

Emily Garza, Director of Purchasing

May 24, 2019

ADDENDUM ACKNOWLEDGEMENT FORM

To Whom It May Concern:

Concerning the <u>PSJA ISD NORTH ECHS RESTROOM RENOVATIONS AND COLLEGE AND UNIVERSITY CENTER</u> <u>RESTROOMS / SCIENCE LABS RENOVATIONS BID # 18-19-042</u>, to be opened at 4:00 p.m., Thursday, June 6, 2019. Please consider the following:

Addendum Number:	Description of REVISED Addendum:
1	QUESTIONS / ANSWERS
	CLARIFICATIONS
	ATTACHMENTS / DRAWINGS
	PRE-BID SIGN IN SHEET

For any questions pertaining to these changes, please contact Emily Garza, Director of Purchasing at (956) 354-2000.

Sincerely,

Emily Garza

Emily Garza Director of Purchasing

With the acceptance of this form, I acknowledge that I have received the above "ADDENDUM ACKNOWLEDGEMENT FORM" for the <u>PSJA ISD NORTH ECHS RESTROOM RENOVATIONS AND COLLEGE AND</u> <u>UNIVERSITY CENTER RESTROOMS / SCIENCE LABS RENOVATIONS BID # 18-19-042</u>, to be opened at 4:00 p.m., Thursday, June 6, 2019. Please include a signed copy of this "ADDENDUM ACKNOWLEDGMENT FORM" with your bid/proposal.

Company Name:	 Authorized Signature:	
Address:	 Authorized Signature (Print):	
City / State / Zip:	 Email:	
Telephone Number:	 Fax Number:	

START COLLEGE NOW! COMPLETE EARLY! GO FAR!

ADDENDUM NUMBER ONE (1) TO THE PLANS AND SPECIFICATIONS FOR:

NORTH ECHS AND COLLEGE & UNIVERSITY CAMPUS STUDENT RESTROOM RENOVATIONS

PSJA ISD Bid # 18-19-042 Project No. 19.04



GIGNAC & ASSOCIATES 3700 N. 10th STREET, SUITE 205 McALLEN, TEXAS 78501 (956) 686-0100

This addendum is generally separated into sections for convenience; however, all contractors, subcontractors, materialmen, and other parties shall be responsible for reading the entire addendum. The failure to list an item or items in all affected sections of this addendum does not relieve any party affected from performing as per instructions, provided that the information is set forth any time, any place in this addendum. These documents shall be attached to and become a part of the contract documents for this project.

CLARIFICATION ITEMS:

Item C-1-UNIVERSITY

Sheet A-211-U

- One student station shall be ADA-compliant (table height shall be 30" AFF) in each of the Science Labs 108, 113, 116 and 117.

- There shall be one Goggle Cabinet in each of the Science Labs 108, 113, 116 and 117. Refer to Section 12 35 53.19 Wood Laboratory Casework in this Addendum.

Item C-2-UNIVERSITY

Sheet A-220-U

- Fume hoods depicted on Sheet A-220-U INTERIOR ELEVATIONS shall be as specified in Spec Section 12 35 53.19 Wood Laboratory Casework of this Addendum.

- Upper cabinets indicated on Sheet A-220-U INTERIOR ELEVATIONS shall have glass doors and wood shelves.

Item C-3-UNIVERSITY

Sheet G-100 Cover Sheet

Sheet AS-201-U Site Details shall be omitted from the Index of Drawings; it does not exist.

PLAN ITEMS:

Item P-1-UNIVERSITY

Site Plan Sheets

Sheets DS-200-U (Demolition Site Plan) and AS-200-U (Architectural Site Plan) included in this Addendum shall be included as part of the Contract Documents. Scope consists of ornamental fencing and concrete curb / flatwork modifications to existing site.

Item P-2-NORTH

Site Plan Sheet

AS-100-N (Overall Site Plan) included in this Addendum shall be included as part of the Contract Documents. The following sheet gives a map of the campus and highlights which building contains a restroom pod that is being renovated.

Item P-3-NORTH

Demo Plan Sheets

Sheets D-100N to D-106N included in this Addendum shall replace their respective sheets in the Contract Documents. The following sheets provide additional dimensions for further clarification.

SPECIFICATION ITEMS:

Item S-1

<u>Spec Section 08 71 00 – Door Hardware</u> Section 08 71 00 Door Hardware in this Addendum shall become part of the Contract Documents.

Item S-2-UNIVERSITY

<u>Spec Section 12 35 53.19 Wood Laboratory Casework</u> Section 12 35 53.19 Wood Laboratory Casework in this Addendum shall replace Section 12300 Manufactured Casework in the Project Manual.

Item S-3

<u>Spec Section 00 21 13 Instructions to Bidders</u> Refer to PSJA ISD's ionwave website for Owner requirements under the Attachments tab.

Item S-4

Spec Section 00 25 13 Pre-Bid Meetings

The May 23, 2019 – 10 am Pre-Bid Meeting Agenda and Sign-in sheet are included in this Addendum. There were no attendees at the May 23, 2019 – 2 pm Pre-Bid Meeting.

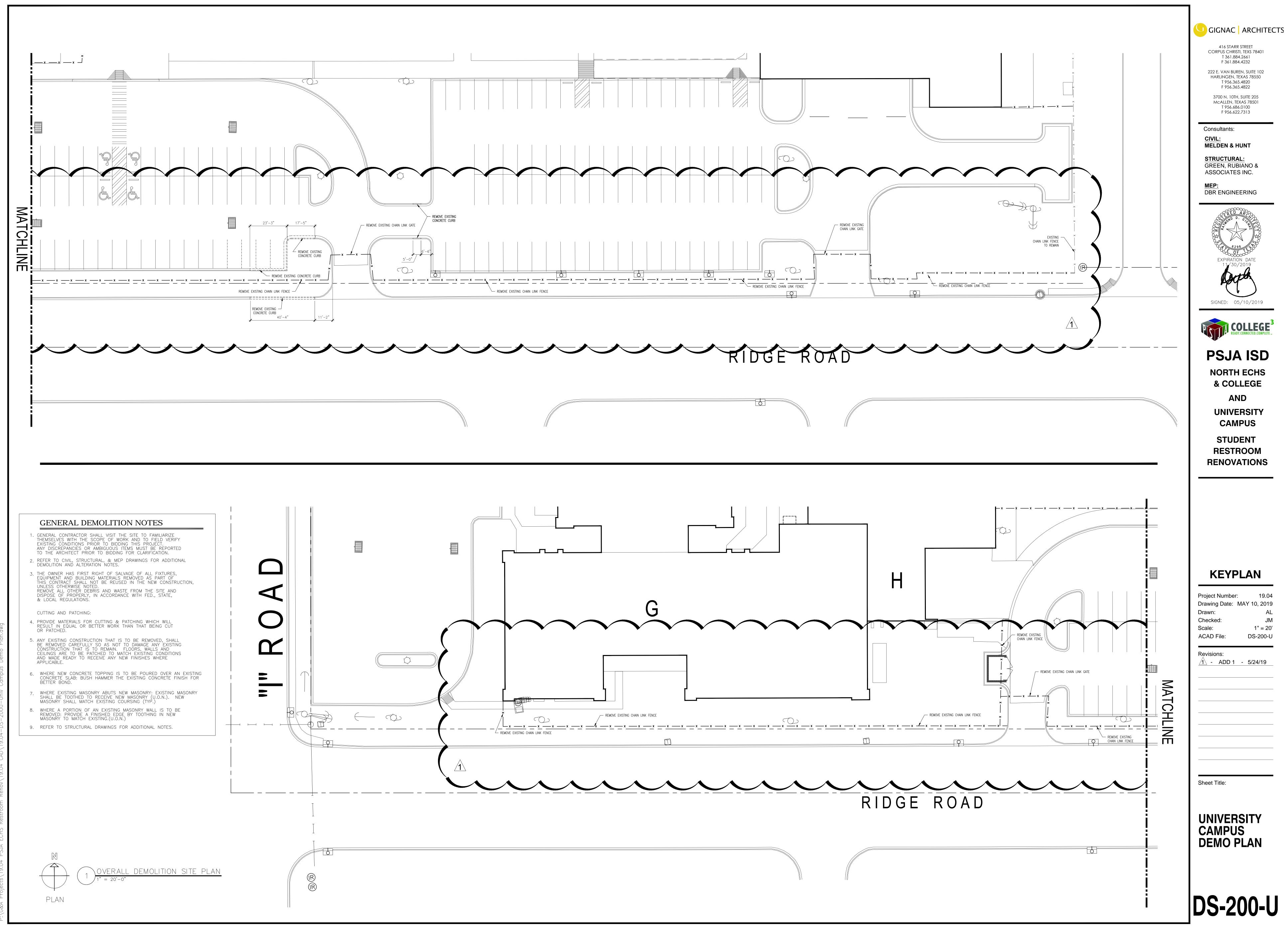
Item S-5

<u>Spec Section 00 41 13 Bid Form Stipulated Sum</u> Refer to PSJA ISD's ionwave website, under the Attachments tab, for AIA A101 – 2007 (Standard Agreement between Owner and Contractor).

Item S-6

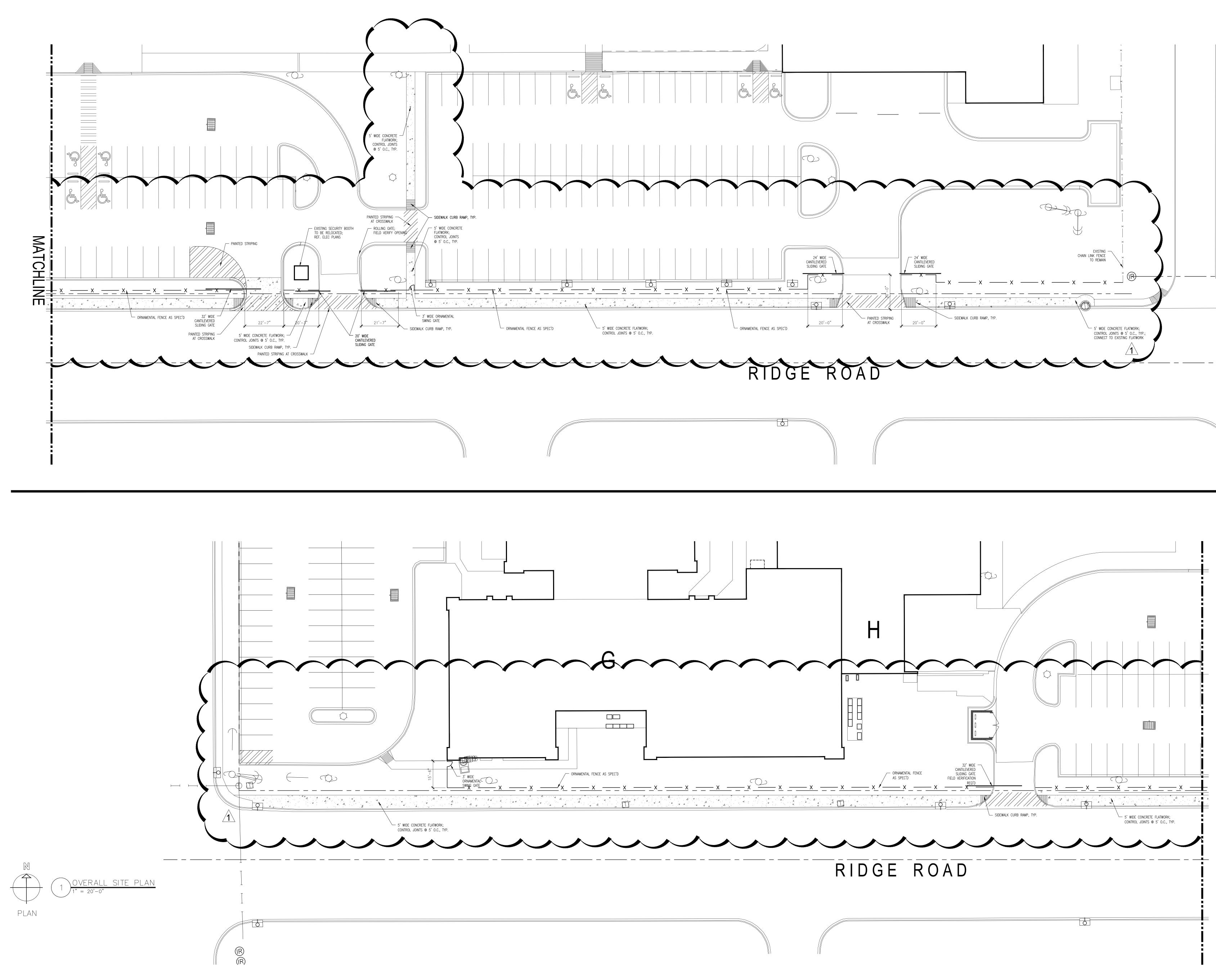
Spec Section 00 70 00 General Conditions

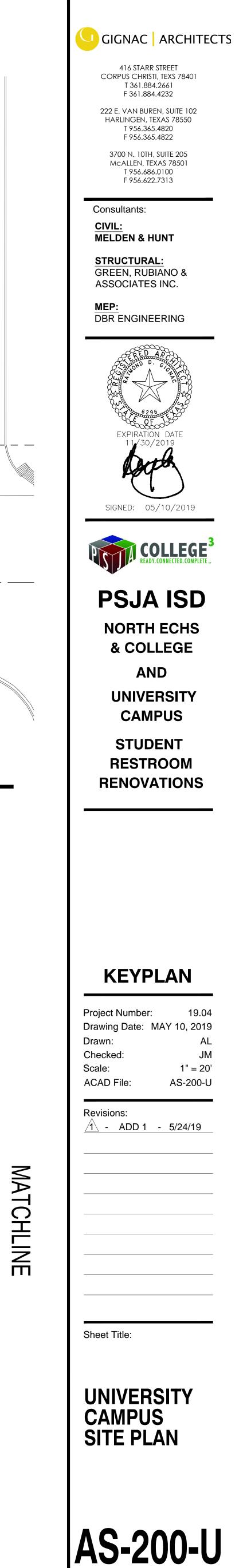
Refer to PSJA ISD's ionwave website, under the Attachments tab, for AIA A201 – 2007 (General Conditions of the Contract for Construction).

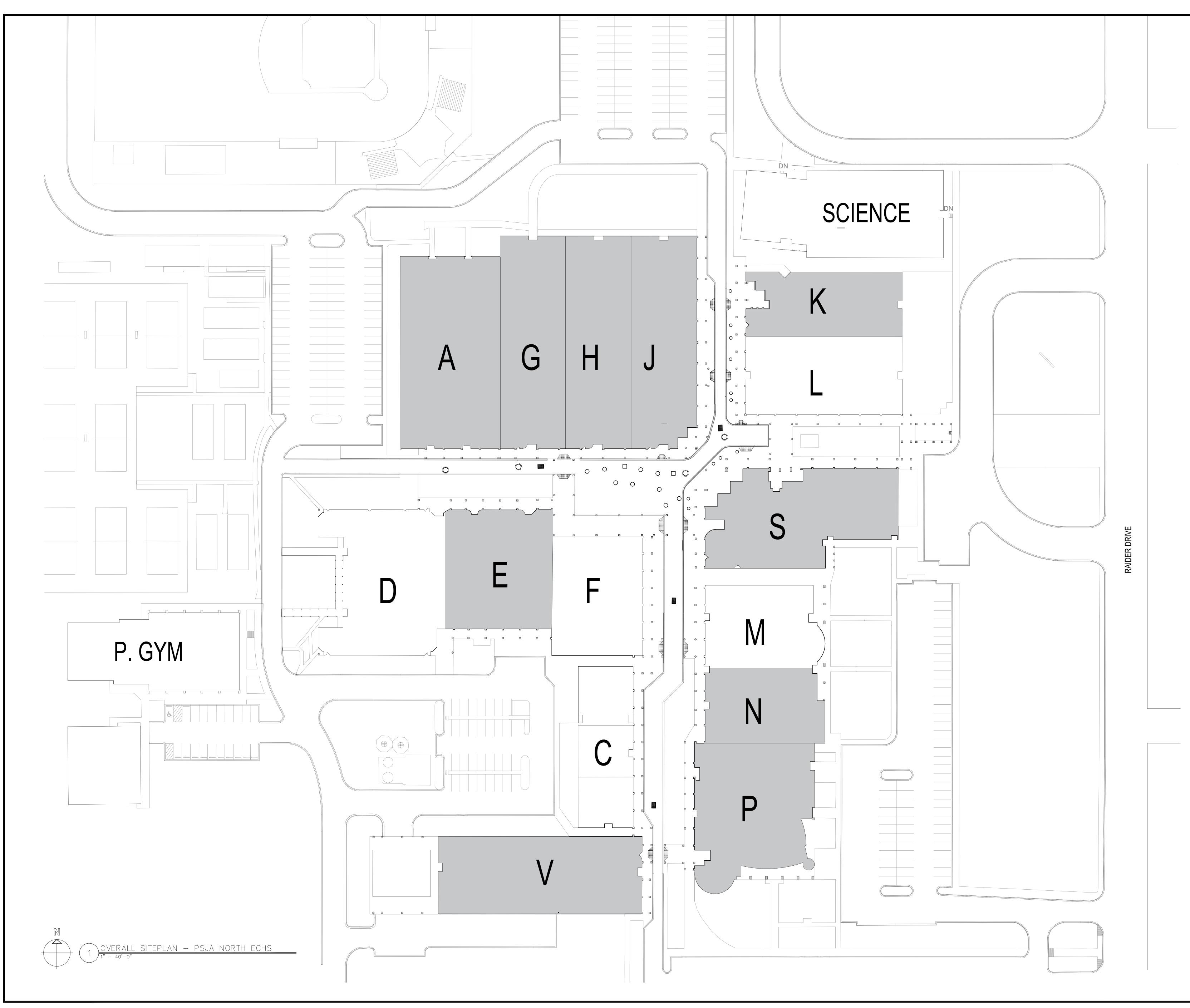


May 15, 2019 — 12:19pm User: aluksa P:\G&A Projects\19.04 PSJA ECHS Restroom Renov\19.04 CAD\19.04—DS—200U—Univ Campus Demo Plan.dw

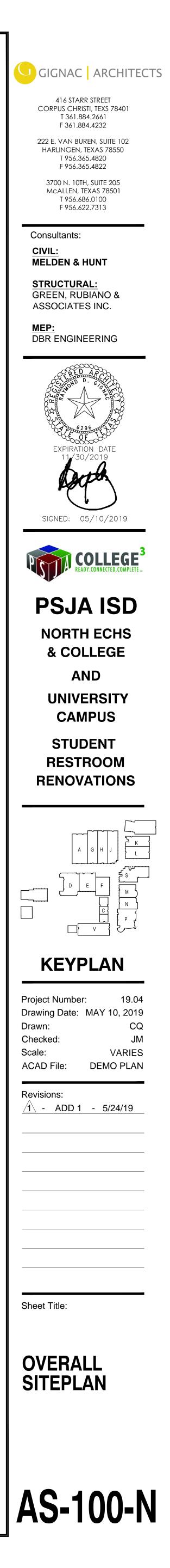




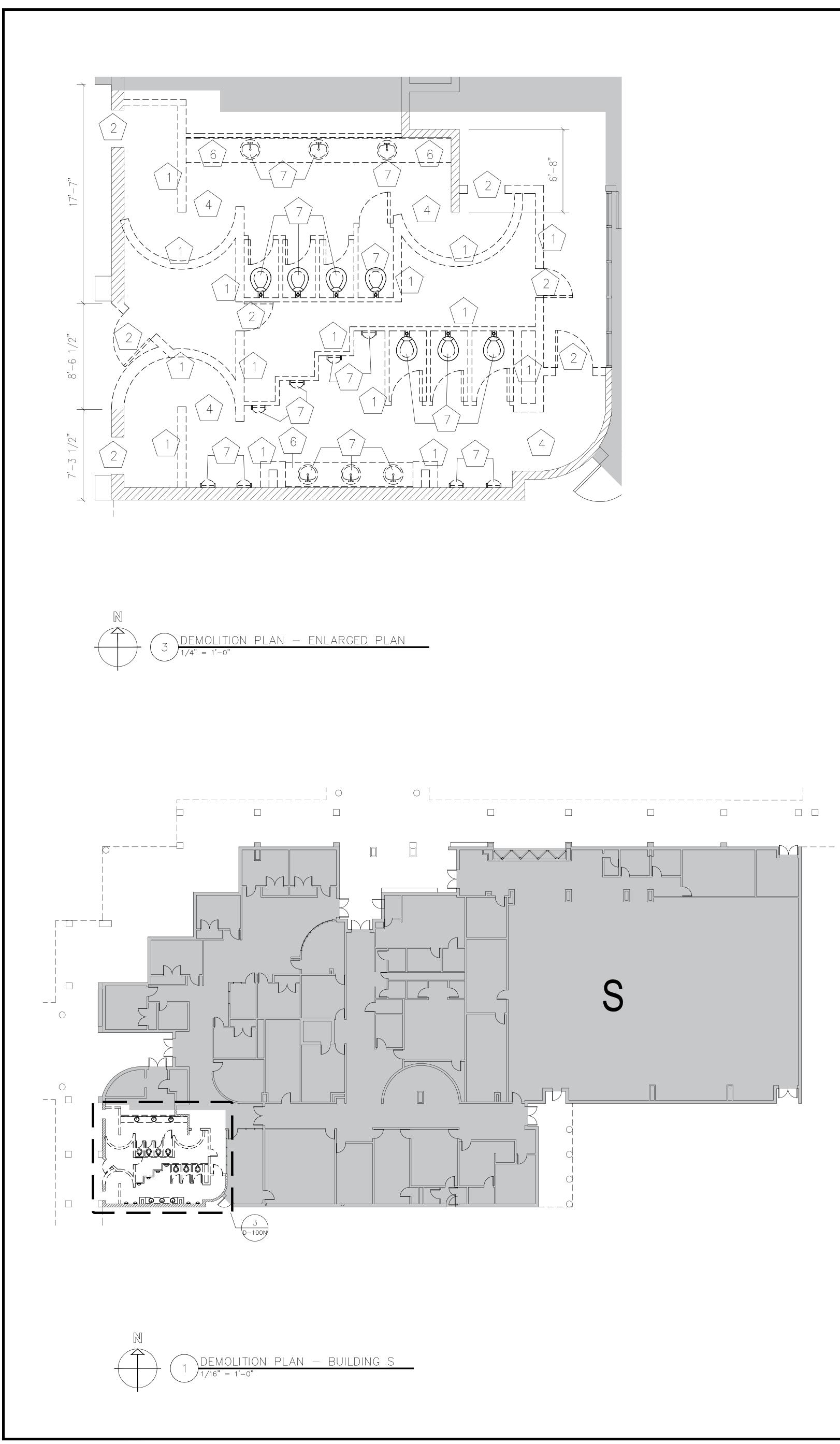


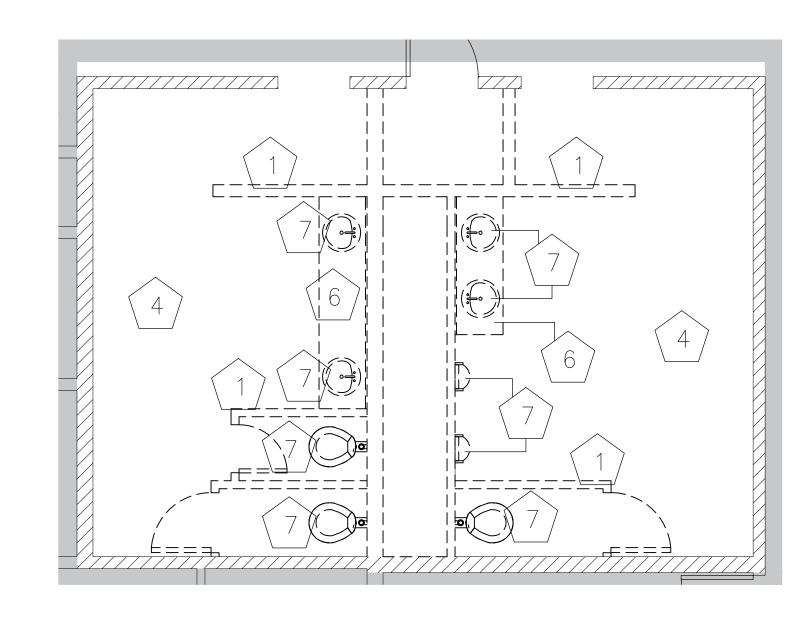


May 23, 2019 — 4:18pm User: cquezada P:\G&A Projects\19.04 PSJA ECHS Restroom Renov\19.04 CAD\ZZ CADD OWNER PROVIDED\SITE PLAN 2.dv

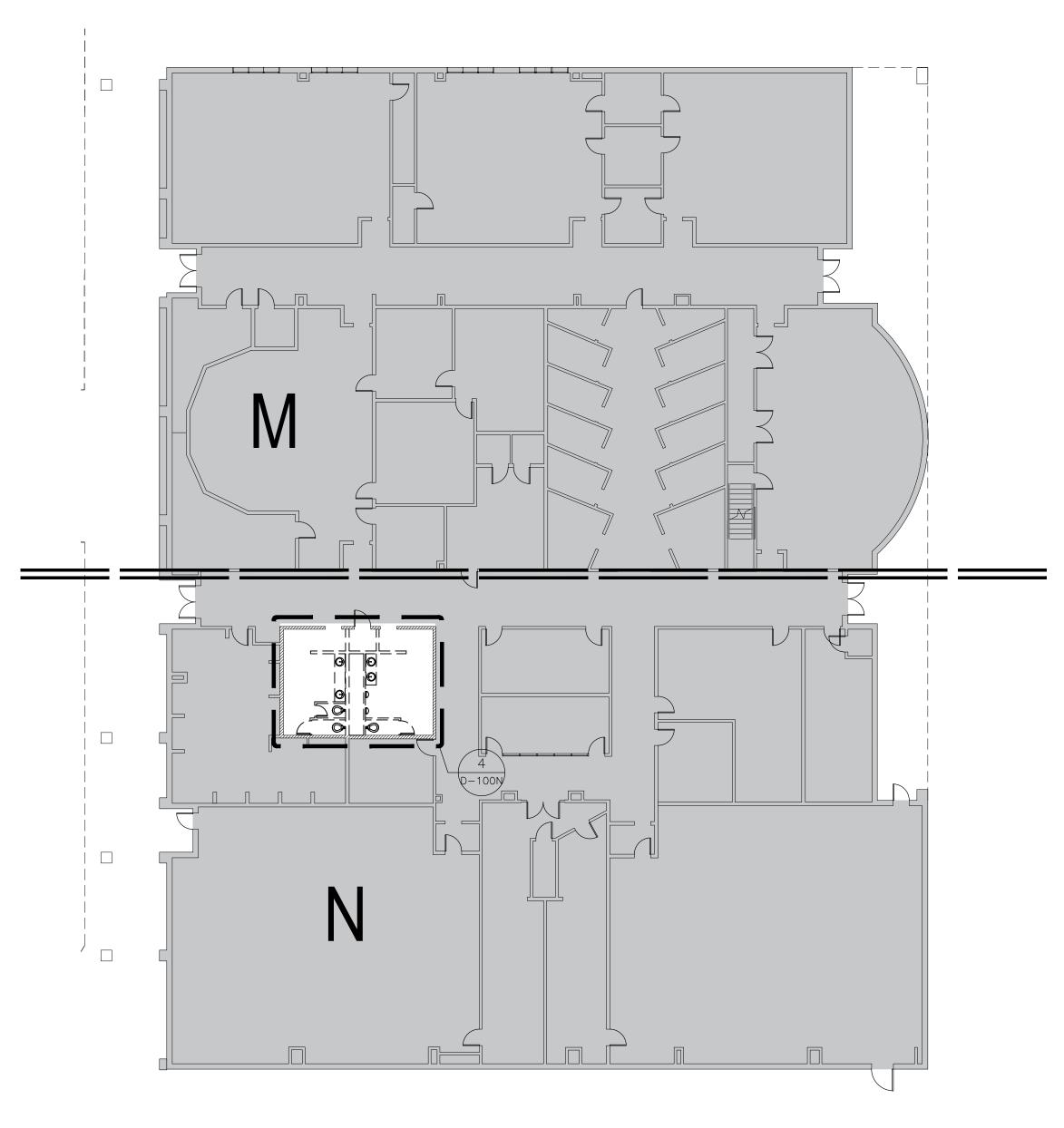


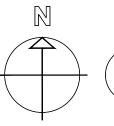












DEMOLITION PLAN - BUILDING N 1/16" = 1'-0"

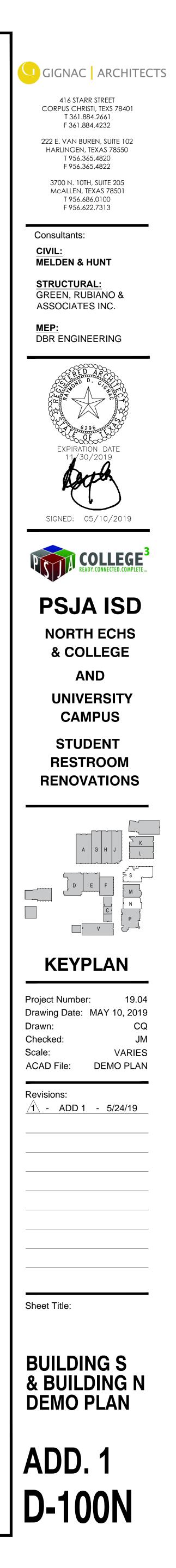


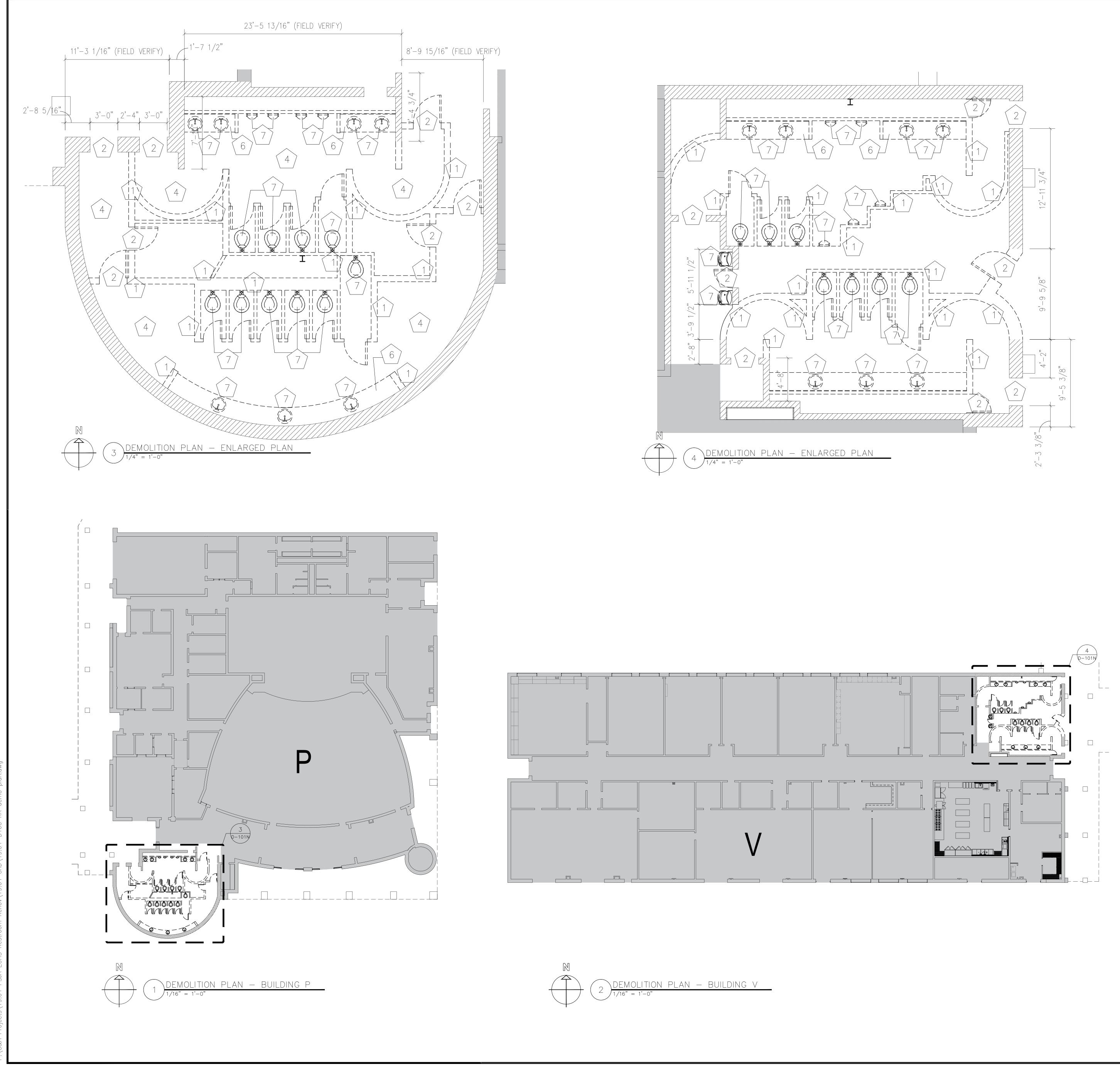
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- $\left(\begin{array}{c} 6 \end{array} \right)$ REMOVE EXISTING COUNTERS.
- $\left(\frac{7}{2}\right)$ REMOVE EXISTING PLUMBING FIXTURES, ITEMS & ACCESSORIES.
- (8) EXISTING DOOR TO REMAIN; PROVIDE NEW HARDWARE.

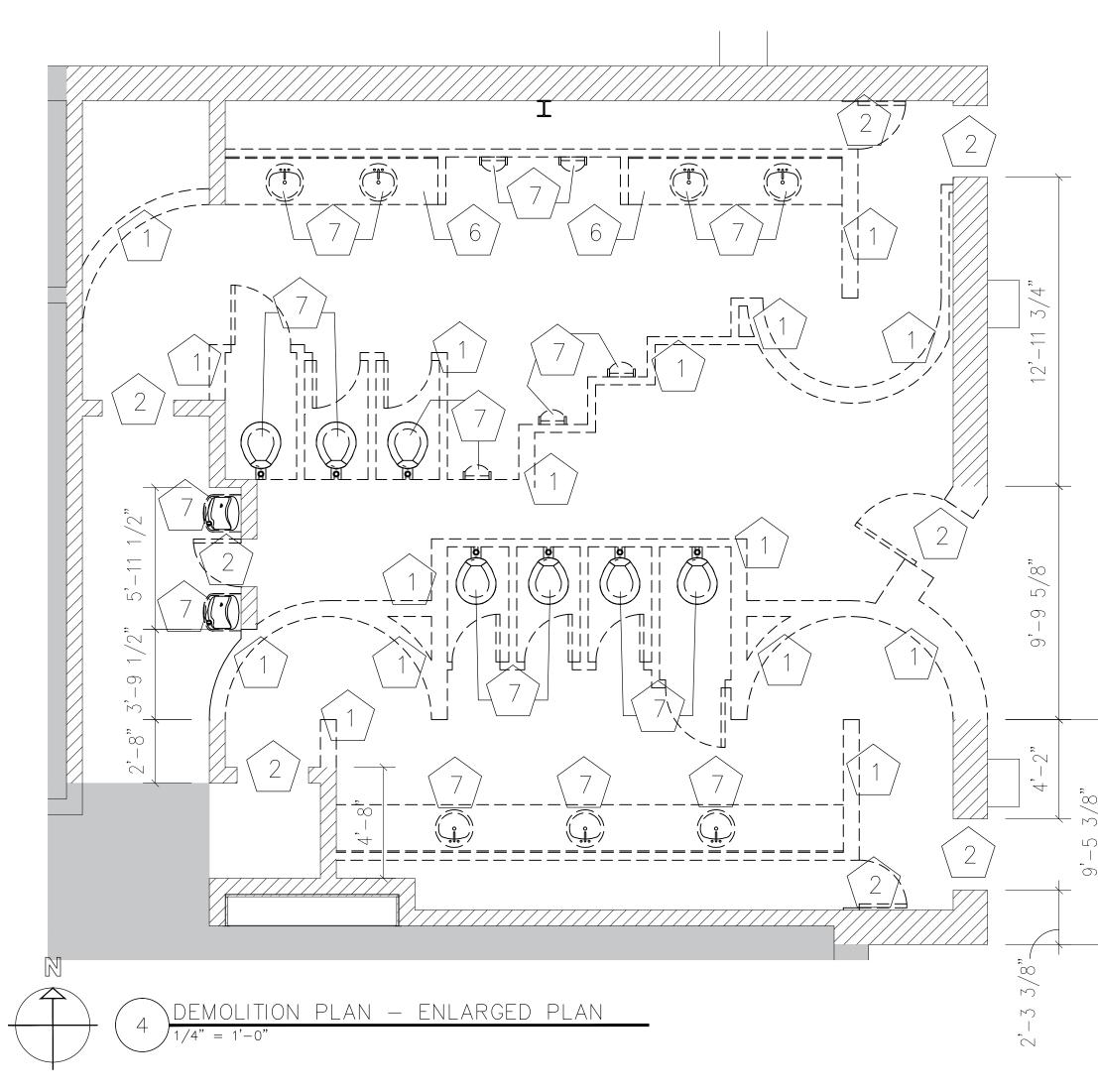
GENERAL DEMOLITION NOTES

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- 2. REFER TO CIVIL, STRUCTURAL, & MEP DRAWINGS FOR ADDITIONAL DEMOLITION AND ALTERATION NOTES. 3. THE OWNER HAS FIRST RIGHT OF SALVAGE OF ALL FIXTURES, EQUIPMENT AND BUILDING MATERIALS REMOVED AS PART OF
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- 10. PLUMBING LINES THAT ARE TO BE REMOVED SHALL BE REMOVED COMPLETELY. PATCH WALLS AND FLOORS TO MATCH EXISTING CONDITIONS. REFER TO THE PLUMBING PLANS.
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- 16. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL NOTES.
- 17. REFER TO ABATEMENT REPORT & PLAN FOR NEW OPENINGS OR WALLS PRIOR TO DEMOLITION.





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DEMOLITION KEY NOTES

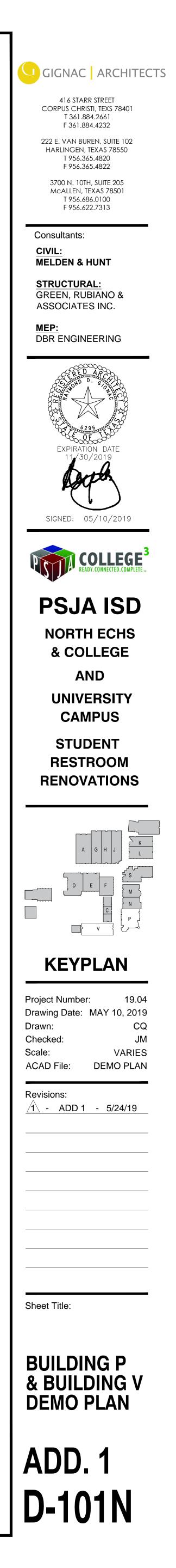
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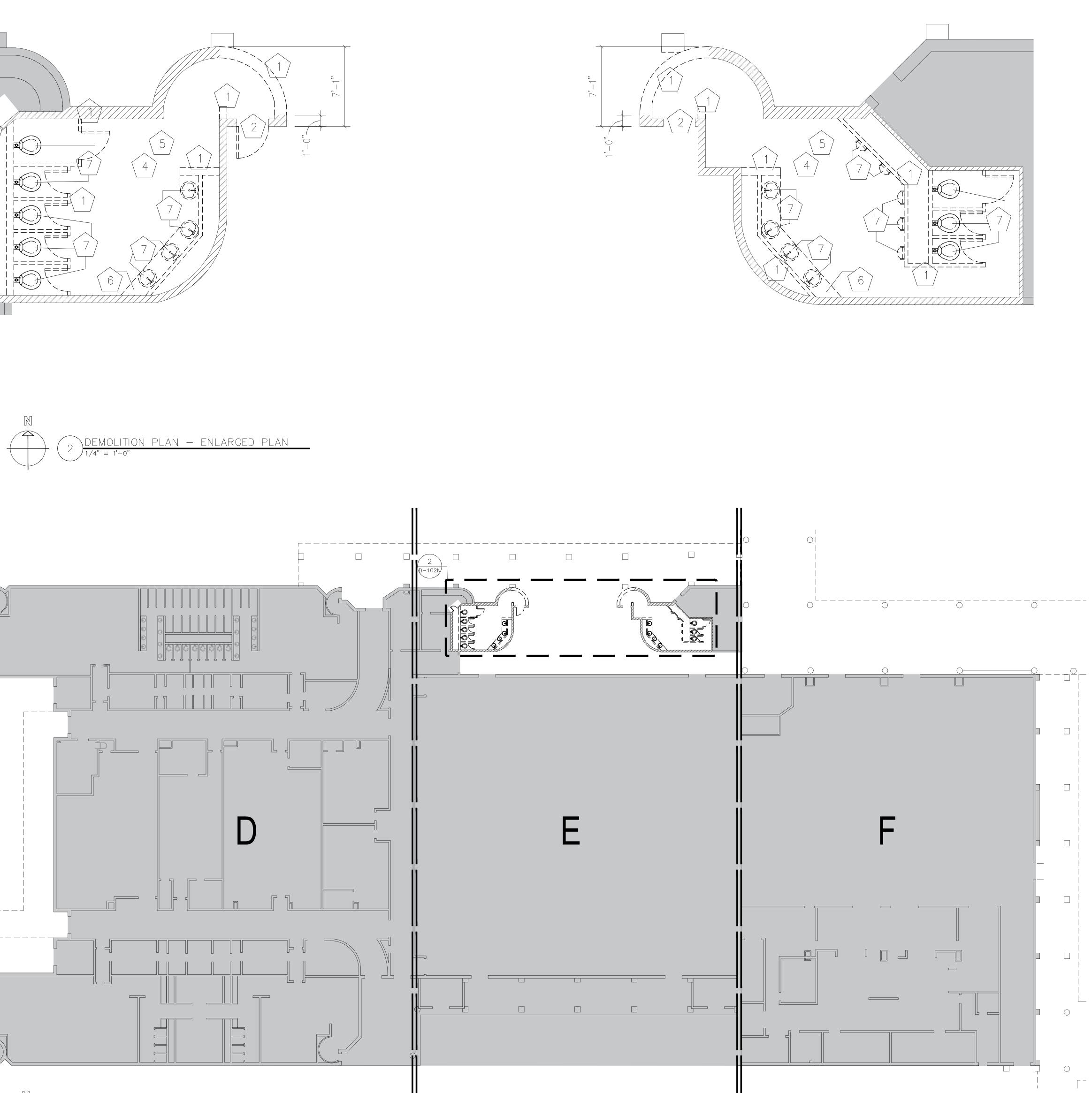
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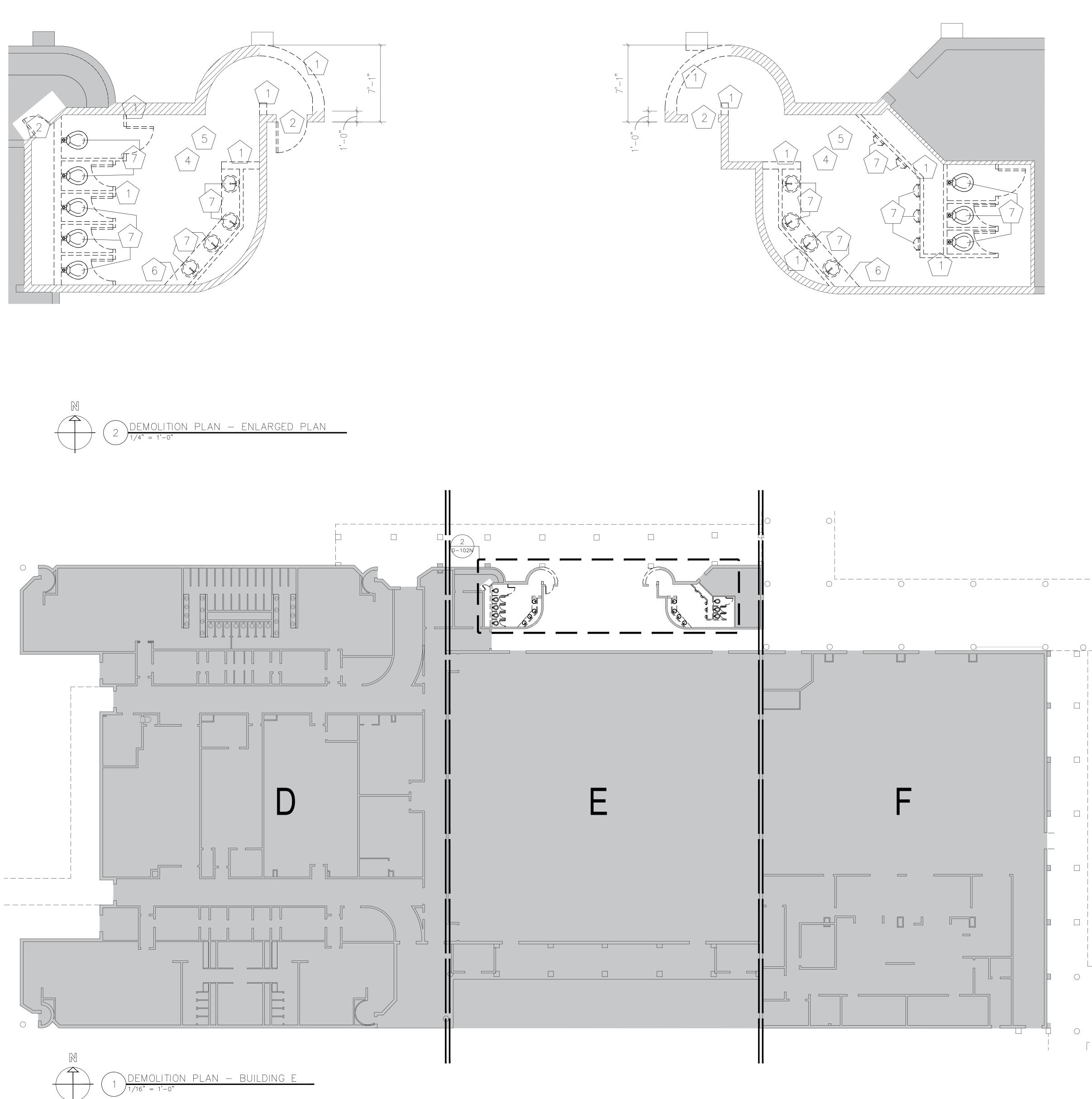
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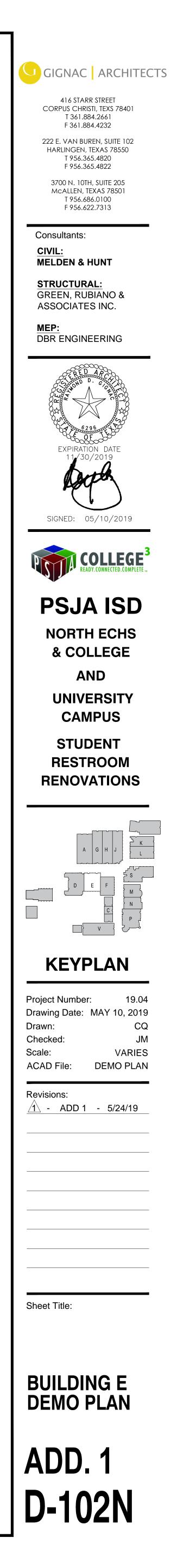
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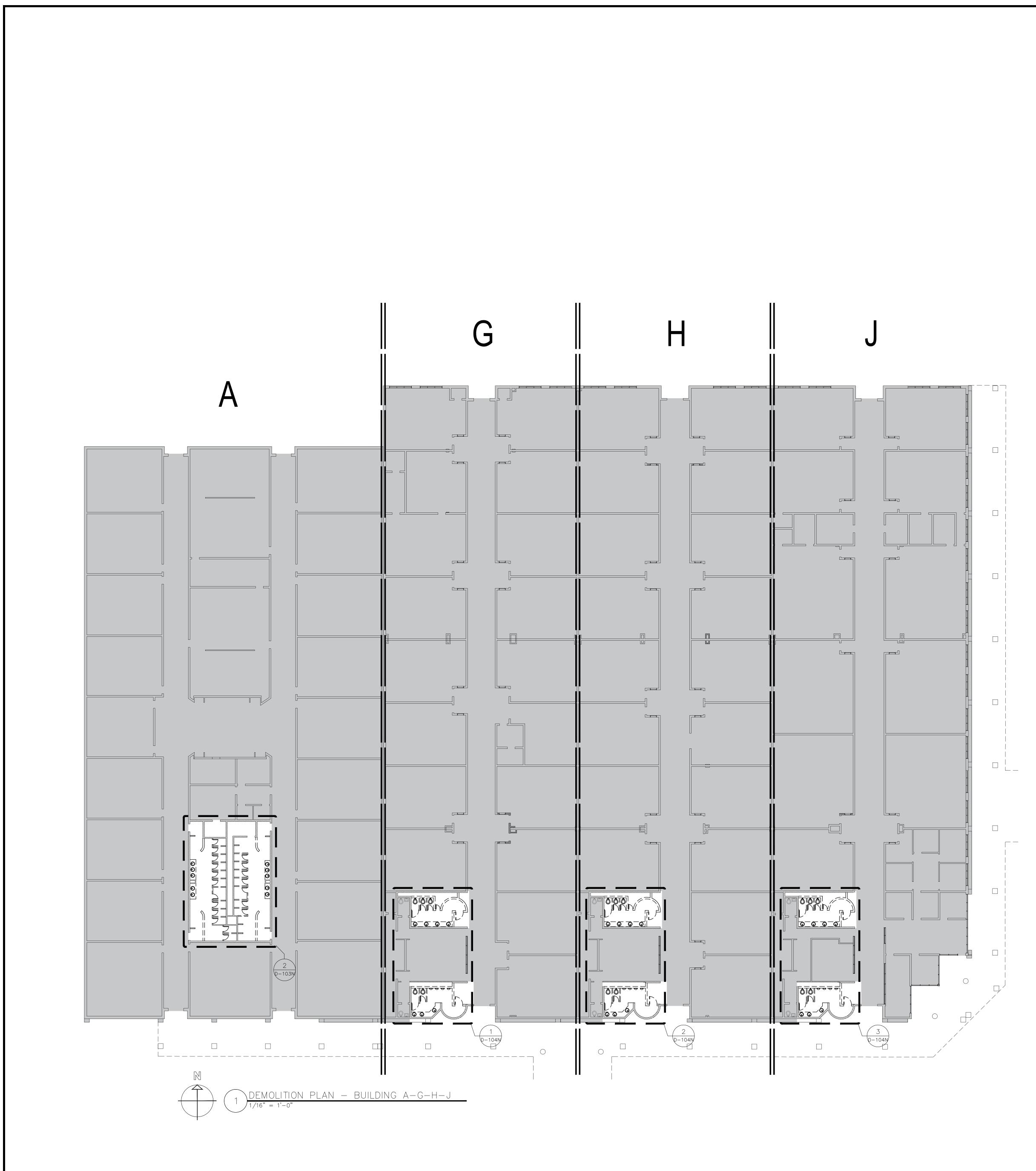
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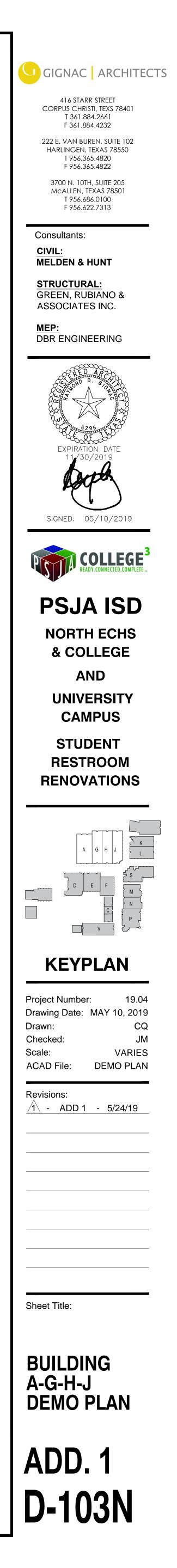
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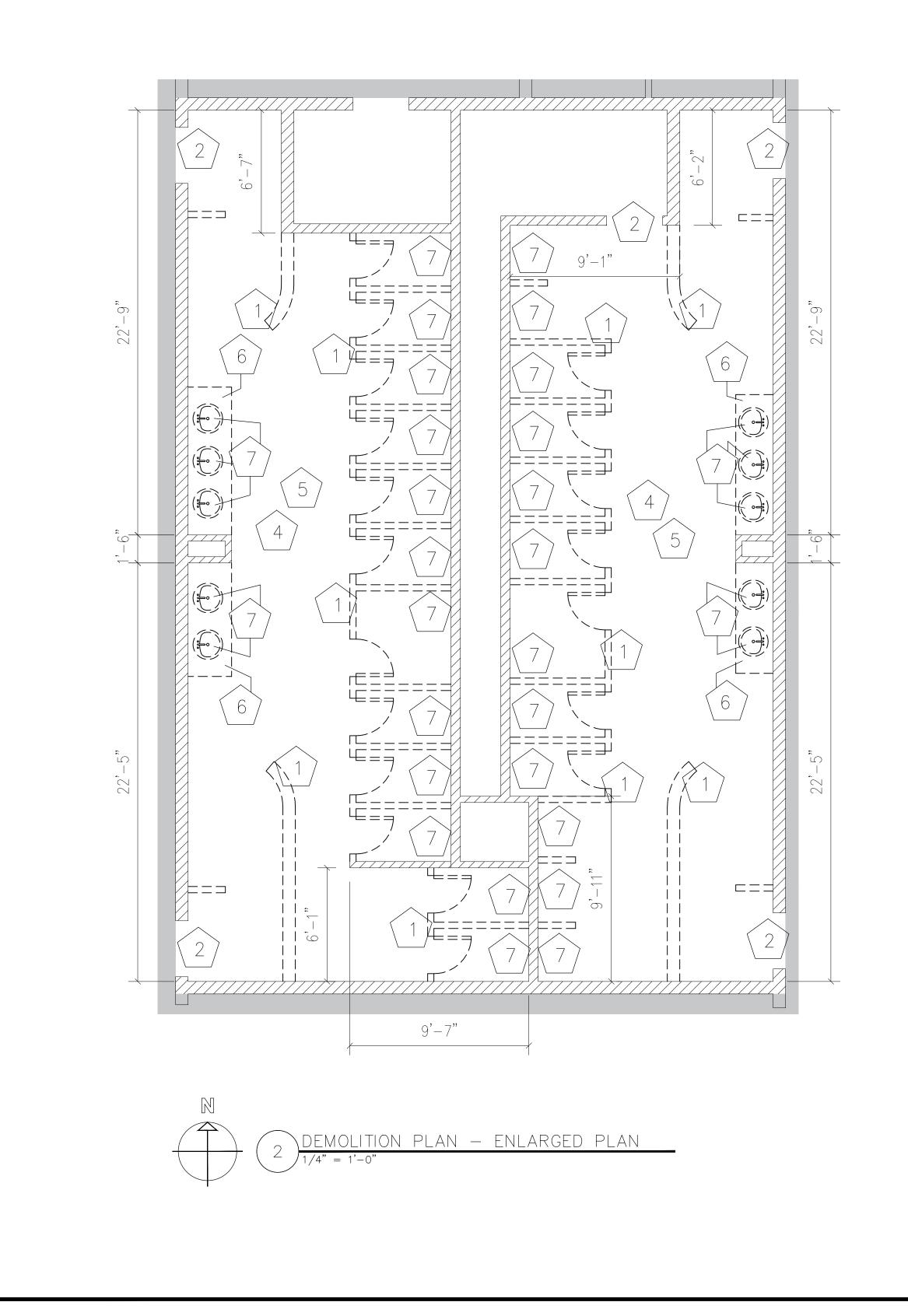
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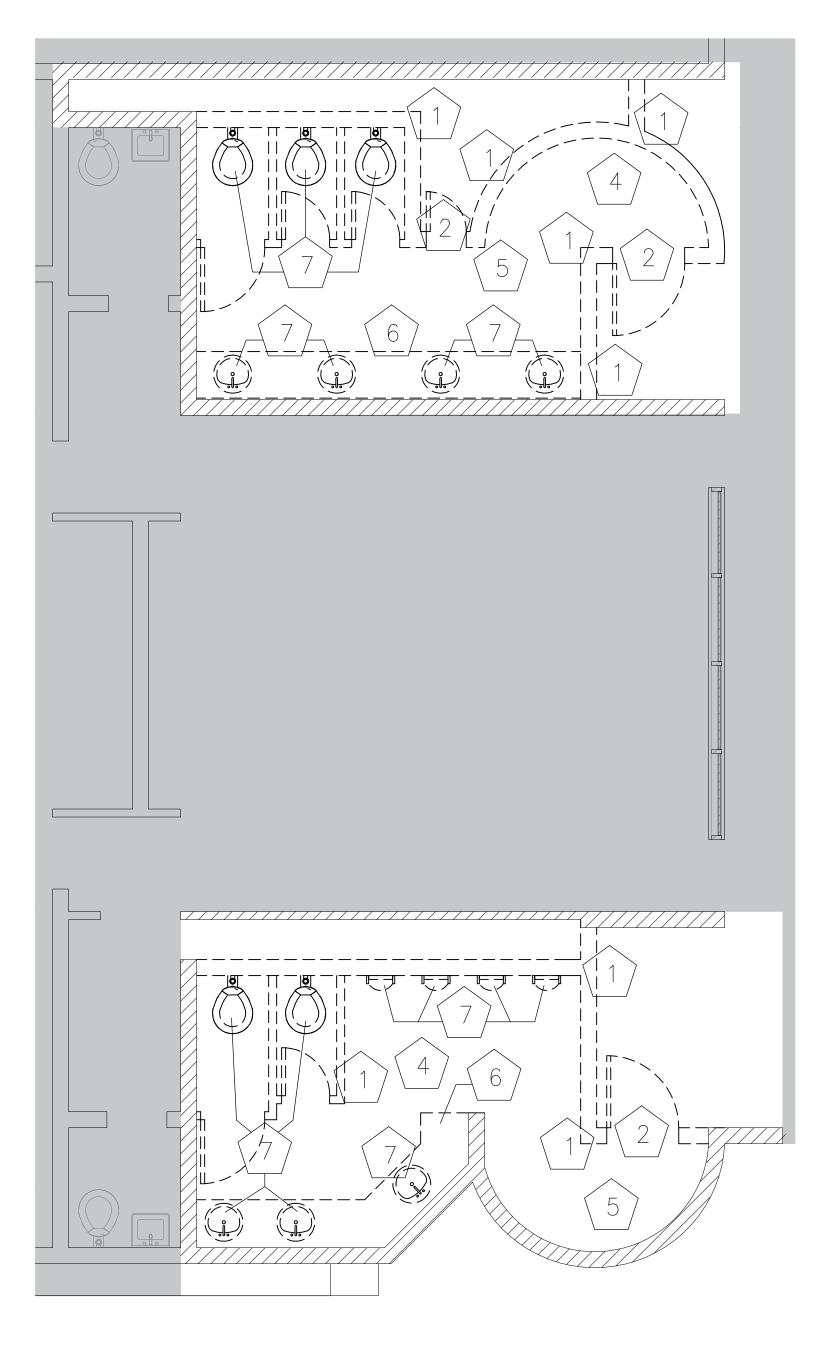


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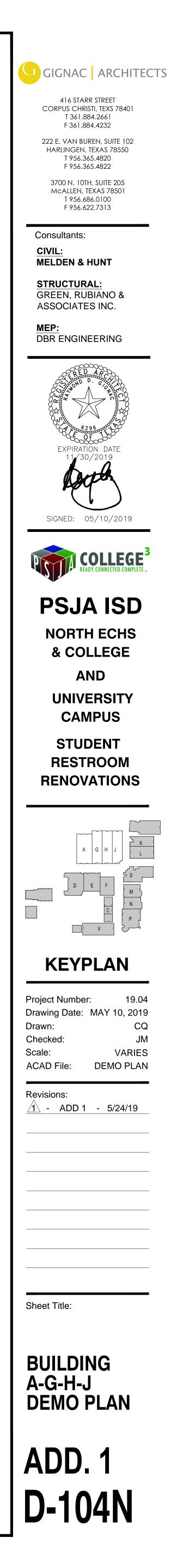
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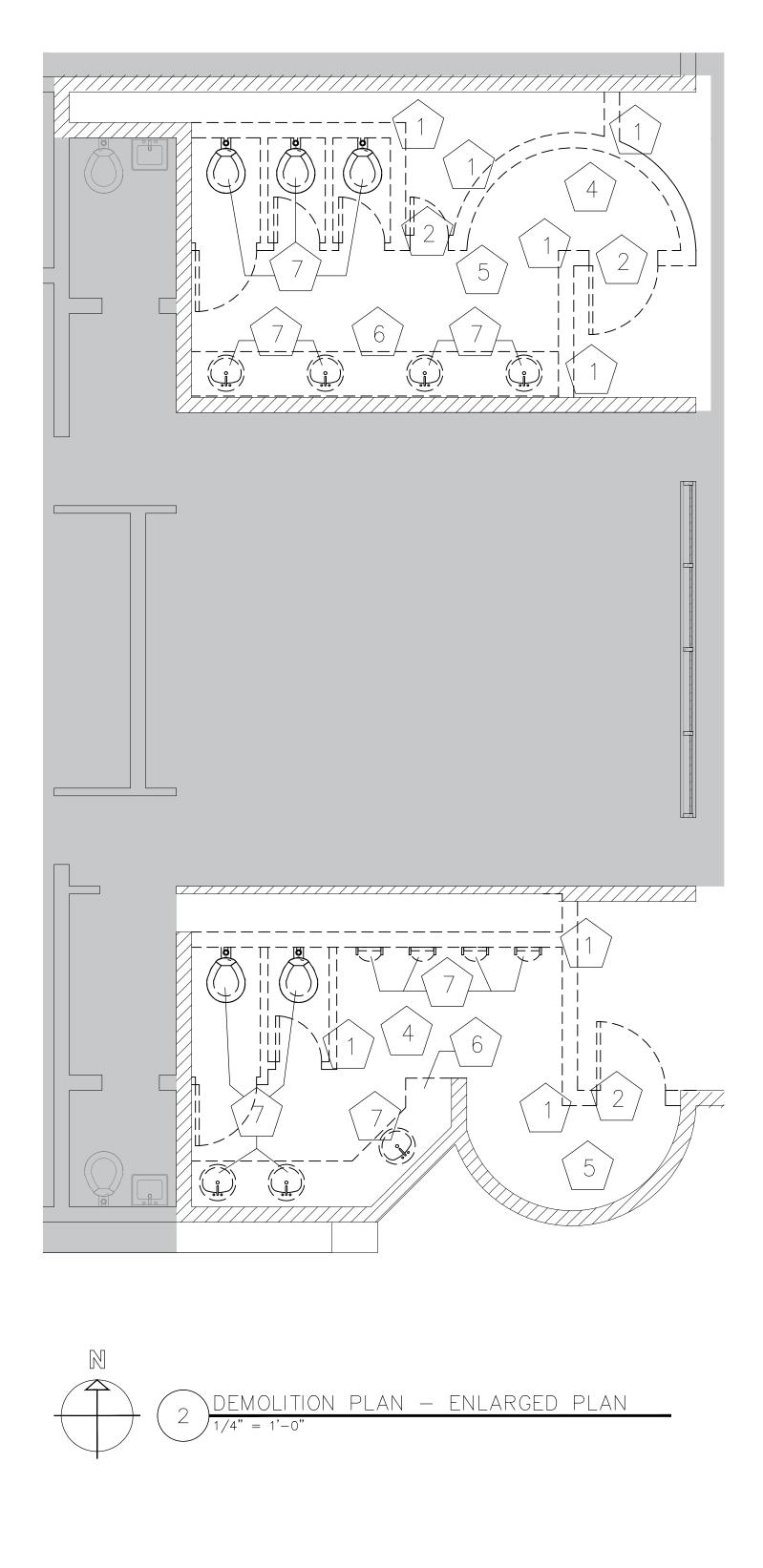
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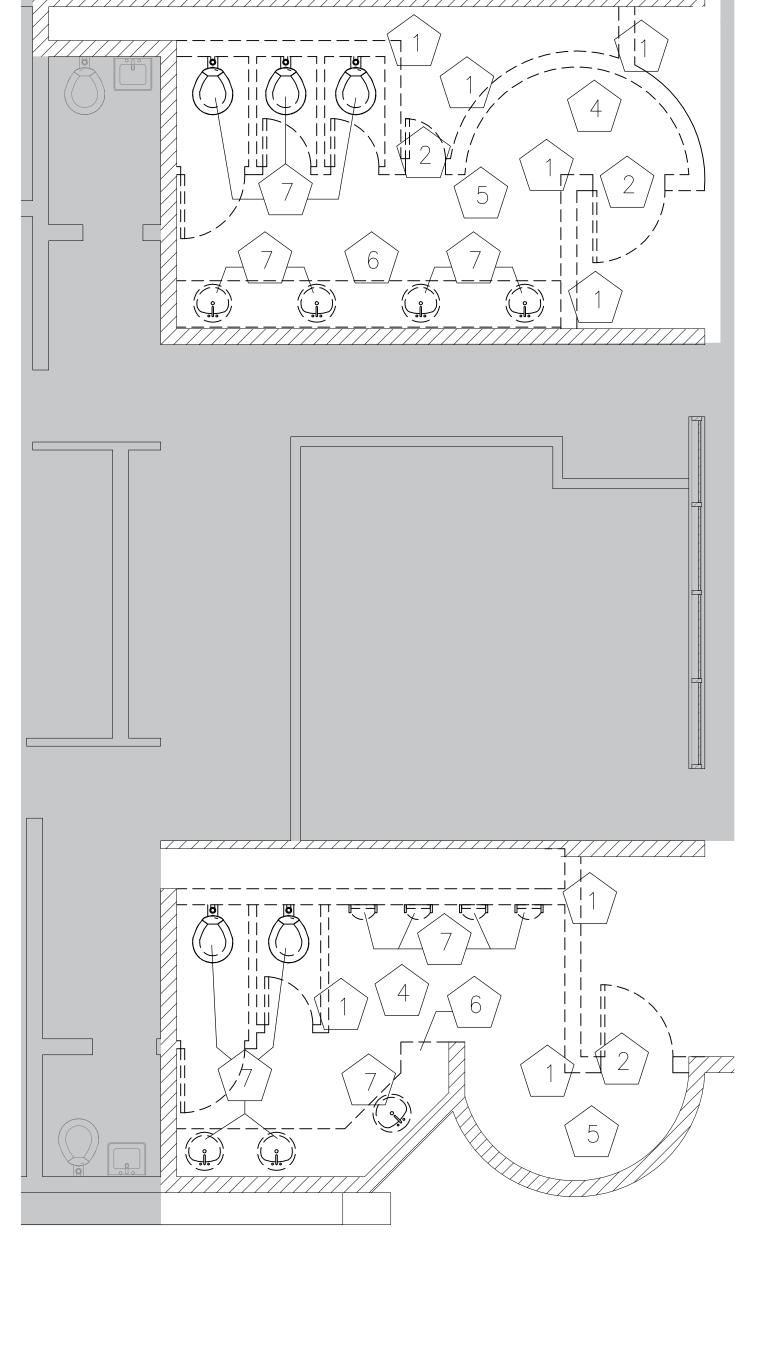
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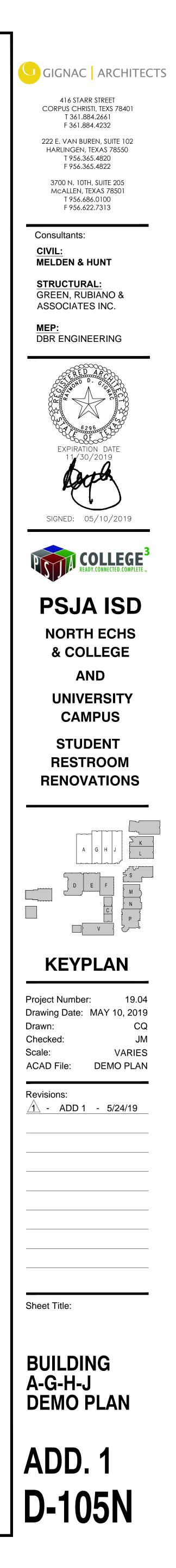
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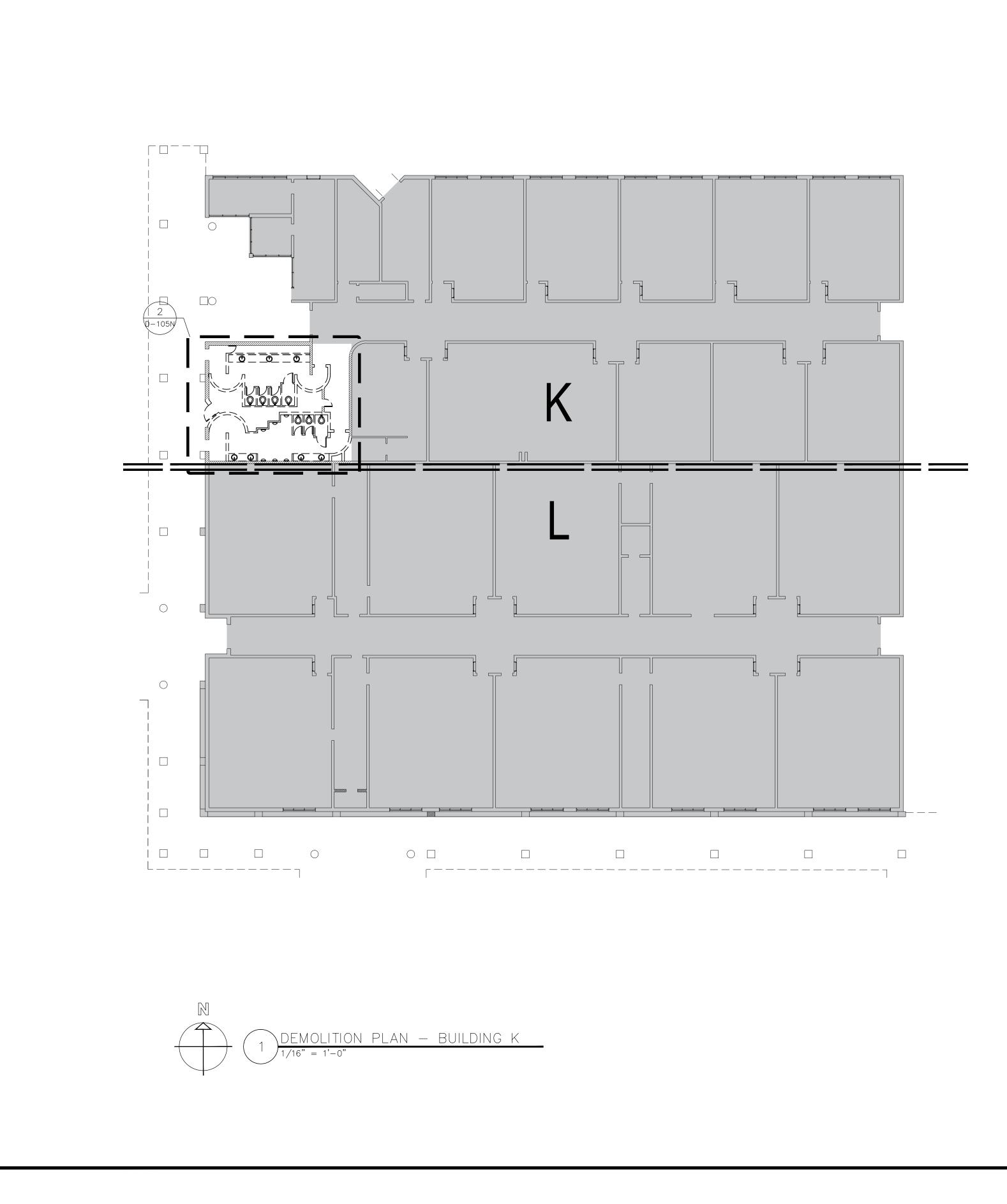
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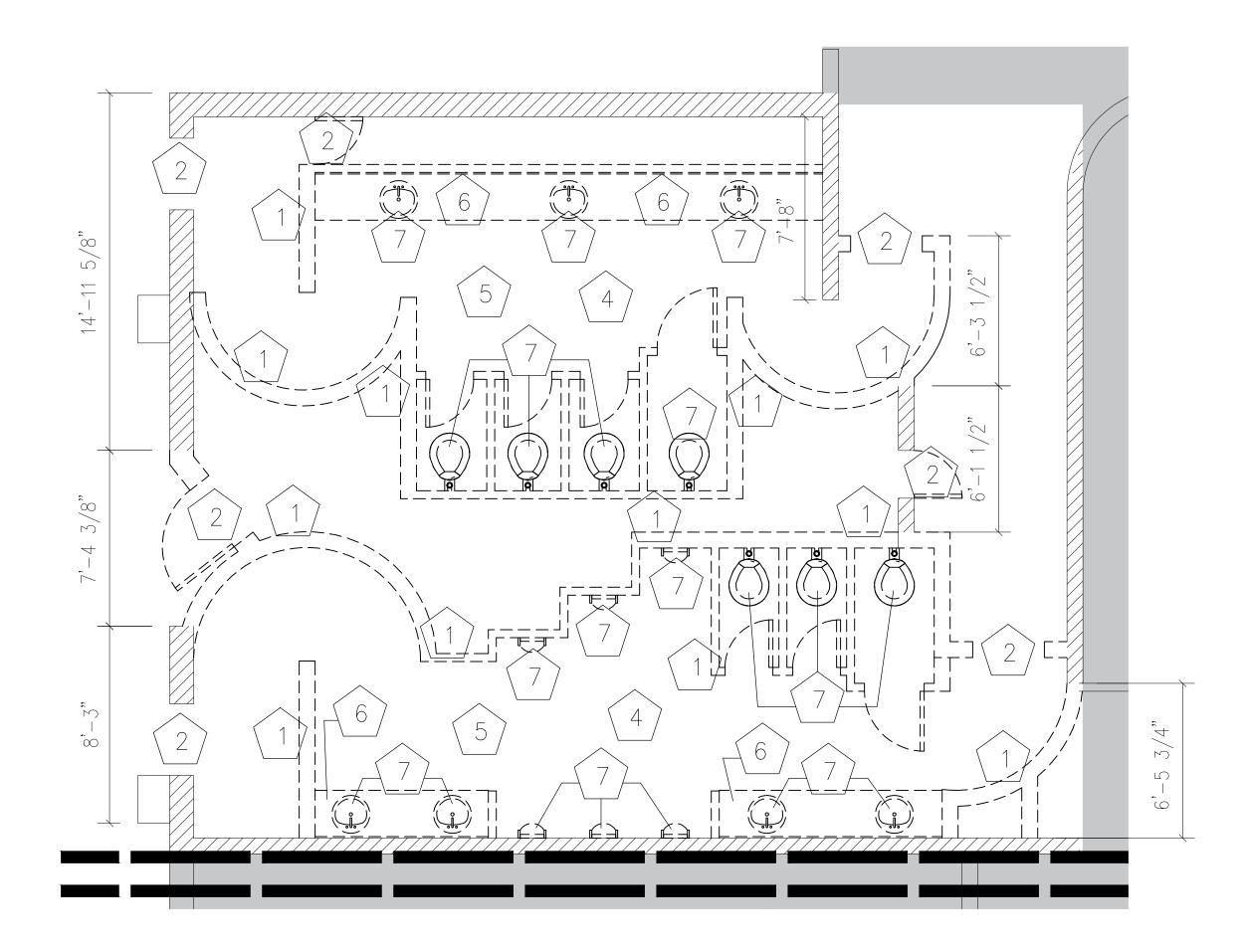
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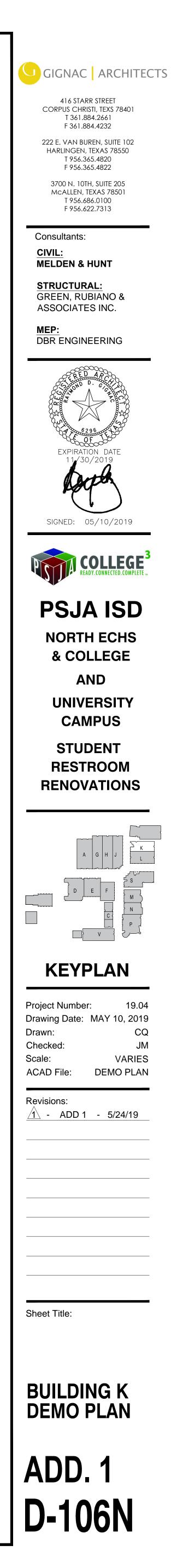


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SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Work under this section comprises of furnishing and installing hardware specified herein and noted on drawings for a complete and operational system, including any electrified hardware components, systems, controls and hardware for aluminum entrance doors. Any door shown on the drawing and not specifically referenced in the hardware sets shall be provided with identical hardware as specified on other similar openings and shall be included in the finish hardware suppliers bid. All fire rated door shall be provided with fire rated hardware as required by local code Authority as part of the hardware supplier's base bid. The hardware supplier shall verify all cylinder types specified for locking devices supplied as part of the door system with the door manufacturer and/or door supplies.
- B. The General Contractor shall notify the Architect in writing of any discrepancies (five (5) days prior to bid date) that could and/or would result in hardware being supplied that is none functional, hardware specified and/or hardware that has not been specified that will result in any code violations and any door that is not covered in this specification. Failure of the general contractor to address any such issue shall be considered acceptance of the hardware specified and all discrepancies shall be corrected at the general contractor's expense and considered as being a part of their base bid. Change orders shall not be issued if, deemed by the Architect and/or Pharr San Juan Alamo ISD to fall under and/or be covered as a part of the general contractor's base bid, due to failure to comply with this instruction notification.
- C. Items include but are not limited to the following:
 - 1. Hinges Pivots
 - 2. Flush Bolts
 - 3. Exit Devices
 - 4. Locksets and Cylinders
 - 5. Push Plates Pulls
 - 6. Coordinators
 - 7. Closers
 - 8. Kick, Mop and Protection Plates
 - 9. Stops, Wall Bumpers, Overhead Controls
 - 10. Electrified Hold Open Devices
 - 11. Thresholds, Seals and Door Bottoms
 - 12. Silencers
 - 13. Miscellaneous Trim and Accessories
- 1.02 RELATED DOCUMENTS, drawings and general provisions of contract, including General and Supplementary Conditions, and Division 1 Specification sections, apply to this section.
- 1.03 RELATED WORK specified elsewhere that should be examined for its effect upon this section:

North ECHS & College & University Campus Pharr-San Juan-Alamo Independent School District Pharr, Texas

- A. Section 06 20 00 Finish Carpentry
- B. Section 08 11 13 Steel Doors and Frames
- C. Section 08 14 16 Flush Wood Doors
- D. Sections within 08 31 13 Access Doors
- E. Section within 08 41 13 Aluminum Entrances, Storefront and Window Framing
- F. Sections within 08 80 00 Glass and Glazing
- G. Sections within 09 91 00 Painting
- H. Division 26 Electrical
- I. Division 28 Access Control
- 1.04 REFERENCES SPECIFIED in this section subject to compliance as directed:
 - A. NFPA-80 Standard for Fire Doors and Windows
 - B. NFPA-101 Life Safety Code
 - C. ADA The Americans with Disabilities Act Title III Public Accommodations
 - D. ANSI-A 117.1 American National Standards Institute Accessible and Usable Buildings and Facilities
 - E. ANSI-A 156.5 American National Standards institute -Auxiliary Locks and Associated Products
 - F. UFAS Uniform Federal Accessibility Standards
 - G. UL Under-writer's Laboratories
 - H. WHI Warnock Hersey International, Testing Services
 - I. State and Local Codes including Authority Having Jurisdiction
 - J. UL10C Positive Pressure
 - K. IBC-2015 International Building Code
 - L. NFPA-70 International Electrical Code

1.05 SUBMITTALS

- A. HARDWARE SCHEDULES submit copies of schedule in accordance with Division 1, General Requirements. Schedule to be in vertical format, listing each door opening, including: handing of opening, all hardware scheduled for opening or otherwise required to allow for proper function of door opening as intended, and finish of hardware. At doors with door closers or door controls include degree of door opening. Supply the schedules all Finish Hardware within two (2) weeks from date purchase order is received by the hardware supplier.
- B. Submit manufacturer's cut/catalog sheets on all hardware items and any required special mounting instructions with the hardware schedule.
- C. Certification of Compliance:
 - 1. Submit any information necessary to indicate compliance to all these specifications as required.
 - 2. Submit a statement from the manufacturer that electronic hardware and systems being supplied comply with the operational descriptions exactly as specified.
- D. Submit any samples necessary as required by the Architect.
- E. Templates for finish hardware items to be sent to related door and frame suppliers within three (3) working days of receipt of approved hardware schedule.

F. Doors and Frames used in positive pressure opening assemblies shall meet UL10C in areas where this specification includes Seals for smoke door.

1.06 QUALITY ASSURANCE

- A. Hardware supplier to be a qualified, Factory Authorized, direct distributor of the products to be furnished. In addition, the supplier to have in their regular employment an A.H.C. or person of equivalent experience who will be made available at reasonable times to consult with the Architect/Contractor and/or PSJA regarding any matters affecting the finish hardware on this project.
- B. All hardware used in labeled fire or smoke rated openings to be listed for those types of openings and bear the identifying label or mark indicating UL. (Underwriter's Laboratories) approved for fire. Exit devices in non-labeled openings to be listed for panic.

1.07 DELIVERY, HANDLING AND PACKAGING

- A. Furnish all hardware with each unit clearly marked and numbered in accordance with the hardware schedule. Include door and item number for each.
- B. Pack each item of hardware completes with all necessary parts and fasteners.
- C. Properly wrap and cushion each item to prevent scratches and dents during delivery and storage.

1.08 SEQUENCING AND SCHEDULING

Any part of the finish hardware required by the frame or door manufacturers or other suppliers that is needed to produce doors or frames is to be sent to those suppliers in a timely manner, so as not to interrupt job progress.

1.09 WARRANTY

- A. All finish hardware shall be supplied with a Two- (2) year warranty against defects in materials and workmanship, commencing with substantial completion of the project except as follows:
 - 1. All Closers are to have a thirty- (30) year written warranty.
 - 2. All Exit Devices are to have a three- (3) year written warranty.
 - 3. All Locksets are to have a three- (3) year written warranty.
- B. Upon conclusion of the Manufactures standard written warranty, the Hardware Supplier shall be liable for the balance of the extended warranty periods specified.

PART 2 – PRODUCTS

2.01 FASTENERS

A. Furnish with finish hardware all necessary screws, bolts and other fasteners of suitable size and type to anchor the hardware in position for a long life under hard use.

- B. Furnish fastenings where necessary with expansion shields, toggle bolts and other anchors designated by the Architect according to the material to which the hardware is to be applied and the recommendations of the hardware manufacturer. All closers and exit devices on labeled wood doors shall be through-bolted if required be the door manufacturer. All thresholds shall be fastened with wood screws and plastic anchors. Where specified in the hardware sets, security type fasteners of the type called for are to be supplied.
- C. Design of all fastenings shall harmonize with the hardware as to material and finish.
- D. All hardware shall be installed with the Manufacturers standard screws as provided. The use of any other type of fasteners shall not be permitted.

2.02 ENVIRONMENTAL CONCERN FOR PACKAGING

Hardware shipped to the project job site shall be packaged in biodegradable packs such as paper or cardboard boxes and wrapping.

2.03 HINGES

- A. All hinges to be of one manufacturer as hereafter listed for continuity and consideration of warranty. Provide one of the following manufacturers lves, Hager or Stanley products as specified and/or listed below.
- B. Unless otherwise specified provide ball bearing five-knuckle, heavy-duty, button tip, full mortise template type hinges with non-rising loose pins. Provide non-removable pins for out swinging doors at secured areas or as called for in this specification (Refer to 3.02 Hardware Sets).
- C. Exterior and interior five knuckle Ball Bearing door hinges shall be manufactured from solid stainless steel or bronze base metal. Furnish three (3) hinges up to 90 inches high and one (1) additional hinge for every 30 inches or fraction thereof. Provide all out-swinging doors with non-removable pins or security studs as called for in 3.02 Hardware Sets.
- D. Provide all exterior & interior hinges in a size $4\frac{1}{2}$ " x $4\frac{1}{2}$ " for all $1\frac{3}{4}$ " thick doors up to and including 36 inches wide. Doors over $1\frac{3}{4}$ " through $2\frac{1}{4}$ " thick, use 5" x 5" hinges. Doors over 36 inches use 5" x $4\frac{1}{2}$ " unless otherwise noted in 3.02 Hardware Sets.
- E. Were exterior or interior door hinges are required to clear the trim and/or to permit the doors to swing 180 degrees furnish hinges of sufficient throw.
- F. Provide heavy weight hinges on all exterior or interior doors over 36 inches in width.
- G. At exterior or interior labeled door's ball-bearing steel or stainless-steel type hinges shall be provided. For all doors equipped with closers provide ball-bearing-type hinges.
- H. Finishes at all Interior and Exterior door hinges shall be brushed stainless-steel or dull chrome, unless otherwise specified in 3.02 Hardware Sets.

I. Continuous hinges shall not be used or accepted on any PSJA project.

2.04 LOCK AND LOCK TRIM

- A. All locksets, latch sets, and trim to be of one manufacturer as hereafter listed for continuity of design and consideration of warranty. Provide Locks and Latch sets as specified for matching the existing district key systems (established in 2012) and security locking standards. All locks specified shall be the Falcon "T" series with the "Dane" lever and shall be prep for small format seven (7) pin interchangeable cores.
- B. Provide metal wrought box strike boxes and curved lip strikes with proper lip length to protect trim of the frame, but not to project more than 1/8 inch beyond frame trim or the inactive leaf of a pair of doors.
- C. Mechanical Locks shall meet ANSI Operational Grade 1, Series 4000 as specified.
 - 1. Hand of lock is to be field reversible and/or non-handed.
 - 2. All lever trim is to be through-bolted through the door.
 - 3. All pairs of doors shall be provided with a $\frac{3}{4}$ " latch bolt throw.
 - 4. Provide extended 5" backsets at all doors specified with sound seal that would conflict with lock or seal installation.
 - 5. Provide all Classrooms and/or areas in which student gather with the Security Classroom Function Locks.
 - 6. Provide all IDF and MDF rooms with Schlage Electronic Access Control Lock #AD-200-CY-70- MTK-RHO-BD-8B to match current district standards.
 - 7. Provide Padlocks and/or Cylinders as required for all Gates, Wire Mesh Partition Doors, Folding Partition Doors, Overhead Doors and Coiling Overhead Counter Doors shown. All Padlocks and Cylinders shall be Factory keyed to the Existing PSJA Grand Master Key System established in 2012.
- D. Provide locks as specified unless prior written approval for products manufactured by Sargent or Best is granted per the General Conditions section of the specifications.

A.05 CYLINDERS AND KEYING

- A. Provide locks and Exit devices requiring cylinders with Falcon Seven (7) pin Interchangeable core cylinders and comply with performance requirements of ANSI A156.5. All keys shall be of nickel silver material only. All locks are to be factory keyed to the Existing Falcon Grand Master Key system as directed by Pharr San Juan Alamo ISD and the Architect. The hardware supplier shall meet with the General Contractor, Architect and Pharr San Juan Alamo ISD at the project site to determine all permanent keying requirements. Provide Falcon permanent cores, "No Substitution".
- B. The hardware supplier <u>shall provide</u> the following items to the Pharr San Juan Alamo ISD district locksmith for future use (Signature for all items shall be required).
 - 1) Two Hundred- (200) extra key blanks KB628 (7 Pin) & stamped as required by Pharr San Juan Alamo ISD.
 - 2) Forty (40) uncombinated cores #C647.
 - 3) Provide a copy of the bitting list used for each project with expansion as required by Pharr San Juan Alamo ISD to the district locksmith prior

to installation of permanent cores. The bitting list shall be emailed to the district locksmith at the following email address: jorge.garcia@psjaisd.us.

- 4) One (1) Knox Box as required by the local Fire Marshall. The contractor shall as require by the local Fire Marshall and Pharr San Juan Alamo ISD install the Knox Box.
- 5) Six (6) Large Bow Emergency Keys for each Indicator Deadlock specified.
- 6) Two (2) Dogging Keys for each None Fire Rated Panic Exit Device specified.
- C. Furnish all locks, cylinders and Exit devices with temporary keyed construction cores for the duration of construction. Provide ten (10) construction keys and two (2) construction control keys total. The general contractor shall within thirty (30) days of the installation of permanent cores return all construction cores to the hardware supplier for full credit. Permanent cores shall be installed by the hardware supplier.
- D. Cylinders shall be factory keyed as directed by Pharr San Juan Alamo ISD and the Architect. Provide three- (3) keys per cylinder and six- (6) master keys per master used. Deliver all Permanent Keys and Cores to the Pharr San Juan Alamo ISD to the district locksmith individually tagged by key symbol and door number.
- E. Factory stamp all keys "Do not duplicate" and with key symbol as directed by Pharr San Juan Alamo ISD. Factory concealed visual key control (stamp all permanent cores with the key symbol on the side of the core). Engraved cores will be rejected.

2.06 EXIT DEVICES

- A. All exit devices and trim, including electrified items, to be of one manufacturer as hereafter listed and in the hardware sets for continuity of design and consideration of warranty; electrified devices and trim to be the same series and design as mechanical devices and trim.
- B. Exit Devices to be "UL" listed for life safety. All exit devices for labeled doors shall have "UL" label for "Fire Exit Hardware". All devices mounted on labeled wood doors are to be through-bolted or installed per the manufacturer's listing requirements. All devices shall conform to NFPA 80 and NFPA 101 requirements.
- C. All exit devices to be of a heavy duty, chassis mounted design, with one-piece removable covers, eliminating necessity of removing the device from the door for standard maintenance and keying requirements.
- D. All trims to be through-bolted to the lock stile case. Lever design "Dane #06" to be the same as specified with the lock sets. Provide Two (2) Dogging Keys for each none fire rated Panic Exit Device. Dogging Keys are to be turned over to the Pharr San Juan Alamo ISD district locksmith prior to project completion.
- E. Exit Devices to be the modern push rail design. Exit Devices supplied shall be capable of being field modified to receive a standard factory Electric Latch Retraction "EL" or Request to Exit "RX" Kit, as manufactured by Von Duprin, Inc.

- F. All devices shall carry a three- (3) year warranty against manufacturing defects and workmanship.
- G. Exit Devices being used on Aluminum Storefront doors shall be the "99" series Rim Exit Devices with Key Removable Mullions when required. Concealed Vertical Rod Exit Devices shall not be accepted and/or allowed for use on any Pharr San Juan Alamo ISD project. Provide Exit Devices only as required by code (NFPA-70, National Electrical Code) at the Electrical Room egress doors.
- H. Exit Devices shall be Von Duprin "99" series with "990NL or 990DT" pull series trim at exterior doors and "996L" breakaway lever series trim at interior doors as specified and manufactured by Von Duprin. All Exit Devices shall match the Current District Standards for Security & Egress Hardware. Provide all Classrooms and/or areas in which student gather that require Panic Hardware for egress with the Security Locking Function (Von Duprin suffix -2).
- I. Provide Von Duprin as specified unless prior written approval for products manufactured by Sargent or Precision is granted per the General Conditions section of the specifications.

2.07 SURFACE MOUNTED DOOR CLOSERS

- A. All closers for this project shall be the products of a single manufacturer for continuity of design and consideration of warranty. All door closers shall be mounted as to achieve the maximum degree of opening (trim permitting).
- B. All closers shall be heavy duty, surface-mounted, fully hydraulic, rack and pinion action with a high strength cast iron cylinder to provide control throughout the entire door opening and closing cycle.
- C. Size all closers in accordance with the manufacturer's recommendations at the factory.
- D. All closers to have adjustable spring power sizes 1 or 2 through 4 or 6 and separate tamper resistant, brass, non-critical regulating screw valves for closing speed, latching speed and back-check control as a standard feature unless specified otherwise.
- E. All exterior closer covers to be rectangular cover type of non-ferrous, noncorrosive material painted to match closer.
- F. Closers shall have heavy-duty arms. All closer arms shall be of sufficient length to accommodate the reveal depth and to insure proper installation. The hardware supplier shall provide all required brackets, spacers or filler plates as required by the manufacture for a proper and functional installation as part of their base bid.
- G. Supply appropriate arm assembly for each closer so that closer body and arm are mounted on non-public side of door opening and on the interior side of exterior openings, except where required otherwise in the hardware sets.
 - 1. All parallel arm mounted closers to be factory indexed to insure proper installation.
 - 2. Furnish heavy-duty cold forged parallel arms for all parallel arm mounted closers.

- H. Provide closers with special application and heavy-duty arms as specified in the hardware sets or as otherwise called for to insure a proper operating, long lasting opening. Drop plates and any additional brackets required for the proper installation of the door closer shall be included in the hardware supplier's base bid. Install all door closers with SNB.
- I. Finish: Sprayed enamel finish shall match other hardware.
- J. Provide LCN 4040XP closers on exterior doors and LCN 1461 closers on interior doors as specified unless prior written approval for products manufactured by Corbin Russwin is granted per the General Conditions section of the specifications.

2.08 DOOR STOPS AND HOLDERS

- A. Door stops are to be furnished for every door leaf. Every door is to have a floor, wall, or an overhead stop.
- B. Place doorstops in such a position that they permit maximum door swing, but do not present a hazard of obstruction. Furnish floor strikes for floor holders of proper height to engage holders of doors.
- C. Where overhead stops and holders are specified, or otherwise required for proper door operation, they are to be heavy duty and of extruded brass, bronze or stainless steel with no plastic parts as specified. The General Contractor shall provide wood blocking in all stud walls specified and scheduled to receive wall stops.
- D. Finish: Same as other hardware where available.
- E. Acceptable Products
 - 1. Floor and wall stops as listed in hardware sets. Equivalent products as manufactured by Ives, Rockwood, ABH, Glynn Johnson and Trimco are acceptable.

2.09 PUSH PLATES, DOOR PULLS, AND KICKPLATES

- A. All push plates, door pull, kick plates and other miscellaneous hardware as listed in hardware sets. Equivalent products as manufactured by Ives, Rockwood, Hager and Trimco are acceptable.
- B. Kick plates to be 10 inches high and Mop plates to be 6 inches high, both by 2 inches or 1 inch less than door width (LDW) as specified. They are to be of 16-gauge thick stainless steel. For door with louvers or narrow bottom rails, kick plate height to be 1 inch less dimension shown from the bottom of the door to the bottom of the louver or glass.
- C. Where required armor plates, edge guards and other protective hardware shall be supplied in sizes as scheduled in the hardware sets.
- D. Finish: Same as other hardware where available.

2.10 FLUSH BOLTS AND COORDINATORS

A. Provide Flush bolts with Dust Proof Strikes as indicated in the individual hardware sets by Ives, Rockwood, ABH, Hager and Trimco are acceptable. Finish shall match the adjacent hardware.

2.11 THRESHOLDS AND SEALS

- Provide materials and finishes as listed in hardware sets as manufactured by Zero. Equivalent product by National Guard Products and Reese are acceptable. All thresholds must be in accordance with the requirements of the ADA and ANSI A117.1.
- B. Provide thresholds with wood screws and plastic anchors. Supply all necessary anchoring devices for weather strip and sound seal.
- C. Seals shall comply with requirements of UL10C. All thresholds, door bottoms and weather strip inserts shall be a silicone-based product as specified in 3.02 Hardware Sets.
- D. Seals shall comply with the requirements of the Wood Door Manufacturer's certification requirements.
- E. Provide all Threshold with none slip coating as specified.

2.12 FINISHES

- A. Finishes for all hardware are as required in this specification and the hardware sets.
- B. Special care is to be taken to make uniform the finish of all various manufactured items.

2.13 DOOR SILENCERS

A. Provide door silencers at all openings without gasket. Provide two- (2) each at each pair of doors and three- (3) or four- (4) each for each single door (coordinate with the frame manufacturer).

2.14 KEY CABINET

A. <u>Provide</u> a Lund key cabinet #1200 series with 150% expansion for installation by the contractor as instructed by the Architect. The hardware supplier shall (on the project site) assist and train the Pharr San Juan Alamo ISD staff in the proper use of the key cabinet. This shall include the tagging of all keys, instructing the Pharr San Juan Alamo ISD staff as to the proper use of the key cabinet and how they can best maintain the key system. The hardware supplier <u>shall provide</u> two- (2) copies of the floor plans that show the door number and key symbol at each door opening. One- (1) copy shall be placed in the key cabinet and one- (1) copy shall be turned over to the facilities locksmith. The hardware supplier shall send the Architect written confirmation that this has been completed. Confirmation shall include the date training occurred and names of all Pharr San Juan Alamo ISD staff members trained.

2.15 PROPRIETARY PRODUCTS

- A. References to specific products are used to establish quality standards of utility and performance. Unless otherwise approved provide only the specified product.
- B. All other materials, not specifically described, but required for a complete and proper finish hardware installation, are to be selected by the Contractor, subject to the approval of the Architect and Pharr San Juan Alamo ISD.
- C. Architect and Pharr San Juan Alamo ISD reserve the right to approve all the substitutions proposed for this specification. All requests for substitution to be made prior to bid in accordance with Division 1, General Requirements, and are to be in writing, hand delivered to the Architect. Two (2) copies of the manufacturer's brochures and a physical sample of each item in the appropriate design and finish shall accompany requests for substitution.

PART 3 - EXECUTION

- 3.01 INSTALLATION OF FINISH HARDWARE
 - A. All finish hardware shall be installed by an experienced finish hardware installer with at least ten (10) years experience after a pre-installation meeting between the contractor, hardware Manufacturers representative, the hardware supplier, the hollow metal supplier and the wood door supplier. The finish hardware installer shall be responsible for the proper installation and function of all doors and hardware.
 - B. Check hardware against the reviewed hardware schedule upon delivery. Store the hardware in a dry and secure location to protect against loss and damage.
 - C. Install finish hardware in accordance with approved hardware schedule and manufacturers' printed instructions. Pre-fit hardware before finish is applied to door; remove and reinstall after finish is complete and dry. Install and adjust hardware so that parts operate smoothly, close tightly, and do not rattle.
 - D. Mortise and cutting to be done neatly, and evidence of cutting to be concealed in the finished work. Protect all Finish hardware from scratching or other damage.
 - E. The hardware supplier, general contractor, hardware installer, representatives of the lock, exit device and closer manufacturers shall after three (3) months of Pharr San Juan Alamo ISD acceptance of the facility perform an onsite survey of the finish hardware installation. Any item of finish hardware found to be defective or out of adjustment shall be replaced or adjusted for the proper function and operation of the door assembly at the contractor's, supplier's and/or installer's expense. The hardware supplier shall provide a written report of all affected items to the Architect and Pharr San Juan Alamo ISD Facilities Department.

Section 08 71 00 Door Hardware Specification

	VARE	DWARE SETS: GROUP NO. 04 por #(s): 101B H103	103 J10		103B J103	G102 N101		G103 P103	
S102 S103									
Provide	each	SGL door(s) with	the f	ollowing:					
QTY		DESCRIPTION		CATALOG			ITEMID		MFR
3	EA	HINGE		5BB1 4.5 >				630	IVE
1	EA	STOREROOM LOCK		T581BD D	ANE			626	FAL
1	EA	PERMANENT CORE		CB809				626	FAL
1	EA	WALL STOP		WS406/40	7CCV			630	IVE
3	EA	SILENCER		SR64				GRY	IVE
For use A102 Provide QTY	Provide each SGL door(s) with the following:								
3	EA	-		5BB1 4.5 >	-			630	IVE
1	EA	STOREROOM LOCK		T581BD D	ANE			626	FAL
1	EA	PERMANENT CORE		CB809				626	FAL
1	EA	WALL STOP		WS406/40	7CCV			630	IVE
1	EA	SILENCER		SR64				GRY	IVE
GENERAL CONTRACTOR/HW SUPPLIER FIELD-VERIFY EXISTING CONDITIONS PRIOR TO BID DATE. ADVISE ARCHITECT OF ANY INCOMPATIBILITY REGARDING DOOR/FRAME/HARDWARE. IN SUBMITTAL PROVIDE NAME, COMPANY AND DATE OF FIELD VERIFICATION.									

HARDWARE GROUP NO. 06 For use on Door #(s): 119B Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		630	IVE
1	EA	PRIVACY LOCK	T301S DANE		626	FAL
1	EA	WALL STOP	WS406/407CCV		630	IVE
3	EA	SILENCER	SR64		GRY	IVE
1	EA	COAT HOOK	582M		626	IVE

HARDWARE GROUP NO. 08.1 For use on Door #(s): 112 Provide each SGL door(s) with the following:

North ECHS & College & University Campus Pharr-San Juan-Alamo Independent School District Pharr, Texas

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5		630	IVE
1	EA	CLASSROOM LOCK	T561BD DANE		626	FAL
1	EA	PERMANENT CORE	CB809		626	FAL
1	EA	SURFACE CLOSER	4050 RW/PA		689	LCN
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	SMOKE GASKETING	8145S-BK-HEAD & JAMBS		S-BK	ZER

HARDWARE GROUP NO. 09FV

For use on Door #(s):

122A

Provide each SGL door(s) with the following:

	QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
	3	EA	HINGE	5BB1 4.5 X 4.5 NRP		630	IVE
	1	EA	CLASSRM SEC	T381BD DANE		626	FAL
			LOCK				
	2	EA	PERMANENT	CB809		626	FAL
			CORE				
	1	EA	WALL STOP	WS406/407CCV		630	IVE
	1	EA	SILENCER	SR64		GRY	IVE
r							

GENERAL CONTRACTOR/HW SUPPLIER FIELD-VERIFY EXISTING CONDITIONS PRIOR TO BID DATE. ADVISE ARCHITECT OF ANY INCOMPATIBILITY REGARDING DOOR/FRAME/HARDWARE.

IN SUBMITTAL PROVIDE NAME, COMPANY AND DATE OF FIELD VERIFICATION.

HARDWARE GROUP NO. 21FVFor use on Door #(s):108B113B116B117BProvide each SGL door(s) with the following:

QTY 3 1	EA EA	DESCRIPTION HINGE PANIC HARDWARE	CATALOG NUMBER 5BB1HW 4.5 X 4.5 NRP 99-NL-SNB ADJUST BACKSET FOR MOUNTING BRACKET	ITEMID	FINISH 630 628	MFR IVE VON
1	EA	STRIKE MOUNTING BRACKET	328SPB		600	ZER
1	EA	RIM CYLINDER	C953		626	FAL
1	EA	PERMANENT CORE	CB809		626	FAL
1	EA	SURFACE CLOSER	4050 SCUSH TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B4E		630	IVE
1	EA	WEATHER STRIP	8303AA-2 PCS JAMB HEIGHT		AA	ZER
1	EA	HEADER SEALS	429A-1 PC FRAME WIDTH		А	ZER
1	EA	DOOR	8197AA-DOOR WIDTH		AA	ZER
		BOTTOM/DRIP			^	750
1	EA	THRESHOLD	65A-E-V3-FRAME WIDTH		A	ZER
1	EA	HEADER RAIN DRIP	142A-FRAME HEAD PLUS 4"		A	ZER

GENERAL CONTRACTOR/HW SUPPLIER FIELD-VERIFY EXISTING CONDITIONS PRIOR TO BID DATE. ADVISE ARCHITECT OF ANY INCOMPATIBILITY REGARDING DOOR/FRAME/HARDWARE.

IN SUBMITTAL PROVIDE NAME, COMPANY AND DATE OF FIELD VERIFICATION.

		GROUP NO. 26 oor #(s):					
100			104	105	107	119A	
120		121	G100	G101	H100	H101	
J100		J101	K100A	K102A	P100	P101A	
P102A		S101A	V100A	V101A			
Provide	each	SGL door(s) with th	ne following:				
QTY		DESCRIPTION	CATALOG	NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X	(4.5		652	IVE
1	EA	CLASSRM	D211HD7			626	FAL
		DEADBOLT					
1	ΕA	PERMANENT	CB809			626	FAL
		CORE					
1	ΕA	PULL PLATE	8305 8" 3.5	5" X 15"		630	IVE
1	ΕA	PUSH PLATE	8200 8" X ′	16"		630	IVE
1	ΕA	SURFACE CLOSE	ER 4050 RA T	BSRT		689	LCN
1	ΕA	KICK PLATE	8400 10" X	2" LDW B4E		630	IVE
1	ΕA	WALL STOP	WS406/407	7CCV		630	IVE
3	ΕA	SILENCER	SR64			GRY	IVE

HARDWARE GROUP NO. 26.1 For use on Door #(s): 106 Provide each SGL door(s) with the following:

North ECHS & College & University Campus Pharr-San Juan-Alamo Independent School District Pharr, Texas

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	ΕA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	CLASSRM	D211HD7		626	FAL
		DEADBOLT				
1	EA	PERMANENT CORE	CB809		626	FAL
1	EA	PULL PLATE	8305 8" 3.5" X 15"		630	IVE
1	EA	PUSH PLATE	8200 8" X 16"		630	IVE
1	EA	SURFACE CLOSER	4050 RA TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B4E		630	IVE
1	EA	FLOOR STOP	FS410		626	IVE
1	EA	SILENCER	SR64		GRY	IVE

HARDWARE GROUP NO. 26.2 For use on Door #(s): E100 E101 Provide each SGL door(s) with the following: ITEMID FINISH QTY DESCRIPTION CATALOG NUMBER MFR 3 ΕA HINGE 5BB1HW 4.5 X 4.5 630 IVE ΕA 626 1 CLASSRM D211HD7 FAL DEADBOLT 1 ΕA PERMANENT CORE CB809 626 FAL 1 ΕA PULL PLATE 8305 8" 3.5" X 15" 630 IVE 1 ΕA PUSH PLATE 8200 8" X 16" 630 IVE 1 ΕA SURFACE CLOSER 4050 RA TBSRT 689 LCN ΕA KICK PLATE 8400 10" X 2" LDW B4E 630 IVE 1 **FS18S** BLK IVE 1 ΕA FLOOR STOP 1 ΕA WEATHER STRIP 8303AA-HEAD & JAMBS AA ZER 1 ΕA DOOR BOTTOM 50A-DOOR WIDTH А ZER 1 EΑ SADDLE 546A-E-V3-FRAME WIDTH А ZER THRESHOLD 1 ΕA HEADER RAIN 142A-FRAME HEAD PLUS А ZER DRIP 4"

HARDWARE GROUP NO. 26.2FVFor use on Door #(s):K100BK102BS100BS101BV100BV101BProvide each SGL door(s) with the following:V100BV101B

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		630	IVE
1	EA	CLASSRM	D211HD7		626	FAL
		DEADBOLT				
1	EA	PERMANENT CORE	CB809		626	FAL
1	EA	PULL PLATE	8305 8" 3.5" X 15"		630	IVE
1	EA	PUSH PLATE	8200 8" X 16"		630	IVE
1	EA	SURFACE CLOSER	4050 RA TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B4E		630	IVE
1	EA	FLOOR STOP	FS18S		BLK	IVE
1	EA	WEATHER STRIP	8303AA-HEAD & JAMBS		AA	ZER
1	EA	DOOR BOTTOM	50A-DOOR WIDTH		А	ZER
1	EA	SADDLE	546A-FRAME WIDTH		А	ZER
		THRESHOLD				
1	EA	HEADER RAIN	142A-FRAME HEAD PLUS		А	ZER
		DRIP	4"			

GENERAL CONTRACTOR/HW SUPPLIER FIELD-VERIFY EXISTING CONDITIONS PRIOR TO BID DATE. ADVISE ARCHITECT OF ANY INCOMPATIBILITY REGARDING DOOR/FRAME/HARDWARE.

IN SUBMITTAL PROVIDE NAME, COMPANY AND DATE OF FIELD VERIFICATION.

HARDWARE GROUP NO. 26.3FV

For use on Door #(s):

P101B P102B

Provide each SGL door(s) with the following:

1 101100	000011		lie miligi			
QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		630	IVE
1	EA	CLASSRM	D211HD7		626	FAL
		DEADBOLT				
1	EA	PERMANENT CORE	CB809		626	FAL
1	EA	PUSH PLATE	8200 8" X 16"		630	IVE
1	EA	PULL PLATE	8305 8" 3.5" X 15"		630	IVE
1	EA	SURFACE CLOSER	4050 SCUSH TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B4E		630	IVE
1	EA	FLOOR STOP	FS18S		BLK	IVE
1	EA	WEATHER STRIP	8303AA-2 PCS JAMB		AA	ZER
			HEIGHT			
1	EA	HEADER SEALS	429A-1 PC FRAME WIDTH		А	ZER
1	EA	DOOR	8197AA-DOOR WIDTH		AA	ZER
		BOTTOM/DRIP				
1	EA	THRESHOLD	65A-E-V3-FRAME WIDTH		А	ZER
1	EA	HEADER RAIN DRIP	142A-FRAME HEAD PLUS		А	ZER
			⊿ "			

GENERAL CONTRACTOR/HW SUPPLIER FIELD-VERIFY EXISTING CONDITIONS PRIOR TO BID DATE. ADVISE ARCHITECT OF ANY INCOMPATIBILITY REGARDING DOOR/FRAME/HARDWARE.

IN SUBMITTAL PROVIDE NAME, COMPANY AND DATE OF FIELD VERIFICATION.

HARDWARE GROUP NO. 26FV

North ECHS & College & University Campus Pharr-San Juan-Alamo Independent School District Pharr, Texas Section 08 71 00 Door Hardware Specification

For us	e on D	oor #(s):							
A100A		()	101A	A101B	N100	N102			
S100A	4								
Provid	e each	SGL door(s) with the	following:						
QTY		DESCRIPTION	CATALO	G NUMBER	ITEMID	FINISH	MFR		
3	EA	HINGE	5BB1HW	/ 4.5 X 4.5		652	IVE		
1	EA	CLASSRM	D211HD	7		626	FAL		
		DEADBOLT							
1	EA	PERMANENT CORE	CB809			626	FAL		
1	EA	PUSH PLATE	8200 8" >			630	IVE		
1		PULL PLATE		3.5" X 15"		630	IVE		
1	EA					689	LCN		
1		KICK PLATE		X 2" LDW B4E		630	IVE		
1		WALL STOP	WS406/4	IO7CCV		630	IVE		
1	EA		SR64			GRY	IVE		
		ONTRACTOR/HW SL				TIONS PF	RIOR TO		
		DVISE ARCHITECT (OF ANY ING	COMPATIBILITY F	REGARDING				
		1E/HARDWARE.							
IN SUI	BMITT	AL PROVIDE NAME,	COMPANY	AND DATE OF F	IELD VERIFIC	ATION.			
For us	HARDWARE GROUP NO. 30 For use on Door #(s):								
118									
		SGL door(s) with the							
QTY		DESCRIPTION			ITEMID	FINISH	MFR		
3	EA		5BB1 4.			652	IVE		
1	EA			DANE		626	FAL		
1		PERMANENT COR				626	FAL		
1	EA		FS410			626	IVE		
3	EA	SILENCER	SR64			GRY	IVE		
HARD	WARE	GROUP NO. 30.1							
		oor #(s):							
109	C ON D		4A	114B					
	e each	SGL door(s) with the							
QTY		DESCRIPTION	•	DG NUMBER	ITEMID	FINISH	MFR		
3	EA	HINGE		V 5 X 4.5		652	IVE		
1	EA	CLASSROOM LOC				626	FAL		
1	EA					626	FAL		
1	EA		FS410			626	IVE		
1	EA	SILENCER	SR64			GRY	IVE		
•	-/ \	3.22.102.10	01107			0.01			
HARD	WARE	GROUP NO. 33							
		oor #(s):							

For use on Door #(s): 117A Provide each SGL door(s) with the following:

North ECHS & College & University Campus Pharr-San Juan-Alamo Independent School District Pharr, Texas

QTY 3 1 1 1	EA EA EA EA	DESCRIPTION HINGE PANIC HARDWARE RIM CYLINDER PERMANENT CORE	CATALOG NUMBER 5BB1HW 4.5 X 4.5 NRP 99-L-2-06-SNB C953 CB809	ITEMID	FINISH 652 628 626 626	MFR IVE VON FAL FAL
1 1	EA EA	SURFACE CLOSER KICK PLATE	4050 HW/PA TBSRT 8400 10" X 2" LDW B4E		689 630	LCN IVE
1	EA	WALL STOP	WS406/407CCV		630 630	IVE
3	EA	SILENCER	SR64		GRY	IVE
3	EA	SILENCER	3804		GRT	
		GROUP NO. 33.2				
108A	on Do	oor #(s):				
Provide QTY	each	SGL door(s) with the for DESCRIPTION	ollowing: CATALOG NUMBER	ITEMID		MFR
3	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	PANIC HARDWARE			628	VON
1	EA	RIM CYLINDER	C953		626	FAL
1	EA	PERMANENT CORE			626	FAL
1	EA	SURFACE CLOSER			689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B4E		630	IVE
1	EA	SILENCER	SR64		GRY	IVE
		GROUP NO. 33.3				
		or #(s):				
113A	On De	116A				
	each	SGL door(s) with the fo	bllowing:			
QTY	ouon	DESCRIPTION		ITEMID	FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	PANIC HARDWARE			628	VON
1	EA	RIM CYLINDER	C953		626	FAL
1	EA	PERMANENT	CB809		626	FAL
		CORE				
1	EA	SURFACE CLOSER	4050 HW/PA TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B4E		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	SILENCER	SR64		GRY	IVE

HARDWARE GROUP NO. 34FV For use on Door #(s): 122B Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
3	EA	FLUSH BOLT	FB458		626	IVE
1	EA	DUST PROOF	DP2		626	IVE
		STRIKE				
1	EA	STOREROOM	T581BD DANE		626	FAL
		LOCK				
1	EA	PERMANENT CORE	CB809		626	FAL
2	EA	OH STOP	100S		630	GLY
1	EA	STRIKE ASTRAGAL	43SP-DOOR HEIGHT		SP	ZER
1	EA	SILENCER	SR64		GRY	IVE

GENERAL CONTRACTOR/HW SUPPLIER FIELD-VERIFY EXISTING CONDITIONS PRIOR TO BID DATE. ADVISE ARCHITECT OF ANY INCOMPATIBILITY REGARDING DOOR/FRAME/HARDWARE.

IN SUBMITTAL PROVIDE NAME, COMPANY AND DATE OF FIELD VERIFICATION.

HARDWARE GROUP NO. 53.1

For use on Door #(s):

110 115

Provide each SGL door(s) with the following:

		()	0			
QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	CLASSROOM LOCK	T561BD DANE		626	FAL
1	EA	PERMANENT CORE	CB809		626	FAL
1	EA	SURFACE CLOSER	4050 RW/PA		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B4E		630	IVE
1	EA	FLOOR STOP	FS410		626	IVE
1	EA	SMOKE	8145S-BK-HEAD & JAMBS		S-BK	ZER
		GASKETING				

HARDWARE GROUP NO. 62.1

For use on Door #(s):	
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K101 V102

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		630	IVE
1	EA	STOREROOM	T581BD DANE		626	FAL
		LOCK				
1	EA	PERMANENT CORE	CB809		626	FAL
1	EA	SURFACE CLOSER	4050 HW/PA TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B4E		630	IVE
1	EA	WEATHER STRIP	8303AA-HEAD & JAMBS		AA	ZER
1	EA	DOOR BOTTOM	50A-DOOR WIDTH		А	ZER
1	EA	SADDLE	546A-FRAME WIDTH		А	ZER
		THRESHOLD				
1	EA	HEADER RAIN	142A-FRAME HEAD PLUS		A	ZER
		DRIP	4"			

END OF SECTION



SECTION 12 35 53.19 - WOOD LABORATORY CASEWORK PART 1 GENERAL

- 1.01 SUMMARY
 - A. The following specifications for Wood Laboratory Casework and related equipment outline the minimum requirements.
 - B. Section Includes:
 - 1. Furnishing, delivering to the building, uncrating, setting in place, leveling, and anchoring all casework, countertops, equipment, and technical products listed in the specifications, equipment schedule or shown on the drawings.
 - 2. Furnishing and installing filler panels and scribes as required for finished installation.
 - 3. Furnishing laboratory service fixtures and fittings, as described in the specifications, equipment list or shown on the drawings, that are directly attached to the casework or equipment, complete with tank nipples and lock nuts for mounting on tops or curbs. Installation and final connections will be by other respective trades as part of their work.
 - 4. Furnishing laboratory sinks and cup sinks, complete with threaded sink outlets, and required overflows, plugs, and strainers as described in the specifications, equipment list or shown on the drawings. Installation and final connections will be by other respective trades as part of their work.
 - 5. Furnishing electrical service fixtures, as described in the specifications, equipment list or shown on the drawings, that are directly attached to the casework or equipment. Installation and final connections will be by other trades as part of their work.
 - 6. Removal of all debris, dirt, and rubbish accumulated as a result of installation of this equipment, to an onsite container provided by others.
- 1.02 RELATED DIVISIONS AND SECTIONS
 - A. Section 06 10 00 Rough Carpentry: Grounds/blocking provided within metal stud walls to adequately support wall mounted casework provided and installed in this section.
 - B. Section 09 65 00 Resilient Flooring: Base molding for laboratory casework provided and installed in this section.
 - C. Section 11 53 00 Laboratory Equipment: Specialized equipment described in this section and furnished in lab areas is provided and installed in this section of work.
 - 1. Laboratory Fume Hoods provided and installed in section 12 35 53.19.
 - D. Division 22 00 00 Plumbing: Material and final connections for rough-ins, drain lines, vents, traps, tailpieces, service piping, shut-off valves, adapters, supports, in-line vacuum breakers, thermostatic mixing valves, etc. are provided and installed in this division for laboratory sinks, faucets, service fixtures, emergency showers, and fume hoods that are part of laboratory casework.
 - 1. Laboratory fume hood superstructures are provided with internal service piping pre-piped by Hood manufacturer.



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- E. Division 23 00 00 HVAC: Material and final connections for exhaust and supply fans, stacks, ductwork, elbows, supports, dampers, controls, duct collar adapters, etc. are provided in this division for laboratory casework fume hoods.
- F. Division 26 00 00 Electrical: Material and final connections for electrical roughins, junction boxes, conduit, wiring, etc. are provided in this division for laboratory casework electrical service fixtures.
 - 1. Laboratory fume hood superstructures are provided with internal electrical conduit and wiring by Hood manufacturer that terminates on top of hood at junction box.
- G. Division 27 00 00 Communications: Voice, audio-video cabling, data and data outlets are provided in this division.

1.03 REFERENCES

- A. ADAAG: 2004 Americans with Disabilities Act Accessibility Guidelines; Revised 2010 ADA Standards for Accessible Design.
- B. ANSI/ISEA Z358.1-2014: Emergency Eyewash and Shower Equipment.
- C. NFPA 30: Flammable and Combustible Liquids Code.
- D. NFPA 45: Standard for Fire Protection for Laboratories Using Chemicals.
- E. SEFA: Scientific Equipment and Furniture Association Recommended Practices. Desk Reference, 5th Edition, 2014. www.sefalabs.com
 - 1. SEFA 1-2010: Recommended Practices for Fume Hoods.
 - 2. SEFA 2-2010: Recommended Practices for Installation.
 - 3. SEFA 3-2010: Recommended Practices for Work Surfaces.
 - 4. SEFA 7-2010: Recommended Practices for Laboratory Service Fixtures.
 - 5. SEFA 8-W-2014: Recommended Practices for Wood Laboratory Grade Casework.
- F. California Air Resources Board; CARB Phase 2 Compliant.
- G. ANSI/HPVA HP-1 2009: Hardwood Veneer Core Plywood.
- H. ANSI A208.1-2009: Particleboard (PBC); Composite Panel.
- I. ANSI A208.2-2009: Medium Density Fiberboard (MDF); Composite Panel.
- J. UL-1805: Laboratory Fume Hoods.
- K. ANSI/ASHRAE 110: Method of Testing Performance of Laboratory Fume Hoods as Manufactured.
- 1.04 SUBMITTALS
 - A. Refer to Section 01 33 00 for Submittal Procedures.
 - B. Shop Drawings: Submit shop drawings showing plans, service rough-Ins, elevations, sections, end views, service chases, countertop details, location and type of sinks and service fixtures, installation details, and location of grounds/blocking within walls for adequate wall cabinet reinforcement.
 - C. Manufacturer's Data:
 - 1. Provide data indicating compliance with SEFA 8-W-2014, Laboratory Furniture Certificate of Performance Test from SEFA approved, Independent Test Facility.
 - 2. Provide Test Report from SEFA approved, Independent Test Facility, certifying that wood casework finish complies with SEFA 8-W-2014, Chemical Resistance Testing requirements.
 - D. Selection Samples: Submit one (1) set of manufacturer's standard color chips for wood casework.



- 1.05 QUALITY ASSURANCE
 - A. All laboratory casework, including cabinetry, work surfaces, sinks, and accessories, service fixtures and fittings, fume hoods, and technical products should be provided by the Wood Laboratory Casework Manufacturer.
 - B. Provide certification that laboratory casework shall meet the performance requirements described in SEFA 8-W-2014.
 - C. Provide Casework manufactured and assembled in the USA.
- 1.06 PROJECT SITE CONDITIONS
 - A. Building: Should be enclosed and weather-tight. HVAC system should be operating and maintaining a temperature range of 65-80 deg F with relative humidity range of 30%-50% to maintain acceptable wood casework moisture content, and to prevent problems such as drawers swelling and doors warping.
 - B. Additional Conditions:
 - 1. Required grounds/blocking in walls for reinforcement of wall-mounted cabinets must be in place.
 - 2. If floor tile is required under casework, it must be in place.
 - 3. Overhead ductwork, ceiling grid, tile, and light fixtures must be in place.
 - 4. Wet operations should be complete.
 - 5. Painting should be complete.
 - 6. Service lines for water, gas, etc. must be flushed clean of dirt and chips, capped and tested for leaks prior to the Plumber's final connections.
 - 7. Electrical service and lighting should be available in each room where casework will be installed.
 - C. Field Dimensions: Should be confirmed prior to product fabrication. General Contractor shall provide Guaranteed Dimensions if actual field dimensions are not available in time frame necessary to meet lead times for Laboratory Casework Manufacturer to produce and deliver to jobsite.
- 1.07 DELIVERY, STORAGE, HANDLING
 - A. Delivery: Products shall be delivered to the project site in undamaged condition, unloaded by casework installer, distributed to required rooms, unpackaged, and made ready for installation.
 - B. Storage: If rooms are not ready for installation, store product indoors, in ventilated areas with constant temperature range of 65-80 deg F, and range of relative humidity as noted in 1.06 A. Do not remove wrapping or packaging material. Laboratory Casework Manufacturer not responsible for off-site storage.
 - C. Handling: Use proper moving equipment to unload and distribute equipment and utilize personnel that are experienced in moving furniture and equipment.
 - D. Waste Disposal: Casework installers shall remove refuse resulting from their casework installation and place in trash container and leave installation site clean and free of debris. Trash container shall be provided by the General Contractor.

1.08 WARRANTY

A. Casework Manufacturer Warranty: 5 years from date of substantial completion. Provide written warranty with close-out documents stating that this manufacturer shall guarantee that all Wood Casework provided on this contract to be free from defects in material and workmanship of the product in the application and location installed.



PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements, provide products from one of the following:
 - 1. Sheldon Laboratory Systems Basis of Design
 - 2. Labscape Furniture & Equipment
 - 3. Diversified Casework
 - 4. ALC/Collegedale
 - 5. Kewaunee
 - Qualifications of other Manufacturers seeking prior approval to bid this project.
 - 1. Provide name, location, and description of Wood Laboratory Casework Manufacturer, including source and data of laboratory grade service fixtures, work surfaces and sinks, fume hoods, and technical products.
 - 2. Provide list of five (5) installations of comparable size and scope completed within the past five (5) years.
 - 3. Provide certification that manufacturer's product complies with standards and test performance of SEFA 8-W-2014.

2.02 MATERIALS

B.

- A. General:
 - 1. All casework shall be of modern design and shall be constructed in accordance with the recommended practices of the Scientific Equipment and Furniture Association. First class quality casework shall be established by use of modern machinery, tools, fixtures, and skilled workmanship.
 - 2. The following definitions apply to wood laboratory casework units. Size and type of units is indicated on the drawings or equipment list.
 - Exposed surfaces of casework include exterior surfaces visible after installation when all doors and drawer fronts are closed. Visible surfaces in open cases or behind clear glass doors shall be considered as exposed portions. Back of drawer fronts and panel doors shall be considered as exposed surfaces. Bottoms of wall hung cabinets shall be considered as exposed.
 - b. **Semi-exposed surfaces** of casework shall include interior surfaces exposed to view only when opaque doors are open.
 - c. **Unexposed surfaces** not visible after installation include back rails, top side rails, stretchers, web frames, blocking, components concealed by drawers, underside of knee spaces and drawer aprons, and tops of 82" high tall and wall hung cabinets.
- B. Casework Materials:
 - 1. Materials used for construction of cabinets, cases and tables as specified herein shall meet or exceed the minimum standards as described.
 - a. All exterior surfaces exposed to view after installation, and all cabinet interior surfaces shall be Red Oak with the exception of back panels behind opaque doors which shall be Hardboard, and drawer boxes which shall be Birch.
 - b. All plywood panels with veneer core, particleboard core, or MDF core shall be CARB Phase 2 Compliant.



- c. Exposed solid wood: Plain sawn Red Oak lumber, Grade FAS or better, clear and free of defects. Lumber shall be air dried, then kiln dried, and tempered to a moisture content of 6%-9% before use.
- d. Unexposed solid wood: Other hardwoods may be used that are Grade FAS or better, clear and free of defects, and properly dried in same manner as exposed solid wood.
- e. Plywood: Hardwood Veneer Core Plywood shall be minimum 3-ply (1/4"), 5-ply (1/2"), or 7-ply (3/4") with select Red Oak, Grade A-1, plain sliced, book match, veneer face and back, and shall be compliant with ANSI/HPVA HP-1 2009. All 9-ply (1") plywood shall be Grade A-1, whole piece, rotary cut, oak veneer face and back. Use of other hardwood face veneer is acceptable in unexposed areas. Combination core with composite cross bands is acceptable in lieu of veneer core.
- f. Plywood: Composite Core Plywood for cabinet drawer fronts and doors shall be 3-ply, 3/4" thick select Red Oak, Grade A-1, plain sliced, book match veneer face and back, and shall be compliant with ANSI A208.1-2009 (PBC) or ANSI A208.2-2009 (MDF).
- g. Banding: Plywood panels shall be edge banded where specified herein with 3mm solid Oak edge band.
- h. Hardboard: Tempered hardboard shall be 1/4" thick. All hardboard shall be composed of wood fibers and resinous binder compressed under heat and pressure.
- i. Glass: Wall Cabinet framed swinging and framed sliding doors shall have 1/8" float glass. Wall Cabinet and Tall Cabinet frameless sliding doors shall have 1/4" float glass with polished edges. Tall Cabinet framed swinging doors shall have 1/4" float glass.
 - Tempered Glass: Tempered safety glass as indicated.
- 2.03 FABRICATION
 - A. General:
 - 1. The Wood Cabinetry selected for this project shall be as follows.
 - a. Cabinet Front Style: CLASSIC SERIES Red Oak.
 - b. Cabinet drawer fronts and panel doors feature a square edge with slight radius, partial overlay style with vertical match grain fronts and Oak edge band.
 - c. Drawer fronts and panel doors on each cabinet are cut from one (1) Oak composite core plywood panel as a matching front set.
 - 2. Cabinets, tables, and other units shall be of the size and configuration indicated on the drawings and/or equipment list. Wood cabinetry is bored, doweled, grooved, and rabbeted construction.
 - 3. Base Cabinet Construction:
 - a. Cabinet End Panels shall be 3/4", Oak veneer core plywood. End panels shall be doweled and glued to top frame members, intermediate rails, and bottoms.
 - b. Vertical Partitions are 3/4", Oak veneer core plywood.



- c. Exposed or semi-exposed edges of end panels, partitions, bottom panels, and shelves shall be edged with 3mm solid Oak edge banding.
- Two-Piece Top Frame consists of nominal 1" X 3" solid Oak front rail, with back edge grooved to receive cross rails, and similar 1" X 3" solid Oak back rail, both set flush with cabinet ends, doweled and glued into place.
- e. Top Frame Cross Rails to be nominal 1" X 2-1/4" solid hardwood fully housed into front and back rails with tongue and groove joints to form a full four-sided top frame.
- f. Intermediate Rails are provided on all base cabinets between drawer/drawer configurations and drawer/door configurations. Rails are 1" X 3" solid Oak with back grooved to receive lock security panels (when panels are required). Rails shall be set flush with cabinet ends, doweled and glued into place.
- g. Bottom Panel shall be 3/4", Oak veneer core plywood. Panel shall be set flush with cabinet ends, doweled and glued into place.
- h. Back Panel shall be 1/4" thick Oak plywood when cabinet interior is exposed and 1/4" hardboard when cabinet interior is semiexposed. Backs are recessed into grooved end panels and secured on all four (4) sides.
- i. Recessed Front Toe Rail shall be 4"x 3/4" Oak veneer core plywood.
- j. Cabinet Shelves shall be 1", Oak veneer core plywood. Shelves are adjustable on 32mm centers, supported by four (4) nickelplated steel pin and socket type shelf clips.
- k. Security Panels are 1/4" thick hardboard. Panel is provided between drawer/drawer and drawer/door base cabinets. All cabinet doors and drawers are to be lockable.
- 4. Wall Cabinet Construction:
 - a. Cabinet End Panels shall be 3/4", Oak veneer core plywood. End panels shall be doweled and glued to top and bottom panels.
 - b. Vertical Partitions shall be 3/4", Oak veneer core plywood.
 - c. Exposed or semi-exposed edges of end panels, top and bottom panels, partitions, and shelves shall be edged with 3mm solid Oak edge banding.
 - d. Top and Bottom Panels shall be 1", Oak veneer core plywood. Panels shall be set flush with cabinet ends, doweled and glued into place.
 - e. Back Panel shall be 1/4" Oak plywood when cabinet interior is exposed and 1/4" hardboard when interior is semi-exposed. Back panels shall be rabbeted into ends and secured on all (4) sides.
 - f. Cabinet Shelves shall be 1", Oak veneer core plywood. Shelves are adjustable on 32mm centers and supported by four (4) nickelplated steel pin and socket type shelf clips.
 - g. Top and Bottom Back Rail shall be 4" x 3/4" hardwood veneer core plywood doweled and glued into end panels, and used for attaching the cabinet to wall.



- 5. Tall Cabinet Construction:
 - a. Cabinet End Panels shall be 3/4", Oak veneer core plywood. End panels shall be doweled and glued to top and bottom panels.
 - b. Vertical Partitions shall be 3/4", Oak veneer core plywood.
 - c. Exposed edges of end panels, top and bottom panels, partitions, and shelves shall be edged with 3mm solid Oak edge banding.
 - d. Cabinet Top Panel shall be 1", Oak veneer core plywood. Panel shall be set flush with cabinet ends, doweled and glued into place.
 - e. Cabinet Bottom Panel shall be 3/4", Oak veneer core plywood. Panel shall be set flush with cabinet ends, doweled and glued into place.
 - f. Top Back Rail and Center Back Rail shall be 3" x 1" solid hardwood doweled and glued into end panels.
 - g. Bottom Back Rail shall be 4" x 3/4" hardwood veneer core plywood doweled and glued into end panels.
 - h. Recessed Bottom Front Toe Rail shall be 4" x 3/4" Oak veneer core plywood doweled and glued into end panels.
 - Back Panel shall be 1/4" Oak plywood when cabinet interior is exposed and 1/4" hardboard when interior is semi-exposed. Back panels are recessed into grooved end panels and secured on four (4) sides.
 - j. Shelves shall be 1", Oak veneer core plywood with one (1) center fixed shelf and four (4) adjustable shelves that are adjustable on 32mm centers, supported by four (4) nickel-plated steel pin and socket type shelf clips.
- 6. Drawers and Doors:
 - a. Drawer Fronts:
 - 1) CLASSIC SERIES Square Edge Partial Overlay Style.
 - 2) 3/4", Oak composite core plywood and 3mm solid Oak edge band with a slight radius.
 - 3) Drawer fronts and panel doors on each cabinet have vertical match grain cut from one (1) plywood panel as a Matching Front Set.
 - b. Drawer Box Body:
 - 1) Front, sides, and back are 1/2" thick 9-ply Birch plywood.
 - 2) Dovetail joinery all four (4) corners.
 - 3) 1/4" thick white finished hardboard bottom.
 - 4) Bottom is set in grooves on four (4) sides and hot-melt glued on underside.
 - 5) Drawer box has clear chemical resistant finish.
 - 6) Top edge of box is provided with FINISHED TOP CAP to conceal edge of veneer core.
 - c. Panel Doors Base Cabinets:
 - 1) CLASSIC SERIES: Square Edge Partial Overlay Style.
 - 2) 3/4", Oak composite core plywood and 3mm solid Oak edge band with a slight radius.



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- 3) Panel doors and drawer fronts on each cabinet have vertical match grain cut from one (1) plywood panel as a Matching Front Set.
- d. Panel Doors Wall and Tall Cabinets:
 - 1) CLASSIC SERIES: Square Edge Partial Overlay Style.
 - 2) 3/4", Oak composite core plywood and 3mm solid Oak
 - edge band with a slight radius.3) Panel doors on each cabinet have vertical match grain cut
 - from one (1) plywood panel as a Matching Front Set.
 - Framed Glass Doors Wall and Tall Cabinets:
 - 1) CLASSIC SERIES: Square Edge Partial Overlay Style.
 - 3/4" x 3" solid Oak top, bottom, and side rails, doweled and glued together, sanded for smooth fit, and edge detailed with a slight radius.
 - 3) Tall Cabinet doors shall have a 3/4" x 6" wide solid Oak center rail.
- 7. Utility Tables:

e.

- a. Tables shall be fully framed with 3/4" x 4" radius edged solid Oak apron rails with diagonal heavy-duty steel corner braces locked into grooves and screwed with four (4) screws to inner face of rails. Intermediate rails shall be solid hardwood.
- b. Table legs shall be properly fitted into position and securely fastened to diagonal corner braces with nut, washer and 3-1/2" x 5/16" carriage bolt, completely running through the leg providing a positive system, whereby bolt can be tightened without depending upon screw holding power of the table legs. Legs shall be 2-1/4" square laminated solid Oak, thoroughly glued, and radius edged. Legs shall be equipped with rubber leg shoes, and adjustable nylon glides.
- c. Available options, Refer to drawings.
- 2.04 LABORATORY GRADE WOOD FINISH
 - A. Prior to application of wood finish, component parts shall be carefully sanded and buffed in preparation for the finishing process.
 - 1. Exposed wood surfaces shall receive a stain and sealer coat of synthetic resin. The product is then cured at elevated temperatures. After the sealer coat, the product shall be sanded, wiped clean, and then a double pass coat of chemical resistant synthetic resin shall be applied and cured at elevated temperatures.
 - 2. Semi-exposed surfaces receive sealer coat and a double pass coat of chemically resistant synthetic resin.
 - 3. Unexposed cabinet end panels receive a sealer coat.
 - B. Cabinet Wood Surface Finish Tests and Evaluation:
 - 1. The final finished wood product shall meet the performance test requirements and evaluations described under Paragraph 8.0 Cabinet Surface Finish Tests found in Section 8-W-2014 of the SEFA Recommended Practices for Laboratory Grade Wood Casework.
 - 2. Paragraph 8.1 Chemical Spot Test and 8.1.1 thru 8.1.3. This Test Procedure describes the testing of a RED OAK wood veneer panel without



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stain, using forty-nine (49) chemical reagents with each given a final rating system of Level 0, Level 1, Level 2, or Level 3. After testing, panel shall have no more than four (4) Level 3 conditions.

- 3. Paragraph 8.2 Hot Water Test and 8.2.1 thru 8.2.3. This Test Procedure describes the testing of a RED OAK wood veneer panel without stain, using hot water with no visible effect.
- 4. The above Test Procedures shall be performed for Wood Casework Manufacturer by an Independent third party, SEFA approved, testing facility.

2.05 CASEWORK HARDWARE AND ACCESSORIES

- A. Hinges: Institutional type, ground tip, five-knuckle, with pins of not less than .177" in diameter and leaves of not less than .095" thick. Hinges shall be 2-3/4" long wrought steel with chemical resistant epoxy powder coating. Two (2) hinges shall be provided on doors under 36" in height and three (3) hinges for doors 36" and over. Standard color of epoxy powder coat is Black. Chrome color of powder coat is available option.
- B. Pulls: Solid metal, wire type, 4" long mounted with two (2) screws fastened from back. Pulls shall have chemical resistant epoxy powder coating to match hinges. Provide two (2) pulls for drawers over 24" wide. Standard color of epoxy powder coat is Black. Chrome color of powder coat is an available option.
- C. Drawer Slides: Shall be easily removable with a 100 lb dynamic load rating, and have self-closing, 3/4 extension, epoxy powder coated steel, nylon rollers, bottom mount, positive stop features. File drawers shall have full extension, zinc plated anochrome finish, ball bearing, side mount slides with lever release.
- D. Door Catches: Provide two (2), top and bottom, dual, self-aligning magnetic catches on base and wall cabinet doors, and two (2) heavy-duty magnetic catches on tall cabinet doors.
- E. Elbow Catches: Brass with latch held by coiled compressing spring. Catch plates of 16-gauge plated steel. Provide on base and wall cabinets with double doors where locks are specified.
- F. Spring Actuated Latch: Latch has 4-5/8" bevel slide bolt with 2-1/4 lbs./in. actuating spring. Provide on tall cabinets with double doors where locks are specified.
- G. Leg Shoes: Molded vinyl or rubber, black, coved bottom type.
- H. Glass: Type I, Class I, float glass.
- I. Tote Trays: High impact molded plastic tray with high gloss.
- J. Locks: All casework doors and drawers are to be lockable.
 - 1. Locks are laboratory grade, cylinder cam locks, with 5-disc tumbler mechanism, and a dull chrome-plated face. Tumblers and keys are brass, while plug and cylinder are die cast zinc alloy. Locks are equipped with RemovaCoreTM keying control. With the use of a control key, the key core of the lock assembly can be removed and a new key core inserted, changing the entire locking system.
 - a. Keying: Locks are keyed alike per room, but each room different and master keyed. Each lock in a room can be opened with one (1) key, but each room would have a different key, and all rooms can be opened with a single master key. Provide minimum of two (2) master keys per project.



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- 2. When locks are shown on drawings or equipment list, and DESIGNATED AS BEING KEYED DIFFERENT, the following shall be provided. Locks are keyed different and master keyed. Each lock is keyed different from all other locks. All locks in this group can be opened with one (1) master key. With keyed different locks, security panels are provided between drawers and between drawers and cupboards.
- K. Swinging Doors (Framed Glass Wall and Tall Cabinets): 1/8" thick float glass on wall cabinets and 1/4" thick float glass on tall cabinets. Locks, when indicated, shall be cam type.

2.06 WORK SURFACES, SINKS, AND ACCESSORIES

- A. General:
 - 1. Comply with physical and chemical resistance requirements for materials for tops, sinks, and accessories as specified herein and in accordance with SEFA 3-2010 Laboratory Work Surfaces.
 - 2. Provide tops with smooth, clean, exposed surfaces and edges, in uniform plane, free of defects. Provide 4" high x 1" thick back splash and end splash where tops abut walls, or where shown on drawings.
 - a. Top sizes: Furnish tops in longest practical lengths, in configuration indicated on the drawings.
- B. Work Surfaces:
 - 1. Epoxy Resin Tops (Shelresin): Shall consist of sheets cast from modified epoxy resin and non-asbestos inert fillers; compounded mixture cured and thermoset specifically from formulation to provide exceptional physical and chemical resistance required in medium to heavy duty laboratory environments.
 - Wall counters shall be monolithic throughout without surface coating application, and shall be flat and 1" thick with 1/8" chamfered exposed edges. Provide drip grooves under all exposed edges. Exposed corners shall be eased slightly for safety. Bond joints of tops and splashes with highly chemical resistant cement with properties and color similar to base material. Standard color is Black.

TEST	ASTM	IMPERIAL
Rockwell Hardness	D785-08	109 (M scale)
Density	D792-00	133 (lb/ft3)
Compressive Strength	D695-02	33.5 (kpsi)
Flexural Strength	D790-07	14.9 (kpsi)
Fire Resistance	D635-06	Self-Extinguishing
Water Absorption	D570-98	0.008 (% after 24 hrs)
Linear Thermal Expansion	D696-03	1.37x10-5 (in/in degree F)
Flame Spread Index	E84-06	0.29 (in)
Smoke Developed Index	E84-06	8.71 (in)

b. Minimum Physical Properties and Test Results:

C. Chemical Resistance Tests and Evaluation: Epoxy Resin Tops shall meet the performance test requirements and evaluations described under Paragraph 2.1.1



Chemical/Stain Resistance Test found in Section 3-2010 of the SEFA Recommended Practices for Laboratory Work Surfaces. Epoxy Resin Top material shall be tested using forty-nine (49) Reagents and shall result in no more Sinks and Troughs:

- 1. Epoxy Resin Sinks (Shelresin): Shall be one-piece, molded construction. Sinks to be "drop-in" style with inside corners and bottoms coved for easy cleaning. Standard color of sink is Black.
- Epoxy Resin Troughs (Shelresin): Trough for TEII Student Tables shall be one-piece, molded construction with integral raised service turrets. Trough to have inside corners and bottoms coved for easy cleaning, and shall have molded raised ribs to facilitate glassware drying. Standard color of trough is Black.
- 3. Epoxy Resin Removable Lid: Provide resin removable lid at each student and teacher station. Color to match adjacent epoxy resin top.
- D. Sink Outlets:
 - 1. Epoxy Resin Sinks and Troughs and Fiberglass Sinks shall be provided with 1-1/2" dia. X 3" threaded polypropylene sink outlet with locknut, removable disc strainer, and sink stopper.
- 2.07 LABORATORY SERVICE FIXTURES, FITTINGS, AND ACCESSORIES
 - A. Water Faucets and Valves:
 - Provide units that comply with SEFA 7 2010, Laboratory Service Fittings Recommended Practices, and also complying with ANSI/ASME 112.18.1-2005 and certified by CSA International under CAN/CSA B.125.1-05.
 - 2. Provide units fabricated from cast or forged red brass unless otherwise indicated.
 - 3. Provide fittings complete with threaded mounting shanks, locknuts, and washers. Include necessary flanges, escutcheons, extension rods, etc.
 - 4. Provide units complying with ADA accessible requirements where indicated on the drawings or equipment list. Provide one (1) faucet with 4" wrist blade handles at ADA sinks.
 - 5. All water faucets shall be provided with aerators unless specifically noted to have serrated hose ends.
 - 6. If serrated hose ends are designated on any water faucets, provide the unit with a vacuum breaker.
 - 7. Water faucets shall have self-contained renewable compression valve units with stainless steel valve seats. Compression unit valve stem shall be sealed with molded TFE stem packing to prevent leakage. Provide color coded index discs.
 - 8. Water faucets shall rotate 180° minimum.
 - B. Gas Fixtures:
 - 1. Provide gas fittings in multiple service faucets, deck mounted turrets, or panel mounted flanges with forged brass lever handle, non-removable serrated hose end, color coded index discs, ball valve and INTERNAL CHECK VALVE (except vacuum service).



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- 2. Provide ball valve with chrome plated ball and PTFE seals. Valve handle shall require no more than 5 lbs. of force to operate. Valve shall be factory tested at 125 PSI. Maximum working pressure is 75 PSI.
- C. Vandal Resistant Multiple Service Combination Faucets shall be provided with the following construction features.
 - 1. Multiple Service Combination Faucets main body shall be constructed of heavy duty, cast brass that is sufficient to resist bending and breakage.
 - 2. Provide Aerators of vandal-resistant design.
 - 3. Index discs shall be tamperproof and cemented in place.
 - 4. Fittings for laboratory gases shall be provided with ball valve (for ADA) and INTERNAL CHECK VALVE (except vacuum) to prevent back flow into gas system.
 - 5. Nuts shall be provided with set screws.
 - 6. Provide cemented threaded connections.
 - 7. Combination water/gas faucets shall have inlet shanks machined from solid brass bar stock and heavy wall steel pipe.
 - 8. Refer to MEP documents for vacuum equipment and accessories.
- D. Quality Assurance:
 - 1. All water faucets and service fixtures shall be fully assembled and factory tested prior to shipment.
- E. Faucet and Fixture Finish:
 - 1. All water faucets and service fixtures shall have BLACK powder coat epoxy finish.
- F. Vandal-Resistant Multiple Service Combination Faucets:
 - 1. Sheldon Unicast Faucet No. 80020:
 - a. Combination cold water-gas fixture
 - b. Black powder coat epoxy finish
 - c. Color coded nylon handles for cold water
 - d. Vandal-resistant features
 - e. Wrist blade handles at ADA sinks
 - f. Internal check valve in gas fixtures
 - 2. Sheldon Unimix Faucet No. 80030:
 - a. Combination hot water-cold water-gas fixture
 - b. Black powder coat epoxy finish
 - c. Color coded nylon handles for hot and cold water
 - d. Vandal-resistant features
 - e. Wrist blade handles at ADA sinks
 - f. Internal check valve in gas fixtures
- G. Approved Equal:

1.

- WaterSaver Faucet Co. No. VR5300WSA:
 - a. Combination cold water-gas fixture
 - b. Black powder coat epoxy finish
 - c. Color coded nylon handles for cold water
 - d. Vandal-resistant features
 - e. Wrist blade handles at ADA sinks
 - f. Internal check valve in gas fixtures
- 2. WaterSaver Faucet Co. No. VR5800WSA:



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- a. Combination hot water-cold water-gas fixture
- b. Black powder coat epoxy finish
- c. Color coded nylon handles for hot and cold water
- d. Vandal-resistant features
- e. Wrist blade handles at ADA sinks
- f. Internal check valve in gas fixtures
- H. Electrical Fixtures:
 - 1. Electrical Fixtures that are a part of, or installed in the lab casework shall be approved by the National Board of Underwriters and must conform to city and state building codes.
 - 2. Knock-out boxes when indicated, shall be installed in the lab casework.
 - 3. Receptacles shall be grounded type, 20-amp heavy-duty industrial grade.
- 2.08 TECHNICAL PRODUCTS LIST
 - A. **Air Master Systems: ADA Green Solution Fume Hood with GFH Filtration** 6-ft. width
 - 1. Upon completion of installation, the GFH Technology equipped filtration fume hood, including all its components and design features, shall perform as a completely autonomous exhaust and filtration system; entirely independent of and unaffected by the building mechanical systems.
 - a. Fume hoods shall function as ventilated, enclosed workspaces, designed to capture, confine and exhaust fumes, vapors, and particulate matter produced or generated within the enclosure.
 - Design fume hoods for consistent and safe air flow through the hood face. Negative variations of face velocity shall not exceed 20% of the average face velocity at any designated measuring point.
 - c. Fume hoods shall be 6-feet. Each size will be a maximum of 39" deep with an epoxy work surface of 33" deep (no deviations).
 - d. Hoods must pass ASHRAE 110 containment test with only filtration technology. No external fans allowed to aid in flow of hood.
 - e. Fume hoods must be fully compliant with the 2010 ADA Standards for Accessible Design.
 - 2. The manufacturer of filtered fume hood must demonstrate their design safety and efficiently contains toxic vapors and fumes generated within the enclosure and effectively remove said containments from the captured air prior to returning it to the lab environment. Submit test results for ASHRAE 110-1995 for face velocity, smoke challenges and containment efficiency and for AFNOR NF X 15-211 for filtration effectiveness. These tests must be performed by an independent third-party testing authority with a proven record of experience performing these two-test protocol. Provide full frame construction, 16" and 18" gauge steel, rigid, self-supporting assembly with 5" wide, double walls and front posts. Walls consist of a sheet steel outer shell and a corrosion resistant full inner liner and houses electrical services and remote operating service fixtures. Access to fixture valves is provided by two removable panels with a PVC gasket. Top of the hood contains a 10"



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round, 20-gauge stainless steel exhaust duct collar. Hood shall be UL 1805 Classified.

- 3. The system fans shall effectively capture and contain the contaminated air within the fume hood enclosure then transport it, along with the contaminants, into and through the filtration media where all chemical vapors from multiple families of organic & inorganic acids, solvents & bases are adsorbed. The managed air flow rate shall serve to guarantee the necessary residence time for contaminates to remain within and be exposed to the media. The objectionable components in the air stream shall be adsorbed and clean filtered air returned to the space.
- 4. A universal type of carbon filtration media shall be employed for the purpose of adsorbing all chemical families. Multiple layers of task specific media are not acceptable.
- 5. Fume Hood Safety Features:
 - a. Controlled Access- Fume hood protocol for user interface shall be controlled by computer software with defined levels of access. The levels of access shall be: User, Administrator, and Maintenance Levels.
 - **b.** Alarms- All alarms shall be in an audible (selectable) and visual format. The alarm software shall be programmable with the capability to send alarm signals in the form of electronic mail to a predetermined multiple set of recipients.
 - c. The hood shall be equipped with a filter saturation detection system capable of detecting acids, solvents & bases. The sensor shall have an accuracy sufficient to guarantee no re-entrainment of contaminated air to the laboratory of > 1% of the published TLV adopted by the American Conference of Government Industrial Hygienists.
 - d. Back up redundancy filtration shall be provided. The second layer filtration media shall be provided to assure continued capture of contaminants beyond the saturation level of the primary filters to protect against recycling contaminated air back to the laboratory environment.
 - e. A high temperature alarm system shall be included. Alarms shall trigger when the temperature reaches 104 degrees F and remains steady. A second alarm shall sound if the temperature reaches 140 degrees F.
 - f. In order to preclude the possibly during filter rotation of reusing a loaded filter, an electronic filter I.D. system must be included; thus preventing the placement of a previously used and loaded filter into the primary filter position (no deviations accepted).
- 6. Fume Hood Materials:
 - a. Steel: High quality, cold rolled, mild steel meeting requirements of ASTM A1008; gauges U.S. Standard and galvanized. Ceiling enclosure panels to match fume hood finish. Minimum 18 gauge.
 - b. Safety glass: 1/4" thick laminated safety glass or 3/8" thick laminated safety glass viewing panel.



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- c. Sash pull: Corrosion resistant steel with chemical resistant powder coating.
- d. Interior access panels required. Service fixtures to be front mounted with plumbing outlets within arms' reach of user while head is outside of the fume hood at all times (no deviations accepted).
- e. Fume Hood liner: Laboratory grade powder coat steel. Must be UV stable. Epoxy based paint is not acceptable.
- 7. Fume Hood Construction:
 - a. Superstructure: Rigid, self-supporting assembly. Manufacturer's standard post thickness.
 - b. Interior height to be minimum of 47". Hood shall be designed so sash opening is 28" for loading and unloading purposes (no deviations). Flip up panels are not acceptable due to safety concerns.
 - c. Hoods to have optional side viewing panels that are flush with the exterior of the hood for maximum viewing and less shadowing.
 Hood to have the option of a glass back for demonstration purposes without baffles obstructing views.
 - d. Exhaust outlet: Top of filters to be a maximum of 9' 0" off the floor with a 36" high work surface. To provide clearance for filter replacements, a ceiling of 9'2" for single hoods to 9'4" for multiple hoods next to each other.
 - e. Airfoil to be flush with the work surface and sill to be low profile design. A secondary containment trough shall be located in front of the work surface and extend below the airfoil. Airfoil shall tilt open for easy cleaning.
 - f. Sash shall be designed to promote usage as an upper body and face shield. Face velocities and volumes shall be based on an 18" operating opening. Sash shall have the capability to be raised to full vertical 28" height for all sizes of fume hoods for loading and unloading of large apparatus. Sash, posts and front viewing area shall be angled to enhance comfort and viewing.
 - g. Plumbing fixtures are to be WaterSaver ColorTech front-loaded valves with color coded handles. Services on each hood are determined by designer. Must be CSA certified valves.
 - h. Hood to be equipped with (2) GFI 20-amp electrical receptacles.
 - i. Fume hood front posts shall be angled to provide better viewing and ergonomics.

PART 3 EXECUTION

3.01 EXAMINATION

A. The casework contractor shall verify that building conditions have been completed as described in 1.06 A and B which outline building readiness required before casework installation begins.



3.02 INSTALLATION

- A. Installer Qualifications: The Installer shall have a minimum of five (5) years of experience installing laboratory casework using professional and accepted trade practices and be familiar with SEFA's Recommended Practices as described in SEFA 2-2010, and be certified by the manufacturer as having the necessary skills and equipment to install the casework so as not to void the warranty.
- B. Coordination: Coordinate the work of this section with regard to installing casework. Cooperate with other trades regarding mechanical and electrical connections to casework that are provided in their work, including final connections to sinks, plumbing fixtures, electrical fixtures, fume hoods, etc.
- C. Performance:
 - 1. Casework:
 - a. Set base cabinets in place, level, secure to walls or floors as necessary. Install fillers, trim and scribe to walls. Shim as required using concealed shims.
 - b. Screw continuous cabinets together with joints flush, tight and uniform.
 - c. Secure tall cabinets and wall cabinets to the walls. Secure these cabinets to solid supporting material, utilizing grounds/blocking that is provided in walls in another section of work.
 - 2. Work Surfaces:
 - a. Work surfaces shall be installed with nominal 1" overhang on the front and end, unless otherwise indicated on the shop drawings.
 - b. Level and shim as necessary. Shims shall generally not exceed 1/8".
 - c. Install work surfaces to achieve a uniform alignment of the front edge of the top.
 - d. Only factory-prepared field joints, located per the shop drawings, shall be permitted.
 - e. Secure work surfaces to the understructure with adhesive or mechanical fasteners per the manufacturer's recommendations.
 - f. Provide flush joints not to exceed 1/8" between work surface sections.
 - g. Grout butt joints with material and method per the manufacturer's recommendation.
 - h. Backsplashes and end returns shall be secured in place with joints sealed per manufacturer's recommendation.
- 3.03 ADJUST AND CLEAN-UP
 - A. Adjust doors and drawers to operate smoothly.
 - B. Clean casework and touch-up as required.
 - C. Clean work surfaces.
 - D. Remove all debris, dirt, rubbish, and excess material as a result of the installation of this equipment and leave the site clean and orderly.
- 3.04 PROTECTION
 - A. Protect countertops with Kraft paper or cardboard after installation to help prevent damage from other trades.
 - END OF SECTION

PSJA ISD NORTH ECHS - AND - COLLEGE & UNIVERSITY CAMPUS STUDENT RESTROOM RENOVATIONS PRE-BID CONFERENCE AGENDA - May 23, 2018 at 10 AM

- I. Introduction:
 - A. Introduce Owner & Design Team
 - B. State Purpose of Meeting: to introduce the Owner, the Design Team, provide a brief overview of the Project and its importance to the District.
- II. Bidding Expectations, Pre-Requisites, and Requirements:
 - Drawings, Project Manual, and Addenda may be obtained from RGV Reprographics / 519 S. Broadway St. / McAllen, Texas (956) 686-1525 and on the PSJA Website: <u>https://psjaebid.ionwave.net/</u>
 - B. Project Description.
 - C. State Contractor's Responsibility to Review the above and become familiarized with the site. *Bidders may contact Jerry Lopez with PSJA ISD Construction Department at (956) 354-2075 to coordinate a site visit.
 - D. State Architect's Responsibility in Assisting the Contractor Interpret the Construction Documents.
 - a. Type-written bidding RFI's shall be emailed to: Emily Garza at Emily.garza@psjaisd.us
 AND Juan Mujica jmujica@gignac-associates.com
 and Cynthia Quezada cquezada@gignac-associates.com
 RFI's will NOT be answered by phone. Hand written RFI's are highly discouraged.
 - b. All inquiries shall be received by 10:00 AM on Monday, June 3, 2019. Inquiries beyond this time will not receive a response. Contact the Owner for copies of Addenda. Final addendum to be issued no later than 5 pm on Tuesday, June 4, 2019.
 - c. All substitution requests must be submitted as stipulated in the Project Manual.

- E. Discuss Bidding Requirements: Division 0
 - a. Bid Bond
 - b. Standard Form of Agreement: AIA A101 Agreement between Owner and Contractor.
 - c. Payment Bond (after a contract is awarded)
 - d. Performance Bond (after a contract is awarded)
 - e. Statement of Contractor's Qualifications Statement A305 (must be notarized).
 - f. Sub-Contractors list (to be submitted within 24 hours of bid opening) at same location where Sealed bid package is due.
 - g. Builders Risk requirement
 - h. Ranking Criteria
- F. Review Bid Schedule:
 - a. <u>BIDS DUE BY 4:00 PM ON Thursday, JUNE 6, 2019</u>. (Refer to Addenda for any changes to the Bid Date).
 - b. Bids will be opened at that time and read aloud. They will be reviewed later by an evaluation committee.
 - c. Refer to Owner for important construction dates (i.e. completion date).
- III. Concluding Statements, General Comments, and Questions from Bidders.

PHARR-SAN JUAN-ALAMO I.S.D. PSJA ISD PSJA NORTH ECHS RESTROOM RENOVATIONS AND PSJA COLLEGE AND UNIVERSITY CENTER RESTROOMS / SCIENCE LAB RENOVATIONS BID # 18-19-042 PRE-BID CONFERENCE DATE: MAY 23, 2019 @ 10:00 A.M.

					JEEPSY FULLET	GIGNACDINAISA	"/Analuksa	GIGNAC	646 Contractors	UIG .	AMAContraction	NAME	COMPANY
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					956.694.6384	686-0100	11	(076 0100	956.259.8046	2 956-460-337	976-521-980	NUMBER	PHONE
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