

FACILITY ENERGY REPAIRS, BUILDING 4401

MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROJECT NO. CP12004M

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THESE DOCUMENTS ARE BASED ON HISTORICAL DRAWINGS OF THE EXISTING BUILDING. THE ORIGINAL BUILDING DRAWINGS WERE DEVELOPED BY GANTT HUBERMAN ARCHITECTS, AND ARE DATED JANUARY 18, 1996. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS PRIOR TO FABRICATION OF SYSTEM. MODIFICATIONS SHALL BE MADE ONLY AFTER WRITTEN APPROVAL BY THE ARCHITECT/ENGINEER.

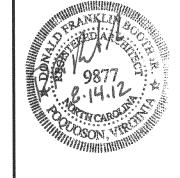
DESIGNED & ENGINEERED BY:

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ENGINEERS
ARCHITECTS
PLANNERS

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ACTIVITY - SATISFACTORY TO

FOR EFD FOR COMMANDER NAVFAC

 DATE
 08.14.2012

 A/E
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 PROJECT
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ON, CHERRY POINT, NGY REPAIRS, 3 4401

MARINE CORPS AIR STATION,
FACILITY ENERGY
BUILDING 4

CODE ID. NO. 80091 SIZE D
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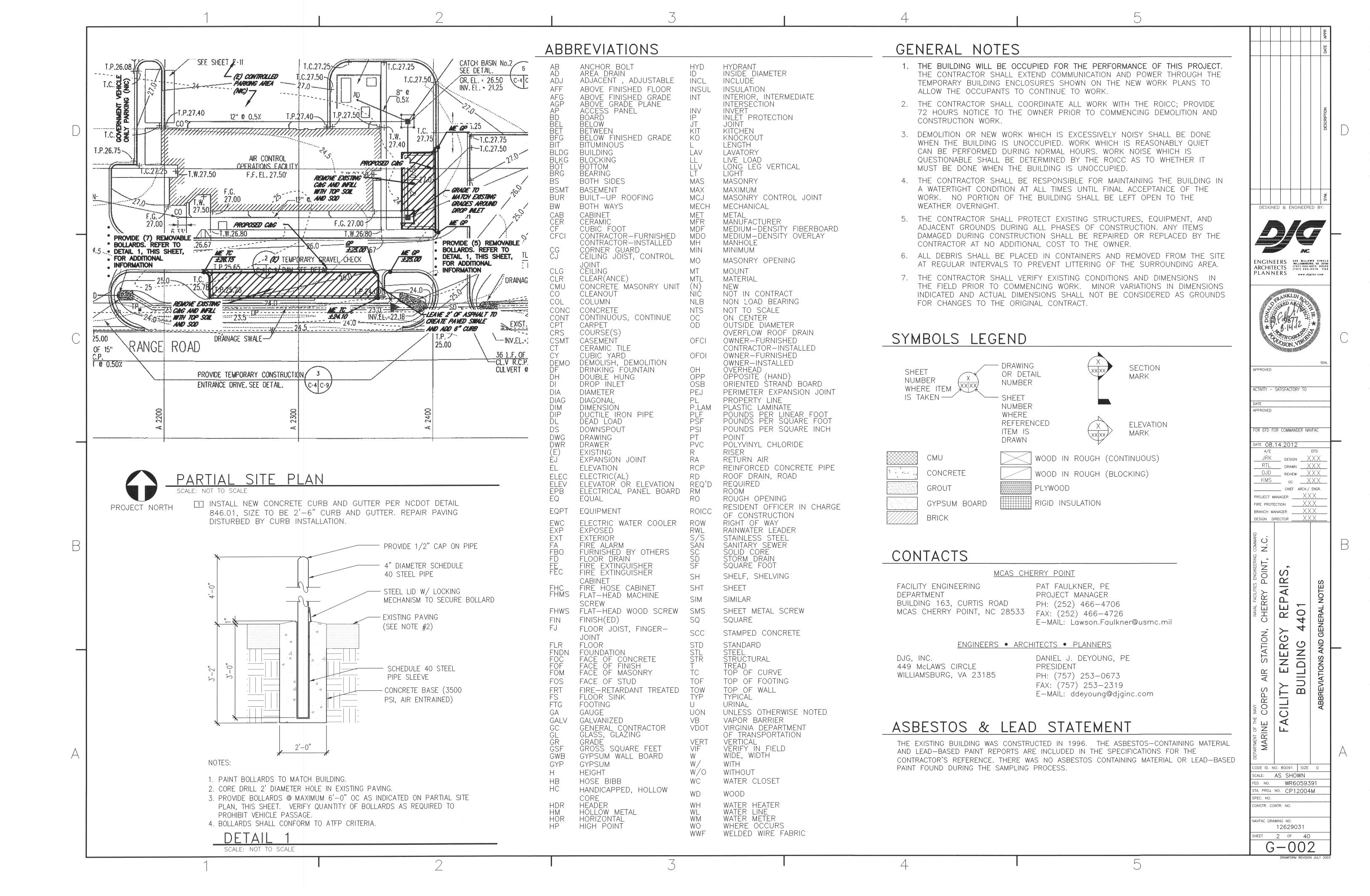
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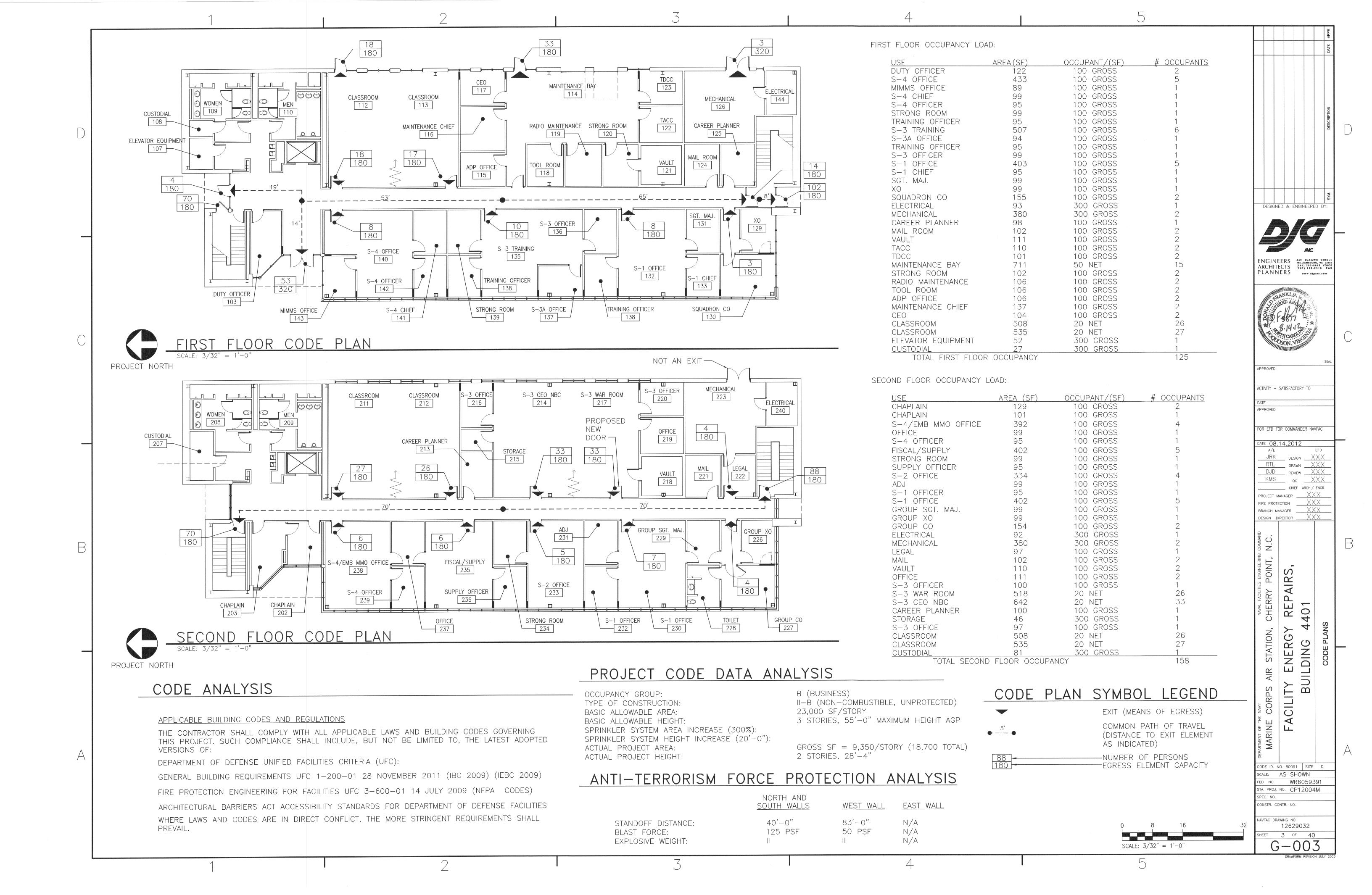
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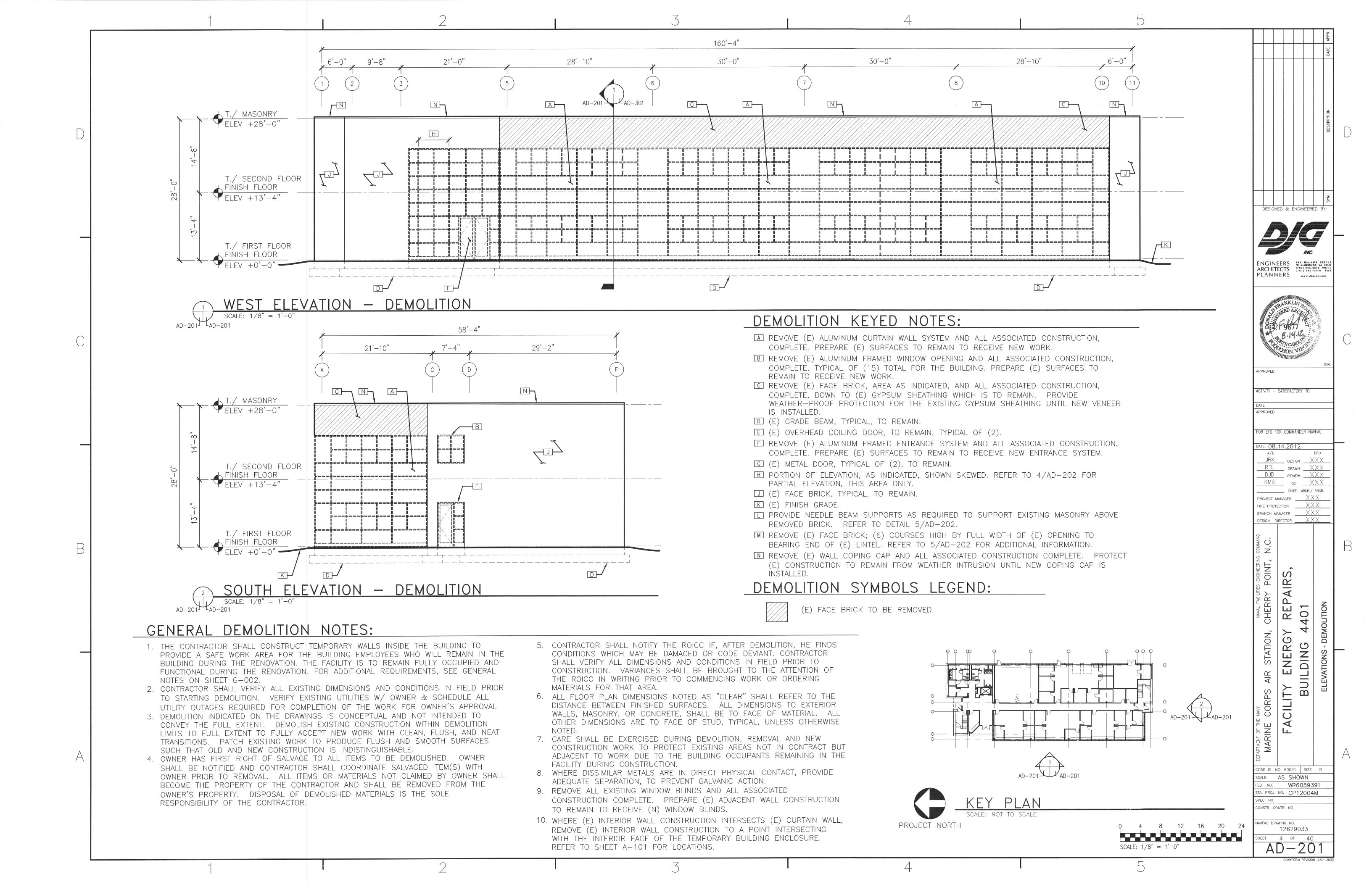
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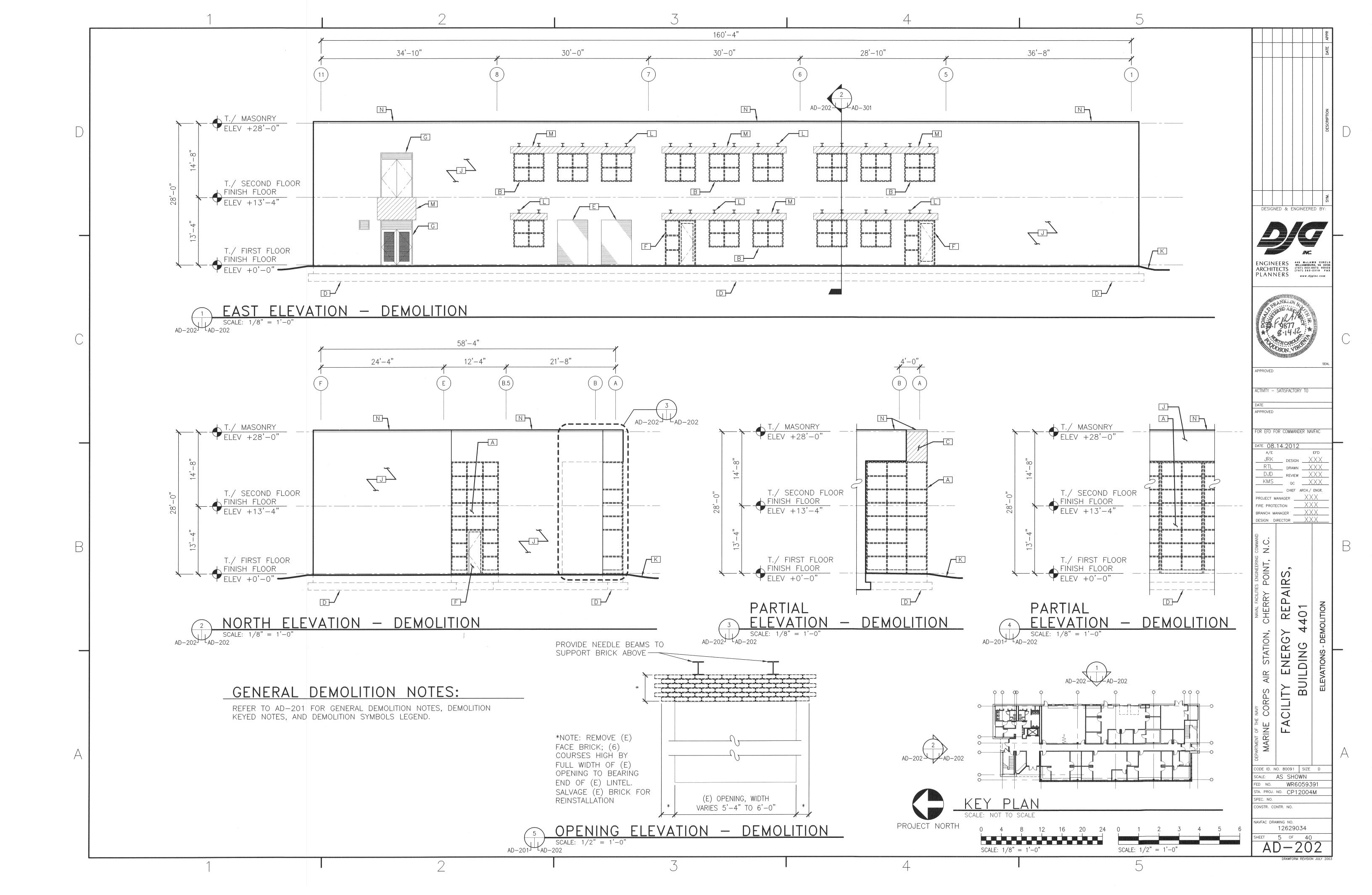
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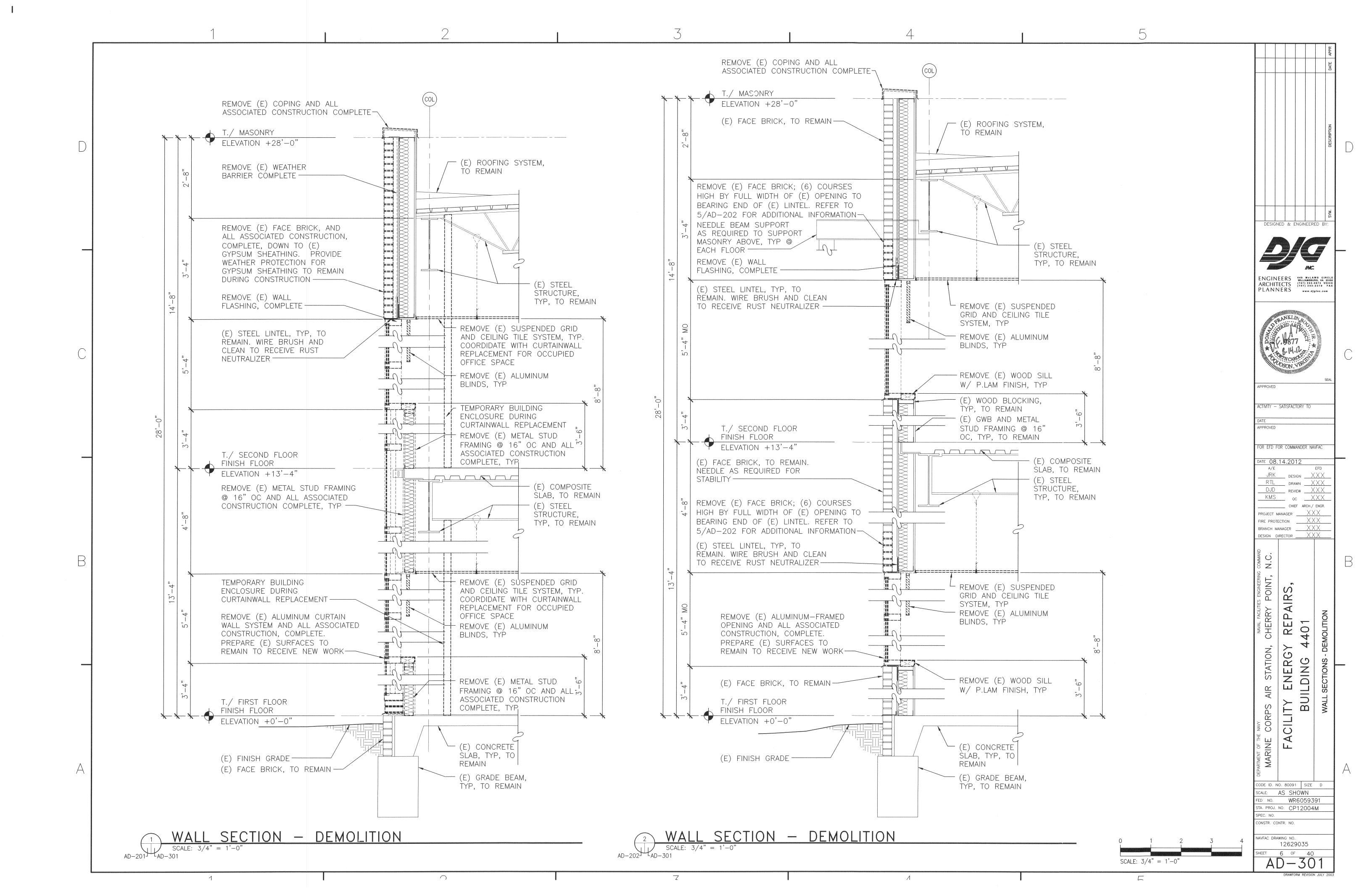
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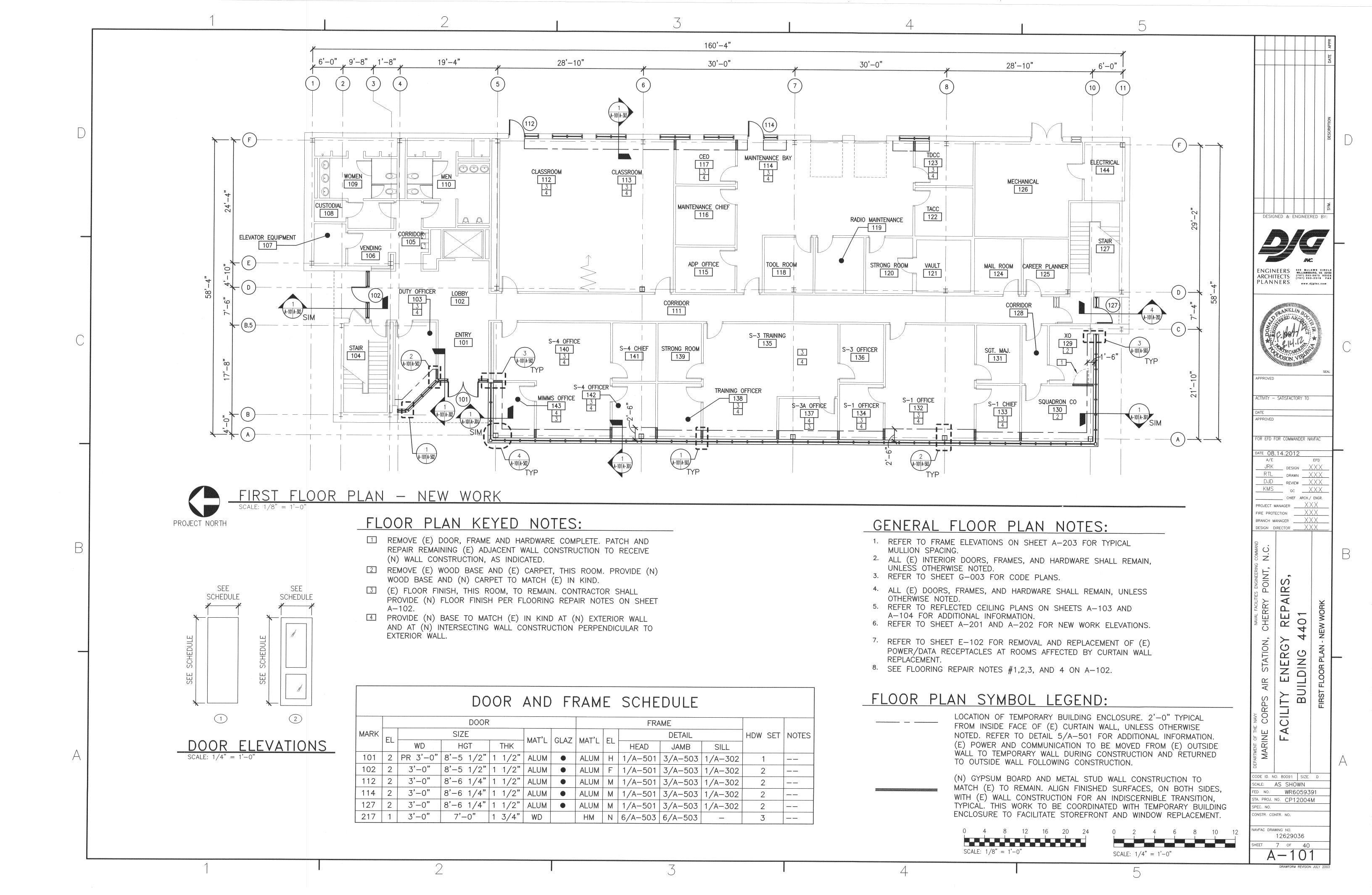


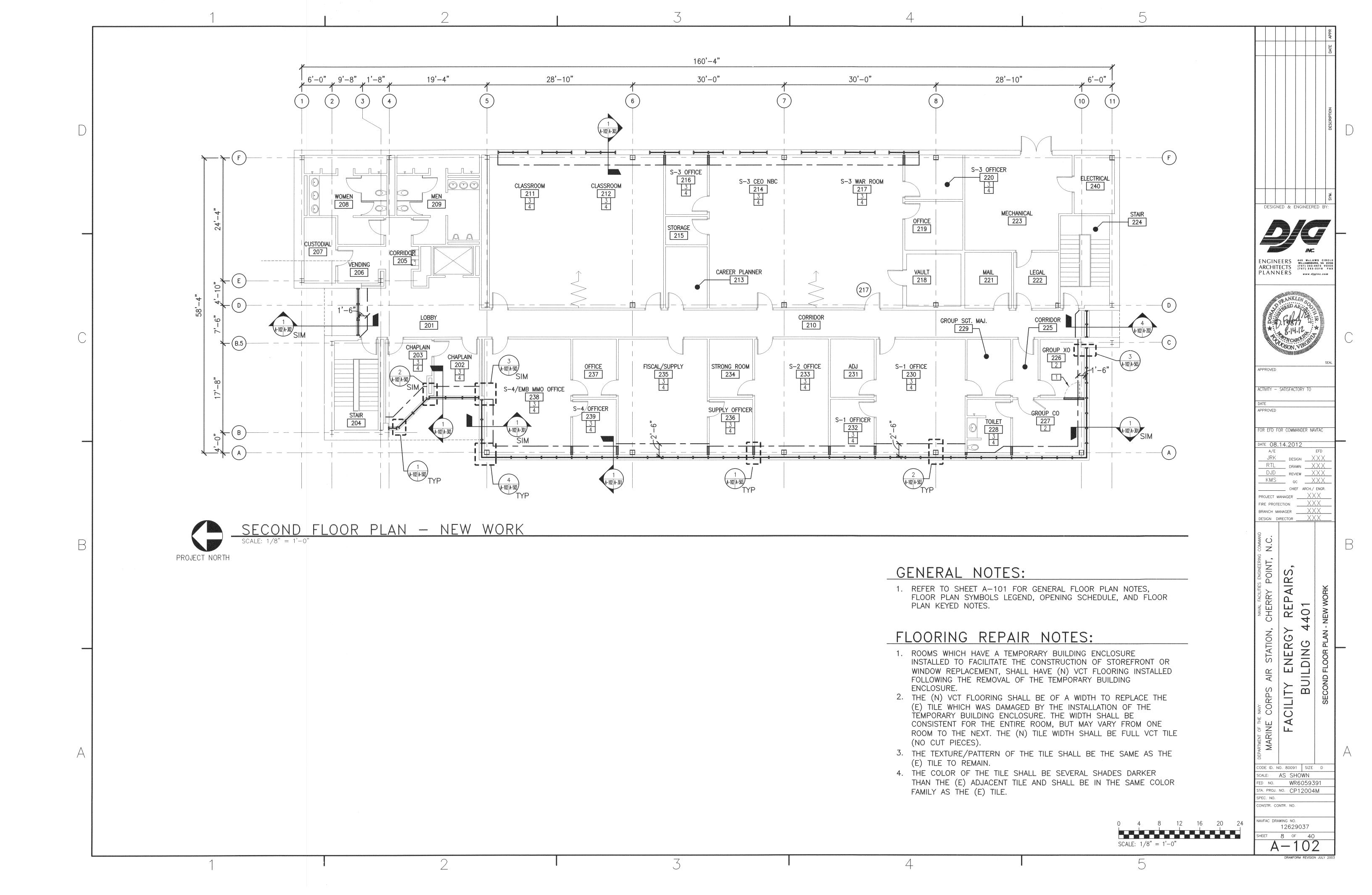


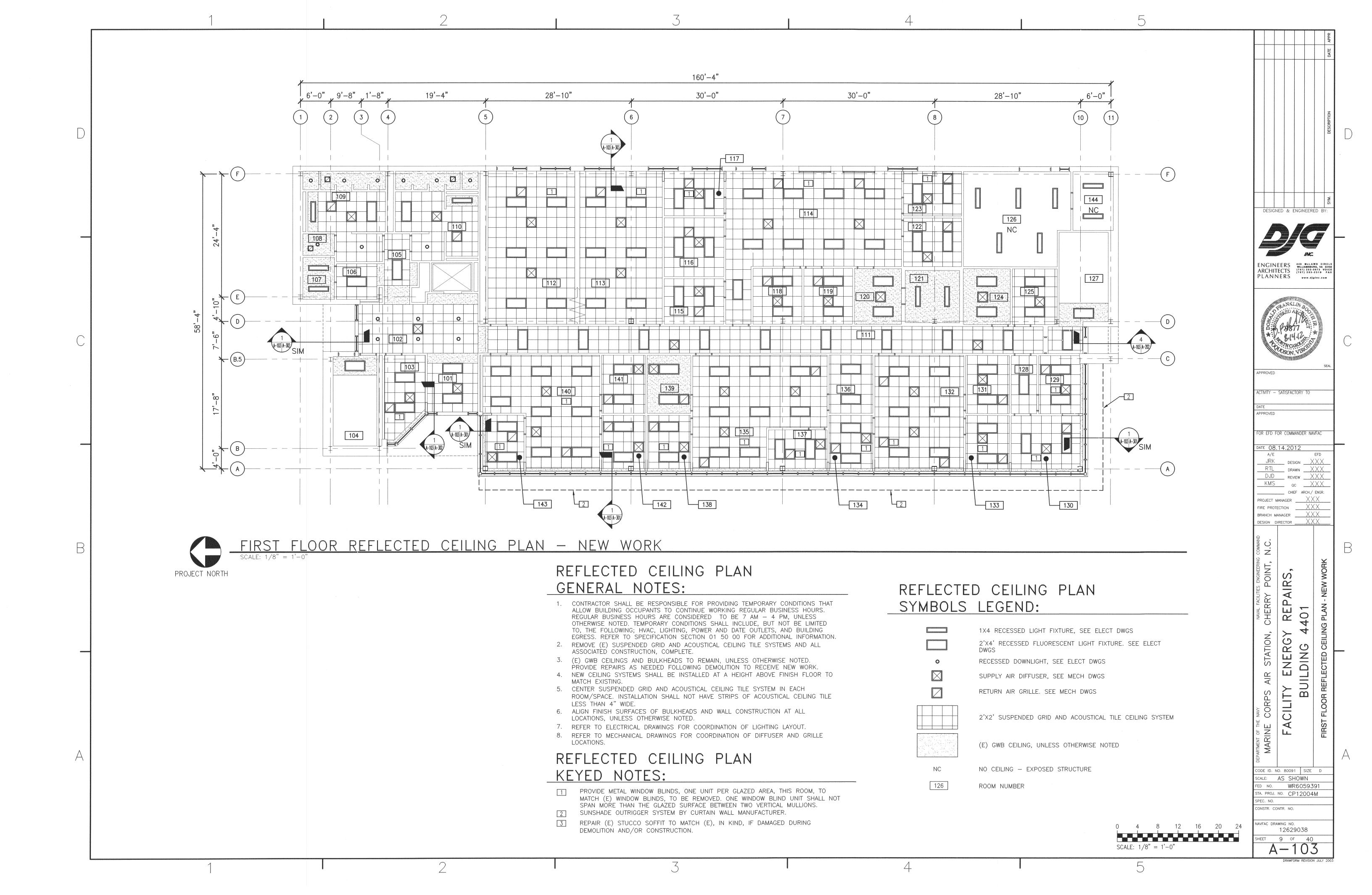


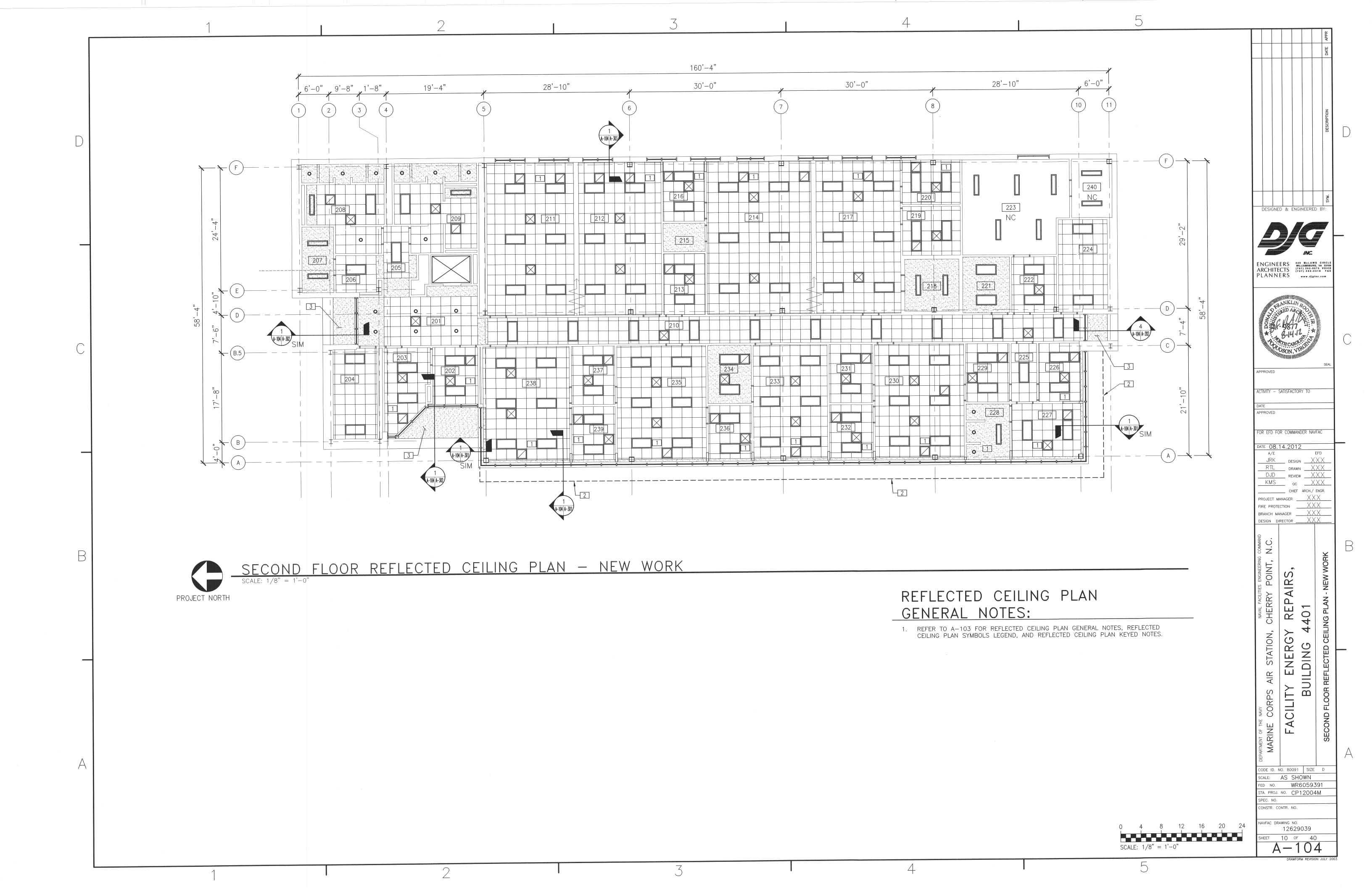


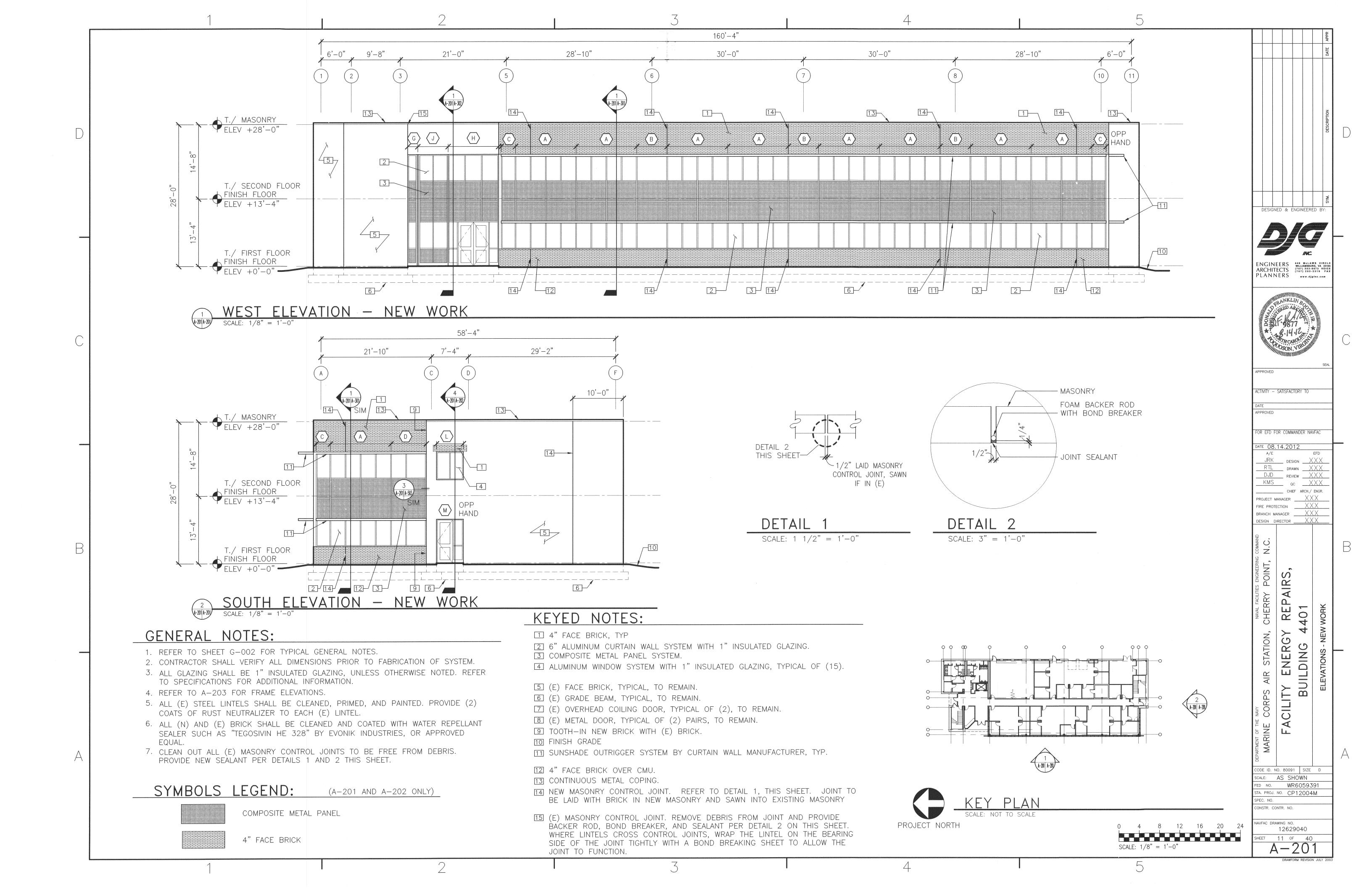


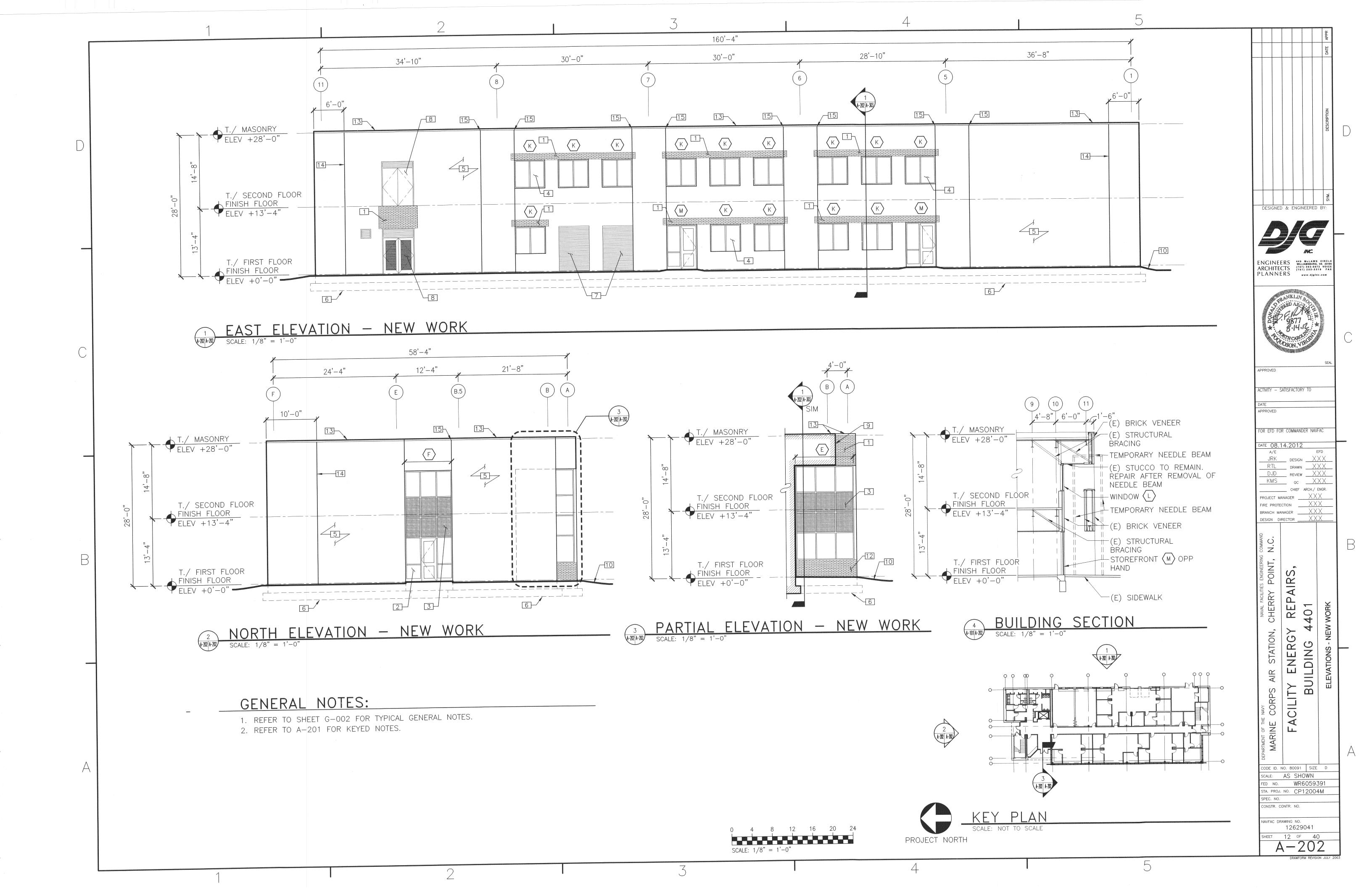


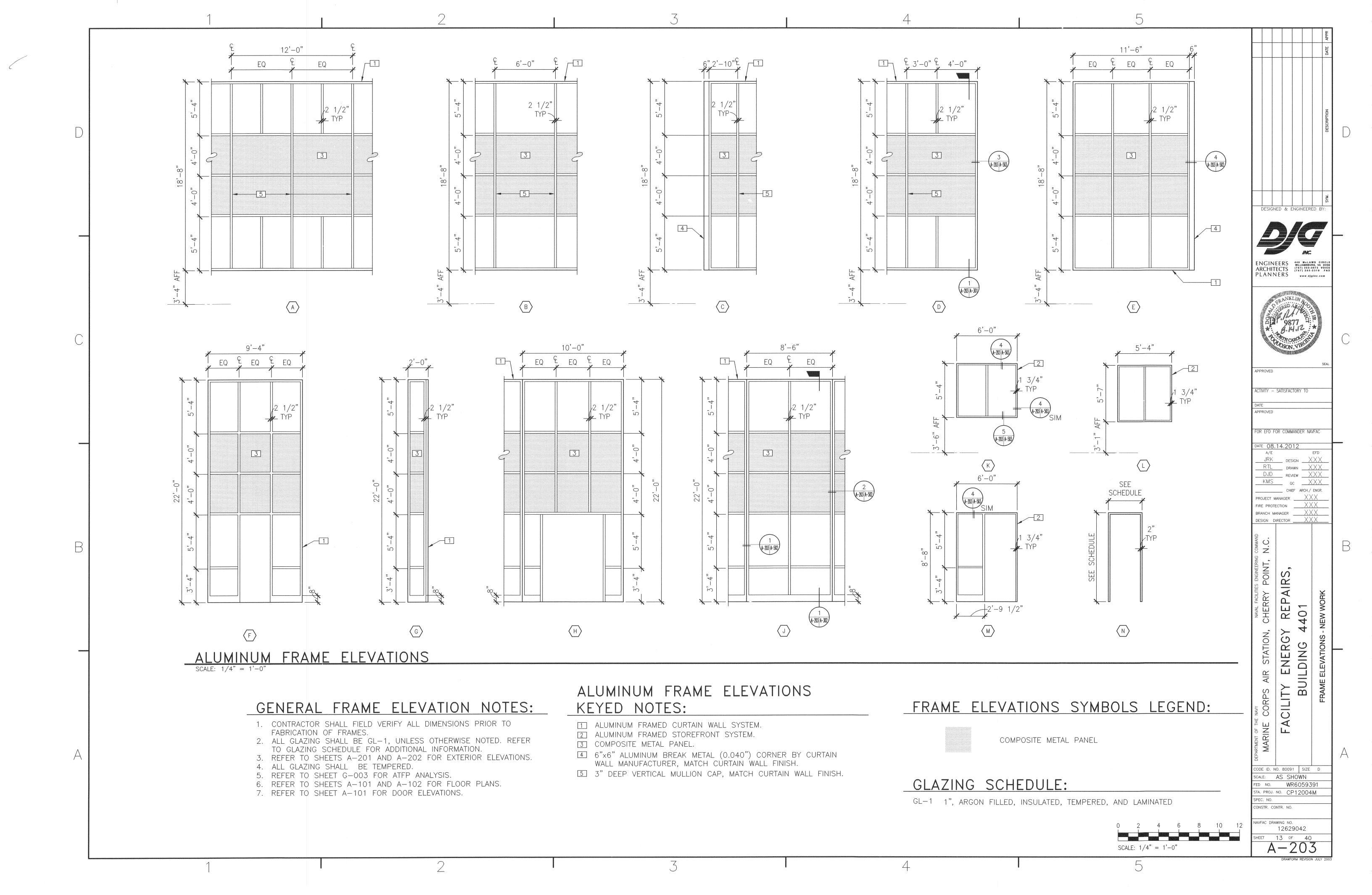


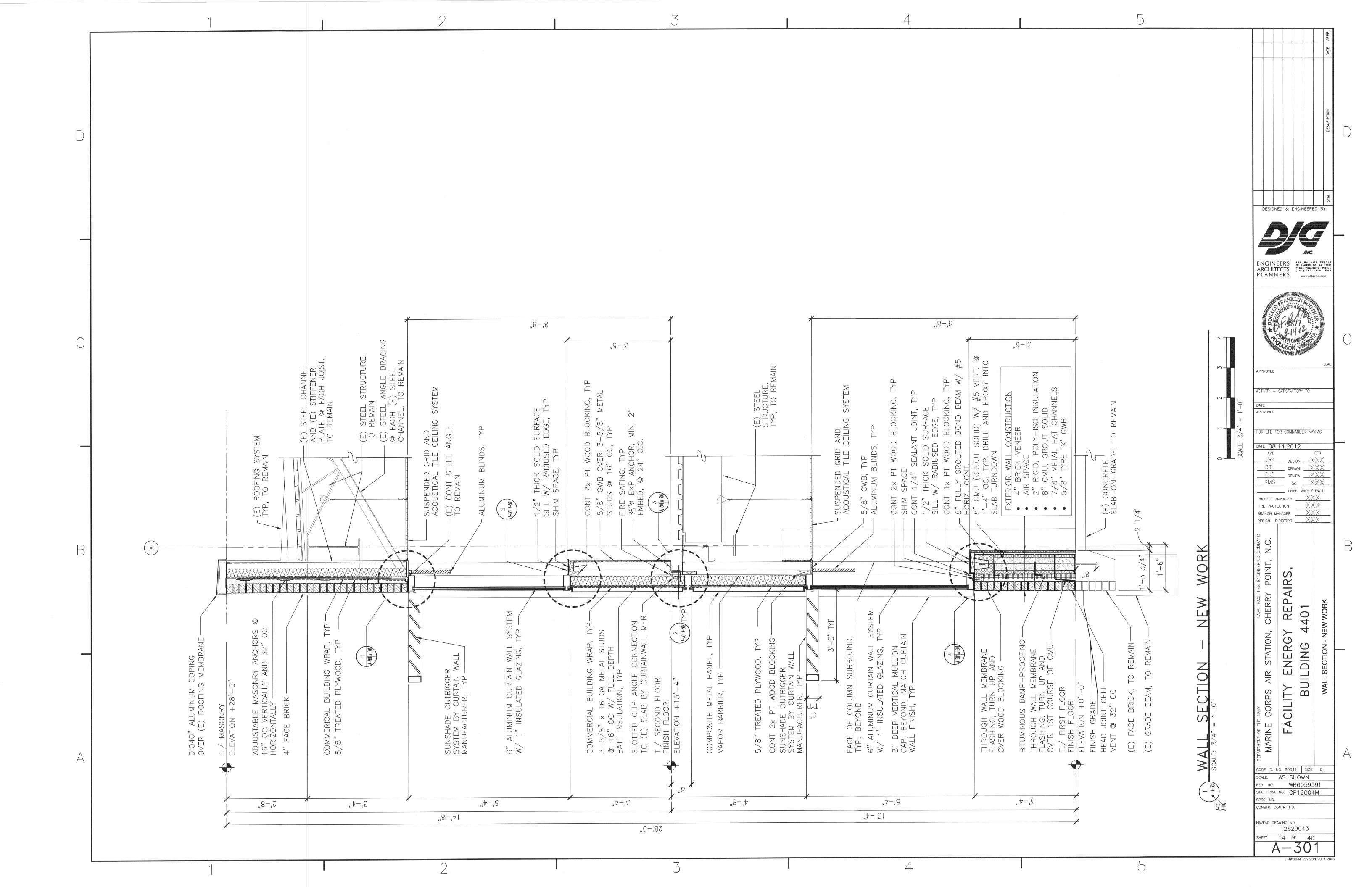


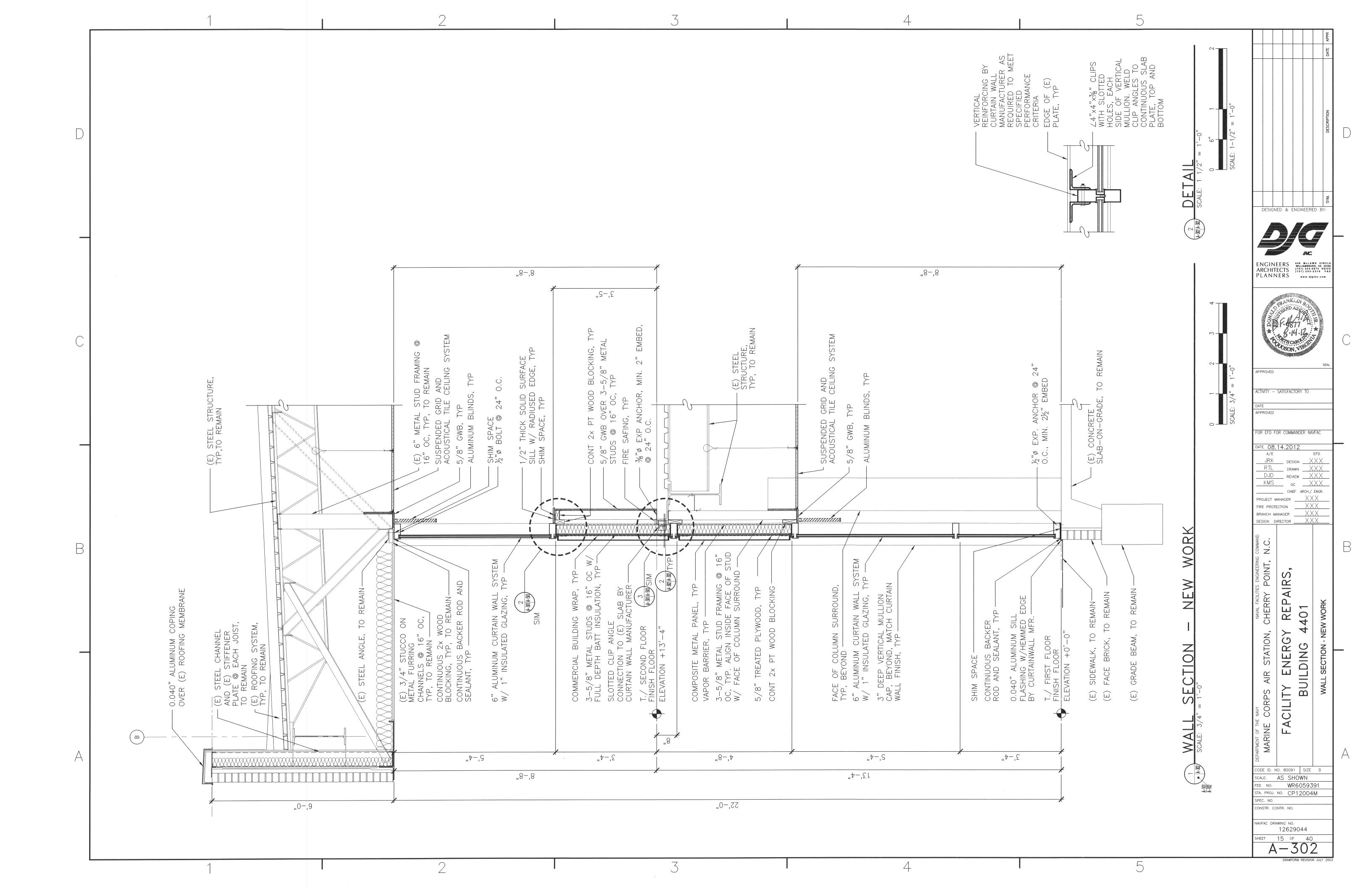


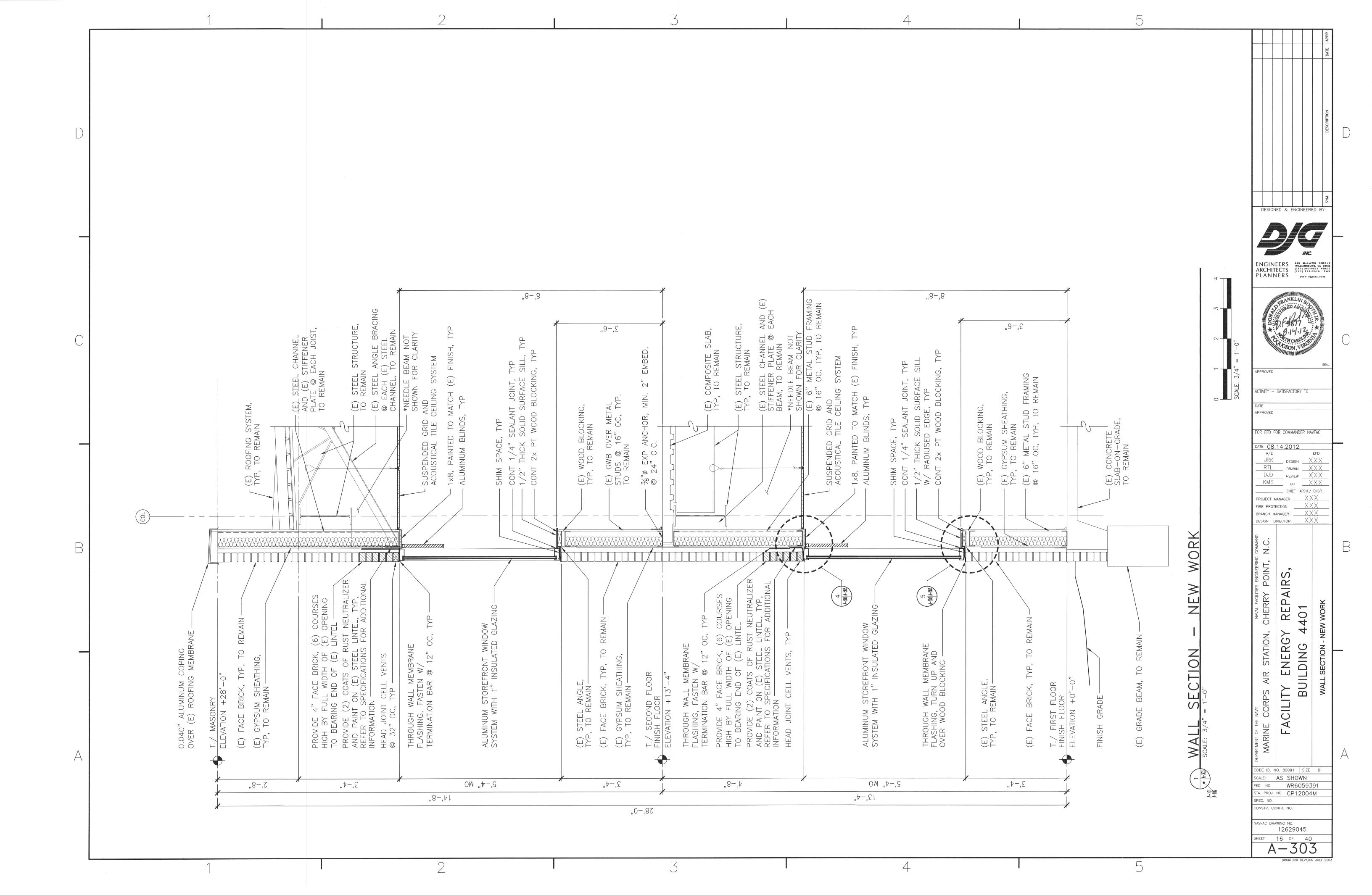


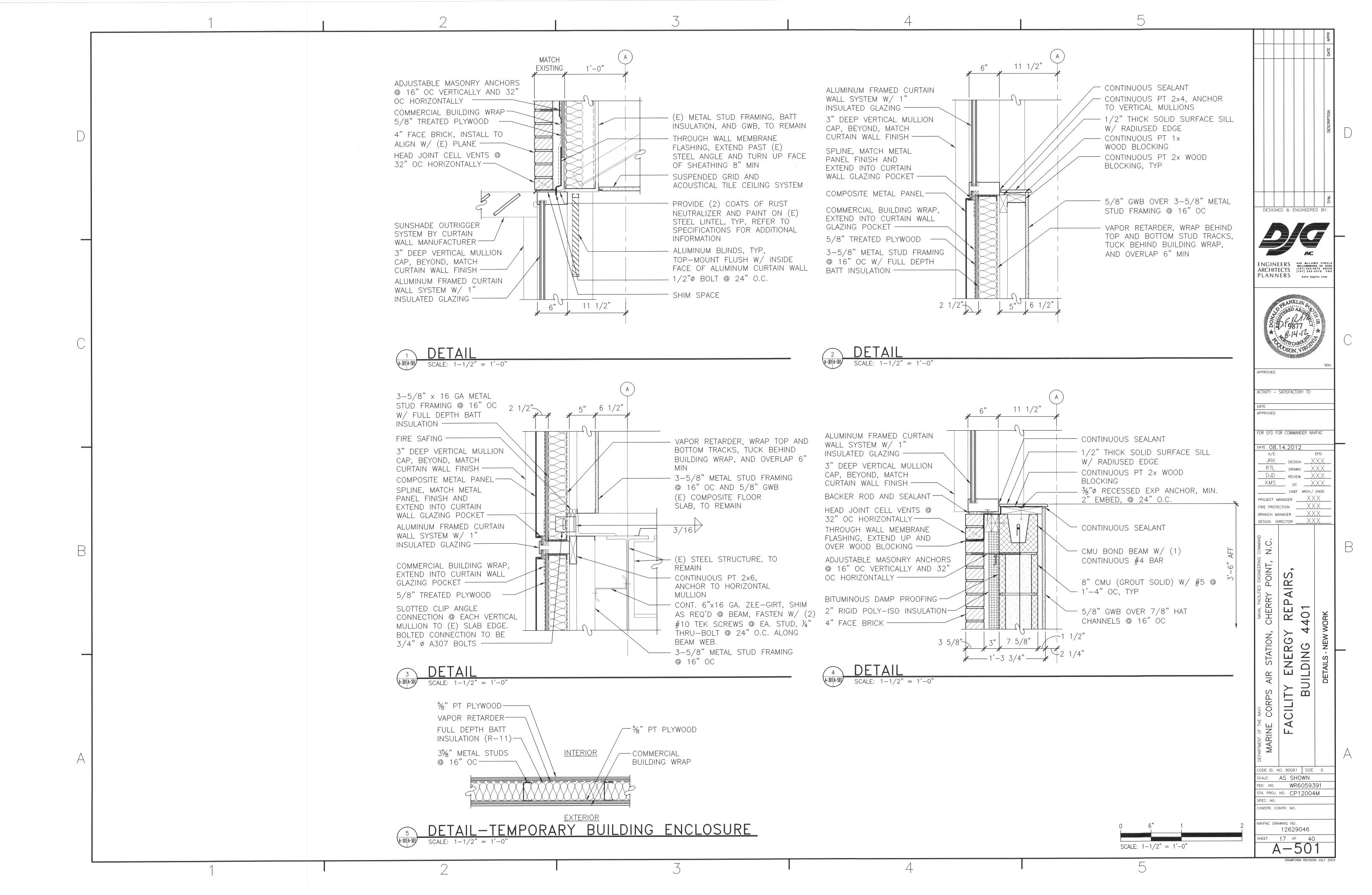


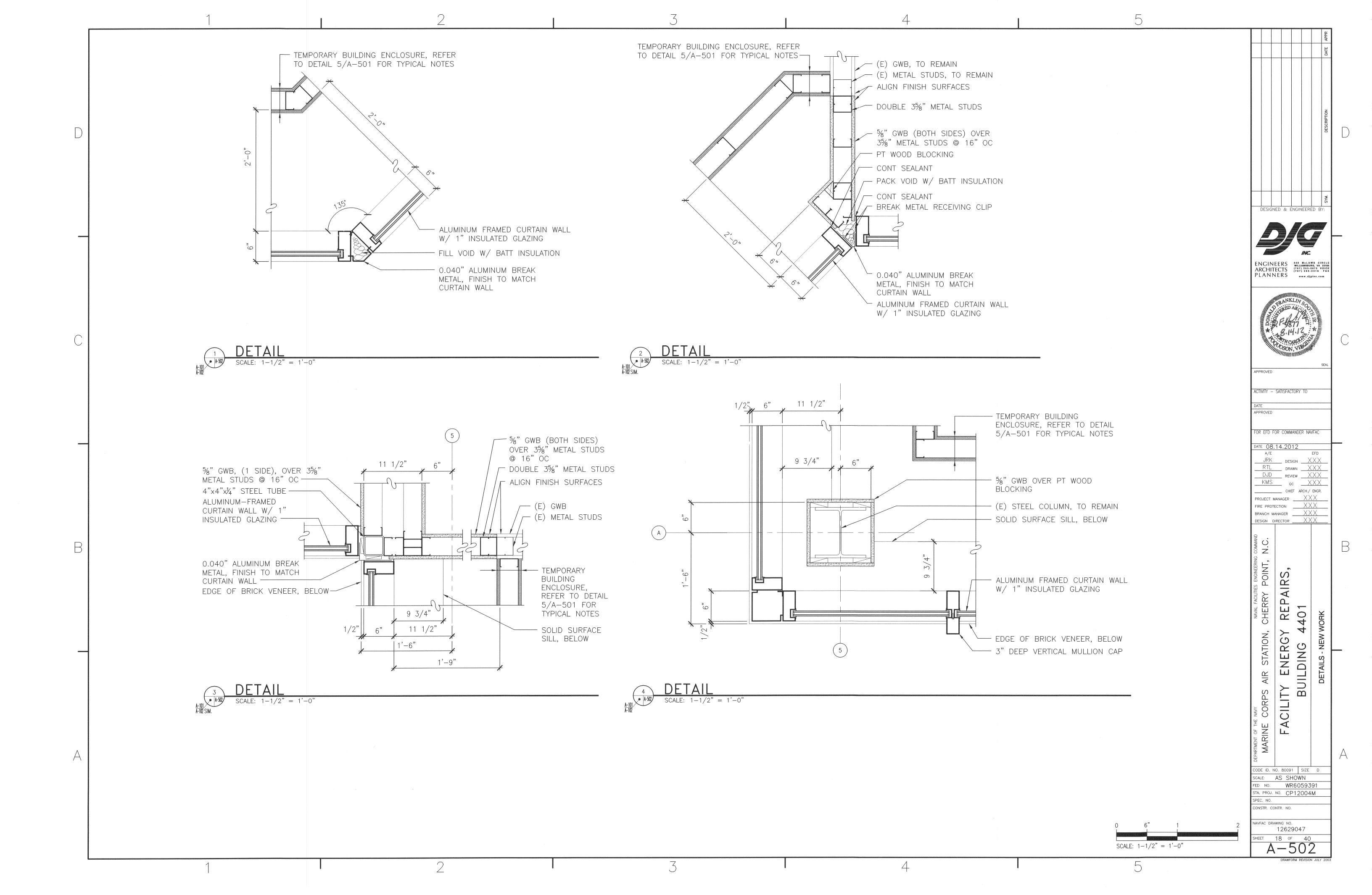


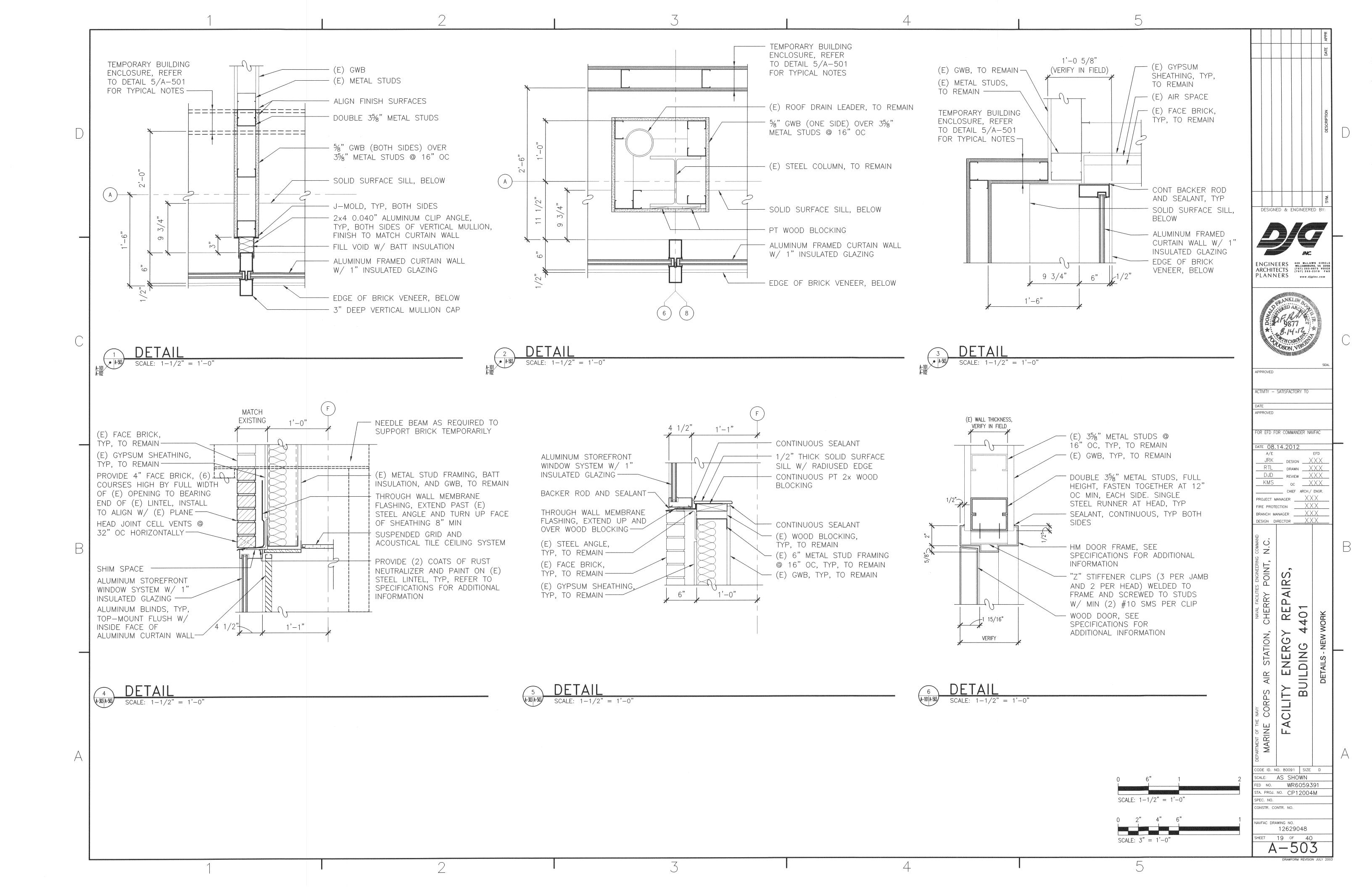












GENERAL MECHANICAL NOTES

- 1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS. CONTRACTOR SHALL FIELD VERIFY ALL SIZES, TYPES, AND LOCATIONS OF EXISTING PIPING, PIPE INSULATION, EQUIPMENT, AND ALL ASSOCIATED APPURTENANCES. CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER OF DEVIATIONS WHICH AFFECT WORK PRIOR TO PROCEEDING WITH WORK AND ORDERING PIPING, PIPE INSULATION, DUCTWORK, EQUIPMENT, OR ANY OTHER APPURTENANCES. COORDINATE WORK WITH ALL TRADES.
- 2. ALL MECHANICAL EQUIPMENT AND APPURTENANCES WHICH ARE TO BE REMOVED SHALL BE STORED OR DISCARDED AS DIRECTED BY THE CONTRACTING OFFICER. COORDINATE WITH CONTRACTING OFFICER.
- 3. ALL ARCHITECTURAL APPURTENANCES AFFECTED BY THE MECHANICAL WORK SHALL BE REPAIRED TO MATCH EXISTING CONDITIONS.
- 4. COORDINATE SCHEDULING OF ALL DEMOLITION WORK WITH THE CONTRACTING OFFICER AND OTHER TRADES. REVIEW DRAWINGS AND EXISTING CONDITIONS TO VERIFY AND DETERMINE EXTENT OF WORK PRIOR TO PERFORMING DEMOLITION WORK.
- 5. ALL SYSTEM RELATED TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.
- 6. PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, AND THE SERVICES NECESSARY FOR A COMPLETE AND OPERABLE INSTALLATION AS SPECIFIED AND SHOWN ON THE DRAWINGS.
- 7. AT ALL TIMES, TAKE ALL PRECAUTIONS NECESSARY TO PROTECT NEW AND EXISTING MATERIALS AND SYSTEMS FROM DAMAGE. PROTECT ALL PIPE AND DUCT OPENINGS TO PREVENT CONTAMINATION.
- 8. WIRING AND CONDUIT REQUIREMENTS ARE ADDRESSED EITHER ON THE DRAWINGS, AS A PART OF A PACKAGED ASSEMBLY, OR WITHIN DIVISION 23 AND 26 OF THE PROJECT SPECIFICATIONS. HOWEVER, SHOULD AN EQUIPMENT COMPONENT, PANEL, OR SYSTEM DEVICE NEED ADDITIONAL WIRING AND CONDUIT SO AS TO BE COMPLETE, APPROVED, AND FULLY OPERATIONAL, THE CONTRACTOR SHALL PROVIDE THE REQUIRED WIRING AND CONDUIT AS WELL AS CIRCUIT DISCONNECT AND CIRCUIT PROTECTION. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE 2008.
- 9. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE NECESSARY CUTTING AND PATCHING AS REQUIRED FOR THE INSTALLATION OF ALL WORK. PATCHING SHALL LEAVE PREMISES AND FINISHES COMPLETE AND IN A CONDITION IDENTICAL TO THE ORIGINAL FINISH AND CONSTRUCTION. REPAIR, PATCH AND PAINT ALL AREAS AFFECTED TO MATCH EXISTING CONDITIONS AND CONSTRUCTION TYPE. MAINTAIN FIRE INTEGRITY OF ALL WALLS, FLOORS, CEILINGS, AND PARTITIONS AT ALL TIMES.
- 10. WHERE MATERIALS TO BE INSTALLED ARE BEING STORED AT OR NEAR THE PROJECT DURING CONSTRUCTION, ARRANGE SUCH MATERIALS SO AS TO PREVENT THE POSSIBILITY OF CONTAMINATION, CORROSION, AND DAMAGE. KEEP ENDS OF PIPE, EQUIPMENT, AND SPECIALTIES PROPERLY CLOSED DURING CONSTRUCTION AND INSTALLATION.
- 11. DO NOT CORE DRILL THROUGH BEAMS OR JOISTS. DO NOT PENETRATE EXISTING CEILING EXCEPT AS REQUIRED TO INSTALL UNI-STRUT SUBFRAMING AS INDICATED ELSEWHERE IN THESE DOCUMENTS.
- 12. PROVIDE ALL NECESSARY COMPONENTS FOR A FULLY OPERATIONAL AIR CONDITIONING SYSTEM. INSTALL SYSTEM IN ACCORDANCE WITH APPLICABLE FEDERAL UFC AND BASE CODES AND AUTHORITIES HAVING JURISDICTION.
- 13. ALL EQUIPMENT AND ASSOCIATED ITEMS SCHEDULED OR OTHERWISE INDICATED ON DRAWINGS SERVE AS THE BASIS OF DESIGN AND ARE INTENDED TO SHOW THE GENERAL SIZE, CONFIGURATION, LOCATION, CONNECTIONS, AND/OR SUPPORT FOR EQUIPMENT OR SYSTEMS SPECIFIED WITH RELATION TO THE OTHER BUILDING SYSTEMS. REFER TO SPECIFICATIONS FOR TECHNICAL REQUIREMENTS PERTAINING TO THE PRODUCTS. PROVIDE EQUIPMENT THAT MEETS THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.
- 14. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT. DO NOT SCALE.
- 15. ALL HVAC EQUIPMENT BEING CONTROLLED BY THE NEW DDC SYSTEM SHALL BE PROVIDED WITH A STANDARD LOW VOLTAGE TERMINAL STRIP TO PERMIT HARD WIRED INTERLOCKS TO THE DDC SYSTEM. LOW VOLTAGE TERMINAL STRIP SHALL BE PROVIDED BY THE EQUIPMENT MANUFACTURER.
- 16. CONTRACTOR SHALL LABEL ALL NEW INSULATED AND NON-INSULATED HVAC PIPING IN ACCORDANCE WITH ASME A13.1. LABELS SHALL HAVE COLOR CODED BACKGROUND TO SIGNIFY LEVELS OF HAZARD IN ACCORDANCE WITH ASME A13.1.

INDOOR DESIGN CONDITIONS									
SPACE	WINTER INDOOR		WINTER OUTDOOR		SUMMER INDOOR		SUMMER OUTDOO		
TYPE	DB F	%RH	DB F	WB F	DB F	%RH	DB F	WB F	
OFFICES	FICES 68		24		75	50	91	78	
STORAGE ROOMS	68	-	24		75	50	91	78	
TOILET ROOMS	68	***************************************	24		75	50	91	78	
CONFERENCE ROOMS	68	_	24	_	75	50	91	78	
CORRIDORS	68		24	_	75	50	91	78	
ELEC ROOMS	55	-	24	-	75	50	91	78	
MECH ROOMS	55	<u></u>	24	ministra de la constanción de	· ·	week	91	78	

								process process process		Committee
	MECHANIC	CAL LEGEND			MECHAN	ICAL ABBREVIATIONS			A COO	DAIE AFFI
	\uparrow \uparrow \uparrow	DUCT WITH RADIUS ELBOW 1.50 TURNING RADIUS MIN.		ITEM TO BE REMOVED NEW WORK	AC AFF	AIR CONDITIONING ABOVE FINISHED FLOOR				20 mm
	~ I	(UNLESS OTHERWISE NOTED)		EXISTING TO REMAIN	AFG AHU	ABOVE FINISHED GRADE AIR HANDLING UNIT				
		RECTANGULAR DUCT W/TRANSITION TO ROUND (DOUBLE LINE DRAWING)	——— D———	GRAVITY CONDENSATE DRAIN PIPING	AI AO	ANALOG INPUT ANALOG OUTPUT				
		ROUND DUCTWORK (SINGLE LINE DRAWING)	—— DCW ——	DOMESTIC COLD WATER PIPING	APD ATV	AIR PRESSURE DROP ATMOSPHERIC VENT			NOIT:	21
			—— CHS——	CHILLED WATER SUPPLY PIPING	AWSL BI	AVERAGE WEIGHTED SOUND LEVEL BINARY INPUT			000	DESC.
		DUCT W/TRANSITION (DOUBLE LINE DRAWING)	CHR	CHILLED WATER RETURN PIPING	BO BTUH	BINARY OUTPUT BRITISH THERMAL UNITS PER HOUR				
	<u> </u>	BRANCH TAKE-OFF WITH MANUAL VOLUME	HWS	HOT WATER SUPPLY PIPING	CAP CHW	CAPACITY CHILLED WATER				
	VD VD	DAMPER (WITH LOCKING QUADRANT)	—— HWR—— —— RL ——	HOT WATER RETURN PIPING REFRIGERANT LIQUID PIPING	CFM	CUBIC FEET PER MINUTE				
				REFRIGERANT SUCTION PIPING	CO COMP	CLEANOUT COMPRESSOR				
		DUCTWORK ELBOW WITH TURNING VANES.		DIRECTION OF FLOW	CWR CWS	CHILLED WATER RETURN CHILLED WATER SUPPLY				A.
			***************************************	PIPE CAP	CONT DB	CONTINUATION DRY BULB	DESI	SNED & ENGI	INFERED BY:	
			──	ISOLATION VALVE	DCW DDC	DOMESTIC COLD WATER DIRECT DIGITAL CONTROLLER				
	24x12	NEW RECTANGULAR DUCTWORK. SIZE IN INCHES		GLOBE VALVE	DM DN	DAMPER MOTOR DOWN				
		FIRST NUMBER INDICATES SIZE FOR SIDE SHOWN	——————————————————————————————————————	PRESSURE REDUCING VALVE	DPS F	DIFFERENTIAL PRESSURE SENSOR EXISTING TO REMAIN				
	12"ø	NEW ROUND DUCTWORK. SIZE IN INCHES	0	ELBOW (TURNED UP)	EA EAT	EXHAUST AIR ENTERING AIR TEMPERATURE			INC.	
			<u> </u>	ELBOW (TURNED DOWN) TEE (TURNED UP)	EER	ENERGY EFFICIENCY RATIO	ENGIN ARCHI	JEERS 448 WILL TECTS (75	9 McLAWS CIRCL LLIAMSBURG, VA 231: 57) 253-0673 VOIC 57) 253-2319 FA	LE 185 CE AX
	30x10ø	NEW FLAT OVAL DUCTWORK. SIZE IN INCHES. MAJOR AXIS VS. MINOR AXIS.		TEE (TURNED DOWN)	EFF	EXHAUST FAN EFFICIENCY	PLAN	NERS	www.djginc.com	
	DN			PITCH AND SLOPE PIPE DOWN IN DIRECTION OF	EC ELEC	ELECTRICAL CONTRACTOR ELECTRICAL		WEALTH	On the	
<		DUCT OFF—SET UP (UP) OR DOWN (DN)		ARROW, MIN. 1/8" PER FOOT UNLESS NOTED OR SPECIFIED OTHERWISE	EMCS ES	ENERGY MONITORING CONTROL SYSTEM END SWITCH	Ma NOT		The same	_
	UP	IN DIRECTION OF ARROW		PIPE SLEEVE	ESP EWT	EXTERNAL STATIC PRESSURE ENTERING WATER TEMPERATURE	\$ 00 S	twe No	人宣	*
	→ DN UP →			CONTINUATION	F FPM	FAHRENHEIT FEET PER MINUTE	31	Lic. No. 047	ARTER >	
	******	DUCT WITH FLEXIBLE CANVAS CONNECTION	CO II——	CLEANOUT PIPE UNION	FT FTS	FOOT/FEET FLOAT SWITCH	TON STATE	8/4/	12	
		DOCT WITH TEEXIDEE CANVAS CONNECTION	'I' ⊬ }		GA GPM	GAUGE GALLONS PER MINUTE		SSIONAL F	NGIL	
	-	EXHAUST / RETURN AIR ELBOW UP		AIR VENT, MANUAL	H20 HOA	WATER COMBINATION STARTER/DISCONNECT	APPROVED		SEA	<u>L</u>
		EXHAUST / RETURN AIR ELBOW DOWN	<u></u>	AIR VENT, AUTOMATIC		WITH HAND/OFF/AUTO OPERATION				
			<u> </u>	PRESSURE GAGE AND COCK	HP HPC	HORSEPOWER HIGH PRESSURE CONDENSATE	ACTIVITY -	- SATISFACTOR'	7 TO	
		SUPPLY / EXHAUST / OUTSIDE AIR ELBOW UP	TORY	PRESS & TEMPERATURE PORTS W/CAP & PET COCK	HPS HR	HIGH PRESSURE STEAM HOUR	DATE APPROVED)		
		SUPPLY / EXHAUST / OUTSIDE AIR ELBOW DOWN	—	SCHEMATIC PUMP	HS HW	HUMIDITY SENSOR HOT WATER				
				STRAINER W/BLOW OFF VALVE	HWR HWS	HOT WATER RETURN HOT WATER SUPPLY	FOR EFD	FOR COMMAND	ER NAVFAC	
		SUPPLY AIR DEVICE (4-WAY PATTERN)		STRAINER W/BLOW OFF VALVE	HZ IN	HERTZ INCHES	B	3.14.2012		
	<u></u>			THERMOMETER	LAT LBS	LEAVING AIR TEMPERATURE POUNDS	A/E SSC	DESIGN		
	4+	SUPPLY AIR DIRECTIONAL DEVICE	<u> </u>	THERMOMETER	LPS LWT	LOW PRESSURE STEAM LEAVING WATER TEMPERATURE	SSC KS		\ (\) (\) (_
			——————————————————————————————————————	2-WAY CONTROL VALVE	MAV MAX	MANUAL AIR VENT MAXIMUM		QC	XXX	
		EXHAUST OR RETURN AIR DEVICE	——————————————————————————————————————	3-WAY CONTROL VALVE	MBH	ONE THOUSAND BTUH	PROJECT	MANAGER	ARCH./ ENGR.	_
		CEM	$-\!$	BALANCING VALVE	MECH MERV	MECHANICAL MINIMUM EFFICIENCY REPORTING	FIRE PRO BRANCH		XXX	
	100 - S1-10ø -	— NECK SIZE		CHECK VALVE (DIRECTION AS INDICATED)	MIN	VALUE MINIMUM	DESIGN	DIRECTOR	XXX	
		— AIR DEVICE TAG	<u> </u>	TRIPLE DUTY VALVE	MOD MUA	MOTORIZED DAMPER MAKE-UP AIR	MMAND.			
	MVD	MANUAL VOLUME DAMPER (WITH LOCKING QUADRANT)	*	TEMPERATURE AND PRESSURE RELIEF VALVE	MVD NC	NORMALLY CLOSED OR NOISE	COMM			B
			▼		NIC	CRITERIA NOT INCLUDED IN CONTRACT	ERING T	>		
		SCHEMATIC FAN OR PUMP	Camanana	VALVE IN RISER	NO OA	NORMALLY OPEN OUTSIDE AIR	OINT	S		
		EQUIPMENT W/ MANUFACTURER'S		REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY	OBD OC	OPPOSED BLADE DAMPER ON CENTER	TES B	2		
	<u>AHU-1</u>	REQUIRED SERVICE CLEARANCE	REDUCER INCREASER	ECCENTRIC REDUCER AND INCREASER	ORU PC	OUTDOOR REFRIGERATION UNIT PRESSURIZED CONDENSATE	- FACILIT	PA		
	 			FLOAT AND THERMOSTATIC TRAP	PCF PE	POUNDS PER SQUARE FOOT HIGH DENSITY POLETHYLENE PIPING	NAVAL		401 END	
	<u>AHU-1</u>	EXISTING EQUIPMENT TO BE REMOVED			PG POS	PROPYLENE GLYCOL POSITION			44 EGE 44	
	A111 4/EV	EVICTING FOURDMENT TO DELLAND		FLEXIBLE PIPE CONNECTOR	PF PS	PLENUM FAN PRESSURE SENSOR	ATION,	3		Telebonemics
	AHU-1(E)	EXISTING EQUIPMENT TO REMAIN	DP	DDC DIFFERENTIAL PRESSURE SENSOR	PSIG PSIG	POUNDS PER SQUARE INCH GAGE	ĀTI	E R	ANICAL	
	-\-\-	AIRFLOW DIRECTION	DPS	DDC DIFFERENTIAL PRESSURE SWITCH	R RA	REFRIGERANT LINESET OR R-VALUE RETURN AIR	ST	Z		
		POINT OF DISCONNECTION	SP	DDC DUCT STATIC PRESSURE SENSOR	RH RPM	RELATIVE HUMIDITY REVOLUTIONS PER MINUTE	AR AR			
		POINT OF CONNECTION			RS RTU	ROTATION SENSOR ROOFTOP UNIT	S	>		
		CONTROLS WIRING	FS	DDC FLOW SWITCH	SA SAF	SUPPLY AIR SUPPLY AIR FAN	≥ ORP			
			TS	DDC TEMPERATURE SENSOR	SENS SD	SENSIBLE SMOKE DETECTOR	CO	O		
		KEYNOTE	HS	DDC HUMIDITY SENSOR	SP SPECS	STATIC PRESSURE SPECIFICATIONS	the H	FA		
	S	DDC TEMPERATURE SENSOR	SD	SMOKE DETECTOR	TDV TEMP	TRIPLE DUTY VALVE TEMPERATURE	ARTMENT OF MARINI			
	(1)	THERMOSTAT (NOT BY DDC)			TS TUC	TEMPERATURE SENSOR TERMINAL UNIT CONTROLLER	EPART			A
	H	HUMIDITY SENSOR	FZ	DDC FREEZE STAT	TYP	TYPICAL	CODE ID.	NO. 80091	SIZE D	
		TEMPERATURE SENSOR WITH INSULATED BASE	DM	DAMPER MOTOR ACTUATOR	V VD	VOLTS VOLUME DAMPER	SCALE:	AS SHO	WN	\exists
	P	SPACE PRESSURE SENSOR	VFD	VARIABLE FREQUENCY DRIVE	VFD W	VARIABLE FREQUENCY DRIVE ELECTRICAL WATTS	I	I. NO. CP12	059391 2004M	1
	E	HVAC EMERGENCY SHUTDOWN SWITCH	AF	DDC AIRFLOW MONITORING STATION	WB WG	WET BULB WATER GAGE	SPEC. NO.	CONTR. NO.		_
			Lucanomod		W/ WPD	WITH WATER PRESSURE DROP		RAWING NO.		_
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