-on-Steel Markerboards and Chalkboards due to discoloration, excessive fading of color, crazing, cracking or flaking. Warranty does not cover the cost of removal or reinstallation.

PART 2: products

2.1 MANUFACTURERS
A. Provide visual display boards as manufactured by Platinum Visual Systems™, Corona, California. Tel.: (800)498-2990 Fax: (951)817-9900. Email: info@pvsusa.com. Website: www.pvsusa.com.
B. Substitutions: See Section 01600 – Product Requirements.

2.2 MARKERBOARD AND CHALKBOARD MATERIALS
A. Steel Face Sheets: Writing surface will be Writanium® 28 gauge steel face with porcelain enamel finish fused to the steel sheet using a continuous coil process.

1. Markerboard and Chalkboard surface shall be fused at a temperature of 1450° and 1200°, respectively.
2. The gloss of the writing surface will not increase more than three units when subjected to wearability tests specified in testing procedures for 30 hours.

B. Core Material: 1/2" particleboard.
C. Backing Material: .005" aluminum backing sheet.
D. Metal Trim and Accessories: 6063 aluminum alloy with a T5 temper.
E. Adhesive: As recommended by manufacturer for project conditions.

2.3 PORCELAIN-ON-STEEL MARKERBOARDS AND CHALKBOARDS

A. Provide Markerboards and Chalkboards for project from manufacturer's DTS Series.
   1. Metal trim and accessories: DTS Series aluminum extrusions with clear satin anodized finish.
      a. Chalktray CR315: Standard continuous solid chalktray with ribbed section and smoothly curved and polished ends.
      b. Map Rail MR411: Standard 1" high continuous rail with colored cork insert as follows:
         1) End stops: One pair per Map Rail.
         2) Map hooks: One every 2" of Map Rail.
         3) Roller brackets: One pair per Map Rail.
         4) Flag holder: One per room.
      c. Frame CH215: Standard channel frame with 3/4" face.
   2. Size: As shown on drawings.
   3. Color: As selected from manufacturer's standard colors.

2.4 COLORED CORK TACKBOARD MATERIALS

A. Face Sheet: Colored cork surface will be 1/4" resilient homogenous tackable linoleum surface consisting of linseed oil, granulated cork, rosin binders and dry pigments calendared onto natural burlap backing. Color shall extend through thickness of material and be self-healing.
B. Core Material: 1/4"≠≠ medium density fiberboard.
C. Metal Trim: 6063 aluminum alloy with T5 temper.
D. Adhesive: As recommended by manufacturer for project conditions.

2.5 COLORED CORK TACKBOARDS

A. Provide Tackboards for project from manufacturer's DTS Series.
   1. Metal trim and accessories: DTS Series aluminum extrusions with clear satin anodized finish.
      a. Frame CH215: Standard channel frame with 3/4" face.
   2. Size: As shown on drawings.
   3. Color: As selected from manufacturer's standard colors.

2.6 FABRICATION

A. Laminate facing sheet and backing sheet to core material under pressure, using manufacturer's recommended adhesive.
B. Provide factory-assembled visual display boards, except where sizes demand partial field assembly.
C. Assemble units in one piece without joints, wherever possible. Where required dimensions exceed maximum panel size available, provide two or more pieces of equal length, as indicated on approved shop drawings. Assemble to verify fit at factory, then disassemble for delivery and final assembly at project site.

PART 3: *execution*

3.1 EXAMINATION

A. Verify that substrates are properly prepared to receive visual display boards. Do not begin installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

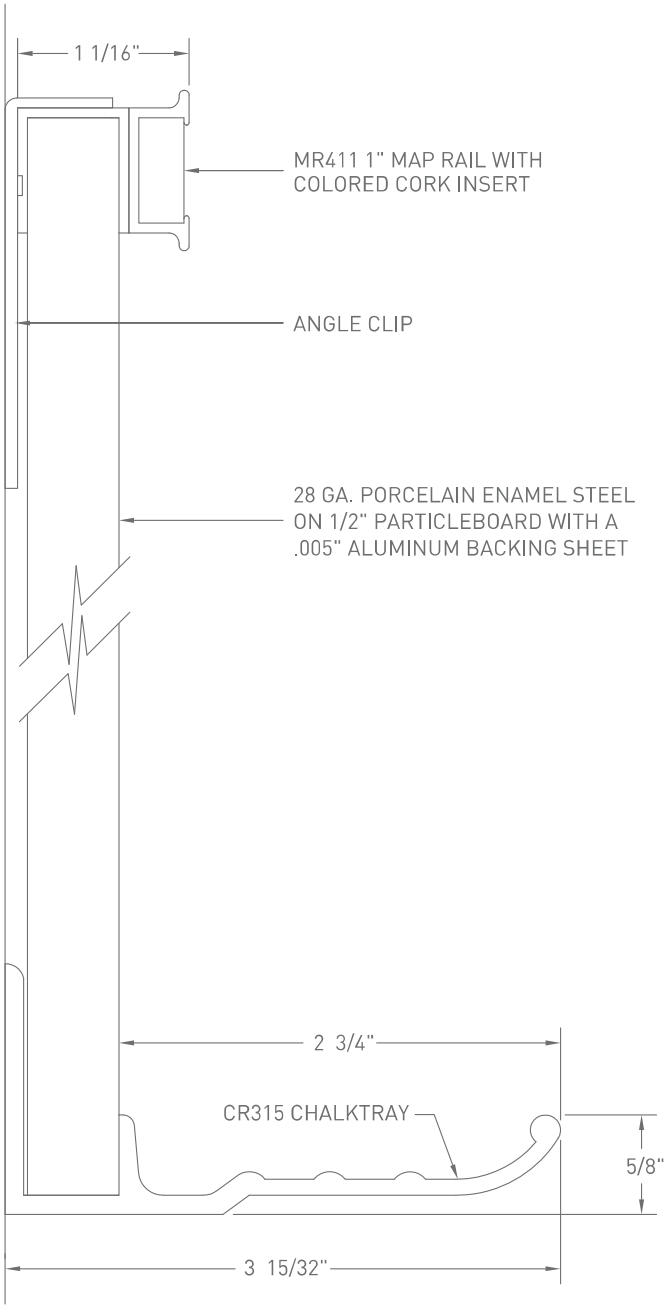
A. Comply with manufacturer's installation instructions.
B. Where visual display boards must be partly assembled at project site, use factory-supplied H-bar to maintain proper alignment.
C. Install visual display boards level and plumb, keeping perimeter trim aligned in accordance with manufacturer's recommendations.

3.3 ADJUSTING AND CLEANING

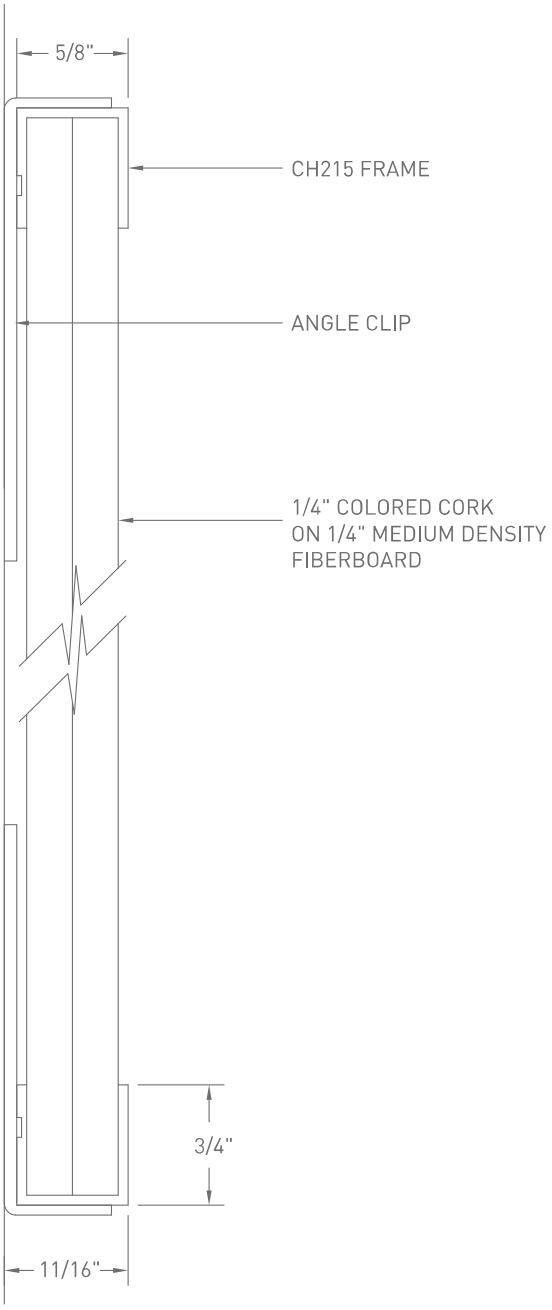
A. Verify that all accessories are installed as required for each unit.
B. Upon completion of installation, clean surfaces and trim in accordance with manufacturer's recommendations, leaving all materials ready for use.

DTS: Specifications

MARKERBOARD/CHALKBOARD



TACKBOARD



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e³ environmental ceramicsteel™

Writing Surfaces by PolyVision

The new *e³ environmental ceramicsteel* surface is the first and only ecologically intelligent whiteboard surface to receive Cradle to Cradle certification, and PolyVision's fourth generation of ceramicsteel writing surfaces. *e³*™ delivers the properties of PolyVision's best selling writing surface, *P³ ceramicsteel*®, and complies with Cradle to Cradle™ Silver certification criteria, which places a major emphasis on the human and ecological health impacts of a product's ingredients. For over five decades, millions of boards have been produced around the world using PolyVision ceramicsteel. PolyVision used this cross section of consumers to gather the information that helped determine what the next generation of writing surfaces should provide. Our internationally renowned R&D team worked with experts in the field of ceramics and technology to create *e³ environmental ceramicsteel* surface - the new industry standard for superior quality.

e³ Surface – High-Gloss and Low-Gloss* Markerboards

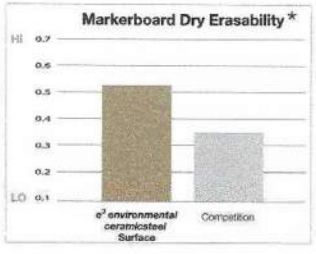
WHITE		LIGHT GRAY		BEIGE	
High Gloss	6100H	High Gloss	6101H	High Gloss	6102H
Low Gloss	6100L	Low Gloss	6101L	Low Gloss	6102L

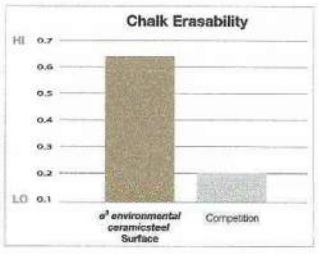
e³ Surface – Ultra Matte Chalkboards

GREEN		BLACK		GRAY	
Ultra Matte	6500U	Ultra Matte	6501U	Ultra Matte	6502U

* There are characteristic and performance differences between High-Gloss and Low-Gloss. For further detail, refer to the chart on the backside of this card under Low-Gloss Markerboards. For additional questions, specifications, and sample color chips, please call 1.800.620.POLY.

Actual colors may vary from the colors shown.
Please contact your sales representative for color samples.





The ultra-smooth finish enables dry markers and chalk to glide easily across the *e³ environmental ceramicsteel* surface with minimal friction. The surface smoothness allows more dry-erase ink and chalk to be removed, improving erasability and eliminating "ghost writing."

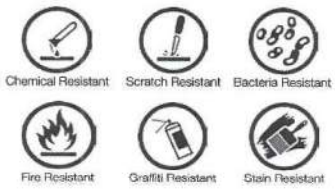
*All markerboard erasability tests were conducted using High-Gloss *e³ environmental ceramicsteel* surfaces.

Environmental Features

- Enamel fused to cold-rolled enamelling-grade steel
- In all coatings, the total amount of heavy metals cadmium, mercury, hexavalent chromium, and lead is less than 0.1%
- All coatings are free of arsenic and antimony
- No Volatile Organic Compounds (VOCs)
- Steel core is made from minimum 30% post-consumer and post-industrial waste
- *e³ environmental ceramicsteel* surface is 99% recyclable

PolyVision Ceramicsteel Advantage

- Ultra-smooth writing surface
- Improved erasability
- Greater color contrast
- Significantly less surface/light distortion
- Optimum eye comfort
- Enhanced visibility
- Reduced chalk pressure, greater adherence
- Increased chalk/surface contrast



PolyVision Corporation
1.800.620.POLY
www.polyvision.com
info@polyvision.com

POLYVISION®
A Steelcase Company

e^3 environmental ceramicsteel Surface

Specifications

Materials

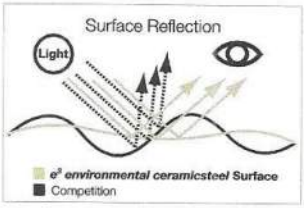
All ceramicsteel panels will be supplied with light-gauge steel. The ceramic finish is fused to the steel sheet at a temperature of approximately 1250°F for chalkboards and 1500°F for markerboards.

Finishes

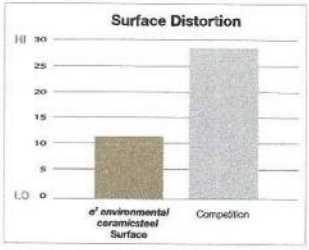
The ceramic finish will consist of a specially formulated glass substance applied by machine. Base metal will be coiled enameled steel of an alloy suitable for the application of architectural porcelain employing a continuous coil process. Base metal will be properly pre-cleaned and treated to assure a complete bond between the steel and the subsequent ceramic coatings. Both surfaces of steel based metal will receive a ground coat of ceramic frit to be fused to the metal in a firing operation used exclusively for ground coat application to prevent contamination. A color cover coat of ceramic frit will be applied to one surface of the ground coat and fused by a firing operation used exclusively for color application. All ceramic coatings will be machine applied with automated equipment for maximum finish uniformity. Firing temperature will be approximately 1250°F for chalkboard and 1500°F for markerboard. Panels will be specified in any standard color listed on this color guide. The gloss of writing surfaces will not increase by more than three units when subjected to wearability tests specified in testing procedures for 30 hours (approximately 126,000 strokes).

Characteristic	*e³ environmental ceramicsteel* Markerboard	*e³ environmental ceramicsteel* Chalkboard
Write-ability	Can be written on with any dry-erase, semi-permanent, water-soluble, permanent marker, pen, or crayon without damaging the surface.	Superior, low-gloss, matte finish readily accepts chalk providing a sharp, unbroken line with less pressure and maximum surface adherence.
Visibility	Contrast/waviness for markerboards (light and dark effects) shall be no greater than 15 when tested with BYK - Gardner Wave Scan 5+ measurement device showing visual acuity (contrast sensitivity) to the human eye at distances greater than 3 meters (10'- 0"). Resolution (visual acuity) shall be based on 3 lines per degree and be visibly maintained beyond the current standard of 3 meters.	Contrast/waviness for chalkboards (light and dark effects) shall be no less than 20 when tested with the contrast measurement test with 773-gram load on chalk. Resolution (visual acuity) shall be based on 3 lines per degree and be visibly maintained beyond the current standard of 3 meters.
Erasability	Dry-erase marker ink can be wiped off easily with a dry cloth or standard eraser. Crayon, semi-permanent, and permanent marker pen inks can be removed with a solvent based cleaner.	Erases easily with a dry cloth or standard chalk eraser, retains minimal residual chalk dust, and will not leave "ghost writing." Color change (dark/light) after chalk erasing is reduced 60% from traditional surfaces.
Cleanability (Washability)	All residues that remain after normal erasing can be removed by following the care and cleaning instructions on the www.CleanMyBoard.com website.	WET Ghost measurements on chalkboard surfaces before and after wet cleaning shall not exceed a factor of 0.49. For further care and cleaning instructions, refer to the www.CleanMyBoard.com website.
Wearability	Vitrified glass-hard ceramic surface fused to light-gauge enameling grade steel at approximately 1500°F. High resistance to impact damage, abrasion, scratching, and color fading. The *e³ environmental ceramicsteel* surface registers a 6.5 on the revised Mohs hardness scale.	Vitrified glass-hard ceramic surface fused to light-gauge enameling grade steel at approximately 1250°F. High resistance to impact damage, abrasion, scratching, and color fading. The *e³ environmental ceramicsteel* surface registers at a minimum of 5 on the revised Mohs hardness scale.
Magnet Capability	The *e³ environmental ceramicsteel* surfaces are ideal for all magnets and magnetic impregnated materials and will not be scratched or damaged from the contact.	The *e³ environmental ceramicsteel* surfaces are ideal for all magnets and magnetic impregnated materials and will not be scratched or damaged from the contact.
Flame Resistance	The *e³* surface is 100% non-combustible.	The *e³* surface is 100% non-combustible.

Product and Characteristic	Writeability	Erasability	Cleanability
***e³ environmental ceramicsteel* Low-Gloss Markerboard**	Provides the same writing characteristics as High-Gloss.	Low-Gloss surfaces will not erase as thoroughly as High-Gloss surfaces. When this occurs, a water-dampened cloth will be required to erase the surface.	After normal erasing of Low-Gloss surfaces, solvents may be used to remove harder-to-erase dry marker inks and residue from other pens. Always clear water rinse after using any cleaning agent on the surface. Refer to www.CleanMyBoard.com for further details.



The *e³ environmental ceramicsteel* surface maximizes the performance of reflected light and reduces surface glare, resulting in improved visibility under a wide range of lighting conditions.



Surface distortion (Orange Peel) has been reduced by 44% in direct comparison with the original surface.

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SILVER

Environmental Policy: PolyVision strives for continuous improvement in all areas of environmental stewardship – responsible use of raw materials and natural resources, design processes and operation of all facilities – to protect, replenish, and restore the communities in which we live and serve.

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SECTION 10 11 00
VISUAL DISPLAY UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Porcelain enamel steel markerboards.

1.02 RELATED REQUIREMENTS

A. Section 06 10 00 - Rough Carpentry: Blocking and supports.

B. Section 09 21 16 - Gypsum Board Assemblies: Concealed supports in metal stud walls.

C. Section 09 91 23 - Interior Painting: Finishing of wood frame and marker rail.

1.03 REFERENCE STANDARDS

A. ANSI A208.1 - American National Standard for Particleboard 2022.

B. ASTM A424/A424M - Standard Specification for Steel, Sheet, for Porcelain Enameling 2018.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's data on porcelain enamel steel markerboard, trim, and accessories.

C. Shop Drawings: Indicate wall elevations, dimensions, joint locations , special anchor details.

D. Samples: Color charts for selection of color and texture of porcelain enamel steel markerboard and trim.

E. Test Reports: Show compliance to specified surface burning characteristics requirements.

F. Manufacturer's printed installation instructions.

G. Manufacturer's Qualification Statement.

H. Maintenance Data: Include data on regular cleaning, stain removal ~~, and[_____]~~.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.06 WARRANTY

A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

B. Provide five year warranty for chalkboard and markerboard to include warranty against discoloration due to cleaning, crazing or cracking, and staining.

PART 2 PRODUCTS

2.01 VISUAL DISPLAY UNITS

A. Porcelain Enamel Steel Markerboards:

1. Manufacturers:
   a. AJW Architectural Products~~:[_____]~~: www.ajw.com/#sle.
   b. ASI Visual Display Products~~:[_____]~~: www.asi-visualdisplayproducts.com/#sle.
   c. Claridge Products and Equipment, Inc~~:[_____]~~: www.claridgeproducts.com/#sle.
   d. Platinum Visual solutions: www.pvusa.com.
2. Color: White.
3. Steel Face Sheet Thickness: 24 gauge, 0.0239 inch (0.61 mm).
4. Core: Particleboard, manufacturer's standard thickness, laminated to face sheet.
5. Backing: Aluminum foil, laminated to core.
6. Size: As indicated on drawings.
7. Frame: Extruded aluminum , with concealed fasteners.
8. Frame Finish: Anodized, natural.
9. Accessories: Provide marker tray.

10. Products:
    a. Basis of Design: Claridge Series 200.

2.02 MATERIALS

A. Porcelain Enameled Steel Sheet: ASTM A424/A424M, Type I, Commercial Steel, with fired-on vitreous finish.

B. Particleboard: ANSI A208.1; wood chips, set with waterproof resin binder, sanded faces.

C. Foil Backing: Aluminum foil sheet, 0.005 inch thick (0.13 mm thick).

2.03 ACCESSORIES

A. Temporary Protective Cover: Sheet polyethylene, 8 mil (0.2 mm) thick.

B. Cleaning Instruction Plate: Provide instructions for chalkboard cleaning on a metal plate fastened to perimeter frame near chalkrail.

C. Marker Tray: Aluminum, manufacturer's standard profile, one piece full length of markerboard, molded ends, concealed fasteners, same finish as frame.

D. Mounting Brackets: Concealed.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that internal wall blocking is ready to receive work and positioning dimensions are as indicated on shop drawings.

C. Verify flat wall surface for frameless adhesive-applied boards.

3.02 PREPARATION

A. Acclimatize tackable wall panels by removing from packaging in installation area not less than 24 hours before application.

B. Remove switchplates, wall plates, and surface-mounted fixtures where tackable wall paneling is applied. Reinstall items on completion of installation.

C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Install boards in accordance with manufacturer's instructions.

B. Install with top of marker tray at 30 inches (760 mm) above finished floor.

C. Secure units level and plumb.

D. Butt Joints: Install with tight hairline joints.

E. Carefully cut holes in boards for thermostats.

F. Install tackable wall panels in accordance with manufacturer's recommendations on specified substrates with concealed attachments.
    1. Fabricate re-wrapped edges where partial panels about each other, or adjacent surfaces or trim.
    2. Re-wrap top, bottom or side edges for cutting panels around door or window openings, abutting trim, protruding objects, and at other openings, including x-cut at receptacles, light switches, and other openings.

3.04 CLEANING

A. Clean board surfaces in accordance with manufacturer's instructions.

B. Cover with protective cover, taped to frame.

C. Remove temporary protective cover at Date of Substantial Completion.

END OF SECTION 10 11 00