SYLVESTER TURNER

CITY COUNCIL MEMBERS

AMY PECK - DISTRICT A

TARSHA JACKSON - DISTRICT B

ABBIE KAMIN - DISTRICT C

CAROLYN EVANS-SHABAZZ - DISTRICT D

DAVID MARTIN - DISTRICT E

TIFFANY D. THOMAS - DISTRICT F

MARY NAN HUFFMAN - DISTRICT G

KARLA CISNEROS - DISTRICT H



## CONTROLLER

CHRIS B. BROWN

## CITY COUNCIL MEMBERS

ROBERT GALLEGOS - DISTRICT I

EDWARD POLLARD - DISTRICT J

MARTHA CASTEX-TATUM - DISTRICT K

MIKE KNOX - AT LARGE POSITION 1

DAVID ROBINSON - AT LARGE POSITION 2

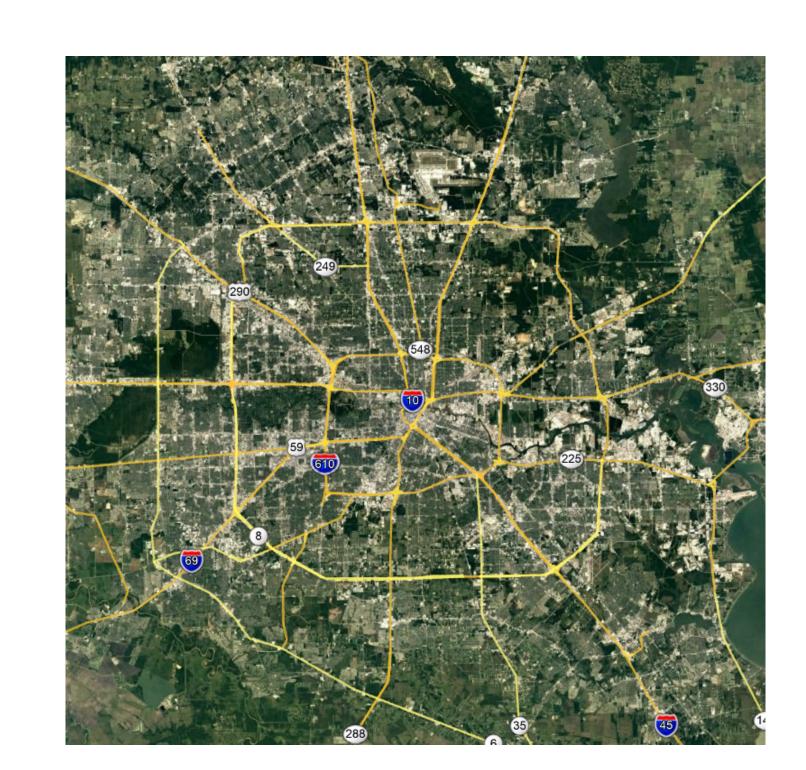
MICHAEL KUBOSH - AT LARGE POSITION 3

LETITIA PLUMMER - AT LARGE POSITION 4

SALLIE ALCORN - AT LARGE POSITION 5

# HAS HOBBY AIRPORT RESTROOM RENOVATION PHASE III

# HOUSTON HOBBY AIRPORT



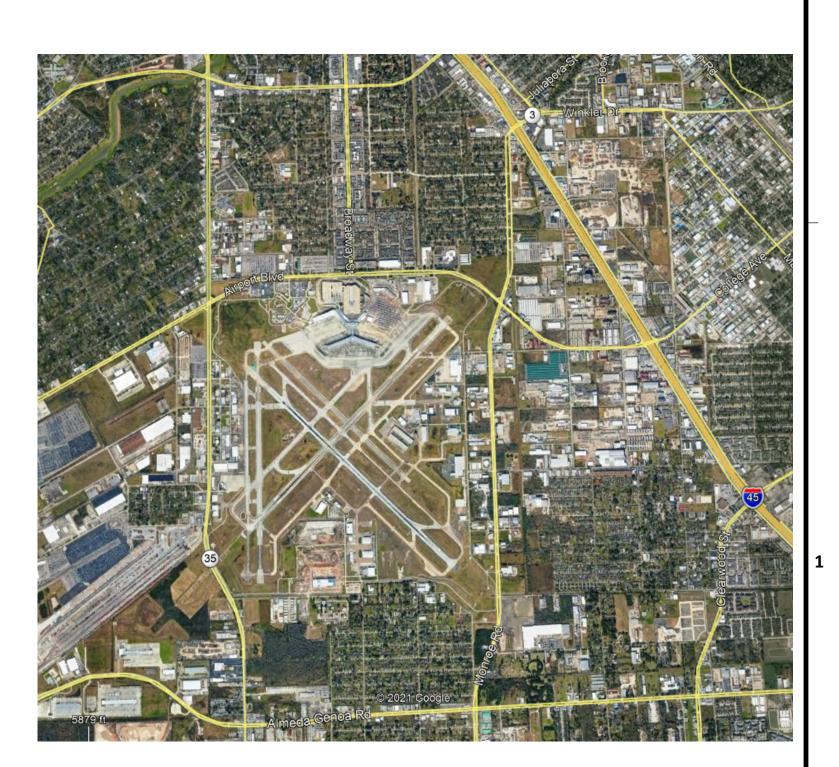
AREA MAP - N.T.S.

PREPARED BY

# RDLR

# HOUSTON AIRPORT SYSTEM

MARIO C. DIAZ - DIRECTOR



VICINITY MAP - N.T.S.

7800 Airport Blvd

Houston, TX 77061 HAS HOBBY AIRPORT RESTROOMS

> PHASE 3 PN209B A.I.P. No.

RDLR Architects

800 Sampson St. #104

Houston, TX 77003 www.rdlr.com



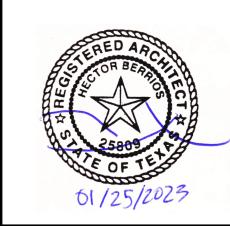
structural engineers 2603 Augusta, Suite 800 Houston, Texas 77057

713.430.5800 713.430.5888 fax www.hendersonrogers.com

**REVISIONS** 



**APPROVAL DATE:** 



COVER SHEET

( ? )── D1 **→** 

ARCHITECTURAL SYMBOLS **ROOM IDENTIFICATION** - ROOM NAME ROOM NUMBER **DOOR NUMBERING** SIDELIGHT (PART OF DOOR ASSEMBLY) DOOR NUMBER TO COINCIDE WITH ADJOINING ROOM **REVISION REFERENCE** REVISION REFERENCE MARK REVISION CLOUD **DETAIL/SECTION DESIGNATOR DETAIL OR SECTION NUMBER** DRAWING NO. (WHERE DETAIL OR SECTION IS DRAWN) (OMIT WHEN ON THE SAME DRAWING) - AREA OF ENLARGEMENT WALL **BUILDING** SECTION SECTION (1 A101 SECTION IDENTIFICATION -DRAWING NO. WHERE DRAWN -**DETAIL SECTION** DRAWING NUMBER WHERE DRAWN **ELEVATION NUMBER EXTERIOR BUILDING ELEVATION** A1 / A101 DRAWING NUMBER WHERE DRAWN **ELEVATION NUMBER INTERIOR ROOM ELEVATIONS** A1 / A101 DRAWING NUMBER WHERE DRAWN **ELEVATION NUMBER** PARTITION TYPE REFERENCE A123 REFER TO SHEETS

**WINDOW TYPE REFERENCE** 

REFER TO SHEETS

**COLUMN LINES** 

KEYNOTE

**FURNISHINGS** 

SHEET INDEX Sheet Number Sheet Name GENERAL COVER SHEET SYMBOLS LEGEND, ABBREVIATIONS, AND SHEET INDEX GENERAL NOTES TEXAS ACCESSIBILITY GUIDELINES - 1 OF 2 TEXAS ACCESSIBILITY GUIDELINES - 2 OF 2 PARTITION SCHEDULE PLUMBING COUNT AND CODE SUMMARY CONSTRUCTION PHASING PLAN ARCHITECTURAL DEMOLITION DEMOLITION PLAN DEMOLITION RCP **STRUCTURA** OVERALL FLOOR PLAN - LEVEL 2 S-301 PARTIAL FLOOR FRAMING PLAN - RESTROOMS **ARCHITECTUF** OVERALL FLOOR PLAN - LEVEL 2 ENLARGED RESTROOM FLOOR PLANS REFLECTED CEILING PLAN TYPICAL ELEVATIONS AND PLANS TYPICAL STALL PLANS & ELEVATIONS INTERIOR ELEVATIONS - RESTROOM GATE 3-4 INTERIOR ELEVATIONS - RESTROOM GATE 3-4 CONT INTERIOR ELEVATIONS - RESTROOM GATE 5-6 INTERIOR ELEVATIONS - RESTROOM GATE 5-6 CONT INTERIOR ELEVATIONS - RESTROOM GATE 58-59 INTERIOR ELEVATIONS - RESTROOM GATE 58-59 CONT PLAN DETAILS SECTION DETAILS SECTION DETAILS ROOM FINISH, MATERIAL LEGEND & DOOR SCHEDULE ENLARGED FINISH PLAN ROOM SIGNAGE MECHANICAL DEMOLITION MECHANICAL DEMO ENLARGED PLANS **MECHANICAL** MECHANICAL ABBREVIATIONS, LEGENDS AND NOTES MECHANICAL OVERALL PLAN - LEVEL 2 MECHANICAL ENLARGED PLANS MECHANICAL DETAILS ELECTRICAL LIGHTING DEMOLITION ELECTRICAL ABBREVIATIONS, LEGENDS AND NOTES **ELECTRICAL LIGHTING** ELECTRICAL LIGHTING DEMO ENLARGED PLANS **ELECTRICAL LIGHTING** ELECTRICAL LIGHTING OVERALL PLAN LEVEL 2 ELECTRICAL LIGHTING ENLARGED PLANS ELECTRICAL POWER DEMOLITION ELECTRICAL POWER DEMO ENLARGED PLANS ELECTRICAL POWER ELECTRICAL POWER OVERALL PLAN - LEVEL 2 ELECTRICAL POWER ENLARGED PLANS ELECTRICAL DETAILS ELECTRICAL DETAILS FIRE ALARM DEMOLITION FIRE ALARM DEMO ENLARGED PLANS FIRE ALARM FIRE ALARM OVERALL PLAN - LEVEL 2 FA-100 FIRE ALARM ENLARGED PLANS PLUMBING DEMOLITION PLUMBING DEMO ENLARGED PLANS PLUMBING PLUMBING SYMBOLS AND ABBREVIATIONS PLUMBING OVERALL PLAN - LEVEL 2 PLUMBING ENLARGED PLANS PLUMBING SCHEDULES AND DETAILS PLUMBING RISER DIAGRAMS **TECHNOLOGY** TECHNOLOGY - ABBREVIATIONS & SYMBOLS TECHNOLOGY - SPECIFICATIONS TECHNOLOGY - OVERALL FLOOR PLAN - LEVEL TECHNOLOGY - OVERALL FLOOR PLAN - LEVEL 2 TECHNOLOGY - FLOOR PLAN - RESTROOMS 3-4 TECHNOLOGY - FLOOR PLAN - RESTROOMS 5-6 TECHNOLOGY - FLOORPLAN - RESTROOMS 58-59 TECHNOLOGY - ENLARGED PLAN -BDF 102.39 TECHNOLOGY - ENLARGED PLAN - IDF 201.3 TECHNOLOGY - EQUIPMENT DETAILS

TECHNOLOGY - EQUIPMENT SCHEDULES

7800 Airport Blvd Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209B A.I.P. No.

# **RDLR Architects**

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## HENDERSON **ROGERS**

structural engineers 2603 Augusta, Suite 800 Houston, Texas 77057 713.430.5800 713.430.5888 fax www.hendersonrogers.com

DESIGNER PROJECT No.: 1429.1 CONSTRUCTION DOCUMENTS

# **REVISIONS**

No. DESCRIPTION DATE BY 09.30.22 HB 30% CD 10.28.22 HB 12.09.22 HB 95% CD 01.25.23 HB

**DESIGN BY: DRAWN BY: CHECKED BY:** 10/28/2022 **ISSUE DATE: Hector Berrios APPROVED BY:** 

> **DIRECTOR HOUSTON AIRPORT SYSTEM**

eview/ Approval Catego ISSUED FOR CONSTRUCTION

**APPROVAL DATE:** 



SHEET NAME:
SYMBOLS LEGEND, ABBREVIATIONS, AND SHEET INDEX As indicated

FOC

FOM

FOF

FACE OF CONCRETE

FACE OF MASONRY

FACE OF FINISH

RISER

RB

RADIUS

RUBBER BASE

#### **GENERAL NOTES**

- THE WORK PERFORMED UNDER THIS CONTRACT SHALL CONSIST OF FURNISHING ALL TOOLS, EQUIPMENT MATERIALS, SUPPLIES, TRANSPORTATION, SERVICES, POWER AND WATER, ESSENTIAL COMMUNICATIONS, AND THE PERFORMANCE OF ALL LABOR, WORK, REQUIRED CALCULATIONS, TESTING, OR OPERATIONS REQUIRED FOR THE FULFILLMENT OF THE CONTRACT, IN STRICT ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND SCHEDULES, ALL OF WHICH ARE MADE A PART HEREOF, INCLUDING DETAIL SKETCHES AS MAY BE FURNISHED BY ARCHITECT OR ENGINEER FROM TIME TO TIME DURING CONSTRUCTION IN EXPLANATION OF THE PLANS. THE WORK SHALL BE COMPLETE AND ALL MATERIAL, SERVICES, INCIDENTALS, QUALITY OR NOT SPECIFICALLY CALLED FOR QUALITY AND CONDITIONS NOTED, IN THE SPECIFICATIONS, OR NOT SHOWN ON THE PLANS WHICH MAY BE NECESSARY FOR THE COMPLETE AND PROPER CONSTRUCTION TO CARRY OUT THE CONTRACT IN GOOD FAITH AND IN A SATISFACTORY MANNER SHALL BE PERFORMED, FURNISHED, AND INSTALLED BY THE CONTRACTOR AT NO INCREASE IN COST TO THE CITY/HAS.
- THE WORK PREFORMED UNDER THIS CONTRACT SHALL CONSIST OF FURNISHING ALL MATERIALS AND LABOR REQUIRED TO COMPLETE THE INSTALLATION OF ALL BUILDING SYSTEMS, BUILDING COMPONENTS, SPECIFIED EQUIPMENT, AND MATERIALS / FINISHES IDENTIFIED IN THE DOCUMENTS. SUCH WORK SHALL INCLUDE ALL SUPPORTING MATERIALS AND COMPONENTS NECESSARY TO COMPLETE THE INSTALLATION FOR A FULLY OPERATIONAL, FUNCTIONAL AND STRUCTURALLY ANCHORED SYSTEM. CONSISTENT WITH STANDARD PRACTICES, MANUFACTURER'S RECOMMENDATIONS. GOVERNING CODES.
- THE CONTRACT DOCUMENTS ARE COMPLIMENTARY, AND WHAT IS CALLED FOR IN ONE PART SHALL BE AS BINDING AS IF CALLED FOR BY ALL. THE INTENT OF THE DOCUMENTS IS TO INCLUDE ALL WORK CONSISTENT THEREWITH AND REASONABLY INFERABLE THEREFROM AS BEING NECESSARY FOR THE COMPLETION OF THE CONTRACT. MATERIALS OR WORK DESCRIBED IN WORDS THAT INDICATE PROPER EXECUTION AND WELL KNOWN TECHNICAL OR TRADE DESIGNATION SHALL BE HELD TO REFER TO RECOGNIZED STANDARDS.
- ARCHITECT DOES NOT WARRANT THE ACCURACY OF SCALED DIMENSIONS. DIMENSIONS INDICATED BY FIGURES OR NUMERALS SHALL GOVERN. LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
- OMISSIONS FROM THE PLANS AND SPECIFICATIONS SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF FURNISHING, MAKING, OR INSTALLING ALL ITEMS REQUIRED BY LAW OR USUALLY FURNISHED, MADE, OR INSTALLED IN ACCORDANCE WITH RECOGNIZED STANDARDS, FOR A PROJECT OF THE SCOPE AND CHARACTER INDICATED ON THE PLANS AND SPECIFICATIONS.
- THE PLANS SHOW CONDITIONS AS THEY ARE SUPPOSED OR BELIEVED TO EXIST, BUT IT IS NOT INTENDED OR INFERRED THAT THE CONDITIONS AS SHOWN CONSTITUTE A REPRESENTATION OR WARRANTY EXPRESSED OR IMPLIED, THAT SUCH CONDITIONS ACTUALLY EXIST.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORK COMPLIES WITH THE CONTRACT DOCUMENTS. UPON DISCOVERY, ALL DEFECTIVE OR NONCOMPLIANT WORK SHALL BE IMMEDIATELY REPAIRED OR REPLACED BY THE CONTRACTOR. FAILURE OF THE ARCHITECT TO IDENTIFY NONCONFORMING WORK SHALL NOT CONSTITUTE ACCEPTANCE OR IMPLIED ACCEPTANCE OF SUCH WORK.
- ANY DELAYS OR IMPACTS ARISING ON THE WORK AS A RESULT OF CONSTRUCTION, FABRICATION OR DELIVERY OF NONCONFORMING WORK OR MATERIALS SHALL BE THE CONTRACTOR'S SOLE EXPENSE, WITHOUT REIMBURSEMENT FOR EXTENDED OVERHEAD.
- THE CONTRACT DOCUMENTS INDICATE THE SCOPE OF THE PROJECT IN TERMS OF THE ARCHITECTURAL DESIGN CONCEPT, THE DIMENSIONS OF THE MAJOR ARCHITECTURAL ELEMENTS. AND THE MAJOR DESIGN OF THE STRUCTURAL AND ELECTRICAL SYSTEMS, BASED ON THE SCOPE DESCRIBED HEREIN. PROVIDE ALL ITEMS, SYSTEMS, PRODUCTS AND LABOR REQUIRED OR INFERRED FOR THE PROPER EXECUTION AND COMPLETE INSTALLATION OF THE SPECIFIED PRODUCT.
- 10. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND THEIR SERVICE CONNECTIONS WITH THE PROPER UTILITY COMPANIES AND AGENCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF THE CONSTRUCTION ON THE
- 13. DETAILS NOT SHOWN ARE SIMILAR IN NATURE TO THOSE DETAILED, WHERE CONDITIONS ARE SIMILAR. WHERE SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CAN NOT BE DETERMINED, CONSULT ARCHITECT BEFORE PROCEEDING WITH THE WORK. TYPICAL DETAILS OCCUR AT ALL SIMILAR CONDITIONS, WHETHER REFERENCED OR
- WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS BY VARIOUS TRADES, THE CONTRACTOR SHALL CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIFFENERS, BRACINGS, BACK-UP PLATES, AND SUPPORTING BRACKETS REQUIRED FOR THE BEST POSSIBLE INSTALLATION OF ALL BUILDING COMPONENTS AND EQUIPMENT.
- WHEN DISCREPANCIES EXIST WITHIN THE DRAWINGS, AND BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE COSTLIER CONDITION SHALL APPLY.
- THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT PRIOR TO STARTING THE WORK, A COMPREHENSIVE LAYOUT INDICATING DIMENSIONAL CRITERIA FOR ALL VISIBLE BUILDING ELECTRICAL, SECURITY, LIFE SAFETY, CONTROLS, AND OTHER EQUIPMENT.
- PROPRIETARY PRODUCTS AND MATERIALS IDENTIFIED IN THE DRAWINGS SHALL BE INTERPRETED AS THE BASIS OF DESIGN AND SHALL TAKE PRECEDENCE OVER OTHER PRODUCTS AND COMPONENTS INDICATED IN THE SPECIFICATIONS. ALTERNATE PRODUCTS INDICATED WITHIN THE SPECIFICATIONS MAY BE USED IF EQUAL TO THE BASIS OF DESIGN. ALTERNATE PRODUCTS SHALL MATCH THE PERFORMANCE, QUALITY, AND PROFILE OF THE "BASIS OF DESIGN" PRODUCT. CONTRACTOR SHALL CONSULT WITH ARCHITECT BEFORE PROCEEDING WITH AN ALTERNATE PRODUCT TO WHAT IS SPECIFICALLY IDENTIFIED IN THE DRAWINGS. BASIS OF DESIGN PRODUCTS INCLUDE BUT ARE NOT LIMITED TO ITEMS AS
- SCAN EXISTING SLAB PRIOR TO DRILLING, CUTTING. CORING OR SHOOTING INTO THE SLAB, PROVIDE GPR OR BETTER X-RAY SCANNING PER HAS STANDARDS. SCANS TO BE SUBMITTED BEFORE WORK CAN BE PERFORMED. SEAL SLAB PENETRATIONS TO MAINTAIN FIRE RATING.

SCHEDULED ON ELEVATIONS & FINISH SCHEDULE.

20. CONTRACTOR TO COORDINATE THEIR WORK WITH THE NEW SANITARY WORK THAT IS BEING PERFORMED BY ANOTHER CONTRACT FOR TIE-IN YOUR WORK TO THEIR NEW SANITARY LINES.

#### ARCHITECTURAL SYSTEMS AND FINISHES

- COLORS INDICATED ON THE MATERIALS AND FINISH KEY ARE CUSTOM COLORS TO MATCH THE COLOR INDICATED. COLORS FROM MANUFACTURER'S STANDARD CHARTS WILL NOT BE ACCEPTED UNLESS THOSE COLORS MATCH THE COLORS INDICATED. CONTRACTOR MAY USE ANY ACCEPTABLE ALTERNATE PAINT MANUFACTURER THAT CAN MATCH THE SPECIFIED COLOR.
- PROVIDE SHOP DRAWINGS FOR ARCHITECTURAL SYSTEMS & SIGNAGE. PROVIDE SUBMITTALS INCLUDING PRODUCT DATA, WARRANTY, AND COLOR SELECTION (AS APPLICABLE) OF MATERIALS AND FINISHES. PROVIDE SAMPLES FOR EACH MATERIAL FOR EACH COLOR, FINISH, AND TEXTURE TO BE APPLIED. PROVIDE MOCKUP OF WOOD FINISH PLATFORM AND SIGN WALL TO INCLUDE EXPOSED END CONDITIONS AND RETURNING EDGE CONDITIONS.
- WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED MATERIAL. PLATFORM WOOD FRAMING SHALL BE FIRE RETARDANT TREATED.
- INTERIOR STUD WALL FRAMING DESIGN IS INDICATED ON THE PARTITION SCHEDULE. SPECIFIED GAUGES ARE MINIMUMS TO BE UTILIZED FOR TYPICAL APPLICATIONS AND CONDITIONS, CONTRACTOR SHALL PROVIDE ADDITIONAL BRACING AT SPECIFIC LOCATIONS WHERE THE SPECIFIED OR DETAILED STUD APPLICATION WILL NOT MEET THE MINIMUM DESIGN OR DEFLECTION CRITERIA.
- NON-LOAD BEARING INTERIOR STUDS SUBJECT TO LOCALIZED STRUCTURAL LOADS FROM OTHER BUILDING SYSTEMS OR COMPONENTS. INCLUDING BUT NOT LIMITED TO, ANCHORAGE REQUIREMENTS FOR DOORS, WINDOWS, STOREFRONTS, CURTAINWALLS, CABINETS, BUILT-IN FURNITURE. ETC. SHALL BE DESIGNED AND ENGINEERED BY THE CONTRACTOR, IF SUCH DESIGN IS NOT SPECIFICALLY INDICATED IN THE DOCUMENTS.
- INTERIOR PARTITIONS AND WALLS MORE THAN 6 FEET IN HEIGHT, INCLUDING THEIR FINISH MATERIALS SHALL HAVE ADEQUATE STRENGTH TO RESIST LOADS THEY ARE SUBJECTED TO BUT NOT LESS THAN 5 PSF. DEFLECTION LIMITS OF INTERIOR PARTITIONS AND WALLS (IBC 2012 TABLE 1604.3): 360 FOR WALLS WITH STUCCO AND PLASTER FINISHES 240 FOR OTHER BRITTLE FINISHES
- MISCELLANEOUS STUD FRAMING FOR SOFFITS AND OTHER ARCHITECTURAL ELEMENTS ARE INDICATED FOR GENERAL DESIGN INTENT AND PROFILE ONLY. CONTRACTOR SHALL PROVIDE ADDITIONAL BRACING AND FRAMING AS NECESSARY TO MEET THE DESIGN AND DEFLECTION CRITERIA.

120 WITH FLEXIBLE FINISHES

- INTERIOR WALL, SOFFIT, AND CEILING FRAMING SHALL MEET A MINIMUM OF 5 PSF WIND LOAD AND L/240 DEFLECTION DESIGN CRITERIA. INTERIOR ELEVATOR OR MECHANICAL SHAFT FRAMING SHALL MEET A MINIMUM OF 10 PSF WIND LOAD AND L/240 DEFLECTION DESIGN CRITERIA. EXTERIOR OR STRUCTURAL FRAMING SHALL MEET SPECIFIC DESIGN CRITERIA SPECIFIED ELSEWHERE IN THE DOCUMENTS.
- GYP. BOARD CONTROL JOINTS ARE INDICATED FOR GENERAL DESIGN INTENT ONLY. CONTRACTOR IS RESPONSIBLE FOR INSTALLING CONTROL JOINTS TO COMPLY W/ ASTM C840. ALL CONTROL JOINT LOCATIONS ARE TO BE VERIFIED IN THE FIELD WITH THE OWNER OR APPROVED REPRESENTATIVE PRIOR TO INSTALLATION. SEALANT JOINTS DESIGNED AS REVEALS ARE INDICATED
- GRAPHICALLY AS RECESSED, AND MAY ALSO BE NOTED AS "RECESSED". MAINTAIN A CONSISTENT BACK OF REVEAL DEPTH.

#### ARCHITECTURALLY EXPOSED STEEL

- ALL EXTERIOR EXPOSED STRUCTURAL STEEL AND MISCELLANEOUS STEEL COMPONENTS INCLUDING ANGLES, PLATES, ANCHORS, AND FASTENERS SHALL BE PAINTED WITH A HIGH-PERFORMANCE COATING, COLOR AS INDICATED IN THE DOCUMENTS.
- ALL EXPOSED STEEL RAILINGS SHALL BE PAINTED WITH A HIGH-PERFORMANCE COATING. EXCEPT FOR STAINLESS STEEL HANDRAILS.
- ALL EXPOSED TUBE OR PIPE PROFILES SHALL HAVE CLOSURE PLATES ON ANY EXPOSED ENDS. SUCH PLATES SHALL BE SEAL WELDED TO PREVENT MIGRATION OF

WATER AND INTERNAL RUSTING.

CONTRACTOR SHALL REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL MISCELLANEOUS STEEL SHAPES AND COMPONENTS THAT FALL WITHIN THE PROJECT SCOPE BUT ARE NOT INDICATED ON THE STRUCTURAL PLANS. SUCH ITEMS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

MISCELLANEOUS STEEL SUPPORTS

CLOSURE PLATES ON EXPOSED STEEL PROFILES LAVATORY SUPPORTS PARTIAL HEIGHT WALL PARTITIONS CEILING MOUNTED PARTITIONS CEILING MOUNTED EQUIPMENT CUSTOM MILLWORK

## REVEAL TRIM DESIGN

- THE ENLARGED ELEVATIONS, SECTIONS, AND DETAILS INDICATE TYPICAL REVEALS AT THE INTERFACE BETWEEN ADJOINING MATERIALS, AND AT INTERSECTING PLANES SUCH AS HORIZONTAL TO VERTICAL.
- ALL REVEALS SHALL BE CONTINUOUS AND SHALL NOT TERMINATE INTO AN INTERSECTING WALL OR CEILING SURFACE. REVEAL DESIGN IS INDICATED ON THE ELEVATIONS, SECTIONS AND DETAILS.
- EXTRUDED REVEAL TRIM SHALL BE PAINTED TO MATCH THE COLOR OF THE ADJACENT FINISH, UNLESS NOTED OTHERWISE

### SPECIAL INSPECTIONS AND SUBMITTALS

- A MONTHLY REPORT BY THE CONTRACTOR WITH A COPY OF THE QUALITY CONTROL LOG AND A COPY OF ALL NON-COMPLIANCE ITEMS SHALL BE MAINTAINED AND SUBMITTED TO THE OWNER AND APPROVED REPRESENTATIVE
- SPECIAL INSPECTIONS RETAINED BY THE OWNER ARE REQUIRED FOR THE FOLLOWING WORK, BUT ARE NOT LIMITED TO: CONCRETE.

STRUCTURAL MASONRY.

- ANCHOR BOLTS INSTALLED IN CONCRETE. REINFORCING STEEL AND REDRESSING STEEL.
- WEI DING HIGH-STRENGTH BOLTING.

#### REFLECTED CEILING PLAN NOTES

- THE GENERAL NOTES HEREIN ADDRESS ARCHITECTURAL DESIGN INTENT FOR ALL BUILDING SYSTEM COMPONENTS INSTALLED ABOVE THE FLOOR AND WITHIN THE CEILING AREAS, INCLUDING MECHANICAL, ELECTRICAL, PLUMBING, AND ARCHITECTURAL. CONTRACTOR SHALL REFER TO THESE GENERAL NOTE REQUIREMENTS FOR CLARIFICATION ON ARCHITECTURAL DESIGN INTENT FOR ALL EXPOSED BUILDING COMPONENTS AND SYSTEMS. FURTHERMORE, CONTRACTOR SHALL ISSUE A RFI REQUEST FOR CLARIFICATION ON ANY RELATED ITEMS EXPOSED TO VIEW, FOR WHICH INFORMATION IS GIVEN HERE, AND CONTRADICTED ELSEWHERE WITHIN THE DOCUMENTS.
- MINIMIZE EXPOSED ACCESS HATCHES IN LOBBY AREAS, WHERE FINISHED CEILING IS GYP. BOARD, PLACE EQUIPMENT IN ADJACENT ACCESSIBLE CEILING AREAS ADJACENT TO HARD LID GYP. BOARD CEILINGS.
- ELEMENTS INDICATED ON THE ARCHITECTURAL CEILING PLANS, INCLUDING LIGHTS, AIR DIFFUSERS, SPRINKLER HEADS (WHERE INDICATED), DUCT RUNS, PIPING, SPEAKERS, ETC., INDICATE THE ARCHITECTURAL DESIGN INTENT. NOTIFY OWNER OR APPROVED REPRESENTATIVE OF ANY REQUIRED VARIATIONS TO THE INDICATED DESIGN INTENT PRIOR TO SUBMITTING BIDS FOR THE WORK, PURCHASING MATERIALS OR COMMENCEMENT OF SYSTEM INSTALLATION.

#### ALL ACCESS HATCHES TO BE KEYED ALIKE.

APPROVED REPRESENTATIVE.

- THE CONTRACTOR SHALL REFER TO THE CONTRACT DOCUMENTS FOR THE LOCATION OF ALL EXPOSED MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS, INCLUDING DUCTS, DIFFUSERS, RETURN GRILLES, THERMOSTATS, LIGHT FIXTURES, CONDUITS, SENSORS, SWITCHES, OUTLETS, FIRE SPRINKLER PIPES, SPRINKLER HEADS AND EQUIPMENT REQUIRING VISIBLE ACCESS HATCHES, INCLUDING JUNCTION BOXES, PULL BOXES, CLEAN OUTS, VALVES, SWITCHES, ETC., WHERE THE EXPOSED MECHANICAL, ELECTRICAL OR PLUMBING COMPONENT IS IMPORTANT TO THE ARCHITECTURAL DESIGN INTENT, AND INDICATED ON THE ARCHITECTURAL PLANS. WHERE ITEMS ARE NOT SPECIFICALLY INDICATED ON THE ARCHITECTURAL PLANS, THE CONTRACTOR SHALL FOLLOW THE LAYOUTS INDICATED ON THE SPECIFIC MEP PLANS, BUT ONLY AFTER VERIFICATION FROM OWNER OR
- WHERE DISCREPANCIES OCCUR BETWEEN ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. INCLUDING THE QUANTITY OF FIXTURES INDICATED, THE CONTRACTOR SHALL ASK THE OWNER OR APPROVED REPRESENTATIVE IN WRITING FOR AN INTERPRETATION PRIOR TO PLACING A BID FOR THE WORK. OTHERWISE, THE LARGEST QUANTITY AND/OR MOST EXPENSIVE PRODUCT INDICATED SHALL APPLY.
- ALL KNOWN CEILING ELEMENTS HAVE BEEN INDICATED ON THE ARCHITECTURAL PLANS, INCLUDING LIGHT FIXTURES, AIR DIFFUSERS, AND DUCT WORK, ITEMS NOT INDICATED INCLUDE EXPOSED CONDUIT. NOTIFY OWNER OR APPROVED REPRESENTATIVE OF ANY REQUIRED VARIATIONS TO THE INDICATED ARCHITECTURAL LAYOUTS PRIOR TO PURCHASING MATERIALS OR COMMENCEMENT OF SYSTEM INSTALLATION.
- NOTIFY OWNER OR APPROVED REPRESENTATIVE OF ANY VARIATIONS BETWEEN THE NOTES HEREIN AND DRAWINGS, DETAILS, OR SPECIFICATIONS PRIOR TO PURCHASING MATERIALS OR COMMENCEMENT OF SYSTEM INSTALLATION.

#### HAS STANDARD

- THIS PROJECT IS TO FOLLOW HOUSTON AIRPORT SYSTEM (HAS) STANDARDS FOR ALL DISCIPLINES. HAS STANDARDS CAN BE FOUND AT THEIR WEBSITE, HTTP://WWW.HOUSTONAIRPORTS/BIZ/TIP.
- ANY CONFLICTS BETWEEN HAS STANDARDS AND BID/CONSTRUCTION DOCUMENTS ARE TO BE BROUGHT TO THE ARCHITECTS ATTENTION VIA RFI.
- ANY FLOOR PENETRATION WILL NEED TO BE X-RAY SCANNED. THIS INCLUDES BUT NOT LIMITED TO FLOOR ANCHORS, AND CORE DRILLING. ALL SCANS ARE TO BE SUBMITTED TO HAS / EOR FOR REVIEW BEFORE WORK CAN BE PERFORMED, GPR

## SIGNAGE

- ALL FINAL DESIGN. ENGINEERING & AMOUNT/SIZING OF STRUCTURAL SIGN SUPPORT ELEMENTS, MATERIAL TYPES/THICKNESSES, DIMENSIONS AND ATTACHMENT METHODS SHALL BE PERFORMED AND APPROVED BY A LICENSED ENGINEER TO MEET OR EXCEED ALL APPLICABLE LOCAL AND NATIONAL CODES.
- FINAL ENGINEERING, DIMENSIONS, MATERIALS AND FABRICATION ARE THE RESPONSIBILITY OF THE CONTRACTOR/FABRICATOR/INSTALLER TO ENSURE THE HIGHEST QUALITY FIT AND FINISH FOR ALL COMPONENTS OF THE COMPLETED PRODUCT, ALL FINAL DETAILING AND SPECIFICATIONS TO BE PROVIDED BY THE CONTRACTOR, FABRICATOR, AND/OR INSTALLER WITHIN THEIR FINAL APPROVED FABRICATION-READY SHOP DRAWINGS.
- WHEREVER DISSIMILAR METALS ARE IN CONTACT, ALWAYS SEPARATE CONTACT SURFACES PRIOR TO ASSEMBLY OR INSTALLATION WITH THE NECESSARY PROTECTIVE COATINGS/GASKETS/WASHERS TO PREVENT GALVANIC CORROSION.
- FINAL FABRICATION METHODS, QUALITY AND FIT / FINISH TO BE REVIEWED & APPROVED BY HAS AND THE WAYFINDING DESIGN CONSULTANTS THRU PROTOTYPE REVIEWS PRIOR TO FINAL PRODUCTION RUN / INSTALLATION PROCESSES.
- COLORS SHOWN ARE FOR REFERENCE ONLY, AND ARE SUBJECT TO THE LIMITATIONS OF THE PRINTING PROCESS AND / OR VARIANCE OF ELECTRONIC RGB SCREEN DISPLAYS. REFER TO COLOR SYSTEM SWATCHES AND/OR FINAL FINISH SAMPLES FOR ACCURATE REFERENCE.

#### **ELECTRICAL NOTES**

- ALL ELECTRICAL POWER OUTLETS SHALL BE COMMERCIAL GRADE IN ALL AREAS, FACE PLATES SHALL BE STAINLESS STEEL WITH STAINLESS STEEL FLAT HEAD SCREW FASTENERS TO MATCH. ALL DEVICE AND FACEPLATE COLORS ARE TO BE VERIFIED WITH THE OWNER OR APPROVED REPRESENTATIVE.
- EXPOSED CONDUIT SHALL BE INSTALLED STRAIGHT, LEVEL, UNIFORMLY SPACED, AND PARALLEL TO EXPOSED STRUCTURAL ELEMENTS.
- THE DESIGN INTENT FOR UNDERSLAB CONDUIT IS TO SUPPLY POWER & DATA TO FLOOR RECEPTACLES AND "FLOATING" WALLS. "FLOATING" WALLS ARE WALL PARTITIONS WHICH DO NOT CONNECT TO THE ROOF DECK OR STRUCTURE ABOVE, DO NOT CONNECT TO A FINISHED CEILING, OR DO NOT CONNECT TO AN EXTERIOR PERIMETER BUILDING WALL. THE DESIGN INTENT IS TO PREVENT HAVING CONDUIT HANG DOWN OR DROP DOWN FROM THE CEILING INTO VISUALLY EXPOSED OPEN
- NO UNDER SLAB CONDUIT SHALL EXTEND TO CEILING MOUNTED DEVICES UNLESS CONCEALED FROM VIEW. NO OVERHEAD OR CEILING MOUNTED CONDUIT SHALL EXTEND DOWN FROM THE CEILING TO FLOOR OR WALL
- DEVICES UNLESS CONCEALED FROM VIEW. POWER DISTRIBUTION TO OVERHEAD LIGHTS AND OTHER OVERHEAD EQUIPMENT SHALL BE SUPPLIED BY CONDUIT RUNS PLACED IN THE CEILING, WITH CEILING HOME RUNS

LOCATED BELOW STEEL BEAMS AND WITHIN THE OPEN

NO CONDUIT SHALL BE PLACED ON ANY EXPOSED COLUMN SURFACES UNLESS SPECIFICALLY INDICATED WITHIN THE ARCHITECTURAL DETAILS, OR SPECIFICALLY COORDINATED WITH THE OWNER OR APPROVED REPRESENTATIVE PRIOR TO INSTALLATION.

WEB JOIST CAVITY.

BE ACCEPTED.

- EXPOSED CEILING CONDUITS SHALL BE GANGED TOGETHER WHEREVER POSSIBLE, AND SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO EXPOSED STRUCTURAL ELEMENTS. DIAGONAL ROUTING SHALL NOT
- THERE SHALL BE NO EXPOSED CONDUITS ON/OR SPANNING ACROSS SKYLIGHT AREAS OR CLERESTORY.
- EXPOSED CEILING CONDUIT SHALL BE INSTALLED STRAIGHT, LEVEL, AND UNIFORMLY SPACED.
- STRUCTURED CEILING SOFFITS SHALL HAVE POWER FED FROM CONCEALED CONDUITS WHICH EXTEND FROM THE PERIMETER WALL.

#### LIGHTING GENERAL NOTES

- SCHEDULED LIGHT FIXTURE ARE PROPRIETARY PRODUCTS AND SHALL BE INTERPRETED AS THE BASIS-OF-DESIGN; THE SCHEDULED FIXTURES SHALL TAKE PRECEDENCE OVER OTHER PRODUCTS INDICATED ELSEWHERE IN THE CONTRACT DOCUMENTS; ALTERNATIVE FIXTURES MAY BE USED IF EQUAL TO THE BASIS OF DESIGN; ALTERNATIVE FIXTURES SHALL MATCH THE PERFORMANCE, QUALITY, PROFILE, AND LAMPING OF THE BASIS-OF-DESIGN FIXTURE: CONTRACTOR SHALL CONSULT WITH OWNER OR APPROVED REPRESENTATIVE BEFORE PROCEEDING WITH AN ALTERNATIVE PRODUCT TO THAT WHICH IS SPECIFICALLY IDENTIFIED IN THE DRAWINGS
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHT FIXTURES, FIXTURE MOUNTING HEIGHTS, AND FIXTURE MOUNTING DETAILS; NOTIFY OWNER OR APPROVED REPRESENTATIVE OF ANY CONFLICTS BETWEEN THE INDICATED MOUNTING REQUIREMENTS AND THE MANUFACTURER'S RECOMMENDED INSTALLATION DETAILS PRIOR TO ORDERING AND PURCHASING OF
- ALL FIXTURE FINISHES ARE TO BE VERIFIED WITH THE OWNER OR APPROVED REPRESENTATIVE.
- SUBMIT PRODUCT DATA FOR ALL LIGHTING SYSTEM COMPONENTS INCLUDING, BUT NOT LIMITED TO, COLOR, FINISH. MOUNTING HARDWARE, AND LAMPING; PROVIDE DETAILS FOR ANY NON-STANDARD MOUNTING CONFIGURATIONS. STANDARD FIXTURE MOUNTING IS ASSUMED TO BE MANUFACTURER'S STANDARD OR CUSTOM LENGTH SUSPENSION SYSTEM AND POWER CORD CONNECTION DIRECTLY TO THE ROOF DECK, ROOF STRUCTURE, AND ROOF DECK MOUNTED J-BOXES, WHERE APPLICABLE.

## 5. SEE NOTE 7 ON THE REFLECTED CEILING PLAN NOTES.

### ACCESSIBILITY NOTES

- AN EXIT IS A CONTINUOUS AND UNOBSTRUCTED MEAN OF EGRESS TO A PUBLIC WAY AND SHALL INCLUDE INTERVENING ROOMS, DOORS, AISLES, AND YARDS. A PUBLIC WAY IS ANY STREET, ALLEY OR SIMILAR PARCEL OF LAND UNOBSTRUCTED FROM GROUND TO SKY WHICH IS DEDICATED FOR PUBLIC USE AND HAVING A CLEAR WIDTH OF NOT LESS THAN 10 FEET. CIRCULATION AISLES AND PEDESTRIAN WAYS SHALL BE SIZED ACCORDING TO FUNCTIONAL REQUIREMENTS BUT
- SHALL NOT BE LESS THAN 36" IN CLEAR WIDTH. EVERY PORTION OF EVERY BUILDING IN WHICH ARE INSTALLED SEATS, TABLES, MERCHANDISE, EQUIPMENT OR SIMILAR MATERIALS SHALL BE PROVIDED WITH AISLES LEADING TO AN EXIT. OBJECTS PROTRUDING FROM WALLS WITH THEIR LEADING EDGES BETWEEN 27" AND 80" ABOVE THE FINISHED FLOOR SHALL PROTRUDE NO MORE THAN 4" INTO WALKS, HALLS,
- PASSAGEWAYS OR AISLES. FREE STANDING OBJECTS MOUNTED ON POSTS MAY OVERHANG 12" MAXIMUM FROM 27" TO 80" ABOVE THE FINISHED FLOOR.
- CLEAR FLOOR SPACE THAT ALLOWS A FORWARD OR PARALLEL APPROACH BY A PERSON USING A WHEELCHAIR SHALL BE PROVIDED AT CONTROLS, RECEPTACLES, AND OTHER OPERABLE EQUIPMENT THE MINIMUM CLEAR FLOOR SPACE REQUIRED TO ACCOMMODATE A SINGLE STATIONARY WHEELCHAIR IS 30" BY 48". THE MINIMUM CLEAR FLOOR SPACE MAY BE POSITIONED FOR FORWARD OR PARALLEL APPROACH. THE MINIMUM CLEAR WIDTH FOR A SINGLE WHEELCHAIR
- PASSAGE SHALL BE 32" AT A POINT AND 36" CONTINUOUSLY THE MINIMUM CLEAR WIDTH FOR 2 WHEELCHAIRS TO PASS SHALL BE 60". THE MINIMUM CLEAR WIDTH REQUIRED FOR A
- WHEELCHAIR TO TURN AROUND AN OBSTRUCTION SHALL BE 36" WHERE THE OBSTRUCTION IS 48" OR MORE IN LENGTH AND 42" WHERE THE OBSTRUCTION IS LESS THAN 48" IN LENGTH CONTRACTOR SHALL NOTIFY ARCHITECT SHOULD ANY OF THE ABOVE GENERAL NOTES BE IN CONFLICT WITH THE TEXAS ACCESSIBILITY STANDARDS.



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**DESIGNER PROJECT No.:** 1429.1 CONSTRUCTION DOCUMENTS

# **REVISIONS**

ROJECT STATUS:

#### No. DESCRIPTION DATE BY 09.30.22 HB 15% SD 10.28.22 HB 95% CD 12.09.22 HB 01.25.23 HB

**DESIGN BY: DRAWN BY: CHECKED BY:** 01/25/2023 **ISSUE DATE: APPROVED BY: Hector Berrios** 

> DIRECTOR **HOUSTON AIRPORT SYSTEM**

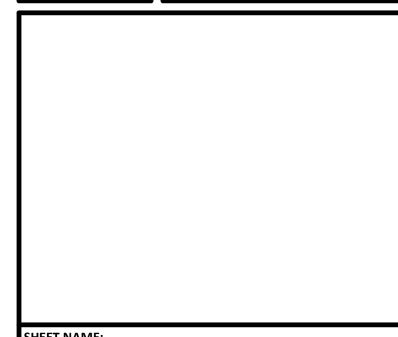


<u> APPROVAL DATE:</u>



GENERAL NOTES

01/25/2023



**302 FLOOR OR GROUND SURFACES** 

302.1 GENERAL. FLOOR AND GROUND SURFACES SHALL BE STABLE, FIRM, AND SLIP RESISTANT AND SHALL COMPLY WITH 302. **302.2 CARPET.** CARPET OR CARPET TILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION, PAD, OR BACKING OR NO CUSHION OR PAD. CARPET OR CARPET TILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL CUT/UNCUT PILE TEXTURE. PILE HEIGHT SHALL BE 1/2 INCH (13 MM) MAXIMUM. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND SHALL HAVE TRIM ON THE ENTIRE LENGTH OF THE EXPOSED EDGE. CARPET EDGE TRIM SHALL COMPLY WITH 303. 302.3 OPENINGS. OPENINGS IN FLOOR OR GROUND SURFACES SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2 INCH (13 MM) DIAMETER EXCEPT AS ALLOWED IN 407.4.3, 409.4.3, 410.4, 810.5.3 AND 810.10. ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

**303 CHANGES IN LEVEL** 

**303.1 GENERAL.** WHERE CHANGES IN LEVEL ARE PERMITTED IN FLOOR OR GROUND SURFACES, THEY SHALL COMPLY WITH 303. 303.2 VERTICAL. CHANGES IN LEVEL OF 1/4 INCH (6.4 MM) HIGH MAXIMUM SHALL BE PERMITTED TO BE VERTICAL 303.3 BEVELED. CHANGES IN LEVEL BETWEEN 1/4 INCH (6.4 MM) HIGH MINIMUM AND 1/2 INCH (13 MM) HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT

STEEPER THAN 1:2. 303.4 RAMPS. CHANGES IN LEVEL GREATER THAN 1/2 INCH (13 MM) HIGH SHALL BE RAMPED, AND SHALL COMPLY WITH 405 OR 406.



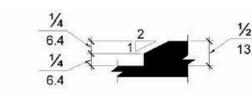
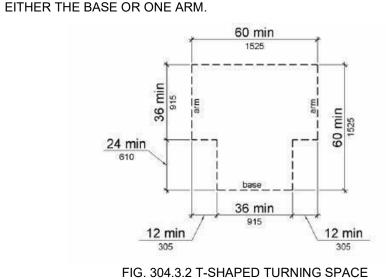


FIG. 303.2 VERTICAL CHANGE IN LEVEL FIG. 303.3 BEVELED CHANGE IN LEVEL

#### **304 TURNING SPACE**

**304.1 GENERAL.** TURNING SPACE SHALL COMPLY WITH 304. **304.2 FLOOR OR GROUND SURFACES**. FLOOR OR GROUND SURFACES OF A TURNING SPACE SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT

**304.3 SIZE.** TURNING SPACE SHALL COMPLY WITH 304.3.1 OR 304.3.2. **304.3.1 CIRCULAR SPACE.** THE TURNING SPACE SHALL BE A SPACE OF 60 INCHES (1525 MM) DIAMETER MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 306. **304.3.2 T-SHAPED SPACE**. THE TURNING SPACE SHALL BE A T-SHAPED SPACE WITHIN A 60 INCH (1525 MM) SQUARE MINIMUM WITH ARMS AND BASE 36 INCHES (915 MM) WIDE MINIMUM. EACH ARM OF THE T SHALL BE CLEAR OF OBSTRUCTIONS 12 INCHES (305 MM) MINIMUM IN EACH DIRECTION AND THE BASE SHALL BE CLEAR OF OBSTRUCTIONS 24 INCHES (610 MM) MINIMUM. THE SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 306 ONLY AT THE END OF



304.4 DOOR SWING. DOORS SHALL BE PERMITTED TO SWING INTO TURNING SPACES.

#### **305 CLEAR FLOOR OR GROUND SPACE**

305.1 GENERAL. CLEAR FLOOR OR GROUND SPACE SHALL COMPLY WITH 305. **305.2 FLOOR OR GROUND SURFACES**. FLOOR OR GROUND SURFACES OF A CLEAR FLOOR OR GROUND SPACE SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT **305.3 SIZE.** THE CLEAR FLOOR OR GROUND SPACE SHALL BE 30 INCHES (760 MM) MINIMUM BY 48 INCHES (1220 MM) MINIMUM

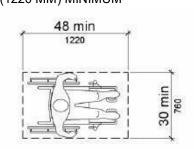


FIG. 305.3 CLEAR FLOOR OR GROUND SPACE

305.4 KNEE AND TOE CLEARANCE. UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR OR GROUND SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE COMPLYING WITH 306. **305.5 POSITION.** UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR OR GROUND SPACE SHALL BE POSITIONED FOR EITHER FORWARD OR PARALLEL APPROACH TO AN

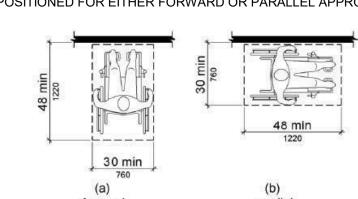
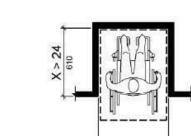


FIG. 305.5 POSITION OF CLEAR FLOOR OR GROUND SPACE

305.6 APPROACH. ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR OR GROUND SPACE SHALL ADJOIN AN ACCESSIBLE ROUTE OR ADJOIN ANOTHER CLEAR FLOOR OR GROUND SPACE. 305.7 MANEUVERING CLEARANCE. WHERE A CLEAR FLOOR OR GROUND SPACE IS LOCATED IN AN ALCOVE OR OTHERWISE CONFINED ON ALL OR PART OF THREE SIDES, ADDITIONAL MANEUVERING CLEARANCE SHALL BE PROVIDED IN ACCORDANCE WITH 305.7.1 AND 305.7.2. 305.7.1 FORWARD APPROACH. ALCOVES SHALL BE 36 INCHES (915 MM)WIDE MINIMUM WHERE THE DEPTH EXCEEDS 24 INCHES (610 MM). 305.7.2 PARALLEL APPROACH. ALCOVES SHALL BE 60 INCHES (1525 MM) WIDE



MINIMUM WHERE THE DEPTH EXCEEDS 15 INCHES (380 MM).

FIG. 305.7.1 MANEUVERING CLEARANCE IN AN ALCOVE, FORWARD APPROACH

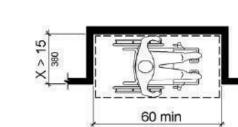


FIG. 305.7.1 MANEUVERING CLEARANCE IN AN ALCOVE, PARALLEL APPROACH

#### 306 KNEE AND TOE CLEARANCE

306.1 GENERAL. WHERE SPACE BENEATH AN ELEMENT IS INCLUDED AS PART OF CLEAR FLOOR OR GROUND SPACE OR TURNING SPACE, THE SPACE SHALL COMPLY WITH 306. ADDITIONAL SPACE SHALL NOT BE PROHIBITED BENEATH AN ELEMENT BUT SHALL NOT BE CONSIDERED AS PART OF THE CLEAR FLOOR OR GROUND SPACE OR TURNING SPACE. **306.2 TOE CLEARANCE.** 306.2.1 GENERAL. SPACE UNDER AN ELEMENT BETWEEN THE FINISH FLOOR OR GROUND AND 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL BE CONSIDERED TOE CLEARANCE AND SHALL COMPLY WITH 306.2. 306.2.2 MAXIMUM DEPTH. TOE CLEARANCE SHALL EXTEND 25 INCHES (635 MM) MAXIMUM UNDER AN ELEMENT. 306.2.3 MINIMUM REQUIRED DEPTH. WHERE TOE CLEARANCE IS REQUIRED AT AN ELEMENT AS PART OF A CLEAR FLOOR SPACE, THE TOE CLEARANCE SHALL EXTEND 17 INCHES (430 MM) MINIMUM UNDER THE ELEMENT. 306.2.4 ADDITIONAL CLEARANCE. SPACE EXTENDING GREATER THAN 6 INCHES (150 MM) BEYOND THE AVAILABLE KNEE CLEARANCE AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL NOT BE CONSIDERED TOE CLEARANCE. 306.2.5 WIDTH. TOE CLEARANCE SHALL BE 30 INCHES (760 MM) WIDE MINIMUM.

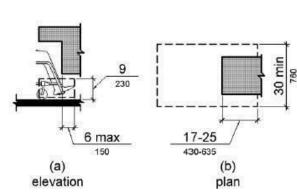
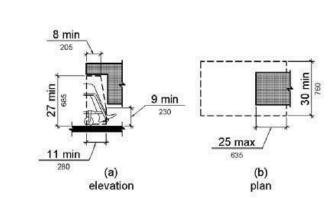


FIG. 306.2 TOE CLEARANCE

306.3 KNEE CLEARANCE 306.3.1 GENERAL. SPACE UNDER AN ELEMENT BETWEEN 9 INCHES (230 MM) AND 27 INCHES (685 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL BE CONSIDERED KNEE CLEARANCE AND SHALL COMPLY WITH 306.3. 306.3.2 MAXIMUM DEPTH. KNEE CLEARANCE SHALL EXTEND 25 INCHES (635 MM) MAXIMUM UNDER AN ELEMENT AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND. 306.3.3 MINIMUM REQUIRED DEPTH. WHERE KNEE CLEARANCE IS REQUIRED UNDER AN ELEMENT AS PART OF A CLEAR FLOOR SPACE, THE KNEE CLEARANCE SHALL BE 11 INCHES (280 MM) DEEP MINIMUM AT 9 INCHES (230 MM) ABOVE THE FINISH FLOOR OR GROUND, AND 8 INCHES (205 MM) DEEP MINIMUM AT 27 INCHES (685 MM) ABOVE THE FINISH FLOOR OR GROUND. **306.3.4 CLEARANCE REDUCTION.** BETWEEN 9 INCHES (230 MM) AND 27 INCHES (685 MM) ABOVE THE FINISH FLOOR OR GROUND, THE KNEE CLEARANCE SHALL BE PERMITTED TO

REDUCE AT A RATE OF 1 INCH (25 MM) IN DEPTH FOR EACH 6 INCHES (150 MM) IN HEIGHT



**306.3.5 WIDTH.** KNEE CLEARANCE SHALL BE 30 INCHES (760 MM) WIDE MINIMUM.

307 PROTRUDING OBJECTS

307.1 GENERAL. PROTRUDING OBJECTS SHALL COMPLY WITH 307. 307.2 PROTRUSION LIMITS. OBJECTS WITH LEADING EDGES MORE THAN 27 INCHES (685 MM) AND NOT MORE THAN 80 INCHES (2030 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL PROTRUDE 4 INCHES (100 MM) MAXIMUM HORIZONTALLY INTO THE

FIGURE 306.3 KNEE CLEARANCE

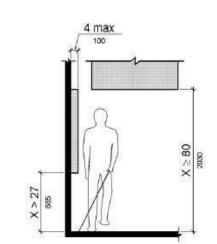


FIG. 307.2 LIMITS OF PROTRUDING OBJECTS

307.3 POST-MOUNTED OBJECTS. FREE-STANDING OBJECTS MOUNTED ON POSTS OR PYLONS SHALL OVERHANG CIRCULATION PATHS 12 INCHES (305 MM) MAXIMUM WHEN LOCATED 27 INCHES (685 MM) MINIMUM AND 80 INCHES (2030 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE A SIGN OR OTHER OBSTRUCTION IS MOUNTED BETWEEN POSTS OR PYLONS AND THE CLEAR DISTANCE BETWEEN THE POSTS OR PYLONS IS GREATER THAN 12 INCHES (305 MM), THE LOWEST EDGE OF SUCH SIGN OR OBSTRUCTION SHALL BE 27 INCHES (685 MM) MAXIMUM OR 80 INCHES (2030 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

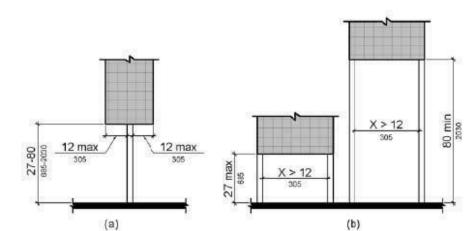
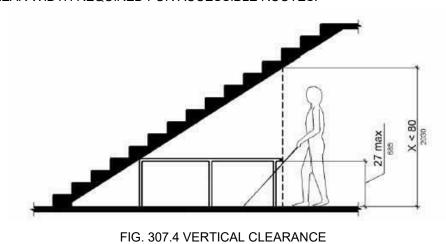


FIG. 307.3 POST-MOUNTED PROTRUDING OBJECTS

**307.4 VERTICAL CLEARANCE**. VERTICAL CLEARANCE SHALL BE 80 INCHES (2030 MM) HIGH MINIMUM. GUARDRAILS OR OTHER BARRIERS SHALL BE PROVIDED WHERE THE VERTICAL CLEARANCE IS LESS THAN 80 INCHES (2030 MM) HIGH. THE LEADING EDGE OF SUCH GUARDRAIL OR BARRIER SHALL BE LOCATED 27 INCHES (685 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. 307.5 REQUIRED CLEAR WIDTH. PROTRUDING OBJECTS SHALL NOT REDUCE THE CLEAR WIDTH REQUIRED FOR ACCESSIBLE ROUTES.



**308 REACH RANGES** 

**308.1 GENERAL.** REACH RANGES SHALL COMPLY WITH 308

308.2 FORWARD REACH. 308.2.1 UNOBSTRUCTED, WHERE A FORWARD REACH IS UNOBSTRUCTED. THE HIGH FORWARD REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM AND THE LOW FORWARD REACH SHALL BE 15 INCHES (380 MM) MINIMUM ABOVE THE FINISH

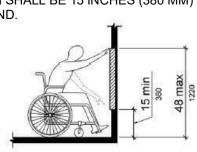


FIG. 308.2.1 UNOBSTRUCTED FORWARD REACH

**308.1 GENERAL.** REACH RANGES SHALL COMPLY WITH 308 308.2 FORWARD REACH. 308.2.1 UNOBSTRUCTED. WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM AND THE LOW FORWARD

REACH SHALL BE 15 INCHES (380 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND. 308.2.2 OBSTRUCTED HIGH REACH. WHERE A HIGH FORWARD REACH IS OVER AN OBSTRUCTION. THE CLEAR FLOOR SPACE SHALL EXTEND BENEATH THE ELEMENT FOR A DISTANCE NOT LESS THAN THE REQUIRED REACH DEPTH OVER THE OBSTRUCTION. THE HIGH FORWARD REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM WHERE THE REACH DEPTH IS 20 INCHES (510 MM) MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 20 INCHES (510 MM). THE HIGH FORWARD REACH SHALL BE 44 INCHES (1120 MM) MAXIMUM AND THE REACH DEPTH SHALL BE 25 INCHES (635 MM) MAXIMUM.

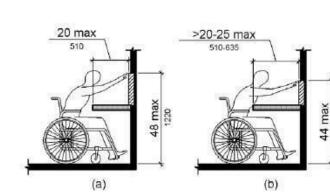
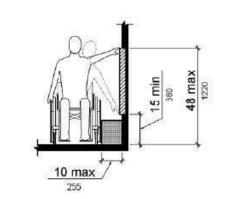
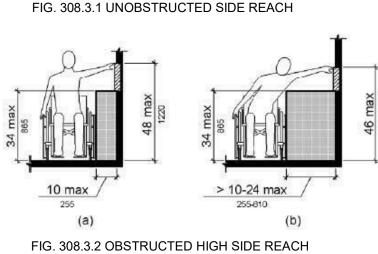


FIG. 308.2.2 OBSTRUCTED HIGH FORWARD REACH

308.3 SIDE REACH.

**308.3.1 UNOBSTRUCTED.** WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE SIDE REACH IS UNOBSTRUCTED, THE HIGH SIDE REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM AND THE LOW SIDE REACH SHALL BE 15 INCHES (380 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND. 308.3.1 UNOBSTRUCTED. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE SIDE REACH IS UNOBSTRUCTED, THE HIGH SIDE REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM AND THE LOW SIDE REACH SHALL BE 15 INCHES (380 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.





308.3.2 OBSTRUCTED HIGH REACH. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34 INCHES (865 MM) MAXIMUM AND THE DEPTH OF THE OBSTRUCTION SHALL BE 24 INCHES (610 MM) MAXIMUM. THE HIGH SIDE REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM FOR A REACH DEPTH OF 10 INCHES (255 MM)308.3.2 OBSTRUCTED HIGH REACH. WHERE A CLEAR FLOOR OR GROUND SPACE ALLOWS A PARALLEL APPROACH TO AN ELEMENT AND THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE HEIGHT OF THE OBSTRUCTION SHALL BE 34 INCHES (865 MM) MAXIMUM AND THE DEPTH OF THE OBSTRUCTION SHALL BE 24 INCHES (610 MM) MAXIMUM. THE HIGH SIDE REACH SHALL BE 48 INCHES (1220 MM) MAXIMUM FOR A REACH DEPTH OF 10 INCHES (255 MM) MAXIMUM. WHERE THE REACH DEPTH EXCEEDS 10 INCHES (255 MM), THE HIGH SIDE REACH SHALL BE 46 INCHES (1170 MM) MAXIMUM FOR A REACH DEPTH OF 24 INCHES (610 MM) MAXIMUM.

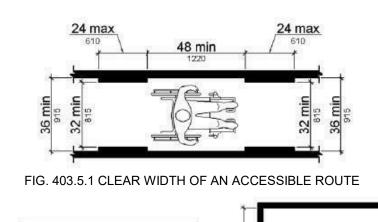
#### **402 ACCESSIBLE ROUTES**

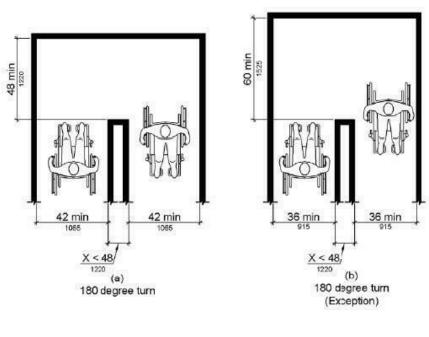
402.1 GENERAL. ACCESSIBLE ROUTES SHALL COMPLY WITH 402. 402.2 COMPONENTS. ACCESSIBLE ROUTES SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING COMPONENTS: WALKING SURFACES WITH A RUNNING SLOPE NOT STEEPER THAN 1:20, DOORWAYS, RAMPS, CURB RAMPS EXCLUDING THE FLARED SIDES, ELEVATORS, AND PLATFORM LIFTS. ALL COMPONENTS OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF CHAPTER 4.

### **403 WALKING SURFACES**

403.1 GENERAL. WALKING SURFACES THAT ARE A PART OF AN ACCESSIBLE **ROUTE SHALL COMPLY WITH 403.** 403.2 FLOOR OR GROUND SURFACE. FLOOR OR GROUND SURFACES SHALL COMPLY WITH 302. 403.3 SLOPE. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48. 403.4 CHANGES IN LEVEL. CHANGES IN LEVEL SHALL COMPLY WITH 303. 403.5 CLEARANCES. WALKING SURFACES SHALL PROVIDE CLEARANCES COMPLYING WITH 403.5. **403.5.1 CLEAR WIDTH.** EXCEPT AS PROVIDED IN 403.5.2 AND 403.5.3, THE CLEAR WIDTH OF WALKING SURFACES SHALL BE 36 INCHES (915 MM)

403.5.2 CLEAR WIDTH AT TURN. WHERE THE ACCESSIBLE ROUTE MAKES A 180 DEGREE TURN AROUND AN ELEMENT WHICH IS LESS THAN 48 INCHES (1220 MM) WIDE, CLEAR WIDTH SHALL BE 42 INCHES (1065 MM) MINIMUM APPROACHING THE TURN, 48 INCHES (1220 MM) MINIMUM AT THE TURN AND 42 INCHES (1065 MM) MINIMUM LEAVING THE TURN. 403.5.3 PASSING SPACES. AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN 60 INCHES (1525 MM) SHALL PROVIDE PASSING SPACES AT INTERVALS OF 200 FEET (61 M) MAXIMUM. PASSING SPACES SHALL BE EITHER: A SPACE 60 INCHES (1525 MM) MINIMUM BY 60 INCHES (1525 MM) MINIMUM; OR, AN INTERSECTION OF TWO WALKING SURFACES PROVIDING A T-SHAPED SPACE COMPLYING WITH 304.3.2 WHERE THE BASE AND ARMS OF THE T-SHAPED SPACE EXTEND 48 INCHES (1220 MM) MINIMUM BEYOND THE INTERSECTION. 403.6 HANDRAILS. WHERE HANDRAILS ARE PROVIDED ALONG WALKING SURFACES WITH RUNNING SLOPES NOT STEEPER THAN 1:20 THEY SHALL





### 404 DOORS, DOORWAYS, AND GATES

404.1 GENERAL. DOORS, DOORWAYS, AND GATES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH 404. 404.2 MANUAL DOORS, DOORWAYS, AND MANUAL GATES. MANUAL DOORS AND DOORWAYS AND MANUAL GATES INTENDED FOR USER PASSAGE SHALL COMPLY WITH 404.2. **404.2.1 REVOLVING DOORS, GATES, AND TURNSTILES. REVOLVING DOORS, REVOLVING** GATES, AND TURNSTILES SHALL NOT BE PART OF AN ACCESSIBLE ROUTE. 404.2.2 DOUBLE-LEAF DOORS AND GATES. AT LEAST ONE OF THE ACTIVE LEAVES OF DOORWAYS WITH TWO LEAVES SHALL COMPLY WITH 404.2.3 AND 404.2.4. **404.2.3 CLEAR WIDTH.** DOOR OPENINGS SHALL PROVIDE A CLEAR WIDTH OF 32 INCHES (815 MM) MINIMUM. CLEAR OPENINGS OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES. OPENINGS MORE THAN 24 INCHES (610 MM) DEEP SHALL PROVIDE A CLEAR OPENING OF 36 INCHES (915 MM) MINIMUM. THERE SHALL BE NO PROJECTIONS INTO THE REQUIRED CLEAR OPENING WIDTH LOWER THAN 34 INCHES (865 MM) ABOVE THE FINISH FLOOR OR GROUND. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34 INCHES (865 MM) AND 80 INCHES (2030 MM) ABOVE THE FINISH FLOOR OR GROUND SHALL NOT EXCEED 4 INCHES (100 MM).

404.2.4 MANEUVERING CLEARANCES. MINIMUM MANEUVERING CLEARANCES AT DOORS AND GATES SHALL COMPLY WITH 404.2.4. MANEUVERING CLEARANCES SHALL EXTEND THE FULL WIDTH OF THE DOORWAY AND THE REQUIRED LATCH SIDE OR HINGE SIDE CLEARANCE. 404.2.4.1 SWINGING DOORS AND GATES. SWINGING DOORS AND GATES SHALL HAVE MANEUVERING CLEARANCES COMPLYING WITH TABLE 404.2.4.1. 404.2.4.2 DOORWAYS WITHOUT DOORS OR GATES, SLIDING DOORS, AND FOLDING DOORS, DOORWAYS LESS THAN 36 INCHES (915 MM) WIDE WITHOUT DOORS OR GATES, SLIDING DOORS, OR FOLDING DOORS SHALL HAVE MANEUVERING CLEARANCES COMPLYING WITH TABLE 404.2.4.2. 404.2.4.3 RECESSED DOORS AND GATES. MANEUVERING CLEARANCES FOR FORWARD APPROACH SHALL BE PROVIDED WHEN ANY OBSTRUCTION WITHIN 18 INCHES (455 MM) OF THE LATCH SIDE OF A DOORWAY PROJECTS MORE THAN 8 INCHES (205 MM) BEYOND THE FACE OF THE DOOR, MEASURED PERPENDICULAR TO THE FACE OF THE 404.2.4.4 FLOOR OR GROUND SURFACE. FLOOR OR GROUND SURFACE WITHIN REQUIRED MANEUVERING CLEARANCES SHALL COMPLY WITH 302. CHANGES IN LEVEL

404.2.5 THRESHOLDS. THRESHOLDS, IF PROVIDED AT DOORWAYS, SHALL BE 1/2 INCH (13 MM) HIGH MAXIMUM. RAISED THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH 302 AND 303. 404.2.6 DOORS IN SERIES AND GATES IN SERIES. THE DISTANCE BETWEEN TWO HINGED OR PIVOTED DOORS IN SERIES AND GATES IN SERIES SHALL BE 48 INCHES (1220 MM) MINIMUM PLUS THE WIDTH OF DOORS OR GATES SWINGING INTO THE SPACE. 404.2.7 DOOR AND GATE HARDWARE. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL COMPLY WITH 309.4. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34 INCHES (865 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. 404.2.8 CLOSING SPEED. DOOR AND GATE CLOSING SPEED SHALL COMPLY WITH 404.2.8. 404.2.8.1 DOOR CLOSERS AND GATE CLOSERS. DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM.

404.2.8.2 SPRING HINGES. DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR OR GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM. **404.2.9 DOOR AND GATE OPENING FORCE.** FIRE DOORS SHALL HAVE A MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE OTHER THAN FIRE DOORS SHALL BE AS

1.INTERIOR HINGED DOORS AND GATES: 5 POUNDS (22.2 N) MAXIMUM 2.SLIDING OR FOLDING DOORS: 5 POUNDS (22.2 N) MAXIMUM. THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR OR GATE IN A CLOSED POSITION. 404.2.10 DOOR AND GATE SURFACES. SWINGING DOOR AND GATE SURFACES WITHIN 10 INCHES (255 MM) OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACES SHALL BE WITHIN 1/16 INCH (1.6 MM) OF THE SAME PLANE AS THE OTHER. CAVITIES CREATED BY ADDED KICK PLATES SHALL BE CAPPED. 404.3 AUTOMATIC AND POWER-ASSISTED DOORS AND GATES. AUTOMATIC DOORS AND

AUTOMATIC GATES SHALL COMPLY WITH 404.3. FULL-POWERED AUTOMATIC DOORS SHALL COMPLY WITH ANSI/BHMA A156.10 (INCORPORATED BY REFERENCE, SEE "REFERENCED STANDARDS" IN CHAPTER 1), I OW-ENERGY AND POWER-ASSISTED DOORS SHALL COMPLY WITH ANSI/BHMA A156.19 (1997 OR 2002 EDITION) (INCORPORATED BY REFERENCE, SEE "REFERENCED STANDARDS" IN CHAPTER 1). 404.3.1 CLEAR WIDTH, DOORWAYS SHALL PROVIDE A CLEAR OPENING OF 32 INCHES (815 MM) MINIMUM IN POWER-ON AND POWER-OFF MODE. THE MINIMUM CLEAR WIDTH FOR AUTOMATIC DOOR SYSTEMS IN A DOORWAY SHALL BE BASED ON THE CLEAR OPENING PROVIDED BY ALL LEAVES IN THE OPEN POSITION. 404.3.2 MANEUVERING CLEARANCE. CLEARANCES AT POWER-ASSISTED DOORS AND GATES

SHALL COMPLY WITH 404.2.4. CLEARANCES AT AUTOMATIC DOORS AND GATES WITHOUT STANDBY POWER AND SERVING AN ACCESSIBLE MEANS OF EGRESS SHALL COMPLY WITH 404.3.3 THRESHOLDS. THRESHOLDS AND CHANGES IN LEVEL AT DOORWAYS SHALL COMPLY WITH 404.2.5. 404.3.4 DOORS IN SERIES AND GATES IN SERIES. DOORS IN SERIES AND GATES IN SERIES SHALL COMPLY WITH 404.2.6. 404.3.5 CONTROLS. MANUALLY OPERATED CONTROLS SHALL COMPLY WITH 309. THE CLEAR FLOOR SPACE ADJACENT TO THE CONTROL SHALL BE LOCATED BEYOND THE ARC OF THE DOOR SWING 404.3.6 BREAK OUT OPENING. WHERE DOORS AND GATES WITHOUT STANDBY POWER ARE A PART OF A MEANS OF EGRESS, THE CLEAR BREAK OUT OPENING AT SWINGING OR SLIDING DOORS AND GATES SHALL BE 32 INCHES (815 MM) MINIMUM WHEN OPERATED IN EMERGENCY

404.3.7 REVOLVING DOORS, REVOLVING GATES, AND TURNSTILES. REVOLVING DOORS,

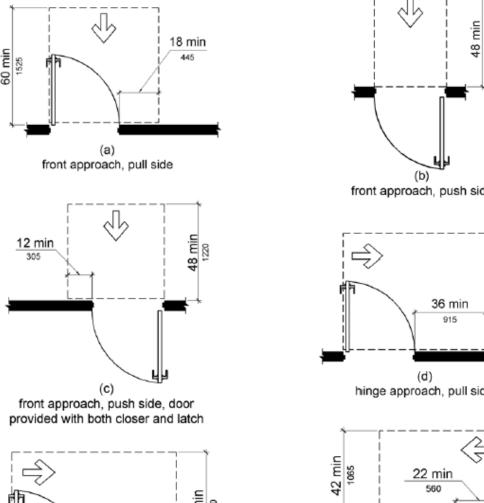
REVOLVING GATES, AND TURNSTILES SHALL NOT BE PART OF AN ACCESSIBLE ROUTE.

Table 404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates Minimum Maneuvering Clearance Type of Use Parallel to Doorway Perpendicular to (beyond latch side unless noted) 60 inches (1525 mm) 18 inches (455 mm) From from 48 inches (1220 mm) 0 inches (0 mm)1 60 inches (1525 mm) 36 inches (915 mm) From hinge side From hinge side Pull 54 inches (1370 mm) 42 inches (1065 mm) 22 inches (560 mm)3

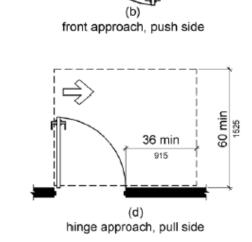
42 inches (1065 mm)<sup>2</sup> From hinge side Pull From latch side 48 inches (1220 mm)<sub>4</sub> From latch side Push 42 inches (1065 mm)<sub>4</sub> 1. Add 12 inches (305 mm) if closer and latch are provided. 2. Add 6 inches (150 mm) if closer and latch are provided. Beyond hinge side. 4. Add 6 inches (150 mm) if closer is provided.

#### Table 404.2.4.2 Maneuvering Clearances at Doorways without Doors or Gates, Manual Sliding Doors, and Manual Folding Doors

manda Grang 20013, and manda i orang 20013		anng 200.0	
	Minimum Maneu	vering Clearance	
Approach Direction	Perpendicular to Doorway	Parallel to Doorway (beyo stop/latch side unless noted)	
From Front From side¹ From pocket/hinge side From stop/latch side	48 inches (1220 mm) 42 inches (1065 mm) 42 inches (1065 mm) 42 inches (1065 mm) 1. Doorway with no door only. 2. Beyond pocket/hinge side.	0 inches (0 mm) 0 inches (0 mm) 22 inches (560 mm) <sup>2</sup> 24 inches (610 mm)	
	 	zs o zs o	



hinge approach, pull side



24 inches (610 mm)

24 inches (610 mm)

hinge approach, push side

405.1 GENERAL. RAMPS ON ACCESSIBLE ROUTES SHALL COMPLY WITH 405 405.2 SLOPE. RAMP RUNS SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12. 405.3 CROSS SLOPE. CROSS SLOPE OF RAMP RUNS SHALL NOT BE STEEPER THAN 1:48 **405.4 FLOOR OR GROUND SURFACES.** FLOOR OR GROUND SURFACES OF RAMP RUNS SHALL COMPLY WITH 302. CHANGES IN LEVEL OTHER THAN THE RUNNING SLOPE AND CROSS SLOPE ARE NOT PERMITTED ON RAMP RUNS. **405.5 CLEAR WIDTH.** THE CLEAR WIDTH OF A RAMP RUN AND, WHERE HANDRAILS ARE PROVIDED, THE CLEAR WIDTH BETWEEN HANDRAILS SHALL BE 36 INCHES (915 MM)

405.6 RISE. THE RISE FOR ANY RAMP RUN SHALL BE 30 INCHES (760 MM) MAXIMUM. **405.7 LANDINGS.** RAMPS SHALL HAVE LANDINGS AT THE TOP AND THE BOTTOM OF EACH RAMP RUN. LANDINGS SHALL COMPLY WITH 405.7. 405.7.1 SLOPE. LANDINGS SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT 405.7.2 WIDTH. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING. 405.7.3 LENGTH. THE LANDING CLEAR LENGTH SHALL BE 60 INCHES (1525 MM) LONG 405.7.4 CHANGE IN DIRECTION. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING 60 INCHES (1525 MM) MINIMUM BY 60 INCHES (1525 MM) MINIMUM

405.7.5 DOORWAYS. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY 404.2.4 AND 404.3.2 SHALL BE PERMITTED TO OVERLAP THE REQUIRED LANDING AREA. **405.8 HANDRAILS.** RAMP RUNS WITH A RISE GREATER THAN 6 INCHES (150 MM) SHALL HAVE HANDRAILS COMPLYING WITH 505. 405.9 EDGE PROTECTION. EDGE PROTECTION COMPLYING WITH 405.9.1 OR 405.9.2 SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND AT EACH SIDE OF RAMP LANDINGS. 405.9.1 EXTENDED FLOOR OR GROUND SURFACE. THE FLOOR OR GROUND SURFACE OF THE RAMP RUN OR LANDING SHALL EXTEND 12 INCHES (305 MM)

PREVENTS THE PASSAGE OF A 4 INCH (100 MM) DIAMETER SPHERE, WHERE ANY PORTION OF THE SPHERE IS WITHIN 4 INCHES (100 MM) OF THE FINISH FLOOR OR GROUND SURFACE. 405.10 WET CONDITIONS. LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT THE ACCUMULATION OF WATER.

MINIMUM BEYOND THE INSIDE FACE OF A HANDRAIL COMPLYING WITH 505.

405.9.2 CURB OR BARRIER. A CURB OR BARRIER SHALL BE PROVIDED THAT

#### 406 CURB RAMP

**406.1 GENERAL.** CURB RAMPS ON ACCESSIBLE ROUTES SHALL COMPLY WITH 406, 405.2 THROUGH 405.5, AND 405.10. **406.2 COUNTER SLOPE.** COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 1:20. THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMPS TO WALKS, GUTTERS, AND STREETS SHALL BE AT THE SAME LEVEL 406.3 SIDES OF CURB RAMPS. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT BE STEEPER THAN 1:10.. 406.4 LANDINGS. LANDINGS SHALL BE PROVIDED AT THE TOPS OF CURB RAMPS. THE LANDING CLEAR LENGTH SHALL BE 36 INCHES (915 MM) MINIMUM. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARED SIDES, LEADING TO THE 406.5 LOCATION. CURB RAMPS AND THE FLARED SIDES OF CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES, PARKING SPACES, OR PARKING ACCESS AISLES. CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES. 406.6 DIAGONAL CURB RAMPS. DIAGONAL OR CORNER TYPE CURB RAMPS WITH RETURNED CURBS OR OTHER WELL-DEFINED EDGES SHALL HAVE THE EDGES PARALLEL TO THE DIRECTION OF PEDESTRIAN FLOW. THE BOTTOM OF DIAGONAL CURB RAMPS SHALL HAVE A CLEAR SPACE 48 INCHES (1220 MM) MINIMUM OUTSIDE ACTIVE TRAFFIC LANES OF THE ROADWAY. DIAGONAL CURB RAMPS PROVIDED AT MARKED CROSSINGS SHALL PROVIDE THE 48 INCHES (1220 MM) MINIMUM CLEAR SPACE WITHIN THE MARKINGS. DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 24 INCHES (610 MM) LONG MINIMUM LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING. 406.7 ISLANDS. RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMPS AT BOTH SIDES. EACH CURB RAMP SHALL HAVE A LEVEL AREA 48 INCHES (1220 MM) LONG MINIMUM BY 36 INCHES (915 MM) WIDE MINIMUM AT THE TOP OF THE CURB RAMP IN THE PART OF THE ISLAND INTERSECTED BY THE CROSSINGS. EACH 48

#### **407 ELEVATORS**

407.1 GENERAL. ELEVATORS SHALL COMPLY WITH 407 AND WITH ASME A17.1 (INCORPORATED BY REFERENCE, SEE "REFERENCED STANDARDS" IN CHAPTER 1). THEY SHALL BE PASSENGER ELEVATORS AS CLASSIFIED BY ASME A17.1. ELEVATOR OPERATION SHALL BE AUTOMATIC. 407.2 ELEVATOR LANDING REQUIREMENTS. ELEVATOR LANDINGS SHALL COMPLY WITH 407.2. 407.2.1 CALL CONTROLS. WHERE ELEVATOR CALL BUTTONS OR KEYPADS ARE PROVIDED, THEY SHALL COMPLY WITH 407.2.1 AND 309.4. CALL BUTTONS SHALL BE RAISED OR FLUSH. 407.2.1.1 HEIGHT. CALL BUTTONS AND KEYPADS SHALL BE LOCATED WITHIN ONE OF

INCH (1220 MM) MINIMUM BY 36 INCH (915 MM) MINIMUM AREA SHALL BE ORIENTED SO THAT

THE CURB RAMP IT SERVES. THE 48 INCH (1220 MM) MINIMUM BY 36 INCH (915 MM) MINIMUM

THE 48 INCH (1220 MM) MINIMUM LENGTH IS IN THE DIRECTION OF THE RUNNING SLOPE OF

AREAS AND THE ACCESSIBLE ROUTE SHALL BE PERMITTED TO OVERLAP.

THE REACH RANGES SPECIFIED IN 308, MEASURED TO THE CENTERLINE OF THE HIGHEST OPERABLE PART. 407.2.1.2 SIZE. CALL BUTTONS SHALL BE 3/4 INCH (19 MM) MINIMUM IN THE SMALLEST 407.2.1.3 CLEAR FLOOR OR GROUND SPACE. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 SHALL BE PROVIDED AT CALL CONTROLS. 407.2.1.4 LOCATION. THE CALL BUTTON THAT DESIGNATES THE UP DIRECTION SHALL BE LOCATED ABOVE THE CALL BUTTON THAT DESIGNATES THE DOWN DIRECTION. 407.2.1.5 SIGNALS. CALL BUTTONS SHALL HAVE VISIBLE SIGNALS TO INDICATE WHEN EACH CALL IS REGISTERED AND WHEN EACH CALL IS ANSWERED 407.2.1.6 KEYPADS. WHERE KEYPADS ARE PROVIDED, KEYPADS SHALL BE IN A STANDARD TELEPHONE KEYPAD ARRANGEMENT AND SHALL COMPLY WITH **407.2.2 HALL SIGNALS.** HALL SIGNALS, INCLUDING IN-CAR SIGNALS, SHALL COMPLY WITH

407.2.2.1 VISIBLE AND AUDIBLE SIGNALS. A VISIBLE AND AUDIBLE SIGNAL SHALL BE PROVIDED AT EACH HOISTWAY ENTRANCE TO INDICATE WHICH CAR IS ANSWERING A CALL AND THE CAR'S DIRECTION OF TRAVEL. WHERE IN-CAR SIGNALS ARE PROVIDED, THEY SHALL BE VISIBLE FROM THE FLOOR AREA ADJACENT TO THE HALL CALL

**407.2.2.2 VISIBLE SIGNALS.** VISIBLE SIGNAL FIXTURES SHALL BE CENTERED AT 72 INCHES (1830 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND. THE VISIBLE SIGNAL ELEMENTS SHALL BE 2 1/2 INCHES (64 MM) MINIMUM MEASURED ALONG THE VERTICAL CENTERLINE OF THE ELEMENT. SIGNALS SHALL BE VISIBLE FROM THE FLOOR AREA ADJACENT TO THE HALL CALL BUTTON. 407.2.2.3 AUDIBLE SIGNALS. AUDIBLE SIGNALS SHALL SOUND ONCE FOR THE UP DIRECTION AND TWICE FOR THE DOWN DIRECTION, OR SHALL HAVE VERBAL ANNUNCIATORS THAT INDICATE THE DIRECTION OF ELEVATOR CAR TRAVEL. AUDIBLE SIGNALS SHALL HAVE A FREQUENCY OF 1500 HZ MAXIMUM. VERBAL ANNUNCIATORS SHALL HAVE A FREQUENCY OF 300 HZ MINIMUM AND 3000 HZ MAXIMUM. THE AUDIBLE SIGNAL AND VERBAL ANNUNCIATOR SHALL BE 10 DB MINIMUM ABOVE AMBIENT, BUT SHALL NOT EXCEED 80 DB, MEASURED AT THE HALL CALL BUTTON. 407.2.2.4 DIFFERENTIATION. EACH DESTINATION-ORIENTED ELEVATOR IN A BANK OF ELEVATORS SHALL HAVE AUDIBLE AND VISIBLE MEANS FOR DIFFERENTIATION.

407.2.3 HOISTWAY SIGNS. SIGNS AT ELEVATOR HOISTWAYS SHALL COMPLY WITH 407.2.3. 407.2.3.1 FLOOR DESIGNATION. FLOOR DESIGNATIONS COMPLYING WITH 703.2 AND 703.4.1 SHALL BE PROVIDED ON BOTH JAMBS OF ELEVATOR HOISTWAY ENTRANCES. FLOOR DESIGNATIONS SHALL BE PROVIDED IN BOTH TACTILE CHARACTERS AND BRAILLE. TACTILE CHARACTERS SHALL BE 2 INCHES (51 MM) HIGH MINIMUM. A TACTILE STAR SHALL BE PROVIDED ON BOTH JAMBS AT THE MAIN ENTRY LEVEL. 407.2.3.2 CAR DESIGNATIONS. DESTINATION-ORIENTED ELEVATORS SHALL PROVIDE TACTILE CAR IDENTIFICATION COMPLYING WITH 703.2 ON BOTH JAMBS OF THE HOISTWAY IMMEDIATELY BELOW THE FLOOR DESIGNATION. CAR DESIGNATIONS SHALL BE PROVIDED IN BOTH TACTILE CHARACTERS AND BRAILLE. TACTILE CHARACTERS SHALL BE 2 INCHES (51 MM) HIGH MINIMUM. 407.3 ELEVATOR DOOR REQUIREMENTS. HOISTWAY AND CAR DOORS SHALL COMPLY WITH

407.3.1 TYPE. ELEVATOR DOORS SHALL BE THE HORIZONTAL SLIDING TYPE. CAR GATES SHALL BE PROHIBITED. 407.3.2 OPERATION. ELEVATOR HOISTWAY AND CAR DOORS SHALL OPEN AND CLOSE 407.3.3 REOPENING DEVICE. ELEVATOR DOORS SHALL BE PROVIDED WITH A REOPENING DEVICE COMPLYING WITH 407.3.3 THAT SHALL STOP AND REOPEN A CAR DOOR AND HOISTWAY DOOR AUTOMATICALLY IF THE DOOR BECOMES OBSTRUCTED BY AN OBJECT OR PERSON. 407.3.3.1 HEIGHT. THE DEVICE SHALL BE ACTIVATED BY SENSING AN OBSTRUCTION PASSING THROUGH THE OPENING AT 5 INCHES (125 MM) NOMINAL AND 29 INCHES (735 MM) NOMINAL ABOVE THE FINISH FLOOR.

407.3.3.2 CONTACT. THE DEVICE SHALL NOT REQUIRE PHYSICAL CONTACT TO BE ACTIVATED, ALTHOUGH CONTACT IS PERMITTED TO OCCUR BEFORE THE DOOR REVERSES. **407.3.3.3 DURATION.** DOOR REOPENING DEVICES SHALL REMAIN EFFECTIVE FOR 20 SECONDS MINIMUM. 407.3.4 DOOR AND SIGNAL TIMING. THE MINIMUM ACCEPTABLE TIME FROM NOTIFICATION THAT A CAR IS ANSWERING A CALL OR NOTIFICATION OF THE CAR ASSIGNED AT THE MEANS FOR THE ENTRY OF DESTINATION INFORMATION UNTIL THE DOORS OF THAT CAR START TO CLOSE SHALL BE CALCULATED FROM THE FOLLOWING EQUATION: T = D/(1.5 FT/S) OR T = D/(455 MM/S) = 5 SECONDS MINIMUM WHERE T EQUALS THE TOTAL TIME IN SECONDS AND D EQUALS THE DISTANCE (IN FEET OR MILLIMETERS) FROM THE POINT IN THE LOBBY OR CORRIDOR 60 INCHES (1525 MM) DIRECTLY IN FRONT OF THE FARTHEST CALL BUTTON CONTROLLING THAT CAR TO THE CENTERLINE OF ITS HOISTWAY DOOR. 407.3.5 DOOR DELAY. ELEVATOR DOORS SHALL REMAIN FULLY OPEN IN RESPONSE TO A CAR CALL FOR 3 SECONDS MINIMUM. 407.3.6 WIDTH. THE WIDTH OF ELEVATOR DOORS SHALL COMPLY WITH TABLE

407.4 ELEVATOR CAR REQUIREMENTS. ELEVATOR CARS SHALL COMPLY WITH 407.4. 407.4.1 CAR DIMENSIONS. INSIDE DIMENSIONS OF ELEVATOR CARS AND CLEAR WIDTH OF ELEVATOR DOORS SHALL COMPLY WITH TABLE 407.4.1. **407.4.2 FLOOR SURFACES.** FLOOR SURFACES IN ELEVATOR CARS SHALL COMPLY WITH 302 AND 303. 407.4.3 PLATFORM TO HOISTWAY CLEARANCE. THE CLEARANCE BETWEEN THE CAR PLATFORM SILL AND THE EDGE OF ANY HOISTWAY LANDING SHALL BE 1 1/4 INCH (32 MM) 407.4.4 LEVELING. EACH CAR SHALL BE EQUIPPED WITH A SELF-LEVELING FEATURE THAT WILL AUTOMATICALLY BRING AND MAINTAIN THE CAR AT FLOOR LANDINGS WITHIN A TOLERANCE OF 1/2 INCH (13 MM) UNDER RATED LOADING TO ZERO LOADING CONDITIONS.

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10.28.22 HB

12.09.22 HB

01.25.23 HB

01/25/2023

**Hector Berrios** 

#### **REVISIONS** No. DESCRIPTION DATE BY 09.30.22 HB

PROJECT STATUS:

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95% CD

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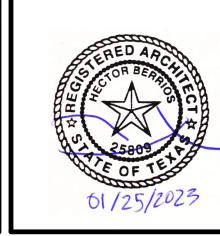
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12" = 1'-0"

407.4.5 ILLUMINATION. THE LEVEL OF ILLUMINATION AT THE CAR CONTROLS. PLATFORM, CAR THRESHOLD AND CAR LANDING SILL SHALL BE 5 FOOT CANDLES (54 407.4.6 ELEVATOR CAR CONTROLS. WHERE PROVIDED, ELEVATOR CAR CONTROLS SHALL COMPLY WITH 407.4.6 AND 309.4. 407.4.6.1 LOCATION. CONTROLS SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308. **407.4.6.2 BUTTONS.** CAR CONTROL BUTTONS WITH FLOOR DESIGNATIONS SHALL COMPLY WITH 407.4.6.2 AND SHALL BE RAISED OR FLUSH. 407.4.6.2.1 SIZE. BUTTONS SHALL BE 3/4 INCH (19 MM) MINIMUM IN THEIR SMALLEST DIMENSION. 407.4.6.2.2 ARRANGEMENT. BUTTONS SHALL BE ARRANGED WITH NUMBERS IN ASCENDING ORDER. WHEN TWO OR MORE COLUMNS OF BUTTONS ARE PROVIDED THEY SHALL READ FROM LEFT TO RIGHT. 407.4.6.3 KEYPADS. CAR CONTROL KEYPADS SHALL BE IN A STANDARD

TELEPHONE KEYPAD ARRANGEMENT AND SHALL COMPLY WITH 407.4.7.2. 407.4.6.4 EMERGENCY CONTROLS. EMERGENCY CONTROLS SHALL COMPLY WITH 407.4.6.4. 407.4.6.4.1 HEIGHT. EMERGENCY CONTROL BUTTONS SHALL HAVE THEIR CENTERLINES 35 INCHES (890 MM) MINIMUM ABOVE THE FINISH

407.4.6.4.2 LOCATION. EMERGENCY CONTROLS, INCLUDING THE EMERGENCY ALARM, SHALL BE GROUPED AT THE BOTTOM OF THE 407.4.7 DESIGNATIONS AND INDICATORS OF CAR CONTROLS. DESIGNATIONS AND INDICATORS OF CAR CONTROLS SHALL COMPLY WITH 407.4.7. 407.4.7.1 BUTTONS. CAR CONTROL BUTTONS SHALL COMPLY WITH 407.4.7.1.

407.4.7.1.1 TYPE. CONTROL BUTTONS SHALL BE IDENTIFIED BY TACTILE CHARACTERS COMPLYING WITH 703.2. 407.4.7.1.2 LOCATION. RAISED CHARACTER AND BRAILLE DESIGNATIONS SHALL BE PLACED IMMEDIATELY TO THE LEFT OF THE CONTROL BUTTON TO WHICH THE DESIGNATIONS APPLY. 407.4.7.1.3 SYMBOLS. THE CONTROL BUTTON FOR THE EMERGENCY STOP, ALARM, DOOR OPEN, DOOR CLOSE, MAIN ENTRY FLOOR, AND PHONE, SHALL BE IDENTIFIED WITH TACTILE SYMBOLS AS SHOWN IN TABLE 407.4.7.1.3. 407.4.7.1.4 VISIBLE INDICATORS. BUTTONS WITH FLOOR DESIGNATIONS SHALL BE PROVIDED WITH VISIBLE INDICATORS TO SHOW THAT A CALL HAS BEEN REGISTERED. THE VISIBLE INDICATION SHALL EXTINGUISH

WHEN THE CAR ARRIVES AT THE DESIGNATED FLOOR. 407.4.7.2 KEYPADS. KEYPADS SHALL BE IDENTIFIED BY CHARACTERS COMPLYING WITH 703.5 AND SHALL BE CENTERED ON THE CORRESPONDING KEYPAD BUTTON. THE NUMBER FIVE KEY SHALL HAVE A SINGLE RAISED DOT. THE DOT SHALL BE 0.118 INCH (3 MM) TO 0.120 INCH (3.05 MM) BASE DIAMETER AND IN OTHER ASPECTS COMPLY WITH TABLE 703.3.1. 407.4.8 CAR POSITION INDICATORS. AUDIBLE AND VISIBLE CAR POSITION INDICATORS SHALL BE PROVIDED IN ELEVATOR CARS. 407.4.8.1 VISIBLE INDICATORS. VISIBLE INDICATORS SHALL COMPLY WITH

407.4.8.1.1 SIZE. CHARACTERS SHALL BE 1/2 INCH (13 MM) HIGH MINIMUM. 407.4.8.1.2 LOCATION. INDICATORS SHALL BE LOCATED ABOVE THE CAR CONTROL PANEL OR ABOVE THE DOOR. **407.4.8.1.3 FLOOR ARRIVAL**. AS THE CAR PASSES A FLOOR AND WHEN A CAR STOPS AT A FLOOR SERVED BY THE ELEVATOR, THE CORRESPONDING CHARACTER SHALL ILLUMINATE. 407.4.8.1.4 DESTINATION INDICATOR. IN DESTINATION-ORIENTED ELEVATORS, A DISPLAY SHALL BE PROVIDED IN THE CAR WITH VISIBLE INDICATORS TO SHOW CAR DESTINATIONS. 407.4.8.2 AUDIBLE INDICATORS. AUDIBLE INDICATORS SHALL COMPLY WITH 407.4.8.2.1 SIGNAL TYPE. THE SIGNAL SHALL BE AN AUTOMATIC VERBAL ANNUNCIATOR WHICH ANNOUNCES THE FLOOR AT WHICH THE CAR IS ABOUT 407.4.8.2.2 SIGNAL LEVEL. THE VERBAL ANNUNCIATOR SHALL BE 10 DB MINIMUM ABOVE AMBIENT, BUT SHALL NOT EXCEED 80 DB, MEASURED AT THE

407.4.8.2.3 FREQUENCY. THE VERBAL ANNUNCIATOR SHALL HAVE A FREQUENCY OF 300 HZ MINIMUM TO 3000 HZ MAXIMUM. 407.4.9 EMERGENCY COMMUNICATION. EMERGENCY TWO-WAY COMMUNICATION SYSTEMS SHALL COMPLY WITH 308. TACTILE SYMBOLS AND CHARACTERS SHALL BE PROVIDED ADJACENT TO THE DEVICE AND SHALL COMPLY WITH 703.2.

502.1 GENERAL. CAR AND VAN PARKING SPACES SHALL COMPLY WITH 502. WHERE PARKING SPACES ARE MARKED WITH LINES, WIDTH MEASUREMENTS OF PARKING SPACES AND ACCESS AISLES SHALL BE MADE FROM THE CENTERLINE OF THE 502.2 VEHICLE SPACES. CAR PARKING SPACES SHALL BE 96 INCHES (2440 MM) WIDE MINIMUM AND VAN PARKING SPACES SHALL BE 132 INCHES (3350 MM) WIDE MINIMUM, SHALL BE MARKED TO DEFINE THE WIDTH, AND SHALL HAVE AN ADJACENT ACCESS AISLE COMPLYING WITH 502.3. 502.2 VEHICLE SPACES. CAR PARKING SPACES SHALL BE 96 INCHES (2440 MM) WIDE MINIMUM AND VAN PARKING SPACES SHALL BE 132 INCHES (3350 MM) WIDE MINIMUM, SHALL BE MARKED TO DEFINE THE WIDTH, AND SHALL HAVE AN ADJACENT ACCESS AISLE COMPLYING WITH 502.3.

502.3 ACCESS AISLE. ACCESS AISLES SERVING PARKING SPACES SHALL COMPLY WITH 502.3. ACCESS AISLES SHALL ADJOIN AN ACCESSIBLE ROUTE. TWO PARKING SPACES SHALL BE PERMITTED TO SHARE A COMMON ACCESS AISLE. 502.3.1 WIDTH. ACCESS AISLES SERVING CAR AND VAN PARKING SPACES SHALL BE 60 INCHES (1525 MM) WIDE MINIMUM **502.3.2 LENGTH.** ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACES THEY SERVE. 502.3.3 MARKING. ACCESS AISLES SHALL BE MARKED SO AS TO DISCOURAGE PARKING

502.3.4 LOCATION. ACCESS AISLES SHALL NOT OVERLAP THE VEHICULAR WAY. ACCESS AISLES SHALL BE PERMITTED TO BE PLACED ON EITHER SIDE OF THE PARKING SPACE EXCEPT FOR ANGLED VAN PARKING SPACES WHICH SHALL HAVE ACCESS AISLES LOCATED ON THE PASSENGER SIDE OF THE PARKING SPACES. 502.4 FLOOR OR GROUND SURFACES. PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL COMPLY WITH 302. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE. CHANGES IN LEVEL ARE NOT PERMITTED. **502.5 VERTICAL CLEARANCE.** PARKING SPACES FOR VANS AND ACCESS AISLES AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 98

INCHES (2490 MM) MINIMUM. **502.6 IDENTIFICATION.** PARKING SPACE IDENTIFICATION SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 703.7.2.1. SIGNS IDENTIFYING VAN PARKING SPACES SHALL CONTAIN THE DESIGNATION "VAN ACCESSIBLE." SIGNS SHALL BE 60 INCHES (1525 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE MEASURED TO THE BOTTOM OF THE SIGN. **502.7 RELATIONSHIP TO ACCESSIBLE ROUTES.** PARKING SPACES AND ACCESS AISLES SHALL BE DESIGNED SO THAT CARS AND VANS, WHEN PARKED, CANNOT OBSTRUCT

THE REQUIRED CLEAR WIDTH OF ADJACENT ACCESSIBLE ROUTES.

**503 PASSENGER LOADING ZONES 503.1 GENERAL.** PASSENGER LOADING ZONES SHALL COMPLY WITH 503.

503.2 VEHICLE PULL-UP SPACE. PASSENGER LOADING ZONES SHALL PROVIDE A VEHICULAR PULL-UP SPACE 96 INCHES (2440 MM) WIDE MINIMUM AND 20 FEET (6100 MM) LONG MINIMUM 503.3 ACCESS AISLE. PASSENGER LOADING ZONES SHALL PROVIDE ACCESS AISLES COMPLYING WITH 503 ADJACENT TO THE VEHICLE PULL-UP SPACE. ACCESS AISLES SHALL ADJOIN AN ACCESSIBLE ROUTE AND SHALL NOT OVERLAP THE VEHICULAR WAY. **503.3.1 WIDTH.** ACCESS AISLES SERVING VEHICLE PULL-UP SPACES SHALL BE 60 INCHES (1525 MM) WIDE MINIMUM. 503.3.2 LENGTH. ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE VEHICLE 503.3.3 MARKING. ACCESS AISLES SHALL BE MARKED SO AS TO DISCOURAGE PARKING 503.4 FLOOR AND GROUND SURFACES. VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL COMPLY WITH 302. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE VEHICLE PULL-UP SPACE THEY SERVE. CHANGES IN LEVEL ARE NOT 503.5 VERTICAL CLEARANCE. VEHICLE PULL-UP SPACES, ACCESS AISLES SERVING THEM, AND A VEHICULAR ROUTE FROM AN ENTRANCE TO THE PASSENGER LOADING

PROVIDE A VERTICAL CLEARANCE OF 114 INCHES (2895 MM) MINIMUM.

**504 STARIWAYS** 504.1 GENERAL. STAIRS SHALL COMPLY WITH 504. 504.2 TREADS AND RISERS. ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS. RISERS SHALL BE 4 INCHES (100 MM)

ZONE, AND FROM THE PASSENGER LOADING ZONE TO A VEHICULAR EXIT SHALL

HIGH MINIMUM AND 7 INCHES (180 MM) HIGH MAXIMUM. TREADS SHALL BE 11 INCHES (280 MM) DEEP MINIMUM 504.3 OPEN RISERS. OPEN RISERS ARE NOT PERMITTED. 504.4 TREAD SURFACE. STAIR TREADS SHALL COMPLY WITH 302. CHANGES IN LEVEL ARE NOT PERMITTED **504.5 NOSINGS.** THE RADIUS OF CURVATURE AT THE LEADING EDGE OF THE TREAD SHALL BE 1/2 INCH (13 MM) MAXIMUM, NOSINGS THAT PROJECT BEYOND RISERS SHALI HAVE THE UNDERSIDE OF THE LEADING EDGE CURVED OR BEVELED. RISERS SHALL BE PERMITTED TO SLOPE UNDER THE TREAD AT AN ANGLE OF 30 DEGREES MAXIMUM

FROM VERTICAL. THE PERMITTED PROJECTION OF THE NOSING SHALL EXTEND 1 1/2 INCHES (38 MM) MAXIMUM OVER THE TREAD BELOW. 504.6 HANDRAILS. STAIRS SHALL HAVE HANDRAILS COMPLYING WITH 505. **504.7 WET CONDITIONS**. STAIR TREADS AND LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT THE ACCUMULATION OF WATER.

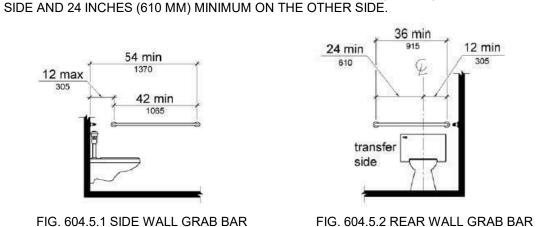
**505 HANDRAILS** 505.1 GENERAL. HANDRAILS PROVIDED ALONG WALKING SURFACES COMPLYING WITH 403, REQUIRED AT RAMPS COMPLYING WITH 405, AND REQUIRED AT STAIRS

COMPLYING WITH 504 SHALL COMPLY WITH 505. 505.2 WHERE REQUIRED. HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS AND RAMPS. 505.3 CONTINUITY. HANDRAILS SHALL BE CONTINUOUS WITHIN THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN. INSIDE HANDRAILS ON SWITCHBACK OR DOGLEG STAIRS AND RAMPS SHALL BE CONTINUOUS BETWEEN FLIGHTS OR RUNS. 505.4 HEIGHT. TOP OF GRIPPING SURFACES OF HANDRAILS SHALL BE 34 INCHES (865 MM) MINIMUM AND 38 INCHES (965 MM) MAXIMUM VERTICALLY ABOVE WALKING SURFACES, STAIR NOSINGS, AND RAMP SURFACES. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT ABOVE WALKING SURFACES, STAIR NOSINGS, AND RAMP SURFACES. **505.5 CLEARANCE**. CLEARANCE BETWEEN HANDRAIL GRIPPING SURFACES AND

ADJACENT SURFACES SHALL BE 1 1/2 INCHES (38 MM) MINIMUM.

FIG. 604.5.1 SIDE WALL GRAB BAR

AT WATER CLOSETS



AT WATER CLOSETS

505.6 GRIPPING SURFACE. HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS ALONG THEIR LENGTH AND SHALL NOT BE OBSTRUCTED ALONG THEIR TOPS OR SIDES. THE BOTTOMS OF HANDRAIL GRIPPING SURFACES SHALL NOT BE OBSTRUCTED FOR MORE THAN 20 PERCENT OF THEIR LENGTH. WHERE PROVIDED, HORIZONTAL PROJECTIONS SHALL OCCUR 1 1/2 INCHES (38 MM) MINIMUM BELOW THE BOTTOM OF THE HANDRAIL GRIPPING SURFACE. 505.7 CROSS SECTION. HANDRAIL GRIPPING SURFACES SHALL HAVE A CROSS SECTION COMPLYING WITH 505.7.1 OR 505.7.2. **505.7.1** CIRCULAR CROSS SECTION. HANDRAIL GRIPPING SURFACES WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/4 INCHES (32 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM.

505.7.2 NON-CIRCULAR CROSS SECTIONS. HANDRAIL GRIPPING SURFACES WITH A NON-CIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4 INCHES (100 MM) MINIMUM AND 6 1/4 INCHES (160 MM) MAXIMUM, AND A CROSS-SECTION DIMENSION OF 2 1/4 INCHES (57 MM) MAXIMUM.505.7 CROSS SECTION. HANDRAIL GRIPPING SURFACES SHALL HAVE A CROSS SECTION COMPLYING WITH 505.7.1 OR

505.7.1 CIRCULAR CROSS SECTION. HANDRAIL GRIPPING SURFACES WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/4 INCHES (32 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM. 505.7.2 NON-CIRCULAR CROSS SECTIONS. HANDRAIL GRIPPING SURFACES WITH A NON-CIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4 INCHES (100 MM) MINIMUM AND 6 1/4 INCHES (160 MM) MAXIMUM, AND A CROSS-SECTION DIMENSION OF 2 1/4 INCHES (57 MM) MAXIMUM. 505.8 SURFACES. HANDRAIL GRIPPING SURFACES AND ANY SURFACES ADJACENT TO

THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED 505.9 FITTINGS. HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS. **505.10 HANDRAIL EXTENSIONS.** HANDRAIL GRIPPING SURFACES SHALL EXTEND BEYOND AND IN THE SAME DIRECTION OF STAIR FLIGHTS AND RAMP RUNS IN ACCORDANCE WITH 505 10 505.10.1 TOP AND BOTTOM EXTENSION AT RAMPS. RAMP HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 12 INCHES (305 MM) MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT RAMP RUN 505.10.2 TOP EXTENSION AT STAIRS. AT THE TOP OF A STAIR FLIGHT, HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 12 INCHES (305 MM) MINIMUM BEGINNING DIRECTLY ABOVE THE FIRST RISER NOSING. EXTENSIONS SHALL RETURN HANDRAIL OF AN ADJACENT STAIR FLIGHT.

TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE 505.10.3 BOTTOM EXTENSION AT STAIRS. AT THE BOTTOM OF A STAIR FLIGHT HANDRAILS SHALL EXTEND AT THE SLOPE OF THE STAIR FLIGHT FOR A HORIZONTAL DISTANCE AT LEAST EQUAL TO ONE TREAD DEPTH BEYOND THE LAST RISER NOSING. EXTENSION SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT STAIR FLIGHT. **602 DRINKING FOUNTAINS** 

**602.1 GENERAL.** DRINKING FOUNTAINS SHALL COMPLY WITH 307 AND 602. 602.2 CLEAR FLOOR SPACE. UNITS SHALL HAVE A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR A FORWARD APPROACH AND CENTERED ON THE UNIT. KNEE AND TOE CLEARANCE COMPLYING WITH 306 SHALL BE PROVIDED. **602.3 OPERABLE PARTS.** OPERABLE PARTS SHALL COMPLY WITH 309. 602.4 SPOUT HEIGHT. SPOUT OUTLETS SHALL BE 36 INCHES (915 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. **602.5 SPOUT LOCATION.** THE SPOUT SHALL BE LOCATED 15 INCHES (380 MM) MINIMUM FROM THE VERTICAL SUPPORT AND 5 INCHES (125 MM) MAXIMUM FROM THE FRONT EDGE OF THE UNIT, INCLUDING BUMPERS.

**602.6 WATER FLOW.** THE SPOUT SHALL PROVIDE A FLOW OF WATER 4 INCHES (100 MM) HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES (125 MM) MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHERE SPOUTS ARE LOCATED LESS THAN 3 INCHES (75 MM) OF THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES (75 MM) AND 5 INCHES (125 MM) MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM. 602.7 DRINKING FOUNTAINS FOR STANDING PERSONS. SPOUT OUTLETS OF DRINKING FOUNTAINS FOR STANDING PERSONS SHALL BE 38 INCHES (965 MM) MINIMUM AND 43 INCHES (1090 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.

#### **603 TOILET & BATHING ROOMS**

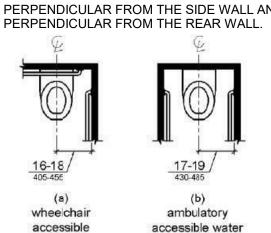
**603.1 GENERAL.** TOILET AND BATHING ROOMS SHALL COMPLY WITH 603. 603.2 CLEARANCES. CLEARANCES SHALL COMPLY WITH 603.2. 603.2.1 TURNING SPACE. TURNING SPACE COMPLYING WITH 304 SHALL BE PROVIDED 603.2.2 OVERLAP. REQUIRED CLEAR FLOOR SPACES, CLEARANCE AT FIXTURES, AND TURNING SPACE SHALL BE PERMITTED TO OVERLAP. 603.2.3 DOOR SWING. DOORS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR

CLEARANCE REQUIRED FOR ANY FIXTURE. DOORS SHALL BE PERMITTED TO SWING INTO THE REQUIRED TURNING SPACE. 603.3 MIRRORS. MIRRORS LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40 INCHES (1015 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. MIRRORS NOT LOCATED ABOVE LAVATORIES OR COUNTERTOPS SHALL BE INSTALLED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES (890 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. 603.4 COAT HOOKS AND SHELVES, COAT HOOKS SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308. SHELVES SHALL BE LOCATED 40 INCHES (1015 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR

### 604 WATER CLOSETS AND TOILET COMPARTMENTS

**604.1 GENERAL.** WATER CLOSETS AND TOILET COMPARTMENTS SHALL COMPLY WITH 604.2 THROUGH 604.8. 604.2 LOCATION. THE WATER CLOSET SHALL BE POSITIONED WITH A WALL OR PARTITION TO THE REAR AND TO ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 16 INCHES (405 MM) MINIMUM TO 18 INCHES (455 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION, EXCEPT THAT THE WATER CLOSET SHALL BE 17 INCHES (430) MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION IN THE AMBULATORY ACCESSIBLE TOILET COMPARTMENT SPECIFIED IN 604.8.2. WATER CLOSETS SHALL BE ARRANGED FOR A LEFT-HAND OR RIGHT-HAND APPROACH. **604.3 CLEARANCE**. CLEARANCES AROUND WATER CLOSETS AND IN TOILET COMPARTMENTS SHALL COMPLY WITH 604.3.

**604.3.1 SIZE.** CLEARANCE AROUND A WATER CLOSET SHALL BE 60 INCHES (1525 MM) MINIMUM MEASURED PERPENDICULAR FROM THE SIDE WALL AND 56 INCHES (1420 MM) MINIMUM MEASURED PERPENDICULAR FROM THE REAR WALL.



water closets closets FIG. 604.2 WATER CLOSET LOCATION

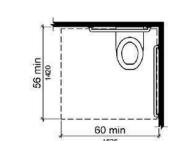


FIG. 604.3.1 SIZE OF CLEARANCE AT WATER CLOSETS

604.3.2 OVERLAP. THE REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, DISPENSERS, SANITARY NAPKIN DISPOSAL UNITS, COAT HOOKS, SHELVES, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AND CLEARANCES REQUIRED AT OTHER FIXTURES, AND THE TURNING SPACE. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.

604.4 SEATS. THE SEAT HEIGHT OF A WATER CLOSET ABOVE THE FINISH FLOOR SHALL BE 17 INCHES (430 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM MEASURED TO THE TOP OF THE SEAT. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION. **604.5 GRAB BARS.** GRAB BARS FOR WATER CLOSETS SHALL COMPLY WITH 609. GRAB BARS SHALL BE PROVIDED ON THE SIDE WALL CLOSEST TO THE WATER CLOSET AND ON THE REAR WAL

604.5.1 SIDE WALL. THE SIDE WALL GRAB BAR SHALL BE 42 INCHES (1065 MM) LONG MINIMUM, LOCATED 12 INCHES (305 MM) MAXIMUM FROM THE REAR WALL AND EXTENDING 54 INCHES (1370 MM) MINIMUM FROM THE REAR WALL. **604.5.2 REAR WALL.** THE REAR WALL GRAB BAR SHALL BE 36 INCHES (915 MM) LONG MINIMUM AND EXTEND FROM THE CENTERLINE OF THE WATER CLOSET 12 INCHES (305 MM) MINIMUM ON ONE

604.7 DISPENSERS. TOILET PAPER DISPENSERS SHALL COMPLY WITH 309.4 AND SHALL BE 7 INCHES (180 MM) MINIMUM AND 9 INCHES (230 MM) MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE 15 INCHES (380 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR AND SHALL NOT BE LOCATED BEHIND GRAB BARS. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY OR THAT DOES NOT ALLOW CONTINUOUS PAPER FLOW.

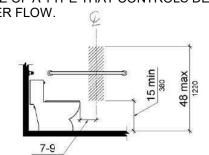


FIG. 604.7 DISPENSER OUTLET LOCATION

**604.8 TOILET COMPARTMENTS.** WHEELCHAIR ACCESSIBLE TOILET COMPARTMENTS SHALL MEET THE REQUIREMENTS OF 604.8.1 AND 604.8.3. COMPARTMENTS CONTAINING MORE THAN ONE PLUMBING FIXTURE SHALL COMPLY WITH 603. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH 604.8.2 AND 604.8.3. **604.8.1 WHEELCHAIR ACCESSIBLE COMPARTMENTS.** WHEELCHAIR ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH 604.8.1.

**604.8.1.1 SIZE.** WHEELCHAIR ACCESSIBLE COMPARTMENTS SHALL BE 60 INCHES

(1525 MM) WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND

56 INCHES (1420 MM) DEEP MINIMUM FOR WALL HUNG WATER CLOSETS AND 59 INCHES (1500 MM) DEEP MINIMUM FOR FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL. WHEELCHAIR ACCESSIBLE COMPARTMENTS FOR CHILDREN'S USE SHALL BE 60 INCHES (1525 MM) WIDE MINIMUM MEASURED PERPENDICULAR TO THE SIDE WALL, AND 59 INCHES (1500 MM) DEEP MINIMUM FOR WALL HUNG AND FLOOR MOUNTED WATER CLOSETS MEASURED PERPENDICULAR TO THE REAR WALL. 604.8.1.2 DOORS. TOILET COMPARTMENT DOORS. INCLUDING DOOR HARDWARE, SHALL COMPLY WITH 404 EXCEPT THAT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR. CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42 INCHES (1065 MM) MINIMUM. DOORS SHALL BE LOCATED IN THE FRONT PARTITION OR IN THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET. WHERE LOCATED IN THE FRONT PARTITION, THE DOOR OPENING SHALL BE 4 INCHES (100 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET. WHERE LOCATED IN THE SIDE WALL OR PARTITION, THE DOOR OPENING SHALL BE 4 INCHES (100 MM) MAXIMUM FROM THE FRONT PARTITION. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL COMPLYING WITH 404.2.7 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. TOILET COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA.

604.8.1.3 APPROACH. COMPARTMENTS SHALL BE ARRANGED FOR LEFT-HAND OR RIGHT-HAND APPROACH TO THE WATER CLOSET. **604.8.1.4 TOE CLEARANCE.** THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 9 INCHES (230 MM) MINIMUM ABOVE THE FINISH FLOOR AND 6 INCHES (150 MM) DEEP MINIMUM BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS. COMPARTMENTS FOR CHILDREN'S USE SHALL PROVIDE A TOE CLEARANCE OF 12 INCHES (305 MM) MINIMUM ABOVE THE FINISH FLOOR.





FIG. 604.8.1.2 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT DOORS

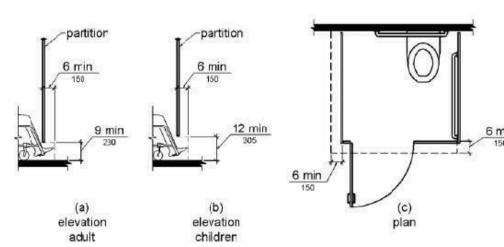


FIG. 604.8.1.4 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT TOE CLEARANCE

7A 8A	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
Water Closet Centerline	12 inches (305 mm)	12 to 15 inches (305 to 380 mm)	15 to 18 inches (380 to 455 mm)
Toilet Seat Height	11 to 12 inches (280 to 305 mm)	12 to 15 inches (305 to 380 mm)	15 to 17 inches (380 to 430 mm)
Grab Bar Height	18 to 20 inches (455 to 510 mm)	20 to 25 inches (510 to 635 mm)	25 to 27 inches (635 to 685 mm)
Dispenser Height	, 14 inches (355 mm)	14 to 17 inches (355 to 430 mm)	17 to 19 inches (430 to 485 mm)

**604.8.1.5 GRAB BARS.** GRAB BARS SHALL COMPLY WITH 609. A SIDE-WALL GRAB BAR COMPLYING WITH 604.5.1 SHALL BE PROVIDED AND SHALL BE LOCATED ON THE WALL CLOSEST TO THE WATER CLOSET. IN ADDITION, A REAR-WALL GRAB BAR COMPLYING WITH 604.5.2 SHALL BE PROVIDED 604.8.2 AMBULATORY ACCESSIBLE COMPARTMENTS. AMBULATORY ACCESSIBLE COMPARTMENTS SHALL COMPLY WITH 604.8.2. **604.8.2.1 SIZE.** AMBULATORY ACCESSIBLE COMPARTMENTS SHALL HAVE A

DEPTH OF 60 INCHES (1525 MM) MINIMUM AND A WIDTH OF 35 INCHES (890 MM) MINIMUM AND 37 INCHES (940 MM) MAXIMUM. **604.8.2.2 DOORS.** TOILET COMPARTMENT DOORS, INCLUDING DOOR HARDWARE, SHALL COMPLY WITH 404, EXCEPT THAT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 42 INCHES (1065 MM) MINIMUM. THE DOOR SHALL BE SELF-CLOSING. A DOOR PULL COMPLYING WITH 404.2.7 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH. TOILET COMPARTMENT DOORS SHALL NOT SWING INTO THE MINIMUM REQUIRED COMPARTMENT AREA. **604.8.2.3 GRAB BARS.** GRAB BARS SHALL COMPLY WITH 609. A SIDE-WALL GRAB BAR COMPLYING WITH 604.5.1 SHALL BE PROVIDED ON BOTH SIDES OF THE

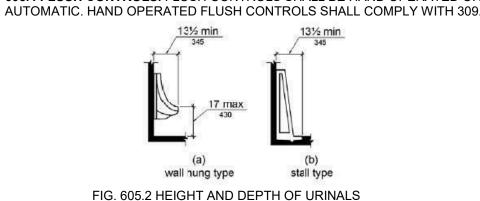
604.8.3 COAT HOOKS AND SHELVES. COAT HOOKS SHALL BE LOCATED WITHIN ONE OF THE REACH RANGES SPECIFIED IN 308. SHELVES SHALL BE LOCATED 40 INCHES (1015 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FINISH FLOOR. 604.9 WATER CLOSETS AND TOILET COMPARTMENTS FOR CHILDREN'S USE. WATER CLOSETS AND TOILET COMPARTMENTS FOR CHILDREN'S USE SHALL COMPLY WITH

**604.9.1 LOCATION.** THE WATER CLOSET SHALL BE LOCATED WITH A WALL OR PARTITION TO THE REAR AND TO ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 12 INCHES (305 MM) MINIMUM AND 18 INCHES (455 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION, EXCEPT THAT THE WATER CLOSET SHALL BE 17 INCHES (430 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM FROM THE SIDE WALL OR PARTITION IN THE AMBULATORY ACCESSIBLE TOILET COMPARTMENT SPECIFIED IN 604.8.2. COMPARTMENTS SHALL BE ARRANGED FOR LEFT-HAND OR RIGHT-HAND APPROACH TO THE WATER CLOSET. **604.9.2 CLEARANCE**. CLEARANCE AROUND A WATER CLOSET SHALL COMPLY WITH

**604.9.3 HEIGHT.** THE HEIGHT OF WATER CLOSETS SHALL BE 11 INCHES (280 MM) MINIMUM AND 17 INCHES (430 MM) MAXIMUM MEASURED TO THE TOP OF THE SEAT. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION. 604.9.4 GRAB BARS, GRAB BARS FOR WATER CLOSETS SHALL COMPLY WITH 604.5. **604.9.5 FLUSH CONTROLS**. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS SHALL COMPLY WITH 309.2 AND 309.4 AND SHALL BE INSTALLED 36 INCHES (915 MM) MAXIMUM ABOVE THE FINISH FLOOR. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET EXCEPT IN AMBULATORY ACCESSIBLE COMPARTMENTS COMPLYING WITH 604.8.2. 604.9.6 DISPENSERS. TOILET PAPER DISPENSERS SHALL COMPLY WITH 309.4 AND SHALL BE 7 INCHES (180 MM) MINIMUM AND 9 INCHES (230 MM) MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE 14 INCHES (355 MM) MINIMUM AND 19 INCHES (485 MM) MAXIMUM ABOVE THE FINISH FLOOR. THERE SHALL BE A CLEARANCE OF 1 1/2 INCHES (38 MM) MINIMUM BELOW THE GRAB BAR. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY OR THAT DOES NOT ALLOW CONTINUOUS PAPER FLOW. 604.9.7 TOILET COMPARTMENTS. TOILET COMPARTMENTS SHALL COMPLY WITH 604.8.

#### 605 URINALS

**605.1 GENERAL.** URINALS SHALL COMPLY WITH 605. 605.2 HEIGHT AND DEPTH. URINALS SHALL BE THE STALL-TYPE OR THE WALL-HUNG TYPE WITH THE RIM 17 INCHES (430 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. URINALS SHALL BE 13 1/2 INCHES (345 MM) DEEP MINIMUM MEASURED FROM THE OUTER FACE OF THE URINAL RIM TO THE BACK OF THE FIXTURE. **605.3 CLEAR FLOOR SPACE.** A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR FORWARD APPROACH SHALL BE PROVIDED. 605.4 FLUSH CONTROLS. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS SHALL COMPLY WITH 309. 605.3 CLEAR FLOOR SPACE. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH 305 POSITIONED FOR FORWARD APPROACH SHALL BE PROVIDED. 605.4 FLUSH CONTROLS. FLUSH CONTROLS SHALL BE HAND OPERATED OR



606 LAVATORIES AND SINKS 606.1 GENERAL. LAVATORIES AND SINKS SHALL COMPLY WITH 606. 606.2 CLEAR FLOOR SPACE. A CLEAR FLOOR SPACE COMPLYING WITH 305. POSITIONED FOR A FORWARD APPROACH, AND KNEE AND TOE CLEARANCE COMPLYING WITH 306 SHALL BE PROVIDED. 606.3 HEIGHT. LAVATORIES AND SINKS SHALL BE INSTALLED WITH THE FRONT OF THE HIGHER OF THE RIM OR COUNTER SURFACE 34 INCHES (865 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. **606.4 FAUCETS.** CONTROLS FOR FAUCETS SHALL COMPLY WITH 309. HAND-OPERATED METERING FAUCETS SHALL REMAIN OPEN FOR 10 SECONDS MINIMUM. 606.5 EXPOSED PIPES AND SURFACES. WATER SUPPLY AND DRAIN PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS

609.1 GENERAL. GRAB BARS IN TOILET FACILITIES AND BATHING FACILITIES SHALL COMPLY WITH 609. 609.2 CROSS SECTION. GRAB BARS SHALL HAVE A CROSS SECTION COMPLYING WITH 609.2.1 CIRCULAR CROSS SECTION. GRAB BARS WITH CIRCULAR CROSS SECTIONS SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/4 INCHES (32 MM) MINIMUM AND 2 INCHES 609.2.2 NON-CIRCULAR CROSS SECTION. GRAB BARS WITH NON-CIRCULAR CROSS SECTIONS SHALL HAVE A CROSS-SECTION DIMENSION OF 2 INCHES (51 MM) MAXIMUM AND A PERIMETER DIMENSION OF 4 INCHES (100 MM) MINIMUM AND 4.8 INCHES (120 MM) MAXIMUM. 609.3 SPACING. THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1 1/2 INCHES (38 MM). THE SPACE BETWEEN THE GRAB BAR AND PROJECTING OBJECTS BELOW AND AT THE ENDS SHALL BE 1 1/2 INCHES (38 MM) MINIMUM. THE SPACE BETWEEN THE GRAB BAR AND PROJECTING OBJECTS ABOVE SHALL BE 12 INCHES (305 609.4 POSITION OF GRAB BARS. GRAB BARS SHALL BE INSTALLED IN A HORIZONTAL POSITION, 33 INCHES (840 MM) MINIMUM AND 36 INCHES (915 MM) MAXIMUM ABOVE THE FINISH FLOOR MEASURED TO THE TOP OF THE GRIPPING SURFACE, EXCEPT THAT AT

INSTALLED IN A HORIZONTAL POSITION 18 INCHES (455 MM) MINIMUM AND 27 INCHES (685 MM) MAXIMUM ABOVE THE FINISH FLOOR MEASURED TO THE TOP OF THE GRIPPING SURFACE. THE HEIGHT OF THE LOWER GRAB BAR ON THE BACK WALL OF A BATHTUB SHALL COMPLY WITH 607.4.1.1 OR 607.4.2.1. **609.5 SURFACE HAZARDS.** GRAB BARS AND ANY WALL OR OTHER SURFACES ADJACENT TO GRAB BARS SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES. 609.6 FITTINGS. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS. 609.7 INSTALLATION. GRAB BARS SHALL BE INSTALLED IN ANY MANNER THAT PROVIDES A GRIPPING SURFACE AT THE SPECIFIED LOCATIONS AND THAT DOES NOT OBSTRUCT THE REQUIRED CLEAR FLOOR SPACE. 609.8 STRUCTURAL STRENGTH. ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR

MATERIALS USED WHEN A VERTICAL OR HORIZONTAL FORCE OF 250 POUNDS (1112 N)

IS APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER, MOUNTING DEVICE, OR

WATER CLOSETS FOR CHILDREN'S USE COMPLYING WITH 604.9, GRAB BARS SHALL BE

#### **702 FIRE ALARM SYSTEMS**

SUPPORTING STRUCTURE.

702.1 GENERAL. FIRE ALARM SYSTEMS SHALL HAVE PERMANENTLY INSTALLED AUDIBLE AND VISIBLE ALARMS COMPLYING WITH NFPA 72 (1999 OR 2002 EDITION) (INCORPORATED BY REFERENCE, SEE "REFERENCED STANDARDS" IN CHAPTER 1 EXCEPT THAT THE MAXIMUM ALLOWABLE SOUND LEVEL OF AUDIBLE NOTIFICATION APPLIANCES COMPLYING WITH SECTION 4-3.2.1 OF NFPA 72 (1999 EDITION) SHALL HAVE A SOUND LEVEL NO MORE THAN 110 DB AT THE MINIMUM HEARING DISTANCE FROM THE AUDIBLE APPLIANCE. IN ADDITION, ALARMS IN GUEST ROOMS REQUIRED TO PROVIDE COMMUNICATION FEATURES SHALL COMPLY WITH SECTIONS 4-3 AND 4-4 OF NFPA 72 (1999 EDITION) OR SECTIONS 7.4 AND 7.5 OF NFPA 72 (2002 EDITION).

703.1 GENERAL. SIGNS SHALL COMPLY WITH 703. WHERE BOTH VISUAL AND TACTILE CHARACTERS ARE REQUIRED. EITHER ONE SIGN WITH BOTH VISUAL AND TACTILE CHARACTERS, OR TWO SEPARATE SIGNS, ONE WITH VISUAL, AND ONE WITH TACTILE CHARACTERS, SHALL BE PROVIDED. 703.2 RAISED CHARACTERS. RAISED CHARACTERS SHALL COMPLY WITH 703.2 AND SHALL BE DUPLICATED IN BRAILLE COMPLYING WITH 703.3. RAISED CHARACTERS SHALL BE INSTALLED IN ACCORDANCE WITH 703.4. 703.2.1 DEPTH. RAISED CHARACTERS SHALL BE 1/32 INCH (0.8 MM) MINIMUM ABOVE THEIR BACKGROUND. 703.2.2 CASE. CHARACTERS SHALL BE UPPERCASE.

703.2.3 STYLE. CHARACTERS SHALL BE SANS SERIF. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS. 703.2.4 CHARACTER PROPORTIONS. CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". 703.2.5 CHARACTER HEIGHT. CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8 INCH (16 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I". 703.2.6 STROKE THICKNESS. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER. 703.2.7 CHARACTER SPACING. CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT RAISED CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES. WHERE CHARACTERS HAVE RECTANGULAR CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/8 INCH (3.2 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM. WHERE CHARACTERS HAVE OTHER CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/16 INCH (1.6 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS, AND 1/8 INCH (3.2 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPARATED FROM RAISED BORDERS AND DECORATIVE ELEMENTS 3/8 INCH (9.5 MM) MINIMUM. 703.2.8 LINE SPACING. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE RAISED CHARACTER HEIGHT. 703.3 BRAILLE. BRAILLE SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH 703.3 AND 703.4. 703.3.1 DIMENSIONS AND CAPITALIZATION. BRAILLE DOTS SHALL HAVE A DOMED OR ROUNDED SHAPE AND SHALL COMPLY WITH TABLE 703.3.1. THE INDICATION OF AN UPPERCASE LETTER OR LETTERS SHALL ONLY BE USED BEFORE THE FIRST WORD OF SENTENCES, PROPER NOUNS AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS, AND ACRONYMS 703.4 INSTALLATION HEIGHT AND LOCATION. SIGNS WITH TACTILE CHARACTERS SHALL

COMPLY WITH 703.4. 703.4.1 HEIGHT ABOVE FINISH FLOOR OR GROUND. TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48 INCHES (1220 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES (1525 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE

703.4.2 LOCATION, WHERE A TACTILE SIGN IS PROVIDED AT A DOOR. THE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF. THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR AT THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18 INCHES (455 MM) MINIMUM BY 18 INCHES (455 MM) MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN 703.5 VISUAL CHARACTERS. VISUAL CHARACTERS SHALL COMPLY WITH 703.5

703.5.1 FINISH AND CONTRAST. CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND. 703.5.2 CASE. CHARACTERS SHALL BE UPPERCASE OR LOWERCASE OR A COMBINATION OF BOTH. 703.5.3 STYLE, CHARACTERS SHALL BE CONVENTIONAL IN FORM, CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL

703.5.4 CHARACTER PROPORTIONS. CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 55 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". 703.5.5 CHARACTER HEIGHT. MINIMUM CHARACTER HEIGHT SHALL COMPLY WITH TABLE 703.5.5. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION PREVENTING FURTHER APPROACH TOWARDS THE SIGN. CHARACTER HEIGHT SHALL BE BASED ON THE UPPERCASE LETTER "I". 703.5.6 HEIGHT FROM FINISH FLOOR OR GROUND. VISUAL CHARACTERS SHALL BE 40

INCHES (1015 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

703.5.7 STROKE THICKNESS. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 30 PERCENT MAXIMUM OF THE HEIGHT OF THE 703.5.8 CHARACTER SPACING. CHARACTER SPACING SHALL BE MEASURED BETWEEN

THE TWO CLOSEST POINTS OF ADJACENT CHARACTERS, EXCLUDING WORD SPACES.

SPACING BETWEEN INDIVIDUAL CHARACTERS SHALL BE 10 PERCENT MINIMUM AND 35 PERCENT MAXIMUM OF CHARACTER HEIGHT. 703.5.9 LINE SPACING. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE CHARACTER HEIGHT. 703.6 PICTOGRAMS. PICTOGRAMS SHALL COMPLY WITH 703.6.

703.6.1 PICTOGRAM FIELD. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6 INCHES (150 MM) MINIMUM. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM

703.6.2 FINISH AND CONTRAST. PICTOGRAMS AND THEIR FIELD SHALL HAVE A NON-

GLARE FINISH, PICTOGRAMS SHALL CONTRAST WITH THEIR FIELD WITH EITHER A LIGHT PICTOGRAM ON A DARK FIELD OR A DARK PICTOGRAM ON A LIGHT FIELD. 703.6.3 TEXT DESCRIPTORS. PICTOGRAMS SHALL HAVE TEXT DESCRIPTORS LOCATED DIRECTLY BELOW THE PICTOGRAM FIELD. TEXT DESCRIPTORS SHALL COMPLY WITH 703.2, 703.3 AND 703.4. 703.7 SYMBOLS OF ACCESSIBILITY. SYMBOLS OF ACCESSIBILITY SHALL COMPLY WITH 703.7.1 FINISH AND CONTRAST. SYMBOLS OF ACCESSIBILITY AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. SYMBOLS OF ACCESSIBILITY SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER A LIGHT SYMBOL ON A DARK BACKGROUND OR A DARK SYMBOL ON A LIGHT BACKGROUND.

703.7.2 SYMBOLS. 703.7.2.1 INTERNATIONAL SYMBOL OF ACCESSIBILITY. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL COMPLY WITH FIGURE 703.7.2.1.



FIG. 703.7.2.1 INTERNATIONAL SYMBOL OF ACCESSIBILITY

7800 Airport Blvd Houston, TX 77061 HAS HOBBY AIRPORT RESTROOMS

> PHASE 3 PN209B | A.I.P. No.

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DESIGNER PROJECT No.: 1429.1 CONSTRUCTION **DOCUMENTS** 

**REVISIONS** No. DESCRIPTION DATE BY 09.30.22 HB 30% CD 10.28.22 HB 95% CD 12.09.22 HB 01.25.23 HB

PROJECT STATUS:

**DESIGN BY:** DRAWN BY: **CHECKED BY: ISSUE DATE:** 01/25/2023 **Hector Berrios APPROVED BY:** 

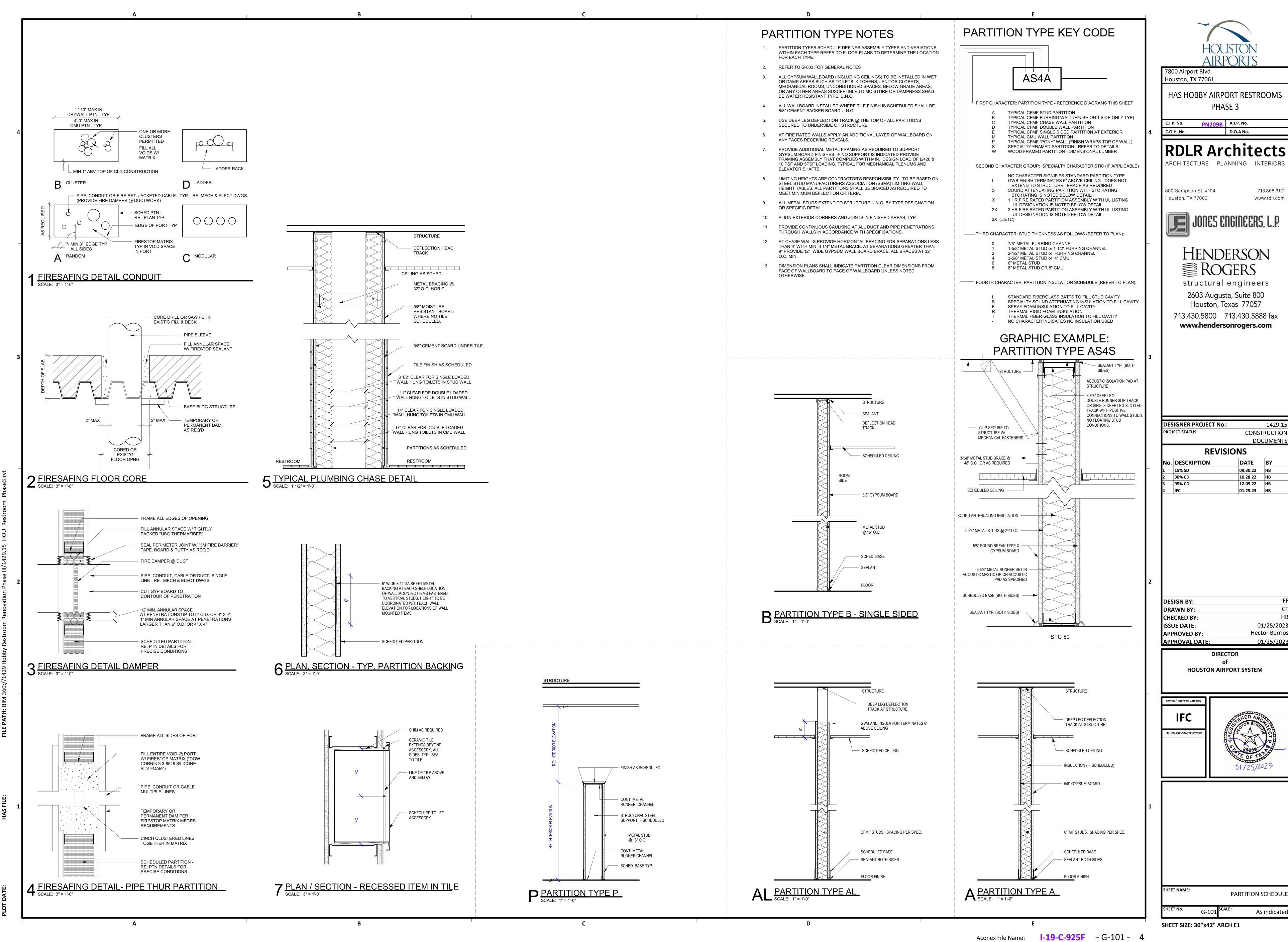
> DIRECTOR **HOUSTON AIRPORT SYSTEM**



**APPROVAL DATE:** 



HEET NAME: TEXAS ACCESSIBILITY GUIDELINES - 2 OF 7 12" = 1'-0"





1429.1 CONSTRUCTION

# DOCUMENTS



PARTITION SCHEDULI

## APPLICABLE BUILDING CODES

2015 INTERNATIONAL BUILDING CODE 2015 INTERNATIONAL FIRE CODE 2015 UNIFORM MECHANICAL CODE 2015 UNIFORM PLUMBING CODE 2020 NATIONAL ELECTRICAL CODE 2015 HOUSTON COMMERCIAL ENERGY CONSERVATION CODE CITY OF HOUSTON SIGN CODE CITY OF HOUSTON BUILDING CODE AMENDMENTS

HAS STANDARDS STATE OF TEXAS ACCESSIBILITY STANDARDS

#### SCOPE OF WORK

THE WORK SHALL BE DONE IN COMPLIANCE OF THESE DRAWINGS AND SPECIFICATIONS, AND FACILITIES CRITERIA DOCUMENT OF THE HOUSTON AIRPORT 2. THE WORK INCLUDES MINOR DEMOLITION; SAW CUTTING AND REMOVIING PORTIONS OF BUILDING WALLS, CEILINGS, WALL AND FLOOR FINISHES AND ASSOCIATED MECHANICAL; PLUMBING AND ELECTRICAL DEMOLITION. 3. THE WORK INCLUDES RESTROOMS RENOVATIONS AT HOBBY AIRPORT NONSECURE AREA. CONSTRUCTION INCLUDES INTERIOR BUILDING INPROVEMENTS INCLUDING WALLS, CEILINGS, ACCESSORIES, FINISHES AND LIGHTING. TECHNOLOGY, MECHANICAL, PLUMBING AND ELECTRICAL SYSTEMS WORK AS PER TECHNOLOGY AND MEP DRAWINGS AND SPECIFICATIONS. 4. THE WORK REQUIRES CAREFUL AND THROUGH COORDINATION WITH OWNER FURNISHED ITEMS AND SYSTEMS.

## **BUILDING CODE SUMMARY**

OCCUPANCY CLASSIFICATION

**EXISTING AIRPORT** OCCUPANCY TYPE: A3, RESTROOMS IN TRANSPORTATION TERMINALS, ACCESSORY OCCUPANCY

CONSTRUCTION TYPE: SPRINKLER:

BUILDING/PROJECT ADDRESS: 7800 AIRPORT BLVD

EXISTING TO REMAIN - OCCUPANCY CLASSIFICATION/OCCUPANCY LOAD NOT AFFECTED BY WORK

HOUSTON, TX 77061

ACCESSORY OCCUPANCIES

508.2.3 AGGREGATE ACCESSORY OCCUPANCIES SHALL NOT OCCUPY MORE THAN 10 PERCENT OF THE FLOOR AREA OF THE STORY IN WHICH THEY ARE LOCATED AND SHALL NOT EXCEED THE TABULAR VALUES FOR NONSPRINKLERED BUILDINGS IN TABLE 506.2 FOR EACH SUCH ACCESSORY OCCUPANCY

508.3.1 NONSEPARATED OCCUPANCIES SHALL BE INDIVIDUALLY CLASSIFIED IN ACCORDANCE WITH SECTION 302.1. CODE REQUIREMENTS SHALL APPLY TO EACH PORTION OF THE BUILDING BASED ON THE OCCUPANCY CLASSIFICATION OF THAT SPACE. IN ADDITION, THE MOST RESTRICTIVE PROVISIONS OF CHAPTER 9 THAT APPLY TO THE NONSEPRETED OCCUPANCIES SHALL APPLY TO THE TOTAL NONSEPARTED OCCUPANCY AREA. WHERE NONSEPARETED OCCUPANCIES OCCUR IN HIGH-RISE BUILDING, THE MOST RESTRCTIVE OF SECTION 403 THAT APPLY TO THE NONSEPARETED OCCUPANCIES

CONSTRUCTION REQUIREMENTS

CONSTRUCTION TYPE: TYPE 1A, [FULLY SPRINKLERED]

TABLE 601 FIRE RESISTIVE REQUIREMENTS FOR BUILDING ELEMENTS STRUCTURAL FRAME BEARING WALLS 3-HOUR

SHALL APPLY THROUGHOUT THE HIGH-RISE BUILDING.

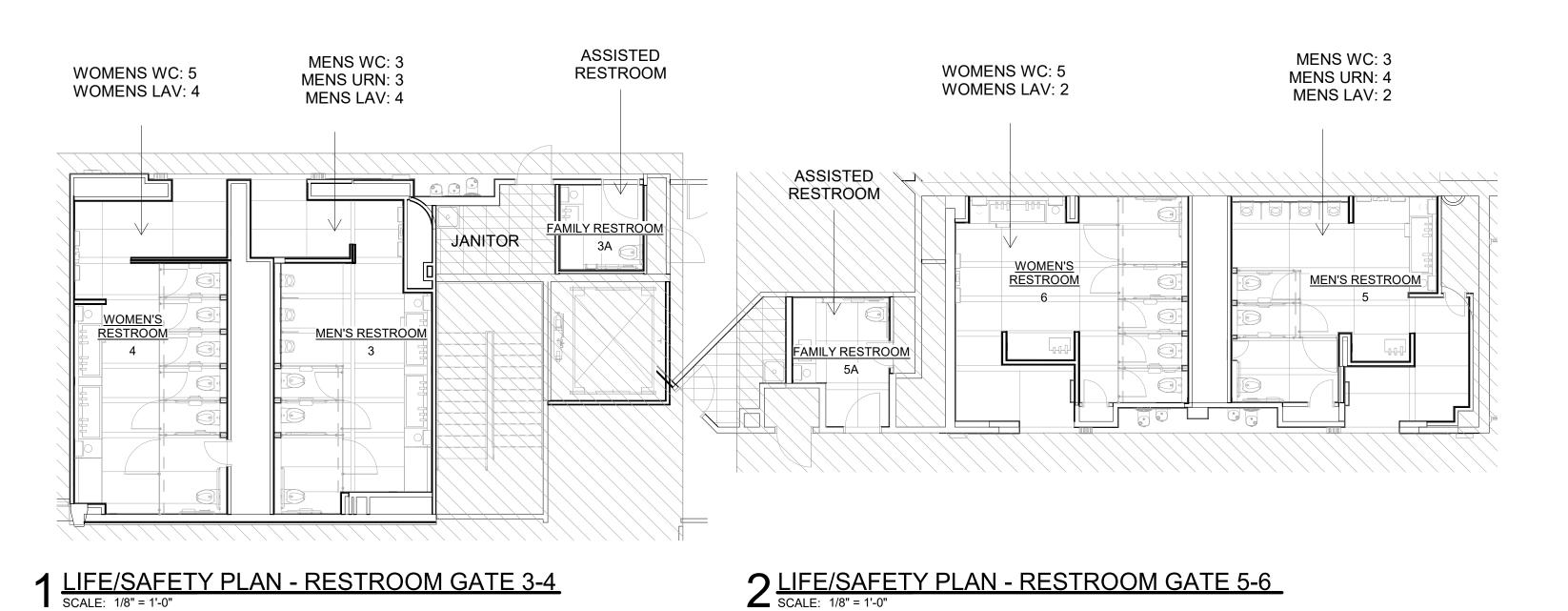
NONBEARING WALLS (INTERIOR) 0-HOUR FLOOR CONSTRUCTION 2-HOUR ROOF CONSTRUCTION 1.5-HOUR

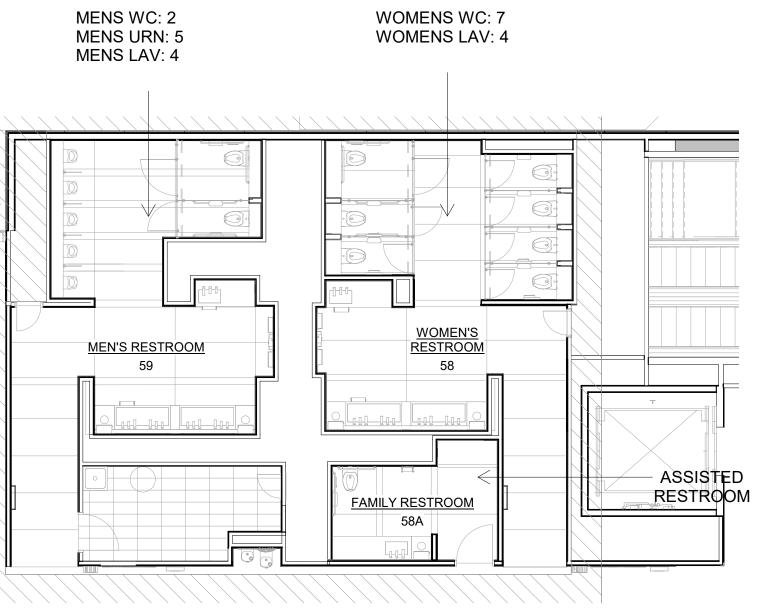
INTERIOR FINISHES

803.1.1 INTERIOR WALL AND FINISH MATERIALS

INTERIOR WALL AND FINISH CEILING MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E 84 OR UL 723

FLAME SPREAD INDEX SMOKE DEVELOPED INDEX CLASS A CLASS B 0-450 CLASS C 0-450 GROUP A-3 (SPRINKLERED) CORRIDORS CLASS B ROOMS & ENCLOSED SPACES CLASS C





3 LIFE/SAFETY PLAN - RESTROOM GATE 58-59
SCALE: 1/8" = 1'-0"

7800 Airport Blvd Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209B A.I.P. No. C.I.P. No. C.O.H. No.

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**DESIGNER PROJECT No.:** 1429.15 CONSTRUCTION

01.25.23 HB

#### **DOCUMENTS** DEVICIONS

REVISIONS		
ESCRIPTION	DATE	ВҮ
5% SD	09.30.22	НВ
0% CD	10.28.22	НВ
5% CD	12.09.22	НВ

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> DIRECTOR **HOUSTON AIRPORT SYSTEM**

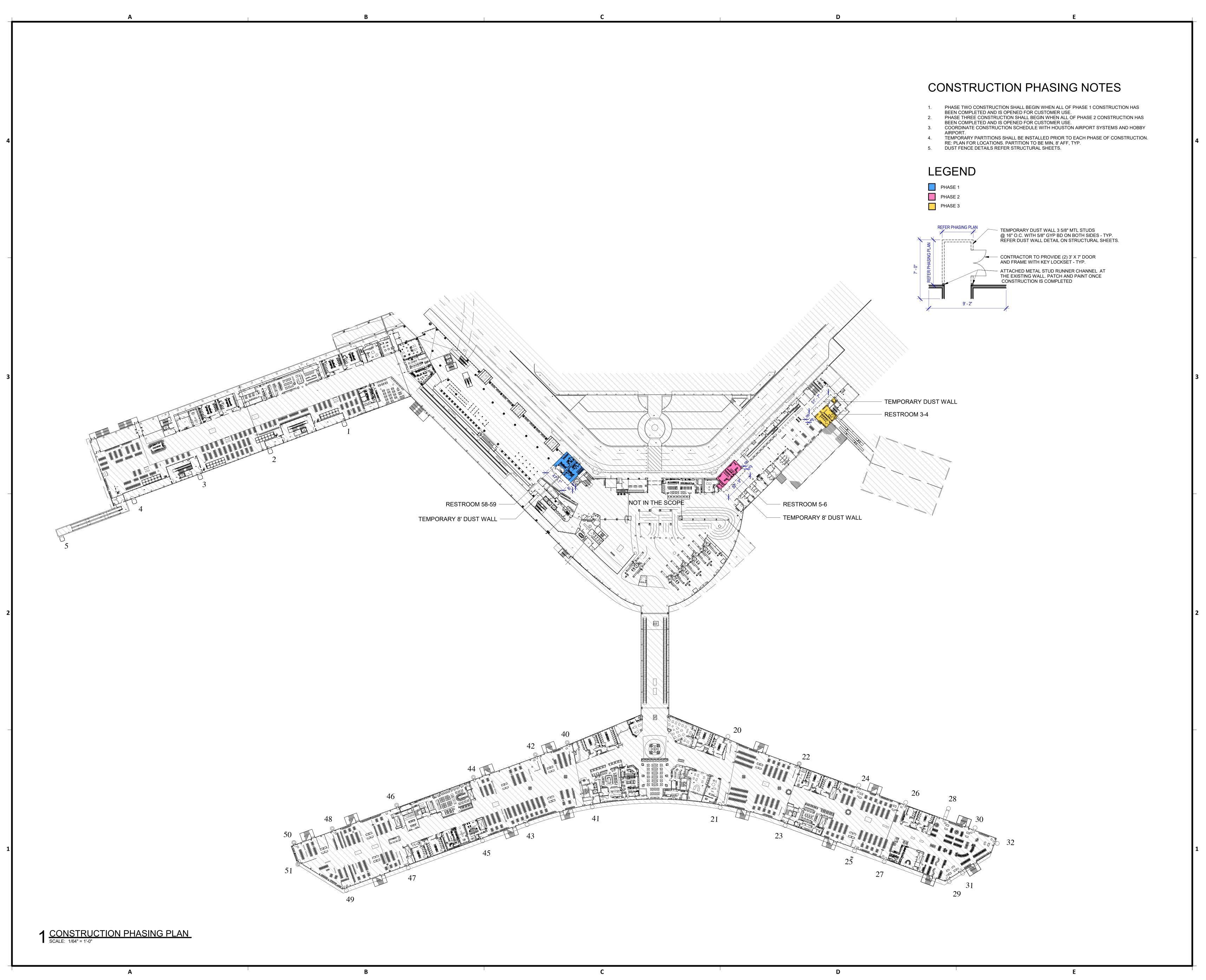


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SHEET NAME:
PLUMBING COUNT AND CODE SUMMARY

As indicated



HOUSTON AIRPORT

7800 Airport Blvd Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS
PHASE 3

C.I.P. No. PN209B A.I.P. No.

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PROJECT STATUS: CONSTRUCTION

## REVISIONS

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lo.	DESCRIPTION	DATE	ВҮ
	15% SD	09.30.22	НВ
	30% CD	10.28.22	НВ
	95% CD	12.09.22	НВ
	IFC	01.25.23	НВ

DESIGN BY:

DRAWN BY:

CT

CHECKED BY:

HB

ISSUE DATE:

O1/25/2023

APPROVED BY:

Hector Berrios

APPROVAL DATE:

01/25/2023

DIRECTOR of HOUSTON AIRPORT SYSTEM

IFC

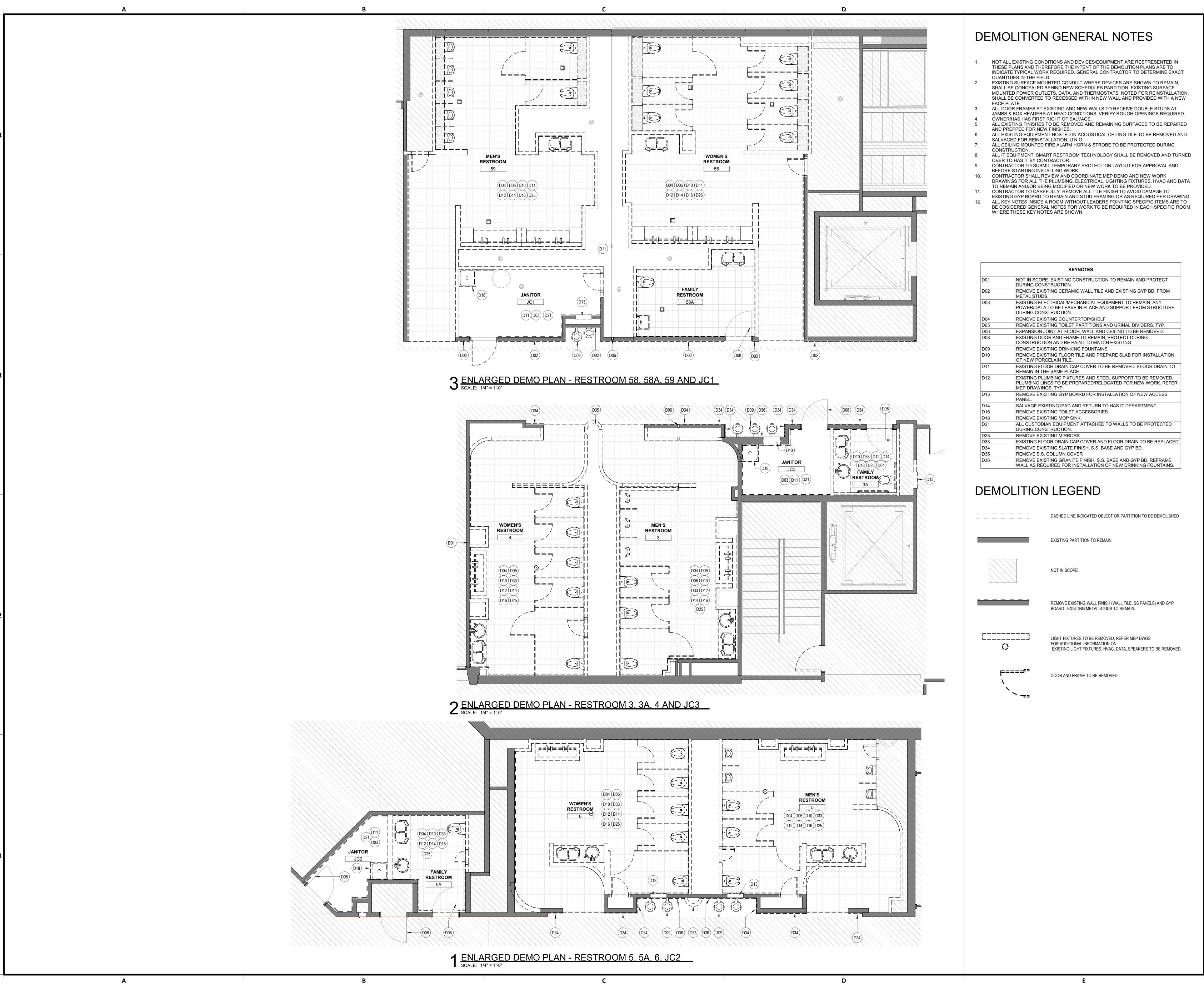
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**DOCUMENTS** 

## **REVISIONS**

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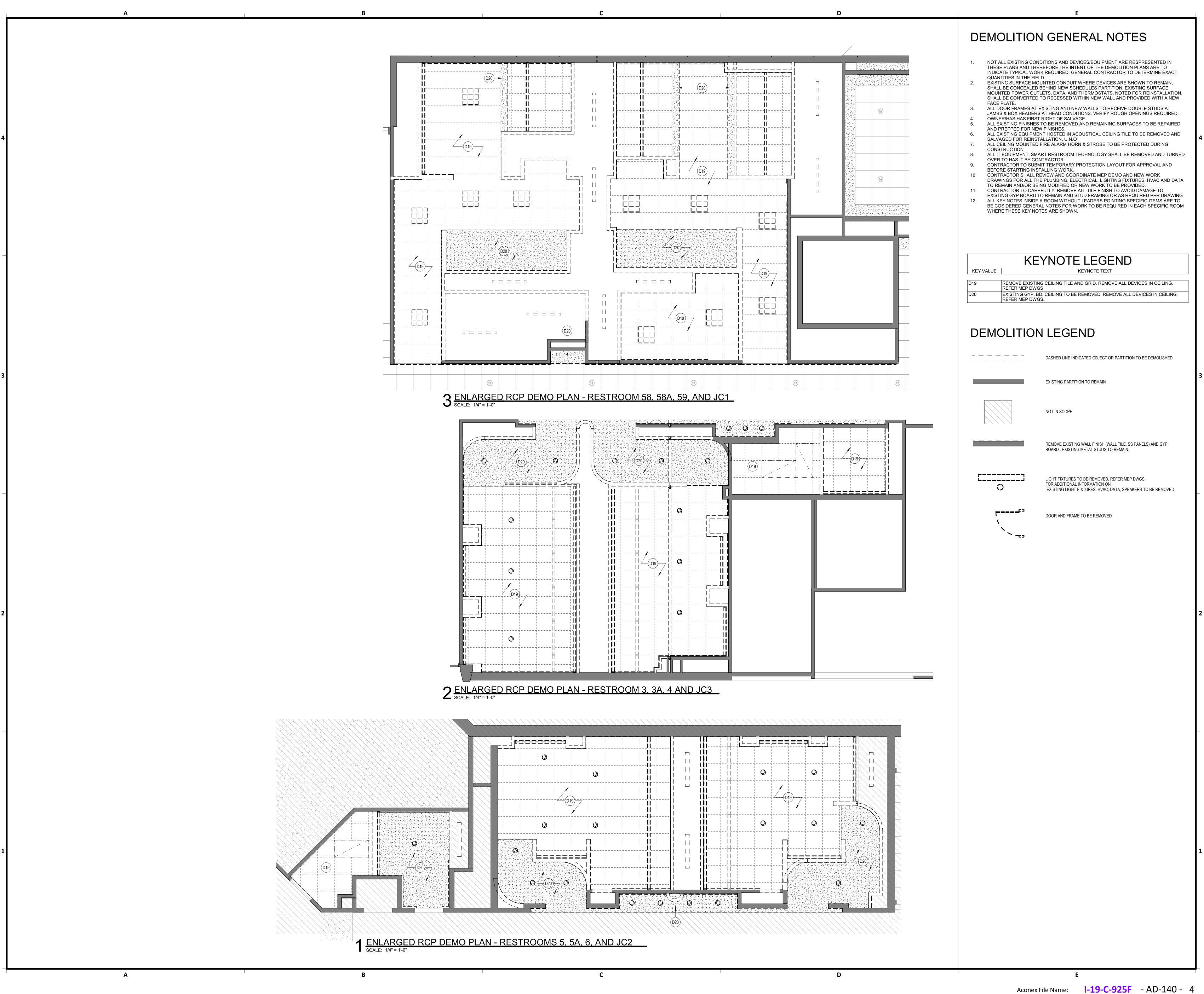
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**Hector Berrios** 

DEMOLITION PLAN



HAS HOBBY AIRPORT RESTROOMS PHASE 3

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**DOCUMENTS REVISIONS** 

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**APPROVAL DATE:** 

PROJECT STATUS:



As indicated

DEMOLITION RCF



HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209B A.I.P. No.
D.O.A No.

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ISSUED FOR CONSTRUCTION

**APPROVAL DATE:** 



1/64" = 1'-0"

OVERALL FLOOR PLAN - LEVEL 2

HAS HOBBY AIRPORT RESTROOMS PHASE 3

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**DESIGNER PROJECT No.:** CONSTRUCTION **DOCUMENTS REVISIONS** 

No. DESCRIPTION 01.25.23 HB

**DESIGN BY: DRAWN BY: CHECKED BY: ISSUE DATE:** 01/25/2023 APPROVED BY: **Hector Berrios** 

**HOUSTON AIRPORT SYSTEM** 

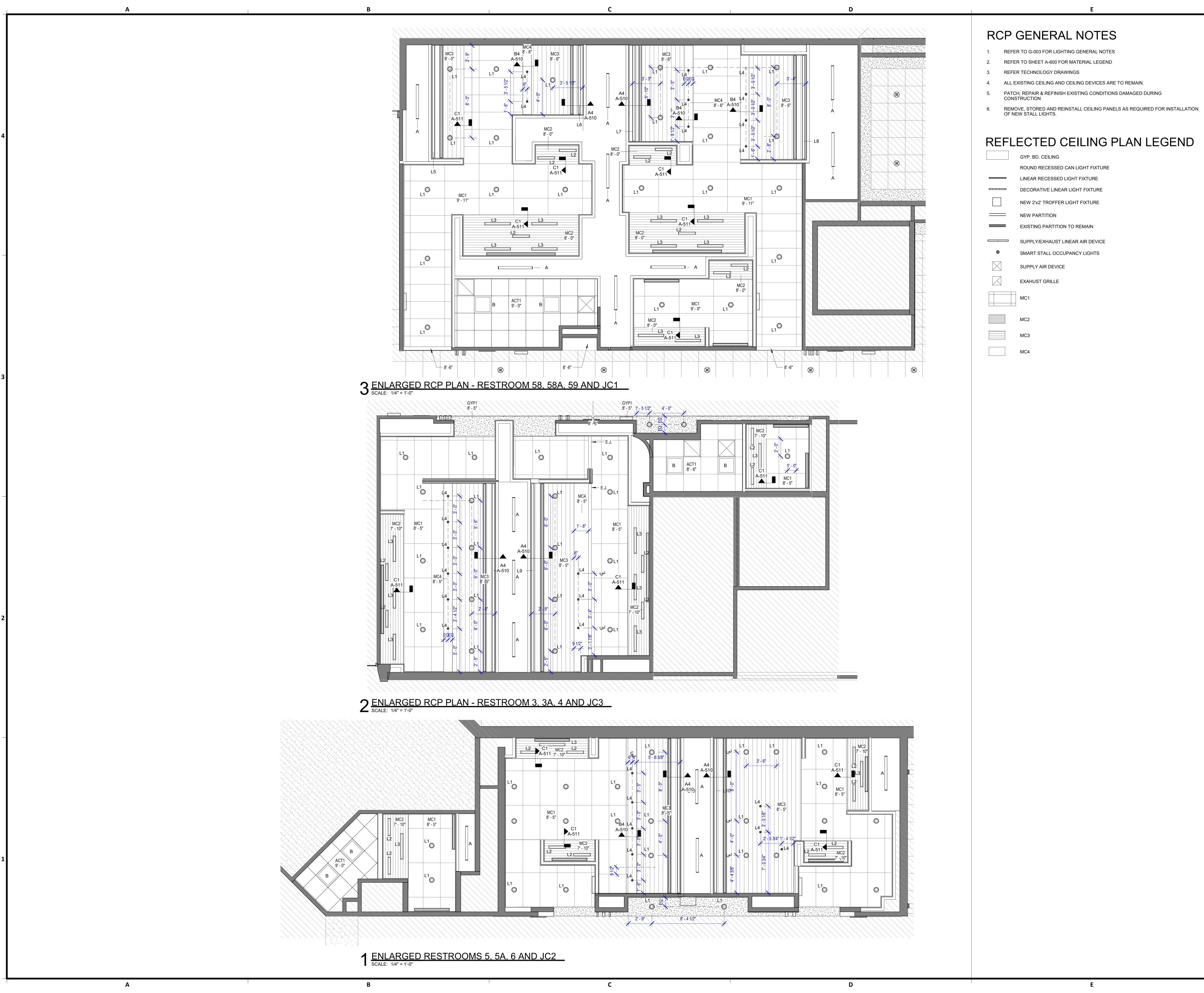
ISSUED FOR CONSTRUCTIO

APPROVAL DATE:



1/4" = 1'-0"

SHEET NAME: ENLARGED RESTROOM FLOOR PLANS



HAS HOBBY AIRPORT RESTROOMS PHASE 3

RDLR Architects

ARCHITECTURE PLANNING INTERIORS

800 Sampson St. #104

Houston, TX 77003 www.rdlr.com

713.868.3121

HENDERSON **ROGERS** 

structural engineers 2603 Augusta, Suite 800 Houston, Texas 77057

713.430.5800 713.430.5888 fax www.hendersonrogers.com

**DESIGNER PROJECT No.:** 1429.15 CONSTRUCTION DOCUMENTS

**REVISIONS** DATE BY No. DESCRIPTION 09.30.22 HB 10.28.22 HB 12.09.22 HB 01.25.23 HB

PROJECT STATUS:

**DESIGN BY:** DRAWN BY: **CHECKED BY:** 01/25/2023 **ISSUE DATE: Hector Berrios** APPROVED BY:

> DIRECTOR **HOUSTON AIRPORT SYSTEM**

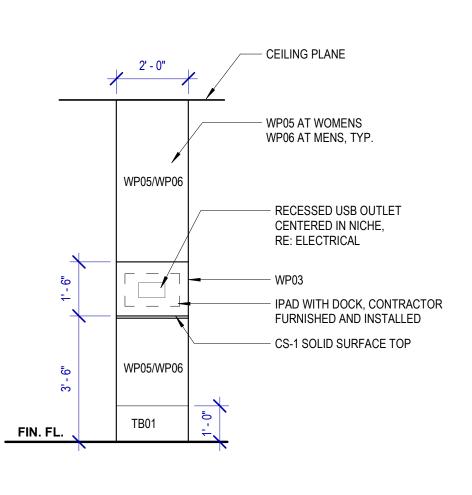
ISSUED FOR CONSTRUCTION

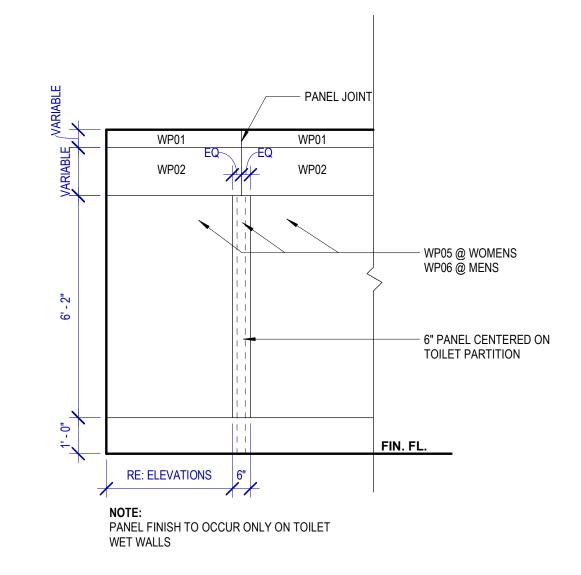
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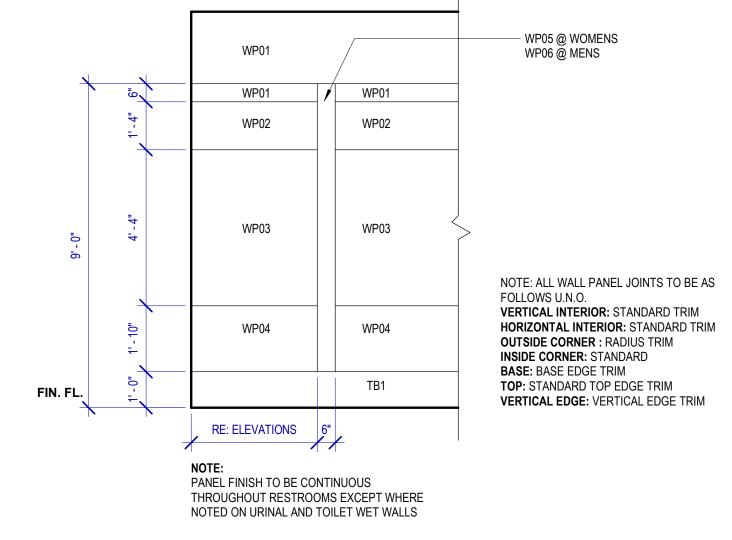


REFLECTED CEILING PLAN As indicated

A4 ADA MOUNTING LOCATIONS - RESTROOMS
SCALE: 1/2" = 1'-0"







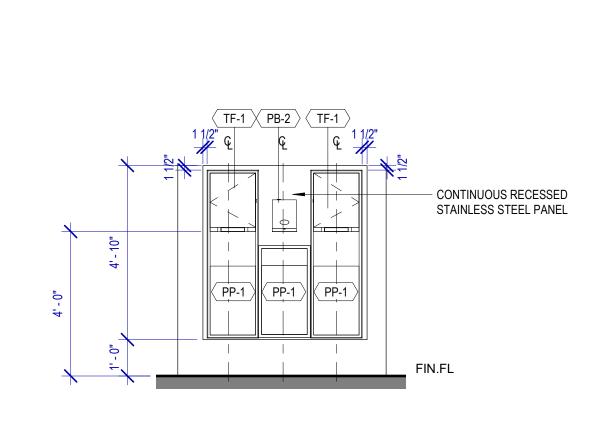
A3 TYPICAL IPAD STATION ELEVATION

SCALE: 3/8" = 1'-0"

B3 TYPICAL WALL PATTERN @ PLUMBING WALL

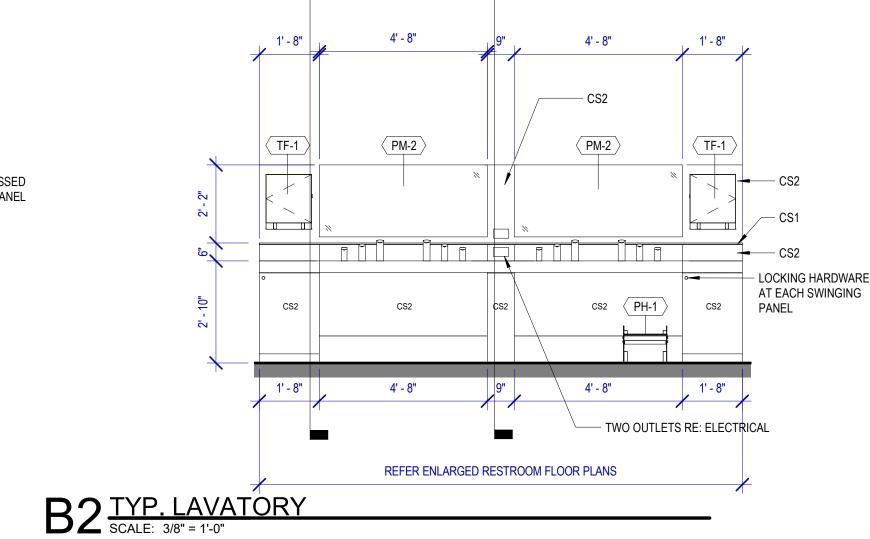
SCALE: 3/8" = 1'-0"

C3 TYPICAL WALL PATTERN
SCALE: 3/8" = 1'-0"



A2 TYP. ELEVATION AT SANITIZING STATION

SCALE: 3/8" = 1'-0"



## **TOILET ACCESSORIES**

- PB-1 KOALA KARE BED LINER DISPENSER KB134-SSLD
- PB-2 TORK HAND SANITIZER 466100
- PC-1 KOALA CARE BABY CHANGING STATION KB110-SSRE
- PC-2 KOALA CARE CHILD SEAT KB102-00
- PC-3 BRADLEY WASTE RECEPTACLE FOR BABY PRODUCTS 315-35
- PE-1 TORK TOILET SEAT COVER DISPENSER 1951001
- PF-1 THE SPLASH LAB RIBBON HAND DRYER TSL.R.030.CS.H PF-2 THE SPLASH LAB RIBBON SENSOR FAUCET TSL.R.020.CS.H
- PG-1 BOBRICK 42" GRAB BAR B-5806
- PG-2 BOBRICK 36" GRAB BAR B-5806
- PH-1 STEP 'N WASH FLOOR MOUNTED SELF-RETRACTING STEPT STOOL SNW-SS 975B
- PI-1 TORK TOILET TISSUE DISPENSER 465500
- PJ-1 CARVART COAT HOOK
- PK-1 TOTO TOILET FLUSH VALVE WITH CHASE TET3LA
- PK-2 TOTO TOILET FLUSH VALVE WITHOUT CHASE TET2LA
- PM-1 CARVART FLOATING MIRROR
- PM-2 CARVART FRAMELESS LED MIRROR
- PN-1 BOBRICK SANITARY NAPKIN DISPOSAL B-254
- PO-1 THE SPLASH LAB RIBBON SOAP DISPENSER TSL.R.010.CS.H
- PP-1 TORK AUTO PAPER TOWEL AND WASTE 309051
- PP-2 BOBRICK WASTE RECEPTACLE B-3644
- PW-1 TOTO URINAL FLUSH VALVE WITH CHASE TEU3LA

PX-1 BOBRICK MOP & BROOM HOLDER B-223

- PY-1 ZURN MOP SINK 1996-24
- PZ-1 TOILET PARTITION RE: MATERIAL LEGEND
- PZ-2 URINAL PARTITION RE: MATERIAL LEGEND
- PZ-3 BABY CHANGING STATION GLASS PARTITION
- TF-1 TORK SURFACE MOUNTED AUTOMATIC PAPER TOWEL DISPENSER 461202

## INTERIOR ELEVATIONS NOTES

- 1. REFER TO SHEET A600 FOR FINISH LEGEND.
- ALL DIMENSIONS ARE TAKEN FROM FACE TO FINISH UNLESS OTHERWISE NOTED.
- PROVIDE BLOCKING AS REQUIRED FOR PARITIONS & TOILET ACCESSORIES.
- INSTALL CEMENT BOARD FOR INSTALLATION OF NEW TILE.



7800 Airport Blvd Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209B A.I.P. No.

# **RDLR Architects**

ARCHITECTURE PLANNING INTERIORS

800 Sampson St. #104 713.868.3121 Houston, TX 77003



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#### **DESIGNER PROJECT No.:** 1429.15 CONSTRUCTION **DOCUMENTS**

## **REVISIONS**

#### No. DESCRIPTION DATE BY

09.30.22 HB 10.28.22 HB

**DESIGN BY: DRAWN BY: CHECKED BY: ISSUE DATE:** 01/25/2023 APPROVED BY: **Hector Berrios** 

APPROVAL DATE: DIRECTOR **HOUSTON AIRPORT SYSTEM** 

ISSUED FOR CONSTRUCTION



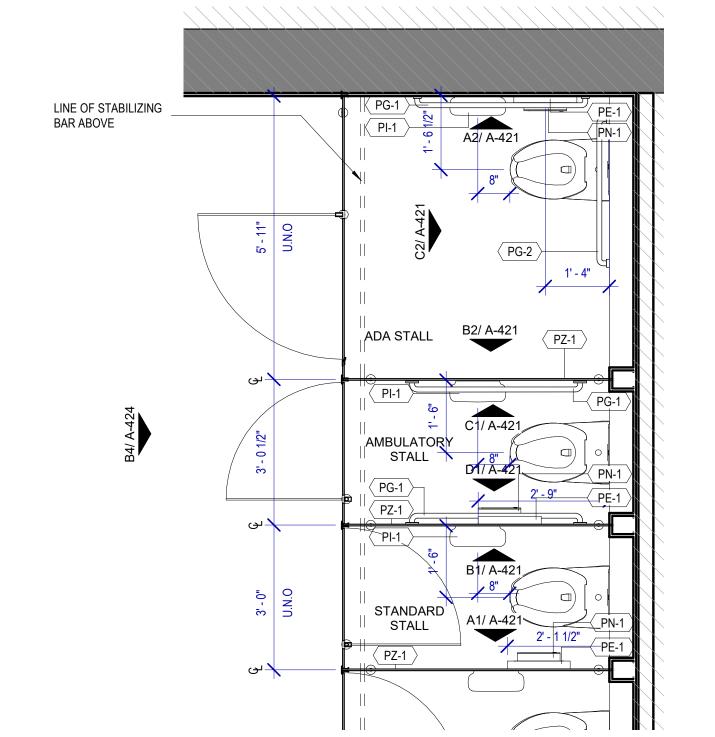
TYPICAL ELEVATIONS AND PLANS As indicated

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - A-420 - 4

A4 ADA RESTROOM MOUNTING LOCATIONS

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





## TOILET ACCESSORIES

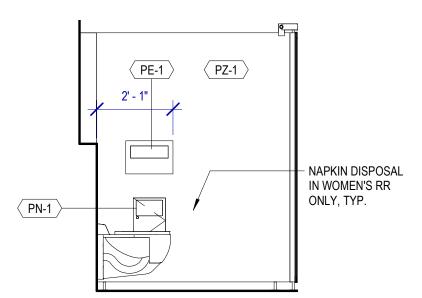
- PB-1 KOALA KARE BED LINER DISPENSER KB134-SSLD
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## INTERIOR ELEVATIONS NOTES

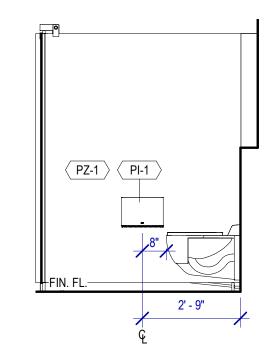
- REFER TO SHEET A600 FOR FINISH LEGEND.
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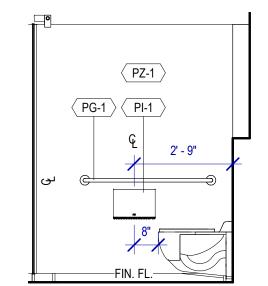
ALL DIMENSIONS ARE TAKEN FROM FACE TO FINISH UNLESS OTHERWISE NOTED.

4. INSTALL CEMENT BOARD FOR INSTALLATION OF NEW TILE.

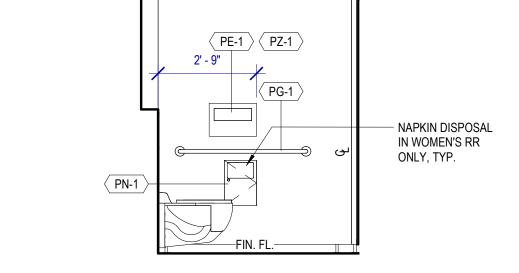


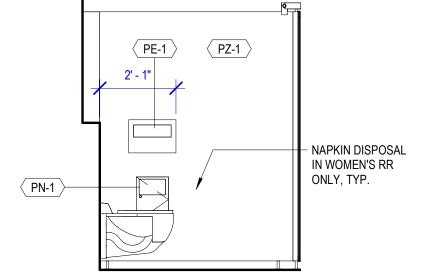
A2 TYP. ADA STALL ELEVATION - A SCALE: 3/8" = 1'-0"





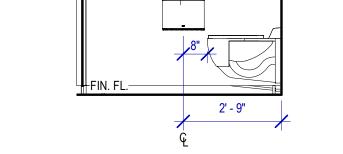
C2 TYP. ADA STALL - BACK
SCALE: 3/8" = 1'-0"





IN WOMEN'S RR

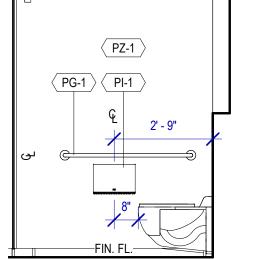




B1 TYP. STANDARD STALL ELEVATION - B
SCALE: 3/8" = 1'-0"

 $\langle PZ-1 \rangle$ 

B2 TYP. ADA STALL ELEVATION - B
SCALE: 3/8" = 1'-0"



C1 TYP. AMBULATORY STALL ELEVATION - A
SCALE: 3/8" = 1'-0"

1 TYP. AMBULATORY STALL ELEVATION - B
SCALE: 3/8" = 1'-0"



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**DESIGNER PROJECT No.:** 1429.15 CONSTRUCTION

**DOCUMENTS REVISIONS** 

No. DESCRIPTION DATE BY 09.30.22 HB 10.28.22 HB

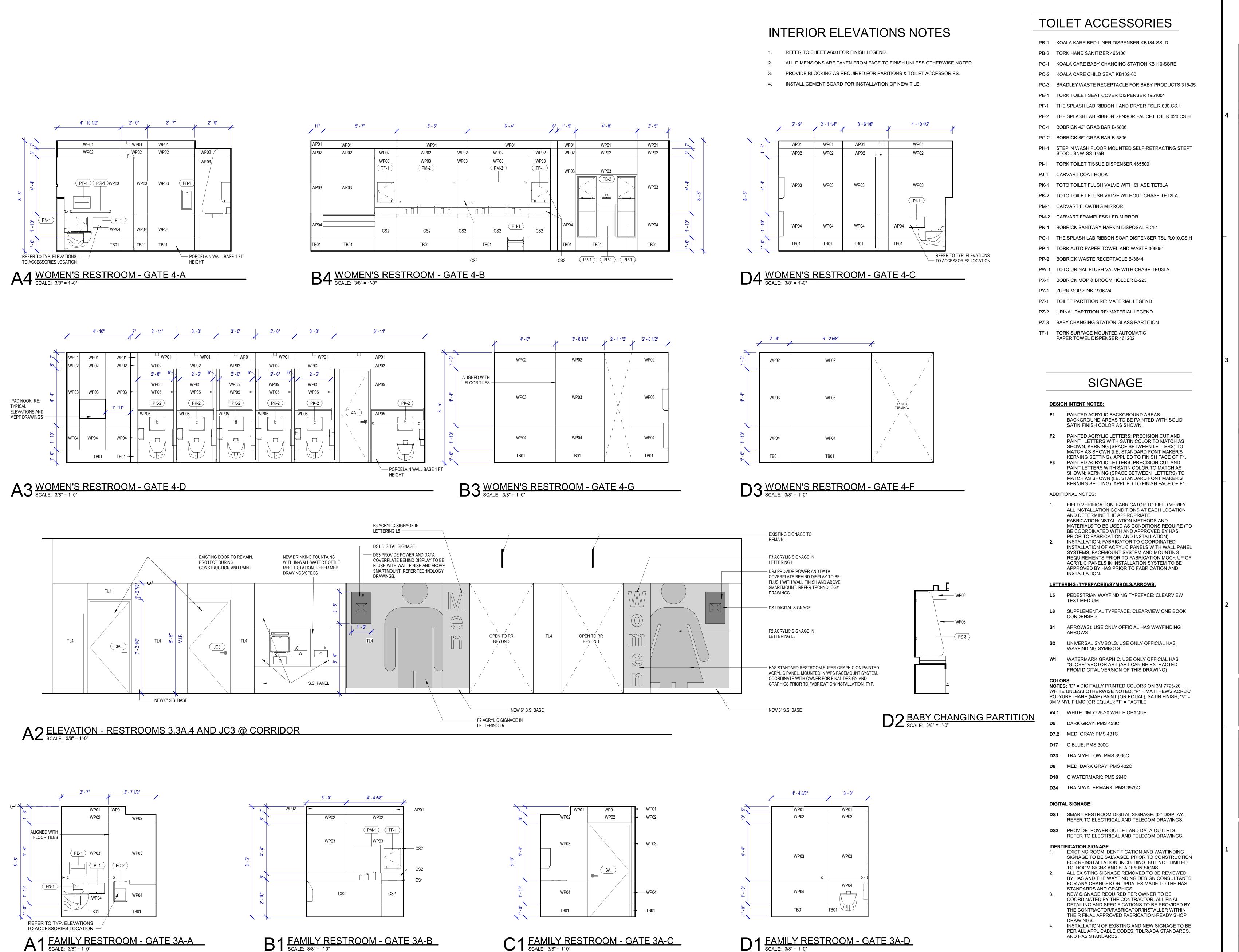
**DESIGN BY: DRAWN BY: CHECKED BY: ISSUE DATE:** 01/25/2023 **APPROVED BY: Hector Berrios APPROVAL DATE:** 

> DIRECTOR **HOUSTON AIRPORT SYSTEM**





TYPICAL STALL PLANS & ELEVATION: As indicated



HAS HOBBY AIRPORT RESTROOMS PHASE 3

ARCHITECTURE PLANNING INTERIORS

PROJECT STATUS:

800 Sampson St. #104 Houston, TX 77003

www.rdlr.com

713.868.3121



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**DESIGNER PROJECT No.:** 1429.15

#### CONSTRUCTION DOCUMENTS

## **REVISIONS**

No. DESCRIPTION DATE BY 09.30.22 HB 30% CD 10.28.22 HB 95% CD 12.09.22 HB 01.25.23 HB

**DESIGN BY: DRAWN BY:** 

**CHECKED BY: ISSUE DATE:** 01/25/2023 **Hector Berrios APPROVED BY: APPROVAL DATE:** 

> **DIRECTOR HOUSTON AIRPORT SYSTEM**



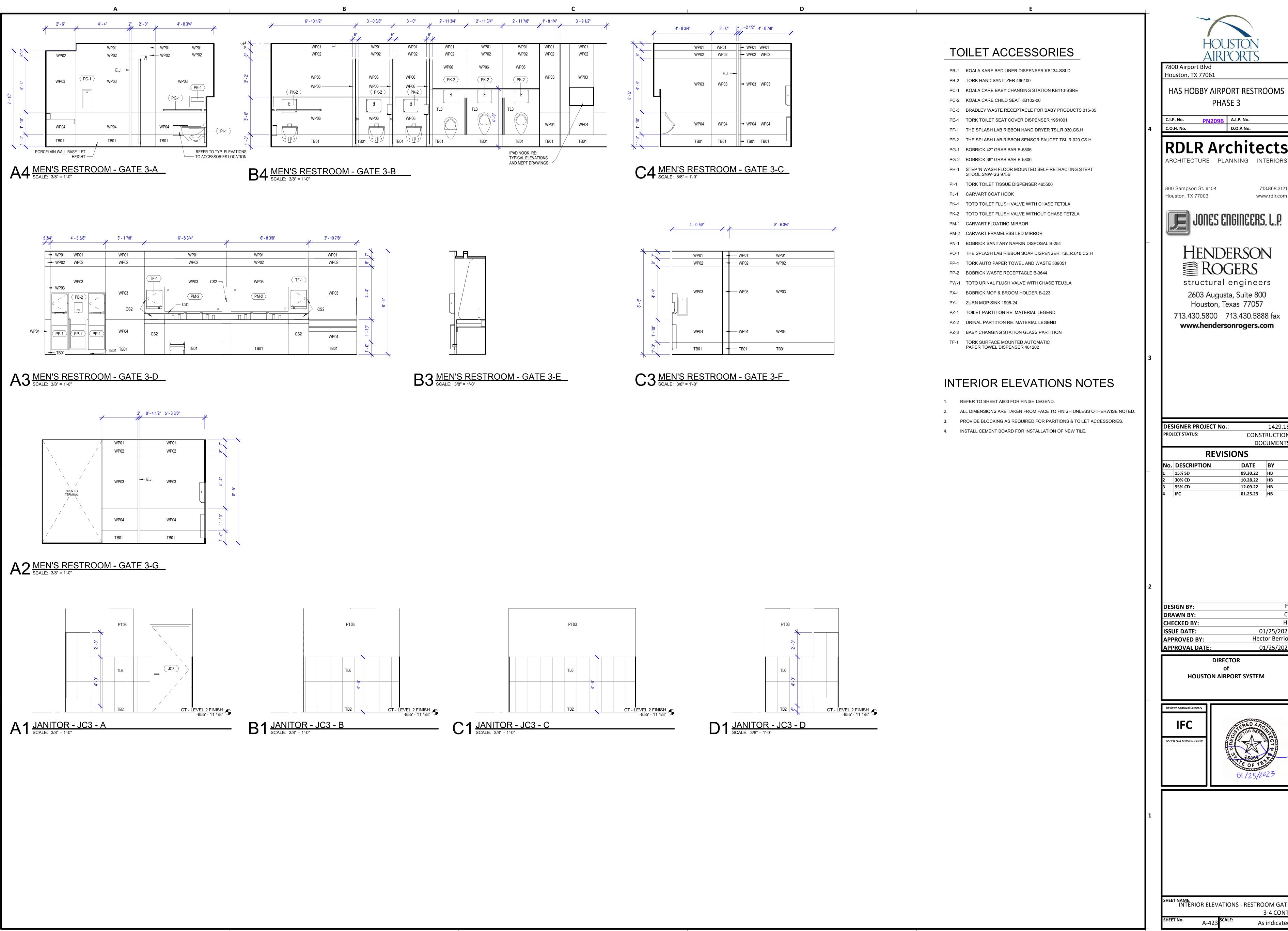


SHEET NAME: INTERIOR ELEVATIONS - RESTROOM GAT!

As indicated

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - A-422 - 4



Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

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> 1429.15 CONSTRUCTION **DOCUMENTS**

**REVISIONS** 

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01/25/2023 **APPROVED BY: Hector Berrios** 

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SHEET NAME: INTERIOR ELEVATIONS - RESTROOM GATE As indicated

SHEET SIZE: 30"x42" ARCH E1

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## TOILET ACCESSORIES

- PB-1 KOALA KARE BED LINER DISPENSER KB134-SSLD
- PB-2 TORK HAND SANITIZER 466100

7800 Airport Blvd

Houston, TX 77061

800 Sampson St. #104

Houston, TX 77003

HAS HOBBY AIRPORT RESTROOMS

PHASE 3

PN209B A.I.P. No.

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**REVISIONS** 

**DESIGNER PROJECT No.:** 

PROJECT STATUS:

No. DESCRIPTION

30% CD

95% CD

**DESIGN BY:** 

**DRAWN BY: CHECKED BY:** 

**ISSUE DATE:** 

**APPROVED BY:** 

ISSUED FOR CONSTRUCTION

**APPROVAL DATE:** 

**DIRECTOR** 

**HOUSTON AIRPORT SYSTEM** 

**ROGERS** 

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1429.15

CONSTRUCTION

DATE BY

09.30.22 HB

10.28.22 HB

12.09.22 HB

01.25.23 HB

**DOCUMENTS** 

01/25/2023

**Hector Berrios** 

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- PZ-3 BABY CHANGING STATION GLASS PARTITION
- TF-1 TORK SURFACE MOUNTED AUTOMATIC PAPER TOWEL DISPENSER 461202

## **SIGNAGE**

#### **DESIGN INTENT NOTES:**

- PAINTED ACRYLIC BACKGROUND AREAS: BACKGROUND AREAS TO BE PAINTED WITH SOLID SATIN FINISH COLOR AS SHOWN.
- PAINTED ACRYLIC LETTERS: PRECISION CUT AND PAINT LETTERS WITH SATIN COLOR TO MATCH AS
- SHOWN; KERNING (SPACE BETWEEN LETTERS) TO MATCH AS SHOWN (I.E. STANDARD FONT MAKER'S KERNING SETTING). APPLIED TO FINISH FACE OF F1 PAINTED ACRYLIC LETTERS: PRECISION CUT AND PAINT LETTERS WITH SATIN COLOR TO MATCH AS
- SHOWN; KERNING (SPACE BETWEEN LETTERS) TO MATCH AS SHOWN (I.E. STANDARD FONT MAKER'S KERNING SETTING). APPLIED TO FINISH FACE OF F1.

### ADDITIONAL NOTES:

- FIELD VERIFICATION: FABRICATOR TO FIELD VERIFY ALL INSTALLATION CONDITIONS AT EACH LOCATION AND DETERMINE THE APPROPRIATE FABRICATION/INSTALLATION METHODS AND MATERIALS TO BE USED AS CONDITIONS REQUIRE (TO
- BE COORDINATED WITH AND APPROVED BY HAS PRIOR TO FABRICATION AND INSTALLATION). INSTALLATION: FABRICATOR TO COORDINATED INSTALLATION OF ACRYLIC PANELS WITH WALL PANEL SYSTEMS, FACEMOUNT SYSTEM AND MOUNTING REQUIREMENTS PRIOR TO FABRICATION.MOCK-UP OF ACRYLIC PANELS IN INSTALLATION SYSTEM TO BE APPROVED BY HAS PRIOR TO FABRICATION AND

### **LETTERING (TYPEFACES)/SYMBOLS/ARROWS:**

INSTALLATION.

- PEDESTRIAN WAYFINDING TYPEFACE: CLEARVIEW TEXT MEDIUM
- SUPPLEMENTAL TYPEFACE: CLEARVIEW ONE BOOK CONDENSED
- ARROW(S): USE ONLY OFFICIAL HAS WAYFINDING
- UNIVERSAL SYMBOLS: USE ONLY OFFICIAL HAS WAYFINDING SYMBOLS
- WATERMARK GRAPHIC: USE ONLY OFFICIAL HAS "GLOBE" VECTOR ART (ART CAN BE EXTRACTED FROM DIGITAL VERSION OF THIS DRAWING)

NOTES: "D" = DIGITALLY PRINTED COLORS ON 3M 7725-20 WHITE UNLESS OTHERWISE NOTED; "P" = MATTHEWS ACRLIC POLYURETHANE (MAP) PAINT (OR EQUAL), SATIN FINISH; "V" = 3M VINYL FILMS (OR EQUAL); "T" = TACTILE

- **V4.1** WHITE: 3M 7725-20 WHITE OPAQUE
- **D5** DARK GRAY: PMS 433C
- **D7.2** MED. GRAY: PMS 431C
- **D17** C BLUE: PMS 300C
- TRAIN YELLOW: PMS 3965C MED. DARK GRAY: PMS 432C
- D18 C WATERMARK: PMS 294C
- D24 TRAIN WATERMARK: PMS 3975C

### **DIGITAL SIGNAGE:**

- SMART RESTROOM DIGITAL SIGNAGE: 32" DISPLAY REFER TO ELECTRICAL AND TELECOM DRAWINGS.
- **DS3** PROVIDE POWER OUTLET AND DATA OUTLETS, REFER TO ELECTRICAL AND TELECOM DRAWINGS.

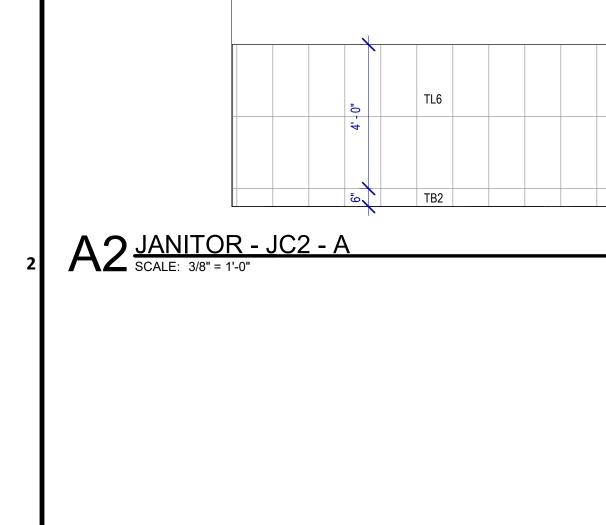
#### <u>IDENTIFICATION SIGNAGE:</u>1. EXISTING ROOM IDENTIFICATION AND WAYFINDING SIGNAGE TO BE SALVAGED PRIOR TO CONSTRUCTION

- FOR REINSTALLATION. INCLUDING, BUT NOT LIMITED TO. ROOM SIGNS AND BLADE/FIN SIGNS. ALL EXISTING SIGNAGE REMOVED TO BE REVIEWED
- BY HAS AND THE WAYFINDING DESIGN CONSULTANTS FOR ANY CHANGES OR UPDATES MADE TO THE HAS STANDARDS AND GRAPHICS. NEW SIGNAGE REQUIRED PER OWNER TO BE
- COORDINATED BY THE CONTRACTOR. ALL FINAL DETAILING AND SPECIFICATIONS TO BE PROVIDED BY THE CONTRACTOR/FABRICATOR/INSTALLER WITHIN THEIR FINAL APPROVED FABRICATION-READY SHOP DRAWINGS.
- INSTALLATION OF EXISTING AND NEW SIGNAGE TO BE PER ALL APPLICABLE CODES, TDLR/ADA STANDARDS, AND HAS STANDARDS.

SHEET NAME: INTERIOR ELEVATIONS - RESTROOM GATE As indicated

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - A-424 - 4



WP02 WP02

3' - 2"

2' - 6 3/8"

WP06

TB01 • • •

WP06

WP06

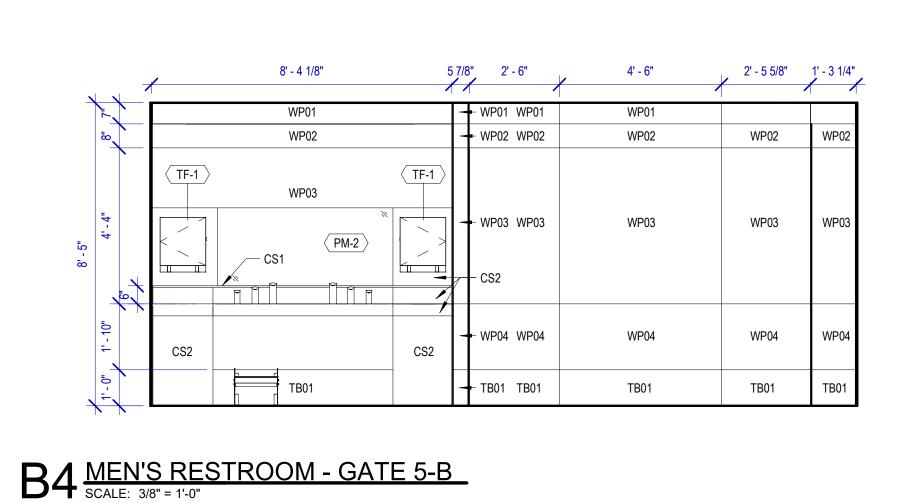
WP02

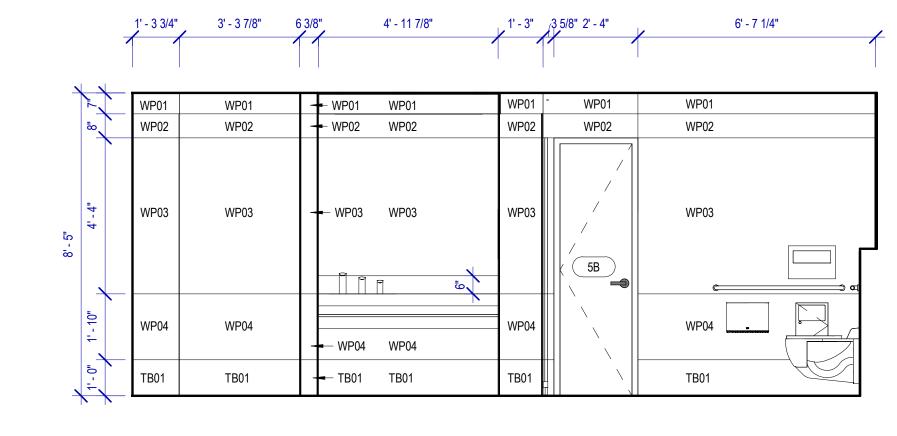
WP02

WP03

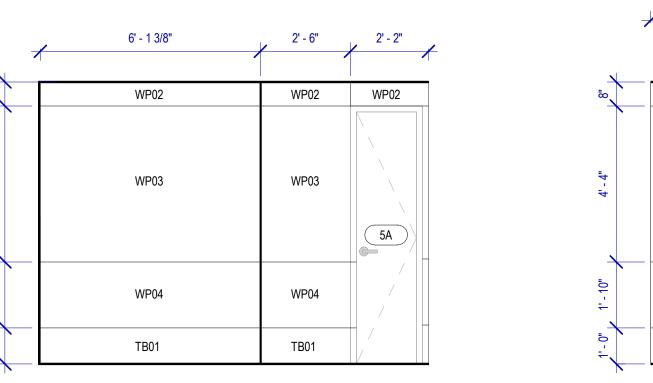
6' - 2 3/8"

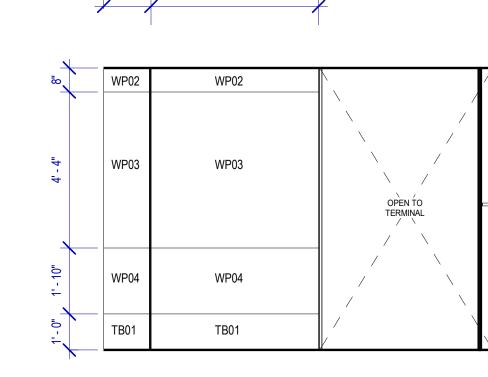
WP02



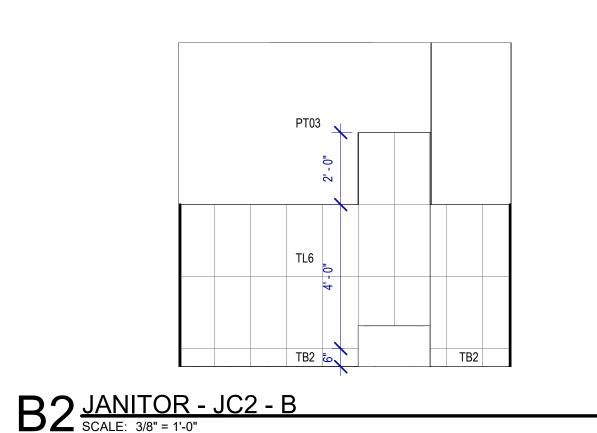


C4 MEN'S RESTROOM - GATE 5-C
SCALE: 3/8" = 1'-0"

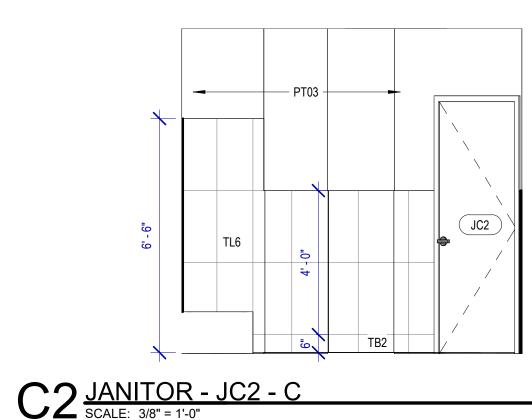




C3 MEN'S RESTROOM - GATE 5-F
SCALE: 3/8" = 1'-0"



B3 MEN'S RESTROOM - GATE 5-E
SCALE: 3/8" = 1'-0"



## **TOILET ACCESSORIES**

- PB-1 KOALA KARE BED LINER DISPENSER KB134-SSLD
- PB-2 TORK HAND SANITIZER 466100
- PC-1 KOALA CARE BABY CHANGING STATION KB110-SSRE
- PC-2 KOALA CARE CHILD SEAT KB102-00
- PC-3 BRADLEY WASTE RECEPTACLE FOR BABY PRODUCTS 315-35
- PE-1 TORK TOILET SEAT COVER DISPENSER 1951001
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- INSTALL CEMENT BOARD FOR INSTALLATION OF NEW TILE.

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	DOCUMENTS
PROJECT STATUS:	CONSTRUCTION
<b>DESIGNER PROJECT No.:</b>	1429.15

# **REVISIONS**

No. DESCRIPTION DATE BY 09.30.22 HB 10.28.22 HB 12.09.22 HB 95% CD 01.25.23 HB

**DESIGN BY: DRAWN BY: CHECKED BY: ISSUE DATE:** 01/25/2023 **Hector Berrios** APPROVED BY: APPROVAL DATE:

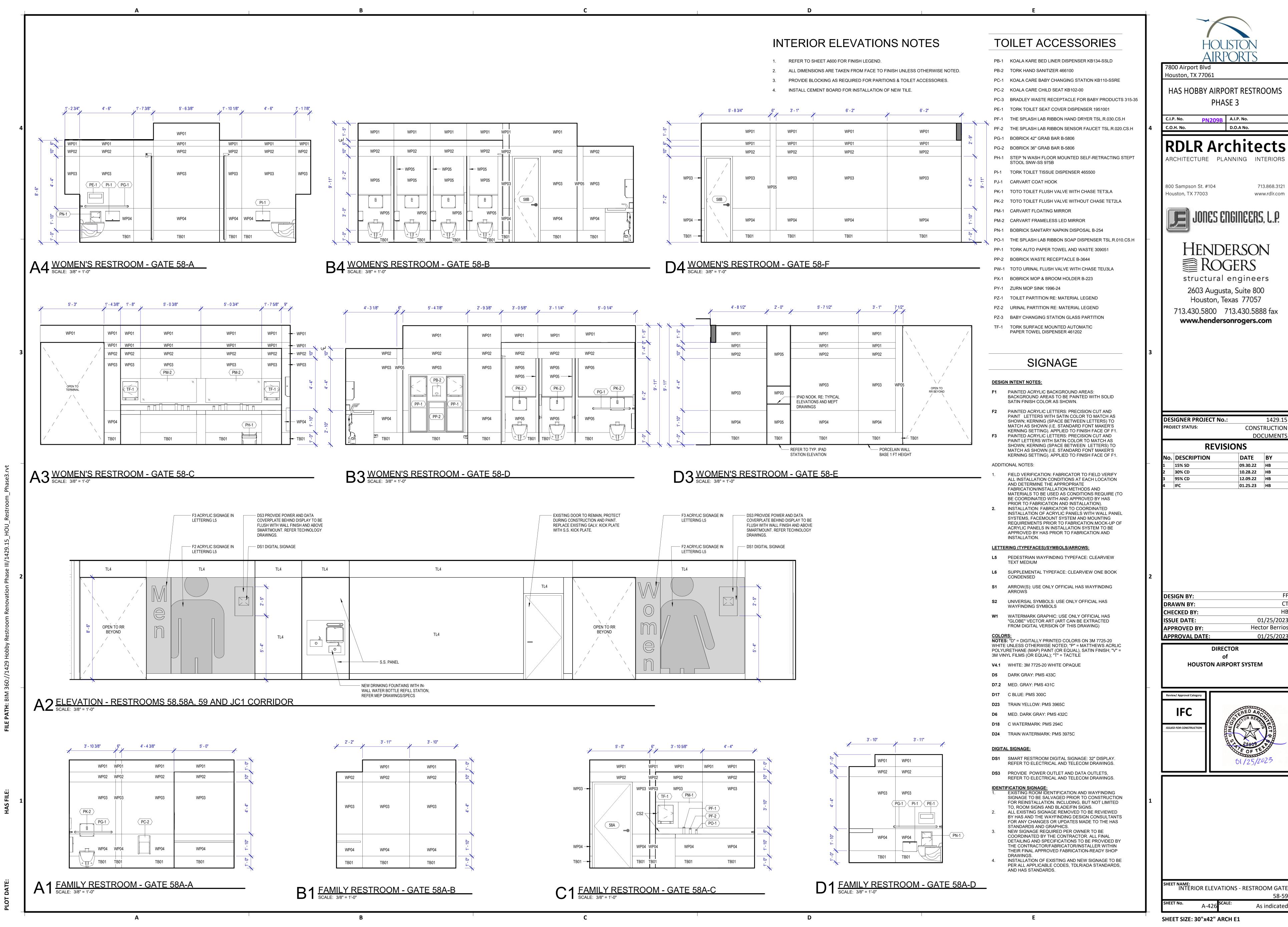
> DIRECTOR **HOUSTON AIRPORT SYSTEM**

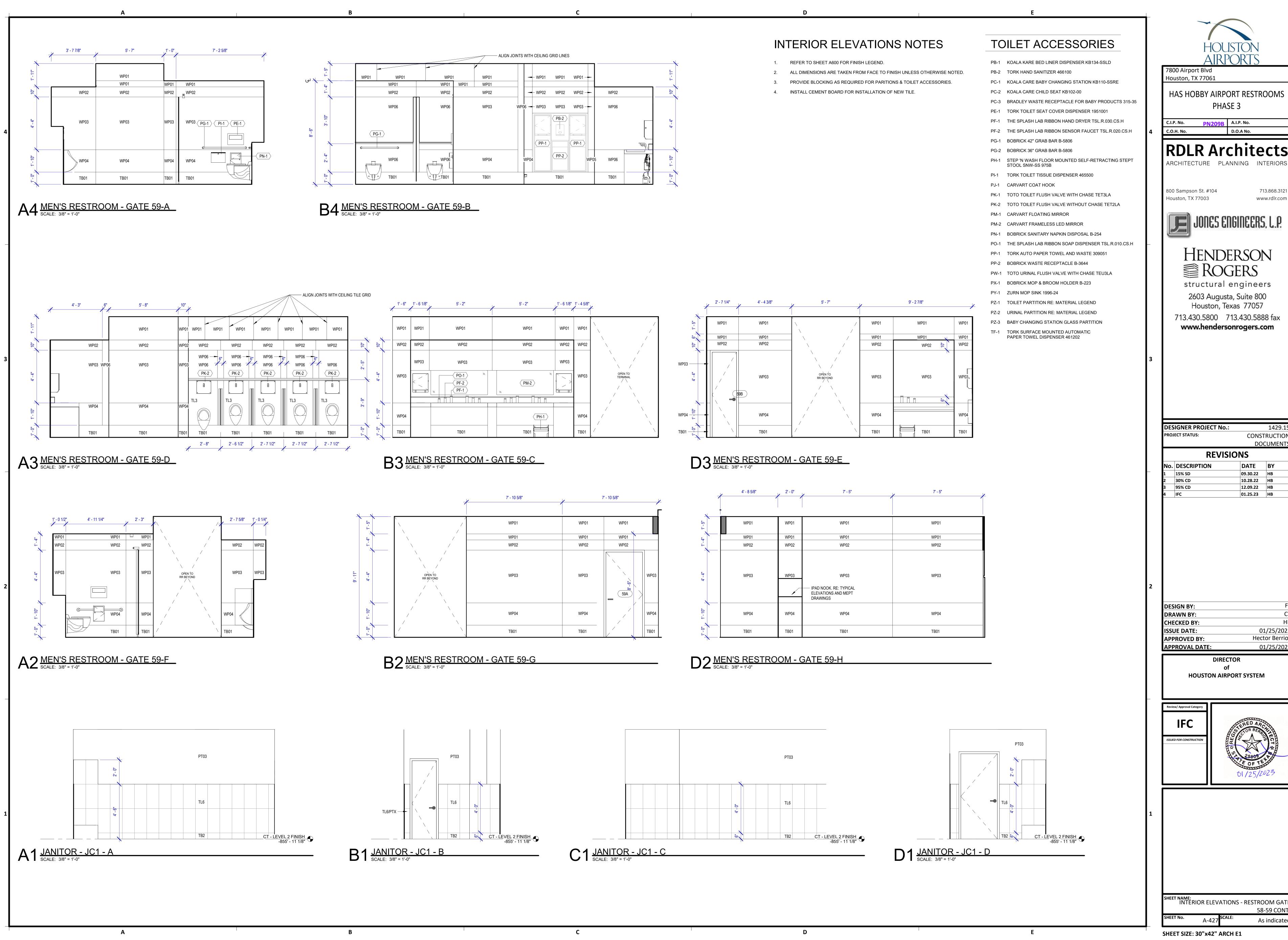




SHEET NAME: INTERIOR ELEVATIONS - RESTROOM GATE

As indicated SHEET SIZE: 30"x42" ARCH E1





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1429.15 CONSTRUCTION DOCUMENTS

**REVISIONS** 

DATE BY 09.30.22 HB 10.28.22 HB

12.09.22 HB 01.25.23 HB

01/25/2023 **Hector Berrios** 01/25/2023

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SHEET NAME: INTERIOR ELEVATIONS - RESTROOM GATE 58-59 CONT. As indicated

Aconex File Name: I-19-C-925F - A-427 - 4

STAINLESS STELL WALL PANEL 11/12 GAUGE MIN. – EXISTING WALL TO REMAIN -SCHLUTER SS METAL TRIM -1/4" CEMENT BOARD -PORCELAIN WALL TILE -1 PLAN DETAIL @ ALUMINUM DETAIL AT DRINKING FOUNTAIN
SCALE: 3" = 1'-0" — SCHEDULED CS2 BELOW PARTITION — WALL RAIL SCHEDULED TOILET PARTITION — WALL PANEL REFER FLOOR PLAN SCHEDULED WALL PANEL (2) 3 5/8" METAL STUDS 2 PLAN DETAIL @ SHELVING BEHIND THE URINAL/WC SCALE: 3" = 1'-0"

7800 Airport Blvd Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209B A.I.P. No.
D.O.A No.

ARCHITECTURE PLANNING INTERIORS

800 Sampson St. #104

713.868.3121 Houston, TX 77003



# HENDERSON ROGERS structural engineers

2603 Augusta, Suite 800 Houston, Texas 77057 713.430.5800 713.430.5888 fax www.hendersonrogers.com

**DESIGNER PROJECT No.:** 1429.15 CONSTRUCTION DOCUMENTS **REVISIONS** 

No. DESCRIPTION DATE BY 09.30.22 HB 10.28.22 HB 95% CD 12.09.22 HB 01.25.23 HB

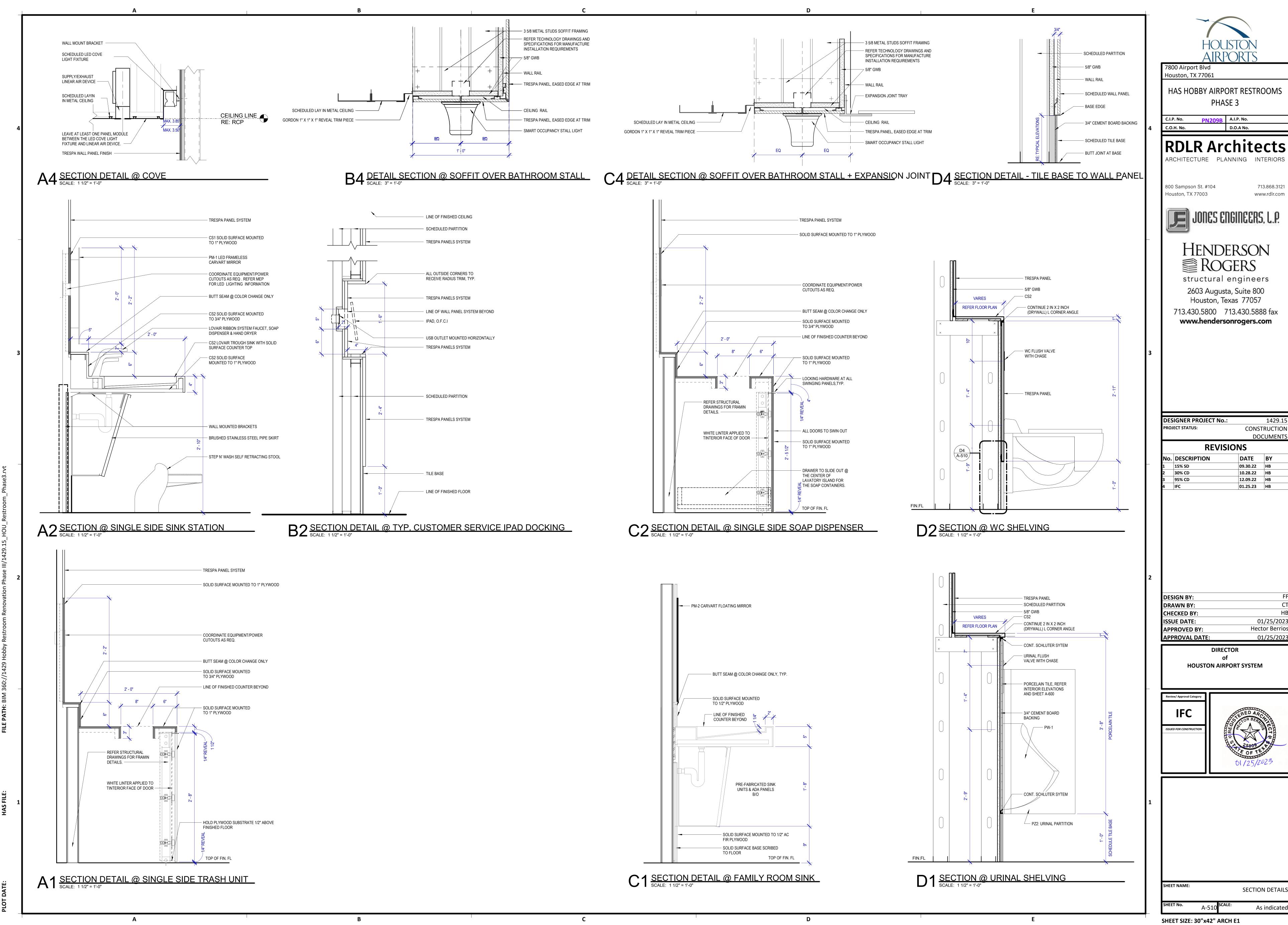
**DESIGN BY: DRAWN BY: CHECKED BY: ISSUE DATE:** 01/25/2023 APPROVED BY: **Hector Berrios APPROVAL DATE:** 

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ISSUED FOR CONSTRUCTION



PLAN DETAILS



Aconex File Name: I-19-C-925F - A-510 - 4

— BASE TRIM AT WALL PANEL SYSTEM - 3/4" RATED PLYWOOD SCHEDULED LAY IN METAL CEILING -GORDON 1" X 1" X 1" REVEAL TRIM PIECE TRESPA PANEL, EASED EDGE AT TRIM D1 SECTION DETAIL @ VANITY
SCALE: 1 1/2" = 1'-0" C1 SECTION DETAIL @ SOFFIT SCALE: 3" = 1'-0" Aconex File Name: I-19-C-925F - A-511 - 4



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**DESIGNER PROJECT No.:** 1429.15 CONSTRUCTION DOCUMENTS

## **REVISIONS**

o.	DESCRIPTION	DATE	BY	
	15% SD	09.30.22	НВ	
	30% CD	10.28.22	НВ	
	95% CD	12.09.22	НВ	
	IFC	01.25.23	НВ	

**DESIGN BY: DRAWN BY: CHECKED BY: ISSUE DATE:** 01/25/2023 APPROVED BY: **Hector Berrios APPROVAL DATE:** 

> DIRECTOR **HOUSTON AIRPORT SYSTEM**





As indicated

SECTION DETAILS

# DOOR AND DOOR SCHEDULE **GENERAL NOTES** ALL DOOR OPENINGS, FRAMES, AND HARDWARE SHALL COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES.

1.	ALL DOOR SIZES ARE TO JAMB OPENING SIZE.
2.	ALL UNDERCUT DOOR REQUIREMENTS FOR VARIOUS FLOOR FINISHES SHALL BE VERIFIED AND COORDINATED BY THE CONTRACTOR.

- COORDINATE ALL DOORS AND DETAILS TO PROVIDE ADEQUATE CLEARANCE AND
- FRAME REINFORCEMENT FOR HARDWARE TYPES. TYPICAL DOOR BEVEL TO BE 1/8" IN 2", UNLESS NOTED OTHERWISE BY THE
- REQUIRED HARDWARE TEMPLATES. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE SIDE OF EGRESS WITHOUT USE OF SPECIAL KNOWLEDGE OR EFFORT.
- DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE LOCATED 4" FROM THE
- FINISHED WALL TO OUTSIDE OF FINISHED JAMB. DOORS & FRAMES TO BE PAINTED TO MATCH ADJACENT WALL PAINT COLOR

## DOOR HARDWARE NOTES

- HARDWARE SETS REPRESENT THE DESIGN INTENT. THEY ARE A GUIDE AND SHOULD NOT BE CONSIDERED A DETAIL HARDWARE SCHEDULE. DISCREPANCIES. CONFLICTING HARDWARE AND MISSING ITEMS SHOULD BE BROUGHT TO THE ATTENTION WITH THE ARCHITECT WITH CORRECTIONS MADE. OMITTED ITEMS NOT INCLUDED SHOULD BE SCHEDULED WITH THE APPROPRIATE ADDITIONAL HARDWARE REQUIRED FOR PROPER APPLICATION AND FUNCTIONALITY.
- ALWAYS FREE EGRESS, INGRESS WITH VALID CREDENTIAL
- MANUFACTURERS LISTED ARE A BASIS OF DESIGN. ABBREVIATIONS USED IN THE LISTED SETS INCLUDE: MK - MCKINNEY

TRESPA PANELS, REF. FINISH

SCHEDULED COVE BASE TILE,

REF. FINISH SCHED.

— ALIGN STONE THRESHOLD

WITH CORRIDOR SIDE OF

NEW PORCELAIN TILE, REF.

SCHED AND DRAWINGS

- STONE THRESHOLD, REF.

TILING SPECIFICATIONS

- EXISTING FLOOR FINISH

A3 SECTION DETAIL @ FLOOR TRANSITION 1
SCALE: 3" = 1'-0"

REFER TO

PART. SCHEDULE

A2 DOOR HEAD W/ ACOUS SEAL SCALE: 3" = 1'-0"

TILING SPECIFICATION, FINISH

BOXED METAL STUDS-WELD 1"

DOOR OPENING

B2 DOOR JAMB AT GYP WALL
SCALE: 3" = 1'-0"

- CONTINUOUS WELD

CONTINUOUS WELD GRIND

SMOOTH WHERE EXPOSED

TO VIEW

CHANNEL RUNNER

"Z" ANCHOR CLIPS

SCHEDULED DOOR WITH

HOLLOW METAL FRAME

JAMB ANCHOR CLIP WELDED

ALTERNATE DOOR LOCATION

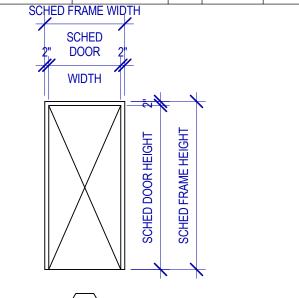
SCHED.

RO - ROCKWOOD BE - DORMAKABA BEST OT- OTHER RF-RIXSON NO-NORTON

#### DOOR SCHEDULE DOOR OPENING FIRE GLAZIN HARDWARE AAOS Shared **ROOM NAME** TYPE THICKNESS WIDTH HEIGHT MATERIAL FINISH RATING G TYPE GROUP HW Set TYPE HEIGHT WIDTH RIAL FINISH HEAD HOLD REMARKS FAMILY RESTROOM FAMILY RESTROOM 1 3/4" 3' - 0" 7' - 0" A2/A600 B3/A60 4 CORRIDOR PLUMBING CHASE |B2/A600 |A2/A600 |B3/A60 |4 PLUMBING CHASE FAMILY RESTROOM A 1 3/4" 3' - 0" 7' - 0" HM PT2 1 7' - 2" 3' - 4" HM PT2 1 7' - 2" 2' - 4" HM PT2 PLUMBING CHASE 1 3/4" 2' - 0" 7' - 0" 5.0 B2/A600 | A2/A600 | B3/A60 | 4 PLUMBING CHASE PLUMBING CHASE 1 6'-2" 1'-10" HM PT2 PLUMBING CHASE B2/A600 | A2/A600 | B3/A60 | A 1 3/4" 3' - 0" 7' - 0" HM PT2 FAMILY RESTROOM 1 7' - 2" 3' - 4" HM PT2 2' - 0" 7' - 0" 1 7' - 2" 2' - 4" HM PT2 PLUMBING CHASE A 1 3/4" 1.0 B2/A600 | A2/A600 | B3/A60 | 4 A 1 3/4" 3' - 0" 7' - 0" HM PT2 A2/A600 D3/A60 PROVIDE 1 ROOM SIGN REF.: A-604 A 1 3/4" 2' - 0" 7' - 0" PLUMBING CHASE B2/A600 | A2/A600 | B3/A60 | 4 PLUMBING CHASE 2' - 0" 7' - 0" 1 7' - 2" 2' - 4" HM PT2 B2/A600 A2/A600 B3/A60 4 1 7' - 2" 3' - 4" HM PT2 A 1 3/4" 3' - 0" 7' - 0" 1 7' - 2" 3' - 4" HM PT2 JC2 JC3 A 1 3/4" 3' - 0" JANITOR 1 7' - 2" 3' - 4" HM PT2 A 1 3/4" 3' - 0" 7' - 0" 3.0 SCHED FRAME WID

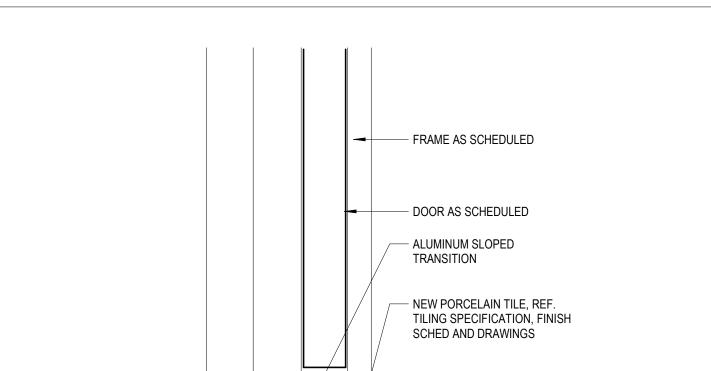
# DOOR SCHEDULE REMARKS LEGEND

- EXISTING DOOR AND FRAME TO REMAIN, RE PAINT. EXISTING DOOR AND FRAME TO REMAIN, RE PAINT. REPLACE EXISTING GALV. KICK PLATE WITH S.S. KICK PLATE. EXISTING DOOR AND FRAME TO REMAIN, RE PAINT TO MATCH EXISTING. ADD S.S. KICK PLATE, SIZE TO MATCH DOOR
- AT FAMILY RESTROOM 5A. DOOR POSITION SWITCH IN ALL CHASE DOORS



TYPE "A" **HOLLOW METAL** 

FRAME TYPE ELEVATIONS **DOOR TYPE ELEVATIONS** 



B3 SECTION DETAIL @ FLOOR TRANSITION 2
SCALE: 3" = 1'-0"

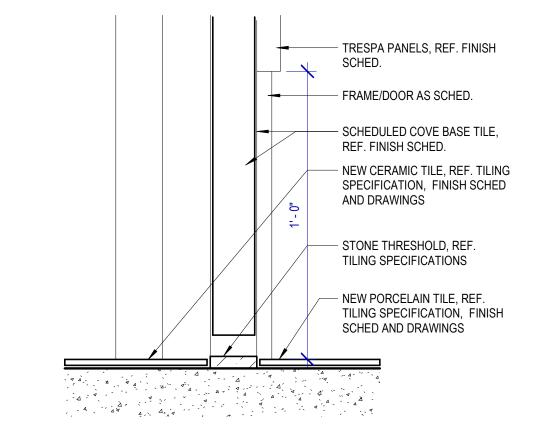
DOUBLE STUDS AT JAMB

HOLLOW METAL FRAME

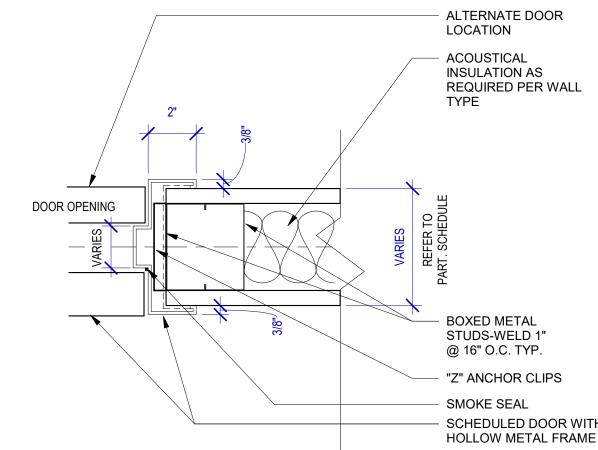
JAMB ANCHOR SHOP

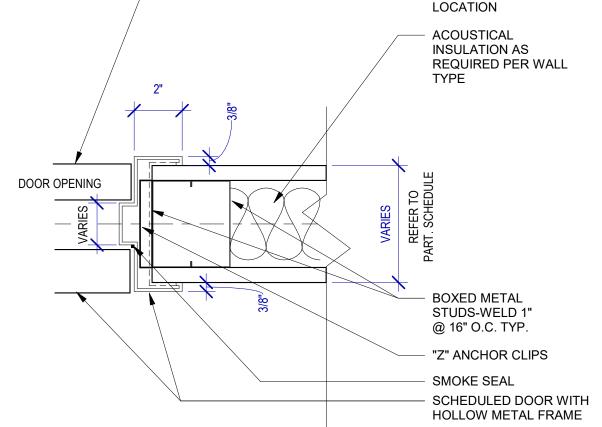
WELDED TO FRAME

SCHED. DOOR

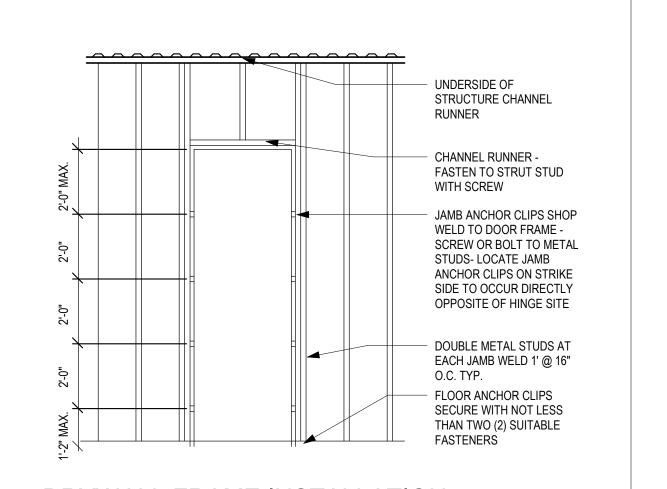


D3 SECTION DETAIL @ FLOOR TRANSITION 3
SCALE: 3" = 1'-0"





D2 DOOR JAMB W/ ACOUS SEAL SCALE: 3" = 1'-0"



## MATERIAL & FINISH KEY

#### **DIVISION 3 - CONCRETE**

SIKAQUICK® SMOOTH FINISH - LIGHTWEIGHT MORTAR FOR CONCRETE REPROFILING - COLOR: PRECAST GREY. SEAL WITH SIKAGUARD 740 W.

### **DIVISION 5 - METALS**

METAL PANELS STAINLESS STEEL WALL PANEL. 11/12 GAUGE MIN.

## **DIVISION 8 - OPENINGS**

GL3
6MM SILVERED FLAT GLASS MIRROR. SECURE TO WALL WITH CONSTRUCTION

#### **DIVISION 9 - FINISHES**

#### SOLID SURFACE

CORIAN - SOLID SURFACE - GLACIER WHITE

#### CORIAN - SOLID SURFACE - CARBON CONCRETE

GORDON - R116-764ST23 23% OPENING AV-3000 GRID, NO REVEAL - 2' X 4' , 1/4" SOLID BORDER - PDR30113 ACROGUARD BIANCO MILL FINISH REMARKS: 1/16" HOLES X 7/64" STRAIGHT CIRCLES W/ 1" X 1 1/2# DENSITY BLACK ACOUSTICAL PADS.

MC2 TURN-KEY CEILING PANEL SIZE: 3 1/2" LINEAR PANELS MATERIAL: 0.040" THICK ALUMINUM WITH 1" UPTURNS PERF SPEC: R116-764ST23 (SEE PERF DETAIL MC-1/MC-2 THIS SHEET) FINISH: EXPOSED SURFACÈS POWDER COATED ACROGUARD PDR-30803 (STERLING) INSULATION: 1" X 1 1/2# DENSITY BLACK PVC ACOUSTICAL PADS

IN-FILL PANELS SHIPPED STOCK LENGTHS FOR FIELD CUTTING.

#### PANEL SIZE: 6" LINEAR PANELS

MATERIAL: 0.040" THICK ALUMINUM WITH 1" UPTURNS PERF SPEC: R116-532DG12 (SEE PERF DETAIL MC-3 THIS SHEET) FINISH: EXPOSED SURFACES POWDER COATED ACROGUARD PDR-30803 (STERLING) INSULATION: 1"X 1 1/2# DENSITY BLACK PVC ACOUSTICAL PADS IN-FILL PANELS SHIPPED STOCK LENGTHS FOR FIELD CUTTING.

## ACT1 ARMSTRONG ULTIMA 2' X 2' ACOUSTICAL CEILING TILE, SUPRAFINE XL SUSPENSION

#### **WALL FINISH**

WP01
TRESPA - TOPLAB VERTICAL WPS FACEMOUNT SYSTEM - 10MM THK -K05.0.0 PURE REMARKS: VARYING SIZES, RE: TYP, ELEVATIONS FOR SIZES AND INSTALL

## WP02 TRESPA - TOPLAB VERTICAL WPS FACEMOUNT SYSTEM - 10MM THK - K21.1.0

REMARKS: VARYING SIZES, RE: TYP. ELEVATIONS FOR SIZES AND INSTALL

## TRESPA - TOPLAB VERTICAL WPS FACEMOUNT SYSTEM - 10MM THK - K21.5.1 MID REMARKS: VARYING SIZES, RE: TYP. ELEVATIONS FOR SIZES AND INSTALL

WP04
TRESPA - TOPLAB VERTICAL WPS FACEMOUNT SYSTEM - 10MM THK - KNA18 REMARKS: VARYING SIZES, RE: TYP. ELEVATIONS FOR SIZES AND INSTALL

## TRESPA - TOPLAB VERTICAL WPS FACEMOUNT SYSTEM - 10MM THK - K32.2.1

REMARKS: VARYING SIZES, RE: TYP. ELEVATIONS FOR SIZES AND INSTALL WP06
TRESPA - TOPLAB VERTICAL WPS FACEMOUNT SYSTEM - 10MM THK - K24.4.1 STEEL

REMARKS: VARYING SIZES, RE: TYP. ELEVATIONS FOR SIZES AND INSTALL

PT01 TBD - MATTE - CEILING WHITE - STANDARD CEILING

#### PT02 SHERWIN WILLIAMS - DIRECT TO METAL/SEMI-GLOSS - TRICORN BLACK REMARKS: ALL NEW AND EXISTING DOORS

PT03 SHERWIN WILLIAMS - SW 9165 GOSSAMER VEIL - EGGSHELL FINISH **PAINT SPECIALTY** 

PTS1 GAGE ARCH PRODUCTS - GM4225 (FRC) (METAL FRAMES)

## TILE

CROSSVILLE LAMINAM - GAUGED PORELAIN TILE - 1M X 3M X 5.6MM THK - SALE REMARKS: STACKED INSTALLATION. GROUT TO BE MIN. THK PER MFR, COLOR TO BE SELECTED BY MFR FULL RANGE

### TL2 CROSSVILLE LAMINAM - GAUGED PORELAIN TILE - 1M X 3M X 5.6MM THK - PIOMBO REMARKS: STACKED INSTALLATION. GROUT TO BE MIN. THK PER MFR, COLOR TO BE SELECTED BY MFR FULL RANGE

CROSSVILLE LAMINAM - GAUGED PORELAIN TILE - 1M X 3M X 5.6MM THK - FUMO REMARKS: STACKED INSTALLATION. GROUT TO BE MIN. THK PER MFR, COLOR TO BE SELECTED BY MFR FULL RANGE

CROSSVILLE LAMINAM - GAUGED PORELAIN TILE - 1M X 3M X 3+MM THK - ARGENTO REMARKS: VERTICAL INSTALLATION MOUNTED TO SUBSTRATE & USED W/ WALL PANEL SYSTEMS FACEMOUNT SYSTEM

## DALTILE VOLUME 1.0 - GLAZED PORELAIN TILE - 12 X 24 FLOOR TILE - STEREO GREY DALTILE VOLUME 1.0 - GLAZED PORELAIN TILE - 12 X 24 WALL TILE -SONIC WHITE

CROSSVILLE LAMINAM - GAUGED PORELAIN TILE - 1M X 3M X 5.6MM THK - SALE REMARKS: CUT IN FIELD 12"H. ALIGN GROUT JOINTS W/ FLOOR TILE, MIN. THK PER MFR, COLOR SELECTED BY MFR FULL RANGE

DALTILE VOLUME 1.0 - GLAZED PORELAIN TILE - COVE BASE 6 X 12 - STEREO GREY

### **DIVISION 13 – SPECIALTIES**

#### **TOILET PARTITIONS**

CARVART - COLOR GLASS BOXES WITH PHENOLIC DIVIDER PANELS DOORS: B07 IVORY, OPAQUE, SMOOTH OUTSIDE, ETCHED INSIDE. LADDER PULL DIVIDER PANELS: C-HPL PHENOLIC PANEL. COLOR: 871 DARK GRAY NON-GLOSSY

REMARKS: INDICATOR, CONTINUOUS CONCEALER @ DOOR EDGES, OUT-SWINGING DOOR ON PIVOT HINGE W/ ROTATING FLOOR PEDESTAL.

PZ2 CARVART - COLOR GLASS BOXES - IVORY, OPAQUE, NON-GLOSSY SATIN ALUMINUM - 36" H X 18" D

REMARKS: MEN'S RESTROOMS, URINAL PARTITION, CHROME MOUNTING BRACKET TO BE SAND-BLASTED TO COUNTER HIGH REFLECTIVITY

PZ3
CARVART - COLOR GLASS BOXES - IVORY, OPAQUE, NON-GLOSSY SATIN ALUMINUM - FOR SIZE AND SHAPE REFER TO A-420 **REMARKS: BABY CHANGING STATION DIVIDERS** 



#### 7800 Airport Blvd Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209R A.I.P. No. C.I.P. No.

D.O.A No.

# **RDLR Architects**

## ARCHITECTURE PLANNING INTERIORS





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	CONSTRUCTION
	DOCUMENTS

# **REVISIONS**

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ο.	DESCRIPTION	DATE	ВҮ
	15% SD	09.30.22	НВ
	30% CD	10.28.22	НВ
	95% CD	12.09.22	НВ
	IFC	01.25.23	НВ

**DESIGNER PROJECT NO** 

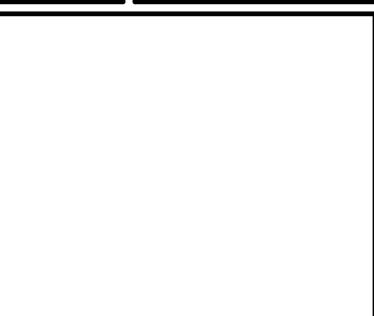
PROJECT STATUS:

DESIGN BY:	FF
DRAWN BY:	СТ
CHECKED BY:	HB
ISSUE DATE:	01/25/2023
APPROVED BY:	Hector Berrios
APPROVAL DATE:	01/25/2023

**DIRECTOR HOUSTON AIRPORT SYSTEM** 







EET NAME:
ROOM FINISH, MATERIAL LEGEND & DOO As indicated

SHEET SIZE: 30"x42" ARCH E1

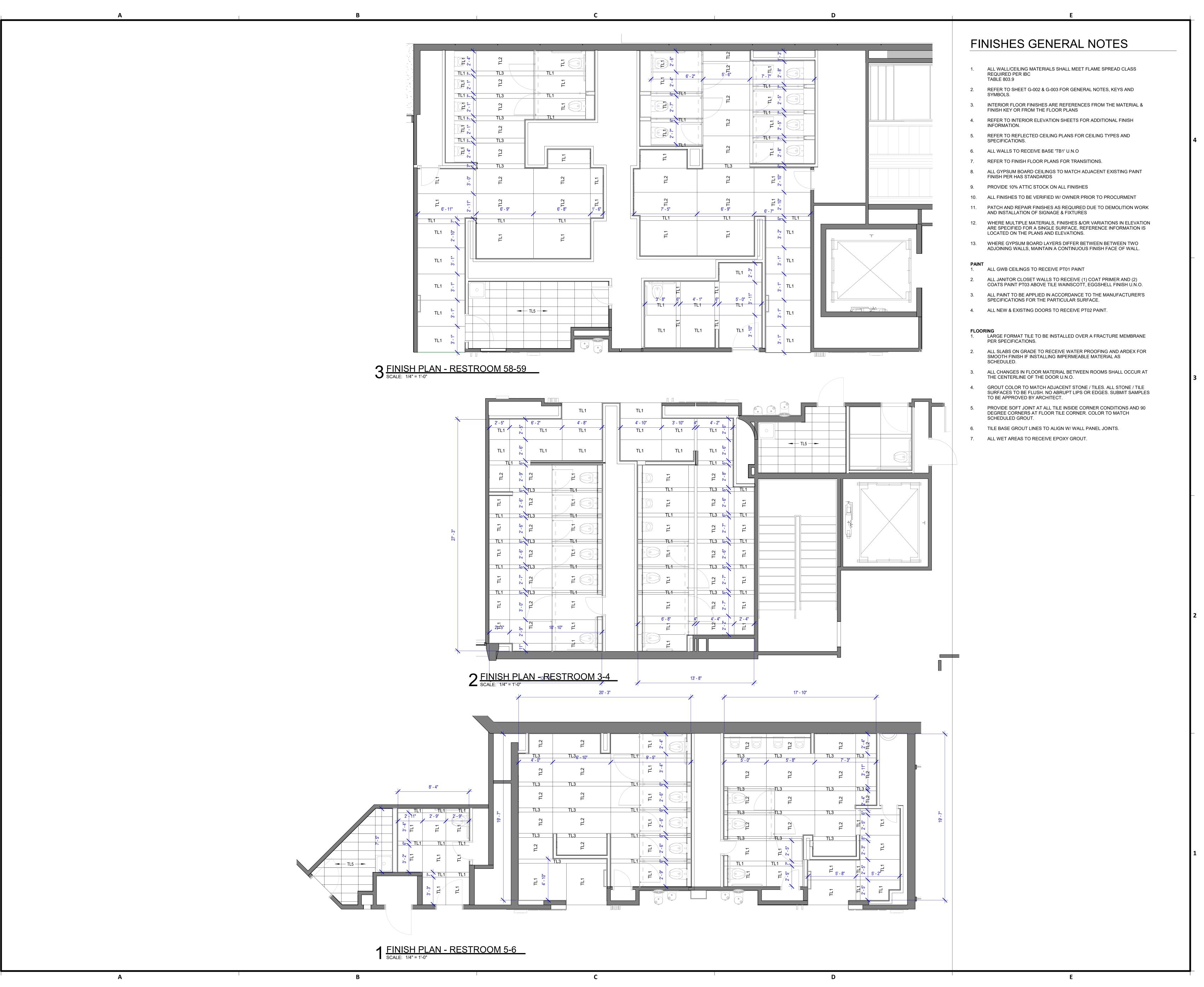
- 1-1/8" X 14 GA METAL STRAP

ALT. TYPE FLOOR ANCHOR FOR THE CROSS WALL

2 X 8 X 14 GA GALV. METAL

FLOOR ANCHOR STRAP

Aconex File Name: I-19-C-925F - A-600 - 4



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> DIRECTOR **HOUSTON AIRPORT SYSTEM**



APPROVAL DATE:



As indicated

ENLARGED FINISH PLAN

GENERAL NOTES NOTE: All final design, engineering and amount/sizing of structural sign support elements, material types/thicknesses, dimensions and attachment methods PROVIDE 11 ROOM SIGNS, REFER DOOR SCHEDULE shall be performed and approved by a licensed engineer to meet or exceed all FOR LOCATION. applicable local and national codes. - Final engineering, dimensions, materials and fabrication are the responsibility of the Contractor/Fabricator/Installer to ensure the highest quality fit and finish for all components of the completed product. All final detailing and specifications to be provided by the Contractor/Fabricator/Installier within their - center text & symbol horiz. final approved fabrication-ready shop drawings. within dark gray area Wherever dissimilar metals are in contact, always separate contact surfaces 11" prior to assembly or installation with the necessary protective coatings/gaskets/washers to prevent galvanic corrosion. P5 - Final fabrication methods, quality and fit/finish to be reviewed and approved by HAS and the Wayfinding Design Consultants through prototype reviews prior to final production run/installation processes. 1234.5 - Colors shown are for reference only, and are subject to the limitations of the printing process and/or variance of electronic RGB screen displays. Refer to color system swatches and/or final finish samples for accurate reference. Messages shown here are typical placeholders only. See message schedules for specific messaging by location and sign type. W1 P7 DESIGN INTENT NOTES F1 SIGN PANEL: 1/4" thick thermoformed acrylic panel, edges sanded smooth & eased, paint 2nd surface to match MAP paint P5, satin finish; screen paint watermark graphic 2nd L5 T4.3 ROOM NAME surface to match P1.2 & P7, satin finish; 1st surface 1/32" raised tactile letters/graphics painted to match MAP paint P4, satin finish; 1st surface tactile Braille, no color applied (NOTE: Braille must meet all of the most recent TAS/ADA Braille Notes: tactile/spacing/sizing/formatting requirements) - placeholder Braille artwork/characters shown; F4 MOUNTING: mounting height and location/proximity to final Braille to be provided by Fabricator doors, strike plates & finished entry openings per most - Braille must meet all of the most recent TAS/ADA recent TAS/ADA requirements; mount plumb & level with tactile/spacing/sizing/formatting requirements adhesive/high-bond strength sign grade VHB tape (or approved equal) as install cond. req. (field verify) - no color applied to Braille FACE LAYOUT: Typical PLAN VIEW A1-A4 LETTERING (TYPEFACES) / SYMBOLS / ARROWS: all mounting per ; L5 Pedestrian Wayfinding Typeface: ClearviewText Medium F1 latest TAS/ADA req. L6 Supplemental Typeface: Clearview One Book Condensed S1 Arrow(s): use only official HAS wayfinding arrows S2 Universal Symbols: use only official HAS wayfinding symbols W1 Watermark Graphic: use only official HAS "globe" vector art COLORS: NOTES: "D" = digitally printed colors on 3M 7725-20 White unless otherwise noted; "P" = Matthews Acrylic Polyurethane (MAP) paint (or equal), satin finish; "V" = 3M vinyl films (or equal); "T" = tactile V4.1 White: 3M 7725-20 White Opaque D5 Dark Gray: match PMS 433C D6 Med. Dark Gray: match PMS 432C D13 Green (Ecopark): match PMS 349C D17 Blue (Garage): match PMS 300C D19 Red (Garage): match PMS 187C **ELEVATION** P1.2 Silver: MAP paint MP33172 Silver Surfer Metallic P4 White: MAP paint MP N202 White P5 Dark Gray: MAP paint matched to PMS 433C P7 Neutral Watermark: MAP paint matched to PMS 430C T4.3 Tactile White: White to match V4.1

**AIRPORTS** 

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**DESIGNER PROJECT No.:** 1429.15 CONSTRUCTION PROJECT STATUS: **DOCUMENTS** 

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> DIRECTOR **HOUSTON AIRPORT SYSTEM**

eview/ Approval Catego ISSUED FOR CONSTRUCTION



ROOM SIGNAGE

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - A-604 - 4



HOUSTON AIRPORTS

7800 Airport Blvd
Houston, TX 77061

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# HENDERSON ROGERS

structural engineers

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SIGNER PROJECT No.: 1429.		1429.15	
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REVISIONS			
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IFC	01/25/2023	H+R	

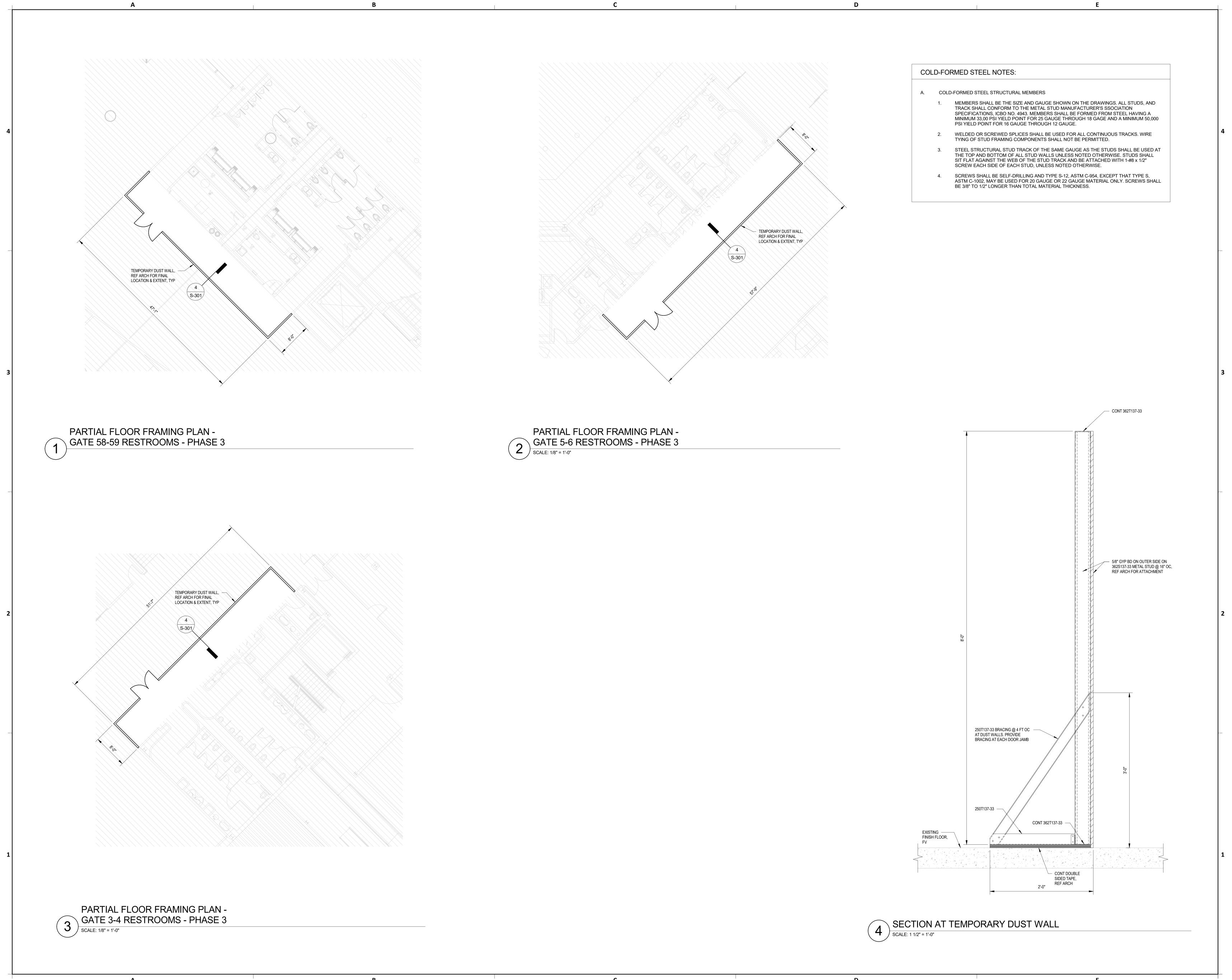
DESIGN BY:	P. MUZUMDAR
DRAWN BY:	H.TORRES
CHECKED BY:	P. MUZUMDAR
ISSUE DATE:	01/25/2023
APPROVED BY:	P. MUZUMDAR
APPROVAL DATE:	01/25/2023

HOUSTON AIRPORT SYSTEM

Henderson Rogers Structural Engineers, LLC TBPE Firm Registration No. 8755

1/64" = 1'-0"

OVERALL FLOOR PLAN - LEVEL 2





HAS HOBBY AIRPORT RESTROOMS PHASE 3

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ROGERS

structural engineers

5599 San Felipe, Suite 1425 Houston, Texas 77056 713.430.5800 www.hendersonrogers.com

**DESIGNER PROJECT No.:** 1429.15 PROJECT STATUS: CONSTRUCTION DOCUMENTS **REVISIONS** DATE BY No. DESCRIPTION 12/09/2022 H+R 01/25/2023 H+R

P. MUZUMDAR **DESIGN BY:** H.TORRES **DRAWN BY:** P. MUZUMDAR **CHECKED BY:** 01/25/2023 **ISSUE DATE:** P. MUZUMDAR **APPROVED BY: APPROVAL DATE:** 

> DIRECTOR HOUSTON AIRPORT SYSTEM

Review/ Approval Category

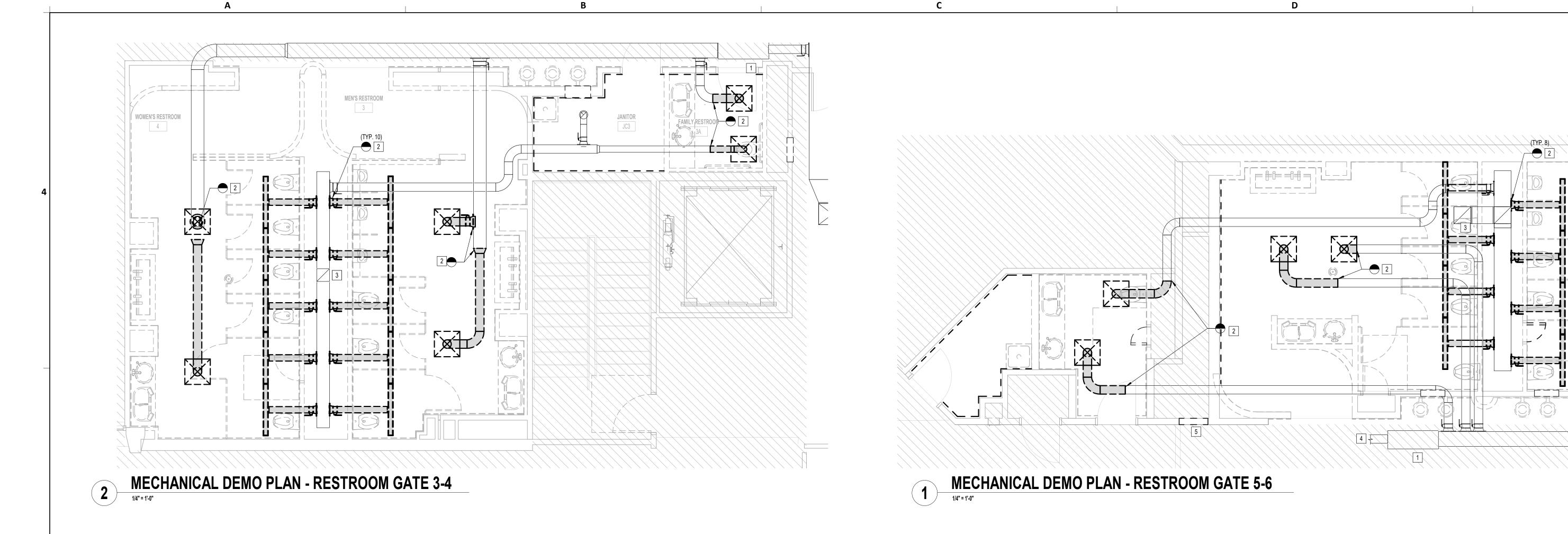
ISSUED FOR CONSTRUCTION

Henderson Rogers Structural Engineers, LLC TBPE Firm Registration No. 8755

PARTIAL FLOOR FRAMING PLAN RESTROOMS As indicated

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: **I-19-C-925F** - S-301 - 2



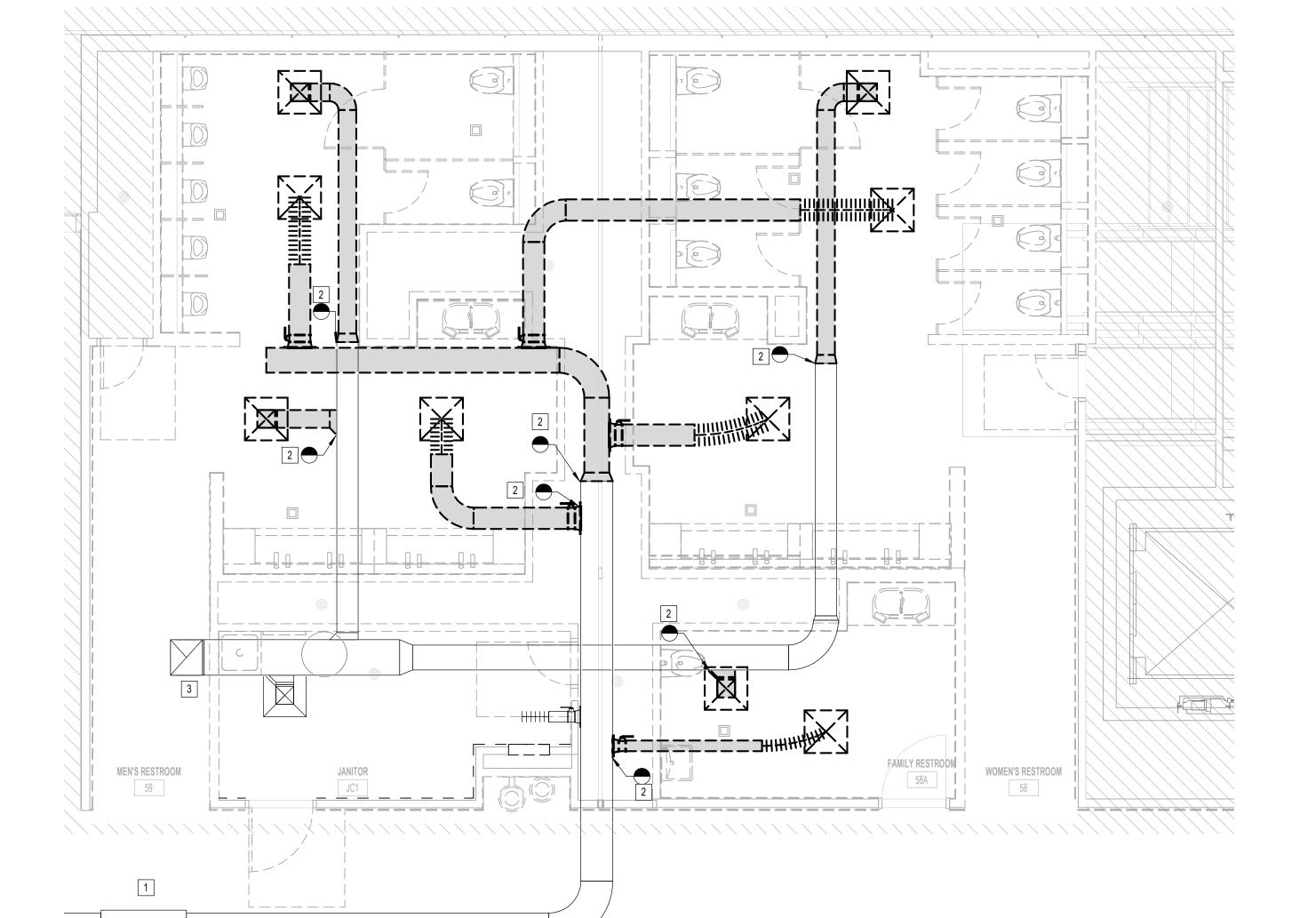
**KEYED NOTES** 

POINT OF DEMOLITION. DEMOLISH ALL DOWNSTREAM DUCTWORK AND AIR DEVICES AND REMOVE.

DEMOLISH EXISTING EXHAUST FAN ON ROOF AND REMOVE. COORDINATE WITH ELECTRICAL CONTRACTOR.

EXISTING AIR TERMINAL UNIT TO REMAIN.

EXISTING UPSTREAM DUCTWORK TO REMAIN. DEMOLISH EXISTING RETURN AIR INTAKE GRILLE.



MECHANICAL DEMO PLAN - RESTROOM GATE 58-59

1/4" = 1'-0"

7800 Airport Blvd Houston, TX 77061 HAS HOBBY AIRPORT RESTROOMS PHASE 3

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800 Sampson St. #104 Houston, TX 77003

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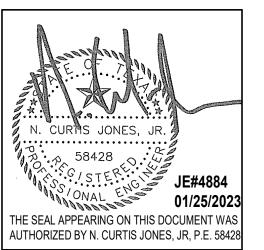
**DESIGNER PROJECT No.:** PROJECT STATUS: CONSTRUCTION **DOCUMENTS REVISIONS** No. DESCRIPTION DATE BY 10.28.22 JE 95% CD 12.09.22 JE 01.25.2023 JE

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SHEET NAME:
MECHANICAL DEMO ENLARGED PLANS

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - MD-101 - 3

HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209B A.I.P. No. D.O.A No. C.O.H. No.

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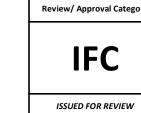
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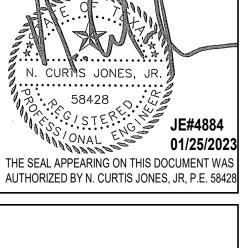
01.25.2023 JE

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SHEET NAME:
MECHANICAL ABBREVIATIONS, LEGENDS AND

C.O.H. No. RESTROOM 58-59 WOMEN'S RESTROOM -RESTROOM 5-6 WOMEN'S RESTROOM -RESTROOM 58-59 MEN'S RESTROOM -RESTROOM 5-6 MEN'S RESTROOM -FAMILY RESTROOM -FAMILY RESTROOM -2 M-101 2 MD-101 FAMILY RESTROOM RESTROOM 3-4 MEN'S RESTROOM RESTROOM 3-4
WOMEN'S RESTROOM ISSUED FOR REVIEW MECHANICAL OVERALL PLAN - LEVEL 2

1/64" = 1'-0"

7800 Airport Blvd Houston, TX 77061

## HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209B A.I.P. No.

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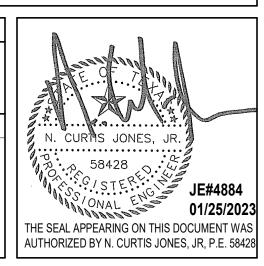
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DES	ESIGNER PROJECT No.: 1429.1						
PROJ	ECT STATUS:	CONST	CONSTRUCTION				
		DOCUMENTS					
REVISIONS							
No.	DESCRIPTION	DATE	ВҮ				
1	30% CD	10.28.22	JE				
2	95% CD	12.09.22	JE				
3	IFC	01.25.2023	JE				

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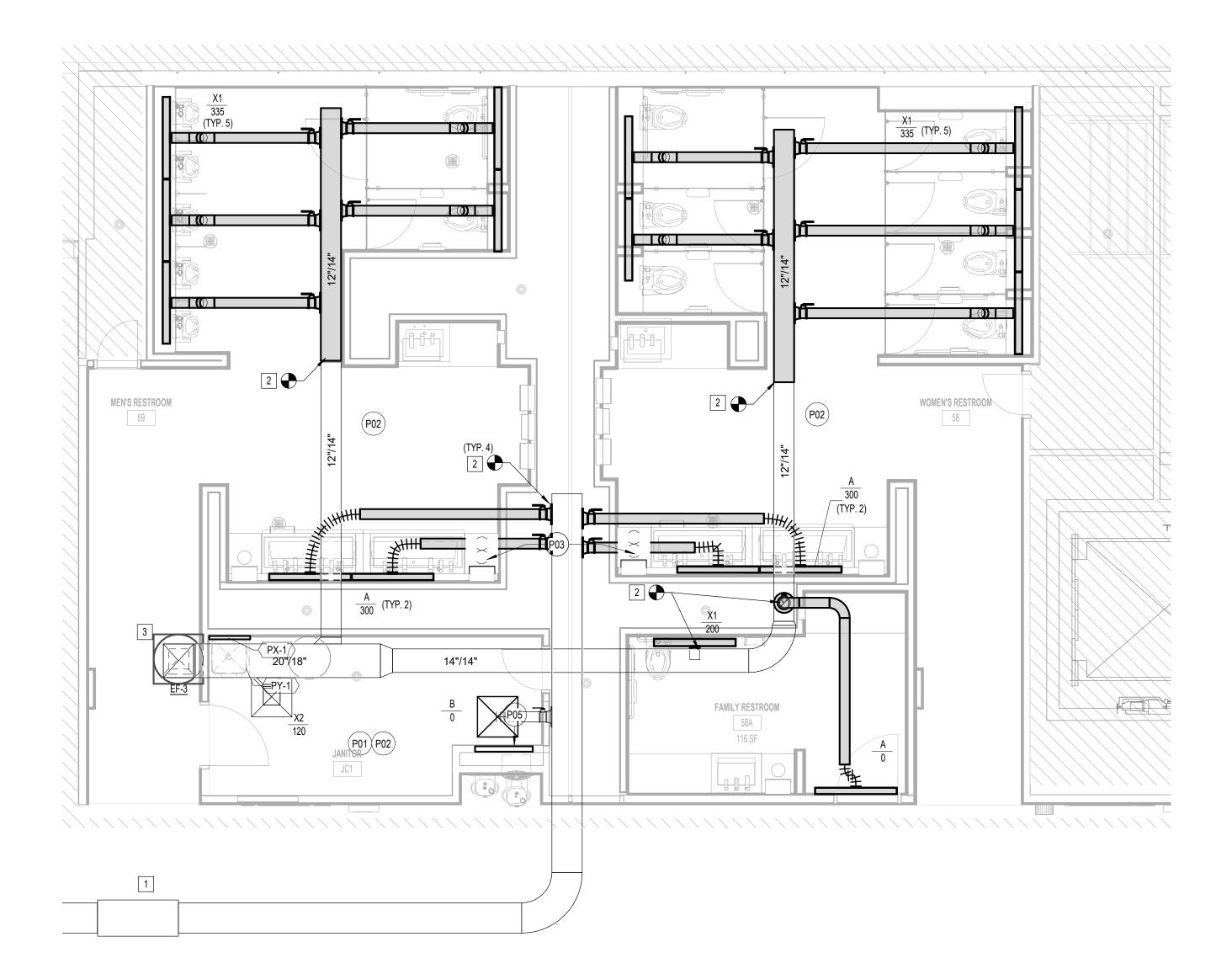
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SHEET NAME:
MECHANICAL OVERALL PLAN - LEVEL 2

1/64" = 1'-0"

MECHANICAL PLAN - RESTROOM GATE 5-6



MECHANICAL PLAN - RESTROOM GATE 58-59

EXISTING AIR TERMINAL UNIT TO REMAIN. CONNECT TO EXISTING BRANCH DUCTWORK. PROVIDE NEW EXHAUST FAN ON ROOF. EXISTING UPSTREAM DUCTWORK TO REMAIN.

**KEYED NOTES** 

7800 Airport Blvd Houston, TX 77061

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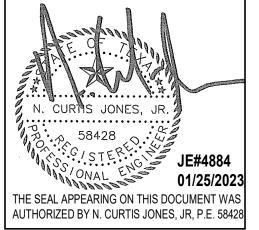
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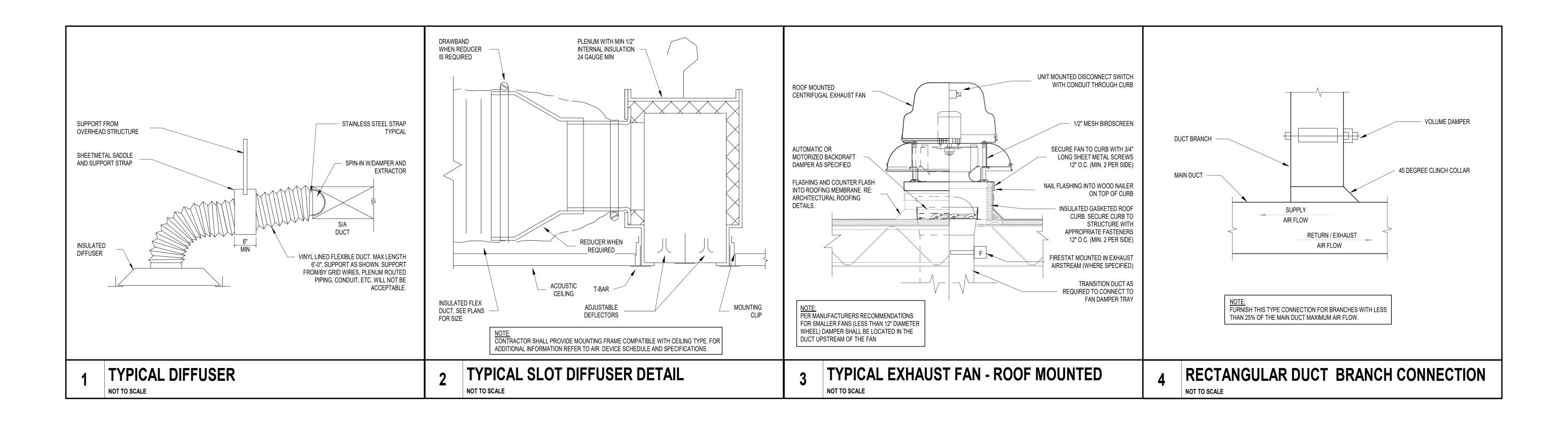
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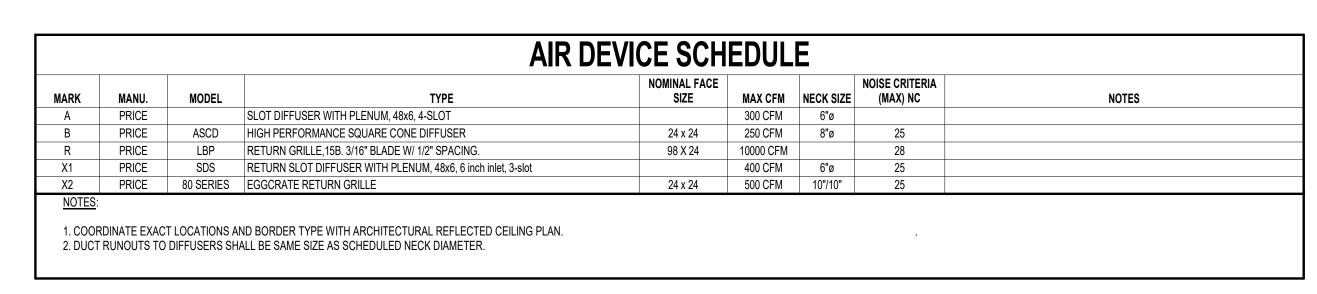


MECHANICAL ENLARGED PLANS 1/4" = 1'-0"

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - M-101 - 3





MARK	MANU.	MODEL LOCATION		AREA(S) SERVED	FAN TYPE	CFM	E.S.P. IN. W.G.	ELECTRICAL					
								MOTOR DATA					
								HP	RPM	V	PH	HZ	NOTES
F-1	GREENHECK	GB-200-VGD	ROOF	RR	UPBLAST	2800	1.5	1.5	1400	460	3	60	
F-2	GREENHECK	GB-200-VGD	ROOF	RR	UPBLAST	2800	1.5	1.5	1400	460	3	60	
F-3	GREENHECK	G-180-VGD	ROOF	RR	UPBLAST	3680	1.5	2	1400	460	3	60	
F-3 IOTES:		G-180-VGD	ROOF	RR	UPBLAST	3680	1.5				3		

### HAS HOBBY AIRPORT RESTROOMS PHASE 3

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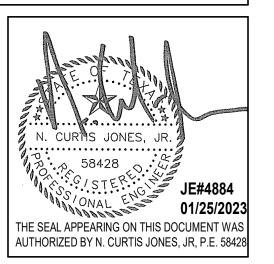
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MECHANICAL DETAILS As indicated

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2. GUARANTEE LABOR AND MATERIALS FOR 1 YEAR. ELECTRICAL DEPARTMENT. TO ABOVE CABLE TRAY WITH BUSHING. CORRECTIONS AS NEEDED. COORDINATED WITH OWNER. MANAGEMENT AND INCLUDE THESE COSTS IN HIS BID PROPOSAL. RESTRICTIVE. CONSTRUCTED WORK. STICKERS. WHERE APPLICABLE, ALL RECEPTACLES ON TABLES OR BAR AREA SHALL BE GFCI PROTECTED. CONDUITS CROSSING EXPANSION JOINTS SHALL HAVE EXPANSION FITTING PER NEC. LONG OR LESS. A. NO AC (BX) OR MC CABLE ALLOWED. ALL ELECTRICAL WORK MUST PASS INSPECTION PRIOR TO BACKFILL, CONCRETE PLACEMENT, INSULATION OR COVER(WALL OR CEILING). AND SUPPORTED SEPARATELY FROM CONDUIT. BOX WITH BRASS CARPET FLANGE SHALL BE HUBBELL B2536 OR EQUAL. INSPECTORS BEFORE COVERING. 24. CONDUCTORS: a. NO. 14 AWG MAY BE USED FOR CONTROL CIRCUIT WIRING WHEN OVER CURRENT STANDARDS. FIXTURES WHEN USING INDIVIDUAL FUSE PROTECTION FOR EACH FIXTURE. C. STRANDED WIRE SMALLER THAN NO. 8 AWG MAY BE FOR BRANCH CIRCUITS PROVIDING: CONNECTIONS. HAS/BSG ELECTRICAL INSPECTORS. COLOR CODING SHALL BE AS FOLLOWS: AØ - BROWN AØ - BLACK BØ - PURPLE BØ - RED CØ - YELLOW CØ - BLUE N - GRAY N - WHITE GRND - BARE GRND - BARE ISO GRND - GREEN ISO GRND - GREEN 25. ALL WORK IN WALLS, CEILINGS AND UNDERGROUND CONDUITS SHALL BE INSPECTED BEFORE COVERING. MASTIC 50) OR EQUIVALENT AFTER INSPECTION. INSULATION OR COVER (WALL OR CEILING).

#### **GENERAL ELECTRICAL NOTES:**

THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND WERE MADE FROM THE BEST INFORMATION AVAILABLE. CONFIRM ALL LOCATIONS AND DIMENSIONS IN THE FIELD. VISIT THE SITE PRIOR TO BID. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CONDITIONS AS THEY EXIST AND NO ADDITIONAL COSTS WILL BE ALLOWED FOR READILY OBSERVABLE CONDITIONS.

- ALL NEW OR ADDITIONAL POWER DISTRIBUTION EQUIPMENT SHALL BE THE SAME MANUFACTURER AS THE ORIGINAL BUILDING EQUIPMENT AND SHALL BE PROVIDED WITH BLACK, PHENOLIC NAMEPLATES WITH WHITE LETTERS (MIN. 5/16" HT.). PANELBOARDS SHALL BE EMBOSSED OR ENGRAVED METAL NAMEPLATE TO INDICATE VOLTAGE, PHASE, BUSSING, AND SHORT CIRCUIT BRACING. SUPPLY NEW, ACCURATE PANEL DIRECTORIES FOR EACH PANEL BOARD OR DISTRIBUTION PANEL IN WHICH ANY WORK IS PERFORMED. PROVIDE NEW BREAKERS IN EXISTING SPACES AS REQUIRED FOR THIS INSTALLATION. BREAKERS FOR ABANDONED CIRCUITS SHALL BE LABELED "SPARES".
- REUSED ELECTRICAL EQUIPMENT, WIRING DEVICES, WIRING DEVICE COVER PLATED, CONDUIT AND WIRE WHICH ARE DAMAGED SHALL BE RESTORED TO ORIGINAL INTEGRITY. ALL MATERIALS USED FOR REPAIRS SHALL MEET ORIGINAL SPECIFICATIONS. ABANDONED ELECTRICAL, DATA, OR COMMUNICATIONS ELEMENTS SHALL BE REMOVED BACK TO ORIGINAL SOURCE AND RETURNED TO LANDLORD. REFER TO DATA AND TELEPHONE CONTRACTOR FOR COORDINATION.
- ANY ELECTRICAL WORK AFFECTING THE LIGHTING ON THE AOA MUST BE COORDINATED WITH IAH
- FOR ALL TELEPHONES/DATA OUTLETS, PROVIDE AN OPENING, PLASTER RING, AND DEVICE PLATE AT NORMAL RECEPTACLE HEIGHT UNLESS OTHERWISE INDICATED AND A PULLSTRING TO THE ACCESSIBLE CEILING SPACE ABOVE. WHERE THE WALL IS LOCATED BELOW AN INACCESSIBLE CEILING SPACE, PROVIDE A 4" SQUARE JUNCTION BOX WITH A SINGLE DEVICE PLASTER RING MOUNTED FLUSH WITH FINISHED WALL AT NORMAL RECEPTACLE HEIGHT. UNLESS OTHERWISE NOTED. ALL TELECOMMUNICATION CONDUIT TO BE 1" MINIMUM AND ROUTED TO IDF ROOM AND/OR
- ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ALL CIRCUIT DESIGNATIONS AND SHALL MAKE
- ALL FIRE ALARM SYSTEM DEVICES AND EXIT SIGNAGE SHALL BE INTERFACED WITH BUILDING FIRE ALARM SYSTEM. ALL NEW DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM. FIRE ALARM SYSTEM CONTRACTOR SHALL VERIFY LOCATION AND QUANTITY OF FIRE ALARM SYSTEM INITIATING, AUTOMATIC INITIATING AND AUDIBLE DEVICES AS REQUIRED BY EXISTING BUILDING SYSTEM. PROVIDE ADDITIONAL FIRE ALARM SIGNALING DEVICES AS REQUIRED TO ENSURE ADEQUATE COVERAGE THROUGHOUT THE APPLICABLE AREA. ADDITIONAL FIRE ALARM DEVICES SHALL BE ADDED TO MEET BUILDING STANDARDS AND FIRE ALARM SYSTEM CODE REQUIREMENTS. ALL FIRE ALARMS RELATED WORK INCLUDING FIRE ALARM SYSTEM SHUTDOWNS, MUST BE
- THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH HAS CONSTRUCTION REQUIREMENTS. WORK THAT INTERFERES WITH EXISTING TENANT OR BUILDING ACTIVITIES MAY REQUIRE SPECIAL TIME. THE ELECTRICAL CONTRACTOR SHALL COORDINATE SPECIAL TIME WITH BUILDING
- 10. ELECTRICAL WORK MUST COMPLY WITH NEC-2020, CITY ELECTRIC CODE, AND 2018 HAS-ELECTRIC STANDARDS. BASE BUILDING STANDARDS AND SPECIFICATIONS SHALL APPLY TO ALL WORK SHOWN ON THESE DRAWINGS. IF ANY CONFLICT BETWEEN ANY CODE REQUIREMENTS ARISES, USE THE MOST
- 11. ALL LOCATIONS OF DEVICES ARE APPROXIMATE. SEE ARCHITECTURAL DRAWINGS FOR EXACT
- 12. SEAL NEW OR EXISTING PENETRATIONS IN OF FLOORS, RATED PARTITIONS, AND CORRIDOR WALLS.
- 13. SECURE ALL PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
- 14. ALL WORK AND SERVICE INTERRUPTIONS SHALL BE COORDINATED WITH THE OWNER SUCH THAT THE WORK IS PERFORMED AT THE OWNERS CONVENIENCE. THIS MAY BE DURING EVENINGS AND
- 15. CONTRACTOR TO PROVIDE "AS-BUILT" DRAWINGS INDICATING THE CONFIGURATION OF THE
- 16. REPAIR ANY DAMAGE THAT OCCURS TO ANY ELECTRICAL EQUIPMENT DURING DEMOLITION.
- 17. SUBMIT INFORMATION ON ALL NEW EQUIPMENT IN THE FORM OF SHOP DRAWINGS. REFER TO ARCHITECTURAL SPECIFICATIONS FOR THE CORRECT PROCEDURE.
- 18. PROVIDE 3 COPIES OF THE OPERATION AND MAINTENANCE MANUALS TO THE OWNER. PROVIDE INSTRUCTION ON THE SYSTEM OPERATION TO THE OWNER.
- 19. AS PER 2020 NEC AND ALL HAS STANDARDS ALL PANELS, DISCONNECTS, TRANSFORMERS SHALL HAVE PHENOLIC TAGS STATING ELECTRICAL ROOM, CIRCUIT NUMBER AND VOLTAGE WITH ARC FLASH
- WIRING ALL WIRING SHALL BE COPPER, MINIMUM SIZE #12 AWG, THWN, RATED AT 600 VOLTS. PROVIDE GREEN GROUNDING CONDUCTOR WITH ALL POWER AND RECEPTACLE CIRCUITS. ALL WIRING TO BE IN CONDUIT, LIGHTING FIXTURES MUST HAVE INDIVIDUAL FEEDS TO EACH FIXTURE, "DAISY CHAINING" OF FIXTURES IS NOT ALLOWED. LIGHTING FIXTURE WHIPS MUST BE 6 FEET
- ALL GROUND RODS TO BE STAINLESS STEEL (3/4" x 10' MINIMUM). ALL BONDING AND GROUNDING PER 250 OF 2020 NEC AND ALL HAS 2020 STANDARDS. ALL UNUSED CONDUIT AND WIRING OF ANY CRAFT SHALL BE REMOVED BACK TO ITS SOURCE.
- 21. BOXES ALL BOXES TO BE GALVANIZED STEEL SUITABLE FOR LOCATION AND SIZED PER THE N.E.C.
- 22. DEVICES: SWITCHES SINGLE POLE, 3-WAY AND 4-WAY SWITCHES TO BE 20 AMP., 120/240 OR 277/480 VOLT AS APPLICABLE. MOUNT SWITCHES AS SHOWN ON PLAN. SWITCHES AND DEVICE PLATES SHALL BE WHITE IN COLOR, UNLESS NOTED OTHERWISE. HUBBELL #1121I OR EQUAL RECEPTACLES -COMMERCIAL GRADE 20 AMP., 120V., NEMA 5-20R, HUBBELL 5262I OR EQUAL. INSTALL RECEPTACLES AS SHOWN ON PLAN. RECEPTACLES AND DEVICE PLATES SHALL BE WHITE IN COLOR, UNLESS NOTED OTHERWISE. ISOLATED GROUND RECEPTACLES TO BE ORANGE HUBBELL 1121I OR EQUAL. FLOOR
- 23. CONDUIT ALL ELECTRICAL CONDUIT SHALL BE 3/4" MINIMUM GALVANIZED EMT W/ COMPRESSION FITTINGS. ALL TELECOMMUNICATION CONDUIT SHALL BE 1" MINIMUM GALVANIZED EMT W/ COMPRESSION FITTINGS. SUPPORT CONDUIT FROM STRUCTURE, NOT TO EXCEED 10' BETWEEN SUPPORTS. DO NOT SUPPORT FROM DUCTWORK OR PIPING. ROUTE CONDUIT AS DIRECTLY AS POSSIBLE WITH LARGE RADIUS BENDS AND INSTALLED PER N.E.C. PROVIDE U.L. LISTED EXPANSION FITTINGS IF CONDUIT CROSSES EXPANSION OR DEFLECTION JOINT. CLEAN CONDUIT INTERIOR AFTER INSTALLATION, COAT SCRATCHES WITH ZINC PAINT. PROVIDE PULL WIRE FOR ALL EMPTY CONDUIT. CONDUIT UNDER SLAB SHALL BE SCHEDULE 40 PVC. ALL CONDUIT SHALL BE CONCEALED IN THE SALES AREAS. ANY CONDUIT PASSING THROUGH THE FLOOR SHALL BE RIGID GALVANIZED STEEL CONDUIT. ALL FLOOR PENETRATIONS SHALL BE INSPECTED FOR FIRE CAULKING BY BSG ELECTRICAL
- A. MINIMUM WIRE SIZE FOR BRANCH CIRCUITS BE NO. 12 AWG COPPER. A.
  - PROTECTION IS PROVIDED IN COMPLIANCE WITH THE APPLICABLE NEC, NFPA AND JIC b. NO. 14 AWG OR NO. 16 AWG MAY BE USED FOR "FIXTURE WHIPS" FOR INDIVIDUAL
- B. ALUMINUM WIRE SHALL BE USED ONLY FOR OVERHEAD SPANS FROM POLE TO POLE, POLE TO BUILDING, OR BUILDING TO BUILDING APPLICATIONS.
- a. THEY ARE CONNECTED TO WIRING DEVICES THAT UTILIZE CLAMP TYPE TERMINATIONS RATHER THAN BINDER HEAD SCREW CONNECTIONS. b. THEY ARE TERMINATED WITH SPADE TYPE LUGS FOR BINDER HEAD SCREW
- THEY ARE SPLICED TO SOLID CONDUCTORS FOR BINDER HEAD SCREW CONNECTIONS. STRANDED CONDUCTORS SHALL BE USED FOR ALL MOTOR AND CONTROL CIRCUIT WIRING. CONDUCTORS FEEDING COMPUTER OUTLETS (OR IN CLOSE PROXIMITY TO A TELECOMMUNICATIONS OUTLET) SHALL HAVE À NEUTRAL ONE SIZE LARGER THAN THE PHASE
- F. REQUIRED TORQUE TO TERMINALS IN BREAKERS 100A AND ABOVE MUST BE WITNESSED BY G. CONDUCT COLOR CODING SHALL BE CONSISTENT ALONG THE ENTIRE LENGTH OF A CIRCUIT.
- 480Y / 277V, 3Ø, 4W 208Y / 120V, 3Ø, 4W 240Y / 120V, 1Ø, 3W AØ - BLACK CØ - RED N - WHITE GRND - BARE ISO GRND - GREEN
- 26. ALL CAD-WELDS TO BE INSPECTED BY ELECTRICAL INSPECTOR BEFORE COVERING. ALL CAD-WELDS UNDERGROUND TO BE SEALED WITH A COLD TAR (BIT
- 27. TRANSFORMERS TO BE INSTALLED IN ACCORDANCE WITH HAS DESIGN
- 28. THE MINIMUM LENGTH OF FLEXIBLE METALLIC CONDUIT (OR LIQUID TIGHT) FOR FINAL CONNECTION TO VIBRATING EQUIPMENT WILL BE 4 FEET. THE MAXIMUM LENGTH FOR ANY CONNECTION WILL BE 6 FEET.
- 29. ALL ELECTRICAL WORK MUST PASS INSPECTION PRIOR TO BACKFILL, CONCRETE PLACEMENT,

#### SYMBOL LEGEND

#### **SWITCHES**

- SWITCH, SPST, 20A, 120/277V
- SWITCH, 20A, 120/277V, "2" DENOTES DPST, "3" DENOTES THREE-WAY, "4" DENOTES FOUR-WAY
- \$ M SWITCH, MOTION SENSOR, NOVITAS #01-133

DIMMER CONTROL SWITCH, 1000 WATT UNLESS OTHERWISE NOTED

- WALL MOUNTED OCCUPANT SENSOR WITH 0-10V DIMMER. PROVIDE ENOUGH SENSORS(CEILING OR WALL MOUNTED) FOR FULL ROOM COVERAGE. CONNECT LIGHT FIXTURES SERVING ROOM THROUGH NEW SENSOR(S). LIGHTS MUST BE TURNED ON MANUALLY (OR OPTIONALLY CAN BE CONFIGURED TO COME ON AUTOMATICALLY TO 50%). EATON #VSW-P-010
- HASH MARKS INDICATE NUMBER OF CONDUCTORS PHASE/NEUTRAL/SWITCH LEG/GROUND FROM LEFT TO RIGHT. NO HASH MARKS INDICATES 2#12, 1#12G, UNLESS OTHERWISE

RECEPTACLES AND OUTLETS

#### UNDERGROUND CONDUIT

- DUPLEX WALL RECEPTACLE, NEMA 5-15R, 15A, 125V OR NEMA 5-20R, 20A, 125V, RE: SPECIFICATIONS, DOT INDICATES ABOVE COUNTER.
- WP DUPLEX WALL RECEPTACLE. "WP" DENOTES WEATHERPROOF, "TP" DENOTES SAFETY TYPE, "GFI" DENOTES GROUND FAULT PROTECTION, DOT INDICATES ABOVE COUNTER.
- DOT INDICATES ABOVE COUNTER. FOURPLEX WALL RECEPTACLE. NEMA 5-15R, 15A, 125V.
- SPECIAL RECEPTACLE, NEMA CONFIGURATION AS NOTED. DOT INDICATES ABOVE COUNTER.
- FLOOR OUTLET
- J JUNCTION BOX
- DIRECT CONNECTION TO EQUIPMENT
- TELEPHONE WALL OUTLET. PROVIDE 2"X4" OUTLET BOX WITH 3/4" CONDUIT AND PULL STRING TO ABOVE CEILING. DATA WALL OUTLET. PROVIDE 2"X4" OUTLET BOX WITH 3/4" CONDUIT AND PULL STRING TO ABOVE CEILING.
- COMBINATION RECEPTACLE/TELEPHONE/DATA FLOOR OUTLET

#### GFI GROUND FAULT INTERRUPTERS ELECTRICAL EQUIPMENT

DISTRIBUTION PANEL PLYWOOD TERMINAL BOARD, TYPE AS NOTED, 4' X 8' X 3/4", UNLESS NOTED OTHERWISE

T TRANSFORMER

#### MOTORS AND CONTROLS

- SINGLE OR THREE PHASE MOTOR DISCONNECT (SAFETY) SWITCH "200/3/150" DENOTES
- AMPERES/POLE/FUSE, "NF" DENOTES NON-FUSED
- COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER, "30/3/15/#0" DENOTES AMPÉRES/POLES/FUSE/ STARTER
- SIZE, "NF" DENOTES NON-FUSED. MANUAL MOTOR STARTING WITH THERMAL OVERLOAD

## FIRE ALARM

#### FACP FIRE ALARM CONTROL PANEL (FLUSH|SURFACE)

CEILING SPEAKER/STROBE. (##) IS CANDELA RATING WALL SPEAKER/STROBE

## CEILING STROBE. (##) IS CANDELA RATING

WALL STROBE SPEAKER

MANUAL PULL STATION

AREA SMOKE DETECTOR, "H" HEAT DETECTOR, "DD" DUCT DETECTOR.

SPRINKLER FLOW SWITCH

⟨ T ⟩ VALVE SUPERVISORY SWITCH

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HAS HOBBY AIRPORT RESTROOMS PHASE 3

C.O.H. No. D.O.A No.

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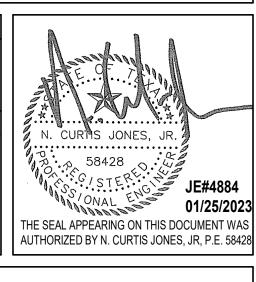
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**APPROVAL DATE:** 



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12" = 1'-0"

SHEET NAME: ELECTRICAL ABBREVIATIONS, LEGENDS, AND

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - E-001 - 3

C.O.H. No. WOMEN'S RESTROOM 800 Sampson St. #104 **GENERAL LIGHTING DEMOLITION NOTES:** 1. ALL LIGHTING TO BE REMOVED. REMOVE LIGHT FIXTURES, CONDUIT AND WIRE BACK TO NEAREST JUNCTION BOX. EXISTING BRANCH CIRCUIT ARE TO REMAIN AND BE REUSED FOR NEW LIGHTING. REFER TO LIGHTING PLANS FOR NEW F=----FAMILY RESTROOM L\_\_\_\_\_ **ELECTRICAL KEYED NOTE** EXISTING LIGHTING CONTROL OCCUPANCY SENSOR TO BE REUSE REFER TO EL-101 FOR NEW LOCATION. ALL EXISTING LIGHTING CONTROL ABOVE CEILING TO BE REUSED (ROOM CONTROLLER). LIGHT SWITCH TO BE REMOVED. 4 EXISTING LIGHTING TO REMAIN IN THIS AREA. **ELECTRICAL LIGHTING DEMO PLAN - RESTROOM GATE 58-59** FAMILY RESTROOM WOMEN'S RESTROOM MEN'S RESTROOM 4 **ELECTRICAL LIGHTING DEMO PLAN - RESTROOM GATE 3-4** ISSUED FOR REVIEW MEN'S RESTROOM WOMEN'S RESTROOM \_\_\_JANITOR \_\_\_\_ 1 ELECTRICAL LIGHTING DEMO PLAN - RESTROOM GATE 5-6 Aconex File Name: I-19-C-925F - ELD-101 - 3

7800 Airport Blvd Houston, TX 77061

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PHASE 3

ARCHITECTURE PLANNING INTERIORS

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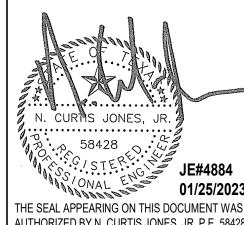
**DESIGNER PROJECT No.:** CONSTRUCTION PROJECT STATUS: DOCUMENTS **REVISIONS** No. DESCRIPTION DATE BY 10.28.22 JE 95% CD 12.09.22 JE

01.25.2023 JE

**DESIGN BY:** DRAWN BY: CHECKED BY: 01/25/2023 **ISSUE DATE: CURT JONES** APPROVED BY: APPROVAL DATE: 01/25/2023

> DIRECTOR **HOUSTON AIRPORT SYSTEM**

Review/ Approval Category



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY N. CURTIS JONES, JR, P.E. 58428

SHEET NAME:
ELECTRICAL LIGHTING DEMO ENLARGED As indicated

Houston, TX 77003 RESTROOM 5-6 WOMEN'S RESTROOM — RESTROOM 58-59 WOMEN'S RESTROOM — RESTROOM 5-6 MEN'S RESTROOM -RESTROOM 58-59 MEN'S RESTROOM FAMILY RESTROOM — FAMILY RESTROOM -2 EL-101 ELD-101 FAMILY RESTROOM RESTROOM 3-4 MEN'S RESTROOM RESTROOM 3-4
WOMEN'S RESTROOM ISSUED FOR REVIEW 1 ELECTRICAL LIGHTING OVERALL PLAN - LEVEL 2



7800 Airport Blvd Houston, TX 77061

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## RDLR Architects

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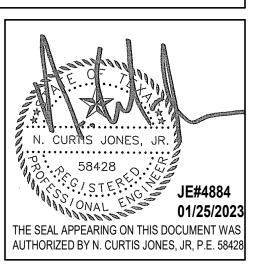


**DESIGNER PROJECT No.:** CONSTRUCTION PROJECT STATUS: DOCUMENTS **REVISIONS** No. DESCRIPTION DATE BY 10.28.22 JE 12.09.22 JE 01.25.2023 JE

DESIGN BY:	JE
DRAWN BY:	JE
CHECKED BY:	JE
ISSUE DATE:	01/25/2023
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APPROVAL DATE:	01/25/2023

**HOUSTON AIRPORT SYSTEM** 

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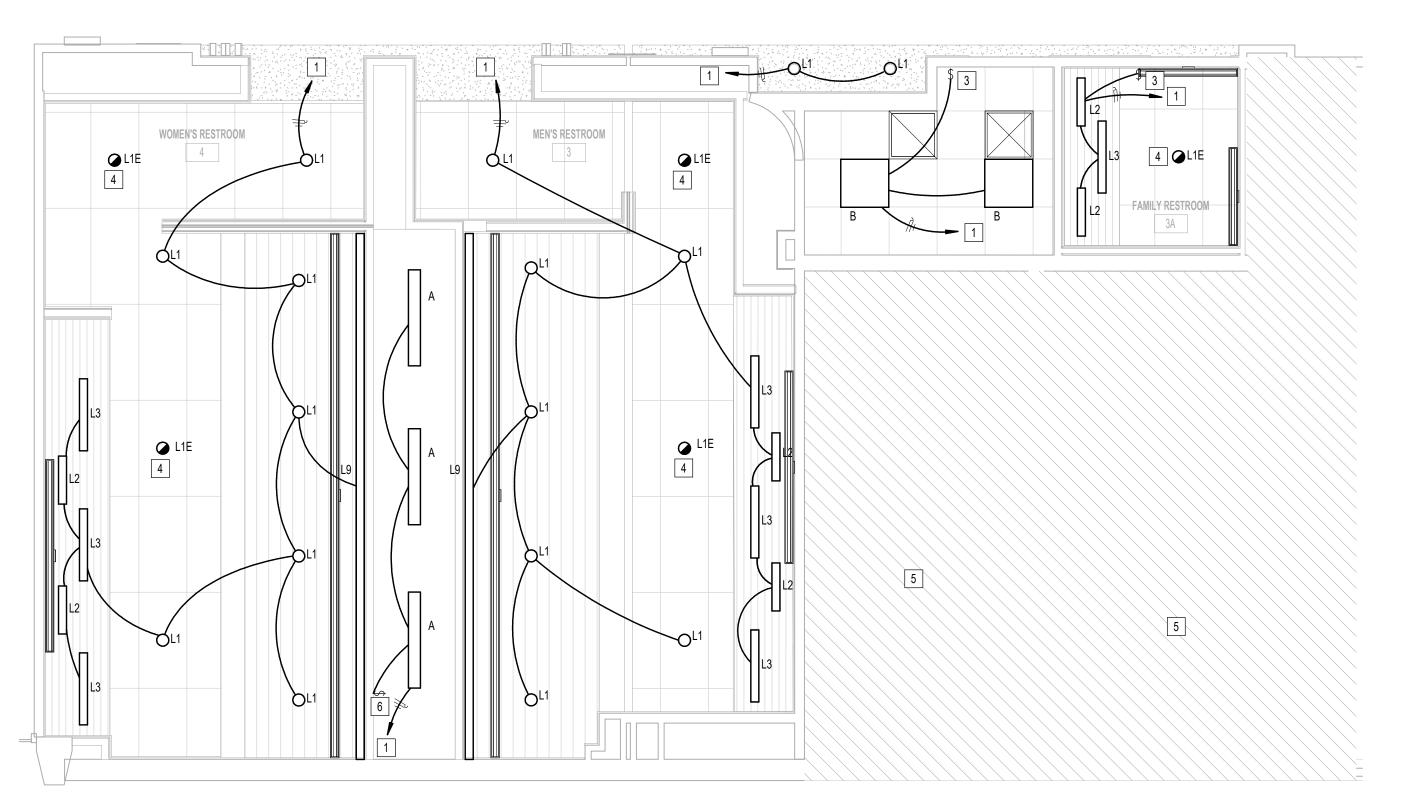


SHEET NAME: ELECTRICAL LIGHTING OVERALL PLAN - LEVEL 2

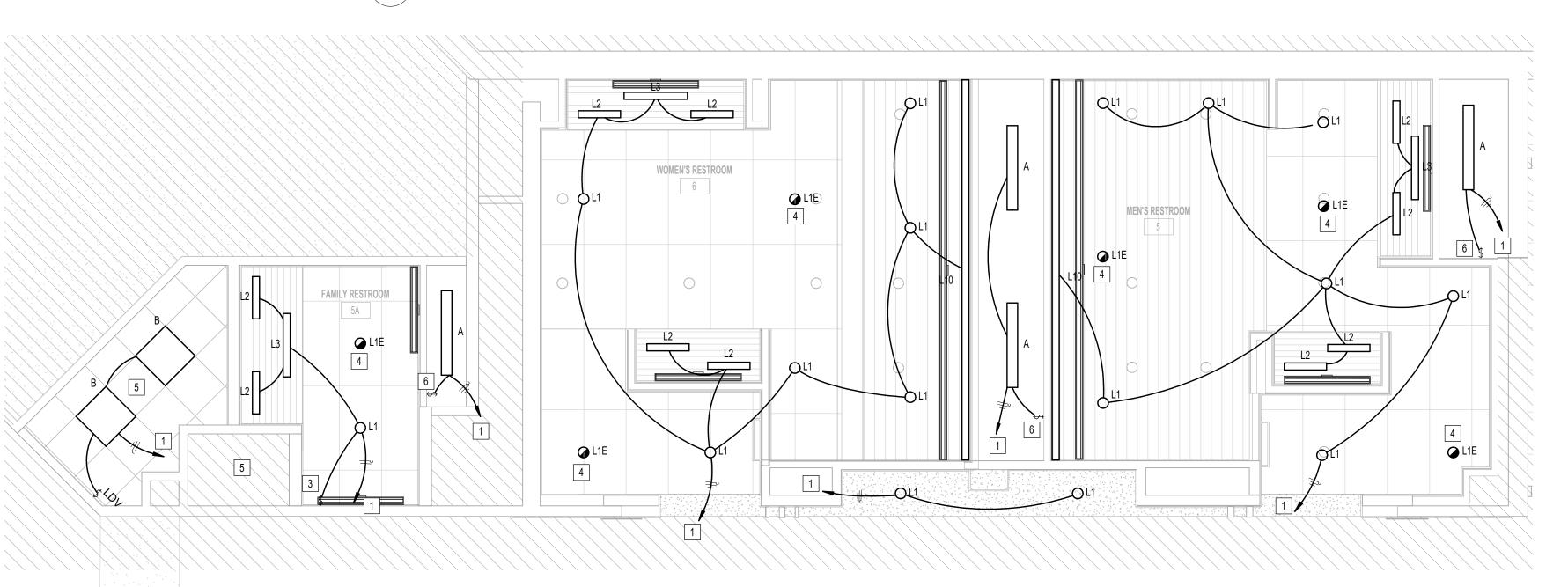
1/64" = 1'-0"

4 **4** L1E MEN'S RESTROOM 4 🕢 L1E 4 **4** L1E 4 🕢 L1E

**ELECTRICAL LIGHTING PLAN - RESTROOM GATE 58-59** 



ELECTRICAL LIGHTING PLAN - RESTROOM GATE 3-4



ELECTRICAL LIGHTING PLAN - RESTROOM GATE 5-6

ELECTRICAL LIGHTING PLAN GENERAL NOTES

A. ALL LIGHT FIXTURE LOCATIONS ARE APPROXIMATE. FOR EXACT LOCATION REFER TO ARCHITECTURAL DRAWINGS.

B. ALL OCCUPANCY SENSORS SHALL PROVIDE FULL ROOM COVERATE. PROVIDE POWER PACKS AND OVERRIDE SWITCHES AS REQUIRED FOR CONTROL

C. ALL LIGHTS TO BE CONTROLLED BY EXISTING LIGHTING CONTROL SYSTEM. D. CONTRACTOR SHALL REUSE EXISTING EMERGENCY CIRCUIT TO PROVIDE POWER TO NEW EMERGENCY LIGHTING.

**ELECTRICAL KEYED NOTE** 

HAS NOT BEEN EXCEEDED.

1 CONNECT TO EXISTING LIGHTING CIRCUIT SERVING REMOVED LIGHT FIXTURES. VERIFY BRANCH CIRCUIT HAS NOT BEEN

- NEW LOCATION OF OCCUPANT SENSOR. WALL MOUNTED OCCUPANT SENSOR WITH 0-10V DIMMER. PROVIDE FULL ROOM COVERAGE. CONNECT LIGHT FIXTURES SERVING ROOM THROUGH NEW SENSOR(S). AUTO OFF / AUTO ON. 4 CONNECT TO EXISTING EMERGENCY LIGHTING CIRCUIT SERVING REMOVED EMERGENCY LIGHT FIXTURES. VERIFY BRANCH CIRCUIT
- EXISTING LIGHTING TO REMAIN IN THIS AREA. 6 DOOR JAMB SWITCH. COORDINATE EXACT REQUIREMENTS IN

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C.O.H. No.

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PN209B A.I.P. No. C.I.P. No.

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D.O.A No.

ARCHITECTURE PLANNING INTERIORS

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9820 Whithorn Dr. Houston, Texas 77095 (713)222-7766 Texas Registered Engineering Firm #F-3811

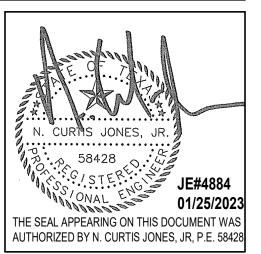
**DESIGNER PROJECT No.:** 1429.15 CONSTRUCTION PROJECT STATUS: DOCUMENTS **REVISIONS** DATE BY No. DESCRIPTION 10.28.22 JE 12.09.22 JE 01.25.2023 JE

**DESIGN BY:** DRAWN BY: CHECKED BY: 01/25/2023 ISSUE DATE: CURT JONES APPROVED BY: 01/25/2023 APPROVAL DATE:

> DIRECTOR **HOUSTON AIRPORT SYSTEM**

Review/ Approval Category

ISSUED FOR REVIEW



SHEET NAME:
ELECTRICAL LIGHTING ENLARGED PLANS As indicated

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - EL-101 - 3

4 (1) 400 C.O.H. No. 400 5 MEN'S RESTROOM WOMEN'S RESTROOM 58 **GENERAL POWER DEMOLITION NOTES:** 1. CONTRACTOR SHALL REMOVE ALL ELECTRICAL DEVICES IN THE AREA OF WORK. ELECTRICAL CONDUIT, BOX, AND BRANCH CIRCUITS ARE TO BE REMOVED ALL THE WAY TO THE SOURCE PANEL. UNLESS OTHER WISE NOTED. 2. REMOVE ALL FIRE ALARM DEVICES. **JANITOR** FAMILY RESTROOM 58A **ELECTRICAL KEYED NOTE** HAND DRYER TO BE REMOVED AUTOMATIC SOAP DISPENSER AND FAUCET SENSOR TO BE REMOVED \_\_\_\_\_\_\_ RECEPTACLE TO BE REMOVED REMOVE JUNCTION BOX FOR AUTO FLUSH. EXISTING RECEPTACLE TO REMAIN. REMOVE JUNCTION BOX **ELECTRICAL POWER DEMO PLAN - RESTROOM GATE 58-59** JUNCTION FOR FAUCET SENSOR TO BE REMOVED 8 EXISTING RECEPTACLE FOR SOAP DISPENSER PUMP TO REMAIN. 9 REMOVE IPAD \_\_\_\_ MEN'S RESTROOM WOMEN'S RESTROOM ELECTRICAL POWER DEMO PLAN - RESTROOM GATE 3-4 ISSUED FOR REVIEW WOMEN'S RESTROOM ELECTRICAL POWER DEMO PLAN - RESTROOM GATE 5-6 Aconex File Name: **I-19-C-925F** - EPD-101 - 3

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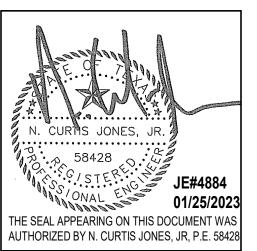
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SHEET NAME: ELECTRICAL POWER DEMO ENLARGED PLANS SHEET No. EPD-101 SCALE: As indicated

RESTROOM 5-6 WOMEN'S RESTROOM -RESTROOM 58-59 WOMEN'S RESTROOM -RESTROOM 5-6 MEN'S RESTROOM -RESTROOM 58-59 MEN'S RESTROOM -FAMILY RESTROOM -FAMILY RESTROOM -2 EPD-101 — FAMILY RESTROOM RESTROOM 3-4MEN'S RESTROOM RESTROOM 3-4
WOMEN'S RESTROOM ISSUED FOR REVIEW ELECTRICAL POWER OVERALL PLAN - LEVEL 2

1/64" = 1'-0"

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### HAS HOBBY AIRPORT RESTROOMS PHASE 3

## RDLR Architects

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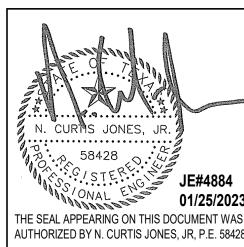
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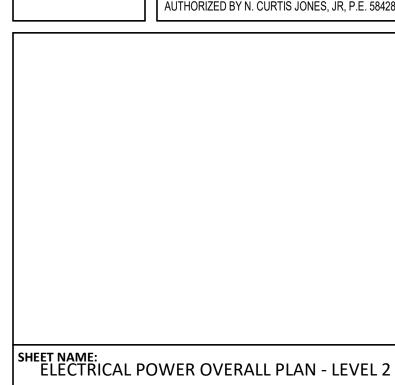
S	IGNER PROJECT No.	:	1429.15	
DJECT STATUS: CONSTRUCTION				
		DOC	CUMENTS	
	REVIS	SIONS		
	DESCRIPTION	DATE	ВҮ	
	30% CD	10.28.22	JE	
	95% CD	12.09.22	JE	
	IFC	01.25.2023	JE	

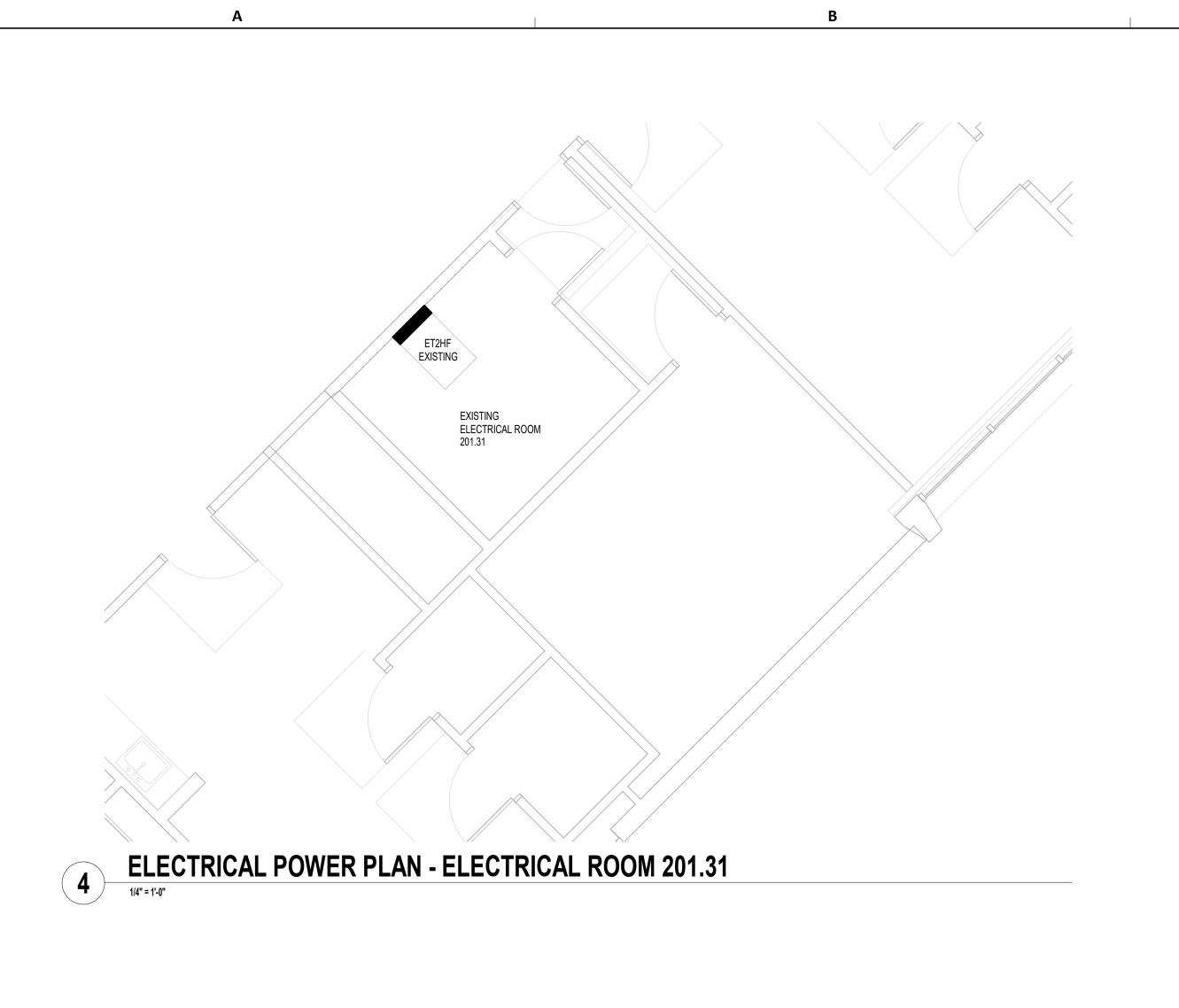
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APPROVED BY:	CURT JONES
APPROVAL DATE:	01/25/2023

Review/ Approval Category



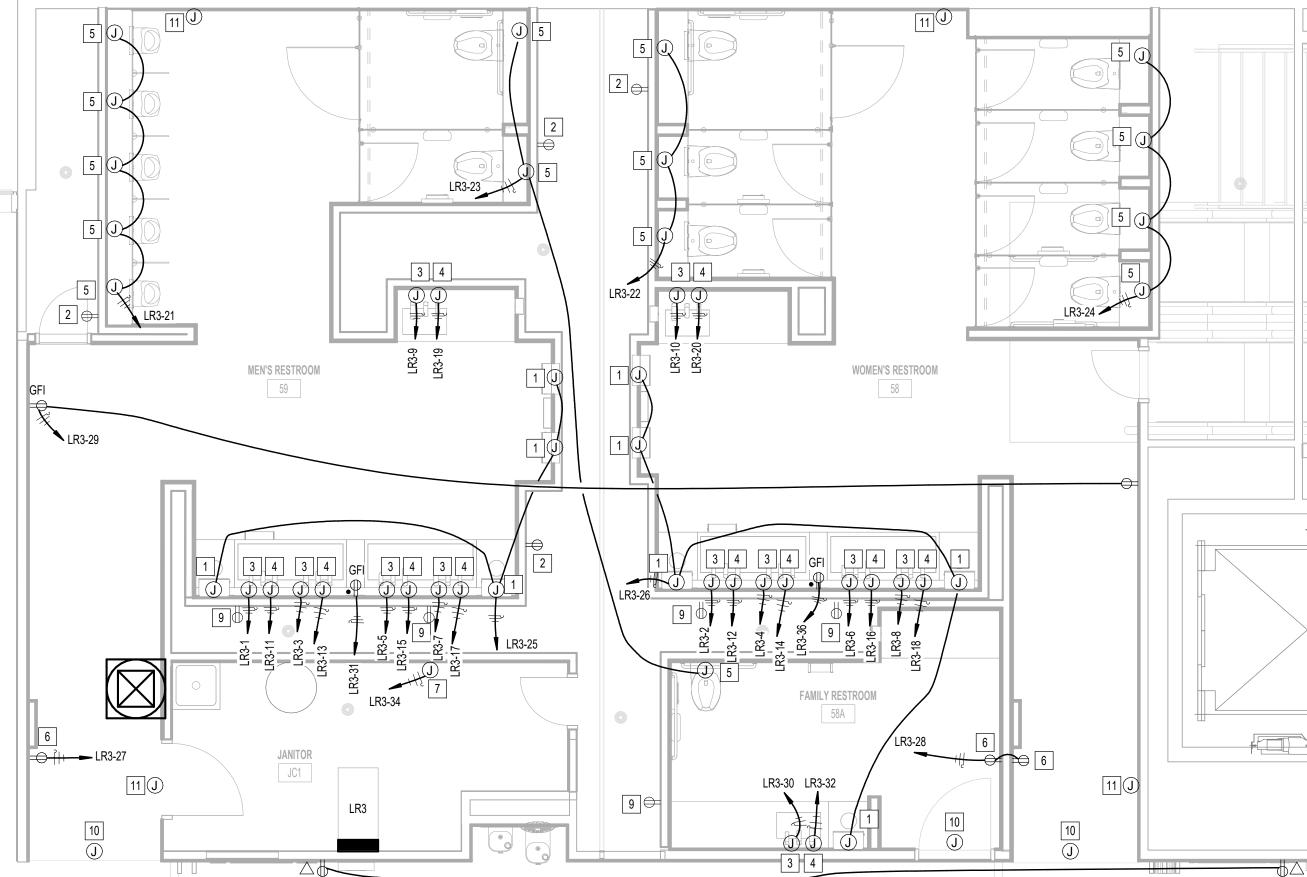
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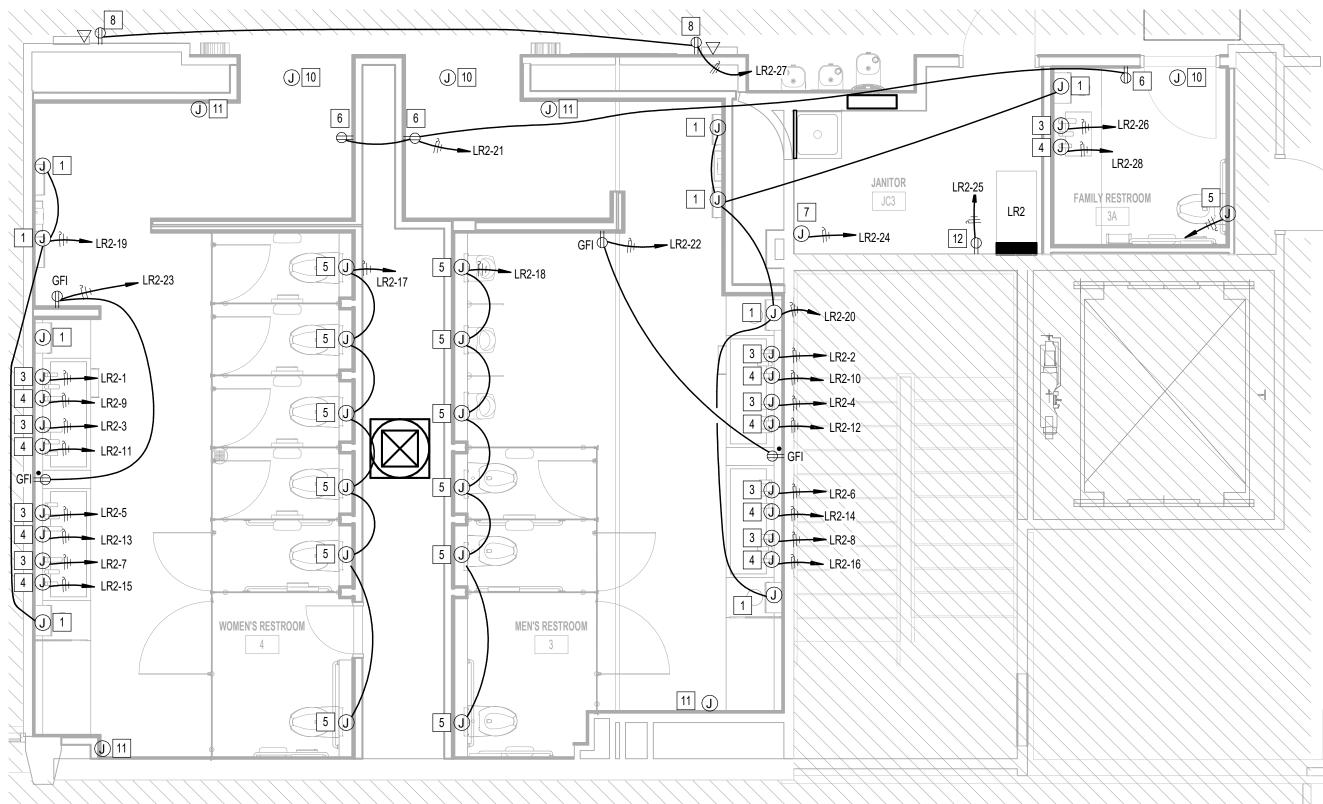


COMM RM 212.45

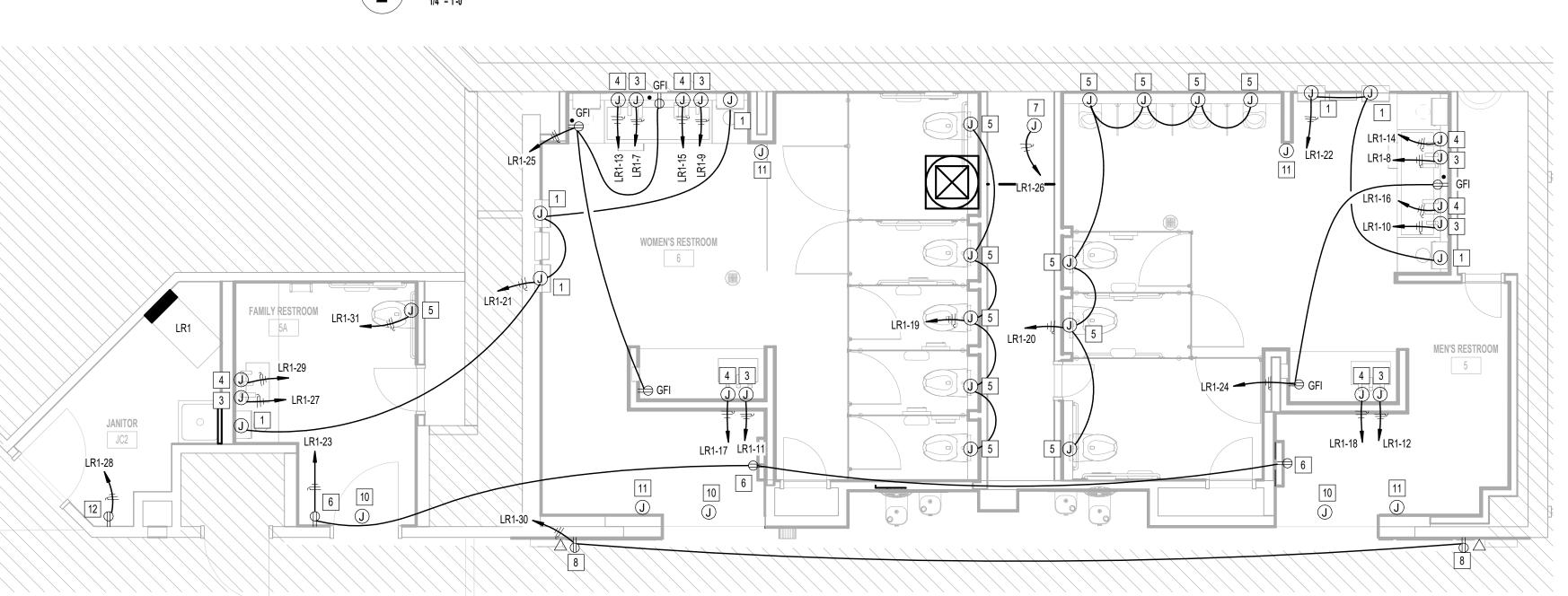
ELECTRICAL POWER PLAN - COMM RM 212.45



3 ELECTRICAL POWER PLAN - RESTROOM GATE 58-59



ELECTRICAL POWER PLAN - RESTROOM GATE 3-4



ELECTRICAL POWER PLAN - RESTROOM GATE 5-6

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C.O.H. No.

**ELECTRICAL KEYED NOTE** 

4 JUNCTION BOX FOR SOAP/ WATER FAUCET SENSOR. COORDINATE CONNECTION WITH EQUIPMENT MANUFACTURER. PROVIDE GFI RECEPTACLE(S) AS REQUIRED.

6 USB GFI RECEPTACLE FOR SMART RESTROOM TABLET. REFER TO TECHNOLOGY DRAWINGS ADDITIONAL REQUIREMENTS.

JUNCTION BOX FOR STALL OCCUPANCY LIGHTS. REFER TO TECHNOLOGY DRAWAING FOR ADDITIONAL REQUIREMENTS.

10 JUNCTION BOX FOR PASSENGER COUNTER SENSOR. REFER TO TECHNOLOGY DRAWINGS ADDITIONAL REQUIREMENTS.

JUNCTION BOX FOR BLUETOOTH BEACON PUCK. REFER TO TECHNOLOGY DRAWINGS ADDITIONAL REQUIREMENTS.

12 RECEPTACLE FOR TECHNOLOGY RACK. REFER TO TECHNOLOGY DRAWINGS ADDITIONAL REQUIREMENTS.

8 FLAT PANEL DISPLAY. REFER TO TECHNOLOGY DRAWINGS FOR DATA REQUIREMENTS AND ADDITIONAL REQUIREMENTS.

EXISTING RECEPTACLE FOR SOAP DISPENSER PUMP TO REMAIN.

JUNCTION BOX FOR TOILET/URINAL SENSOR. PROVIDE 120V HARDWIRE CONNECTION. COORDINATE LOCATION OF TRANSFORMER.

JUNCTION BOX FOR PAPER TOWEL DISPENSOR.

EXISTING RECEPTACLE TO REMAIN. JUNCTION BOX FOR HAND DRYER.

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Consulting Mechanical/Electrical/Plumbing Engineers 9820 Whithorn Dr. Houston, Texas 77095 (713)222-7766 Texas Registered Engineering Firm #F-3811

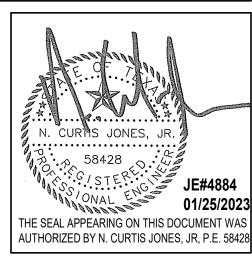
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> DIRECTOR **HOUSTON AIRPORT SYSTEM**

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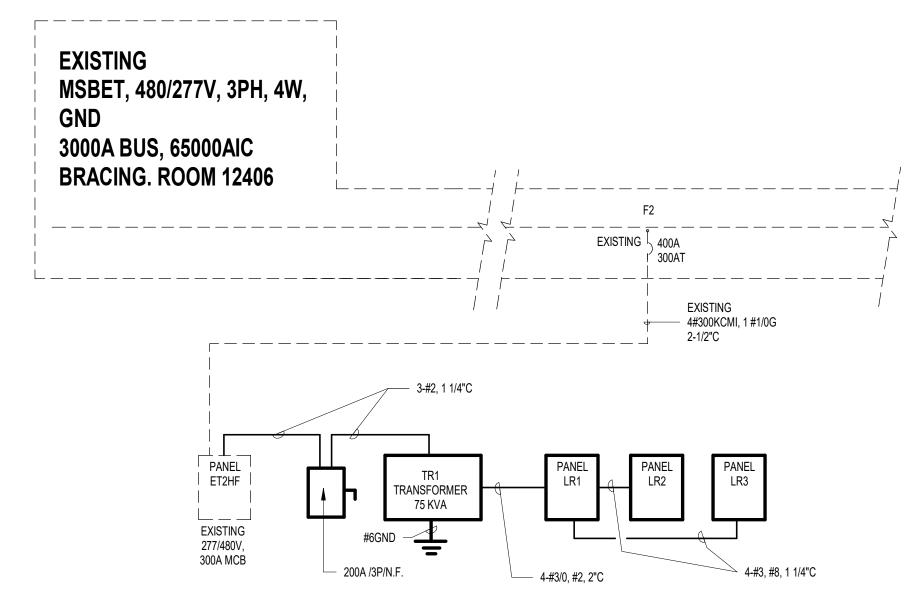
1/4" = 1'-0"

SHEET NAME: ELECTRICAL POWER ENLARGED PLANS

SHEET SIZE: 30"x42" ARCH E1

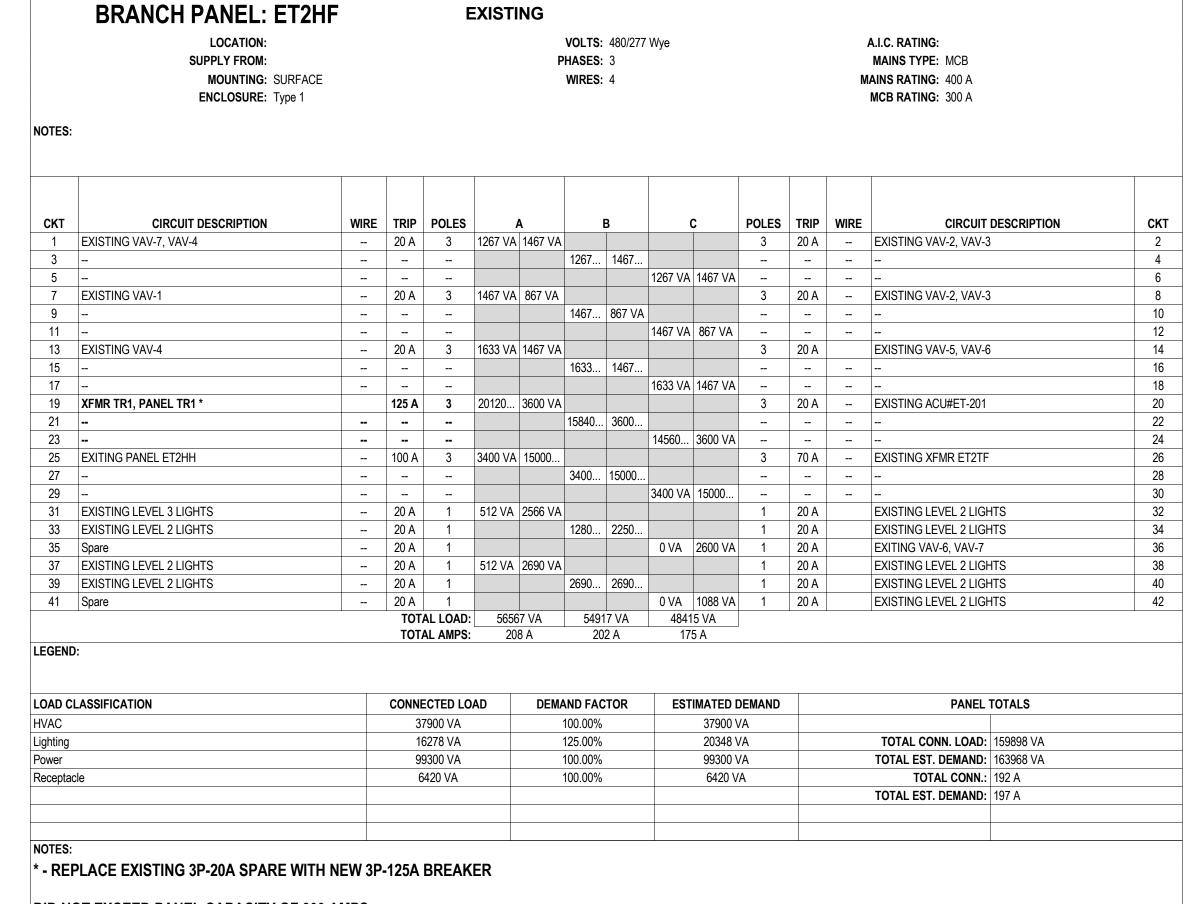
Aconex File Name: I-19-C-925F - EP-101 - 3

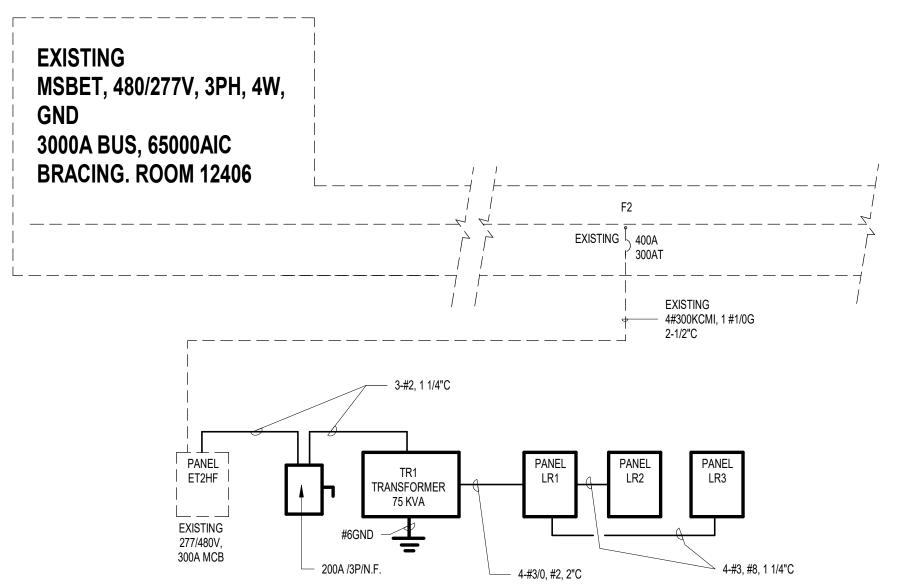
LOCATION: A.I.C. RATING: VOLTS: 480/277 Wye SUPPLY FROM: PHASES: 3 MAINS TYPE: MCB **MOUNTING: SURFACE** MAINS RATING: 400 A WIRES: 4 **ENCLOSURE**: Type 1 MCB RATING: 300 A CIRCUIT DESCRIPTION C POLES TRIP WIRE CIRCUIT DESCRIPTION 1 EXISTING VAV-7, VAV-4 7 EXISTING VAV-1 13 EXISTING VAV-4 19 XFMR TR1, PANEL TR1 \* 25 EXITING PANEL ET2HH 31 EXISTING LEVEL 3 LIGHTS 33 EXISTING LEVEL 2 LIGHTS 35 Spare 37 EXISTING LEVEL 2 LIGHTS 39 EXISTING LEVEL 2 LIGHTS 41 Spare LEGEND: LOAD CLASSIFICATION **ESTIMATED DEMAND** PANEL TOTALS CONNECTED LOAD DEMAND FACTOR 37900 VA 37900 VA 100.00% 16278 VA TOTAL CONN. LOAD: 159898 VA 125.00% 20348 VA TOTAL EST. DEMAND: 163968 VA 99300 VA 100.00% 99300 VA TOTAL CONN.: 192 A 6420 VA 100.00% 6420 VA TOTAL EST. DEMAND: 197 A \* - REPLACE EXISTING 3P-20A SPARE WITH NEW 3P-125A BREAKER DID NOT EXCEED PANEL CAPACITY OF 300 AMPS





L	oad An	alysis					
	Connect KVA	Factor	Demand KVA	A Amps	B Amps	C Amps	N Amps
Measured Load Panel ET2HF (*1.25%)	74.7	1.25	93.4	112.4	112.4	112.4	112.4
New Equipment							
Receptacles	6.4	1.00	6.4	7.7	7.7	7.7	7.7
MISC	44.1	1.00	44.1	53.1	53.1	53.1	53.1
New Load Added	50.5		50.5	60.8	60.8	60.8	60.8
Total DID NOT EXCEED PANEL CAPACITY OF 300AMPS	125.3 S		143.9	173.2	173.2	173.2	173.2





	Load An	alysis					
	Connect KVA	Factor	Demand KVA	A Amps	B Amps	C Amps	N Amps
leasured Load Panel ET2HF (*1.25%)	74.7	1.25	93.4	112.4	112.4	112.4	112.4
ew Equipment							
eceptacles	6.4	1.00	6.4	7.7	7.7	7.7	7.7
IISC	44.1	1.00	44.1	53.1	53.1	53.1	53.1
ew Load Added	50.5		50.5	60.8	60.8	60.8	60.8
otal ID NOT EXCEED PANEL CAPACITY OF 300AM	125.3		143.9	173.2	173.2	173.2	173.2

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C.I.P. No. PN209B A.I.P. No. C.O.H. No. D.O.A No.

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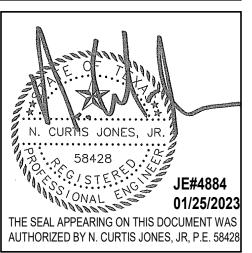
**DESIGNER PROJECT No.:** 1429.15 PROJECT STATUS: CONSTRUCTION DOCUMENTS **REVISIONS** No. DESCRIPTION DATE BY 10.28.22 JE 95% CD 12.09.22 JE

**DESIGN BY:** DRAWN BY: CHECKED BY: 01/25/2023 **ISSUE DATE: CURT JONES APPROVED BY: APPROVAL DATE:** 01/25/2023

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ISSUED FOR REVIEW



ELECTRICAL DETAILS 12" = 1'-0"

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - E-301 - 2

LITHONIA #CLX LED L48 5000LM SEF RDL WD MVOLT GZ10 40K 80CRI

RECESSED

LIGHTING RELAY

WHERE APPLICABLE —— (C)

LED MVOLT

LED MVOLT

LED MVOLT

LITHONIA #EPANL 2X24000LM 80CRI 40K ZT MVOLT

MARK #FINL-2FT-4D-N-40K-AD-277-CF-N100EMG-DPL MARK #FINL-3FT-4D-N-40K-AD-277-CF-N100EMG-DPL

MARK #SL4L-XXFT-RL-XX-90CRI-40K-800LMF-MIN10-277-ZT

MARK #SL4L-XXFT-RL-XX-90CRI-40K-800LMF-MIN10-277-ZT

MARK #SL4L-XXFT-RL-XX-90CRI-40K-800LMF-MIN10-277-ZT

MARK #SL4L-XXFT-RL-XX-90CRI-40K-800LMF-MIN10-277-ZT

MARK #SL4L-XXFT-RL-XX-90CRI-40K-800LMF-MIN10-277-ZT

MARK #SL4L-XXFT-RL-XX-90CRI-40K-800LMF-MIN10-277-ZT

FOCALPOINT #FL6D-20LED-L40-RO-T

FOCALPOINT #FL6D-20LED-L40-RO-T

Remarks

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FULL LENGHT OF THE COVE.

SWITCHED

**EMERGENCY** LED DRIVER

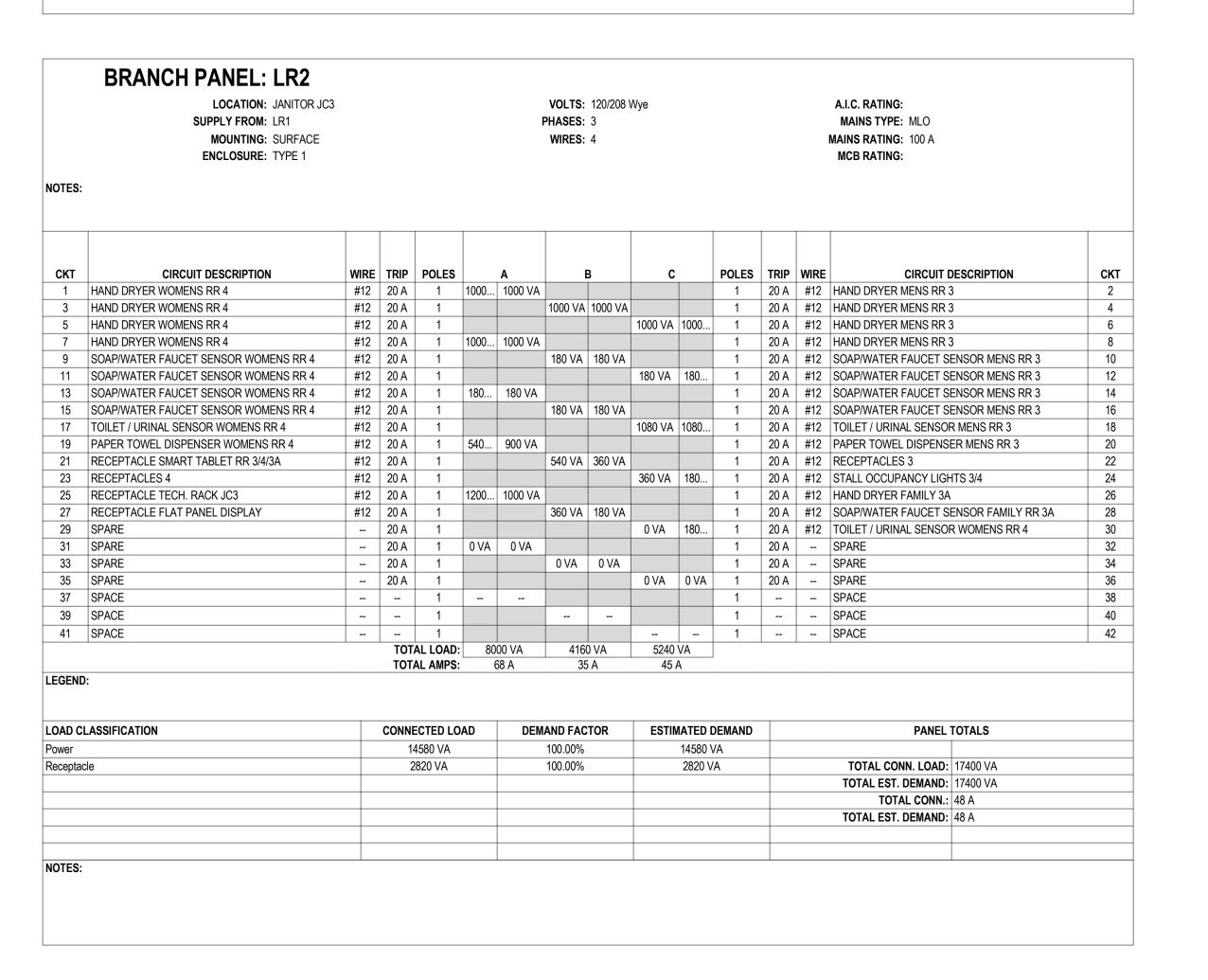
DRIVER

TYPICAL EMERGENCY LED DRIVER WIRING

**BRANCH PANEL: LR3** A.I.C. RATING: **LOCATION: JANITOR JC1** VOLTS: 120/208 Wye SUPPLY FROM: LR1 PHASES: 3 MAINS TYPE: MLO MOUNTING: SURFACE WIRES: 4 MAINS RATING: 100 A **ENCLOSURE**: TYPE 1 MCB RATING: CIRCUIT DESCRIPTION POLES TRIP WIRE HAND DRYER MENS RR 59 #12 20 A 1 1000... 1000 VA 1 20 A #12 HAND DRYER WOMENS RR 58 1000 VA 1000 VA HAND DRYER MENS RR 59 | #12 | 20 A | 1 1 20 A #12 HAND DRYER WOMENS RR 58 #12 20 A 1 1000 VA 1000 VA 1000 VA 1000 WA 100 HAND DRYER MENS RR 59 HAND DRYER MENS RR 59 1 20 A #12 HAND DRYER WOMENS RR 58 #12 | 20 A | 1 HAND DRYER MENS RR 59 |1000 VA|1000 VA| SOAP/WATER FAUCET SENSOR MENS RR 59 180 VA 180... 1 20 A #12 SOAP/WATER FAUCET SENSOR WOMENS RR 58 | #12 | 20 A | 1 #12 20 A 1 180... 180 VA 180 VA 180 VA 1 20 A #12 SOAP/WATER FAUCET SENSOR WOMENS RR 58 1 20 A 1 180 VA 180 VA 1 20 A #12 SOAP/WATER FAUCET SENSOR WOMENS RR 58 13 SOAP/WATER FAUCET SENSOR MENS RR 59 15 SOAP/WATER FAUCET SENSOR MENS RR 59 17 SOAP/WATER FAUCET SENSOR MENS RR 59 19 SOAP/WATER FAUCET SENSOR MENS RR 59 21 TOILET / URINAL SENSOR MENS RR 59 23 TOILET / URINAL SENSOR MENS RR 59 25 PAPER TOWEL DISPENSER MENS RR 59 #12 20 A 1 720... 900 VA 180... 1 20 A #12 RECEPTACLE SMART TABLET WOMENS RR 59/58A 12 20 A 1 80 VA 360 VA 180... 1 20 A #12 HAND DRYER FAMILY RR 58A 12 20 A 1 180... 180 VA 1 20 A #12 SOAP/WATER FAUCET SENSOR FAMILY RR 58 12 20 A 1 80 VA 180 VA 1 20 A #12 STALL OCCUPANCY LIGHTS 58/59 1 20 A 1 0 VA 180... 1 20 A #12 RECEPTACLES 58 1 20 A 1 0 VA - 1 - SPACE 1 - SPACE 27 RECEPTACLE SMART TABLET MENS RR 59 29 RECEPTACLES 58/59 31 RECEPTACLES 59 33 RECEPTACLE FLAT PANEL DISPLAY 35 SPARE - 20 A 1 0 VA - 1 - SPACE
- 20 A 1 0 VA - 1 - - SPACE

TOTAL LOAD: 6700 VA 6880 VA 5520 VA 39 SPARE TOTAL AMPS: 57 A 59 A LOAD CLASSIFICATION CONNECTED LOAD DEMAND FACTOR **ESTIMATED DEMAND** PANEL TOTALS 17480 VA 100.00% 17480 VA 1620 VA 100.00% 1620 VA TOTAL CONN. LOAD: 19100 VA TOTAL EST. DEMAND: 19100 VA TOTAL CONN.: 53 A TOTAL EST. DEMAND: 53 A

**BRANCH PANEL: LR1 LOCATION**: JANITOR JC2 VOLTS: 120/208 Wye A.I.C. RATING: SUPPLY FROM: TR1 MAINS TYPE: MCB PHASES: 3 **MOUNTING: SURFACE** WIRES: 4 MAINS RATING: 200 A **ENCLOSURE**: TYPE 1 MCB RATING: 200 A WIRE TRIP POLES CKT CIRCUIT DESCRIPTION C POLES TRIP WIRE 3 100 A PANEL LR3 100 A 3 8000... 6700 VA 1 PANEL LR2 HAND DRYER WOMENS RR 6 9 HAND DRYER WOMENS RR 6 1000 VA 1000... 1 20 A #12 HAND DRYER MENS RR 5 11 HAND DRYER WOMENS RR 6 #12 20 A 1 1 20 A #12 SOAP/WATER FAUCET SENSOR MENS RR 5
180 VA 180 VA 1 20 A #12 SOAP/WATER FAUCET SENSOR MENS RR 5 13 SOAP/WATER FAUCET SENSOR WOMENS RR 6 #12 | 20 A | 1 | 180... | 180 VA | #12 | 20 A | 1 180 VA | 180 VA 15 SOAP/WATER FAUCET SENSOR WOMENS RR 6 180 VA 180... 1 20 A #12 SOAP/WATER FAUCET SENSOR MENS RR 5 17 SOAP/WATER FAUCET SENSOR WOMENS RR 6 #12 20 A 1 900... 1260 VA 100... 1 20 A #12 TOILET / URINAL SENSOR WOMENS RR 5 #12 | 20 A | 1 19 TOILET / URINAL SENSOR WOMENS RR 6 #12 20 A 1 720 VA 540 VA 21 PAPER TOWEL DISPENSER WOMENS RR 6 1 20 A #12 PAPER TOWEL DISPENSER MENS RR 5 #12 20 A 1 720 VA 340 V 23 RECEPTACLE SMART TABLET RR 5/6/5A 540 VA 360... 1 20 A #12 RECEPTACLES 5 #12 20 A 1 540... 180 VA 500... 1 20 A #12 STALL OCCUPANCY LIGHTS 5/6
#12 20 A 1 1000 VA 180 VA 1 20 A #12 RECEPTACLE TECH. RACK JC2 25 RECEPTACLES 6 27 HAND DRYER FAMILY RR 5A 29 SOAP/WATER FAUCET SENSOR FAMILYRR 5A 31 TOILET / URINAL SENSOR FAMILY RR 5A 33 SPARE 35 SPARE 37 SPACE 39 SPACE 41 SPACE 134 A TOTAL AMPS: 169 A LEGEND: LOAD CLASSIFICATION CONNECTED LOAD **DEMAND FACTOR** ESTIMATED DEMAND PANEL TOTALS 100.00% 44100 VA 44100 VA 6420 VA 6420 VA 100.00% TOTAL CONN. LOAD: 50520 VA Receptacle TOTAL EST. DEMAND: 50520 VA TOTAL CONN.: 140 A TOTAL EST. DEMAND: 140 A



7800 Airport Blvd Houston, TX 77061

#### HAS HOBBY AIRPORT RESTROOMS PHASE 3

C.O.H. No.

ARCHITECTURE PLANNING INTERIORS

800 Sampson St. #104

713.868.3121 Houston, TX 77003 www.rdlr.com



**DESIGNER PROJECT No.:** 1429.15 PROJECT STATUS: CONSTRUCTION **DOCUMENTS REVISIONS** 

DATE BY

No. DESCRIPTION

Designer **DESIGN BY:** Author DRAWN BY: Checker CHECKED BY:

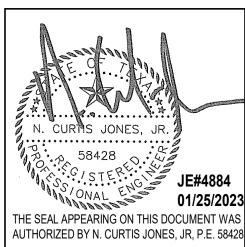
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Review/ Approval Category

ISSUED FOR REVIEW

ISSUE DATE:

**APPROVED BY:** APPROVAL DATE:



01/25/2023

01/25/2023

**Approver** 

**ELECTRICAL DETAILS** 

SHEET SIZE: 30"x42" ARCH E1

E-302 SCALE:

Aconex File Name: I-19-C-925F - E-302 -

7800 Airport Blvd Houston, TX 77061 PHASE 3 MEN'S RESTROOM WOMEN'S RESTROOM C.O.H. No. | F-E====== | LE'-----ARCHITECTURE PLANNING INTERIORS 800 Sampson St. #104 **ELECTRICAL KEYED NOTE** Houston, TX 77003 # KEYNOTE

1 EXISTING FIRE ALARM DEVICE TO REMAIN. 2 FIRE ALARM DEVICE TO BE REMOVED. \_\_\_\_\_\_\_ - -FAMILY-RESTROOM- -FIRE ALARM DEMO PLAN - RESTROOM GATE 58-59 0 0 **DESIGNER PROJECT No.:** FAMILY RESTROOM PROJECT STATUS: No. DESCRIPTION 95% CD WOMEN'\$ RESTROOM MEN'S RESTROOM **DESIGN BY:** DRAWN BY: CHECKED BY: ISSUE DATE: APPROVED BY: APPROVAL DATE: FIRE ALARM DEMO PLAN - RESTROOM GATE 3-4 Review/ Approval Category ISSUED FOR REVIEW WOMEN'S RESTROOM MEN'S RESTROOM JANITOR JG2 FAMILY RESTROOM FIRE ALARM DEMO PLAN - RESTROOM GATE 5-6 SHEET No. FAD-101 SCALE: Aconex File Name: I-19-C-925F - FAD-101 - 3

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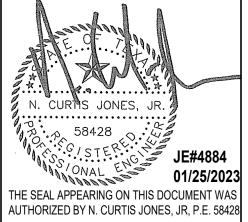
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CONSTRUCTION DOCUMENTS **REVISIONS** DATE BY 10.28.22 JE 12.09.22 JE 01.25.2023 JE

01/25/2023 **CURT JONES** 01/25/2023

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1/4" = 1'-0"

SHEET NAME:
FIRE ALARM DEMO ENLARGED PLANS

C.O.H. No. RESTROOM 58-59 WOMEN'S RESTROOM -RESTROOM 5-6 WOMEN'S RESTROOM -RESTROOM 5-6 MEN'S RESTROOM -RESTROOM 58-59 MEN'S RESTROOM — FAMILY RESTROOM -FAMILY RESTROOM -FA-101 2 FAD-101 3 FAD-101 FA-101 1 FAD-101 FA-101 — FAMILY RESTROOM RESTROOM 3-4MEN'S RESTROOM RESTROOM 3-4
WOMEN'S RESTROOM ISSUED FOR REVIEW FIRE ALARM OVERALL PLAN - LEVEL 2

1/64" = 1'-0"



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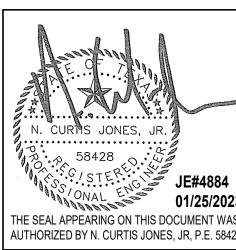
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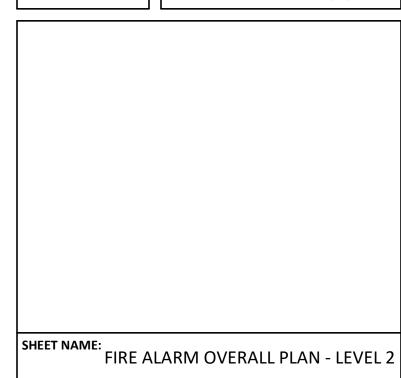
DESIGNER PROJECT No.: 1429.15						
PROJ	ECT STATUS:	CONST	CONSTRUCTION			
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REVISIONS						
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2	95% CD	12.09.22	JE			
3	IFC	01.25.2023	JE			

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/25/2023
RT JONES
/25/2023

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1/64" = 1'-0"



C.O.H. No. **ELECTRICAL KEYED NOTE** # KEYNOTE

1 EXISTING FIRE ALARM DEVICE TO REMAIN. MEN'S RESTROOM WOMEN'S RESTROOM 800 Sampson St. #104 FIRE ALARM PLAN - RESTROOM GATE 58-59 FAMILY RESTROOM PROJECT STATUS: 95% CD WOMEN'S RESTRO FIRE ALARM PLAN - RESTROOM GATE 3-4 ISSUED FOR REVIEW WOMEN'S RESTROOM 1 FIRE ALARM PLAN - RESTROOM GATE 5-6

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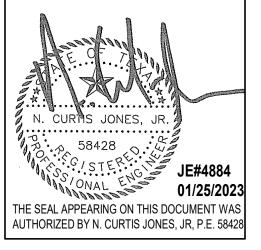
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01.25.2023 JE

**DESIGN BY:** DRAWN BY: CHECKED BY: 01/25/2023 ISSUE DATE: CURT JONES **APPROVED BY:** APPROVAL DATE: 01/25/2023

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1/4" = 1'-0"

FIRE ALARM ENLARGED PLANS

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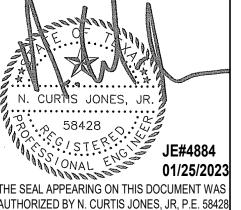
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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY N. CURTIS JONES, JR, P.E. 58428

PLUMBING DEMO ENLARGED PLANS As indicated

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - PD-101 - 3

**ABBREVIATIONS** FOS FUEL OIL SUPPLY AIR (COMPRESSED) PSI POUNDS PER SQUARE INCH ABV ABOVE FOV FUEL OIL VENT PSIG POUNDS PER SQUARE INCH AIR CONDITIONING FP FIRE PUMP GAUGE ALTERNATING CURRENT, AIR FRZR FREEZER PLUMBING TRIM COMPRESSOR FS FLOW SWITCH, FIRE PV PLUG VALVE AMERICAN CONCRETE SPRINKLER PVC POLYVINYL CHLORIDE INSTITUTE FT FOOT, FEET PW PROCESS WASTE ACCESS DOOR, AREA DRAIN FUT FUTURE **ADJUSTABLE** ABOVE FINISHED CEILING ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE QTY QUANTITY ALUMINUM AL GAS AMB AMBIENT GAGE ACCESS PANEL, ALARM PANEL GALLON ARCH ARCHITECT, ARCHITECTURAL GALV GALVANIZED ASME AMERICAN SOCIETY OF RISER GC GENERAL CONTRACTOR MECHANICAL ENGINEERS RAD REFRIGERATED AIR DRYER GLV GLOBE VALVE RCP REFLECTED CEILING PLAN, ASTM AMERICAN SOCIETY OF GND GROUND REINFORCED CONCRETE PIPE TESTING AND MATERIALS GALLONS PER DAY ATS AUTOMATIC TRANSFER SWITCH **ROOF DRAIN** GALLONS PER HOUR ACID VENT, AIR VENT, AREA VALVE REFERENCE, REFER GPM GALLONS PER MINUTE RECIRC RECIRCULATE AVG AVERAGE GV GATE VALVE AW ACID WASTE RED REDUCER AWS AMERICAN WELDING SOCIETY REFR REFRIGERATOR AUX AUXILIARY REINF REINFORCING REQD REQUIRED REV REVISION, REVISE HEIGHT RELATIVE HUMIDITY HOSE BIBB RKVA RUNNING KILOVOLT-AMPS BELOW COUNTER HD HEAD, HUB DRAIN RKW RUNNING KILOWATTS BACK OF CURB HE HEAT EXCHANGER RLA RUNNING LOAD AMPS HORIZ HORIZONTAL BUTTERFLY VALVE BFV ROOM, REFRIGERATION HORSEPOWER, HALON PANEL BH BOX HYDRANT MACHINE BLDG BUILDING HOUSEKEEPING PAD RPM REVOLUTIONS PER MINUTE HSC HORIZONTAL SPLIT CASE BM BENCHMARK RV RELIEF VALVE HTG HEATING BOF BOTTOM OF FOOTING HTR HEATER BOS BOTTOM OF STRUCTURE BATH TUB, BREAK TANK HW HOT WATER HWC HOT WATER CIRCULATOR BTU BRITISH THERMAL UNIT HWR HOT WATER RETURN BV BALL VALVE SAN SANITARY SEWER HWS HOT WATER SUPPLY BWV BACK WATER VALVE HZ HERTZ SC STEAM CONVERTER SCHED SCHEDULED SCR SILICON CONTROLLED C CELSIUS RECTIFIER CAB CABINET STORM DRAIN CB CATCH BASIN SEWAGE EJECTOR INSIDE DIAMETER CFM CUBIC FEET PER MINUTE SEC SECONDARY INVERT ELEVATION CFS CUBIC FEET PER SECOND SECT SECTION INCH CI CAST IRON SQUARE FEET INSUL INSULATION CIRC CIRCULATING SFCS SPRINKLER FLOOR CONTROL INT INTERNAL, INTERIOR CENTERLINE STATION INDIRECT WASTE CLG CEILING SH SHOWER CLR CLEAR SHT SHEET CMP CORRIGATED METAL PIPE SIM SIMILAR CMU CONCRETE MASONRY UNIT SK SINK CPI CAST IRON PIPE INSTITUTE SKVA STARTING KILOVOLT-AMPS JUNCTION BOX CPVC CHLORINATED POLYVINYL SKW STARTING KILOWATTS JP JOCKEY PUMP CHLORIDE SUMP PUMP CO CLEAN OUT SPEC SPECIFICATION COL COLUMN SPR SPRINKLER COMB COMBINATION SQ SQUARE COMP COMPRESSOR SERVICE SINK CON CONVERTER SSD SUBSURFACE DRAIN KEC KITCHEN EQUIPMENT CONC CONCRETE, CONCENTRIC SSFU SANITARY SEWER FIXTURE CONTRACTOR COND CONDENSER, CONDENSATE KO KNOCKOUT CONN CONNECTION STD STANDARD KVA KILOVOLT-AMPS CONT CONTINUOUS, CONTINUATION STL STEEL KW KILOWATT CONTR CONTROLLER, CONTRACTOR STR STRAINER CRP CORROSION RESISTANT PIPE SURF SURFACE CRT CATHODE RAY TUBE SUSP SUSPEND CT COOLING TOWER SV SANITARY VENT CTR CENTER LENGTH, LAVATORY COPPER LABORATORY AIR CW COLD WATER LAV LAVATORY CAPACITY INDEX LINEAR FEET CHECK VALVE TCC TEMPERATURE CONTROL LOCKED ROTOR AMPS LABORATORY VACUUM COMPRESSOR LVL LEVEL TRENCH DRAIN DEPTH, DRAIN LWCO LOW WATER CUT OFF TDH TOTAL DYNAMIC HEAD DIRECT CURRENT LWT LEAVING WATER TEMPERATURE TH BLK THRUST BLOCK DIRECT DIGITAL CONTROL TOC TOP OF CURB DE DEIONIZED WATER SUPPLY TRAP PRIMER DEP DEIONIZED WATER PUMP TSTAT THERMOSTAT MA MEDICAL AIR DER DEIONIZED WATER RETURN TW TEMPERED WATER METER DESIG DESIGNATION TYP TYPICAL MAP MASTER ALARM PANEL DET DETAIL MAX MAXIMUM DRINKING FOUNTAIN MBH THOUSAND OF BTU'S DIAMETER MC MECHANICAL CONTRACTOR DIM DIMENSION MECH MECHANICAL DISC DISCONNECT MFR MANUFACTURER URINAL DN DOWN MEDICAL GAS OUTLET UNDERGROUND DOWNSPOUT, DOUBLE SUCTION MANHOLE UNDERWRITERS LABORATORIES, DW DISHWASHER MALLEABLE IRON DWG DRAWING MIN MINIMUM UON UNLESS OTHERWISE NOTED DWH DOMESTIC WATER HEATER MEDICAL AIR PURIFIER U|F UNDERFLOOR DWP DOMESTIC WATER PUMP MOP SINK U|S UNDERSLAB MTD MOUNTED MAKE-UP MV MEDICAL VACUUM EA EACH EC ELECTRICAL CONTRACTOR ECC ECCENTRIC VOLT, VENT, VACUUM EDF ELECTRIC DRINKING FOUNTAIN NITROGEN **VOLT-AMPERE** EFF EFFICIENCY NITROUS OXIDE VAC VACUUM EXPANSION JOINT NORMALLY CLOSED VB VALVE BOX EL ELEVATION NFPA NATIONAL FIRE PROTECTION VCP VITRIFIED CLAY PIPE ELEC ELECTRICAL ASSOCIATION VEL VELOCITY ELEV ELEVATOR NIC NOT IN CONTRACT VACUUM PUMP **EMERG EMERGENCY** N.O. NORMALLY OPEN VERT VERTICAL NO. NUMBER ENCL ENCLOSURE VIB VALVE IN BOX ENGR ENGINEER NTS NOT TO SCALE VOV VALVE ON VERTICAL EQ EQUAL VTR VENT THRU ROOF EQUIP EQUIPMENT ES END SUCTION, EMERGENCY SHOWER ET EXPANSION TANK OXYGEN ETR EXISTING TO REMAIN ON CENTER OD OUTSIDE DIAMETER, OVERFLOW EVAP EVAPORATOR WATT, WASTE, WIDTH EWT ENTERING WATER TEMPERATURE DRAIN OE WITH EX EXPLOSION-PROOF ORAL EVACUATION wjo without OPG OPENING EXT EXTERNAL OS&Y OPEN STEM AND YOLK WATER CLOSET WC EXTG EXISTING WCO WALL CLEANOUT WALL HYDRANT WH WM WATER METER WEATHERPROOF F FARENHEIT, FIRE WPD WATER PRESSURE DROP FBO FURNISHED BY OTHERS PUMP, PLUMBING EQUIPMENT WS WATER SOFTENER FCO FLOOR CLEAN OUT PLUMBING CONTRACTOR WT WATERTIGHT, WEIGHT FCS FLOOR CONTROL STATION PUMPED CONDENSATE RETURN WWF WELDED WIRE FABRIC FLOOR DRAIN PD PRESSURE DROP, PLANTER FD FDS FIRE DEPARTMENT SIAMESE FDV FIRE DEPARTMENT VALVE PIV POST INDICATOR VALVE FH FIRE HYDRANT FHC FIRE HOSE CABINET PLBG PLUMBING FHR FIRE HOSE RACK PNEU PNEUMATIC YH YARD HYDRANT FHV FIRE HOSE VALVE PNL PANEL FIXT FIXTURE PNTH PENTHOUSE FLA FULL LOAD AMPS POLYPROPYLENE FLEX FLEXIBLE PPM PARTS PER MILLION FLOW LINE PRIMARY FLR FLOOR PRS PRESSURE REDUCING STATION ZONE FOP FUEL OIL PUMP PRV PRESSURE REDUCING VALVE ZV ZONE VALVE FOR FUEL OIL RETURN PSF POUNDS PER SQUARE FOOT

PIPING TYPES ——— SANITARY DRAIN BELOW FLOOR SANITARY DRAIN ABOVE FLOOR (NOTED) — — — — SANITARY VENT —— SD ——— STORM DRAIN —— OD —— OVERFLOW DRAIN ------ COLD WATER ——— - - ——— HOT WATER —— - - - — HOT WATER RECIRCULATION — G — NATURAL GAS FIRE STANDPIPE, FIRE LINE — FS — FIRE SPRINKLER — TP — TRAP PRIMER — D — DRAIN LINE ——— GW ———— GREASE WASTE —— DCWF —— FILTERED DOMESTIC COLD WATER —— AIR ——— COMPRESSED AIR (ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS) PIPING SYMBOLS ————O ELBOW UP ———O√¬ VALVE IN DROP ■ DIRECTION OF FLOW DIRECTION OF SLOPE DOWN CONCENTRIC REDUCER ECCENTRIC REDUCER TEE OUTLET UP TEE OUTLET DOWN EXPANSION JOINT STRAINER WITH BLOWDOWN VALVE GATE VALVE GLOBE VALVE BALL VALVE THERMOSTATIC BALANCING VALVE HOT WATER RECIRCULATION PUMP ——— CHECK VALVE PRESSURE REDUCING VALVE FCS SPRINKLER FLOOR CONTROL STATION GAS VALVE — T AUTOMATIC AIR VENT T&P RELIEF VALVE VACUUM BREAKER LINE CLEANOUT FLOOR CLEANOUT PRESSURE GAUGE WITH GAUGE COCK \_\_\_\_\_L THERMOMETER DOUBLE CHECK REDUCED PRESSURE BACKFLOW PREVENTER **MISCELLANEOUS** FLOOR DRAIN FLOOR SINK ROOF DRAIN OR OVERFLOW DRAIN HOSE BIBB ——

WALL HYDRANT PLUMBING FIXTURES POINT OF NEW CONNECTION TO EXISTING PIPING POINT OF DEMOLITION TO EXISTING PIPING 1 DRAWING NOTE REFERENCE → OWNER OR CONTRACTOR FURNISHED EQUIPMENT REFERENCE PLUMBING EQUIPMENT REFERENCE. "aaa" DENOTES TYPE, "bb" DENOTES NUMBER. RISER DESIGNATION. "P" DENOTES WASTE|VENT OR WASTE|VENT|WATER, "W" DENOTES WATER, "DS" DENOTES DOWNSPOUT, "F" DENOTES FIRE.

FIRE DEPARTMENT SIAMESE CONNECTION



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Texas Registered Engineering Firm #F-3811

713.868.3121

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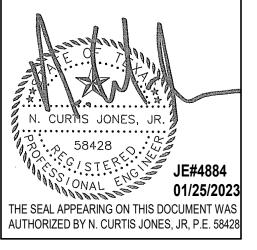
**DESIGN BY:** DRAWN BY: CHECKED BY: ISSUE DATE: 01/25/2023 **CURT JONES APPROVED BY:** APPROVAL DATE: 01/25/2023

DIRECTOR **HOUSTON AIRPORT SYSTEM** 

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ISSUED FOR REVIEW

95% CD



SHEET NAME:
PLUMBING SYMBOLS AND ABBREVIATIONS SHEET No. P-001 SCALE: 12" = 1'-0"

**GENERAL NOTE: BUILDING TO BE 100%** SPRINKLERED, PER NFPA 13. C.O.H. No. Houston, TX 77003 RESTROOM 5-6 WOMEN'S RESTROOM RESTROOM 58-59 WOMEN'S RESTROOM RESTROOM 5-6 MEN'S RESTROOM -RESTROOM 58-59 MEN'S RESTROOM -FAMILY RESTROOM -FAMILY RESTROOM FAMILY
RESTROOM RESTROOM 3-4MEN'S RESTROOM RESTROOM 3-4
WOMEN'S RESTROOM ISSUED FOR REVIEW PLUMBING OVERALL PLAN - LEVEL 2

1/64" = 1'-0"



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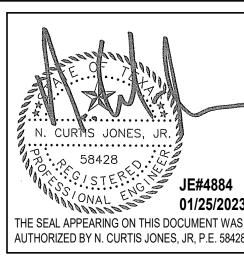
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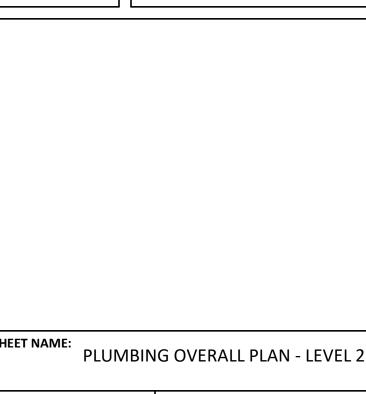
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DRAWN BY:	JE
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APPROVAL DATE:	01/25/2023

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**GENERAL NOTE: BUILDING TO BE 100%** SPRINKLERED, PER NFPA 13.

2. LAVATORY FAUCET HOT WATER SUPPLY MUST BE WITHIN THE DISTANCE ALLOWED IN IECC, SECTION C404.5.1.

WASTE & VENT AND 3/4" DCW, DHW, & DHWR PIPING AS REQUIRED AND PROVIDE ANY ADDITIONAL PIPING & FITTINGS NOT SHOWN FOR CONNECTION TO EXISTING.

WATER PIPING AS REQUIRED AND PROVIDE ANY ADDITIONAL PIPING & FITTINGS NOT SHOWN FOR CONNECTION TO EXISTING.

7. PROVIDE DOMESTIC WATER ISOLATION VALVES FOR EACH BATTERY OF FIXTURES.

10. HORIZONTAL DOMESTIC WATER LINES FOR WATER CLOSETS TO BE ROUTED ABOVE

9. COORDINATE EXACT LOCATION AND REQUIREMENTS IN FIELD.

FLUSH VALVES AND VENT PIPING IN CHASE.

## **PLUMBING GENERAL NOTES:**

1. PROVIDE NEW PLUMBING FIXTURES ACCORDING TO SCHEDULE.

3. PROVIDE NEW LAVATORIES AND DRINKING FOUNTAINS, ROUTE ALL NEW 2" SANITARY

4. PROVIDE NEW MOP SINK, ROUTE ALL NEW 4" SANITARY WASTE & VENT AND 3/4" DOMESTIC

AND 1-1/2" DOMESTIC WATER PIPING AS REQUIRED AND PROVIDE ANY ADDITIONAL PIPING & FITTINGS NOT SHOWN FOR CONNECTION TO EXISTING.

5. PROVIDE NEW WATER CLOSETS AND URINALS, ROUTE ALL NEW 4" SANITARY WASTE & VENT

6. PROVIDE NEW CLEAN OUTS IN EASILY ACCESSIBLE LOCATIONS AT ENDS OF EACH BATTERY OF FIXTURES.

8. CORE/SAW CUT FLOOR AS REQUIRED.

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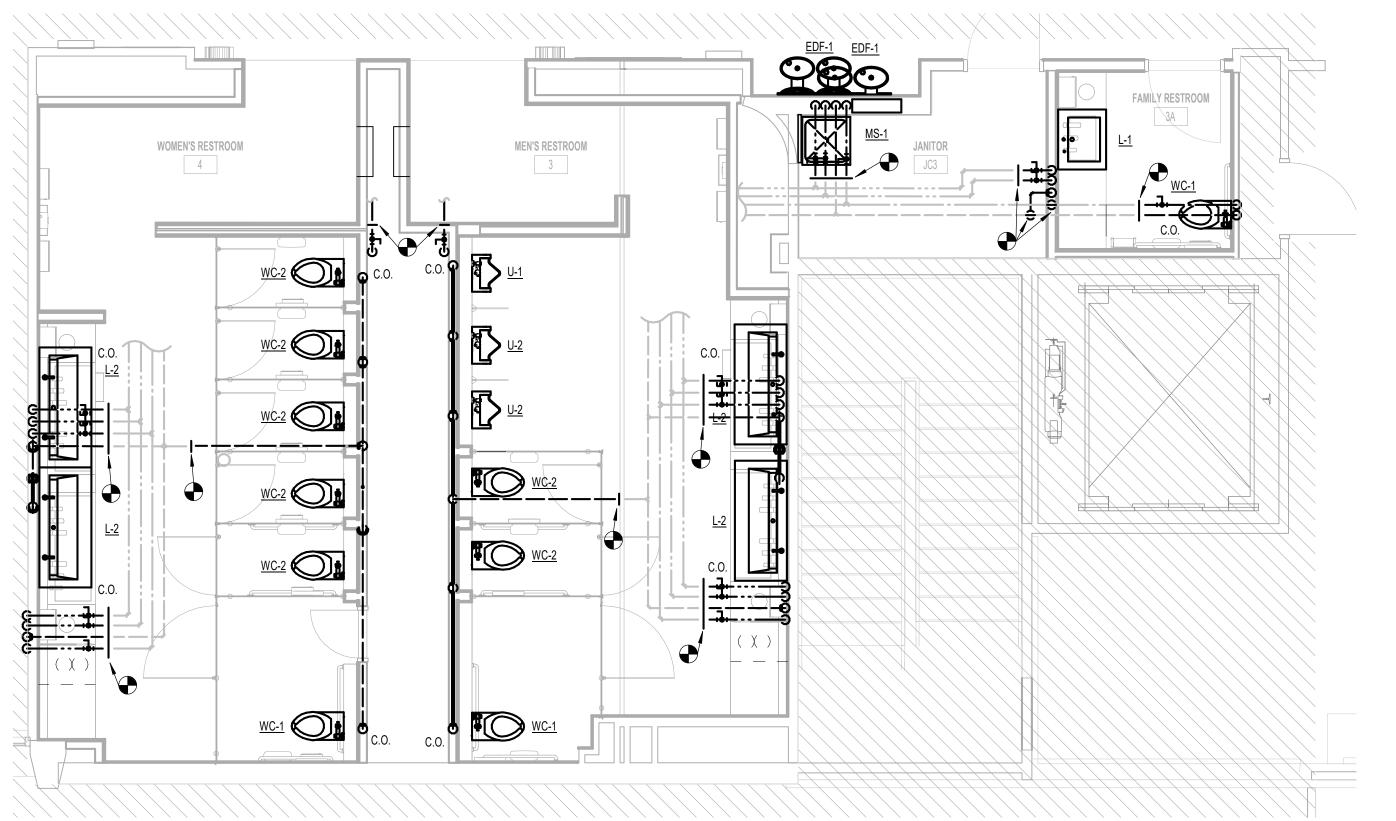
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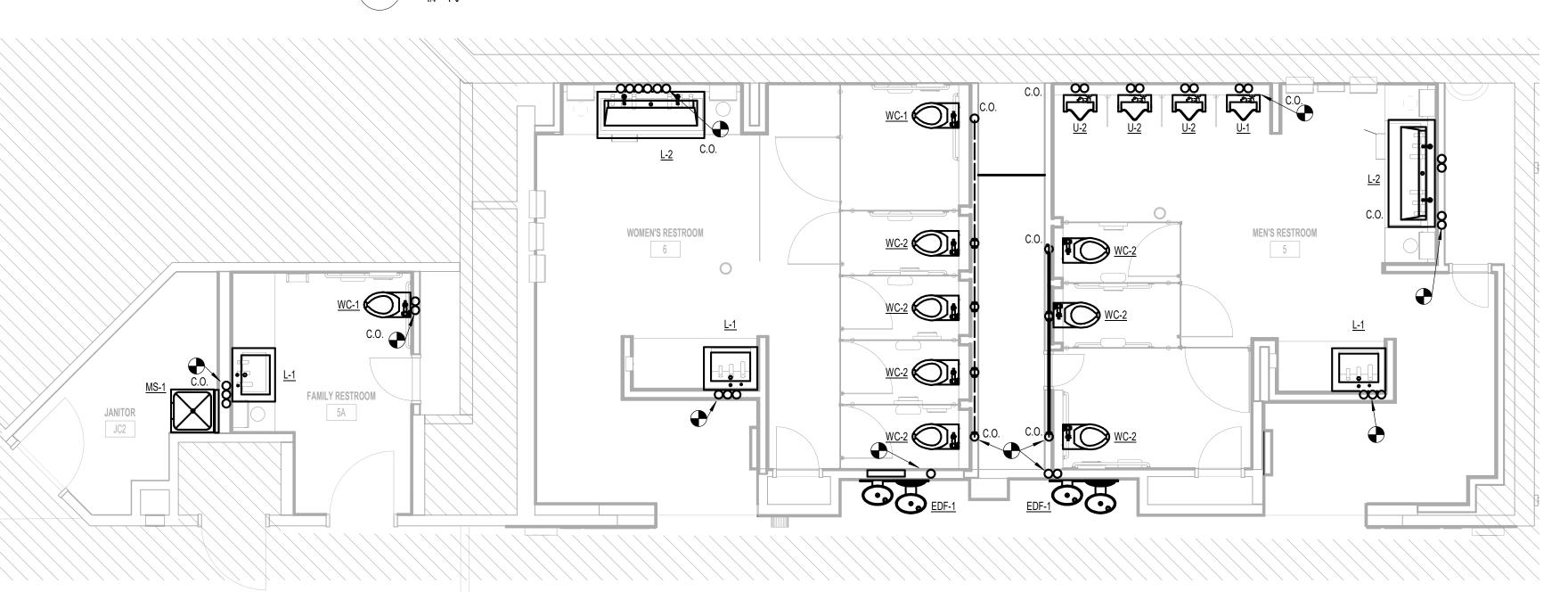
PLUMBING ENLARGED PLANS As indicated

SHEET SIZE: 30"x42" ARCH E1

PLUMBING PLAN - RESTROOM GATE 58-59



PLUMBING PLAN - RESTROOM GATE 3-4



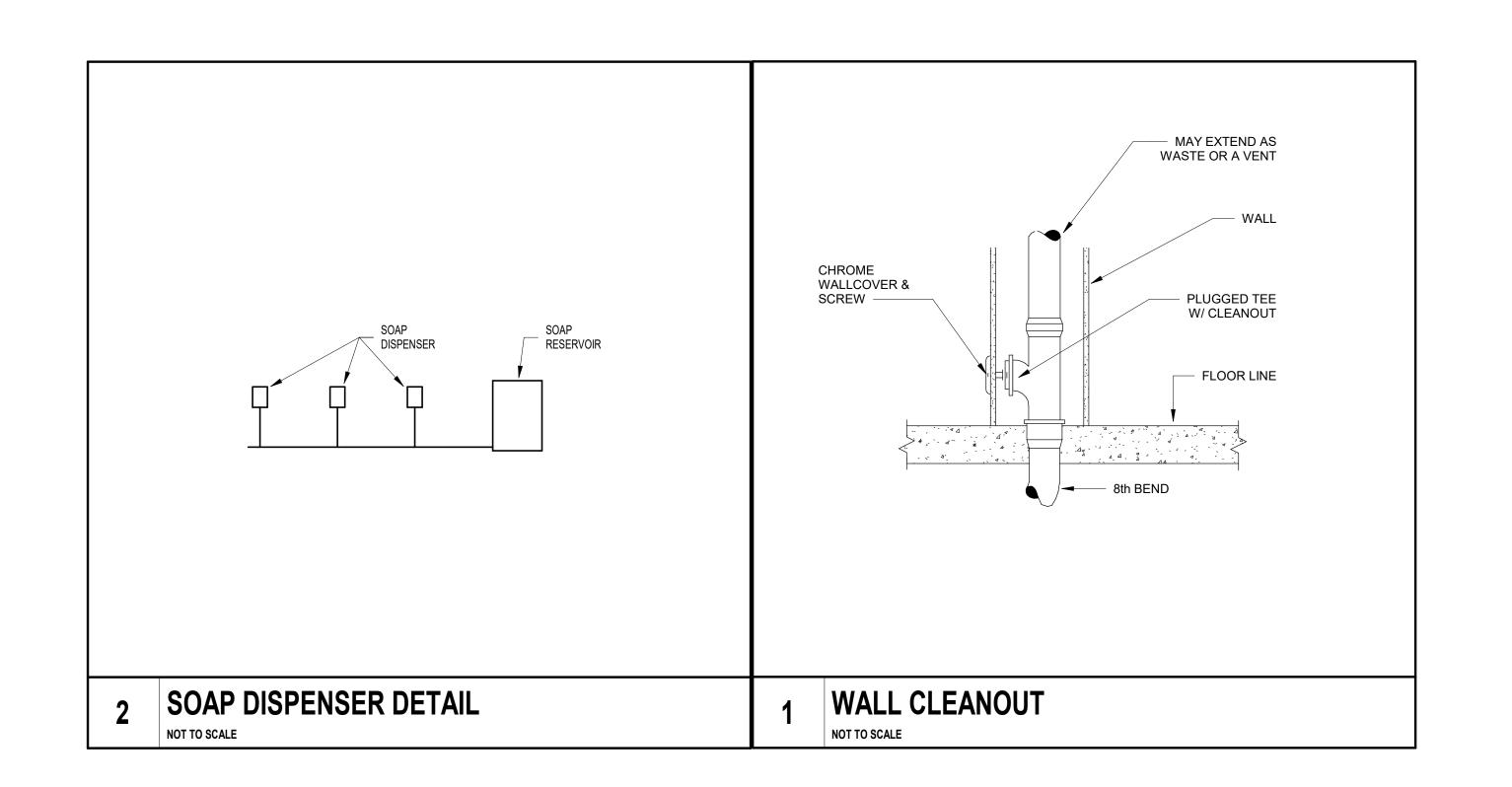
PLUMBING PLAN - RESTROOM GATE 5-6

Aconex File Name: I-19-C-925F - P-101 - 3

PLUMBING FIXTURE AND CONNECTION SCHEDULE ROUGH-IN CONNECTION SIZE C.W. H.W. VENT WASTE MANUFACTURER **DESCRIPTION AND NOTES** HYDROBOOST WALL-MOUNTED BI-LEVEL WATER FOUNTAIN WITH BOTTLE FILLING STATION. PUSHBAR ACTIVATION. BOTTLE FILLER PROVIDES 1.1-1.5 GPM FLOW RATE WITH LAMINAR FLOW TO EDF-1 ELECTRIC DRINKING HALSEY TAYLOR HTHB-HRFSEBP-I MINIMIZE SPLASHING. FOR INDOOR APPLICATIONS. AN ELECTRONIC SENSOR FOR TOUCHLESS ACTIVATION WITH AUTO 20-SECOND SHUT-OFF TIMER. ANTI-MICROBIAL, 399 CERTIFIED. LEAD-FREE DESIGN, CERTIFIED TO NSF/ANSI 42, 53, 61, & 372 (LEAD FREE). ADA-COMPLIANT. L-1 LAVATORY (SINGLE-SYSTEM) THE SPLASH LAB USA TSL.MON.C.CUSTOM BASIN - MONOLITH A-SERIES MODULAR SINK SYSTEM. TROUGH STYLE WITH SINGULAR DRAINAGE PER USER. COMES COMPLETE WITH POWDER COATED METAL LEG BRACKET SYSTEM FOR WALL MOUNTING. FINISH CORIAN SOLID SURFACE – ANTARTICA. ADA COMPLIANT. FAUCET - SPLASH LAB TSL.020.CS.H, RIBBON SENSOR FAUCET - 304 STAINLESS STEEL. STANDARD 0.5GPM FLOW WITH LAMINAR FLOW AERATOR. PROVIDE WITH HARD-WIRED AC POWER SUPPLY OR MULTI-AC ADAPTOR AS REQUIRED. APPURTENANCES - KOHLER K-8998 P-TRAP WITH ADA TRAP PROTECTOR AND KOHLER K-7605-P SINK SUPPLY STOPS WITH FLEXIBLE LAVATORY SUPPLY AND SUPPLY STOP ADA PROTECTORS. ZURN Z8737 FLAT GRID SINK STRAINER. RIBBON SOAP DISPENSER - SPLASH LAB TSL.R.010.CS.H, 304 STAINLESS STEEL WITH FOAM SOAP DISPENSING SYSTEM. 120V SOAP FEED SYSTEM, SMART VERSION - SPLASH LAB TSL.C.040.CS-M MULTI-FEED VERSION, RECOMMENDED FOR UP TO 3 SOAP DISPENSERS IN AIRPORT ENVIRONMENTS. TOP FILL WITH HIGH AND LOW CONTROL TECHNOLOGY AND SMART RESTROOM INTEGRATION. PROVIDE WITH 1.6 GAL RESERVOIR. HAND DRYER – SPLASH LAB TSL.R.030.CS.H, 304 STAINLESS STEEL THE SPLASH LAB USA TSL.MON.C.CUSTOM BASIN - MONOLITH A-SERIES MODULAR SINK SYSTEM. TROUGH STYLE WITH SINGULAR DRAINAGE PER USER. COMES COMPLETE WITH POWDER COATED METAL LEG BRACKET L-2 LAVATORY (MULTI-SYSTEM) SYSTEM FOR WALL MOUNTING. FINISH CORIAN SOLID SURFACE – ANTARTICA. ADA COMPLIANT. FAUCET - SPLASH LAB TSL.020.CS.H, RIBBON SENSOR FAUCET - 304 STAINLESS STEEL. STANDARD 0.5GPM FLOW WITH LAMINAR FLOW AERATOR. PROVIDE WITH HARD-WIRED AC POWER SUPPLY OR MULTI-AC ADAPTOR AS REQUIRED. APPURTENANCES - KOHLER K-8998 P-TRAP WITH ADA TRAP PROTECTOR AND KOHLER K-7605-P SINK SUPPLY STOPS WITH FLEXIBLE LAVATORY SUPPLY AND SUPPLY STOP ADA PROTECTORS. ZURN Z8737 FLAT GRID SINK STRAINER. RIBBON SOAP DISPENSER - SPLASH LAB TSL.R.010.CS.H, 304 STAINLESS STEEL WITH FOAM SOAP DISPENSING SYSTEM. 120V SOAP FEED SYSTEM, SMART VERSION – SPLASH LAB TSL.C.040.CS-M MULTI-FEED VERSION, RECOMMENDED FOR UP TO 3 SOAP DISPENSERS IN AIRPORT ENVIRONMENTS. TOP FILL WITH HIGH AND LOW CONTROL TECHNOLOGY AND SMART RESTROOM INTEGRATION. PROVIDE WITH 3 GAL RESERVOIR. HAND DRYER - SPLASH LAB TSL.R.030.CS.H, 304 STAINLESS STEEL BASIN: FLOOR-MOUNTED, 24x24x10 SQUARE, MOP SERVICE BASIN WITH ZURN Z415B DRAIN BODY ASSEMBLY, STAINLESS-STEEL BUMPER GUARD AND STAINLESS-STEEL WALL SERVICE SINK ZURN INDUSTRIES FAUCET: ZURN AQUASPEC Z84300-XL, CHROME PLATED FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK AND 3/4" HOSE THREAD ON SPOUT. BODY INLETS 8" CENTER TO CENTER, COLD (BLUE) AND HOT (RED) INDICATORS. COTTON WHITE, VITREOUS CHINA, UNIVERSAL HIGH EFFICIENCY, LOW CONSUMPTION (0.5 GPF), ELONGATED 14" FLUSHING RIM FROM FINISH WALL, WASHOUT FLUSH ACTION URINAL (ADA) VALVE URINAL. MOUNTED AT ADA HEIGHT. WALL-MOUNTED FLUSHOMETER FOR SCENARIOS WITH WALK-IN CHASE: TOTO TEU3LA, SATIN FINISH. WALL-MOUNTED FLUSHOMETER FOR SCENARIOS WITHOUT WALK-IN CHASE: TOTO TEU2LA, SATIN FINISH. COTTON WHITE, VITREOUS CHINA, UNIVERSAL HIGH EFFICIENCY, LOW CONSUMPTION (0.5 GPF), ELONGATED 14" FLUSHING RIM FROM FINISH WALL, WASHOUT FLUSH ACTION VALVE URINAL. WALL-MOUNTED FLUSHOMETER FOR SCENARIOS WITH WALK-IN CHASE: TOTO TEU3LA, SATIN FINISH. WALL-MOUNTED FLUSHOMETER FOR SCENARIOS WITHOUT WALK-IN CHASE: TOTO TEU2LA, SATIN FINISH. BOWL: WALL HUNG, WHITE VITREOUS CHINA, TOP-SPUD FLUSHOMETER VALVE, HIGH-EFFICIENCY, LOW CONSUMPTION 1.28 GPF TOILET WITH ELONGATED BOWL, CONDENSATION CHANNEL, CONCEALED DESIGN AND FULLY GLAZED TRAPWAY, ANTIMICROBIAL SURFACE, DIRECT-FED SIPHON JET ACTION AND TESTED TO SUPPORT STATIC WEIGHT LOAD OF WC-1 WATER CLOSET (ADA) 1-1/2" 1,000 POUNDS. MOUNTED AT ADA HEIGHT. WALL-MOUNTED FLUSHOMETER FOR SCENARIOS WITH WALK-IN CHASE: TOTO TET3LA, SATIN FINISH. WALL-MOUNTED FLUSHOMETER FOR SCENARIOS WITHOUT WALK-IN CHASE: TOTO TET2LA, SATIN FINISH. SEAT: OPEN FRONT LESS COVER. FLONGATED. HEAVY-DUTY. INJECTION MOLDED SOLID PLASTIC TOIL ET SEAT WITH FOUR MOLDED-IN BUMPERS, NON-SELF-SUSTAINING CHECK HINGES WITH NON-CORROSIVE 300 SERIES STAINLESS STEEL POSTS AND PINTLES. COMPLYING WITH IAPMO/ANSI Z124.5-2013. TOTO SC534. WATER CLOSET BOWL: WALL HUNG, WHITE VITREOUS CHINA, TOP-SPUD FLUSHOMETER VALVE, HIGH-EFFICIENCY, LOW CONSUMPTION 1.28 GPF TOILET WITH ELONGATED BOWL, CONDENSATION CHANNEL, CONCEALED DESIGN AND FULLY GLAZED TRAPWAY, ANTIMICROBIAL SURFACE, DIRECT-FED SIPHON JET ACTION AND TESTED TO SUPPORT STATIC WEIGHT LOAD OF WALL-MOUNTED FLUSHOMETER FOR SCENARIOS WITH WALK-IN CHASE: TOTO TET3LA, SATIN FINISH. WALL-MOUNTED FLUSHOMETER FOR SCENARIOS WITHOUT WALK-IN CHASE: TOTO TET2LA, SATIN FINISH. SEAT: OPEN FRONT LESS COVER, ELONGATED, HEAVY-DUTY, INJECTION MOLDED SOLID PLASTIC TOILET SEAT WITH FOUR MOLDED-IN BUMPERS, NON-SELF-SUSTAINING CHECK

PLUMBING PIPE MATERIALS				
SYSTEM:	SERVICE:			
WATER PIPE, ABOVE GRADE	TYPE 'L' COPPER			
SANITARY SEWER, ABOVE GRADE	CAST IRON			
FIRE SPRINKLER LINE, INSIDE	BLACK STEEL			

HINGES WITH NON-CORROSIVE 300 SERIES STAINLESS STEEL POSTS AND PINTLES. COMPLYING WITH IAPMO/ANSI Z124.5-2013. TOTO SC534.





7800 Airport Blvd Houston, TX 77061

C.O.H. No.

#### HAS HOBBY AIRPORT RESTROOMS PHASE 3

D.O.A No.

## **RDLR Architects**

ARCHITECTURE PLANNING INTERIORS

800 Sampson St. #104

713.868.3121 Houston, TX 77003 www.rdlr.com



**DESIGNER PROJECT No.:** PROJECT STATUS: CONSTRUCTION DOCUMENTS **REVISIONS** 

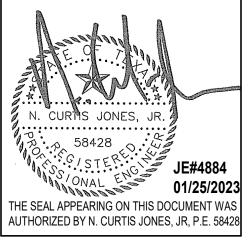
No. DESCRIPTION DATE BY 10.28.22 JE 95% CD 12.09.22 JE 01.25.2023 JE

**DESIGN BY:** DRAWN BY: CHECKED BY: 01/25/2023 ISSUE DATE: **CURT JONES APPROVED BY:** APPROVAL DATE: 01/25/2023

> DIRECTOR **HOUSTON AIRPORT SYSTEM**

Review/ Approval Category

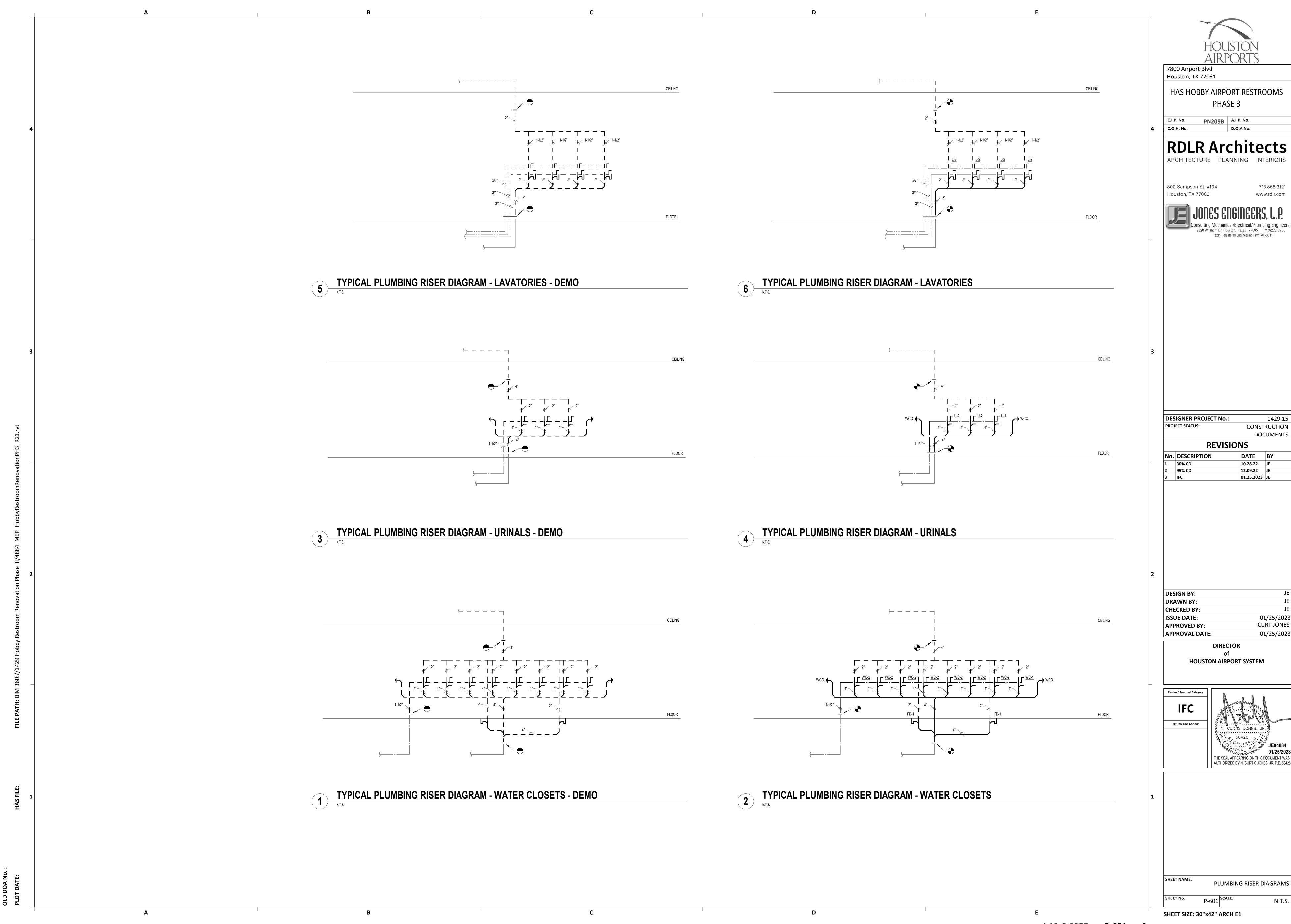
ISSUED FOR REVIEW



SHEET NAME: PLUMBING SCHEDULES AND DETAILS

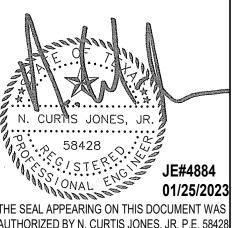
SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - P-501 - 3





CONSTRUCTION DOCUMENTS



PLUMBING RISER DIAGRAMS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER (RCDD) SUPERVISOR SHALL REVIEW, APPROVE AND STAMP ALL SHOP DRAWINGS. COORDINATE DRAWINGS AND RECORD DRAWINGS.

ALL WALL PENETRATIONS SHALL BE SEALED WITH APPROVED FIRE STOPPING.

REFER TO THE ELECTRICAL FLOOR PLAN DRAWINGS FOR ADDITIONAL ROUGH-IN REQUIREMENTS. WHERE THERE ARE DRAWING DISCREPANCIES, THE CONTRACTOR SHALL INSTALL THE GREATER QUANTITY OF DEVICES.

REFER TO THE SITE PLAN ON AND RISER DIAGRAM FOR TELECOMMUNICATION BACKBONE CONDUITS/CABLES. FIELD COORDINATE EXACT ROUTING WITH OTHER TRADES.

ALL COMMUNICATIONS EQUIPMENT SHOWN SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. BOND ALL COMMUNICATIONS CABINETS, RELAY RACKS, CABLE TRAYS, AND OTHER METALLIC SUPPORTING DEVICES TO TELECOMMUNICATIONS GROUND BUSBAR INSIDE COMMUNICATIONS ROOM. BOND WITH A #6 GROUND CONDUCTOR.

ALL HORIZONTAL VOICE AND DATA CABLES SHALL BE DISTRIBUTED VIA MINIMUM 1" CONDUIT AND/OR CABLE TRAY. NO

SINGLE LINE DIAGRAMS, SCHEMATICS, DETAILS AND CONDUIT PATHS SHOWN HEREIN ARE CONCEPTUAL AND ILLUSTRATE ONLY THE FUNCTIONAL RELATIONSHIPS BETWEEN COMPONENTS OF THE SYSTEM. ACCORDINGLY, FULL SHOP DRAWING DEVELOPMENT IS REQUIRED TO REALIZE THE SPECIFIED FUNCTIONS.

DEVICE LOCATIONS ON PLANS ARE CONCEPTUAL. LOCATE AS SITE CONDITIONS REQUIRE AND AS APPROVED BY GC.

REFER TO THE BID SPECIFICATION FOR ADDITIONAL REQUIREMENTS REGARDING THIS WORK.

PAINTING, PATCHING AND FINISHES FOR DEVICES LOCATED IN EXISTING AREAS SHALL MATCH EXISTING FINISHES AS APPROVED BY

13. FINISHES OF DEVICES IN NEW/REMODEL AREAS SHALL BE APPROVED BY GC.

WORK AND MATERIALS SHALL CONFORM TO THE MOST CURRENT UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AS FURNISHED BY GC. WORK AND MATERIALS NOT IN CONFORMANCE WITH THESE SPECIFICATIONS AND DETAILS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

IN SOME INSTANCES THE IDF MAY BE OVER 90 METERS FROM THE IP DEVICE DUE TO LEGACY DESIGN STANDARDS WHEN THE BUILDING WAS CONSTRUCTED. IF TESTED CABLE DOES NOT PASS CERTIFICATION, CONTRACTOR MUST USE MIDSPAN EXTENDER INSTALLED INSIDE OF ENCLOSURE. REFERENCE DETAIL SHEETS FOR INSTALLATION DIAGRAM.

(E)	EXISTING		
GC	GENERAL CONTRACTOR		
LEC	LOCAL EXCHANGE CARRIER		
MMF	MULTIMODE FIBER		
(N)	NEW		
NIC	NOT IN CONTRACT		
PR	PAIR AS IN COPPER PAIR (CATEGORY 5)		
R	RADIUS		
SMF	SINGLE MODE FIBER		
STP	SHIELDED TWISTED PAIR, 22 AWG		
UTP	UNSHIELDED TWISTED PAIR		

#### REFERENCE SPECIFICATIONS

270526 - TELECOMMUNICATIONS GROUNDING AND BONDING

270528 - INTERIOR COMMUNICATION PATHWAYS

270543 - EXTERIOR COMMUNICATION PATHWAYS

270553 - IDENTIFICATION AND LABELING OF COMMUNICATION INFRASTRUCTURE

<a href="https://www.fly2houston.com/biz/resources/building-standards-and-permits/">https://www.fly2houston.com/biz/resources/building-standards-and-permits/></a>

271045 - RESTROOM MONITORING SYSTEM

6. 271100 - COMMUNICATIONS CABINETS AND EQUIPMENT ROOMS

7. 271500 - HORIZONTAL MEDIA INFRASTRUCTURE

8. 272100 - DATA COMMUNICATION NETWORK EQUIPMENT 9. 272200 - LAPTOP, AND SERVERS EQUIPMENT

10. 275113 - AUDIO COMMUNICATION SYSTEM

11. SPECIFICATION CAN BE DOWNLOADED AT

## TECHNOLOGY EQUIPMENT SYMBOLS LIST

SYMBOL	DESCRIPTION	
HDMI-R	HDMI RECEIVER	
HDMI-T	HDMI TRANSMITTER	
FOPP	FIBER OPTIC PATCH PANEL	
FOT	FIBER OPTIC TRANSMITTER	
FOR	FIBER OPTIC RECEIVER	
СРР	COPPER PATCH PANEL	
СР	CURTESY PHONE	
НН	HAND HOLE	
MATV	MAINTENANCE HOLE	
МН	MAINTENANCE HOLE	
NS O	NETWORK SWITCH (OWNER)	
NS T	NETWORK SWITCH (TENANT)	
РВ	PULL BOX	
Р	OSP COPPER PROTECTOR	
<b>▼</b> x	X-CAT6 TERMINATION JACK WHERE X REPRESENTS QUANTITY OF CAT6 CABLES. FIELD COORDINATE EXACT PLACEMENT WITH OTHER TRADE.	
<b>V</b> <sub>4</sub>	EXAMPLE: 4-CAT6 WITH 4-PORT WALL PLATE, 15" A.F.F.	
X	CAT 6 TERMINATION JACK.  X=CONFIGURATION.  Y=QTY OF CAT 6 CABLES.  PROVIDE PATCH CORD FOR EACH CONNECTED PORT.	
Trv	TV OUTLET (1 RG-6 CABLE)	
<b>V</b> A/V	HDMI WITH 2 AUDIO JACKS. INCLUDE PLENUM HDMI AND 2 AUDIO CABLE FROM JACK TO A/V SOURCE WITHIN ROOM.	
<b>V</b> w	1 CAT 6 WITH PLATE FOR WALL MOUNTED PHONE, 45"A.F.F.	

BLANK WALL PLATE

X CAT 6 CABLE (FLOOR OUTLET)

WIRELESS ACCESS POINT, 2 CAT 6A CABLES

ALL WEATHER OUTDOOR PHONE, 1 CAT 6

В

WAP

## TECHNOLOGY EQUIPMENT SYMBOLS LIST

SYMBOL	DESCRIPTION
0	CONDUIT TURNING UP
•	CONDUIT TURNING DOWN
E	TERMINATING CONDUIT. PROVIDE GROUND LUG AND INSULATED THROAT BUSHING.
	EXPOSED CONDUIT
	CONCEALED CONDUIT
	ARIEL CABLE
ВТР	BLUETOOTH BEACON PUCK
EX	ETHERNET EXTENDER
FPC	FLIGHT INFORMATION DISPLAY PC
FPD	FLAT PANEL DISPLAY
НСМ	HORIZONTAL CABLE MANAGEMENT
JB	JUNCTION BOX
МРС	MINIATURE COMPUTER
OSL	BATHROOM STALL OCCUPANCY SENSOR LIGHT
PWR	POWER SUPPLY
PCS	PASSENGER COUNTER SENSOR
REC	REMOTE EQUIPMENT ENCLOSURE
SP1	A/V SPEAKER TYPE 1. MODEL JBL CONTROL 24CT
SP2	A/V SPEAKER TYPE 2
OSG	BATHROOM STALL OCCUPANCY SENSOR GATEWAY

TOUCH PANEL / TABLET

#### SHEET INDEX

T-001	TECHNOLOGY - ABBREVIATIONS & SYMBOLS
T-002	TECHNOLOGY - SPECIFICATIONS
T-101	TECHNOLOGY - OVERALL FLOOR PLAN - LEVEL 1
T-102	TECHNOLOGY - OVERALL FLOOR PLAN - LEVEL 2
T-103	TECHNOLOGY - FLOOR PLAN - RESTROOMS 3-4
T-104	TECHNOLOGY - FLOOR PLAN - RESTROOMS 5-6
T-105	TECHNOLOGY - FLOORPLAN RESTROOMS 58-59
T-401	TECHNOLOGY - ENLARGED PLAN - BDF 102.39
T-402	TECHNOLOGY - ENLARGED PLAN - IDF 201.31
T-501	TECHNOLOGY - EQUIPMENT DETAILS
T-601	TECHNOLOGY - EQUIPMENT SCHEDULES

7800 Airport Blvd Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

C.O.H. No.

**RDLR Architects** 

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800 Sampson St. #104 713.868.3121 Houston, TX 77003 www.rdlr.com



## HENDERSON **ROGERS**

structural engineers 2603 Augusta, Suite 800 Houston, Texas 77057 713.430.5800 713.430.5888 fax www.hendersonrogers.com



DES	IGNER PROJECT No.	:	2022.019
PROJECT STATUS: CON		CONS	TRUCTION
		DC	CUMENT:
	REVIS	SIONS	
No.	DESCRIPTION	DATE	BY
1	15% SD	09.30.22	PGA
2	30% CD	10.28.22	PGA
3	95% CD	12.09.22	PGA
4	IFC	01.25.23	PGA

DESIGN BY:	PGA
DRAWN BY:	AC
CHECKED BY:	JG
SSUE DATE:	01/25/23
APPROVED BY:	Approver
APPROVAL DATE:	01/25/2023

DIRECTOR HOUSTON AIRPORT SYSTEM





01/25/2023			

SHEET NAME:
TECHNOLOGY - ABBREVIATIONS & SYMBOLS T-001 SCALE:

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - T-001 - 4

#### RESTROOM TECHNOLOGY SPECIFICATIONS **SECTION 271045 - RESTROOM MONITORING SYSTEM** 1.1 RELATED DOCUMENTS A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply 1. Refer to https://www.fly2houston.com/biz/resources/building-standards-and-permits for a complete list of related specification sections. B. Reference Symbols: 1. All device symbols are defined by the appropriate symbol schedule on the symbols and abbreviations sheet in the systems drawing package. Not all device symbols indicated may be required for the project. 2. Because of the scale of the drawings, symbols are shown on drawings as close as possible to the mounting location. Contractor shall coordinate exact locations with all drawings and affected trades prior to submittal of shop drawings. a. The installing Contractor shall coordinate exact locations with all security and telecommunications drawings and site plan drawings as well as all affected trades prior to submittal of any shop drawings. A. An expansion to the existing Restroom Monitoring System (A.K.A. Smart Restroom) shall be installed at each public restroom space planned in the project). The system shall be a reconfiguration and update of the existing "Smart Restroom" system (SRR) manufactured by the existing vendor, B. The Smart Restroom System shall: 1. Count number users of at each Restroom using Bluetooth and video analytics, for the purpose of notification of Janitorial staff to inspect, service consumables and clean the spaces at predetermined thresholds of users. a. Provide airport maintenance and management with statistical data on Restroom usage patterns and trends using beacon interfaced to custodial carts. 2. Provide touch-screen passenger experience at each restroom location support interface to system to collect positive and negative input 3. Additionally, the scope of work shall include all necessary modifications, software upgrades and programming as required to seamlessly integrate the Existing HAS IT Smart Restroom platform. The work includes materials, infrastructure, equipment, software updates, and programming as required to provide a fully integrated and operational system as herein specified. 4. The installation, performance, features, functions, software, and programming modifications as specified herein as well as all related specification sections have been designed to offer the maximum system efficiency ease of operation, occupant safety and enhance the MLIT Experience. The initial deployment of the Smart Restroom System components shall consist of, but not be limited to, the following. 1. Each restroom shall be provisioned with: a. User counting camera system with video analytics. b. Custodial frequency tracking c. Passenger experience touch screen d. Network interface and mini-PC 2. Local Area Network (LAN) and beacon integration shall be performed to support the deployment of all Smart Restroom components as The Smart Restroom System shall be IP-based. The Contractor shall be responsible for all integration with the other trades, vendors, and HAS IT for network and low voltage cabling, cable terminations, patch panels, media cabinet (TE) and necessary configuration to provide the functionality described within this document. SRR configuration shall be performed in coordination with HAS IT, TRAX, and the Project 1. In addition to SRR equipment procurement, installation, programming and activation, The Contractor shall furnish and install the following tasks as part of the Work: a. System training as specified. b. System warranty as specified. c. System testing and acceptance plans as specified. The Division 27 integrator shall be responsible for providing all equipment, devices, system components, software, licenses, final cable terminations, configuration, programming, commissioning, and testing of all network communications cabling and equipment in accordance with all related Division 27 Specification Sections. Contact TRAX and coordinate with them on implementing: 1. TRAX Web Application - SaaS browser access to TRAX software and data including administrative access; unlimited users. Includes reporting, dashboards, business intelligence, digital map views of restrooms and sensors 2. TRAX SmartRestrooms Mobile Application iOS and Android Mobile App - Access for janitorial users and for supervisor users. 3. AVIUS Feedback Software - Feedback Survey API data stream to TRAX 4. Kontakt BLE Data API Beacon data stream to TRAX Platform 5. XOVIS IBEX Software - Throughput counter API data stream from cameras to TRAX platform Testing and Commissioning 8. Software Training to End User Coordinate with TRAX and HAS IT for VLAN / TRAX Cloud Server requirements/setup for SMART RESTROOM TECHNOLOGY. A. Refer to HAS Standards and specific specification sections for requirements. 1.4 SYSTEMS DESCRIPTIONS

PART 1 - GENERAL

1.2 SUMMARY

to this Section.

Site Visit

A. Refer to HAS Standards and specific specification sections for requirements.

Submit manufacturer's technical data for each product provided.

B. For Smart Restroom Hardware/Software/Licenses, coordinate with TRAX.

A. For Smart Restroom Hardware/Software/Licenses, coordinate with TRAX

For Smart Restroom Technology, coordinate with TRAX.

For Smart Restroom Technology, coordinate with TRAX.

For Smart Restroom Technology, coordinate with TRAX.

B. For Smart Restroom Technology, coordinate with TRAX.

Include spares list to be approved by HAS IT Project Manager for approval.

Submit Technical Implementation Plan.

Submit technical and operations manuals.

Refer to HAS Standards and specific specification sections for additional information.

For infrastructure, refer to HAS Standards and specific specification sections for requirements.

For infrastructure, refer to HAS Standards and specific specification sections for requirements.

For infrastructure, refer to HAS Standards and specific specification sections for requirements.

For infrastructure, refer to HAS Standards and specific specification sections for requirements.

For infrastructure, refer to HAS Standards and specific specification sections for requirements.

Qualifications: Demonstrate compliance with requirements for Contractor certifications and trade skill sets.

1.3 REFERENCES

1.5 SUBMITTALS

1.6 QUALITY ASSURANCE

1.8 RECORD DOCUMENTS

1.10 SOFTWARE AGREEMENT

1.11 EXTRA MATERIAL

1.7 DELIVERY STORAGE AND HANDLING

1.9 OPERATIONS AND MAINTENANCE

## RESTROOM TECHNOLOGY SPECIFICATIONS SECTION 271045 - RESTROOM MONITORING SYSTEM

**PART 2 - PRODUCTS** 2.1 MANUFACTURED PRODUCTS

> For Infrastructure, refer to HAS Standards and specific specification sections in addition to the following: For Smart Restroom Technology, all products shall be compatible with the latest revision of existing HAS TRAX Smart Restrooms system

product as integrated and provided by TRAX, no approved equal.

2.2 SYSTEM CONFIGURATION REQUIREMENTS

Program and configure the Smart Restrooms to be a seamless reconfiguration and upgrade extension of the existing TRAX system. Perform all network-related work including but not limited to:

1. HAS IT network assignments including port assignments and activation requirements. Coordinate with HAS network provider to provide optimal performance for the Smart restroom system and the HAS network.

2.3 SYSTEM SOFTWARE AND LICENSE REQUIREMENTS

System software shall be TRAX Smart Restroom Systems, no approved equal. SMART RESTROOM SYSTEM Configuration to be subcontracted through TRAX.

2.4 HARDWARE REQUIREMENTS

Network Switch 1. Refer to Section 27 21 00 for SRR switch equipment.

Passenger Count Camera

Mini PC or NUC 1. Processor equipment for SRR shall be NOW MICRO DMPS-2200

1. Bluetooth beacons for SRR shall be latest HAS IT adopted product offered by TRAX for the SRR system. 2. Current basis of design: KONTACT.IO, ANCHOR BEACON 2.

1. Passenger Count cameras/ sensors for SRR shall be latest HAS IT adopted product offered by TRAX for the SRR system 2. Current basis of design: XOVIS, PC2-S. Passenger Feedback Screen

1. Passenger experience feedback touchscreen tablet for SRR shall be latest HAS IT adopted product offered by TRAX for the SRR Ćurrent basis of design Samsung Galaxy A7 LTE. with ARMOR ACTIVE ELITE ENCLOSURE AND WEDGE MOUNT, and a BOUNCEPAD VESA MAXI CASE.

Flat Panel Display

Bathroom Stall Occupancy Sensor System 1. Bathroom Stall Occupancy Lights, ZURN Z-LIGHT-W1.

2. Bathroom Stall Occupancy Light Gateway, ZURN ZGW-WRP-W1-ETH.

1. Bathroom Display, LG 32SM5KE, mounted with a SMARTMOUNT SF632P.

3. Bathroom Stall Occupancy Light Power Supply, ZURN Z-PWRSUP-W1 or Meanwell IRM-90-12ST. 4. Bathroom Stall Occupancy Lights Cable, Belden 6100UE.

#### RESTROOM TECHNOLOGY SPECIFICATIONS

#### **SECTION 271045 - RESTROOM MONITORING SYSTEM**

**PART 3 - EXECUTION** 

3.1 COORDINATION

Refer to HAS Standards and specific specification sections for requirements. Contact INFAX/TRAX at 1-770-209-9925 for details regarding their aspects of the scope.

3.2 EQUIPMENT PROTECTION

A. Protect all materials, equipment, devices, or components permanently installed and/or stored on the job site. Protect all materials, equipment, cabling, devices, or components during construction and after installation, provide appropriate protection of all materials, equipment, components and/or devices until time of substantial completion. All materials, equipment, components and/or devices shall be protected during shipment and storage against any physical damage, dirt, moisture, cold, snow or rain:

3.3 WORK PERFORMANCE

Refer to HAS Standards and specific specification sections in addition to the following: 1. Refer to related Specification Sections for additional project coordination requirements. In addition to the requirements defined in this Specification Section, the contractor shall coordinate and meet all requirements addressed in Division 26, Division 27, and Division 28 2. The contractor shall adjust and calibrate the system to provide of performance acceptable to HAS.

3.4 EQUIPMENT INSTALLATION

All system equipment installations shall be in accordance with good engineering practices, NEC, local building codes, and all manufacturer's requirements. Cable terminations at all equipment locations shall comply with all state and local electrical codes. All wiring shall test free from all grounds, shorts, stray voltages, and EMI. Follow manufacturers and integrator's instructions for installing, components and adjusting all equipment and cabling.

INSTALLATION REQUIREMENTS

In addition to all demonstration and training as specified by Division 01, HAS Standards and specific specification sections and related Division 27 Specification Sections, system installation shall be provided in accordance with all requirements of this Section.

1. SRR installation shall be configured, programmed, and commissioned by TRAX certified programmer.

Software / License Installation 1. The Contractor shall provide, configure, and program all SRR software/licenses, in compliance HAS IT approved and existing SRR system offer by TRAX.

Hardware Installation 1. The Contractor shall provide, configure, and install all SRR hardware in compliance HAS IT approved and existing SRR system offer System Startup

1. The Contractor shall not apply power to the system until after: a. TRAX representative has inspected and approved the SRR configuration and installation for compliance with HAS IT and integrator's system operational requirements.

3.6 COMMUNICATIONS CABLING REQUIREMENTS

For infrastructure, refer to HAS Standards and specific specification sections for requirements. B. For Smart Restroom Hardware/Software/Licenses. TRAX

3.7 ELECTRICAL POWER DISTRIBUTION

A. Refer to HAS Standards and specific specification sections for requirements.

3.8 TRANSIENT VOLTAGE SUPPRESSION

A. Refer to HAS Standards and specific specification sections for requirements.

3.9 GROUNDING AND BONDING

A. Refer to HAS Standards and specific specification sections for requirements.

3.10 EQUIPMENT IDENTIFICATION

A. Refer to HAS Standards and specific specification sections for requirements.

3.11 MAINTENANCE AND SERVICE A. For infrastructure, refer to HAS Standards and specific specification sections for requirements.

For Smart Restroom Hardware/Software/Licenses, coordinate with TRAX. 3.12 WARRANTY

Refer to HAS Standards and specific specification sections for requirements. The Product Warranty's shall meet all manufactures specification to ensure against product defects.

As part of TRAX's services, a warranty period will be provided for their equipment and services. 3.13 FIELD SERVICES

For infrastructure, refer to HAS Standards and specific specification sections for requirements. For Smart Restroom Technology, coordinate with TRAX.

3.14 TRAINING

A. For infrastructure, refer to HAS Standards and specific specification sections for requirements. B. For Smart Restroom Technology, coordinate with TRAX.

3.15 PROJECT CLOSEOUT REQUIREMENTS

A. For infrastructure, refer to HAS Standards and specific specification sections for requirements. B. For Smart Restroom Technology, coordinate with TRAX.

**END OF SECTION 27 10 45** 

7800 Airport Blvd Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

PN209B A.I.P. No. C.O.H. No. D.O.A No.

RDLR Architects

ARCHITECTURE PLANNING INTERIORS

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DES	SIGNER PROJECT No	<b>.:</b>	2022.03
PROJECT STATUS: CONSTRUC		TRUCTIC	
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No.	DESCRIPTION	DATE	BY
1	15% SD	09.30.22	PGA
2	30% CD	10.28.22	PGA
3	95% CD	12.09.22	PGA
4	IFC	01.25.23	PGA

DESIGN BY:	PGA
DRAWN BY:	AC
CHECKED BY:	JG
ISSUE DATE:	01/25/23
APPROVED BY:	Approver
APPROVAL DATE:	01/25/2023

**DIRECTOR HOUSTON AIRPORT SYSTEM** 

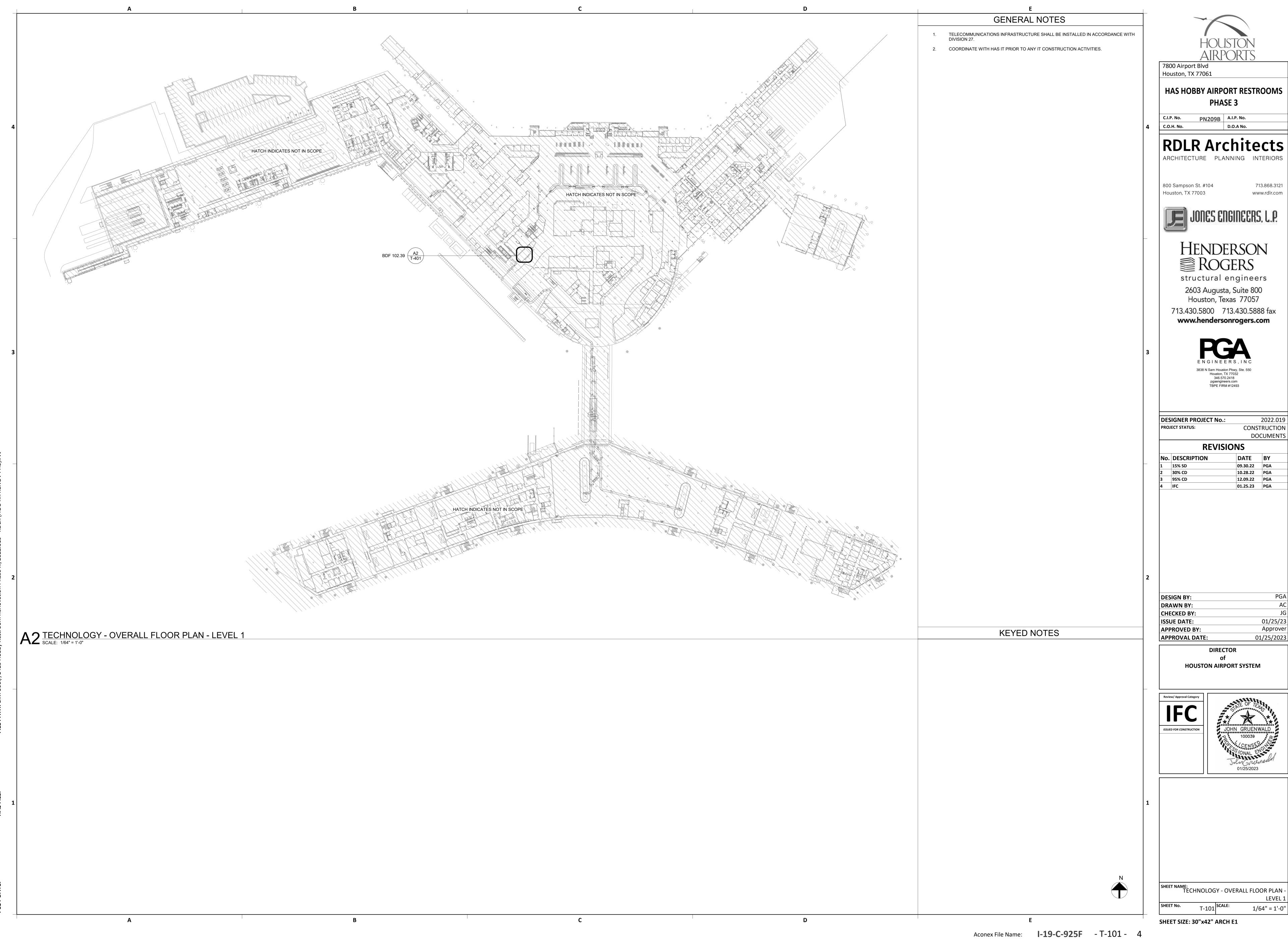




TECHNOLOGY - SPECIFICATIONS

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - T-002 - 4



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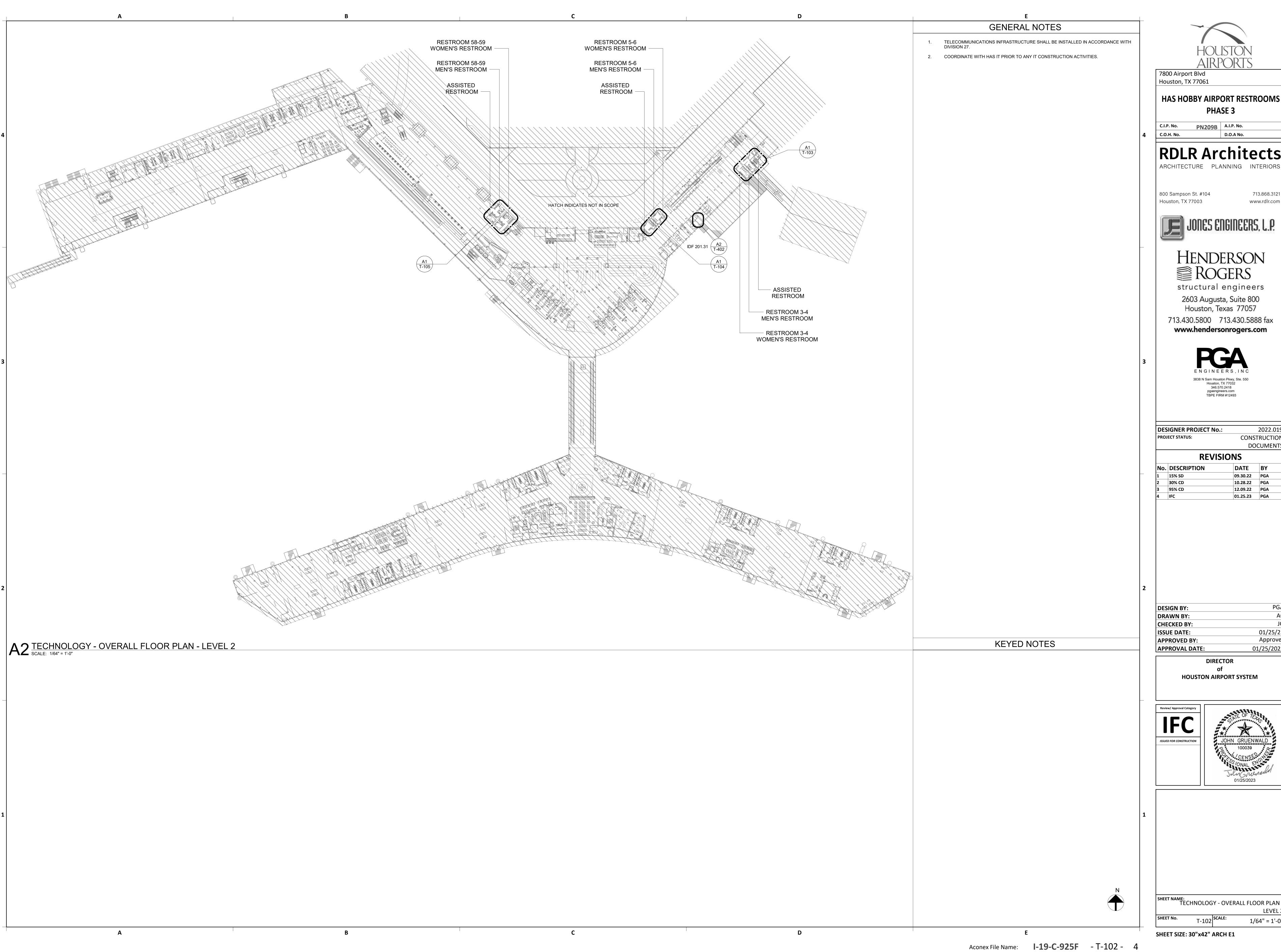


DES	SIGNER PROJECT No.	<b>o.:</b> 2022.019		
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No.	DESCRIPTION	DATE	ВҮ	
1	15% SD	09.30.22	PGA	
2	30% CD	10.28.22	PGA	
3	95% CD	12.09.22	PGA	
4	IFC	01.25.23	PGA	

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APPROVAL DATE:	01/25/2023



SHEET NAME:
TECHNOLOGY - OVERALL FLOOR PLAN -



Houston, TX 77061

HAS HOBBY AIRPORT RESTROOMS PHASE 3

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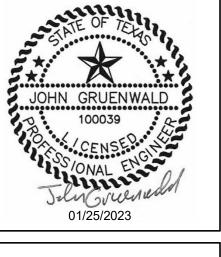
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	REVIS	IONS	
No.	DESCRIPTION	DATE	ВҮ
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2	30% CD	10.28.22	PGA
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APPROVAL DATE:	01/25/2023



SHEET NAME:
TECHNOLOGY - OVERALL FLOOR PLAN -

A 1 TECHNOLOGY - FLOORPLAN RESTROOM 3-4

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

— BTP.35

### **GENERAL NOTES**

- TELECOMMUNICATIONS INFRASTRUCTURE SHALL BE INSTALLED IN ACCORDANCE WITH
- REFER TO GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS SHEETS FOR ADDITIONAL
- COORDINATE WITH HAS IT PRIOR TO ANY IT CONSTRUCTION ACTIVITIES.
- SCREENED DEVICES DENOTE EXISTING.
- TURN OVER ANY DEMO'D TECHNOLOGY DEVICES TO HAS IT.

## LEGEND

- FPD FLAT PANEL DISPLAY
- HORIZONTAL CABLE MANAGEMENT
- MINIATURE COMPUTER
- OSG BATHROOM STALL OCCUPANCY SENSOR GATEWAY
- BATHROOM STALL OCCUPANCY SENSOR LIGHT
- POWER SUPPLY
- PCS PASSENGER COUNTER SENSOR
- REC REMOTE EQUIPMENT ENCLOSURE
- A/V SPEAKER TYPE 1
- TP1 TOUCH PANEL / TABLET

#### **KEYED NOTES**

- 1 EXISTING WALL MOUNTED REMOTE EQUIPMENT ENCLOSURE (REC).
- 2 EXISTING 6-PORT, SURFACE MOUNT DATA RECEPTACLE MOUNTED INSIDE EXISTING REC.
- REPLACE EXISTING IPAD WITH SAMSUNG GALAXY A7 LTE. MOUNT TO WALL WITH ARMOR ACTIVE ELITE ENCLOSURE AND WEDGE MOUNT, WITH A BOUNCEPAD VESA MAXI CASE.
- REPLACE EXISTING PASSENGER COUNT SENSOR WITH XOVIS PC2-S, MOUNTED WITH PA-PC2-FM FLUSH MOUNT KIT. SUBMIT PRODUCT DATA FOR APPROVAL PRIOR TO INSTALLATION. (1) CAT6 CABLE ROUTED THROUGH A 1"C. TO EXISTING REC.
- REPLACE EXISTING BLUETOOTH BEACON PUCK WITH KONTAKT.IO, ANCHOR BEACON 2. SUBMIT PRODUCT DATA FOR APPROVAL PRIOR TO INSTALLATION.
- 7 2-PORT, SURFACE MOUNT DATA RECEPTACLE MOUNTED TO WALL. 2 CAT6 CABLE ROUTED THROUGH A 1"C TO EXISTING REC. FED FROM NEW 4-PORT, SURFACE MOUNT
- DATA RECEPTACLE MOUNTED INSIDE EXISTING REC. REFERENCE KEYNOTE 13 AND
- 8 EXISTING CEILING SPEAKER (SP1).
- 9 BATHROOM STALL OCCUPANCY LIGHTS, ZURN Z-LIGHT-W1. MOUNT AT 6" INSIDE THE STALL MEASURED FROM THE STALL DOOR AS PER MANUFACTURER INSTALL ATION STALL, MEASURED FROM THE STALL DOOR AS PER MANUFACTURER INSTALLATION INSTRUCTIONS.
- LOCATION OF JUNCTION BOX FOR BATHROOM STALL OCCUPANCY LIGHTS POWER SUPPLY. JUNCTION BOX TO HAVE 1" CONDUIT ROUTED TO CEILING.
- BATHROOM STALL OCCUPANCY LIGHT GATEWAY, ZURN ZGW-WRP-W1-ETH. PLACE INSIDE NEW WALL MOUNTED REMOTE FOLIPMENT ENCLOSURE (REC) INSIDE NEW WALL MOUNTED REMOTE EQUIPMENT ENCLOSURE (REC).
- MINI COMPUTER, NOW MICRO DMPS-2200. SUBMIT PRODUCT DATA FOR APPROVAL PRIOR TO INSTALLATION.
- 4-PORT, SURFACE MOUNT DATA RECEPTACLE MOUNTED INSIDE EXISTING REC. 4 CAT6 CABLE ROUTED FROM IDF 201.31 THROUGH A 1"C TO EXISTING REC.



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HAS HOBBY AIRPORT RESTROOMS PHASE 3

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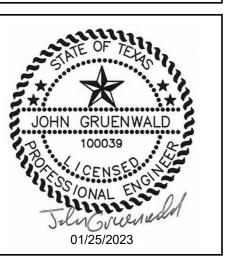
<b>DESIGNER PROJECT No.:</b> 2022.019		2022.019	
PROJECT STATUS:		CONSTRUCTION	
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REVISIONS			
No.	DESCRIPTION	DATE	ВҮ
1	15% SD	09.30.22	PGA
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01.25.23 PGA

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APPROVAL DATE:	01/25/2023

DIRECTOR HOUSTON AIRPORT SYSTEM

ISSUED FOR CONSTRUCTION



SHEET NAME: TECHNOLOGY - FLOOR PLAN - RESTROOMS

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - T-103 - 4

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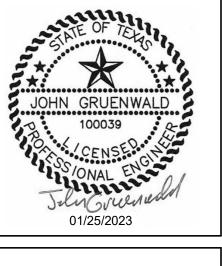


<b>DESIGNER PROJECT No.:</b> 2022.01		2022.019		
PROJECT STATUS:		CONS	CONSTRUCTION	
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No.	DESCRIPTION	DATE	ВҮ	
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SHEET NAME: TECHNOLOGY - FLOOR PLAN - RESTROOMS

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: I-19-C-925F - T-104 - 4

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12.09.22 PGA

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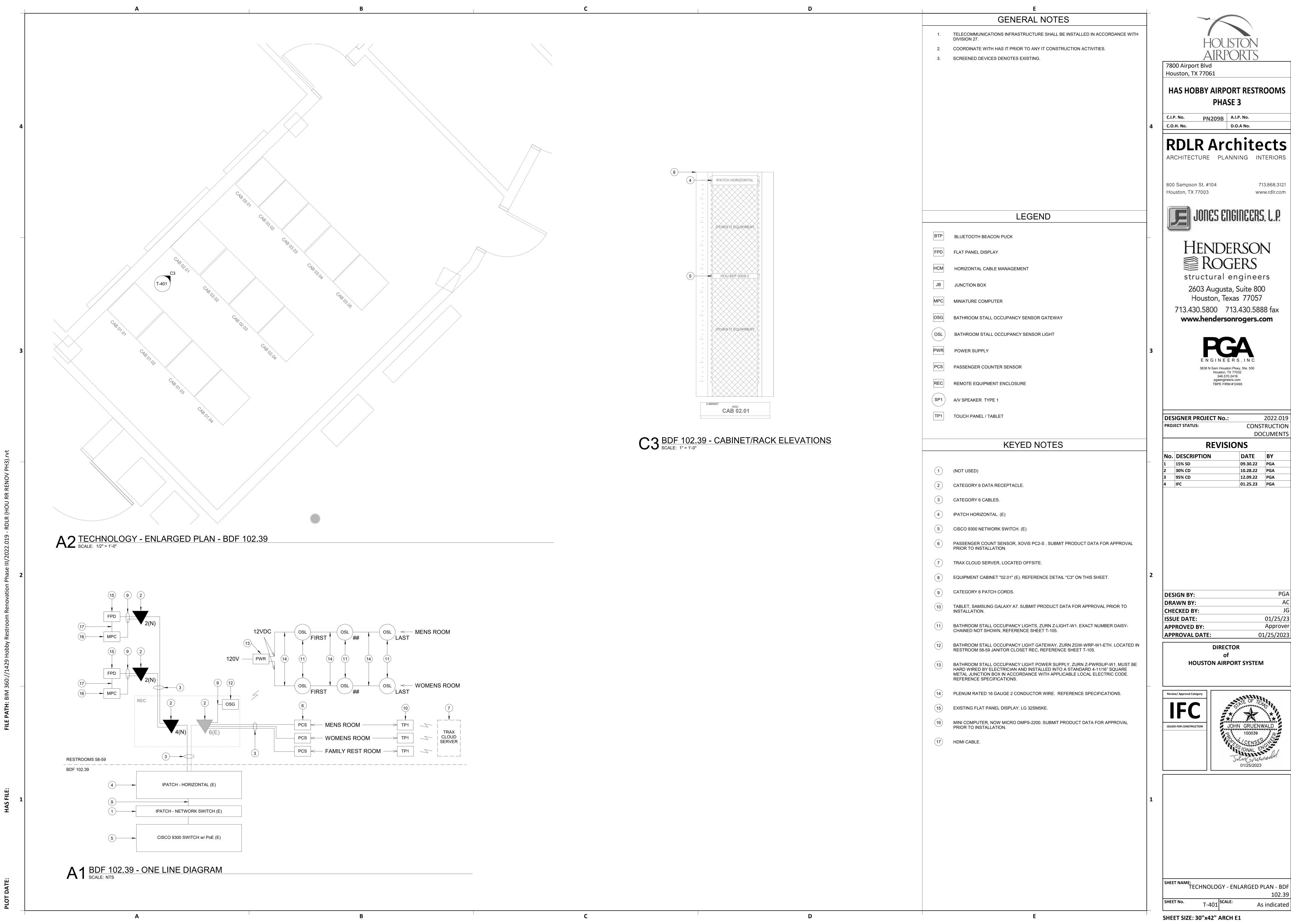
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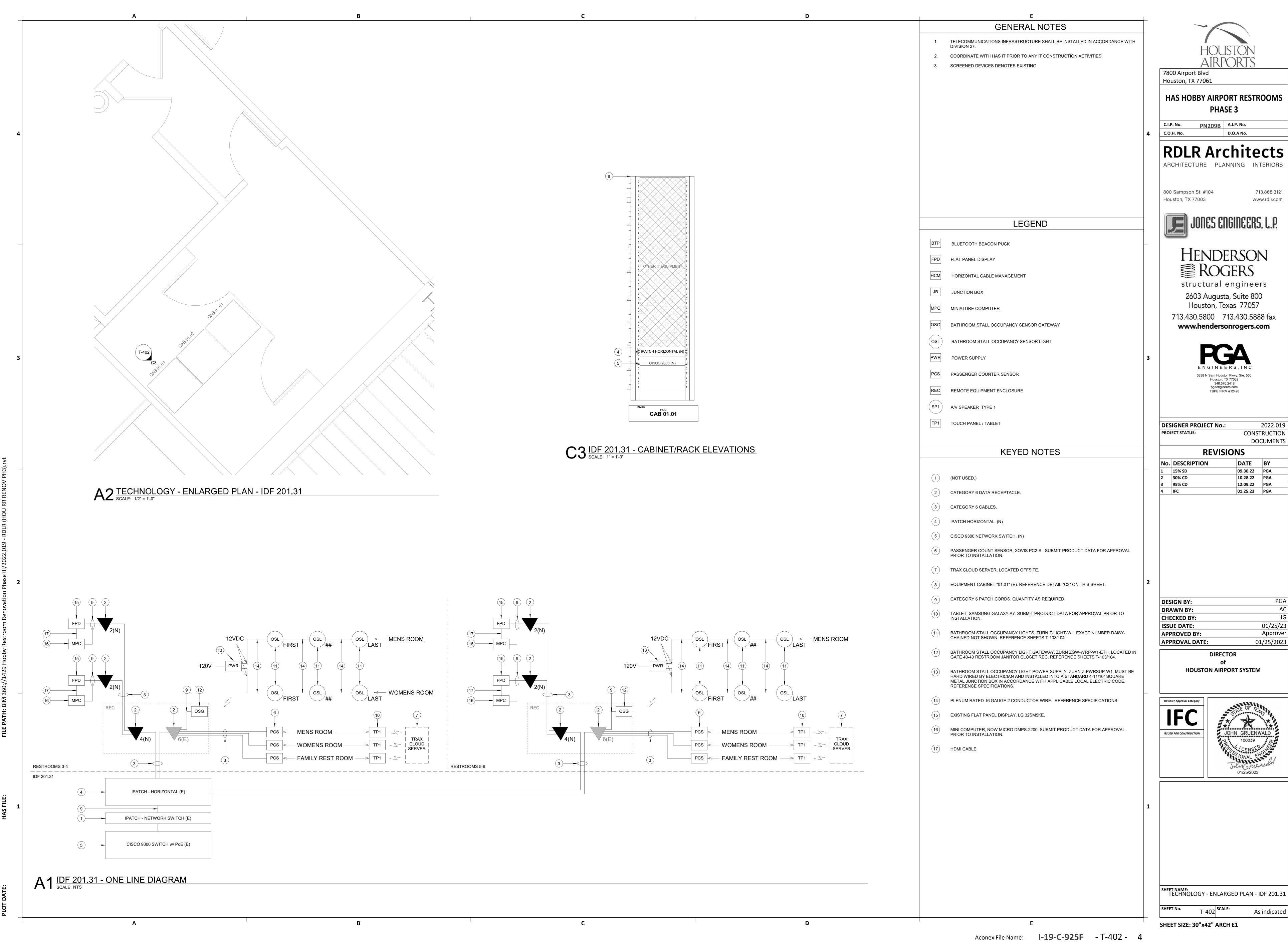


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TECHNOLOGY - FLOORPLAN RESTROOMS



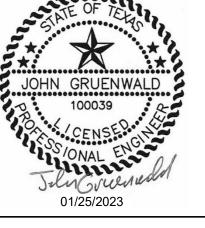
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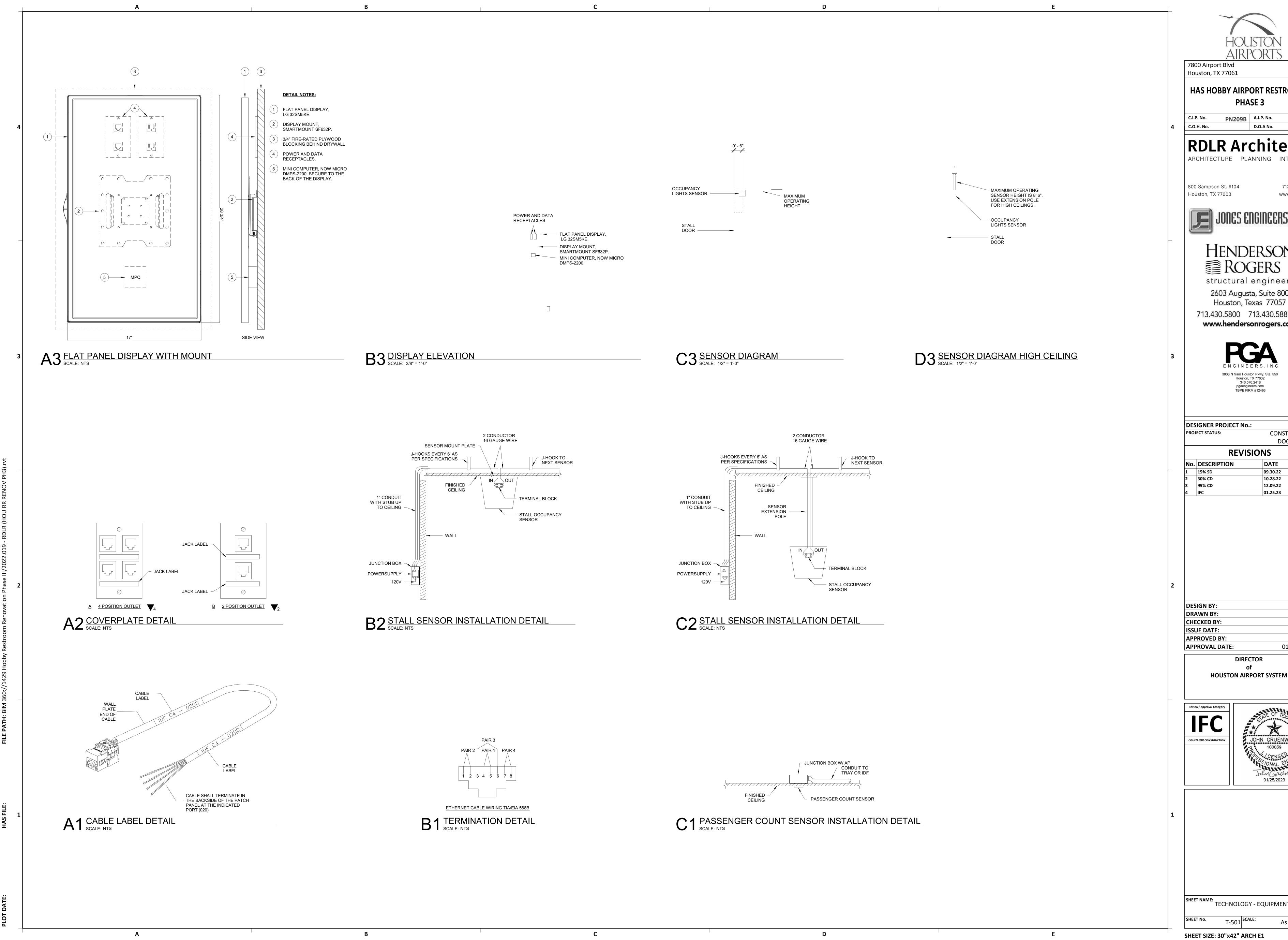




2022.019 CONSTRUCTION DOCUMENTS

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10.28.22 PGA

12.09.22 PGA

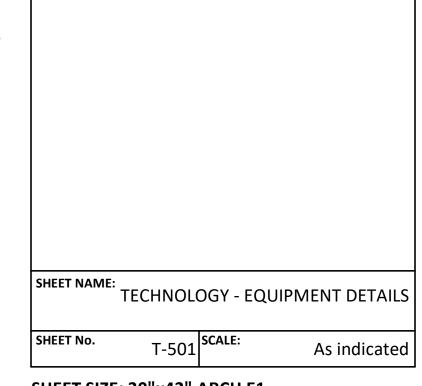
01.25.23 PGA

01/25/23

Approver

01/25/2023

JOHN GRUENWALD



DIRECTOR

SHEET SIZE: 30"x42" ARCH E1

Aconex File Name: **I-19-C-925F** - T-501 - 4

DEVICE ID LOCATION MANUFACTURER MODEL COMMENTS RESTROOM 3-4 KONTAKT.IO ANCHOR BEACON 2 BTP.32 ANCHOR BEACON 2 RESTROOM 3-4 KONTAKT.IO RESTROOM 3-4 KONTAKT.IO ANCHOR BEACON 2 RESTROOM 3-4 KONTAKT.IO ANCHOR BEACON 2 RESTROOMS 5-6 ANCHOR BEACON 2 KONTAKT.IO KONTAKT.IO RESTROOMS 5-6 ANCHOR BEACON 2 KONTAKT.IO RESTROOMS 5-6 ANCHOR BEACON 2 RESTROOMS 5-6 KONTAKT.IO ANCHOR BEACON 2 RESTROOMS 58-59 KONTAKT.IO ANCHOR BEACON 2 RESTROOMS 58-59 KONTAKT.IO ANCHOR BEACON 2 KONTAKT.IO ANCHOR BEACON 2 RESTROOMS 58-59 RESTROOMS 58-59 ANCHOR BEACON 2 BTP.43 KONTAKT.IO RESTROOMS 58-59 RESTROOM 3-4 RESTROOM 3-4 32SM5KE RESTROOM 3-4 32SM5KE RESTROOMS 5-6 32SM5KE 32SM5KE RESTROOMS 5-6 RESTROOMS 58-59 LG 32SM5KE LG RESTROOMS 58-59 32SM5KE NOW MICRO DMPS-2200 RESTROOM 3-4 RESTROOM 3-4 NOW MICRO DMPS-2200 RESTROOMS 5-6 NOW MICRO DMPS-2200 RESTROOMS 5-6 NOW MICRO DMPS-2200 RESTROOMS 58-59 NOW MICRO DMPS-2200 RESTROOMS 58-59 NOW MICRO DMPS-2200 OSG.08 **RESTROOM 3-4** ZURN ZGW-WRP-W1-ETH **RESTROOM 5-6 ZURN** ZGW-WRP-W1-ETH RESTROOMS 58-59 **ZURN** ZGW-WRP-W1-ETH OSL.116 RESTROOM 3-4 **ZURN** Z-LIGHT-W1 ZURN OSL.117 RESTROOM 3-4 Z-LIGHT-W1 OSL.118 RESTROOM 3-4 ZURN Z-LIGHT-W1 OSL.119 RESTROOM 3-4 **ZURN** Z-LIGHT-W1 OSL.120 RESTROOM 3-4 ZURN Z-LIGHT-W1 OSL.121 RESTROOM 3-4 **ZURN** Z-LIGHT-W1 OSL.122 RESTROOM 3-4 ZURN Z-LIGHT-W1 OSL.123 RESTROOM 3-4 **ZURN** Z-LIGHT-W1 OSL.124 RESTROOM 3-4 **ZURN** Z-LIGHT-W1 OSL.125 RESTROOMS 5-6 **ZURN** Z-LIGHT-W1 OSL.126 RESTROOMS 5-6 **ZURN** Z-LIGHT-W1 OSL.127 RESTROOMS 5-6 **ZURN** Z-LIGHT-W1 OSL.128 RESTROOMS 5-6 **ZURN** Z-LIGHT-W1 OSL.129 RESTROOMS 5-6 **ZURN** Z-LIGHT-W1 OSL.130 RESTROOMS 5-6 ZURN Z-LIGHT-W1 OSL.131 RESTROOMS 5-6 **ZURN** Z-LIGHT-W1 OSL.132 RESTROOMS 5-6 ZURN Z-LIGHT-W1 OSL.133 RESTROOMS 58-59 **ZURN** Z-LIGHT-W1 OSL.134 RESTROOMS 58-59 **ZURN** Z-LIGHT-W1 OSL.135 RESTROOMS 58-59 **ZURN** Z-LIGHT-W1 OSL.136 RESTROOMS 58-59 **ZURN** Z-LIGHT-W1 OSL.137 RESTROOMS 58-59 **ZURN** Z-LIGHT-W1 OSL.138 RESTROOMS 58-59 ZURN Z-LIGHT-W1 OSL.139 RESTROOMS 58-59 **ZURN** Z-LIGHT-W1 **ZURN** OSL.140 RESTROOMS 58-59 Z-LIGHT-W1 OSL.141 RESTROOMS 58-59 **ZURN** Z-LIGHT-W1 **RESTROOM 3-4** XOVIS **RESTROOM 3-4** XOVIS PC2-S XOVIS RESTROOM 3-4 PC2-S XOVIS RESTROOMS 5-6 PC2-S PC2-S RESTROOMS 5-6 XOVIS RESTROOMS 5-6 XOVIS PC2-S RESTROOMS 58-59 XOVIS RESTROOMS 58-59 **XOVIS** RESTROOMS 58-59 XOVIS PC2-S RESTROOM 3-4 SAMSUNG GALAXY A7 RESTROOM 3-4 SAMSUNG GALAXY A7 RESTROOM 3-4 SAMSUNG GALAXY A7 RESTROOMS 5-6 SAMSUNG GALAXY A7 RESTROOMS 5-6 SAMSUNG GALAXY A7 SAMSUNG TP1.26 RESTROOMS 5-6 GALAXY A7 SAMSUNG RESTROOMS 58-59 GALAXY A7 RESTROOMS 58-59 SAMSUNG GALAXY A7 RESTROOMS 58-59 SAMSUNG GALAXY A7 B1 EQUIPMENT SCHEDULE
SCALE: 1/16" = 1'-0"

TECHNOLOGY SCHEDULE

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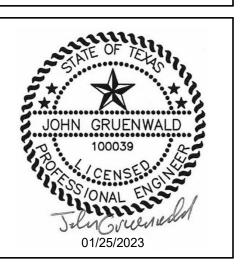


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PROVAL DATE:	01/25/2023

DIRECTOR **HOUSTON AIRPORT SYSTEM** 

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1/16" = 1'-0"

1	
	SHEET NAME: TECHNOLOGY - EQUIPMENT SCHEDULES