

20500 MADRONA AVE, TORRANCE, CA 90503



PATH OF TRAVEL

NOTE:  ACCESSIBLE PATH OF TRAVEL (P.O.T.) SHALL NOT EXCEED 5% MAX SLOPE AT WALKWAYS WITH 2% MAX CROSS SLOPE

OWNER CITY OF TORRANCE TRANSIT SYSTEMS 20500 MADRONA AVE, TORRANCE, CA 90503, UNITED STATES CONTACT: XX T: XX E: XX	ELECTRICAL ENGINEER EDA INCORPORATED 10061 TALBERT AVENUE, SUITE 300 FOUNTAIN VALLEY, CA 92708 CONTACT: KEVIN FRIEDMAN E: KEVIN@EDAMCORPORATED.COM T: 714-609-3184	SCOPE OF WORK AT THE TORRANCE TRANSIT FACILITY SHALL INCLUDE THE FOLLOWING: FIRST FLOOR - • THE RENOVATION OF A STORAGE AREA INTO A NEW BREAKROOM AND DISPATCH AREA WITH NEW UPDATED LED LIGHTING, TWO GENDER NEUTRAL RESTROOMS (ONE WHICH MEETS ADA STANDARDS), A NEW KITCHENETTE, A NEW DISPATCH WINDOW AREA, RELOCATED DISPATCH MAILBOXES, REFINISHED CONCRETE FLOORS, AND WINDOW STOREFRONTS • THE RENOVATION OF THE CORRIDOR INCLUDES UPDATED LED LIGHTING, NEW LOCKERS AND BENCHES, AND A FULL HEIGHT STORAGE SPACE. • THE PLANNING ROOM SHALL HAVE A NEW STOREFRONT WINDOW • NEW EXHAUST FANS FOR ALL RESTROOMS • NEW FINISHES FOR THE INTERIOR AND EXTERIOR OF THE ELEVATOR ENTRY • THE RENOVATION OF THE WAREHOUSE INCLUDES REPOLISHED CONCRETE FLOOR, UPDATED LED LIGHTING • THE RENOVATION OF THE FOYER INCLUDES A NEW SERVICE COUNTER, CABINETRY, REFINISHED INTERIORS, POLISHED CONCRETE, AND UPDATED LED LIGHTING
ARCHITECT BOA ARCHITECTURE 1511 COTA AVENUE LONG BEACH, CA 90813 CONTACT: EDWARD LOK NG P: 562.912.7900 E: LOK.NG@BOAARCHITECTURE.COM	MECHANICAL ENGINEER EDA INCORPORATED 10061 TALBERT AVENUE, SUITE 300 FOUNTAIN VALLEY, CA 92708 CONTACT: KEVIN FRIEDMAN E: KEVIN@EDAMCORPORATED.COM T: 714-609-3184	SECOND FLOOR - • THE RENOVATION OF COMMON SPACES WITH A NEW LANDING FACADE WALL WITH A TV DISPLAY, AN UPDATED DRINKING FOUNTAIN, REPOLISHED CONCRETE FLOOR, UPDATED LED LIGHTING, WALL CABINETRY FOR ADDED STORAGE, AND UPDATED OUTLETS WITH USB FIXTURES • A NEW PRIVATE OFFICE • A NEW KITCHEN LAYOUT WITH PROPER FIXTURES • NEW EXHAUST FANS AT ALL RESTROOMS • A NEW OFFICE WITH CUBICLES • NEW CARPET, PAINT, AND ACOUSTICS AT EXISTING OFFICES
STRUCTURAL ENGINEERING FOR INTERIOR RENOVATION PACIFIC ENGINEERING 17703 CRENSHAW BLVD. TORRANCE, CA 90504 CONTACT: VICTOR CHAI-PHASEET T: 310-516-9275	PLUMBING ENGINEER EDA INCORPORATED 10061 TALBERT AVENUE, SUITE 300 FOUNTAIN VALLEY, CA 92708 CONTACT: KEVIN FRIEDMAN E: KEVIN@EDAMCORPORATED.COM T: 714-609-3184	

&	AND	INSUL	INSULATION	
@	ANGLE	INT	INTERIOR	
^	AT	JAN	JANITOR	
~	CENTERLINE	JAM	JOINT	APPLICABLE STATE CODES (WITH CITY OF TORRANCE AMENDMENTS)
1	DIAMETER OR ROUND	KIT	KITCHEN	
L	PERPENDICULAR	LAM	LAMINATE	CALIFORNIA BUILDING CODE
f	POUND OR NUMBER	LAV	LAVATORY	CALIFORNIA GREEN BUILDING STANDARDS
ACC.	ACCESSIBLE	LT	LIGHT	CALIFORNIA MECHANICAL CODE
AC	AIR CONDITIONING	LT	LIGHT	CALIFORNIA ELECTRICAL CODE
ACOUS.	ACOUSTICAL	M.C.	MEDICINE CABINET	CALIFORNIA PLUMBING CODE
ADJ.	AREA DRAIN	MECH	MECHANICAL	CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS
AL	ADJUSTABLE	MEMB	MEMBRANE	
AL	ALUMINUM	MTL	METAL	FEDERAL STANDARDS
APPROX	APPROXIMATE	MFR	MANUFACTURER	AIA STANDARDS
				2010

APN:	7352-012-909
OCCUPANCY GROUP:	B
CONSTRUCTION TYPE:	V-A
EXISTING BUILDING AREA:	32,825 S.F.
INTERIOR AREA TO BE RENOVATED:	7,611 S.F.

--- P.O.T. (ACCESSIBLE PATH OF TRAVEL)

DETAIL NUMBER
SHEET NUMBER

SECTION LETTER
SHEET NUMBER

ELEVATION LETTER
ELEVATION NUMBER
SHEET NUMBER

ROOM NAME ROOM NUMBER

DOOR NUMBER

RENOVATION KEYNOTE

DEMOLITION KEYNOTE

FINISH KEYNOTE

A map showing the project location. The map includes the following labels: HAWTHORNE BLVD (vertical line on the left), MADISON AVE (vertical line in the center), DEL AMO BLVD (horizontal line at the top), and TORRANCE BLVD (horizontal line at the bottom). A vertical line on the right is labeled GARDENVIEW BLVD. A black rectangle is located at the intersection of Hawthorne Blvd and Madison Ave. An arrow points from the text 'PROJECT LOCATION' to this rectangle.

ABBREVIATIONS

VICINITY MAP



A0.1

DOOR #	DOOR SIZE		DOOR TYPE	DOOR SIZE		DOOR		FRAME		FIRE RATED	DETAILS			HARDWARE SET	COMMENTS
	WIDTH	HEIGHT		HEIGHT	THK.	CONSTRUCT.	FINISH	MATERIAL	FINISH		HEAD	JAMB	THRESHOLD		
1	3' - 0" 1/32"	A	9' - 0"	1 3/4"	ALUM / GLZ	-	HM	PAINT			21A/2	21A/2	10A/2.2		CLOSER, DEADBOLT, KICKPLATE, HINGES, HANDLE, TEMPERED, EXTERIOR GRADE
2	3' - 0"	B	7' - 0"	1 3/4"	HM	PAINT	HM	PAINT			71A/0	81A/0	15A/0.0		CLOSER AT ADA RESTROOM, CLATCH AND LOCK, DEADBOLT, KICKPLATE, HINGES
3	3' - 0"	B	7' - 0"	1 3/4"	HM	PAINT	HM	PAINT			71A/0	81A/0	15A/0.0		CLOSER AT ADA RESTROOM, CLATCH AND LOCK, DEADBOLT, KICKPLATE, HINGES
4	3' - 0"	B	8' - 8"	1 3/4"	HM	PAINT	HM	PAINT			71A/0	81A/0	20A/0.0		LATCH AND LOCK, DEADBOLT, KICKPLATE, HINGES, ELECTRIFICATION FOR CARD READER
5	3' - 0"	B	7' - 8"	1 3/4"	HM	PAINT	HM	PAINT			71A/0	81A/0	15A/0.0		CLOSER, DEADBOLT, KICKPLATE, HINGES, HANDLE, TEMPERED GLASS
6	3' - 0"	B	7' - 0"	1 3/4"	HM	PAINT	HM	PAINT			71A/0	81A/0	15A/0.0		LATCH AND LOCK, DEADBOLT, KICKPLATE, HINGES, ELECTRIFICATION FOR CARD READER
7	3' - 0"	B	7' - 0"	1 3/4"	HM	PAINT	HM	PAINT			71A/0	81A/0	15A/0.0		LATCH AND LOCK, DEADBOLT, KICKPLATE, HINGES, ELECTRIFICATION FOR CARD READER
8	3' - 0"	E	7' - 0"	1 3/4"	HM/GLZ	PAINT	MH	PAINT	Y		71A/0	81A/0	15A/0.0		CLOSER, LATCH, KICKPLATE, HINGES HANDLE, TEMPERED GLASS, ELECTRIFICATION FOR CARD READER
9	6' - 8"	C	4' - 8"		MTL		HM								SEE SPEC
10	6' - 0"	D	7' - 0"				HM	PAINT			21A/5.0	22A/5.0			NEW FRAME AT EXISTING OPENING

The diagrams illustrate various door and window options with the following details:

- Diagram A: SINGLE FULL LITE ALUMINUM FRAME**
 - Dimensions: PER SCHEDULE (width and height).
 - Labels: FULL LITE TEMP GLAZING.
- Diagram B: SINGLE HOLLOW METAL**
 - Dimensions: PER SCHEDULE (width and height).
 - Labels: 0'-2" (top), 3/4" TO 1-1/4" (left), HARDWARE (bottom left), 10" (bottom), 10" SS KICK (bottom right).
- Diagram C: ROLL UP SERVICE DOOR-COUNTER HEIGHT**
 - Labels: SS. FRAME, ANODIZE ALM. SLOT, 2'-10" AFF (bottom right).
- Diagram D: NEW CASE OPENING W/O DOOR**
 - Dimensions: PER SCHEDULE (width and height).
 - Label: NEW CASE OPENING (center).
- Diagram E: SINGLE HOLLOW METAL WITH HALF**
 - Dimensions: PER SCHEDULE (width and height).
 - Labels: 3/4" TO 1-1/4" (left), HARDWARE (bottom left), 10" (bottom), 10" TOEICK (bottom right).

MARK	MANUFACTURER	LENGTH	FIXTURE STYLE	COMMENTS	QTY
L-1	HE WILLIAMS TROFFER LED	2'X4'	LAY IN TGRID LIGHT	SEE ELECTRICAL	40
L-2	ALCON LIGHTING	8' L	LINEAR SUSPENDED MOUNT	SEE ELECTRICAL AND DETAILS FOR DECK MOUNTING	20
L-3A	ALCON LIGHTING	6' L	LINEAR SURFACE MOUNT	SEE ELECTRICAL	8
L-3B	ALCON LIGHTING	4'	LINEAR RECESSED MOUNT	SEE ELECTRICAL	10
L-4	ALCON LIGHTING	4' WRAPAROUND	SURFACE MOUNT	SEE ELECTRICAL	10
L-5	ALCON LIGHTING	6" DIA	RECESSED CAN LIGHT	SEE ELECTRICAL	5

MARK	QTY	TYPE	TYPE	WIDTH	MATERIAL	GLAZING	LOCATION	MANUFACTURER	DETAILS AS.1	COMMENTS
W1	1	NEW, FIXED	A	17'-0"	ALUMINUM	1/2" THICK	EXTERIOR	-	4 AND 3	LOW-E GLASS - TEMPERED
W2	1	NEW, FIXED	B	15'-0"	ALUMINUM	1/2" THICK	EXTERIOR	-	4 AND 3	LOW-E GLASS - TEMPERED
W3	1	NEW, FIXED	C	15'-3"	ALUMINUM	1/2" THICK	EXTERIOR	-	4 AND 5	LOW-E GLASS - TEMPERED
W4	1	NEW, FIXED	D	14'-0"	ALUMINUM	1/2" THICK	INTERIOR	-	4 AND 5	LOW-E GLASS - TEMPERED
W5	1	NEW, FIXED	E	8'-0"	ALUMINUM	1/2" THICK	EXTERIOR	-	4 AND 5	LOW-E GLASS - TEMPERED
W6	1	NEW, FIXED	F	9'-0"	ALUMINUM	1/2" THICK	EXTERIOR	-	4 AND 5	LOW-E GLASS - TEMPERED
W7	1	NEW, FIXED	G	8'-6"	ALUMINUM	1/2" THICK	INTERIOR	-	4 AND 5	LOW-E GLASS - TEMPERED
W8	1	NEW, FIXED	H	9'-4"	ALUMINUM	1/2" THICK	INTERIOR	-	4 AND 5	LOW-E GLASS - TEMPERED
W9	1	OPERABLE	I	40'-0"	ALUMINUM	1/2" THICK	INTERIOR	-	4 AND 5	SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION
W10	1	OPERABLE	J	4'-0"	ALUMINUM	1/2" THICK	INTERIOR	-	4 AND 5	SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION

The drawings show various window and door configurations with the following labels:

- W1:** PER SCHEDULE, MULLIONS TO BE EQ DISTANCE, ALUM. FRAME, TEMP. GLAZING TYP, FF, 9'-0" height, 3'-6" width.
- W2:** PER SCHEDULE, MULLIONS TO BE EQ DISTANCE, ALUM. FRAME, SQUARE CORNER MULLION, TEMP. GLAZING, 9'-0" height, 6'-0" width.
- W3:** PER SCHEDULE, MULLIONS TO BE EQ DISTANCE, ALUM. FRAME, SQUARE CORNER MULLION, TYPE A DOOR, TEMP. GLAZING TYP, 9'-0" height, 6'-0" width.
- W4:** PER SCHEDULE, ALUM. FRAME, TEMP. GLAZING, SQUARE CORNER MULLION, OPEN, OPEN TRANSFER WINDOW, FF, 9'-0" height, 2'-6" width.
- W5:** PER SCHEDULE, ALUM. FRAME, SQUARE CORNER MULLION, TEMP. GLAZING TYP, FF, 9'-0" height, 2'-6" width.
- W7:** PER SCHEDULE, ALUM. FRAME, TEMP. GLAZING TYP, 8'-0" height, 6'-0" width.
- W8:** PER SCHEDULE, ALUM. FRAME, SQUARE CORNER MULLION, TEMP. GLAZING TYP, FF, 8'-0" height, 2'-10" width.
- W9:** PER SCHEDULE, ALUM. FRAME, SQUARE CORNER MULLION, TEMP. GLAZING TYP, FF, 8'-0" height, 10'-0" width.

MARK	MATERIAL	MANUFACTURER	MODEL	COMMENTS
CONC	CONCRETE	PER SPEC	ARCHITECT TO SELECT	AT FLOORS. PROVIDE SAMPLE FOR APPROVAL BEFORE APPLICATION. IN WET AREAS PROVIDE ANTISLIP FINISH WHERE APPLICABLE
CT-1	CARPET TILES - FIELD	SHAW CARPET	ARCHITECT TO SELECT	COLOR PER CLIENT
GL-1	GLAZING	PER SPEC	ARCHITECT TO SELECT	STOREFRONTS AND WINDOWS
ML-1	MULLIONS	ARCHITECT TO SELECT	ARCHITECT TO SELECT	STOREFRONTS AND WINDOWS
PL-1	LAMINATE	WILSONART	ARCHITECT TO SELECT	CASEWORK AND VANITIES
PL-2	LAMINATE	WILSONART	ARCHITECT TO SELECT	HALLWAY STORAGE CABINETS
PT-1	PAINT - INTERIOR	SHERWIN WILLIAMS	ARCHITECT TO SELECT	SATIN FINISH UON. SEMIGLOSS FINISH AT RESTROOMS, KITCHEN, FLAT FINISH AT WAREHOUSE, AND BREAKROOM CEILINGS
PT-2	PAINT - EXTERIOR FACADE REPAIR	SHERWIN WILLIAMS	ARCHITECT TO SELECT	COLOR PER CLIENT TO MATCH EXISTING FACADE ELEMENTS
PT-3	PAINT - EXTERIOR ACCENT	SHERWIN WILLIAMS	ARCHITECT TO SELECT	FACADE OF EXTERIOR ELEVATOR ENTRY
PD-1	PAINT - INTERIOR DOOR	SHERWIN WILLIAMS	ARCHITECT TO SELECT	SATIN FINISH AT INTERIOR DOORS - HOLLOW METAL
SQL-1	SPANDREL GLASS PANEL	SEE SPEC	ARCHITECT TO SELECT	AT NEW EXTERIOR STOREFRONT SYSTEM TO MAINTAIN FIRE VALVE
SS-1	SOLID SURFACE	WILSONART	ARCHITECT TO SELECT	CONTERTOPS AT RESTROOM AND KITCHENETTE
TL-1	PORCELAIN FLOOR TILE	ARCHITECT TO SELECT	ARCHITECT TO SELECT	AT INTERIOR RESTROOMS. GROUT JOINT TO BE 1/8"MIN GROUT: TBD
TL-2	PORCELAIN WALL TILE	ARCHITECT TO SELECT	ARCHITECT TO SELECT	AT INTERIOR RESTROOMS GROUT JOINT TO BE 1/8"MIN GROUT: TBD
TL-3	PORCELAIN WALL TILE	ARCHITECT TO SELECT	ARCHITECT TO SELECT	AT KITCHENETTE. GROUT JOINT TO BE 1/8"MIN GROUT: TBD
WB-1	WALL BASE	ALLSTATE RUBBER	4" TALL	TO MATCH CONCRETE
WB-2	WALL BASE	ALLSTATE RUBBER	4" TALL	TO MATCH CARPET
WP-1	WALL PANEL	WILSONART LAMINATE	ARCHITECT TO SELECT	INTERIOR ELEVATOR FACADE

MARK	TYPE	DESCRIPTION
DF-1	DUAL STATION DRINKING FOUNTAIN WITH BOTTLE FILLER	SEE PLUMBING DRAWINGS
DF-2	SINGLE DRINKING FOUNTAIN WITH BOTTLE FILLER	ELKAY EZH20
FD-1	FLOOR DRAIN	SEE PLUMBING DRAWINGS
KF-1	KITCHEN FAUCET	SEE PLUMBING DRAWINGS
KF-2	DRINKING FAUCET	SEE PLUMBING DRAWINGS
KS-1	KITCHEN SINK	SEE PLUMBING DRAWINGS. 1ST FLOOR KITCHENETTE SINK AND FAUCET AND SP-3
L-1	LAVATORY	SEE PLUMBING DRAWINGS. RESTROOM SINK, FAUCET, SOAP COMBO
LR-1	SINK FAUCET	SEE PLUMBING DRAWINGS
UR-1	URINAL	SEE PLUMBING DRAWINGS
WC-1	WATER CLOSET	SEE PLUMBING DRAWINGS

MARK	TYPE	MANU	MODEL	QTY	DESCRIPTION	LOCATION
P-01	SOAP DISPENSER	SLANO	ESD-2100	4	DECK MOUNTED HARDWIRED FOAM SOAP DISPENSER AT RESTROOM SINKS. PROVIDE POWER AT EACH LOCATION	VANITIES AND KITCHENETTES
P-02	RECESSED COMBO DISPENSER	BOBRICK	B-3092B-3091	2	COMBO RECESSED TOILET TISSUE/SEAT COVER DISPENSER/WASTE DISPOSAL (RIGHT OR LEFT). PROVIDE PROPER BACKING FOR ROUGH OPENING	SINGLE OCCUPANCY RESTROOMS
P-03	COAT HOOK	BOBRICK	B-9541	2	HEAVY-DUTY CLOTHES HOOK WITH CONCEALED MOUNTING	SINGLE OCCUPANCY RESTROOMS
P-04	GRAB BARS	BOBRICK	B-5806	1	1 1/4" DIAMETER STAINLESS STEEL GRAB BARS WITH SNAP FLANGE (1) 36" LENGTH AND (1) 42" LENGTH. SATIN FINISH. PROVIDE PROPER BACKING	ADA RESTROOM
P-05	RECESSED COMBO PAPER DISPENSER/TRASH	BOBRICK	B-43044	2	RECESSED PAPER TOWEL DISPENSER AND WASTER RECEPTACLE PROVIDE REQUIRED BLOCK FOR ROUGH OPENING	SINGLE OCCUPANCY RESTROOMS
P-06	MIRROR	BOBRICK		1	WALL MOUNTED MANUAL	SINGLE OCCUPANCY RESTROOMS
P-07	PAPER TOWEL DISPENSER	BOBRICK		2	WALL MOUNTED MANUAL	KITCHENETTES
P-08	MIRROR	BOBRICK		1	WALL MOUNTED MANUAL	SINGLE OCCUPANCY RESTROOMS

Mark	EQUIPMENT	SPECIFICATION	PURCHASED/INSTALLED BY	Comments
SP-1	LARGE TV DISPLAY	BY OWNER	CONTRACTOR	CONTRACTOR TO SUPPLY RECESSED WALL BOX FOR POWER AND DATA. CONTRACTOR TO SUPPLY POWER AND DATA
SP-2	REFRIGERATOR	BY OWNER	CONTRACTOR	TO INCLUDE WATER LINE FOR ICE MAKER. CONTRACTOR TO SUPPLY POWER
SP-3	GARBAGE DISPOSAL	CONTRACTOR	CONTRACTOR	CONTRACTOR TO SUPPLY POWER. GARBAGE DISPOSAL TO MEET ADA APPROACH CLEARANCES. INSINKERATOR ADGER SERIES BADGER 5XP OR EQUAL
SP-4	MICROWAVE	BY OWNER	CONTRACTOR	CONTRACTOR TO SUPPLY POWER
SP-5	SMALL TV DISPLAY	BY OWNER	CONTRACTOR	CONTRACTOR TO SUPPLY RECESSED WALL BOX FOR POWER AND DATA. CONTRACTOR TO SUPPLY POWER AND DATA
SP-6	LOCKERS	CONTRACTOR	CONTRACTOR	5% OF LOCKERS TO COMPLY WITH ACCESSIBILITY CODE.
SP-7	MAILBOXES	RETAINED	CONTRACTOR	CONTRACTOR TO REINSTALL MAILBOXES IN NEW LOCATION

MARK	COUNT	WIDTH	DEPTH	HEIGHT	FINISH	DESCRIPTION	LOCATION	COMMENTS
100S	1	10' - 0"	2' - 6"	2' - 6"	PL-1	DESK WITH TWO THREE TIERED DRAWERS	ROOM 113	PROVIDE SUPPORT BRACKETS FOR DESK AND BLOCKING IN WALL AS NEEDED
102A	2	2' - 0"	2' - 0"	2' - 8"	PL-1	LOWER CABINET WITH DOUBLE DOORS	ROOM 202	
102B	2	2' - 1"	2' - 0"	2' - 8"	PL-1	LOWER CABINET WITH DOUBLE DOORS	ROOM 202	
154A	1	3' - 0"	2' - 0"	2' - 8"	PL-1	LOWER SINK CABINET WITH DOUBLE DOORS	ROOM 103	FAUX TOEKICK FOR ADA
154B	1	3' - 0"	2' - 0"	2' - 8"	PL-1	LOWER SINK CABINET WITH DOUBLE DOORS	ROOM 202	FAUX TOEKICK FOR ADA
223A	1	1' - 10"	2' - 0"	2' - 8"	PL-1	LOWER CABINET WITH SINGLE DRAWER	ROOM 103	WITH MICROWAVE CUBBY, PROVIDE ADEQUATE POWER
223B	1	2' - 4"	2' - 0"	2' - 8"	PL-1	LOWER CABINET WITH SINGLE DRAWER	ROOM 202	
302A	1	2' - 10"	1' - 0"	3' - 0"	PL-1	WALL HUNG CABINET WITH DOUBLE DOOR AND ADJUSTABLE SHELF	ROOM 103	
302B	1	2' - 5 1/2"	1' - 0"	3' - 0"	PL-1	WALL HUNG CABINET WITH DOUBLE DOOR AND ADJUSTABLE SHELF	ROOM 103	
302C	2	2' - 0"	1' - 0"	3' - 0"	PL-1	WALL HUNG CABINET WITH DOUBLE DOOR AND ADJUSTABLE SHELF	ROOM 202	
302D	1	3' - 0"	1' - 0"	3' - 0"	PL-1	WALL HUNG CABINET WITH DOUBLE DOOR AND ADJUSTABLE SHELF	ROOM 202	
302E	1	2' - 0"	1' - 0"	3' - 0"	PL-1	WALL HUNG CABINET WITH DOUBLE DOORS	ROOM 103	WITH MICROWAVE CUBBY, PROVIDE ADEQUATE POWER
302B	1	2' - 4"	1' - 0"	3' - 0"	PL-1	WALL HUNG CABINET WITH DOUBLE DOORS	ROOM 202	
402A	5	4' - 0"	3' - 0"	7' - 10"	PL-2	TALL BUILT IN STORAGE CABINET DOUBLE DOOR AND ADJUSTABLE SHELVES	ROOM 102	LOCKABLE

NOTES:

1. CONTRACTOR SHALL PERFORM FIELD MEASUREMENTS AND SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY OWNER/ARCHITECT, PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL PROVIDE FINISH AND HARDWARE SAMPLES AND SUBMITALS FOR REVIEW AND APPROVAL BY OWNER/ARCHITECT.

SERIES 300 302
WALL HUNG CABINET WITH DOUBLE DOORS AND ADJUSTABLE SHELF

326 M
WALL HUNG CABINET WITH DOUBLE DOORS AND MICROWAVE CUBBY

SERIES 100 154
LOWER SINK CABINET WITH DOUBLE DOORS AND FAUX KICK

102
LOWER CABINET WITH DOUBLE DOORS AND ADJUSTABLE SHELF

SERIES 200 223 M
LOWER CABINET WITH SINGLE DRAWER AND MICROWAVE CUBBY

SERIES 400 402
TALL CABINET WITH DOUBLE DOORS AND ADJUSTABLE SHELVES

SERIES S 100S
DESK AND TIERED DRAWERS

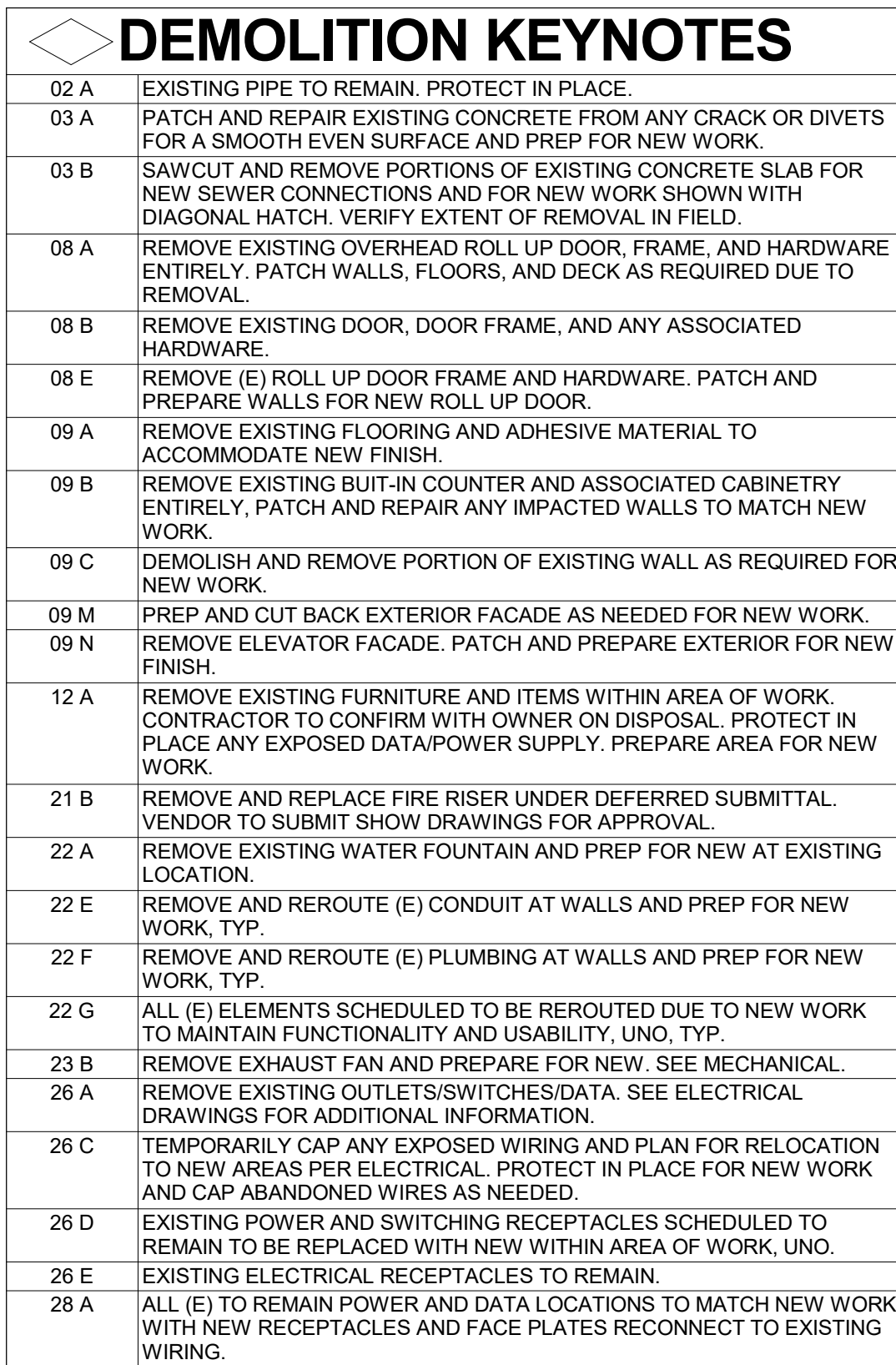
10' - 0"

2' - 6"

1' - 6"

1' - 6"

COUNTER TOP BELOW



1. CAP ALL EXISTING UTILITIES & PREPARE FOR NEW WORK AS REQUIRED. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE DEMOLITION WORK. SUBMIT MATERIALS TO THE LOCAL AIR QUALITY MANAGEMENT DISTRICT FOR TESTING AND SPECIFICATIONS AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.
2. PATCH, REPAIR, AND RESTORE ALL AREAS DAMAGED BY THE CONSTRUCTION WORK AND DEMOLITION TO MATCH CONDITION OF ADJACENT UNDISTURBED SURFACES.
3. REMOVE FROM THE SITE ALL MATERIAL RESULTING FROM THE DEMOLITION WORK. SUBMIT MATERIALS TO THE LOCAL AIR QUALITY MANAGEMENT DISTRICT FOR TESTING AND SPECIFICATIONS TO AVOID CREATING A NUISANCE. DISPOSE OF ALL MATERIALS FROM THE SITE ON A DAILY BASIS AT NO ADDITIONAL COST TO THE OWNER.
4. DISPOSE OF ALL MATERIALS FROM THE DEMOLITION WORK IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS, INCLUDING THOSE GOVERNING NOISE, DUST, AND DIRECT CONTROL; DISPOSITION OF HAZARDOUS MATERIALS IN ACCORDANCE WITH THE LOCAL AIR QUALITY MANAGEMENT DISTRICT.
5. CONTRACTOR SHALL REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING: FIRE ALARM PULL STATIONS, SMOKE ALARMS, LIGHTS, FIRE ALARM PULL STATIONS AND FIRE EXTINGUISHERS.

	ELEMENT TO BE REMOVED		EXISTING FIRE RATE WALL TO REMAIN
	EXISTING WALL TO REMAIN		NOT IN SCOPE HATCH
	OUTLET / DATA / SWITCH TO REMAIN		EXISTING CARD READER TO REMAIN
	OUTLET / DATA / SWITCH TO BE REMOVED		

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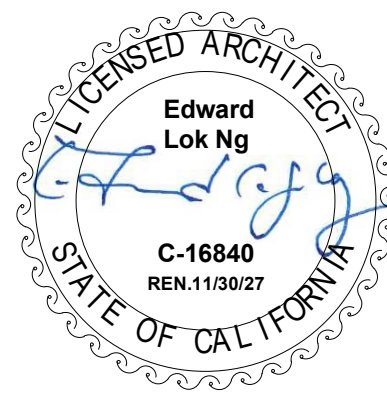
02 A	EXISTING PIPE TO REMAIN. PROTECT IN PLACE.
03 A	PATCH AND REPAIR EXISTING CONCRETE FROM ANY CRACK OR DIVETS FOR A SMOOTH EVEN SURFACE AND PREP FOR NEW WORK.
08 B	REPAIR EXISTING DOOR, DOOR FRAME, AND ANY ASSOCIATED HARDWARE.
08 C	REMOVE EXISTING WINDOW, FRAME, AND ANY ASSOCIATED HARDWARE.
09 A	REMOVE EXISTING FLOORING AND ADHESIVE MATERIAL TO EXPOSE UNDAIRING NEW FLOOR.
09 B	DEMOLISH AND REMOVE PORTION OF EXISTING WALL AS REQUIRED FOR NEW WORK.
09 E	REMOVE ALL WALL FINISHES, ATTACHMENTS, TRIMS, AND BASE. PREPARE WALL FOR NEW FINISHES AS PLANNED.
09 F	REMOVE ALL UPPER AND LOWER CABINET MILLWORK ENTIRELY AND PREPARE FOR NEW WORK.
09 I	REMOVE EXISTING RUBBER WALL BASE THROUGHOUT. PATCH AND REPAIR IMPACTED WALLS AND PREP FOR INSTALLATION OF NEW RUBBER BASE.
09 J	PREP EXISTING WALL SURFACES TO MATCH NEW WORK.
09 K	DEMOLISH AND REMOVE PORTION OF EXISTING WALL WHERE WATER DAMAGE OCCURS AND PREP FOR NEW FRAMING AND FINISH. SEE ELEVATIONS.
09 O	REMOVE EXISTING WALL FINISH AND PREPARE FOR NEW INSULATION AT (E) OFFICE. MIN R19 RATED.
10 A	EXISTING REFRIGERATOR TO BE REMOVED. CONTRACTOR TO COORDINATE WITH CITY FOR REMOVAL OR SALVAGE.
10 B	REMOVE AND RETAIN ALL SHELVES WITH OWNERS ON DISPOSAL. REINSTALL AT NEW LOCATION. SEE MAIL BOXES.
12 A	REMOVE EXISTING FURNITURE AND ITEMS WITHIN AREA OF WORK. CONTRACTOR TO COORDINATE WITH OWNERS ON DISPOSAL. PROTECT PLACE ANY EXPOSED DATAPOWER SUPPLY. PREPARE AREA FOR NEW WORK.
22 A	REMOVE EXISTING WATER FOUNTAIN AND PREP FOR NEW AT EXISTING LOCATION.
22 C	EXISTING FLOOR SINK TO REMAIN. PROTECT IN PLACE.
23 B	REMOVE EXHAUST FAN AND PREPARE FOR NEW. SEE MECHANICAL.
26 D	EXISTING POWER AND SWITCHING RECEPTACLES SCHEDULED TO REMAIN TO BE REWIRED TO NEW ELECTRICAL WORK. LINK EXISTING CARD READER TO REMAIN. PROTECT IN PLACE.

2. CAP ALL EXISTING UTILITIES & PREPARE FOR NEW WORK AS REQUIRED. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE DEMOLITION WORK. DEMOLITION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LAWS, ORDINANCES, AND SPECIFICATIONS AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.
3. PATCH, REPAIR, AND RESTORE ALL AREAS DAMAGED BY THE CONSTRUCTION WORK AND DEMOLITION TO MATCH CONDITION OF ADJACENT UNDISTURBED SURFACES.
4. REMOVE ALL MATERIALS AND DEBRIS RESULTING FROM THE DEMOLITION WORK IN SUCH A MANNER AS TO AVOID CREATING A NUISANCE. DISPOSE OF ALL MATERIALS FROM THE SITE ON A DAILY BASIS AT NO ADDITIONAL COST TO THE OWNER.
5. DISPOSE OF ALL MATERIALS FROM THE DEMOLITION WORK IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS, INCLUDING THOSE GOVERNING NOISE, DUST, AND DIRT CONTROL.
6. DISPOSAL OF HAZARDOUS MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AIR QUALITY MANAGEMENT DISTRICT.
7. CONTRACTOR SHALL REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING: FIRE PULL STATIONS, EMERGENCY EXIT LIGHTS, FIRE ALARM PULL STATIONS AND FIRE EXTINGUISHERS.

	ELEMENT TO BE REMOVED		EXISTING FIRE RATE WALL TO REMAIN
	EXISTING WALL TO REMAIN		NOT IN SCOPE HATCH
	OUTLET / DATA / SWITCH TO REMAIN		EXISTING CARD READER TO REMAIN
	OUTLET / DATA / SWITCH TO BE REMOVED		

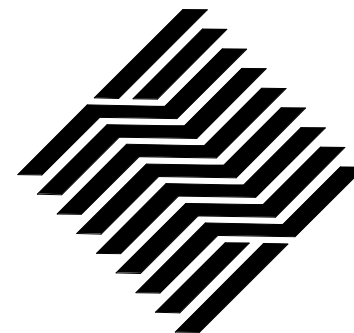
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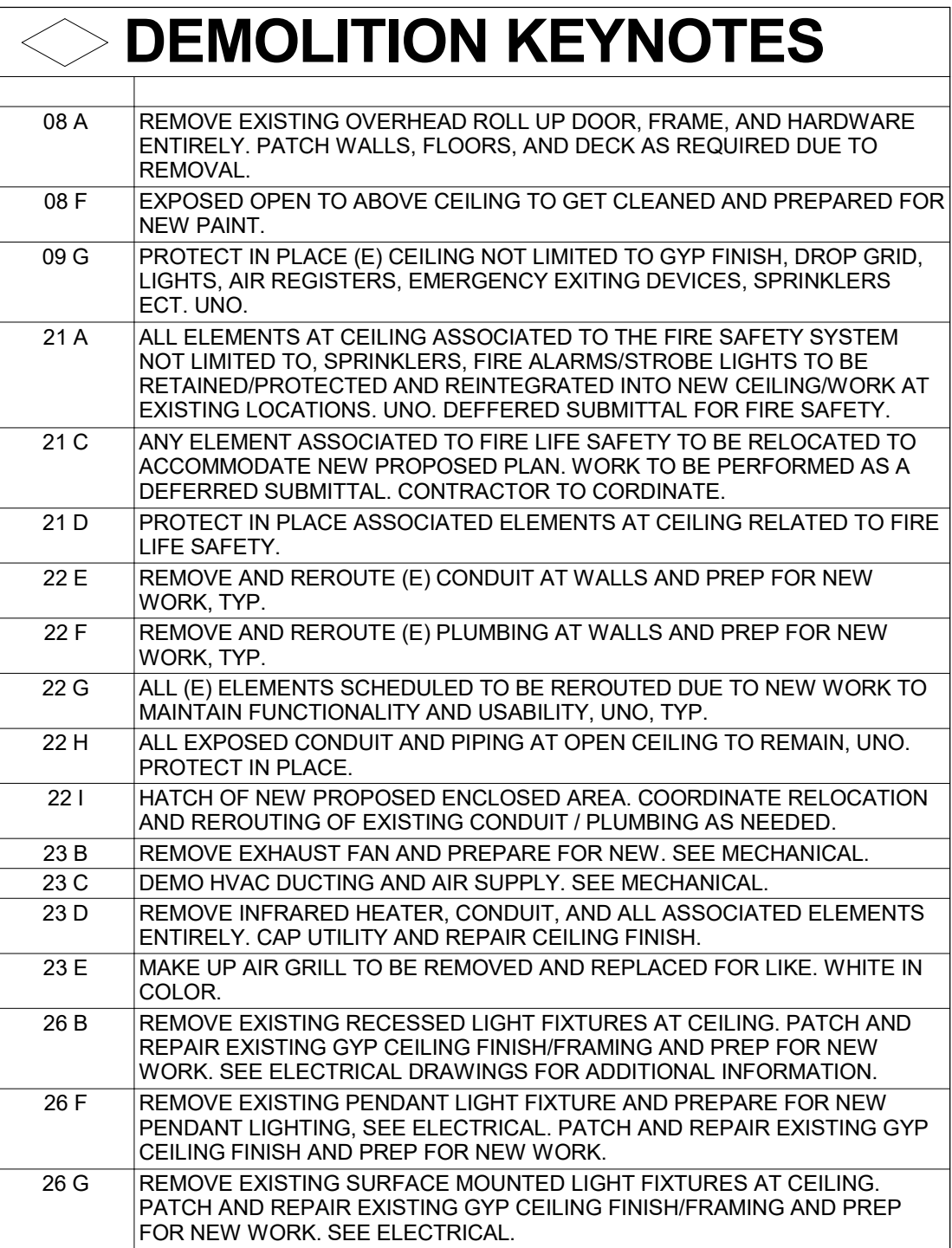


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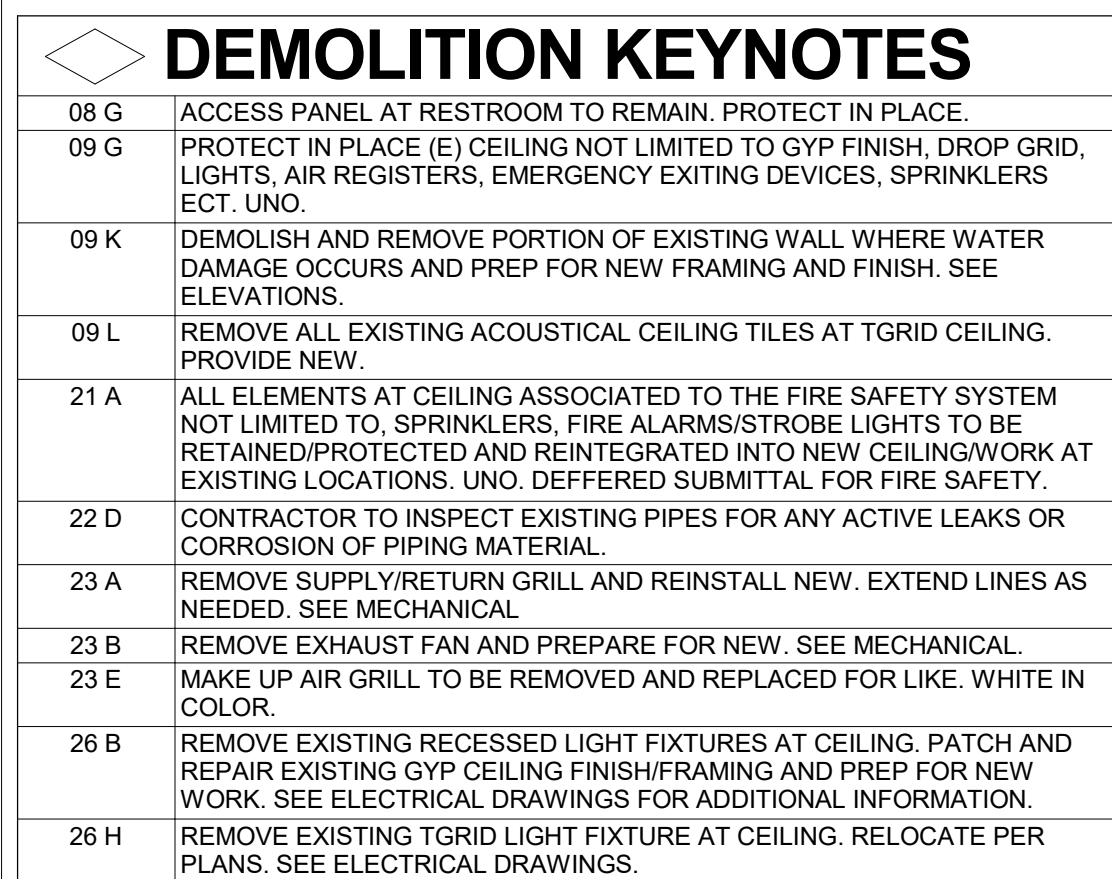
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1. CAP ALL EXISTING UTILITIES & PREPARE FOR NEW WORK AS REQUIRED. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETION OF DEMOLITION WORK IN ACCORDANCE WITH THE CODES AND SPECIFICATIONS AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.
2. PATCH, REPAIR, AND RESTORE ALL AREAS DAMAGED BY THE CONSTRUCTION WORK AND DEMOLITION TO MATCH CONDITION OF ADJACENT UNDISTURBED SURFACES.
3. REMOVE FROM THE SITE ALL MATERIAL RESULTING FROM THE DEMOLITION WORK IN SUCH A MANNER AS TO AVOID CREATING A NUISANCE. DISPOSE OF ALL MATERIALS FROM THE SITE ON A DAILY BASIS AT NO ADDITIONAL COST TO THE OWNER.
4. DISPOSE OF ALL MATERIALS FROM THE DEMOLITION WORK IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS, INCLUDING THOSE GOVERNING NOISE, DUST, AND DIRT CONTROL.
5. EXCEED ALL APPLICABLE LOCAL AND STATE REQUIREMENTS OF THE LOCAL AIR QUALITY MANAGEMENT DISTRICT.
6. CONTRACTOR SHALL REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING FIRE ALARMING DEVICES: SMOKE LIGHTS, FIRE ALARM PULL STATIONS AND FIRE EXTINGUISHERS.

	ELEMENT TO BE REMOVED		EXISTING FIRE RATED WALL TO REMAIN
	EXISTING WALL TO REMAIN		NOT IN SCOPE HATCH
	AIR REGISTERS / EXHAUSTS TO REMAIN		EXISTING CARD READER TO REMAIN
	AIR REGISTERS / EXHAUSTS TO BE REMOVED		PENDANT LIGHT TO BE REMOVED
	SPRINKLERS TO REMAIN		PENDANT LIGHT TO REMAIN
	SPRINKLERS TO BE RELOCATED (DEFERRED SUBMITTAL)		
	RECESSED LIGHT TO BE REMOVED		
	RECESSED LIGHT TO REMAIN		

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1. CAP ALL EXISTING UTILITIES & PREPARE FOR NEW WORK AS REQUIRED.
2. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE DEMOLITION WORK AS INDICATED ON DRAWINGS AND SPECIFICATIONS AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.
3. PATCH, REPAIR, AND RESTORE ALL AREAS DAMAGED BY DEMOLITION WORK IN SUCH A MANNER AS TO AVOID CREATING AN ADJACENT UNDISTURBED SURFACES.
4. REMOVE FROM THE SITE ALL MATERIAL RESULTING FROM THE DEMOLITION WORK IN SUCH A MANNER AS TO AVOID CREATING A NUISANCE. DISPOSE OF ALL MATERIALS FROM THE SITE ON A DAILY BASIS AT NO ADDITIONAL COST TO THE OWNER.
5. DISPOSE OF ALL MATERIALS FROM THE DEMOLITION WORK IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS, INCLUDING THOSE GOVERNING NOISE, DUST, AND DIRT CONTROL, DISPOSE OF HAZARDOUS MATERIALS IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AIR QUALITY MANAGEMENT DISTRICT.
6. CONTRACTOR SHALL REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING: FIRE ALARM PANELS, FIRE SMOKE LIGHTS, FIRE ALARM PULL STATIONS AND FIRE EXTINGUISHERS.

	ELEMENT TO BE REMOVED		EXISTING FIRE RATED WALL TO REMAIN
	EXISTING WALL TO REMAIN.		NOT IN SCOPE HATCH
	AIR REGISTERS / EXHAUSTS TO REMAIN	<u>CR</u>	EXISTING CARD READER TO REMAIN
	AIR REGISTERS / EXHAUSTS TO BE REMOVED		PENDANT LIGHT TO BE REMOVED
	SPRINKLERS TO REMAIN		PENDANT LIGHT TO REMAIN
	SPRINKLERS TO BE RELOCATED (DEFERRED SUBMITTAL)		
	RECESSED LIGHT TO BE REMOVED		
	RECESSED LIGHT TO REMAIN		

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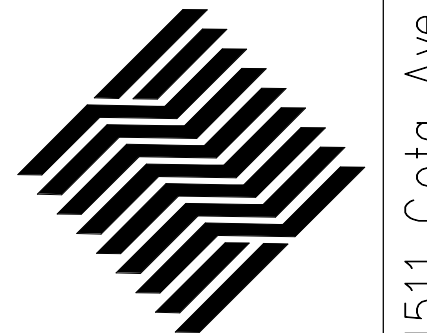
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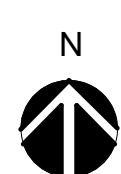
- SECOND FLOOR DEMO
- RCP

A1.3

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02-01	EXISTING PIPE TO REMAIN. PROTECT IN PLACE.
02-02	PATCHING, FILL, AND SAND EXISTING CONCRETE FOR NEW FINISH.
08-01	PROVIDE NEW EXTERIOR ALUMINUM STOREFRONT SYSTEM WITH TEMPERED GLASS. SEE DOOR/WINDOW SCHEDULE FOR MORE INFO.
08-02	PROVIDE NEW EXTERIOR ALUMINUM STOREFRONT DOOR WITH TEMPERED GLASS & DOOR HARDWARE. SEE DOOR/WINDOW SCHEDULE FOR MORE INFO.
08-03	PROVIDE NEW INTERIOR ALUMINUM STOREFRONT SYSTEM WITH TEMPERED GLASS. SEE DOOR/WINDOW SCHEDULE FOR MORE INFO.
08-06	NEW HM DOOR AND HOLLOW METAL DOOR FRAME. DOOR TO BE PAINT PER FINISH MATERIAL SCHEDULE. SEE DOOR SCHEDULE FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER TO PROVIDE KEY/OB FOR OCCURS AND CONTRACTOR TO INSTALL REQUIRED HARDWARE/POWER. COORDINATE WITH IT DEPARTMENT AS NEEDED.
08-07	PROVIDE NEW ACCESS PANEL AT NEW WALL TO MAINTAIN SERVICEABILITY TO EXISTING PIPE.
08-09	NEW ROLL UP COUNTER SECURITY SCREEN. PROVIDE THE PROPER BLOCKING FOR MOUNTING PER SPEC. SEE DOOR SCHEDULE.
08-11	NEW CASED EXISTING METAL STUD WALL AT EXISTING EXTERIOR SCHEDULE.
09-01	REPOLISH EXISTING CONCRETE FLOORS AND PROVIDE NEW RUBBER SHEET THROUGHOUT AREA OF WORK.
09-06	PAINT ALL NEW AND EXISTING GYP WALLS/CEILING PER SCHEDULE. PATCH AND REPAIR EXISTING WALLS AND CEILING.
09-07	NEW FULL HEIGHT METAL STUD WALL MOUNTED TO THE UNDERSIDE OF THE ROOF/FLOOR ASSEMBLY.
09-07	NEW PARTIAL HEIGHT METAL STUD WALL WITH HARDIUD CEILING.
09-07	NEW FURNITURE MOUNTED STUD WALL AT EXISTING EXTERIOR SCHEDULE.
09-10	NEW DESK WORK STATIONS BY MILLWORKER. SEE CASEWORK SCHEDULE. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
09-11	NEW FULL HEIGHT STORAGE CLOSET BY MILLWORKER. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
09-12	LINE OF SOFFIT ABOVE.
09-21	TRANSACTION COUNTER AT PROVIDED BY CONTRACTOR. SUBMIT SHOP DRAWINGS FOR APPROVAL. SEE DETAIL FOR MORE INFORMATION.
09-22	NEW KITCHEN CASEWORK AND COUNTERTOP WITH ADA APPROACH AT SINK.
09-26	PROVIDE COMPLIANT ROOM SIGNAGE.
10-01	NEW WALL MOUNTED MAIL SLOTS BY OTHERS. COORDINATE AND PROVIDE CLOSET BUILT BY OTHERS.
10-02	NEW FINISHES AT ELEVATOR INTERIOR AND EXTERIOR.
10-03	NEW INDUSTRIAL GRADE DOUBLE TIE LOCKERS. PER CBC 11B - 225.2.1 PROVIDE A MINIMUM OF 5% ACCESSIBLE LOCKERS FROM TOTAL NUMBER OF LOCKERS.
11-03	REINSTALL MAILBOXES AT NEW METAL STUD WALL. SEE ELEVATIONS.
11-03	NEW AUTOMATED PARTS STORAGE BY OTHERS. SEE ELECTRICAL DRAWINGS.
11-04	NEW AT EXISTING WALL. PROVIDE RECESSED WALL MOUNT AND POWER.
12-01	NEW FURNITURE/CUBICLES/PRIVATE OFFICE DESKING PROVIDED BY OTHERS. CONTRACTOR TO COORDINATE POWER WITH CLIENT AND FURNITURE VENDOR.
12-02	REINSTALL EXISTING RETAINED FURNITURE. COORDINATE WITH CITY.
12-01	NEW FIRE RISER. OBTAINED SUBMITTAL FOR FIRE SAFETY. VENDOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL.
22-01	NEW ADA COMPLIANT FILTER WATER FOUNTAIN WITH BOTTLE FILLER. COILED. SEE PLUMBING DRAWINGS TO MEET ALL ADA CLEARANCE. SEE DETAILS.
22-02	NEW FLOOR DRAIN WITH ACCESSIBLE COVER. CONCRETE FLOOR. SEE PLUMBING DRAWINGS. SEE DETAIL FOR NEW CONCRETE FLOOR AND TILE FINISH SHALL BE SLOPE 1/16" MIN AND 2% MAX. TO DRAIN.
26-05	PROVIDE NEW ELECTRICAL OUTLET DATA/SWITCHING POWER COUDIT AND RACK. SEE ELECTRICAL SCHEDULE. GAT AT NEW WALL.
26-06	PROVIDE NEW ELECTRICAL OUTLET DATA/SWITCHING RECEPTABLE AT EXISTING LOCATIONS SCHEDULED TO REMAIN. TYP. SEE ELECTRICAL DRAWINGS.
26-07	EXISTING ELECTRICAL OUTLET DATA/S/NEW PANELS TO REMAIN. PROTECT IN PLACE. TYP. UNO.

(ICC-ESR-3016)
NEW METAL STUDS SHALL BE CALIFORNIA EXPANDED METAL PRODUCTS
COMPANY 2620263 NORTH COVINA LANE CITY OF INDUSTRY, CA 91746
TEL. 626-369-3564 OR 800-775-2362

1. EXTERIOR STUD WALLS (HT = 14FT +/- OR LESS)
6" STUDS "600EC516" @ 16" OC
2. INTERIOR STUD WALLS (HT = 14FT +/-)
6" STUDS "600EC520" @ 16" OC
3. INTERIOR STUD WALLS (HT = 10FT +/-)
3-5/8" STUDS "362EC520" @ 16" OC

NOTE: SEE DRAWING SHEET A5.0 FOR METAL STUD CONSTRUCTION DETAILS. AND
SEE STRUCTURAL NOTES ON SHEET A5.1

A. ELECTRICAL / MECHANICAL EQUIPMENT AND DEVICES: REINSTALL AND PROPERLY RECONNECT EXISTING DUCTWORK, SWITCHES, CONTROLS, AND EQUIPMENT. REPAIR OR REPLACE DEFECTIVE EQUIPMENT AND DEVICES REMOVED DURING THE WORK BUT NOT INDICATED TO BE REMOVED. REINSTALL EXISTING EQUIPMENT AND DEVICES IN GOOD CONDITION. DISCARD EQUIPMENT AND DEVICES THAT ARE NOT IN CONDITION AT LEAST AS GOOD AS EXISTED BEFORE REMOVAL, AND NEW EQUIPMENT AND DEVICES THAT DO NOT MEET THE SPECIFICATIONS AND DEVICES SHALL EXACTLY MATCH THOSE REMOVED IN TYPE, SIZE, FINISH, CONFIGURATION, AND OPERATING CHARACTERISTICS, UNLESS NOTED OTHERWISE. NEW EQUIPMENT SHALL MEET CURRENT BUILDING CODE.

B. NEW FINISH MATERIALS TO MATCH EXISTING UNDISTURBED WORK FOR CLOSING OF OPENINGS, REPAIRS, AND RENOVATION. NEW FINISH MATERIALS AND SUBSTRATES TO MATCH EXISTING SHALL BE THE SAME TYPE, FINISH, QUANTITY, COLOR, AND GRADE AS THE EXISTING MATERIAL. REPAIR ALL DAMAGED OR DEFACED FLOOR, WALL, AND CEILING MATERIALS TO MATCH EXISTING UNDISTURBED WORK.

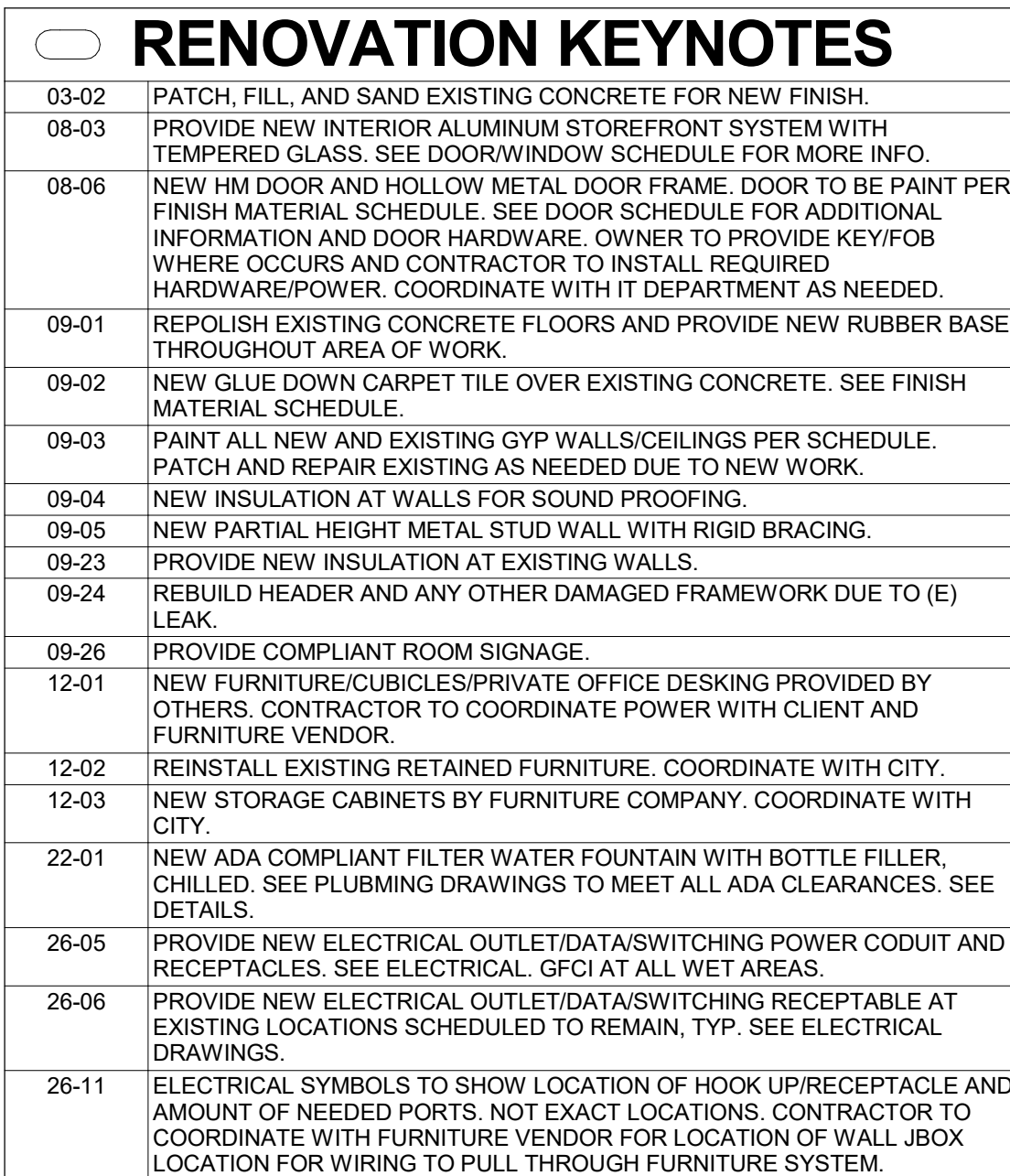
C. THE CONTRACTOR/SUB-CONTRACTOR SHALL SUBMIT THE PLANS TO THE FIRE DEPARTMENT FOR DEFERRED APPROVAL. USE THE EXISTING EQUIPMENT WHERE THE EQUIPMENT IS NOT TO BE REMOVED. WHERE EXISTING PLUMBING VENT PIPES ARE REMOVED FROM THE ROOF, REPAIRS AND REPAIRS TO THE ROOF SHALL BE DONE BY A SUB-CONTRACTOR EXPERIENCED WITH ROOFING IN GENERAL AND ROOF REPAIRS.

D. FLOOR COVERING MATERIALS SHALL COMPLY WITH ASTM STANDARD E 688, HAVING A SPECIFIC OPTICAL DENSITY SMOKE RATING NOT TO EXCEED 0.45 PER AREA. THE CONTRACTOR SHALL SUBMIT THE FINISH DIMENSIONS AT FLOOR PLAN ARE TO CENTER OF STUD AT NEW WALLS AND FINISH DIMENSIONS AT FLOOR PLAN ARE TO CENTER OF STUD AT NEW WALLS.

E. FINISH DIMENSIONS AT FLOOR PLAN ARE FROM FINISHED FACE. UNO

	NEW STUD WALL		EXISTING FIRE RATED WALL TO REMAIN
	EXISTING WALL TO REMAIN		NEW FIRE RATED WALL
	EXISTING OUTLET / DATA / SWITCH TO REMAIN		NOT IN SCOPE HATCH
	NEW OUTLET / DATA / SWITCH		NEW STOREFRONT SYSTEM

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



A. ELECTRICAL / MECHANICAL EQUIPMENT AND DEVICES: REINSTATE AND PROPERLY RECONNECT EXISTING DUCTWORK, SWITCHES, TERMINALS, AND EQUIPMENT. REMOVE AND REINSTALL EXISTING EQUIPMENT AND DEVICES REMOVED DURING THE WORK BUT NOT INDICATED TO BE REMOVED. REINSTATE ONLY EQUIPMENT AND DEVICES THAT ARE IN GOOD CONDITION. DISCARD EQUIPMENT AND DEVICES THAT ARE IN POOR CONDITION AT LEAST AS GOOD AS EXISTED BEFORE REMOVAL. AND REINSTALL EQUIPMENT AND DEVICES THAT ARE IN GOOD CONDITION. EQUIPMENT AND DEVICES SHALL EXACTLY MATCH THOSE REMOVED IN TYPE, SIZE, FINISH, CONFIGURATION, AND OPERATING CHARACTERISTICS, UNLESS OTHERWISE SPECIFIED. NEW EQUIPMENT SHALL BE INSTALLED IN THE EXISTING BUILDING CODE.

B. REMOVE NEW MATERIALS TO MATCH EXISTING UNDISTURBED WORK FOR CLOSING OF OPENINGS, REPAIRS, AND RENOVATION. NEW FINISH MATERIALS AND SUBSTRATES TO MATCH EXISTING SHALL BE THE SAME AS EXISTING. QUALITY OF REPAIRS SHALL BE THE SAME AS EXISTING. MATERIAL REPAIR ALL DAMAGED OR DETAILED FLOOR, WALL, AND CEILING FINISHES ASSOCIATED WITH THESE ALTERATIONS.

C. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY PLANS TO THE FIRE DEPARTMENT FOR DEFERRED APPROVAL. USE THE EXISTING EQUIPMENT WHERE THE EQUIPMENT IS NOT TO BE REMOVED.

D. WHERE EXISTING PLUMBING VENT PIPES ARE REMOVED FROM THE ROOF AND NEW ONES ARE INSTALLED THE CONTRACTOR SHALL PATCH AND REPAIR THE ROOF. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE SUB-CONTRACTOR EXPERIENCED WITH ROOFING IN GENERAL AND ROOF REPAIRS.

E. FLOOR COVERING MATERIALS SHALL COMPLY WITH ASTM STANDARD E 648, AND HAVING A SPECIFIC OPTICAL DENSITY SMOKE RATING NOT TO EXCEED 0.05 PER SQUARE FOOT. THE CONTRACTOR SHALL PROVIDE THE DIMENSIONS AT FLOOR PLAN ARE IN CONFORMITY WITH THE CITY PLANS. THE CONTRACTOR SHALL PROVIDE THE DIMENSIONS AT FLOOR PLAN ARE IN CONFORMITY WITH THE CITY PLANS. THE CONTRACTOR SHALL PROVIDE THE DIMENSIONS AT FLOOR PLAN ARE IN CONFORMITY WITH THE CITY PLANS.

F. DIMENSIONS AT RCP PLAN ARE FROM FINISHED FLOOR. UNO

	NEW STUD WALL		EXISTING FIRE RATED WALL TO REMAIN
	EXISTING WALL TO REMAIN.		NEW FIRE RATED WALL
	EXISTING OUTLET / DATA / SWITCH TO REMAIN		NOT IN SCOPE HATCH
	NEW OUTLET / DATA / SWITCH		NEW STOREFRONT SYSTEM

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09-03	PAINL ALL NEW AND EXISTING GP WALLS/CEILINGS PER SCHEDULE PATCH AND REPAIR EXISTING AS NEEDED DUE TO NEW CURE.
09-14	NO CEILING IN AREA. EXISTING GYPSUM TO REMAIN IN UNDERSIDE OF FLOOR ASSEY TO RECEIVE NEW PAINT FINISH.
23-01	NEW EXPOSED HVAC AIR SUPPLY UNITS TO UNDO. SEE MECHANICAL.
23-02	NEW AIR REGISTER GRILL AT EXISTING LOCATION. SEE MECHANICAL.
23-03	NEW MAKE UP AIR GRILL AT EXISTING LOCATION. SEE MECHANICAL.
23-04	NEW MAKE UP AIR GRILL AT EXISTING LOCATION. SEE MECHANICAL.
26-01	NEW RECESSED 4" WET RATED CAN LED LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
26-02	NEW RECESSED 4" CAN LED LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
26-03	NEW RECESSED INTERIOR LED LIGHTING FIXTURE. SEE ELECTRICAL DRAWINGS FOR FULL INFORMATION.
26-04	NEW SUSPENDED/PENDANT MOUNTED LED LIGHT FIXTURE ATTACHED TO UNDERSIDE OF ROOF/FLOOR ASSEMBLY. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.

A. ELECTRICAL / MECHANICAL EQUIPMENT AND DEVICES: REINSTATE AND PROPERLY RECONNECT EXISTING DUCTWORK, SWITCHES, TRANSFORMERS, AND ELECTRICAL EQUIPMENT. REMOVE AND DISPOSE OF DEVICES REMOVED DURING THE WORK BUT NOT INDICATED TO BE REMOVED. REINSTATE ONLY EQUIPMENT AND DEVICES THAT ARE IN GOOD CONDITION. DISCARD EQUIPMENT AND DEVICES THAT ARE IN POOR CONDITION AT LEAST AS GOOD AS EXISTED BEFORE REMOVAL. AND PROVIDE NEW EQUIPMENT AND DEVICES TO MATCH EXISTING EQUIPMENT AND DEVICES SHALL EXACTLY MATCH THOSE REMOVED IN TYPE, SIZE, FINISH, CONFIGURATION, AND OPERATING CHARACTERISTICS, UNLESS OTHERWISE SPECIFIED. PROVIDE A NEW, UNDISTURBED BUILDING CODE COMPLIANT ELECTRICAL SYSTEM.

B. REMOVE NEW MATERIALS TO MATCH EXISTING UNDISTURBED WORK FOR CLOSING OF OPENINGS, REPAIRS, AND RENOVATION. NEW FINISH MATERIALS AND SUBSTRATES TO MATCH EXISTING SHALL BE THE SAME TYPE, QUALITY, AND COLOR. REPAIRS TO MATCH EXISTING SHALL BE THE SAME MATERIAL. REPAIR ALL DAMAGED OR DEFACECED FLOOR, WALL, AND CEILING FINISHES AS NEARLY AS POSSIBLE TO MATCH EXISTING.

C. THE CONTRACTOR/SUB-CONTRACTOR SHALL SUBMIT THE PLANS TO THE FIRE DEPARTMENT FOR DEFERRED APPROVAL. USE THE EXISTING EQUIPMENT WHERE THE EQUIPMENT IS NOT TO BE REMOVED.

D. WHERE EXISTING PLUMBING VENT PIPES ARE REMOVED FROM THE ROOF AND NEW ONES ARE INSTALLED THE CONTRACTOR SHALL PATCH AND PAINT THE ROOF TO MATCH EXISTING. THE CONTRACTOR SHALL EMPLOY A SUB-CONTRACTOR EXPERIENCED WITH ROOFING IN GENERAL AND ROOF REPAIRS.

E. FLOOR COVERING MATERIALS SHALL COMPLY WITH ASTM STANDARD E 648, AND HAVING A SPECIFIC OPTICAL DENSITY SMOKE RATING NOT EXCEEDING 0.45 PER SQUARE FOOT.

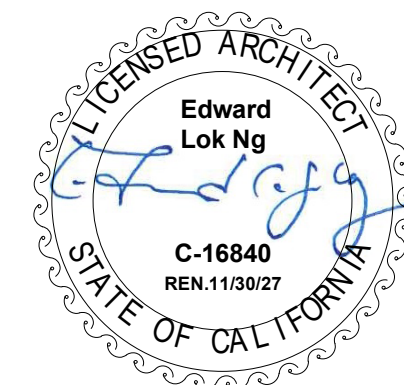
F. ALL FINISHED FLOOR DIMENSIONS AT FLOOR PLAN ARE TO CENTER OF STUD AT 2" MAX FINISHED FLOOR DIMENSIONS AT FLOOR PLAN ARE TO CENTER OF STUD AT 2" MAX FINISHED FLOOR DIMENSIONS AT RCP PLAN ARE FROM FINISHED FACE. UNO

	CEILING SURFACE MOUNTED INTERIOR LED LIGHTING FIXTURE
	RECESSED INTERIOR LED LIGHTING FIXTURE
	SUSPENDED/PENDANT MOUNTED INTERIOR LED LIGHT FIXTURE

	ELEMENT TO BE REMOVED		EXISTING FIRE RATED WALL TO REMAIN
	EXISTING WALL TO REMAIN		NOT IN SCOPE HATCH
	OUTLET / DATA / SWITCH TO REMAIN		EXISTING CARD READER TO REMAIN
	OUTLET / DATA / SWITCH TO BE REMOVED		

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Consultant:



- FIRST FLOOR RCF

A1.7



BOA^o

Architecture
Interiors
Planning

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2 RENOVATION - SECOND FLOOR REFLECTED CEILING PLAN

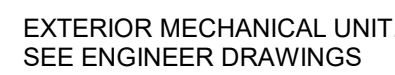
RENOVATION NOTES

- ELECTRICAL / MECHANICAL EQUIPMENT AND DEVICES: REINSTALL AND PROPERLY RECONNECT EXISTING DUCTWORK, SWITCHES, CONTROLS, AND EQUIPMENT. REMOVE EXISTING MECHANICAL EQUIPMENT AND DEVICES REMOVED DURING THE WORK BUT NOT INDICATED TO BE REMOVED. REINSTALL EXISTING MECHANICAL EQUIPMENT AND DEVICES IN GOOD CONDITION. DISCARD EQUIPMENT AND DEVICES THAT ARE NOT IN CONDITION AT LEAST AS GOOD AS EXISTED BEFORE REMOVAL, AND REPLACE NEW EQUIPMENT AND DEVICES THAT ARE IN POOR CONDITION AND DEVICES SHALL EXACTLY MATCH THOSE REMOVED IN TYPE, SIZE, FINISH, CONFIGURATION, AND OPERATING CHARACTERISTICS, UNLESS OTHERWISE SPECIFIED. REPAIR OR REPLACE EXISTING BUILDING CODE.
- REMOVE NEW MATERIALS TO MATCH EXISTING UNDISTURBED WORK FOR CLOSING OF OPENINGS, REPAIRS, AND RENOVATION. NEW FINISH MATERIALS AND SUBSTRATES TO MATCH EXISTING SHALL BE THE SAME TYPE, FINISH, QUALITY, COLOR, AND GRADE AS EXISTING. REPAIR MATERIAL, REPAIR ALL DAMAGED OR DEFACED FLOOR, WALL, AND CEILING MATERIALS TO MATCH EXISTING. REPAIR OR REPLACE MATERIALS TO MATCH EXISTING. THE CONTRACTOR/SUB-CONTRACTOR SHALL SUBMIT THE PLANS TO THE FIRE DEPARTMENT FOR DEFERRED APPROVAL. USE THE EXISTING EQUIPMENT WHERE SPECIFIED.
- WHERE EXISTING PLUMBING VENT PIPES ARE REMOVED FROM THE ROOF AND NEW ONES ARE INSTALLED THE CONTRACTOR SHALL PATCH AND REPAIR THE ROOF. THE CONTRACTOR SHALL PATCH AND REPAIR THE SUB-CONTRACTOR EXPERIENCED WITH ROOFING IN GENERAL AND AS SPECIFIED.
- FLOOR COVERING MATERIALS SHALL COMPLY WITH ASTM STANDARD E 648; AND HAVE A SPECIFIC OPTICAL DENSITY SMOKE RATING NOT TO EXCEED 0.05 PER AREA.
- F. DIMENSIONS AT FLOOR PLAN ARE TO CENTER OF STUD AT NEW WALLS. F. DIMENSIONS AT ROOF PLAN ARE TO CENTER OF STUD AT NEW WALLS. DIMENSIONS AT RCP PLAN ARE FROM FINISHED FACE. UNO

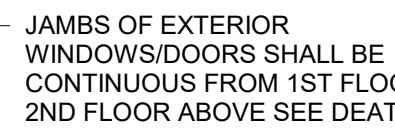
	CEILING SURFACE MOUNTED INTERIOR LED LIGHTING FIXTURE
	RECESSED INTERIOR LED LIGHTING FIXTURE
	SUSPENDED/PENDANT MOUNTED INTERIOR LED LIGHT FIXTURE

	ELEMENT TO BE REMOVED		EXISTING FIRE RATED WALL TO REMAIN
	EXISTING WALL TO REMAIN,		NOT IN SCOPE HATCH
	OUTLET / DATA / SWITCH TO REMAIN		EXISTING CARD READER TO REMAIN
	OUTLET / DATA / SWITCH TO BE REMOVED		

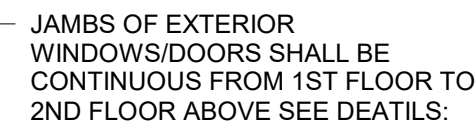
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SCALE: 1/4" = 1'-0"



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

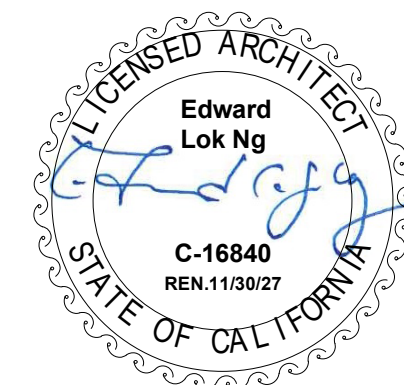


SCALE: 1/4" = 1'-0"

RENOVATION KEYNOTES

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- EXTERIOR ELEVATIONS

A2.0

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Interiors
Planning

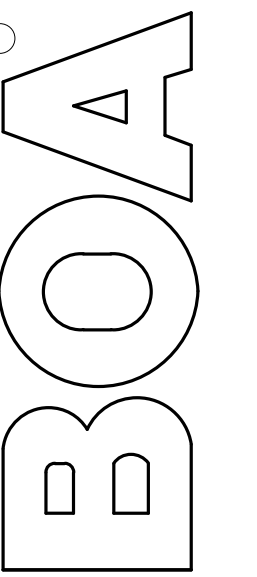
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09-16	INFILL EXTERIOR WALL AS NEEDED AND MATCH EXISTING EXTERIOR SIDING AND TRIM WORK. PATCH AND REPAIR SIDING AS NEEDED DUE TO NEW STOREFRONT WINDOW OPENINGS. SEE ELEVATIONS.
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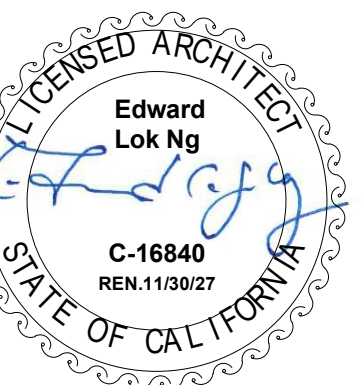
1511 Cota Ave. Long Beach, CA 90813 tel. 562-912-7900

20300 MADRONA AVE, TORNANCE, CA 90303

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Designer:	AH
CAD Draft:	AH
Architect:	LOK
Engineer:	-
Client:	CITY OF TORRANCE
Date Issued:	2/25/2026
Job Number:	3171

Consultant:



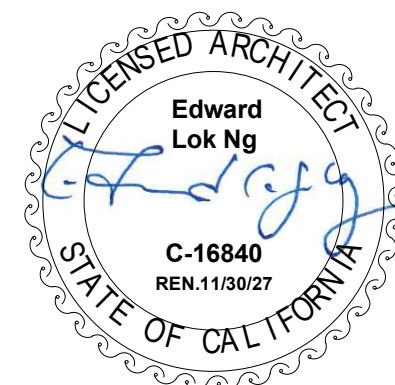
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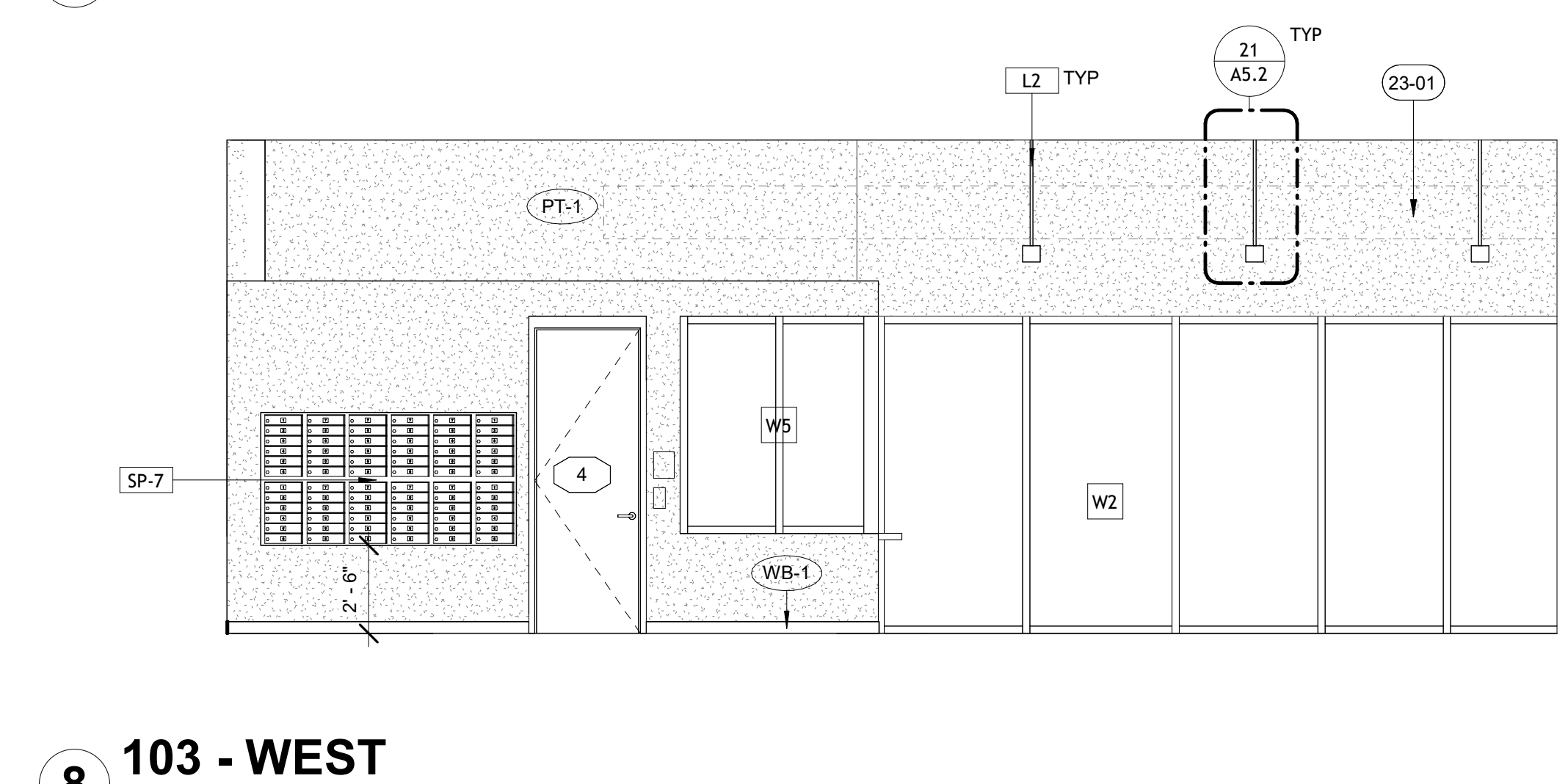
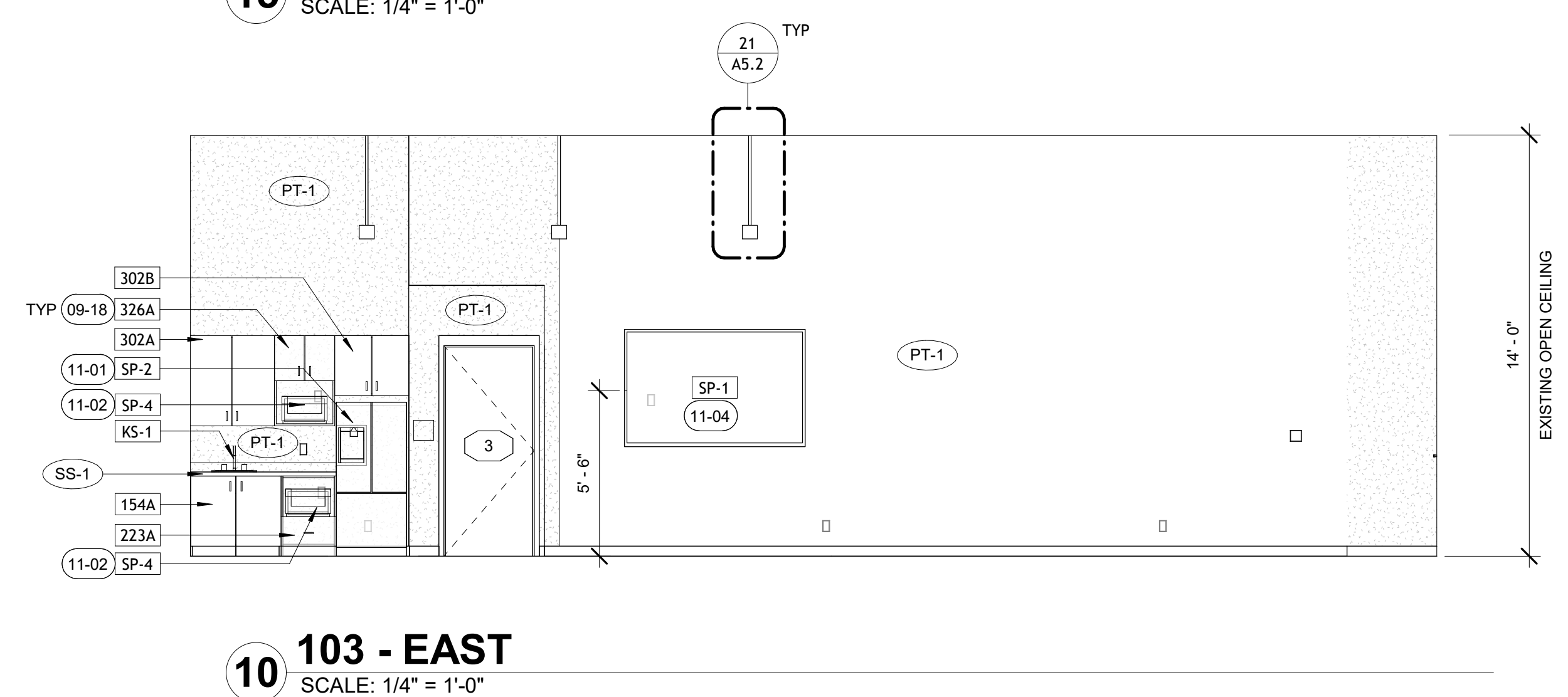
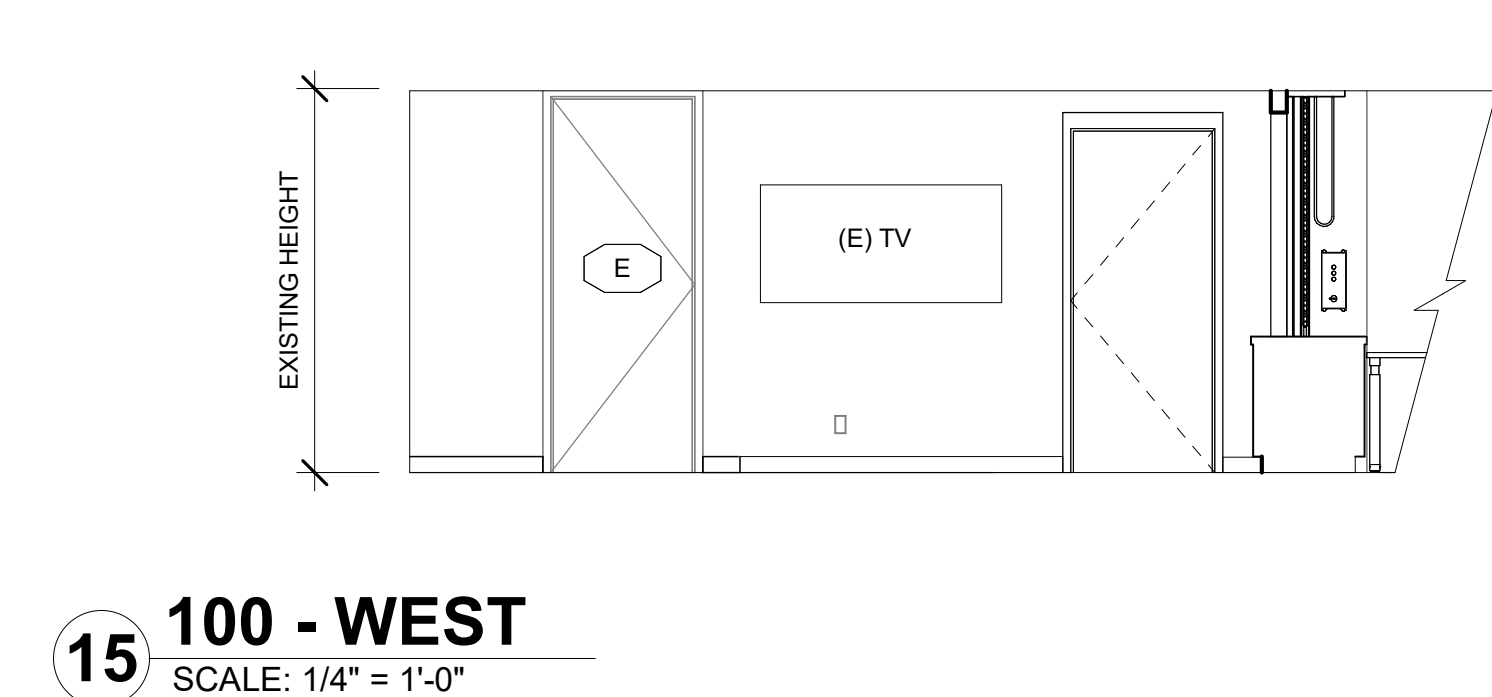
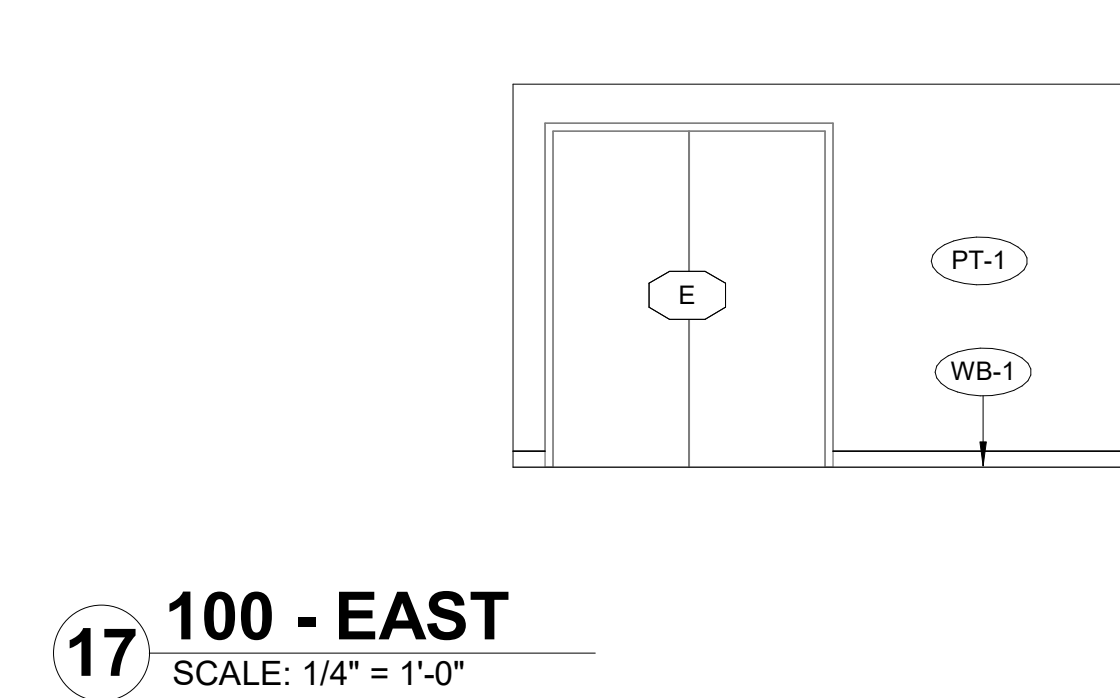
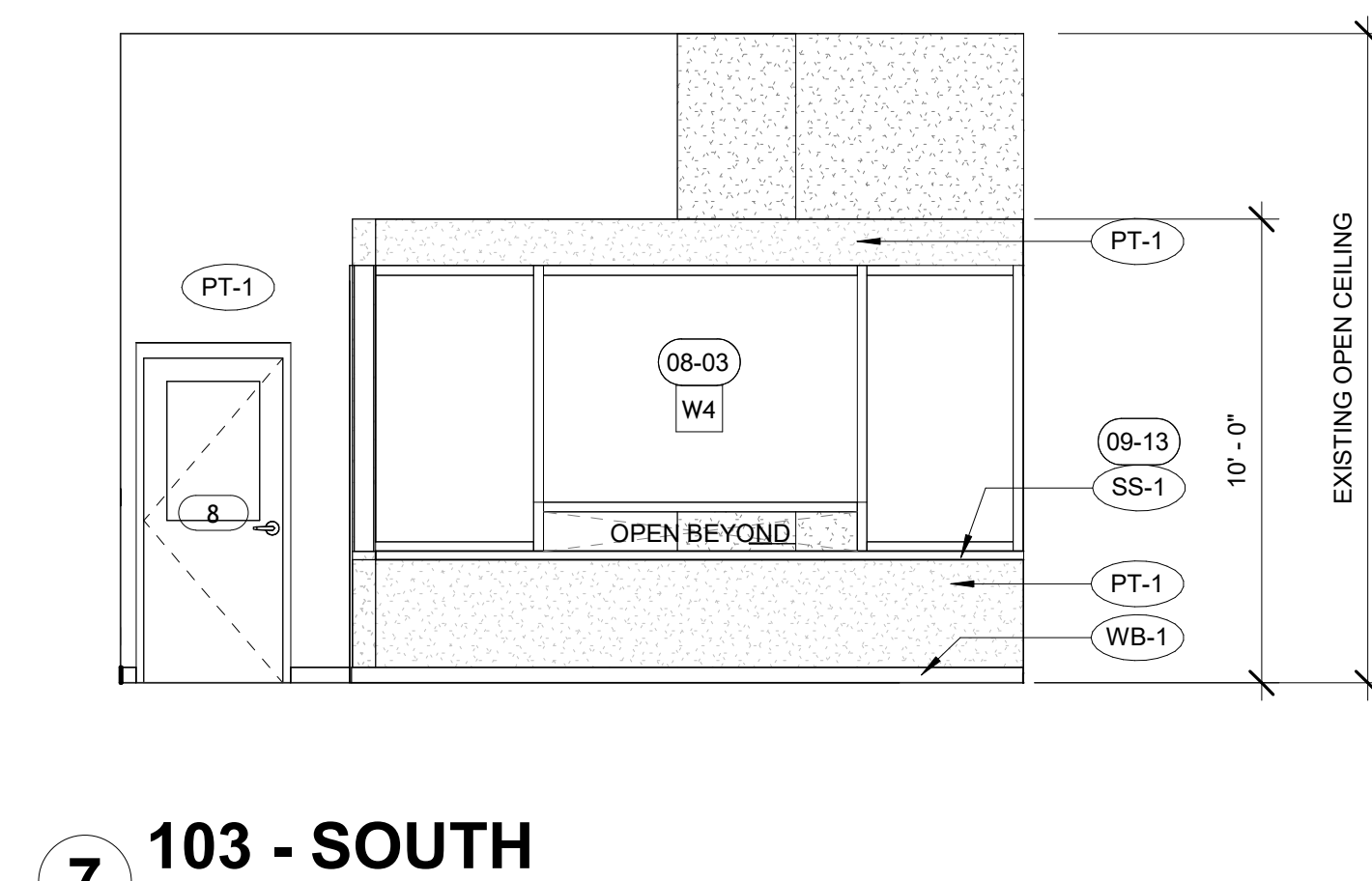
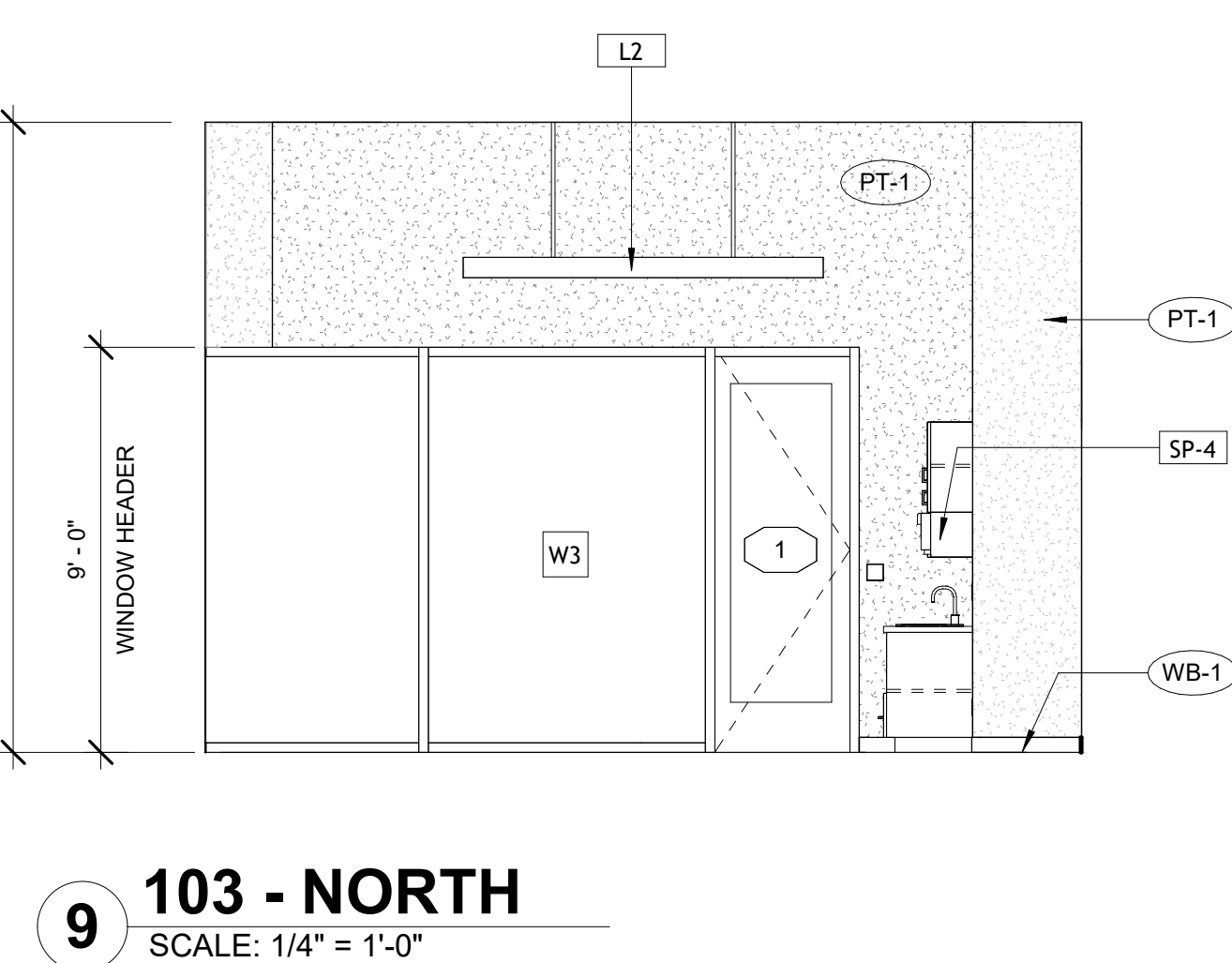
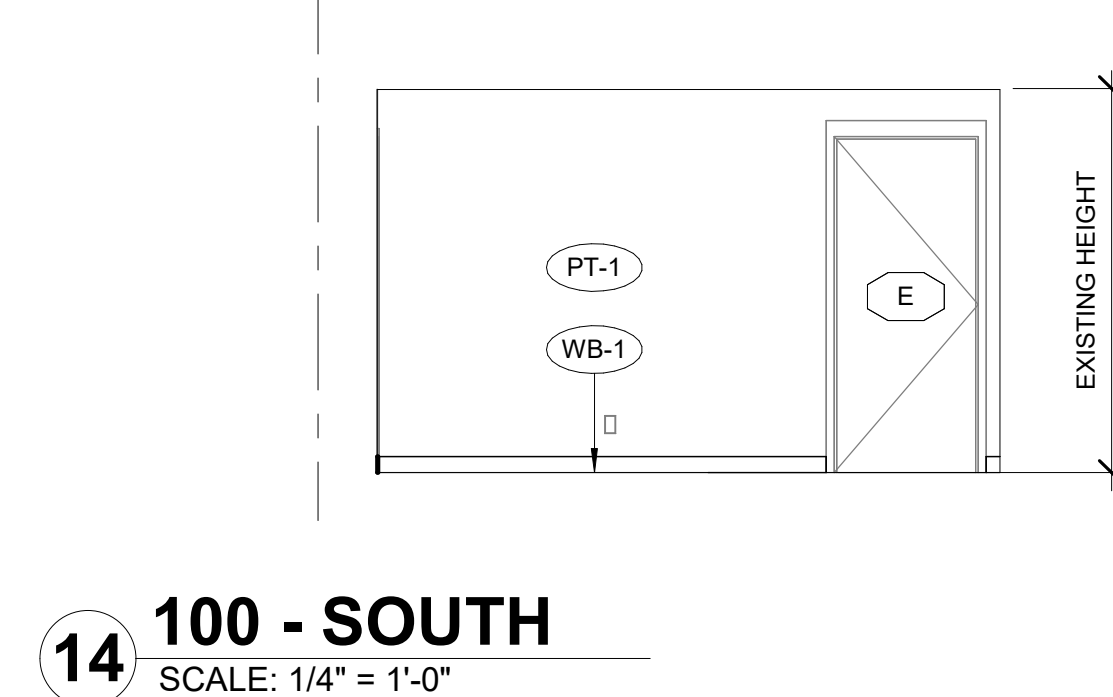
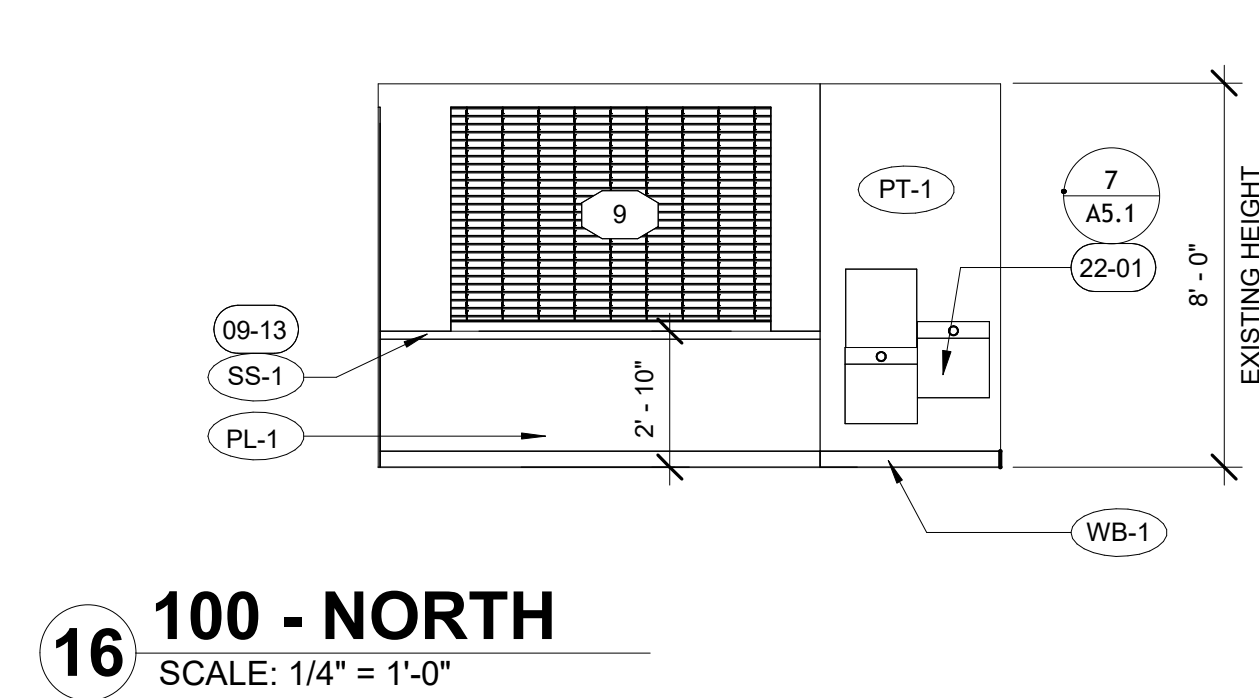
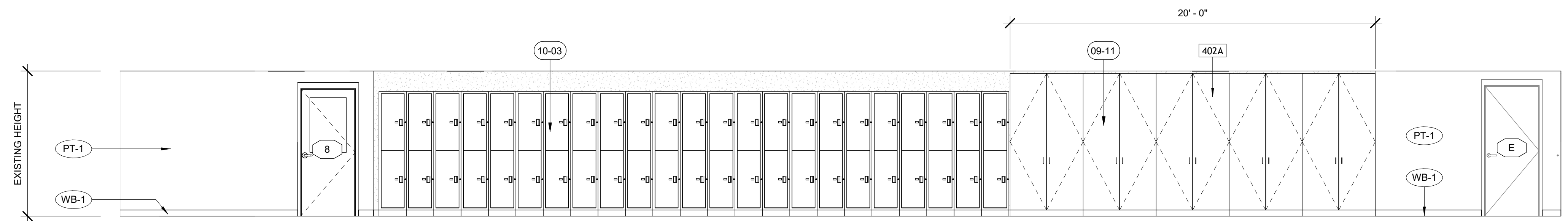
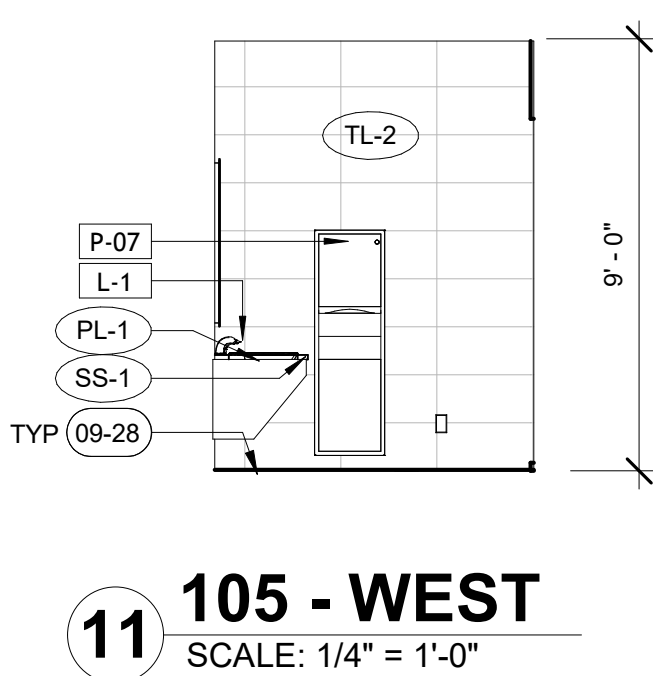
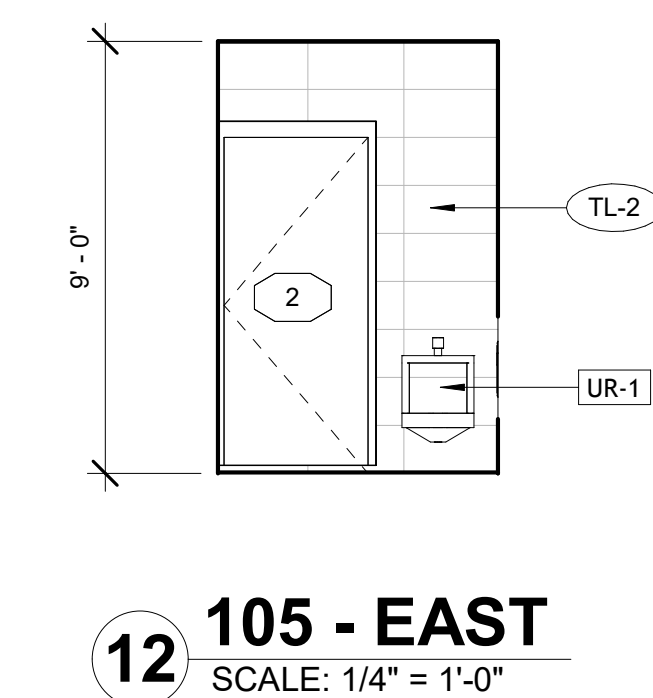
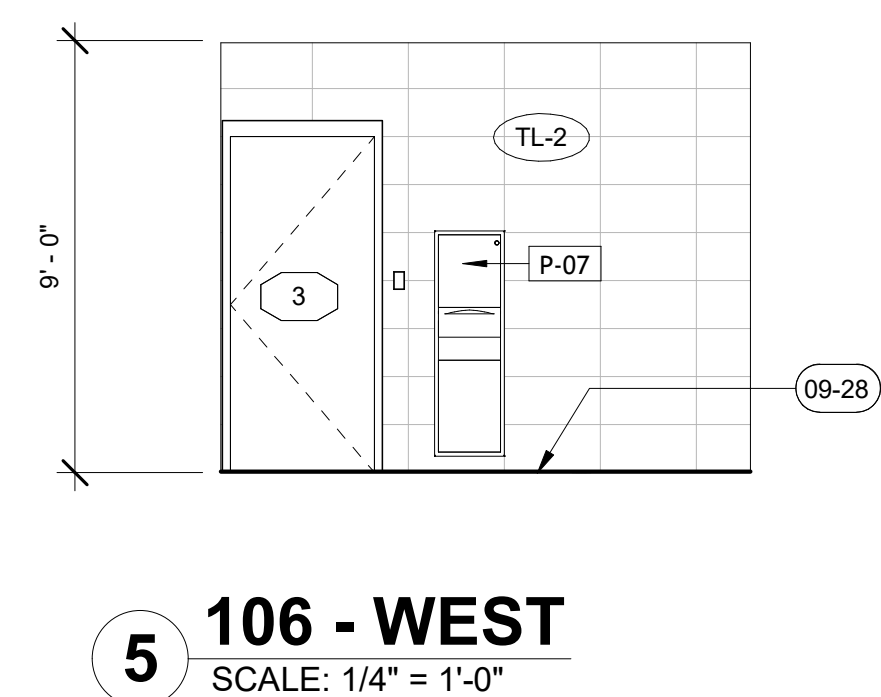
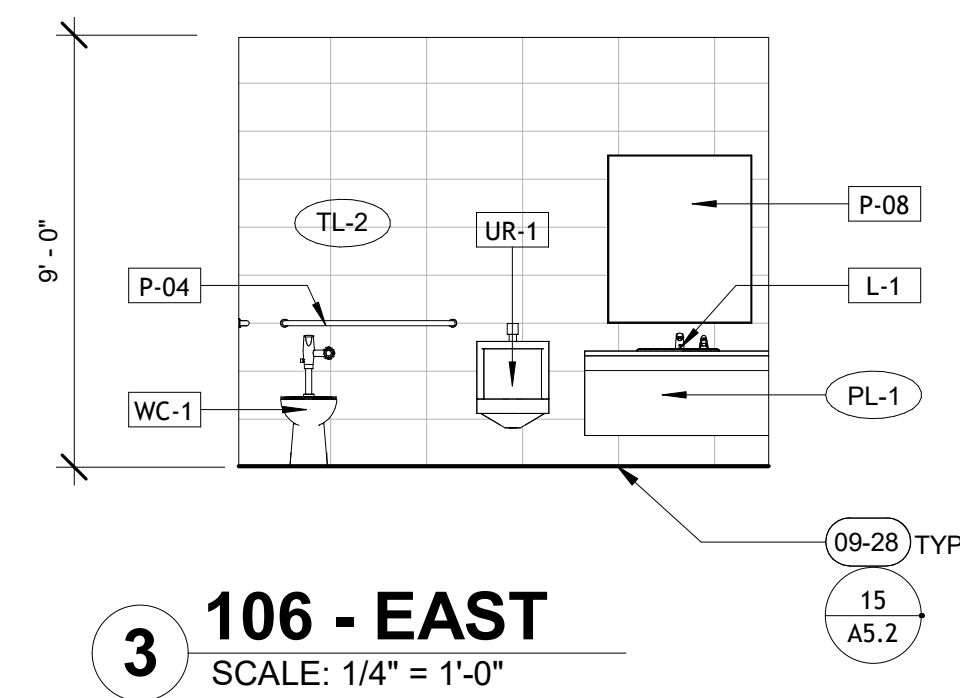
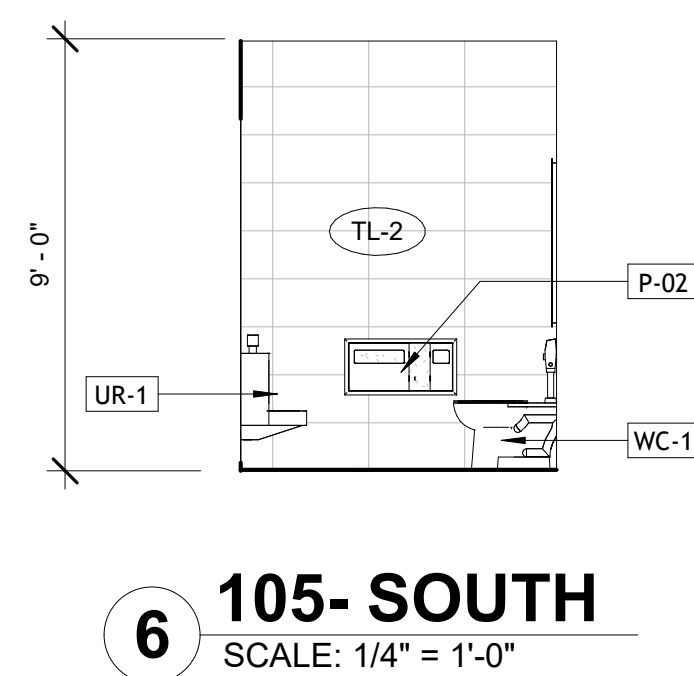
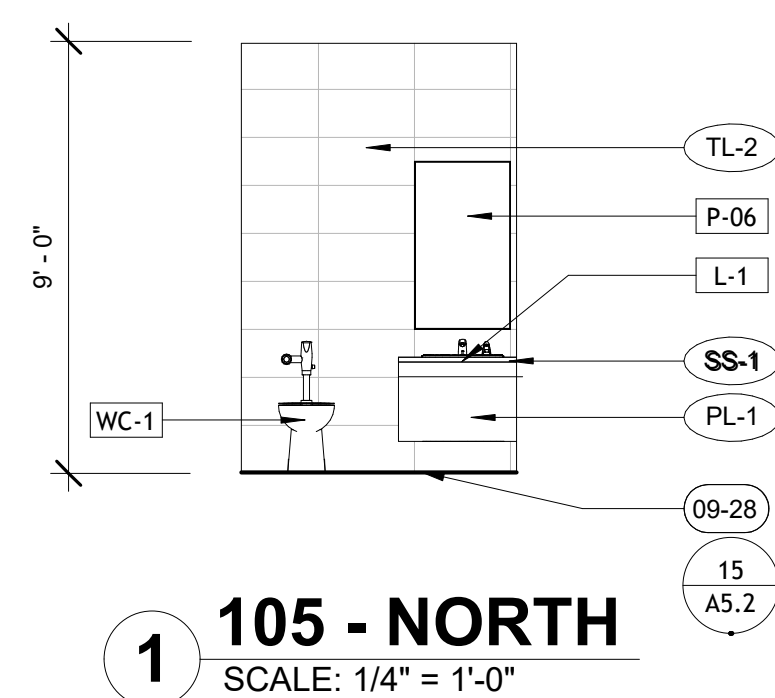
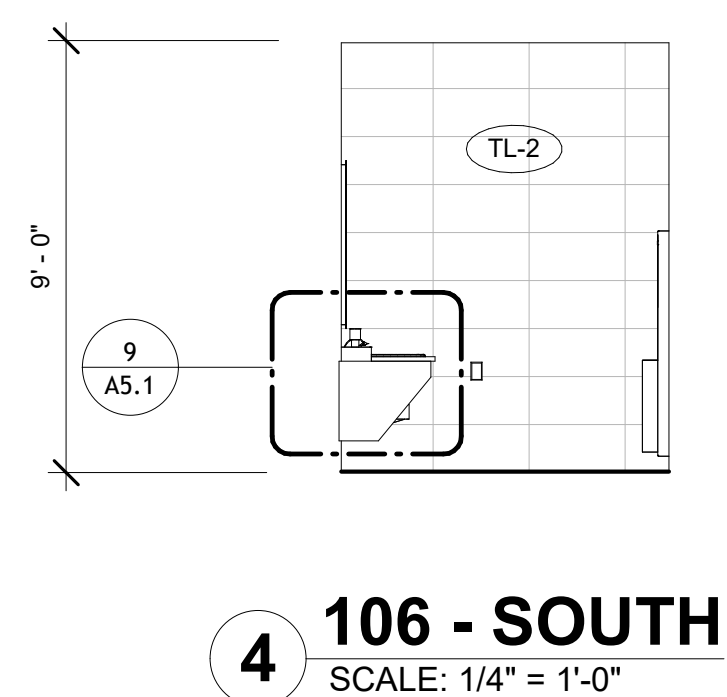
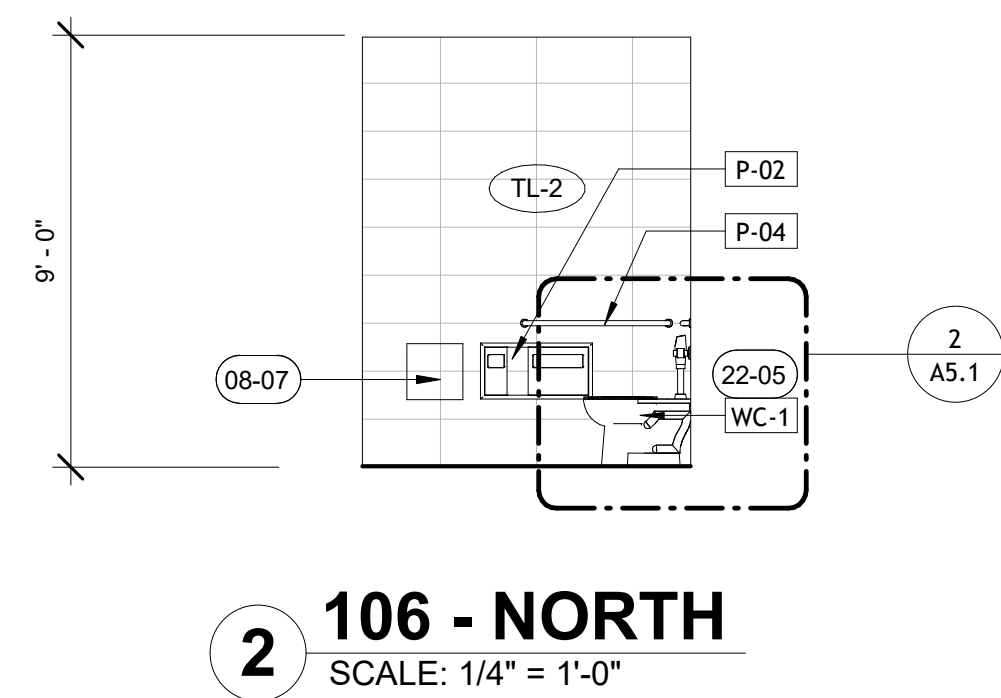
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CAD Draft:	AH
Architect:	LOK
Engineer:	-
Client:	CITY OF TORRANCE
Date Issue:	2/25/2026
Job Number:	3171

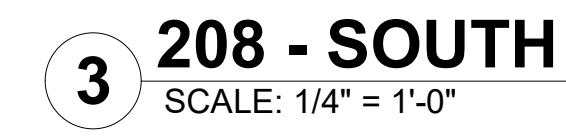
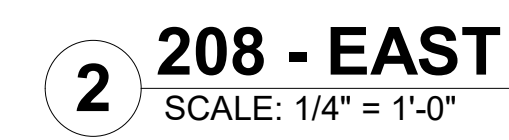
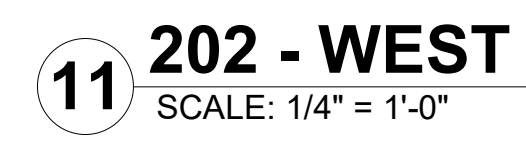
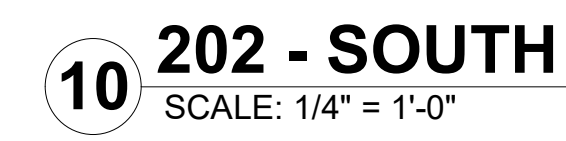
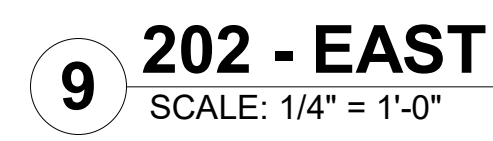
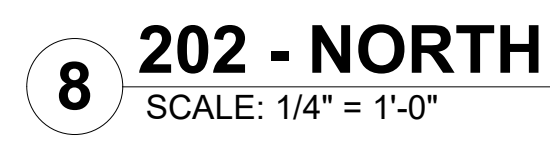
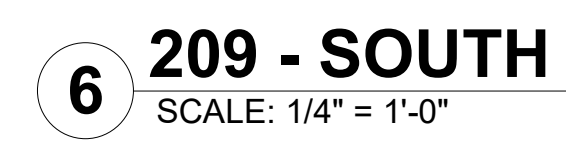
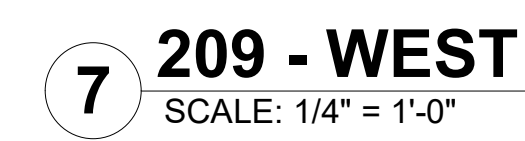
Consultant:



- ENLARGED PLANS AND DETAILS
-
-

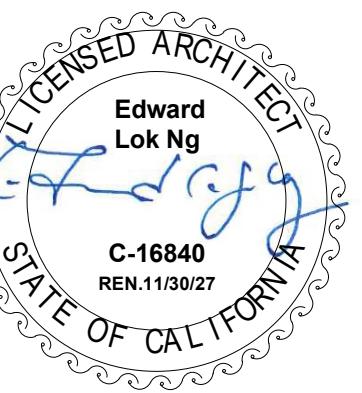
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Consultant:

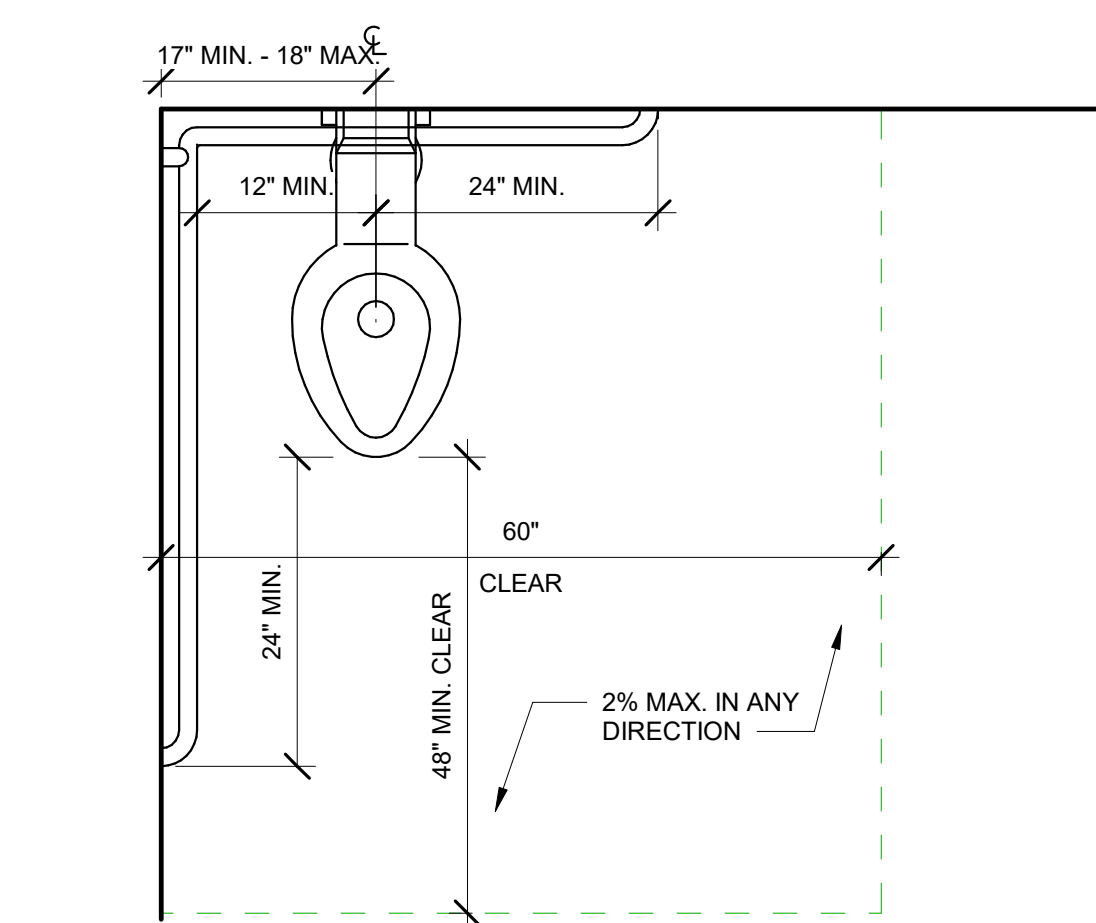
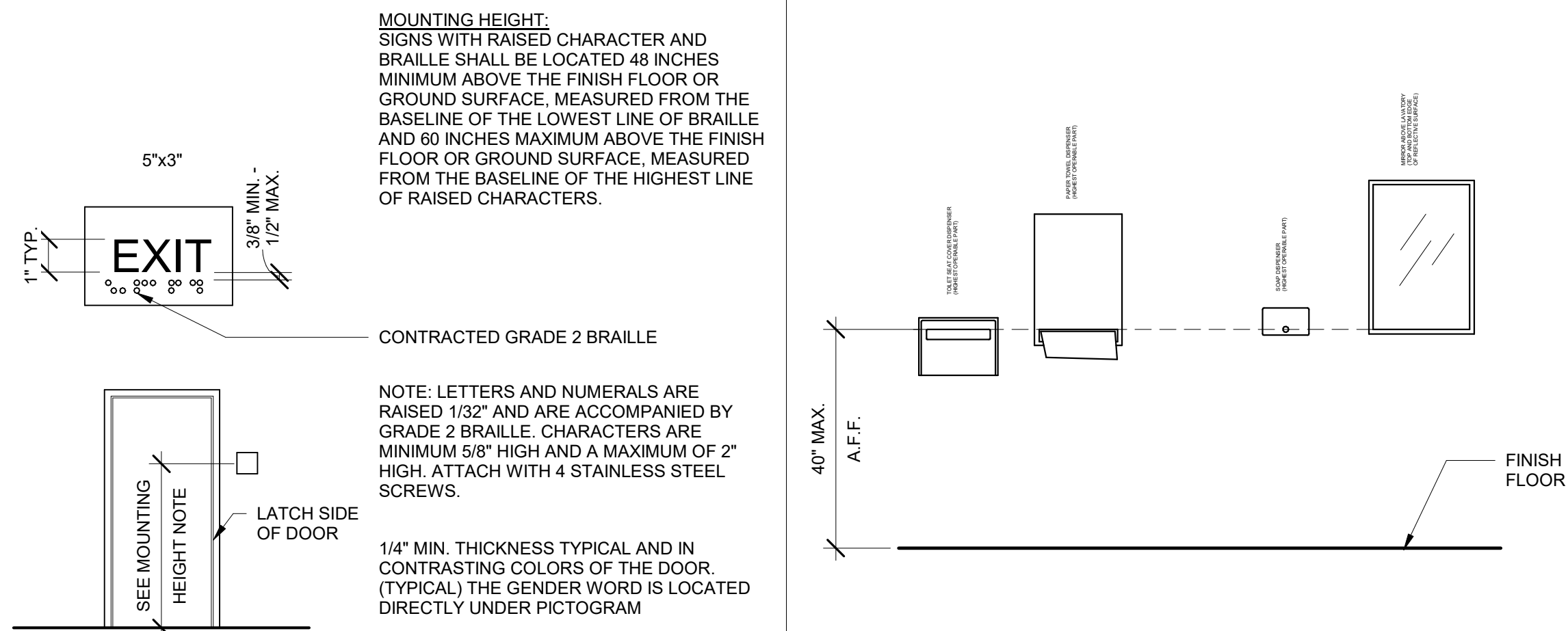


- ### INTERIOR ELEVATIONS

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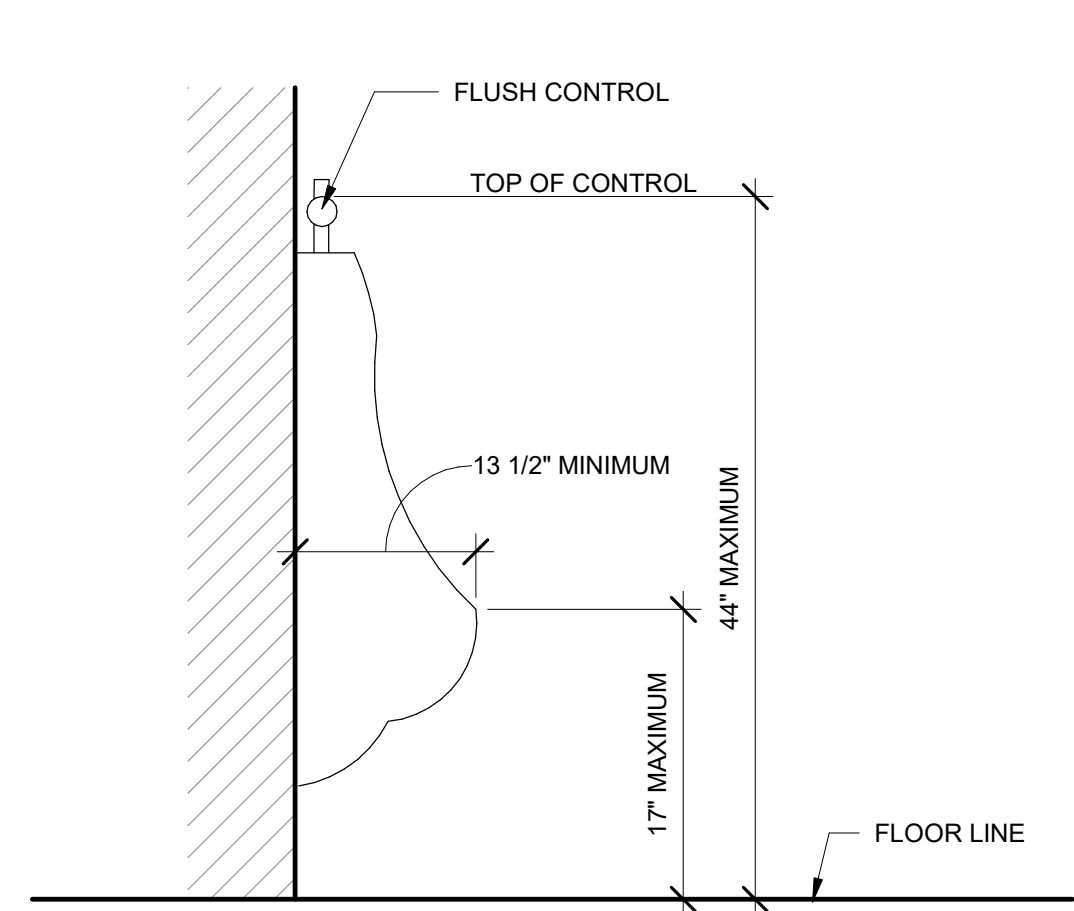
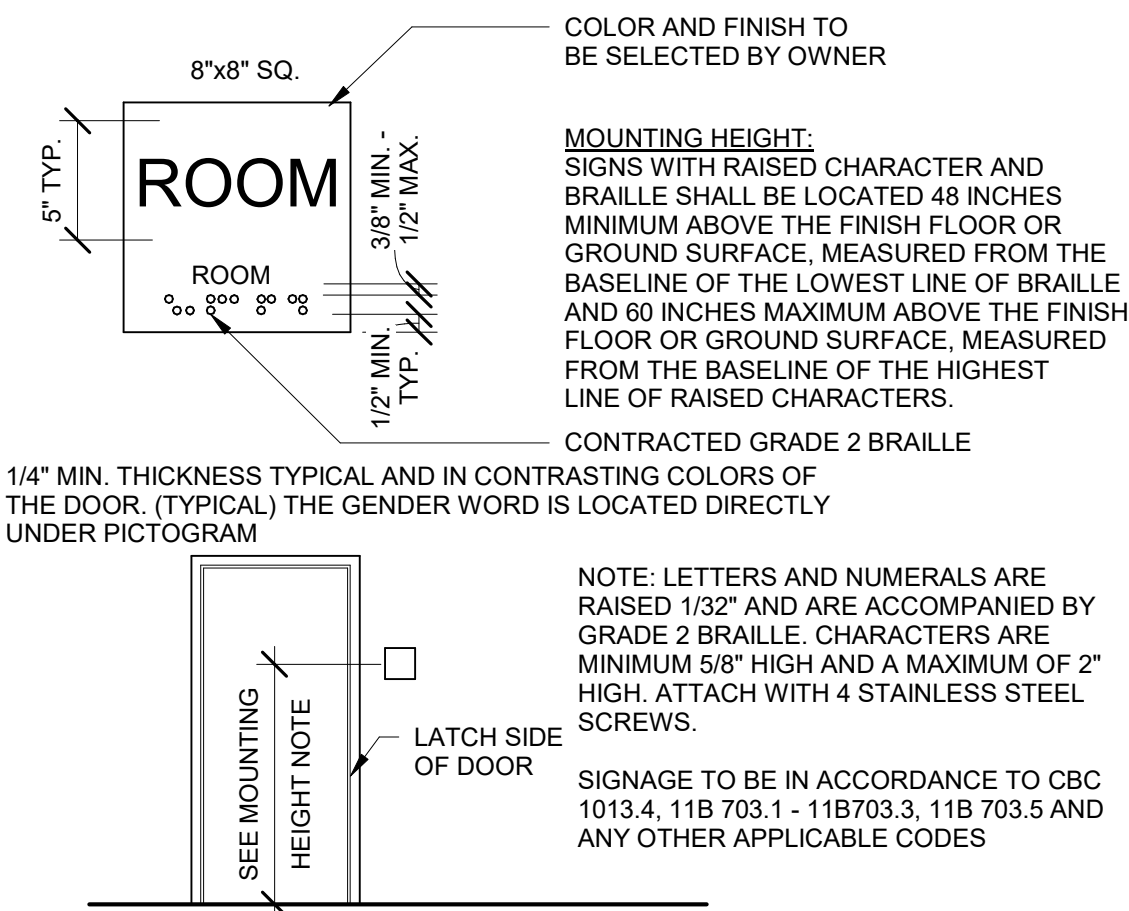
1. STRUCTURAL STEEL AND MISCELLANEOUS IRON/SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE.
2. STEEL PIPE COLUMNS AND OTHER STEEL PIPE STRUCTURAL MEMBERS SHALL CONFORM TO ASTM A53, GRADE B.
3. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE GRADE B, Fy = 40 KSI
4. ALL BOLTS SHALL CONFORM TO ASTM A307, UNLESS NOTED OTHERWISE. WHERE HIGH STRENGTH (H.S.) BOLTS CONFORMING TO ASTM A325 ARE SPECIFIED, INSTALLATION SHALL BE INSPECTED BY A REGISTERED DEPUTY INSPECTOR APPROVED BY THE BUILDING DEPARTMENT.
5. LIGHT GAUGE STRUCTURAL STEEL MEMBERS SHALL CONFORM TO A.S.T.M. SPECIFICATIONS A-446, GRADE A (GALVANIZED) OR A.S.T.M. A-570, GRADE C (HOT ROLLED) OR A.S.T.M. A-570, GRADE E (HOT ROLLED) OR A.S.T.M. A-4807, GRADE 50.
6. FABRICATION AND ERECTION SHALL CONFORM TO A.I.S.C. SPECIFICATIONS.

1. ALL WELDING SHALL BE DONE USING THE SHIELDED ELECTRIC ARC PROCESS BY CERTIFIED WELDERS, USING E70XX ELECTRODES.
2. WELDING OF STEEL REINFORCING BARS SHALL BE DONE WITH LOW HYDROGEN ELECTRODES, A233, CLASS E70XX SERIES. ALL REINFORCEMENT TO BE WELDED SHALL CONFORM TO A.S.T.M. A706 UNLESS APPROVED OTHERWISE.
3. WELDS IDENTIFIED AS REQUIRING CONTINUOUS OR PERIODIC SPECIAL INSPECTION NEED NOT HAVE SPECIAL INSPECTION WHEN WELDING IS DONE IN AN APPROVED FABRICATOR'S SHOP.



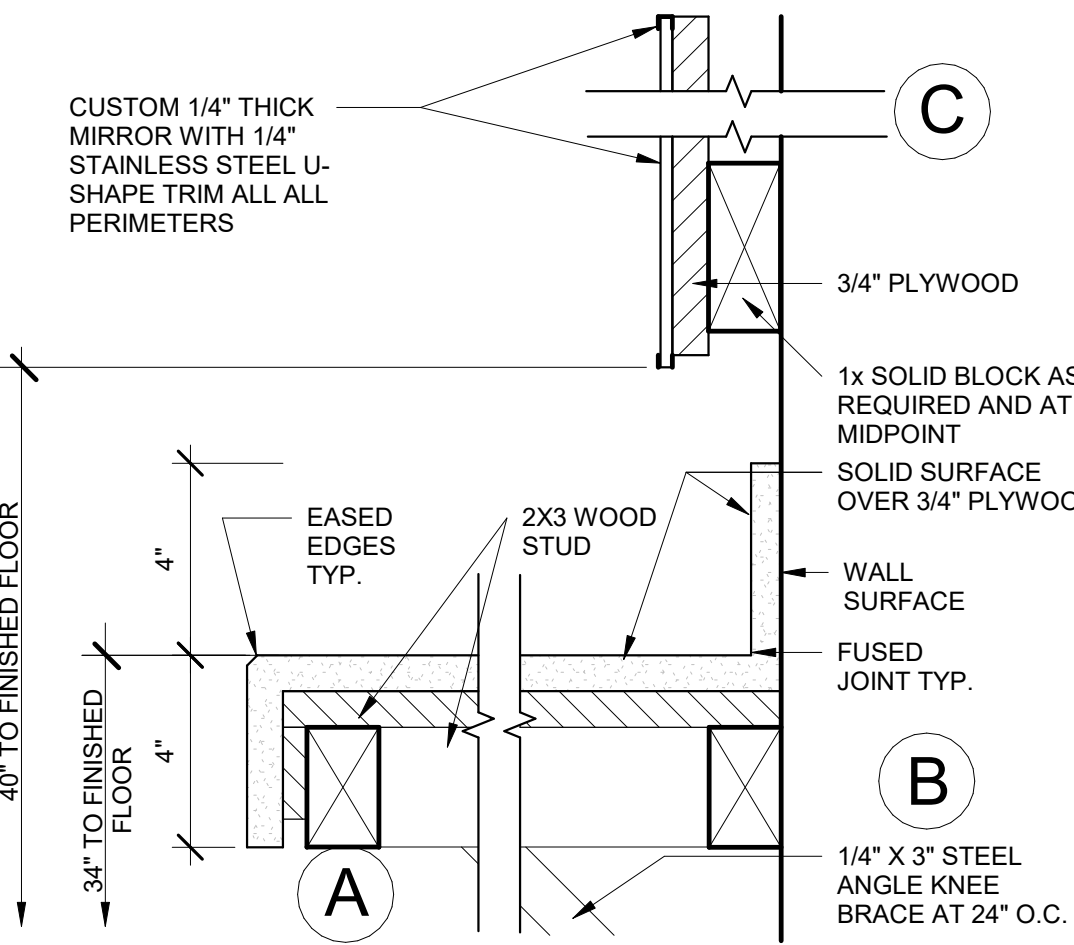
11 MOUNTING HEIGHTS

ADA - TOILET



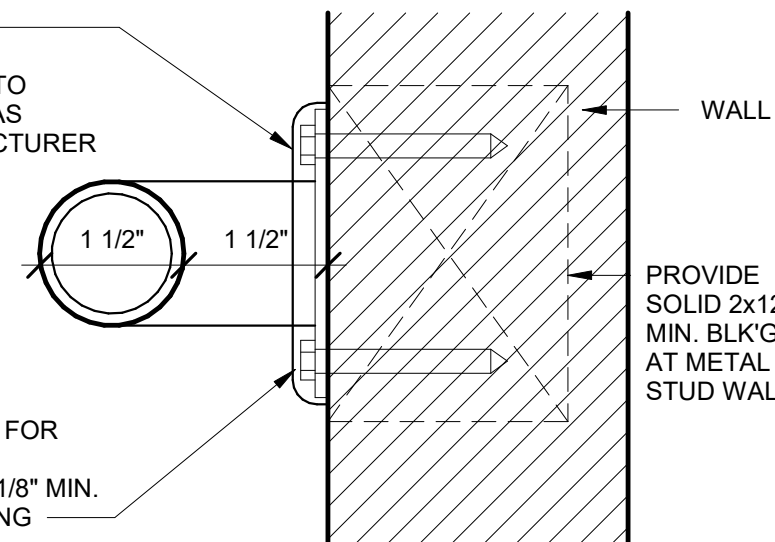
14 URINAL

ADA TOILET/ACCESSORIES



LOCATE GRAB BARS ON EACH SIDE, OR ONE SIDE AND THE BACK, OF THE WATER COLLECTOR, 33 INCHES ABOVE AND PARALLEL TO THE FLOOR. GRAB BARS AT THE SIDE ARE TO BE AT LEAST 42 INCHES LONG WITH THE FRONT END POSITIONED 24 INCHES IN FRONT OF THE WATER COLLECTOR. GRAB BARS AT THE BACK CAN NOT BE LESS THAN 36 INCHES LONG. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACE IS REQUIRED TO BE 1 1/2" O.D., OR THE SHAPE IS TO PROVIDE AN EQUIVALENT GRIPPING SURFACE. GRAB BARS ARE MOUNTED ADJACENT TO A WALL. THE SPACE BETWEEN THE WALL AND THE GRAB BARS IS TO BE 1 1/2 INCHES. GRAB BARS ARE TO RESIST 250 POUNDS OF DOWNWARD FORCE AND TORSION. GRAB BARS ARE TO BE MADE OF STAINLESS STEEL WITH A FINISHED SURFACE AND SNAP FLANGES OVER MOUNTING BOLTS.

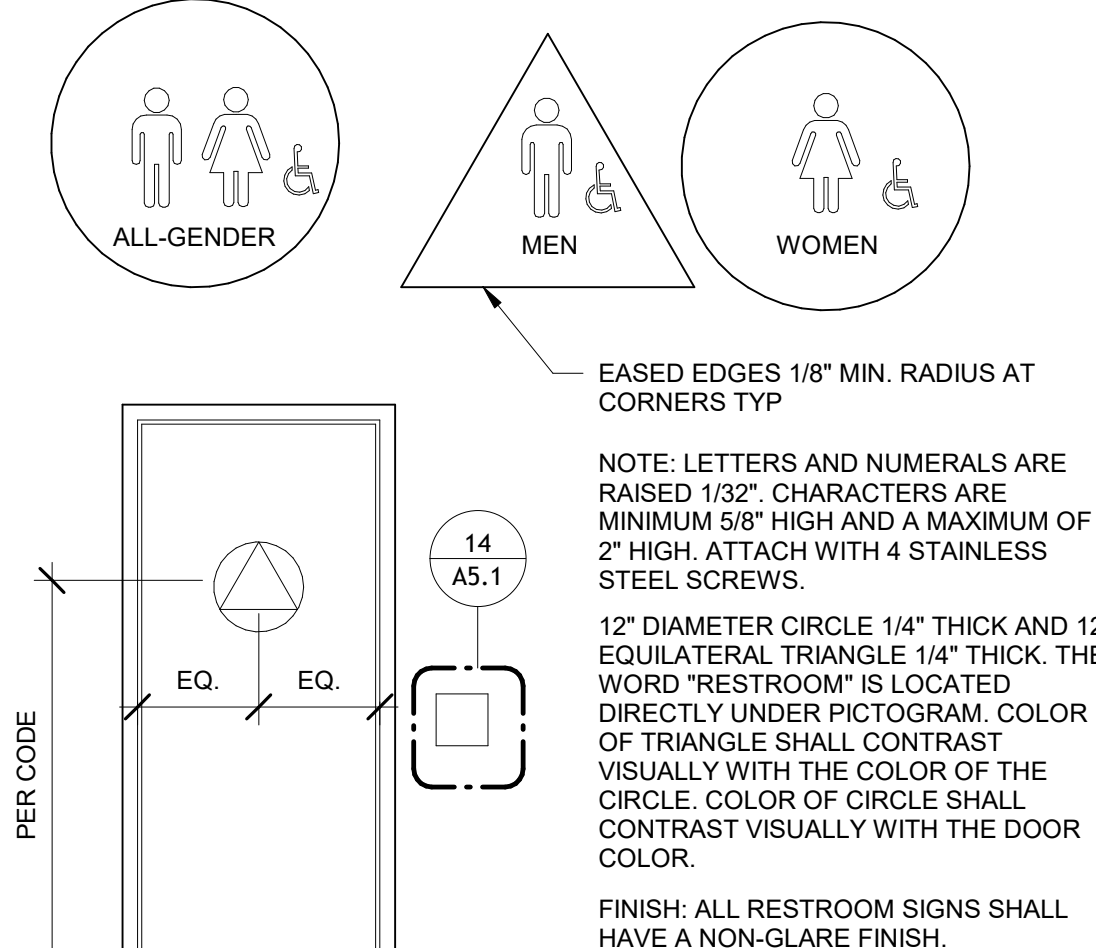
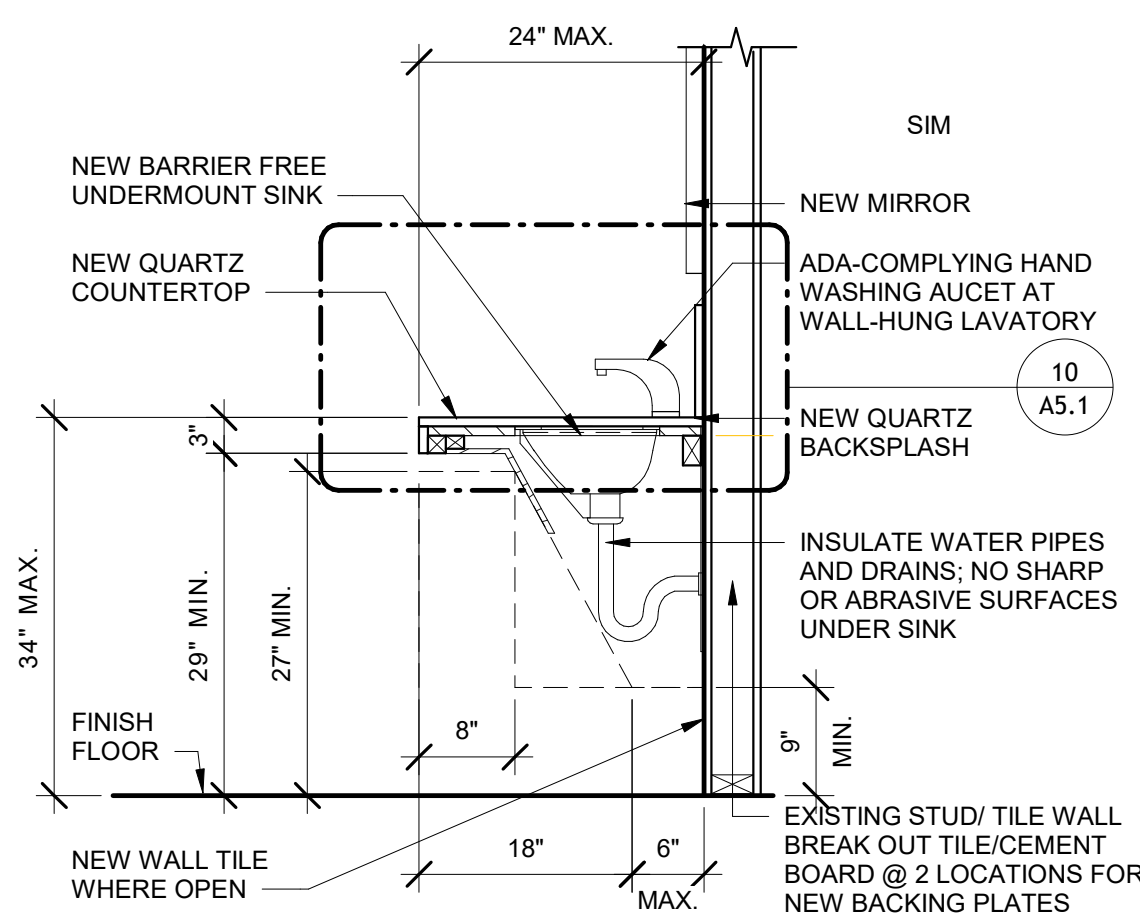
AT CMU WALL:
3-#16 x 2 1/2" LO
EXPANSION AN
WALL STRUCTU
PROVIDED BY M



AT STUD WALL:
USE MANUFACTURED
MOUNTING HARDWARE
ATTACHMENT TO STUD
STRUCTURE. PROVIDE
STEEL PLATE AS SHOWN

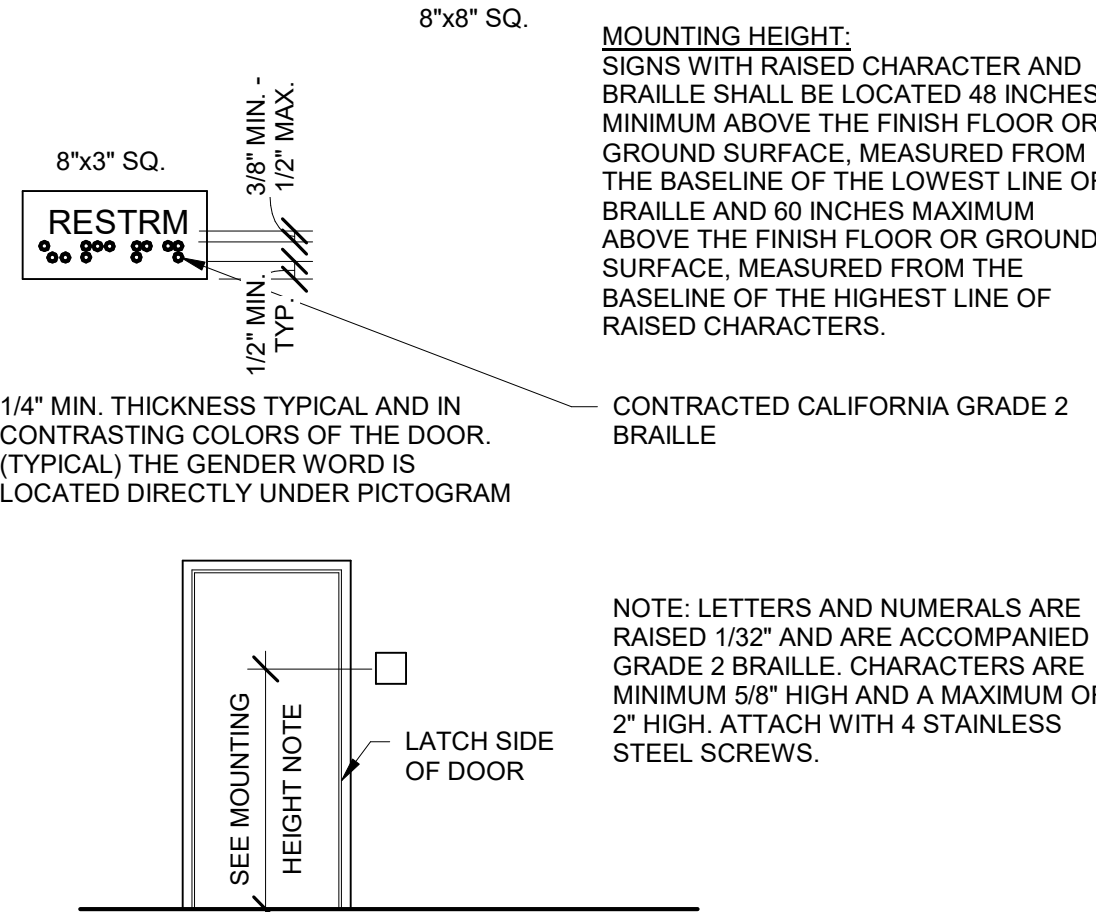
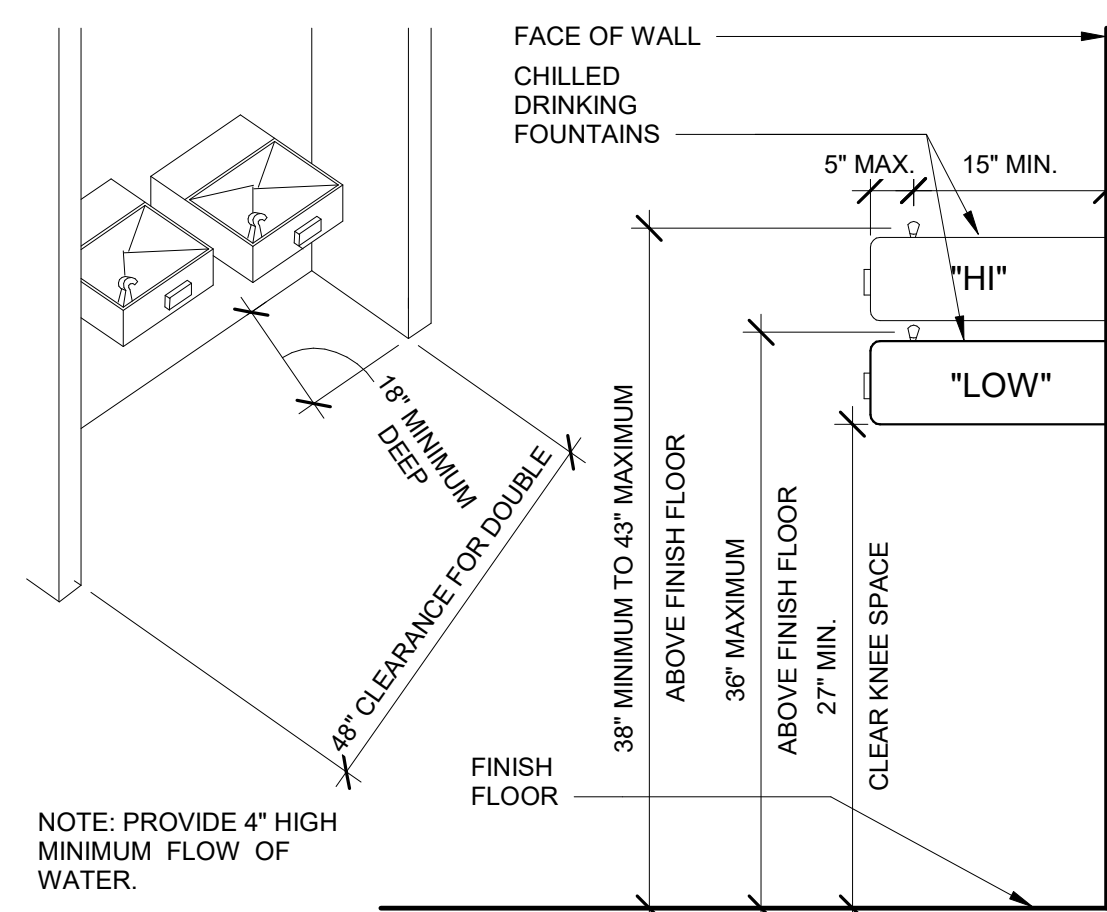
COUNTER

10 GRAB BARS



LAVATORY

DOOR SIGNAGE



WATER FOUNTAIN

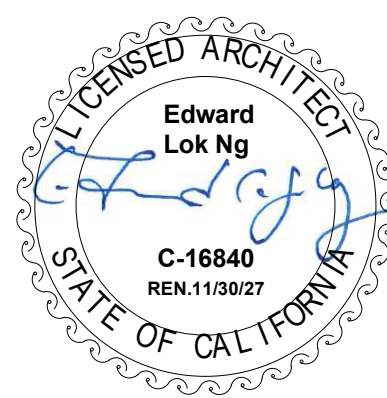
ID SIGNAGE

[illegible]

Designer:	AH
CAD Draft:	AH
Architect:	LOK
Engineer:	-
Client:	CITY OF TORRANCE
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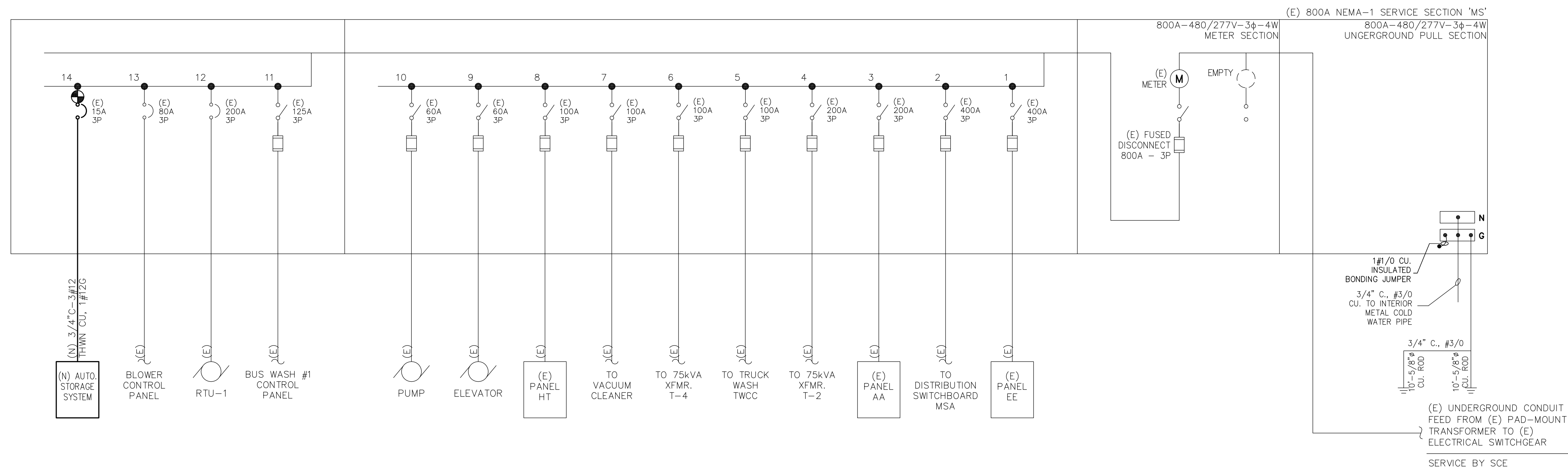
Consultant:



- ACCESSIBLE DETAILS
-
-

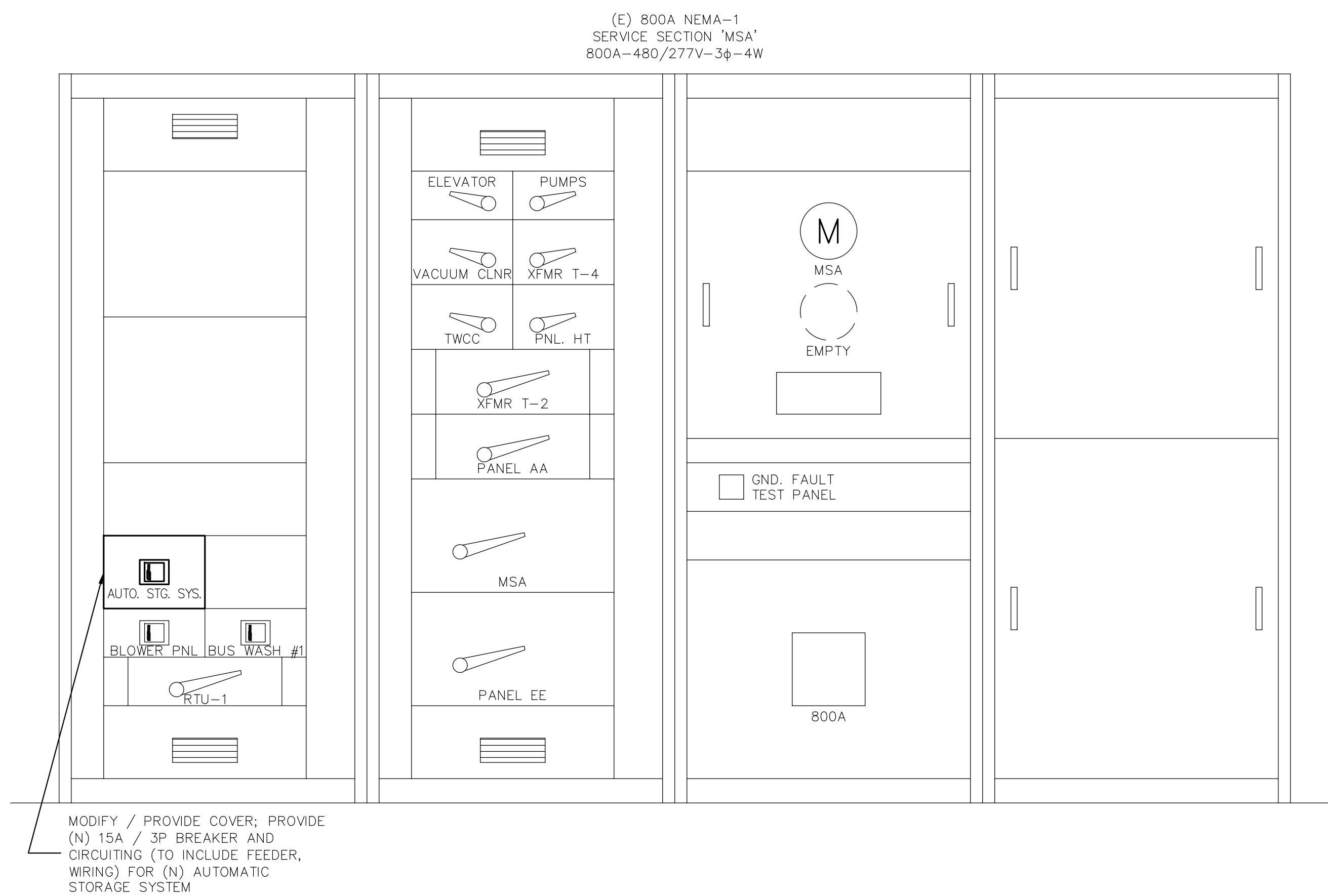
A5.1

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DEMAND LOAD CALCULATION						
EQUIPMENT	SCE. METER	DEMAND (VA)	+25%	INCREASED LOAD (VA)	CONNECTED LOAD (VA)	TOTAL (VA)
(E) SWITCHGEAR MSS	259000-075524	86000	21500.0	—	0.0	107500.0
(N) PROPOSED LOADS	—	—	—	—	54578	54578.0
(N) AUTO. STORAGE SYS.	—	—	—	—	6500	6500.0
		TOTAL kVA:				162078
		TOTAL AMPS 480/3ø:				194.9

SINGLE LINE DIAGRAM



SWITCHGEAR ELEVATION

LEGEND

SYMBOL	DESCRIPTION
	LIGHT FIXTURE, EXIT, SINGLE FACED, UNIVERSAL MOUNTED WITH DIRECTIONAL ARROWS
	LIGHT FIXTURE, EXIT, DOUBLE FACED, UNIVERSAL MOUNTED WITH DIRECTIONAL ARROWS
	LIGHT FIXTURE, EXIT
	DUPLEX RECEPTACLE, 20A, 120V, +15" AFF TO BOTTOM OF BOX OR AS NOTED; G- INDICATES GFI; I- INDICATES ISOLATED GROUND
	SHOW WINDOW RECEPTACLE WITHIN 18" OF TOP OF SHOW WINDOW
	DEDICATED EQUIPMENT RECEPTACLE, 20A, 120V
	JUNCTION BOX, 4" x 1-1/2" SQUARE; TYP. UNO
	JUNCTION BOX, WALL MOUNTED, 4" x 1-1/2" SQUARE; TYP. UNO
	PHOTO SENSOR FOR AUTOMATIC DAYLIGHT CONTROL
	OCCUPANCY SENSOR
	SWITCH, SINGLE (+48" UNO TO TOP OF BOX) X = DESIGNATED LUMINAIRES CONTROLLED BY SWITCH
	SWITCH, MULTIPLE (+48" UNO TO TOP OF BOX) a = SWITCH ONE; b = SWITCH TWO
	OVERIDE SWITCH - T-TMED, 2 HOUR MAXIMUM OVERRIDE
	SWITCH, 3-WAY (+48" UNO TO TOP OF BOX)
	SWITCH, 4-WAY (+48" UNO TO TOP OF BOX)
	SWITCH: K=KEY OPERATED M=MANUAL MOTOR P=PLUT SWITCH T=TIMER L=ILLUMINATED
	DISCONNECT SWITCH; RATINGS AS NOTED
	FUSED DISCONNECT SWITCH; RATINGS AS NOTED
	MANUAL MOTOR STARTER
	HOME RUN TO PANEL BOARD "A" CIRCUITS 1, 3, 5
	PANEL BOARD
	LIGHTING FIXTURE DESIGNATION; TYPE A, 98 VA
	DENOTES PANELBOARD / SWITCHBOARD "A"
	PROGRAMMABLE TIME CLOCK
	CONDUIT CONCEALED IN WALL OR CEILING; SIZE AS NOTED
	CONDUIT BELOW FLOOR OR GRADE OR IN SLAB; SIZE AS NOTED
	CONDUIT EXPOSED; SIZE AS NOTED
	TELEPHONE SYSTEM CONDUIT; 3/4" C OR AS NOTED
	BRANCH CIRCUIT
	CONDUIT TURNED
	CONDUIT TURNED UP OR TOWARD OBSERVER
	CONDUIT TURNED DOWN OR AWAY FROM OBSERVER
	CIRCUIT BREAKER
	1/2" TICK MARKS INDICATE QUANTITY OF #12 AWG CONDUCTORS UNO, NO MARKS INDICATES 2 #12; LARGE SLASH DENOTES NEUTRAL; SLASH WITH DOT DENOTES CODE SIZED GROUND
	MARK COUNT INDICATES QUANTITY, CONDUCTOR; SIZE AS NOTED
	EXISTING
	NEW
	CONDUIT ONLY FOR FUTURE CONNECTION; 3/4" OR AS NOTED

SCOPE OF WORK

1. MAINTAIN (E) 800A-400/277V-3ø-4W BUILDING ELECTRICAL SERVICES IN PLACE IN ENTIRETY
2. MAINTAIN ELECTRICAL PANELS SERVING AREAS OF WORK; MAINTAIN ASSOCIATED ELECTRICAL WIRING, CONDUIT, FEEDERS FROM BUILDING ELECTRICAL SERVICE TO PANELS AS IDENTIFIED HEREIN; PROVIDE (N) SUBPANEL G1 AND ASSOCIATED CIRCUITRY
3. PROVIDE CIRCUITING (TO INCLUDE CONDUIT, BREAKERS) TO OFFICE, WAREHOUSE, AND BREAK ROOM EQUIPMENT, HVAC, PLUMBING FIXTURES, RECEPTACLES AND ANCHILARIES AS NECESSARY AND AS IDENTIFIED ON DRAWINGS
4. PROVIDE CIRCUITING FOR AUTOMATED STORAGE SYSTEM, TO INCLUDE LINE VOLTAGE POWER FOR ANCHILARY EQUIPMENT AS NECESSARY; LOW VOLTAGE POWER FOR CORDUITS BY VENDOR
5. PROVIDE TYPE 24 COMPLIANT LIGHTING AND LIGHTING CONTROLS

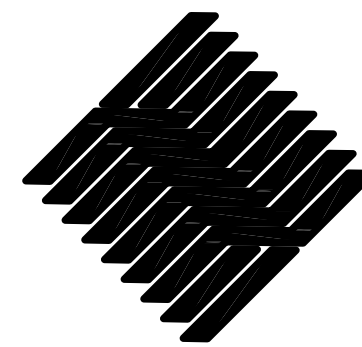
DRAWING INDEX

E1.0	LEGEND, SCOPE OF WORK, DRAWING INDEX, SINGLE LINE DIAGRAM, SWITCHGEAR ELEVATION
E1.1	PROJECT NOTES
E2.0	SITE PLAN
E2.1	DEMOLITION POWER PLAN
E2.2	DEMOLITION LIGHTING PLAN
E2.3	RENOVATION POWER PLAN
E2.4	RENOVATION LIGHTING PLAN
E3.0	PANEL SCHEDULES
E4.0	TITLE 24

**CONTRACTOR SHALL VERIFY
AVAILABILITY OF ALL
UTILITIES PRIOR TO
INITIATION OF
CONSTRUCTION**

Architecture
Interiors
Planning

BOA



TORRANCE TRANSIT FACILITY

20500 MADRONA AVE, TORRANCE, CA 90503

[illegible]

Designer:	KY
CAD Draft:	RT
Architect:	ELN
Engineer:	KMF
Client:	Client Name
Date Issue:	Issue Date
Job Number:	Project Number

Client:

Consultant:
ENGINEERING-DESIGN-ANALYSIS
INCORPORATED
16461 TALBERT AVENUE SUITE 300
FOUNTAIN VALLEY, CA 92708
714/815-8383 (F)
866/426-4338 (T)
EMAIL: CDD@CDDTALBERT.COM

- LEGEND, SCOPE OF WORK,
- DRAWING INDEX, SINGLE
- LINE DIAGRAM,
- SWITCHGEAR ELEVATION

E1.0

TORRANCE TRANSIT FACILITY

20500 MADRONA AVE, TORRANCE, CA 90503

[illegible]

Designer:	KY
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Job Number:	Project Number

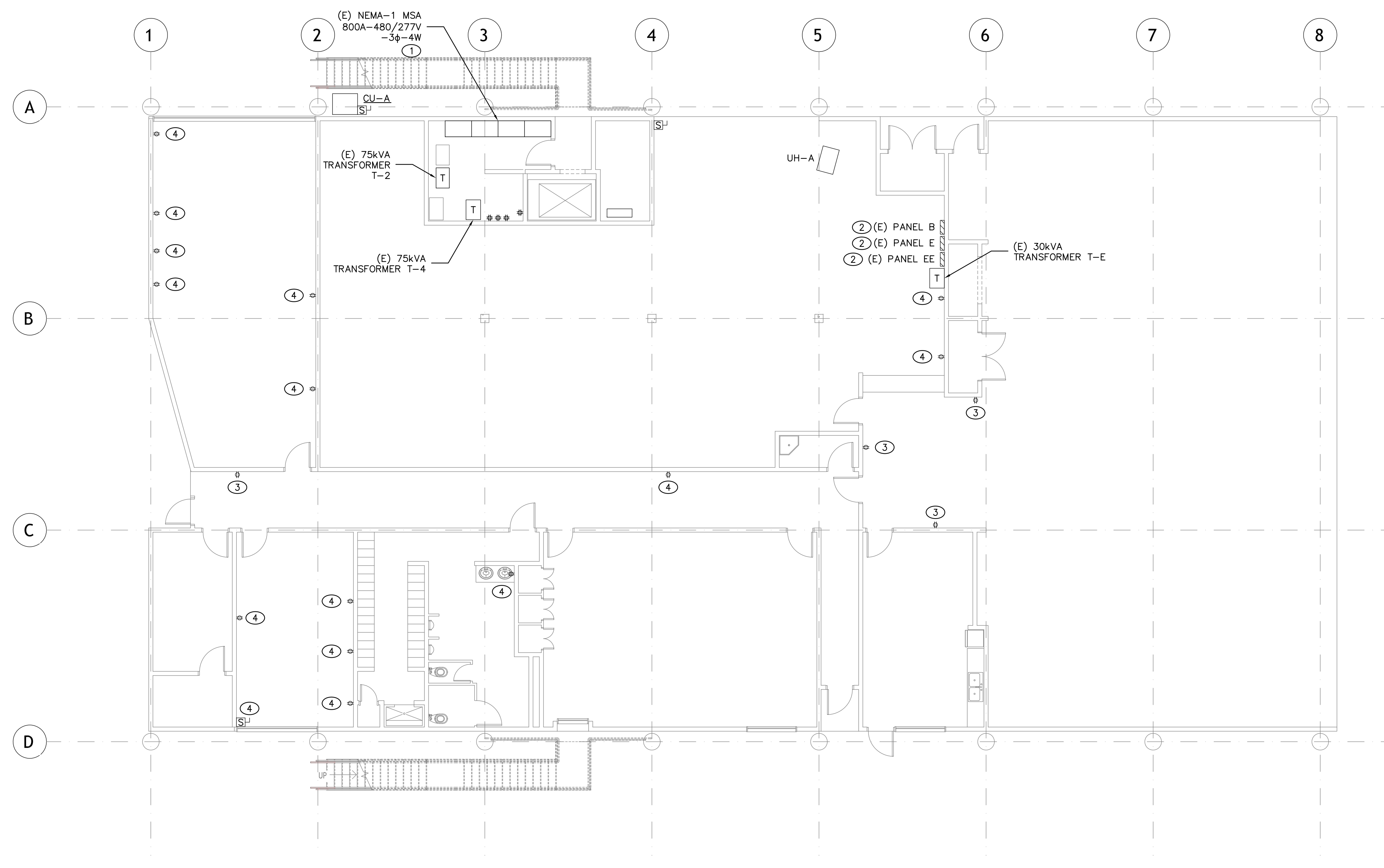
Client:

Consultant:

ENGINEERING-DESIGN-ANALYSIS
INCORPORATED
661 TALBERT AVENUE SUITE 300
FOUNTAIN VALLEY, CA 92708
714-913-6393 (F)
909-425-4336 (F)
EDAINCORPORATED@AOL.COM

● SITE PLAN

E2.0

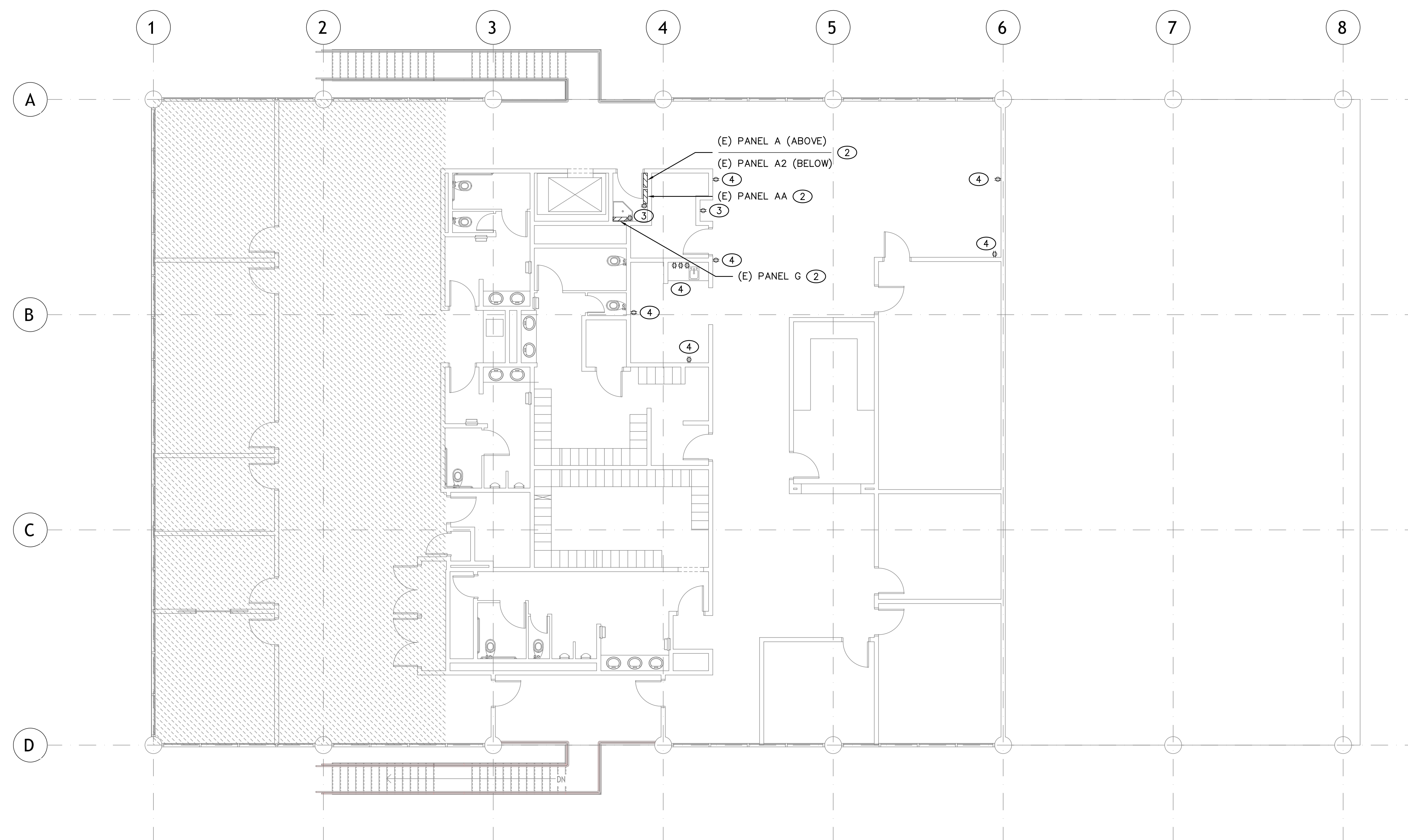


NOTES:

- ① MAINTAIN (E) BUILDING ELECTRICAL SERVICES
- ② MAINTAIN (E) ELECTRICAL PANELS; TYP
- ③ MAINTAIN (E) RECEPTACLES AND ASSOCIATED WIRING UNLESS OTHERWISE NOTED; TYP
- ④ DEMO (E) RECEPTACLES AND ASSOCIATED WIRING

DEMOLITION FIRST FLOOR POWER PLAN

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



NOTES:

- ① NOT USED
- ② MAINTAIN (E) ELECTRICAL PANELS; TYP
- ③ MAINTAIN (E) RECEPTACLES AND ASSOCIATED WIRING UNLESS OTHERWISE NOTED; TYP
- ④ DEMO (E) RECEPTACLES AND ASSOCIATED WIRING



NORTH

D E M O L I T I O N S E C O N D F L O O R P O W E R P L A N

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

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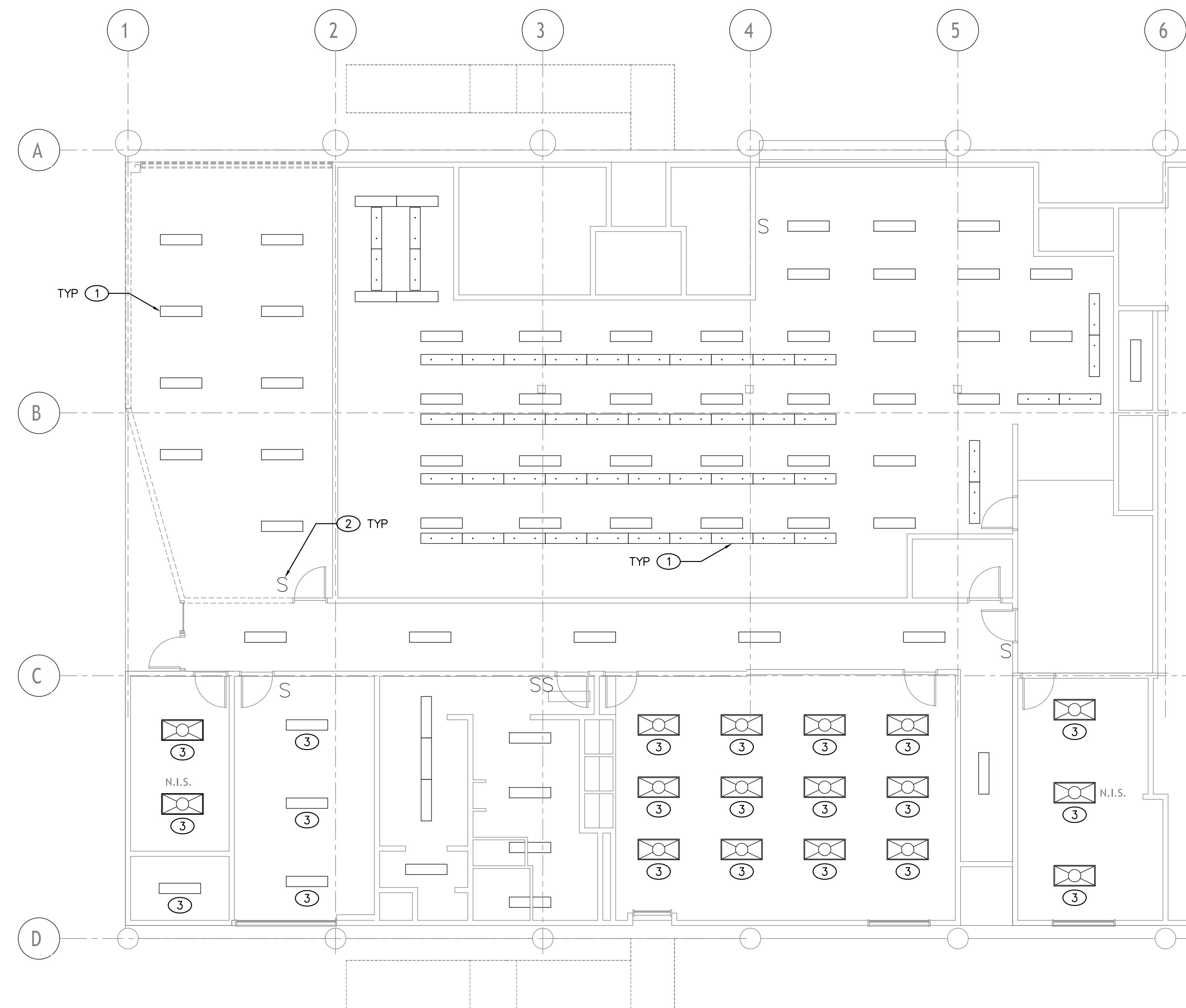
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Architect:	ELN
Engineer:	KMF
Client:	Client Name
Date	Issue Date

Client:

Consultant:
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FOUNTAIN VALLEY, CA 92708
714/931-8333 (P)
714/931-8333 (F)

- DEMOLITION POWER PLAN
-
-

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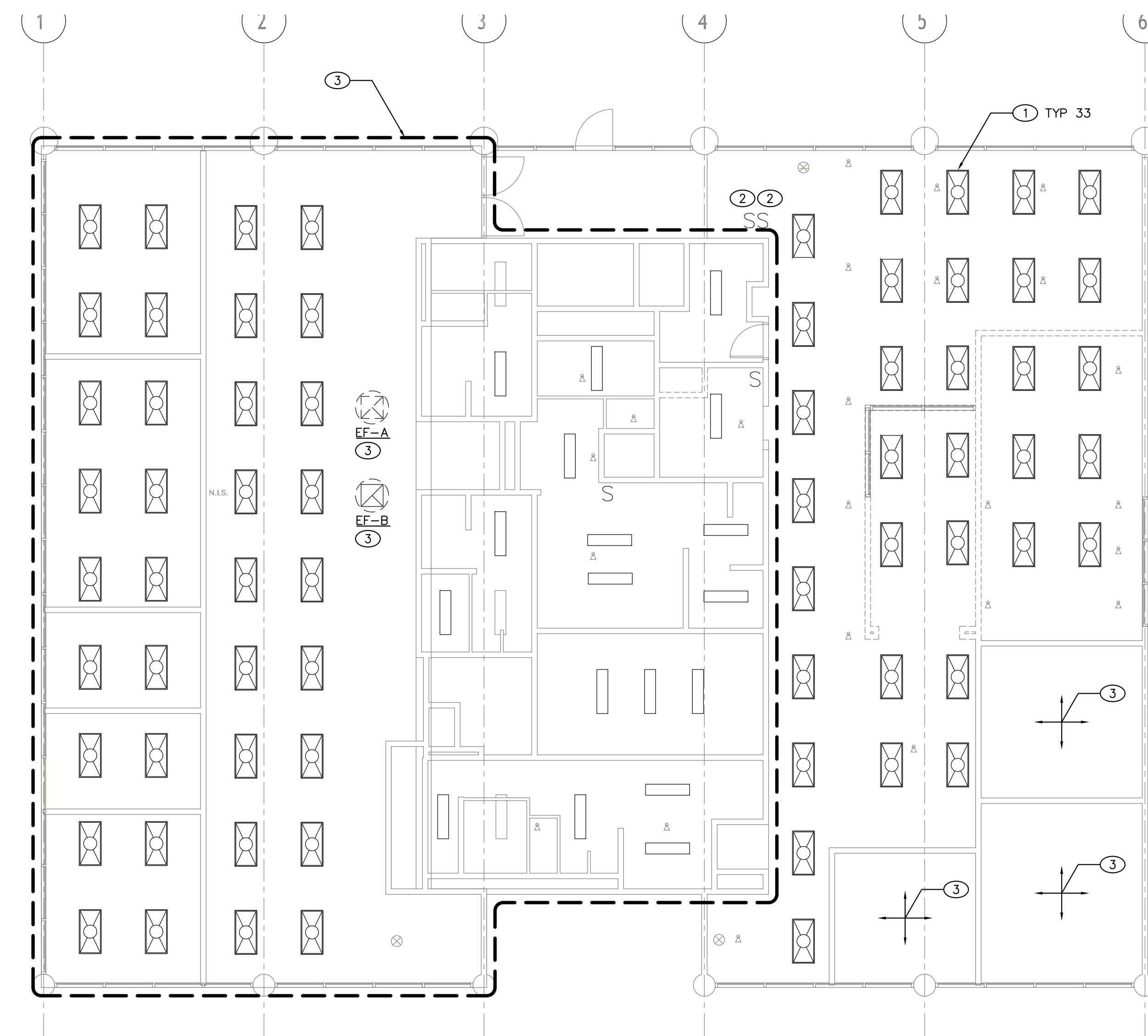
NOTES:

- ① DEMO (E) LED LIGHT FIXTURES; PULL WIRE BACK TO ELECTRICAL SERVICE; TYP UNLESS OTHERWISE NOTED
- ② DEMO (E) SWITCH; TYP
- ③ MAINTAIN (E) LIGHT FIXTURE AND ASSOCIATED SWITCHING IN VICINITY



D E M O L I T I O N F I R S T F L O O R L I G H T I N G P L A N

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



NOTES:

- ① DEMO (E) LED LIGHT FIXTURES; PULL WIRE BACK TO ELECTRICAL SERVICE; TYP UNLESS OTHERWISE NOTED
- ② DEMO (E) SWITCH; TYP
- ③ DEMO CIRCUITING TO (E) EXHAUST FANS; TYP EF'S
- ④ MAINTAIN (E) LIGHT FIXTURE AND ASSOCIATED SWITCHING IN VICINITY

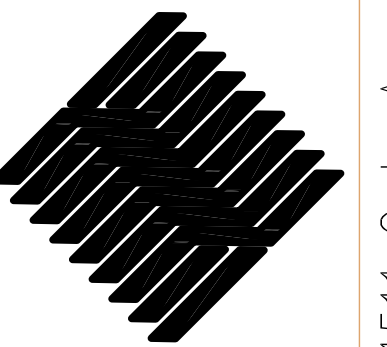


DEMOLITION SECOND FLOOR LIGHTING PLAN

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

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**TORRANCE TRANSIT
FACILITY**

20500 MADRONA AVE, TORRANCE, CA 90503

[illegible]

Designer:	KY
CAD Draft:	RT
Architect:	ELN
Engineer:	KMF
Client:	Client Name
Date Issue:	Issue Date
Job Number:	Project Number

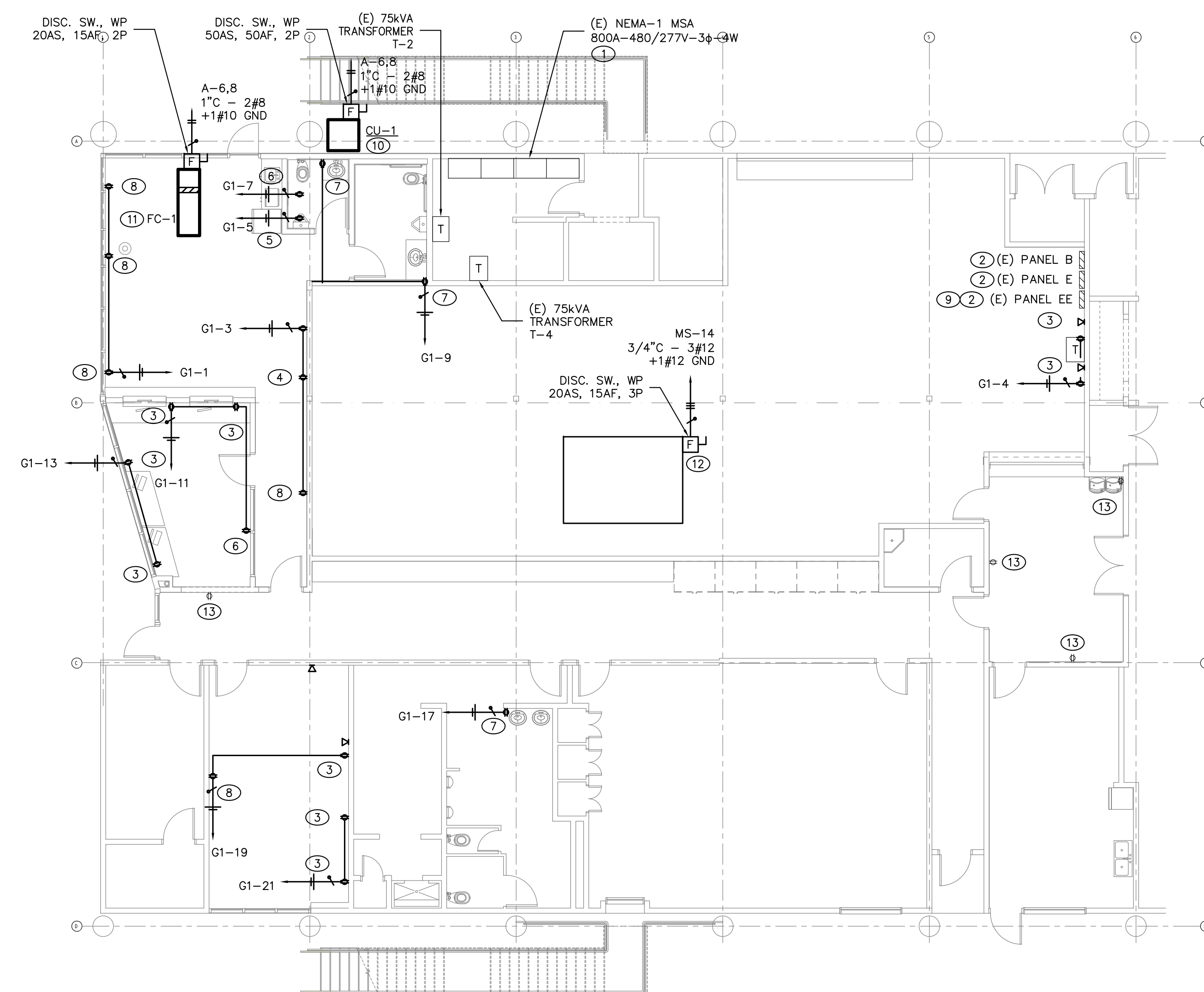
Client:

Consultant:
ENGINEERING-DESIGN-ANALYSIS
INCORPORATED
10661 TALENT AVENUE SUITE 300
FOUNTAIN VALLEY, CA 92708
714-913-6393 (P)
909-427-4326 (F)
EDAIN@CORPORATEDS@AOL.COM

● DEMOLITION LIGHTING PLAN

E2.2

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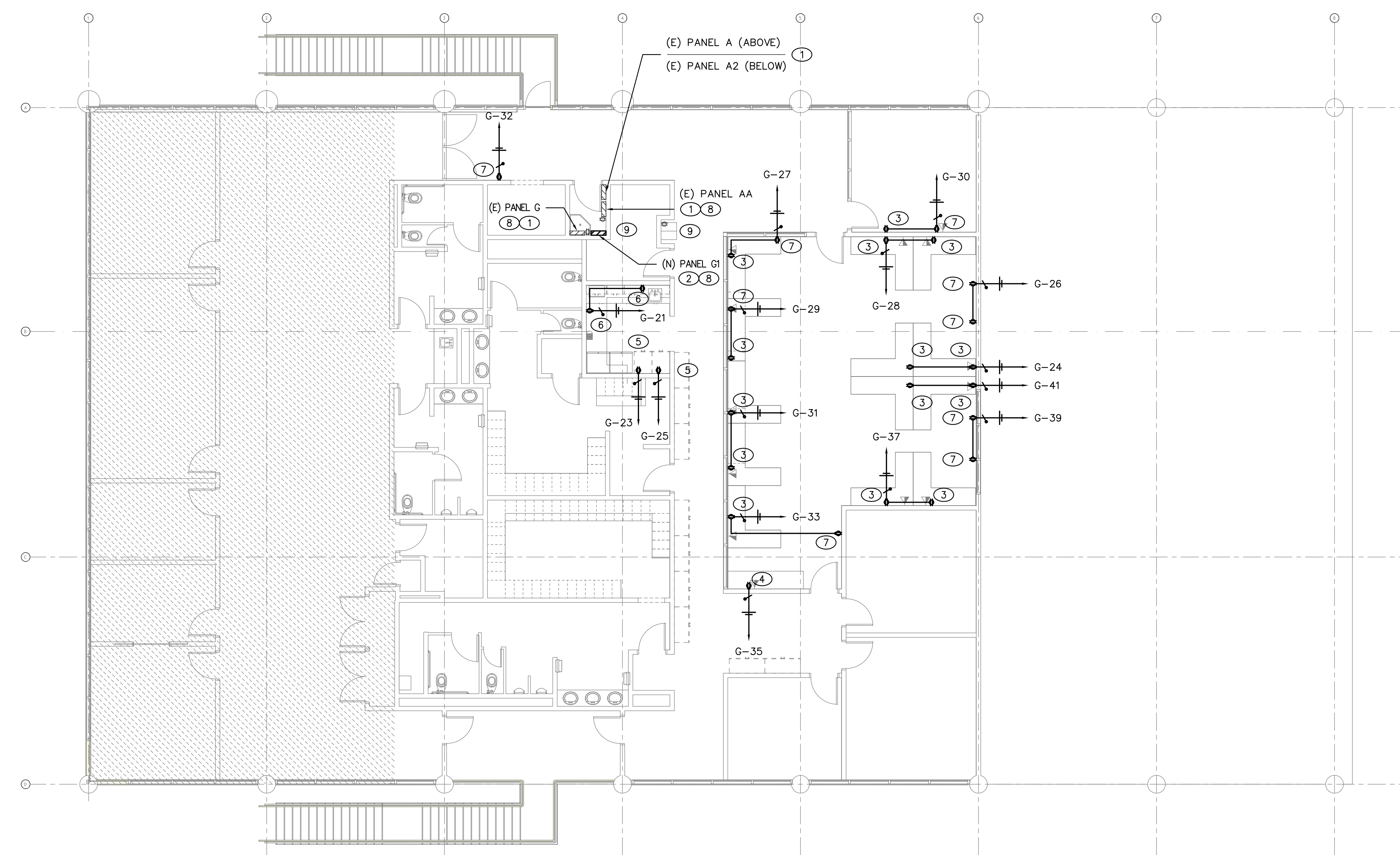
NOTES:

- ① MAINTAIN (E) 800A-480/277V-3ø-4W MS ELECTRICAL SERVICE
- ② MAINTAIN (E) ELECTRICAL PANELS IN ASSOCIATED SPACE
- ③ PROVIDE (N) RECEPTACLE FOR OFFICE WORKSTATION, TO INCLUDE ETHERNET RJ-45 CAT 5E CABLE, ETHERNET WIRING, ETHERNET AND POE WIRING, TERMINATION AND TESTING TO BE DONE BY QUALIFIED ELECTRICAL CONTRACTOR
- ④ PROVIDE (N) RECEPTABLES, ASSOCIATED DATA J-BOX AND DATA CONDUIT FOR TELEVISION
- ⑤ PROVIDE (N) RECEPTACLE FOR REFRIGERATOR IN KITCHENETTE AREA
- ⑥ PROVIDE (N) RECEPTACLE FOR MICROWAVE IN KITCHENETTE AREA
- ⑦ PROVIDE (N) GFCI RECEPTABLES
- ⑧ PROVIDE (N) RECEPTABLES FOR GENERAL RECEPTACLE-BASED EQUIPMENT
- ⑨ PROVIDE (N) CIRCUITING FROM PANELS TO POINTS OF USE
- ⑩ PROVIDE CIRCUITING TO (N) CU EQUIPMENT; PROVIDE WIRING, FUSED DISCONNECT AS IDENTIFIED HEREIN
- ⑪ PROVIDE CIRCUITING FROM FC UNIT TO ASSOCIATED CU; PROVIDE WIRING, FUSED DISCONNECT AS IDENTIFIED HEREIN
- ⑫ PROVIDE CIRCUITING FROM MS TO (N) AUTOMATIC STORAGE SYSTEM
- ⑬ MAINTAIN / MODIFY / REPAIR (E) RECEPTACLE AND ASSOCIATED CIRCUITING AS NECESSARY



RENOVATION FIRST FLOOR POWER PLAN

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



NOTES:

- 1 MAINTAIN (E) ELECTRICAL PANELS IN ASSOCIATED SPACE
- 2 PROVIDE (N) ELECTRICAL SUBPANEL G1 IN SPACE
- 3 PROVIDE (N) RECEPTACLE FOR OFFICE WORKSTATION, TO INCLUDE ETHERNET PORT—RJ-45 CABLE, ROUTER WIRING, ETHERNET AND POE WIRING, TERMINATION AND TESTING TO BE DONE BY GENERAL CONTRACTOR
- 4 PROVIDE (N) RECEPTACLES, ASSOCIATED DATA, J-B-BOX AND DATA CONDUIT FOR PRINTER
- 5 PROVIDE (N) RECEPTACLE FOR REFRIGERATOR IN BREAK ROOM
- 6 PROVIDE (N) GFCI RECEPTACLES
- 7 PROVIDE (N) RECEPTACLES FOR GENERAL RECEPTACLE-BASED EQUIPMENT
- 8 PROVIDE (N) CIRCUITING FROM PANELS TO POINTS OF USE
- 9 MAINTAIN / MODIFY / REPAIR (E) RECEPTACLE AND ASSOCIATED CIRCUITING AS NECESSARY



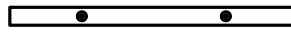
RENOVATION SECOND FLOOR POWER PLAN

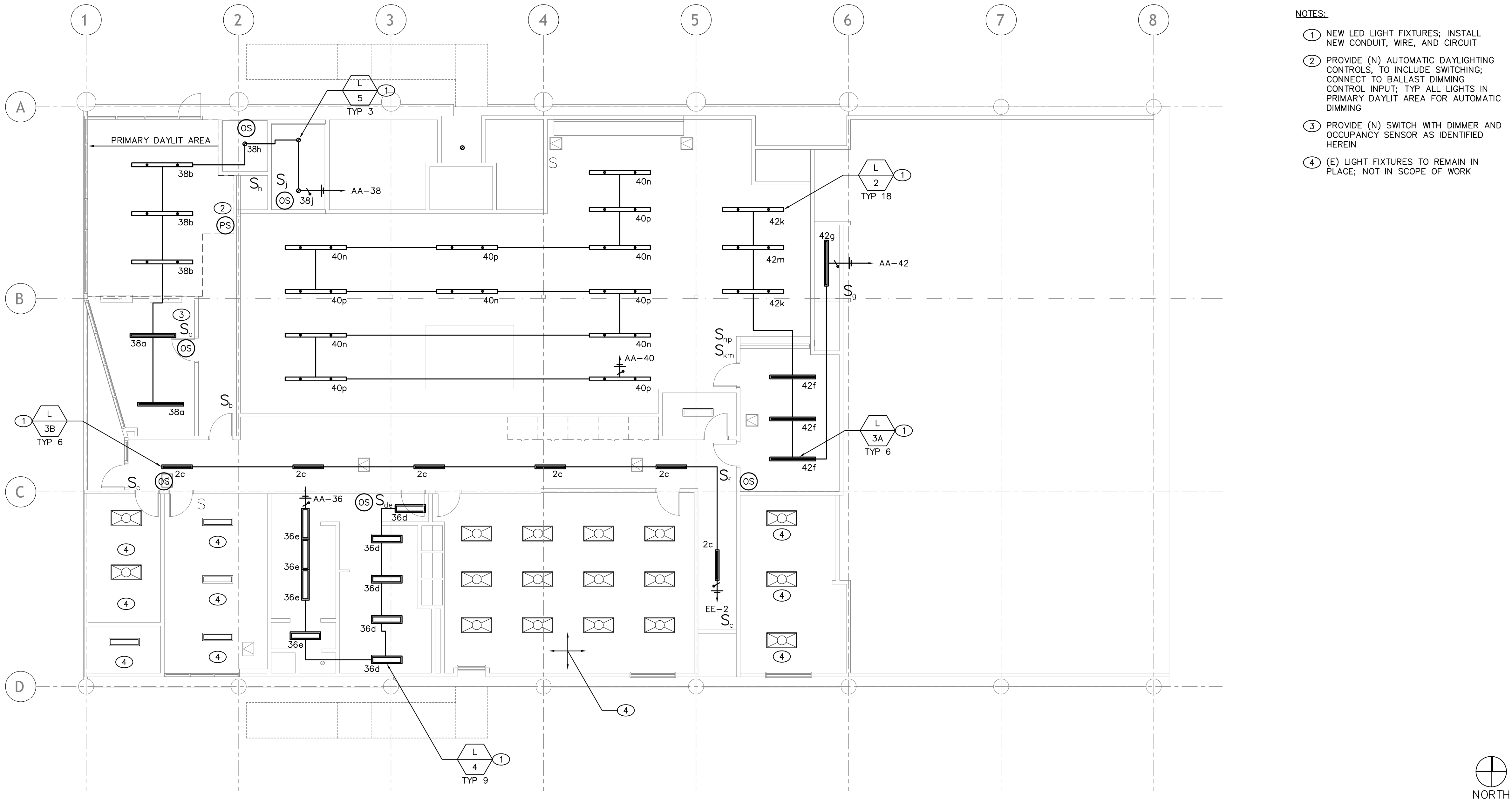
SCALE: 1/4"=1'-0"

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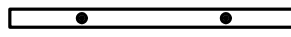
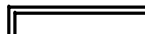
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CAD Draft:	RT
Architect:	EUN
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Client:	Consultant:
	ENGINEERING-DESIGN ANALYSIS INCORPORATED
	1661 TALENT AVENUE SUITE 500 FOUNTAIN VALLEY, CA 92708 909.421.4526 (F) 909.421.4526 (H) www.eda-inc.com

LIGHTING FIXTURE SCHEDULE									
SYMBOL	TYPE	DESCRIPTION	TOTAL V-A	LAMP		V/PH	BALLAST	REMARKS	
				NO.	V-A				
		HE WILLIAMS 2'x4' TROFFER LED ATS-24-L40/835-D	34.2	1	34.2	LED	120/1	STANDARD	LAY-IN TROFFER MOUNTED
		ALCON 8' LINEAR SUSPEND MOUNT LED 12100-40-P	54	1	54	LED	120/1	DIMMING	SUSPENDED MOUNT; PROVIDE 1-10V DIMMING BALLAST
		ALCON 6' LINEAR SURFACE MOUNT LED 12100-40-S	40.5	1	40.5	LED	120/1	DIMMING	SURFACE MOUNT; PROVIDE 1-10V DIMMING BALLAST
		ALCON 4' LINEAR RECESSED MOUNT LED 12100-40-S	27	1	27	LED	120/1	DIMMING	RECESSED MOUNT; PROVIDE 1-10V DIMMING BALLAST
		ALCON 4' WRAPAROUND LED 12119-S-48	38	1	38	LED	120/1	DIMMING	SURFACE MOUNT; PROVIDE 1-10V DIMMING BALLAST
		ALCON 6' RECESSED DOWNLIGHT LED 14008-6-R	10	1	10	LED	120/1	DIMMING	RECESSED MOUNT; PROVIDE 1-10V DIMMING BALLAST
NOTES:									
1. ALL FIXTURE BALLASTS SHALL BE U.L. APPROVED AND CERTIFIED PER CEC 2-5314 (b).									
2. ALL LAMPS PROVIDED WITH DIMMING BALLASTS SHALL HAVE DIMMING SWITCHES PROVIDED FOR CONTROL.									
3. ALL MOUNTING HEIGHTS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.									
4. EXIT SIGNS SHALL NOT BE USED AS JUNCTION BOXES.									
5. GENERAL LIGHTING OVERRIDE SWITCH SHALL OPERATE FOR A MAXIMUM OF 2 HOURS.									
6. ALL LIGHTING CONTROL EQUIPMENT SHALL BE APPROVED BY THE CALIFORNIA ENERGY COMMISSION AND BE LISTED IN THE APPLIANCE EFFICIENCY DATABASE (TO INCLUDE TIMECLOCKS, PHOTOSENSORS ETC.).									

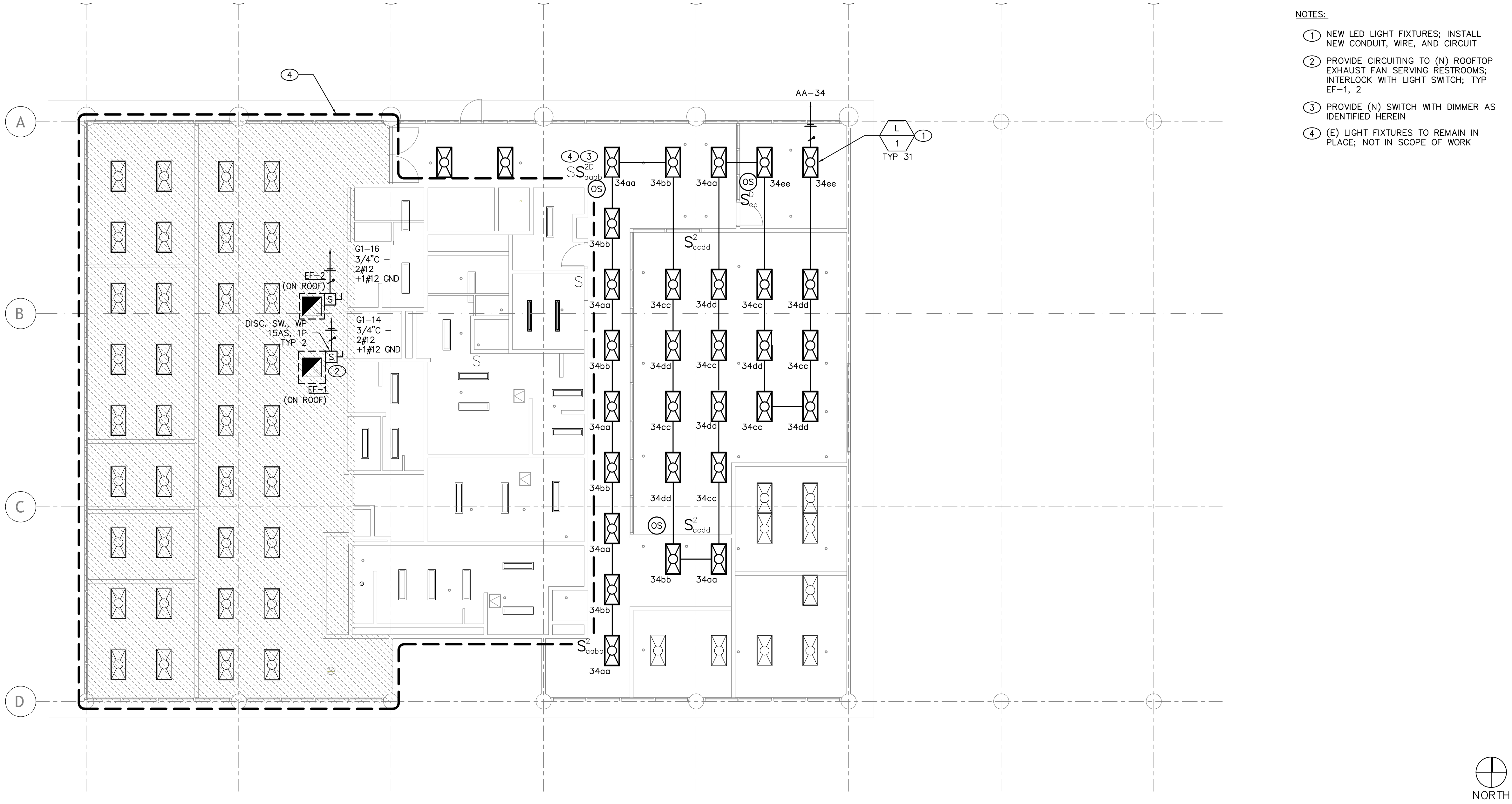


RENOVATION FIRST FLOOR LIGHTING PLAN

SYMBOL	TYPE	DESCRIPTION	TOTAL V-A	LAMP		V/PH	BALLAST	REMARKS	
				NO.	V-A TYPE				
	L 1	HE WILLIAMS 2'x4' TROFFER LED ATS-24-140/835-D	34.2	1	34.2	LED	120/1	STANDARD	LAY-IN TROFFER MOUNTED
	L 2	ALCON 8' LINEAR SUSPEND MOUNT LED 12100-40-P	54	1	54	LED	120/1	DIMMING	SUSPENDED MOUNT; PROVIDE 1-10V DIMMING BALLAST
	L 3A	ALCON 6' LINEAR SURFACE MOUNT LED 12100-40-S	40.5	1	40.5	LED	120/1	DIMMING	SURFACE MOUNT; PROVIDE 1-10V DIMMING BALLAST
	L 3B	ALCON 4' LINEAR RECESSED MOUNT LED 12100-40-S	27	1	27	LED	120/1	DIMMING	RECESSED MOUNT; PROVIDE 1-10V DIMMING BALLAST
	L 4	ALCON 4' LINEAR SURFACE MOUNT LED 12100-40-S	27	1	27	LED	120/1	DIMMING	SURFACE MOUNT; PROVIDE 1-10V DIMMING BALLAST
	L 5	ALCON 6" RECESSED DOWNLIGHT LED 14008-6-R	10	1	10	LED	120/1	DIMMING	RECESSED MOUNT; PROVIDE 1-10V DIMMING BALLAST

NOTES:

- ALL FIXTURE BALLASTS SHALL BE U.L. APPROVED AND CERTIFIED PER CEC 2-5314 (b).
- ALL LAMPS PROVIDED WITH DIMMING BALLASTS SHALL HAVE DIMMING SWITCHES PROVIDED FOR CONTROL.
- ALL MOUNTING HEIGHTS SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS.
- EXIT SIGNS SHALL NOT BE USED AS JUNCTION BOXES.
- GENERAL LIGHTING OVERRIDE SWITCH SHALL OPERATE FOR A MAXIMUM OF 2 HOURS.
- ALL LIGHTING CONTROL EQUIPMENT SHALL BE APPROVED BY THE CALIFORNIA ENERGY COMMISSION AND BE LISTED IN THE APPLIANCE EFFICIENCY DATABASE (TO INCLUDE TIMELOCKS, PHOTOSENSORS ETC.).



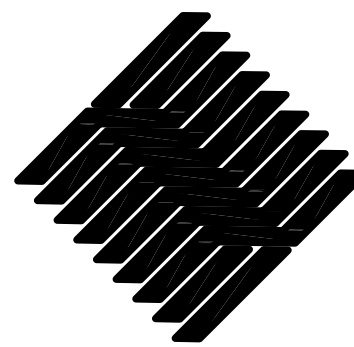
RENOVATION SECOND FLOOR LIGHTING PLAN

NOTES:

- ① NEW LED LIGHT FIXTURES; INSTALL NEW CONDUIT, WIRE, AND CIRCUIT
- ② PROVIDE (N) AUTOMATIC DAYLIGHTING CONTROLS, TO INCLUDE SWITCHING; CONNECT TO BALLAST DIMMING CONTROL INPUT; TYP ALL LIGHTS IN PRIMARY DAYLIT AREA FOR AUTOMATIC DIMMING
- ③ PROVIDE (N) SWITCH WITH DIMMER AND OCCUPANCY SENSOR AS IDENTIFIED HEREIN
- ④ (E) LIGHT FIXTURES TO REMAIN IN PLACE; NOT IN SCOPE OF WORK

Architecture
Interiors
Planning

BOA



1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

**TORRANCE TRANSIT
FACILITY**

20500 MADRONA AVE, TORRANCE, CA 90503

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

NOTES:

- ① NEW LED LIGHT FIXTURES; INSTALL NEW CONDUIT, WIRE, AND CIRCUIT
- ② PROVIDE CIRCUITING TO (N) ROOFTOP EXHAUST FAN SERVING RESTROOMS; INTERLOCK WITH LIGHT SWITCH; TYP EF-1, 2
- ③ PROVIDE (N) SWITCH WITH DIMMER AS IDENTIFIED HEREIN
- ④ (E) LIGHT FIXTURES TO REMAIN IN PLACE; NOT IN SCOPE OF WORK

[illegible]

Designer:	KY
CAD Draft:	RT
Architect:	ELN
Engineer:	KMF
Client:	Client Name
Date Issue:	Issue Date
Job Number:	Project Number

Client:	
Consultant:	<u>ENGINEERING DESIGN ANALYSIS</u> INCORPORATED 11661 VALLEY AVENUE SUITE 200 FOUNTAIN VALLEY, CA 92708 714-913-3483 (P) 714-913-3483 (F) EDAN@CORPORATE2@AOL.COM

- RENOVATION LIGHTING PLAN
-

E2.4

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

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(E) PANEL B LOCATION: 101 - WAREHOUSE MOUNTING: SURFACE										VOLTAGE/PHASE: 208/120V, 3ø, 4W BUS AMPS: 225A MAIN BREAKER: MCB										FEED FROM: MSA 10 KAIC									
LOADS	SEE NOTE	OUTLETS			VOLT AMPS			BKR/ POLE	ABC	BKR/ POLE	ABC	OKT	VOLT AMPS			OUTLETS	SEE NOTE	LOADS											
		MSC	REC	LTO	A	B	C						A	B	C														
LOUNGE & WELD	E				1080			1	20/1	---	20/1	2	720					E	STRG & UPHOLSTER										
LOUNGE & WELD	E				900			3	20/1	---	20/1	4	720					E	STRG & UPHOLSTER										
CTRL. PNL A/C	E							3	20/1	---	20/1	6						E	UPHOLSTERY										
SHOP OUTLET	E				1080			7	20/1	---	20/1	8	1140					E	EDF STORAGE										
SHOP OUTLET	E				900			9	20/1	---	20/1	10	828					E	1/3HP EF-C										
SHOP OUTLET	E							11	20/1	---	20/1	12						E	RECEPTACLES										
RCPT	E				1000			15	20/1	---	20/1	14	540					E	IONTON ON HEATERS										
RCPT	E							15	20/1	---	20/1	16	540					E	IONTON ON HEATERS										
A/C COND. GYM	E							17	60	---	2	18																	
								19	2	---	20/1	20	1000					E	COPIER										
AHU - GYM	E							21	20	---	20/1	22						E	SPARE										
								23	2	---	20/1	24						E	SPARE										
SPACE	E							25	---	100	26							E	(E) PANEL A										
SPACE	E							27	---	---	28																		
TRAINING RM	E							29	28	---	3	30																	
								31	2	---	20/1	32						E	SPARE										
SPACE	E							33	---	---	20/1	34						E	SPARE										
SPACE	E							35	20/1	---	20/1	36						E	SPARE										
SUB-TOTAL																													
PANEL TOTAL:										AMPS																			
15175	+	LCL	+	LM	=	15175	0208V 3ø = 42.1																						

(E) PANEL A LOCATION: 2ND FLR ELEC ROOM MOUNTING: SURFACE										VOLTAGE/PHASE: 208/120, 3ø, 4W BUS AMPS: 100A MAIN BREAKER: MLO										FEED FROM: PNL B 10 KAIC	
LOADS	SEE NOTE	OUTLETS			VOLT AMPS			BKR/ POLE	ABC	BKR/ POLE	OKT	VOLT AMPS			OUTLETS	SEE NOTE	LOADS				
		MISC	REC	LTG	A	B	C					A	B	C				MISC	REC	LTG	
(E) CIRCUIT	E				-			1	50	---	20/1	2	900				E	OFFICES			
-					-			3		---	20/1	4	1080				E	OFFICES			
					-			5	3	---	20	6					E	(E) CIRCUIT			
DRIVERS LOUNGE	E				1140			7	20/1	---	2	8									
LOUNGE	E				900			9	20/1	---	20/1	10	1800				E	WH-A			
LOUNGE	E							11	20/1	---	20/1	12					E	CONTROLS			
WINDING	E				780			13	20/1	---	20/1	14	500				E	PROJECTION SCREEN			
WINDING	E				1200			15	20/1	---	20/1	16	900				E	TOILETS RR G2'S			
WINDING	E							17	20/1	---	20/1	18					E	LOUNGE RCPT			
RR G2L AREA RCPT	E				1000			19	20/1	---	20	3050					E	KITCHEN UNIT			
SPACE	E							21	---	---	22		3050								
EF-B	E							23	20/1	---	20/1	24					E	SPARE			
DISPOSAL	E				1000			25	20/1	---	20/1	26					E	SPARE			
SPARE	E							27	20/1	---	20/1	28					E	SPARE			
SPARE	E							29	20/1	---	20/1	30					E	SPARE			
SUB-TOTAL																					
PANEL TOTAL:					3920	2100	2020							4450	6830	1680					
20400	+	LCL	+	LM	=	VA		AMPS													
	-	-	+	-	=	20400		0208V 3ø =						56.6							

(E) PANEL G														VOLTAGE/PHASE: 208/120, 3ø, 4W										FEED FROM: MSA							
LOCATION: 2ND FLR ELEC ROOM														BUS AMPS: 225A														10 KAIC			
MOUNTING: SURFACE														MAIN BREAKER: MCB																	
LOADS	SEE NOTE	OUTLETS			VOLT AMPS			BKR/ POLE	ABC	BKR/ POLE	ABC	OKT	VOLT AMPS			OUTLETS	SEE NOTE	LOADS													
		MSC	REC	LTO	A	B	C						A	B	C																
FURN-OPEN OFFICE					1000			3	20/1	---	20/1	4	1000					FURN-OPEN OFFICE													
FURN-OPEN OFFICE								5	20/1	---	20/1	6	1000					FURN-OPEN OFFICE													
FURN-OPEN OFFICE					1000			7	20/1	---	20/1	8	1000					FURN-OPEN OFFICE													
KIT CASHIAC DISPL					1000			9	20/1	---	20/1	10	3563					WATER HEATER C/F													
KITCHEN GFCI RCPT					1080			11	20/1	---	2	12						---													
COFFEE REFRIGERATOR					1000			13	20/1	---	20/1	14	360					CONV. OUTLET													
COFFEE MACHINE					1500			15	20/1	---	20/1	16	1500					HAND DRYER - W.													
COFFEE MICROWAVE					1500			17	20/1	---	20/1	18	1500					HAND DRYER - M.													
2F RESTROOM EF					1000			19	20/1	---	20/1	20	540					TV MONITOR													
* 2F KIT RCPT/MICROW					1380			21	20/1	---	20/1	22	1000					ND, W. ALL-SCANNER													
* 2F REFRIGERATOR					840			23	20/1	---	20/1	24						2F WORKSTATION													
* 2F REFRIGERATOR					720			25	20/1	---	20/1	26	360					2F OFFICE RCPT													
* 2F WORKSTATION/RCPT					720			27	20/1	---	20/1	28	1200					2F WORKSTATION													
* 2F WORKSTATION/RCPT								29	20/1	---	20/1	30	720					2F WORKSTATION/RCPT													
* 2F WORKSTATION					1200			31	20/1	---	20/1	32	180					2F LANDING RCPT													
* 2F WORKSTATION/RCPT					720			33	20/1	---	34							SPACE													
* COPIER/PRINTER					1200			35	20/1	---	36							SPACE													
* 2F WORKSTATION								37	20/1	---	38	4380						(N) PANEL G1													
* 2F OFFICE RCPT					360			39	20/1	---	40	3540						---													
* 2F WORKSTATION/RCPT								41	20/1	---	2	42	2380					---													
SUB-TOTAL														7820				11803				12363									
PANEL TOTAL:																															
50946	+	LCL	+	LM	VA																										
	-	-	+	-	=	50946																									
0208V 3ø =														141.4																	

* PROVIDE (N) BREAKER AND CIRCUITING TO (N) EQUIPMENT, LIGHTING, RECEPTACLES, ANCILLARIES AS IDENTIFIED HEREIN

(E) PANEL EE LOCATION: 101 - WAREHOUSE MOUNTING: SURFACE														VOLTAGE/PHASE: 480/277V, 3ø, 4W BUS AMPS: 225A MAIN BREAKER: MLO														FEED FROM: MSA 14 KAIC	
LOADS	SEE NOTE	OUTLETS			VOLT AMPS			BKR/ POLE	ABC	BKR/ POLE	ABC	OKT	VOLT AMPS			OUTLETS			SEE NOTE	LOADS									
		MSC	REC	LTO	A	B	C						A	B	C	MSC	REC	LTO											
SERVICE BAYS	E				-			3	20/1	---	20/1	4							E	FIRST FLOOR LTS									
SERVICE BAYS	E							5	20/1	---	20/1	6							E	SECOND FLOOR LTS									
SERVICE BAYS	E							7	20/1	---	20/1	8							E	STAR LTS									
SPARE	E							9	20/1	---	20/1	10							E	2HPx4 MOTORS									
SPARE	E							11	20/1	---	3	12																	
2HPx4 MOTORS	E							13	20/1	---	35	14							E	BUS LIFT - 10HP									
	E							15				16																	
	E							17				18																	
PORTABLE HOSTS	E							19	20/1	---	20	20							E	CONVENIENCE PLUG									
	E							21			---	22																	
	E							23	1	---	3	24																	
15 HP AIR COMP.	E							25	50	---	100	25							E	PANEL EER									
	E							27			---	28																	
	E							29	3	---	3	30																	
2HPx3 MOTORS	E							31	20/1	---	50	32							E	SPARE									
	E							33			---	34																	
	E							35	20/1	---	36	36																	
TRANSIT WELDER	E							37	20/1	---	50	38							E	PANEL E									
	E							39			---	40																	
	E							41	2	---	3	42																	
														SUB-TOTAL															
PANEL TOTAL:		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+									
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STATE OF CALIFORNIA

INDOOR LIGHTING

CERTIFICATE OF COMPLIANCE

This document is used to demonstrate compliance with requirements in 2022, 2019, 2016, 2013, 2010, 2007, 2004, and 2001 for indoor lighting systems using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 2001, 2004, 2007, 2010, 2013, 2016, 2019, and 2022 for indoor lighting systems using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

Project Name: Torrance Renovation - Torrance Transit Facility

Report Pages: (Page 1 of 9)

Project Address: 20500 MACDONA AVENUE, TORRANCE, CA 90503

Date Prepared: 2025-12-31T14:11:48-08:00

A. GENERAL INFORMATION

01 Project Location (city)

Torrance

04 Total Conditioned Floor Area (ft²)

3,979

02 Climate zone

5

05 Total Unconditioned Floor Area (ft²)

2,477

03 Occupancy Types Within Project (select all that apply)

☐ New Lighting System

☐ New Lighting System - Parking Garage

☒ Altered Lighting System

06 # of Stories (Excludable Above Ground)

2

Support Areas

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.1(e) or 141.10(b)(2) / 140.21(a)(4) for others.

Scope of Work	Conditioned Spaces	Unconditioned Spaces		
01 My Project Consists of (check all that apply):	02 Calculation Method	03 Area (ft²)	04 Calculation Method	05 Area (ft²)
☐ New Lighting System	N/A	0	N/A	0
☐ New Lighting System - Parking Garage	N/A	0	N/A	0
☒ Altered Lighting System	Area Category Method	3979	Area Category Method	2477
Total Area of Work (ft²)	3979		2477	

Generated Date/Time:

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: 314359-1225-0210

Report Generated: 2025-12-31 13:11:46

STATE OF CALIFORNIA

INDOOR LIGHTING

CERTIFICATE OF COMPLIANCE

This document is used to demonstrate compliance with requirements in 2022, 2019, 2016, 2013, 2010, 2007, 2004, and 2001 for indoor lighting systems using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 2001, 2004, 2007, 2010, 2013, 2016, 2019, and 2022 for indoor lighting systems using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

Project Name: Torrance Renovation - Torrance Transit Facility

Report Pages: (Page 2 of 9)

Project Address: 20500 MACDONA AVENUE, TORRANCE, CA 90503

Date Prepared: 2025-12-31T14:11:48-08:00

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls	04	05	06	07	08	09	10	11	12
Area Description	Complete Building or Complete Primary Function Area	Manual Area Controls (300-136) /160.50(b)(4)	Mult-Level Controls (300-130) /160.50(b)(8)	Shut-Off Controls (160.161) /160.50(b)(4)	Primary/Sky Light Daylighting (160.160) /160.50(b)(4)	Secondary Daylighting (160.160) /160.50(b)(4)	Interfaced Systems (160.160) /160.50(b)(4)	Field Inspector	
(1st Floor) Hallway	Corridor	Really Accessible	NA: General Utg <= 0.5W/SP	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
(1st Floor) Restroom Rm.107	Restroom	Really Accessible	NA: Restrooms	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
(1st Floor) Breakroom	Lounge	Really Accessible	NA: General Utg <= 0.5W/SP	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
(1st Floor) Office	Office (>=250 square feet)	Really Accessible	NA: General Utg <= 0.5W/SP	Auto. Time Switch	Included	NA: Not daylit zone	No	☐	☐
(1st Floor) Restrooms	Restroom	Really Accessible	NA: Restrooms	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
(1st Floor) Foyer	All Other Spaces	Really Accessible	NA: General Utg <= 0.5W/SP	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
(1st Floor) Warehouse Storage	Commercial Industrial Warehouse	Really Accessible	Dimmer	NA: Elec. equip. rm	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
(2nd Floor) Hallway	Corridor	Really Accessible	Dimmer	Occupancy Sensor	NA: Overhanging	NA: Overhanging	No	☐	☐
(2nd Floor) Open Office	Office (>250 square feet)	Auth. Personal	NA: General Utg <= 0.5W/SP	Occupancy Sensor	NA: Overhanging	NA: Overhanging	No	☐	☐
(2nd Floor) New Office	Office (>250 square feet)	Auth. Personal	Dimmer	Occupancy Sensor	NA: Overhanging	NA: Overhanging	No	☐	☐

Generated Date/Time:

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: 314359-1225-0210

Report Generated: 2025-12-31 13:11:46

STATE OF CALIFORNIA

INDOOR LIGHTING

CERTIFICATE OF COMPLIANCE

This document is used to demonstrate compliance with requirements in 2022, 2019, 2016, 2013, 2010, 2007, 2004, and 2001 for indoor lighting systems using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 2001, 2004, 2007, 2010, 2013, 2016, 2019, and 2022 for indoor lighting systems using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

Project Name: Torrance Renovation - Torrance Transit Facility

Report Pages: (Page 3 of 9)

Project Address: 20500 MACDONA AVENUE, TORRANCE, CA 90503

Date Prepared: 2025-12-31T14:11:48-08:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:
Mervin Friedman

Signature Date: 2025-12-18

CEC/HES Certificate Identification (if applicable)
Title: (114) 915-8393

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I, the undersigned, hereby declare that the information provided in this Certificate of Compliance is true and correct.

I am eligible under Division 3 of the California and Professional Code to accept responsibility for building design or system design identified in this Certificate of Compliance (responsible design).

I am aware of the requirements of the California Building Code, including the requirements for the building design or system design identified in this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

I am aware of the requirements of the California Building Code, including the requirements for the building design or system design identified in this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.

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I am aware of the requirements of the California Building Code, including the requirements for the building design or system design identified in this Certificate of Compliance conform to the requirements of Title 24, Part 1

STATE OF CALIFORNIA Indoor Lighting		CALIFORNIA ENERGY COMMISSION						
CERTIFICATE OF COMPLIANCE		PROJECT NAME					PROJECT NO.	
Project Name: Torrance Renovation - Torrance Transit Facility		Report Page: Page 4 of 8					2025-12-31T14:14:50.000	
20500 MADRONA AVENUE, TORRANCE, CA 90503 (Date Prepared)								
C. COMPLIANCE RESULTS								
If any one on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, for guidance.								
Allowed Lighting Power per 140.6(f) / 170.2(e) (Watts)					Adjusted Lighting Power per 140.6(f) / 170.2(e) (Watts)			Compliance Results
Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(f) / 170.2(e)	01	02	03	04	05	06	07	08
Complete Building 140.6(f) / 170.2(e)	Area Category 140.6(f) / 170.2(e)	Area Category 140.6(f) / 170.2(e)	Tailored 140.6(f) / 170.2(e)	Total Allowed (Watts)	Total Designed (Watts)	Adjustments 170.2(e) Lighting Control Credits 140.6(f) / 170.2(e)	Adjusted (Watts) *Includes Adjustments	05 must be <= 08 140.6 / 170.2(e)
(See Table I)	(See Table I)	(See Table I)	(See Table I)	=	(See Table I)	(See Table I)	=	
Conditioned	2,078.15			=	2,078.15	2	1,807.2	=
Unconditioned	1,005.65			=	1,005.65	2	1,002	=
					Control Compliance (See Table I for Details)			COMPLIES
					Rated Power Reduction Compliance (See Table I for Details)			COMPLIES
D. EXCEPTIONAL CONDITIONS								
Each area is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.								
E. ADDITIONAL REMARKS								
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.								
Generated Date/Time:					Documentation Software: Energy Code App			
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance					Compliance ID: 314339-1233-010			
Report Version: 2022.0.000					Report Generated: 2025-12-31 14:14:50			
Schema Version: v20220001								
STATE OF CALIFORNIA Indoor Lighting		CALIFORNIA ENERGY COMMISSION						
CERTIFICATE OF COMPLIANCE		PROJECT NAME					PROJECT NO.	
Project Name: Torrance Renovation - Torrance Transit Facility		Report Page: Page 4 of 8					2025-12-31T14:14:50.000	
20500 MADRONA AVENUE, TORRANCE, CA 90503 (Date Prepared)								
I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS								
Each area complying using the Complete Building or Area Category Methods per 140.6(f) is included in this table. Column 06 indicates if additional lighting power allowances per 140.6(f) or adjustments per 140.6(f) are being used.								
Conditioned Spaces								
01	02	03	04	05	06			
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment			
(1st Floor) Hallway	Corridor	0.4	613	245.2	No			
(1st Floor) Restroom Ren.107	Restroom	0.65	444	288.6	No			
(1st Floor) Breakroom	Lounge	0.55	567	311.85	No			
(1st Floor) Office	Office (c<250 square feet)	0.65	196	127.4	No			
(2nd Floor) Hallway	Corridor	0.4	1,000	400	No			
(2nd Floor) Open Office	Office (c<250 square feet)	0.6	969	579	No			
(2nd Floor) New Office	Office (c<250 square feet)	0.65	194	126.1	No			
		TOTALS:	5,979	2,078.15	See Tables I, & F for details			
Unconditioned Spaces								
01	02	03	04	05	06			
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment			
(1st Floor) Restroom	Restroom	0.65	109	70.85	No			
(1st Floor) Foyer	All Other Space Types	0.4	229	91.6	No			
(1st Floor) Warehouse Storage	Commercial Industrial Warehouse	0.4	2,538	1,015.2	No			
		TOTALS:	2,446	1,205.65	See Tables I, & F for details			
J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM								
This section does not apply to this project.								
Generated Date/Time:					Documentation Software: Energy Code App			
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance					Compliance ID: 314339-1233-010			
Report Version: 2022.0.000					Report Generated: 2025-12-31 14:14:50			
Schema Version: v20220001								

CITY OF CALIFORNIA				SAN FRANCISCO PUBLIC UTILITIES COMMISSION			
Indoor Lighting				CALIFORNIA ENERGY COMMISSION			
CERTIFICATE OF COMPLIANCE				NIC-CLT-1			
Project Name: (Torrance) Renovation - Torrance Transit Facility				Report Page:		Page 7 of 8	
20500 MADRONA AVENUE, TORRANCE CA 90505				(Date Prepared)		2025-12-11 10:14:11 AM PST	

E. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit / hotel / motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table F (using Table T) to document lighting in multifamily common areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Watts: Conditioned Spaces

G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
Name or Item Tag	Complete Luminaires Description	Modular (Track) Fixture	Small Aperture & Color Change 1	Watts per luminaire ²	How Is Wattage determined	Total Number of Luminaires	Excluded per §40.6(a)(3) / §170.2(e)(2)(C)	Design Watts	Field Inspector Pass Fail
L-1	2x4' Troffer Mounted LED	No	NA	34.2	Mfr. Spec	31	No	1,060.2	☐ ☒
L-2	8' Linear Suspended Mount LED	No	NA	54	Mfr. Spec	3	No	162	☐ ☒
L-3A	8' Linear Surface Mount LED	No	NA	40.5	Mfr. Spec	2	No	81	☐ ☒
L-3B	6" Recessed Surface Mount LED	No	NA	27	Mfr. Spec	6	No	162	☐ ☒
L-4	4" W/pannel LED	No	NA	38	Mfr. Spec	9	No	342	☐ ☒
Total Designed Watts: CONDITIONED SPACES							1,807.2		

Designed Watts: Unconditioned Spaces

G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
Name or Item Tag	Complete Luminaires Description	Modular (Track) Fixture	Small Aperture & Color Change 1	Watts per luminaire ²	How Is Wattage determined	Total Number of Luminaires	Excluded per §40.6(a)(3) / §170.2(e)(2)(C)	Design Watts	Field Inspector Pass Fail
L-2	8' Linear Suspended Mount LED	No	NA	54	Mfr. Spec	15	No	810	☐ ☒
L-3A	6" Linear Surface Mount LED	No	NA	40.5	Mfr. Spec	4	No	162	☐ ☒
L-5	6" Recessed Downlight LED	No	NA	10	Mfr. Spec	3	No	30	☐ ☒
Total Designed Watts: UNCONDITIONED SPACES							1,002		

FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §40.6(a)(3) / §170.2(e)(2) is adjusted to be 75% / 80% of their rated wattages. Table F automatically makes this adjustment, the permit applicants should enter full rated wattage in column G5.

Generated Date/Time:	Documentation Source: Energy Code Assessor
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance	Compliance ID: 33-4339-1225-0010
Report Version: 2022.0.0.0	Report Generated: 2025-11-28 11:11:46
Schema Version: Rev 20220010	

CITY OF CALIFORNIA				SAN FRANCISCO PUBLIC UTILITIES COMMISSION			
Indoor Lighting				CALIFORNIA ENERGY COMMISSION			
CERTIFICATE OF COMPLIANCE				NIC-CLT-1			
Project Name: (Torrance) Renovation - Torrance Transit Facility				Report Page:		Page 7 of 8	
20500 MADRONA AVENUE, TORRANCE CA 90505				(Date Prepared)		2025-12-11 10:14:11 AM PST	

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE / SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERNATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

Project Name: (Optional) Renovation - Torrance Transit Facility

Report Page: (Optional) 1

20500 MADRONA AVENUE, TORRANCE, CA 90503

Date Prepared: 2023-12-18 11:48:0303

2023-12-18 11:48:0303

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F. INDOOR LIGHTING FIXTURE SCHEDULE

*Authority Having Jurisdiction may ask for Luminaires cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls		Field Inspector	
G1:	G2:	G3:	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)(4)(C)	Pass	Fail
NA < 4,000W subject to multi-level	See Area/Space Level Controls	☐	☐

Generated Date/Time: Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 33-4339-1225-0102

Schema Version: rev 20220301 Report Generated: 2023-12-18 11:48:0303

STATE OF CALIFORNIA

Indoor Lighting

CERTIFICATE OF COMPLIANCE

Project Name: (Optional) Renovation - Torrance Transit Facility

Report Page: (Optional) 1

20500 MADRONA AVENUE, TORRANCE, CA 90503

Date Prepared: 2023-12-18 11:48:0303

2023-12-18 11:48:0303

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S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online.

Form/Title

NRIC-LT1-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through an Acceptance Test Notification Certification Provider (ATNCP). For more information visit: <http://www.energy.ca.gov/Title24/attest/providers.html>

Form/Title

System/Access To be Field Verified

NRICA-LT1-Q2-A - Must be submitted for occupancy sensors and automatic time switch controls.

1st Floor Hallway, 1st Floor Restroom, Rm. 107, 1st Floor Breakroom, 1st Floor Office, 1st Floor Restroom, 1st Floor Foyer, 2nd Floor Hallway, 2nd Floor Open Office, 2nd Floor New Office

1st Floor Office

NRICA-LT1-Q3-A - Must be submitted for automatic daylight controls.

Generated Date/Time: Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2023 Nonresidential Compliance Report Version: 2023.0.000 Compliance ID: 33-4339-1225-0102

Schema Version: rev 20220301 Report Generated: 2023-12-18 11:48:0303

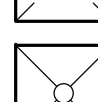
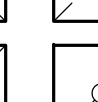
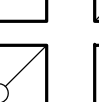
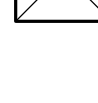
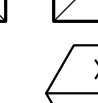
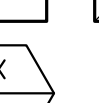
These drawings and accompanying, as instruments of service, are the exclusive property of the Architect and their use and publication shall be restricted to the original site for which they were prepared. Re-use, reproduction or publication by any method, in whole or part, is prohibited by written permission from the Architect. Title to these plans and specifications shall remain with the Architect without prejudice, and shall constitute prima facie evidence of acceptance of those restrictions.

**CONTRACTOR SHALL VERIFY
AVAILABILITY OF ALL UTILITIES
PRIOR TO INITIATION OF
CONSTRUCTION**

SHEET INDEX

M1.0	LEGEND, SCOPE OF WORK, SHEET INDEX, SITE PLAN
M1.1	SCHEDULES
M1.2	PROJECT NOTES
M2.0	DEMOLITION FLOOR PLAN
M2.1	RENOVATION FLOOR PLAN
M3.0	DETAILS
M4.0	TITLE 24 – MECHANICAL

LEGEND

SYMBOL	DESCRIPTION
	ROUND DUCT RISER UP / DOWN
	
	SUPPLY / RETURN / EXHAUST
	DUCT RISER UP
	
	SUPPLY / RETURN / EXHAUST
	DUCT RISER DOWN
	
	CEILING DIFFUSER, RETURN GRILLE, EXHAUST GRILLE
	
	
	EQUIPMENT CALLOUT
	
	DETAIL CALLOUT
	NOTE CALLOUT
	CARBON DIOXIDE SENSOR
	SWITCH
	SMOKE DETECTOR
	TEMPERATURE SENSOR / THERMOSTAT
<u>LINETYPE</u>	
	EXISTING (LIGHT)
	NEW (DARK)
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
<u>ABBREVIATIONS</u>	
(E)	EXISTING
(N)	NEW
CFM	CUBIC FEET PER MINUTE
CD	CEILING DIFFUSER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
HP	HEAT PUMP
RA	RETURN AIR
RG	RELIEF GRILLE
SA	SUPPLY AIR
SR	SUPPLY REGISTER
TG	TRANSFER GRILLE
UTR	UP THROUGH ROOF

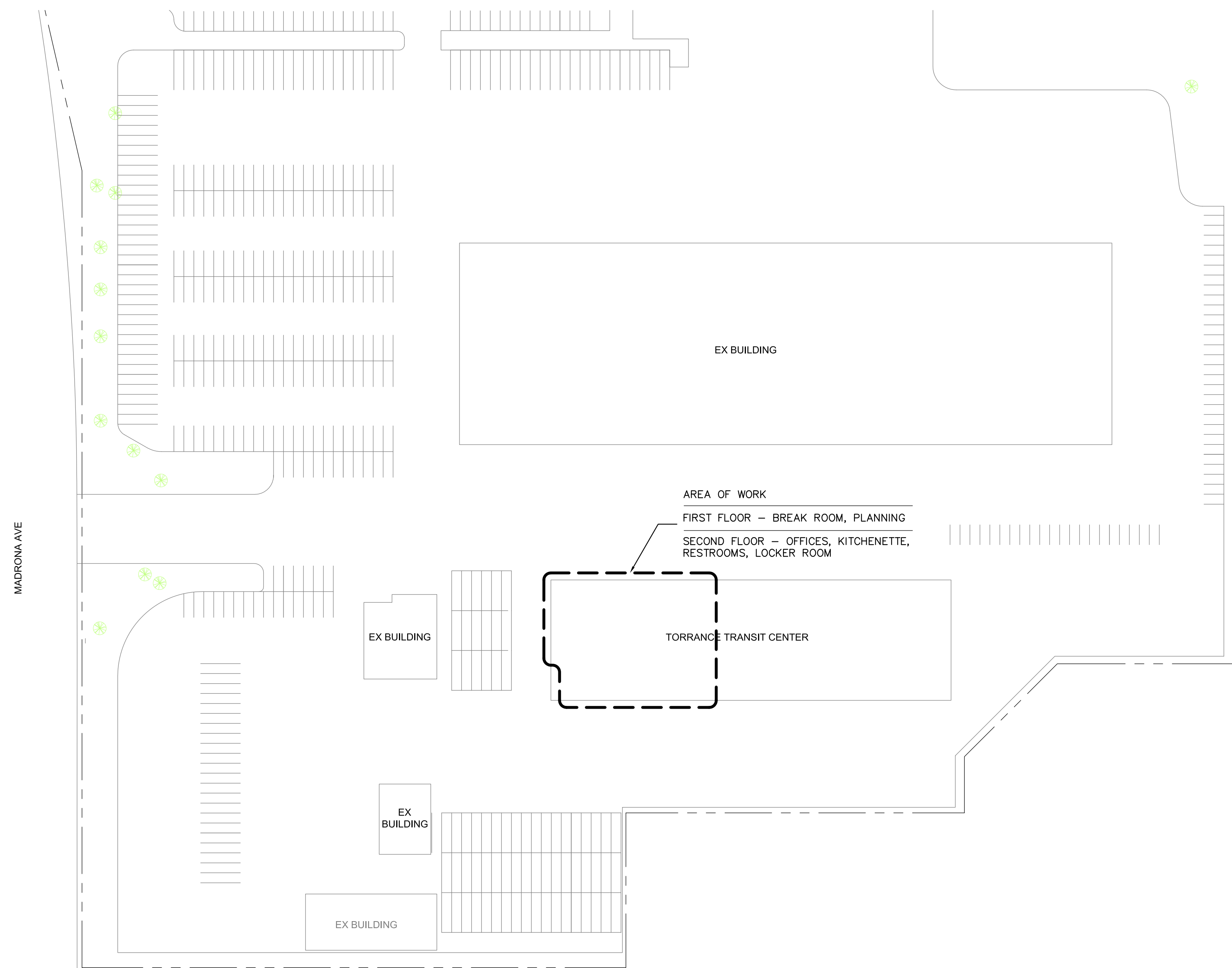
SCOPE OF WORK

A. DEMO:

- 1) DEMO SPLIT SYSTEM HEAT PUMP SERVING EXISTING STORAGE SPACE, FIRST FLOOR; PREPARE FOR REFIT IN KIND, NEW SPLIT SYSTEM HEAT PUMP; MAINTAIN / MODIFY / REPLACE REFRIGERATION SYSTEM AND PIPING AS NECESSARY AND AS AGREED UPON, FOR RENO
- 2) MAINTAIN HEATING HOT WATER BOILER ON ROOF FOR SERVICE TO SECOND FLOOR REHEAT SERVICES; ACCEPT OPERATION OF INSTALLATION PRIOR TO INITIATION OF WORK
- 3) MAINTAIN ROOFTOP SPLIT SYSTEM HEAT PUMP FOR SERVICES ASSOCIATED WITH PLANNING SPACE, ADJACENT SPACES, FIRST FLOOR; ACCEPT MANUFACTURED VOLUME TEMPERATURE (VVT) SERVICE PRIOR TO INITIATION OF WORK
- 4) REPAIR / REFIT EXHAUST FAN ON ROOFTOP AS NECESSARY FOR SERVICE WITH SPLIT SYSTEM HEAT PUMP, ECONOMIZER AIR SERVICES
- 5) REPAIR / REFIT EXHAUST FAN ON ROOFTOP AS NECESSARY FOR SERVICE TO FIRST FLOOR, SECOND FLOOR RESTROOMS
- 6) MAINTAIN HEATING HOT WATER BOILER ON ROOF FOR SERVICE TO SECOND FLOOR REHEAT SERVICES; ACCEPT OPERATION OF INSTALLATION PRIOR TO INITIATION OF WORK
- 7) MAINTAIN / MODIFY / REFIT SUPPLY AIR, RETURN AIR, OUTSIDE AIR SERVICES ASSOCIATED WITH SUBJECT SPLIT SYSTEM HEAT PUMP; PREPARE FOR REFIT OF SERVICES IN KIND, TO INCLUDE REVITALIZATION OF ECONOMIZER SERVICE; MAINTAIN EXHAUST AIR SERVICE ASSOCIATED WITH ECONOMIZER REHEAT SERVICES
- 8) MAINTAIN, MODIFY SUPPLY AIR, RETURN AIR SERVICES ASSOCIATED WITH PLANNING SPACE, ADJACENT SPACES AS IDENTIFIED HEREIN
- 9) MAINTAIN / MODIFY, REFIT SUPPLY AIR, RETURN AIR SERVICES ASSOCIATED WITH UPSTAIR LOBBY / RESTROOM FACILITY, SECOND FLOOR; MAINTAIN, MODIFY ELEMENTS OF SUPPLY AIR SERVICES AS NECESSARY FOR SPACE RECONFIGURATION, FOR MAINTENANCE OF EXISTING VARIATION OF VOLUME (VAV) SERVICES AND ASSOCIATED HEATING HOT WATER SERVICES
- 10) MAINTAIN EXHAUST AIR SERVICES, FIRST FLOOR RESTROOMS; MODIFY INSTALLATION AS IDENTIFIED HEREIN
- 11) MAINTAIN EXHAUST AIR SERVICES, SECOND FLOOR RESTROOMS; MODIFY INSTALLATION AS IDENTIFIED HEREIN
- 12) MAINTAIN CONTROLS FOR EQUIPMENT AND SERVICES, SCOPE

B. RENO:

- 1) PROVIDE SPLIT SYSTEM HEAT PUMP SERVING EXISTING STORAGE SPACE, FIRST FLOOR; REFIT IN KIND; MAINTAIN / MODIFY / REPLACE REFRIGERATION SUCTION, LIQUID PIPING AS NECESSARY FOR REFRIGERATION SERVICE
- 2) MAINTAIN ROOFTOP PACKAGE HEAT PUMP FOR SERVICES ASSOCIATED WITH PLANNING SPACE, ADJACENT SPACES, FIRST FLOOR; DEMONSTRATE OPERATION OF INSTALLATION (I.E. ROOFTOP GAS HEAT / AIR CONDITIONING UNIT, MANUFACTURED VOLUME TEMPERATURE (VVT) SERVICE UPON COMPLETION OF WORK
- 3) MAINTAIN ROOFTOP PACKAGE AIR CONDITIONING UNIT FOR SERVICE TO SECOND FLOOR, SUBJECT AREA; DEMONSTRATE OPERATION OF INSTALLATION AS IDENTIFIED HEREIN
- 4) PROVIDE EXHAUST FAN ON ROOFTOP AS NECESSARY FOR SERVICE WITH SPLIT SYSTEM HEAT PUMP, ECONOMIZER AIR SERVICES
- 5) PROVIDE EXHAUST FAN ON ROOFTOP AS NECESSARY FOR SERVICE WITH SPLIT SYSTEM HEAT PUMP, ECONOMIZER AIR SERVICES
- 6) MAINTAIN HEATING HOT WATER BOILER ON ROOF FOR SERVICE TO SECOND FLOOR REHEAT SERVICES; ACCEPT OPERATION OF INSTALLATION AS IDENTIFIED HEREIN
- 7) MAINTAIN / MODIFY / REFIT SUPPLY AIR, RETURN AIR, OUTSIDE AIR SERVICES ASSOCIATED WITH SUBJECT SPLIT SYSTEM HEAT PUMP; PREPARE FOR REFIT OF SERVICES IN KIND, TO INCLUDE REVAUTIZATION OF ECONOMIZER SERVICE; MAINTAIN EXHAUST AIR SERVICE ASSOCIATED WITH ECONOMIZER RELIEF
- 8) MAINTAIN, MODIFY SUPPLY AIR, RETURN AIR SERVICES ASSOCIATED WITH PLANNING SPACE, ADJACENT SPACES
- 9) MAINTAIN / MODIFY, REFIT SUPPLY AIR, RETURN AIR SERVICES ASSOCIATED WITH UPSTAIR LOBBY, RESTROOM FACILITY, SECOND FLOOR; REPAIR LOGIC ELEMENTS OF SUPPLY AIR SERVICES AS NECESSARY FOR SPACE RECONFIGURATION, FOR MAINTENANCE OF EXISTING VARIATE AIR VOLUME (VAV) SERVICES AND ASSOCIATED HEATING HOT WATER SERVICES
- 10) MAINTAIN EXHAUST AIR SERVICES, FIRST FLOOR RESTROOMS; MODIFY INSTALLATION AS IDENTIFIED HEREIN
- 11) MAINTAIN EXHAUST AIR SERVICES, SECOND FLOOR RESTROOMS; MODIFY INSTALLATION AS IDENTIFIED HEREIN
- 12) MAINTAIN CONTROLS FOR EQUIPMENT AND SERVICES, SCOPE OF WORK

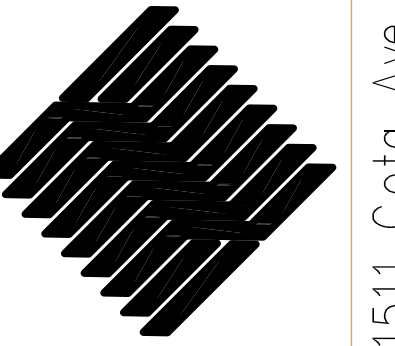


S I T E P L A N

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

Architecture
Interiors
Planning

BOA



1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

**TORRANCE TRANSIT
FACILITY**

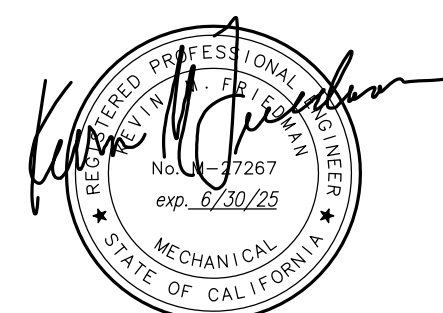
20500 MADRONA AVE, TORRANCE, CA 90503

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Designer:	KY
CAD Draft:	RT
Architect:	ELN
Engineer:	KMF
Client:	Client Name
Date Issue:	Issue Date
Job Number:	Project Number

Client:

Consultant:
ENGINEERING



- LEGEND, SCOPE OF WORK,
- SHEET INDEX, SCHEDULES,
- SITE PLAN
-

M1.0

AIR CONDITIONING UNIT																									
MARK	MFG# & MODEL	LOCATION	SERVICE	TYPE	SUPPLY FAN				ELECTRICAL		COOLING				REFRIGERANT		HEATING			FILTERS SIZE (IN) ...QTY	OSA CFM	OPER WT LBS	REMARKS		
					AIRFLOW CFM	TSP *WC	RPM	BHP	HP	FLA MCA MCCA	V/PH	AMB *F	EDB/EBW LDB/LWB *F	SENS MBH	TOT MBH	EER @ ARI	TYPE	CHARGE	INPUT MBH					OUTPUT MBH	AFUE %
AC-A	CARRIER 50AK027D611	ROOFTOP	—	RTU	10800	0.4	801	8.24	15	— 89 100	460/3	95	67	270	300	9	R-22	25.2 LBS	—	—	—	20x25x2 ...4	2160	4873	EXISTING; REFIT SUPPLY AIR AND RETURN AIR SERVICE FOR SPACE RECONFIGURATION
AC-B	CARRIER 48HJD008	ROOFTOP	OFFICE SPACE	RTU	3000	1	1003	3.17	—	— 19.2 25	460/3	95	67	67.2	92.9	11	R-22	16 LBS	125	102.5	82	16x20x2 ...4	350	1148	EXISTING; IDENTIFIED HEREIN FOR REFERENCING ONLY

FAN COIL																				
MARK	MFR & MODEL	CU SERVICE	TYPE	SERVICE	LOCATION	SUPPLY FAN			COOLING CAPACITY			HEATING CAPACITY			CONNECTIONS-IN		ELECTRICAL		OPER WT LBS	REMARKS
						CFM	ESP INCHES	FAN BHP	CAPACITY NOMINAL TONS	AMBIENT °F	EER2 (SEER2)	CAPACITY NOMINAL MBH	AMBIENT °F	COP	RS INCH	RL INCH	FLA MCA MOC P	V / PH		
FC-1	CARRIER FTSANBD60	CU-1	CEILING DUCTED	STORAGE	CEILING	2000	0.5	—	5	95	12.5 (15.2)	57.6	47	3.76	7/8"	3/8"	5.7 7.1 15	208/1	203	FURNISH WITH WIRED THERMOSTAT AND ECONOMIZER. CONTROLS, SERVICE SWITCH FOR CONDENSATE OVERFLOW, REMOTE ECONOMIZER HARDWARE, CONDENSATE PUMP

CONDENSING UNIT																			
MARK	MFR & MODEL	FC SERVICE	TYPE	SERVICE	LOCATION	COOLING CAPACITY			HEATING CAPACITY			CONNECTIONS—IN		ELECTRICAL		REFRIGERANT		OPER WT LBS	REMARKS
						CAPACITY NOMINAL TONS	AMBIENT °F	EER2 (SEER2)	CAPACITY NOMINAL MBH	AMBIENT °F	COP	RS INCH	RL INCH	FLA MCA MOPP	V / PH	TYP	CHARGE		
CU-1	CARRIER 27SCA560	FC-1	HP	STORAGE	ON GRADE	5	95	12.5 (15.2)	57.6	47	3.76	7/8"	3/8"	25.2 31.1 50	208/1	R-454B	8.7 LBS	234	FURNISH WITH VFD COMPRESSOR, ANTI SHORT CYCLE TIMER, CRANKCASE HEATER, LIQUID-LINE REFRIGERANT DRYER, MICROPROCESSOR-BASED CONTROLS, LOW VOLTAGE CIRCUIT PROTECTION, HIGH AND LOW PRESSURE CONTROL, COMPRESSOR DISCHARGE TEMPERATURE LIMIT, CORROSION RESISTANT COIL COATING, CABINET TREATMENT FOR COASTAL CONDITIONS

BOILER																						
MARK	MFG# & MODEL	LOCATION	SERVICE	TYPE	CAPACITY		WATER					CONNECTION			EFFICIENCY		ELECTRICAL			BLOWER HP	OPER. WT LBS.	REMARKS
					MAX. INPUT MBTU/h	OUTPUT MBTU/h	GPM	DIFF. INLET (°F)	OUTLET (°F)	LWT (°F)	MAX TEMP	GAS INLET INCHES	COMBUSTION AIR	EXHAUST INCHES	%	NOx PPM	V/PH	HZ	AMPS			
B-A	HI-DELTA	ROOFTOP	HEATING HOT WATER PLANT	DIRECT VENT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCING ONLY

MARK	MFGR & MODEL	LOCATION/ SERVICE	TYPE	INLET SIZE (N)	MAX CFM	MIN CFM	AIR			HEATING COIL					REMARKS
							MIN. HTG. (MBH)	EAT (°F)	LAT (°F)	GPM	EWI (°F)	LWT (°F)	MAX. PD (FT)	ROWS	
VAV-1	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	1000	300	10.4	58	90	1.0	180	155	-	-	EXISTING; MODIFY AIR BALANCE SERVICES FOR SPACE RECONFIGURATION
VAV-2	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	800	240	8.3	58	90	0.8	180	155	-	-	EXISTING; MODIFY AIR BALANCE SERVICES FOR SPACE RECONFIGURATION
VAV-3	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; MAINTAIN SUPPLY AND RETURN AIR SERVICES
VAV-4	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; MAINTAIN SUPPLY AND RETURN AIR SERVICES
VAV-5	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	500	150	5.2	58	90	0.5	180	155	-	-	EXISTING;MODIFY AIR BALANCE SERVICES FOR SPACE RECONFIGURATION
VAV-6	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; MAINTAIN SUPPLY AND RETURN AIR SERVICES
VAV-7	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK
VAV-8	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK
VAV-9	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK
VAV-10	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK
VAV-11	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK
VAV-12	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK
VAV-13	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK
VAV-14	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK
VAV-15	-	CEILING	SINGLE DUCT VAV W/ HHW REHEAT	-	-	-	-	-	-	-	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCEING ONLY NOT IN SCOPE OF WORK

EXHAUST FAN														
MARK	MFRG AND MODEL	LOCATION	SERVICE	TYPE	FAN				MOTOR			SONES	OPER WT LBS	REMARKS
					AIRFLOW CFM	ESP "WC	BHP (W)	RPM	HP WATTS	V/PH	RPM			
EF-1	GREENHECK LB-21-5	ROOF	LOCKER ROOM REST ROOM	CENTRIFUGAL ROOF	3500	0.3	0.45	699	1/2	120/1	699	9.5	200	FURNISH WITH BACK DRAFT DAMPER; ANODIZED GRILLE, DISCONNECT, ROOF CURB AND INSECT SCREEN
EF-2	GREENHECK LB-18-4	ROOF	REST ROOM GYM	CENTRIFUGAL ROOF	2000	0.47	0.114	755	1/4	120/1	755	6.6	190	FURNISH WITH BACK DRAFT DAMPER; ANODIZED GRILLE, DISCONNECT, ROOF CURB AND INSECT SCREEN
EF-3	COOK GC-420	1ST FLOOR RESTROOM	1ST FLOOR RESTROOM	CABINET FAN	300	FRAC	0.114	1500	FRAC	120/1	1500	4	30	FURNISH WITH BACK DRAFT DAMPER; ANODIZED GRILLE, DISCONNECT, INSECT SCREEN

DIFFUSERS, REGISTERS & GRILLES								
MARK	MFGR AND MODEL	LOCATION	SERVICE	MOUNTING TYPE	MATERIAL	FRONT BLADES	OPPOSED BLADE DAMPER	REMARKS
CD-A	KRUEGER MCD	OFFICE SPACE	CEILING DIFFUSER	LAY IN TEE BAR	STEEL	MODULAR CORE	YES	EXISTING; IDENTIFIED HEREIN FOR REFERENCING ONLY
CD-1	TITUS TDC	OFFICE SPACE	CEILING DIFFUSER	LAY IN TEE BAR	STEEL	MODULAR CORE	YES	FURNISH IN WHITE, WITH OBD
CD-2	TITUS MCD	BREAK ROOM	CEILING DIFFUSER	FLANGED EXPOSED	STEEL	MODULAR CORE	YES	FURNISH IN WHITE, WITH OBD
RG-1	TITUS 300 RL	DISPATCH	RETURN GRILLE	EXPOSED	STEEL	EGGCRATE	NO	FURNISH IN WHITE
RG-2	TITUS EG	OFFICE SPACE	RETURN GRILLE	LAY IN TEE BAR	STEEL	EGGCRATE	NO	FURNISH IN WHITE
ER-A	KRUEGER EGS	RESTROOM LOCKERROOM	EXHAUST AIR	SURFACE MOUNT	STEEL	EGGCRATE	NO	EXISTING; IDENTIFIED HEREIN FOR REFERENCE ONLY

ZONE DAMPER									
MARK	ASSOCIATED AC	ROOM TAG	SERVICE	LOCATION	MFGR & MODEL	SIZE	MAXIMUM CFM	MINIMUM CFM	REMARKS
ZD-1	-	-	ZONE DAMPER	CEILING	-	-	-	-	EXISTING; IDENTIFIED HEREIN FOR REFERENCING ONLY

M1.1

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PROJECT NOTES

1. GENERAL

A. ADMINISTRATIVE

1) BASIS OF WORK

a. SCOPE OF WORK SHALL BE AS IDENTIFIED HEREIN THESE DRAWINGS ON SHEET m-1 FOR COMPLETE AND OPERABLE INSTALLATION OF PLUMBING SERVICES.

b. ALL WORK SHALL COMPLY WITH THE FOLLOWING CODES AS ADOPTED AND AS AMENDED BY THE INSPECTING AUTHORITY:

i) CALIFORNIA BUILDING CODE (2019).

ii) CALIFORNIA ELECTRICAL CODE (2019).

iii) CALIFORNIA MECHANICAL CODE (2019).

iv) CALIFORNIA PLUMBING CODE (2019).

v) CALIFORNIA ADMINISTRATIVE CODE - TITLE 24 (2019).

vi) CALIFORNIA FIRE CODE (2019).

vii) AMENDMENTS AS ADOPTED BY LOCAL AUTHORITIES.

c. ALL EQUIPMENT AND HARDWARE SHALL BE PROVIDED FOR LISTED INSTALLATIONS AND APPLICABLE INDUSTRY STANDARDS. A COPY OF THE EVALUATION REPORT AND/OR CONDITIONS OF LISTING SHALL BE MADE AVAILABLE AT THE JOB SITE.

d. ALL TERMS CITED HEREIN LEND TO THE MECHANICAL CONTRACTOR, WHETHER ACTING AS A PRIME CONTRACTOR OR AS A SUB CONTRACTOR. HEREINAFTER, THE HVAC CONTRACTOR IS REFERRED TO AS THE CONTRACTOR, AND REQUIREMENTS OF THESE NOTES SHALL DIRECT SAID CONTRACTOR TO ACCOMPLISH TASKS AS CITED HEREIN.

e. ALL EQUIPMENT AND HARDWARE SHALL BE PROVIDED FOR LISTED INSTALLATIONS AND APPLICABLE INDUSTRY STANDARDS. A COPY OF THE EVALUATION REPORT AND/OR CONDITIONS OF LISTING SHALL BE MADE AVAILABLE AT THE JOB SITE.

2) CONTRACTUAL OBLIGATIONS

a. PURCHASE AND MAINTAIN CERTIFICATIONS OF INSURANCE WITH RESPECT TO WORKMAN'S COMPENSATION, PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE LIMITS AS REQUIRED BY LAW. INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY PRECAUTIONS IN CONNECTION WITH THE WORK.

b. APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS REQUIRED BY ALL APPLICABLE BUILDING CODES AND REGULATORY REQUIREMENTS OF CITY AND STATE. FOR CONTRACTOR'S EXPENSE OF SECURING PERMITS (AS AGREED TO), SUBMIT TO OWNER FOR REIMBURSEMENT OF COST OF PERMITS AND ASSOCIATED FEES AS CHARGED BY CITY (AND / OR ASSOCIATED JURISDICTIONS).

c. PROVIDE A LIST OF SUBCONTRACTORS TO ARCHITECT PRIOR TO THE START OF WORK.

3) BIDDING

a. DURING PRICING PERIOD, CONFIRM IN WRITING THE APPROXIMATE ON-SITE DELIVERY DATES FOR ALL CONSTRUCTION MATERIALS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS AND NOTIFY ARCHITECT IN WRITING OR ANY POSSIBLE CONSTRUCTION DELAYS AFFECTING OCCUPANCY THAT MAY ARISE DUE TO THE UNAVAILABILITY OF SPECIFIED PRODUCTS.

b. UPON SUBMITTAL OF THE FINAL CONSTRUCTION COSTS, SUBMIT A SPECIFIC CONSTRUCTION SCHEDULE INDICATING THE REQUIRED CONSTRUCTION TIME FOR ALL SUBCONTRACTORS AND CONTRACTOR'S WORK.

c. SUBSTITUTIONS MAY BE CONSIDERED AT THE DISCRETION OF THE OWNER AND AS SPECIFIED HEREIN. ALL SUBSTITUTION MUST BE APPROVED IN WRITING BY THE ARCHITECT PRIOR TO ANY ORDER PLACEMENT OR PURCHASE. ANY SUBSTITUTION INSTALLED WITHOUT APPROVAL WILL BE REJECTED AND REPLACED AT CONTRACTOR'S EXPENSE.

d. ACCOUNT FOR ADDITIONAL OFFSETS, FITTINGS, HARDWARE, ET AL AS NECESSARY TO ACCOMMODATE REQUIREMENTS FOR FIELD CONDITIONS AND COORDINATION BETWEEN DISCIPLINES.

e. INCLUDE ALL NECESSARY LABOR, TRANSPORTATION AND EQUIPMENT NECESSARY TO INSTALL SUCH WORK.

f. INCLUDE ALL NECESSARY LABOR, TRANSPORTATION AND EQUIPMENT NECESSARY TO INSTALL SUCH WORK.

g. ACCOUNT FOR ANY AND ALL OVERTIME COSTS.

4) SUBMITTALS

a. SUBMIT SHOP DRAWINGS, AND / OR DESCRIPTIVE DATA AND SAMPLES OF ALL EQUIPMENT, FIXTURES, HARDWARE, FINISHES, MILLWORK, ET AL FOR APPROVAL BY THE ARCHITECT PRIOR TO INSTALLATION.

b. ADDITIONAL REQUIREMENTS FOR SUBMITTAL INFORMATION IS PROVIDED HEREINAFTER.

5) RECEIVING AND STORAGE

a. RECEIVE, STORE AND SECURE ALL EQUIPMENT, FIXTURES, HARDWARE, FINISHES, MILLWORK, ET AL ON SITE OR AS OTHERWISE ARRANGED FOR BY CONTRACTOR.

6) GUARANTEE

a. PROVIDE ONE YEAR GUARANTEE TO CONTRACTOR ON PARTS AND LABOR EXCEPT AS OTHERWISE SPECIFIED HEREIN.

2. PRODUCTS

A. EQUIPMENT

1) MANUFACTURER

a. CARRIER ROOFTOP PACKAGE AC UNITS WITH FACTORY CURBS AS IDENTIFIED HEREIN AND ON MECHANICAL PLANS.

b. MICROMETL CURBS AND ECONOMIZERS AS REQUIRED FOR SPECIALTY CONFIGURATIONS AS IDENTIFIED HEREIN AND ON MECHANICAL PLANS.

2) APPROVED EQUAL

a. YORK (AS APPROVED, FOR PHYSICAL CONSTRAINTS OF INSTALLATION).

b. TRANE (AS APPROVED, FOR PHYSICAL CONSTRAINTS OF INSTALLATION).

B. HARDWARE

1) PIPE SUPPORTS

a. INSTALL ALL SUPPORT AND BRACING OF PIPING IN ACCORDANCE WITH CMC (AND OPC) 313.0, SMACNA SEISMIC BRACING STANDARDS, AND / OR AS DETAILED AND SPECIFIED HEREIN.

b. ATTACH ALL SUPPORT AND BRACING OF PIPING TO STRUCTURE (ROOF OR FLOOR FRAMING OR SLAB) VIA HARDWARE AS FOLLOWS:

i) ANCHOR BOLTS.

ii) LAG BOLT / SCREW.

iii) OR AS OTHERWISE APPROVED IN WRITING.

iv) VERTICAL ATTACHMENT WITH PULL-OUT CAPABILITY IS NOT ALLOWED.

c. PROVIDE SUPPORT VIA HARDWARE AS FOLLOWS:

i) ADJUSTABLE "J" HANGER.

ii) ADJUSTABLE PIPE SADDLE SUPPORT.

iii) ADJUSTABLE SWIVEL RING.

iv) CLEVIS HANGER.

v) OFFSET PIPE CLAMP.

vi) GAGE STRAP AND HANGER.

vii) MANUFACTURED SUPPORT SYSTEMS.

viii) MANUFACTURED C-CHANNEL (FOR TRAPEZE SUPPORTS).

ix) AND / OR AS DETAILED AND SPECIFIED HEREIN.

d. PROVIDE INTERIM HARDWARE AS FOLLOWS:

i) BEAM CLAMP.

ii) ANGLE CLIP.

iii) MANUFACTURED PLATE AND COLUMN HARDWARE.

iv) FIELD-FABRICATED PLATE AND COLUMN HARDWARE.

v) MANUFACTURED SLEEPER HARDWARE.

vi) FIELD-FABRICATED SLEEPER HARDWARE.

vii) THREADED RODS.

viii) AND / OR AS DETAILED AND SPECIFIED HEREIN.

2) DUCT SUPPORTS

a. SUPPORT ALL SUPPORT AND BRACING OF METAL AND FLEXIBLE DUCTWORK ACCORDANCE WITH CMC 603.0, AND / OR SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE AND / OR AS DETAILED AND SPECIFIED HEREIN.

b. ATTACH ALL SUPPORT AND BRACING OF PIPING TO STRUCTURE (ROOF OR FLOOR FRAMING OR SLAB) VIA HARDWARE AS FOLLOWS:

i) ANCHOR BOLTS.

ii) LAG BOLT / SCREW.

iii) OR AS OTHERWISE APPROVED IN WRITING.

iv) VERTICAL ATTACHMENT WITH PULL-OUT CAPABILITY IS NOT ALLOWED.

283. EXECUTION

A. GENERAL

1) DOCUMENTATION

a. ALL ABBREVIATIONS USED ON DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.

b. DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND DO NOT ACCOUNT FOR EVERY ASPECT OF INSTALLATION AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS. CONTRACTOR SHALL CHECK CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND SCALES FOR ACCURACY AND CONFIRMING THAT WORK IS BUILDABLE AS SHOWN FOR A COMPLETE AND OPERABLE AND OPERATIONAL INSTALLATION PRIOR TO PROCEEDING WITH CONSTRUCTION. CONTRACTOR TO REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.

c. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THE DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO COMMENCING WORK.

d. DO NOT SCALE DRAWINGS. IF THERE ARE ANY QUESTIONS REGARDING THESE OR OTHER COORDINATION ISSUES, THE CONTRACTOR SHALL CLARIFY WITH OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH WORK IN QUESTION OR RELATED WORK.

e. VERIFY ALL DIMENSIONS SHOWN ON DRAWINGS BY FIELD MEASUREMENTS. BEFORE COMMENCING WORK, CHECK ALL LINES AND LEVELS INDICATED. IMMEDIATELY REPORT DISCREPANCIES TO THE OWNER'S REPRESENTATIVE FOR CORRECTION AND ADJUSTMENT. PROVIDE PROPER FIT AND ATTACHMENT OF ALL PARTITIONS AND CONSTRUCTION MATERIALS.

f. ALL DIMENSIONS NOTED "MINIMUM", "CLEAR", OR "VERIFY" ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY VARIANCES ARE TO BE REPORTED TO THE ARCHITECT IMMEDIATELY FOR RESOLUTION. SIMILAR MEANS COMPARABLE CHARACTERISTICS FOR THE TERMS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLAN. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED ONES.

g. ALL PARTITIONS ARE DIMENSIONED FINISH TO FINISH UNLESS NOTED OTHERWISE.

2) STANDARD OF CARE

a. REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THE DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO COMMENCING WORK.

b. IF ANY MATERIALS OR PRODUCTS ARE INSTALLED WITHOUT FIRST PROVIDING THE REQUIRED SUBMITTALS OR SHOP DRAWINGS FOR APPROVAL, THOSE MATERIALS OR PRODUCTS ARE SUBJECT TO BEING REMOVED AND CORRECTLY REINSTALLED AT FULL COST TO THE CONTRACTOR.

c. WORK SHALL BE COMMENSURATE TO FINISHED CONDITIONS WITHIN SPACE AND / OR STRUCTURE, AND / OR TO STANDARDS ESTABLISHED IN COMMENSURATE TERMS.

d. NO WORK, DEFECTIVE IN CONSTRUCTION OR QUALITY OR DEFICIENT IN ANY REQUIREMENTS OF THE DRAWINGS OR NOTES, WILL BE FOUND ACCEPTABLE IN CONSEQUENCE OF THE OWNER'S OR ARCHITECT'S FAILURE TO DISCOVER AND OR POINT OUT DEFECTS AND DEFICIENCIES DURING CONSTRUCTION. DEFECTIVE WORK REVEALED WITHIN THE TIME REQUIRED BY GUARANTEES SHALL BE REPLACED BY WORK CONFORMING WITH THE INTENT OF THE CONTRACT. NO PAYMENT, EITHER PARTIAL OR FINAL, SHALL BE CONSIDERED AS AN ACCEPTANCE OF DEFECTIVE WORK OR IMPROPER MATERIALS.

e. WORK WHICH CREATES NOXIOUS ODORS SHALL BE PERFORMED AT A TIME OF AGREEABLE WITH, AND COORDINATED THROUGH THE OWNER'S REPRESENTATIVE AND PER JURISDICTIONAL/GOVERNMENTAL REQUIREMENTS.

f. PROVIDE AN EMERGENCY POWER SOURCE FOR EXIT AND EXIT WAY ILLUMINATION.

g. KEEP ALL BUILDING AREAS CLEAN AND FREE OF ACCUMULATED DIRT AND DEBRIS. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ANY SURPLUS MATERIALS, DEBRIS AND EQUIPMENT.

3) COORDINATION OF CONSTRUCTION EFFORT

a. ORDER ALL MATERIALS IN TIME TO MAINTAIN THE APPROVED CONSTRUCTION SCHEDULE.

b. COORDINATE SCHEDULE WITH ALL CONTRACTORS, OWNER'S VENDORS, AND PARTIES INSTALLING ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS.

c. THE CONTRACTOR SHALL COORDINATE SCHEDULE FOR ALL SUBCONTRACTORS, OWNER'S VENDORS, AND PARTIES INSTALLING ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS.

d. ORDER MATERIALS IN TIME TO MAINTAIN THE APPROVED CONSTRUCTION SCHEDULE.

e. COORDINATE INSTALLATION OF ALL WORK FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, LIGHT FIXTURES, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH ALL CONTRACTORS.

f. COORDINATE INSTALLATION OF ALL WORK BY THE OWNER'S VENDORS (I.E. SITE / CIVIL / UTILITIES, SIGNAGE, FIRE / LIFE SAFETY, DATA CABLEING, SECURITY SYSTEM, AUDIO VISUAL, ET AL) WITH OTHER TRADES.

g. COORDINATE INSTALLATION OF ALL WORK BY SUBCONTRACTORS FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, LIGHT FIXTURES, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH OWNER'S REPRESENTATIVE IN THE FIELD.

h. COORDINATE INSTALLATION OF ALL WORK BY THE OWNER'S VENDORS (I.E. SITE / CIVIL / UTILITIES, SIGNAGE, FIRE / LIFE SAFETY, DATA CABLEING, SECURITY SYSTEM, AUDIO VISUAL, ET AL) WITH OTHER TRADES.

i. COORDINATE THE INSTALLATION OF ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS WITH OTHER TRADES.

4) PLACEMENT OF EQUIPMENT AND HARDWARE

a. ALL DIMENSIONS NOTES "CLR" ARE CLEAR AND ARE NOT ADJUSTABLE WITHOUT APPROVAL FROM ARCHITECT.

b. ALIGN ALL PARTITIONS ADJACENT TO BASE BUILDING COLUMNS OR WALL WITH THE FACE OF FINISHED COLUMN SURFACE, UNLESS NOTED OTHERWISE.

c. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT REVIEW BY ARCHITECT UNLESS NOTED OTHERWISE.

d. ARRANGE AND PLACE ALL FRAMING MEMBERS TO PERMIT INSTALLATION OF PIPE, CONDUITS, AND DUCTWORK WITH MINIMAL CUTTING. ALL NECESSARY CUTTING, BLOCKING, BRACING, SUPPORTING AND REPAIRING SHALL BE APPROVED BY OWNER'S REPRESENTATIVE.

e. ARRANGE CEILING MOUNTED FIXTURES AND HARDWARE PER THE REFLECTED CEILING PLAN PROVIDED AS PART OF THE ARCHITECTURAL PLANS.

f. PROVIDE ACCESS TO AND CLEARANCE AROUND ALL EQUIPMENT AND HARDWARE AS REQUIRED BY CODE AND BY EQUIPMENT MANUFACTURER.

g. PROVIDE ACCESS PANELS IN LOCATIONS AS REQUIRED FOR HARDWARE REQUIRING ACCESS.

5) INTEGRITY OF CONSTRUCTION

a. X-RAY SLABS AND WALLS IN LOCATIONS OF PENETRATIONS PRIOR TO SAW CUTTING OR CORING.

b. MAINTAIN AND / OR MODIFY AND / OR PROVIDE NEW STRUCTURAL CONSTRUCTION, ANCHOR AND BRACE EQUIPMENT, HARDWARE, ASSEMBLIES, ELEMENTS OF CONSTRUCTION, ET AL AS REQUIRED BY CODE.

c. PROVIDE INSTALLATIONS PLUMB AND CRAFTSMAN LIKE, TO PROVIDE FOR MAXIMUM CLEARANCES AND MINIMUM IMPOSITION, AND COMMENSURATE WITH EXISTING CONDITIONS AND / OR GRADE OF CONSTRUCTION OF OVERALL JOB.

d. DO NOT BORE OR NOTCH STRUCTURAL ELEMENTS WITHOUT WRITTEN AUTHORIZATION FROM OWNER'S REPRESENTATIVES.

e. PROVIDE EQUIPMENT, HARDWARE, AND TREATMENTS WHERE NEW INSTALLATIONS PENETRATE NEW OR EXISTING RATED ELEMENTS OF CONSTRUCTION.

f. MAINTAIN AND / OR MODIFY AND / OR PROVIDE NEW FIRE SUPPRESSION AND FIRE ALARM SYSTEMS AS REQUIRED BY CODE.

6) EQUIPMENT

1) PROVIDE HVAC EQUIPMENT (TO INCLUDE ASSOCIATED MECHANICAL HARDWARE, SUPPORTS, FASTENERS, BLOCKING AND BAKING, AND CONTROLS AND LOW VOLTAGE CONDUIT AND WIRING) AS REQUIRED FOR COMPLETE INSTALLATION.

2) VERIFY EQUIPMENT DIMENSIONS AND ASSOCIATED SIZES OF PLATFORMS AND CURBS AND MOUNTING REQUIREMENTS FOR SLAB POURS, ROOF FRAMING, AND ASSOCIATED ELEMENTS OF CONSTRUCTION.

3) VERIFY SERVICE REQUIREMENTS OF EQUIPMENT AS SUBMITTED FOR AVAILABLE VOLTAGE AND PHASE, AS PROPOSED FOR INSTALLATION HEREIN. IDENTIFY DISCREPANCY IN WRITING IN COURSE OF SUBMITTAL AND PROCUREMENT PROCESS.

4) INSTALL EQUIPMENT LEVEL AND PLUMB, AND IN A CRAFTSMANSHIP LIKE MANNER.

294. HARDWARE

C. HARDWARE

1) PIPE SUPPORTS

a. COORDINATE HEIGHT OF INSTALLATION OF HARDWARE TO ACCOMMODATE REQUIREMENTS FOR SURROUNDINGS (I.E. WITHIN SPACE AND ON SLAB AND ON ROOF, FOR PASSAGE AND THOROUGHFARE, AND ROOFING WORK, ET AL).

b. SECURE SUPPORTS WITH RIGID CONNECTIONS TO FLOOR AND ROOF CONSTRUCTION. PROVIDE INTERIM BLOCKING AS NECESSARY.

c. PROVIDE INSULATION AND INSERTS AND SADDLES AT PIPE SUPPORTS.

d. PROVIDE INSULATION / INSERTS TO ISOLATE DISSIMILAR METALS.

e. PIPING AND SUPPORTS EXPOSED IN SPACE SHALL BE PAINTED UNLESS OTHERWISE SPECIFIED.

2) DUCT SUPPORTS

a. COORDINATE HEIGHT OF INSTALLATION OF HARDWARE TO ACCOMMODATE REQUIREMENTS FOR SURROUNDINGS (I.E. WITHIN SPACE AND ON SLAB AND ON ROOF).

b. PROVIDE INSULATION AND INSERTS AND SADDLES AT PIPE SUPPORTS.

c. PROVIDE INSULATION / INSERTS TO ISOLATE DISSIMILAR METALS.

d. SUPPORT DUCTWORK EXPOSED IN SPACE VIA THREADED RODS, AND GAGE METAL STRAPS CINCHED TIGHT TO DUCTS TO ENSURE ADEQUATE CLEARANCE. ADDITIONAL SUPPORT (I.E. MANUFACTURED C-CHANNEL, ET AL) TOPSIDE OF DUCTWORK TO MINIMIZE VISIBILITY.

e. PAINT DUCTWORK AND SUPPORTS EXPOSED IN SPACE UNLESS OTHERWISE SPECIFIED.

3) PIPE INSULATION

a. DOMESTIC HOT WATER PIPE

i) DOMESTIC HOT WATER: 1/2" THICK FOR 1/2" PIPE, 3/4" THICK FOR 3/4" PIPE, 1-1/2" THICK FOR SIZES UP TO 1-1/2". 2" THICK FOR SIZES 2" AND LARGER. MINIMUM THERMAL RESISTANCE SHALL BE R=4.0 TO 4.6 PER INCH.

ii) CONDENSATE DRAINS: FOR CONCEALED AND EXPOSED SPACES INSIDE, 1" THICK. MINIMUM THERMAL RESISTANCE SHALL BE R=4.0 TO 4.6 PER INCH.

iii) RIGID MOLDED ONE PIECE FIBERGLASS INSULATION WITH ALL-SERVICE JACKET AND SELF-SEALING LAP, WITH BUTTSTRIP FOR EACH SECTION.

iv) WHITE PVC JACKETS FOR FITTINGS, CONNECTIONS, FLANGES, AND VALVES.

v) INSULATE JOINTS WITH VAPOR BARRIER FINISH

vi) 25 FLAME SPREAD / 50 SMOKE DEVELOPED RATING WHEN TESTED IN ACCORDANCE WITH ASTM E 64, NFPA 255, UL723.

vii) INSTALL PIPE INSULATION IN COMPLIANCE WITH TITLE 24.

b. REFRIGERANT

i) CLOSED CELL RATED WITH SELF-SEALING LAP, FOR INDOOR INSTALLATION.

ii) CLOSED CELL RATED WITH GLUE, EXTERIOR COVER, FOR OUTDOOR INSTALLATION.

iii) 25 FLAME SPREAD / 50 SMOKE DEVELOPED RATING WHEN TESTED IN ACCORDANCE WITH ASTM E 64, NFPA 255, UL723.

iv) PIPE INSULATION SHALL BE INSTALLED IN COMPLIANCE WITH TITLE 24.

4) DUCT INSULATION: WRAP AND LINING

a. WRAP: 1-1/2", 3/4" PCF INSULATION, U=0.27 AT 50°F (ASTM C 177), WITH FSK VAPOR BARRIER AND 2" STAPLING FLANGE.

b. LINING: 1" FOR INTERIOR INSTALLATION OR 2" FOR EXTERIOR INSTALLATIONS, U=0.24 @ 75°F (ASTM C518), MAXIMUM VELOCITY 6000 FPM. INSTALL WITH 100% ADHESIVE COVERAGE, AND PINS PER SMACNA.

c. ALL PRODUCTS TO HAVE A 25 FLAME / 50 SMOKE DEVELOPED RATING WHEN TESTED IN ACCORDANCE WITH ASTM E 84, NFPA 255, UL723.

d. DUCT INSULATION AND LINING SHALL BE INSTALLED IN COMPLIANCE WITH CHAPTER 6 OF THE UNIFORM MECHANICAL CODE AND TITLE 24.

5) PIPING

a. REFRIGERANT:

i) ACR (REFRIGERANT SUCTION, LIQUID SERVICE):

a) REFRIGERANT PIPING: SEAMLESS COPPER ACR TUBING, HARD DRAWN, SOLDERED OR BRACED JOINTS WITH 95/5 (TIN/ANTIMONY) SOLDER.

b) TYPE-O SOFT ANNEALED COPPER PIPE FOR SIZES UP TO 3/4". TYPE 1/2H FOR SIZES 3/4" AND LARGER. PROVIDE FLARE PER MANUFACTURER'S RECOMMENDATIONS.

b. DUCTWORK

a. METAL DUCTS: COMPLY WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE, TO INCLUDE DUCTS, PLENUMS, METAL FITTINGS.

b. FLEXIBLE DUCTS: SHALL COMPLY WITH UL181 AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE.

6) DUCTWORK

a. METAL DUCTS: COMPLY WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE, TO INCLUDE DUCTS, PLENUMS, METAL FITTINGS.

b. FLEXIBLE DUCTS: SHALL COMPLY WITH UL181 AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE.

305. CONTROLS

C. CONTROLS

1) BUILDING AUTOMATION SYSTEM

a. MANUFACTURED BY PELICAN.

b. PROVIDE MICROPROCESSOR-BASED CONTROLS WITH SCHEDULING AND NETWORKING AND REMOTE COMMUNICATION CAPABILITY.

c. INSTALL SAID SYSTEM COMPLETE TO EXTENT OF CONNECTION TO OWNER'S WAN (INTERNET).

d. PROVIDE FOR WIRELESS THERMOSTAT OPERATION FOR MULTIPLE ROOFTOP PACKAGE HVAC UNITS AND SINGULAR ROOFTOP PACKAGE HVAC UNIT.

e. INSTALLATION WITH VVT SERVICES VIA MULTIPLE ZONE DAMPERS, BYPASS DAMPER, AND NECESSARY CONTROLS AS IDENTIFIED HEREIN.

f. PROVIDE FOR GATEWAY AND CONNECTION TO INTERNET AS IDENTIFIED HEREIN.

2) DOCUMENTATION

a. ALL ABBREVIATIONS USED ON DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.

b. DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND DO NOT ACCOUNT FOR EVERY ASPECT OF INSTALLATION AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS. CONTRACTOR SHALL CHECK CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND SCALES FOR ACCURACY AND CONFIRMING THAT WORK IS BUILDABLE AS SHOWN FOR A COMPLETE AND OPERABLE AND OPERATIONAL INSTALLATION PRIOR TO PROCEEDING WITH CONSTRUCTION. CONTRACTOR TO REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.

c. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THE DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO COMMENCING WORK.

d. DO NOT SCALE DRAWINGS. IF THERE ARE ANY QUESTIONS REGARDING THESE OR OTHER COORDINATION ISSUES, THE CONTRACTOR SHALL CLARIFY WITH OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH WORK IN QUESTION OR RELATED WORK.

e. VERIFY ALL DIMENSIONS SHOWN ON DRAWINGS BY FIELD MEASUREMENTS. BEFORE COMMENCING WORK, CHECK ALL LINES AND LEVELS INDICATED. IMMEDIATELY REPORT DISCREPANCIES TO THE OWNER'S REPRESENTATIVE FOR CORRECTION AND ADJUSTMENT. PROVIDE PROPER FIT AND ATTACHMENT OF ALL PARTITIONS AND CONSTRUCTION MATERIALS.

f. ALL DIMENSIONS NOTED "MINIMUM", "CLEAR", OR "VERIFY" ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY VARIANCES ARE TO BE REPORTED TO THE ARCHITECT IMMEDIATELY FOR RESOLUTION. SIMILAR MEANS COMPARABLE CHARACTERISTICS FOR THE TERMS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLAN. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED ONES.

g. ALL PARTITIONS ARE DIMENSIONED FINISH TO FINISH UNLESS NOTED OTHERWISE.

3) STANDARD OF CARE

a. REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THE DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO COMMENCING WORK.

b. IF ANY MATERIALS OR PRODUCTS ARE INSTALLED WITHOUT FIRST PROVIDING THE REQUIRED SUBMITTALS OR SHOP DRAWINGS FOR APPROVAL, THOSE MATERIALS OR PRODUCTS ARE SUBJECT TO BEING REMOVED AND CORRECTLY REINSTALLED AT FULL COST TO THE CONTRACTOR.

c. WORK SHALL BE COMMENSURATE TO FINISHED CONDITIONS WITHIN SPACE AND / OR STRUCTURE, AND / OR TO STANDARDS ESTABLISHED IN COMMENSURATE TERMS.

d. NO WORK, DEFECTIVE IN CONSTRUCTION OR QUALITY OR DEFICIENT IN ANY REQUIREMENTS OF THE DRAWINGS OR NOTES, WILL BE FOUND ACCEPTABLE IN CONSEQUENCE OF THE OWNER'S OR ARCHITECT'S FAILURE TO DISCOVER AND OR POINT OUT DEFECTS AND DEFICIENCIES DURING CONSTRUCTION. DEFECTIVE WORK REVEALED WITHIN THE TIME REQUIRED BY GUARANTEES SHALL BE REPLACED BY WORK CONFORMING WITH THE INTENT OF THE CONTRACT. NO PAYMENT, EITHER PARTIAL OR FINAL, SHALL BE CONSIDERED AS AN ACCEPTANCE OF DEFECTIVE WORK OR IMPROPER MATERIALS.

e. WORK WHICH CREATES NOXIOUS ODORS SHALL BE PERFORMED AT A TIME OF AGREEABLE WITH, AND COORDINATED THROUGH THE OWNER'S REPRESENTATIVE AND PER JURISDICTIONAL/GOVERNMENTAL REQUIREMENTS.

f. PROVIDE AN EMERGENCY POWER SOURCE FOR EXIT AND EXIT WAY ILLUMINATION.

g. KEEP ALL BUILDING AREAS CLEAN AND FREE OF ACCUMULATED DIRT AND DEBRIS. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ANY SURPLUS MATERIALS, DEBRIS AND EQUIPMENT.

4) COORDINATION OF CONSTRUCTION EFFORT

a. ORDER ALL MATERIALS IN TIME TO MAINTAIN THE APPROVED CONSTRUCTION SCHEDULE.

b. COORDINATE SCHEDULE WITH ALL CONTRACTORS, OWNER'S VENDORS, AND PARTIES INSTALLING ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS.

c. THE CONTRACTOR SHALL COORDINATE SCHEDULE FOR ALL SUBCONTRACTORS, OWNER'S VENDORS, AND PARTIES INSTALLING ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS.

d. ORDER MATERIALS IN TIME TO MAINTAIN THE APPROVED CONSTRUCTION SCHEDULE.

e. COORDINATE INSTALLATION OF ALL WORK FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, LIGHT FIXTURES, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH ALL CONTRACTORS.

f. COORDINATE INSTALLATION OF ALL WORK BY THE OWNER'S VENDORS (I.E. SITE / CIVIL / UTILITIES, SIGNAGE, FIRE / LIFE SAFETY, DATA CABLEING, SECURITY SYSTEM, AUDIO VISUAL, ET AL) WITH OTHER TRADES.

g. COORDINATE INSTALLATION OF ALL WORK BY SUBCONTRACTORS FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, LIGHT FIXTURES, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH OWNER'S REPRESENTATIVE IN THE FIELD.

h. COORDINATE INSTALLATION OF ALL WORK BY THE OWNER'S VENDORS (I.E. SITE / CIVIL / UTILITIES, SIGNAGE, FIRE / LIFE SAFETY, DATA CABLEING, SECURITY SYSTEM, AUDIO VISUAL, ET AL) WITH OTHER TRADES.

i. COORDINATE THE INSTALLATION OF ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS WITH OTHER TRADES.

5) PLACEMENT OF EQUIPMENT AND HARDWARE

a. ALL DIMENSIONS NOTES "CLR" ARE CLEAR AND ARE NOT ADJUSTABLE WITHOUT APPROVAL FROM ARCHITECT.

b. ALIGN ALL PARTITIONS ADJACENT TO BASE BUILDING COLUMNS OR WALL WITH THE FACE OF FINISHED COLUMN SURFACE, UNLESS NOTED OTHERWISE.

c. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT REVIEW BY ARCHITECT UNLESS NOTED OTHERWISE.

d. ARRANGE AND PLACE ALL FRAMING MEMBERS TO PERMIT INSTALLATION OF PIPE, CONDUITS, AND DUCTWORK WITH MINIMAL CUTTING. ALL NECESSARY CUTTING, BLOCKING, BRACING, SUPPORTING AND REPAIRING SHALL BE APPROVED BY OWNER'S REPRESENTATIVE.

e. ARRANGE CEILING MOUNTED FIXTURES AND HARDWARE PER THE REFLECTED CEILING PLAN PROVIDED AS PART OF THE ARCHITECTURAL PLANS.

f. PROVIDE ACCESS TO AND CLEARANCE AROUND ALL EQUIPMENT AND HARDWARE AS REQUIRED BY CODE AND BY EQUIPMENT MANUFACTURER.

g. PROVIDE ACCESS PANELS IN LOCATIONS AS REQUIRED FOR HARDWARE REQUIRING ACCESS.

6) INTEGRITY OF CONSTRUCTION

a. X-RAY SLABS AND WALLS IN LOCATIONS OF PENETRATIONS PRIOR TO SAW CUTTING OR CORING.

b. MAINTAIN AND / OR MODIFY AND / OR PROVIDE NEW STRUCTURAL CONSTRUCTION, ANCHOR AND BRACE EQUIPMENT, HARDWARE, ASSEMBLIES, ELEMENTS OF CONSTRUCTION, ET AL AS REQUIRED BY CODE.

c. PROVIDE INSTALLATIONS PLUMB AND CRAFTSMAN LIKE, TO PROVIDE FOR MAXIMUM CLEARANCES AND MINIMUM IMPOSITION, AND COMMENSURATE WITH EXISTING CONDITIONS AND / OR GRADE OF CONSTRUCTION OF OVERALL JOB.

d. DO NOT BORE OR NOTCH STRUCTURAL ELEMENTS WITHOUT WRITTEN AUTHORIZATION FROM OWNER'S REPRESENTATIVES.

e. PROVIDE EQUIPMENT, HARDWARE, AND TREATMENTS WHERE NEW INSTALLATIONS PENETRATE NEW OR EXISTING RATED ELEMENTS OF CONSTRUCTION.

f. MAINTAIN AND / OR MODIFY AND / OR PROVIDE NEW FIRE SUPPRESSION AND FIRE ALARM SYSTEMS AS REQUIRED BY CODE.

7) EQUIPMENT

1) PROVIDE HVAC EQUIPMENT (TO INCLUDE ASSOCIATED MECHANICAL HARDWARE, SUPPORTS, FASTENERS, BLOCKING AND BAKING, AND CONTROLS AND LOW VOLTAGE CONDUIT AND WIRING) AS REQUIRED FOR COMPLETE INSTALLATION.

2) VERIFY EQUIPMENT DIMENSIONS AND ASSOCIATED SIZES OF PLATFORMS AND CURBS AND MOUNTING REQUIREMENTS FOR SLAB POURS, ROOF FRAMING, AND ASSOCIATED ELEMENTS OF CONSTRUCTION.

3) VERIFY SERVICE REQUIREMENTS OF EQUIPMENT AS SUBMITTED FOR AVAILABLE VOLTAGE AND PHASE, AS PROPOSED FOR INSTALLATION HEREIN. IDENTIFY DISCREPANCY IN WRITING IN COURSE OF SUBMITTAL AND PROCUREMENT PROCESS.

4) INSTALL EQUIPMENT LEVEL AND PLUMB, AND IN A CRAFTSMANSHIP LIKE MANNER.

316. INSULATION

C. HARDWARE

1) PIPE SUPPORTS

a. COORDINATE HEIGHT OF INSTALLATION OF HARDWARE TO ACCOMMODATE REQUIREMENTS FOR SURROUNDINGS (I.E. WITHIN SPACE AND ON SLAB AND ON ROOF, FOR PASSAGE AND THOROUGHFARE, AND ROOFING WORK, ET AL).

b. SECURE SUPPORTS WITH RIGID CONNECTIONS TO FLOOR AND ROOF CONSTRUCTION. PROVIDE INTERIM BLOCKING AS NECESSARY.

c. PROVIDE INSULATION AND INSERTS AND SADDLES AT PIPE SUPPORTS.

d. PROVIDE INSULATION / INSERTS TO ISOLATE DISSIMILAR METALS.

e. PIPING AND SUPPORTS EXPOSED IN SPACE SHALL BE PAINTED UNLESS OTHERWISE SPECIFIED.

2) DUCT SUPPORTS

a. COORDINATE HEIGHT OF INSTALLATION OF HARDWARE TO ACCOMMODATE REQUIREMENTS FOR SURROUNDINGS (I.E. WITHIN SPACE AND ON SLAB AND ON ROOF).

b. PROVIDE INSULATION AND INSERTS AND SADDLES AT PIPE SUPPORTS.

c. PROVIDE INSULATION / INSERTS TO ISOLATE DISSIMILAR METALS.

d. SUPPORT DUCTWORK EXPOSED IN SPACE VIA THREADED RODS, AND GAGE METAL STRAPS CINCHED TIGHT TO DUCTS TO ENSURE ADEQUATE CLEARANCE. ADDITIONAL SUPPORT (I.E. MANUFACTURED C-CHANNEL, ET AL) TOPSIDE OF DUCTWORK TO MINIMIZE VISIBILITY.

e. PAINT DUCTWORK AND SUPPORTS EXPOSED IN SPACE UNLESS OTHERWISE SPECIFIED.

3) PIPE INSULATION

a. DOMESTIC HOT WATER PIPE

i) DOMESTIC HOT WATER: 1/2" THICK FOR 1/2" PIPE, 3/4" THICK FOR 3/4" PIPE, 1-1/2" THICK FOR SIZES UP TO 1-1/2". 2" THICK FOR SIZES 2" AND LARGER. MINIMUM THERMAL RESISTANCE SHALL BE R=4.0 TO 4.6 PER INCH.

ii) CONDENSATE DRAINS: FOR CONCEALED AND EXPOSED SPACES INSIDE, 1" THICK. MINIMUM THERMAL RESISTANCE SHALL BE R=4.0 TO 4.6 PER INCH.

iii) RIGID MOLDED ONE PIECE FIBERGLASS INSULATION WITH ALL-SERVICE JACKET AND SELF-SEALING LAP, WITH BUTTSTRIP FOR EACH SECTION.

iv) WHITE PVC JACKETS FOR FITTINGS, CONNECTIONS, FLANGES, AND VALVES.

v) INSULATE JOINTS WITH VAPOR BARRIER FINISH

vi) 25 FLAME SPREAD / 50 SMOKE DEVELOPED RATING WHEN TESTED IN ACCORDANCE WITH ASTM E 64, NFPA 255, UL723.

vii) INSTALL PIPE INSULATION IN COMPLIANCE WITH TITLE 24.

b. REFRIGERANT

i) CLOSED CELL RATED WITH SELF-SEALING LAP, FOR INDOOR INSTALLATION.

ii) CLOSED CELL RATED WITH GLUE, MANUFACTURED EXTERIOR COVER, FOR OUTDOOR INSTALLATION.

iii) 25 FLAME SPREAD / 50 SMOKE DEVELOPED RATING WHEN TESTED IN ACCORDANCE WITH ASTM E 64, NFPA 255, UL723.

iv) PIPE INSULATION SHALL BE INSTALLED IN COMPLIANCE WITH TITLE 24.

4) DUCT INSULATION: WRAP AND LINING

a. WRAP: 1-1/2", 3/4" PCF INSULATION, U=0.27 AT 50°F (ASTM C 177), WITH FSK VAPOR BARRIER AND 2" STAPLING FLANGE.

b. LINING: 1" FOR INTERIOR INSTALLATION OR 2" FOR EXTERIOR INSTALLATIONS, U=0.24 @ 75°F (ASTM C518), MAXIMUM VELOCITY 6000 FPM. INSTALL WITH 100% ADHESIVE COVERAGE, AND PINS PER SMACNA.

c. ALL PRODUCTS TO HAVE A 25 FLAME / 50 SMOKE DEVELOPED RATING WHEN TESTED IN ACCORDANCE WITH ASTM E 84, NFPA 255, UL723.

d. DUCT INSULATION AND LINING SHALL BE INSTALLED IN COMPLIANCE WITH CHAPTER 6 OF THE UNIFORM MECHANICAL CODE AND TITLE 24.

5) PIPING

a. REFRIGERANT:

i) ACR (REFRIGERANT SUCTION, LIQUID SERVICE):

a) REFRIGERANT PIPING: SEAMLESS COPPER ACR TUBING, HARD DRAWN, SOLDERED OR BRACED JOINTS WITH 95/5 (TIN/ANTIMONY) SOLDER.

b) TYPE-O SOFT ANNEALED COPPER PIPE FOR SIZES UP TO 3/4". TYPE 1/2H FOR SIZES 3/4" AND LARGER. PROVIDE FLARE PER MANUFACTURER'S RECOMMENDATIONS.

b. DUCTWORK

a. METAL DUCTS: COMPLY WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE, TO INCLUDE DUCTS, PLENUMS, METAL FITTINGS.

b. FLEXIBLE DUCTS: SHALL COMPLY WITH UL181 AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE.

6) DUCTWORK

a. METAL DUCTS: COMPLY WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE, TO INCLUDE DUCTS, PLENUMS, METAL FITTINGS.

b. FLEXIBLE DUCTS: SHALL COMPLY WITH UL181 AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE.

327. CONTROLS

C. CONTROLS

1) BUILDING AUTOMATION SYSTEM

a. MANUFACTURED BY PELICAN.

b. PROVIDE MICROPROCESSOR-BASED CONTROLS WITH SCHEDULING AND NETWORKING AND REMOTE COMMUNICATION CAPABILITY.

c. INSTALL SAID SYSTEM COMPLETE TO EXTENT OF CONNECTION TO OWNER'S WAN (INTERNET).

d. PROVIDE FOR WIRELESS THERMOSTAT OPERATION FOR MULTIPLE ROOFTOP PACKAGE HVAC UNITS AND SINGULAR ROOFTOP PACKAGE HVAC UNIT.

e. INSTALLATION WITH VVT SERVICES VIA MULTIPLE ZONE DAMPERS, BYPASS DAMPER, AND NECESSARY CONTROLS AS IDENTIFIED HEREIN.

f. PROVIDE FOR GATEWAY AND CONNECTION TO INTERNET AS IDENTIFIED HEREIN.

2) DOCUMENTATION

a. ALL ABBREVIATIONS USED ON DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.

b. DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND DO NOT ACCOUNT FOR EVERY ASPECT OF INSTALLATION AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS. CONTRACTOR SHALL CHECK CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND SCALES FOR ACCURACY AND CONFIRMING THAT WORK IS BUILDABLE AS SHOWN FOR A COMPLETE AND OPERABLE AND OPERATIONAL INSTALLATION PRIOR TO PROCEEDING WITH CONSTRUCTION. CONTRACTOR TO REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.

c. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THE DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO COMMENCING WORK.

d. DO NOT SCALE DRAWINGS. IF THERE ARE ANY QUESTIONS REGARDING THESE OR OTHER COORDINATION ISSUES, THE CONTRACTOR SHALL CLARIFY WITH OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH WORK IN QUESTION OR RELATED WORK.

e. VERIFY ALL DIMENSIONS SHOWN ON DRAWINGS BY FIELD MEASUREMENTS. BEFORE COMMENCING WORK, CHECK ALL LINES AND LEVELS INDICATED. IMMEDIATELY REPORT DISCREPANCIES TO THE OWNER'S REPRESENTATIVE FOR CORRECTION AND ADJUSTMENT. PROVIDE PROPER FIT AND ATTACHMENT OF ALL PARTITIONS AND CONSTRUCTION MATERIALS.

f. ALL DIMENSIONS NOTED "MINIMUM", "CLEAR", OR "VERIFY" ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY VARIANCES ARE TO BE REPORTED TO THE ARCHITECT IMMEDIATELY FOR RESOLUTION. SIMILAR MEANS COMPARABLE CHARACTERISTICS FOR THE TERMS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLAN. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED ONES.

g. ALL PARTITIONS ARE DIMENSIONED FINISH TO FINISH UNLESS NOTED OTHERWISE.

3) STANDARD OF CARE

a. REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THE DRAWINGS ARE TO BE REPORTED TO THE ARCHITECT PRIOR TO COMMENCING WORK.

b. IF ANY MATERIALS OR PRODUCTS ARE INSTALLED WITHOUT FIRST PROVIDING THE REQUIRED SUBMITTALS OR SHOP DRAWINGS FOR APPROVAL, THOSE MATERIALS OR PRODUCTS ARE SUBJECT TO BEING REMOVED AND CORRECTLY REINSTALLED AT FULL COST TO THE CONTRACTOR.

c. WORK SHALL BE COMMENSURATE TO FINISHED CONDITIONS WITHIN SPACE AND / OR STRUCTURE, AND / OR TO STANDARDS ESTABLISHED IN COMMENSURATE TERMS.

d. NO WORK, DEFECTIVE IN CONSTRUCTION OR QUALITY OR DEFICIENT IN ANY REQUIREMENTS OF THE DRAWINGS OR NOTES, WILL BE FOUND ACCEPTABLE IN CONSEQUENCE OF THE OWNER'S OR ARCHITECT'S FAILURE TO DISCOVER AND OR POINT OUT DEFECTS AND DEFICIENCIES DURING CONSTRUCTION. DEFECTIVE WORK REVEALED WITHIN THE TIME REQUIRED BY GUARANTEES SHALL BE REPLACED BY WORK CONFORMING WITH THE INTENT OF THE CONTRACT. NO PAYMENT, EITHER PARTIAL OR FINAL, SHALL BE CONSIDERED AS AN ACCEPTANCE OF DEFECTIVE WORK OR IMPROPER MATERIALS.

e. WORK WHICH CREATES NOXIOUS ODORS SHALL BE PERFORMED AT A TIME OF AGREEABLE WITH, AND COORDINATED THROUGH THE OWNER'S REPRESENTATIVE AND PER JURISDICTIONAL/GOVERNMENTAL REQUIREMENTS.

f. PROVIDE AN EMERGENCY POWER SOURCE FOR EXIT AND EXIT WAY ILLUMINATION.

g. KEEP ALL BUILDING AREAS CLEAN AND FREE OF ACCUMULATED DIRT AND DEBRIS. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ANY SURPLUS MATERIALS, DEBRIS AND EQUIPMENT.

4) COORDINATION OF CONSTRUCTION EFFORT

a. ORDER ALL MATERIALS IN TIME TO MAINTAIN THE APPROVED CONSTRUCTION SCHEDULE.

b. COORDINATE SCHEDULE WITH ALL CONTRACTORS, OWNER'S VENDORS, AND PARTIES INSTALLING ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS.

c. THE CONTRACTOR SHALL COORDINATE SCHEDULE FOR ALL SUBCONTRACTORS, OWNER'S VENDORS, AND PARTIES INSTALLING ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS.

d. ORDER MATERIALS IN TIME TO MAINTAIN THE APPROVED CONSTRUCTION SCHEDULE.

e. COORDINATE INSTALLATION OF ALL WORK FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, LIGHT FIXTURES, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH ALL CONTRACTORS.

f. COORDINATE INSTALLATION OF ALL WORK BY THE OWNER'S VENDORS (I.E. SITE / CIVIL / UTILITIES, SIGNAGE, FIRE / LIFE SAFETY, DATA CABLEING, SECURITY SYSTEM, AUDIO VISUAL, ET AL) WITH OTHER TRADES.

g. COORDINATE INSTALLATION OF ALL WORK BY SUBCONTRACTORS FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, LIGHT FIXTURES, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH OWNER'S REPRESENTATIVE IN THE FIELD.

h. COORDINATE INSTALLATION OF ALL WORK BY THE OWNER'S VENDORS (I.E. SITE / CIVIL / UTILITIES, SIGNAGE, FIRE / LIFE SAFETY, DATA CABLEING, SECURITY SYSTEM, AUDIO VISUAL, ET AL) WITH OTHER TRADES.

i. COORDINATE THE INSTALLATION OF ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS WITH OTHER TRADES.

5) PLACEMENT OF EQUIPMENT AND HARDWARE

a. ALL DIMENSIONS NOTES "CLR" ARE CLEAR AND ARE NOT ADJUSTABLE WITHOUT APPROVAL FROM ARCHITECT.

b. ALIGN ALL PARTITIONS ADJACENT TO BASE BUILDING COLUMNS OR WALL WITH THE FACE OF FINISHED COLUMN SURFACE, UNLESS NOTED OTHERWISE.

c. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT REVIEW BY ARCHITECT UNLESS NOTED OTHERWISE.

d. ARRANGE AND PLACE ALL FRAMING MEMBERS TO PERMIT INSTALLATION OF PIPE, CONDUITS, AND DUCTWORK WITH MINIMAL CUTTING. ALL NECESSARY CUTTING, BLOCKING, BRACING, SUPPORTING AND REPAIRING SHALL BE APPROVED BY OWNER'S REPRESENTATIVE.

e. ARRANGE CEILING MOUNTED FIXTURES AND HARDWARE PER THE REFLECTED CEILING PLAN PROVIDED AS PART OF THE ARCHITECTURAL PLANS.

f. PROVIDE ACCESS TO AND CLEARANCE AROUND ALL EQUIPMENT AND HARDWARE AS REQUIRED BY CODE AND BY EQUIPMENT MANUFACTURER.

g. PROVIDE ACCESS PANELS IN LOCATIONS AS REQUIRED FOR HARDWARE REQUIRING ACCESS.

6) INTEGRITY OF CONSTRUCTION

a. X-RAY SLABS AND WALLS IN LOCATIONS OF PENETRATIONS PRIOR TO SAW CUTTING OR CORING.

b. MAINTAIN AND / OR MODIFY AND / OR PROVIDE NEW STRUCTURAL CONSTRUCTION, ANCHOR AND BRACE EQUIPMENT, HARDWARE, ASSEMBLIES, ELEMENTS OF CONSTRUCTION, ET AL AS REQUIRED BY CODE.

c. PROVIDE INSTALLATIONS PLUMB AND CRAFTSMAN LIKE, TO PROVIDE FOR MAXIMUM CLEARANCES AND MINIMUM IMPOSITION, AND COMMENSURATE WITH EXISTING CONDITIONS AND / OR GRADE OF CONSTRUCTION OF OVERALL JOB.

d. DO NOT BORE OR NOTCH STRUCTURAL ELEMENTS WITHOUT WRITTEN AUTHORIZATION FROM OWNER'S REPRESENTATIVES.

e. PROVIDE EQUIPMENT, HARDWARE, AND TREATMENTS WHERE NEW INSTALLATIONS PENETRATE NEW OR EXISTING RATED ELEMENTS OF CONSTRUCTION.

f. MAINTAIN AND / OR MODIFY AND / OR PROVIDE NEW FIRE SUPPRESSION AND FIRE ALARM SYSTEMS AS REQUIRED BY CODE.

7) EQUIPMENT

1) PROVIDE HVAC EQUIPMENT (TO INCLUDE ASSOCIATED MECHANICAL HARDWARE, SUPPORTS, FASTENERS, BLOCKING AND BAKING, AND CONTROLS AND LOW VOLTAGE CONDUIT AND WIRING) AS REQUIRED FOR COMPLETE INSTALLATION.

2) VERIFY EQUIPMENT DIMENSIONS AND ASSOCIATED SIZES OF PLATFORMS AND CURBS AND MOUNTING REQUIREMENTS FOR SLAB POURS, ROOF FRAMING, AND ASSOCIATED ELEMENTS OF CONSTRUCTION.

3) VERIFY SERVICE REQUIREMENTS OF EQUIPMENT AS SUBMITTED FOR AVAILABLE VOLTAGE AND PHASE, AS PROPOSED FOR INSTALLATION HEREIN. IDENTIFY DISCREPANCY IN WRITING IN COURSE OF SUBMITTAL AND PROCUREMENT PROCESS.

4) INSTALL EQUIPMENT LEVEL AND PLUMB, AND IN A CRAFTSMANSHIP LIKE MANNER.

338. INSULATION

C. HARDWARE

1) PIPE SUPPORTS

a. COORDINATE HEIGHT OF INSTALLATION OF HARDWARE TO ACCOMMODATE REQUIREMENTS FOR SURROUNDINGS (I.E. WITHIN SPACE AND ON SLAB AND ON ROOF, FOR PASSAGE AND THOROUGHFARE, AND ROOFING WORK, ET AL).

b. SECURE SUPPORTS WITH RIGID CONNECTIONS TO FLOOR AND ROOF CONSTRUCTION. PROVIDE INTERIM BLOCKING AS NECESSARY.

c. PROVIDE INSULATION AND INSERTS AND SADDLES AT PIPE SUPPORTS.

d. PROVIDE INSULATION / INSERTS TO ISOLATE DISSIMILAR METALS.

e. PIPING AND SUPPORTS EXPOSED IN SPACE SHALL BE PAINTED UNLESS OTHERWISE SPECIFIED.

2) DUCT SUPPORTS

a. COORDINATE HEIGHT OF INSTALLATION OF HARDWARE TO ACCOMMODATE REQUIREMENTS FOR SURROUNDINGS (I.E. WITHIN SPACE AND ON SLAB AND ON ROOF).

b. PROVIDE INSULATION AND INSERTS AND SADDLES AT PIPE SUPPORTS.

c. PROVIDE INSULATION / INSERTS TO ISOLATE DISSIMILAR METALS.

d. SUPPORT DUCTWORK EXPOSED IN SPACE VIA THREADED RODS, AND GAGE METAL STRAPS CINCHED TIGHT TO DUCTS TO ENSURE ADEQUATE CLEARANCE. ADDITIONAL SUPPORT (I.E. MANUFACTURED C-CHANNEL, ET AL) TOPSIDE OF DUCTWORK TO MINIMIZE VISIBILITY.

e. PAINT DUCTWORK AND SUPPORTS EXPOSED IN SPACE UNLESS OTHERWISE SPECIFIED.

3) PIPE INSULATION

a. DOMESTIC HOT WATER PIPE

i) DOMESTIC HOT WATER: 1/2" THICK FOR 1/2" PIPE, 3/4" THICK FOR 3/4" PIPE, 1-1/2" THICK FOR SIZES UP TO 1-1/2". 2" THICK FOR SIZES 2" AND LARGER. MINIMUM THERMAL RESISTANCE SHALL BE R=4.0 TO 4.6 PER INCH.

ii) CONDENSATE DRAINS: FOR CONCEALED AND EXPOSED SPACES INSIDE, 1" THICK. MINIMUM THERMAL RESISTANCE SHALL BE R=4.0 TO 4.6 PER INCH.</

1 DEMO CONDENSING UNIT CU-A, ANCHILLARIES TO INCLUDE ANCHILLARIES, HARDWARE, TRIM; PREPARE SITE FOR REFIT OF (N) CU

2 DEMO INTERCONNECTING RS, RL PIPING SERVICES FROM CONNECTIONS AT CU-A TO FC-A; PREPARE SITE AND SPACE FOR REFIT

3 DEMO FAN COIL FC-A, ANCHILLARIES, HARDWARE, TRIM

4 DEMO SUPPLY AIR / RETURN AIR / OUTSIDE AIR SERVICES ASSOCIATED WITH FC-A; PREPARE FOR REFIT OF SERVICES COMMENSURATE, TO INCLUDE REVITALIZATION OF ECONOMIZER SERVICES

5 MAINTAIN / MODIFY ECONOMIZER EXHAUST SERVICE; MODIFY ASSOCIATED EXHAUST FAN EF-B AS IDENTIFIED HEREIN

6 MAINTAIN (E) AC UNIT AC-B SERVING ROW OFFICES (AND PLANNING SPACE), VVT, SUPPLY AIR AND RETURN AIR SERVICES; DEMONSTRATE SERVICES AS IDENTIFIED HEREIN

7 BALANCE SUPPLY AIR SERVICES TO PLANNING SPACE ASSOCIATED WITH AC-B AS IDENTIFIED HEREIN

8 MAINTAIN EXHAUST AIR SERVICES TO FIRST FLOOR RESTROOM; MODIFY ASSOCIATED EXHAUST FAN EF-A AS IDENTIFIED HEREIN

9 REFIT CONTROLS FOR CU-A / FC-A AS IDENTIFIED HEREIN

10 MAINTAIN CONTROLS FOR AC-B AND ASSOCIATED VVT COMPONENTS AS IDENTIFIED HEREIN; DEMONSTRATE OPERATION OF AC-B AND ASSOCIATED VVT SERVICES FOR ASSOCIATED AC UNIT; DEMONSTRATE OPERATION OF AC-B AND ASSOCIATED VVT SERVICES FOR ASSOCIATED AC UNIT PRIOR TO INITIATION OF INSTALLATION

11 PREPARE SITE AND SPACE FOR (N) EF SERVICES FOR (N) RESTROOM

12 PREPARED OPENING IN CONCRETE WALL BY GENERAL CONTRACTOR

13 DEMO OF ELECTRICAL SERVICES (AND PREPARATION FOR INSTALLATION OF COMMENSURATE CONFIGURATIONS) BY ELECTRICAL CONTRACTOR

14 DEMO OF CONDENSATE DRAIN SERVICES (TO INCLUDE PREPARATION FOR INSTALLATION OF OF COMMENSURATE CONFIGURATIONS) BY PLUMBING CONTRACTOR

1 DEMO CONDENSING UNIT CU-A, ANCHILLARIES, TO INCLUDE ANCHILLARIES, HARDWARE, TRIM. PREPARE SITE FOR REFIT OF (N) CU

2 DEMO INTERCONNECTING RS, RL PIPING SERVICES FROM CONNECTIONS AT CU-A TO FC-A. PREPARE SITE AND SPACE FOR REFIT

3 DEMO FAN COIL FC-A, ANCHILLARIES, HARDWARE, TRIM

4 DEMO SUPPLY AIR / RETURN AIR / OUTSIDE AIR SERVICES ASSOCIATED WITH FC-A. PREPARE FOR REFIT OF SERVICES COMMENSURATE, TO INCLUDE REVITALIZATION OF ECONOMIZER SERVICES

5 MAINTAIN / MODIFY ECONOMIZER EXHAUST SERVICE; MODIFY ASSOCIATED EXHAUST FAN EF-B AS IDENTIFIED HEREIN

6 MAINTAIN (E) AC UNIT AC-B SERVING ROW OFFICES (AND PLANNING SPACE), VVT, SUPPLY AIR AND RETURN AIR SERVICES; DEMONSTRATE SERVICES AS IDENTIFIED HEREIN

7 BALANCE SUPPLY AIR SERVICES TO PLANNING SPACE ASSOCIATED WITH AC-B AS IDENTIFIED HEREIN

8 MAINTAIN EXHAUST AIR SERVICES TO FIRST FLOOR RESTROOM; MODIFY ASSOCIATED EXHAUST FAN EF-A AS IDENTIFIED HEREIN

9 REFIT CONTROLS FOR CU-A / FC-A AS IDENTIFIED HEREIN

10 MAINTAIN CONTROLS FOR AC-B AND ASSOCIATED VVT COMPONENTS AS IDENTIFIED HEREIN; DEMONSTRATE OPERATION OF AC-B AND ASSOCIATED VVT SERVICES FOR ASSOCIATED AC UNIT; DEMONSTRATE OPERATION OF AC-B AND ASSOCIATED VVT SERVICES FOR ASSOCIATED AC UNIT PRIOR TO INITIATION OF INSTALLATION

11 PREPARE SITE AND SPACE FOR (N) EF SERVICES FOR (N) RESTROOM

12 PREPARED OPENING IN CONCRETE WALL BY GENERAL CONTRACTOR

13 DEMO OF ELECTRICAL SERVICES (AND PREPARATION FOR INSTALLATION OF COMMENSURATE CONFIGURATIONS) BY ELECTRICAL CONTRACTOR

14 DEMO OF CONDENSATE DRAIN SERVICES (TO INCLUDE PREPARATION FOR INSTALLATION OF OF COMMENSURATE CONFIGURATIONS) BY PLUMBING CONTRACTOR

The mechanical floor plan for the 2nd floor shows a complex network of HVAC systems. Key features include:

- Grid System:** A horizontal grid labeled 1 through 8 and a vertical grid labeled A through F.
- VAV Boxes:** Numerous Variable Air Volume (VAV) boxes are labeled, including VAV-1, VAV-2, VAV-3, VAV-4, VAV-5, VAV-6, VAV-7, VAV-8, VAV-9, VAV-10, VAV-11, VAV-X-2, VAV-13, VAV-14, and VAV-15.
- Exhaust Services:** Exhaust services are indicated for the first floor restroom (1), second floor restroom (2), and first floor exhaust fan (EF-A) (3).
- AC Unit:** The AC unit is located in the central area, with a callout for AC-A.
- Boiler:** The boiler is located in the central area, with a callout for B-A.
- Stairwells:** Stairwells are located in the central area, with a callout for UP TO 1ST FLOOR.
- Callouts:** Various callouts are present, including "UP TO EF-A", "UP TO EF-B", "UP TO AC-A", "UP TO 1ST FLOOR", and "UP TO 2ND FLOOR".

NOTES:

1. MODIFY / REFIT SUPPLY AIR / RETURN AIR SERVICES ASSOCIATED WITH AC-A FOR EXTENT OF SPACES IDENTIFIED HEREIN; MAINTAIN VARIABLE AIR VOLUME (VAV) BOXES WITH HEATING HOT WATER REHEAT (HHW RH) COILS; PREPARE FOR REFIT OF SERVICES AS NECESSARY FOR SPACE RECONFIGURATION
2. MAINTAIN SUPPLY AIR / RETURN AIR SERVICES ASSOCIATED WITH AC-A (TO INCLUDE VARIABLE AIR VOLUME (VAV) BOXES WITH HEATING HOT WATER REHEAT (HHW RH) COILS)
3. MAINTAIN (E) AC UNIT AC-A; DEMONSTRATE SERVICES AS IDENTIFIED HEREIN
4. MAINTAIN EXHAUST AIR SERVICES TO FIRST FLOOR RESTROOM
5. MAINTAIN EXHAUST AIR SERVICES TO SECOND FLOOR RESTROOM
6. MODIFY ASSOCIATED EXHAUST FAN EF EF-A AS IDENTIFIED HEREIN
7. MAINTAIN / MODIFY / REFIT CONTROLS FOR AC-A AND ASSOCIATED VAV SERVICES AS IDENTIFIED HEREIN; DEMONSTRATE OPERATION OF AC-A AND ASSOCIATED VAV SERVICES FOR ASSOCIATED AC UNIT PRIOR TO INITIATION OF INSTALLATION
8. MAINTAIN BOILER B-A ASSOCIATED WITH AC-A FOR VAV HHW RH SERVICES; DEMONSTRATE OPERATION OF EQUIPMENT PRIOR TO INITIATION OF INSTALLATION

DEMOLITION SECOND FLOOR PLAN

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

- NOTES:**
- ① MODIFY / REFIT SUPPLY AIR / RETURN AIR SERVICES ASSOCIATED WITH AC-A FOR EXTENT OF SPACES IDENTIFIED HEREIN; MAINTAIN VARIABLE AIR VOLUME (VAV) BOXES WITH HEATING HOT WATER REPEAT (HHW RH) COILS; PREPARE FOR REFIT OF SERVICES AS NECESSARY FOR AIR RECONFIGURATION
 - ② MAINTAIN SUPPLY AIR / RETURN AIR SERVICES ASSOCIATED WITH AC-A (TO INCLUDE: VARIABLE AIR VOLUME (VAV) BOXES WITH HEATING HOT WATER REPEAT (HHW RH) COILS
 - ③ MAINTAIN (E) AC UNIT AC-A; DEMONSTRATE SERVICES AS IDENTIFIED HEREIN
 - ④ MAINTAIN EXHAUST AIR SERVICES TO FIRST FLOOR RESTROOM
 - ⑤ MAINTAIN EXHAUST AIR SERVICES TO SECOND FLOOR RESTROOM
 - ⑥ MODIFY ASSOCIATED EXHAUST FAN EF ET AC-A AS IDENTIFIED HEREIN
 - ⑦ MAINTAIN / MODIFY / REFIT CONTROLS FOR AC-A AND ASSOCIATED VAV SERVICES AS IDENTIFIED HEREIN; DEMONSTRATE OPERATION OF AC-A AND ASSOCIATED VAV SERVICES FOR ASSOCIATED AC UNIT PRIOR TO INITIATION OF INSTALLATION
 - ⑧ MAINTAIN BOILER B-A ASSOCIATED WITH AC-A FOR VAV HHW RH SERVICES; DEMONSTRATE OPERATION OF EQUIPMENT PRIOR TO INITIATION OF INSTALLATION

[illegible]

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Job Number:	Project Number

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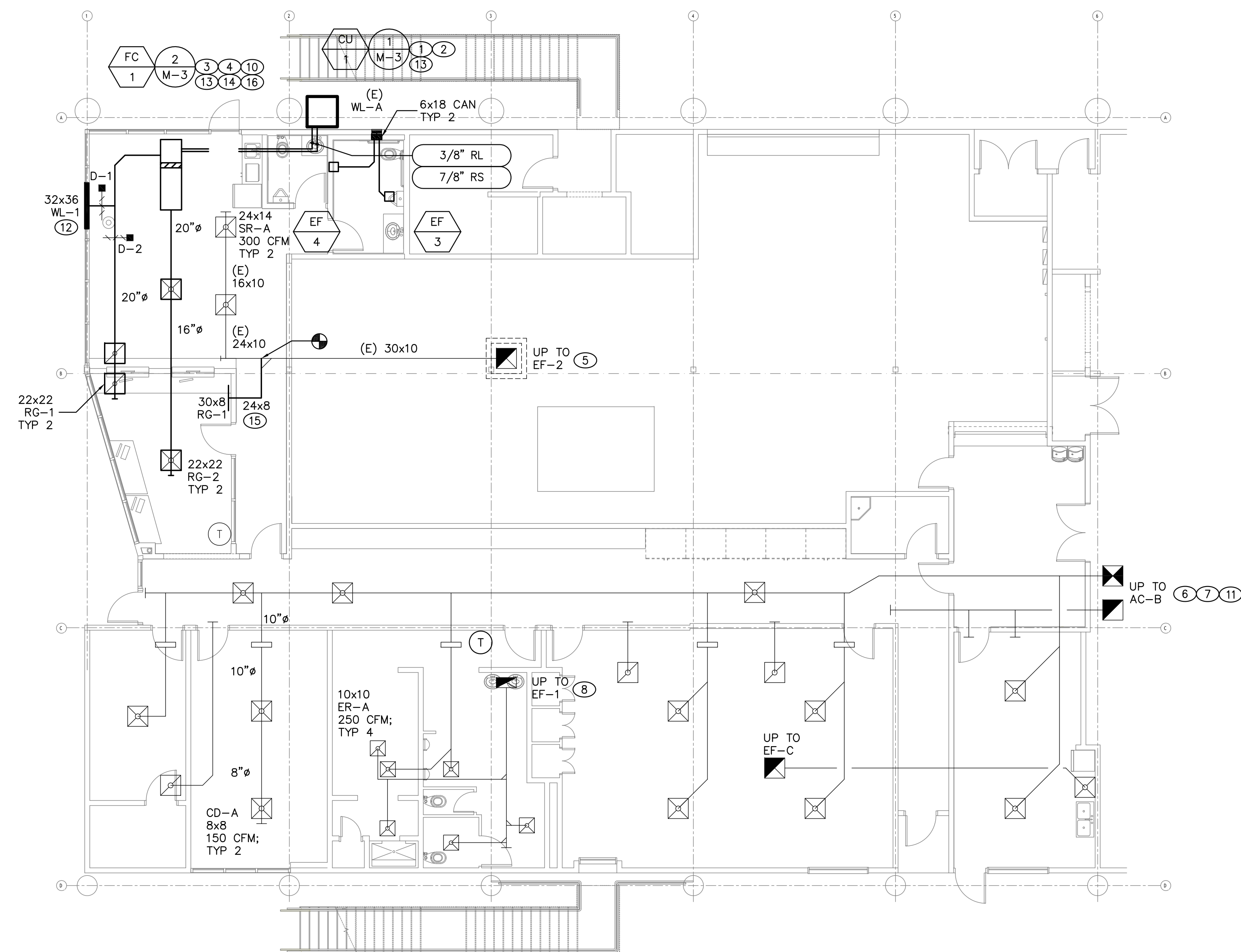


- DEMOLITION FLOOR PLAN
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NOTES:

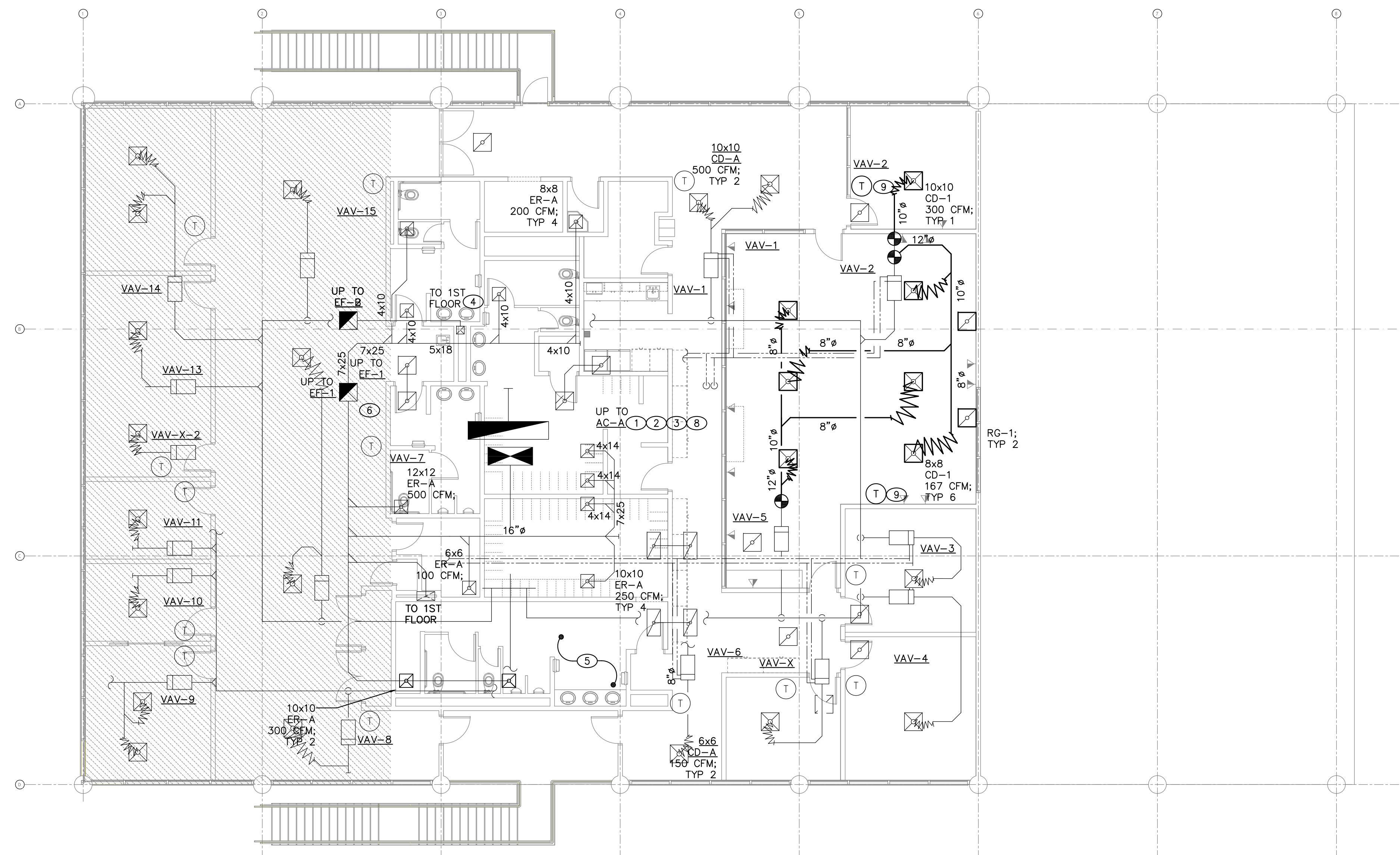
- ① PROVIDE CONDENSING UNIT CU-1, ANCHILLARIES, TO INCLUDE ANCHILLARIES, HARDWARE, TRIM, SUPPORT W/ SPACE OR (N) CU; MOUNT TO E CONCRETE PAD VIA NEOPRENE ISOLATION PADS
- ② PROVIDE INTERCONNECTING RS, RL PIPING SERVICES FROM CONNECTION CU-A TO FC-A; REFIT SITE AND SPACE FOR (N) SERVICES, TO INCLUDE WEATHERIZATION OF WALL PENETRATIONS
- ③ PROVIDE FAN C-1, G-1, ANCHILLARIES, HARDWARE, TRIM; SUPPORT VIA THREADED RODS, MANUFACTURED C-CHANNEL HARDWARE, NEOPRENE ISOLATION PADS, DOUBLE NUT ASSEMBLIES; PROVIDE SWAY BRACING IN FOUR DIRECTIONS VIA AIR RIGID CABLE C-1, C-2, C-3, C-4; PROVIDE OVERSIZED FILTER HOUSING FOR MERV 13 FILTERS SIZED AT MAXIMUM 300 FPM FACE VELOCITIES
- ④ PROVIDE SUPPLY AIR RETURN AIR / OUTSIDE AIR SERVICES ASSOCIATED WITH FC-1; DEVELOP ECONOMIZER SERVICE AS IDENTIFIED HEREIN; AIR BALANCE SERVICES AS IDENTIFIED HEREIN
- ⑤ MAINTAIN / MODIFY ECONOMIZER EXHAUST SERVICE; PROVIDE ASSOCIATED EXHAUST FAN SERVICE ON ROOF
- ⑥ MAINTAIN (E) AC UNIT AC-B SERVING ROOF OFFICES (AND PLANNING SPACE); DEMONSTRATE SERVICES AS IDENTIFIED HEREIN
- ⑦ MAINTAIN PLANNING SPACE / PLANNING SPACE ASSOCIATED WITH AC-B AS IDENTIFIED HEREIN
- ⑧ MAINTAIN EXHAUST AIR SERVICES TO FIRST FLOOR RESTROOM; REPLACE ASSOCIATED EXHAUST FAN (E) AS IDENTIFIED HEREIN
- ⑨ MAINTAIN PLANNING SPACE / PLANNING SPACE ASSOCIATED WITH AC-B AS IDENTIFIED HEREIN; PROVIDE (N) EF-3, 4 FOR (N) RESTROOMS; PROVIDE CEILING CABINET FANS, ASSOCIATED WITH SERVICES FOR EXHAUST FAN TOWNS TO SEPARATE CANS / PLenums AT (E) WALL LOUVER WL-A; INTERLOCK EF'S WITH EXHAUSTIVE LIGHT
- ⑩ PROVIDE CONTROLS FOR CU-1 / FC-1 COMMENSURATE TO (E) CONTROLS (TO INCLUDE ECONOMIZER CONTROL)
- ⑪ MAINTAIN CONTROLS (E) AND ASSOCIATED VUT COMPONENTS AS IDENTIFIED HEREIN; DEMONSTRATE OPERATION OF AC-B ASSOCIATED WITH FC-1 AS IDENTIFIED HEREIN; ASSOCIATED AC UNIT; DEMONSTRATE OPERATION OF AC-B AND ASSOCIATED VUT SERVICES UPON COMPLETION OF PREPARED OPENING IN (E) CONCRETE WALL BY GENERAL CONTRACTOR
- ⑫ ELECTRICAL SERVICES TO INCLUDE COMMENSURATE CONFIGURATIONS) BY ELECTRICAL CONTRACTOR
- ⑬ CONDENSATE DRAIN SERVICES (TO INCLUDE COMMENSURATE CONFIGURATIONS) BY PLUMBING CONTRACTOR
- ⑭ PAINT SUEL METAL DUCT TO MATCH ORIGINAL INTERIOR FINISH
- ⑮ ADJUST AIRFLOWS THEREAFTER OPERATION OF FC-1 AND CU-1 TO ACCOMMODATE OPERATIONS OF OPERATIONS OF NOISE AND SPACE TEMPERATURES



RENOVATION FIRST FLOOR PLAN

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

**RENOVATION ROOF PLAN TO BE
PROVIDED IN FORTHCOMING SUBMITTAL**



NOTES:

- ① REFIT SUPPLY AIR / RETURN AIR SERVICES ASSOCIATED WITH AC-A FOR EXTENT OF SPACES IDENTIFIED HEREIN. MAINTAIN SCHEDULE AIR VOLUME (CFM) BOXES WITH HEATING HOT WATER REHEAT (HHW RH) COILS; REFIT SERVICES AS NECESSARY FOR SPACE BALANCE CONFIGURATION; AIR BALANCE SERVICES AS IDENTIFIED HEREIN
- ② MAINTAIN SUPPLY AIR / RETURN AIR SERVICES ASSOCIATED WITH AC-A (TO INCLUDE VARIOUS VOLUME (CFM) BOXES WITH HEATING HOT WATER REHEAT (HHW RH) COILS
- ③ MAINTAIN (E) AC UNIT AC-A; DEMONSTRATE SERVICES AS IDENTIFIED HEREIN
- ④ MAINTAIN EXHAUST AIR SERVICES TO FIRST FLOOR RESTROOM
- ⑤ MAINTAIN EXHAUST AIR SERVICES TO SECOND FLOOR RESTROOM; AIR BALANCE SERVICES AS IDENTIFIED HEREIN
- ⑥ REPLACE EF-A IN KIND WITH EF-1 AS IDENTIFIED HEREIN
- ⑦ REPLACE EF-B IN KIND WITH EF-2 AS IDENTIFIED HEREIN
- ⑧ REFIT CONTROLS FOR AC-A (AND B-A) AND ASSOCIATED VAV SERVICES AS IDENTIFIED HEREIN; DEMONSTRATE OPERATION OF AC-A AND ASSOCIATED SERVICES UPON COMPLETION OF INSTALLATION
- ⑨ PROVIDE NEW THERMOSTATS IN NEW ROOMS AS NECESSARY; VAV ROOM LOCATION WITH OWNER PRIOR TO INSTALLATION

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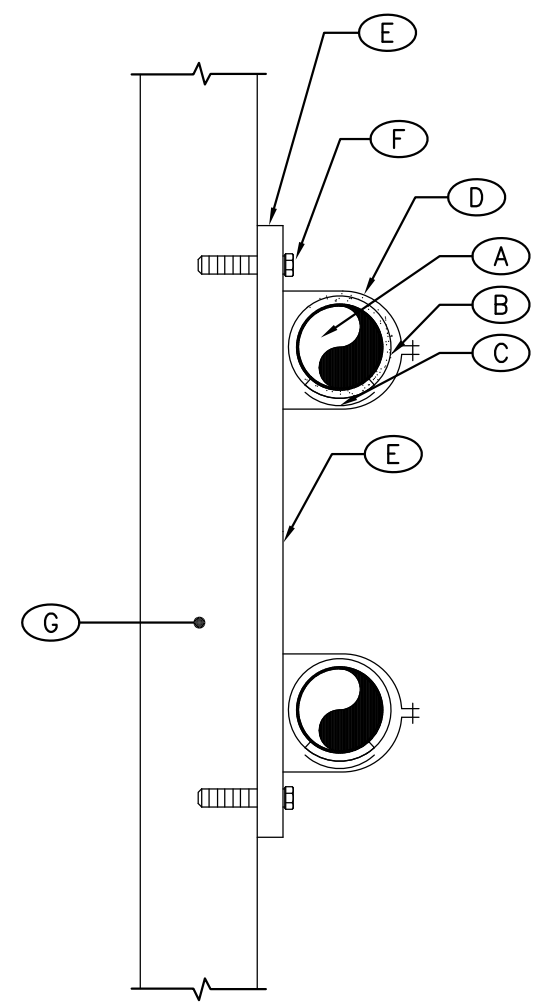
- RENOVATION FLOOR PLAN
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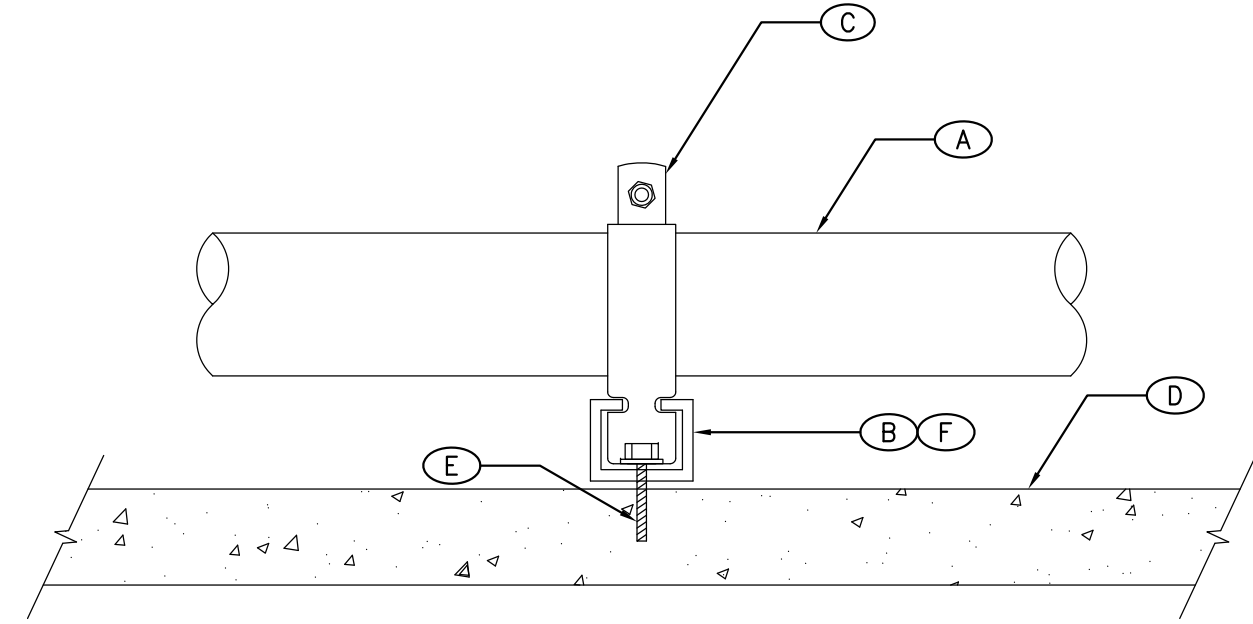


SCALE: 1/8"=1'-0"

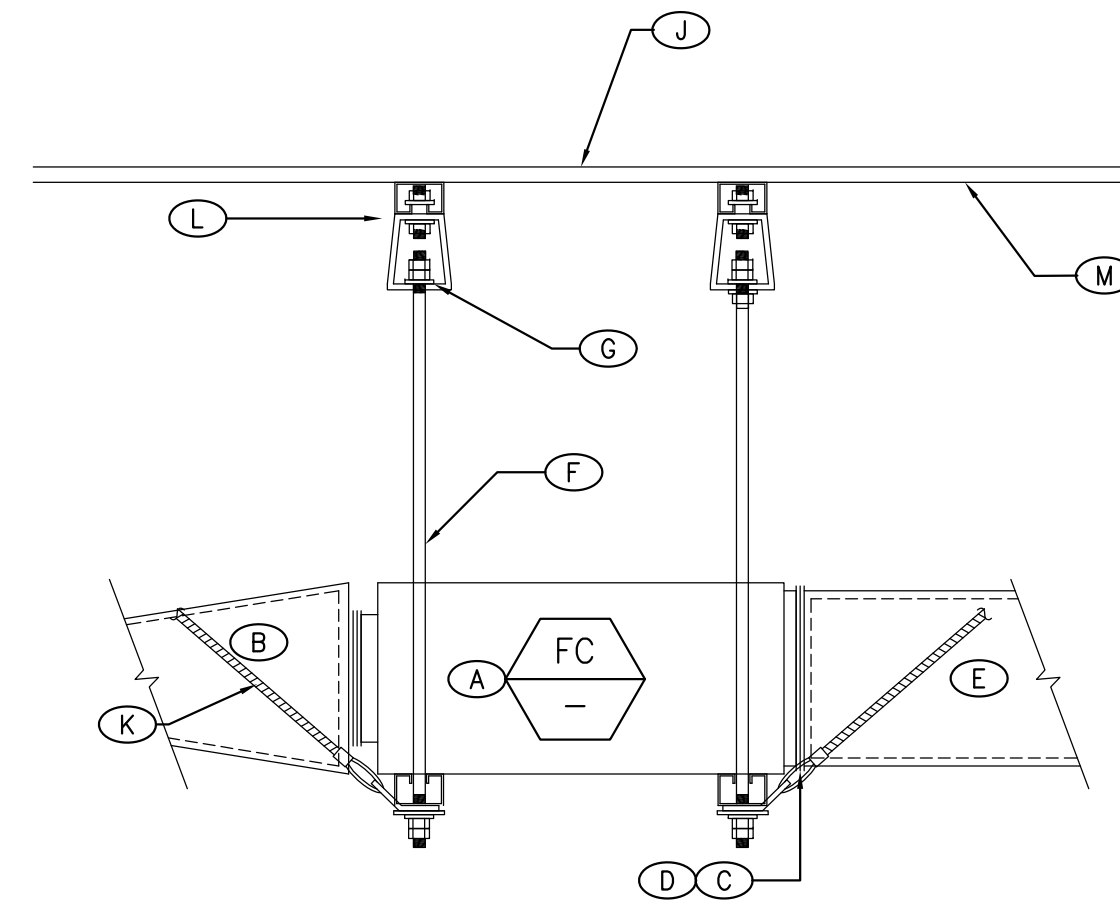
These drawings and accompanying, as instruments of service, are the exclusive property of the Architect and their use and publication shall be restricted to the original site for which they were prepared. Re-use, reproduction or publication by any method, in whole or part, is prohibited by written permission from the Architect. Title to these plans and specifications shall remain with the Architect without prejudice, and visual with them shall constitute prima facie evidence of acceptance of these plans and specifications.



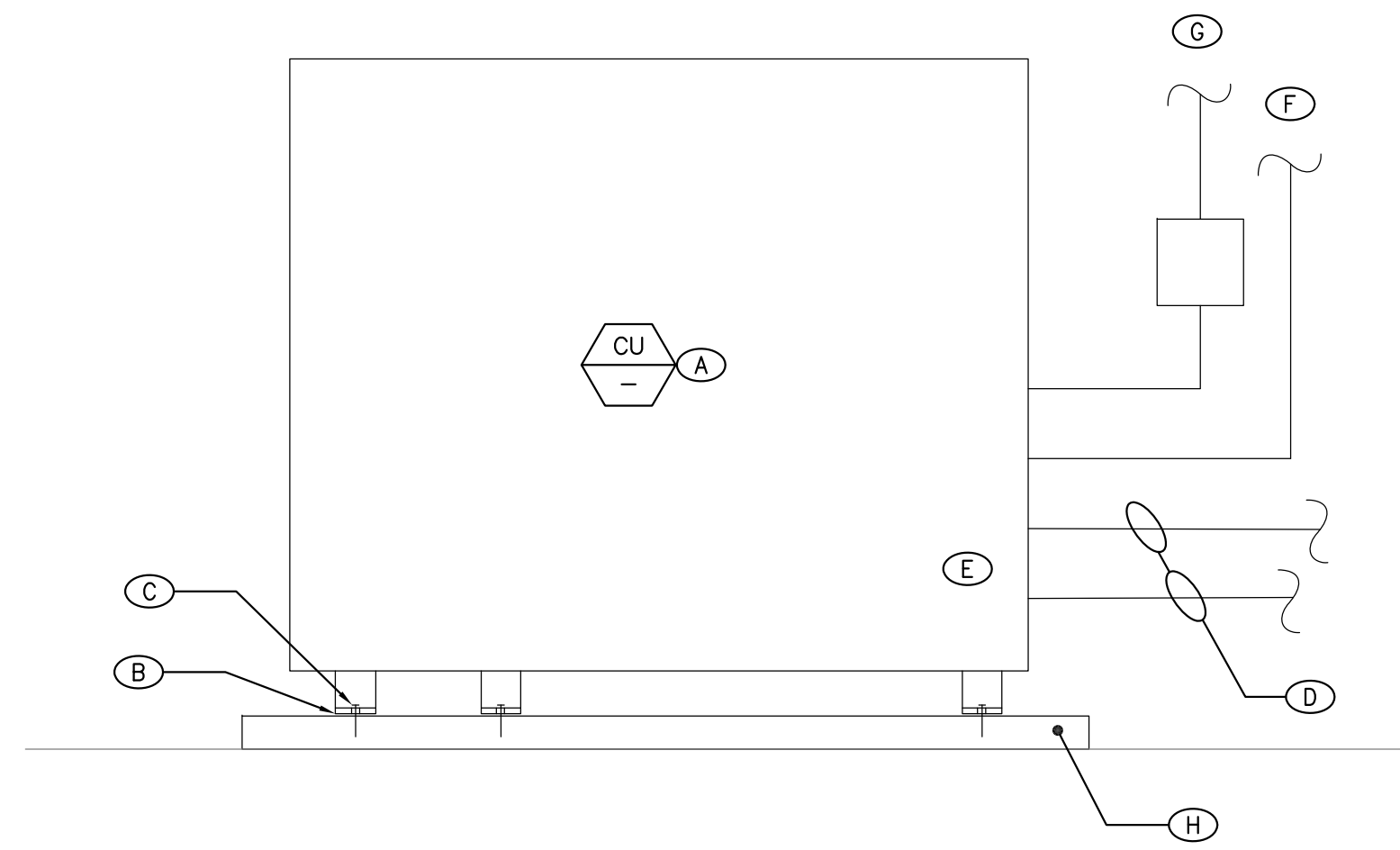
- NOTES:
- (A) RS, RL SERVICE, ET AL
 - (B) PROVIDE PIPE INSULATION
 - (C) PROVIDE PIPE SADDLE OR INSULATION INSERT AS NECESSARY
 - (D) PROVIDE PIPE STRAP
 - (E) MANUFACTURED C-CHANNEL HARDWARE, CUT AND FIELD-ASSEMBLED VIA MANUFACTURER'S FASTENERS. FIELD WELDING IS NOT ALLOWED
 - (F) LAG SCREWS FOR ATTACHMENT OF C-CHANNEL HARDWARE TO FRAME WALL CONSTRUCTION
 - (G) FRAME WALL BY GENERAL CONTRACTOR



- NOTES:
- (A) RS, RL, CONDUIT SERVICES, ET AL
 - (B) MANUFACTURED C-CHANNEL
 - (C) MANUFACTURED PIPE STRAP
 - (D) SLAB ON GRADE BY GENERAL CONTRACTOR
 - (E) ANCHOR BOLT
 - (F) PROVIDE ADDITIONAL HARDWARE AS NECESSARY FOR SLOPE, HEIGHT REQUIREMENTS FOR DRAIN SERVICES



- NOTES:
- (A) FC IN CEILING SPACE; SUPPORT VIA 3/8" THREADED RODS WITH NEOPRENE VIBRATION ISOLATION PADS; PROVIDE FLEX DUCT AT SA, RA SERVICE CONNECTIONS TO FC
 - (B) SA PLENUM, MAINS, SUBMAINS, RUNOUTS AS INDICATED ON DRAWINGS
 - (C) FLAT FILTER BOX; TYP FC-1
 - (D) FILTER RACK INTEGRAL TO FC; RA PLENUM TO FC INLET; TYP FC-1
 - (E) RA PLENUM, WITH ANGLED FILTER BOX IN RISER AND MOTORIZED DAMPER (D-1, D-2); TYP FC-1
 - (F) PROVIDE THREADED RODS FOR SUPPORT OF FC
 - (G) PROVIDE DOUBLE-NUT ASSEMBLY
 - (H) EXISTING C-CHANNEL AND HARDWARE ATTACHED TO ROOF FRAMING ELEMENT; PROVIDE NEW AS NECESSARY
 - (K) PROVIDE SWAY BRACING VIA 1/8" AIRCRAFT CABLE IN 4 DIRECTIONS
 - (L) ROOF FRAMING CONSTRUCTION BY GENERAL CONTRACTOR
 - (M) ROOF DECK



- NOTES:
- (A) OUTDOOR CONDENSING UNIT WITH MOUNTING FEET, TYP CU-1
 - (B) NEOPRENE ISOLATION PADS WITH RUBBER-IN-SHEAR WASHERS
 - (C) SECURE CU TO EQUIPMENT PAD
 - (D) RS, RL SERVICES; INSULATE PER MANUFACTURER
 - (E) CHARGING VALVES, FILTER / DRYER / SIGHT GLASS, TAPS / PORTS INTEGRAL TO CU
 - (F) LOW VOLTAGE CONDUIT AND CONTROL WIRE BY MECHANICAL CONTRACTOR
 - (G) LINE-VOLTAGE WIRING AND CONDUIT BY ELECTRICAL CONTRACTOR
 - (H) EQUIPMENT PAD
 - (J) (E) EXTERIOR GRADE

PIPE SUPPORT ON WALL

NO SCALE

4

PIPE SUPPORT ON GRADE

NO SCALE

3

FC MOUNT

NO SCALE

2

CU MOUNT

NO SCALE

1

NOT USED

NO SCALE

8

DUCT SUPPORT – RECTANGULAR

NO SCALE

7

PIPE SUPPORT

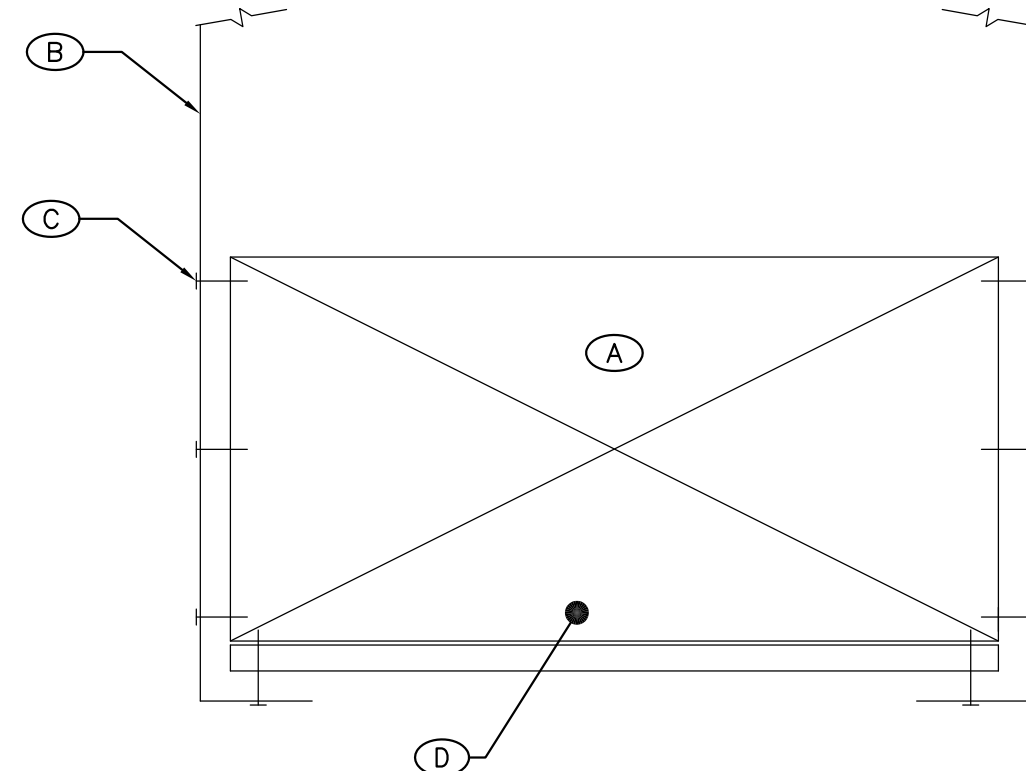
NO SCALE

6

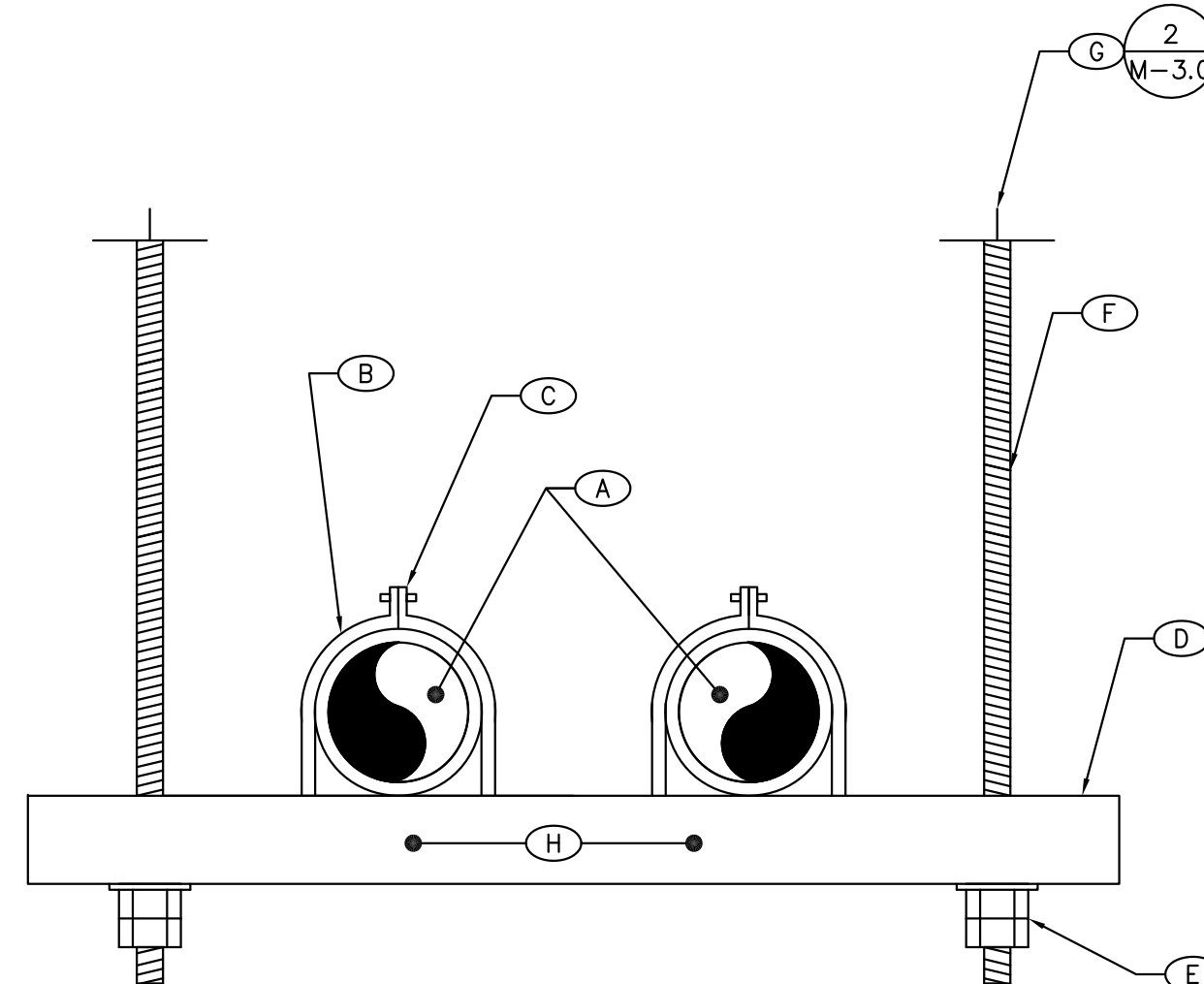
CLEVIS SUPPORT

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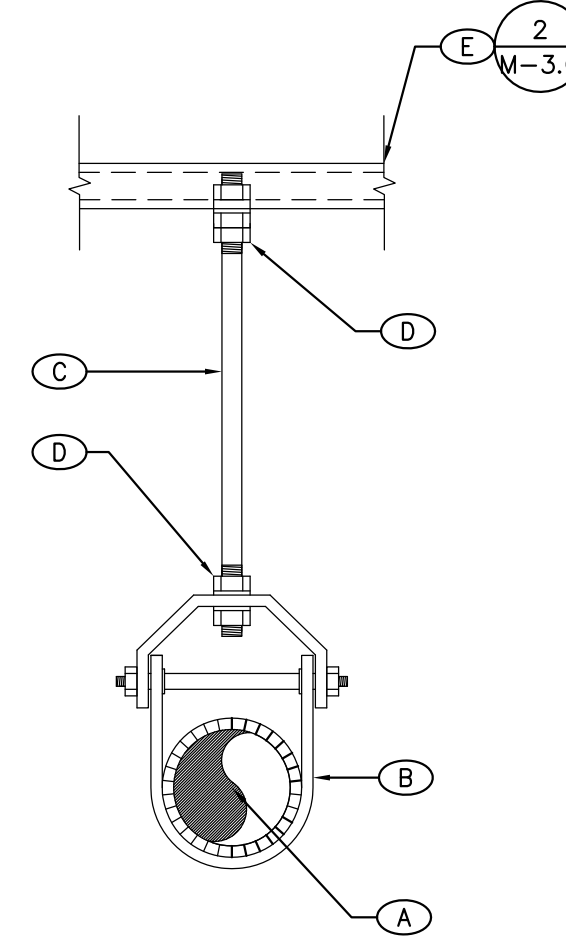
5



- NOTES:
- (A) SA, RA, OSA, EA DUCTWORK IN CEILING SPACE; SECURE TO WOOD ROOF FRAMING CONSTRUCTION VIA LAG SCREWS; PROVIDE INTERIM HARDWARE / INTERIM BLOCKING, ANGLE CLIPS AS NECESSARY AND AS IDENTIFIED HEREIN; ATTACHMENT SIMILAR
 - (B) GAGE STRAP SPACING PER TABLE
 - (C) #8 SHEET METAL SCREW, TYPE
 - (D) SEE PLANS FOR DUCT SIZES



- NOTES:
- (A) PROVIDE RS, RL SERVICES (ET AL)
 - (B) PROVIDE MANUFACTURED PIPE STRAPS
 - (C) SECURE STRAPS WITH MACHINE BOLTS
 - (D) MANUFACTURED C-CHANNEL
 - (E) DOUBLE-NUT ASSEMBLY WITH WASHER
 - (F) 3/8" DIAMETER THREADED ROD; TYP
 - (G) SECURE THREADED ROD TO WOOD ROOF FRAMING CONSTRUCTION VIA ANGLE CLIPS, LAG SCREWS; ATTACHMENT SIMILAR
 - (H) MAXIMUM SPAN OF C-CHANNEL NO GREATER THAN (I) INTERIM FRAMING ELEMENT SPAN



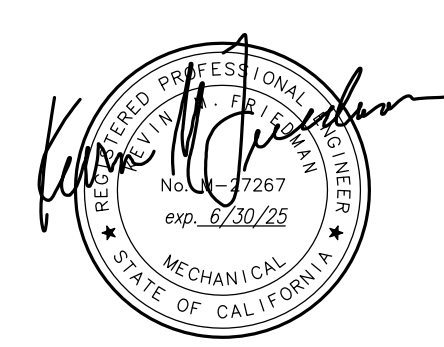
- NOTES:
- (A) RS, RL SERVICES
 - (B) ADJUSTABLE STEEL CLEVIS HANGER ASSEMBLY
 - (C) 3/8" THREADED ROD
 - (D) DOUBLE NUT ASSEMBLY
 - (E) PROVIDE MANUFACTURED C-CHANNEL HARDWARE; ALTERNATIVE, ANGLE CLIP, LAG SCREW TO WOOD ROOF FRAME CONSTRUCTION WITH INTERIM HARDWARE AS NECESSARY; ATTACHMENT SIMILAR

TORRANCE TRANSIT FACILITY

20500 MADRONA AVE, TORRANCE, CA 90503

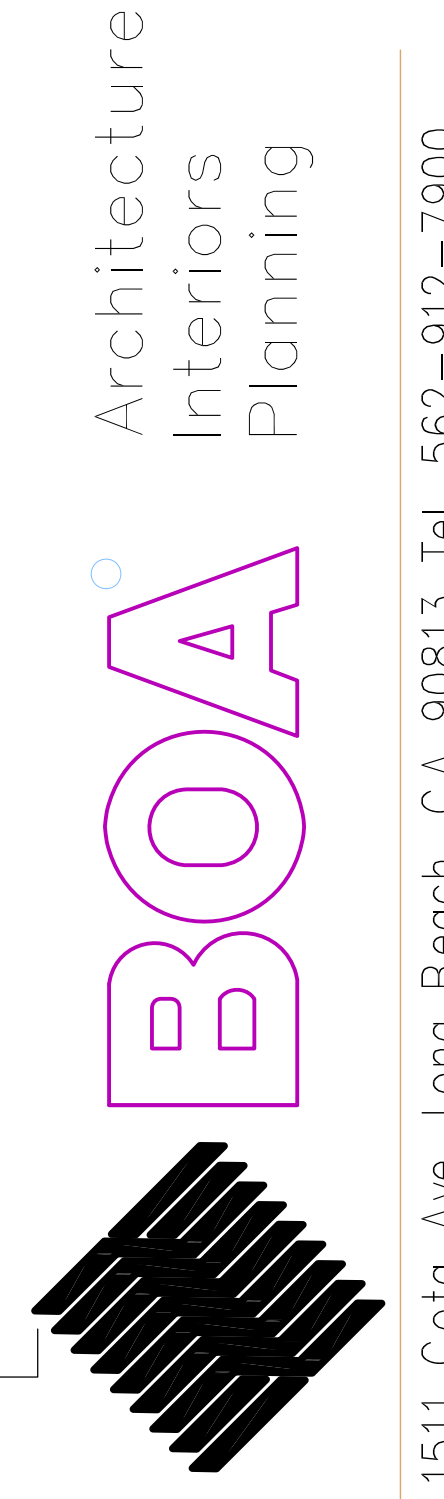
Designer: KY
CAD Draft: RT
Architect: EUI
Engineer: KMF
Client: Client Name
Date Issue: Issue Date
Job Number: Project Number

Client:
Consultant:
ENGINEERING DESIGN ANALYSIS
1885 CALLENDAR AVENUE SUITE 200
TOLSON, CA 94516
TEL: 925-277-0000
WWW.EDANALYSIS.COM



DETAILS

M3.0



1511 Cota Ave. Long Beach, CA 90813 Tel. 562-912-7900

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STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION													
Mechanical Systems		NRC-MCH-3													
CERTIFICATE OF COMPLIANCE		NRC-MCH-3													
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive table outlined in 140.4, 170.2(b) or 141.0(b)(2) for alterations.															
Project Name: (Torrance) Renovation - Torrance Transit Facility		Report Page: (Page 1 of 11)	2025-10-31T11:37:42-08:00												
Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Date Prepared:													
A. GENERAL INFORMATION															
01 Project Location (city)	Torrance	04 Total Conditioned Floor Area	2303												
02 Climate Zone	6	05 Total Unconditioned Floor Area	0												
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	2												
• Office															
B. PROJECT SCOPE															
This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)(2) for alterations.															
01 Air System(s)		02 Work System Components	03 Dn System Components												
☒ Heating Air System	☐ Water Economizer	☐ Air Economizer													
☒ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat													
☐ Mechanical Controls	☐ System Sizing	☒ Fan Systems													
☒ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☐ Ductwork (existing to remain, altered or new)													
	☐ Chilliers	☒ Ventilation													
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes													
Generated Date/Time:		Documentation Software: Energy Code Ace													
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance		Report Version: 2023.0.000 Schema Version: rev 20220101	Compliance ID: 314319-1025-0008 Report Generated: 2025-10-31 08:37:52												
STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION													
Mechanical Systems		NRC-MCH-3													
CERTIFICATE OF COMPLIANCE		NRC-MCH-3													
Project Name: (Torrance) Renovation - Torrance Transit Facility		Report Page: (Page 9 of 11)	2025-10-31T11:37:42-08:00												
Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Date Prepared:													
H. FAN SYSTEMS & AIR ECONOMIZERS															
System Name	EF-2	Quantit y	1	Fan System Status	Alteration	System Zoning	all other systems	Serving Units	Not Serving Units	Fan System Airflow (cfm)	2,000	Site Deviation	109	Economizer	NA - c>33 18ft/s cooling
C1	C2	C3		C4		C5	C6	C7	C8						
Fan Name or Item Tag		Fan Type	City	Component		Airflow through Component (ft³)		Water Gauge (wg)	Allowance		Design		Motor Horsepower		Fan Electrical Input Power (kW)
									Component Allowance (watt/ft³)	Fan Allowance (watt/ft³)	Design Electrical Input Power Method				
EF-2		Exhaust	1	Airflow control devices required for space pressurization control; fully ducted, or Systems that maintain pressure differential between rooms		100			0.116	0.232	Manufacturer provided				0.23
Supply Fan Base Allowance (watt/ft³)		Exhaust/Return/Relief/Transfer Fan Base Allowance (watt/ft³)						Fan System Allowance (kW)				Fan System Electrical Input Power (kW)		0.23	
FOOTNOTES: Fan serving spaces with design background noise goes below NC35 1 Low background single zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed coils. 2 Fan system allowance includes fan system base allowance. 3 Filter pressure loss can only be counted once per fan system. 4 Computer Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both. 5 Computer room economizers must meet requirements of 140.9(c) and will be documented on the NRC-MCH-3 document.															
Fan Energy Index (FEI)															
01		02		03		04		05		06		07		08	
Generated Date/Time:		Documentation Software: Energy Code Ace		CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance		Report Version: 2023.0.000 Schema Version: rev 20220101		Compliance ID: 314319-1025-0008 Report Generated: 2025-10-31 08:37:52							
STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION		NRC-MCH-3		NRC-MCH-3		NRC-MCH-3		NRC-MCH-3		NRC-MCH-3		NRC-MCH-3	
Mechanical Systems		Mechanical Systems		Mechanical Systems		Mechanical Systems		Mechanical Systems		Mechanical Systems		Mechanical Systems		Mechanical Systems	
CERTIFICATE OF COMPLIANCE		CERTIFICATE OF COMPLIANCE		CERTIFICATE OF COMPLIANCE		CERTIFICATE OF COMPLIANCE		CERTIFICATE OF COMPLIANCE		CERTIFICATE OF COMPLIANCE		CERTIFICATE OF COMPLIANCE		CERTIFICATE OF COMPLIANCE	
Project Name: (Torrance) Renovation - Torrance Transit Facility		Project Name: (Torrance) Renovation - Torrance Transit Facility		Project Name: (Torrance) Renovation - Torrance Transit Facility		Project Name: (Torrance) Renovation - Torrance Transit Facility		Project Name: (Torrance) Renovation - Torrance Transit Facility		Project Name: (Torrance) Renovation - Torrance Transit Facility		Project Name: (Torrance) Renovation - Torrance Transit Facility		Project Name: (Torrance) Renovation - Torrance Transit Facility	
Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503		Project Address: 25000 MADRONA AVE, TORRANCE, CA 90503	
Date Prepared:		Date Prepared:		Date Prepared:		Date Prepared:		Date Prepared:		Date Prepared:		Date Prepared:		Date Prepared:	
M. COOLING TOWERS															
This section does not apply to this project.															
N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION															
These documents must be provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4															
Form/Title															
NRC-MCH-02-E: Must be submitted for all buildings															
O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE															
These have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks.															
These documents must be provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4															
Form/Title															
NRC-MCH-03-A: Outdoor Air must be submitted for all newly installed NRC-MCH units. Note: MCH-03-A can be performed in conjunction with MCH-07-A Supply Fan VAV Acceptance if applicable since testing activities overlap.															
NRC-MCH-03-B: Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit application should move this form to "Yes".															
NRC-MCH-11-A Automatic Demand Shutoff Controls															
NRC-MCH-18-A Energy Management Control Systems															
P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION															
There are no NRC-V forms required for this project.															
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STATE OF CALIFORNIA

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CERTIFICATE OF COMPLIANCE

NREC-MCHC-11

Project Name: (Torrance) Removation - Torrance Transit Facility

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C. COMPLIANCE RESULTS

C.1. I will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicates as not compliant for assistance.

01	02	03	04	05	06	07	08	09					
System Summary 110.2, 110.2, 140.4, 170.2(c)	AND	Pumps 170.2(c)(4)	AND	Fans/ Economizers 140.4(c), 140.4(c), 170.2(c)	AND	System Controls 110.2, 110.2, 140.4(f), 170.2(c)	AND	Terminal Box Controls, 140.4(d), 170.2(d)(4)	AND	Distribution 120.3, 140.4(f), 160.2, 160.3	AND	Cooling Towers 110.2(c)	Compliance Results
(See Table I)	Yes	(See Table G)	Yes	(See Table H)	Yes	(See Table J)	Yes	(See Table K)	Yes	(See Table L)	Yes	(See Table M)	COMPLIES
Mandatory Measures Compliance (See Table Q for Details)												COMPLIES	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with unavailable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

F.1. Space Conditioning System Information

System Name	Quantity	System Serving	System Status	Space Type	Utilizing Reheat Heat
CU-1, FC-1	1	Single zone	Alteration		☐

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Schema Version: rev 20220011

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Project Name: (Torrance) Removation - Torrance Transit Facility

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F.2. Fan Energy Index (FEI)

Name or Item Tag	FEI Exception	FEI
EF-1	<1.00 HP or 0.89 kW	
EF-2	<1.00 HP or 0.89 kW	

F.3. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f), and (n), 170.2(c)(40) 170.2(c)(4), or requirements in 141.02(c)(2) 140.2(c)(2) for the listed space conditioning systems.

System Name	System Zoning	Conditioning Method (Floor Area Being Served)	Thermostats 110.2(b) & (c), 120.2(a)(1) 160.3(a)(2) or 141.02(c)(2) & 180.2(c)(2)	Shut Off Controls 120.2(a)(1) 160.3(a)(2) or 141.02(c)(2) & 180.2(c)(2)	Isolation Zone Controls 120.2(a)(1) 160.3(a)(2) or 141.02(c)(2) & 180.2(c)(2)	Demand Response 110.2, 120.2(b) & 160.3(a)(2) or 170.2(c)(40)	Supply Air Temp. Reset 140.4(f) & 170.2(c)(40)	Window Interlocks per 140.4(f) & 170.2(c)(40)	Direct Digital Control (DDC) per 120.2
FC-1, CU-1	Single zone	<= 25,000 ft ²	Setback	EMCS	NA- Single Zone	DIR Tstat per 110.2	NA- Single Zone	NA- No operable windows	NA- Single Zone
AC-A	Single zone	<= 25,000 ft ²	EMCS	EMCS	EMCS	EMCS	NA- Single Zone	NA- No operable windows	NA- Single Zone

FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have rebolt thermometers.

F.4. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1, 120.2(e)(3) 140.4(p) and 140.4(e) for all nonresidential and hotel/motel and 121.02(c)(3)(i) 160.2, 160.3(d), 170.2(c)(4), 170.2(c)(40) for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflow may be shown on the plans or the calculations can be presented in a spreadsheet.

01	02	03	04	05	06	07	08	09	10
01	☐	Check this box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.							
02	☒	Check this box if the project is including Nonresidential, Hotel/Motel/Multifamily Common Use Spaces							
03	☐	Check this box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)(3).							

Nonresidential and Hotel/Motel Multifamily Common Use Ventilation Systems

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STATE OF CALIFORNIA

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NREC-MCHC-11

Project Name: (Torrance) Removation - Torrance Transit Facility

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G. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02	03	04
Compliance with Mandatory Measures documented through MCH	No		Plan sheet or construction document location
Mandatory Measures Note Block			
		Mandatory Measure	Plan sheet or construction document location
Heating Equipment (Efficiency per 110.1)			M-1.1
Cooling Equipment (Efficiency per 110.1)			M-1.1
Furnace Standby Loss Control per 110.2(b)			M-1.1
Duct Insulation per 120.4			M-1.1
Heat Pump with Supplemental electric Resistance Heater Controls per 110.2(b)			M-1.2
The air duct and plenum system is designed per 120.4(a) (7)			M-1.2
Kitchen range hood shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2			N/A

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CERTIFICATE OF COMPLIANCE

Project Name: [Etorrance] Renovation - Torrance Transit Facility
Address: 26500 MAGNOLIA AVE., TORRANCE, CA 90503

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HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (Includes air conditioners, condensers, heat pumps, VRFs, furnace, unit heaters and DGMAS systems)

O1	O2	O3	O4	O5	O6	O7	O8	O9	O10	O11	
Name or Item Tag	Equipment Category per Tables 110.2.1 and 170.2(c)(1)	Equipment Type per Tables 110.2 and Table 200	Smallest Size Available ¹ 140.4(a) and 170.2(c)(1)	Minimum Efficiency Required per Tables 110.2 / Tables 110.2 / Tables 110.2 / Tables 110.2	Per Design (kBtu/h)	Rated (kBtu/h)	Supp-Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
CU-1, FC-1	Unitary Heat Pumps	Air-cooled, split (1phase)	Yes	57.6	57.4	0	44.26	57.44	57	44.26	

*FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per Tables 110.2.1 and 170.2(c)(1). Healthcare facilities are excepted.

*If a room requires to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.

*If equipment is heating only, note cooling output and total load. If equipment is cooling only, note heating output and total load.

*Authority Having Jurisdiction may opt for load calculations used for compliance per 140.4(b) and 170.2(c)(1).

Dry System Equipment Efficiency (Other than Package Terminal Units) (PTAC) and Package Terminal Unit (PTU), DX-DDAS and Dual Fuel Heat Pumps)

O1	O2	O3	O4	O5	O6	O7	O8	O9
Name or Item Tag	Size Category (BtU/h)	Rating Condition (T)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Tables 110.2 / Tables 110.2 / Tables 110.2	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Tables 110.2 / Tables 110.2 / Tables 110.2	Design Efficiency
CU-1, FC-1	<65,000	HSPF2	7.5	7.8	SEER2	14.3	15.2	

G. PUMPS

This section does not apply to this project.

Generated Date/Time: Documentation Software: Energy Code Analyzer

CA Building Energy Efficiency Standards - 2022 NonResidential Compliance Report Version: 2022.0.001 Schema Version: rev 20220101 Compliance ID: B143439-2025-0008 Report Generated: 2025-10-11 08:57:52

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

Project Name: [Etorrance] Renovation - Torrance Transit Facility
Address: 26500 MAGNOLIA AVE., TORRANCE, CA 90503

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J. VENTILATION AND INDOOR AIR QUALITY

O4	O5	O6	O7
System Name	FC-1, CU-1	System Design Capacity Airflow ¹	System Design Transfer Air CM
O8	O9	O10	O11
Space Name or Item Tag	Occupancy Type ⁴	Conditioned Floor Area (ft²)	Showers heads/toilets
BK-103 Break Room	Break room	650	325
17	Total System Required Min DA CM	325	18

*FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.

*Air filtration requirements apply to the following three system types per 120.1(c)(14A) space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply-side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.

*Uniform Mechanical Code may have more stringent ventilation requirements, the most stringent code requirement takes precedence.

*See Standards Tables 120.1.4 and 120.1.8.

*For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.

*120.1(c)(14) requires system serving spaces that are required by 130.1(c)(14) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250sf or smaller, multipurpose rooms less than 1,000 sf, classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack closets, corridors, stairwells, parking garages, and loading and unloading zones, unless exempted by 130.1(c)(14).

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

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STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

Project Name: [Etorrance] Renovation - Torrance Transit Facility
Address: 26500 MAGNOLIA AVE., TORRANCE, CA 90503

Report Page:
[Date Prepared:] 2025-10-11 11:17:42 CDT

NREC-MACH
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:
Kevin Friedman

Signature (Rev. 2025-10-12)
[Signature]
(Title/HRT Certification Identification (if applicable))
(Phone: (714) 915-8393)

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design and system design identified on this Certificate of Compliance (responsible designer).

3. The information regarding performance specifications, materials, components, and manufactured devices for the building design or system design specified in this Certificate of Compliance complies with the requirements of Title 24, Part 1 and Part 6 of the referenced agency for approval with this building permit application.

4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information disclosed in other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

5. I affirm that a completed signed copy of this Certificate of Compliance shall be made available with the building permit application to the building owner at all appropriate inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:
Kevin Friedman

Signature (Rev. 2025-10-12)
[Signature]
(Title/HRT Certification Identification (if applicable))
(Phone: (714) 915-8393)

CA Building Energy Efficiency Standards - 2022 NonResidential Compliance Report Version: 2022.0.001 Schema Version: rev 20220101 Compliance ID: B143439-2025-0008 Report Generated: 2025-10-11 08:57:52

12015 OF CALIFORNIA

Mechanical Systems

CERTIFICATE OF COMPLIANCE

Project Name: (Torrance) Renovation - Torrance Transit Facility

Report Page: 20500 MADISON AVE, TORRANCE, CA 90503

Date Prepared: 2025-10-31 11:37:42-0400

NRC/MCHM

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II. FAN SYSTEMS & AIR ECONOMIES

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(d), 140.4(e), 170.2(c)(3), and 170.2(c)(4) for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	IF-1	Quant Y	1	Fan System Status	Alteration	System Zoning	all other systems	Serving Dwellings Units	Not Serving Dwellings Units	Fan System Airflow (cfm)	3,500	Site Location	109	Economizer	N/A: <33 kWh/yr cooling
	01	02	03		04	05	06	07	08	09			10	11	
Fan Name or Item Tag	Fan Type	Qty		Component	Airflow through Component (%)	Water Gauge (w/g)	Component Allowance (watt/cfm)	Fan Allowance (watt/cfm) ¹	Design Electrical Input Power Method	Motor Nameplate Namepower	Fan Electrical Input Power (kW)				
EF-1	Exhaust	1		Airflow control devices required for space pressurization control fully ducted, or systems that maintain pressure differential between rooms	100		0.116	0.232	Manufacturer provided						0.23
Supply Fan Base Allowance (watt/cfm)				Exhaust/Return/Relief/Transfer Fan Base Allowance(watt/cfm)				Fan System Allowance (kW) ²			Fan System Electrical Input Power (kW)				0.23

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12015 OF CALIFORNIA

Mechanical Systems

CERTIFICATE OF COMPLIANCE

Project Name: (Torrance) Renovation - Torrance Transit Facility

Report Page: 20500 MADISON AVE, TORRANCE, CA 90503

Date Prepared: 2025-10-31 11:37:42-0400

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L. DISTRIBUTION (DUCTWORK AND PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.	
The answers to the questions below apply to the following duct systems: M-1.1			
Duct Leakage Testing			
		NR/ Common Use: Duct leakage testing shall not exceed 15% per NA2.5.3 required for these systems? ¹	No
		Dwellings Units: Total duct leakage of duct system shall not exceed 15% or duct system to outside shall not exceed 30% per RA3.1.4 required for systems? ²	---
		Duct leakage testing per CMC Section 603.9.2 required for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft ² of conditioned floor area.	
14	No	The conditioned surface area of the ducts is more than 25% of the total surface area of the entire duct system.	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	Yes	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	
17	Exposed Ductwork located in occupied space	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A	
18	Yes	All ductwork is an extension of an existing duct system	
19	No	Ductwork serving individual dwelling unit	
20	No	< 25 ft of new or replacement space conditioning ducts installed in multifamily occupancy	
21	R=0.0	Duct Insulation R-value	
22	Yes	Ductwork Existing To Remain	
23	Yes	Duct System Connected To Altered Space Conditioning System	

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PROJECT NOTES

- GENERAL
- A. ADMINISTRATIVE
- 1) BASIS OF WORK
- a. SCOPE OF WORK SHALL BE AS IDENTIFIED HEREIN THESE DRAWINGS ON SHEET P-1 FOR COMPLETE AND OPERABLE INSTALLATION OF PLUMBING SERVICES.
- b. ALL WORK SHALL COMPLY WITH THE FOLLOWING CODES AS ADOPTED AND AS AMENDED BY THE INSPECTING AUTHORITY:
- i) CALIFORNIA BUILDING CODE (2022).
 - ii) CALIFORNIA ELECTRICAL CODE (2022).
 - iii) CALIFORNIA MECHANICAL CODE (2022).
 - iv) CALIFORNIA PLUMBING CODE (2022).
 - v) CALIFORNIA ADMINISTRATIVE CODE - TITLE 24 (2022).
 - vi) CALIFORNIA FIRE CODE (2022).
 - vii) AMENDMENTS AS ADOPTED BY LOCAL AUTHORITIES.
- c. ALL EQUIPMENT AND HARDWARE SHALL BE PROVIDED FOR LISTED INSTALLATIONS AND APPLICABLE INDUSTRY STANDARDS. A COPY OF THE EVALUATION REPORT AND/OR CONDITIONS OF LISTING SHALL BE MADE AVAILABLE AT THE JOB SITE.
- d. ALL TERMS CITED HEREIN LEND TO THE PLUMBING CONTRACTOR, WHETHER ACTING AS A PRIME CONTRACTOR OR AS A SUB CONTRACTOR. HEREINAFTER, THE PLUMBING CONTRACTOR IS REFERRED TO AS THE CONTRACTOR, AND REQUIREMENTS OF THESE NOTES SHALL DIRECT SAID CONTRACTOR TO ACCOMPLISH TASKS AS CITED HEREIN.
- 2) CONTRACTUAL OBLIGATIONS
- a. PURCHASE AND MAINTAIN CERTIFICATIONS OF INSURANCE WITH RESPECT TO WORKMAN'S COMPENSATION, PUBLIC LIABILITY AND PROPERTY DAMAGE AND SET LIMITS AS REQUIRED BY LAW. INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY PRECAUTIONS IN CONNECTION WITH THE WORK.
- b. APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS REQUIRED BY ALL APPLICABLE BUILDING AND REGULATORY REQUIREMENTS OF CITY AND STATE, FOR CONTRACTOR'S EXPENSE OF SECURING PERMITS (AS AGREED TO), SUBMIT TO OWNER FOR REIMBURSEMENT OF COST OF PERMITS AND ASSOCIATED FEES AS CHARGED BY CITY (AND / OR ASSOCIATED JURISDICTIONS).
- c. PROVIDE A LIST OF SUBCONTRACTORS TO OWNER'S REPRESENTATIVE PRIOR TO THE START OF WORK.
- 3) BIDDING
- a. DURING PRICING PERIOD, CONFIRM IN WRITING THE APPROXIMATE ON-SITE DELIVERY DATES FOR ALL CONSTRUCTION MATERIALS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS AND NOTIFY OWNER'S REPRESENTATIVE IN WRITING OR ANY POSSIBLE CONSTRUCTION DELAYS AFFECTING OCCUPANCY THAT MAY ARISE DUE TO THE UNAVAILABILITY OF SPECIFIED PRODUCTS.
- b. UPON SUBMITTAL OF THE FINAL CONSTRUCTION COSTS, SUBMIT A SPECIFIC CONSTRUCTION SCHEDULE INDICATING THE REQUIRED CONSTRUCTION TIME FOR ALL SUBCONTRACTORS AND CONTRACTOR'S WORK.
- c. SUBSTITUTIONS MAY BE CONSIDERED DUE TO THE CONTRACTOR'S DELAY IN ORDERING SPECIFIED LONG LEAD ITEMS. ALL SUBSTITUTION MUST BE APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE PRIOR TO ANY ORDER PLACEMENT OR PURCHASE. ANY SUBSTITUTION INSTALLED WITHOUT APPROVAL WILL BE REJECTED AND REPLACED AT CONTRACTOR'S EXPENSE.
- d. ACCOUNT FOR ADDITIONAL OFFSETS, FITTINGS, HARDWARE, ET AL AS NECESSARY TO ACCOMMODATE REQUIREMENTS FOR FIELD CONDITIONS AND DISCREPANCIES BETWEEN DISCIPLINES.
- e. INCLUDE ALL NECESSARY LABOR, TRANSPORTATION AND EQUIPMENT NECESSARY TO INSTALL SUCH WORK.
- f. ACCOUNT FOR ANY AND ALL OVERTIME COSTS.
- 4) SUBMITTALS
- a. SUBMIT SHOP DRAWINGS, AND / OR DESCRIPTIVE DATA AND SAMPLES OF ALL EQUIPMENT, FIXTURES, HARDWARE, FINISHES, MILLWORK, ET AL FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO FABRICATION AND INSTALLATION.
- b. ADDITIONAL REQUIREMENTS FOR SUBMITTAL INFORMATION IS PROVIDED HEREINAFTER.
- 5) RECEIVING AND STORAGE
- a. RECEIVE, STORE AND SECURE ALL EQUIPMENT, FIXTURES, HARDWARE, FINISHES, MILLWORK, ET AL ON SITE OR AS OTHERWISE ARRANGED FOR BY CONTRACTOR.
- 6) GUARANTEE
- a. PROVIDE ONE YEAR GUARANTEE TO CONTRACTOR ON PARTS AND LABOR EXCEPT AS OTHERWISE SPECIFIED HEREIN.
2. PRODUCTS
- A. EQUIPMENT:
- B. FIXTURES: AS SCHEDULED HEREIN AND ON PLUMBING PLANS.
- C. HARDWARE
- 1) PIPE SUPPORTS
- a. INSTALL ALL SUPPORT AND BRACING OF PIPING IN ACCORDANCE WITH OMC (AND CPC) 313.0, SMACNA SEISMIC BRACING STANDARDS, AND / OR AS DETAILED AND SPECIFIED HEREIN.
- b. ATTACH ALL SUPPORT AND BRACING OF PIPING TO STRUCTURE (ROOF OR FLOOR FRAMING OR SLAB) VIA HARDWARE AS FOLLOWS
- i) ANCHOR BOLTS.
 - ii) LAG BOLT / SCREW.
 - iii) OR AS OTHERWISE APPROVED IN WRITING.
 - iv) VERTICAL ATTACHMENT WITH PULL-OUT CAPABILITY IS NOT ALLOWED.
- c. PROVIDE SUPPORT VIA HARDWARE AS FOLLOWS:
- i) ADJUSTABLE "J" HANGER.
 - ii) ADJUSTABLE PIPE SADDLE SUPPORT.
 - iii) ADJUSTABLE SWIVEL RING.
 - iv) CLEVIS HANGER.
 - v) OFFSET PIPE CLAMP.
 - vi) GAGE STRAP AND HANGER.
 - vii) MANUFACTURED SUPPORT SYSTEMS.
 - viii) MANUFACTURED C-CHANNEL (FOR TRAPEZE SUPPORTS).
 - ix) AND / OR AS DETAILED AND SPECIFIED HEREIN.

- d. INTERIM HARDWARE SHALL BE PROVIDED VIA HARDWARE AS FOLLOWS:
- i) BEAM CLAMP.
 - ii) ANGLE CLIP.
 - iii) MANUFACTURED PLATE AND COLUMN HARDWARE.
 - iv) FIELD-FABRICATED PLATE AND COLUMN HARDWARE.
 - v) MANUFACTURED SLEEPER HARDWARE.
 - vi) FIELD-FABRICATED SLEEPER HARDWARE.
 - vii) THREADED RODS.
 - viii) AND / OR AS DETAILED AND SPECIFIED HEREIN.
- 2) PIPE INSULATION
- a. DOMESTIC HOT WATER AND HOT WATER RETURN RECOILGURATION PIPING FIBERGLASS WITH ALL-SERVICE JACKET, SELF-SEALING CAP, 1" FOR SIZES UP TO 3/4", 1-1/2" THICK FOR SIZES 1" TO 1-1/2"; 2" THICK FOR SIZES 2" AND LARGER. MINIMUM THERMAL RESISTANCE SHALL BE 7 HOURS TO 4.6 PER INCH.
 - b. PROVIDE ARMSTRONG "ARMAFLEX" OR EQUAL INSULATION AND DRAIN PIPING BELOW HANDICAP LAVATORIES AND SINKS; 25 SMOKE RATING, 50 FLAME SPREAD RATING.
 - c. CONDENSATE DRAIN
 - i) CLOSED CELL RATED WITH SELF-SEALING LAP, FOR UNDER INSTALLATION; 25 SMOKE-RATING, 50 FLAME SPREAD RATING. THE HARDWARE IN EXTERIOR LOCATION OUT FROM UNDER COVER SHALL BE RATED ACCORDINGLY
 - d. EXTERIOR, AMBIENT UNDER COVER: EMBOSSED ALUMINUM JACKET, .018" THICK WITH MANUFACTURED BANDS, PVC COVERS FOR FITTINGS AND APPURTENANCES
- 3) PIPING
- a. WASTE & VENT, DRAIN (INSIDE, OUTSIDE BUILDING):
 - i) ABOVE GROUND, BELOW GROUND WASTE & VENT PIPING: SERVICE WEIGHT THUBBLES CAST IRON JOINTS, ASTM B 16.3, OR CISPI 301 AND FITTINGS WITH NEOPRENE GASKETS AND CAST IRON CLAMPS AND STAINLESS STEEL NUTS, BOLTS AND WASHERS.
 - ii) ALTERNATIVE MATERIALS: ABOVE AND BELOW GROUND SCHEDULE 40 ABS, WITH SCHEDULE 40 FITTINGS, AND SOLVENT WELDS.
 - iii) PUMPED DISCHARGE: SCHEDULE 40 GALVANIZED STEEL WITH MALLEABLE IRON FITTINGS, ANSI B 16.3
 - iv) DRAIN PIPING: COPPER TYPE "M", WROT COPPER FITTINGS. 95/5 TIN / ANTIMONY SOLDER.
 - b. WATER PIPING:
 - i) BELOW GRADE, INBOARD OF BUILDING: COPPER TYPE 1K, WITH SILVER SOLDER AT JOINTS, WROT COPPER FITTINGS, ASTM B 88
 - ii) INSIDE BUILDING, BELOW GRADE OUTBOARD OF BUILDING: COPPER TYPE 1L, WITH 95/5 TIN/ANTIMONY SOLDER AT VALVES, SILVER SOLDER AT JOINTS, WROT COPPER FITTINGS, ASTM B 88
 - c. GAS PIPING:
 - i) HOUSE PRESSURE: SCHEDULE 40 BLACK STEEL WITH SCORED MALLEABLE IRON FITTINGS, ANSI B 16.3.
 - ii) FLEX CONNECTION: UL LISTED WITH SHUT-OFF AT CONNECTION TO RIDG SERVICE.
- TERIAL
- 1) DOCUMENTATION
- a. ALL ABBREVIATIONS USED ON DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, OWNER'S REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION.
 - b. DRAWINGS ARE DIAGRAMATIC IN NATURE, AND DO NOT ACCOUNT FOR EVERY ASPECT OF INSTALLATION AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS. CONTRACTOR SHALL CHECK CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND SCALES FOR ACCURACY AND CONFIRMING THAT WORK IS BUILDABLE AS SHOWN FOR A COMPLETE AND OPERABLE AND OPERATIONAL INSTALLATION PRIOR TO PROCEEDING WITH CONSTRUCTION. CONTRACTOR SHALL BECOME FULLY FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
 - c. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THE DRAWINGS ARE TO BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK.
 - d. DO NOT SCALE DRAWINGS. IF THERE ARE ANY QUESTIONS REGARDING THESE OR OTHER COORDINATION ISSUES, CLARIFY WITH OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH WORK IN QUESTION OR RELATED WORK.
 - e. VERIFY ALL DIMENSIONS SHOWN ON DRAWINGS BY FIELD MEASUREMENTS. BEFORE COMMENCING WORK, CONTRACTOR SHALL CHECK ALL LINES AND LEVELS INDICATED. IMMEDIATELY REPORT DISCREPANCIES TO THE OWNER'S REPRESENTATIVE FOR CORRECTION AND ADJUSTMENT. PROVIDE PROPER FIT AND ATTACHMENT OF ALL PARTITIONS AND CONSTRUCTION MATERIALS.
 - f. ALL DIMENSIONS NOTED "MINIMUM", "CLEAR", OR "VERIFY" ARE TO BE CONFIRMED BY FIELD MEASUREMENTS. TERMS NOTED, "ANY VARIANCES ARE TO BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR RESOLUTION." "SIMILAR" MEANS COMPARABLE CHARACTERISTICS. "MARKED-UP" TERMS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLAN. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED ONES.
 - g. ALL PARTITIONS ARE DIMENSIONED FINISH TO FINISH UNLESS NOTED OTHERWISE.
 - h. ADVISE OWNER'S REPRESENTATIVE OF ALL CONFLICTS THAT EXIST AT THE LOCATIONS OF ALL OF THE MECHANICAL, TELEPHONE, ELECTRICAL, LIGHTING, PLUMBING AND SPRINKLER EQUIPMENT (TO INCLUDE ALL PIPING, DUCTWORK AND CONDUITS). PROVIDE OWNER'S REPRESENTATIVE WITH ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF THE ABOVE EQUIPMENT.
 - i. KEEP A PROJECT RECORD SET CONSISTING OF DRAWINGS MARKING ALL CHANGES TO THE ORIGINAL DRAWINGS THROUGHOUT THE COURSE OF THE PROJECT. DELIVER "MARKED-UP" REPRODUCIBLE COPY TO OWNER'S REPRESENTATIVE AT THE COMPLETION OF THE PROJECT.
- 2) STANDARD OF CARE
- a. REVIEW AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY CONDITIONS NOT DOCUMENTED ON THESE DRAWINGS OR OBSERVED TO BE DIFFERENT THAN THOSE SHOWN ON THE DRAWINGS ARE TO BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK.
 - b. IF ANY MATERIALS OR PRODUCTS ARE INSTALLED WITHOUT FIRST PROVIDING THE REQUIRED SUBMITTALS OR SHOP DRAWINGS FOR APPROVAL, THOSE MATERIALS OR PRODUCTS ARE SUBJECT TO BE REMOVED AND CORRECTLY REINSTALLED AT FULL COST TO THE CONTRACTOR.

- c. INSTALL WORK COMMENSURATE TO FINISHED CONDITIONS WITHIN SPACE AND / OR STRUCTURE, AND / OR TO STANDARDS ESTABLISHED IN COMMENSURATE TERMS.
- d. NO WORK, DEFECTIVE IN CONSTRUCTION OR QUALITY OR DEFICIENT IN ANY REQUIREMENT OF THE DRAWINGS OR NOTES, WILL BE FOUND ACCEPTABLE IN CONSEQUENCE OF THE OWNER'S OR OWNER'S REPRESENTATIVE'S FAILURE TO DISCOVER OR POINT OUT DEFECTS AND DEFICIENCIES DURING CONSTRUCTION. DEFECTIVE WORK SHALL BE REVEALED WITHIN TIME REQUIRED BY APPLICABLES. SHALL BE REPLACED BY WORK CONFORMING WITH THE INTENT OF THE CONTRACT. NO PAYMENT, EITHER PARTIAL OR FINAL, SHALL BE CONTINUED AS LONG AS WINDOWS, OR DEFECTURES OR IMPROPER MATERIALS.
- e. WORK WHICH CREATES NOXIOUS ODORS SHALL BE PERFORMED AT A TIME OF AGREEABLE WITH, AND COORDINATED THROUGH THE OWNER'S REPRESENTATIVE WITH THE APPLICABLES' JURISDICTIONAL/GOVERNMENTAL REQUIREMENTS.
- f. PROVIDE AN EMERGENCY POWER SOURCE FOR EXIT AND EXIT WAY ILLUMINATION.
- g. KEEP ALL BUILDING AREAS CLEAN AND FREE OF ACCUMULATED DIRT AND DEBRIS. AT THE END OF THE DRAWINGS OR NOTES, THE CONTRACTOR SHALL REMOVE ANY SURPLUS MATERIALS, DEBRIS AND EQUIPMENT.
- 3) COORDINATION OF CONSTRUCTION EFFORT
- a. ORDER ALL MATERIALS IN TIME TO MAINTAIN THE APPROVED CONSTRUCTION SCHEDULE.
- b. COORDINATE SCHEDULE WITH ALL CONTRACTORS, OWNER'S VENDORS, AND PARTIES INSTALLING ITEMS NOT IN CONTRACT AND "ITEMS PROVIDED BY OTHERS".
- c. THE CONTRACTOR SHALL COORDINATE SCHEDULE FOR ALL SUBCONTRACTORS, OWNER'S VENDORS, AND PARTIES INSTALLING ITEMS NOT IN CONTRACT AND "ITEMS PROVIDED BY OTHERS".
- d. THE CONTRACTOR SHALL ORDER MATERIALS IN TIME TO MAINTAIN THE APPROVED CONSTRUCTION SCHEDULE.
- e. COORDINATE INSTALLATION OF ALL WORK FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH ALL CONTRACTORS.
- f. COORDINATE INSTALLATION OF ALL WORK BY THE OWNER'S VENDORS (I.E. "SITING" UTILITIES, SEWAGE, FIRE / LIFE SAFETY, DATA CABLEING, SECURITY SYSTEM, AUDIO VISUAL, ET AL) WITH OTHER TRADES.
- g. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL WORK BY SUBCONTRACTORS FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, LIGHT FIXTURES, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH OWNER'S REPRESENTATIVE IN THE FIELD.
- h. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL WORK BY SUBCONTRACTORS FOR THE LAYOUT AND EXACT LOCATION OF ALL CEILINGS AND WALLS AND PARTITIONS, OPENINGS FOR DOORS AND WINDOWS, LIGHT FIXTURES, ELECTRICAL / TELEPHONE OUTLETS AND LIGHT SWITCHES, HVAC EQUIPMENT AND HARDWARE, PLUMBING EQUIPMENT AND FIXTURES AND HARDWARE AND SERVICES WITH OWNER'S REPRESENTATIVE IN THE FIELD.
- i. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL WORK BY THE OWNER'S VENDORS (I.E. SITING / UTILITIES, SEWAGE, FIRE / LIFE SAFETY, DATA CABLEING, SECURITY SYSTEM, AUDIO VISUAL, ET AL) WITH OTHER TRADES.
- j. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ITEMS NOT IN CONTRACT AND ITEMS PROVIDED BY OTHERS WITH OTHER TRADES.
- 4) PLACEMENT OF EQUIPMENT AND HARDWARE
- a. ALL DIMENSIONS NOTIONS "CLR" ARE CLEAR AND ARE NOT ADJUSTABLE WITHOUT APPROVAL FROM OWNER'S REPRESENTATIVE.
- b. ALIGN PARTITIONS AS ADJACENT TO BASE BUILDING COLUMNS OR WALLS WITH THE FACE OF FINISHED COLUMN SURFACE, UNLESS NOTED OTHERWISE.
- c. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT REVIEW BY OWNER'S REPRESENTATIVE, UNLESS NOTED OTHERWISE.
- d. ARRANGE AND PLACE FRAMING MEMBERS TO PERMIT INSTALLATION OF REQUIRED CONDUITS AND PIPES AND MINIMAL CUTTING. ALL NECESSARY CUTTING, BLOCKING, BRACING, SUPPORTING AND REPAIRING SHALL BE APPROVED BY OWNER'S REPRESENTATIVE.
- e. ARRANGE CEILING MOUNTED FIXTURES AND HARDWARE PER THE REFLECTED CEILING PLAN PROVIDED AS PART OF THE ARCHITECTURAL PLANS.
- f. THE CONTRACTOR SHALL PROVIDE ACCESS TO AND CLEARANCE AROUND ALL EQUIPMENT AND HARDWARE AS REQUIRED BY CODE AND BY EQUIPMENT MANUFACTURER.
- g. PROVIDE ACCESS PANELS IN LOCATIONS AS REQUIRED FOR HARDWARE REQUIRING ACCESS.
- INTEGRITY OF CONSTRUCTION
- a. X-RAY SLABS AND WALLS IN LOCATIONS OF PENETRATIONS PRIOR TO SAW CUTTING OR CORING.
- b. MAINTAIN AND / OR MODIFY AND / OR PROVIDE NEW STRUCTURAL CONSTRUCTION TO ANCHOR AND BRACE EQUIPMENT, HARDWARE, ASSEMBLIES, ELEMENTS IN CONSTRUCTION, ET AL AS REQUIRED BY CODE.
- c. INSTALLATIONS SHALL BE PLUMB AND CRAFTSMAN LIKE, TO PROVIDE FOR MAXIMUM CLEARANCES AND MINIMUM IMPOSITION, AND COMMENSURATE WITH ALL APPLICABLES' CONDITIONS AND / OR GRADE OF CONSTRUCTION OF OVERALL JOB.
- d. DO NOT BORE OR NOTCH STRUCTURAL ELEMENTS WITHOUT WRITTEN AUTHORIZATION FROM OWNER'S REPRESENTATIVE.
- e. PROVIDE EQUIPMENT, HARDWARE, AND TREATMENTS WHERE NEW INSTALLATIONS PENETRATE NEW OR EXISTING RATED ELEMENTS OF CONSTRUCTION.
- f. MAINTAIN AND / OR MODIFY AND / OR PROVIDE NEW FIRE SUPPRESSION AND FIRE ALARM SYSTEMS AS REQUIRED BY CODE.
- EQUIPMENT
- 1) GENERAL
- a. VERIFY AVAILABILITY OF UTILITIES PRIOR TO INITIATION OF CONSTRUCTION, TO INCLUDE ALL LOCATION AND INVERT ELEVATIONS.
- b. COORDINATE REQUIREMENTS FOR SLEEVES AND INSERTS AND CORING WITH GENERAL CONTRACTOR AND OWNER'S REPRESENTATIVE AND STRUCTURAL ENGINEER.
- c. PROVIDE ACCESS PANELS FOR VALVES AND HARDWARE AND TRIM REQUIRING ACCESS TO THE MAINLINE. COORDINATE LOCATIONS OF ALL HARDWARE AND ASSOCIATED ACCESS PANELS PRIOR TO INSTALLATION.
- d. PROVIDE ESCUTCHEONS AT PENETRATIONS OF ALL WALLS IN EXPOSED LOCATIONS, AND IN CONCEALED LOCATIONS WITHIN CABINETS, ET AL.

- 2) PIPE SUPPORTS
- a. COORDINATE HEIGHT OF INSTALLATION OF HARDWARE TO ACCOMMODATE REQUIREMENTS FOR SURROUNDINGS (I.E. WITHIN SPACE AND ON SLAB AND ON ROOF, FOR PASSAGE AND THROUGHFARE, AND ROOFING WORK, ET AL.)
 - b. SECURE SUPPORTS WITH RIGID CONNECTIONS TO FLOOR AND ROOF STRUCTURE. PROVIDE INTERIM BLOCKING AS NECESSARY.
 - c. PROVIDE INSULATION AND INSERTS AND SADDLES AT PIPE SUPPORTS.
 - d. PROVIDE INSULATION / INSERTS TO ISOLATE DISSIMILAR MATERIALS.
 - e. PIPING AND SUPPORTS EXPOSED IN SPACE SHALL BE PAINTED UNLESS OTHERWISE SPECIFIED.
- 3) PIPE INSULATION
- a. PROVIDE INSULATION ON DOMESTIC HOT WATER SERVICES
 - b. PROVIDE COVERS ON TRAP SERVICES ON LAVS
 - c. PROVIDE INSULATION ON CONDENSATE DRAIN SERVICE CONCEALED IN CEILING SPACE
 - d. PROVIDE JACKET ON DOMESTIC HOT WATER SERVICES IN EXTERIOR LOCATIONS, TO INCLUDE AMBIENT LOCATIONS UNDER COVER
- 4) PIPING
- a. WASTE AND DRAIN
 - i) WASTE PIPING SHALL SLOPE AT 2% UNLESS OTHERWISE NOTED. UNLESS PROHIBITED BY STRUCTURAL CONDITIONS. DRAIN PIPING (CONDENSATE) SHALL SLOPE AT 1% EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX INCHES ABOVE THE FLOOD RIM OF THE FIXTURE BEFORE OFFSETTING HORIZONTALLY.
 - ii) PAINT ABS SERVICES EXPOSED TO SUNLIGHT.
 - iii) ALL CLEAN OUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE.
 - iv) INSTALL HORIZONTAL VENTING WITH PITCH UP TO PRECLUDE FLAT VENTING.
 - v) EACH VENT SHALL TERMINATE NOT LESS THAN 6 INCHES ABOVE THE ROOF NOR LESS THAN 1 FOOT FROM ANY VERTICAL SURFACE, AND SHALL TERMINATE AT LEAST 6 INCHES ABOVE THE ROOF OR FLOOR ABOVE ANY OPENING OR AIR INTAKE INTO THE BUILDING.
 - vi) VENT TERMINATION: ALL PLUMBING FIXTURE VENTS TO TERMINATE A MINIMUM OF 36 INCHES FROM ANY VERTICAL SURFACE AND 10 FEET FROM OR TERMINATED 3'-0" ABOVE ANY OUTSIDE AIR INTAKES.
 - vii) AIR GAP: PROVIDE MINIMUM AIR-GAP FOR ALL PIPING DISCHARGING INTO FLOOR-SINKS, STAND PIPES AND DRAINS AS REQUIRED BY LOCAL CODES.
 - viii) PROVIDE FULL PORT BALL VALVES, THREADED ENDS, AND VACUUM BREAKERS ON ALL DRAIN CONNECTIONS AT EQUIPMENT AND HARDWARE.
 - b. WATER
 - c. GAS
 - i) PROVIDE PIPING EXPOSED TO AMBIENT IN GALVANIZED STEEL, OR BLACK STEEL COATED WITH EPOXY BASED FINISH.
 - ii) CONTRACTOR SHALL PROVIDE GAS SERVICE SIZED PER PLANS, AND BUSHED DOWN TO EQUIPMENT CONNECTION SIZE FOR INSTALLATION OF FLEX FROM RIGID PIPE TO EQUIPMENT.
- 5) IDENTIFY EQUIPMENT AND HARDWARE VIA ENGRAVED ACRYLIC WHITE ON BLACK ADHESIVE LABELS, MANUFACTURED PIPE LABELS, CIRCUIT TAGS AND COMPLETED PANEL SCHEDULE LINE CARDS, ET AL.
- 6) REPAIR OR REPLACE ANY DAMAGED CONSTRUCTION ADJACENT TO WORK PROVIDED UNDER THIS SCOPE OF WORK.
- 7) AT THE COMPLETION OF THE INSTALLATION TEST EQUIPMENT AND HARDWARE FOR AND DEMONSTRATE TO OWNER'S REPRESENTATIVES PROPER OPERATION, AND MAKE ADJUSTMENTS AS REQUIRED. DELIVER VALIDATED CERTIFICATES, WARRANTIES AND GUARANTEES FOR NEW EQUIPMENT TO OWNER'S REPRESENTATIVE.
- 8) MAINTAIN ONE SET OF REPRODUCIBLE DRAWINGS OF "AS-BUILT" CONDITIONS. SUBMIT THE COMPLETION OF THE PROJECT SAME TO THE OWNER'S REPRESENTATIVE.
- 9) TERMS CITED HEREIN ARE REFLECTIVE OF OR IN ADDITION TO REQUIREMENTS FOR COMPLIANCE OF INSTALLATION TO APPLICABLE CODES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REPRESENTATIVE FOR APPROVAL OF DEVIATION FROM SAID TERMS.

- 1) IDENTIFY EQUIPMENT AND HARDWARE VIA ENGRAVED ACRYLIC WORK ON BLACK ADHESIVE LABELS, MANUFACTURE PLE, LABELS, CIRCUIT TAGS AND COMPLETED PANEL SCHEDULE LINE CARDS, ET AL.
- 2) REPAIR OR REPLACE ANY DAMAGED CONSTRUCTION ADJACENT TO WORK PROVIDED UNDER THIS SCOPE OF WORK.
- 3) AT THE COMPLETION OF THE INSTALLATION TEST EQUIPMENT AND HARDWARE FOR AND DEMONSTRATE TO OWNER'S REPRESENTATIVES PROPER OPERATION, AND MAKE ADJUSTMENTS AS REQUIRED. DELIVER VALIDATED CERTIFICATES, WARRANTIES AND GUARANTEES FOR NEW EQUIPMENT TO OWNERS REPRESENTATIVE.
- 4) MAINTAIN ONE SET OF REPRODUCIBLE DRAWINGS OF "AS-BUILT" CONDITIONS. SUBMIT AT THE COMPLETION OF THE PROJECT SAME TO THE OWNER'S REPRESENTATIVE.
- 5) TERMS CITED HEREIN ARE REFLECTIVE OF OR IN ADDITION TO REQUIREMENTS FOR COMPLIANCE OF INSTALLATION TO APPLICABLE CODES. CONTRACTOR SHALL SUBMIT TO OWNER'S REPRESENTATIVE FOR APPROVAL OF DEVIATION FROM SAID TERMS.

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SITE PLAN

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



- SITE PLAN



Client:

Consultant:

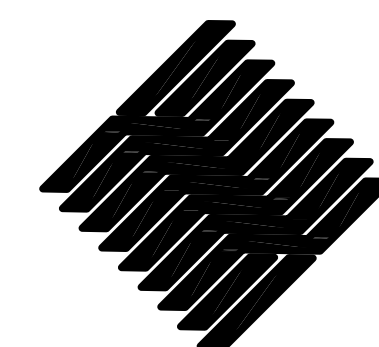
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Designer:	KY
CAD Draft:	RT
Architect:	ELN
Engineer:	KMF
Client:	Client
Date Issue:	Issue
Job Number:	Project

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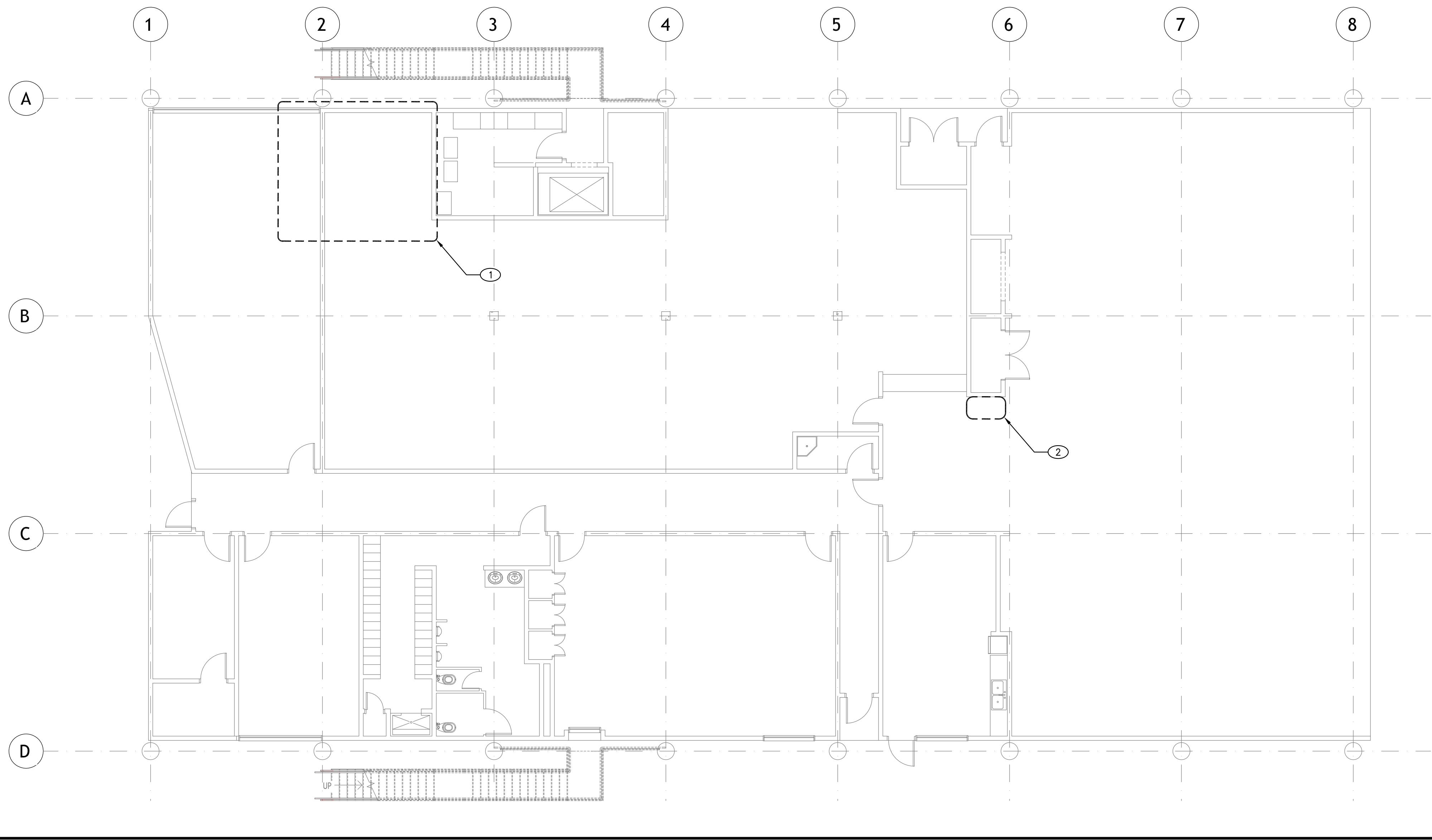
20500 MADRONA AVE, TORRANCE, CA 90503



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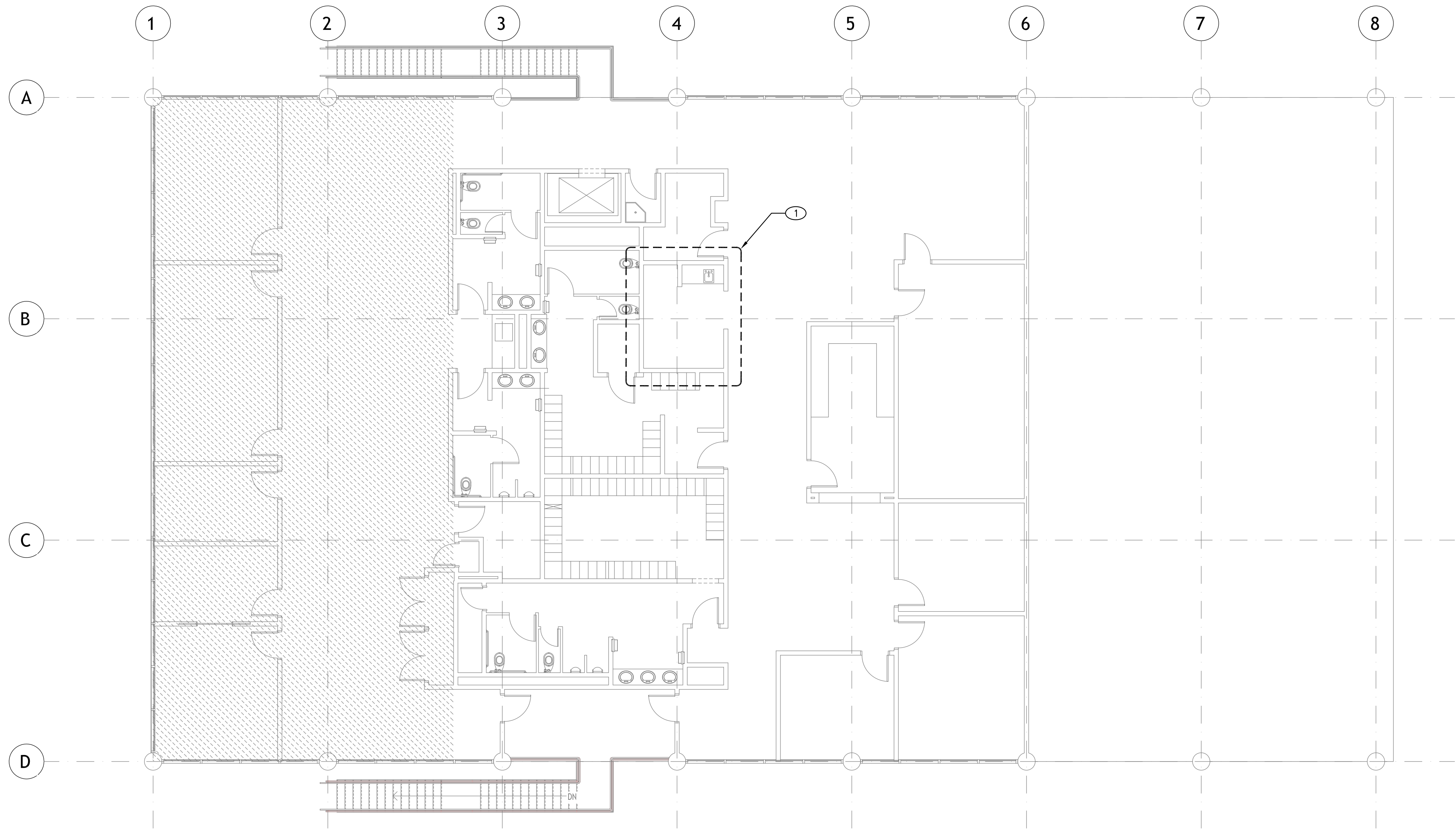
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DEMO FIRST FLOOR PLAN

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



DEMO SECOND FLOOR PLAN

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

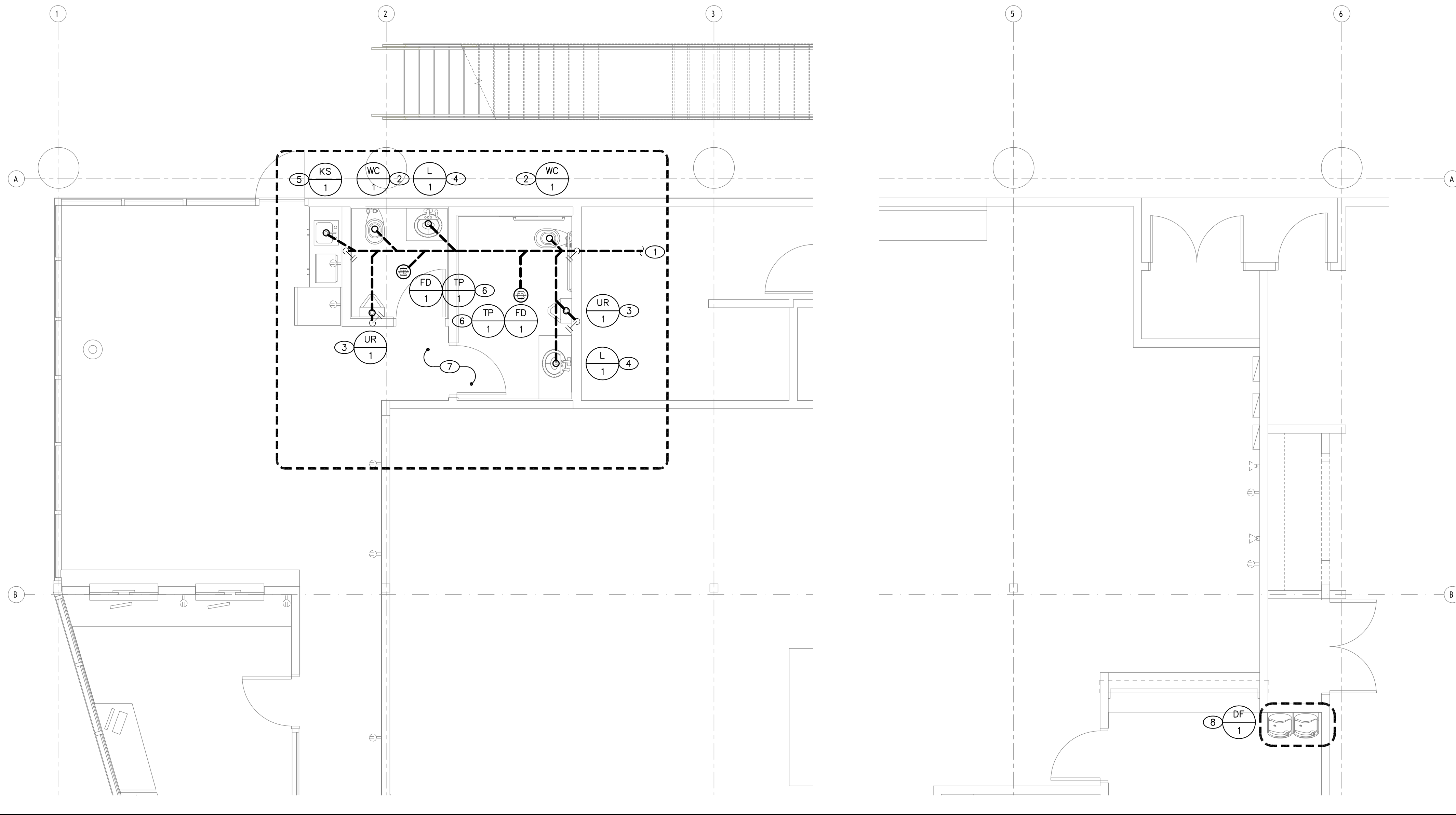
NOTES:

- 1 PREPARE AREA FOR NEW RESTROOMS AND BREAK ROOM
- 2 DEMO (E) WATER FOUNTAIN; DISCONNECT WASTE, CW AND PREPARE FOR RECONNECTION OF NEW FIXTURE WITH BOTTLE FILLER

NOTES:

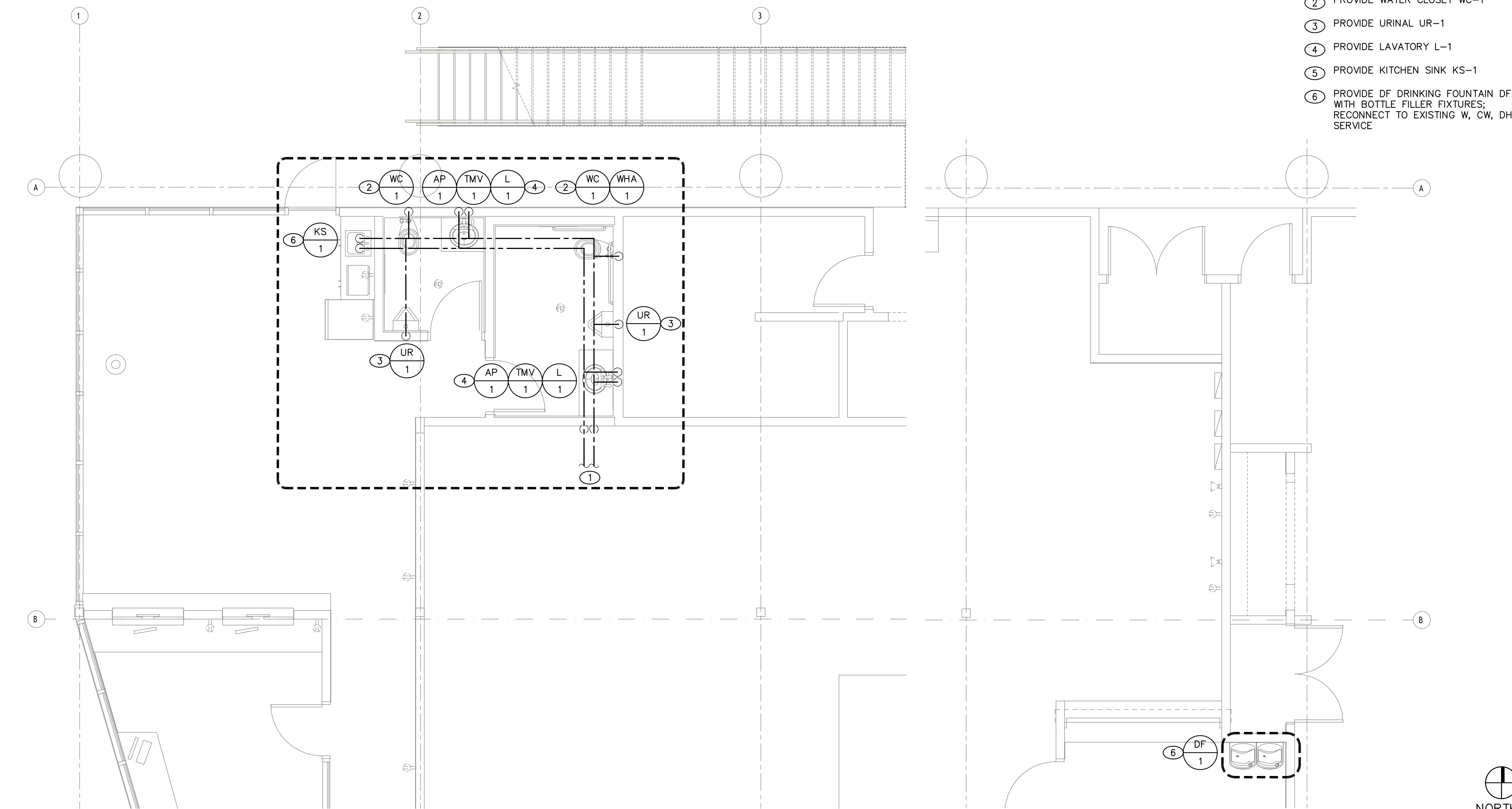
- 1 DEMO (E) SINK; DISCONNECT WASTE, CW, DHW AND PREPARE FOR RECONNECTION OF NEW FIXTURE

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- NOTES:
- 1 PROVIDE 4" W SERVICE FROM (E) W SERVICE ON SITE TO POINTS OF CONNECTION
 - 2 PROVIDE WATER CLOSET WC-1
 - 3 PROVIDE URINAL UR-1
 - 4 PROVIDE LAVATORY L-1
 - 5 PROVIDE KITCHEN SINK KS-1
 - 6 PROVIDE FLOOR DRAIN FD-1
 - 7 PROVIDE V SERVICE
 - 8 PROVIDE DF DRINKING FOUNTAIN DF-1 WITH BOTTLE FILLER FIXTURES; RECONNECT TO EXISTING W, CW, DHW SERVICE

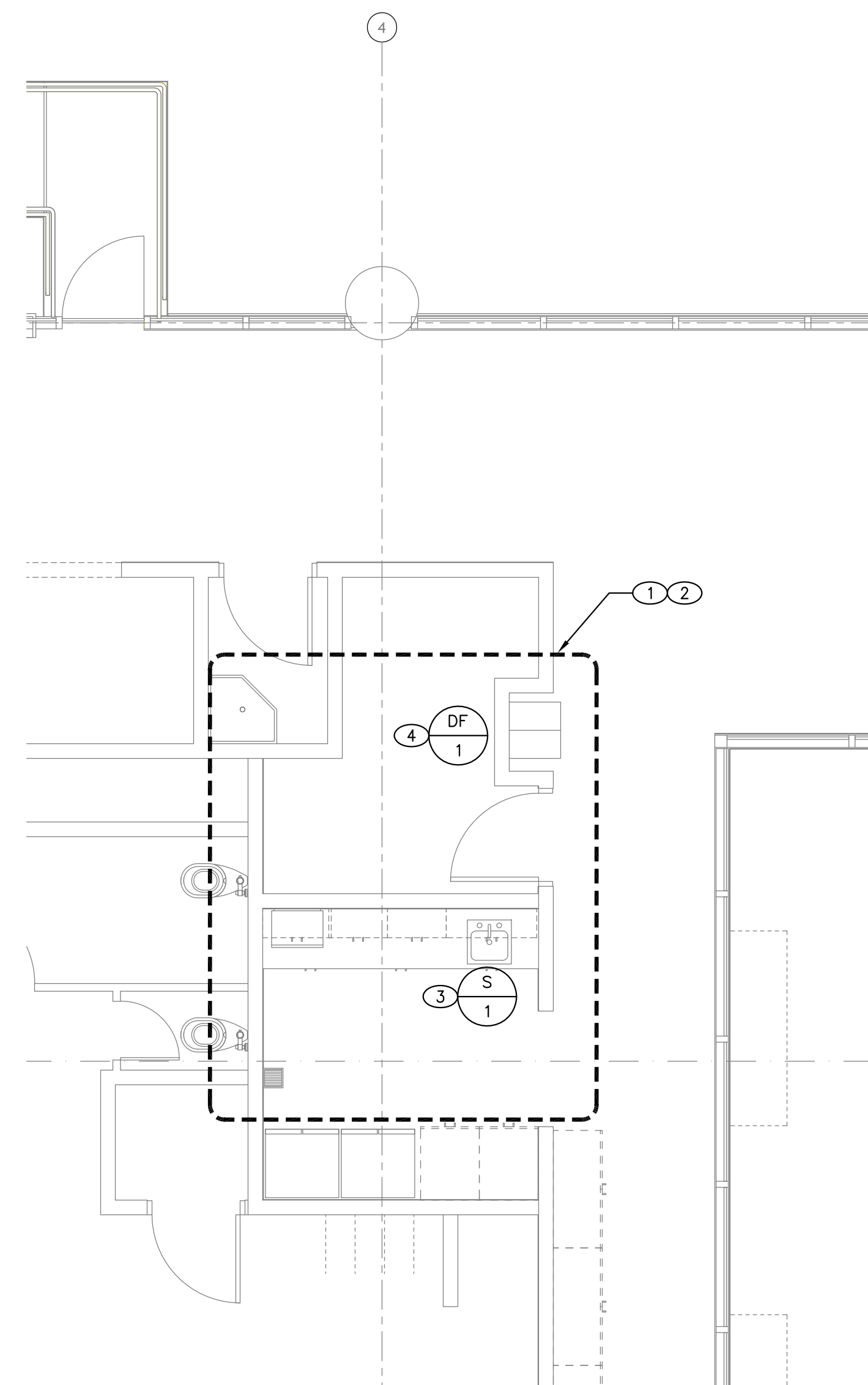
RENO ENLARGED FIRST FLOOR PLAN — WASTE



- NOTES:
- 1 PROVIDE 1-1/2" CW SERVICE FROM EXISTING METER TO POINTS OF CONNECTION IN SPACE
 - 2 PROVIDE WATER CLOSET WC-1
 - 3 PROVIDE URINAL UR-1
 - 4 PROVIDE LAVATORY L-1
 - 5 PROVIDE KITCHEN SINK KS-1
 - 6 PROVIDE DF DRINKING FOUNTAIN DF-1 WITH BOTTLE FILLER FIXTURES; RECONNECT TO EXISTING W, CW, DHW SERVICE

RENO ENLARGED FIRST FLOOR PLAN — HOT & COLD WATER

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



- NOTES:
- 1 MAINTAIN 4" W SERVICE FROM (E) W SERVICE ON SITE TO POINTS OF CONNECTION
 - 2 MAINTAIN 3/4" CW SERVICE FROM EXISTING METER TO POINTS OF CONNECTION IN SPACE
 - 3 PROVIDE SINK S-1 FIXTURES; RECONNECT TO EXISTING W, CW, DHW SERVICE
 - 4 PROVIDE DF DRINKING FOUNTAIN DF-1 WITH BOTTLE FILLER FIXTURES; RECONNECT TO EXISTING W, CW, DHW SERVICE

RENO ENLARGED SECOND FLOOR PLAN

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

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NO.	DATE	REV.	BY	CHK.

Designer: KY	Client: Client Name
CAD Draft: RT	Date Issue: Issue Date
Architect: EUI	Job Number: Project Number
Engineer: KMF	

Client:

Consultant:

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• RENO FLOOR PLAN

P2.2

TYPICAL PRIMER

NO SCALE

1

WASTE & VENT ISOMETRICS

HOT & COLD WATER ISOMETRIC

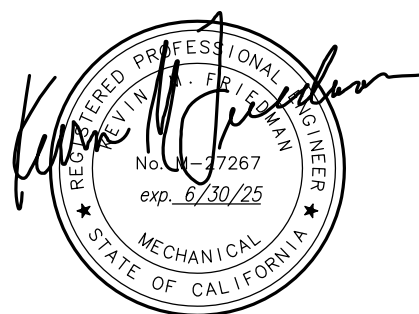
NOTES:

1. COLD WATER, DOMESTIC HOT WATER INSIDE BUILDING:
COPPER TYPE "L", WITH SILVER SOLDER UNLESS
OTHERWISE NOTED (95/5 TIN/ANTIMONY SOLDER AT
VALVES), WROTE COPPER FITTINGS WITHIN BUILDING ABOVE
GROUND
2. PROVIDE DI-ELECTRIC UNIONS AT CONNECTIONS OF
DI-SIMILAR METALS IN LOCATIONS ACCESSIBLE FOR
INSPECTION; PROVIDE ACCESS PANELS AS NECESSARY

Client:

Consultant:

nt:
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- WASTE & VENT ISOMETRICS

P3.0

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