

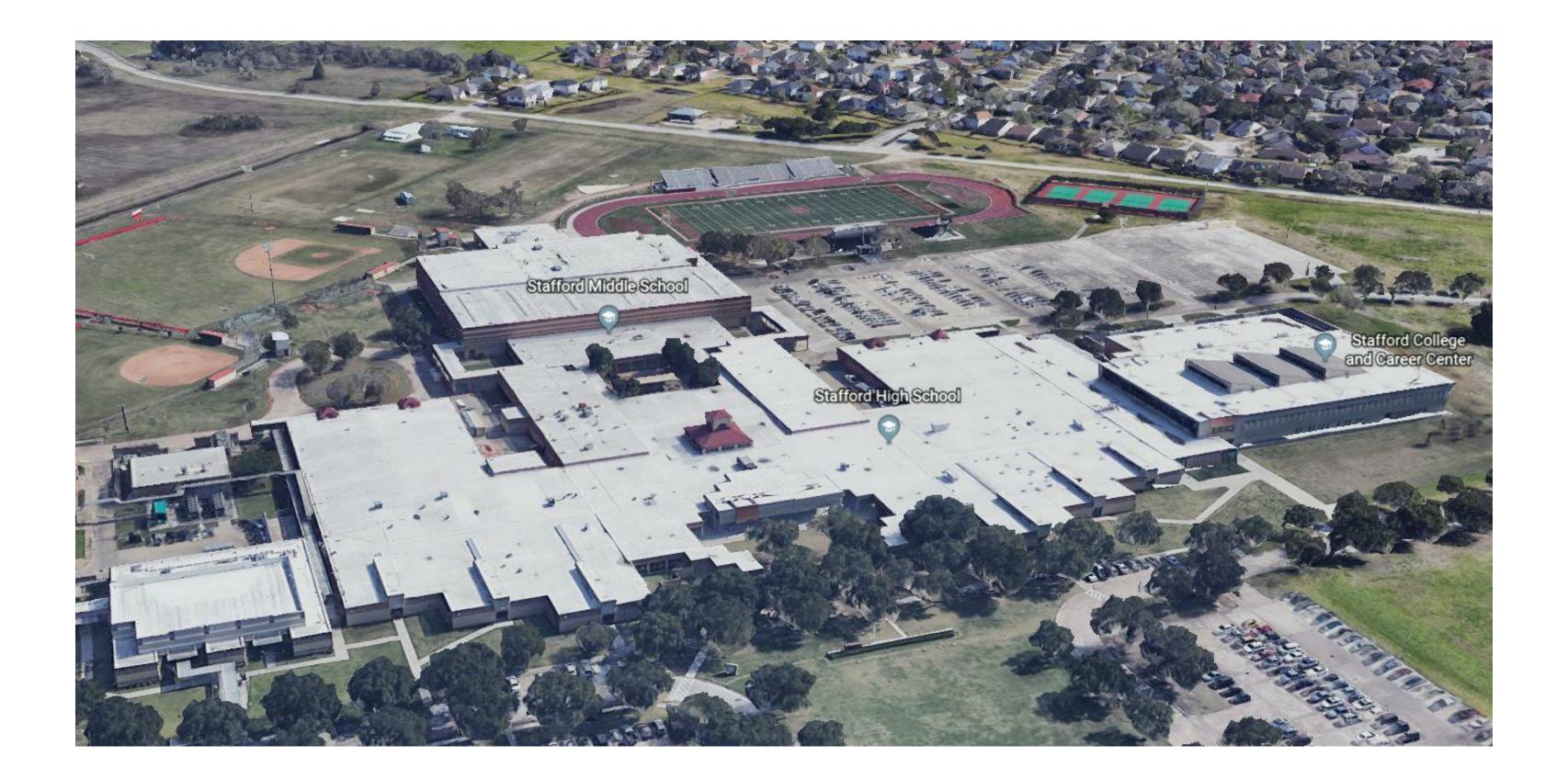
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SMSD LOCKER ROOMS RENOVATION

STAFFORD MUNICIPAL SCHOOL DISTRICT

BOARD OF TRUSTEES

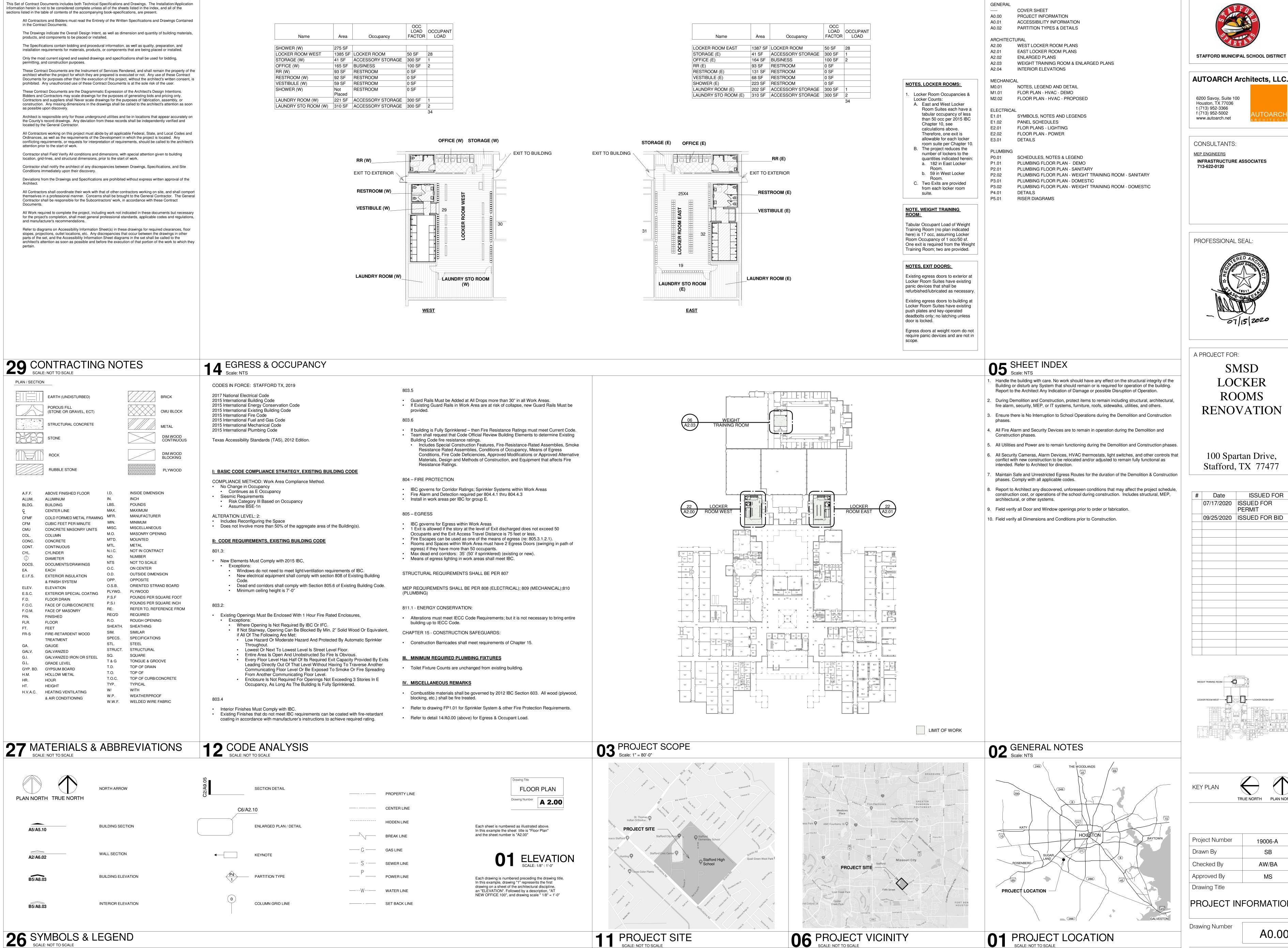
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Issued For: BID 09/25/2020



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CONSULTANTS: MEP ENGINEERS **INFRASTRUCTURE ASSOCIATES** 713-622-0120

A PROJECT FOR:

ROOMS RENOVATION

100 Spartan Drive, Stafford, TX 77477

ISSUED FOR

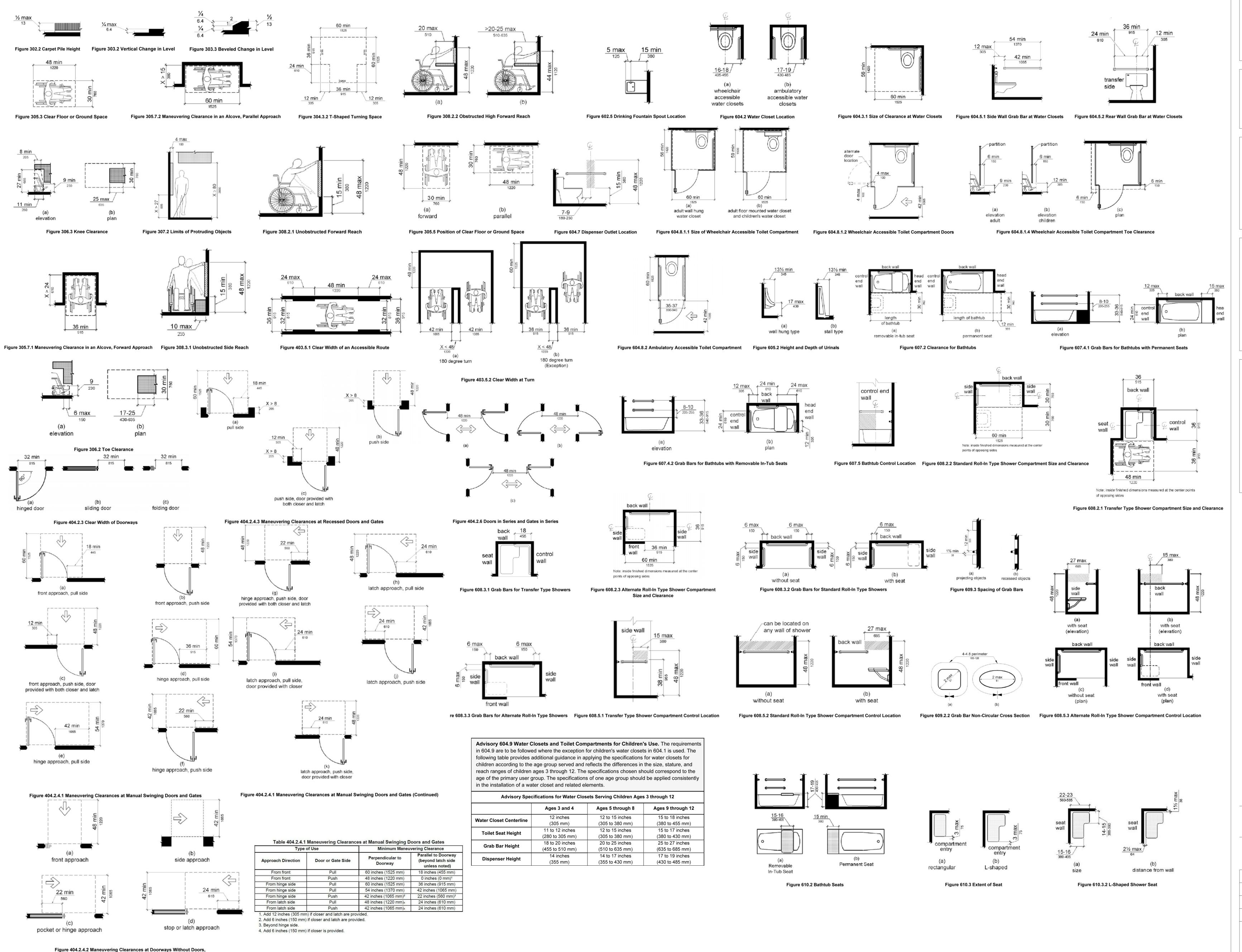
09/25/2020 ISSUED FOR BID

Project Number 19006-A Drawn By AW/BA Checked By Approved By

PROJECT INFORMATION

Drawing Number

A0.00



Sliding Doors, Gates, and Folding Doors



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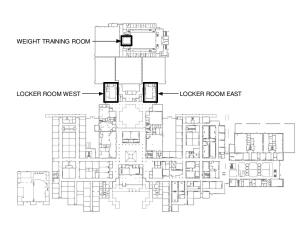
CONSULTANTS: MEP ENGINEERS **INFRASTRUCTURE ASSOCIATES** 713-622-0120

PROFESSIONAL SEAL:

A PROJECT FOR: **SMSD** ROOMS RENOVATION

100 Spartan Drive, Stafford, TX 77477

ISSUED FOR 07/17/2020 ISSUED FOR 09/25/2020 | ISSUED FOR BID

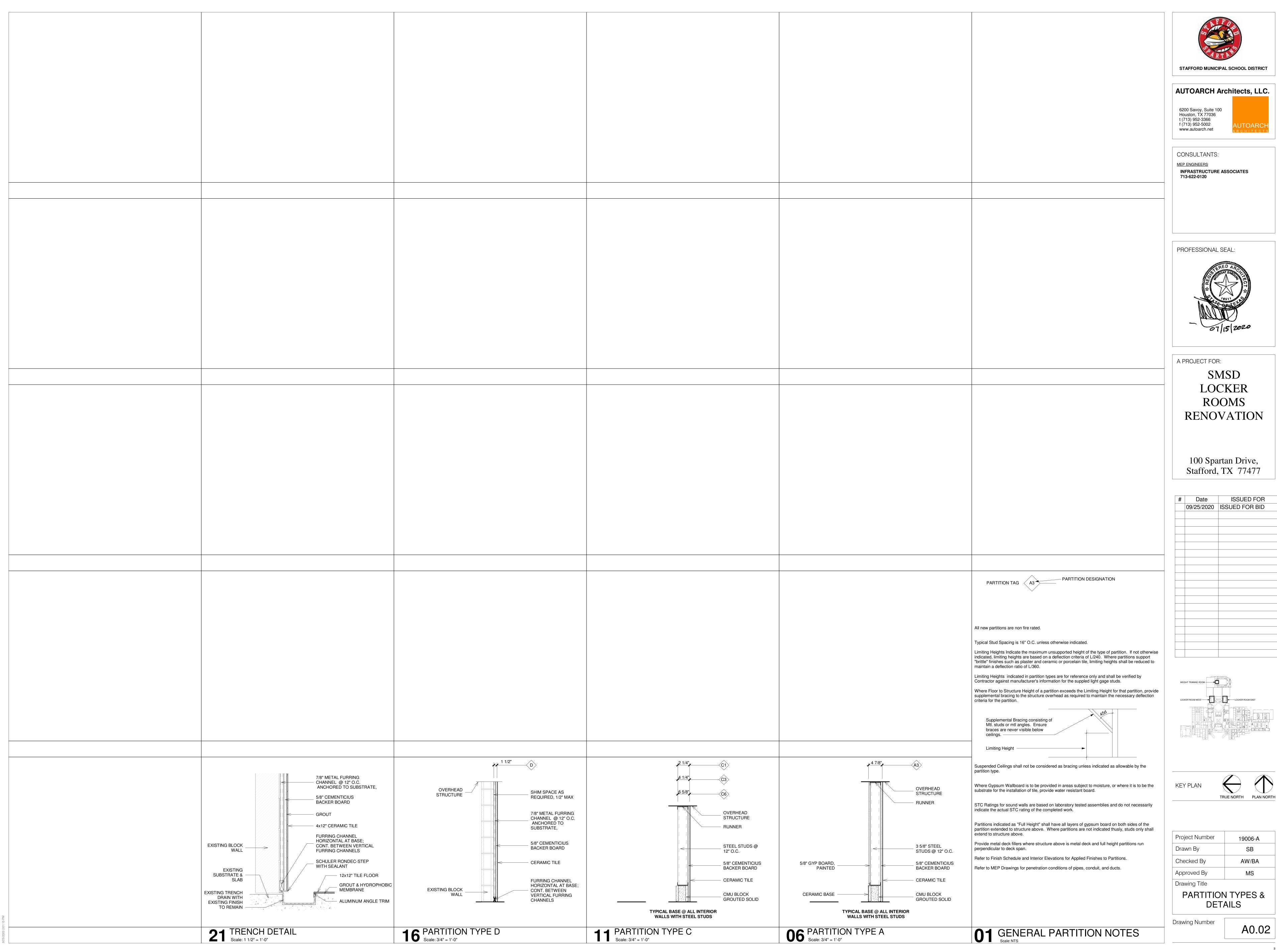


Project Number 19006-A Drawn By ΑW BA Checked By Approved By Drawing Title

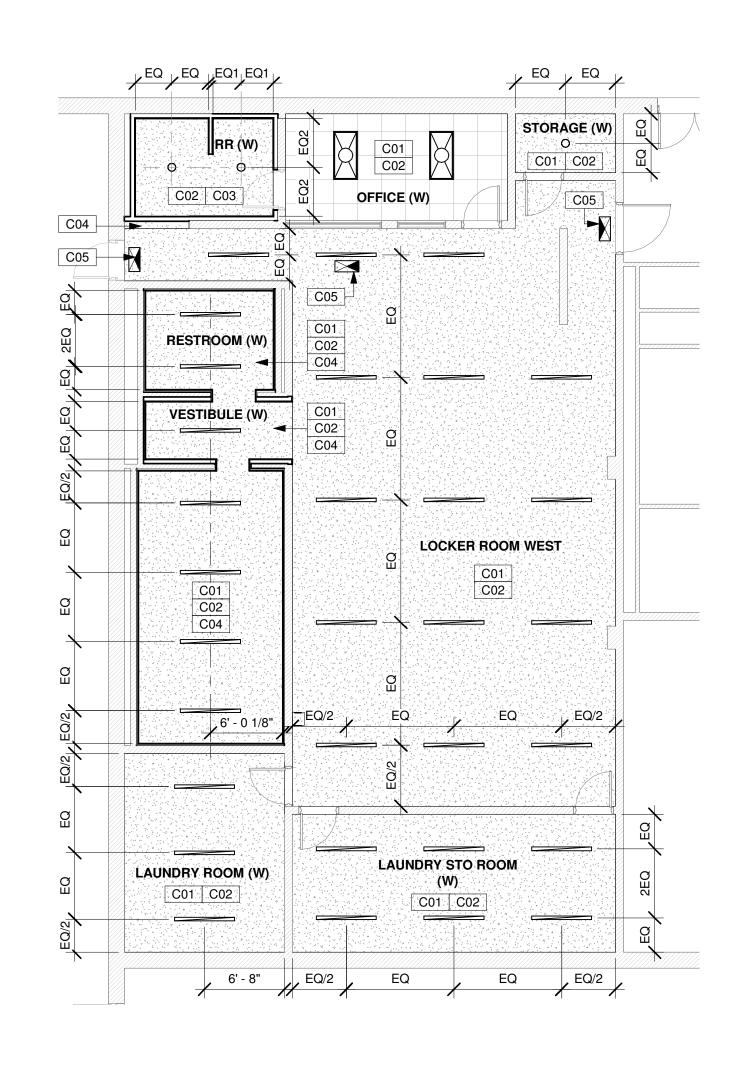
> **ACCESSIBILITY INFORMATION**

Drawing Number

A0.01

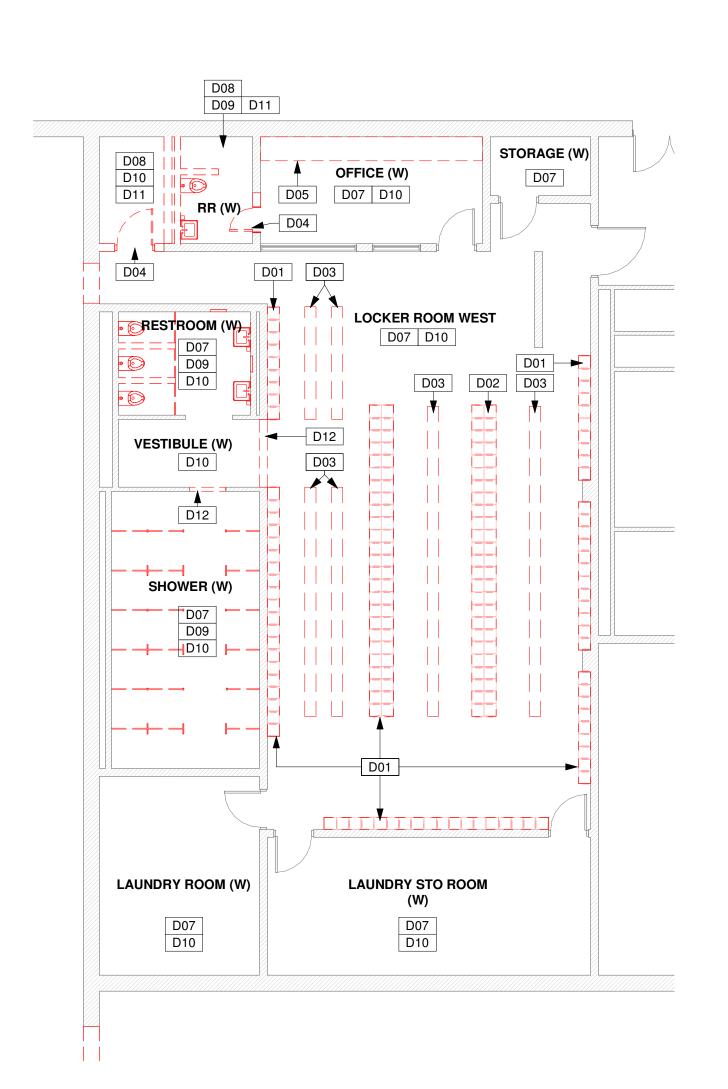




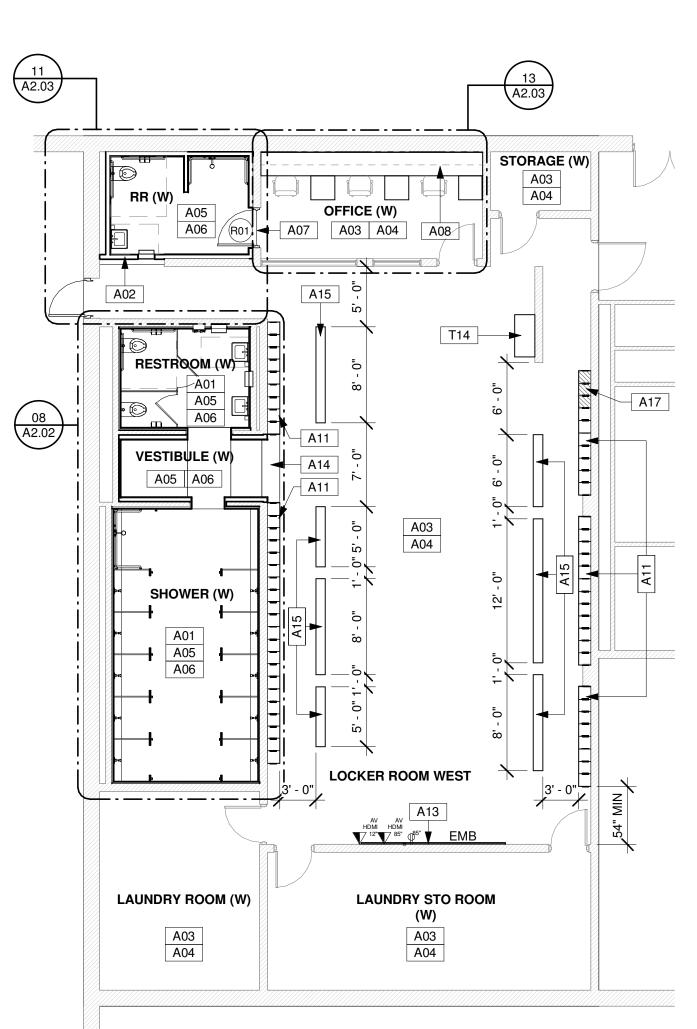


STORAGE (W) OFFICE (W) A04 A06 12\ A2.04 RESTROOM (W VESTIBULE (W) (CF01)— A05 A06 NSF1 LOCKER ROOM WEST SHOWER (W) A05 A06 13\ A2.04 LAUNDRY ROOM (W) **LAUNDRY STO ROOM**

24 REFLECTED CEILING PLAN - LOCKER ROOM WEST Scale: 1/8" = 1'-0"



29 FINISHES PLAN - LOCKER ROOM WEST Scale: 1/8" = 1'-0"



NOTE: FOR FINISH SCHEDULE SEE SHEET A2.03

C02 Provide new led light fixtures to replace existing ones, connect to existing circuit. Re: MEP dwgs. (FIXW, HANDLE 2) COLUMN GRID BUBBLE & LINE C03 Provide new 1/2" gyp ceiling @ adjacent ceiling's height, paint. Re: finish schedule. EXISTING CMU WALLS Patch ceiling in area affected by demolition & construction, match & align with adjascent ceiling, paint. **NEW INTERIOR PARTITIONS** C05 Emergency exit light, ceiling mounted. Re: MEP dwgs. DOOR NUMBER KEY WINDOW TYPE KEY DIMENSION **KEYED NOTE** BUILDING SECTION WALL SECTION A2/A6.02 10 CEILING KEYNOTES
Scale: NTS B5/A8.03 BUILDING ELEVATION Provide new toilet & shower partition, see T05 for toilet partition, T20 for shower partition. 1" B5/A8.03 INTERIOR ELEVATION solid phenolic with SST bracket. Re: Specs A02 Provide new partition as specified. Re: partition types & finish schedule. (FIXW, HANDLE 2) SECTION DETAIL A03 Rehab & paint all existing walls, patches holes where construction were removed. Provide new rubber base. Re: Partition types & finish schedule. (FIXW, HANDLE 2) **ENLARGED DETAIL** A04 Provide new anti-slip duraquartz flooring. Re: finish schedule & specs. (FIXW, HANDLE 2) FINISH TAG Provide new 12"x12" ceramic tile flooring. Rehab & slope toward existing drains. Re: finish schedule & specs. (FIXW, HANDLE 2) PARTITION DESIGNATION A06 Provide new 4"x12" ceramic tile on furred walls, full height. Re: Wall types, Finish schedule & Specs. (FIXW, HANDLE 2) ELECTRONIC MARKER BOARD Provide new doors/frame/HW per door schedule, provide structure support as needed. (FIXW, ENSURE 2) 09 PLAN LEGEND Scale: NTS Provide new casework with wood blocking as needed. Re: MEP for outlets. (FIXW, HANDLE Provide metal lockers, one tier-full height, to match existing. Rehab and reuse relocated GWB ON METAL STUD DOWNLIGHT RECESSED lockers when possible. Attatch to walls as needed. Re: Specs. (HANDLE 2; FIXW; FIX 1) A13 Provide new wall mounted short through projector and markerboard screen. Re:Specs. A14 Provide ramp with slope of 1/2" / 1'-0", finish to match specified locker room floor. (LEVEL 1) 2'x2' ACCOUSTIC 2x4 TROFFER LIGHT FIXTURE CEILING TILES SYSTEM A15 Provide new locker bench as specified. Bolt to floor as needed. Re:Specs & DWGs Provide ADA compliant accessible metal lockers to match adjacent lockers. Attatch to walls SURFACE-MOUNTED as needed. Re: Specs. (HANDLE 2; FIXW; FIX 1) CEILING MOUNTED EXIT LINEAR LIGHT FIXTURE (CEILING MOUNTED) 08 CONSTRUCTION KEYNOTES
Scale: NTS 05 CEILING LEGEND
Scale: NTS Extend duct & all return air through the new ceiling/ wall to be remain fully functional. Remove metal lockers & block base, renab & repair area to receive new construction. He: new construction plan, interior elevations. (FIXW; HANDLE 2) Adjust/relocate all hvac ducts, diffusers, cables, security devices, and it devices that conflicts w/ new ceiling/ wall/ construction. Remove metal lockers & metal base, rehab & repair area to receive new construction. D02 Rehab lockers & base for relocation. Re: new construction plan, interior elevations. All gypsum ceilings to be 9' - 0" a.f.f. unless indicated otherwise. (FIXW; HANDLE 2; HANDLE 3) . All restroom gypsum ceilings to be 9' - 0" a.f.f. unless indicated otherwise. D03 Remove existing benches & repair area to receive new construction. Re: new construction plan. (FIXW; HANDLE 2) All acoustical lay-in ceilings to be 9' - 0" a.f.f. and centered within each room unless indicated

> indicated otherwise. All light fixtures and other equipment that is installed in acoustical ceiling tile, shall be centered All light fixtures at mech/elec room are indicate for quantity only, locations shall be coordinated w/ equipment by gc in field. Rcp indicate architectural lighting only. Re: mep/fire drawings for emergency lighting, strobes, sprinklers to remain fully functional.

0. Extend/adjust fire sprinklers heads & pipes to accommodate the new ceiling & construction. Fire

All light fixtures installed in gyp. Bd. Ceilings are to be centered within the room or wall unless

WORK POINT

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CONSULTANTS:

INFRASTRUCTURE ASSOCIATES

PROFESSIONAL SEAL:

A PROJECT FOR:

SMSD

ROOMS

RENOVATION

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Stafford, TX 77477

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Date

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MEP ENGINEERS

713-622-0120

1. Refer to specifications for ceiling tile materials and equipment types. D10 Remove existing floor finishes and prepare the area to receive new constrution. Re: new construction plans. (FIXW; HANDLE 2)

Q4 GENERAL CEILING NOTES
Scale: NTS

07 DEMOLITION KEYNOTES
Scale: NTS

Remove existing Doors & Frames & prepare area to receive new construction. Re: new

Remove all furniture, furniture systems, shelves & millwork in this area, repair wall as

D08 Remove existing ceiling, light fixtures & assembly to allow for new construction in this area. Re: new RCP & MEP drawings. (FIXW, HANDLE 2, DISCONNECT 1)

D09 receive new construction. Re: new construction plan, elevations, MEP drawings.

Remove existing plumbing fixtures & assembly at this room, fix holes & repair area to

Remove existing wall finishes and prepare the area to receive new constrution. Re: new

D12 Remove existing floor bump and prepare area to receive new construction. Re: new construction plans. (FIXW; HANDLE 2)

Remove existing light fixtures & assembly, fix holes & repair area to receive new

construction. Re: new RCP & MEP drawings. (FIXW, HANDLE 2)

construction plans. (FIXW; HANDLE 2)

(DISCONNECT 1, FIXW, HANDLE 2)

construction plans. (FIXW; HANDLE 2)

needed. (HANDLE 2; FIXW)

Rehab ceiling where light fixtures were removed & paint all ceiling. Re: finish schedule,

C01 | Renab Centing Wildle 2)

Dimension & Alignment Support Notes:

Align face of new construction w/face of existing. (ALIGN 2) Align Centerline of new construction w/Centerline of existing. (ALIGN 3) Align gridline/join grid w/existing grid. Ensure top of new construction is level w/existing surface. (LEVEL 1) Level floor & surface to recieve new construction.

(LEVEL 3) Ensure the top of grade is level w/surrounding ground.

Construction & Condition Support Notes:

(HANDLE 1)____Handle item w/care, and store for owner review. (HANDLE 2) Handle remaining building, pavement, fence, or item w/care. (HANDLE 3)____Handle re-located items with care. DISCONNECT 1, FIXW. _Fix floor/wall/ceiling/item where construction was removed and prepare the area to recieve new construction. Ensure the top of grade is level w/surrounding ground & maintain positive slope towards drain, gutter, and storm system away from building. __Fix floor/wall/ceiling/item where construction was removed and prepare the area

system away from building. Inform Architect prior to the start of this work. CONNECT1)___Connect new construction to existing, ensure continuity and structural integrity. Ensure the top of new construction is level w/existing surface. (CONNECT2)....Connect remaining item to the new structure, and ensure structural integrity while meeting local Codes. Handle remaining buildings, pavement, fences, and other

to an acceptable condition for owner's use. Ensure the top of grade is level w/surrounding ground & maintain positive slope towards drain, gutter, and storm

items w/care (CONNECT3)___Connect new plumbing fixture to existing plumbing pipes/ system, adjust pipes & blocking as needed for new location. Re: MEP DWGS. (DISCONNECT1) Disconnect and conceal all pipes, electrical cables, data cables, and conduits where construction is removed. (ENGINEER1) Professional engineering supervision is required for this work. Provide shop drawings for this work. (REFERENCE)_Refer to photo # for the existing condition at this location.

(SLOPE1) Maintain positive slope towards drains, gutters, and storm systems and away from the building. Ensure maximum slope in all directions of 1:48 (2%) within accessible clearances; maximum 1:48 (2%) cross slope at sidewalks; maximum 1:20 (5%) running slope at sidewalks. (PROTECT1)___Protect item(s) to remain, including any buildings, furniture, sidewalks, roofs, utilities, and other items during the Demolition and Construction phases. __Maintain safe and unrestricted egress routes from areas adjacent to the

Demolition site. Comply with all Applicable Codes. Ensure all routes and utilities required for owner's use of and operations on site are protected. Owner's use of site shall not be interrupted. Ensure all slopes to drain as intended, and that downspouts indicated to remain are protected to maintain normal flow at all times during demolition and construction. Protect items to remain including any buildings, furniture, sidewalks, roofs, utilities, and other items during demolition and construction.

(ENSURE2) Ensure system is water-tight. Provide additional flashing & sealants as needed. (ENSURE3) Ensure the slope of the new roof matches the slope and slope direction of the

03 GENERAL FINISH NOTES Scale: NTS

Handle structure of existing building with care. No work should have any effect on the structural integrity of the building. Report to the architect any indications of structural damage.

Refer to signage plans for acoustical panels, tackboards, and markerboard locations.

Floor material changes between rooms to occur under door; center on door leaf.

Field verify all conditions prior of staring construction. Report to the architect any unforeseen conditions that could affect the construction of the

Protect throughout construction all items indicated to remain including building, utilities, etc.

project or operations. Maintain safe and unrestricted access and egress routes for areas adjacent to work area in

accordance with applicable codes. All dimensions to walls are to finish-face of wall.

Provide wood blocking inside the walls required for equipment, fixture, millwork, and accessories installation. Field verify all door and window openings prior to order or fabrication.

Refer to door and window details for dimensions & conditions. . Field-verify conditions prior to construction. Report to the architect any discrepancy.

. Make new penetration at construction/ existing area watertight join to existing waterproofing as needed. (ENSURE 2)

Plans indicate horizontal dimensions only. Refer to elevations & sections for vertical

02 GENERAL CONSTRUCTION NOTES
Scale: NTS

building or disturb other systems that should remain or required for future operation. Report to the architect any indication of damage or possible disruption. During demolition and construction protect items to remain including structure Sys. architecture,

Handle the building with care. No work should have any effect on the structural integrity of the

MEP Sys. and others. Maintain safe & unrestricted egress route for the duration of the demolition & construction.

Comply with all applicable codes. Report to architect any un-seen discovered conditions that may have structural, MEP, or architectural complications affecting the project schedule/construction/cost/operation.

> Approved By Drawing Title

Drawn By

Checked By

Project Number

Drawing Number

06 SUPPORT NOTES
Scale: NTS **01** GENERAL DEMOLITION NOTES
Scale: NTS

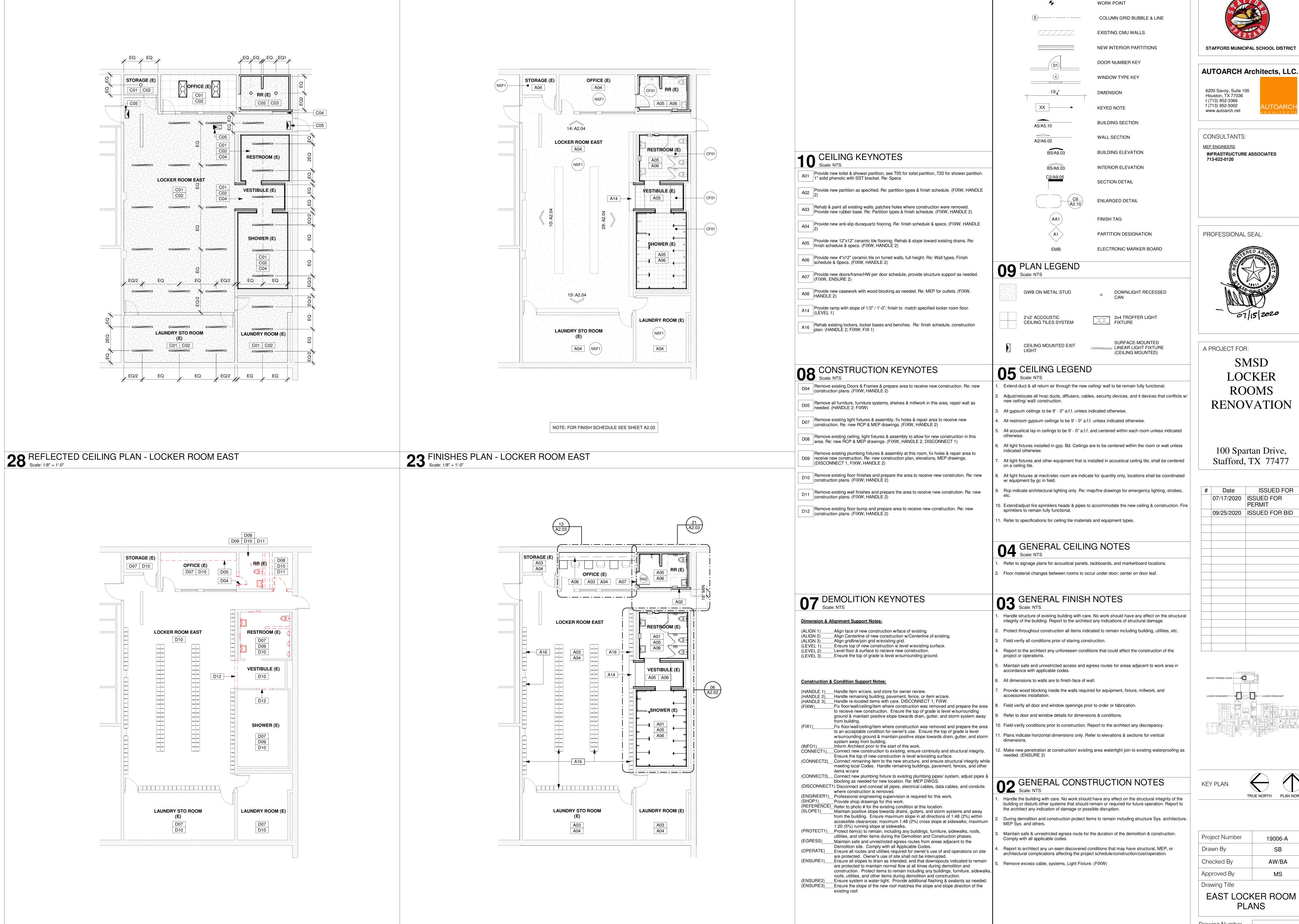
27 DEMOLITION PLAN - LOCKER ROOM WEST Scale: 1/8" = 1'-0"

22 CONSTRUCTION PLAN - LOCKER ROOM WEST Scale: 1/8" = 1'-0"

Remove excess cable, systems, Light Fixture. (FIXW)

19006-A AW/BA

WEST LOCKER ROOM **PLANS**



22 FLOOR PLAN - LOCKER ROOM EAST Scale: 1/8" = 1'-0"

06 SUPPORT NOTES
Scale: NTS

26 DEMOLITION PLAN - LOCKER ROOM EAST Scale: 1/8" = 1'-0"

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PROFESSIONAL SEAL:



A PROJECT FOR: **SMSD**

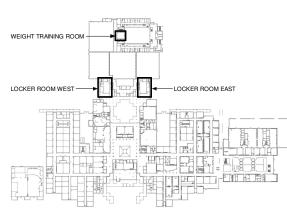
ROOMS RENOVATION

100 Spartan Drive, Stafford, TX 77477

07/17/2020 ISSUED FOR

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	09/25/2020	ISSUED FOR BID

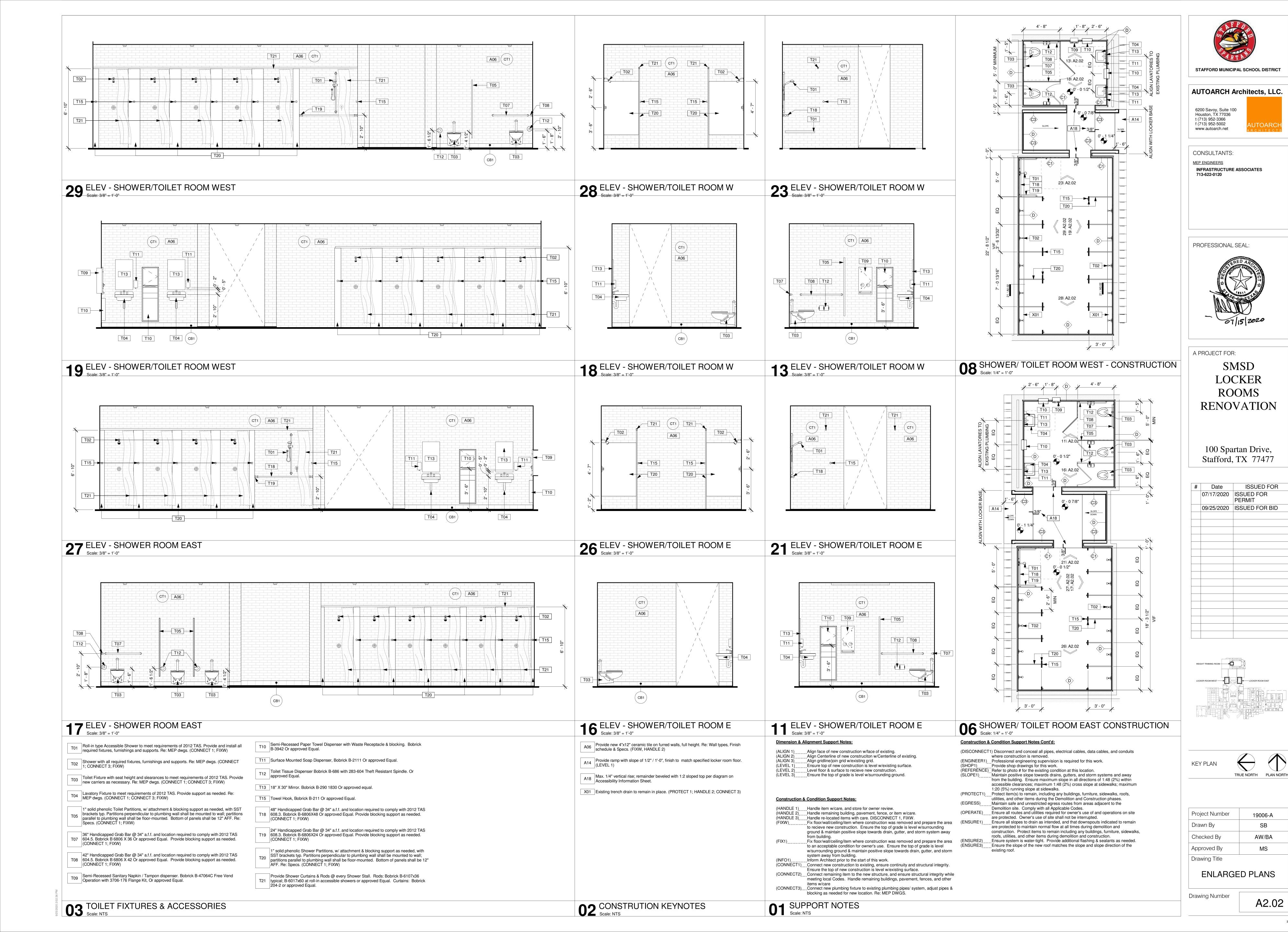


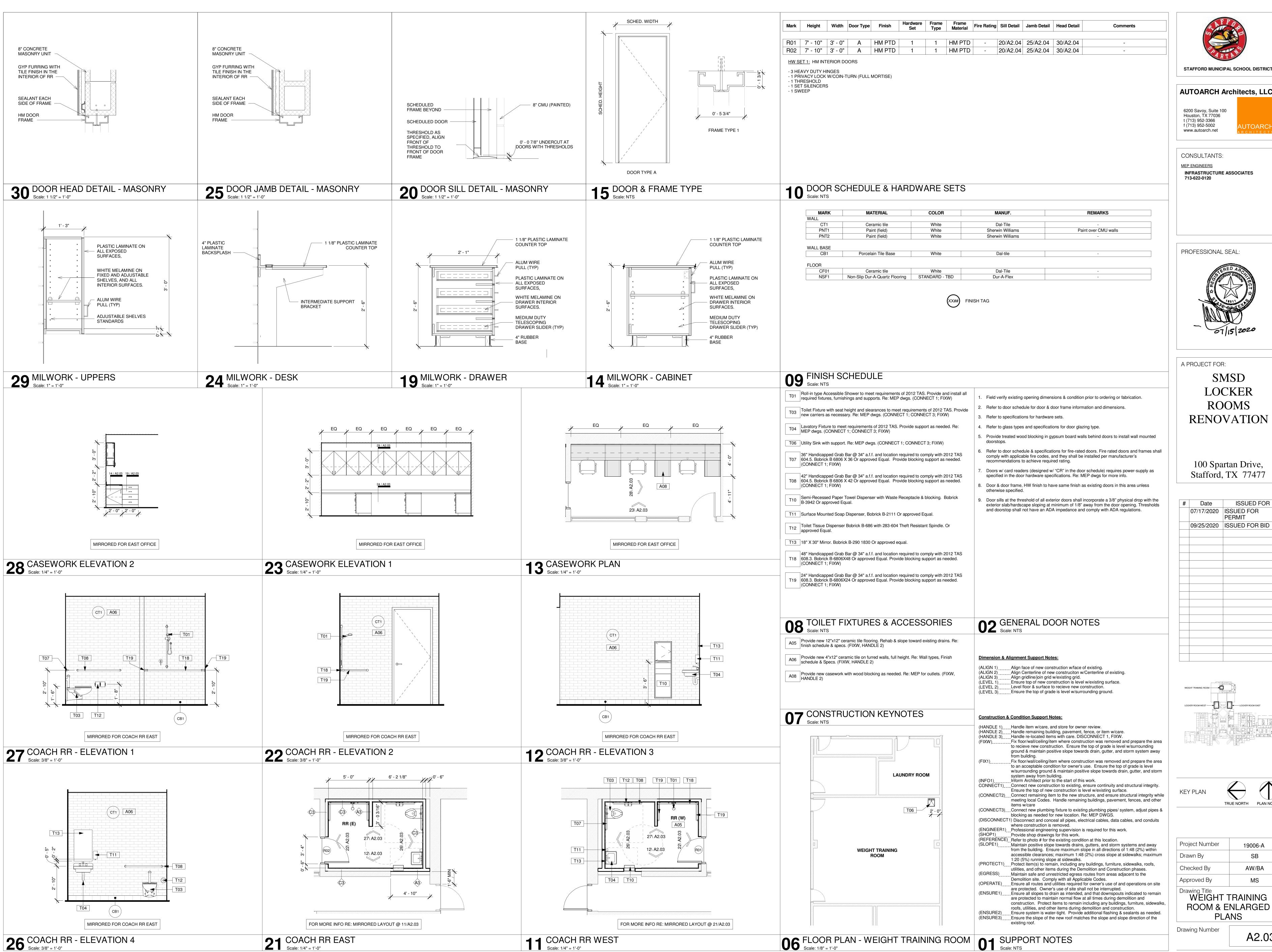
Project Number	19006-A
Drawn By	SB
Checked By	AW/BA
Approved By	MS
Drawing Title	

EAST LOCKER ROOM **PLANS**

Drawing Number

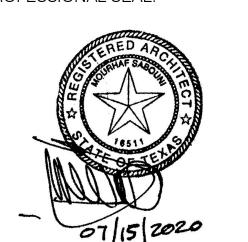
01 GENERAL DEMOLITION NOTES
Scale: NTS





AUTOARCH Architects, LLC.

INFRASTRUCTURE ASSOCIATES



SMSD ROOMS

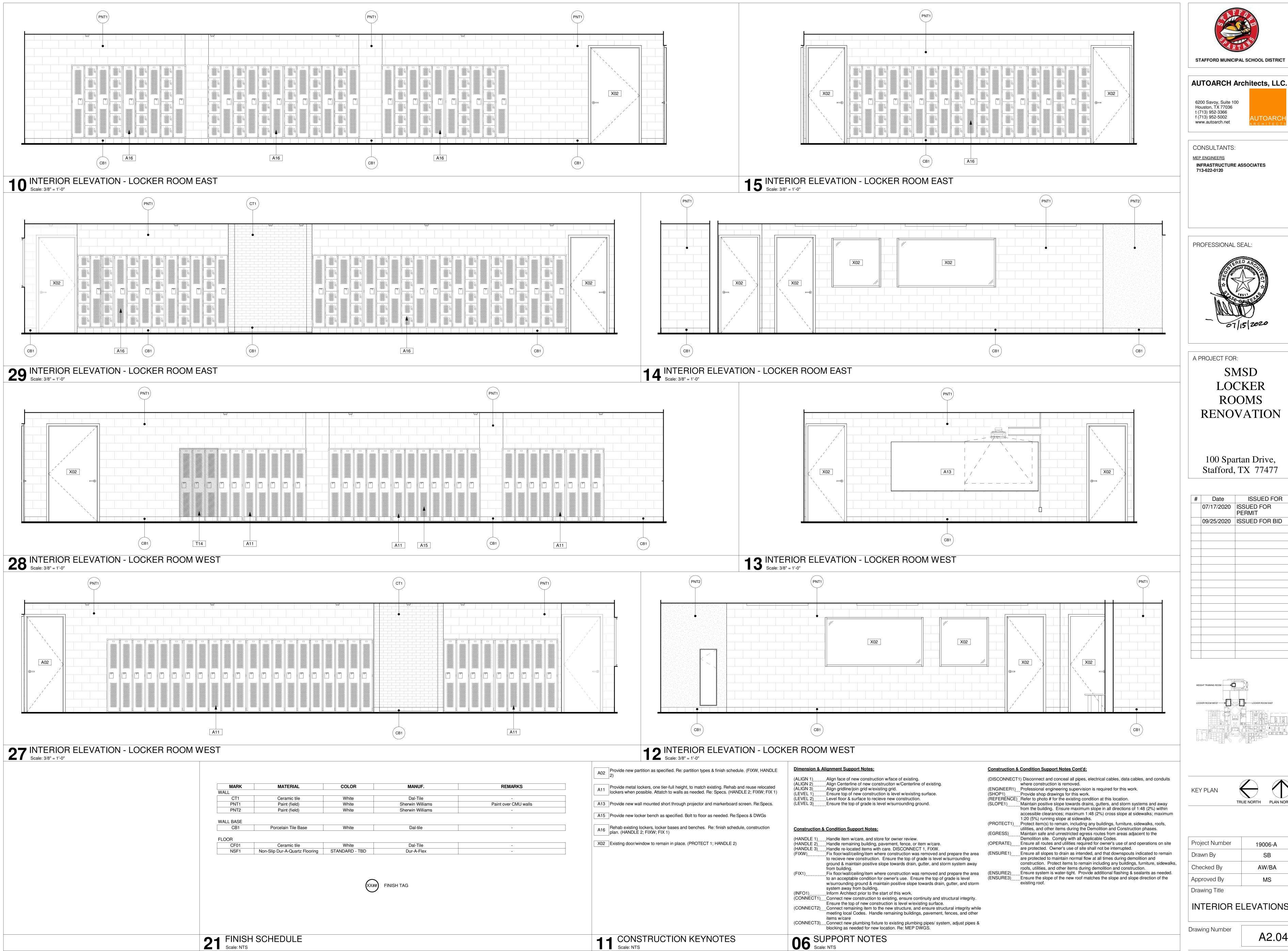
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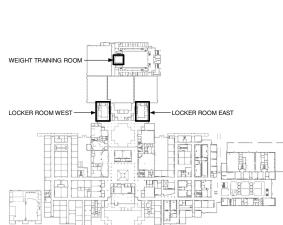
WEIGHT TRAINING **ROOM & ENLARGED PLANS**

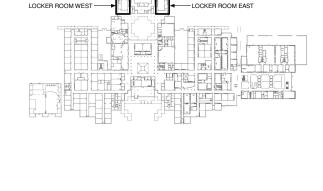


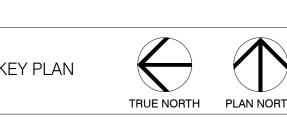


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Stafford, TX 77477







Project Number 19006-A

Checked By AW/BA Approved By Drawing Title

INTERIOR ELEVATIONS

Drawing Number

ME	ECHANICAL SYM	BOLS LEG	SEND
	SUPPLY AIR DUCT UP (PLAN)	X CFM	DIFFUSER TYPE AND CFM
	SUPPLY AIR DUCT DOWN (PLAN)		THERMOSTAT - MOUNT 48" AFF UNO
	RETURN OR OUTSIDE AIR DUCT UP (PLAN)	H	HUMIDISTAT
	RETURN OR OUTSIDE AIR DUCT DOWN (PLAN)		FIRESTAT
	EXHAUST AIR DUCT UP (PLAN)	TCH	THERMOSTAT/ CO2 SENSOR/ HUMIDISTAT MOUNT 48" AFF UNO
	EXHAUST AIR DUCT DOWN (PLAN)		SMOKE DETECTOR
	RETURN AIR/TRANSFER AIR BOOT	+ + +	DUCT WITH SPIN-IN CONNECTOR
	CEILING SUPPLY AIR DEVICE	AP	FLEXIBLE DUCT CONN. TO RECTANGULAR ACCESS PANEL
	SIDEWALL SUPPLY/EXHAUST REGISTER	(C)	DUCT ELBOW WITH TURNING VANES
	CEILING RETURN AIR / EXHAUST REGISTER		DUCT ELBOW WITHOUT VANES
	RETURN AIR GRILLE WITH BOOT		FLEXIBLE CONNECTION, FLEXIBLE DUCT
	BRANCH DUCT TAP	VD	VOLUME DAMPER
	DUCT SPLIT WITHOUT VANES	M———	MOTORIZED VOLUME DAMPER
AD 🖾	ACCESS DOOR		TRANSITION IN DUCT
IOTE:			

NOT ALL ITEMS NECESSARILY USED.

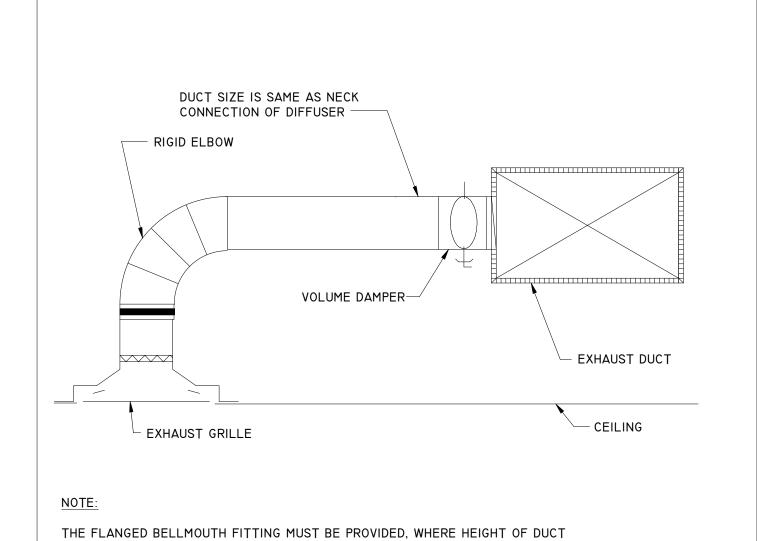
ABBREVIATIONS LEGEND

ACRONYM	DESCRIPTION
۴	FAHRENHEIT
AC	AIR CONDITIONING
AHU	AIR HANDLING UNIT
Al	ANALOG INPUT
EX	EXHAUST AIR
HP	HORSE POWER
HVAC	HEATING VENTILATION AND AIR CONDITIONING
NA	NOT APPLICABLE
NO.	NUMBER
O/A	OUTSIDE AIR
OAHU	OUTSIDE AIR HANDLING UNIT
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
REV	REVOLUTIONS
RTU	ROOF TOP UNIT
S/A	SUPPLY AIR
SG	SPECIFIC GRAVITY
SHG	SENSIBLE HEAT GAIN
SP	STATIC PRESSURE
SPEC	SPECIFICATION
TCH	THERMOSTAT/ CO2 SENSOR/ HUMIDISTAT
T-STAT	THERMOSTAT
TYP.	TYPICAL
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB

NOTE: NOT ALL ITEMS NECESSARILY USED.

MECHANICAL GENERAL NOTES

- SEE ARCHITECTURAL PLANS FOR TYPE OF CEILING. FOR LOCATIONS OF WALL MOUNTED DEVICES AND LOCATION HEIGHTS COORDINATE WITH ARCH, 2. DO NOT OPERATE AIR HANDLERS, FAN COIL UNITS, OR EXHAUST FANS UNTIL ALL INTERIOR
- CLEANING AND PAINTING IS COMPLETE. THE CLEANING OF FOULED COILS OR FAN ASSEMBLIES DUE TO PAINT OR CONSTRUCTION DEBRIS WILL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR.
- RECTANGULAR, OR ROUND DUCT SIZES INDICATED ARE ACTUAL SHEET METAL DIMENSIONS IN INCHES ALL ROUND DUCT SIZES INDICATE NET FREE INSIDE DIAMETER AND DO NOT ACCOUNT FOR ANY INSULATION. ROUND DUCTS ARE EXTERNALLY INSULATED PER SPECIFICATIONS.
- 4. SCHEDULED MANUFACTURERS ARE BASIS OF DESIGN. SEE SPECIFICATIONS FOR OTHER ACCEPTABLE MANUFACTURERS.
- 5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND AUTHORITIES HAVING JURISDICTION.
- 6. SEAL ALL PENETRATIONS OF FLOORS, SMOKE WALLS, FIRE WALLS, LAB WALLS, AND EXTERIOR
- 7. COORDINATE EXACT LOCATION OF EQUIPMENT, DUCTWORK, AIR DEVICES, AND THERMOSTATS WITH ARCHITECTURAL, STRUCTURAL AND REFLECTED CEILING PLANS.
- 8. ALL DUCT RUN-OUTS TO SUPPLY AND EXHAUST, DIFFUSERS AND REGISTERS, SHALL HAVE MANUAL BALANCING DAMPERS. PROVIDE YOUNG REGULATORS WHERE CEILING IS INACCESSIBLE.
- 9. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH LATEST SMACNA STANDARDS. SECURE ALL PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
- 10. GUARANTEE LABOR AND MATERIAL FOR I YEAR AND PER DIV.I.
- II. THE AIR QUANTITIES SHOWN ON THE DRAWINGS FOR INDIVIDUAL OUTLETS MAY BE CHANGED TO OBTAIN UNIFORM TEMPERATURE WITHIN EACH SPACE OR ZONE, BUT THE TOTAL AIR QUANTITY SHOWN FOR EACH ZONE MUST BE OBTAINED.
- 12. WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.
- 13. THE CONTRACTOR TO ENSURE THAT ALL DUCTWORK EITHER STORED ON SITE OR INSTALLED IN THE BUILDING IS THOROUGHLY, SEALED TO PROTECT AGAINST DIRT AND MOISTURE UNTIL SUCH TIME THAT THE BUILDING IS DEEMED BY THE OWNER TO BE ADEQUATELY CLEAN TO ALLOW FOR START-UP OF THE ASSOCIATED AIR HANDLING EQUIPMENT. IF DUCTWORK IS NOT BE SEALED AS SPECIFIED, THEN THE CONTRACTOR TO HAVE SUCH DUCTWORK PROFESSIONALLY CLEANED TO AN AS-NEW CONDITION AT NO COST TO THE OWNER.



EXHAUST GRILLE CONNECTION DETAIL

SHOWN ON PLANS CAN ACCOMMODATE THE FITTING. ONLY WHERE THE DUCT HEIGHT DOES NOT ALLOW THE INSTALLATION OF BELLMOUTH FITTING, PROVIDE STRAIGHT FITTING.

NOT TO SCALE



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CONSULTANTS:

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STRUCTURAL ENGINEERS DALLY ASSOCIATES

713-337-8881



PROFESSIONAL SEAL:

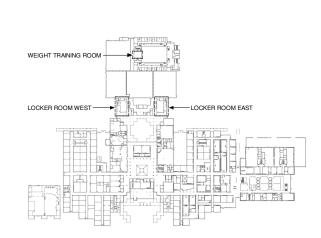


A PROJECT FOR:

SMSD ROOMS RENOVATION

1625 Staffordshire Rd, Stafford, TX 77477

ISSUED FOR 1 2020/07/14 ISSUED FOR BID, PERMIT AND CONSTRUCTION 2 2020/07/17 ISSUED FOR BID





Project Number	19006-A
Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT

DETAIL

Drawing Title NOTES, LEGEND AND

Drawing Number

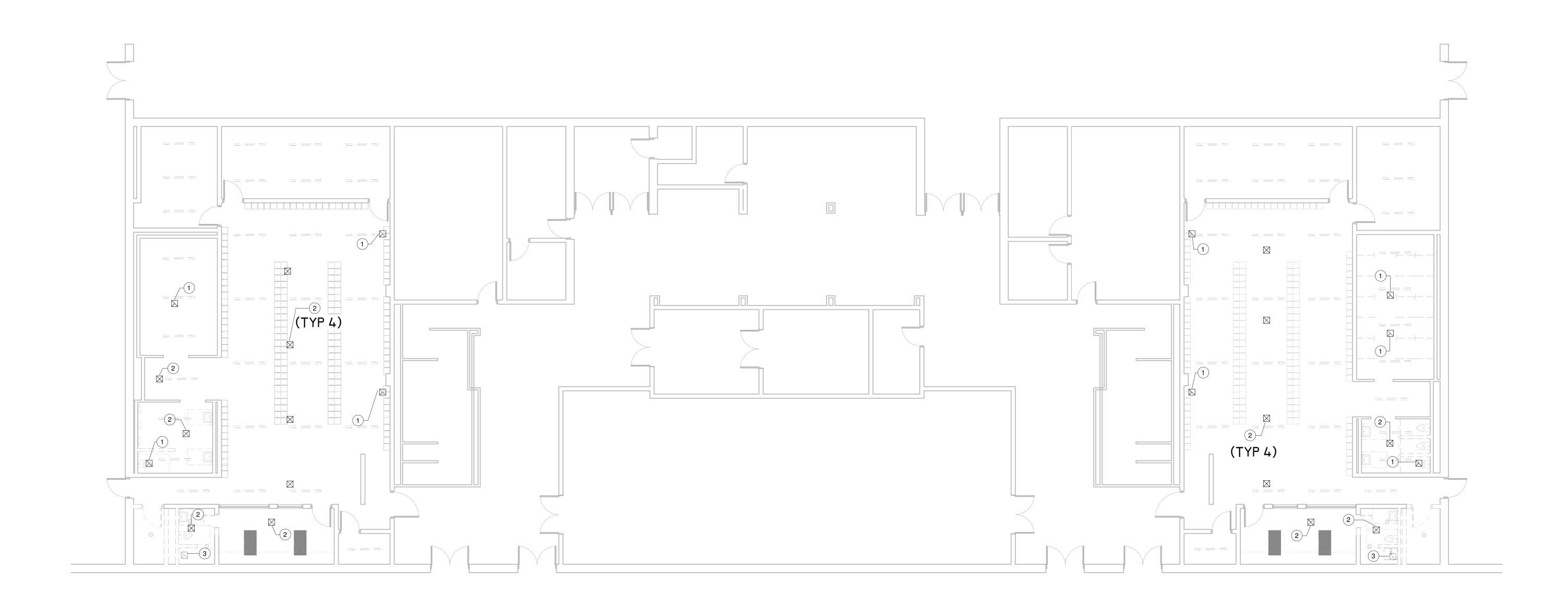
M0.01

KEYNOTE LEGEND

EXISTING EXHAUST GRILLE TO REMAIN.

EXISTING SUPPLY DIFFUSER TO REMAIN.

REMOVE EXISTING GRILLE. CLEAN AND STORE FOR REUSE.



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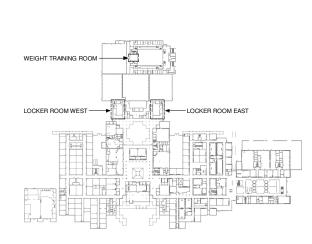


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SMSD LOCKER ROOMS RENOVATION

1625 Staffordshire Rd, Stafford, TX 77477

#	Date	ISSUED FOR			
1	2020/07/14	ISSUED FOR BID, PERMIT AND CONSTRUCTION			
2	2020/07/17	ISSUED FOR BID			





Project Number	19006-A
Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT
Drawing Title	

FLOOR PLAN - HVAC -DEMO

Drawing Number

M1.01

FLOOR PLAN - DEMO - HVAC
Scale: 1/8" = 1'-0"

KEYNOTE LEGEND

ADJUST AIRFLOW RATE TO 220 CFM. SET ASSOCIATED EXHAUST FAN TO OPERATE CONSITNUOUSLY WHEN SPACE IS OCCUPIED.

ADJUST AIRFLOW RATE TO 50 CFM. ADJUST AIRFLOW RATE TO 150 CFM. SET ASSOCIATED EXHAUST FAN TO OPERATE CONSITNUOUSLY WHEN SPACE IS OCCUPIED.

ADJUST AIRFLOW RATE TO 100 CFM. RELOCATE EXISTING GRILLE AS SHOWN. MODIFY DUCTWORK AS REQUIRED.

ADJUST AIRFLOW RATE TO 100 CFM. SET ASSOCIATED EXHAUST FAN TO OPERATE CONSITNUOUSLY WHEN SPACE IS OCCUPIED. EXISTING SUPPLY DIFFUSER TO REMAIN.

EXISTING EXHAUST GRILLE TO REMAIN.

ADJUST AIRFLOW RATE TO IIO CFM. SET ASSOCIATED EXHAUST FAN TO OPERATE CONSITNUOUSLY WHEN SPACE IS OCCUPIED.



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CONSULTANTS:

MEP ENGINEERS

INFRASTRUCTURE ASSOCIATES 713-622-0120 STRUCTURAL ENGINEERS DALLY ASSOCIATES 713-337-8881



PROFESSIONAL SEAL:

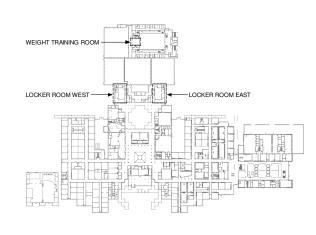


A PROJECT FOR:

ROOMS RENOVATION

1625 Staffordshire Rd, Stafford, TX 77477

#	Date	ISSUED FOR
1	2020/07/14	ISSUED FOR BID, PERMIT AND CONSTRUCTION
2	2020/07/17	ISSUED FOR BID



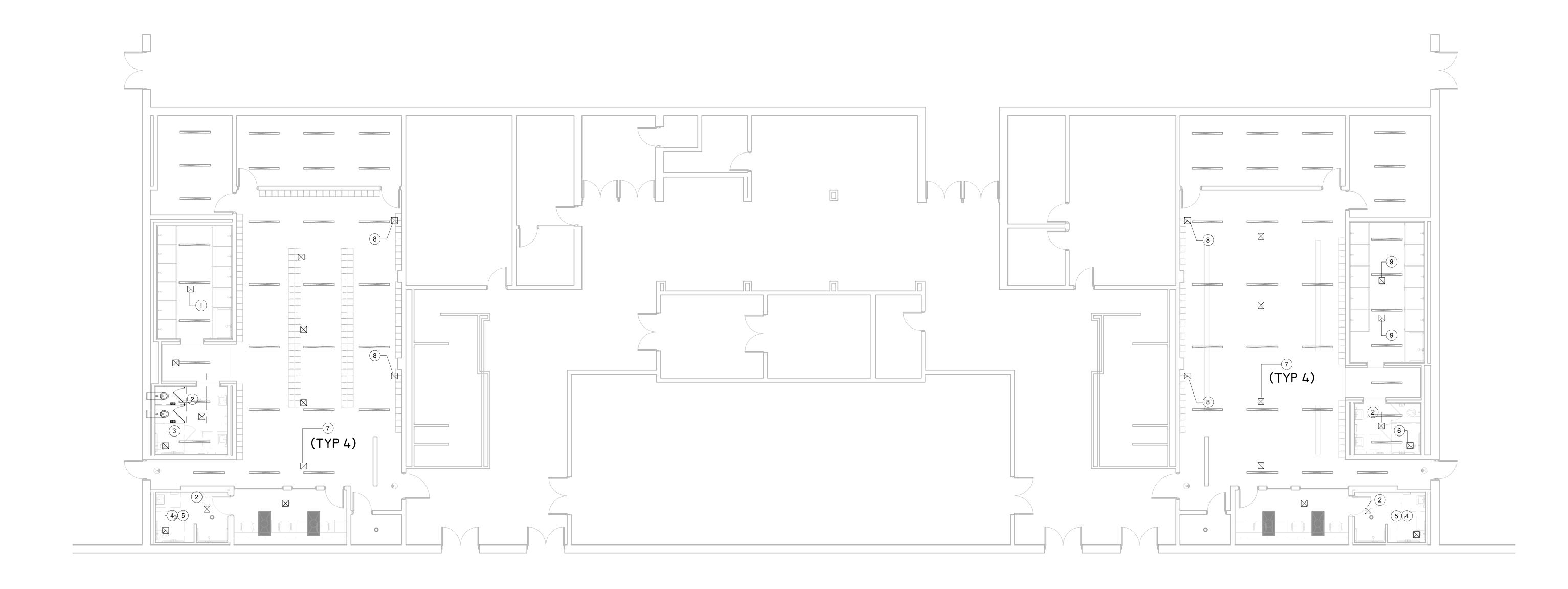


Project Number	19006-A
Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT
Drawing Title	

FLOOR PLAN - HVAC -PROPOSED

Drawing Number

M2.02



ELECTRICAL GENERAL NOTES AND SPECIFICATIONS

(BOOKS SPECIFICATIONS SUPERCEDE ANY NOTES BELOW)

SCOPE: THIS DIVISION SHALL INCLUDE ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED FOR COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM. PROJECT INCLUDES INSTALLATION OF NEW ELECTRICAL DISTRIBUTION SYSTEM, HVAC SYSTEM CONNECTIONS, NEW LIGHTING SYSTEM, NEW RECEPTACLES AND OUTLETS, FIRE ALARM AND NOTIFICATION SYSTEM, AND OTHER ELECTRICAL WORK AS INDICATED ON THE PLANS. CONTRACTOR SHALL PROVIDE CONDUITS, CONDUCTORS FOR POWER, CONTROLS, AND LIGHTING, LIGHTING CONTACTOR AND CONTACT CLOSURES, AND ALL REQUIRED APPARATUS REQUIRED FOR FULL OPERATION OF THE ELECTRICAL SYSTEM. SITE VISIT AND FAMILIARIZATION: CONTRACTORS PROPOSING TO UNDERTAKE WORK UNDER THIS DIVISION SHALL VISIT THE SITE OF THE WORK, AND FULLY INFORM THEMSELVES OF ALL CONDITIONS THAT AFFECT THE WORK, OR COST THEREOF. CONTRACTOR SHALL EXAMINE THE DRAWINGS AND SPECIFICATIONS AS RELATED TO THE

- SITE CONDITIONS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER. NOTICE: CONSIDERATION WILL NOT BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE AMOUNT OF WORK TO BE PERFORMED. TENDER OF A PROPOSAL SHALL CONVEY FULL AGREEMENT TO ALL ITEMS AND CONDITIONS SPECIFIED, INDICATED ON THE DRAWINGS, AND/OR REQUIRED BY NATURE OF THE SITE.
- DISCREPANCIES: SHOULD CONTRACTOR FIND DISCREPANCIES OR OMISSIONS IN THE CONTRACT DOCUMENTS, OR BE IN DOUBT AS TO THE INTENT THEREOF, HE SHALL IMMEDIATELY OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE SUBMITTING PROPOSAL FOR WORK IN THIS DIVISION.
- DEMOLITION: ALL ELECTRICAL COMPONENTS OF THE EXISTING SYSTEM WHICH ARE NOT UTILIZED FOR NEW CONFIGURATION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. REFER TO DEMOLITION NOTES AND DRAWINGS FOR EXTENT OF WORK. TIMELY PLACING OF MATERIALS AND EQUIPMENT: ALL ELECTRICAL APPARATUS SHALL BE INSTALLED AT THE PROPER TIME DURING PROGRESS OF CONSTRUCTION. COORDINATE
- WORK OPERATIONS WITH OTHER CRAFTS. SPACE REQUIREMENTS: CONTRACTOR FOR WORK UNDER THIS DIVISION SHALL BE FULLY RESPONSIBLE FOR DETERMINING IN ADVANCE OF PURCHASE THAT EQUIPMENT AND MATERIALS PROPOSED FOR INSTALLATION SHALL FIT INTO THE CONFINES INDICATED. MANUFACTURERS' LITERATURE: DELIVER ALL PRINTED TAGS, INSTRUCTIONS, CERTIFIED DRAWINGS, PARTS LISTED, CERTIFICATES, ETC., SUPPLIED WITH EQUIPMENT ITEMS, TO THE OWNER.
- CODES, PERMITS, AND FEES: WORK UNDER THIS DIVISION SHALL BE CONSTRUCTED IN STRICT CONFORMANCE WITH PERTINENT PROVISIONS OF CITY AND STATE BUILDING
- A. ALL WORK SHALL COMPLY WITH THE 2017 EDITION OF NATIONAL ELECTRIC CODE
- B. OBTAIN ALL REQUIRED PERMITS. PAY ALL LEGAL FEES FOR PERMITS AND INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.
- C. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
- CUTTING AND PATCHING: A. CONTRACTOR FOR THIS DIVISION SHALL LAYOUT TO DIMENSION AND LOCATIONS, CUT
- AND PATCH ALL OPENINGS ON SURFACES TO BE FORMED, FRAMED, OR CUT. SHOULD CONTRACTOR FOR THIS DIVISION FAIL TO ADHERE WITH THIS REQUIREMENT, AS WORK PROGRESSES, ANY OPENINGS SHALL BE CUT AND PATCHED BY GENERAL CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR FOR THIS DIVISION.
- PROTECTION OF APPARATUS: TAKE ALL PRECAUTIONS NECESSARY FOR PROPER PROTECTION OF NEW EQUIPMENT, APPARATUS, AND MATERIALS FROM DAMAGE. FAILURE TO DO SO WILL BE CAUSE FOR REJECTION OF ANY ITEM COMING UNDER QUESTION. SHOP DRAWINGS: CONTRACTOR FOR THIS DIVISION SHALL SUBMIT SHOP DRAWINGS AND CATALOGUE DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS AND OTHER MATERIAL REQUESTED BY ARCHITECT/ENGINEER. SUBMIT PRODUCT DATA FOR SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, WIRES, CABLE, SUPPORTING DEVICES, IDENTIFICATION COMPONENTS, LIGHT FIXTURES, FIRE ALARM SYSTEM AND COMPONENTS, WIRING DEVICES, MULTI-OUTLET RACEWAYS, CABINETS, AND BOXES. SUBMIT SIX COPIES
- OF SUBMITTALS. SUBMITTALS SHALL CONSIST OF LAYOUTS, WORKING DRAWINGS, CUTS, AND OPERATING AND PERFORMANCE DATA. ALLOW FOUR (4) WEEKS FOR REVIEW AND APPROVAL OF THE SHOP DRAWINGS BY ENGINEER. MATERIALS AND WORKMANSHIP: ALL MATERIALS AND EQUIPMENT SHALL BE NEW, OF BEST GRADE OF STANDARD MANUFACTURE. APPROVED BY UL, AND BE SO LABELED. FOR WIRE AND CABLE, MARKED AS REQUIRED BY ART. 310-2, NEC. INSTALLED BY SKILLED ELECTRICIAN, WORKING UNDER THE DIRECT SUPERVISION OF COMPETENT EXPERIENCED FOREMAN AND/OR SUPERINTENDENT. PRODUCTS SHALL BE INSTALLED IN A THOROUGH

WITHIN THIRTY (30) DAYS AFTER CONTRACT AWARD, AND IN NOT MORE THAN TWO GROUPS

- WORKMANLIKE MANNER, PRESENTING A NEAT, CLEAN-CUT APPEARANCE WHEN COMPLETED. ANY PART OR PARTS NOT MEETING THIS REQUIREMENT SHALL BE REPLACED OR REBUILT WITHOUT EXTRA EXPENSE TO OWNER. PROTECTION OF EXISTING: PLENUM CABLE SHALL BE PROPERLY SECURED ABOVE CEILING PER APPLICABLE CODES. WIRING METHODS: THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE
- LOCATIONS OF EQUIPMENT AND ARRANGEMENT OF CIRCUITS ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY ACTUAL MEASUREMENT AT THE SITE. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL RISES, DROPS, OFFSETS, ETC. NECESSARY TO AVOID CONFLICT WITH STRUCTURAL MEMBERS, AND SIMILAR ITEMS, WHEN INSTALLING ELECTRICAL CONDUITS. INSTALL EXPOSED CONDUIT AS SHOWN OR NOTED, PARALLEL TO HORIZONTAL AND VERTICAL LINES OF STRUCTURES. MAKE BENDS WITH 90 DEGREE TURN
- ONLY, OR WITH APPROVED FITTINGS. CONDUIT: FURNISH A COMPLETE RACEWAY SYSTEM FOR BUT NOT LIMITED TO FEEDER, BRANCH CIRCUITS, CONTROL WIRING, AND AUXILIARY SYSTEM WIRING.
- A. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS FOR ALL MOTORIZED CONNECTIONS, WHERE EQUIPMENT IS SUBJECT TO MOVEMENT, OR LOCATED OUTDOOR. B. WHERE ENTERING PANELS, PULL BOXES, J-BOXES, OR OUTLET BOXES, SECURED IN PLACE WITH WITH LOCK-NUTS INSIDE AND OUTSIDE, AND INSULATED BUSHING INSIDE.

C. BENDS AND OFFSETS MADE WITH APPROVED TOOLS ONLY. BENDS OR OFFSETS IN

- WHICH THE PIPE IS CRUSHED OR DEFORMED SHALL NOT BE INSTALLED. D. USE EMT FOR INTERIOR DRY LOCATIONS, PVC FOR UNDERGROUND INSTALLATION, AND RIGID GALVANIZED STEEL FOR EXPOSED LOCATIONS SUBJECT TO DAMAGE.
- OUTLET AND JUNCTION BOXES: FURNISH AND INSTALL ALL JUNCTION BOXES REQUIRED TO FACILITATE INSTALLATION OF THE VARIOUS CONDUIT SYSTEMS. JUNCTION BOXES SHALL BE SUITABLE FOR ENVIRONMENT AND APPLICATION USED FOR. WIRE AND CABLE: ALL WIRE AND CABLE SHALL:
- A. BE NEW AND OF SOFT DRAWN, ANNEALED, COPPER HAVING A CONDUCTIVITY OF NOT LESS THAN 98% OF THAT OF PURE COPPER; EACH WIRE CONTINUOUS WITHOUT WELD, SPLICE OR JOINT THROUGHOUT ITS LENGTH; UNIFORM IN CROSS SECTION AND FREE FROM FLAWS, SCALES, AND OTHER IMPERFECTIONS.
- B. UNLESS OTHERWISE SPECIFIED OR NOTED, WIRES SHALL BE #12 AWG (FOR PHASE, NEUTRAL, AND GROUND CONDUCTORS) TYPE THW, THWN, THHN, AS MANUFACTURED BY TRIANGLE, GENERAL ELECTRIC, OKONITE, OR ANACONDA. ALL WIRE #8 AND LARGER SHALL BE STRANDED.
- D. NOT BE DRAWN INTO A CONDUIT UNTIL ALL WORK WHICH MAY CAUSE INJURY TO INSULATION IS COMPLETE. WHERE TWO OR MORE CIRCUITS RUN TO A SINGLE OUTLET BOX, TAG EACH CIRCUIT AS A GUIDE.
- E. HAVE ALL STRANDED CONDUCTORS FURNISHED WITH COPPER CONNECTING LUGS, DRILLED, OR REAMED THE FULL DIAMETER OF THE BARE CONDUCTORS. MAINS AND FEEDERS SHALL BE RUN THEIR ENTIRE LENGTH IN CONTINUOUS PIECES WITHOUT JOINTS OR SPLICES.
- IDENTIFICATION OF CONDUCTORS AND PANELBOARD ELEMENTS: A. EACH AND EVERY MAIN AND FEEDER CONDUCTOR SHALL BE IDENTIFIED AT EACH OUTLET POINT WHERE SUCH CONDUCTOR TERMINATES. FEEDER BUNDLES PASSING THROUGH A JUNCTION OR SUPPORT BOX SHALL ALSO BE IDENTIFIED WITHIN SUCH ENCLOSURE, BUT MAY BE IDENTIFIED IN SUCH LOCATIONS AS A GROUP.
- B. IDENTIFY BY USE OF PERMANENT TYPE BANDS, BRADY, OR T AND B. A DEFINITE NUMBER AND/OR LETTER CODE SHALL BE EMPLOYED AND BE UNIFORM THROUGHOUT
- IDENTIFY EACH SWITCH, INCLUDING MAIN DISCONNECT AND MOTOR STARTER WITH WHITE-ON-BLACK NAMEPLATE, EACH HAVING 1/4" HIGH LETTERS. NEATLY AND SECURELY ADHERE NAMEPLATES TO THE UNIT.

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20	SWITCHES	FURNISH	AND IN	STALL AL	I FUSIRI	F AND NON	I_FUSIRI	F SWIT

- 20. SWITCHES: FURNISH AND INSTALL ALL FUSIBLE AND NON-FUSIBLE SWITCHES AS REQUIRED BY CODES, WHETHER OR NOT SHOWN AND/OR NOTED. SWITCHES SHALL BE: A. HEAVY DUTY WITH NEMA-I OR 3R ENCLOSURE, AS REQUIRED, AND BE PROVIDED WITH
- B. PROVIDED AT EACH MOTOR THAT IS OUT OF SIGHT OF THE SWITCH OR PANEL FROM WHICH FED; AND BE NON-FUSIBLE DISCONNECT FOR SUCH USE.
- C. SWITCH MANUFACTURER SHALL BE GE, WESTINGHOUSE, OR SQUARE D. D. DISCONNECT SWITCHES INSTALLED OUTSIDE THE BUILDING SHALL BE IN NEMA-3 ENCLOSURES. E. FUSIBLE SWITCH-STARTER UNITS: EACH UNIT SHALL BE TOTALLY ENCLOSED AND EFFECTIVELY BARRIERED, MANUALLY OPERATED QUICK-MAKE, QUICK BREAK, HORSEPOWER

- CURRENT RATINGS ADEQUATE FOR THE LOADS TO BE SERVED. A. MOUNTING: HEIGHTS OF ALL DEVICES ARE FROM FINISH FLOOR TO CENTERLINE OF DEVICE. DEVICES SHOWN ON THE DRAWINGS IN GROUPS OF TWO OR MORE SHALL BE LOCATED HORIZONTALLY IN SUCH A MANNER AS TO BE CLOSE AS POSSIBLE FROM THE CENTERLINE OF THE FIRST DEVICE TO THE CENTERLINE OF THE NEXT DEVICE UNLESS OTHERWISE NOTES.
- B. WALL SWITCHES: SHALL BE LEVITON DECORA TYPE, WHITE IN COLOR. USE CORRESPONDING DOUBLE POLE, THREE-WAY, FOUR-WAY, KEYED AND DIMMER SWITCHES WHERE NOTES. MOUNT AT 3'-10" A.F.F. AND WITHIN 6" OF ADJACENT DOOR JAMB, UNLESS OTHERWISE NOTED. USE "KEYED" SWITCHES IN LOCATIONS INDICATED.
- C. CONVENIENCE OUTLETS: SHALL BE GROUNDING TYPE, 20 AMP, I25 VOLT, LEVITON, WHITE COLOR. WEATHERPROOF DUPLEX OUTLETS SHALL BE LEVITON 5342 WITH SIERRA NO. WPD-8 PLATE. MOUNT AT 18" A.F.F., UNLESS OTHERWISE NOTED. PROVIDE NEMA 5-20R DEVICES UNLESS OTHERWISE INDICATED. PROVIDE SPECIFICATION (SPEC) GRADE HEAVY DUTY STRAIGHT BLADE DEVICES UNLESS OTHERWISE NOTED. PROVIDE HOSPITAL GRADE DEVICES WHERE INDICATED, OR AS REQUIRED BY CODES.
- D. ACCEPTABLE ALTERNATE MANUFACTURERS: SHALL BE LSI, H.E. WILLIAMS, HUBBELL, P&S AND BRYANT, PROVIDED THEIR DEVICES ARE OF THE SAME TYPE AND QUALITY AND THAT ONLY ONE MANUFACTURER SHALL BE USED THROUGHOUT THE WORK.
- E. PLATES: SHALL BE MATCHING TYPE FOR FINISHED AREAS AND GALVANIZED STEEL FOR AREAS WITH EXPOSED CONDUIT. PROVIDE STAINLESS STEEL PLATES FOR FLUSH MOUNTED DEVICES. PROVIDE CAST ALUMINUM WET LOCATION TYPE COVER PLATES WITH HINGED COVERS FOR DEVICES LOCATED OUTSIDE. GANG OUTLETS GROUPED TOGETHER UNDER A SINGLE WALL PLATE.
- F. INCANDESCENT DIMMERS: 120V SLIDE TO OFF, DECORA STYLE SIMILAR TO SWITCHES, WITH WATTAGE AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. POWER FAILURE MEMORY RFI SUPPRESSION. WHERE SWITCHES ARE SHOWN NEXT TO DIMMERS, PROVIDE MULTI-GANG COVER PLATES. PROVIDE DIMMERS WITH IVORY FINISH, SAME AS SWITCHES UNLESS OTHERWISE
- G. INSTALL WIRING DEVICES AND ACCESSORIES PLUMB AND LEVEL, IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC AND IN
- ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO FULFILL PROJECT REQUIREMENTS. H. TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE VALUES FOR WIRING DEVICES. COORDINATE WITH OTHER WORK, INCLUDING PAINTING, ELECTRICAL BOXES AND WIRING INSTALLATIONS, AS NECESSARY TO INTERFACE INSTALLATION OF WIRING DEVICES WITH
- J. INSTALL WIRING DEVICES AFTER WIRING WORK IS COMPLETED. INSTALL ONLY IN ELECTRICAL BOXES THAT ARE CLEAN; FREE FROM EXCESS BUILDING MATERIALS, DIRT, AND DEBRIS. INSTALL WALL PLATES AFTER PAINTING WORK IS COMPLETED.
- K. NO RECEPTACLE OR SWITCH OUTLETS SHALL BE MOUNTED BACK TO BACK. A MINIMUM OF ONE (I) STUD MUST BE BETWEEN OUTLETS.
- L. INSTALL RECEPTACLES WITH GROUND PIN UP. INSTALL SWITCHES WITH THE "ON" POSITION UP. M. ALL EXTERIOR DEVICES TO BE WEATHER PROOF AND EXTERIOR RECEPTACLES SHALL BE A GFCI TYPE DEVICE. N. ALL 120-VOLT RECEPTACLES OUTLETS LOCATED WITHIN SIX FEET OF SINKS SHALL HAVE
- GROUND FAULT CIRCUIT INTERRUPTION PROTECTION. GROUND FAULT OUTLETS SHALL BE CONNECTED ON DEDICATED NEUTRAL WIRE SERVING ONLY THE INDIVIDUAL OUTLET WITH THE GROUND FAULT PROTECTION.
- O. USE JUMBO SIZE WALL PLATES FOR OUTLETS INSTALLED IN MASONRY WALLS. P. DO NOT SHARE NEUTRAL CONDUCTORS ON DIMMERS. 22. PANELBOARD: PANELBOARDS SHALL BE GE TYPE AL, AQ, OR AE OR APPROVED EQUAL. REFER TO CONSTRUCTION DOCUMENTS FOR THE TYPE AND NUMBER OF BRANCH CIRCUIT BREAKERS. ALL PANELBOARD BUSSING SHALL BE COPPER. PANELBOARDS SHALL BE IN OUTDOOR ENCLOSURE WHERE INSTALLED OUTDOOR. MINIMUM INTERRUPTING RATING FOR PANELS SHALL BE AS INDICATED ON
- 23. TRANSFORMERS: DRY TYPE, TWO_WINDING OF THE SIZE AND ELECTRICAL CHARACTERISTICS SHOWN AND SCHEDULED ON DRAWINGS. TRANSFORMERS SHALL BE EQUIPPED WITH 2 2-1/2% TAPS ABOVE AND BELOW RATING. TRANSFORMERS SHALL HAVE A BONDING JUMPER INSTALLED BETWEEN THE SECONDARY NEUTRAL TERMINAL AND METAL CASE, AND SHALL INCLUDE A GROUND TERMINAL OF PROPER SIZE TO RECEIVE GROUND CONDUCTOR. TRANSFORMERS SHALL BE RATED AT FULL LOAD IN A 40°C AMBIENT WITH 30°C ULTIMATE HOT SPOT TEMPERATURE RISE ALLOWANCE, WITH CLASS F INSULATION HAVING A UL 185°C RATING LIMITING SYSTEM TEMPERATURE TO 115°C ON UNITS SMALLER THAN 15 KVA AND CLASS H INSULATION HAVING UL 220°C RATING LIMIT SYSTEM
- 24. FUSES: FUSES IN MAIN, FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS (UNLESS OTHERWISE SPECIFIED), SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSSMAN TYPE FRN-R (250V), AND FRS-R (600V).

- FULL ACCORDANCE WITH NEC 250. 26. OTHER MATERIALS: FURNISH AND INSTALL ALL OTHER MATERIALS SUCH AS HARDWARE, TAPE, CLAMPS, CONNECTORS, FITTINGS, SUPPORTS, AND ALL OTHER APPURTENANCES REQUIRED TO
- COMPLETE THE WORK TO THE FULL INTENT OF THE CONTRACT. TERMINAL LUGS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR. 27. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL TEMPERATURE, CO2, AND HUMIDITY SENSOR
- STUB-UPS FOR THE MECHANICAL HVAC SYSTEM. REFER TO MECHANICAL PRINTS FOR SENSOR QUANTITY AND LOCATIONS. 28. ELECTRICAL CONTRACTOR WILL CONNECT ALL LOW VOLTAGE PLUMBING CONTRACTOR SUPPLIED TRANSFORMERS (FOR AUTOMATIC FLUSH) TO THE NEAREST IZOV CIRCUIT (OR IF INDICATED ON
- PLANS WITH A CIRCUIT NUMBER). CONTRACTOR TO ASSUME ONE TRANSFORMER PER BATHROOM. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR LOW VOLTAGE WIRING TO THE FIXTURES. 29. SWITCHGEAR AND DISTRIBUTION PANELS: SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT, NEC 110.16.
- 30. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL GTD'S (GENERATOR TRANSFER DEVICES), LIGHTING CONTROL EQUIPMENT, LOW VOLTAGE TRANSFORMERS AND OTHER ELECTRICAL ITEMS WHICH ARE ABOVE CEILINGS. THESE DEVICES SIMILAR TO ELECTRICAL JUNCTION BOXES ARE NOT ALLOWED BY NEC TO BE ABOVE HARD CEILINGS. THE ARCHITECT/OWNER WILL NOT ALLOW THE INSTALLATION OF ACCESS PANELS IN THE CEILINGS. BE AWARE THAT EQUIPMENT IN THOSE AREAS OF HARD CEILINGS WILL HAVE TO BE REMOTELY LOCATED TO THE NEAREST ACOUSTICAL LAY-IN CEILING AREAS.
- 31. ELECTRICAL MATERIAL AND EQUIPMENT: NO ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, OR EQUIPMENT SHALL BE SOLD OR INSTALLED IN THE CITY UNLESS THEY ARE IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE, THE LAWS OF THE STATE OF TEXAS AND ANY APPLICABLE RULES AND REGULATIONS ISSUED UNDER THE AUTHORITY OF THE STATE STATUTES. THE MAKER'S NAME, TRADEMARK, OR OTHER IDENTIFICATION SYMBOL SHALL BE PLACED ON ALL ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, AND EQUIPMENT USED OR INSTALLED UNDER THE PROVISIONS OF THIS CODE. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE LISTED AND LABELED FOR THE INTENDED USE AND SHALL BE INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY.
- 31. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONDUIT ROUTING TO ANY MECHANICAL ROOF TOP EQUIPMENT AND ROUTE THE CONDUIT THRU THE EQUIPMENT CURB SO

TES AND SPECIFICATIONS		E	ELECTR	ICAL SYMBOL LEGEND	
PERCEDE ANY NOTES BELOW)	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	ABBREVIATION DEFINITIONS
20. SWITCHES: FURNISH AND INSTALL ALL FUSIBLE AND NON-FUSIBLE SWITCHES AS REQUIRED BY CODES, WHETHER OR NOT SHOWN AND/OR NOTED. SWITCHES SHALL BE: A. HEAVY DUTY WITH NEMA-I OR 3R ENCLOSURE, AS REQUIRED, AND BE PROVIDED WITH PAD-LOCKING FEATURE.	HA−1,3,5	HOME RUN TO PANEL <u>HA</u> , CIRCUITS I, 3, 5 USING 3#I2 (H), 3#I2 (N), I#I2 (G), 3/4" C (UNLESS OTHERWISE NOTED) EACH CIRCUIT WILL HAVE ITS OWN NEUTRAL ROUND LUMINAIRE RECESSED OR SUSPENDED FROM ABOVE OPEN = DOWN-LIGHT, HALF-SHADED = WALL-WASHER	HA DA	LIGHTING CLASS PANEL HA = PANEL NAME CHARACTERISTICS AS INDICATED ON ONE LINE DIAGRAM AND PANEL SCHEDULE DISTRIBUTION CLASS PANEL DA = PANEL NAME	2SIW TWO-SPEED, ONE-WINDING MOTOR 2S2W TWO-SPEED, TWO-WINDING MOTOR (A) ABANDONED TO REMOVE A PHASE "A" IN THREE-PHASE SYSTEM A AMPERES
 B. PROVIDED AT EACH MOTOR THAT IS OUT OF SIGHT OF THE SWITCH OR PANEL FROM WHICH FED; AND BE NON-FUSIBLE DISCONNECT FOR SUCH USE. C. SWITCH MANUFACTURER SHALL BE GE, WESTINGHOUSE, OR SQUARE D. D. DISCONNECT SWITCHES INSTALLED OUTSIDE THE BUILDING SHALL BE IN NEMA-3 ENCLOSURES. 	×× O-l	XX = TYPE ON LUMINAIRE SCHEDULE ROUND WALL-MOUNTED LUMINAIRE SUSPENDED FROM SIDE ARM XX = TYPE ON LUMINAIRE SCHEDULE		CHARACTERISTICS AS INDICATED ON ONE LINE DIAGRAM CONDUIT TURNING UP CONDUIT TURNING DOWN	AF AMPERE FUSE OR FRAME RATING AFCI ARC FAULT CIRCUIT INTERRUPTER AFF ABOVE FINISHED FLOOR
E. FUSIBLE SWITCH-STARTER UNITS: EACH UNIT SHALL BE TOTALLY ENCLOSED AND EFFECTIVELY BARRIERED, MANUALLY OPERATED QUICK-MAKE, QUICK BREAK, HORSEPOWER RATED STARTER. PROVIDE CLASS R TYPE REJECTION FUSE CLIPS.	XX	24"X48" TROFFER LUMINAIRE RECESSED OR SUSPENDED FROM ABOVE XX = TYPE ON LUMINAIRE SCHEDULE	OH	WEATHER HEAD FOR CONNECTING OVER HEAD CONDUCTORS	AT AMPERE TRIP SETTING AFG ABOVE FINISHED GRADE B PHASE "B" IN THREE-PHASE SYSTEM BF BALLAST FACTOR
F. IDENTIFY EACH DEVICE WITH NAMEPLATE SHOWING THE LOAD SERVED, MATCHING THE EXISTING NAMEPLATES. 21. WIRING DEVICES: FURNISH AND INSTALL ALL WIRING DEVICES AS INDICATED ON THE DRAWINGS. DEVICES SHALL IN ALL CASES BE SUITABLE FOR THE USE INTENDED AND SHALL HAVE VOLTAGE AND	XI ⊘ ∑ X2	EXIT SIGN WITH DIRECTIONAL ARROWS AS INDICATED, I OR 2 FACE, UNIVERSAL MOUNT XI OR X2 = TYPE ON LUMINAIRE SCHEDULE		20" Cu CHATWORTH GROUNDING BUSBAR 40153-020 TMGB PATTERN, 4" W x 1/4" H, 20"L, INSULATED STANDOFFS, PRE-DRILLED & TAP AS REQUIRED FOR CONDUCTORS	BFC BELOW FINISHED CEILING BFF BELOW FINISHED FLOOR BFG BELOW FINISHED GRADE
CURRENT RATINGS ADEQUATE FOR THE LOADS TO BE SERVED. A. MOUNTING: HEIGHTS OF ALL DEVICES ARE FROM FINISH FLOOR TO CENTERLINE OF DEVICE. DEVICES SHOWN ON THE DRAWINGS IN GROUPS OF TWO OR MORE SHALL BE LOCATED	XX 🖂	EMERGENCY EGRESS ONLY LUMINAIRE SURFACE MOUNTED FROM BACK XX = TYPE ON LUMINAIRE SCHEDULE	М	FIRE ALARM MANUAL PULL STATION WITH TAMPER COVER	C PHASE "C" IN THREE-PHASE SYSTEM C CONDUIT CB CIRCUIT BREAKER CH CONSTANT HORSE POWER (2SIW MOTOR)
HORIZONTALLY IN SUCH A MANNER AS TO BE CLOSE AS POSSIBLE FROM THE CENTERLINE OF THE FIRST DEVICE TO THE CENTERLINE OF THE NEXT DEVICE UNLESS OTHERWISE NOTES. B. WALL SWITCHES: SHALL BE LEVITON DECORA TYPE, WHITE IN COLOR. USE CORRESPONDING	(HP)	MOTOR, SINGLE OR THREE PHASE HP = HORSE POWER	SD	FIRE ALARM SMOKE DETECTOR, CEILING MOUNTED	CKT CIRCUIT CS COMBINATION STARTER (MOTOR STARTER / DISCONNECT) CT CONSTANT TORQUE (2SIW MOTOR)
DOUBLE POLE, THREE-WAY, FOUR-WAY, KEYED AND DIMMER SWITCHES WHERE NOTES. MOUNT AT 3'-IO" A.F.F. AND WITHIN 6" OF ADJACENT DOOR JAMB, UNLESS OTHERWISE NOTED. USE "KEYED" SWITCHES IN LOCATIONS INDICATED.	\ominus	NEMA 5-20R DUPLEX RECEPTACLE, MOUNTED 18" AFF (UON) WP = WEATHER PROOF, GFI = GFCI PROTECTED, IG = ISOLATED GROUND PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER	HD	FIRE ALARM HEAT DETECTOR, CEILING MOUNTED	CT CURRENT TRANSFORMER (D) EXISTING TO BE DEMOLISHED OR REMOVED DETD DUAL ELEMENT, TIME DELAY DS DISCONNECT SWITCH
C. CONVENIENCE OUTLETS: SHALL BE GROUNDING TYPE, 20 AMP, 125 VOLT, LEVITON, WHITE COLOR. WEATHERPROOF DUPLEX OUTLETS SHALL BE LEVITON 5342 WITH SIERRA NO. WPD-8 PLATE. MOUNT AT 18" A.F.F., UNLESS OTHERWISE NOTED. PROVIDE NEMA 5-20R DEVICES UNLESS OTHERWISE INDICATED. PROVIDE SPECIFICATION (SPEC) GRADE HEAVY DUTY STRAIGHT	+	NEMA 5-20R QUADRAPLEX RECEPTACLE, MOUNTED 18" AFF (UON) WP = WEATHER PROOF, GFI = GFCI PROTECTED, IG = ISOLATED GROUND PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER SIMPLEX RECEPTACLE, MOUNTED 18" AFF (UON) WITH INDICATED CONFIGURATION	DD	FIRE ALARM DUCT-MOUNTED SMOKE DETECTOR	(E) EXISTING TO REMAIN EMT ELECTRICAL METALLIC TUBING EPM ELECTRONIC POWER METER
BLADE DEVICES UNLESS OTHERWISE NOTED. PROVIDE HOSPITAL GRADE DEVICES WHERE INDICATED, OR AS REQUIRED BY CODES. D. ACCEPTABLE ALTERNATE MANUFACTURERS: SHALL BE LSI, H.E. WILLIAMS, HUBBELL, P&S AND		(E.G. L6-30R = NEMA TWISTLOCK, 250 VAC, 30 A) PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER	R	FIRE ALARM SUPERVISORY SHUTDOWN RELAY	FAAP FIRE ALARM ANNUNCIATOR PANEL FACP FIRE ALARM CONTROL PANEL FVNR FULL VOLTAGE NON-REVERSING G GROUND
BRYANT, PROVIDED THEIR DEVICES ARE OF THE SAME TYPE AND QUALITY AND THAT ONLY ONE MANUFACTURER SHALL BE USED THROUGHOUT THE WORK. E. PLATES: SHALL BE MATCHING TYPE FOR FINISHED AREAS AND GALVANIZED STEEL FOR AREAS		FLUSH FLOOR BOX WITH WIRING DEVICES AS INDICATED ON PLANS HUBBELL SYSTEM ONE ONLY	FS	FIRE ALARM FIRE-WATER FLOW SWITCH	GEC GROUNDING ELECTRODE CONDUCTOR GFI/GFCI GROUND FAULT CIRCUIT INTERRUPTER HMT HARMONIC-MITIGATING TRANSFORMER
WITH EXPOSED CONDUIT. PROVIDE STAINLESS STEEL PLATES FOR FLUSH MOUNTED DEVICES. PROVIDE CAST ALUMINUM WET LOCATION TYPE COVER PLATES WITH HINGED COVERS FOR DEVICES LOCATED OUTSIDE. GANG OUTLETS GROUPED TOGETHER UNDER A SINGLE WALL	J	JUNCTION BOX	TS	FIRE ALARM FIRE-WATER TAMPER SWITCH	HOA HAND / OFF / AUTO SWITCH (FOR FVNR CONTACTOR) HLOA HIGH / LOW / OFF / AUTO (FOR 2SIW OR 2S2W CONTACTOR) IG ISOLATED GROUND J/R JAMMING RATIO
PLATE. F. INCANDESCENT DIMMERS: I20V SLIDE TO OFF, DECORA STYLE SIMILAR TO SWITCHES, WITH WATTAGE AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. POWER FAILURE MEMORY. RFI SUPPRESSION. WHERE SWITCHES ARE SHOWN NEXT TO DIMMERS, PROVIDE MULTI-GANG	\$ _{xx}	LIGHT SWITCH RATED I20/277 VAC, MOUNTED 42" AFF (UON), SINGLE-POLE (UON) 2 = 2-POLE, 3 = 3-WAY, 4 = 4-WAY, D = DIMMER, M = MOTOR-RATED W/ OL, WP = WEATHER PROOF, R = RED COLOR, K = KEYED, VS = INTEGRAL VACANCY SENSOR, OS = INTEGRAL OCCUPANCY SENSOR	AV 30	FIRE ALARM AUDIO/VISUAL HORN/STROBE FIRE ALARM VISUAL STROBE	KAIC KILO AMPERE INTERRUPTING CAPACITY KCMIL KILO CIRCULAR MILS KVA KILO VOLT AMPERES COMPLEX OR APPARENT POWER
COVER PLATES. PROVIDE DIMMERS WITH IVORY FINISH, SAME AS SWITCHES UNLESS OTHERWISE DIRECTED. G. INSTALL WIRING DEVICES AND ACCESSORIES PLUMB AND LEVEL, IN ACCORDANCE WITH	(OS) (OS)	CEILING OR WALL MOUNTED OCCUPANCY SENSOR LIGHTING CONTROL WITH PASSIVE INFRARED AND ULTRASOUND DUAL TECHNOLOGY, 20 A RATED	30 A	FIRE ALARM SPEAKER	KVAR KILO VOLT AMPERES REACTIVE POWER KW KILO WATT REAL POWER LI HOT LEG I IN SINGLE-PHASE SYSTEM < 250 VAC L2 HOT LEG 2 IN SINGLE-PHASE SYSTEM < 250 VAC
MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO FULFILL PROJECT REQUIREMENTS. H. TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH	TV♡	TV OUTLET I-GANG BACKBOX, +42" AFF (UON), SS-302 COVER I" C WITH PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM MEASURED DEVICES AND LOW-VOLTAGE	FACP	FIRE ALARM CONTROL PANEL	LSI+G LONG TERM, SHORT TERM, INSTANTANEOUS, AND GROUND-FAULT MCB MAIN CIRCUIT BREAKER MCC MOTOR CONTROL CENTER
EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE VALUES FOR WIRING DEVICES. I. COORDINATE WITH OTHER WORK, INCLUDING PAINTING, ELECTRICAL BOXES AND WIRING INSTALLATIONS, AS NECESSARY TO INTERFACE INSTALLATION OF WIRING DEVICES WITH OTHER WORK.	w▽	CABLING BY TELECOM CONTRACTOR WALL TELEPHONE OUTLET I-GANG BACKBOX, +42" AFF (UON), SS-302 COVER I" C WITH PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM MEASURED DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR	FAAP	FIRE ALARM REMOTE ANNUNCIATOR PANEL	MLO MAIN LUGS ONLY (N) NEW N NEUTRAL NEC NATIONAL ELECTRICAL CODE (NFPA 70)
J. INSTALL WIRING DEVICES AFTER WIRING WORK IS COMPLETED. INSTALL ONLY IN ELECTRICAL BOXES THAT ARE CLEAN; FREE FROM EXCESS BUILDING MATERIALS, DIRT, AND DEBRIS. INSTALL WALL PLATES AFTER PAINTING WORK IS COMPLETED.	xx ▽	DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR. XX - DENOTES NUMBER OF CAT6E CABLES	Sv	PUBLIC ADDRESS SPEAKER, CEILING-MOUNTED WALL-MOUNTED VOLUME CONTROL ADJACENT TO LIGHT SWITCH (UON)	NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NF NON-FUSIBLE NFPA NATIONAL FIRE PROTECTION ASSOCIATION
K. NO RECEPTACLE OR SWITCH OUTLETS SHALL BE MOUNTED BACK TO BACK. A MINIMUM OF ONE(I) STUD MUST BE BETWEEN OUTLETS.L. INSTALL RECEPTACLES WITH GROUND PIN UP. INSTALL SWITCHES WITH THE "ON" POSITION UP.	+	EQUIPMENT CONNECTION	S	PUBLIC ADDRESS SPEAKER, CEILING-MOUNTED	NSL NON-SWITCHED HOT LEG OFCI OWNER FURNISHED, CONTRACTOR INSTALLED OS OCCUPANCY SENSOR P POLES
 M. ALL EXTERIOR DEVICES TO BE WEATHER PROOF AND EXTERIOR RECEPTACLES SHALL BE A GFCI TYPE DEVICE. N. ALL 120-VOLT RECEPTACLES OUTLETS LOCATED WITHIN SIX FEET OF SINKS SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTION PROTECTION. GROUND FAULT OUTLETS SHALL BE 	_	MULTIOUTLET ASSEMBLY (PLUG MOLD) AS SPECIFIED ON PLANS WITH DEVICE TYPES AND QUANTITIES INDICATED ON PLANS	В	PUBLIC ADDRESS INTERCOM CALL BUTTON, WALL-MOUNTED 42" AFF	PF POWER FACTOR PFCC POWER FACTOR CORRECTION CAPACITOR PVC POLY VINYL CHLORIDE
CONNECTED ON DEDICATED NEUTRAL WIRE SERVING ONLY THE INDIVIDUAL OUTLET WITH THE GROUND FAULT PROTECTION. O. USE JUMBO SIZE WALL PLATES FOR OUTLETS INSTALLED IN MASONRY WALLS.	EPO	EMERGENCY POWER OFF, MUSHROOM HEAD, MAINTAINED CONTACT PUSH BUTTON	(M)	INTRUSION ALARM MOTION DETECTOR	PT POTENTIAL TRANSFORMER RAL RIGID ALUMINUM RGS RIGID GALVANIZED STEEL
P. DO NOT SHARE NEUTRAL CONDUCTORS ON DIMMERS. 22. PANELBOARD: PANELBOARDS SHALL BE GE TYPE AL, AQ, OR AE OR APPROVED EQUAL. REFER TO CONSTRUCTION DOCUMENTS FOR THE TYPE AND NUMBER OF BRANCH CIRCUIT BREAKERS. ALL	PC	PHOTOELECTRIC SENSOR AIMED NORTH	KP	INTRUSION ALARM NUMERIC KEY-PAD	SEC SECTION OF LIGHTING-CLASS PANEL SPD SURGE PROTECTION DEVICE SS-xxx STAINLESS STEEL, "xxx" = AUSTENITIC ALLOY TYPE (E.G. 304) ST SHUNT-TRIP FOR CIRCUIT BREAKER
PANELBOARD BUSSING SHALL BE COPPER. PANELBOARDS SHALL BE IN OUTDOOR ENCLOSURE WHERE INSTALLED OUTDOOR. MINIMUM INTERRUPTING RATING FOR PANELS SHALL BE AS INDICATED ON DRAWINGS.	TC	TIME CLOCK, ASTRONOMIC/MULTI-POLE CONTACTOR	(DC)	INTRUSION ALARM DOOR CONTACTOR	THD TOTAL HARMONIC DISTORTION TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION TYP TYPICAL
23. TRANSFORMERS: DRY TYPE, TWO_WINDING OF THE SIZE AND ELECTRICAL CHARACTERISTICS SHOWN AND SCHEDULED ON DRAWINGS. TRANSFORMERS SHALL BE EQUIPPED WITH 2 2-1/2% TAPS ABOVE AND BELOW RATING. TRANSFORMERS SHALL HAVE A BONDING JUMPER INSTALLED BETWEEN THE SECONDARY NEUTRAL TERMINAL AND METAL CASE, AND SHALL INCLUDE A GROUND TERMINAL	CHA 24 COIL	POWER COMPANY POWER METER	⟨CR⟩	ACCESS CONTROL CARD READER	UON UNLESS OTHERWISE NOTED V VOLTS VAC VOLTS, ALTERNATING CURRENT VDC VOLTS, DIRECT CURRENT
OF PROPER SIZE TO RECEIVE GROUND CONDUCTOR. TRANSFORMERS SHALL BE RATED AT FULL LOAD IN A 40°C AMBIENT WITH 30°C ULTIMATE HOT SPOT TEMPERATURE RISE ALLOWANCE, WITH CLASS FINSULATION HAVING A UL 185°C RATING LIMITING SYSTEM TEMPERATURE TO 115°C ON UNITS	LC 277 VAC 30 AS 12 P	LIGHTING CONTACTOR CHA = CONTACTOR NAME, COIL = COIL CONTROL VOLTAGE, VAC = VOLTAGE RATING, AS = CURRENT RATINGS, P = POLE COUNT, NEMA-# = ENCLOSURE TYPE	⟨ML⟩ ⟨DH⟩	ACCESS CONTROL MAGNETIC DOOR LOCK ACCESS CONTROL DOOR HOLD-OPEN	VFCI VENDOR FURNISHED, CONTRACTOR INSTALLED VFD VARIABLE FREQUENCY DRIVE VS VACANCY SENSOR VT VARIABLE TORQUE (2SIW MOTOR)
SMALLER THAN 15 KVA AND CLASS H INSULATION HAVING UL 220°C RATING LIMIT SYSTEM TEMPERATURE TO 150°C ON 15 KVA AND LARGER UNITS. PROVIDE COPPER WINDINGS. 24. FUSES: FUSES IN MAIN, FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS (UNLESS OTHERWISE	NEMA-I 240 VAC 60 AF	CIRCUIT BREAKER, MOLDED-CASE, THERMO-MAGNETIC (UON)		VIDEO SURVEILLANCE CCTV CAMERA	W WIRES, NOT INCLUDING GEC WP WEATHER PROOF # AMERICAN WIRE GAGE Ø PHASE
SPECIFIED), SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSSMAN TYPE FRN-R (250V), AND FRS-R (600V). 25. GROUNDING: ALL CONDUIT WORK, MOTOR, STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN FULL ACCORDANCE WITH NEC 250. 26. OTHER MATERIALS: FURNISH AND INSTALL ALL OTHER MATERIALS SUCH AS HARDWARE, TAPE,	240 VAC	VAC = VOLTAGE RATING, AF = FRAME SIZE, AT = TRIP SETTING, P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE) DISCONNECT SWITCH VAC = VOLTAGE RATING, AS = SWITCH CURRENT RATING, AF = FUSE SIZE/TYPE (E.G.	TLA DRY-TYPE 480: 208Y/120 VAC 45 KVA NEMA-2	TRANSFORMER = <u>TLA</u> TRANSFORMER NAME TYPE = TRANSFORMER TYPE (E.G. DRY-TYPE, HARMONIC-MITIGATING), VAC = WINDING VOLTAGES (PRIMARY : SECONDARY), kVA = CONTINUOUS CAPACITY, TAPS = QUANTITY/DEVIATION OF TAPS, RISE = TEMP RISE, INSUL = INSULATION CLASS, WOUND = WINDING MATERIAL/CONFIGURATION, NEMA- = ENCLOSURE TYPE	μF MICRO FARAD Ω OHMS
CLAMPS, CONNECTORS, FITTINGS, SUPPORTS, AND ALL OTHER APPURTENANCES REQUIRED TO COMPLETE THE WORK TO THE FULL INTENT OF THE CONTRACT. TERMINAL LUGS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR. 27. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL TEMPERATURE, CO2, AND HUMIDITY SENSOR	→ 60 AF ☐→ □ 3 P □ NEMA−I	DETD) P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE)	VFD	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS, VFCI	
27. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL TEMPERATURE, CO2, AND HUMIDITY SENSOR STUB-UPS FOR THE MECHANICAL HVAC SYSTEM. REFER TO MECHANICAL PRINTS FOR SENSOR QUANTITY AND LOCATIONS. 28. ELECTRICAL CONTRACTOR WILL CONNECT ALL LOW VOLTAGE PLUMBING CONTRACTOR SUPPLIED TRANSFORMERS (FOR AUTOMATIC FLUSH) TO THE NEAREST I20V CIRCUIT (OR IF INDICATED ON PLANS WITH A CIRCUIT NUMBER). CONTRACTOR TO ASSUME ONE TRANSFORMER PER BATHROOM. THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR LOW VOLTAGE WIRING TO THE FIXTURES.	240 VAC 60 AF 40 AT #1 3 P NEMA-I	COMBINATION CIRCUIT BREAKER, MOTOR CONTROLLER, AND THERMAL OVERLOAD VAC = VOLTAGE RATING, AF = FRAME SIZE, AT = TRIP SETTING, NEMA-# = MOTOR STARTER SIZE/TYPE (E.G. FVNR), HOA = SELECTOR SWITCH TYPE, P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE)			

ELECTDICAL CAMBOL LECEND

GENERAL NOTES:

SYMBOL LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED ON ALL DRAWINGS. 2. ABBREVIATION DEFINITIONS ARE NOT COMPREHENSIVE, AND NOT ALL ABBREVIATIONS MAY APPLY TO ALL DRAWINGS. SUBMIT FORMAL REQUEST FOR INFORMATION WHEN ENCOUNTERING CONFLICTS OR AMBIGUOUS SYMBOLS OR

ABBREVIATIONS, AS THESE WILL NOT CONSTITUTE DISMISSAL OF CONTRACTOR RESPONSIBILITY. ALL COVER PLATES FOR RECEPTACLES, SWITCHES, AND DATA SHALL BE SS-302 (UON). 4. PROVIDE DECORA STYPE SWITCHES FOR LIGHT SWITCHES THAT ARE NOT OCCUPANCY SENSOR TYPE.

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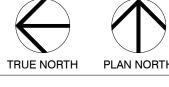
MEP ENGINEERS

713-622-0120

713-337-8881

STRUCTURAL ENGINEERS

DALLY ASSOCIATES



Project Number	19006-A
Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT
Drawing Title	

SYMBOLS, NOTES, AND **LEGENDS**

Drawing Number

E1.01

PANEL: LC		X SURFACE MTG: FLUSH BUS:				100% NEUTI				INT SPD FTL	ENCL:	NEMA TYPE 1		MA		00 A U/SN	BUS	3 ø		WIRE KAIC
LOCATI FED FR	ON: ELEC ROOM OM: LR	STE	RUT			IS	SO GND			FUSIBLE		STE	EL		1	00 A	MLO	208Y/	120	VOLT
WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	TRIP RATE	/ P	CKT NO		A VA)	B (kV		C (kVA)	CKT NO	P /	TRIP RATE	LOAD TYPE		LO	AD DESCRIPTION			WIRE SIZE
1-#12, 1-#12, 1-#12, 3/4"C	EXISTING RECEPTACLE LOAD	R	20	/ 1	1	0.9	0.9				2	1 /	20	R	EXISTIN	G RECE	PTACLE LOAD		1-	#12, 1-#12, 1-#12, 3/4"(
1-#12, 1-#12, 1-#12, 3/4"C	EXISTING RECEPTACLE LOAD	R	20	/ 1	3			0.9	0.7		4	1 /	20	R	(NEW) R	ECEPTA	ACLES - OFFICE		1-	#12, 1-#12, 1-#12, 3/4" (
1-#12, 1-#12, 1-#12, 3/4"C	(NEW) RECEPTACLES - OFFICE	R	20	/ 1	5					0.5	6	/								
				/	7						8	/								
				/	9						10	/								
				/	11						12	/								
					Load:		κVA	2 k\		1 kVA										
				Total	Amps:	16	6 A	15		5 A										
	LOAD TYPE	000	INIFOT			- 4 0 - 5 - 5		OAD AN		is is							OTAL 0			
LIGHTING	LOAD TYPE	COI	NNECTE			FACTOR	1	DEMA	AND	0.1/4						- 10	OTALS			
RECEPTACLE	R			3960	VA	0.00%						CONNECTED LOAD (kVA) 4 kVA								
EQUIPMENT	Q				VA	100.00% 0.00%			3	0 VA			C		AND LOA	. ,				
COOLING	C				VA	0.00%				0 VA			<u></u>		D CURR					
HEATING	Н				VA	0.00%				0 VA					ID CURR					
MOTOR	M				VA	0.00%				0 VA				DLIVIAI	ib Cornin	LITI (A)				
LARGEST MOTOR	G				VA	0.00%				0 VA										
KITCHEN	K				VA	0.00%				0 VA										
EXISTING	X				VA	0.00%				0 VA										
NOTES:																				

TYPE	MANUFACTURER	Model Number	DESCRIPTION	Mounting	MOUNTING LAMP		VOLTAGE	DIMMABLE	Notes	
Δ	PHILIPS DAY-BRITE	2FGG48L-840-4-D-UNV-DIM	2'x4' LED TROFFER, 4800 LUMENS	RECESSED	LED	42 W	UNV	0-I0V DIMMING		
3	PHILIPS LIGHTOLIER	C4SN / C4LI5840WZIOU / C4SDLCL	4" SQUARE DOWNLIGHT	RECESSED	LED	16 W	UNV	0-I0V DIMMING		
3E	PHILIPS LIGHTOLIER	C4SN / C4LI5840WZI0U / C4SDLCL	4" SQUARE DOWNLIGHT	RECESSED	LED	16 W	UNV	0-I0V DIMMING	EMERGENCY EGRESS WITH BATTERY BACKUI	
2	PHILIPS DAY-BRITE	V2-W-5IL-840-4-UNV	4' LINEAR STRIP FIXTURE	SURFACE	LED	46 W	UNV	0-I0V DIMMING		
CE	PHILIPS DAY-BRITE	V2-W-5IL-840-4-UNV-EMLED	4' LINEAR STRIP FIXTURE	SURFACE	LED	46 W	UNV	0-I0V DIMMING	EMERGENCY EGRESS WITH BATTERY BACKU	
X	EMERGI-LITE	LXN-XXX	EDGE-LIT EXIT SIGN	WALL/CEILING	LED	10 W	UNV		PROVIDE WITH NUMBER OF FACES AND DIRECTIONAL ARROWS AS SHOWN ON PLANS	

ALL LIGHT FIXTURES APPENDED WITH E (EMERGENCY) SHALL INCLUDE EMERGENCY BATTERY BACK-UP FIXTURE OPTION. IF FIXTURE DOES NOT HAVE BATTERY BACKUP OPTION, PROVIDE LOCAL INDIVIDUAL INVERTER FOR THAT PARTICULAR FIXTURE.

PROVIDE ADDITIONAL, NON-SWITCHED HOT CIRCUIT LEG TO FIXTURE FOR BATTERY CHARGING AND POWER-LOSS DETECTION FOR ALL EMERGENCY EGRESS OR EXIT SIGN FIXTURES AS PART OF BASE BID.

COORDINATE MOUNTING HEIGHT OF ALL FIXTURES WITH ARCHITECTURAL PLANS.

* PROVIDE A BREAKER WITH GFCI ** ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR

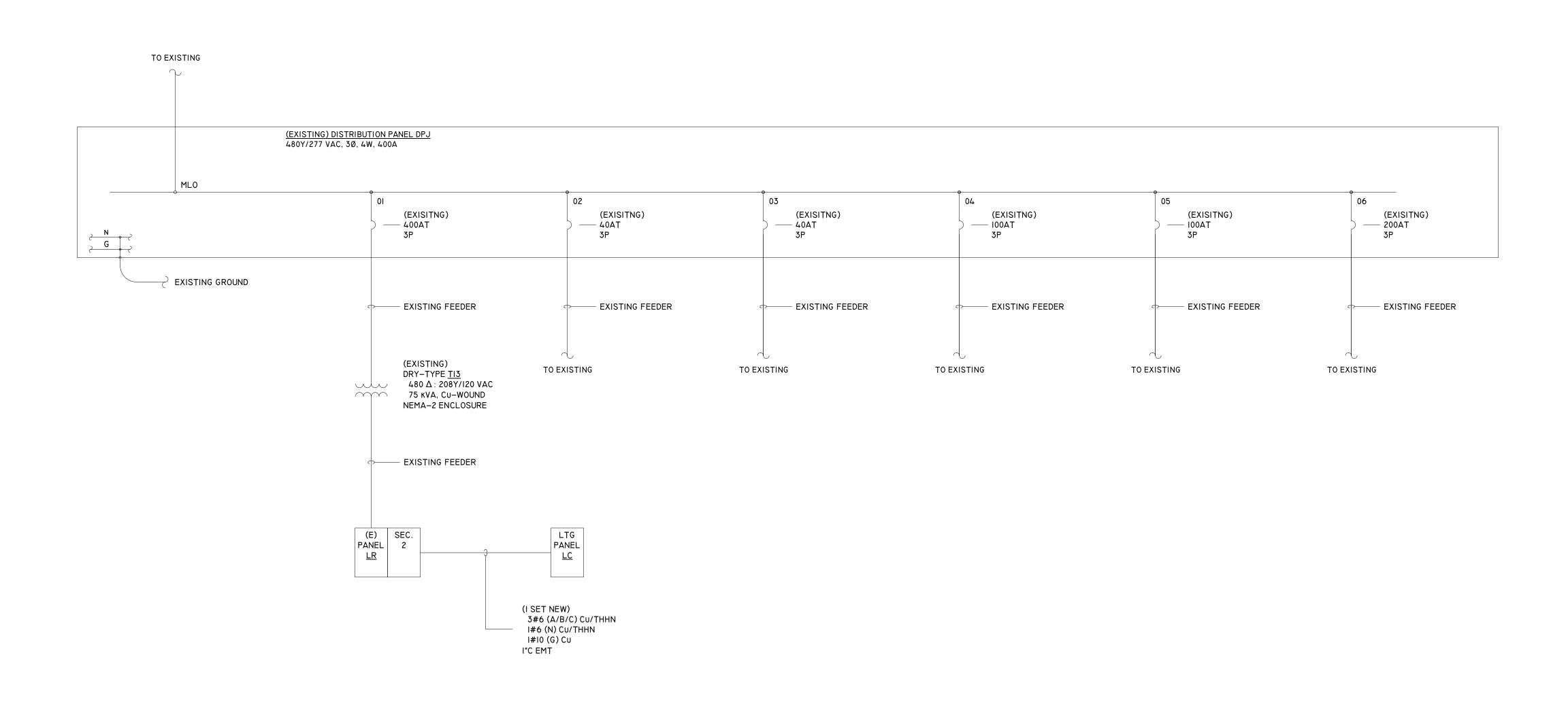
COORDINATE FINISH OF ALL FIXTURE WITH ARCHITECT PRIOR TO ORDERING. REFER TO ARCHITECTURAL PLANS FOR GRID/FLANGE AREAS, PRIOR TO BIDDING OF LIGHT FIXTURES. ORDER CORRECT QUANTITY OF EACH VARIATION.

EXIST PANEL	: LR		X SURF				IEUTRAL			NT SPD			NEMA		225 A	BUS	3 ø	4 WIRE
		MTG:	FLUS		BUS:		SYS GND	OP ⁻		FTL		NCL:	TYPE 1	MAIN		MOD	22	KAIC
	I: ELEC ROOM		STRU	JI		[]	SO GND		F	FUSIBLE			STEEL		225 A	MCB	208Y/120	VOLT
FED FROM	1 :				01/7							01/7	TOID					
WIRE SIZE	LOAD DESCRIPTION			TRIP RATE / P	CKT NO		A VA)	E (kV		(kV		CKT NO	P / RATE	LOAD TYPE	L	OAD DESCRIPTION		WIRE SIZE
1-#12, 1-#12, 1-#12, 3/4"C EX			Q	20 / 1	1	0.9	0.9					2	1 / 20			IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	3			0.9	0.9			4	1 / 20	Q E	XISTING EQU	IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	5					0.9	0.9	6	1 / 20	Q E	XISTING EQU	IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	7	0.9	1.4					8	1 / 30	Q E	XISTING EQU	IIPMENT LOAD		1-#10, 1-#10, 1-#10, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	9			0.9	0.9			10	1 / 20	Q E	XISTING EQU	IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING RECEPTACLE LOAD		R	20 / 1	11					0.9	0.9	12	1 / 20	L E	XISTING LIGH	HTING LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING RECEPTACLE LOAD		R	20 / 1	13	0.9	0.9					14	1 / 20	Q E	XISTING REC	EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING RECEPTACLE LOAD		R	20 / 1	15			0.9	0.9			16	1 / 20	Q E	XISTING REC	EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	17					0.9	1.4	18	1 / 30	Q E	XISTING EQU	IIPMENT LOAD		1-#10, 1-#10, 1-#10, 3/4"C
1-#10, 1-#10, 1-#10, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	30 / 1	19	1.4	1.4					20	1 / 30	Q E	XISTING EQU	IIPMENT LOAD		1-#10, 1-#10, 1-#10, 3/4"C
1-#10, 1-#10, 1-#10, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	30 / 1	21			1.4	1.4			22	1 / 30	Q E	XISTING EQU	IIPMENT LOAD		1-#10, 1-#10, 1-#10, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	23					0.9	0.9	24	1 / 20	R E	XISTING REC	EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#10, 1-#10, 1-#10, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	30 / 1	25	1.4	0.9					26	1 / 20	R E	XISTING REC	EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	27			0.9	0.9			28	1 / 20	R E	XISTING REC	EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	29					0.9	0.9	30	1 / 20	Q E	XISTING EQU	IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	31	0.9	0.9					32	1 / 20	Q E	XISTING EQU	IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#10, 1-#10, 1-#10, 3/4"C EX			Q	30 / 1	33			1.4	1.4			34	1 / 30	Q E	XISTING EQU	IIPMENT LOAD		1-#10, 1-#10, 1-#10, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	35					0.9	0.9	36	1 / 20	Q E	XISTING EQU	IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING EQUIPMENT LOAD		Q	20 / 1	37	0.9	0.9					38	1 / 20	Q E	XISTING EQU	IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX			Q	20 / 1	39			0.9	0.9			40	1 / 20			IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX			Q	20 / 1	41					0.9	0.9	42	1 / 20	· ·		IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX			R	20 / 1	43	0.9	0.9					44	1 / 20			EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX			R	20 / 1	45	0.0	0.0	0.9	0.9			46	1 / 20			EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX			R	20 / 1	47					0.9	0.9	48	1 / 20			EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#10, 1-#10, 1-#10, 3/4"C EX			R	30 / 1	49	1.4	0.9			0.0	0.0	50	1 / 20			EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#10, 1-#10, 1-#10, 3/4"C EX			R	30 / 1	51		0.0	1.4	1.4			52	1 / 30			EPTACLE LOAD		1-#10, 1-#10, 1-#10, 3/4"C
1-#10, 1-#10, 1-#10, 3/4"C EX			R	30 / 1	53					1.4	1.4	54	1 / 30			EPTACLE LOAD		1-#10, 1-#10, 1-#10, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX				20 / 1		0.9	1.4					56	1 / 30			EPTACLE LOAD		1-#10, 1-#10, 1-#10, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX				20 / 1		0.5	1	0.9	0.9			58	1 / 20			EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX				20 / 1				0.0	0.0	0.9	0.9	60	1 / 20			EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX				20 / 1		0.9	0.9			0.9	0.9	62	1 / 20			EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
3-#12, 1-#12, 1-#12, 3/4"C EX				20 / 3	_	0.5	0.5	0.5	0.5			64	3 / 20			IIPMENT LOAD		3-#12, 1-#12, 1-#12, 3/4"C
	AISTING EQUIT MENT EOAD							0.5	0.5	0.5	0.5	66			AISTING EQU	III WENT LOAD		
						0.5	0.5			0.5	0.5				*			
 1-#12, 1-#12, 1-#12, 3/4"C EX	XISTING RECEPTACLE LOAD		 R	20 / 1		0.5	0.5	0.9	0.9			68 70	1 / 20	 R E	YISTING BEC	EPTACLE LOAD		 1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX				20 / 1				0.9	0.9	0.9	0.9	72	1 / 20			EPTACLE LOAD		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C EX						0.9	0.9			0.9	0.9	74	1 / 20		XISTING NEC			1-#12, 1-#12, 1-#12, 3/4"C
1-#10, 1-#10, 1-#10, 3/4"C EX						0.9	0.9	1.4	0.0							IIPMENT LOAD		<u> </u>
1-#12, 1-#12, 1-#12, 3/4"C EX								1.4	0.9	0.9	0.9	76 78	1 / 20			IIPMENT LOAD		1-#12, 1-#12, 1-#12, 3/4"C 1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4 C EX				20 / 1		0.9	1.8			0.9	0.9	80	3 / 60	R L		MI WILINI LOAD		3-#6, 1-#6, 1-#10, 1"C
1-#12, 1-#12, 1-#12, 3/4 C EX					_	0.9	1.0	0.0	1.6									, , ,
				20 / 1				0.9	1.6	0.0	0.5	82						
1-#12, 1-#12, 1-#12, 3/4"C EX	AISTING EQUIFINENT LUAD		Q		83 tal Load	1. 20	kVA		Λ/Δ	0.9 26 k	0.5	84			•			
								29 K		20 r								
				101	al Amps	s. 24	Α O.) A							
	LOAD ANALYSIS																	

	LOAD TYPE	CONNECTED	FACTOR	DEMAND	TC	DTALS
LIGHTING	L	1800 VA	125.00%	2250 VA		
RECEPTACLE	R	34860 VA	64.34%	22430 VA	CONNECTED LOAD (kVA)	83 kVA
EQUIPMENT	Q	46000 VA	100.00%	46000 VA	DEMAND LOAD (kVA)	71 kVA
COOLING	С	0 VA	0.00%	0 VA	CONNECTED CURRENT (A)	229 A
HEATING	Н	0 VA	0.00%	0 VA	DEMAND CURRENT (A)	196 A
MOTOR	M	0 VA	0.00%	0 VA		
LARGEST MOTOR	G	0 VA	0.00%	0 VA		
KITCHEN	К	0 VA	0.00%	0 VA		
EXISTING	X	0 VA	0.00%	0 VA		
NOTES:						

ALL WIRING FOR 20A/1P CKT. SHALL CONSIST OF 2#12, 1#12G IN 3/4"C UNLESS OTHERWISE NOTED. * PROVIDE A BREAKER WITH GFCI ** ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR

EXISTING PANEL TO REMAIN







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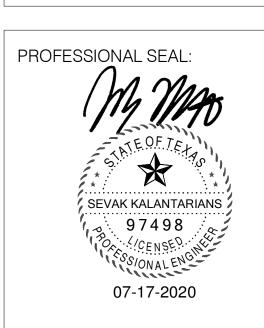
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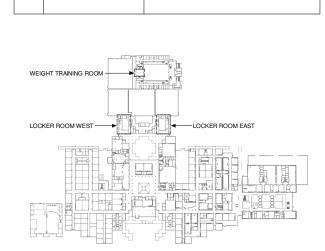


A PROJECT FOR: ROOMS

RENOVATION

1625 Staffordshire Rd, Stafford, TX 77477

#	Date	ISSUED FOR
1	2020/07/14	ISSUED FOR BID PERMIT AND CONSTRUCTION
2	2020/07/17	ISSUED FOR BID



KEY PLAN		
	TOLIE NODTH	DI ANINO

Project Number	19006-A
Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT
Drawing Title	

PANEL SCHEDULES

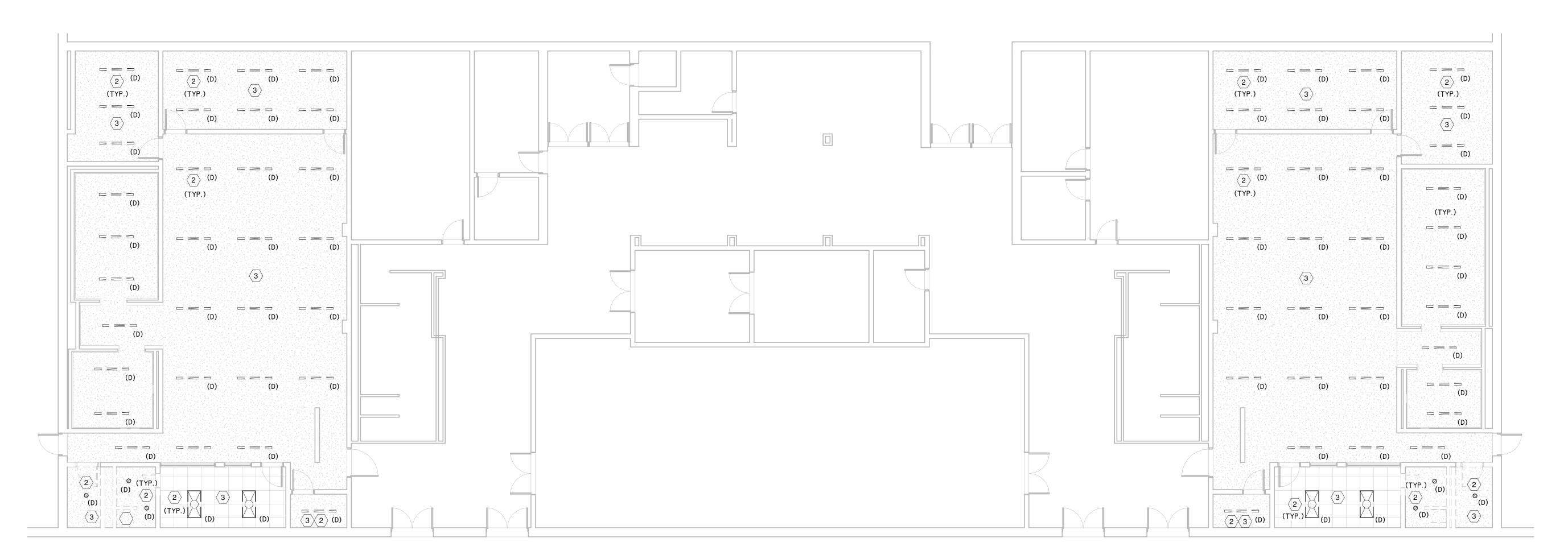
E1.02

Drawing Number

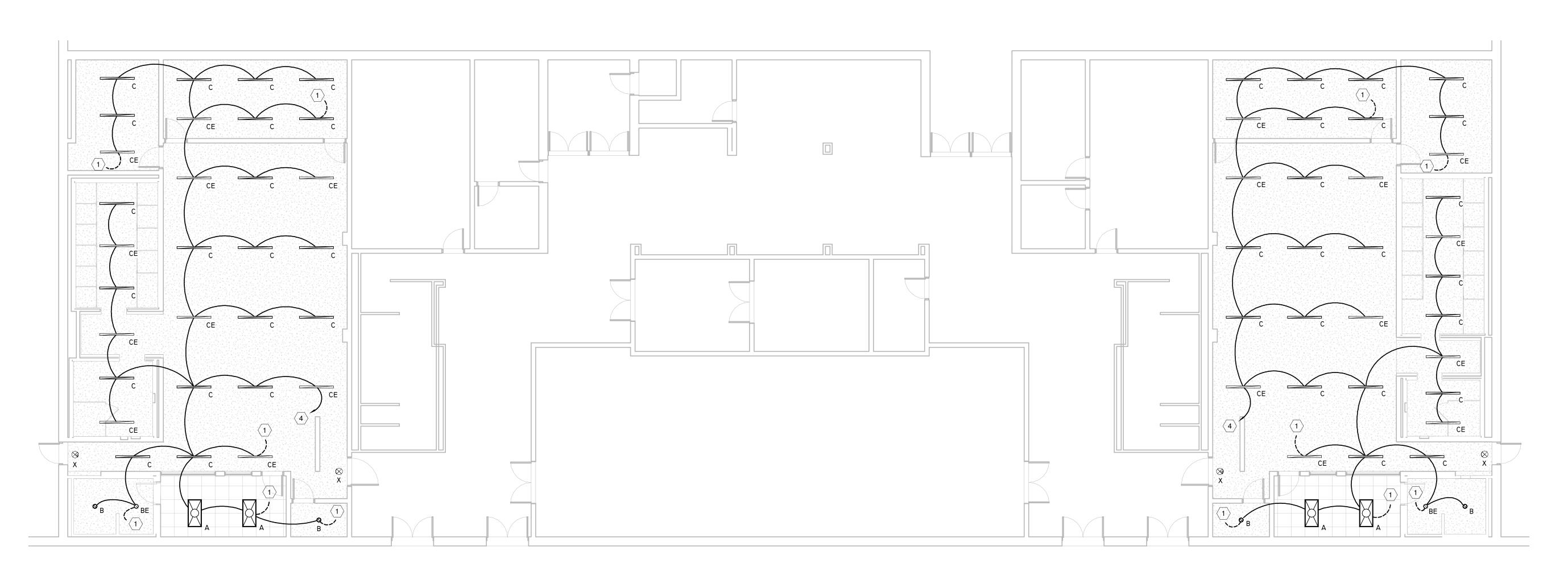
ELECTRICAL GENERAL DEMOLITON NOTES

ELECTRICAL CONTRACTOR SHALL FIELD VERIFY SUCH CONDITION.

- ELECTRICAL CONTRACTOR SHALL REMOVE ELECTRICAL EQUIPMENT AS INDICATED BY KEY NOTES AND AS REQUIRED BY SCOPE OF DEMOLITION WORK. REFER TO ARCHITECTURAL DRAWINGS FOR ALL WALLS DESIGNATED FOR REMOVAL.
- BEFORE ANY ELECTRICAL EQUIPMENT OR OUTLET REMOVAL, IDENTIFY AND DISCONNECT THE POWER SUPPLY TO IT. VERIFY WITH OWNER LOADS THAT MUST REMAIN IN SERVICE AND DO NOT DISCONNECT THESE.
- REMOVE ALL RELATED LINE SIDE AND LOAD SIDE FEEDERS (WIRES AND CONDUITS) IN ENTIRETY FOR EQUIPMENT INDICATED OR REQUIRED TO BE REMOVED.
- LEAVE OVERCURRENT PROTECTION DEVICE FOR EQUIPMENT INDICATED TO BE REMOVED IN PLACE UNLESS NOTED OTHERWISE. ALL REMOVED EQUIPMENT IS PROPERTY OF OWNER AND SHALL BE STORED AT OWNER DESIGNATED LOCATION FOR INSPECTION. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF EQUIPMENT OWNER DOES NOT INTEND TO KEEP, STORE, OR REUSE.
- REMOVE ALL ELECTRICAL, TELEPHONE, AND DATA OUTLETS IN WALLS DESIGNATED FOR DEMOLITION ON ARCHITECTURAL AND/OR ELECTRICAL PLANS. REMOVE RELATED CIRCUITS SERVING THE DEVICES IN THEIR ENTIRETY. VERIFY ALL ABANDONED DATA CABLES ABOVE CEILINGS AND IN OTHER PLENUMS WITH OWNER AND REMOVE THEM AS DIRECTED BY OWNER.
- WHERE EXISTING OUTLETS AND DEVICES (RECEPTACLES OR LUMINAIRES) TO REMAIN IN SERVICE SHARE SAME BRANCH CIRCUIT AS OUTLETS (RECEPTACLES OR LUMINAIRES) TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL ENSURE CONTINUITY OF THE EXISTING AFTER REMOVAL. THIS CONDITION MAY NOT HAVE BEEN IDENTIFIED ON ELECTRICAL DEMOLITION DRAWINGS.
- LUMINAIRES SHALL BE REMOVED AS INDICATED ON ARCHITECTURAL REFLECTED CEILING OR ELECTRICAL DEMOLITION PLANS. DISPOSE OF ALL FIXTURES AND LAMPS OWNER DOES NOT INTEND TO KEEP. REMOVE ALL RELATED BRANCH CIRCUITING, WIRING, SWITCHES, OVERCURRENT PROTECTION DEVICES, AND ALL OTHER RELATED ELECTRICAL ITEMS.
- COORDINATE ARCHITECTURAL REQUIREMENTS FOR EXISTING CEILING GRID SYSTEM. ELECTRICAL CONTRACTOR SHALL PRESERVE AND PROTECT CEILING TILES AND SUPPORTING T'S WHEN REMOVING ELECTRICAL COMPONENTS FROM ABOVE LAY-IN CEILING AS REQUIRED. REMOVE ALL ABANDONED FEEDERS (CONDUITS AND WIRING) IN AREA OF CONSTRUCTION. PROPERLY SUPPORT ALL REMAINING EXISTING CONDUIT AND BOXES AFFECTED. PAINT REUSED AND
- EXPOSED CONDUIT AND BOXES TO MATCH WALL. WHERE PANELBOARDS ARE INDICATED TO BE REPLACED AND FEEDER AND BRANCH CIRCUITS ARE TO REMAIN IN SERVICE, CONTRACTOR SHALL PROTECT THEM FOR REUSE DURING
- CONSTRUCTION PHASE OF THE WORK. ELECTRICAL CONTRACTOR SHALL INSPECT EXISTING ELECTRICAL CIRCUITS INDICATED TO REMAIN IN SERVICE AND REUSED. CONTRACTOR SHALL PERFORM CONDUCTOR INSULATION TESTING IN ALL MAIN FEEDERS INTENDED TO BE REUSED IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS. ALL CONDUCTORS FAILING TEST SHALL BE REPLACED WITH SAME SIZE AS
- ELECTRICAL CONTRACTOR SHALL INSPECT ALL EXISTING JUNCTION BOXES AND REPLACE MISSING COVERS AND PLUG ALL UNUSED HOLES.
- ELECTRICAL PLANS DO NOT SHOW ALL RISER CONDUITS WITHIN WALLS. WHEN FOUND, CONTRACTOR SHALL DETERMINE IF THEY ARE IN SERVICE. IF SO, CONTRACTOR SHALL RELOCATE THEM TO A NEW NEARBY WALL OR OTHER STRUCTURE. SPLICES IN THE WIRING WILL BE PERMITTED IN SUITABLE JUNCTION BOXES IF THE CONDUCTORS ARE IN SOUND CONDITION.



2 FLOOR PLAN - DEMOLITION - LIGHTING Scale: 1/8" = 1'-0"





RECONNECT NEW LIGHTING TO EXISTING SWITCH IN AREA. DEMOLISH EXISTING CONDUCTORS, ROUGH-INS, SUPPORTING DEVICES, AND ASSOCIATED EQUIPMENT BACK TO NEAREST JUNCTION BOX, CAP AND PROTECT CIRCUIT CONDUCTORS IN JUNCTION BOX FOR RECONNECTION DURING CONSTRUCTION. RETURN ALL EQUIPMENT BACK TO OWNER FOR RECYCLE/REUSE. CONTRACTOR WILL TEST ALL EXISTING OUTLETS, SWITCHES, ETC. REPLACE/REWIRE ANY WHICH ARE NOT IN WORKING CONDITION, VERIFYING PROPER GROUNDING AND WIRING OF EACH DEVICE. THE CONTRACTOR WILL RE-LABLE THE EXISTING PANEL SCHEDULE AND LABEL THE EXISTING BREAKER # ON THE BACK OF EACH EXISTING PLATE PROVIDING AN ACCURATE AS-BUILT DOCUMENTATION OF THE CIRCUITING.

RECONNECT NEW LIGHTING FIXTURES TO EXISTING CIRCUIT. MATCH AND EXTEND FEEDERS AS REQUIRED.



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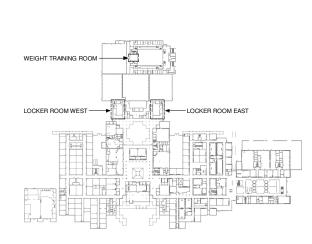


A PROJECT FOR:

ROOMS RENOVATION

1625 Staffordshire Rd, Stafford, TX 77477

#	Date	ISSUED FOR
1	2020/07/14	ISSUED FOR BID, PERMIT AND CONSTRUCTION
2	2020/07/17	ISSUED FOR BID

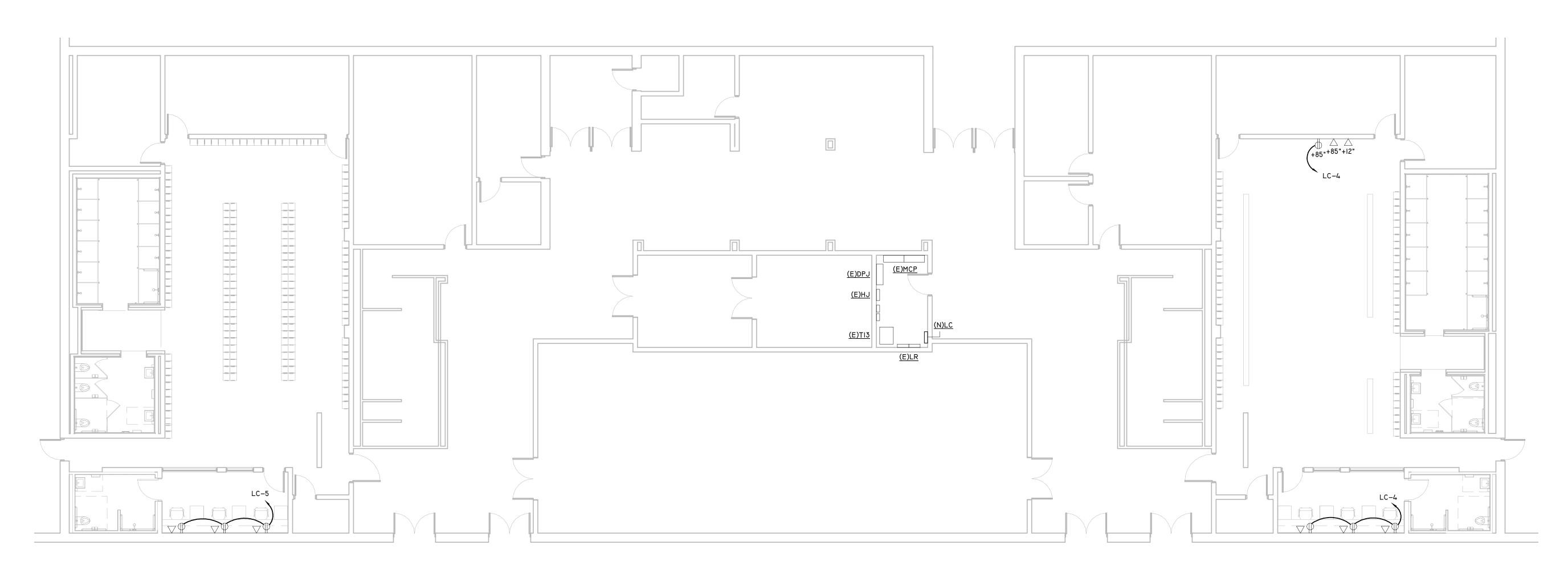


	Project Number	19006-A
	Drawn By	CJ, AB, AH
	Checked By	SK, IT
	Approved By	SK, IT
	Drawing Title	

FLOOR PLANS -LIGHTING

E2.01

Drawing Number



FLOOR PLAN - PROPOSED - POWER
Scale: 1/8" = 1'-0"



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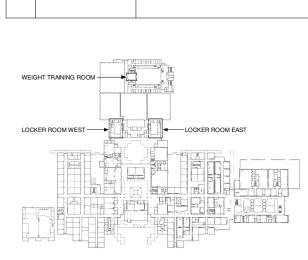
SMSD ROOMS RENOVATION

1625 Staffordshire Rd, Stafford, TX 77477

Date ISSUED FOR

1 2020/07/14 ISSUED FOR BID,
PERMIT AND
CONSTRUCTION

2 2020/07/17 ISSUED FOR BID

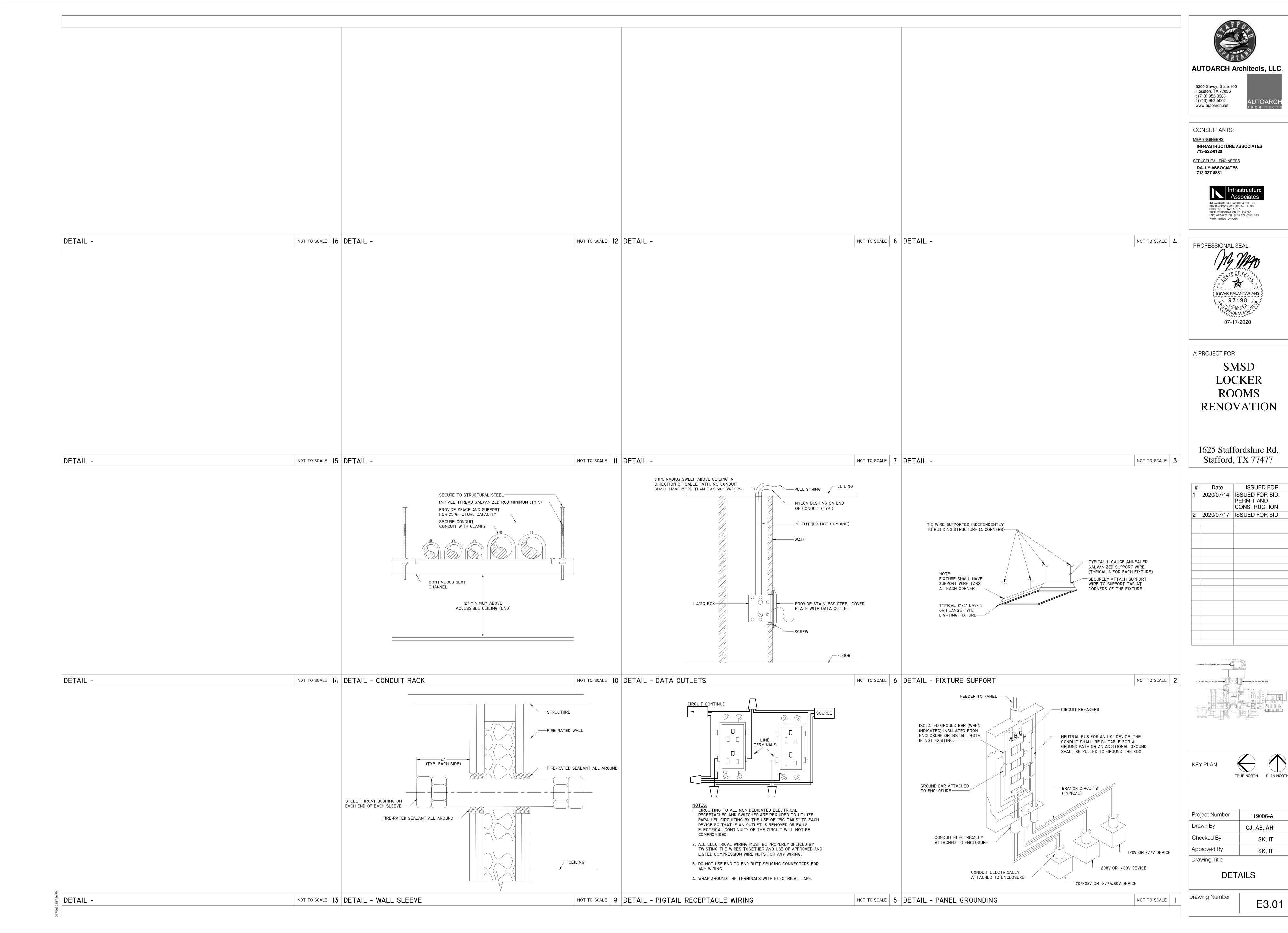


Project Number	19006-A
Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT
Drawing Title	

E2.02

FLOOR PLAN - POWER

Drawing Number



GRADE OF HORIZONTAL DRAINAGE PIPING

. HORIZONTAL DRAINAGE PIPING SHALL RUN IN PRACTICAL ALIGNMENT AND UNIFORM SLOPE OF NOT LESS THAN ONE-FOURTH (I/4) OF AN INCH PER FOOT OR TWO PERCENT (2) TOWARD POINT OF DISPOSAL PROVIDED THAT, WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER OR TO THE STRUCTURAL FEATURES OR TO THE ARRANGEMENT OF ANY BUILDING OR STRUCTURE TO OBTAIN A SLOPE OF ONE-FOURTH (1/4) OF AN INCH PER FOOT OR TWO PERCENT, ANY SUCH PIPE OR PIPING FOUR (4) INCHES OR LARGER IN DIAMETER MAY HAVE A SLOPE OF NOT LESS THAN ONE EIGHTH (I/8) OF AN INCH OR ONE (I) PERCENT, WHEN FIRST APPROVED BY THE ADMINISTRATIVE AUTHORITY.

PIPING MATERIALS

SANITARY WASTE AND VENT PIPING (BELOW GRADE) SCHEDULE 40 PVC, CONFORM TO ASTM D-1785 SOIL AND WASTE VENT PIPING. FITTINGS SHALL BE COMPATIBLE

MATERIAL WITH SOLVENT CEMENT TYPE JOINTS. SANITARY WASTE AND VENT PIPING (ABOVE SLAB ONLY)

PIPE: CAST IRON ASTM A 74, HUBLESS, SERVICE WEIGHT.

JOINTS: NO HUB, ASTM C 564 NEOPRENE GASKETS AND STANDARD STAINLESS STEEL CLAMP AND SOLID SHIELD ASSEMBLIES CONSTRUCTED OF TYPE 300 SERIES STAINLESS STEEL. CLAMP ASSEMBLIES SHALL CONFORM TO FM 1680 WHERE REQUIRED BY THE ADMINISTRATIVE AUTHORITY.

FITTINGS: CAST IRON, ASTM A 888 DRAINAGE PATTERN.

DOMESTIC WATER TYPE "L" COPPER TUBING WITH WROUGHT COPPER FITTINGS AND 95/5 (TIN/ANTIMONY) SOLDER JOINTS.

PLUMBING LEGEND & ABBREVIATIONS

	NOT INDICATED ON DRAWINGS
	NEW PLUMBING FIXTURE
====SAN / S=====	SANITARY WASTE
GW	GREASE WASTE
V	VENT
FIRE	FIRE LINE
cw	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER PIPING
====HWR======	DOMESTIC HOT WATER RETURN PIPING
NG / G	NATURAL GAS
● FCO	FLOOR CLEAN OUT
● ECO	EXTERIOR CLEANOUT
	WALL CLEANOUT
● FD	FLOOR DRAIN
FS FS	FLOOR SINK
##	RISER IDENTIFICATION
	ELBOW UP
	ELBOW DOWN
	CAP AND SEAL
# <u>_</u>	BALL VALVE
Ф 9 B.V.	BALANCING VALVE
√	GAS VALVE
₩ C.V.	CHECK VALVE
<u>s</u>	SOLENOID VALVE
	FLOW SWITCH
TP	AUTOMATIC TRAP PRIMER
BFP	BACKFLOW PREVENTER
VTR	VENT THROUGH ROOF
F.F.L.	FINISHED FLOOR LEVEL
I.L.	INVERT LEVEL
A.R.F.	ABOVE FINISHED ROOF
(E)	EXISTING TO REMAIN
(OF)	OVERFLOW STORM DRAINAGE
(P)	PRIMARY STORM DRAINAGE
T.A.S	TEXAS ACCESSIBILITY STANDARDS

GENERAL NOTES BOOK SPECIFICATION SUPERCEDE ANY NOTES BELOW

- THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATIONS SHOWN. WHERE INTERFERENCE'S WITH COMPONENTS OF OTHER TRADE'S WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTINGS AND LOCATIONS THAT VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL OBTAIN PROJECT ENGINEER'S APPROVAL PRIOR TO INSTALLATION. NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.
- BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.
- ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.
- PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE. CONTRACTOR SHALL PROVIDE A COVER STATING WHAT SYSTEM IT IS SERVING. (CLEANOUT SANITARY, CLEANOUT GREASE WASTE, CLEANOUT ACID WASTE.)
- INDIVIDUAL FIXTURE SUPPLY AND DRAIN SERVICES ARE NOT SHOWN DUE TO DRAWING SPACE LIMITATIONS. THIS CONTRACTOR SHALL PROVIDE ALL SERVICES FOR A COMPLETE FIRST CLASS INSTALLATION.
- FURNISH AND INSTALL ALL NECESSARY VALVES, TRAPS, GAUGES, STRAINERS, UNIONS, ETC. FOR EACH PIECE OF EQUIPMENT HAVING PLUMBING CONNECTIONS TO FACILITATE PROPER FUNCTIONING AND SERVICING.
- SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR OR CEILING.
- EACH CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET THERE IN IMPLEMENTING HIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS VISITED THE PREMISES AND THAT HIS COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO PROPERLY ACCOMPLISH HIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL COMPENSATION.
- 9. FIELD VERIFY EXISTING AND FUTURE GRADES WITHIN AREAS WHERE WORK IS BEING DONE.
- 10. VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO INSTALLATION OF FLOOR DRAINS AND FLOOR SINKS. RELOCATION DUE TO MISPLACEMENT SHALL BE AT CONTRACTORS EXPENSE.
- II. PROVIDE A KEYED ACCESS PANELS FOR ALL VALVES AND APPARATUSES THAT REQUIRE MAINTENANCE.
- 12. A WATER HAMMER ARRESTOR SHALL BE INSTALLED FOR ALL SINGLE AND MULTIPLE FIXTURE BRANCH LINES. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND CONFORM TO ASSE 1010. PROVIDE FOR HOT WATER AND COLD WATER LINES AND REFER TO WATER HAMMER ARRESTOR DETAIL FOR MORE INFORMATION AND SIZING.
- I3. INSULATE PIPING AS FOLLOWS:

DOMESTIC COLD WATER PIPING: INSULATE AND VAPOR SEAL ALL COLD AND SOFTENED WATER PIPE WITH GLASS FIBER PIPE INSULATION. (EXCEPTION: ALL PIPING EXPOSED TO THE EXTERIOR SHALL BE PROVIDED WITH ALUMINUM).

DOMESTIC HOT WATER PIPING: INSULATE ALL HOT WATER PIPE WITH GLASS FIBER PIPE INSULATION WITH FACTORY-APPLIED WHITE JACKET.

INSULATE AND VAPOR SEAL ALL ABOVEGROUND P-TRAPS AND HORIZONTAL DRAIN PIPING RECEIVING CONDENSATE OR ICE MAKER DRAINAGE WITH 1/2" GLASS PER FIBER INSULATION. INSULATE AND VAPOR SEAL ROOF DRAIN AND OVERFLOW ROOF DRAIN SUMP, PIPING AND FITTINGS FROM DRAIN TO VERTICAL LEADER WITH 1/2" GLASS FIBER INSULATION. A.D.A. ACCESSIBLE LAVATORIES AND SINKS:

INSULATE ALL EXPOSED DRAIN PIPING AND WATER SUPPLY PIPING BENEATH A.D.A. COMPLIANT LAVATORIES & SINKS WITH FULLY MOLDED CLOSED CELL VINYL INSULATION KIT AS MANUFACTURED BY TRUEBRO, BROCAR OR MCGUIRE.

14. SUPPORT UNBURIED PIPE AS FOLLOWS:

HORIZONTAL PIPING:

HUBLESS CAST IRON SOIL PIPING SHALL BE SUPPORTED AT LEAST AT EVERY OTHER JOINT EXCEPT THAT WHEN THE DEVELOPED LENGTH BETWEEN SUPPORTS EXCEEDS FOUR FEET, THEY SHALL BE PROVIDED AT EACH JOINT. SUPPORTS SHALL ALSO BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE PLACED IMMEDIATELY ADJACENT TO THE COUPLING. SUSPENDED LINES SHALL BE BRACED TO PREVENT HORIZONTAL

COPPER TUBING SHALL BE SUPPORTED AT NOT MORE THAN SIX FOOT INTERVALS FOR PIPING 1-1/2" AND SMALLER AND NINE FOOT INTERVALS FOR PIPING 2" AND LARGER IN DIAMETER. HANGERS FOR NON-INSULATED COPPER PIPING SHALL HAVE A COPPER FINISH. IN POTENTIALLY DAMP LOCATIONS, NON-INSULATED COPPER PIPING HANGERS OR SUPPORTS SHALL BE PLASTIC-COATED. STEEL PIPING SHALL BE SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR 1/2" PIPING, 8 FEET FOR

3/4" & I" PIPING AND IO FEET FOR I-I/4" AND LARGER PIPING. VERTICAL PIPING:

PROVIDE RISER CLAMP AT BASE AND AT EACH FLOOR LEVEL

15. MARKING AND IDENTIFICATION: IDENTIFY EACH PIPE WITH LABELING AT THE FOLLOWING LOCATIONS:

-AT EACH BRANCH TAKE-OFF FROM A MAIN -ON EACH SIDE OF A WALL PENETRATION

-EVERY 20' OF STRAIGHT RUN OF PIPE -AT EQUIPMENT CONNECTIONS IF MORE THAN 10' FROM A BRANCH TAKE-OFF

DOMESTIC HOT WATER: INDICATE DELIVERED WATER TEMPERATURE ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.

INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.

MEDIUM PRESSURE GAS PIPING:

MEDIUM PRESSURE GAS PIPING (14" WIC TO 5 PI) SHALL BE IDENTIFIED BY THE STATEMENT, "WARNING TO 5 PI NATURAL GAS." THESE LABELS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 30 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL HAVE IDENTIFICATION TAGS IN ACCORDANCE WITH APPLICABLE CODES.

FLOORS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE ABOVE GRADE FLOORS. WALLS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE FIRE RATED WALLS. WHERE PIPING PASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL. INSTALL CHROME OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.

PLUMBING FIXTURE SCHEDULE

			<u>'</u>		71411	י ווכ	IG LIXTURE SCHEDULE
MARK	DESCRIPTION	SIZ TRAP	ZE OF	CONNE	CW	HW	REMARKS
WC-I	WATER CLOSET (WALL MOUNTED)	-	4"	2"	I"	-	2257.00I AMERICAN STANDARD "AFWALL", WALL-MOUNTED FLUSHOMETER VALVE TOILET, VITREOUS CHINA, HIGH EFFICIENCY, LOW CONSUMPTION. OPERATES IN THE RANGE OF I.28 GPF, CONDENSATION CHANNEL, ELONGATED BOWL, POWERFUL DIRECT-FED SIPHON JET ACTION, I-I/2" INLET SPUD, FULLY-GLAZED 2-I/8" TRAPWAY, IO" X I2" WATER SURFACE AREA.
15"							III-I.28-ES-S-TMO SLOAN "OPTIMA", I" I.P.S. SCREWDRIVER BAK-CHEK® ANGLE STOP, FREE SPINNING VANDAL RESISTANT STOP CAP, HIGH BACK PRESSURE VACUUM BREAKER FLUSH CONNECTION WITH ONE-PIECE BOTTOM HEX COUPLING NUT, SPUD COUPLING AND FLANGE FOR I ½" TOP SPUD, EL-I54 TRANSFORMER (I20 VAC/24 VAC 50 VA). THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR THE CONCEALED LOW VOLTAGE WIRING BETWEEN THE MULTI USE TRANSFORMER FOR THE WATER CLOSETS, URINALS AND FACULTY LAVATORIES. LOCATE THE TRANSFORMERS ABOVE ACCESSIBLE CEILINGS OR PROVIDE ACCESS PANEL FOR HARD CEILINGS. UP TO 6 FIXTURE PER TRANSFORMER.
							9500C CHURCH, SEATS SHALL BE EXTRA HEAVY WEIGHT AND INJECTION MOLDED OF SOLID PLASTIC. SEATS SHALL BE OPEN FRONT LESS COVER FOR ELONGATED BOWL AND FEATURE LARGE MOLDED-IN BUMPERS. CONCEALED CHECK HINGES TO FEATURE 300 SERIES STAINLESS STEEL POSTS THAT STOP SEAT II DEGREES BEYOND VERTICAL. USES 300 SERIES STAINLESS STEEL HARDWARE.
							WALL HUNG WATER CLOSET CARRIERS AND FACE PLATE SHALL BE BY JR SMITH.
WC-2	WATER CLOSET (WALL MOUNTED) (A.D.A.)	-	4"	2"	 "	-	2257.00I AMERICAN STANDARD "AFWALL", WALL-MOUNTED FLUSHOMETER VALVE TOILET, VITREOUS CHINA, HIGH EFFICIENCY, LOW CONSUMPTION. OPERATES IN THE RANGE OF I.28 GPF, CONDENSATION CHANNEL, ELONGATED BOWL, POWERFUL DIRECT-FED SIPHON JET ACTION, I-I/2" INLET SPUD, FULLY-GLAZED 2-I/8" TRAPWAY, IO" X I2" WATER SURFACE AREA.
-17"							III—I.28—ES—S—TMO SLOAN "OPTIMA", I" I.P.S. SCREWDRIVER BAK—CHEK® ANGLE STOP, FREE SPINNING VANDAL RESISTANT STOP CAP, HIGH BACK PRESSURE VACUUM BREAKER FLUSH CONNECTION WITH ONE—PIECE BOTTOM HEX COUPLING NUT, SPUD COUPLING AND FLANGE FOR I ½" TOP SPUD, EL—154 TRANSFORMER (120 VAC/24 VAC 50 VA). THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR THE CONCEALED LOW VOLTAGE WIRING BETWEEN THE MULTI USE TRANSFORMER FOR THE WATER CLOSETS, URINALS AND FACULTY LAVATORIES. LOCATE THE TRANSFORMERS ABOVE ACCESSIBLE CEILINGS OR PROVIDE ACCESS PANEL FOR HARD CEILINGS. UP TO 6 FIXTURE PER TRANSFORMER.
							9500C CHURCH, SEATS SHALL BE EXTRA HEAVY WEIGHT AND INJECTION MOLDED OF SOLID PLASTIC. SEATS SHALL BE OPEN FRONT LESS COVER FOR ELONGATED BOWL AND FEATURE LARGE MOLDED—IN BUMPERS. CONCEALED CHECK HINGES TO FEATURE 300 SERIES STAINLESS STEEL POSTS THAT STOP SEAT II DEGREES BEYOND VERTICAL. USES 300 SERIES STAINLESS STEEL HARDWARE.
							WALL HUNG WATER CLOSET CARRIERS AND FACE PLATE SHALL BE BY JR SMITH.
							WATER CLOSET RIM HEIGHT SHALL BE 17" ABOVE FINISHED FLOOR LEVEL PER A.D.A. REQUIREMENTS.
<u>L-1</u>	LAVATORY (WALL MOUNTED) (A.D.A.)	1 1/4"	2"	2"	1/2"	-	0355.012 AMERICAN STANDARD "LUCERNE", WALL HUNG LAVATORY, BARRIER FREE, VITREOUS CHINA, SELF-DRAINING DECK AREA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, 3 HOLES 4" CENTER.
<u> Trao</u>							II6.706.21.1 CHICAGO FAUCET, ELECTRONIC FAUCET, E-TRONIC 40 DECK MOUNTED 4" CENTERSET LAVATORY FAUCET - AC POWER, .5 GPM (I.9 L/MIN) VANDAL RESISTANT SPRAY OUTLET, MOUNTING HARDWARE INCLUDED, I2 VOLT AC TRANSFORMER REQUIRED £40.631.00.1 CHICAGO FAUCETS)
							BV02 MCGUIRE, I/2 IPS X 3/8 OD, QUARTER-TURN BRASS BALL VALVE ANGLE STOP, CHROME PLATED, CONVERTIBLE LOOSE KEY HANDLE.
							149 MCGUIRE, FLAT GRID STRAINER WITH 4" TAILPIECE. WROUGHT BRASS SINK STRAINER WITH 20 GA TAILPIECE AND BRASS LOCK AND COUPLING NUTS.
							8872 MCGUIRE, HEAVY CAST BRASS I I/4 X I I/4 ADJUSTABLE TRAP WITH CLEANOUT PLUG AND IIINCH CENTER TO END.
							102-EZ-W TRUEBRO, "P" TRAP AND SUPPLY INSULATION KIT.
							0700 J.R. SMITH, LAVATORY SUPPORTS WITH CONCEALED ARMS.
SK-I	HAND SINK	I I/2"	3"	2"	1/2"	1/2"	7-PS-68 ADVANCE TABCO, WALL MOUNTED HAND SINK, ONE PIECE DEEP DRAWN SINK BOWL (IO"WXI4"LX8"D), KEYHOLE WALL MOUNT BRACKET, STAINLESS STEEL BASKET DRAIN I I/2"IPS, 4"O.C. SPLASH MOUNTED GOOSENECK FAUCET, CHROME PLATED FURNISHED WITH AERATOR.
_							LK399A ELKAY, FLOOR MOUNT FOOT VALVE, I/2" I.PS. FEMALE INLETS AND OUTLETS.
							2165 MCGUIRE, ANGLE SUPPLY/WHEEL HANDLE.
							8872 MCGUIRE, CAST BODY P-TRAP AND CLEANOUT. INSULATE P-TRAP, TAILPIECE ASSEMBLY, AND HOT AND COLD WATER ANGLE VALVES WITH BROCAR PRODUCTS, INC. TRAP WRAP.
							270 LEONARD, I/2" COPPER ENCAPSULATED THERMOSTAT, LOCKED TEMPERATURE SETTING, INTEGRAL CHECK VALVES ON HOT AND COLD INLETS. (OUTLET TO BE SET TO II0°F)
<u>SH-I</u>	SHOWER STALL	1 1/2"	2"	2"	1/2"	1/2"	SHOWER STALL SHALL BE SPECIFIED BY ARCHITECT AND CONTRACTOR INSTALLED. PROVIDE 3"FD-I.
							SH-TKI-02-000 CHICAGO FAUCETS, TRIM KITS, 620 - <u>I.5 GPM.</u> FLOW RATE @ 80 PSI SHOWER HEAD WITH BALL JOINT, INCLUDES SHOWERHEAD ARM AND WALL FLANGE, VALVE NOT INCLUDED, ORDER 1910-VONF SEPARATELY, EMBOSSED AND COLOR CODED INDEXING ON WALL PLATE, INCLUDES 1910-002KJKCP SHOWER VALVE TRIM KIT, CHROME PLATE FINISH, WEIGHT: 3.672LBS.
							NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS FOR FOR MOUNTING HEIGHT OF THE SHOWER HEAD
							PROVIDE ANTI-SCALDING THERMOSTATIC MIXING VALVE. MIXING VALVE SHALL COMPLY WITH ASSE 1070.
<u>SH-2</u>	SHOWER STALL (A.D.A.)	l I/2"	2"	2"	1/2"	1/2"	SHOWER STALL SHALL BE SPECIFIED BY ARCHITECT AND CONTRACTOR INSTALLED. PROVIDE 3"FD-I.
							96-500-B30-L-V SYMMONS, VALVE SHALL BE 1.5 GPM. TEMPTROL PRESSURE-BALANCING MIXING VALVE WITH LEVER HANDLE, ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. LEVERTROL DIVERTER WITH INTEGRAL VOLUME CONTROL. CLEAR-FLO SHOWER HEAD WITH ARM AND FLANGE, WALL/HAND SHOWER WITH IN-LINE VACUUM BREAKER, FLEXIBLE 5' METAL HOSE, WALL CONNECTION AND FLANGE, 30" SLIDE BAR FOR HAND SHOWER MOUNTING. PROVIDE WITH 60" HOSE.
							NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS FOR SHOWER STALL FINISH, TRAY, CURTAIN, ROD, SEAT, GRAB BARS, SOAP DISH AND ADDITIONAL ACCESSORIES.
							PROVIDE ANTI-SCALDING THERMOSTATIC MIXING VALVE. MIXING VALVE SHALL COMPLY WITH ASSE 1070.
FD-I	FLOOR DRAIN	3"-4"	3"-4"	2"	-	-	2005-B-NB. J.R. SMITH, DUCO CAST IRON BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD 6" DIAMETER TYPE "A" NICKEL BRONZE STRAINER.
E00 !	EL COD						INSTALL COMPLETE WITH PROSET TRAP GUARD, EXCEPT FOR SHOWER DRAIN.
FCO-I	FLOOR CLEANOUT	<u>-</u>	<u>-</u>	-	- 	<u>-</u>	4040 J.R. SMITH, WITH SCREWED PLUG AND FLASHING RING AND COVER PLATE WITH SECURING SCREW. COVER PLATE SHALL BE FLUSH TO FINISH FLOOR, AND SUITABLE FOR FLOOR COVERING INSTALLED.



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CONSULTANTS:

MEP ENGINEERS INFRASTRUCTURE ASSOCIATES 713-622-0120

STRUCTURAL ENGINEERS DALLY ASSOCIATES 713-337-8881



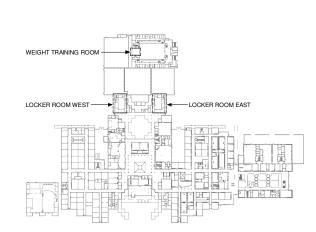
PROFESSIONAL SEAL:



A PROJECT FOR:

ROOMS RENOVATION

1625 Staffordshire Rd, Stafford, TX 77477

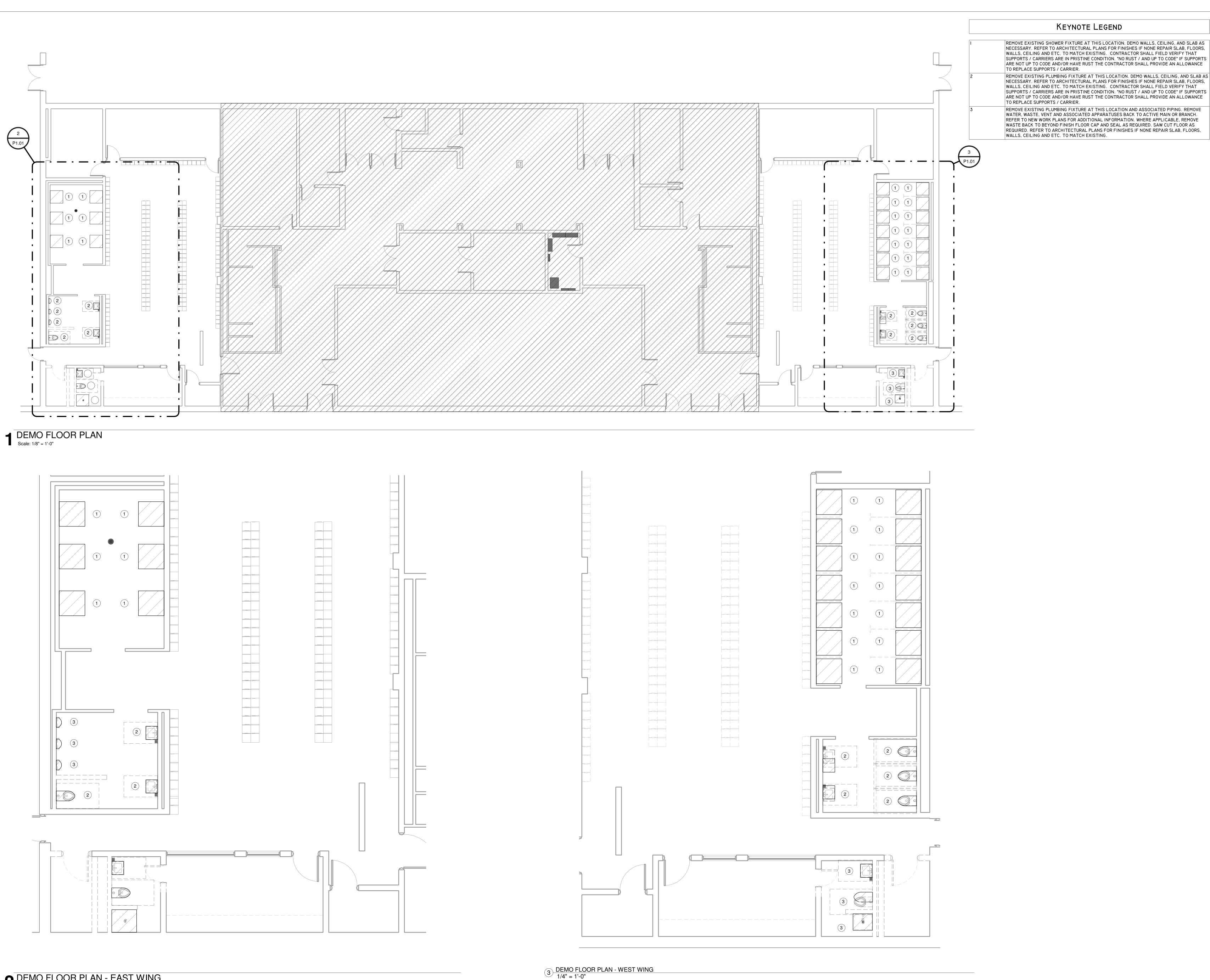


Project Number 19006-A Drawn By CJ, AB, AH Checked By SK, IT Approved By SK, IT Drawing Title

SCHEDULES, NOTES & LEGEND

Drawing Number

P0.01





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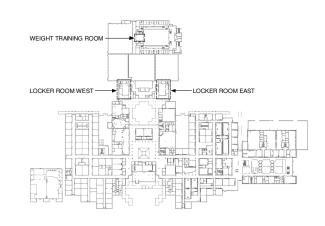


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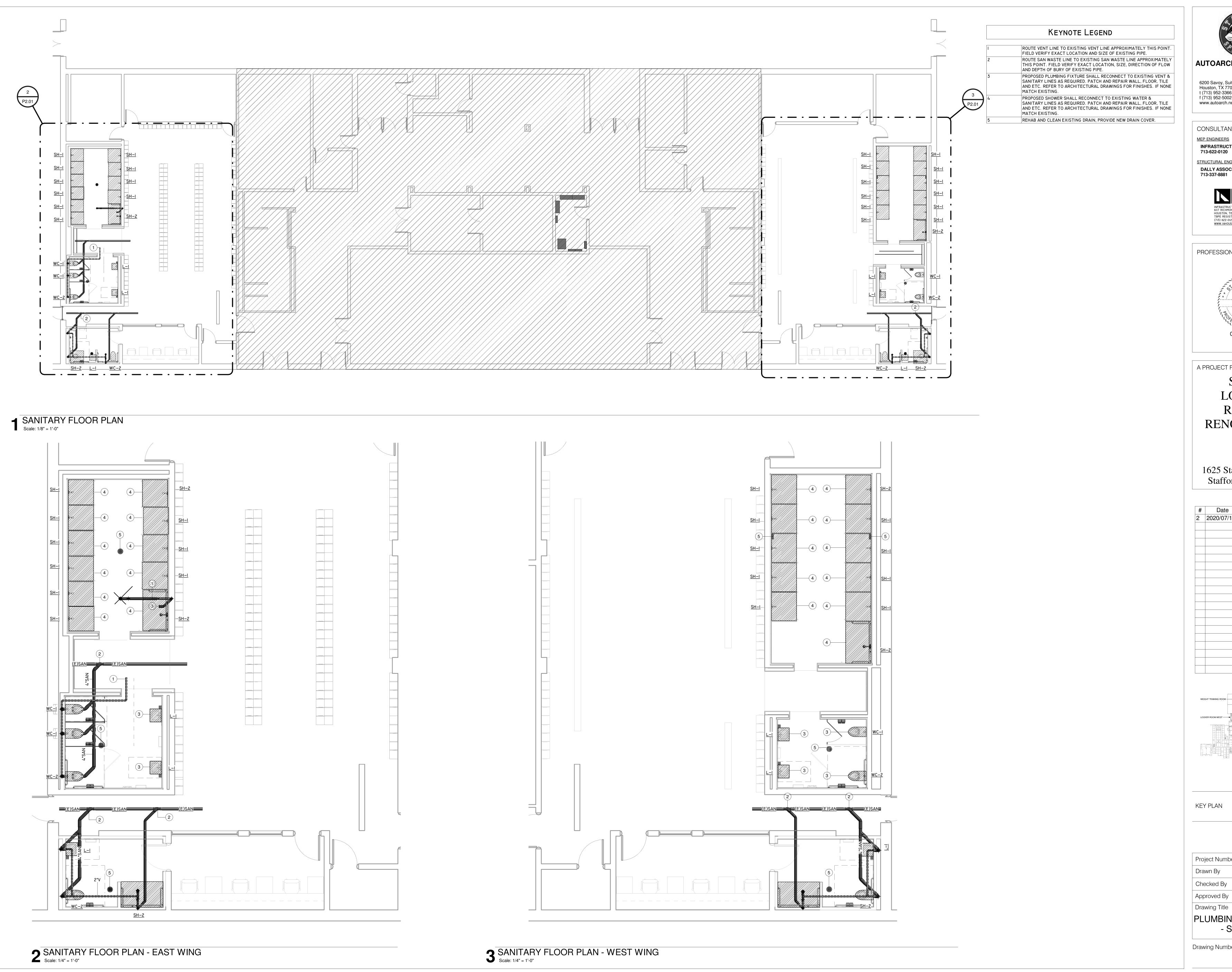
Project Number	19006-A
Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT
Drawing Title	

PLUMBING FLOOR PLAN - DEMO

Drawing Number

P1.01

2 DEMO FLOOR PLAN - EAST WING Scale: 1/4" = 1'-0"



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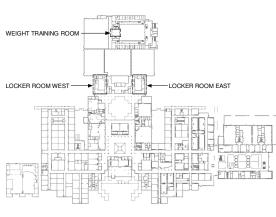


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	TRUE NORTH	PLAN NORT

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Drawn By	CJ, AB, AH
Checked By	SK, IT
Approved By	SK, IT
Drawing Title	

Drawing little PLUMBING FLOOR PLAN
- SANITARY

Drawing Number

P2.01

KEYNOTE LEGEND

ROUTE SAN WASTE LINE TO EXISTING SAN WASTE LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION, SIZE, DIRECTION OF FLOW AND DEPTH OF BURY OF EXISTING PIPE.

ROUTE VENT LINE TO EXISTING VENT LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE.



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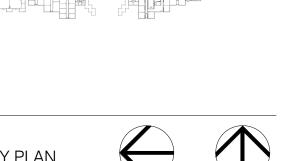
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WEIG	WEIGHT TRAINING ROOM		



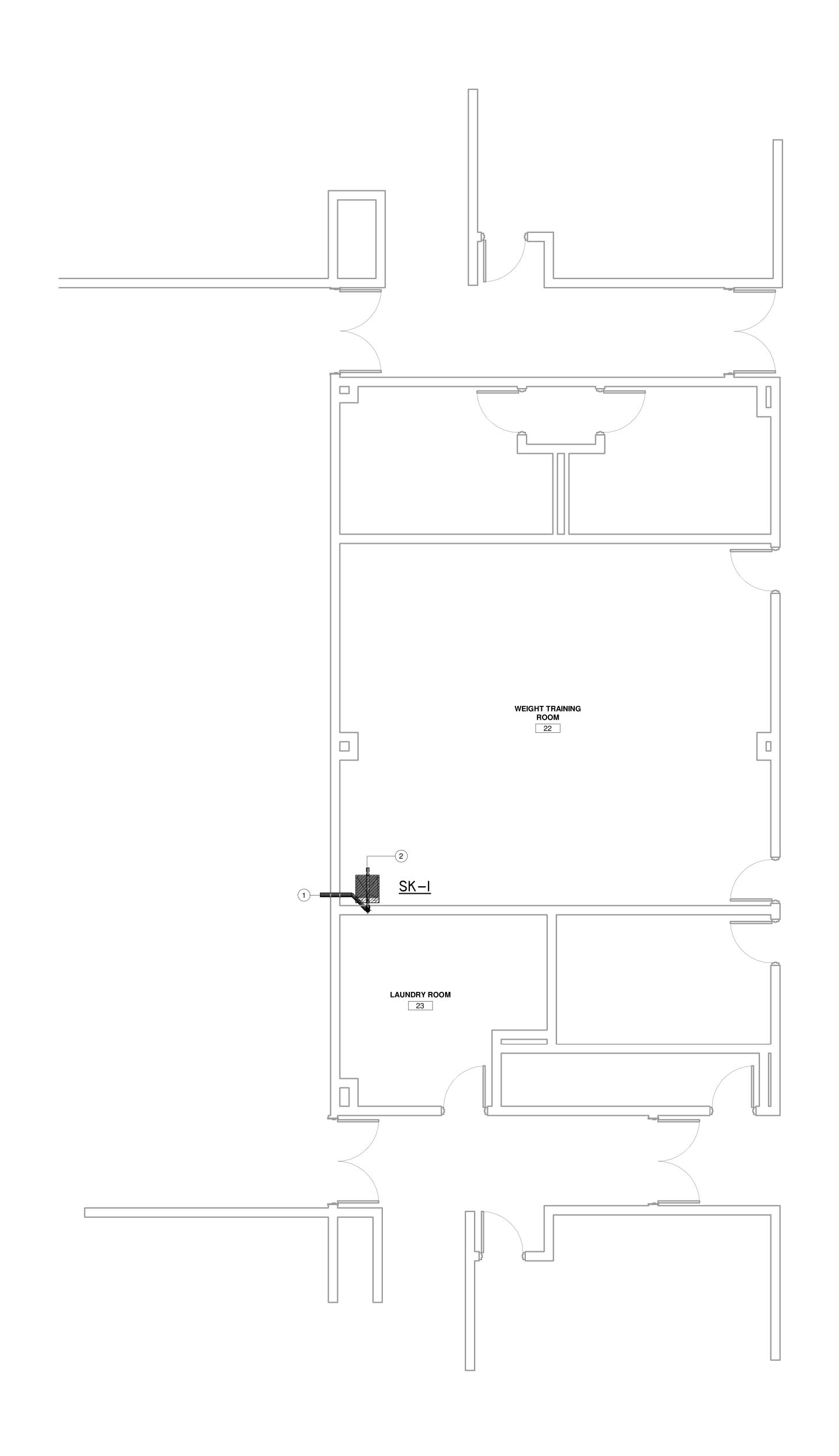
Project Number	19006-A
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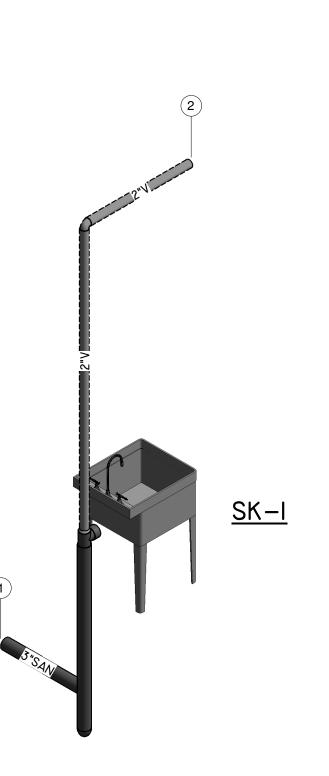
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PLUMBING FLOOR PLAN
- WEIGHT TRAINING
ROOM - SANITARY

Drawing Number

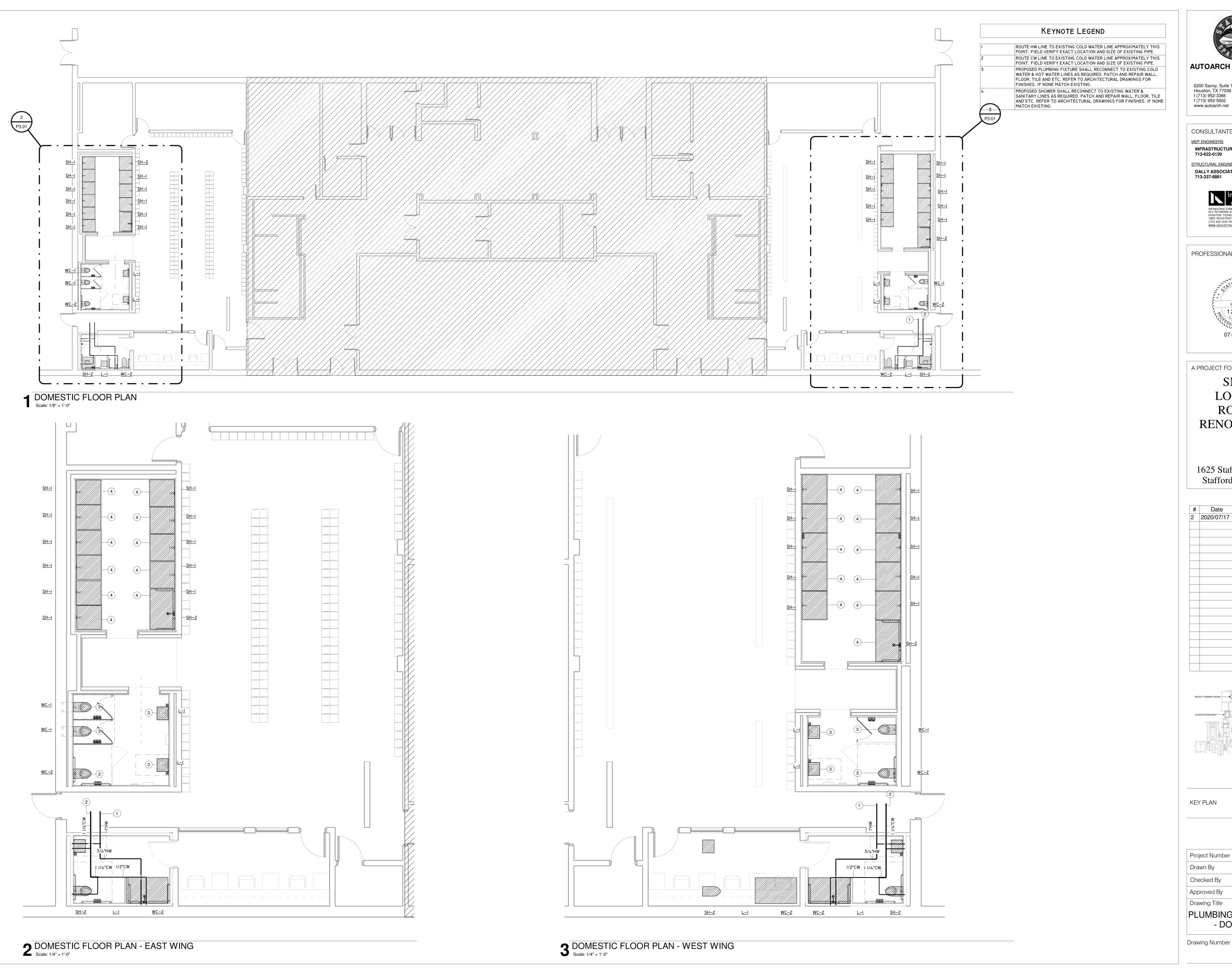
P2.02

2 RISER DIAGRAM - WEIGHT TRAINING ROOM - SANITARY Scale:





SANITARY FLOOR PLAN - WEIGHT TRAINING ROOM
Scale: 1/4" = 1'-0"





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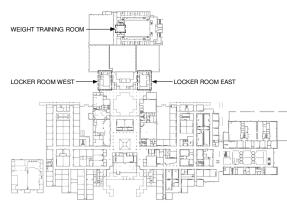


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Checked By	SK, IT
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Drawing Title	

PLUMBING FLOOR PLAN
- DOMESTIC

Drawing Number

P3.01

KEYNOTE LEGEND

ROUTE HW LINE TO EXISTING COLD WATER LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE.

ROUTE CW LINE TO EXISTING COLD WATER LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE.



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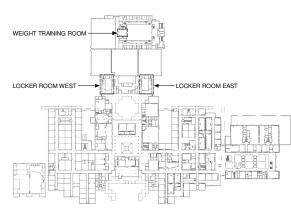


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SMSD LOCKER ROOMS RENOVATION

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KEY PLAN

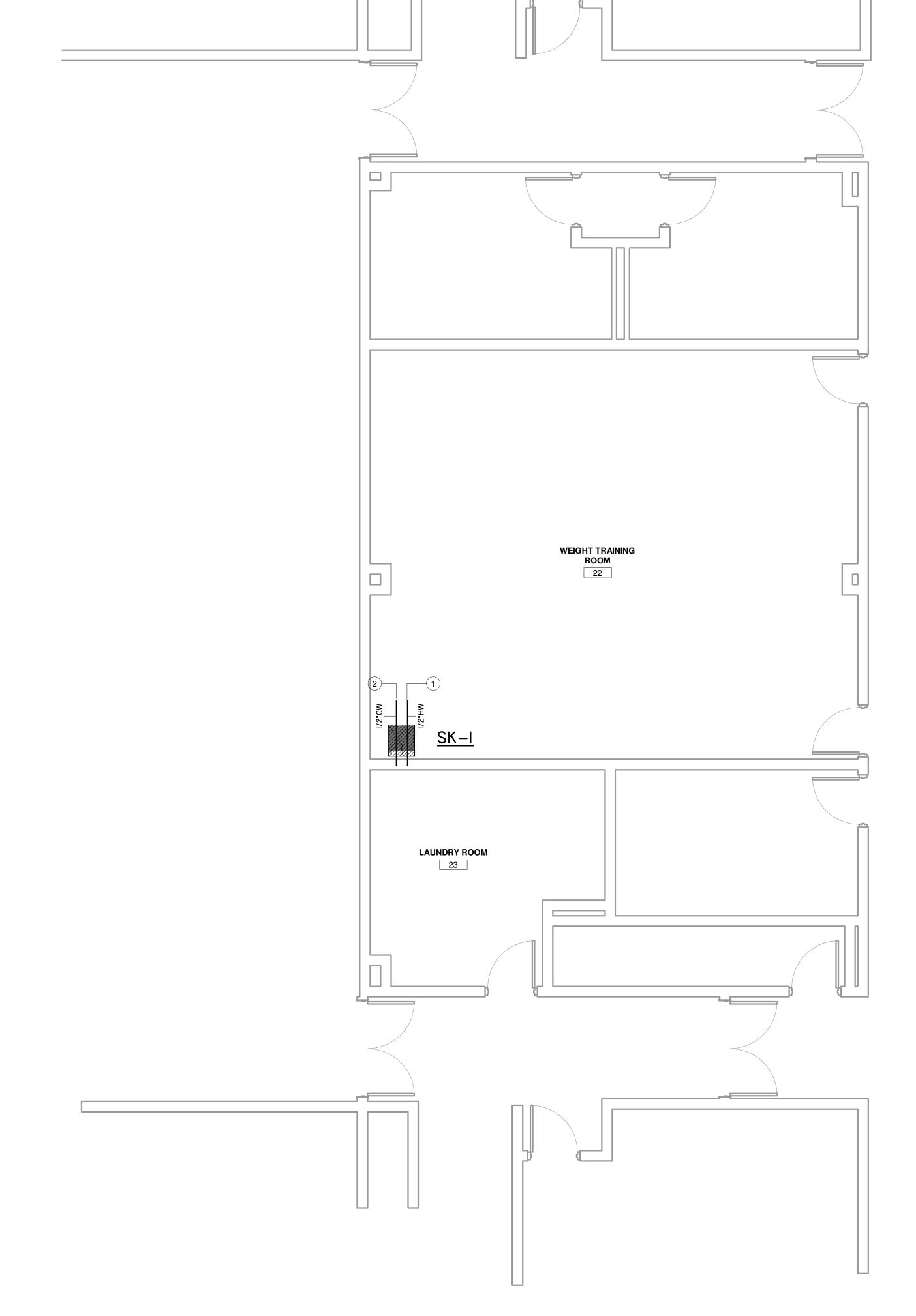
TRUE NORTH PLAN NO

Project Number	19006-A
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Approved By	SK, IT

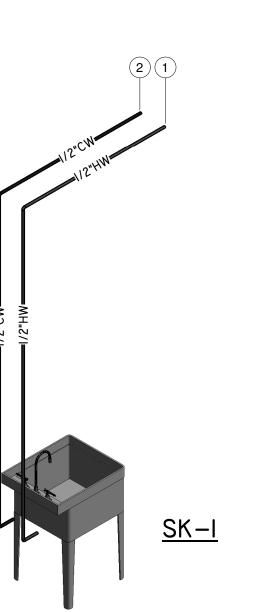
PLUMBING FLOOR PLAN
- WEIGHT TRAINING
ROOM

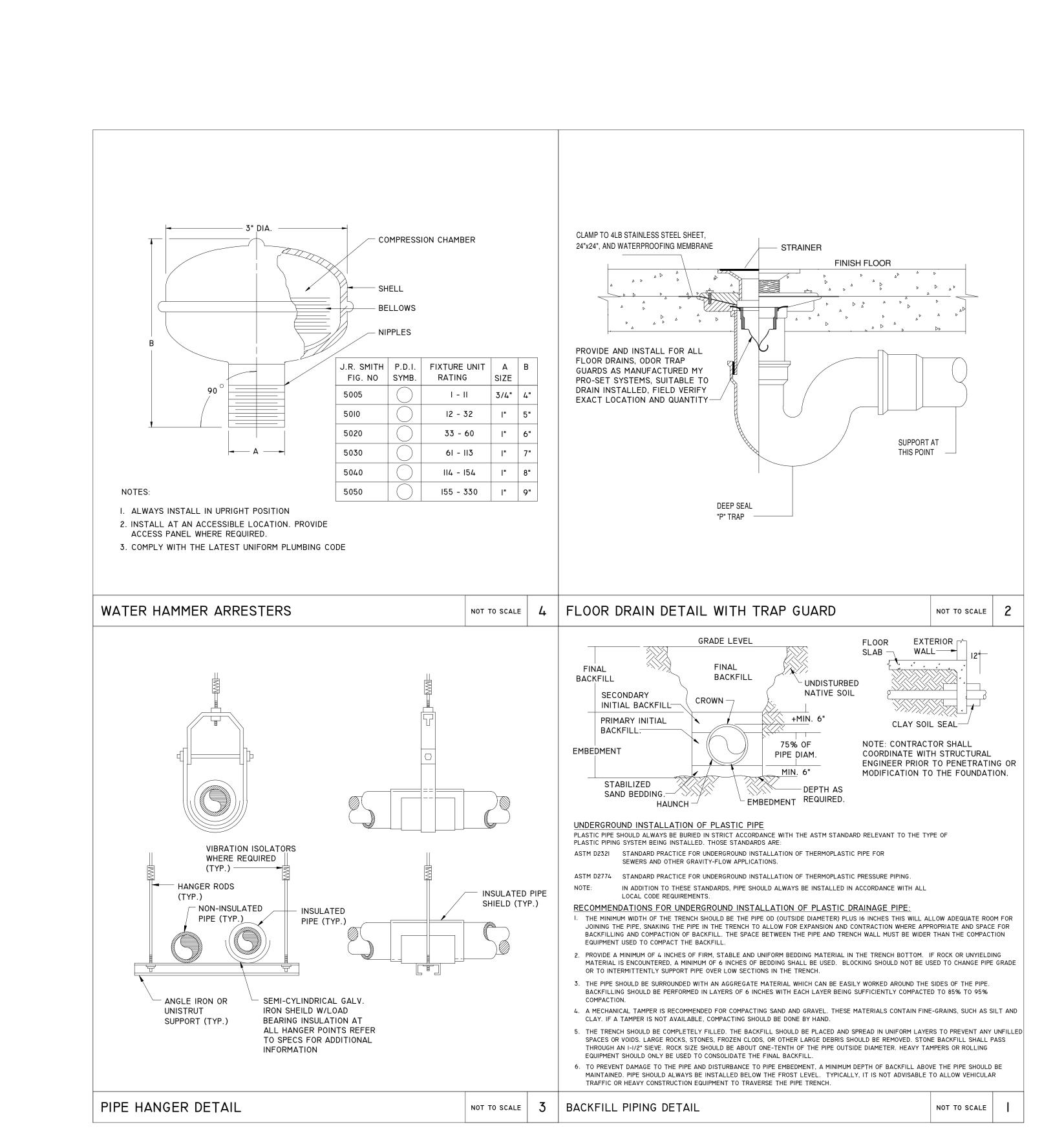
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P3.02



DOMESTIC FLOOR PLAN - WEIGHT TRAINING ROOM
Scale: 1/4" = 1'-0"







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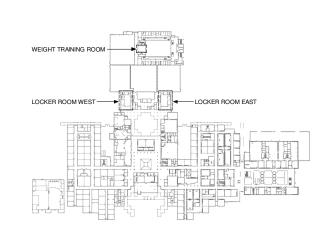


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KEY PLAN

TRUE NORTH PLAN NOF

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DETAILS

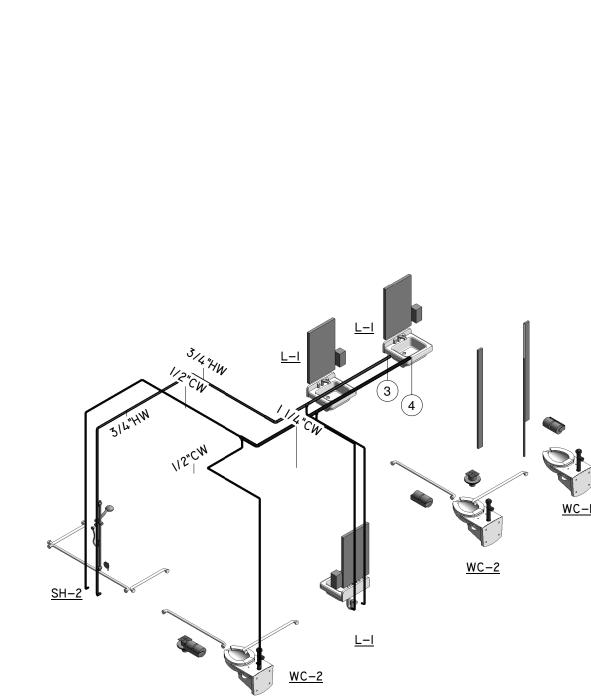
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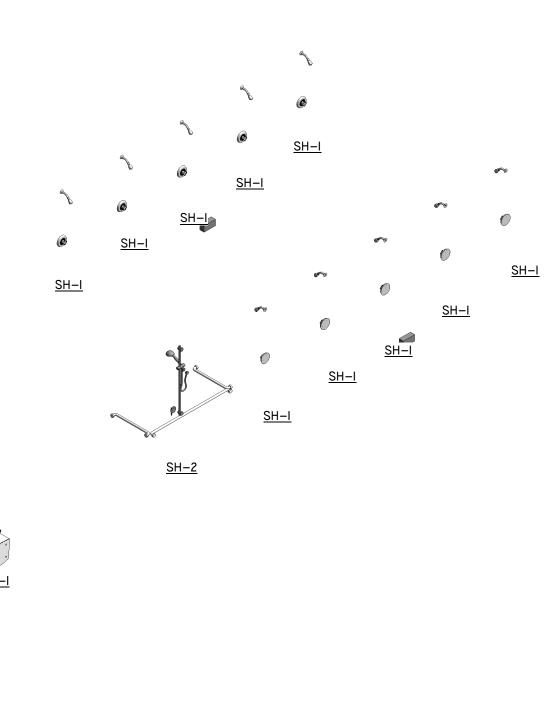
P4.01

RISER DIAGRAM - EAST WING - DOMESTIC Scale:

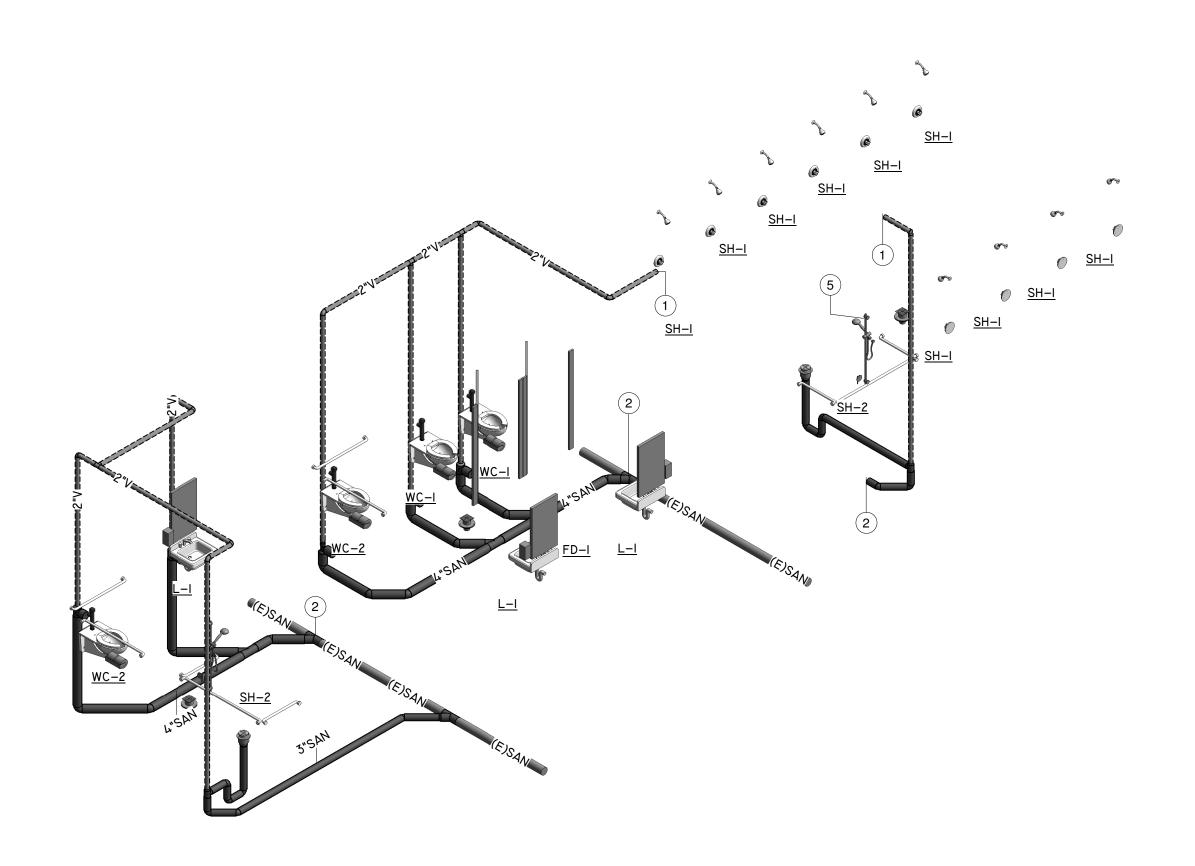
<u>WC-2</u>

4 RISER DIAGRAM - WEST WING - DOMESTIC

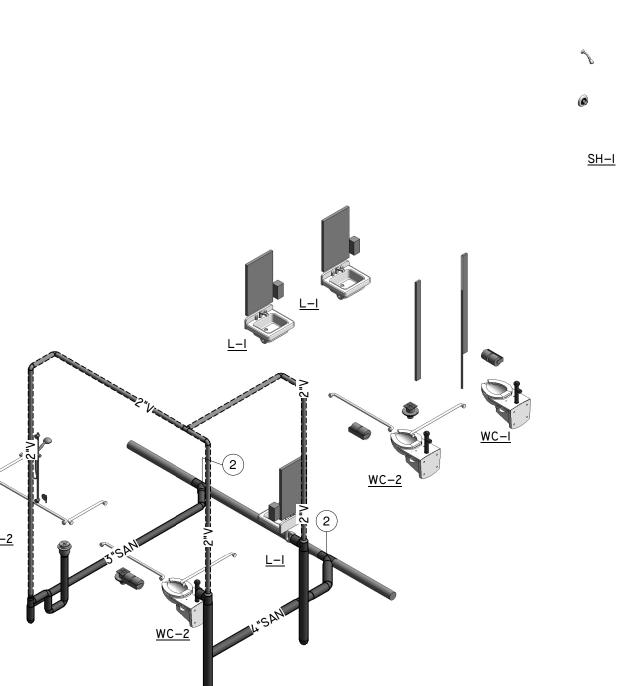


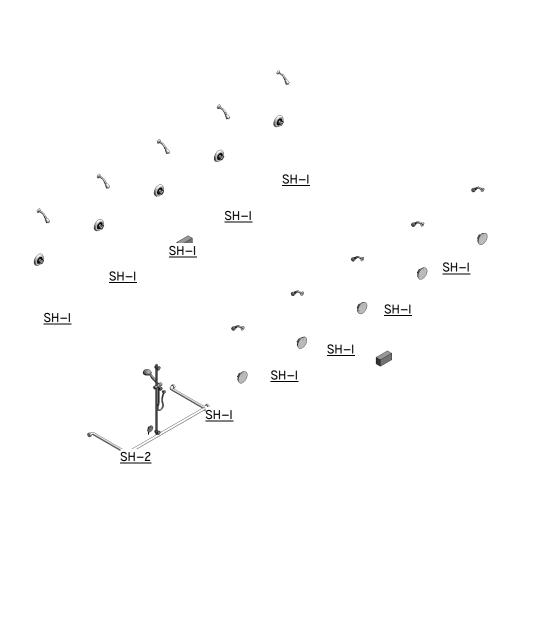


RISER DIAGRAM - EAST WING - SANITARY
Scale:



2 RISER DIAGRAM - WEST WING - SANITARY Scale:





SIZE OF EXISTING PIPE.

EXISTING.

ROUTE VENT LINE TO EXISTING VENT LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE. ROUTE SAN WASTE LINE TO EXISTING SAN WASTE LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION, SIZE, DIRECTION OF FLOW AND DEPTH OF BURY OF EXISTING PIPE. ROUTE HW LINE TO EXISTING COLD WATER LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE.

ROUTE CW LINE TO EXISTING COLD WATER LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND

PROPOSED PLUMBING FIXTURE SHALL RECONNECT TO EXISTING VENT & SANITARY LINES AS REQUIRED. PATCH AND REPAIR WALL, FLOOR, TILE AND ETC. REFER TO ARCHITECTURAL DRAWINGS FOR FINISHES. IF NONE MATCH

KEYNOTE LEGEND

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RISER DIAGRAMS

P5.01