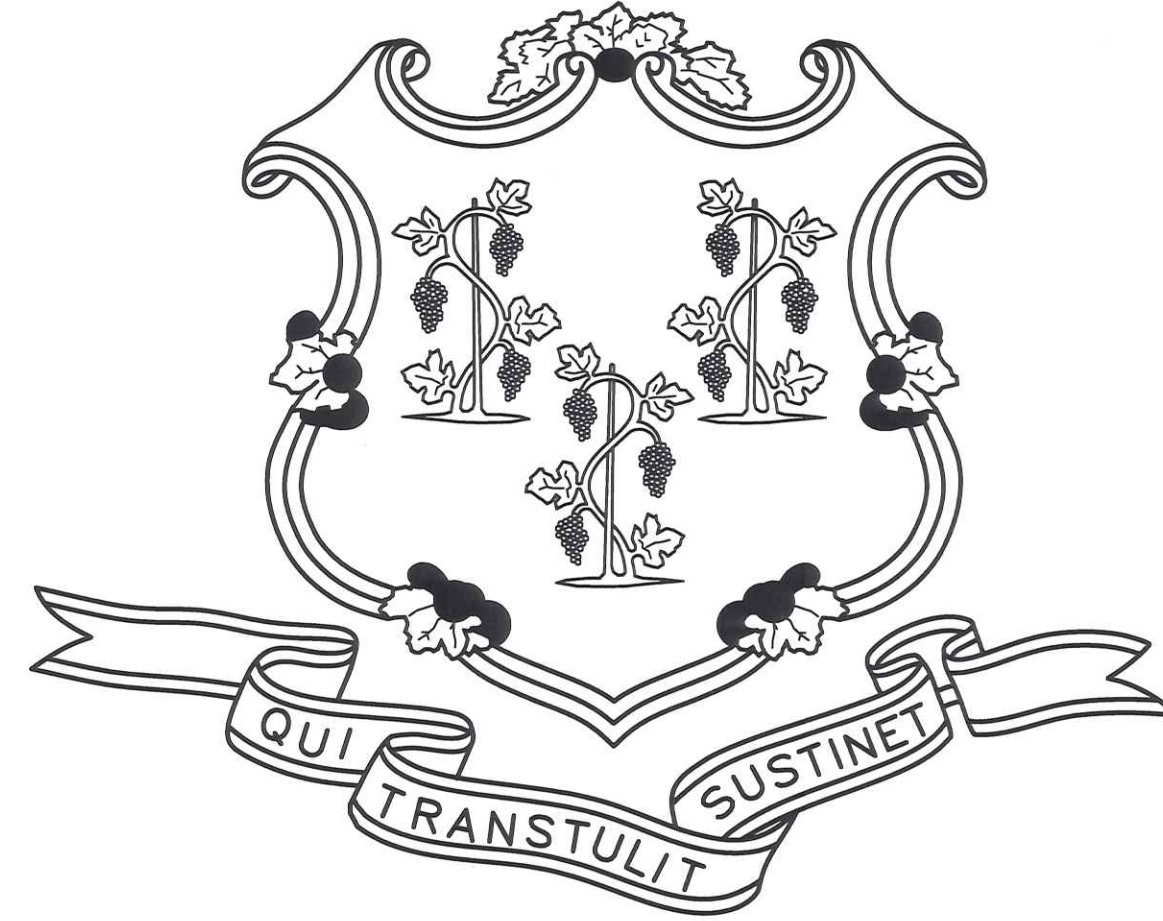


STATE OF CONNECTICUT



NED LAMONT GOVERNOR

DEPARTMENT OF ADMINISTRATIVE SERVICES
 JOSH GEBALLE
 COMMISSIONER

DEPARTMENT OF MOTOR VEHICLES
 JUDEEN WRINN
 INTERIM ACTING COMMISSIONER

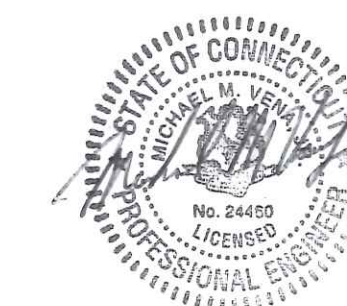
DEPARTMENT OF MOTOR VEHICLES
 WINSTED ROOF AND BOILER
 151 TORRINGTON ROAD, WINSTED, CONNECTICUT 06098

PROJECT NO. BI-MM-55

ARCHITECT
 MARTIN A. BENASSI, AIA / ARCHITECT, LLC
 TWO BROADWAY
 HAMDEN, CT 06518
 (203) 281-5000



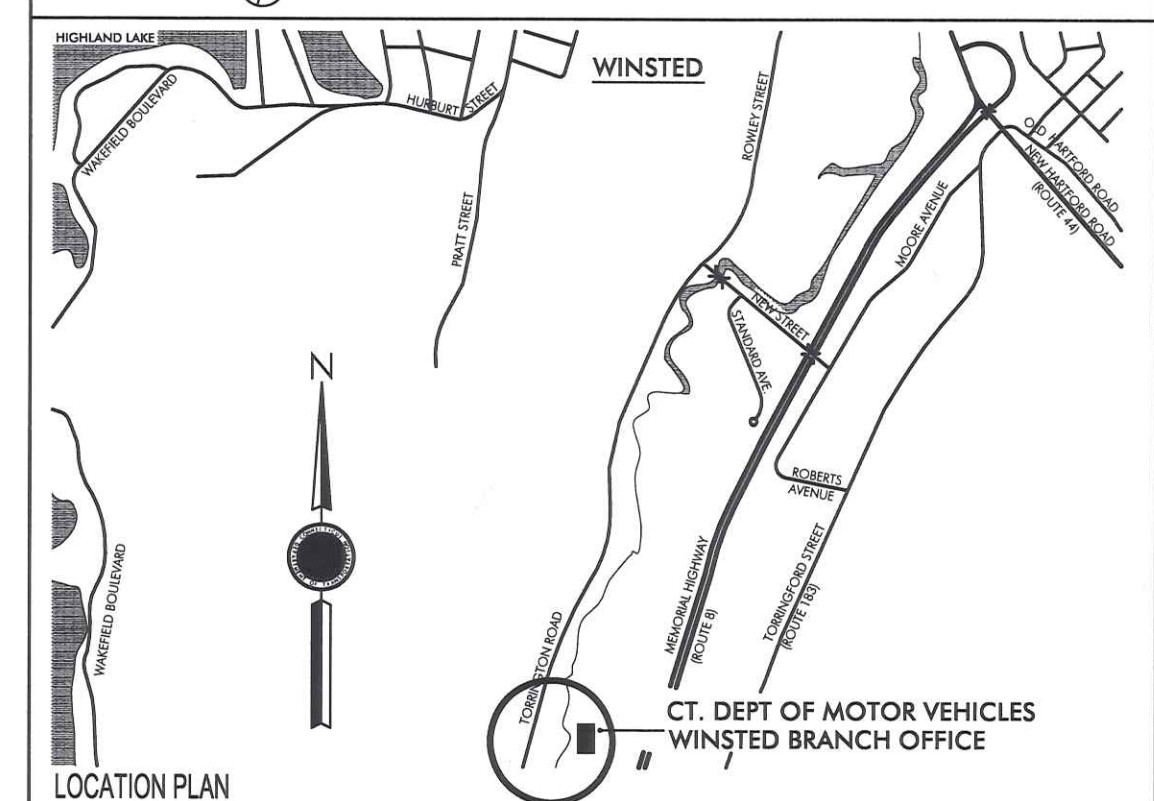
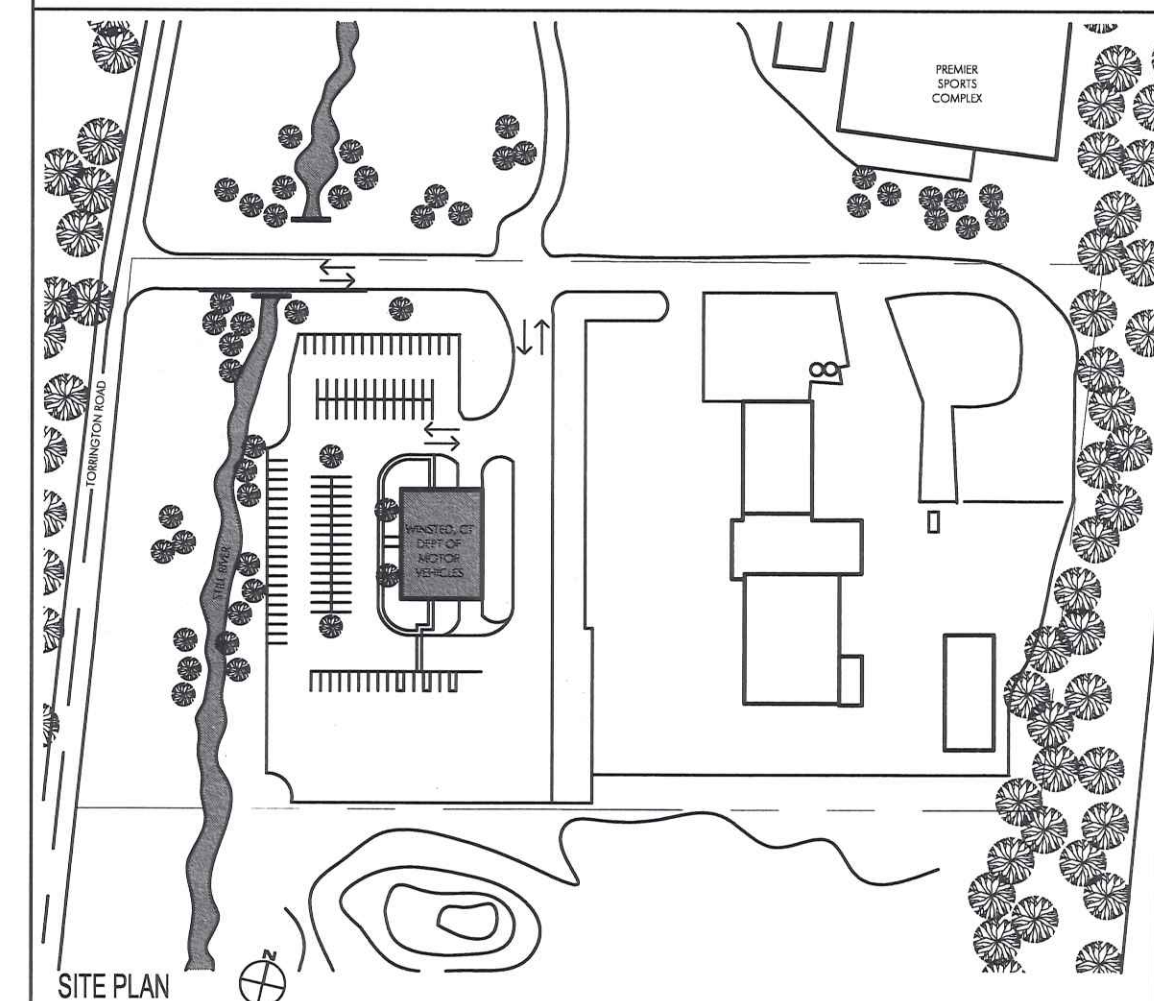
MECHANICAL ENGINEER
 GENERAL DRAFTING AND DESIGN
 140 WASHINGTON AVENUE
 NORTH HAVEN, CT 06473
 (203) 239-6818



CONTRACT DRAWINGS

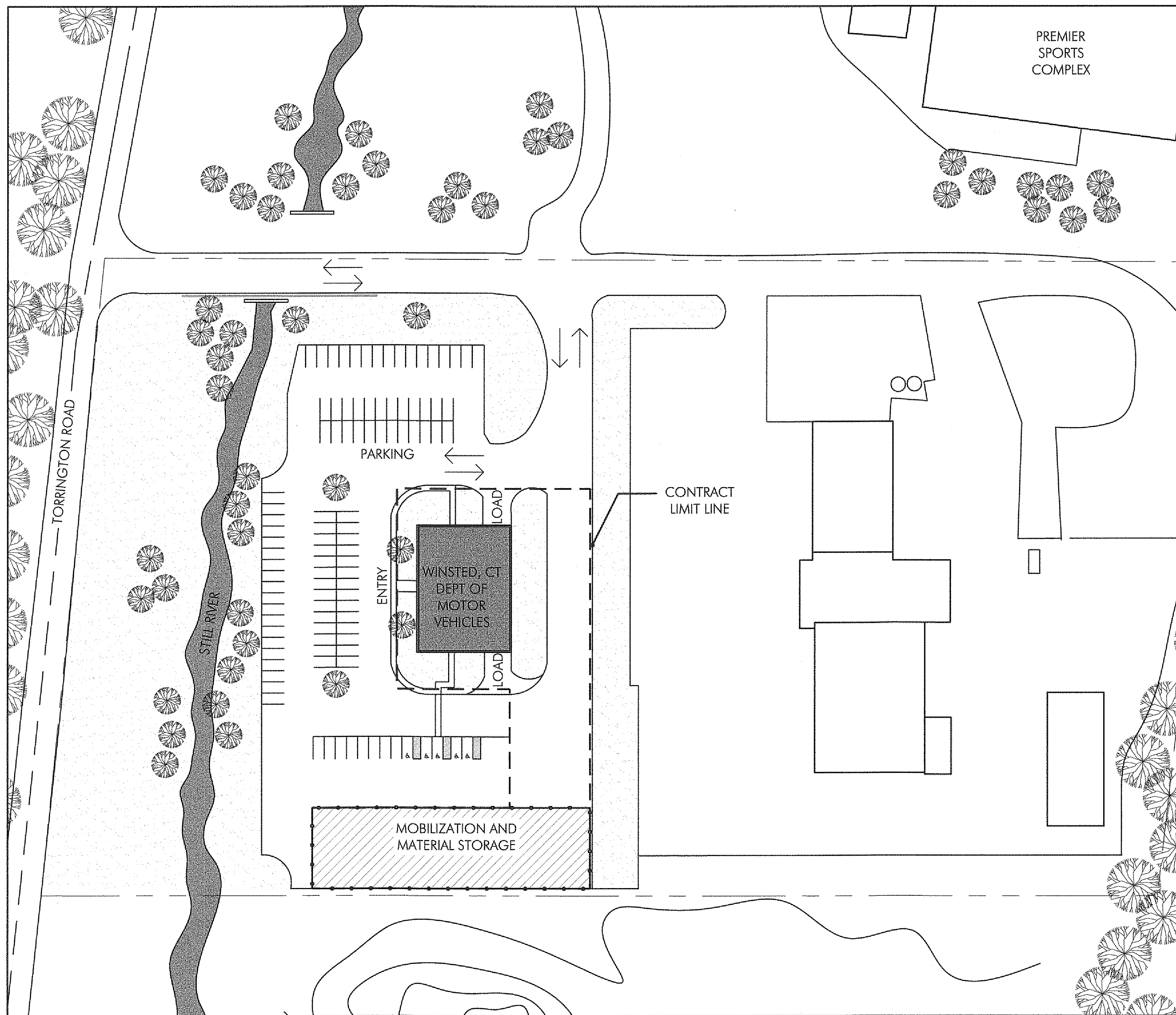
NO.	TITLE
	COVER
ARCHITECTURAL	
A-1	SITE PLAN AND NOTES
A-2	ROOF PLAN
A-3	ROOF DETAILS
A-4	ROOF DETAILS
MECHANICAL	
M-1	MECHANICAL SPECIFICATIONS
M-2	BOILER ROOM PLANS - MECHANICAL

D.C.S BUILDING NUMBER 67816



APPROVALS

<i>Josh Geballe</i>	2-28-19
DEPT. OF ADMINISTRATIVE SERVICES	DATE
<i>Judeen Wrinn</i>	2/27/2019
AGENCY	DATE



PROJECT DESCRIPTION

THE WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- REMOVE EXISTING BOILER AND INSTALL NEW BOILER AND RELATED MECHANICALS - SEE MECHANICAL DRAWINGS M1 AND M2.
- REMOVE EXISTING ROOFING SYSTEM DOWN TO METAL DECK. REMOVE ALL EXISTING FLOOD COAT/GRAVEL, BUILT UP ROOFING, INSULATION BOARDS, FLASHING, CANTS, COUNTER FLASHING, WOOD BLOCKING, ETC. NOTE - KEEP BOTTOM BLOCKING - VERIFY SECURE ATTACHMENT. ABATEMENT OF ALL ASBESTOS MATERIALS.
- INSPECT METAL DECK. REPAIR OR REPLACE DAMAGED OR RUSTED METAL DECKING - SEE UNIT PRICING. REFASTEN METAL DECK AS PER FM GLOBAL REQUIREMENTS. CLEAN AND PAINT METAL DECKING.
- EXISTING ROOFTOP MECHANICAL VENTILATOR UNITS ARE TO LIFTED AND RESET. REMOVE ALL MECHANICAL CURBS AND FLASHINGS, REPLACE WOOD BLOCKING AT ALL CURBS WITH NEW WOOD BLOCKING (NOT PART OF UNIT PRICING).
- DISCONNECT AND LIFT EXISTING AIR HANDLING UNIT TO INSTALL NEW PREFAB METAL CURBING UNIT FROM CARRIER TO MATCH EXISTING UNIT MODEL. INFILL METAL DECKING AT OLD OPENING. RESET UNITS. PROVIDE ALL NEW FLASHINGS AS INDICATED.
- REPLACE ROOF DRAINS WITH ALL NEW ASSEMBLY. PROVIDE NEW FLASHING AS INDICATED.
- EXISTING VENT PIPING TO REMAIN. PROVIDE NEW FLASHING AS INDICATED.
- INSTALL NEW BOILER FLUE STACK. PROVIDE NEW FLASHING AS INDICATED.
- REMOVE ANTENNA AND RELATED PITCH POCKETS. REMOVE PITCH POCKETS AS NOTED ON DRAWINGS.
- REMOVE EXISTING AND INSTALL NEW PREFAB ALUMINUM FASCIA EDGE, INCLUDING ALL NEW WOOD BLOCKING, FASTENERS, ETC.
- PROVIDE NEW FULLY ADHERED EPDM MEMBRANE ROOFING SYSTEM OVER 1/2 INCH DENSDECK COVERBOARD, 4 1/2 INCHES POLYISO/CYANURATE INSULATION MECHANICALLY ATTACHED TO METAL DECKING. PROVIDE ALL NEW CURBING, FLASHINGS.
- PROVIDE ALL ROOFING ASSEMBLIES TO MEET FM GLOBAL REQUIREMENTS AND STATE OF CT REQUIREMENT FOR 25 YEAR WARRANTY. INCLUDE 90 MIL EPDM MEMBRANE AND ENHANCED FLASHINGS AS INDICATED AS REQUIRED FOR MANUFACTURERS WARRANTY.
- PROVIDE EPDM FULLY ADHERED WALKWAY PADS AS SHOWN ON DRAWINGS.
- ALL OTHER RELATED WORK AS SHOWN ON THE DRAWINGS AND/OR INDICATED IN THE SPECIFICATIONS.

GENERAL NOTES

THE FOLLOWING NOTES SHALL APPLY THROUGHOUT. EXCEPTIONS ARE SPECIFICALLY NOTED ON EACH DRAWING:

- ALL WORK IS TO CONFORM TO ALL APPLICABLE REQUIREMENTS OF STATE AND LOCAL CODES, INDUSTRIAL LABOR CODE, HEALTH CODE, FIRE DEPARTMENT REGULATIONS, NFPA, OSHA CODES, & ALL RELATED SUPPLEMENTS/AMENDMENTS.
- DRAWINGS ARE NOT TO BE SCALED. USE DIMENSIONS ONLY. ALL DIMENSIONS AND CONDITIONS SHOWN AND ASSUMED ON THE DRAWINGS MUST BE VERIFIED AT THE SITE BY THE CONTRACTOR BEFORE ORDERING ANY MATERIAL OR DOING ANY WORK. ANY DISCREPANCIES IN THE DRAWINGS AND SPECIFICATIONS SHALL BE REPORTED TO THE ARCHITECT. NO CHANGE IN DRAWINGS OR SPECIFICATIONS IS PERMISSIBLE WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT.
- THE ARCHITECT HAS INDICATED AND ESTIMATED CERTAIN CONDITIONS EITHER NOT SHOWN OR NOT CONSIDERED RELIABLE ON OLDER DRAWINGS FURNISHED TO THE ARCHITECT, OR NOT MEASURABLE DUE TO ABSENCE OF DRAWINGS, OR INACCESSIBLE TO VERIFY IN FIELD PRIOR TO PREPARING THE DRAWINGS.
- WORK ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK EXCEPT WHERE SPECIFICALLY NOTED AS "EXISTING TO REMAIN".
- DETAILS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION OR OPERATION OF ANY PART OF THE WORK AS DETERMINED BY THE ARCHITECT, SHALL BE INCLUDED IN THE WORK THE SAME AS IF HEREIN SPECIFIED OR INDICATED.
- ALL WORK SHALL BE INSTALLED SO THAT ALL PARTS REQUIRED ARE READILY ACCESSIBLE FOR INSPECTION, OPERATION, MAINTENANCE AND REPAIR.
- ANY EXISTING WORK DAMAGED BY THE WORK SHALL BE PATCHED, REPAIRED, REFINISHED, AND CORRECTED BY THE CONTRACTOR TO MATCH EXISTING FINISHES TO THE CLOSEST EXISTING CORNER.
- CONTRACTOR SHALL RELOCATE/MODIFY AND PATCH ANY EXISTING ITEMS INTERFERING WITH THE INSTALLATION OF NEW WORK WHETHER SHOWN OR NOT ON THESE DRAWINGS.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING SAFETY PROGRAMS AND PRECAUTIONS IN THE SPECIFICATIONS, AND SUCH OTHER MEASURES AS MAY BE NECESSITATED TO PROVIDE REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY AND LOSS TO: 1) EMPLOYEES ON THE WORK AND OTHER PERSONS THAT MAY BE AFFECTED BY THE WORK; 2) ALL WORK, MATERIALS AND EQUIPMENT INCORPORATED IN THE WORK AND; 3) OTHER PERSONS AND PROPERTY AT THE SITE OR ADJACENT TO THE SITE.
- PROVIDE BARRICADES AROUND WORK AREAS AS REQUIRED TO PREVENT UNAUTHORIZED PERSONS FROM ENTERING THEREIN.
- PROVIDE GUARDS, RAILS, BARRICADES, FENCES, SIDEWALK SHEDS, CATCH PLATFORMS, DECKING, NIGHT LIGHTING, ETC., AS REQUIRED TO PROVIDE ADEQUATE PROTECTION.
- PROVIDE PROTECTION AT SIDEWALKS AND CURBS AROUND THE PREMISES SO THAT THEY MAY BE SAFELY USED BY THE PUBLIC, STAFF, AND / OR EMPLOYEES AT ALL TIMES AS REQUIRED BY CODE.
- CONTRACTOR SHALL KEEP WORK SITE FREE FROM DEBRIS AND ACCUMULATED REFUSE, AND SHALL HAVE SOLE RESPONSIBILITY FOR PROTECTING ALL DANGEROUS AREAS FROM ENTRY BY UNAUTHORIZED PARTIES. SITE WILL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY.
- REPLACE ALL LANDSCAPING INCLUDING TREES, SHRUBS OR OTHER PLANTING DISTURBED DURING THE WORK OF THE CONTRACT WITH NEW TO MATCH EXISTING. REGRADE & RESEED ANY GRASS AREAS DAMAGED AS A RESULT OF THE WORK. REPAIR ANY WALKWAYS OR PAVED AREAS DAMAGED AS A RESULT OF THE WORK.
- CONTRACTOR TO DEVELOP AN ACTIVITY PLAN AS PART OF HIS MEANS & METHODS.
- ALL FALL PROTECTION TO COMPLY WITH OSHA. CONTRACTOR RESPONSIBLE FOR AN INSTALLATION THAT MEETS OR EXCEEDS ALL REGULATORY REQUIREMENTS.
- UNDERGROUND UTILITIES, ETC. HAVE NOT BEEN LOCATED. LOCATE ALL BEFORE LOADING GROUND WITH VEHICULAR TRAFFIC, DUMPSTERS, MATERIAL STORAGE, ETC.
- DRIVEWAYS MUST BE MAINTAINED AND LEFT SERVICABLE THROUGHOUT THE ENTIRE PROJECT.
- ALL VEHICULAR & ENTRANCES / EXITS ARE TO BE UNOBSTRUCTED AND PROTECTED.
- PROPOSED CONTRACT LIMIT LINE IS FOR BIDDING PURPOSES ONLY. FINAL LOCATION OF THE DUMPSTER, CONSTRUCTION VEHICLE PARKING, LAY-DOWN AREAS, AND CONTRACT LIMIT LINE, ETC. SHALL BE CLARIFIED WITH THE AGENCY USER. SPECIFIC AREAS WITHIN THE CONTRACT LIMIT LINE MAY BE USED PER THEIR WORK OPERATIONS.

UNIT PRICE QUANTITIES

- COORDINATE WITH SPECIFICATION SECTIONS FOR UNIT PRICE ITEMS AND BIDDING INFORMATION.
- TOTAL AREA OF WORK TO BE INCLUDED IN BASE BID AMOUNTS IS AS FOLLOWS (SEE SPECIFICATIONS SECTION 01 20 00 - CONTRACT CONSIDERATION):
 METAL DECKING SPEC SECTION 05 31 00
 ROUGH CARPENTRY SPEC SECTION 06 10 53

LIST OF ABBREVIATIONS

@	AKA	AT	ALSO KNOWN AS	FT	FOOT	PT	PRESSURE TREATED
BD	BOARD	G/C	GENERAL CONTRACTOR	HC	HANDICAPPED	REIN	REINFORCED
CF	COUNTER FLASHING	HM	HOLLOW METAL	INSUL	INSULATION	REQD	REQUIRED
CJ	CONTROL JOINT	IT	JOINT	SP	SQUARE FOOT	SIM	SIMILAR
DIA	DIAMETER	JT	JOINT	SPF	SPRAY POLYURETHANE FOAM	SS	STAINLESS STEEL
DN	DOWN	LC	LEAD COATED	SQ	SQUARE	STL	TYPICAL
DTL	DETAIL	LCC	LEAD COATED COPPER	SS	STAINLESS STEEL	VIF	VERIFY IN FIELD
EL	ELEVATION	MIN	MINIMUM	WD	WOOD	W/	WITH
ELEC	ELECTRICAL	MTL	METAL				
ELEV	ELEVATOR	NIC	NOT IN CONTRACT				
EJ	EXPANSION JOINT	NTS	NOT TO SCALE				
EXIST	EXISTING	OC	ON CENTER				
EXP	EXPANSION	OH	OVER HEAD				
FIN	FINISH	PLYWD	PLYWOOD				
FL	FLOOR	PREFAB	PREFABRICATED				

BUILDING CODE:

- 2016 CONNECTICUT STATE BUILDING CODE
- 2016 CONNECTICUT SUPPLEMENT WITH AMMENDMENTS
- 2012 INTERNATIONAL BUILDING CODE
- 2012 INTERNATIONAL EXISTING BUILDING CODE
- 2012 INTERNATIONAL PLUMBING CODE
- 2012 INTERNATIONAL MECHANICAL CODE
- 2012 INTERNATIONAL RESIDENTIAL CODE
- 2012 INTERNATIONAL ENERGY CONSERVATION CODE
- 2012 NATIONAL ELECTRICAL CODE (NFPA 70)
- 2016 CONNECTICUT FIRE SAFETY CODE
- 2012 INTERNATIONAL FIRE CODE & AMMENDMENTS
- 2012 NFPA101, LIFE SAFETY CODE & AMMENDMENTS
- 2009 ICC/ANSI A117.1 ACCESSIBLE & USABLE BUILDINGS & FACILITIES

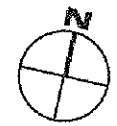
BUILDING INFORMATION

form 3011F

STATE BUILDING CODE	
1.0 EXISTING BUILDING:	
1.1 CONTINUATION OF EXISTING USE.....	YES
1.2 CHANGE OF USE.....	NA
1.3 COMPLYG W/INTERNL EXIST. BLDG. CODE	NA
2.0 NEW BUILDINGS OR ADDITIONS:	
2.1 EXCEEDS THRESHOLD BUILDING LIMITS.....	NA
3.0 USE GROUP CLASSIFICATION	B
4.0 HEIGHT AND AREA COMPUTATION - CASE 1:	NA
4.1 BUILDING HEIGHT:	
4.1.1 ACTUAL BUILDING HEIGHT.....	STORY FEET
4.1.2 ACTUAL BUILDING HEIGHT.....	STORY FEET
4.2 OPEN PERIMETER COMPUTATION:	
BUILDING PERIMETER.....	FEET
BUILDING OPEN PERIMETER.....	FEET
TOTAL BLDG. OPEN PERIMETER.....	FEET
PERCENT (%) OPEN PERIMETER.....	%
TOTAL BLDG. OPEN PERIMETER/BLDG. PERIMETER.....	%
% INCREASE FOR OPEN PERIMETER.....	%
4.3 AREA CONVERSION FACTOR:	
% OF ALLOWABLE TABULAR AREA.....	100%
% REDUCTION FOR HEIGHT.....	NA
% INCREASE FOR OPEN PERIMETER.....	NA
% INCREASE FOR FIRE SUPPRESSION.....	NA
TOTAL PERCENTAGE FACTOR.....	NA
CONVERSION FACTOR (% FACTOR/100).....	NA
4.4 ACTUAL GROSS FLOOR AREA (LARGEST FLOOR).....	9700 SF
4.5 ACTUAL GROSS FLOOR AREA (ENTIRE BUILDING).....	N/A SF
4.6 ADJUSTED TABULAR AREA (ACTUAL GROSS FLOOR AREA/CONVERSION FACTOR).....	
4.7 ALLOWABLE BUILDING AREA PER FLOOR (CONVERSION FACTOR X TABULAR AREA).....	SF
4.8 MINIMUM TYPE OF CONSTRUCTION REQUIRED.....	
4.9 MINIMUM TYPE OF CONSTRUCTION REQUIRED.....	
4.10 TYPE OF CONSTRUCTION ASSUMED FOR REVIEW.....	TYPE 2
5.0 HEIGHT AND AREA COMPUTATION - CASE 2:	
5.1 ACTUAL FLOOR AREA.....	USE SF
5.2 ADJUSTED TABULAR AREA (ACTUAL GROSS FLOOR AREA/CONVERSION FACTOR).....	
SUM OF ADJUSTED TABULAR AREAS =	
IF GREATER THAN 1.00 A HIGHER TYPE OF CONSTRUCTION IS REQUIRED	
5.3 MINIMUM TYPE OF CONSTRUCTION REQUIRED.....	
5.4 TYPE OF CONSTRUCTION ASSUMED FOR REVIEW.....	
6.0 CONSTRUCTION TYPE:	
MINIMUM TYPE OF CONSTRUCTION REQUIRED.....	
ACTUAL TYPE OF CONSTRUCTION PROVIDED.....	
7.0 MEANS OF EGRESS:	
7.1 TOTAL OCCUPANT LOAD (ENTIRE BUILDING).....	
7.2 TOTAL OCCUPANT LOAD (LARGEST FLOOR).....	
7.3 TOTAL CAPACITY OF EXITS (EXIT DISCHARGE).....	
8.0 FIRE RESISTANT RATING OF STRUCTURE ELEMENTS (TABLE 602) REFER TO CONSTRUCTION DOCUMENTS FOR THE FOLLOWING:	
8.1 EXTERIOR WALLS:	
8.1.1 LOAD BEARING.....	HR(S)
8.1.2 NON-LOAD BEARING.....	HR(S)
8.2 FIRE WALLS & PARTY WALLS.....	
8.2 FIRE SEPARATION ASSEMBLIES:	
8.3.1 FIRE ENCLOSURE OF EXITS.....	HR(S)
8.3.2 SHAFTS.....	HR(S)
8.3.3 MIXED USE SEPARATION.....	HR(S)
8.3.4 OTHER SEPARATION ASSEMBLIES.....	HR(S)
8.4 FIRE PARTITIONS.....	
8.5 DWELLING UNIT SEPARATIONS.....	HR(S)
8.6 SMOKE BARRIERS.....	HR(S)
8.7 OTHER NON BEARING PARTITIONS.....	HR(S)
8.8 INTERIOR BEARING WALLS, BEARING PARTITIONS, COLUMNS, GIRDERS, TRUSSES AND FRAMING:	
8.8.1 SUPPORTING MORE THAN ONE FLOOR.....	HR(S)
8.8.2 SUPPORTING ONE FLOOR ONLY OR A ROOF.....	HR(S)
8.8.3 STRUCTURAL MEMBERS SUPPORTING WALL.....	HR(S)
8.8 FLOOR CONSTRUCTION INCLUDING BEAMS.....	HR(S)
8.9 ROOF CONSTRUCTION:	
8.9.1 * 15 FT. OR LESS.....	CLASS C HR(S)
8.9.2 * 15 FT. OR MORE.....	HR(S)
8.9.3 * 20 FT. OR MORE.....	HR(S)
* HEIGHT TO LOWEST MEMBER.	
9.0 FIRE PROTECTION SYSTEM:	
9.1 FIRE SUPPRESSION SYSTEM.....	
9.2 ALARMS.....	
9.3 AUTOMATIC FIRE DETECTION SYSTEM.....	
9.4 SMOKE CONTROL SYSTEM.....	
9.5 SUPERVISION.....	
STATE FIRE SAFETY CODE	
1.0 CLASSIFICATION OF OCCUPANCY.....	
2.0 CONSTRUCTION CLASSIFICATION.....	
3.0 MINIMUM CONSTRUCTION TYPE REQUIRED.....	
4.0 ACTUAL CONSTRUCTION TYPE PROVIDED.....	
5.0 NOTIFICATION/ALARMS.....	
6.0 DETECTION.....	
7.0 EXTINGUISHMENT REQUIREMENTS.....	

1 SITE PLAN

SCALE: 1" = 60'-0"



HATCHING SYMBOLS

SEE ALSO LEGENDS ON SUBSEQUENT SHEETS

	CONCRETE BLOCK		STEEL		SPRAY FOAM INSULATION		NEW WOOD BLOCKING		EPDM ROOF
	STONE CONCRETE		RIGID INSULATION		FINISHED WOOD		DETAIL NUMBER		SECTION NUMBER
							ELEVATION NUMBER		WINDOW NUMBER
							DETAIL SIZE		REVISIONS

REFERENCES

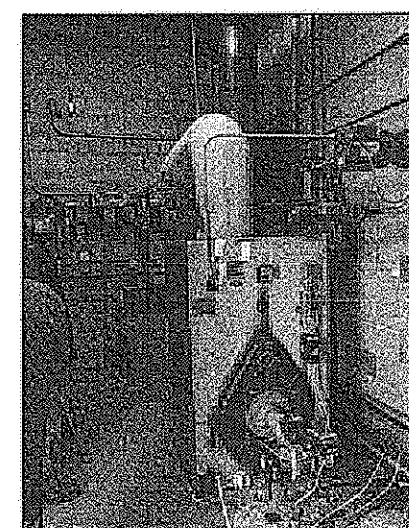
	DETAIL NUMBER		SECTION NUMBER		ELEVATION NUMBER
	DETAIL SIZE		REVISIONS		WINDOW NUMBER



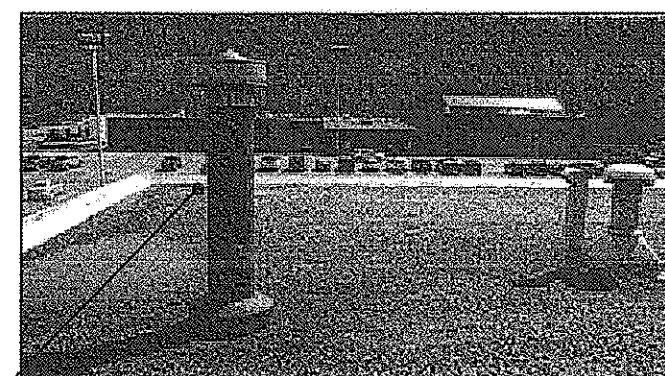
EXISTING FASCIA/D RIP EDGE TO BE REPLACED WITH NEW PREFAB ALUMINUM FASCIA/D RIP EDGE SEE DETAIL AT 3 / A-3. PAINTED TO MATCH EXISTING METAL FASCIA.



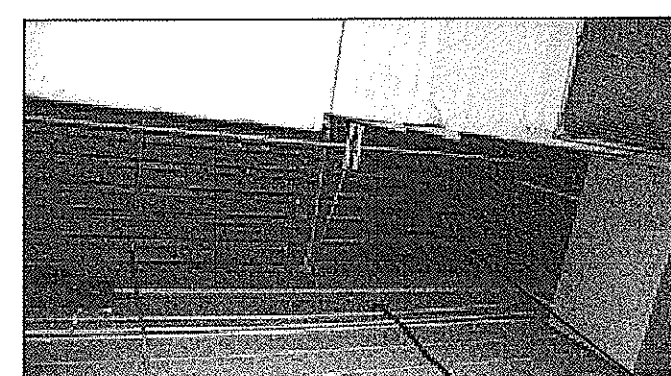
TEST CUT #1 - PLYWD & BLOCKING TO BE REMOVED. KEEP EXIST. BOTTOM BLOCKING. VERIFY SECURE ATTACHMENT. METAL DECK TO REMAIN. REPAIR, REPLACE, FASTEN AS REQUIRED. ALL EXIST BUR ROOFING AND INSULATION BOARDS TO BE REMOVED -SEE DETAIL AT 2/A-3.



BOILER FLUE PIPE TO BE REPLACED, SEE DETAIL AT 5/A-4.



EXISTING BOILER TO BE REPLACED AT EXISTING BOILER ROOM SEE MECHANICAL DRAWINGS - M-1 & M-2.



UNDERSIDE OF DECK. REPLACE ALL METAL DECKING WHERE RUSTED THROUGH TO UNDERSIDE. SEE UNIT PRICING.



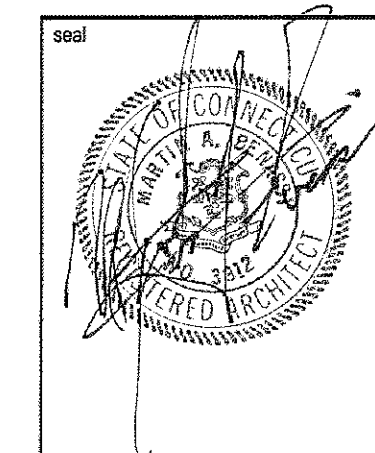
EXISTING AIR HANDLING UNIT TO REMAIN. DISCONNECT AND LIFT UNIT TO INSTALL NEW PREFABRICATED METAL CURB FROM CARRIER - MODEL # CRFCURB047A00. SEE DETAIL AT 1 / A-3. ADD METAL DECKING TO PATCH OPEN AREA. ROOF OVER.



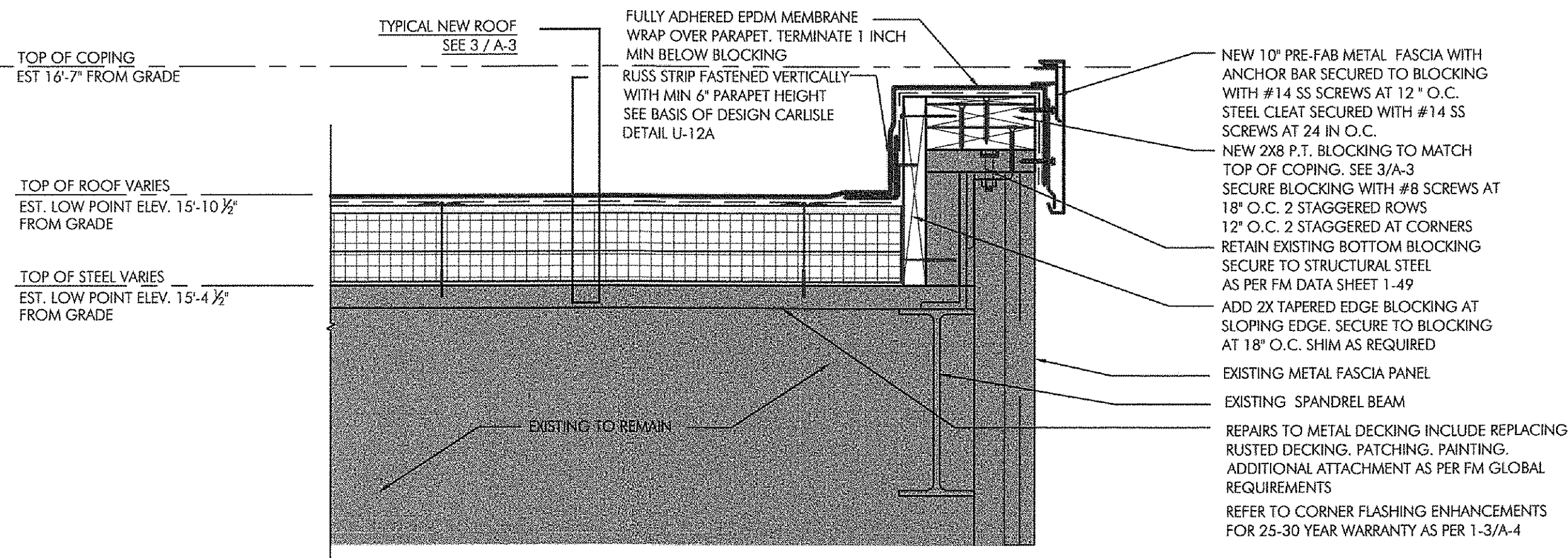
EXISTING PIPES AND FLUE TO BE REPLACED SEE MECHANICAL DRAWINGS - M-1 & M-2.



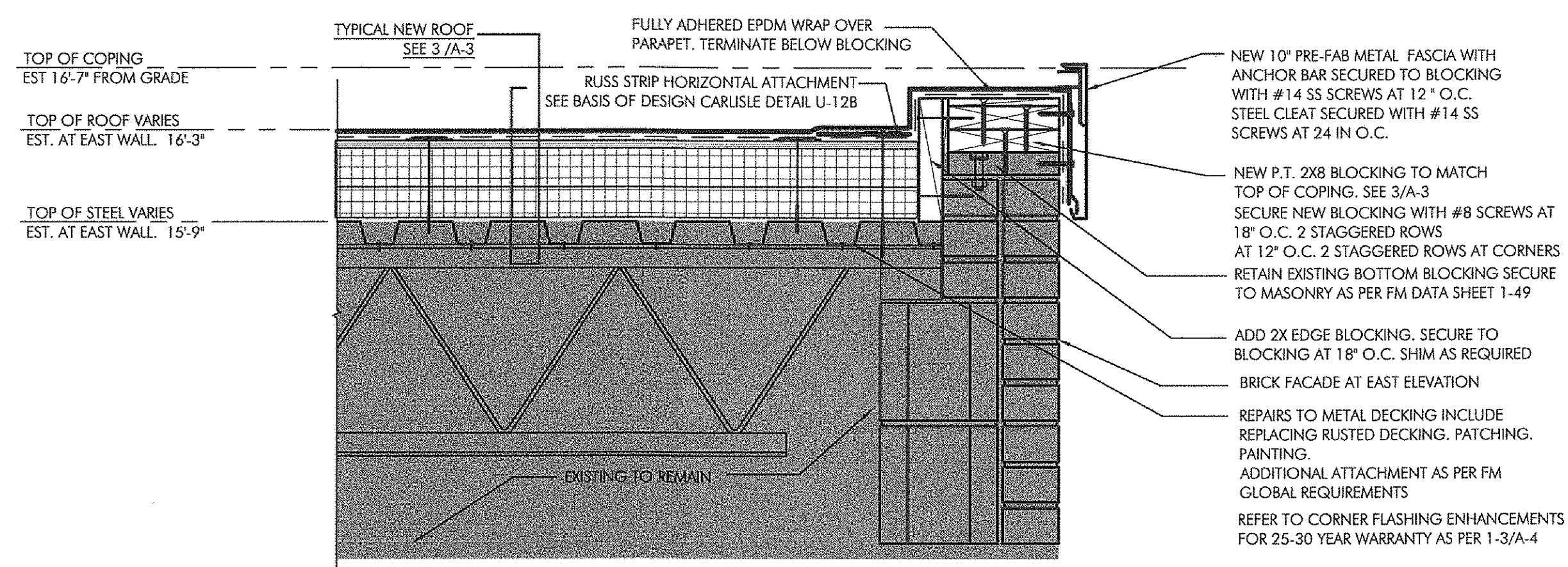
EXISTING OIL TANKS TO REMAIN SEE LOCATION AT 4 / A-2.



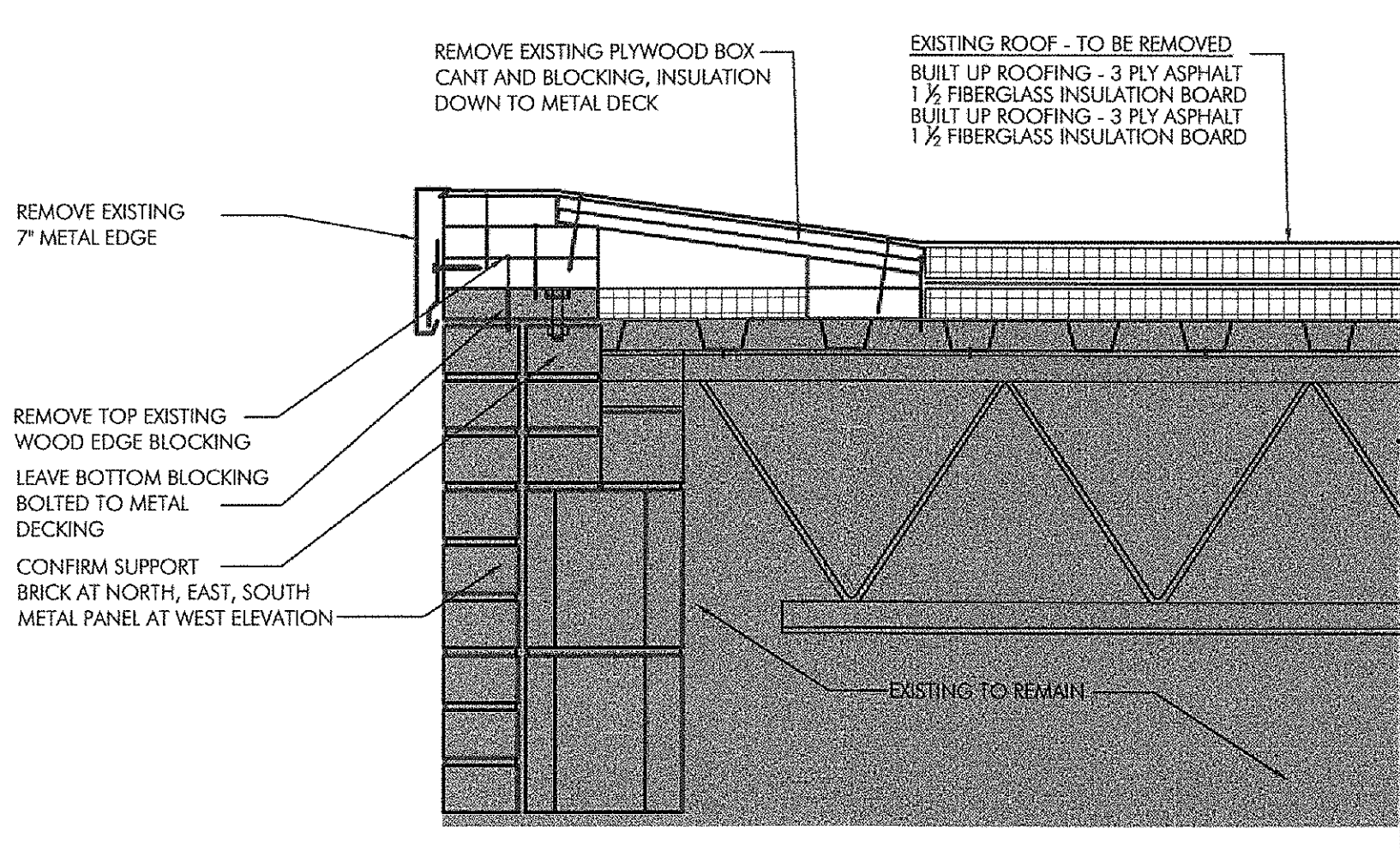
drawing title		SITE PLAN AND NOTES		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
REVISIONS		drawing prepared by		date	
mark	date	description		02/21/2019	
X	XXX	XXX		scale	
		drawing prepared by		AS SHOWN	
		Martin A. Benassi, AIA - Architect, LLC		drawn by	
		Two Broadway, Hamden, CT 06518		MH	
		(203) 281-5000		approved by	
		project		MAB	
		WINSTED ROOF AND BOILER		drawing no.	
		DEPARTMENT OF MOTOR VEHICLES		A-1	
		151 TORRINGTON ROAD, WINSTED, CT 06098			
CAD no.		project no.			
A-1 SITE PLAN.dwg		BI-MM-55			



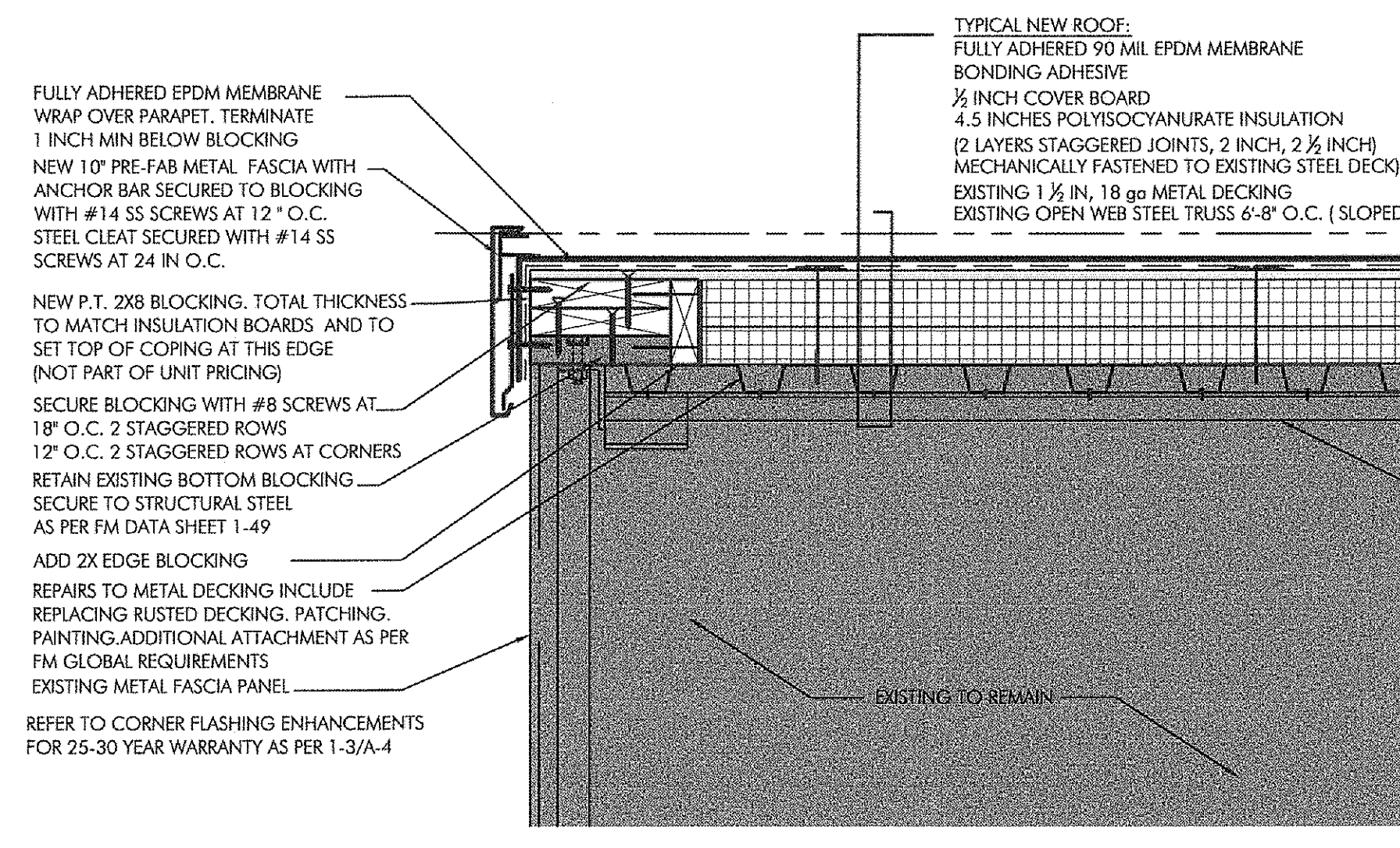
5 NEW ROOF EDGE AT NORTH ELEVATION - ROOF LOW POINT
SCALE: 1 1/2" = 1'-0"



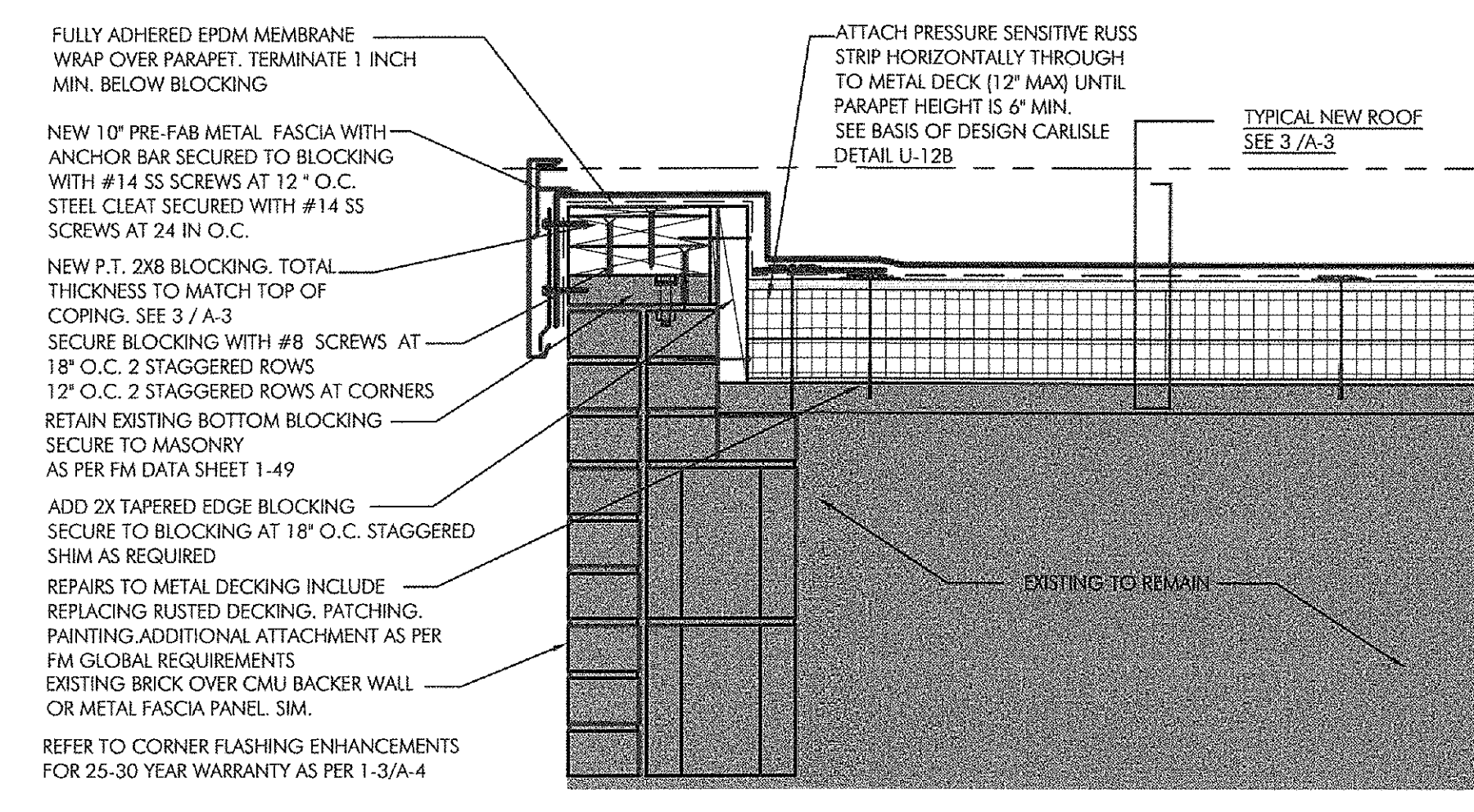
6 NEW ROOF EDGE DETAIL AT EAST ELEV.
SCALE: 1 1/2" = 1'-0"



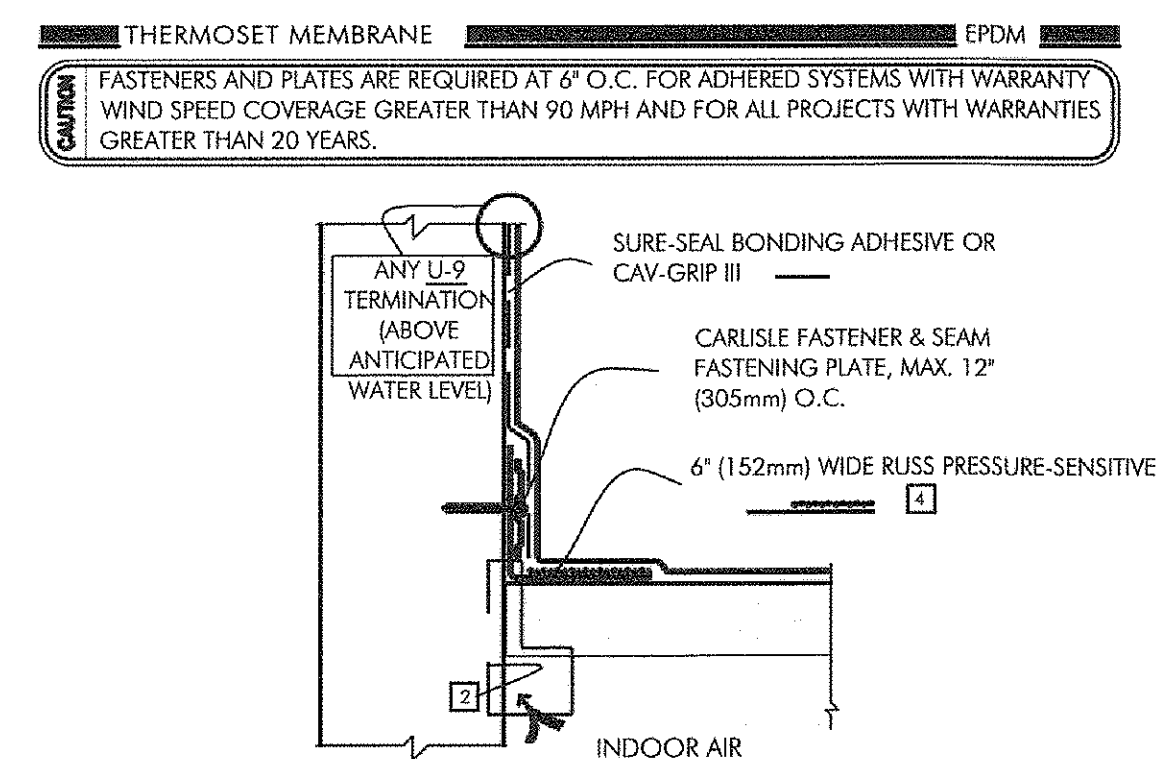
2 DEMOLITION AT EXISTING EDGE DETAIL - TYP.
SCALE: 1 1/2" = 1'-0"



3 NEW ROOF EDGE AT WEST ELEVATION - STEEL HIGH POINT
SCALE: 1 1/2" = 1'-0"

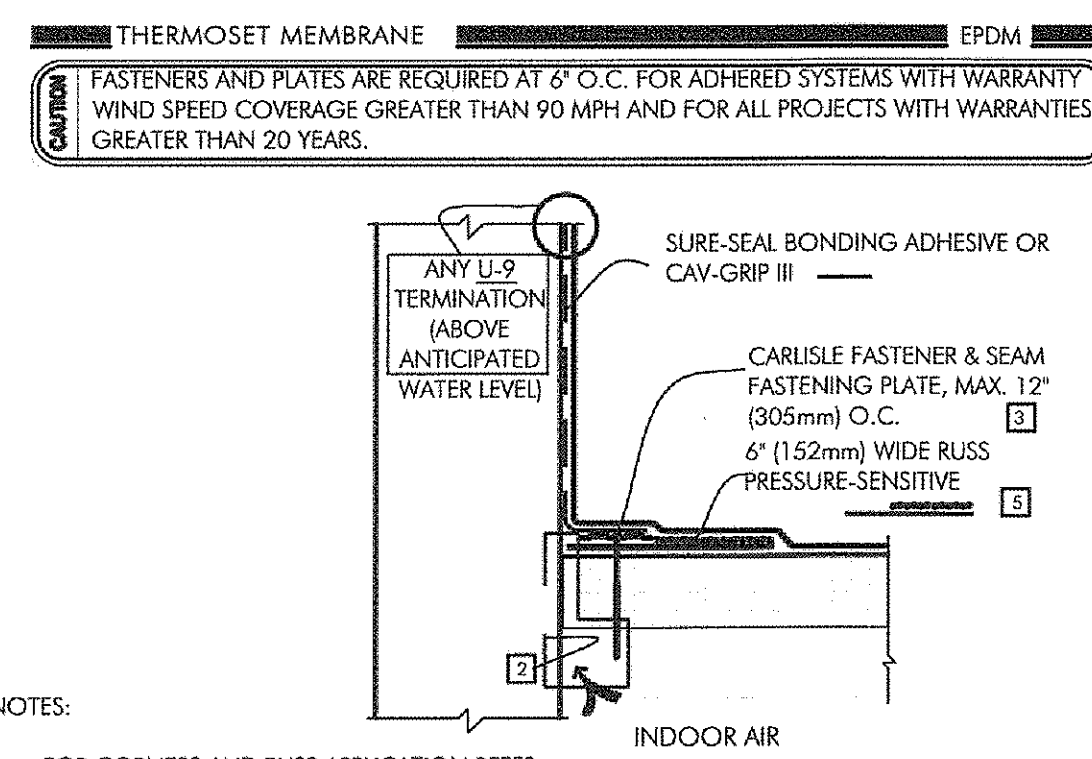


4 NEW ROOF EDGE DETAIL AT SOUTH ELEV. MIDPOINT
SCALE: 1 1/2" = 1'-0"



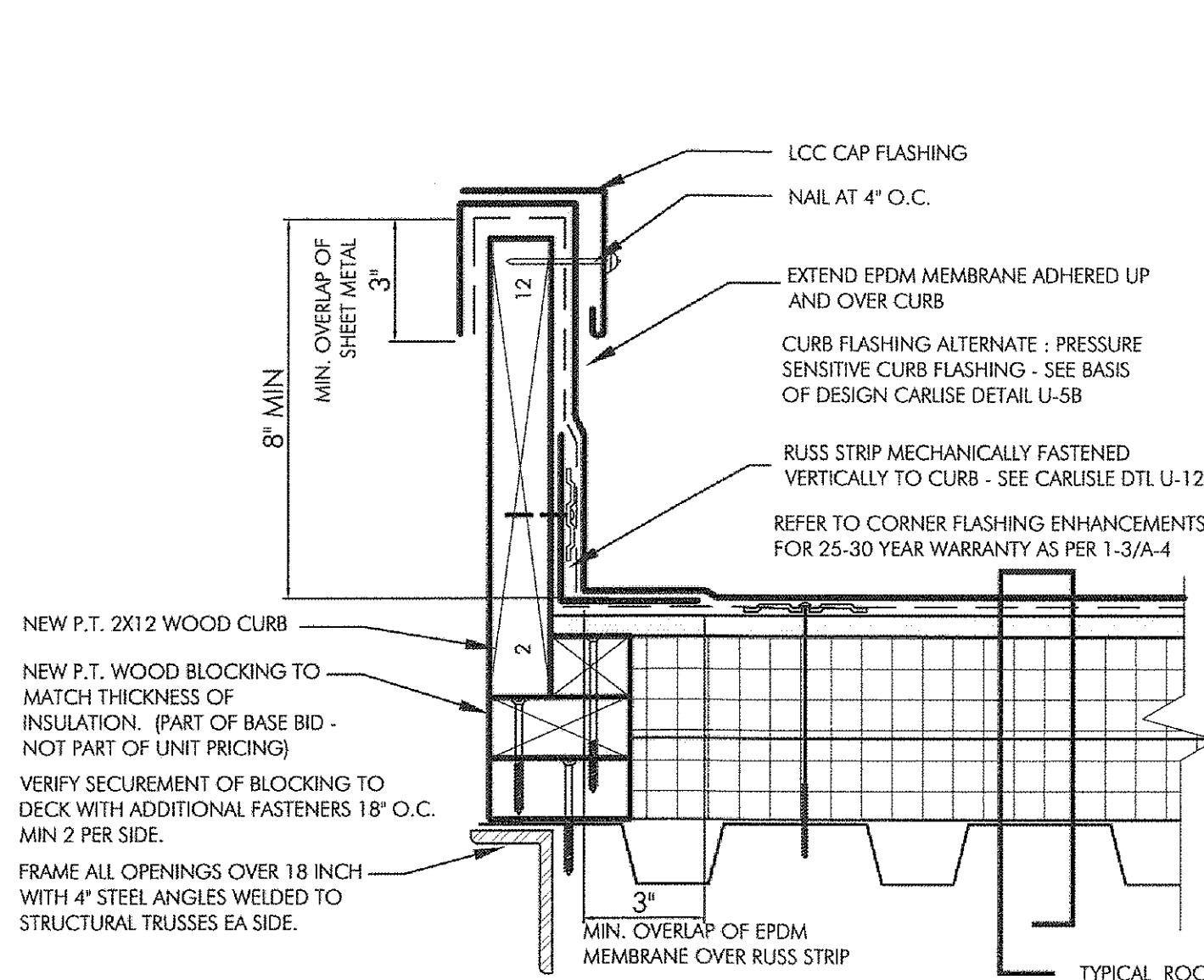
- NOTES:**
- FOR CORNERS AND RUSS APPLICATION REFER TO DETAILS U-15A OR U-15B.
 - REFER TO SPEC. SUPPLEMENTS G-01-18 OR G-08-18:
 - TO BLOCK INDOOR AIR INFILTRATION AND HUMIDITY AT THE JUNCTION (G-01-18).
 - WHERE ROOF SYSTEM IS DESIGNED WITH A VAPOR RETARDER (G-08-18).
 - EPDM PRIMER MUST BE APPLIED TO BACK SIDE OF DECK MEMBRANE PRIOR TO COMPLETING SPLICE TO PRESSURE-SENSITIVE RUSS.
 - PROJECTS WITH 25 AND 30-YEAR WARRANTIES OR WHEN USING 90-MIL MEMBRANE, ALL VERTICAL SPLICES AT THE BASE OF A WALL AND SPLICE INTERSECTIONS MUST BE OVERLAP WITH TWO LAYERS OF PRESSURE-SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6" (152mm) WIDE COVERED WITH A 12" (305mm) WIDE PRESSURE-SENSITIVE ELASTOFORM FLASHING PIECE. BOTH LAYERS SHALL BE CENTERED AND FINAL LAYER SEALED WITH CONTINUOUS LAP SEALANT. REFER TO DETAIL U-2C.

EPDM	PARAPET / CURB WITH PRESSURE-SENSITIVE RUSS (VERTICAL)	DETAIL NO. U-12A
APPROVED SUBSTRATE		
SEE NOTES		



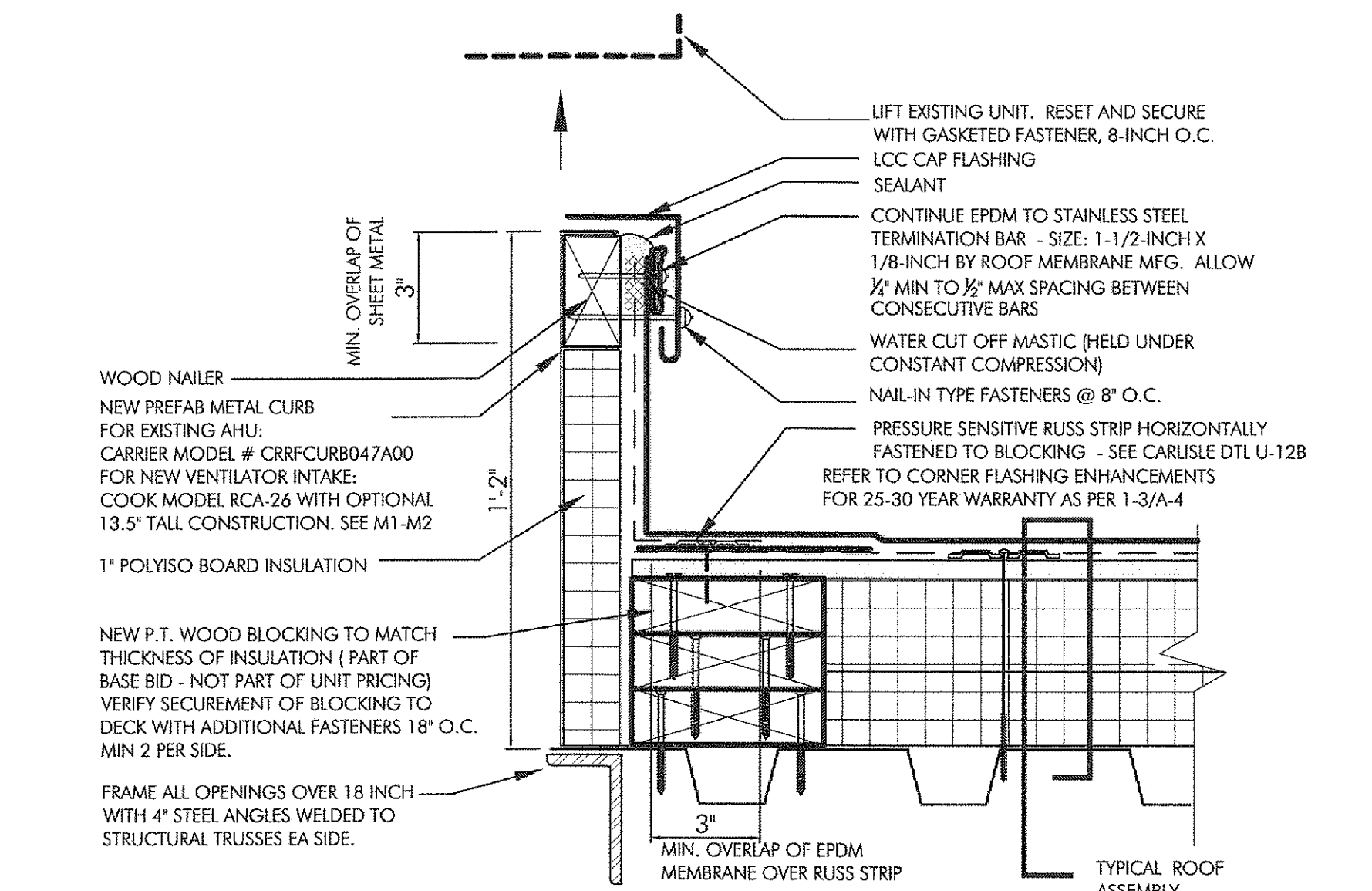
- NOTES:**
- FOR CORNERS AND RUSS APPLICATION REFER TO DETAILS U-15A OR U-15B.
 - REFER TO SPEC. SUPPLEMENTS G-01-18 OR G-08-18:
 - TO BLOCK INDOOR AIR INFILTRATION AND HUMIDITY AT THE JUNCTION (G-01-18).
 - WHERE ROOF SYSTEM IS DESIGNED WITH A VAPOR RETARDER (G-08-18).
 - ON MECHANICALLY-FASTENED ROOFING SYSTEMS, HP FASTENERS AND POWDER SEAM PLATES ARE REQUIRED OVER STEEL DECK.
 - PROJECTS WITH 25 AND 30-YEAR WARRANTIES OR WHEN USING 90-MIL MEMBRANE, ALL VERTICAL SPLICES AT THE BASE OF A WALL AND SPLICE INTERSECTIONS MUST BE OVERLAP WITH TWO LAYERS OF PRESSURE-SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6" (152mm) WIDE COVERED WITH A 12" (305mm) WIDE PRESSURE-SENSITIVE ELASTOFORM FLASHING PIECE. BOTH LAYERS SHALL BE CENTERED AND FINAL LAYER SEALED WITH CONTINUOUS LAP SEALANT. REFER TO DETAIL U-2C.

EPDM	PARAPET / CURB WITH PRESSURE-SENSITIVE RUSS (HORIZONTAL)	DETAIL NO. U-12B
APPROVED SUBSTRATE		
SEE NOTES		



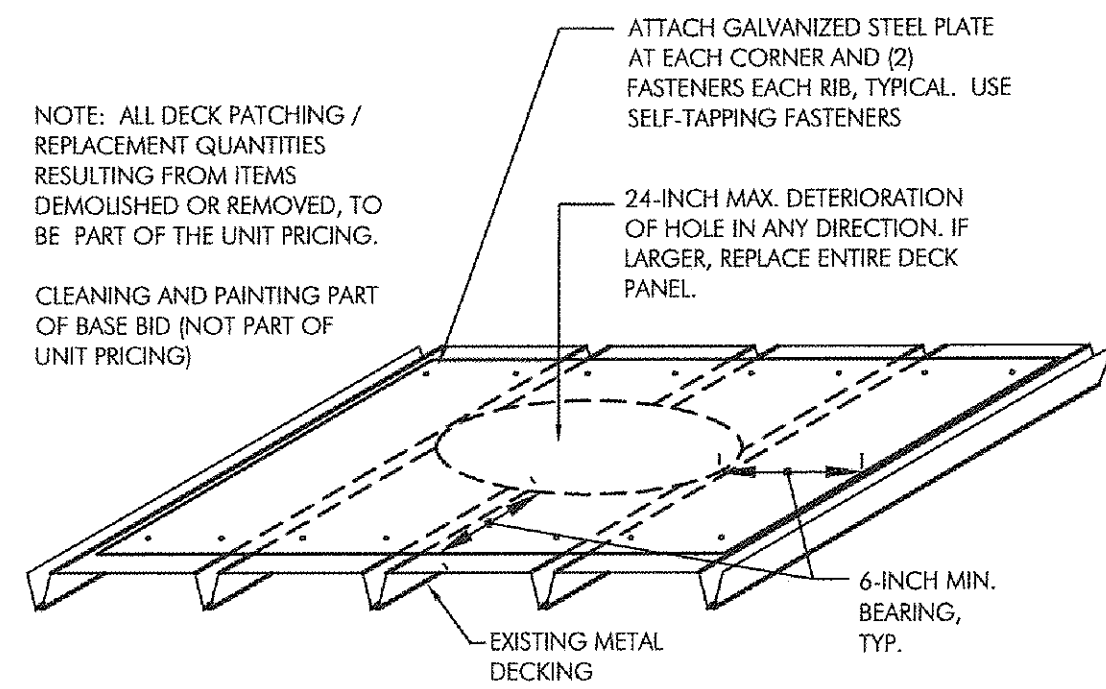
A WOOD CURB AT EXISTING MECHANICAL VENTILATOR UNITS

1 ROOF CURB DETAILS
SCALE: 3" = 1'-0"

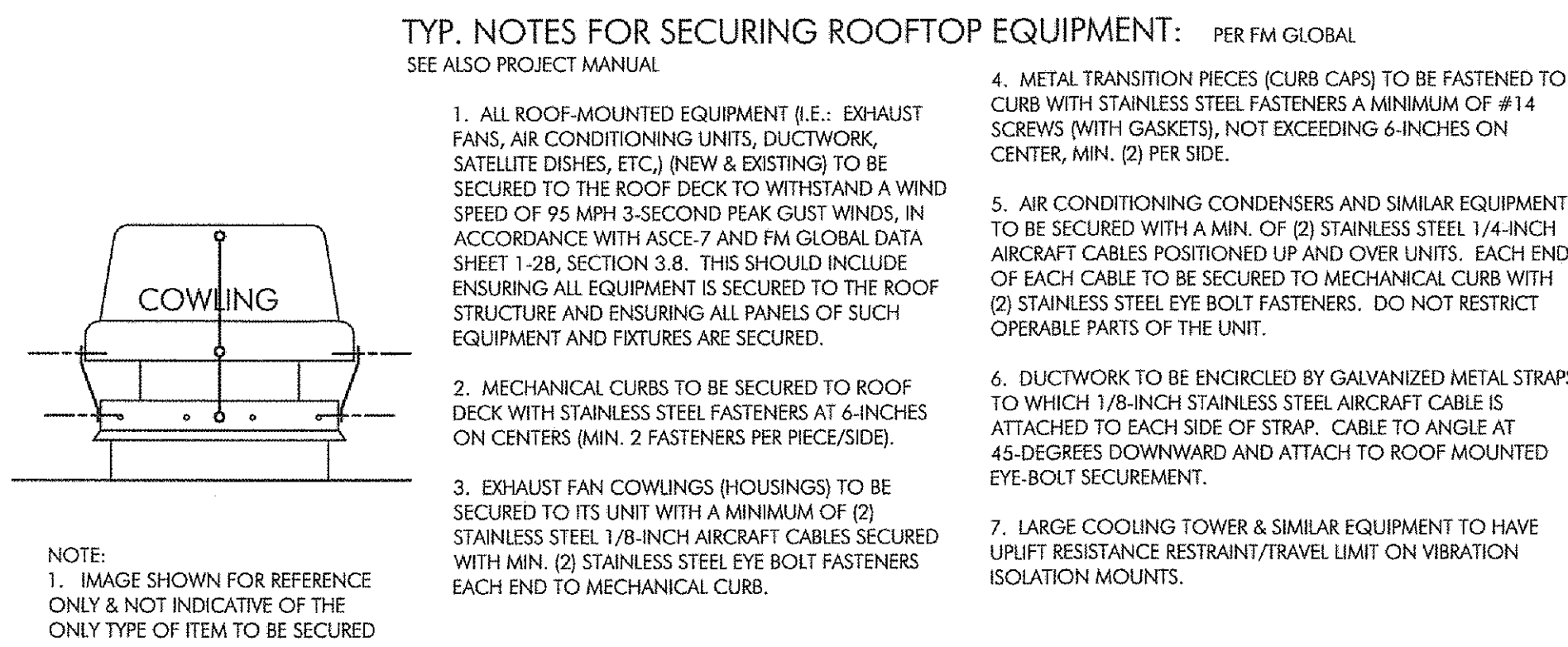


B METAL EQUIPMENT CURBS

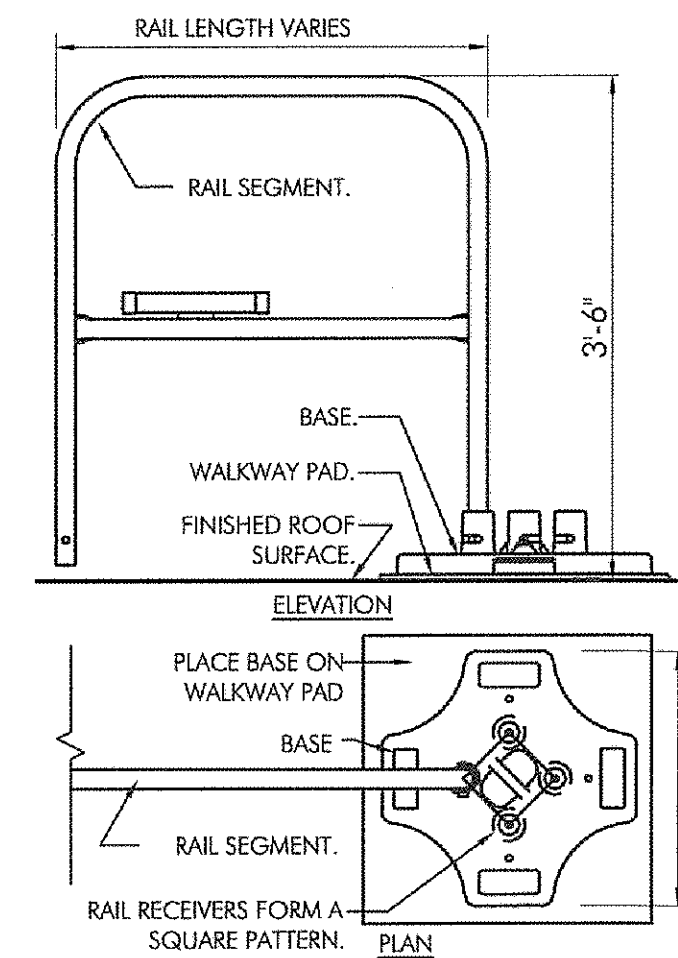
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REVISIONS		drawing prepared by Martin A. Benassi, AIA - Architect, LLC Two Broadway, Hamden, CT 06518 (203) 281-5000	
mark	date	description	date
x	x.x.x	x.x.x	02/21/2019
project WINSTED ROOF AND BOILER DEPARTMENT OF MOTOR VEHICLES 151 TORRINGTON ROAD, WINSTED, CT 06098		scale AS SHOWN	
CAD no. A3 DETAILS.dwg		drawing no. A-3	



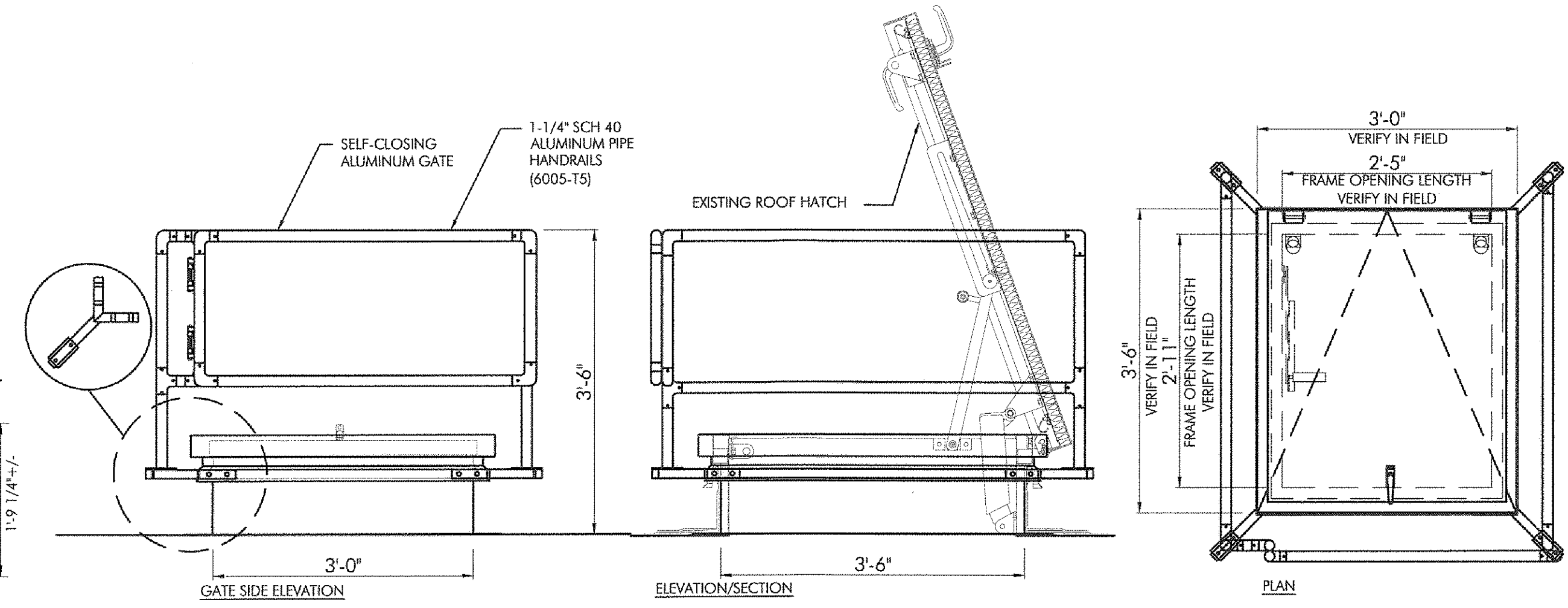
9 DECKING REINFORCEMENT
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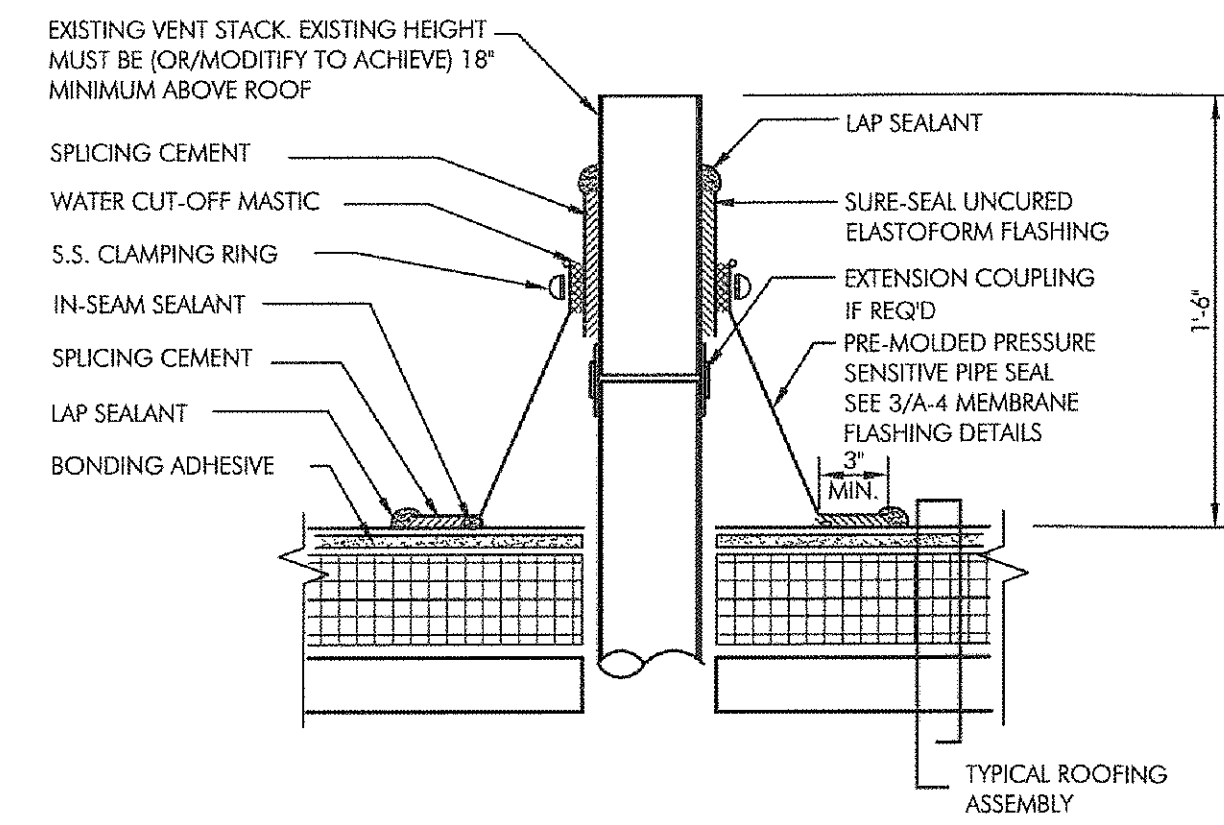
10 TYP. MECHANICAL EQUIPMENT & CURB SECUREMENT
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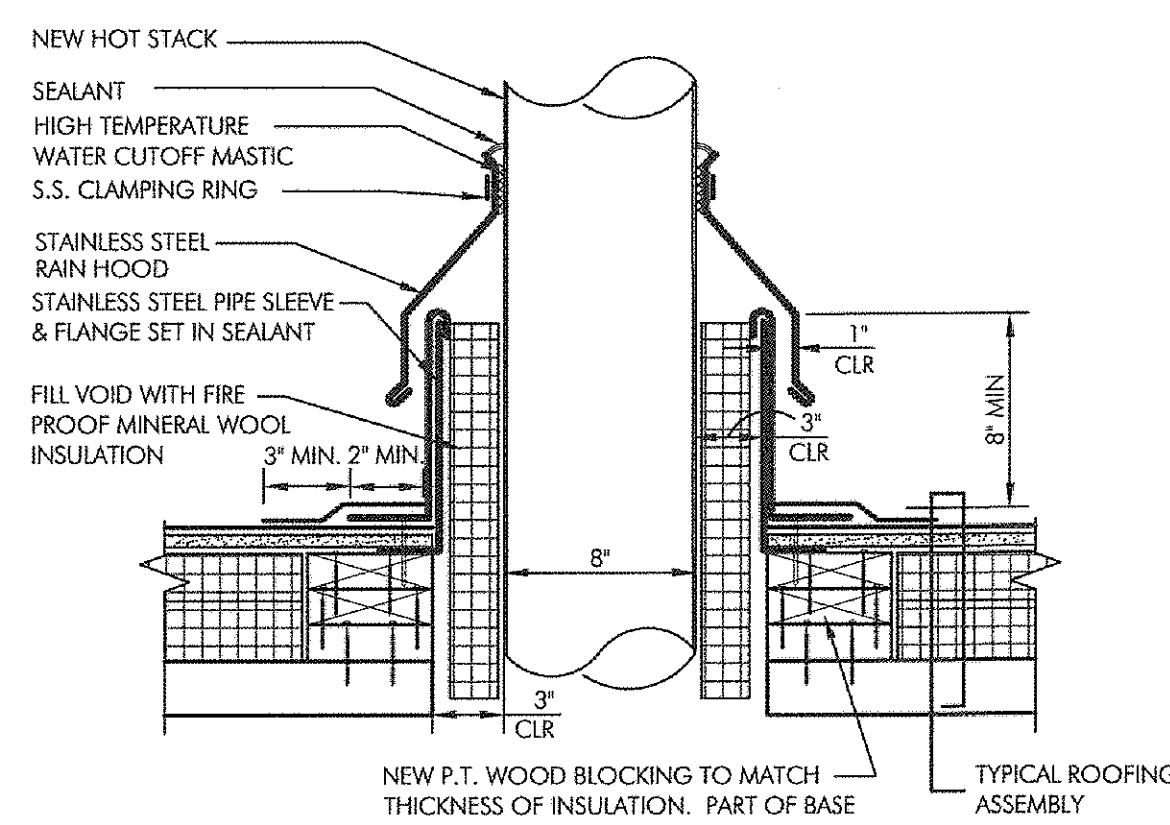
11 FREESTANDING GUARDRAILS
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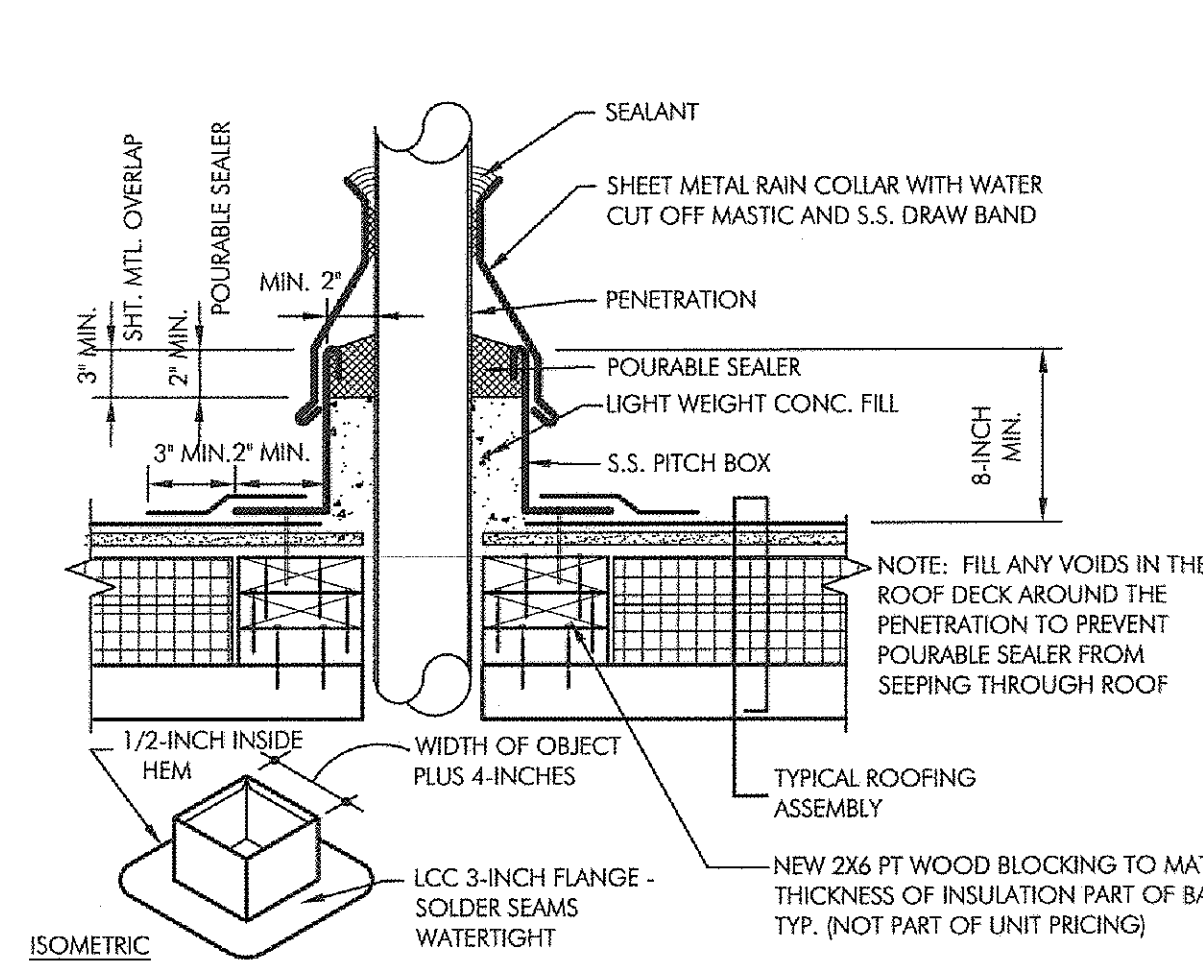
12 NEW CURB MOUNTED RAILING & GATE AT EXISTING ROOF HATCH
SCALE: 3/4"=1'-0"



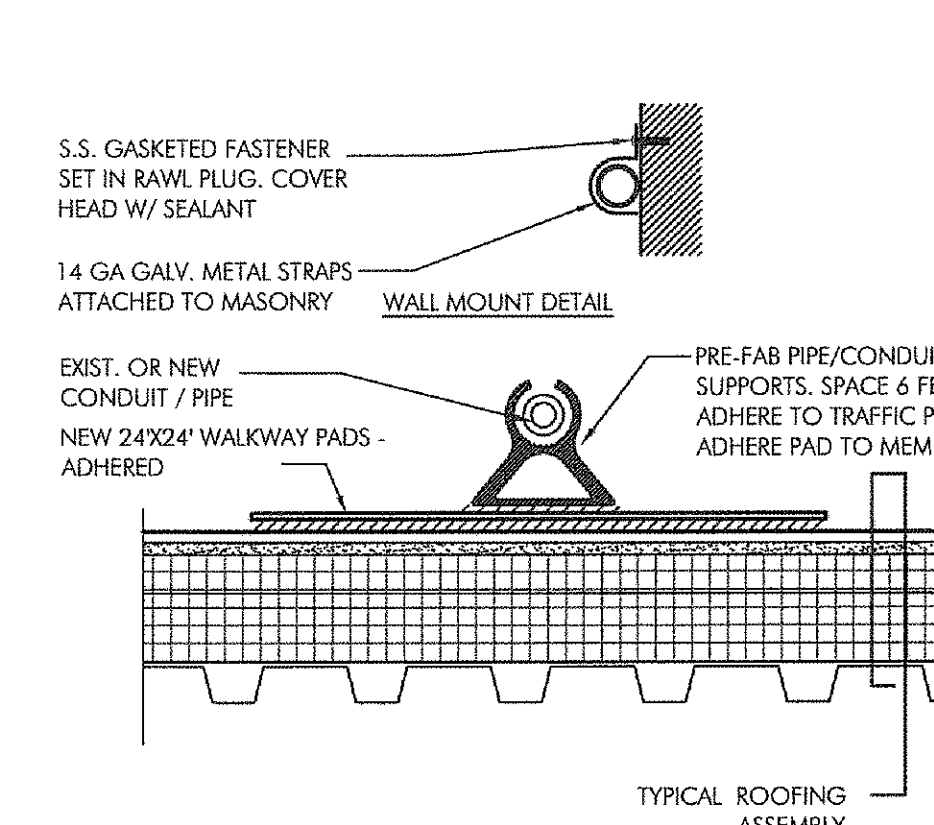
4 STACK VENT TYPICAL
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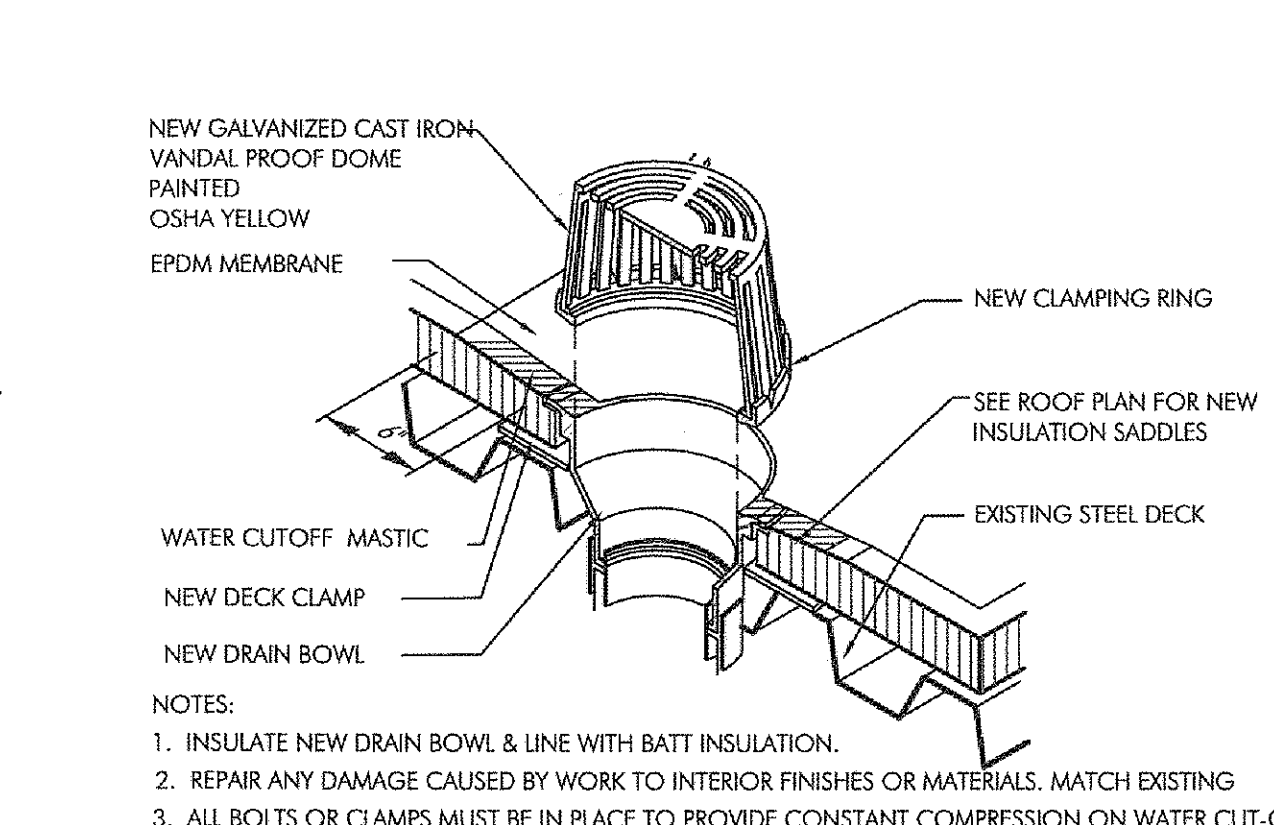
5 HOT STACK TYPICAL
SCALE: 1 1/2"=1'-0"



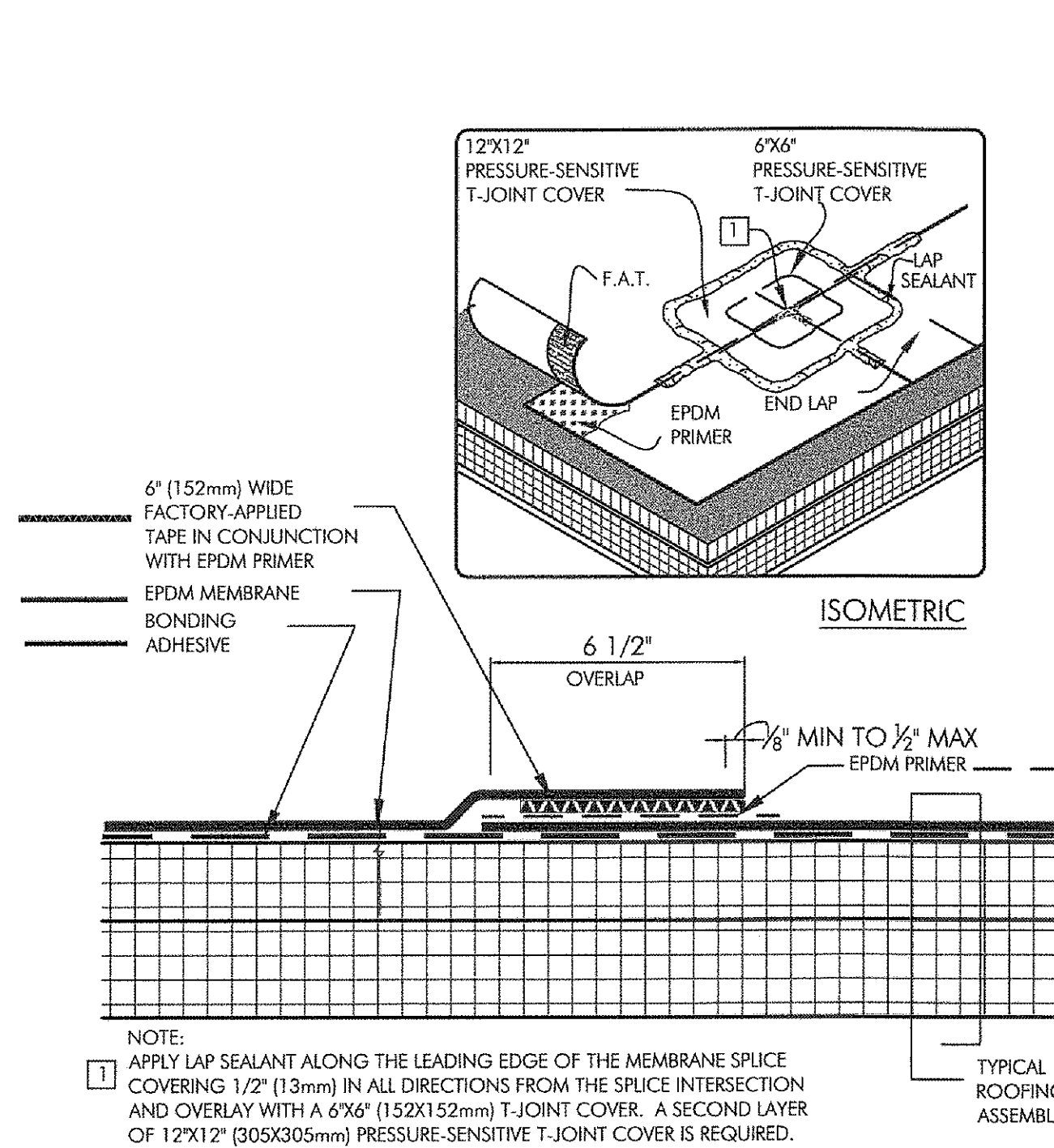
6 PENETRATION POCKET TYPICAL
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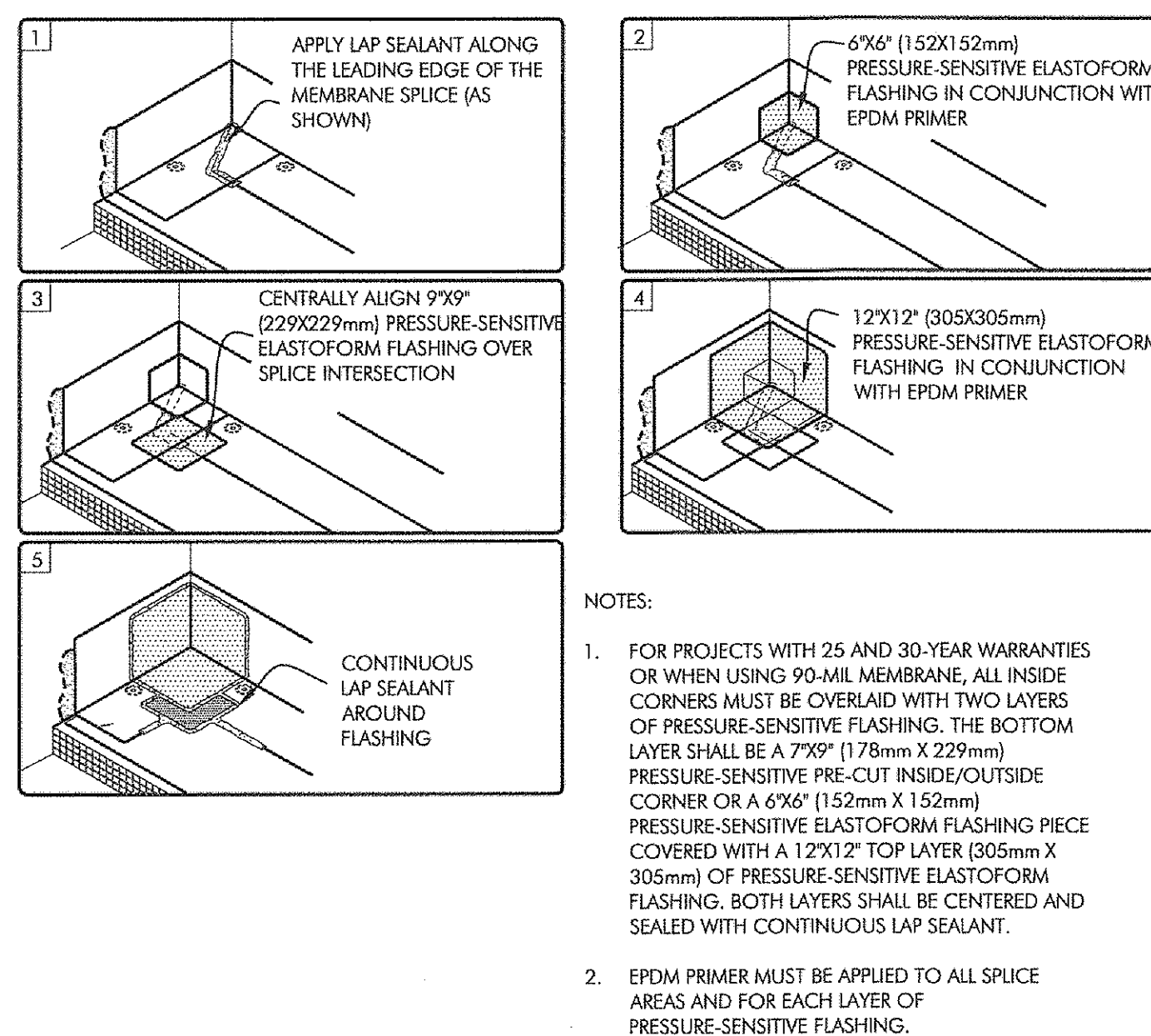
7 PIPE SUPPORT - TYPICAL
SCALE: 1 1/2"=1'-0"



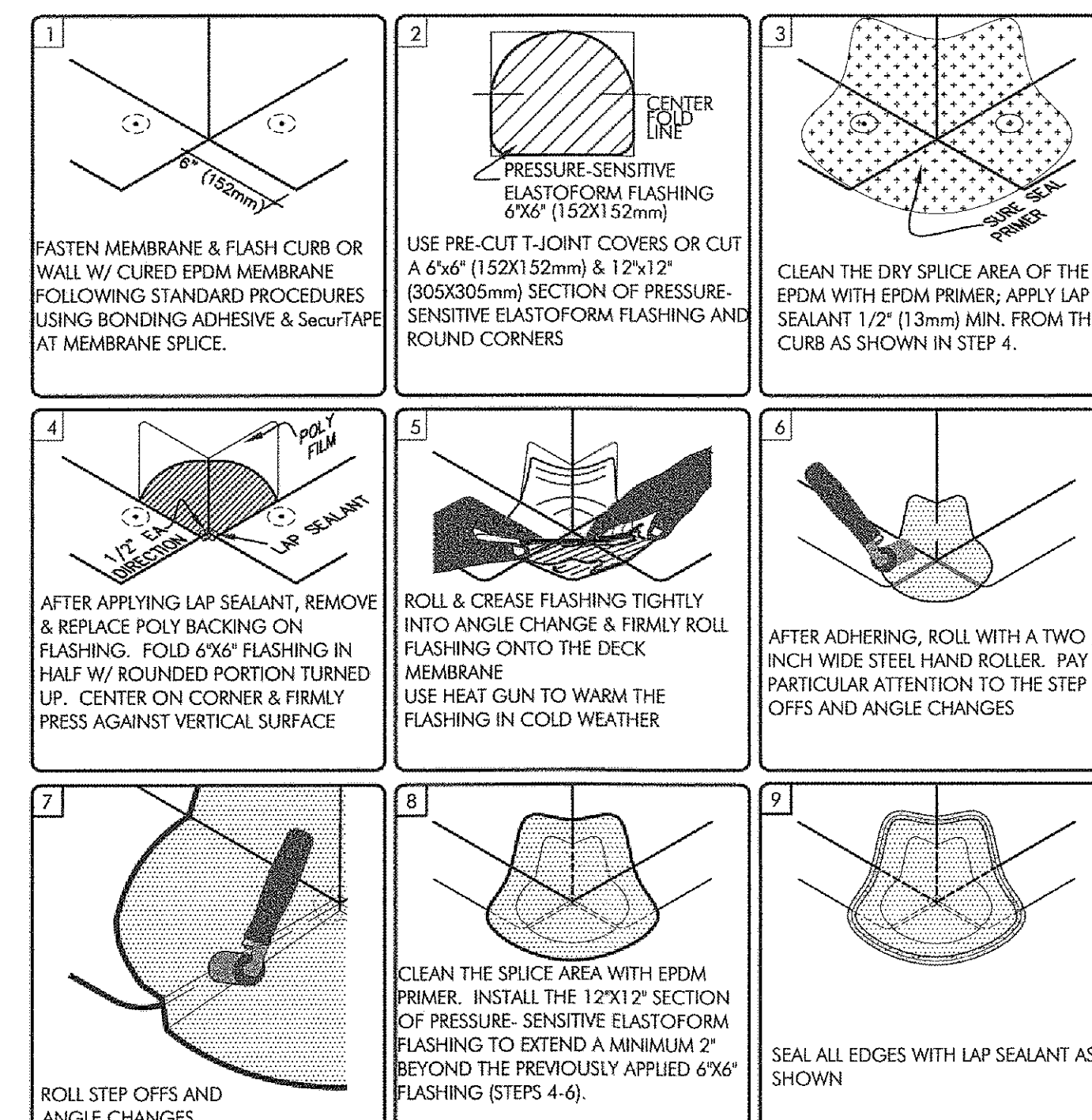
8 ROOF DRAIN - TYPICAL
SCALE: 1 1/2"=1'-0"



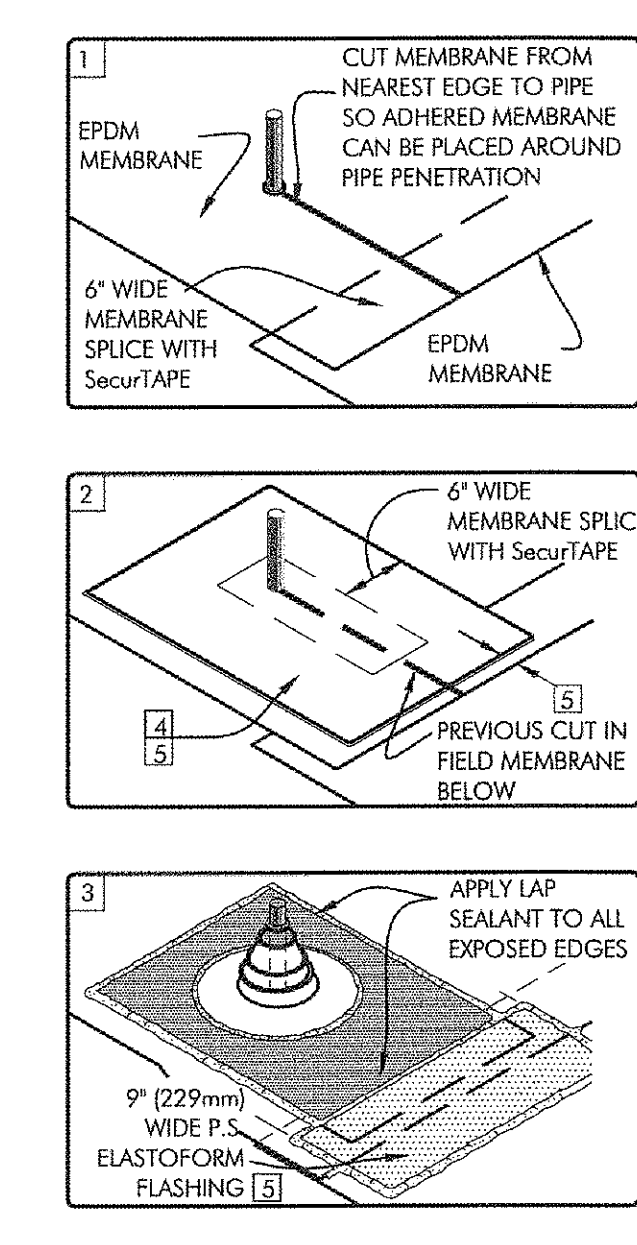
1 EPDM MEMBRANE SPICE
SCALE: 3"=1'-0"



2A INSIDE CORNER EPDM FLASHING



2B OUTSIDE CORNER EPDM FLASHING



3 PRE-MOLDED PIPE SEAL

NOTE: ALL EPDM DETAILS FOR NEW ROOF CONSTRUCTION TO FOLLOW MANUFACTURERS GUIDELINES FOR 90 MIL EPDM AND 25-30 YEAR WARRANTY

drawing title			STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
ROOF DETAILS			drawing prepared by	
REVISIONS			Martin A. Benassi, AIA - Architect, LLC	
mark	date	description	Two Broadway, Hamden, CT 06518 (203) 281-5000	
x	x.x.x	x.x.x	date 02/21/2019	
			scale AS SHOWN	
			drawn by MAB	
			approved by MAB	
			drawing no. A-4	
			project WINSTED ROOF AND BOILER CT. DEPT OF MOTOR VEHICLES WINSTED, CT 06098	
			CAD no. A4 DETAILS.dwg project no. BI-MM-55	

MECHANICAL SPECIFICATIONS

MECHANICAL SCOPE

THE WORK TO BE DONE UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL INCLUDE THE FURNISHING OF ALL EQUIPMENT, SUPPLIES, LABOR, SUPERVISION AND ALL MATERIALS NOT SPECIFICALLY MENTIONED, READY FOR USE, ALL HEATING, PLUMBING AND ELECTRICAL COMPONENTS. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. IT IS THE INTENT THAT ALL HEATING, PLUMBING AND ELECTRICAL WORK AND MATERIALS NECESSARY TO COMPLETE THE ENTIRE PROJECT IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS, WHERE SPECIFICALLY MENTIONED HERE OR NOT, SHALL BE FURNISHED. ALL WORK AND MATERIALS NECESSARY TO FULFILL THIS INTENT SHALL BE SUPPLIED UNDER THE MECHANICAL SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.

CODES, RULES, PERMITS AND FEES

CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL STATE AND LOCAL TAXES, FEES AND OTHER COSTS IN CONNECTION WITH HIS WORK; FILE ALL NECESSARY PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL STATE AND LOCAL DEPARTMENTS HAVING JURISDICTION; OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK AND DELIVERY OF SAME TO THE OWNER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK. EACH CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS (IN ADDITION TO CONTRACT DRAWINGS AND DOCUMENTS), IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS WHETHER OR NOT SHOWN ON THE DRAWINGS AND/OR SPECIFIED. EACH CONTRACTOR SHALL PERFORM AND FILE ALL TESTS IN ACCORDANCE WITH CURRENT REGULATIONS OF THE STATE AND LOCAL AUTHORITIES. EACH CONTRACTOR SHALL FURNISH AND INSTALL SIGNS REQUIRED BY THE STATE AND LOCAL AUTHORITIES. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE RULES AND RECOMMENDATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, WITH ALL REQUIREMENTS OF LOCAL UTILITIES COMPANIES, WITH THE RECOMMENDATIONS OF THE FIRE INSURANCE RATING ORGANIZATION HAVING JURISDICTION.

REGULATIONS

ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CURRENT STATE OF CONNECTICUT BASIC BUILDING CODE, THE CURRENT STATE OF CONNECTICUT FIRE SAFETY CODE, UL, NEMA, OSHA, NFPA, THE INTERNATIONAL PLUMBING CODE, THE INTERNATIONAL MECHANICAL CODE, NATIONAL ELECTRICAL CODE, WITH ALL REQUIREMENTS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION. REQUIREMENTS OF THE ABOVE SHALL TAKE PRECEDENCE OVER PLANS AND SPECIFICATIONS.

GUARANTEE AND SERVICE

CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE INSTALLATION. IN ADDITION, THE CONTRACTOR SHALL PROVIDE, FREE OF CHARGE, ONE YEAR'S MAINTENANCE GUARANTEE OF MAINTAINED SERVICE AND ADJUSTMENT OF ALL EQUIPMENT IN THIS CONTRACT.

DRAWINGS AND INTENT

DRAWINGS ARE INTENDED AS WORKING DRAWINGS FOR GENERAL LAYOUT OF THE VARIOUS ITEMS OF EQUIPMENT. HOWEVER, LAYOUT OF EQUIPMENT, ACCESSORIES, SPECIALTIES, AND PIPING SYSTEMS ARE DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED, AND DO NOT NECESSARILY INDICATE EVERY REQUIRED PIPE, VALVE, FITTINGS, TRAP, ELBOW, TRANSITION, OFFSETS, JUNCTION OR PULLBOX, OR SIMILAR ITEMS REQUIRED FOR A COMPLETE INSTALLATION.

RELATED WORK IN THIS DIVISION

ALL CUTTING AND PATCHING, CORE DRILLING, CONCRETE WORK, ALL ELECTRICAL WORK PER PLANS AND SPECIFICATIONS.

MEASUREMENTS

ALL MEASUREMENTS TAKEN AT THE BUILDING SHALL TAKE PRECEDENCE OVER SCALE DIMENSIONS. EVERY PART OF THE PLANS SHALL BE FITTED TO THE ACTUAL CONDITIONS AT THE BUILDING. IF IN CONFLICT WITH SCALE DIMENSIONS.

PROTECTION OF FIXTURES, MATERIALS AND EQUIPMENT

CLOSE PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. TIGHTLY COVER AND PROTECT EQUIPMENT AGAINST DIRT, WATER AND CHEMICAL OR MECHANICAL INJURY. AT COMPLETION OF ALL WORK, EQUIPMENT SHALL BE THOROUGHLY CLEANED.

DEMOLITION

CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, ETC., REQUIRED TO COMPLETE ALL DEMOLITION WORK NECESSARY FOR THE FULL COMPLETION OF THIS CONTRACT. PROTECT ALL PARTS AND EQUIPMENT THAT ARE TO REMAIN. ASSUME FULL RESPONSIBILITY FOR DAMAGE. ALL ITEMS BEING REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS OTHERWISE INDICATED BY HIM. EQUIPMENT AND DEVICES THE OWNER DOES NOT WISH TO RETAIN SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE. ALL MATERIAL CHOSEN TO BE RETAINED BY THE OWNER SHALL BE DELIVERED BY EACH CONTRACTOR TO SUCH POINT AS DESIGNATED BY THE OWNER.

EXAMINATION OF PREMISES - SPECIAL NOTE

NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED, OR WORK TO BE DONE; IT BEING THAT TENDER OF PROPOSAL INDICATED WITH ITS AGREEMENT TO ITEMS AND CONDITIONS REFERRED TO HEREIN OR INDICATED ON AFOREMENTIONED DRAWINGS.

SCAFFOLDING, RIGGING AND HOISTING

UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL FURNISH ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES OF ANY EQUIPMENT AND APPARATUS FURNISHED. REMOVE SAME FROM THE PREMISES WHEN NO LONGER REQUIRED.

HOUSEKEEPING

CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING STOCK OF MATERIALS AND EQUIPMENT STORED ON PREMISES IN A NEAT AND ORDERLY MANNER AND, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH CAUSED BY HIS EMPLOYEES AT WORK. EACH CONTRACTOR SHALL REMOVE HIS RUBBISH AND SURPLUS MATERIALS FROM THE JOB SITE AND SHALL LEAVE THE PREMISES AND HIS WORK IN A CLEAN AND PERFECT CONDITION.

QUIET OPERATION

ALL WORK SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT ANY SOUND OR VIBRATION WHICH IS OBJECTIONABLE IN THE OPINION OF THE ENGINEER, IN CASE OF MOVING MACHINERY, SOUND OR VIBRATION NOTICEABLE OUTSIDE OF ROOM IN WHICH IT IS INSTALLED, OR ANNOYING INSIDE ITS OWN ROOM, WILL BE CONSIDERED OBJECTIONABLE BY THE ENGINEER AND SHALL BE REMEDIED IN APPROVED MANNER EACH CONTRACTOR AT HIS EXPENSE.

OWNER'S INSTRUCTIONS AND SYSTEM OPERATION

AT THE TIME OF THE JOB'S ACCEPTANCE BY OWNER, CONTRACTOR SHALL FURNISH ONE COMPLETE SET OF APPROVED CERTIFIED DRAWINGS TO THE OWNER. IN ADDITION, CONTRACTOR SHALL FURNISH MAINTENANCE AND OPERATING INSTRUCTIONS FOR ALL EQUIPMENT. THESE INSTRUCTIONS SHALL BE WRITTEN IN LAYMAN'S LANGUAGE AND SHALL BE INSERTED IN VINYL-COVERED THREE-RING LOOSE LEAF BINDER. THIS INFORMATION IN BINDER SHALL BE FIRST SENT TO AND APPROVED BY THE ARCHITECT/ENGINEER BEFORE TURNING OVER TO OWNER.

SHOP DRAWINGS

PRIOR TO DELIVERY TO JOB SITE, BUT SUFFICIENTLY IN ADVANCE OF REQUIREMENTS NECESSARY TO ALLOW ENGINEER AMPLE TIME FOR REVIEW, EACH CONTRACTOR SHALL SUBMIT FOR APPROVAL, FIVE (5) COPIES EACH OF SHOP DRAWINGS OF ALL EQUIPMENT.

EQUIPMENT DEVIATION

BIDDERS INTERESTED IN SUBMITTING A SUBSTITUTION FOR EQUIPMENT OR MATERIAL SHALL BE REQUIRED TO SUBMIT THE SUBSTITUTION REQUEST TEN (10) CALENDAR DAYS PRIOR TO THE BID DUE DATE AND SHALL INCLUDE THE FOLLOWING INFORMATION:

DATA SHALL INCLUDE PRODUCT DESCRIPTION, SPECIFICATIONS, DRAWINGS PHOTOGRAPHS, PERFORMANCE AND TEST DATA ADEQUATE FOR EVALUATION OF THE REQUEST; APPLICABLE PORTIONS OF THE DATA ARE CLEARLY IDENTIFIED. DATA SHALL INCLUDE A DESCRIPTION OF CHANGES TO THE CONTRACT DOCUMENTS, IF ANY, THAT THE PROPOSED SUBSTITUTION WILL REQUIRE FOR ITS PROPER INSTALLATION.

THE BIDDER CERTIFIES:

- PROPOSED SUBSTITUTION HAS BEEN FULLY INVESTIGATED AND DETERMINED TO BE EQUAL OR SUPERIOR IN ALL RESPECTS TO SPECIFIED PRODUCT.
- SAME WARRANTY WILL BE FURNISHED FOR PROPOSED SUBSTITUTION AS FOR SPECIFIED PRODUCT.
- SAME MAINTENANCE SERVICE AND SOURCE OF REPLACEMENT PARTS, AS APPLICABLE, IS AVAILABLE.
- PROPOSED SUBSTITUTION WILL HAVE NO ADVERSE EFFECT ON OTHER TRADES AND WILL NOT AFFECT OR DELAY PROGRESS SCHEDULE.
- PROPOSED SUBSTITUTION DOES NOT AFFECT DIMENSIONS AND FUNCTIONAL CLEARANCES.
- PAYMENT WILL BE MADE FOR CHANGES TO BUILDING DESIGN, INCLUDING A/E DESIGN, DETAILING, AND CONSTRUCTION COSTS BY THE SUBSTITUTION.

BOILER AND RELIEF VALVE DRAINS/INDIRECT WASTE

DRAINS LINES SHALL BE COPPER.

RELIEF VALVE DRAINS SHALL BE TYPE L COPPER.

DOMESTIC WATER PIPING

ALL WATER PIPING WITHIN THE BUILDING SHALL CONFORM TO ASTM B 88 STANDARD AND BE TYPE "L" COPPER TUBING WITH SWEAT TYPE WROUGHT FITTINGS. ALL JOINTS SHALL BE MADE WITH 95-5 SOLDER OR STAY-SAFE BRIDGET LEAD-FREE SOLDER. ALL PIPES SHALL BE REAMED TO FULL AREA BEFORE INSTALLATION AND BLOWN CLEAN OF CHIPS AND DIRT.

PIPE INSULATION - DOMESTIC WATER

INSULATE ALL NEW DOMESTIC HOT AND COLD WATER PIPING WITH 1" THICK HEAVY DENSITY FIBERGLASS 25 ASJ WITH VAPOR BARRIER AND LAP ADHESIVE JACKET. INSULATION ON FITTINGS SHALL BE FIBERGLASS WITH PRE-MOLDED JACKET.

VALVES - DOMESTIC WATER

VALVES SHALL BE BRONZE BALL TYPE, 2 PIECE, FULL PORT APOLLO, MILWAUKEE OR JAMESBURY.

PROTECTION OF POTABLE WATER SUPPLY

PROTECT POTABLE WATER SUPPLIES AGAINST BACKFLOW, BACK-SIPHONAGE, CROSS CONNECTION, AND OTHER UNSANITARY CONDITIONS. DO NOT DIRECTLY CONNECT POTABLE WATER TO, OR RUN WITHIN, ANY PIPING OR DEVICE CONTAINING OR CONVEYING SEWAGE WASTES, OR OTHER MATERIALS HAZARDOUS TO HEALTH AND SAFETY. EQUIP PLUMBING FIXTURE SUPPLIES, OTHER THAN "OVER-RIM" TYPE, WITH APPROVED VACUUM BREAKERS OR AIR GAP FITTINGS. SUPPLIES EQUIPPED FOR HOSE CONNECTION MUST HAVE INTEGRAL VACUUM BREAKERS.

DISINFECTION OF POTABLE WATER PIPING

COMPLETE AND EFFECTIVE DISINFECTION OF POTABLE WATER PIPING SYSTEMS AFTER TESTING AND ACCEPTANCE. DISINFECT AFTER FLUSHING WITH CLEAR WATER BY FILLING ENTIRE SYSTEM OR ANY PART THEREOF WITH WATER SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF AVAILABLE CHLORINE. ALLOW SOLUTION TO STAND IN SYSTEM AT LEAST 24 HOURS BEFORE FLUSHING OUT WITH CLEAN POTABLE WATER. IN LIEU OF ABOVE, SWAB WATER CONTACTING SURFACES WITH SOLUTION CONTAINING AT LEAST 200 PARTS PER MILLION OF AVAILABLE CHLORINE. ALLOW SOLUTION TO STAND IN SYSTEM FOR AT LEAST THREE HOURS BEFORE FLUSHING OUT WITH CLEAN POTABLE WATER.

TESTS

THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, DURING THE PROGRESS OF THE WORK OR UPON ITS COMPLETION AS ORDERED, MAKE SUCH TESTS OF HIS WORK AS ARE HEREIN SPECIFIED OR AS ARE REQUIRED BY AND IN THE PRESENCE OF THE PLUMBING INSPECTOR. IF SO DIRECTED, TESTS SHALL BE MADE OF SECTIONS FOR THE WORK SO AS NOT TO DELAY THE WORK OR OTHER TRADES. THE CONTRACTOR SHALL PROVIDE ALL APPARATUS, TEMPORARY WORK OR ANY OTHER REQUIREMENTS NECESSARY FOR SUCH TESTS. ANY DEFECTS OR DEFICIENCIES DISCOVERED AS A RESULT OF TESTS SHALL BE IMMEDIATELY REPAIRED AND TESTS SHALL BE REPEATED UNTIL THE TEST REQUIREMENTS ARE FULLY COMPLIED WITH. ALL DOMESTIC WATER PIPING SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 150 POUNDS PER SQUARE INCH. PRESSURE SHALL BE MAINTAINED WITHOUT PUMPING FOR TWO HOURS. TEST HEATING PIPING AT 50 P.S.I. WITH AIR FOR TWO HOURS.

PIPE - HEATING HOT WATER

HVAC PIPING REQUIREMENTS. HOT WATER SUPPLY AND RETURN PIPING SHALL BE TYPE L COPPER TUBING WITH SWEAT FITTINGS MADE UP WITH 95-5 SOLDER OR STANDARD WEIGHT, SCHEDULE 40, OPEN HEARTH STEEL, NATIONAL OR EQUAL. FITTINGS FOR STEEL PIPE SHALL BE AS FOLLOWS: GENERALLY, BUTT WELDED FITTINGS OVER TWO INCHES SHALL BE USED AND EITHER SOCKET-WELD OR SCREWED FOR TWO INCHES AND UNDER. WELDING FITTINGS SHALL BE STANDARD FORGED STEEL WITH CHAMFERED ENDS. ALL BRANCHES SHALL BE WELDED WITH EITHER WELD-O-LETE OR TEST THROUGHOUT FOR STEEL PIPE. ALL SCREWED FITTINGS SHALL BE OF THE BEST GRAY CAST IRON WITH TRUE CLEAN TAPERED THREADS, FREE OF SAND HOLES OR OTHER DEFECTS. TEST NEW HEATING PIPING AT 50 P.S.I. FOR TWO HOURS.

PIPE INSULATION - HEATING HOT WATER

INSULATE ALL NEW PIPING WITH MANVILLE MICRO-LOK HP OR EQUAL. INSULATION THICKNESS SHALL BE 1-1/2" FOR LESS THAN OR EQUAL TO 1.5" PIPE SIZE AND 2" FOR GREATER THAN 1.5" PIPE SIZE. PROVIDE ZESTON COVERS ON ALL FITTINGS.

VALVES - HEATING HOT WATER

VALVES SHALL BE BALL TYPE, TWO PIECE, FULL PORT, JAMESBURY CLINCHER OR APOLLO TWO PIECE, FULL PORT.

DISSIMILAR METALS

WHEREVER COPPER OR BRASS ALLOY IS CONNECTED TO STEEL OR GALVANIZED METAL, THE TWO SHALL BE SEPARATED WITH AN DIELECTRIC CONNECTION FITTING.

EQUIPMENT AND PIPING HANGING AND SUPPORT - GENERAL

ALL EQUIPMENT AND PIPING SHALL NOT BE SUPPORTED BY OTHER EQUIPMENT, BUT SHALL BE PROVIDED WITH SUITABLE HANGERS AND SUPPORTS CONNECTED DIRECTLY TO THE BUILDING STRUCTURE. PROVIDE AND INSTALL AUXILIARY STRUCTURE AS REQUIRED. HANGING AND SUPPORTING - PIPING SHALL NOT BE SUPPORTED BY OTHER PIPING, BUT SHALL BE SUPPORTED WITH COPPER PIPE HANGERS SUITABLE FOR THE SIZE OF PIPE AND PROPER STRENGTH AND QUALITY AT PROPER INTERVALS SO THAT PIPING CANNOT BE MOVED ACCIDENTALLY FROM THE INSTALLED POSITION.

PIPE HANGERS

HANGERS FOR ALL PIPING SHALL BE CLEVIS OR SPLIT RING TYPE EXCEPT WHERE THREE OR MORE PIPES RUN PARALLEL AT THE SAME ELEVATION OR GRADE, A TEE FOR VERTICAL ADJUSTMENT. HANGERS SUPPORTING COPPER TUBING SHALL BE COPPER/PLATES STEEL OR BRASS OR BRONZE. HANGER RODS SHALL BE STEEL 3/8". DIAMETER SUPPORTING PIPES 2" OR SMALLER, 1/2" DIAMETER SUPPORTING PIPES 2-1/2" TO 4".

HANGERS SHALL BE INSTALLED TO SUPPORT THE PIPING FROM THE BUILDING STRUCTURE TO MAINTAIN THE REQUIRED GRADE AND PITCH OF THE PIPE LINES, PREVENT VIBRATION, SECURE THE PIPING IN PLACE, AND PROVIDE FOR EXPANSION AND CONTRACTION. HANGERS SHALL BE SECURED TO INSERTS WHEREVER PRACTICAL. HANGERS AND SUPPORTS FOR EQUIPMENT SHALL BE INSTALLED WITH APPROVED BOLTS AND INSERTS; WOOD PLUGS SHALL NOT BE USED.

NO CHAIN OR BAND IRON HANGERS WILL BE ALLOWED. KEEP ALL PIPING CLEAR OF ACCESS HATCHES. COORDINATE LOCATIONS OF ALL PIPE RUNS WITH ALL TRADES.

ALL PIPE CONNECTIONS SHALL BE INSTALLED TO ALLOW FOR FREEDOM OF MOVEMENT OF THE PIPING DURING EXPANSION AND CONTRACTION WITHOUT SPRINGING, SWING JOINTS, EXPANSION LOOPS AND EXPANSION JOINTS WITH PROPER ANCHORS AND GUIDES SHALL BE PROVIDED WHERE NECESSARY.

HANGER SPACING
1/2 INCH PIPE OR TUBING - 6 FEET
3/4 INCH OR 1 INCH PIPE OR TUBING - 8 FEET
1-1/4 INCH OR LARGER (HORIZONTAL) - 10 FEET

DEFINITIONS

"FURNISH" OR "PROVIDE" - TO FURNISH, ERECT, INSTALL AND CONNECT UP COMPLETE AND READY FOR OPERATION PARTICULAR WORK REFERRED TO, UNLESS SPECIFICALLY INDICATED OR SPECIFIED OTHERWISE.

"WORK" - LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND ALL OTHER ITEMS CUSTOMARILY FURNISHED AND/OR REQUIRED FOR PROPER AND COMPLETE INSTALLATION OF WORK.

"CONCEALED" - EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED BEHIND WALL FURRING, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES OR IN CRAWL SPACES.

"EXPOSED" - NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.

"INDICATED" OR "SHOWN" - AS INDICATED OR SHOWN ON DRAWINGS OR SPECIFIED WITH SPECIFICATIONS.

"PIPING" - PIPE, FITTINGS, FLANGES, VALVES, CONTROLS, HANGERS, TRAPS, DRAINS, INSULATION AND ITEMS CUSTOMARILY OR REQUIRED IN CONNECTION WITH OR RELATING TO SUCH PIPING.

"SUPPLY" - TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH ALL RELATED ITEMS.

"INSTALL" - TO ERECT, MOUNT AND CONNECT UP COMPLETE WITH ALL RELATED ACCESSORIES.

"NOTED" - AS INDICATED ON DRAWINGS AND/OR SPECIFIED.

PIPING IDENTIFICATION AND FLOW DIRECTION SLEEVES

PROVIDE AND INSTALL NEW PIPING IDENTIFICATION AND FLOW DIRECTION SLEEVES, SETON NAMEPLATE SETMARK SNAP-AROUND PIPE MARKERS, FOR ALL NEW AND EXISTING PIPING IN EACH BOILER ROOM. NUMBER OF SLEEVES REQUIRED SHALL BE DETERMINED IN FIELD.

TEST AND BALANCE

COMPLETELY TEST AND BALANCE ALL HEATING COMPONENTS AND PROVE THE CAPACITIES. SUBMIT RESULTS TO ENGINEER FOR APPROVAL. VERIFY THAT ALL NEW EQUIPMENT RESPONDS TO NEW OR EXISTING TEMPERATURE CONTROLS.

BOILER - OIL FIRED

NEW BOILER SHALL BE "SMITH" SERIES 19 HE OIL FIRED CAST IRON HOT WATER BOILER MODEL #019HEWS WITH A I.B.R. GROSS OUTPUT OF 587,000 B.T.U.H. FIRING #2 OIL OR EQUAL BURNHAM OR WEIL MCLAIN. BOILER SHALL BE COMPLETE WITH WITH ALL STANDARD ACCESSORIES INCLUDING ASME 40 PSII RELIEF VALVE, THERALTIMETER, MANUAL RESET, HI-LIMIT CONTROL, LO-LIMIT OPERATING CONTROL AND OPTIONAL LOW WATER CUTOFF.

PACKAGED WITH BOILER SHALL BE A POWER FLAME OIL BURNER MODEL # CR1-0, 1/3 H.P. WITH MODULATING FIRING.

DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRING FROM WALL MOUNTED JUNCTION BOX TO BOILER. PROVIDE NEW 2 #12 + 1 #12 GND. - 3/4" EMT CONDUIT CONNECTION FROM JUNCTION BOX TO BOILER, REUSE EXISTING BRANCH CIRCUIT AND CIRCUIT BREAKER. PROVIDE SAFETY SHUT-OFF SWITCH ON BOILER, EXISTING SAFETY SHUT-OFF SWITCH AT ENTRY DOOR TO REMAIN.

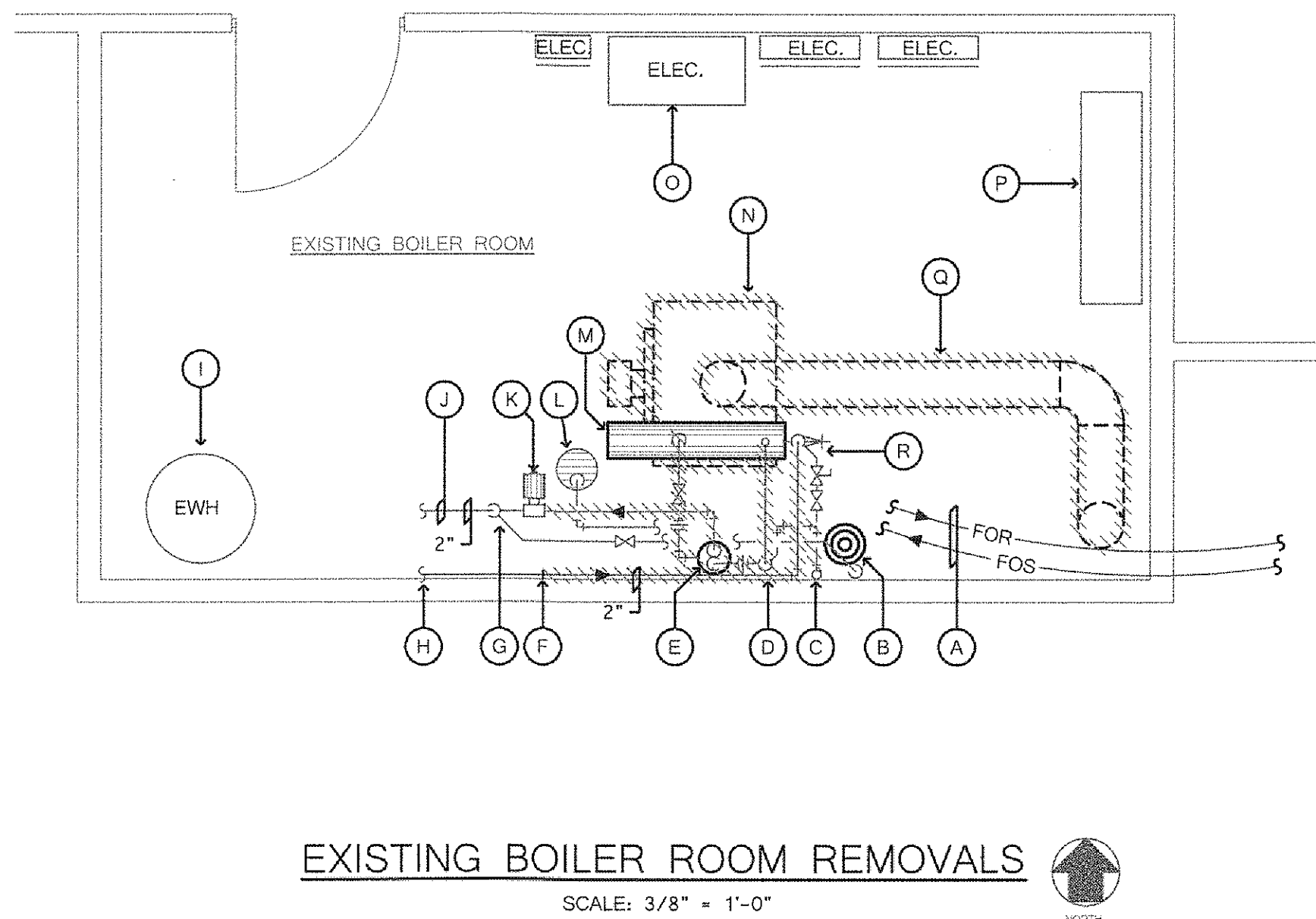
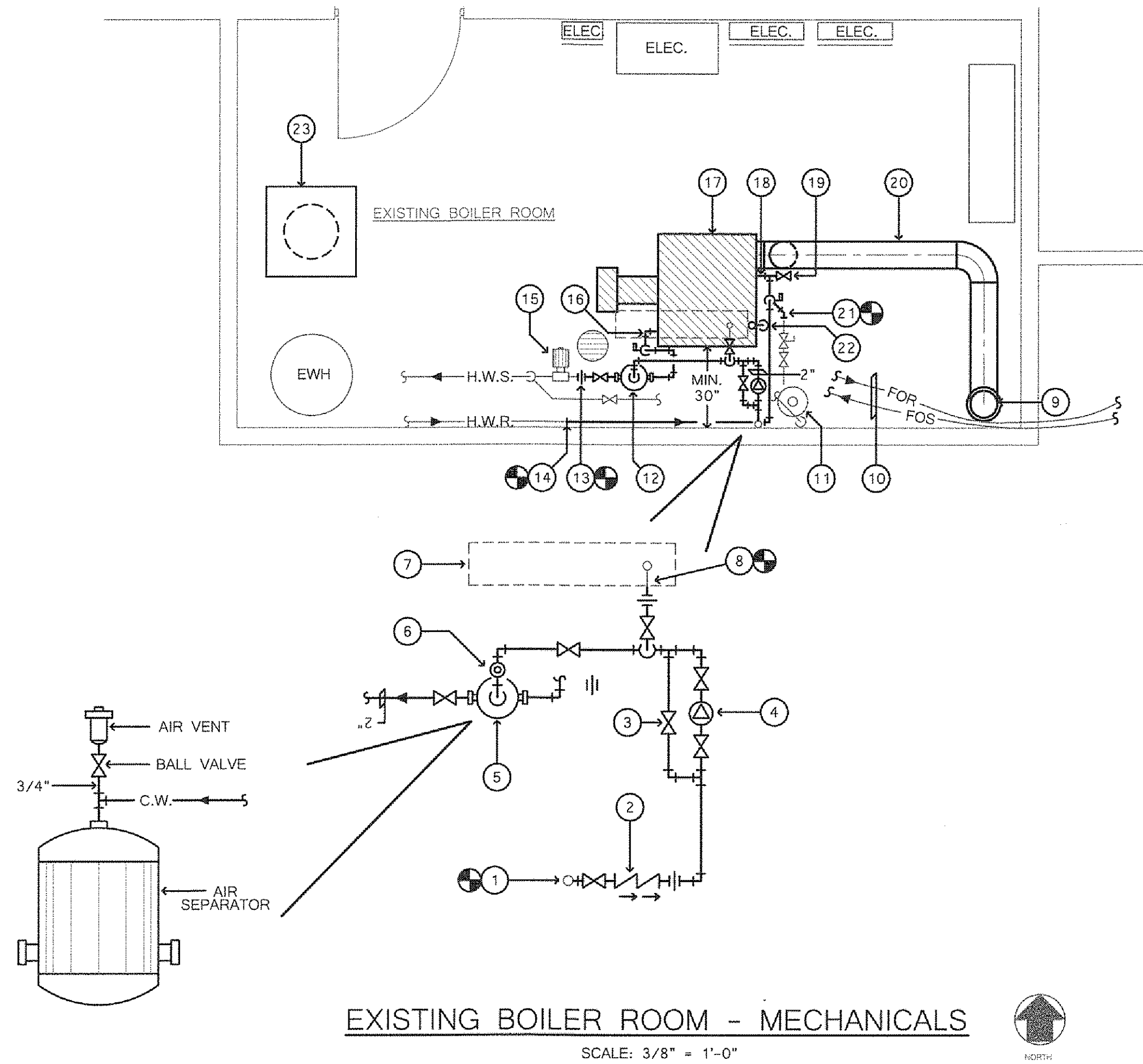
GENERAL NOTES

LOCATIONS OF EXISTING PIPING AND EQUIPMENT AS SHOWN ON PLANS ARE TAKEN FROM THE BEST AVAILABLE FIELD OBSERVATIONS. FROM BUILDING TO BUILDING, EXACT LOCATIONS AND MAKES OF EQUIPMENT, PIPING AND PIPING ARRANGEMENTS MAY VARY FROM THOSE SHOWN, VERIFY EXACT LOCATIONS IN FIELD BEFORE BEGINNING ANY WORK, MODIFY PIPING ARRANGEMENTS AS REQUIRED FOR VARIANCES ENCOUNTERED. REPORT TO ENGINEER ANY DISCREPANCIES THAT MAY HAVE AN IMPACT TO THE INSTALLATION OF THE NEW SYSTEM. REMOVE ALL EXISTING PIPING NOT BEING REUSED, WHETHER OR NOT SHOWN ON PLANS. ALL EXISTING PIPING AND EQUIPMENT TO BE REMOVED AND DISPOSED OF SHALL BE DONE IN STRICT ACCORDANCE WITH ALL STATE AND FEDERAL CODES AND REQUIREMENTS.

BEFORE SUBMITTING A BID, CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS UNDER WHICH HIS WORK WILL BE INSTALLED. EACH CONTRACT INCLUDES ALL NECESSARY OFFSET, TRANSITIONS AND MODIFICATIONS REQUIRED TO INSTALL ALL NEW EQUIPMENT. ALSO INCLUDED SHALL BE ANY MODIFICATIONS NECESSARY TO EXISTING PIPING OR SYSTEMS FOR INSTALLATION OF NEW EQUIPMENT BY THIS OR ANY OTHER TRADE. ALL NEW EQUIPMENT AND SYSTEMS SHALL BE FULLY OPERATIONAL UNDER THIS CONTRACT BEFORE THE JOB IS CONSIDERED COMPLETE. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS HE MAKES, ANY OMISSIONS OR ERRORS HE MAKES, AS A RESULT OF HIS FAILURE TO COORDINATE WITH THE EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS OF ALL TRADES.

LIST OF MECHANICAL DRAWINGS	
NUMBER	DESCRIPTION
M-1	MECHANICAL SPECIFICATIONS
M-2	BOILER ROOM PLANS - MECHANICAL

drawing title		MECHANICAL SPECIFICATIONS		STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES	
REVISIONS					
mark	date	description			
drawing prepared by		General Drafting & Design, Inc. 140 Washington Ave, 3rd Floor North Haven, CT 06473 p: 203-239-6818 f: 203-239-7275		date	02/21/2019
project		WINSTED ROOF AND BOILER DEPARTMENT OF MOTOR VEHICLES 151 TORRINGTON ROAD, WINSTED, CT 06098		scale	NONE
CAD no.		18417 M-1.dwg		drawn by	BJC
project no.		BI-MM-55		approved by	GDD
				drawing no.	M-1



SYMBOLS AND ABBREVIATIONS			
	BALL VALVE LINE SIZE		EXISTING PIPING TO BE REMOVED
	BACKFLOW PREVENTER	H.W.S.	HOT WATER SUPPLY
	REDUCING VALVE WITH FAST FILL	H.W.R.	HOT WATER RETURN
	UNION	F.O.S.	FUEL OIL SUPPLY
	FLOW DIRECTION	F.O.R.	FUEL OIL RETURN
	NEW PIPING		POINT OF CONNECTION
	EXISTING PIPING	EWH	ELECTRIC WATER HEATER

CLEANING OF A HOT WATER SYSTEM

- FOR NEW INSTALLATIONS, ADD A ONE CAN OF "PARKER SOLVE-1" (PER MANUFACTURES RECOMMENDATIONS) FOR EACH 50 GALLONS OF WATER IN THE SYSTEM. DISSOLVE ONE PINT OF CLEAN-1 IN ONE GALLON OF WATER AND POUR INTO AIR SPACE OF EXPANSION TANK.
- FILL, VENT AND CIRCULATE THE SYSTEM WITH THE CLEANING SOLUTION AT APPROXIMATELY 160°-175° FOR 2 TO 4 HOURS.
- COMPLETELY DRAIN THE CLEANING SOLUTION FROM THE BOILER AND SYSTEM AND FLUSH WITH CLEAN WATER TO COMPLETELY REMOVE ALL CLEANING SOLUTIONS.
- FILL AND VENT THE SYSTEM AGAIN AND FIRE THE BOILER TO 150° FOR 30 MINUTES TO ONE HOUR.
- COMPLETELY DRAIN THE RINSE WATER AND FLUSH WITH WATER UNTIL THE DRAIN WATER IS CLEAR AND THOROUGHLY CLEAN.
- REFILL THE SYSTEM TO THE PROPER LEVEL. VENT AIR IN THE EXPANSION TANK AND RESUME NORMAL OPERATION.

LEGEND - MECHANICAL

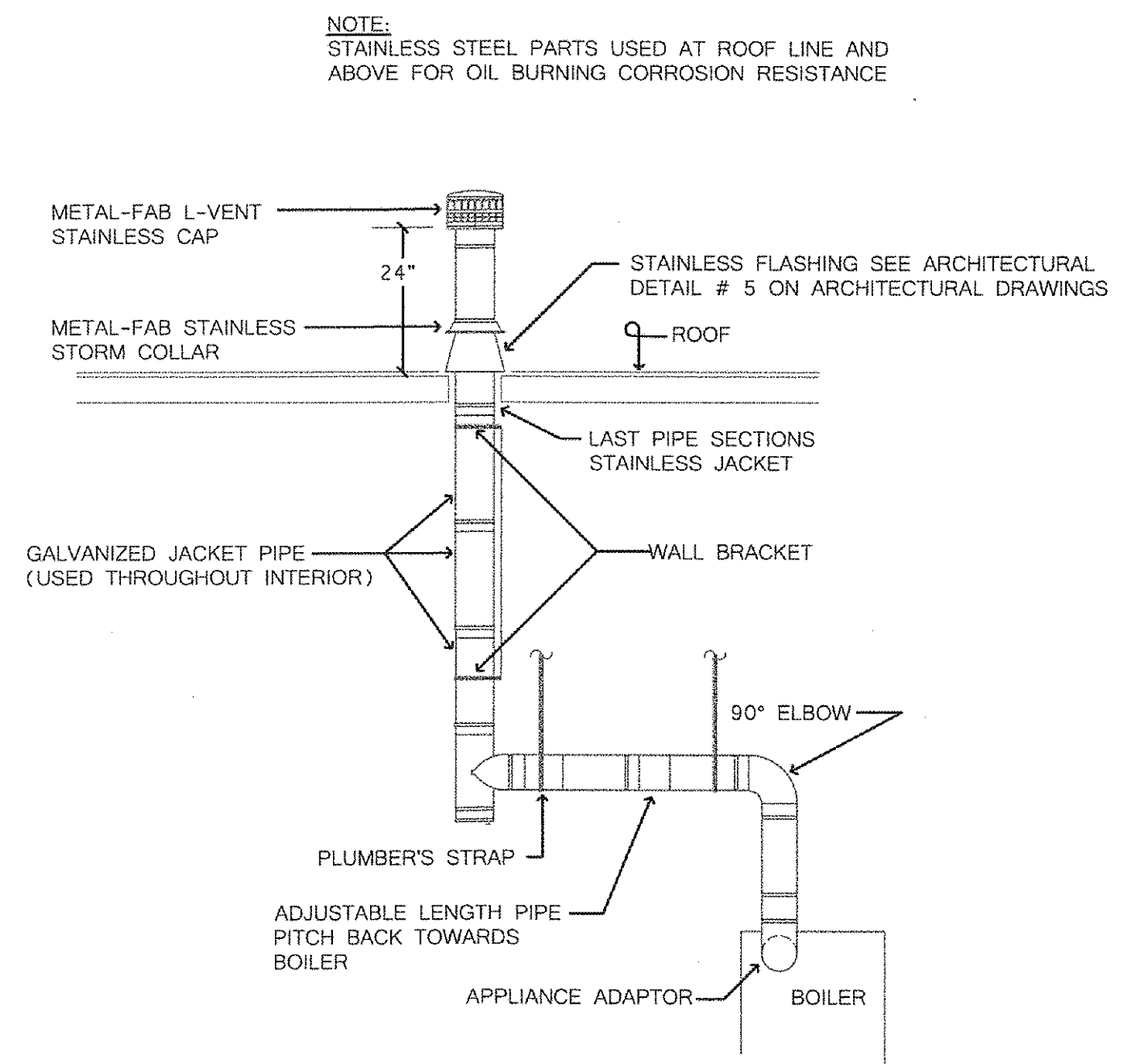
- EXISTING 3/4" DOMESTIC WATER SUPPLY TO HOT WATER HEATING SYSTEM.
- CONNECT NEW HORIZONTAL MOUNTED 3/4" REDUCED PRESSURE ZONE BACKFLOW PREVENTER WITH INLET AND OUTLET "APOLLO", "JAMESBURY" OR "NIBCO" BALL VALVES TO EXISTING COLD WATER HEATING SYSTEM SUPPLY LINE. BACKFLOW PREVENTER SHALL BE "WATTS" MODEL #009, "AMES" OR "WILKINS". MOUNT AT 5 FT. MAXIMUM ABOVE FINISHED FLOOR.
- 3/4" BY-PASS WITH "APOLLO", "JAMESBURY" OR "NIBCO" BALL VALVE.
- 3/4" DOMESTIC COLD WATER FILL WITH "APOLLO", "JAMESBURY" OR "NIBCO" REDUCING VALVE WITH FAST FILL, 10-50 PSIG ADJUSTMENT RANGE. PIPE WITH BALL VALVE SHUT-OFF VALVES AND BY-PASS ARRANGEMENT AS SHOWN. MINIMUM SYSTEM PRESSURE SHALL BE 30 PSIG.
- "TACO" MODEL # 4902A, "B&G" OR "ARMSTRONG" 2" AIR SEPARATOR WITH 3/4" HIGH CAPACITY AIR VENT. CONTRACTOR SHALL PROVIDE PROPER SUPPORT TO STRUCTURE.
- "TACO", "B&G" OR "POTTER" AUTOMATIC AIR VENT WITH "APOLLO", "JAMESBURY" OR "NIBCO" BALL VALVE.
- EXISTING EXPANSION TANK AT CEILING TO REMAIN.
- CONNECT NEW FEED TO EXISTING EXPANSION TANK WITH UNION.
- NEW 8"Ø FLUE THROUGH ROOF. SEE FLUE PIPING ARRANGEMENT.
- EXISTING FUEL OIL SUPPLY AND RETURN PIPING TO BE REUSED AND CONNECTED TO NEW BURNER. ADAPTOR FITTINGS MAY BE NECESSARY. CONNECT IN FULL OPERATING ORDER. TO BE COMPLETE WITH OIL FILTER ASSEMBLY AND "ASSURD AUTOMATION", "BI-TORQ" OR "OCECO" FUSIBLE FIRE LINK VALVE.
- EXISTING GLYCOL FEEDER TO REMAIN IN SERVICE. FEEDER SUPPLY CONNECTIONS TO NEW PIPING WILL HAVE TO BE MODIFIED AND EXTENDED AS REQUIRED.
- NEW 2" AIR SEPARATOR. SEE PIPING DETAIL ABOVE.
- CONNECT NEW 2" HOT WATER SUPPLY PIPING TO EXISTING.
- CONNECT NEW 2" HOT WATER RETURN PIPING TO EXISTING.
- EXISTING HOT WATER CIRCULATING PUMP TO REMAIN.
- 2" HOT WATER SUPPLY TO BUILDING WITH BALL VALVE SHUT-OFF.
- NEW OIL-FIRED HOT WATER BOILER, MOUNT ON 4" SOLID CONCRETE BLOCKS (HOUSEKEEPING PAD). PIPE SAFETY RELIEF VALVE TO FLOOR. RUN NEW 8" DIA. FLUE AS SHOWN THROUGH ROOF. INSTALL NEW BOILER, BURNER AND ALL COMPONENTS IN STRICT ACCORDANCE WITH MANUFACTURES INSTRUCTIONS.
- 2" HOT WATER RETURN PIPING WITH BALL VALVE SHUT-OFF IN RISER.
- "APOLLO", "JAMESBURY" OR "NIBCO" DRAIN VALVE AT LOW POINT.
- NEW 8"Ø FLUE, PIPING TO BE AT LEAST 7' A.F.F. SEE FLUE PIPING ARRANGEMENT.
- EXTEND AND CONNECT EXISTING GLYCOL LINE TO NEW 2" HOT WATER RETURN PIPING.
- SAFETY RELIEF VALVE, PIPE TO EXISTING FLOOR DRAIN.
- LOCATION OF INTAKE HOOD. SEE ARCHITECTURAL DRAWINGS.

LEGEND - REMOVALS

- EXISTING "FLEX FUEL OIL SUPPLY (F.O.S.) AND FUEL OIL RETURN (F.O.R.) PIPING TO REMAIN IN SERVICE. DISCONNECT FROM EXISTING BURNER AND PROVIDE PROPER SUPPORT ABOVE FLOOR. RECONNECT TO NEW BURNER.
- EXISTING ANTI-FREEZE (GLYCOL) FEEDER TO REMAIN.
- REMOVE EXISTING 3/4" COLD WATER FEED TO BOILER FILL AND MAKE-UP. REMOVE ALL DOMESTIC WATER PIPING BACK UPSTREAM TO ABOVE EXISTING BACK FLOW PREVENTER HIGH ON WALL.
- REMOVE PORTION OF EXISTING 2" HOT WATER RETURN PIPING BACK TO POINT SHOWN, ALSO SEE NEW BOILER ROOM PLAN.
- REMOVE EXISTING 2" AIR SEPARATOR AND ALL ASSOCIATED INLET AND OUTLET PIPING.
- REMOVE EXISTING 2" RETURN PIPING BACK TO THIS POINT.
- EXISTING GLYCOL FEED LINE CONNECTED TO HOT WATER SUPPLY MAIN TO REMAIN.
- EXISTING HOT WATER RETURN LINE BEYOND CIRCLE NOTE "F" TO REMAIN.
- EXISTING 40 GALLON ELECTRIC WATER HEATER TO REMAIN.
- EXISTING 2" HOT WATER SUPPLY LINE TO REMAIN ON DISCHARGE SIDE OF HOT WATER CIRCULATING PUMP.
- EXISTING HOT WATER CIRCULATING PUMP TO REMAIN.
- EXISTING FLOOR DRAIN TO REMAIN.
- EXISTING EXPANSION TANK HIGH AT CEILING TO REMAIN. PROVIDE NEW INLET PIPING. SEE NEW BOILER ROOM PLAN.
- REMOVE EXISTING BOILER, BURNER, ASSOCIATED PIPING, VALVES, FITTINGS, HANGERS AND ALL PIPING NOT SCHEDULED FOR REUSE. DISCONNECT ELECTRICAL WIRING.
- EXISTING MAIN ELECTRICAL SERVICE AND ADJACENT SUB-PANELS TO REMAIN.
- DOMESTIC WATER SERVICE AND ACCESSORIES TO REMAIN.
- REMOVE EXISTING BOILER BREECHING AND FLUE PIPING IN ITS ENTIRETY.
- DISCONNECT EXISTING GLYCOL LINE FROM EXISTING RETURN MAIN BEING REMOVED. SAVE FOR RECONNECTION TO NEW RETURN MAIN.

HOT WATER BOILER INSTALLATION NOTES

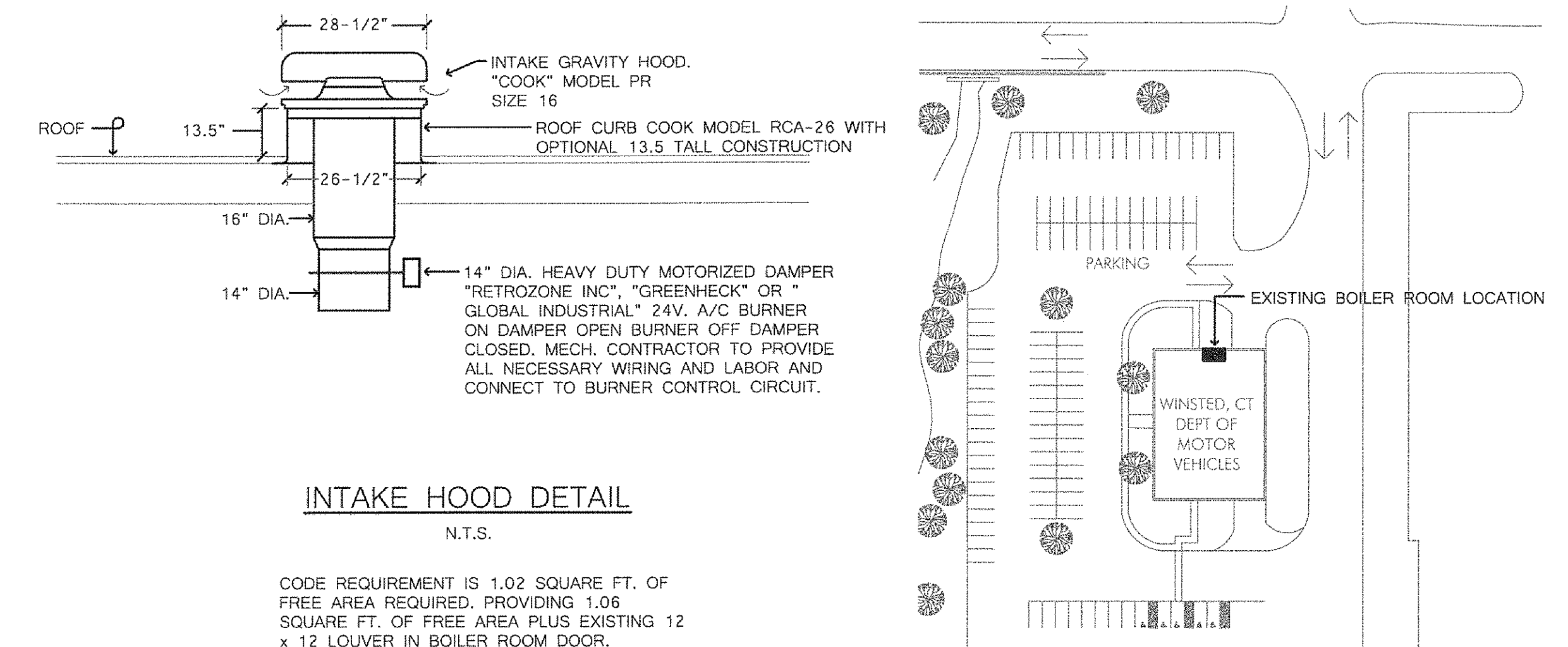
- HEATING SYSTEM SHALL BE FILLED WITH "CAMCO" ITEM #20027, "PIPE SAVER" OR "CHEMORLD" BOILER ANTI FREEZE #20027. DO NOT USE AUTOMOTIVE ANTI-FREEZE IN BOILER WATERWAYS. BE SURE TO EMPLOY A PREPARATION DESIGNED FOR HYDRONIC HEATING SYSTEMS AND IS COMPATIBLE WITH THE BOILERS VITON GASKETS.
- NEW BOILER TO BE MOUNTED DEAD LEVEL ON 4" HIGH SOLID CONCRETE BLOCKS. ADJUST LEVELING LEGS AS REQUIRED.
- CONNECT NEW COLD WATER MAKE-UP PIPING TO EXISTING DOMESTIC COLD WATER. RUN TO AND CONNECT TO NEW PIPING BETWEEN NEW AIR SEPARATOR AND EXISTING EXPANSION TANK. PROVIDE AND INSTALL IN-LINE A NEW BOILER FILL AND MAKE-UP DUAL CONTROL. FEED WATER REGULATOR AND RELIEF VALVE.
- BEFORE NEW BOILER IS INSTALLED, ENTIRE EXISTING HOT WATER HEATING SYSTEM MUST BE THOROUGHLY CLEANED. SYSTEM MUST BE FILLED WITH CLEANING SOLUTION AND FLUSHED WITH CLEAN WATER UNTIL DRAIN WATER IS CLEAR AND THOROUGHLY CLEAN. FOR CLEANING THE NEW BOILER AFTER INSTALLATION FOLLOW THE MFG. INSTALLATION INSTRUCTIONS.
- NEW BOILER CONNECTED TO EXISTING SYSTEM OF CONTROLS. NO EXISTING CONTROLS WERE MODIFIED FOR BOILER REPLACEMENT.



FLUE PIPING SPECIFICATIONS

FLUE PIPING SHALL BE TYPE "L" TEMPERATURE VENTING SYSTEM "METAL-FAB INC" "SELKIRK METALBESTOS" OR "AMPCO" VENT PIPING AND FITTINGS SHALL COMPLY WITH U.L. LISTINGS AND MFG. INSTALLATION INSTRUCTIONS. FOR EXTRA CORROSION RESISTANCE VENT COMPONENTS INSTALLED EXTERIOR TO THE BUILDING INCLUDE A METAL-FAB L-VENT STAINLESS STEEL CAP, STAINLESS STEEL JACKETED PIPE SECTIONS, STAINLESS FLASHINGS AND STORM COLLAR. NOTE: ALWAYS MAINTAIN 3" MINIMUM CLEARANCE TO COMBUSTIBLES.

OIL-FIRED BOILER SCHEDULE								
MAKE	SERIES	MODEL	TYPE	I+B+R GROSS OUTPUT (MBH)	WATER (MBH)	BURNER	BURNER HP	FUEL OIL TYPE
SMITH	19	19AW-5	OIL-FIRED HOT WATER	575	510	POWER FLAME	1/3	#2
ALTERNATE OIL-FIRED BOILER CAN BE BURNHAM OR WEIL MCALAIN FOR BOILER ACCESSORIES SEE DRAWING M-1								



CODE REQUIREMENT IS 1.02 SQUARE FT. OF FREE AREA REQUIRED. PROVIDING 1.06 SQUARE FT. OF FREE AREA PLUS EXISTING 12 x 12 LOUVER IN BOILER ROOM DOOR.

	BOILER ROOM PLANS - MECHANICAL	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES						
	REVISIONS <table border="1"> <thead> <tr> <th>mark</th> <th>date</th> <th>description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	mark	date	description				drawing prepared by General Drafting & Design, Inc. 140 Washington Ave, 3rd Floor North Haven, CT 06473 p: 203-239-6818 f: 203-239-7275
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