

POWERHOUSE STACK REPLACEMENT

WOODBINE DEVELOPMENTAL CENTER
WOODBINE, NEW JERSEY

STATE OF NEW JERSEY
BID DOCUMENTS
JANUARY 2021
DPMC NO. M1514-00

HONORABLE PHILIP D. MURPHY, GOVERNOR
HONORABLE SHEILA Y. OLIVER, LIEUTENANT GOVERNOR

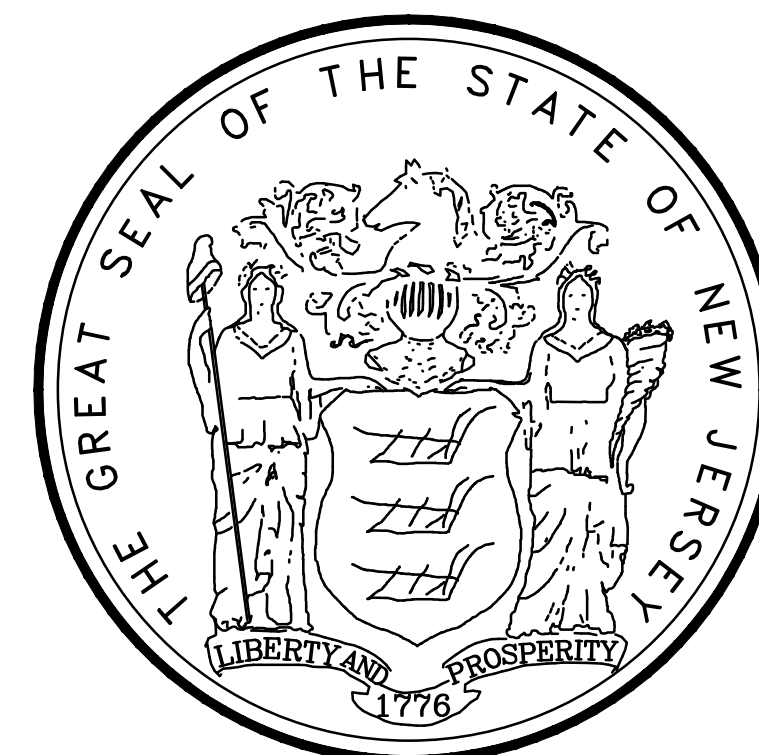
DEPARTMENT OF THE TREASURY
ELIZABETH MAHER MUOIO, STATE TREASURER

DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION
CHRISTOPHER CHIANESE, DIRECTOR

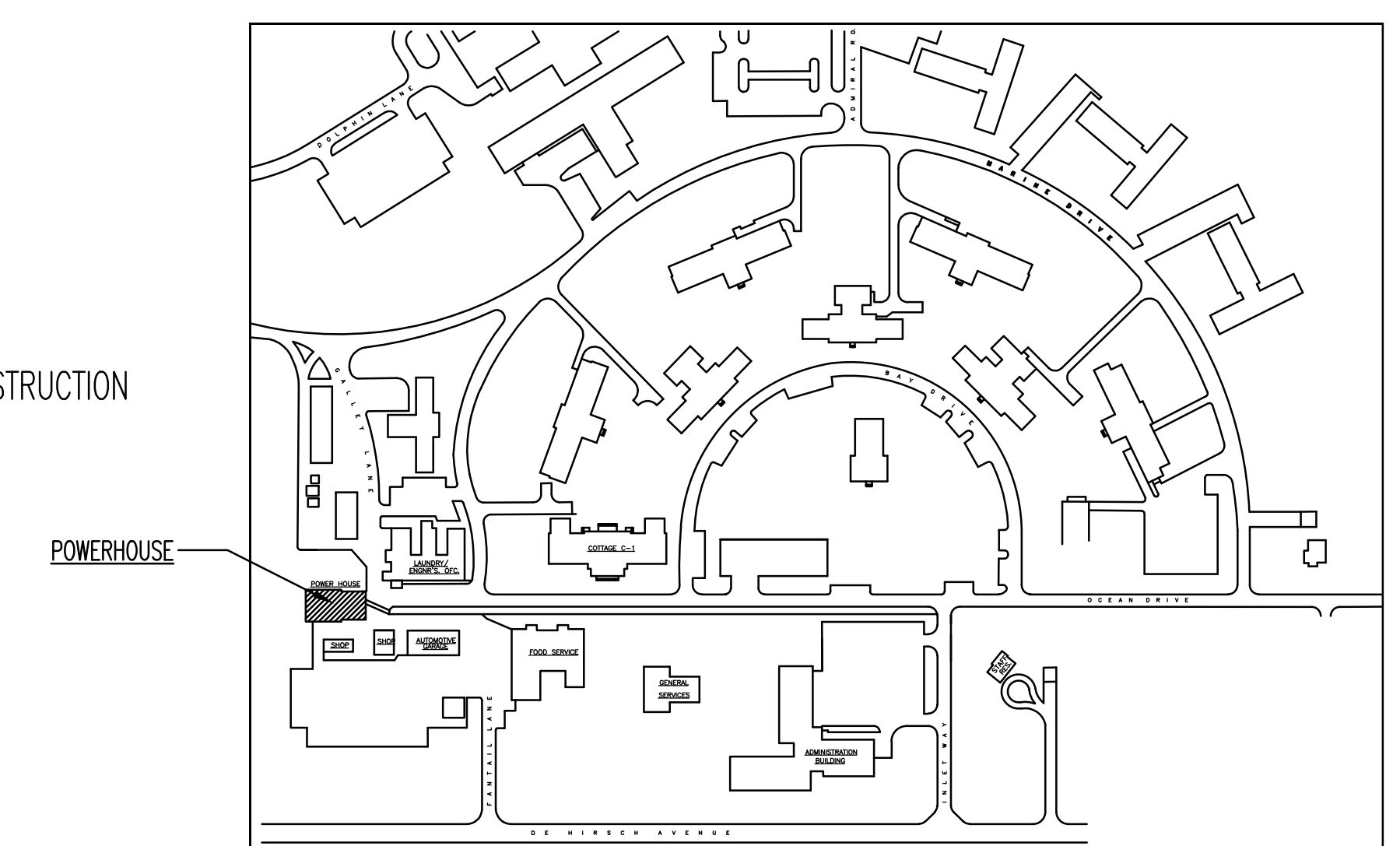
DEPARTMENT OF HUMAN SERVICES
SARAH ADELMAN, ACTING COMMISSIONER

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PROPERTY INFORMATION
PROPERTY LOT#: 1
PROPERTY BLOCK#: 110
PROPERTY USE GROUP: FACTORY GROUP F-1
PROPERTY OWNER:
DEPARTMENT OF HUMAN SERVICES
OFFICE OF DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION
222 SOUTH WARREN ST.
P.O. BOX 700
TRENTON, NJ 08625-700



SITE LOCATION PLAN
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Tel: 201-792-3900

NAME _____ DATE _____
ROBERT KEVIN FRITZ
NJ Registered Architect Lic. No. 11686

TITLE SHEET
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

DPMC NO. M1514-00 DATE 01/22/2021
DRAWN BY DG DESIGNED BY DG
SCALE AS SHOWN
SHEET NO. T1
1 of 15

GENERAL NOTES:

- ALL ITEMS THAT ARE IN CONFLICT WITH THE WORK INCLUDING BUT NOT LIMITED TO MECHANICAL EQUIPMENT, CONDUIT, LIGHT FIXTURES, ETC., SHALL BE DISCONNECTED, REMOVED, RELOCATED, MODIFIED AS REQUIRED AND RE-INSTALLED TO ELIMINATE ANY CONFLICT PER INDUSTRY STANDARDS. ALL MECHANICAL, ELECTRICAL AND PLUMBING WORK SHALL BE PERFORMED BY SUB-CONTRACTORS LICENSED IN THE APPROPRIATE TRADE.
- THE CONTRACT DOCUMENTS, INCLUDING SPECIFIC INSTALLATION DETAILS SHOWN ON THE DRAWINGS, ESTABLISH THE MINIMUM INSTALLATION REQUIREMENTS FOR THIS PROJECT. IF DETAILS SHOWN ARE MORE STRINGENT THAN THE MANUFACTURER'S STANDARD DETAILS, THE DETAILS SHOWN WILL GOVERN THE INSTALLATION OF THAT PORTION OF WORK. IF THE MANUFACTURER'S STANDARD DETAILS ARE MORE STRINGENT THAN DETAILS SHOWN, THE MANUFACTURER'S DETAILS WILL GOVERN THE INSTALLATION OF THAT PORTION OF WORK. ALL MANUFACTURER REQUIREMENTS IN EXCESS OF THAT REQUIRED BY THE CONTRACT DOCUMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE STATE. THE CONTRACTOR SHALL REVIEW THE DRAWINGS WITH THE MANUFACTURER, PRIOR TO SUBMITTING THE BID. ANY MANUFACTURER OBJECTIONS TO DETAILS SHOWN SHALL BE SUBMITTED TO THE STATE, PRIOR TO SUBMITTING A BID.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL REQUIRED FOR A COMPLETE AND WATERIGHT INSTALLATION, THAT IS FULLY WARRANTED/GUARANTEED BY THE ROOFING MANUFACTURER. ANY DETAILS OR WORK REQUIRED, BUT NOT SHOWN OR SPECIFIED, ARE TO BE PROVIDED IN ACCORDANCE WITH THE ROOFING MANUFACTURER'S RECOMMENDATIONS AND/OR REQUIREMENTS AT NO ADDITIONAL COST TO THE STATE.
- PROVIDE BARRICADES, WARNING SIGNS AND LIGHTS AT OPENINGS AND OTHER AREAS HAZARDOUS TO PEDESTRIANS AND TRAFFIC. KEEP CONSTRUCTION DEBRIS CLEAR OF TRAFFIC AREAS.
- ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE REGULATIONS AND GUIDELINES SET FORTH BY ALL AGENCIES HAVING JURISDICTION OVER THE WORK. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE BUILDING CODES AND/ REGULATIONS AND PAYING FOR AND OBTAINING ALL NECESSARY AND REQUIRED INSPECTIONS, APPROVALS AND PERMITS, NECESSARY TO PERFORM ALL WORK AND SERVICES HEREIN NOTED OR INDICATED ON THE DRAWINGS.
- ALL WORK SHALL BE EXECUTED IN A CAREFUL AND ORDERLY MANNER WITH THE LEAST POSSIBLE NOISE, DUST, OR DISTURBANCE TO OCCUPANTS, ADJACENT SITES OR BUILDINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATERIGHT INTEGRITY OF THE BUILDING AT ALL TIMES. ALL WATER DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE STATE.
- THE CONTRACTOR SHALL PROVIDE PROTECTION FOR THE GENERAL PUBLIC AND CONSTRUCTION WORKERS IN AND AROUND THE CONSTRUCTION SITE. ADEQUATE BARRIERS SHALL BE PROVIDED TO EXERCISE CONTROL OF SAFE INGRESS AND EGRESS OF PREMISES. FIRE EXITS SHALL AT NO TIME BE BLOCKED.
- ALL ITEMS, SYSTEMS AND PRODUCTS NOTED ON THE DRAWINGS SHALL BE NEW UNLESS NOTED AS EXISTING.
- THE APPROVAL OF SUBMITTALS BY THE ENGINEER/ ARCHITECT SHALL NOT BE CONSTRUED AS A COMPLETE CHECK, BUT WILL INDICATE ONLY THAT THE GENERAL METHOD OF CONSTRUCTION, MATERIALS, DETAILING AND OTHER INFORMATION ARE SATISFACTORY. APPROVAL WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ANY ERROR, WHICH MAY EXIST IN HIS SUBMITTALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIMENSIONS AND DESIGN OF ADEQUATE CONNECTIONS, DETAILS AND SATISFACTORY CONSTRUCTION OF ALL WORK.
- SUBMITTALS SHALL BE IN COMPLIANCE WITH CONTRACT REQUIREMENTS AND ACTUAL FIELD CONDITIONS. INCOMPLETE SUBMITTALS WILL NOT BE REVIEWED BY THE ENGINEER/ ARCHITECT AND WILL BE RETURNED TO THE CONTRACTOR. REPRODUCED CONTRACT DRAWINGS WILL NOT BE ACCEPTED AS SHOP DRAWINGS. FIELD VERIFY CONSTRUCTION AND INSTALLATION REQUIREMENTS PRIOR TO SUBMITTAL PREPARATION AND SUBMISSION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION CONSISTING OF REPLACEMENT OR RESTORATION OF ALL AREAS TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL, INCLUDING ALL SHRUBS, TREES, FENCE, PAVEMENT, CURBS, SIDEWALK AND GRASS AREAS OR ANY OTHER PROPERTY IMPACTED AS A RESULT OF THE PROJECT.
- THE EXISTING ASPHALT SHINGLES ARE UNDER WARRANTY. THE CONTRACTOR SHALL MAINTAIN THE EXISTING WARRANTY. THE CONTRACTOR SHALL NOTIFY THE MANUFACTURER PRIOR TO THE START OF ROOFING WORK AND AT THE COMPLETION OF THE ROOFING WORK. THE CONTRACTOR SHALL SUBMIT A "MODIFICATION OF WARRANTY" LETTER FROM THE MANUFACTURER STATING THAT THE ROOF SYSTEM IS STILL UNDER WARRANTY AND INCLUDES ALL NEW MATERIAL.
- THE CONTRACTOR SHALL PROVIDE A FIRE WATCH DURING AND TO A MINIMUM OF 2 HOURS AFTER ANY HOT WORK IS PERFORMED ON THE INTERIOR OR EXTERIOR OF THE BUILDING. HOT WORK CONSISTS OF WELDING, USING FIRE OR SPARK PRODUCING TOOLS OR THAT PRODUCES A SOURCE OF IGNITION.
- THE CONTRACTOR SHALL PREPARE AN UNDERGROUND UTILITY PROTECTION PLAN OUTLINING THE PROPOSED MEASURES TO PROTECT THE EXISTING UNDERGROUND UTILITIES IN THE VICINITY OF THE EXISTING MASONRY STACK, DURING THE DEMOLITION OF THE STACK. THE UNDERGROUND UTILITY PROTECTION PLAN SHALL BE SUBMITTED FOR REVIEW PRIOR TO THE STACK DEMOLITION. NO STACK DEMOLITION SHALL BE CONDUCTED UNTIL THE UNDERGROUND UTILITY PROTECTION PLAN IS APPROVED.

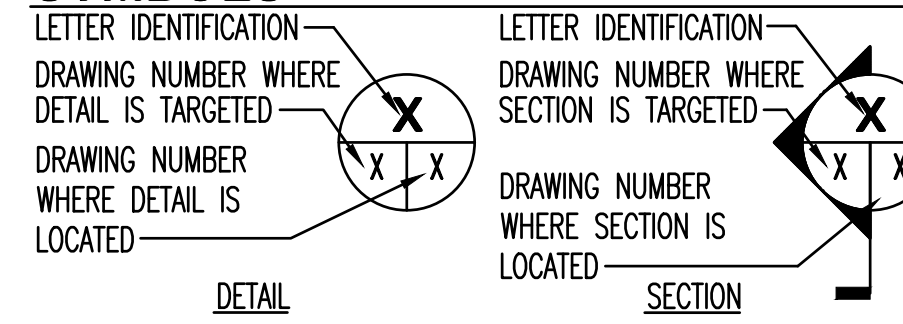
GENERAL DEMOLITION NOTES

- THE SCOPE OF DEMOLITION WORK, SPECIFICALLY CUTTING AND PATCHING, SHALL NOT BE LIMITED TO AREAS BEING RENOVATED, BUT SHALL INCLUDE ALL WORK NECESSARY TO COMPLETE THE FINISHED PROJECT TO THE SATISFACTION OF THE STATE.
- PRIOR TO START OF DEMOLITION, INSPECT AREAS IN WHICH WORK WILL BE PERFORMED. NOTE EXISTING CONDITIONS OF STRUCTURE SURFACES, EQUIPMENT, OR SURROUNDING PROPERTY THAT COULD BE MISCONSTRUED AS DAMAGE RESULTING FROM SELECTIVE DEMOLITION WORK; FILE WITH STATE PRIOR TO STARTING WORK.
- THE STATE ASSUMES NO RESPONSIBILITY FOR ACTUAL CONDITION OF ITEMS OR STRUCTURES TO BE DEMOLISHED OR REMOVED.
- THE CONTRACTOR SHALL MAKE CONTINUOUS OBSERVATIONS OF THE EXISTING STRUCTURE DURING THE PERFORMANCE OF THE WORK AND SHALL NOTIFY THE STATE OF ANY CRACKS, DEFLECTIONS, ETC. THAT MAY REQUIRE FURTHER INVESTIGATION.
- ALL DEMOLITION ACTIVITIES, CUTTING AND PATCHING REQUIRED IN CONNECTION WITH THE WORK SHALL BE PERFORMED BY MECHANICS OF THE SPECIFIC TRADE INVOLVED AND AS REQUIRED TO EXECUTE EACH LINE OF WORK. ALL PATCHING SHALL BE FINISHED TO MATCH ADJACENT SURFACES EITHER NEW OR EXISTING TO REMAIN.
- CONDUCT DEMOLITION OPERATIONS AND REMOVAL OF DEBRIS IN A MANNER TO ENSURE MINIMUM INTERFERENCE WITH WALKS AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
- PROVIDE BARRICADES, WARNING SIGNS AND LIGHTS AT OPENINGS AND OTHER AREAS HAZARDOUS TO PEDESTRIANS AND TRAFFIC. KEEP CONSTRUCTION DEBRIS CLEAR OF TRAFFIC AREAS.
- ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE REGULATIONS AND GUIDELINES SET FORTH BY ALL AGENCIES HAVING JURISDICTION OVER THE WORK.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES, LATEST EDITIONS.
- CONTRACTOR SHALL REMOVE AND RELOCATE ALL EXISTING CONSTRUCTION, CONDUITS, PIPING, WIRING, UTILITIES, ETC. THAT MAY INTERFERE WITH NEW CONSTRUCTION AT NO ADDITIONAL COST TO THE STATE.
- THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL EXISTING ITEMS TO REMAIN AND SHALL REPAIR AND/OR REPLACE ANY ITEM DAMAGED DURING THE COURSE OF WORK TO THE SATISFACTION OF THE STATE AT NO ADDITIONAL COST.
- ALL DEMOLITION MATERIALS AND DEBRIS SHALL BE LEGALLY DISPOSED OF OFF THE PROPERTY.
- ANY EXISTING CONSTRUCTION THAT IS TO REMAIN IN PLACE IF DAMAGED DURING PERFORMANCE OF WORK UNDER THIS CONTRACT SHALL BE RESTORED TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE STATE AND AT THE CONTRACTOR'S SOLE EXPENSE.
- EXISTING PENETRATIONS SHOWN ARE NOT ALL-INCLUSIVE. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO SUBMISSION OF BID.

ABBREVIATIONS:

- ALUM ALUMINUM
- CONT CONTINUOUS
- EXIST EXISTING
- FT FEET, FOOT
- FRT FIRE-RETARDANT TREATED
- GA GAUGE
- GALV GALVANIZED
- H HEIGHT/ HIGH
- L LONG
- LB POUND
- MAX MAXIMUM
- MIN MINIMUM
- MPH MILES PER HOUR
- NFPA NATIONAL FIRE PROTECTION ASSOCIATION
- NO NUMBER
- O.C. ON CENTER
- OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- PSF POUNDS PER SQUARE FOOT
- SF SQUARE FEET
- SS STAINLESS STEEL
- STL STEEL
- SQ SQUARE
- THK THICK
- TYP TYPICAL
- W WIDE
- W/ WITH
- Ø DIAMETER
- ± PLUS/ MINUS

SYMBOLS



CONSTRUCTION CODES

THE UNIFORM CONSTRUCTION CODE – NJAC 5:23
REHABILITATION SUBCODE – NJAC 5:23-6 ALTERATION: 5:23-6.6
LEAD HAZARD EVALUATION AND ABATEMENT SUBCODE NJAC 5.17
ASBESTOS HAZARD EVALUATION AND ABATEMENT SUBCODE NJAC 5.23-8
INTERNATIONAL BUILDING CODE – NJ EDITION 2015
INTERNATIONAL MECHANICAL CODE – 2015
INTERNATIONAL FUEL GAS CODE – 2015
NATIONAL STANDARD PLUMBING CODE – 2015
NATIONAL ELECTRICAL CODE – 2014 (NFPA 70)
ASHRAE 90.1-2013 (COMMERCIAL)

CODE ANALYSIS

USE GROUP:	FACTORY GROUP F-1	UNCHANGED
CONSTRUCTION CLASSIFICATION:	II-B (UNSPRINKLERED)	UNCHANGED
BUILDING HEIGHT:	2-STORY(55' FEET) ALLOWABLE	NON-CONFORMING
	1-STORY(38' FEET) ACTUAL	UNCHANGED
BUILDING AREA	15,500 SF/FL-ALLOWABLE	
	4,812 SF/FL-ACTUAL	UNCHANGED
RISK CATAGORY: III		
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS:		
PRIMARY STRUCTURAL FRAME: 0 HOURS		
BEARING WALLS INTERIOR: 0 HOURS		
BEARING WALLS EXTERIOR: 0 HOURS		
NON-BEARING WALLS INTERIOR: 0 HOURS		
FLOOR CONSTRUCTION: 0 HOURS		
ROOF CONSTRUCTION: 0 HOURS		
BUILDING IS NOT SPRINKLERED		

NOTE: ALL NEW WOOD SHALL BE FIRE-RETARDANT TREATED.

EXISTING ROOF COMPONENTS CHART

STRUCTURE:	EXISTING STEEL TRUSSES W/ STEEL Z-PURLINS AND SAG RODS
DECK:	EXISTING 3"± THICK GYPSUM
SLEEPERS:	EXISTING 2"± X 4"± WOOD SLEEPERS
SHEATHING:	EXISTING 1/2"± THICK PLYWOOD
UNDERLAYMENT:	EXISTING FELT UNDERLAYMENT AND ICE AND WATER SHIELD
ROOFING:	EXISTING 3-TAB ASPHALT SHINGLES

ENERGY CODE EVALUATION

UNCONDITIONED BUILDING – THERE IS NO HEATING SYSTEM IN THE BUILDING. THE BUILDING IS HEATED BY THE HEAT GENERATED FROM THE THREE BOILERS USED TO PROVIDE STEAM TO THE CAMPUS. IT IS BENEFICIAL TO ALLOW HEAT TO ESCAPE DUE TO THE HIGH TEMPERATURES EVEN IN THE WINTER MONTHS.

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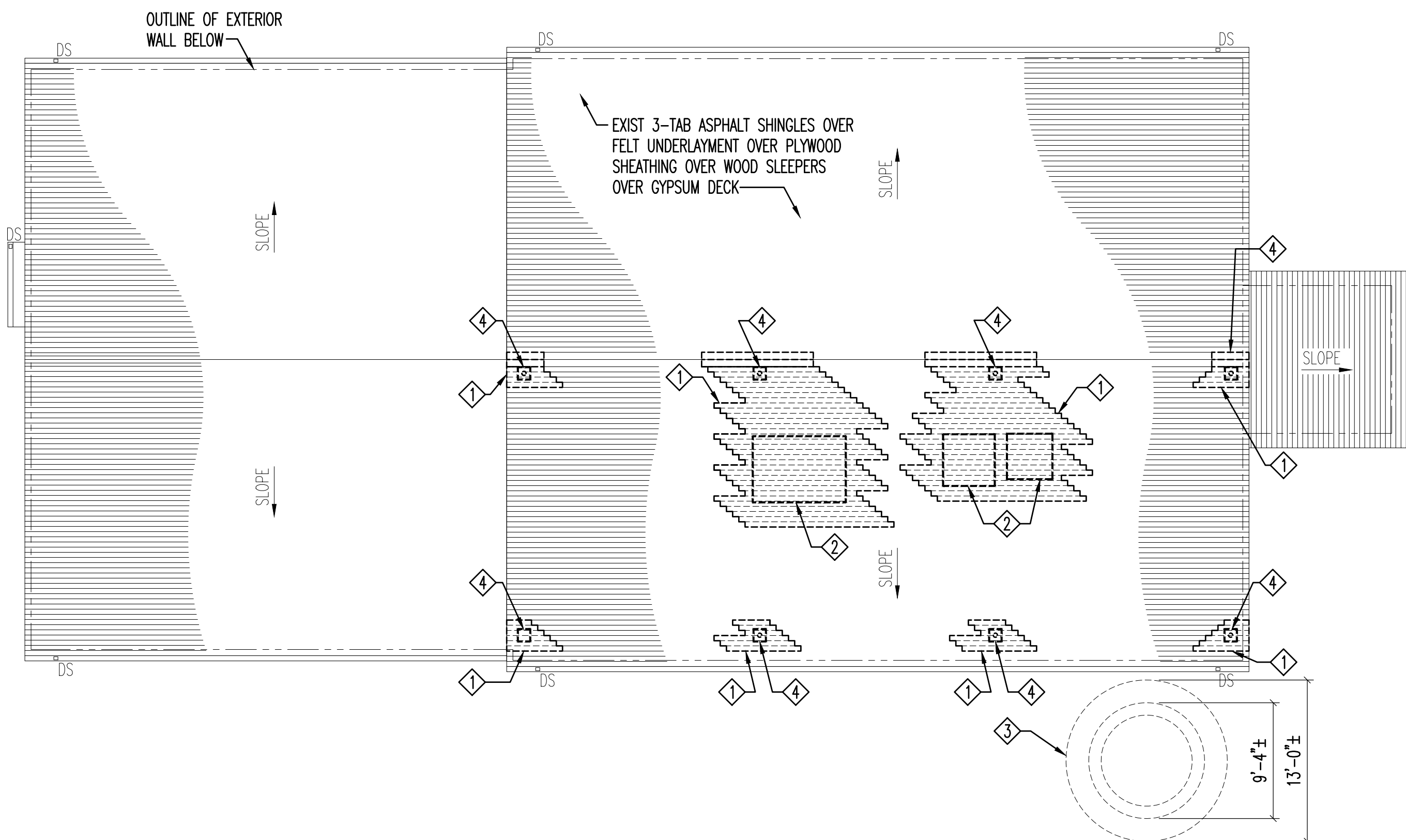
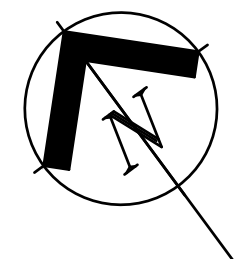
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NAME _____ DATE _____
ROBERT KEVIN FRITZ
NJ Registered Architect Lic. No. 11686

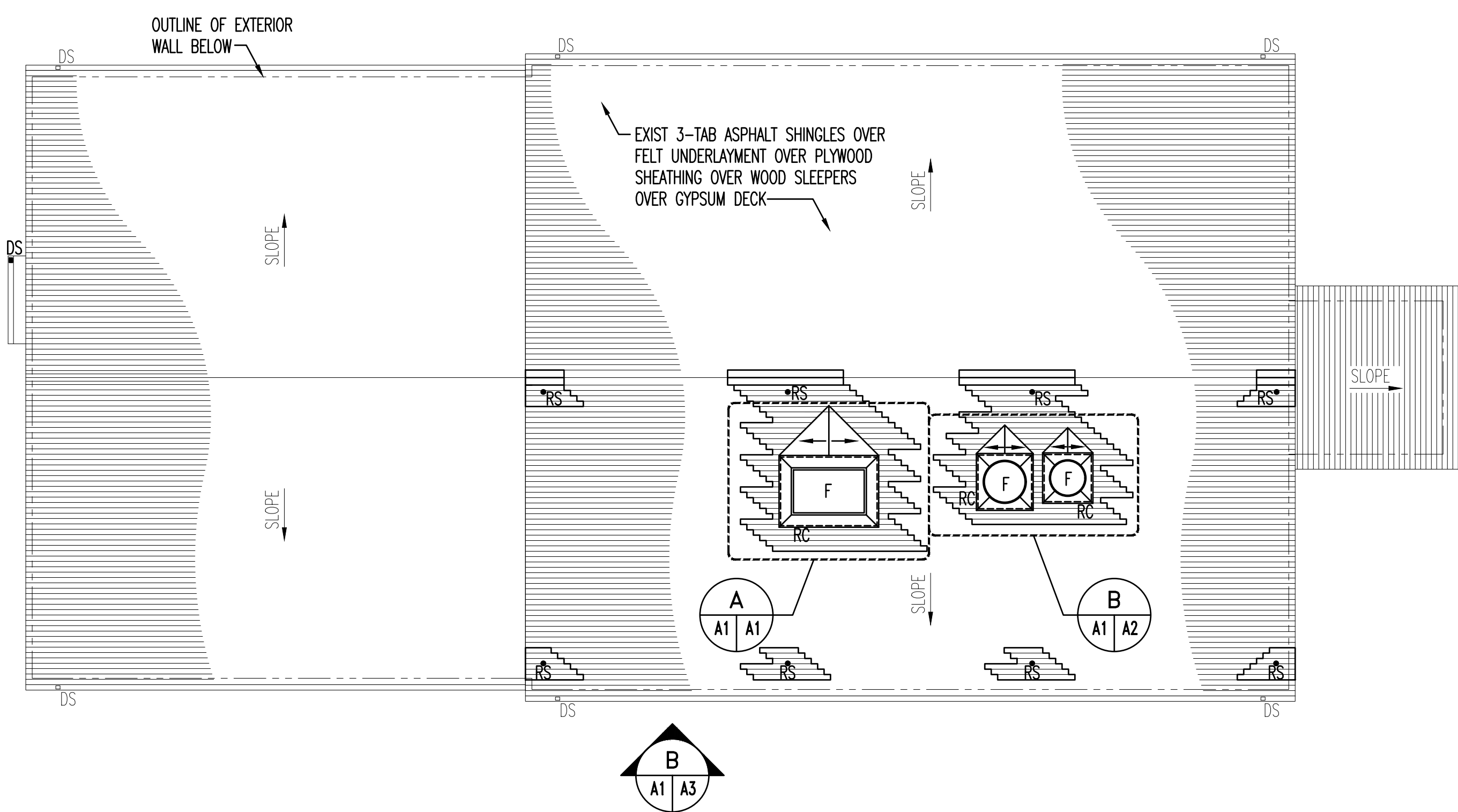
GENERAL NOTES AND ABBREVIATIONS
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

DPWG NO.	DATE
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WOODBINE CAPE MAY COUNTY NEW JERSEY



DEMOLITION ROOF PLAN
SCALE: 1/8" = 1'-0"



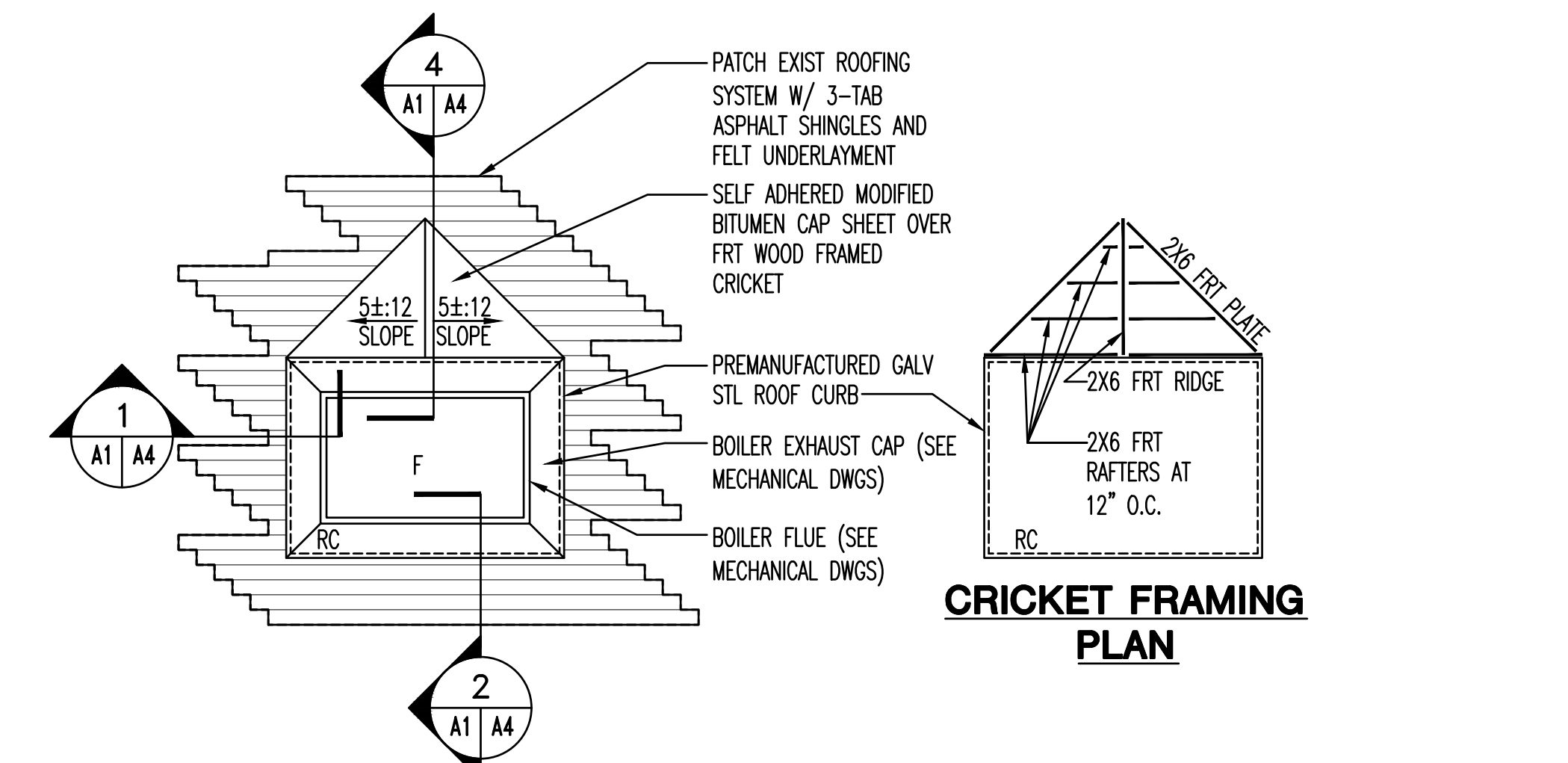
ROOF PLAN
SCALE: 1/8" = 1'-0"

DEMOLITION LEGEND

- (ALL ITEMS LISTED ARE TYPICAL THROUGHOUT THE PROJECT.)
- 1 REMOVE PORTION OF EXIST 3-TAB ASPHALT SHINGLES AND UNDERLAYMENT TO THE EXISTING PLYWOOD SHEATHING TO ACCOMMODATE FLUE PIPE AND FLASHING.
 - 2 REMOVE PORTION OF EXIST 1/2"± PLYWOOD SHEATHING, WOOD SLEEPERS, BATT INSULATION AND GYPSUM DECK TO ACCOMMODATE FLUE PIPE PENETRATION. (SEE STRUCTURAL DWGS FOR GYPSUM DECK REMOVAL AND REINFORCEMENT.)
 - 3 REMOVE EXISTING BRICK SMOKESTACK IN ITS ENTIRETY INCLUDING BUT NOT LIMITED TO BRICK, MORTAR, REINFORCEMENT, STEEL BANDS, STEEL BAND SEALANT, CONCRETE FOUNDATION, CLEAN-OUT DOOR, LIGHTNING PROTECTION AIR TERMINALS, LIGHTNING PROTECTION CABLES AND ALL SOOT. THE STEEL BAND SEALANT CONTAINS ASBESTOS.
 - 4 REMOVE PORTION OF EXIST 1/2"± PLYWOOD SHEATHING, WOOD SLEEPERS, BATT INSULATION AND GYPSUM DECK TO ACCOMMODATE GUY WIRE ROOF SUPPORT. (SEE STRUCTURAL DWGS FOR GYPSUM DECK REMOVAL AND REINFORCEMENT.)

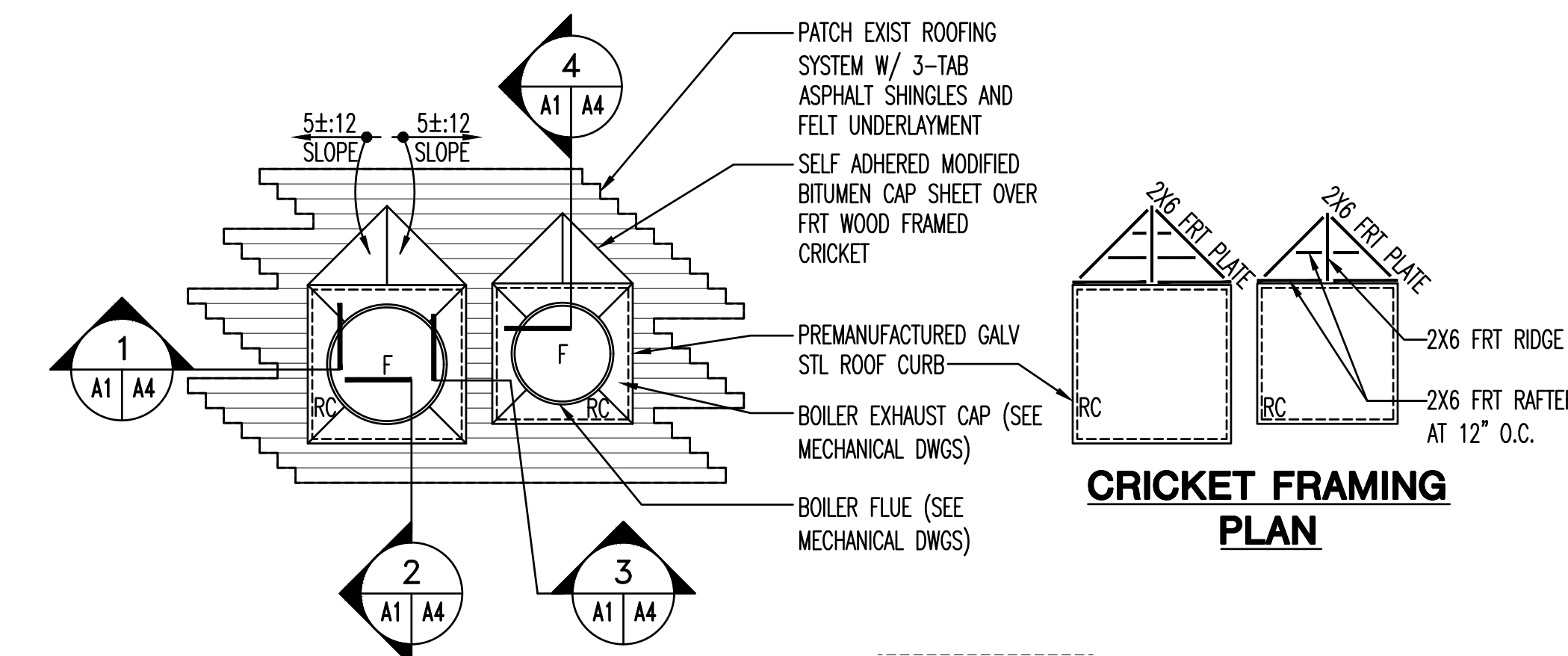
LEGEND

- (ALL ITEMS LISTED ARE TYPICAL THROUGHOUT THE PROJECT.)
- (F) FLUE (SEE MECHANICAL DWGS)
 - (RC) ROOF CURB W/ FRT WOOD FRAMED AND FRT PLYWOOD SHEATHED CRICKET. (SEE ENLARGED PLANS)
 - (P) PATCH EXIST ROOFING SYSTEM W/ 3-TAB ASPHALT SHINGLES AND FELT UNDERLAYMENT (SEE ENLARGED PLANS A/A1/A1 AND B/A1/A1)
 - (F) FLASH GUY WIRE ROOF SUPPORT AND PATCH EXIST ROOFING SYSTEM W/ 3-TAB ASPHALT SHINGLES AND FELT UNDERLAYMENT (SEE DETAIL 1/A1/A1) (SEE STRUCTURAL DWGS FOR GUY WIRE ROOF SUPPORT)



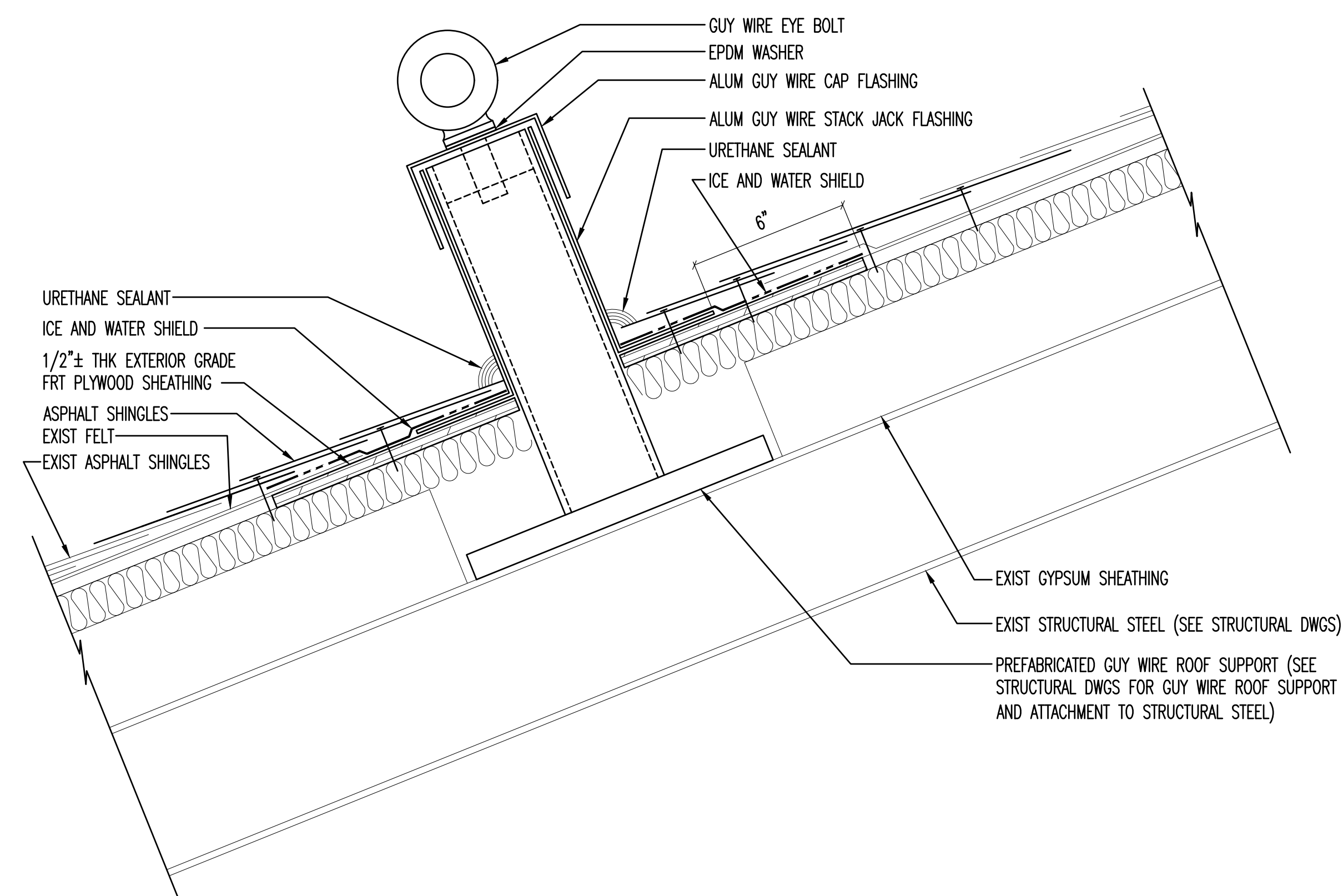
ENLARGED ROOF CURB PLAN

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



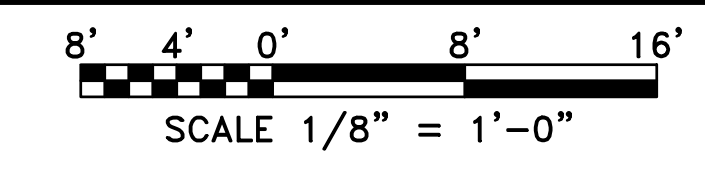
ENLARGED ROOF CURB PLAN

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



GUY WIRE ROOF SUPPORT FLASHING DETAIL

SCALE: 3" = 1'-0"



ROOF PLANS AND DETAILS
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

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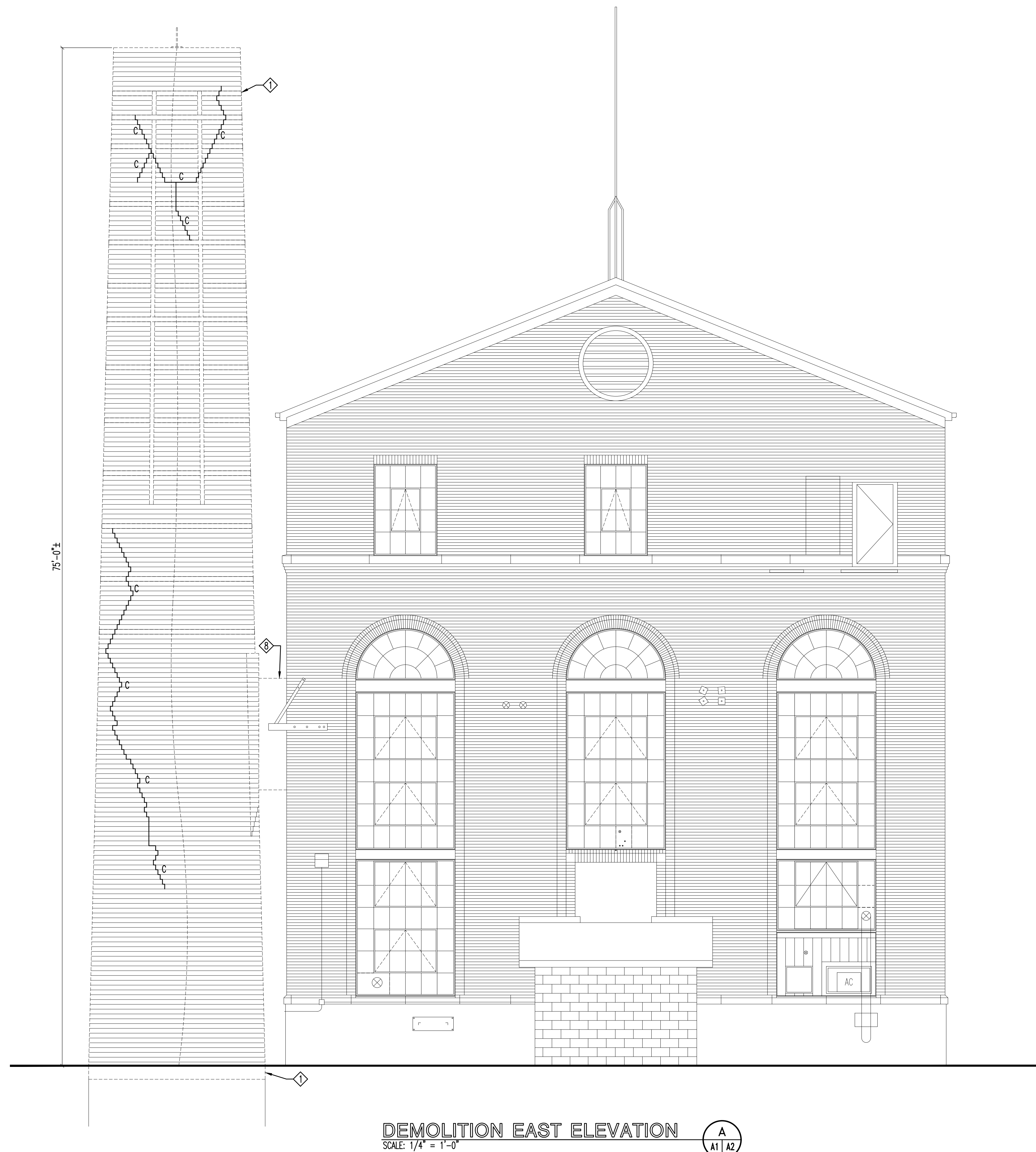
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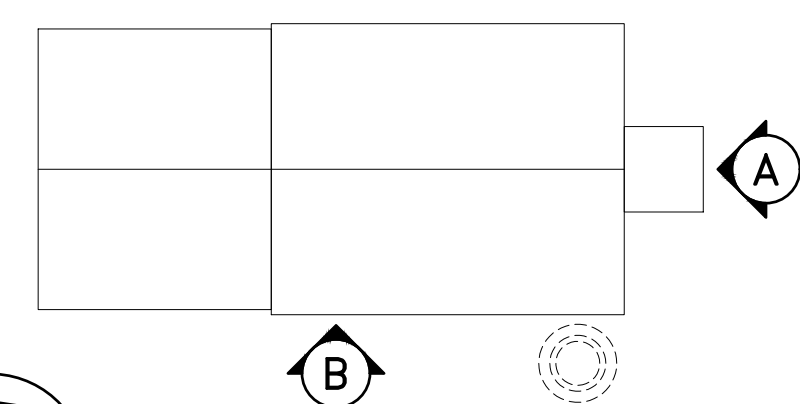
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DEMOLITION LEGEND (ALL ITEMS LISTED ARE TYPICAL THROUGHOUT THE PROJECT.)

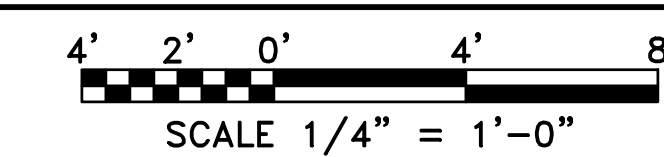
- ◊ REMOVE EXISTING BRICK SMOKESTACK IN ITS ENTIRETY INCLUDING BUT NOT LIMITED TO BRICK, MORTAR, REINFORCEMENT, STEEL BANDS, STEEL BAND SEALANT, CLEAN-OUT DOOR, LIGHTNING PROTECTION AIR TERMINALS, LIGHTNING PROTECTION CABLES AND ALL SOOT. THE STEEL BAND SEALANT CONTAINS ASBESTOS. REMOVE EXISTING CONCRETE FOUNDATION TO 1'-0" BELOW GRADE. BACKFILL REMOVED FOUNDATION HOLE W/ SELECT STRUCTURAL FILL AND COMPACT TO ACHIEVE A MINIMUM DRY DENSITY OF 95% OF THE MODIFIED PROCTOR MINIMUM DRY DENSITY ASTM D1557. COVER STRUCTURAL FILL W/ 6" OF TOPSOIL AND FERTILIZE AND SEED.
- ◊ REMOVE EXISTING SMOKESTACK BREECING IN ITS ENTIRETY. THE BREECING SEAM GASKETS AND ACCESS DOOR GASKETS CONTAIN ASBESTOS. SEE THE MECHANICAL DRAWINGS FOR INTERIOR REMOVALS.



DEMOLITION EAST ELEVATION
SCALE: 1/4" = 1'-0"
A
A1 | A2



KEY PLAN
NOT TO SCALE



DEMOLITION EAST ELEVATION
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

DPWG NO.	M1514-00	DATE	01/22/2021
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	A2		
SHEET NO.	4	of	15

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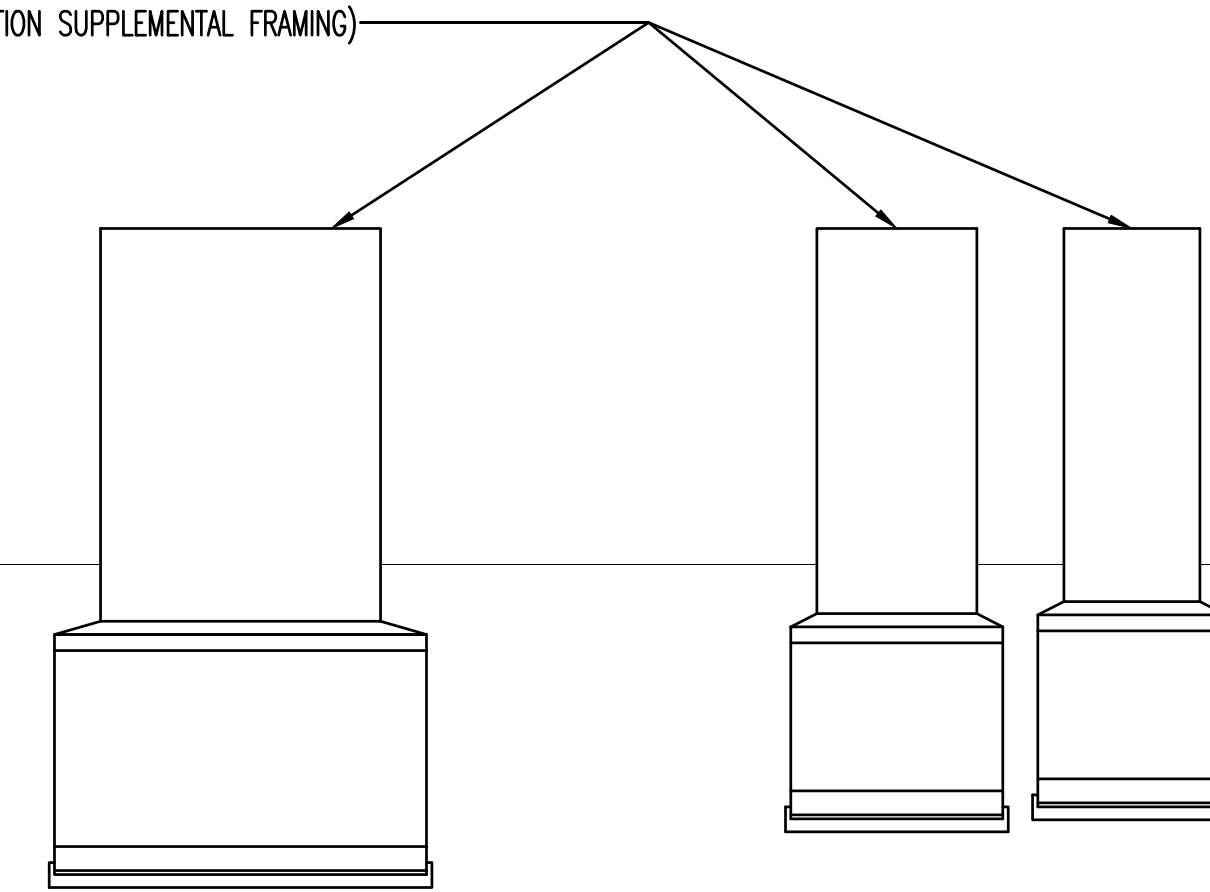
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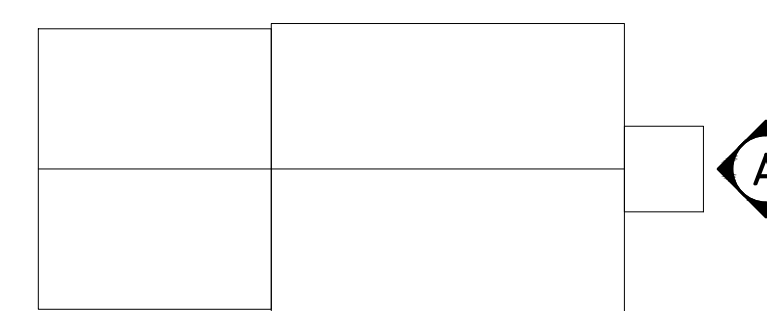
 PREFINISHED ALUMINUM STORMPROOF LOUVER W/ INTERIOR PREFINISHED ALUMINUM BLANK-OFF. (SEE DETAIL 5.6/A3/A4)

BOILER FLUES (SEE ROOF PLANS FOR ROOF WORK, SEE MECHANICAL DWGS FOR FLUES AND SEE STRUCTURAL DWGS FOR FLUE SUPPORT FRAMING AND ROOF PENETRATION SUPPLEMENTAL FRAMING)



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

B
A1 | A3



 **KEY PLAN**
NOT TO SCALE



SOUTH ELEVATION
POWERHOUSE STACK REPLACEMENT
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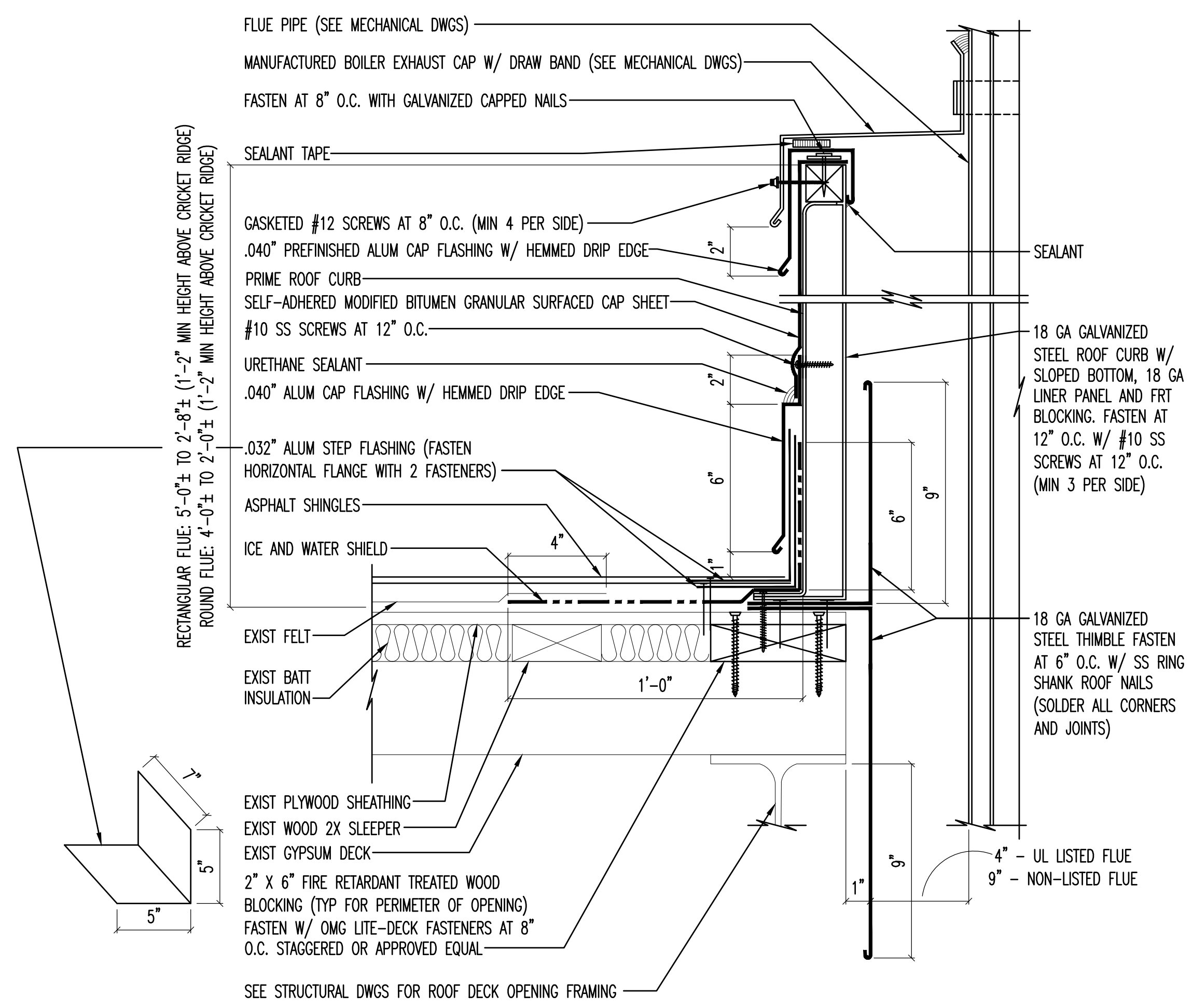
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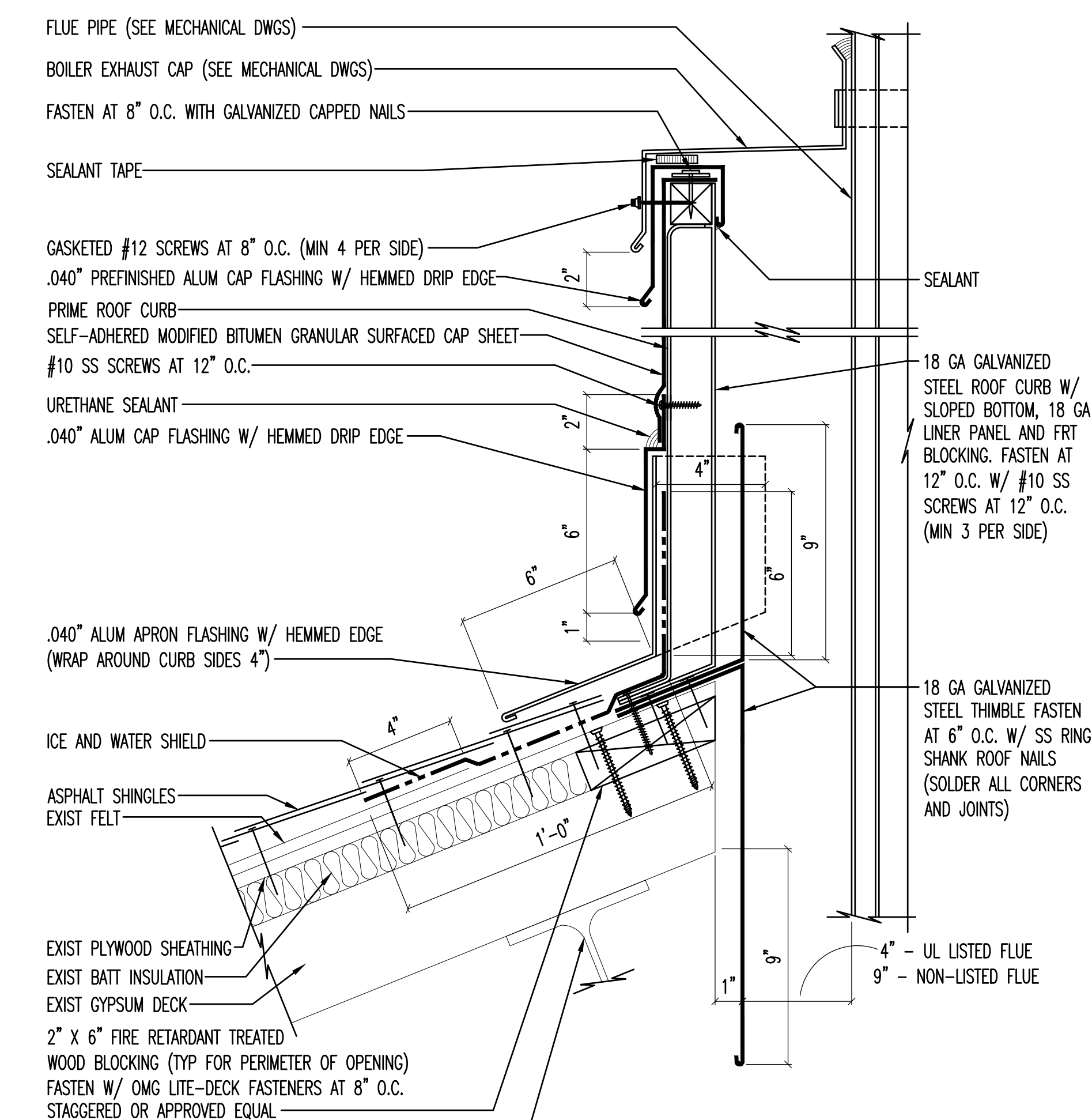
M **MOTT MACDONALD**
MOTT MACDONALD ARCHITECTS, P.C.
111 Wood Avenue South, Suite 102
Iselin, NJ 08830-4112
Tel: 201-792-3900

NAME _____ DATE _____
ROBERT KEVIN FRITZ
NJ Registered Architect Lic. No. 11686



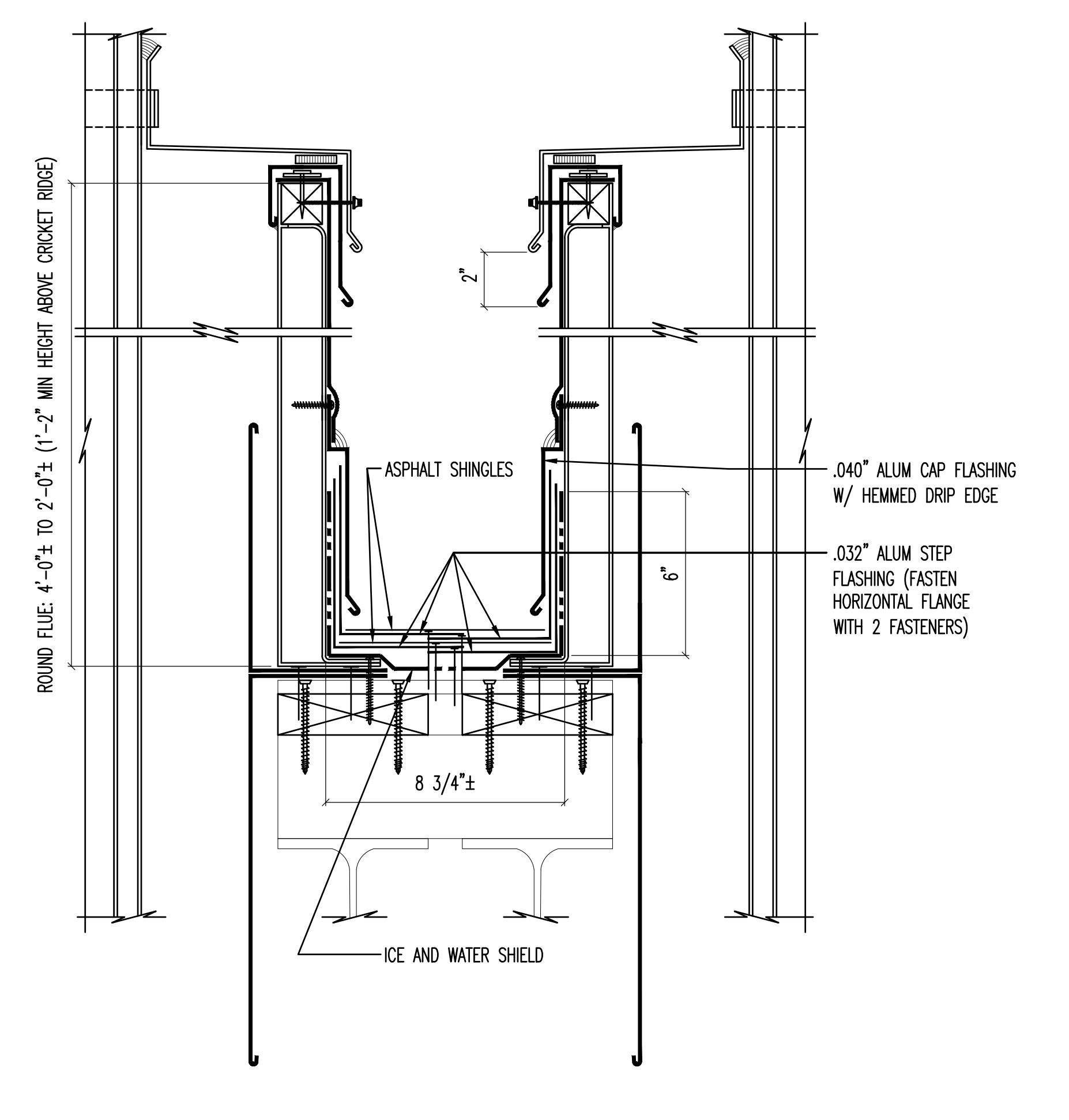
FLUE ROOF CURB DETAIL - SIDES
SCALE: 3" = 1'-0"

1
A1 A4



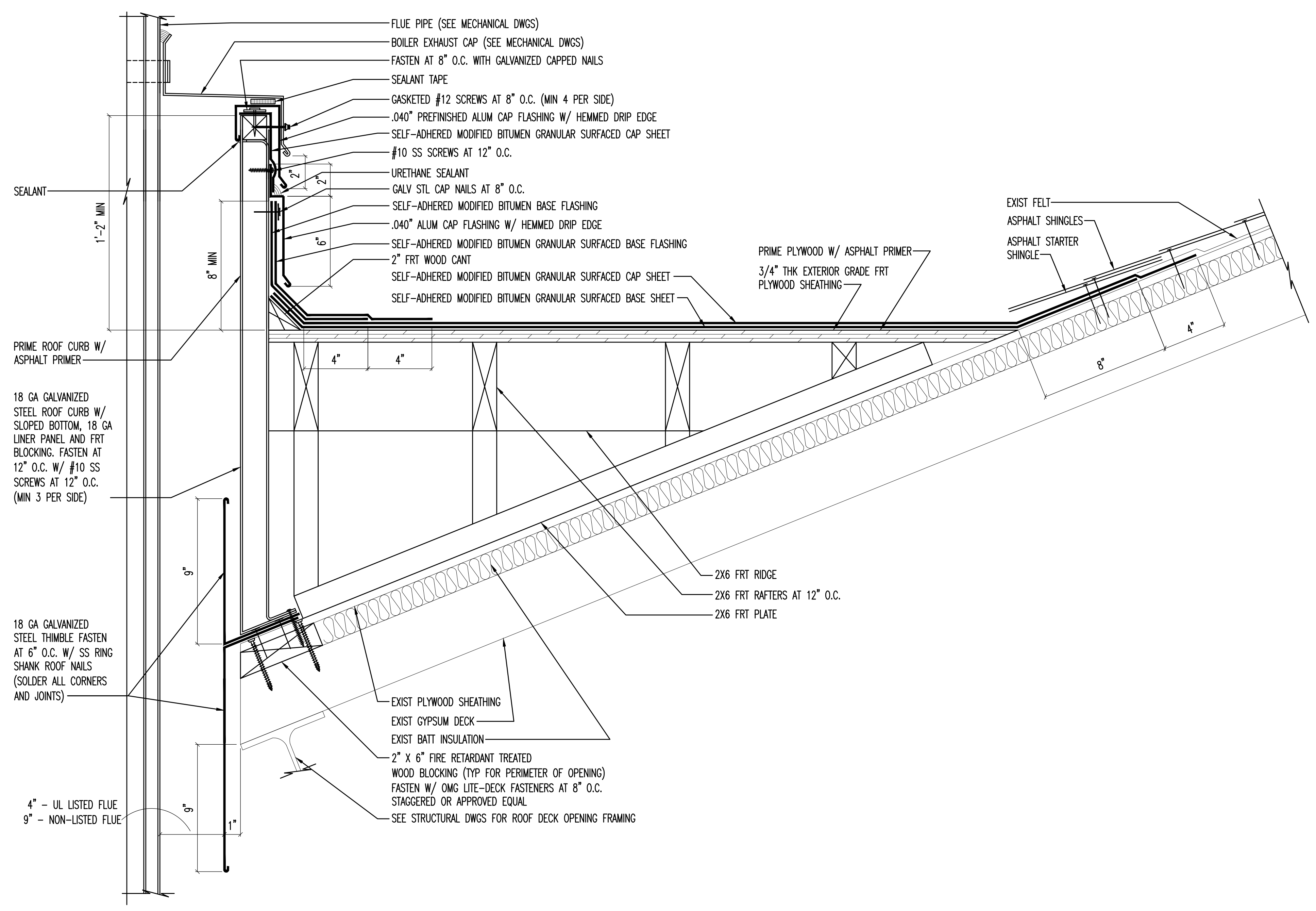
FLUE ROOF CURB DETAIL - APRON
SCALE: 3" = 1'-0"

2
A1 A4



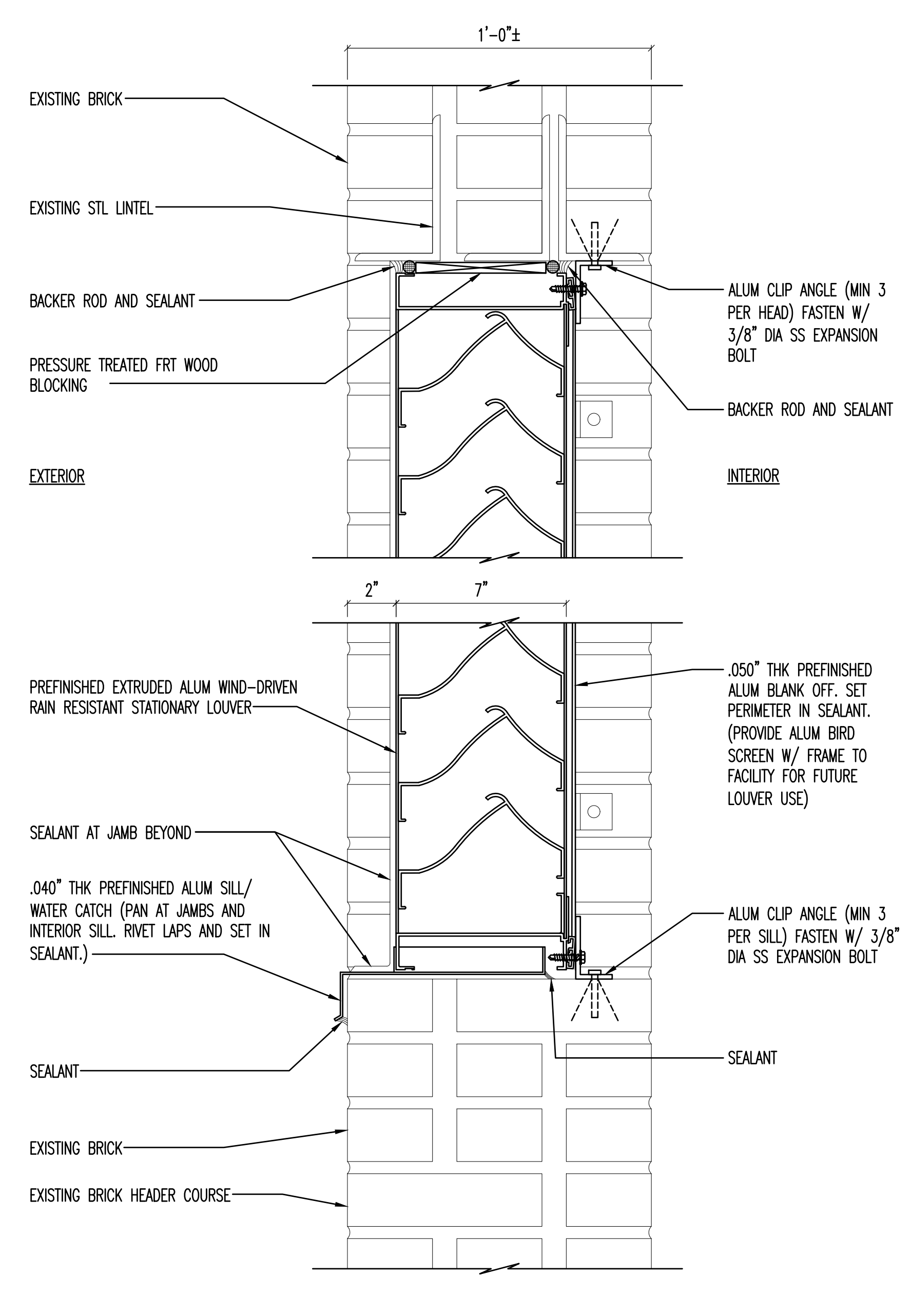
FLUE ROOF CURB DETAIL - SIDES
SCALE: 3" = 1'-0"

3
A1 A4



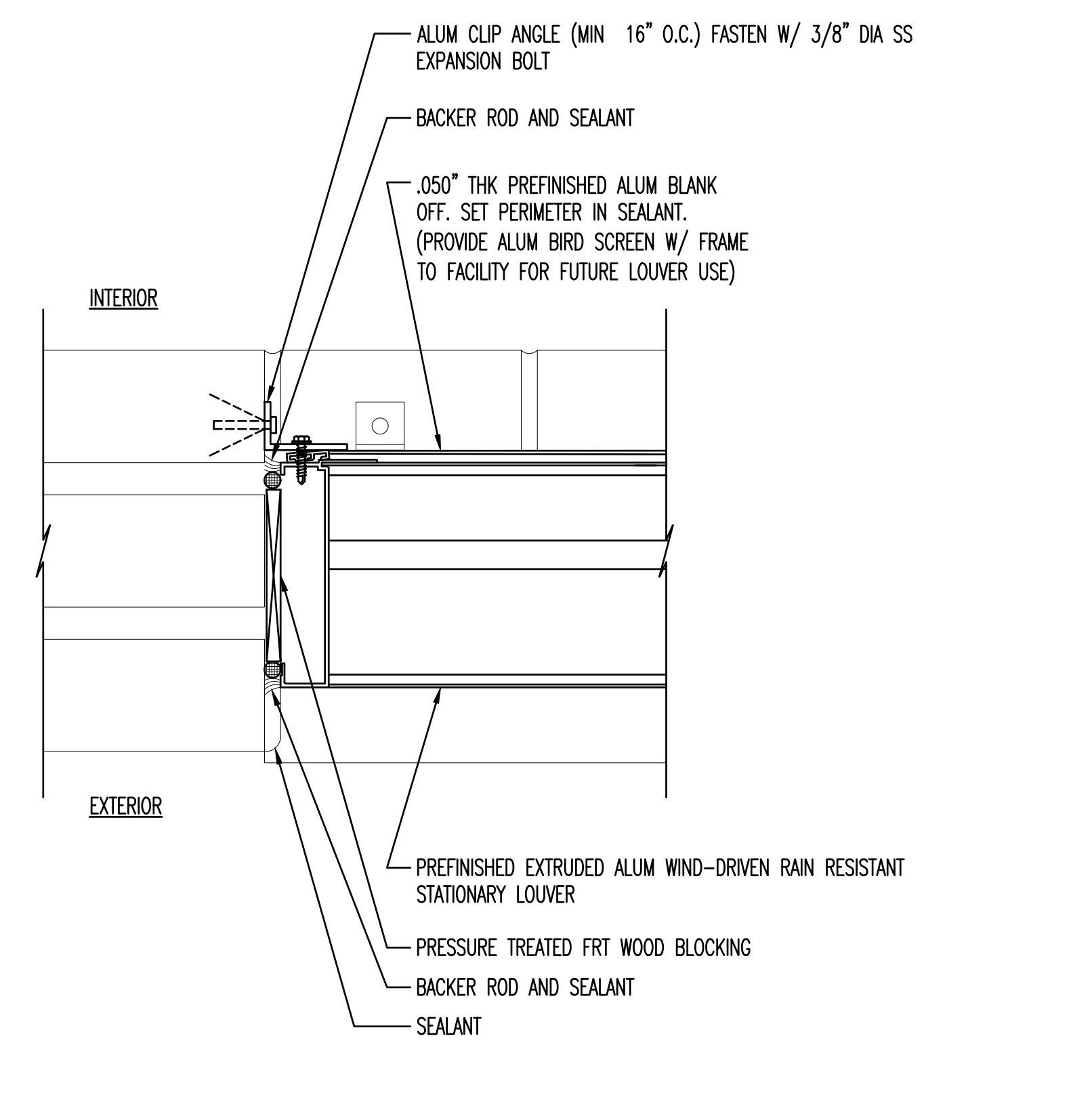
FLUE ROOF CURB DETAIL - CRICKET
SCALE: 3" = 1'-0"

4
A1 A4



LOUVER HEAD AND SILL DETAIL
SCALE: 3" = 1'-0"

5
A3 A4



LOUVER JAMB DETAIL
SCALE: 3" = 1'-0"

6
A3 A4

REVISION NO.	DATE	REVISION

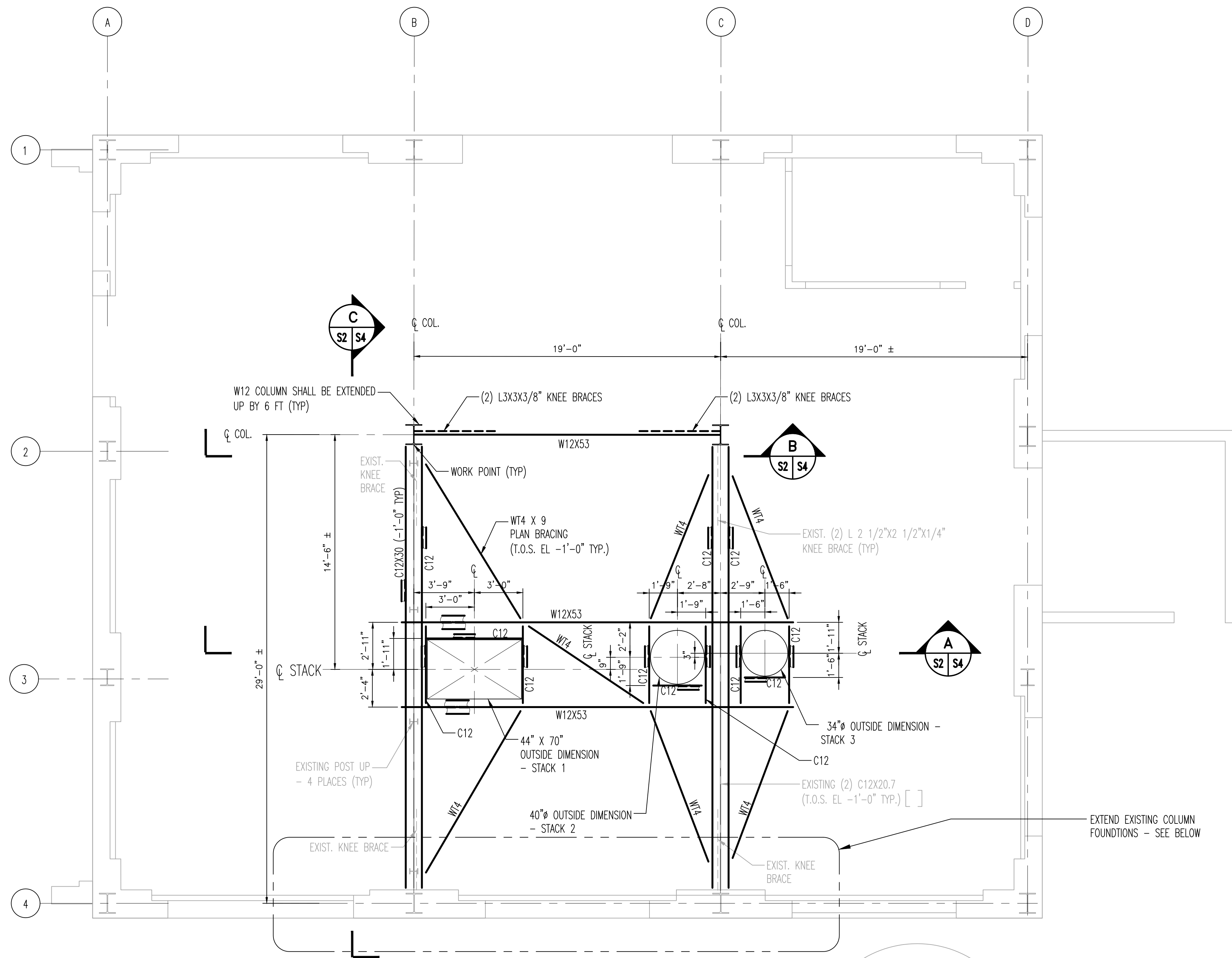
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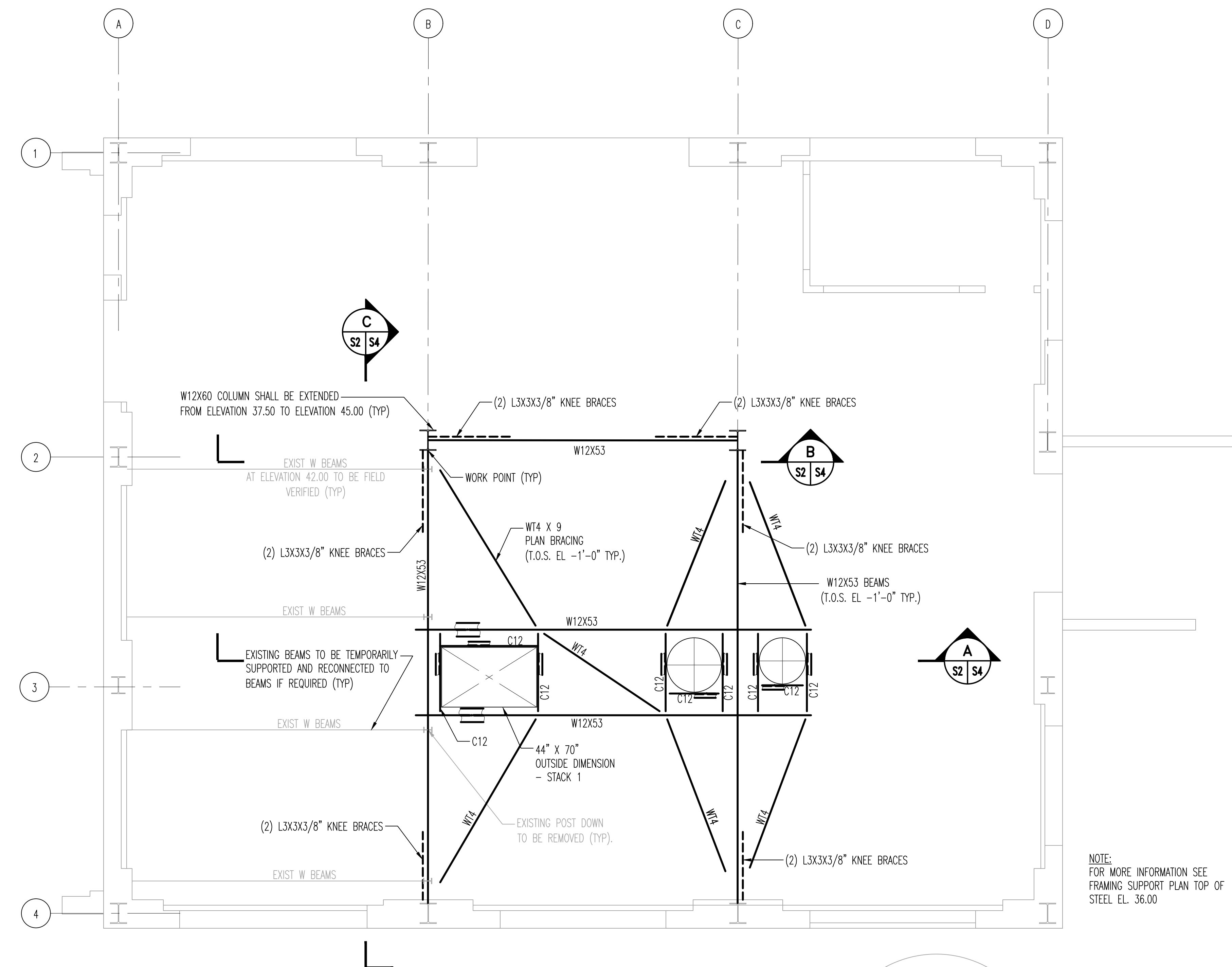
NAME: **ROBERT KEVIN FRITZ** DATE: _____
NJ Registered Architect Lic. No. 11686

DETAILS		DATE
POWERHOUSE STACK REPLACEMENT WOODBINE DEVELOPMENTAL CENTER		01/22/2021
DESIGNED BY	CMK	DESIGNED BY
AS SHOWN	A4	AS SHOWN
WOODBINE	CAPE MAY COUNTY	NEW JERSEY
SHEET NO. 6	of 15	

- NOTES
- FOR GENERAL AND STRUCTURAL NOTES SEE DRAWING S1.
 - THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
 - ALL ELEVATIONS SHOWN ARE WITH RESPECT TO FINISHED FLOOR ELEVATION = 0'-0".

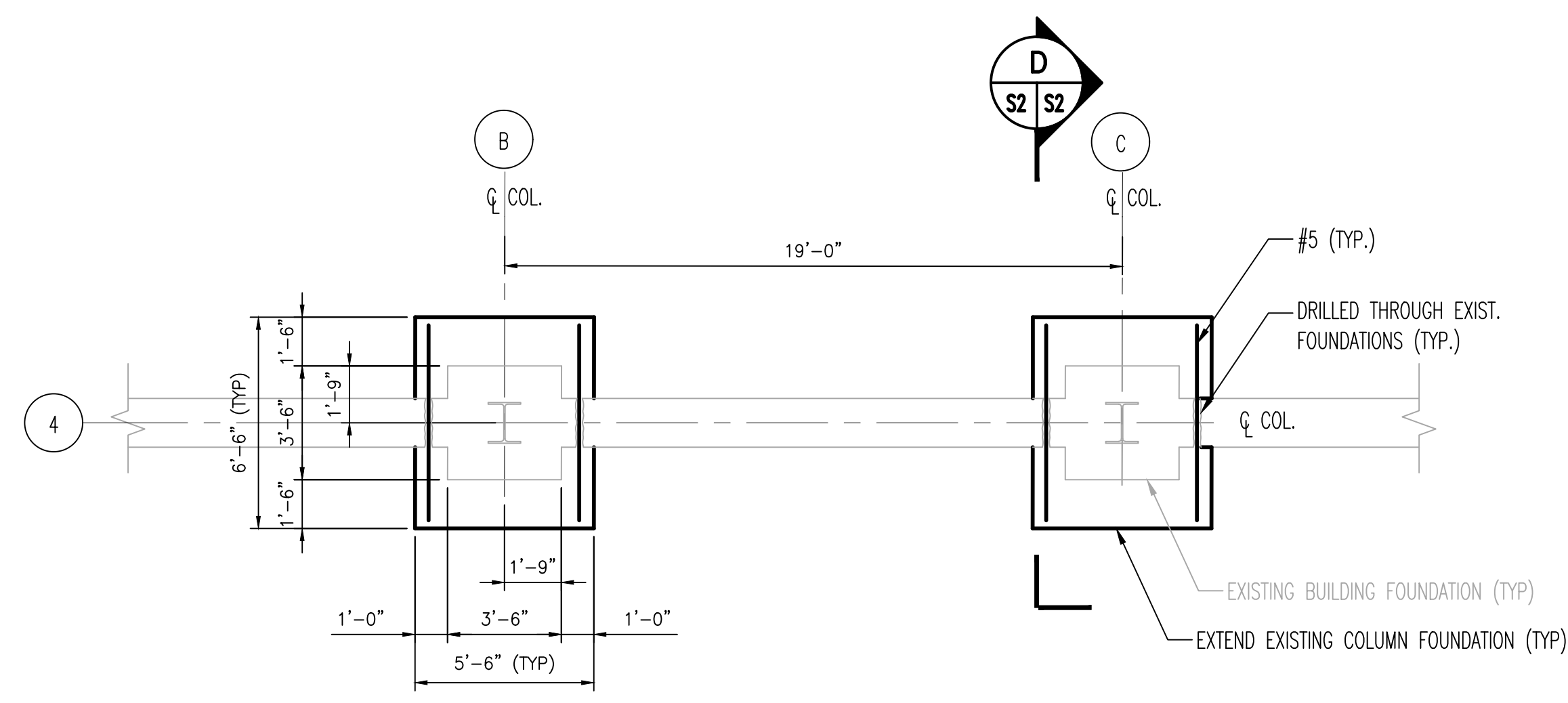


STRUCTURAL FLOOR FRAMING SUPPORT PLAN AT TOP OF STEEL ELEVATION +36.00 (U.O.N.)
SCALE: 1/4" = 1'-0"

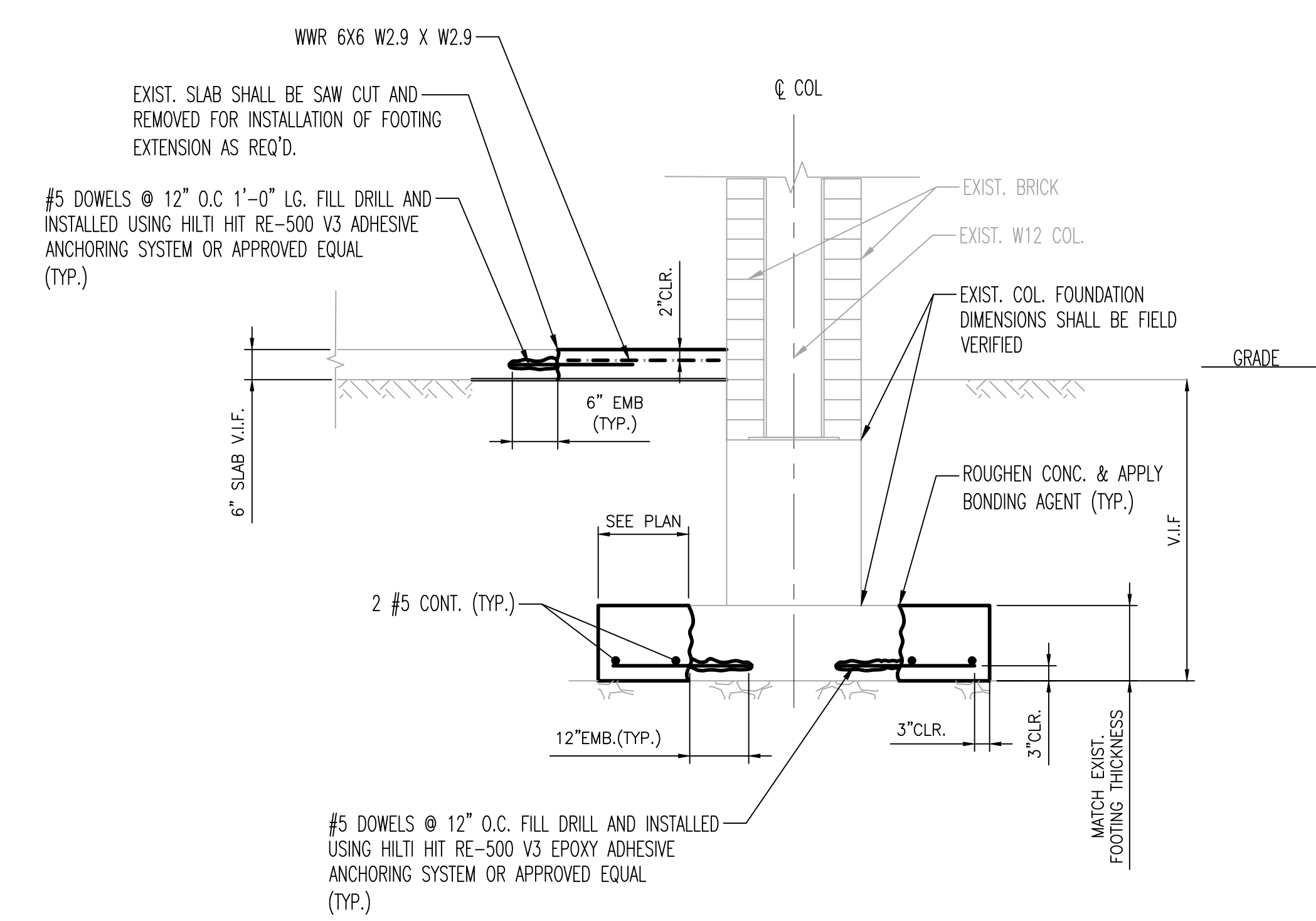


STRUCTURAL FLOOR FRAMING SUPPORT PLAN AT TOP OF STEEL ELEVATION +45.00 (U.O.N.)
SCALE: 1/4" = 1'-0"

NOTE:
FOR MORE INFORMATION SEE
FRAMING SUPPORT PLAN TOP OF
STEEL EL. 36.00



STRUCTURAL PLAN AT EXISTING FOUNDATION
SCALE: 1/4" = 1'-0"



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

REVISION NO.	DATE	REVISION

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MOTT MACDONALD
111 Wood Avenue South, Suite 102
Iselin, NJ 08830-4112
Tel: 201-792-3900

NAME _____ DATE _____
MIGUEL A. NIETO
NJ Registered Professional Engineer Lic. No. NJ246E04136400

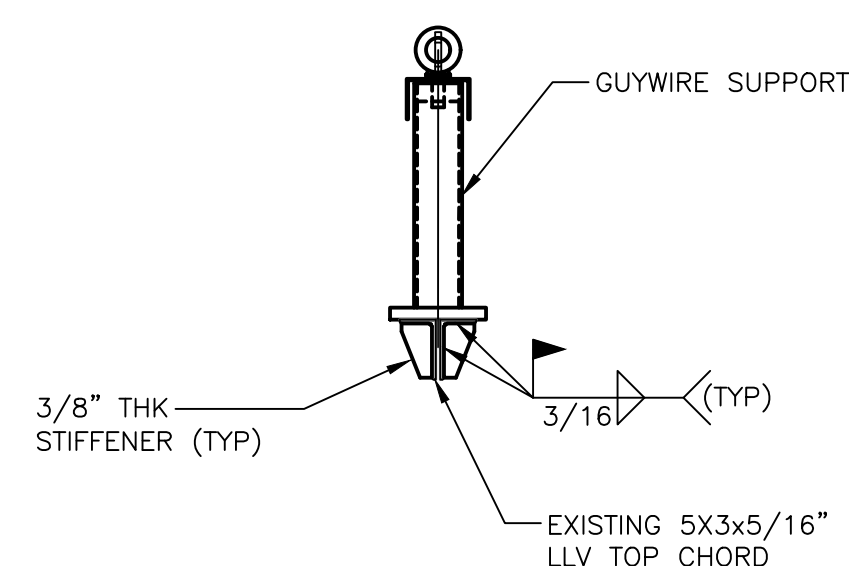
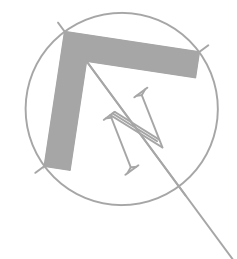
0 2 4 8
SCALE: 1/4" = 1'-0"

0 1 2 4
SCALE: 1/2" = 1'-0"

STRUCTURAL FLOOR FRAMING SUPPORT PLAN
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

PROJECT NO. M1514-00
DRAWN BY: GLT
SCALE: AS SHOWN
DESIGNED BY: SRD
S2
8 of 15



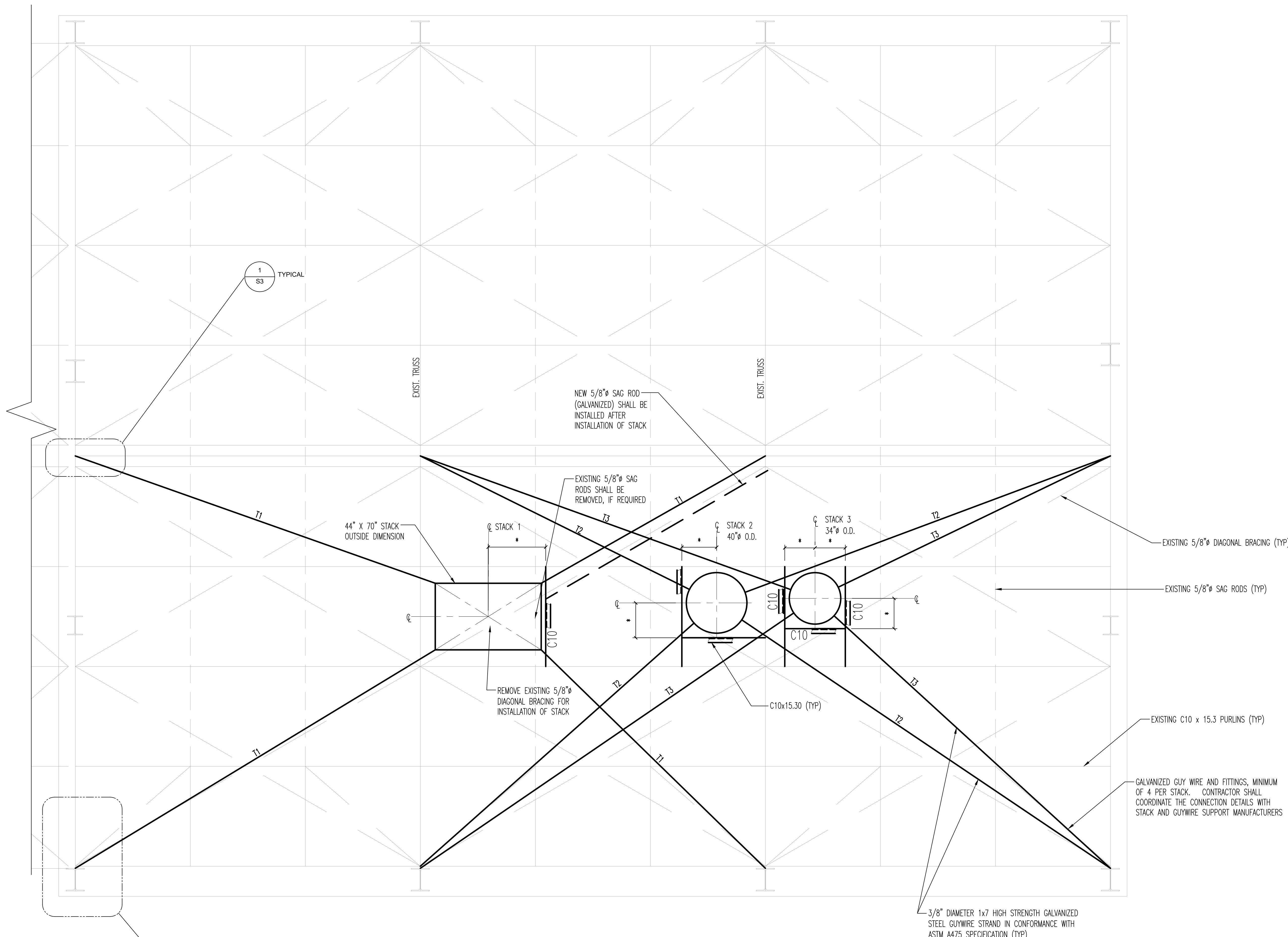
DETAIL 3
SCALE: 3/4" = 1'-0"

LEGEND

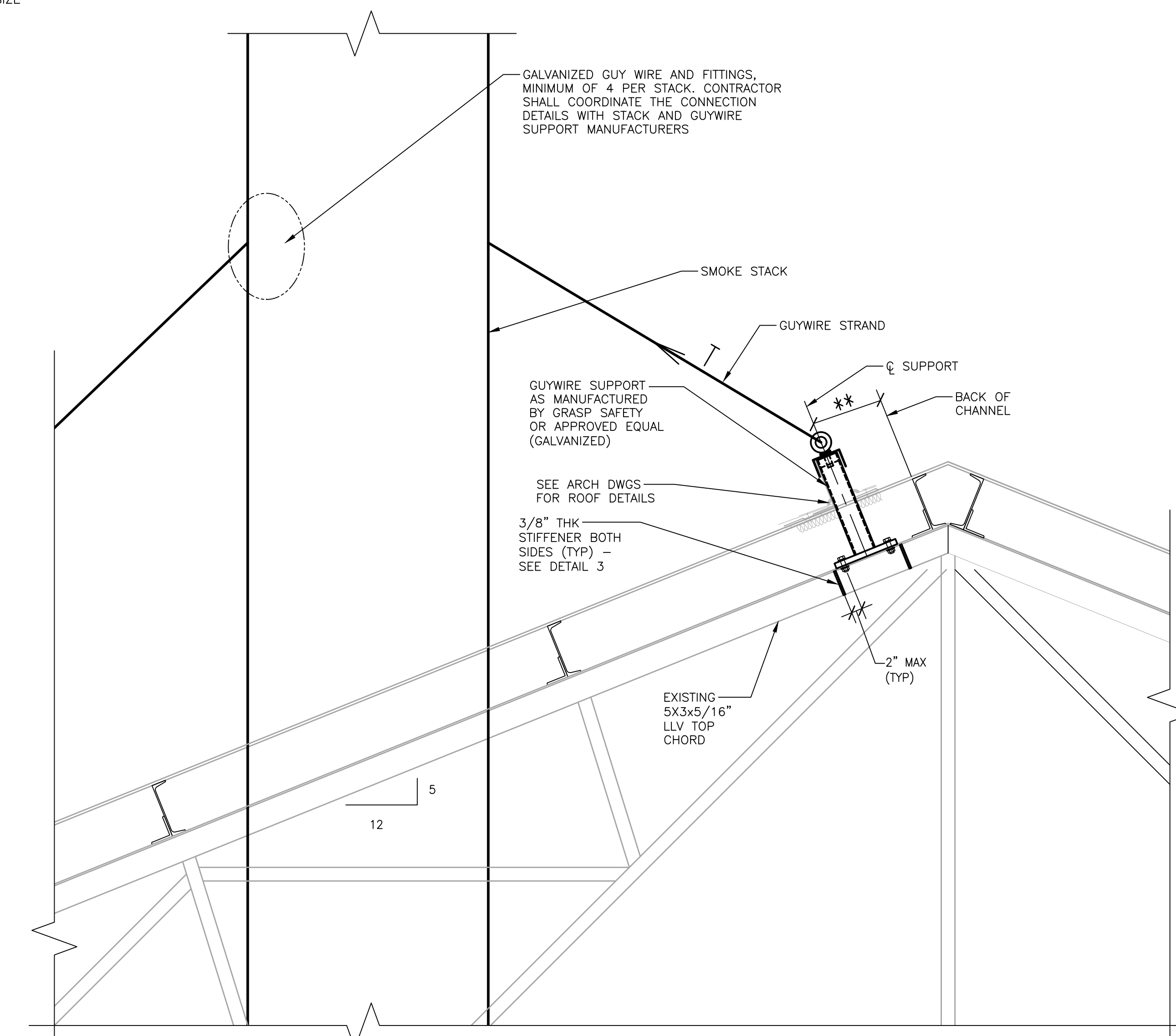
- * DIMENSIONS TO BE COORDINATED WITH STACK MANUFACTURER.
- T DENOTES DESIGN GUYWIRE UNFACTORED TENSION DESIGN LOAD.
- T1 = 2100 LBS
- T2 = 500 LBS
- T3 = 500 LBS
- ** DENOTES DIMENSION SHALL BE FIELD ESTABLISHED BASED ON GUYWIRE BASE PLATE SIZE

NOTES

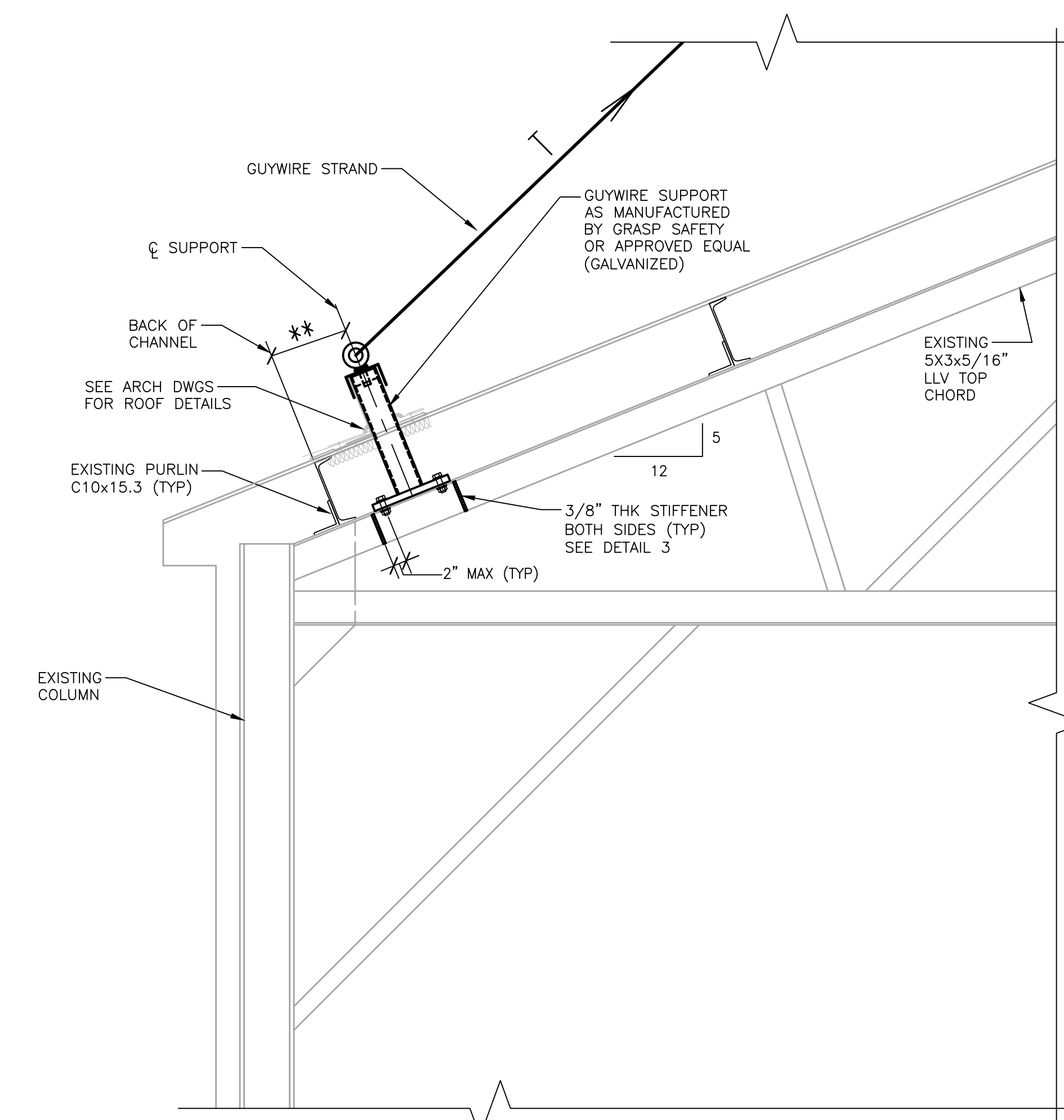
1. FOR GENERAL AND STRUCTURAL NOTES SEE DRAWING S1.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.



STRUCTURAL ROOF FRAMING PLAN
SCALE: 3/8" = 1'-0"



DETAIL 1
SCALE: 3/4" = 1'-0"



DETAIL 2
SCALE: 3/4" = 1'-0"

REVISION NO.	DATE	REVISION

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MOTT MACDONALD
111 Wood Avenue South, Suite 102
Iselin, NJ 08830-4112
Tel: 201-792-3900

NAME: **MIGUEL A. NIETO** DATE: _____
NJ Registered Professional Engineer Lic. No. NJ24GE04136400



STRUCTURAL ROOF FRAMING PLAN
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

PROJECT NO. **9** of **15**

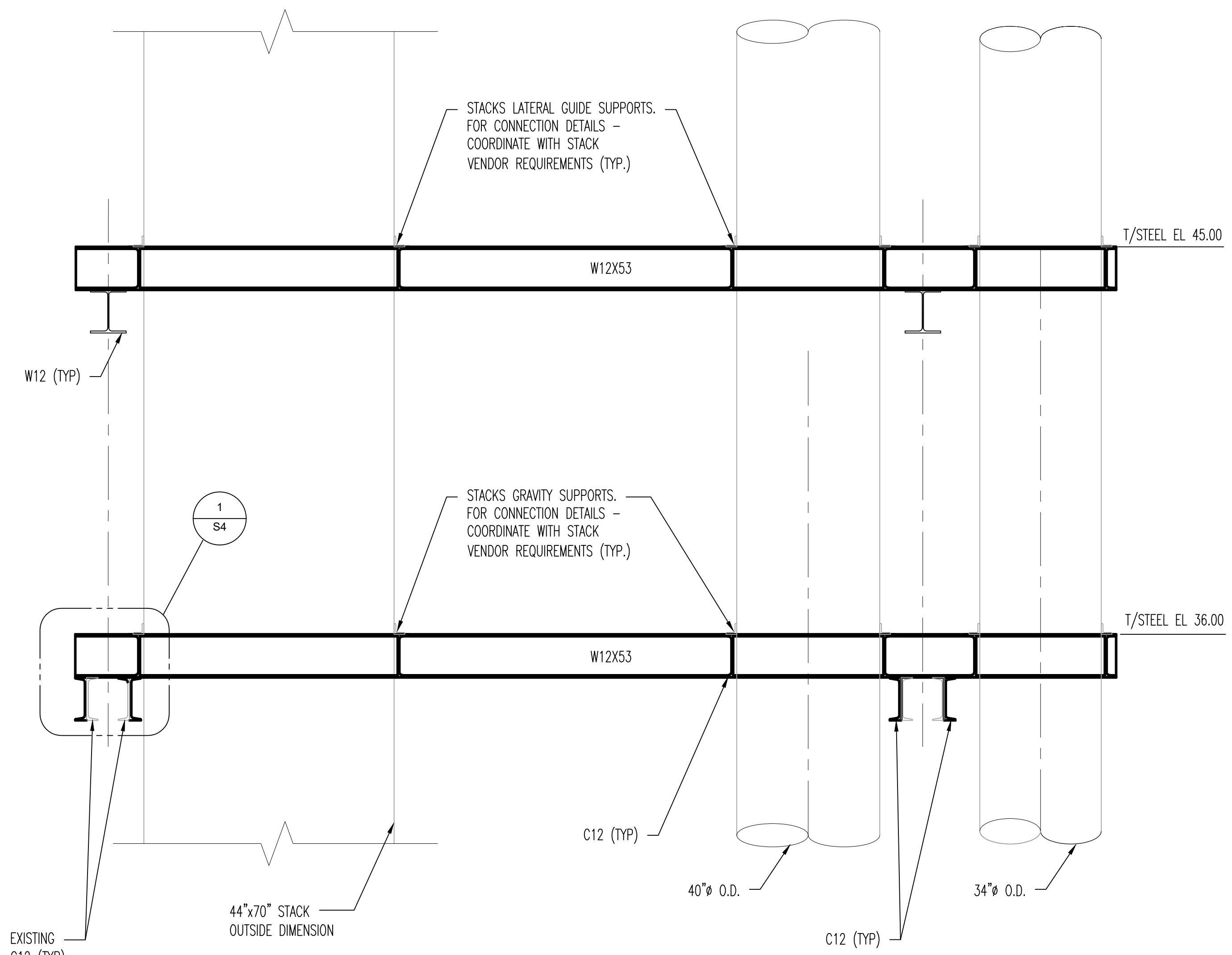
DATE: 01/22/2021
DRAWN BY: GLT
SCALE: AS SHOWN
REVISION: **S3**

NOTES

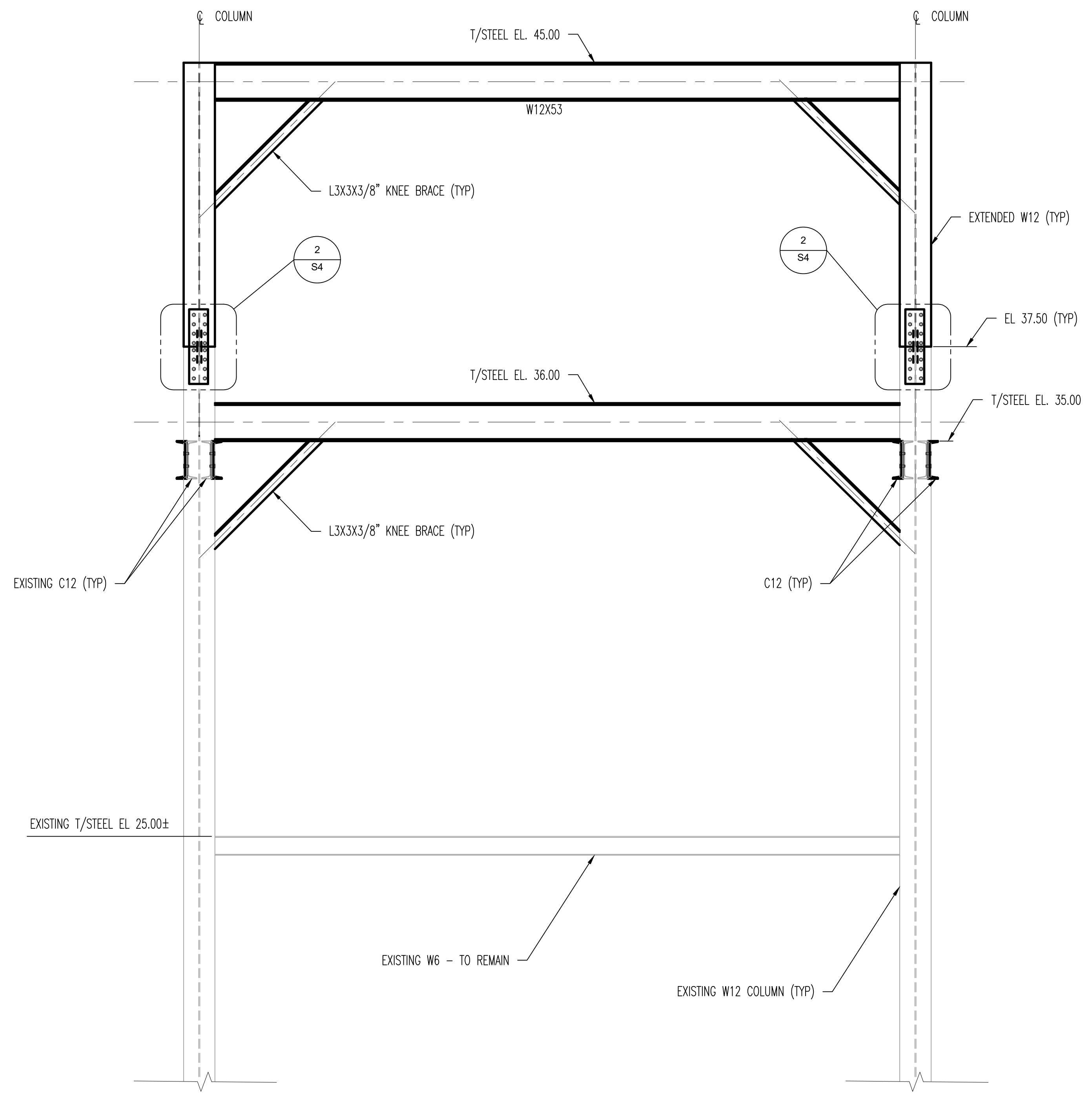
1. FOR GENERAL AND STRUCTURAL NOTES SEE DRAWING S1.
2. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. ALL ELEVATIONS SHOWN ARE WITH RESPECT TO FINISHED FLOOR ELEVATION = 0'-0".

LEGEND

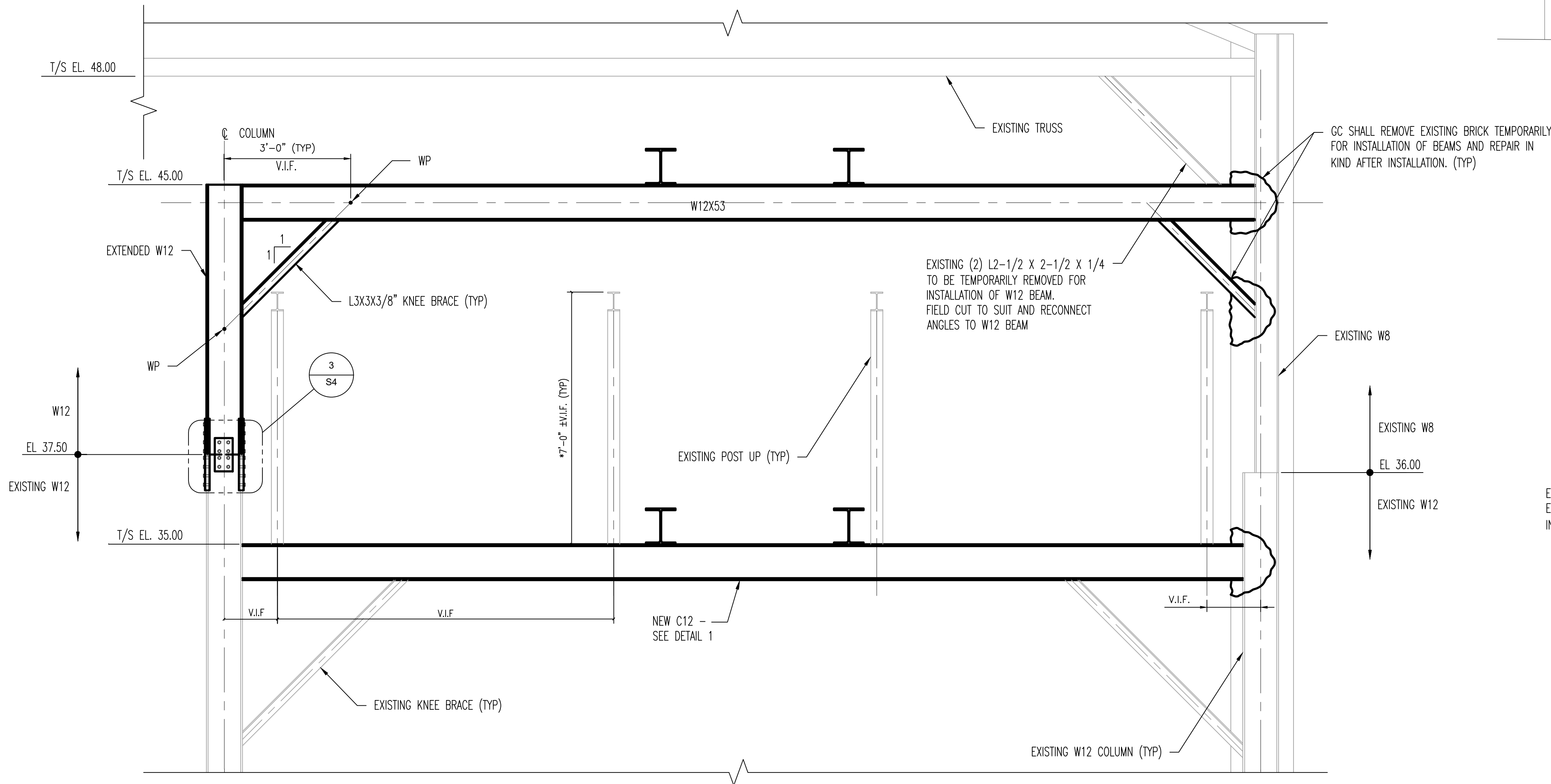
V.I.F.: DIMENSIONS TO BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION AND DISCREPANCIES SHALL BE REPORTED TO THE E.O.R.



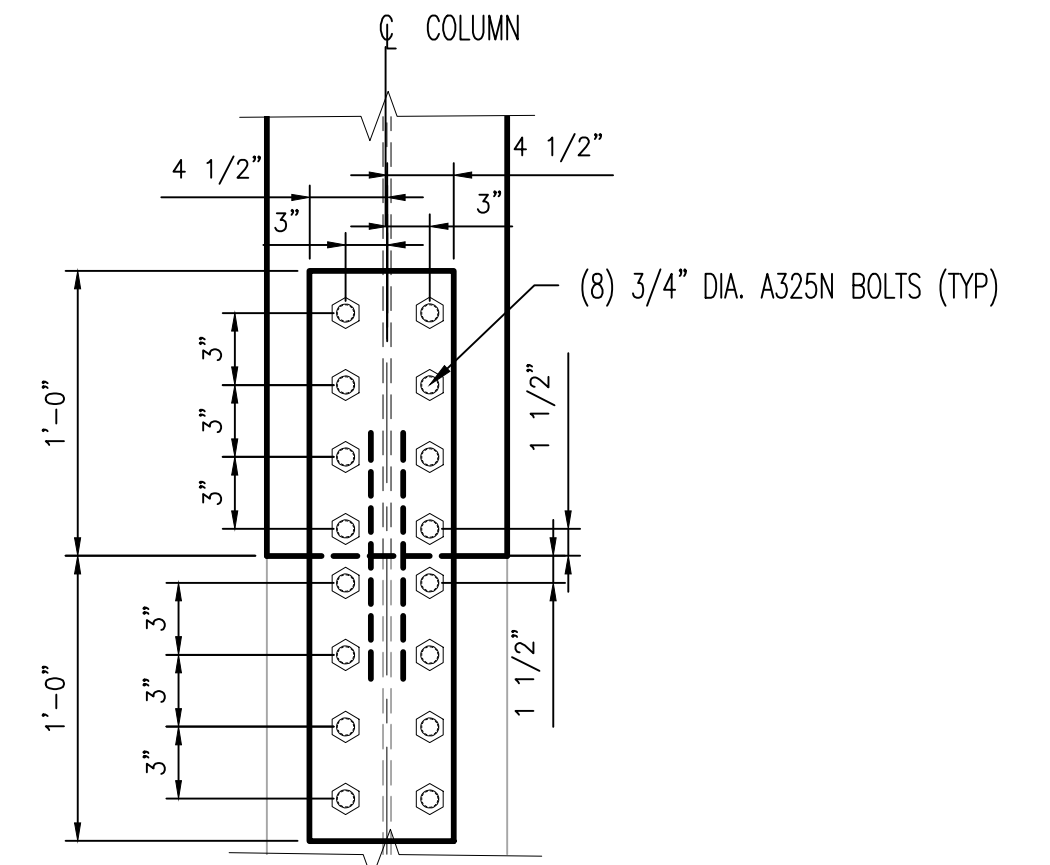
SECTION A
SCALE: 1/2"=1'-0"



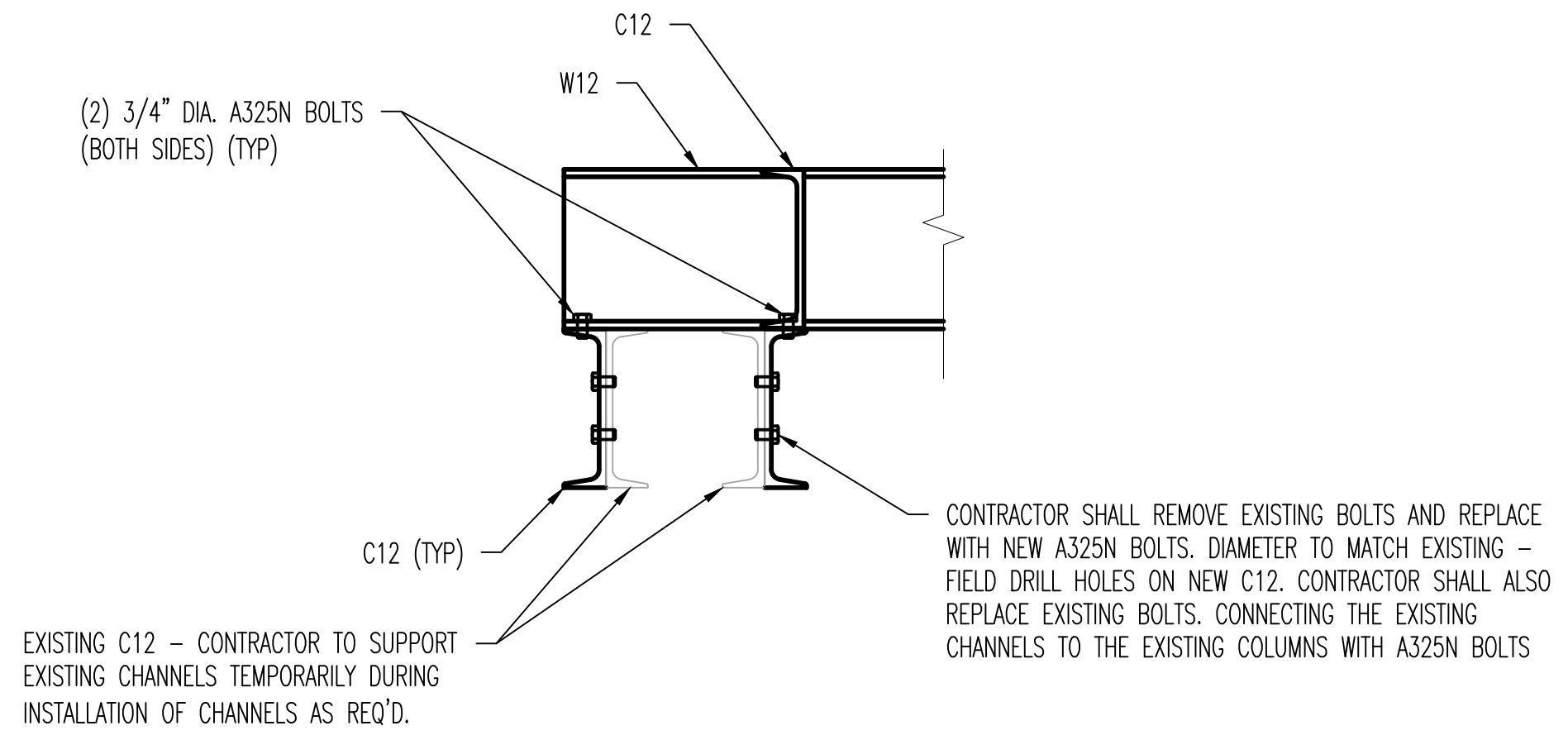
SECTION B
SCALE: 1/2"=1'-0"



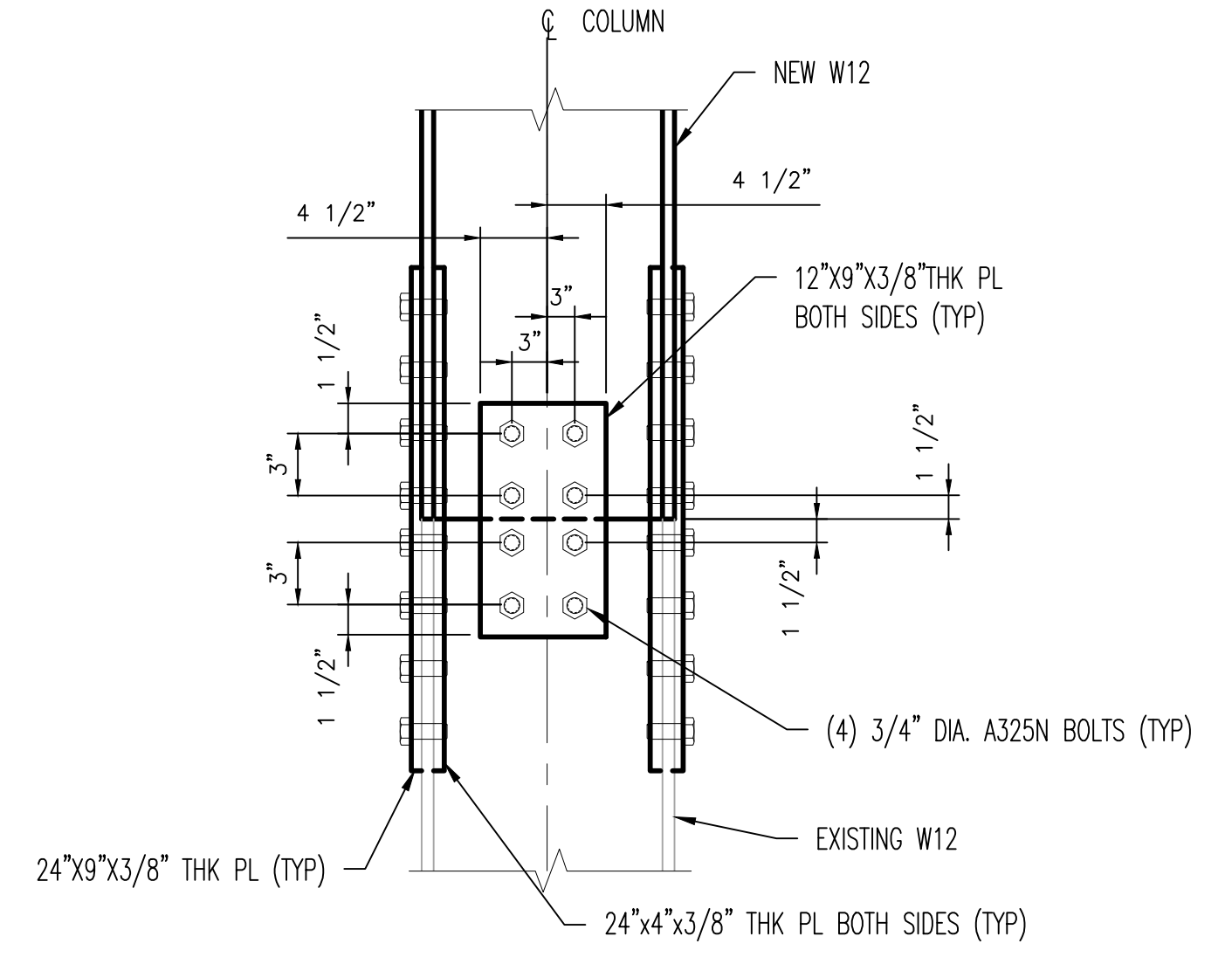
SECTION C
SCALE: 1/2"=1'-0"



2 COLUMN FLANGE CONNECTION DETAIL
SCALE: 1-1/2"=1'-0"



1 CHANNEL CONNECTION DETAIL
SCALE: 1"=1'-0"



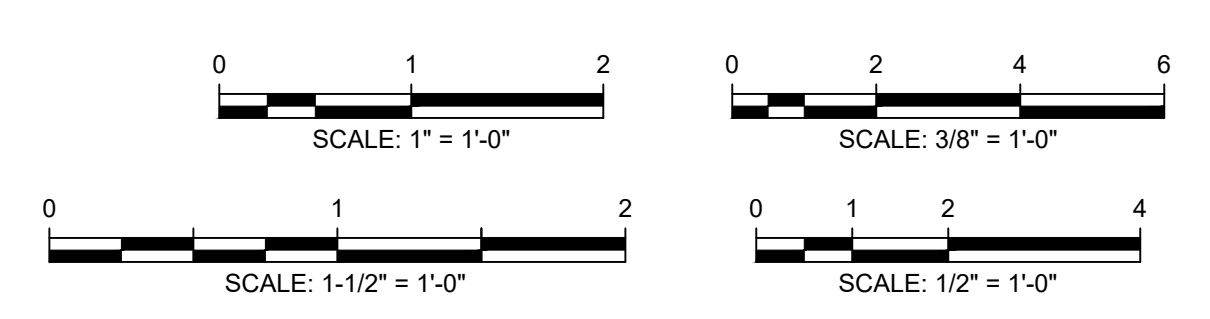
3 COLUMN WEB CONNECTION DETAIL
SCALE: 1-1/2"=1'-0"

REVISION NO.	DATE	REVISION

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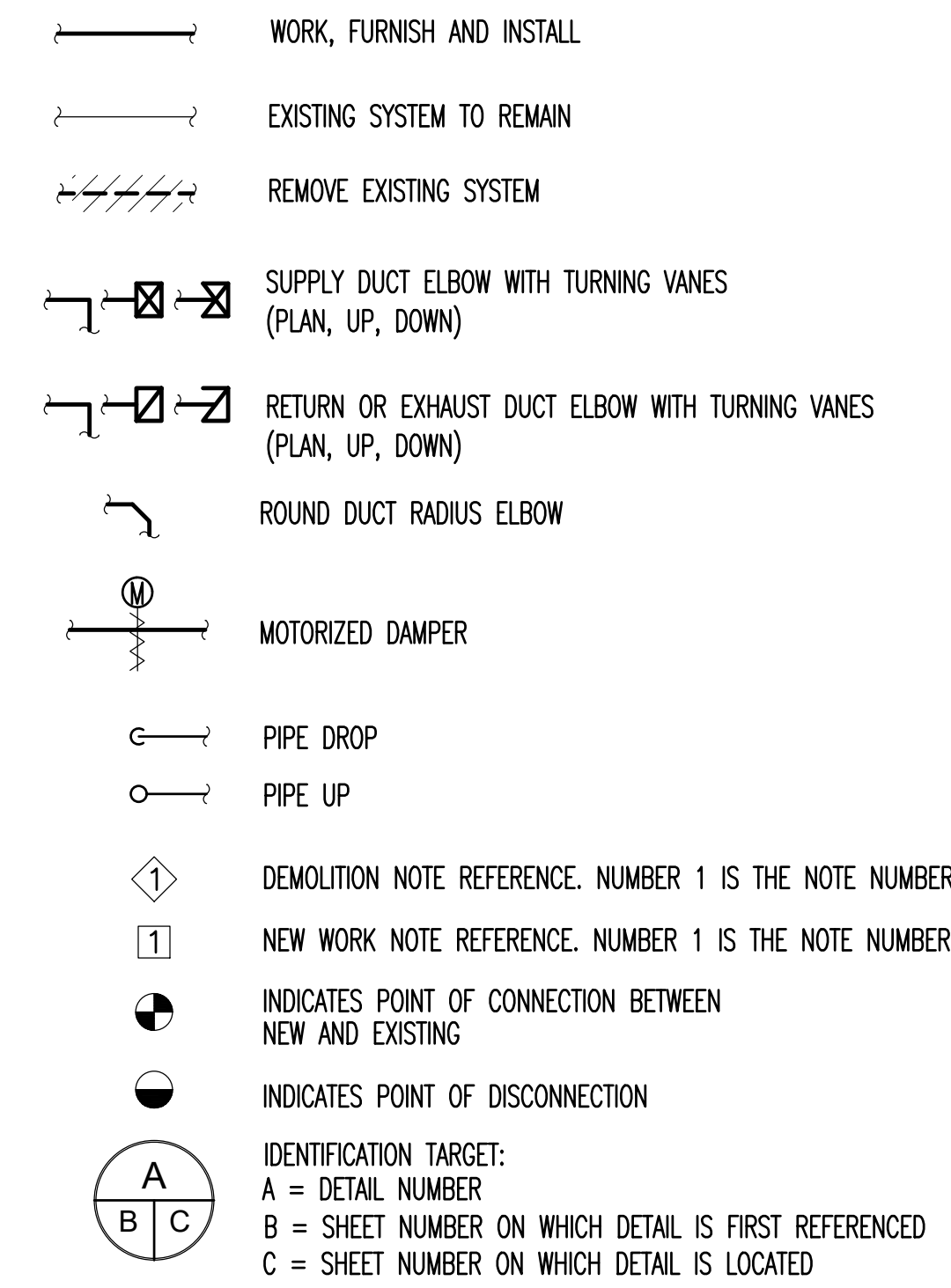
NAME: _____ DATE: _____
MIGUEL A. NIETO
NJ Registered Professional Engineer Lic. No. NJ24GE04136400



SECTION AND DETAIL
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER
WOODBINE CAPE MAY COUNTY NEW JERSEY

PROJECT NO.	DATE
1115-14-03	01/23/2021
DRAWN BY	DESIGNED BY
CLT	SRD
SCALE	AS SHOWN
	S4
SHEET NO.	OF
10	15

MECHANICAL SYMBOLS



MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	LBS	POUNDS
ARCH	ARCHITECTURAL	MAX	MAXIMUM
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MECH.	MECHANICAL
BOD	BOTTOM OF DUCT	MIN	MINIMUM
BOP	BOTTOM OF PIPE	NTS	NOT TO SCALE
CONT.	CONTINUATION	RM	ROOM
D, DIA	DIAMETER	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
DN	DOWN	SQ	SQUARE
DWG	DRAWING	SQ. FT.	SQUARE FEET
E	EXISTING	TYP	TYPICAL
FL.	FLOOR	UH	UNIT HEATER
FT	FEET	U.L.	UNDERWRITER'S LABORATORIES
GA.	GAUGE		
L	LENGTH		

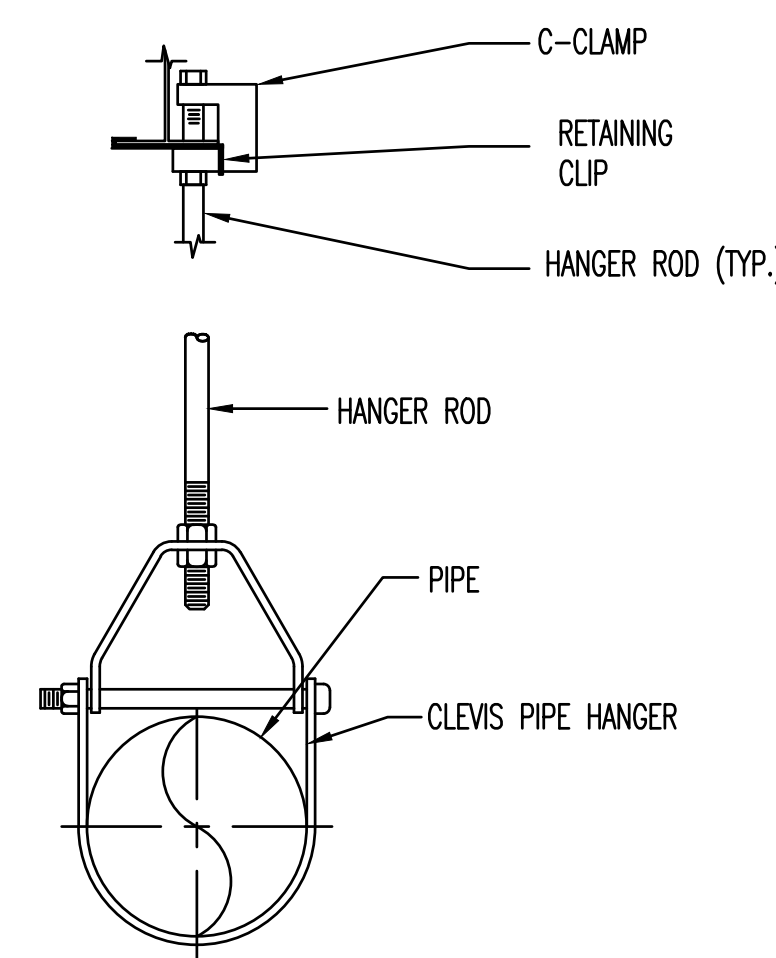
MECHANICAL NOTES

- THE DRAWINGS DO NOT SHOW ALL EXISTING EQUIPMENT, PIPING, PIPE HANGERS, STRUCTURAL STEEL, ELECTRICAL CONDUITS, LIGHTING FIXTURES, ETC. THE CONTRACTOR IS RESPONSIBLE TO PERFORM FIELD SURVEY TO VERIFY THE EXISTING CONDITIONS, AND RELOCATE EXISTING PIPING, ELECTRICAL CONDUITS, LIGHTING FIXTURES, ETC. THAT MIGHT INTERFERE WITH INSTALLATION OF THE NEW FLUES AND ASSOCIATED NEW WORK.
- PRIOR TO ORDERING OR FABRICATING ANY NEW EQUIPMENT AND DUCTWORK, THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, CLEARANCES, EQUIPMENT LOCATIONS AND CONNECTION SIZES. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE CONTRACTING OFFICER'S ATTENTION IMMEDIATELY.
- MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED BUT NECESSARY FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED ON THE DRAWINGS.
- DUE TO THE SMALL SCALE OF THE DRAWINGS THE PIPING SHOWN IS DIAGRAMMATIC. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS TO AVOID CONFLICTS WITH STRUCTURAL ELEMENTS, LIGHTING FIXTURES, PLUMBING, ETC. PROVIDE ALL NECESSARY DUCT TRANSITIONS FROM THE INDICATED DUCT SIZE TO THE ACTUAL EQUIPMENT DUCT COLLAR SIZE.
- WHEN PIPES, DUCTS AND OTHER HANGING ITEMS ARE SUPPORTED FROM THE STRUCTURAL ELEMENTS, THE CONTRACTOR SHALL PROVIDE THE MISCELLANEOUS STEEL NECESSARY TO SUPPORT PIPING, DUCTWORK AND MECHANICAL EQUIPMENT.
- UNLESS OTHERWISE NOTED OR INDICATED, ALL EXISTING EQUIPMENT, PIPING, DUCTWORK AND ACCESSORIES ARE TO REMAIN. ANY UNUSED/ABANDONED EQUIPMENT, PIPING, DUCTWORK, ACCESSORIES, ETC. ARE TO BE REMOVED.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SCAFFOLDS AND TEMPORARY PLATFORMS AS REQUIRED TO PERFORM ALL DEMOLITION AND NEW WORK.
- STACK TESTING WILL BE DONE UNDER A SEPARATE CONTRACT AFTER THE NEW FLUE INSTALLATION IS COMPLETE. UNDER THIS CONTRACT, THE CONTRACTOR SHALL COORDINATE WITH THE STACK TESTING CONTRACTOR, AND BE AVAILABLE FOR ASSISTANCE FOR THE STACK TESTING.

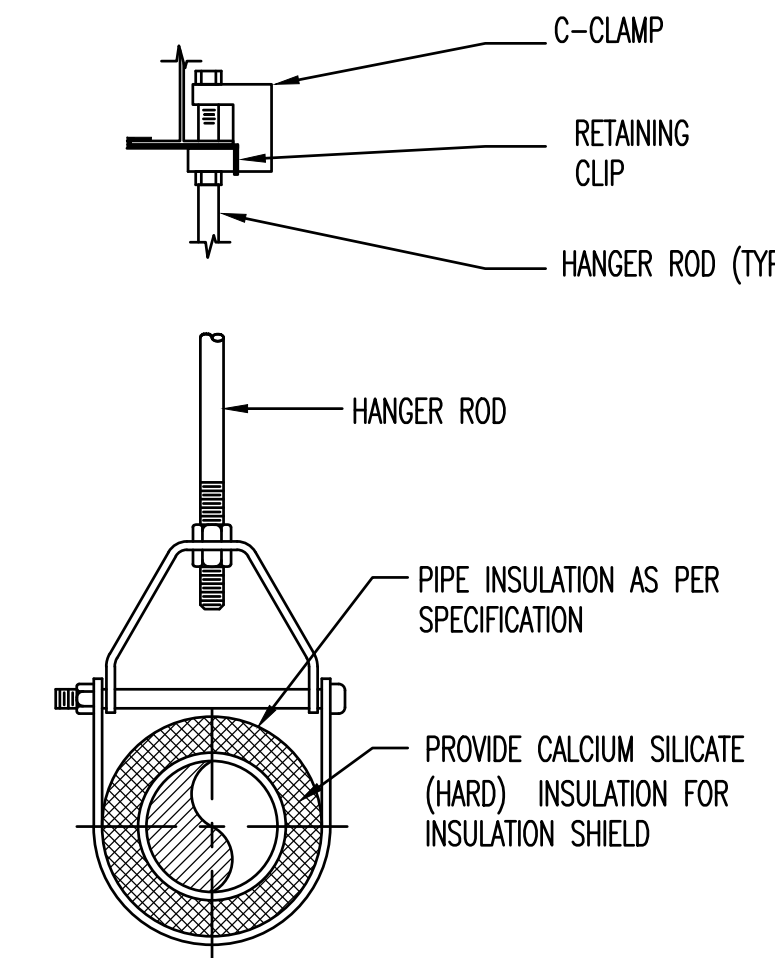
DEMOLITION/PHASING OF CONSTRUCTION

A REQUIREMENT OF THIS PROJECT IS THAT THE BOILER PLANT MUST REMAIN IN OPERATION DURING THE CONSTRUCTION PERIOD. IT IS ESTIMATED THAT THE CONSTRUCTION WILL BEGIN ON 4/12/21. THIS MEANS THAT CONSTRUCTION WILL BEGIN DURING THE HEATING SEASON AND CONTINUE INTO THE NON-HEATING SEASON. THE IMPLICATIONS OF THIS ARE THAT STEAM FOR HEATING, KITCHEN EQUIPMENT, AND DOMESTIC HOT WATER NEEDS TO BE PROVIDED BEGINNING 4/12/21 AND UNTIL 4/15/21, AND FROM 10/15/21 UNTIL THE END OF CONSTRUCTION WHICH SHOULD BE ON APPROXIMATELY ON 11/3/21. FOR THE NON-HEATING SEASON, STEAM FOR ABSORPTION CHILLERS, KITCHEN EQUIPMENT AND DOMESTIC HOT WATER MUST BE PROVIDED CONTINUOUSLY FROM 4/15/2021 UNTIL THE END OF THE HEATING SEASON ON 10/15/21. FIRST, ON 4/27/21, BOILER #3 (500 BHP) CAN BE TAKEN OUT OF SERVICE FOR THE REMOVAL OF THE ASSOCIATED INTERIOR BREECHING/FLUE AND THE INSTALLATION OF THE NEW VERTICAL BREECHING/FLUE THROUGH THE ROOF. A BRIEF BOILER PLANT SHUTDOWN WILL BE REQUIRED FOR PATCHING OF THE HORIZONTAL BREECHING. THE TWO BOILERS, BOILER #1 (1,200 BHP) AND BOILER #2 (700 BHP), CAN REMAIN IN SERVICE FOR HEATING, KITCHEN EQUIPMENT AND DOMESTIC HOT WATER DURING THE HEATING SEASON. ONCE THE WORK ON THE BOILER #3 (500 BHP) IS COMPLETED AND TESTED FOR OPERATION (ON ABOUT 6/7/21), THE WORK ON THE NEXT BOILER CAN BEGIN. IT IS EXPECTED FOR THE WORK ON BOILER #1 (1,200 BHP) TO BEGIN ON ABOUT 6/8/21 AND BE COMPLETED ON 7/20/21 LEAVING THE BOILER #3 (500 BHP) AND BOILER #2 (700 BHP) IN OPERATION. THE BREECHING/FLUE FOR THE BOILER #2 (700 BHP) IS EXPECTED TO BE DONE BETWEEN 7/21/21 THROUGH 9/6/21. ALL BOILERS SHALL BE OPERATIONAL BY THE END OF CONSTRUCTION WHICH SHOULD BE ON 11/3/21.

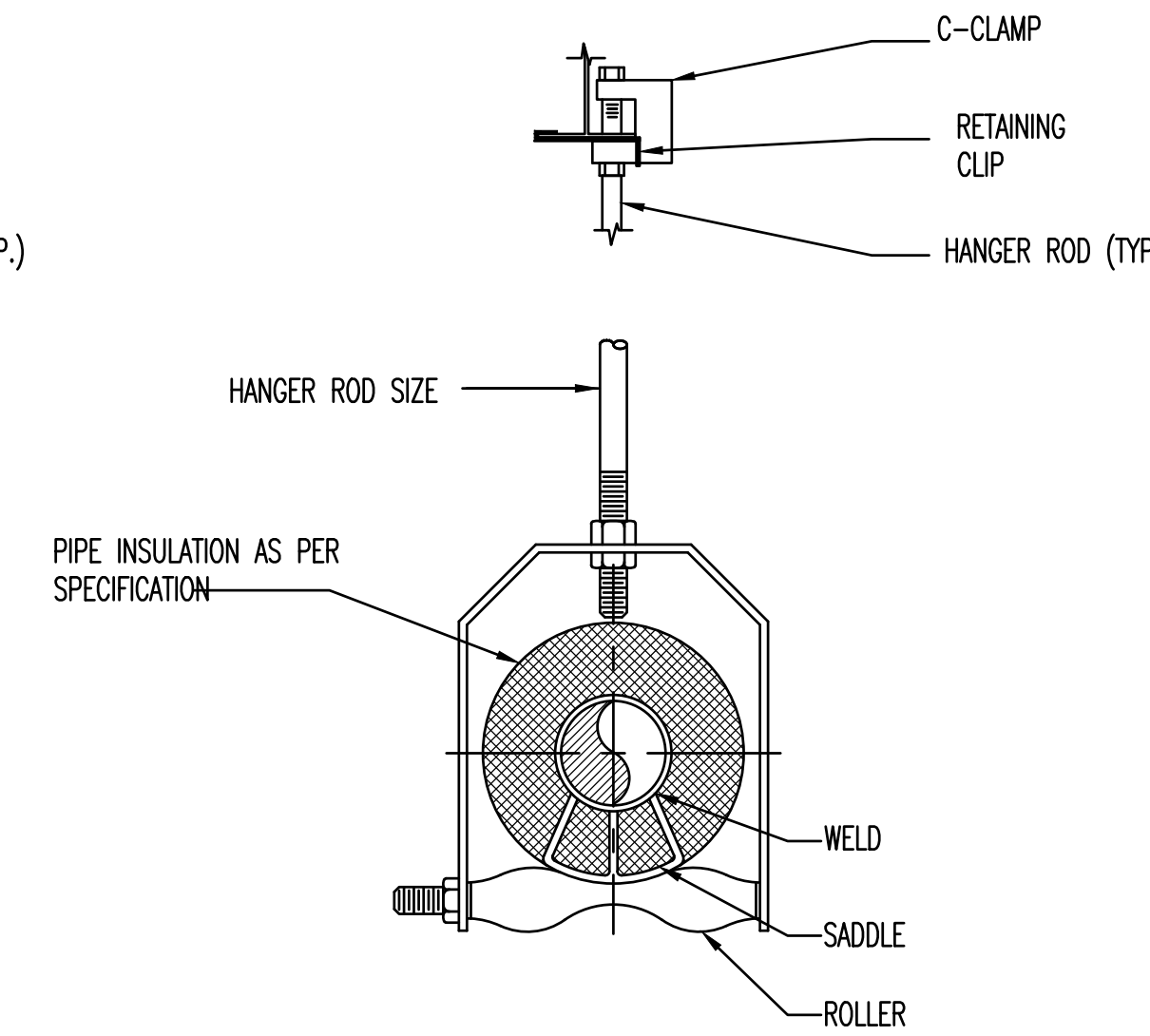
THE EXISTING MASONRY STACK AND EXISTING INTERIOR BREECHING/FLUE WILL BE DEMOLISHED ONLY AFTER THE LAST BOILER HAS ITS NEW VERTICAL BREECHING/FLUE INSTALLED AND IS TESTED AND APPROVED FOR PROPER OPERATION.



CLEVIS HANGER FOR UN-INSULATED PIPE
NOT TO SCALE



CLEVIS HANGER FOR INSULATED PIPE
NOT TO SCALE



CLEVIS ROLLER HANGER FOR INSULATED PIPE
NOT TO SCALE

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MOTT MACDONALD
111 Wood Avenue South, Suite 102
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Tel: 201-792-3900

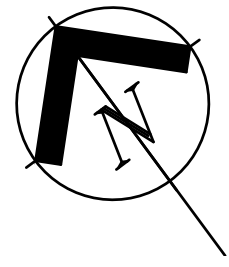
NAME _____ DATE _____
MICHAEL V. LaPILUSA
NJ Professional Engineer Lic. No. 24GE04474900

MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

DPWG NO. M1514-00 DATE 01/22/2021
DRAWN BY GB DESIGNED BY GB
SCALE AS SHOWN
M1
SHEET NO. 11 of 15

REVISION NO.	DATE	REVISION



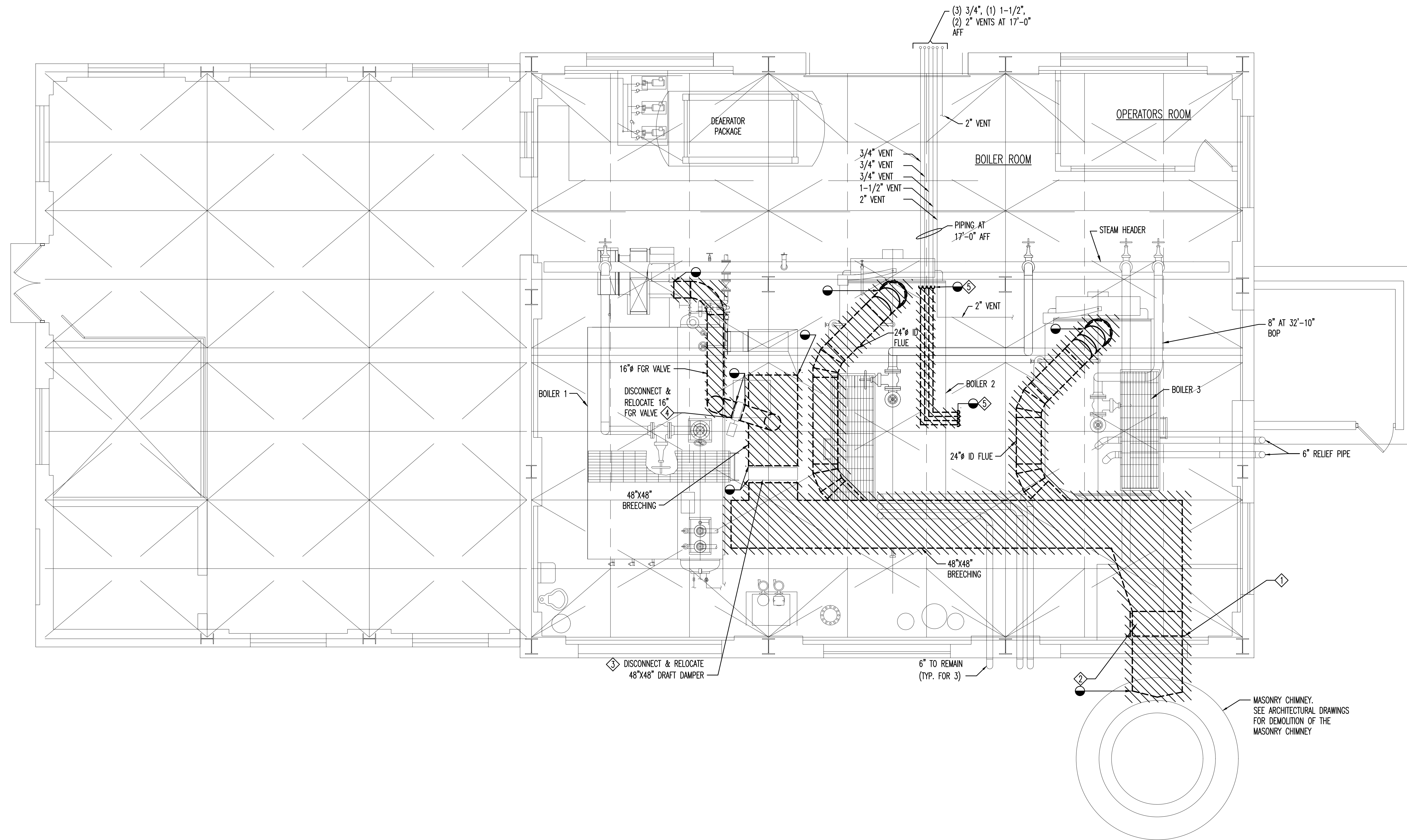
MECHANICAL DEMOLITION/PHASING NOTES

A REQUIREMENT OF THIS PROJECT IS THAT THE BOILER PLANT MUST REMAIN IN OPERATION DURING THE CONSTRUCTION PERIOD. IT IS ESTIMATED THAT THE CONSTRUCTION WILL BEGIN ON 4/12/21. THIS MEANS THAT CONSTRUCTION WILL BEGIN DURING THE HEATING SEASON AND CONTINUE INTO THE NON-HEATING SEASON. THE IMPLICATIONS OF THIS ARE THAT STEAM FOR HEATING, KITCHEN EQUIPMENT, AND DOMESTIC HOT WATER NEEDS TO BE PROVIDED BEGINNING 4/12/21 AND UNTIL 4/15/21, AND FROM 10/15/21 UNTIL THE END OF CONSTRUCTION WHICH SHOULD BE ON APPROXIMATELY ON 11/3/21. FOR THE NON-HEATING SEASON, STEAM FOR ABSORPTION CHILLERS, KITCHEN EQUIPMENT AND DOMESTIC HOT WATER MUST BE PROVIDED CONTINUOUSLY FROM 4/15/2021 UNTIL THE END OF THE HEATING SEASON ON 10/15/21. FIRST, ON 4/27/21, BOILER #3 (500 BHP) CAN BE TAKEN OUT OF SERVICE FOR THE REMOVAL OF THE ASSOCIATED INTERIOR BREECING/FLUE AND THE INSTALLATION OF THE NEW VERTICAL BREECING/FLUE THROUGH THE ROOF. A BRIEF BOILER PLANT SHUTDOWN WILL BE REQUIRED FOR PATCHING OF THE HORIZONTAL BREECING. THE TWO BOILERS, BOILER #1 (1,200 BHP) AND BOILER #2 (700 BHP), CAN REMAIN IN SERVICE FOR HEATING, KITCHEN EQUIPMENT AND DOMESTIC HOT WATER DURING THE HEATING SEASON. ONCE THE WORK ON THE BOILER #3 (500 BHP) IS COMPLETED AND TESTED FOR OPERATION (ON ABOUT 6/7/21), THE WORK ON THE NEXT BOILER CAN BEGIN. IT IS EXPECTED FOR THE WORK ON BOILER #1 (1,200 BHP) TO BEGIN ON ABOUT 6/8/21 AND BE COMPLETED ON 7/20/21 LEAVING THE BOILER #3 (500 BHP) AND BOILER #2 (700 BHP) IN OPERATION. THE BREECING/FLUE FOR THE BOILER #2 (700 BHP) IS EXPECTED TO BE DONE BETWEEN 7/21/21 THROUGH 9/6/21. ALL BOILERS SHALL BE OPERATIONAL BY THE END OF CONSTRUCTION WHICH SHOULD BE ON 11/3/21.

THE EXISTING MASONRY STACK AND EXISTING INTERIOR BREECING/FLUE WILL BE DEMOLISHED ONLY AFTER THE LAST BOILER HAS ITS NEW VERTICAL BREECING/FLUE INSTALLED AND IS TESTED AND APPROVED FOR PROPER OPERATION.

MECHANICAL DEMOLITION KEYNOTES

- 1 DEMOLITION OF EXISTING BREECING INCLUDES, 36 LF OF BREECING SEAM GASKET WHICH CONTAINS ASBESTOS.
- 2 DEMOLITION OF EXISTING BREECING INCLUDES, 20 LF OF BREECING ACCESS DOOR GASKET WHICH CONTAINS ASBESTOS.
- 3 THE CONTRACTOR SHALL DISCONNECT THE EXISTING 48"x48" DRAFT CONTROL DAMPER FROM CONTROL, ELECTRICAL POWER, AND REMOVE FROM BREECING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER ONCE THE DAMPER IS REMOVED SO THAT IT CAN BE INSPECTED AND EVALUATED. THE CONTRACTOR SHALL STORE THE DAMPER IN A SAFE, CLEAN, INDOOR AREA UNTIL IT IS TO BE RE-INSTALLED IN THE NEW B-1 FLUE. THE CONTRACTOR SHALL RE-INSTALL AND RE-CONNECT THE DAMPER TO THE CONTROL SYSTEM AND ELECTRICAL POWER. THE CONTRACTOR SHALL ADJUST THE EXISTING CONTROL AND POWER CONDUIT AND WIRE SO THAT THEY ARRIVE AT THE NEW DAMPER LOCATION. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ANY NECESSARY CONDUIT, WIRE, JUNCTION BOXES, HANGERS, ETC. TO ACHIEVE THE DAMPER RELOCATION. THE CONTRACTOR SHALL TEST THE DAMPER FOR PROPER OPERATION AS PART OF THE STACK TESTING.
- 4 THE CONTRACTOR SHALL DISCONNECT THE EXISTING 16" FRG VALVE FROM CONTROL, ELECTRICAL POWER, AND REMOVE FROM BREECING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER ONCE THE FRG VALVE IS REMOVED SO THAT IT CAN BE INSPECTED AND EVALUATED. THE CONTRACTOR SHALL STORE THE FRG VALVE IN A SAFE, CLEAN, INDOOR AREA UNTIL IT IS TO BE RE-INSTALLED IN THE NEW B-1 FLUE. THE CONTRACTOR SHALL RE-INSTALL AND RE-CONNECT THE 16" FRG VALVE TO THE CONTROL SYSTEM AND ELECTRICAL POWER. THE CONTRACTOR SHALL ADJUST THE EXISTING CONTROL AND POWER CONDUIT AND WIRE SO THAT THEY ARRIVE AT THE NEW VALVE LOCATION. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ANY NECESSARY CONDUIT, WIRE, JUNCTION BOXES, HANGERS, ETC. TO ACHIEVE THE DAMPER RELOCATION. THE CONTRACTOR SHALL TEST THE FRG VALVE FOR PROPER OPERATION AS PART OF THE STACK TESTING.
- 5 DISCONNECT AND RELOCATE PIPING TO AVOID A CONFLICT WITH INSTALLATION OF NEW FLUES.



MECHANICAL DEMOLITION FLOOR PLAN

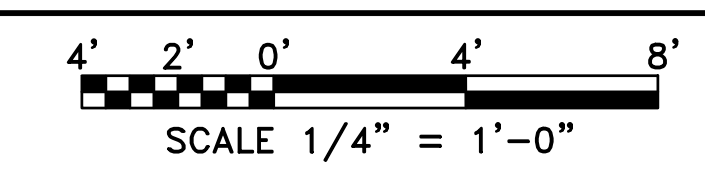
SCALE: 1/4" = 1'-0"

REVISION NO.	DATE	REVISION

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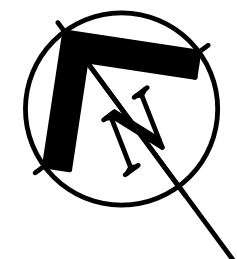
NAME _____ DATE _____
MICHAEL V. LaPILUSA
NJ Professional Engineer Lic. No. 24GE04474900



MECHANICAL DEMOLITION FLOOR PLAN
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

DPWG NO. M1514-00	DATE 01/22/2021
DRAWN BY GB	DESIGNED BY CB
SCALE AS SHOWN	
SHEET NO. 12	OF 15



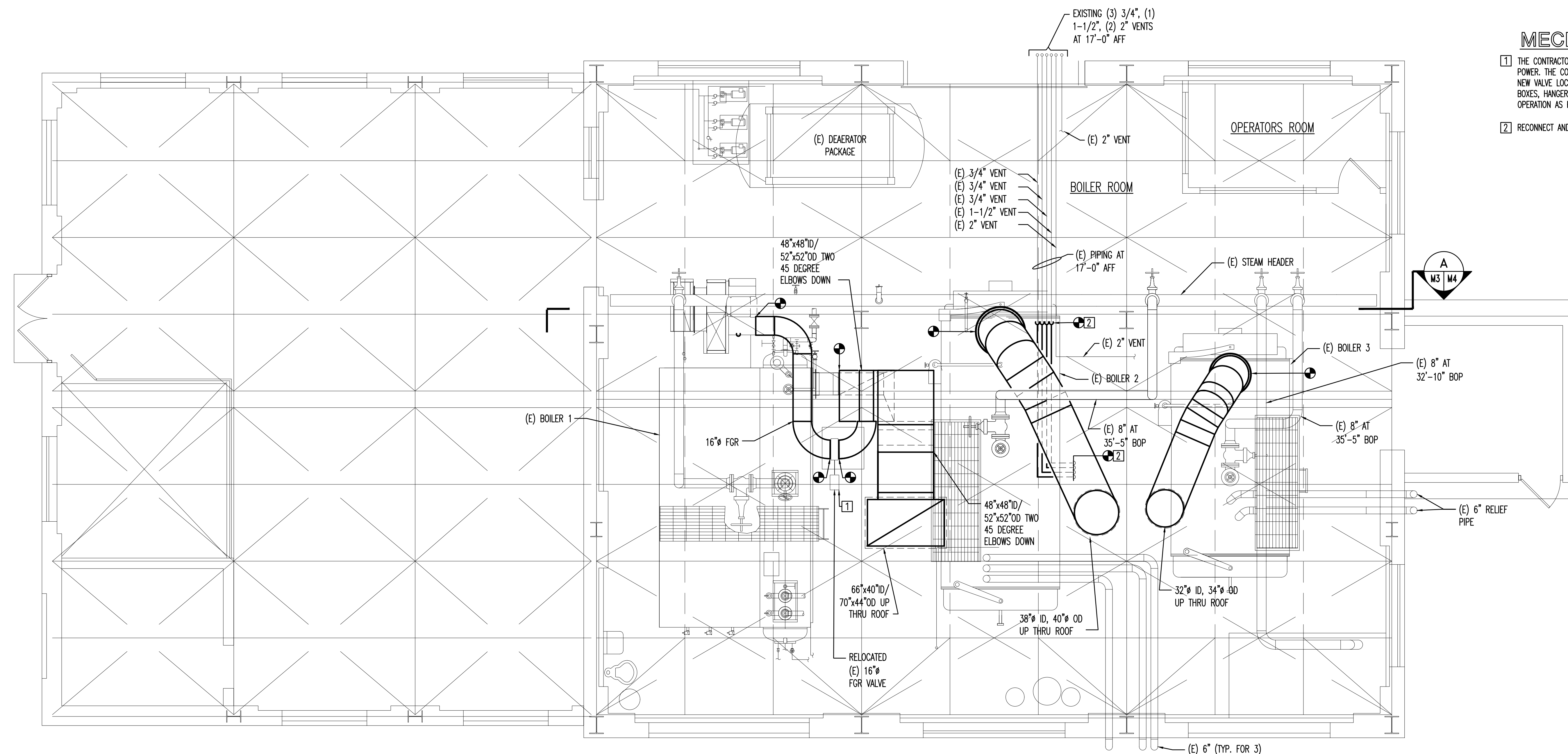
MECHANICAL NOTES

A REQUIREMENT OF THIS PROJECT IS THAT THE BOILER PLANT MUST REMAIN IN OPERATION DURING THE CONSTRUCTION PERIOD. IT IS ESTIMATED THAT THE CONSTRUCTION WILL BEGIN ON 4/12/21. THIS MEANS THAT CONSTRUCTION WILL BEGIN DURING THE HEATING SEASON AND CONTINUE INTO THE NON-HEATING SEASON. THE IMPLICATIONS OF THIS ARE THAT STEAM FOR HEATING, KITCHEN EQUIPMENT, AND DOMESTIC HOT WATER NEEDS TO BE PROVIDED BEGINNING 4/12/21 AND UNTIL 4/15/21, AND FROM 10/15/21 UNTIL THE END OF CONSTRUCTION WHICH SHOULD BE ON APPROXIMATELY ON 11/3/21. FOR THE NON-HEATING SEASON, STEAM FOR ABSORPTION CHILLERS, KITCHEN EQUIPMENT AND DOMESTIC HOT WATER MUST BE PROVIDED CONTINUOUSLY FROM 4/15/2021 UNTIL THE END OF THE HEATING SEASON ON 10/15/21. FIRST, ON 4/27/21, BOILER #3 (500 BHP) CAN BE TAKEN OUT OF SERVICE FOR THE REMOVAL OF THE ASSOCIATED INTERIOR BREECHING/FLUE AND THE INSTALLATION OF THE NEW VERTICAL BREECHING/FLUE THROUGH THE ROOF. A BRIEF BOILER PLANT SHUTDOWN WILL BE REQUIRED FOR PATCHING OF THE HORIZONTAL BREECHING. THE TWO BOILERS, BOILER #1 (1,200 BHP) AND BOILER #2 (700 BHP), CAN REMAIN IN SERVICE FOR HEATING, KITCHEN EQUIPMENT AND DOMESTIC HOT WATER DURING THE HEATING SEASON. ONCE THE WORK ON THE BOILER #3 (500 BHP) IS COMPLETED AND TESTED FOR OPERATION (ON ABOUT 6/7/21), THE WORK ON THE NEXT BOILER CAN BEGIN. IT IS EXPECTED FOR THE WORK ON BOILER #1 (1,200 BHP) TO BEGIN ON ABOUT 6/8/21 AND BE COMPLETED ON 7/20/21 LEAVING THE BOILER #3 (500 BHP) AND BOILER #2 (700 BHP) IN OPERATION. THE BREECHING/FLUE FOR THE BOILER #2 (700 BHP) IS EXPECTED TO BE DONE BETWEEN 7/21/21 THROUGH 9/6/21. ALL BOILERS SHALL BE OPERATIONAL BY THE END OF CONSTRUCTION WHICH SHOULD BE ON 11/3/21.

THE EXISTING MASONRY STACK AND EXISTING INTERIOR BREECHING/FLUE WILL BE DEMOLISHED ONLY AFTER THE LAST BOILER HAS ITS NEW VERTICAL BREECHING/FLUE INSTALLED AND IS TESTED AND APPROVED FOR PROPER OPERATION.

MECHANICAL KEYNOTES

- [1] THE CONTRACTOR SHALL RE-INSTALL RE-CONNECT THE EXISTING 16" FRG VALVE TO THE CONTROL SYSTEM AND ELECTRICAL POWER. THE CONTRACTOR SHALL ADJUST THE EXISTING CONTROL AND POWER CONDUIT AND WIRE SO THAT THEY ABOVE AT THE NEW VALVE LOCATION. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ANY NECESSARY CONDUIT, WIRE, JUNCTION BOXES, HANGERS, ETC. TO ACHIEVE THE DAMPER RELOCATION. THE CONTRACTOR SHALL TEST THE FRG VALVE FOR PROPER OPERATION AS PART OF THE STACK TESTING.
- [2] RECONNECT AND RUN HORIZONTAL PIPING BELOW NEW FLUE AT 13'-0" AFF.



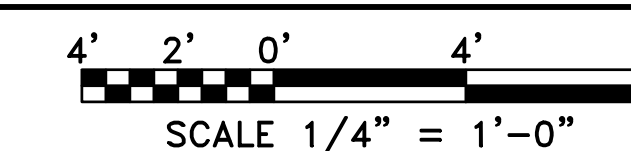
MECHANICAL FLOOR PLAN

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

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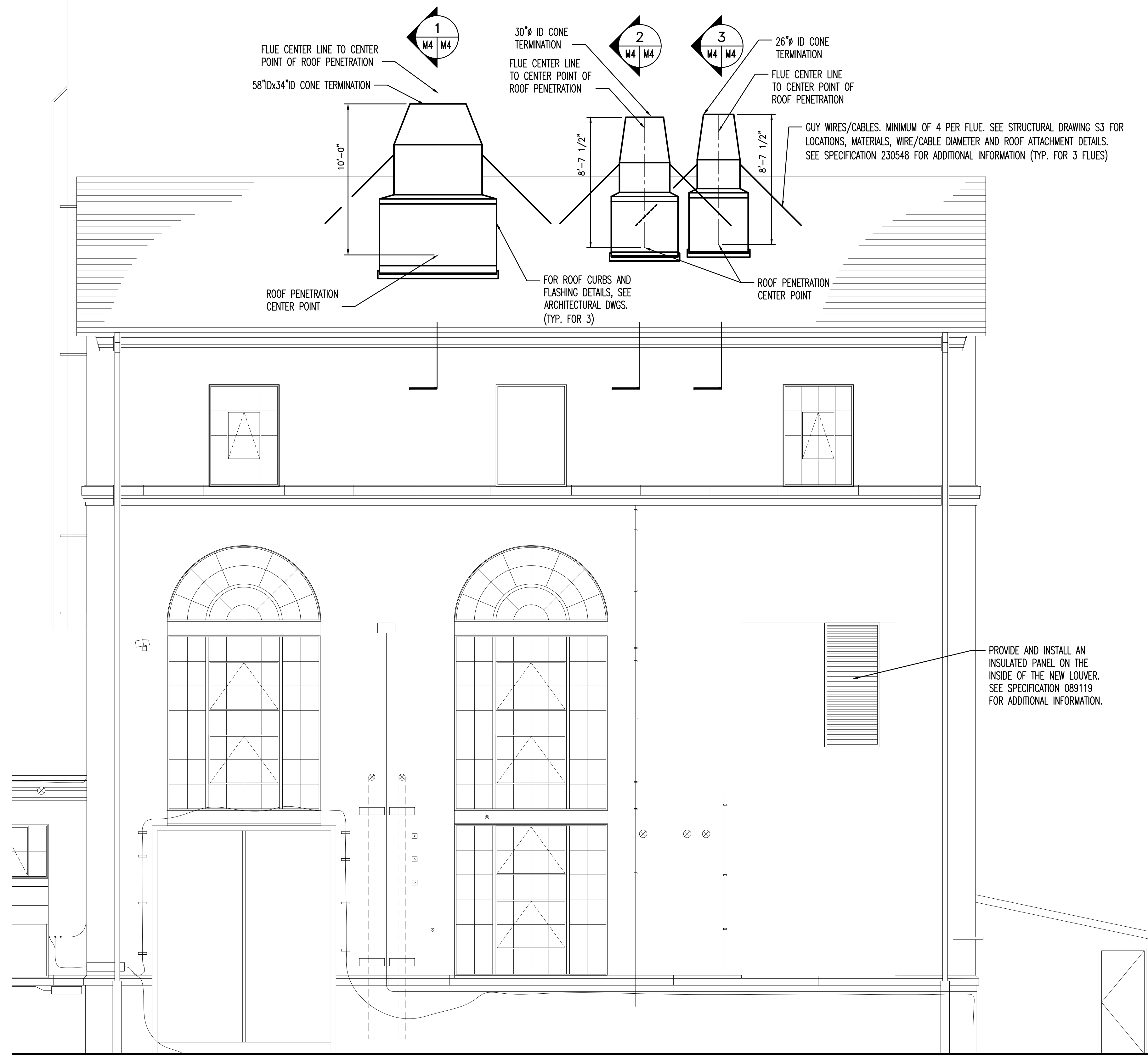
NAME _____ DATE _____
MICHAEL V. LaPILUSA
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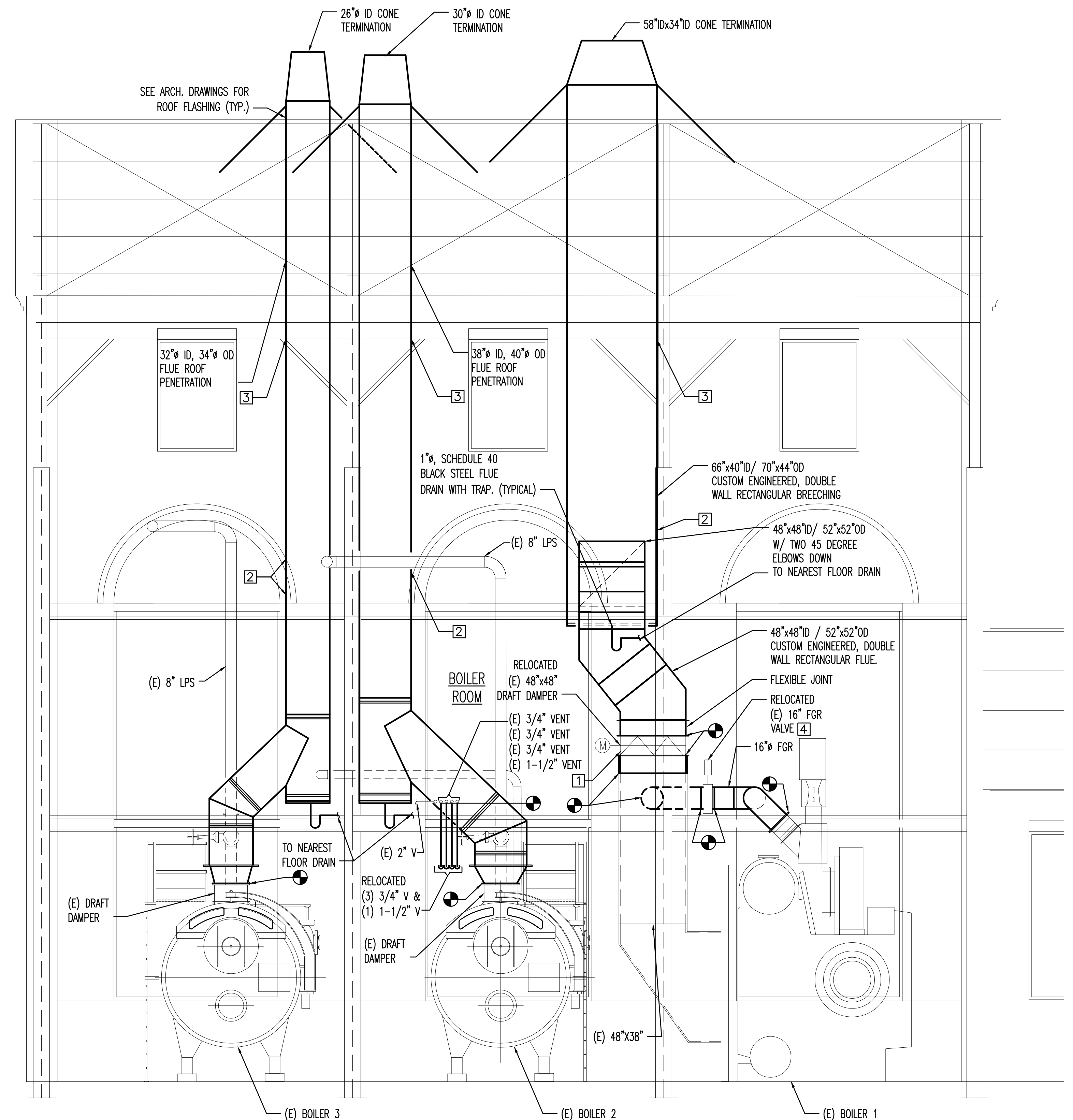
MECHANICAL FLOOR PLAN
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

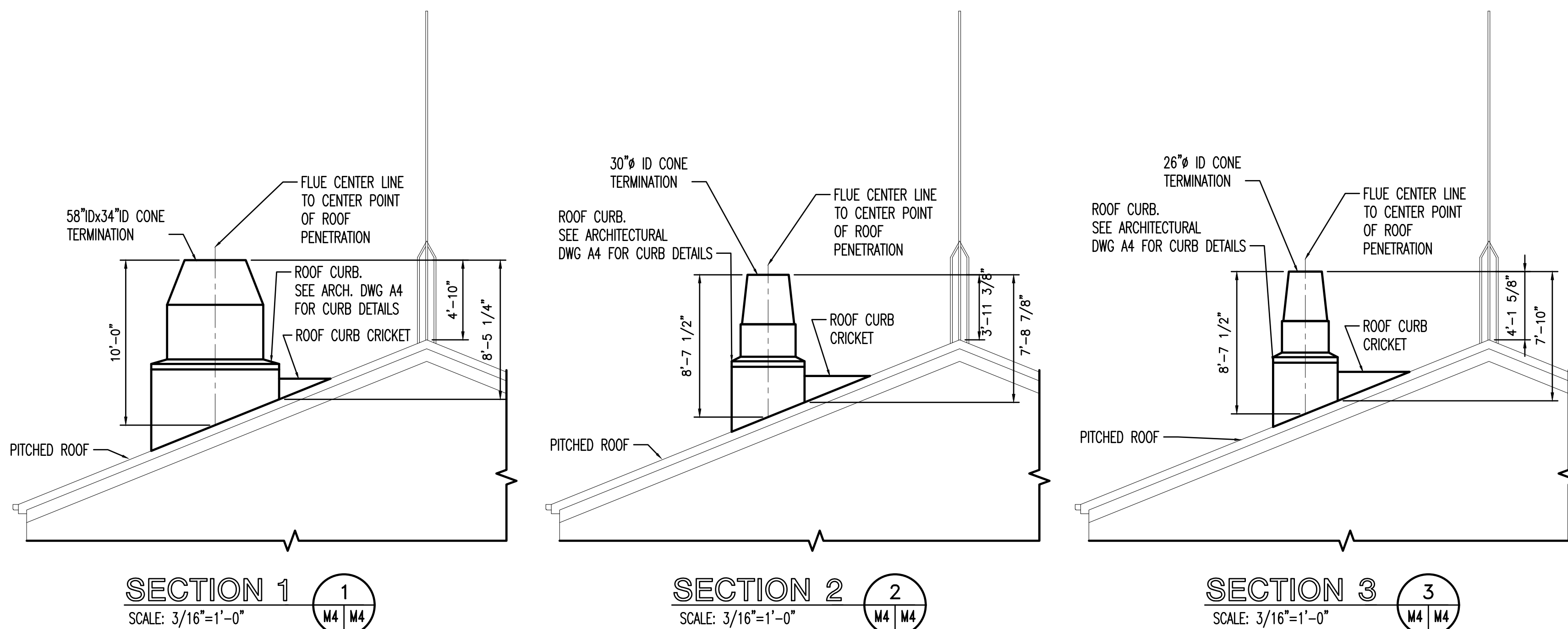
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SHEET NO.	13	OF	15



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



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



SECTION 1
SCALE: 3/16"=1'-0"

SECTION 2
SCALE: 3/16"=1'-0"

SECTION 3
SCALE: 3/16"=1'-0"

MECHANICAL NOTES

A REQUIREMENT OF THIS PROJECT IS THAT THE BOILER PLANT MUST REMAIN IN OPERATION DURING THE CONSTRUCTION PERIOD. IT IS ESTIMATED THAT THE CONSTRUCTION WILL BEGIN ON 4/12/21. THIS MEANS THAT CONSTRUCTION WILL BEGIN DURING THE HEATING SEASON AND CONTINUE INTO THE NON-HEATING SEASON. THE IMPLICATIONS OF THIS ARE THAT STEAM FOR HEATING, KITCHEN EQUIPMENT, AND DOMESTIC HOT WATER NEEDS TO BE PROVIDED BEGINNING 4/12/21 AND UNTIL 4/15/21, AND FROM 10/15/21 UNTIL THE END OF CONSTRUCTION WHICH SHOULD BE ON APPROXIMATELY ON 11/3/21. FOR THE NON-HEATING SEASON, STEAM FOR ABSORPTION CHILLERS, KITCHEN EQUIPMENT AND DOMESTIC HOT WATER MUST BE PROVIDED CONTINUOUSLY FROM 4/15/2021 UNTIL THE END OF THE HEATING SEASON ON 10/15/21. FIRST, ON 4/27/21, BOILER #3 (500 BHP) CAN BE TAKEN OUT OF SERVICE FOR THE REMOVAL OF THE ASSOCIATED INTERIOR BREECHING/FLUE AND THE INSTALLATION OF THE NEW VERTICAL BREECHING/FLUE THROUGH THE ROOF. A BRIEF BOILER PLANT SHUTDOWN WILL BE REQUIRED FOR PATCHING OF THE HORIZONTAL BREECHING. THE TWO BOILERS, BOILER #1 (1,200 BHP) AND BOILER #2 (700 BHP), CAN REMAIN IN SERVICE FOR HEATING, KITCHEN EQUIPMENT AND DOMESTIC HOT WATER DURING THE HEATING SEASON. ONCE THE WORK ON THE BOILER #3 (500 BHP) IS COMPLETED AND TESTED FOR OPERATION (ON ABOUT 6/7/21), THE WORK ON THE NEXT BOILER CAN BEGIN. IT IS EXPECTED FOR THE WORK ON BOILER #1 (1,200 BHP) TO BEGIN ON ABOUT 6/8/21 AND BE COMPLETED ON 7/20/21 LEAVING THE BOILER #3 (500 BHP) AND BOILER #2 (700 BHP) IN OPERATION. THE BREECHING/FLUE FOR THE BOILER #2 (700 BHP) IS EXPECTED TO BE DONE BETWEEN 7/21/21 THROUGH 9/6/21. ALL BOILERS SHALL BE OPERATIONAL BY THE END OF CONSTRUCTION WHICH SHOULD BE ON 11/3/21.

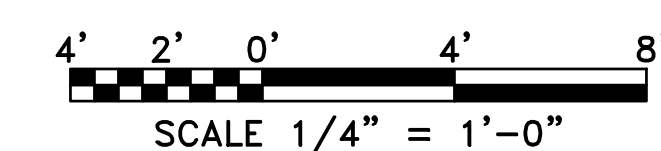
THE EXISTING MASONRY STACK AND EXISTING INTERIOR BREECHING/FLUE WILL BE DEMOLISHED ONLY AFTER THE LAST BOILER HAS ITS NEW VERTICAL BREECHING/FLUE INSTALLED AND IS TESTED AND APPROVED FOR PROPER OPERATION.

NOTES:

- THE FLUE SHALL BE DESIGNED, FABRICATED AND TESTED BY A QUALIFIED VENT PRODUCT MANUFACTURER. DRAFT PRESSURE AT APPLIANCE OUTLET SHALL BE BETWEEN -.025" WG AND +0.25 WG DURING PEAK HEATING LOAD ON A 95°F DAY.
- PROVIDE ALL ACCESS PORTS REQUIRED BY NJDEP TO MONITOR EMISSIONS AND FIELD TESTING OF BOILER, SEE SPECIFICATIONS FOR REQUIREMENTS.
- BOILER B-1 PROVIDE 4 ACCESS PORTS.
- FOR BOILER B-2 AND B-3, EACH OF THE FOLLOWING SHALL BE PROVIDED:
 - THREE 3" INCH DIAMETER HOLES ARE PROVIDED IN THE BREECHING, APPROXIMATELY 4 INCHES APART AND PLACED SO THAT THE ONE CLOSEST TO THE BOILER IS APPROXIMATELY ONE BREECHING DIAMETER DOWNSTREAM FROM THE BOILER OUTLET.
 - TWO 3" INCH DIAMETER HOLES ARE PROVIDED IN THE BREECHING PLACED ONE ON EACH SIDE OF ANY POWER OPERATED DRAFT REGULATOR DAMPER, APPROXIMATELY ONE BREECHING DIAMETER FROM THE CENTERLINE OF THE DAMPER. NOTE THAT THE LOCATION OF ONE OR BOTH OF THESE HOLES MAY, OF NECESSITY, BE IN THE BOILER OUTLET.
 - A 3" INCH DIAMETER HOLE IS PROVIDED IN THE BREECHING WITHIN ONE BREECHING DIAMETER OF THE BREECHING CONNECTION TO THE STACK.
- PROVIDE 48"x48"/52"x52"OD, 12 INCHES LONG DUCT SECTION WITH A FLANGE BETWEEN THE RELOCATED DRAFT DAMPER EXISTING DUCT.
- SEE ARCHITECTURAL DRAWINGS FOR ROOF PENETRATION DETAILS.
- SEE STRUCTURAL DRAWINGS FOR FLUE SUPPORT LOCATIONS.

MECHANICAL KEYNOTES

- THE CONTRACTOR SHALL RE-INSTALL AND RE-CONNECT THE EXISTING 48"x48" DAMPER TO THE CONTROL SYSTEM AND ELECTRICAL POWER. THE CONTRACTOR SHALL ADJUST THE EXISTING CONTROL AND POWER CONDUIT AND WIRE SO THAT THEY ARRIVE AT THE NEW DAMPER LOCATION. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ANY NECESSARY CONDUIT, WIRE, JUNCTION BOXES, HANGERS, ETC. TO ACHIEVE THE DAMPER RELOCATION. THE CONTRACTOR SHALL TEST THE DAMPER FOR PROPER OPERATION AS PART OF THE STACK TESTING.
- EACH BOILER FLUE SHALL BE DESIGNED/FABRICATED/INSTALLED SO THAT THE ENTIRE VERTICAL WEIGHT OF THE FLUE IS SUPPORTED AT ELEVATION +35.00' AFF (APPROXIMATELY). THE CONTRACTOR SHALL COORDINATE THIS WITH THE MANUFACTURER, AND THE FLUES SHALL COME FROM THE FACTORY CONSTRUCTED FOR THIS REQUIREMENT. SEE STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- EACH BOILER FLUE SHALL BE DESIGNED/FABRICATED/INSTALLED SO THAT THEY ARE "GUIDED" TO ELIMINATE LATERAL FORCES AT ELEVATION 45'-0" AFF (APPROXIMATELY). THE CONTRACTOR SHALL COORDINATE THIS WITH THE MANUFACTURER, AND THE FLUES SHALL COME FROM THE FACTORY CONSTRUCTED FOR THIS REQUIREMENT. SEE STRUCTURAL DRAWINGS AND SPECIFICATION FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL RE-INSTALL RE-CONNECT THE EXISTING 16" FGR VALVE TO THE CONTROL SYSTEM AND ELECTRICAL POWER. THE CONTRACTOR SHALL ADJUST THE EXISTING CONTROL AND POWER CONDUIT AND WIRE SO THAT THEY ARRIVE AT THE NEW VALVE LOCATION. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ANY NECESSARY CONDUIT, WIRE, JUNCTION BOXES, HANGERS, ETC. TO ACHIEVE THE DAMPER RELOCATION. THE CONTRACTOR SHALL TEST THE FGR VALVE FOR PROPER OPERATION AS PART OF THE STACK TESTING.



SECTION AND DETAIL
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

DATE	01/22/2021
DESIGNED BY	GB
DRAWN BY	GB
SCALE	AS SHOWN
SHEET NO.	M/4
	14 of 15

NO.	DATE	REVISION

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Tel: 201-792-3900

NAME _____ DATE _____
MICHAEL V. LaPILUSA
NJ Professional Engineer Lic. No. 24GE0447900

GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (2014), NATIONAL ELECTRIC SAFETY CODE, NFPA, OSHA REGULATIONS AND ALL OTHER EXISTING CODES AND REGULATIONS OF AUTHORITIES WHICH HAVE JURISDICTION.
- THE CONTRACT DRAWINGS ARE DIAGRAMMATIC IN NATURE AND NOT EVERY DETAIL OR CONDUIT IS SHOWN. EXISTING CONDITIONS AND DIMENSIONS SHALL BE VERIFIED IN THE FIELD BEFORE COMMENCING ANY FABRICATION, ORDERING ANY MATERIAL, OR PERFORMING ANY WORK. ANY DEPARTURE FROM CONCEPT SHOWN ON THE CONTRACT DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. ALL ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND/OR REQUIRED FOR THE FULL INTEGRITY OF THE CONTRACT SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE CONTRACTOR, EXCEPT WHERE EQUIPMENT SHOWN IS IDENTIFIED AS "EXISTING" OR OTHERWISE NOTED ON THE DRAWINGS.
- UNLESS OTHERWISE NOTED, EQUIPMENT AND MATERIALS TO BE PROVIDED SHALL BEAR LISTING AND LABELING BY A NATIONALLY RECOGNIZED TESTING AGENCY WHERE SUCH STANDARD HAD BEEN ESTABLISHED FOR THAT TYPE OF EQUIPMENT/MATERIAL.
- CONTRACTOR SHALL VISIT THE PROJECT SITE AND EXAMINE AND CONFIRM EXISTING CONDITIONS. ALL CHANGES SHALL BE PRESENTED DURING SHOP DRAWING SUBMITTALS FOR ENGINEER'S APPROVAL.
- THE CONTRACTOR SHALL PROVIDE CONDUIT FITTINGS, CONNECTORS, CLAMPS, HARDWARE, HANGERS, AND SUPPORTS AS NECESSARY FOR A COMPLETE INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE TAGS FOR EQUIPMENT, CONDUITS, AND CABLES THAT ARE INSTALLED UNDER THIS CONTRACT. TAG IDENTIFICATIONS SHALL BE IN ACCORDANCE WITH CONTRACT DRAWINGS. TAGS FOR CONDUITS SHALL BE AS DESCRIBED IN SPECIFICATIONS.
- UNUSED OPENINGS IN CONDUITS AND BOXES SHALL BE CAPPED OR PLUGGED.
- CONTRACTOR SHALL PROVIDE THE NECESSARY MATERIALS, LABOR AND ATTENDANCE FOR THE OPERATION OF TEMPORARY LIGHT AND CONSTRUCTION POWER AS REQUIRED DURING WORKING HOURS FOR THE ENTIRE CONSTRUCTION PERIOD.
- CONTRACTOR SHALL MAINTAIN CONTINUITY OF ANY EXISTING CIRCUITS AFFECTED BY THIS ALTERATION. RECONNECT ALL ALTERED OR REROUTED WORK TO ITS FULLY FUNCTIONAL STATE PRIOR TO ALTERATION.
- PROVIDE ALL NECESSARY TEMPORARY WIRING TO MAINTAIN EXISTING INSTALLATIONS WHICH MUST REMAIN IN SERVICE DURING CONSTRUCTION PERIOD.
- SCHEDULE ALL DISCONNECTION AND INTERRUPTIONS OF ELECTRICAL SERVICE, COMMUNICATIONS AND SUPERVISORY SYSTEMS WITH THE OWNER AND ENGINEER.
- CONTRACTORS SHALL FOLLOW ALL OWNER SITE SAFETY WORK PROCESSES AND PROCEDURES, FOR EXAMPLE, WORK PERMITS, SAFETY TASK ANALYSES, LOCKOUT TAGOUT (LOTO), LOCK, TAG AND TRY, AND RED TAG, ETC.
- CONTRACTORS SHALL COORDINATE ALL WORK ACTIVITIES WITH OPERATIONS, MAINTENANCE, AND OTHER CONTRACTORS.

ABBREVIATIONS

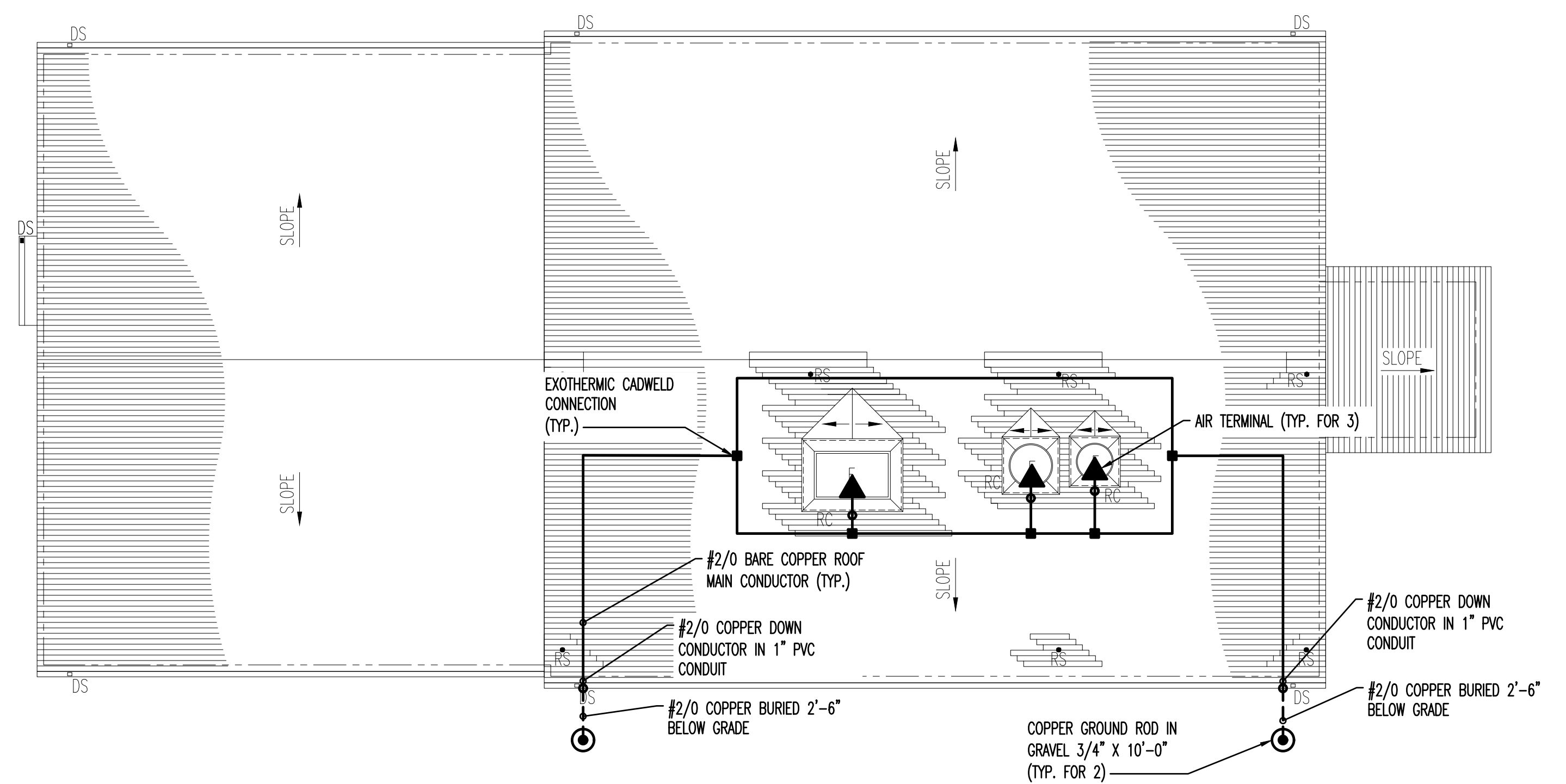
ETC	ET CETERA
MAX.	MAXIMUM
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PVC	POLYVINYLCHLORIDE CONDUIT
TYP.	TYPICAL
UL	UNDERWRITERS LABORATORIES

LEGEND

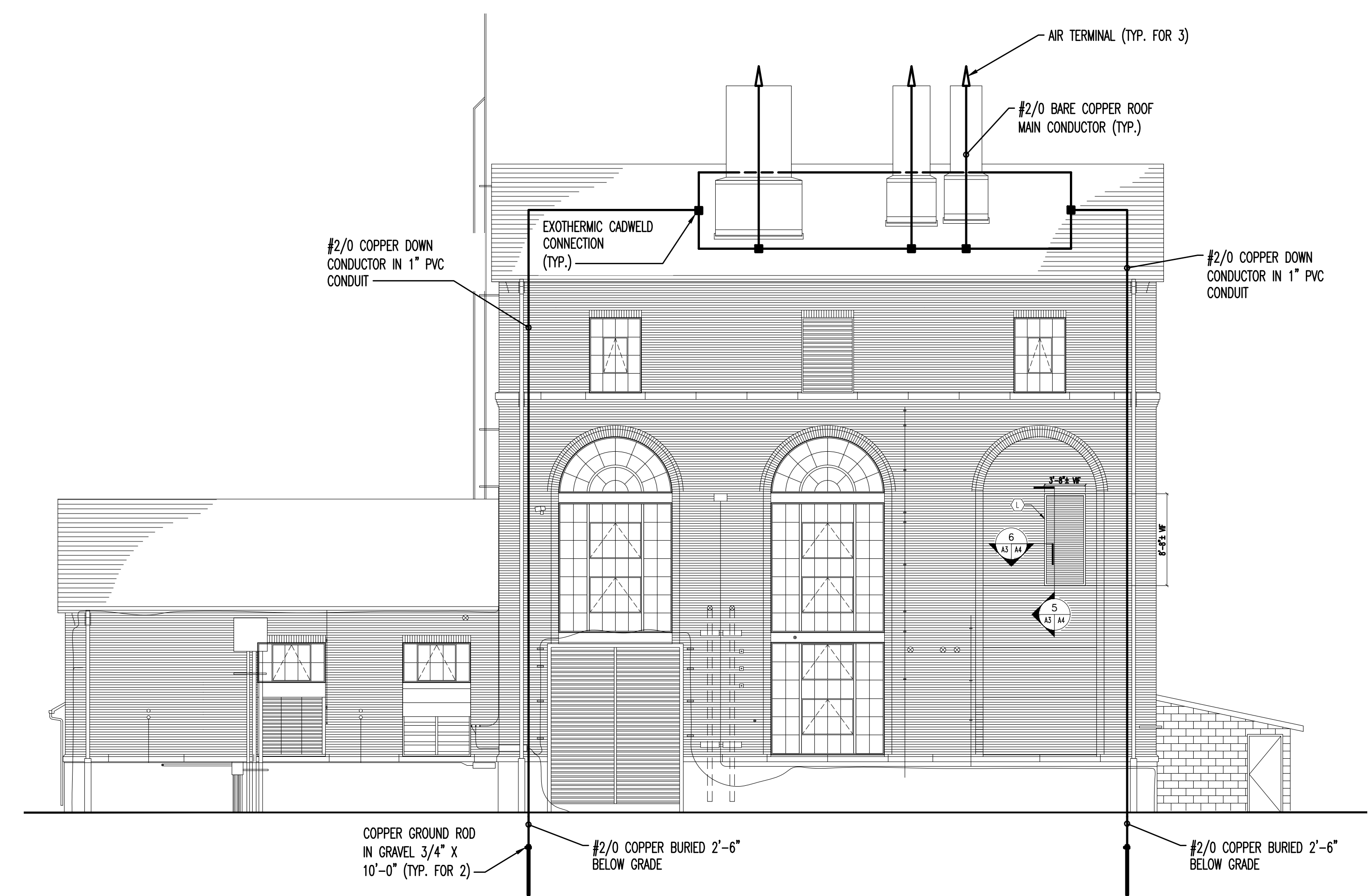
- CONDUIT RUN EXPOSED PARALLEL OR PERPENDICULAR TO BUILDING LINES
- UNDERGROUND CONDUIT, NOT ENCASED
- CONDUIT TURNING DOWN
- EXOTHERMIC CADWELD CONNECTION
- GROUND ROD
- AIR TERMINAL

NOTES

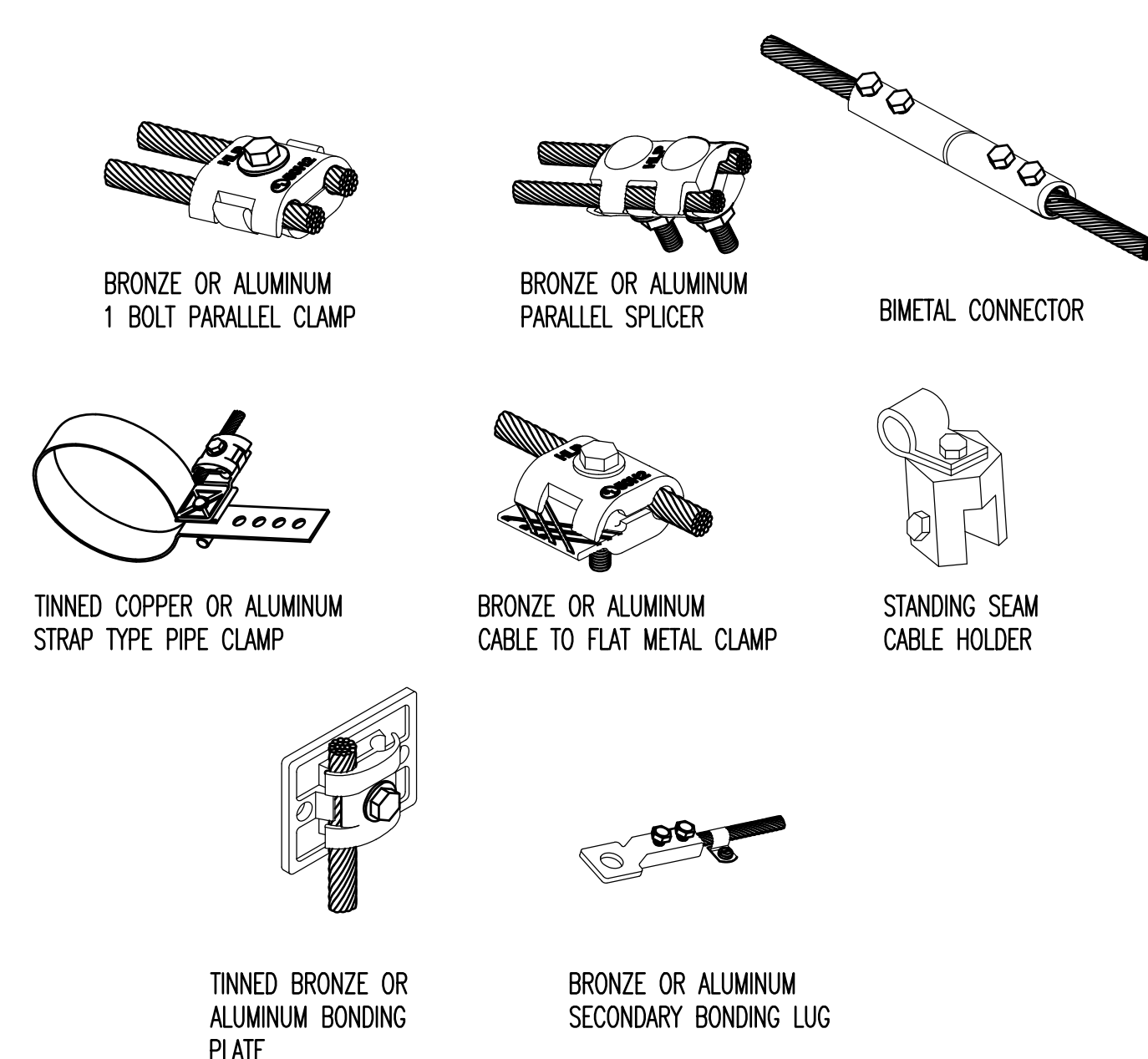
- REFER TO THIS DRAWING FOR GENERAL NOTES, LEGENDS AND ABBREVIATIONS.
- REFER TO DRAWINGS OF OTHER TRADES FOR LOCATION OF EQUIPMENT.
- THE INSTALLATION OF LIGHTNING PROTECTION SYSTEM SHALL COMPLY WITH NFPA 780 AND THE SPECIFICATION SECTION 26 41 13.
- CONDUCTORS SHALL MAINTAIN A HORIZONTAL OR DOWNWARD COURSE, FREE FROM "U" OR "V" (DOWN AND UP) POCKETS.
- NO BEND OF A CONDUCTOR SHALL FORM AN ANGLE OF LESS THAN 90° NOR SHALL HAVE A RADIUS OF BEND LESS THAN 8 INCHES.
- ACTUAL JOB SITE CONDITIONS MAY REQUIRE SLIGHT ALTERATIONS IN AIR TERMINAL, DOWN CONDUCTOR AND GROUND ROD LOCATIONS.
- BARE COPPER MATERIALS SHALL NOT BE INSTALLED ON ALUMINUM SURFACES AND ALUMINUM MATERIALS SHALL NOT BE INSTALLED ON COPPER SURFACES.
- ALL LIGHTNING PROTECTION CONDUCTORS SHALL BE FASTENED HORIZONTALLY AND VERTICALLY NOT MORE THAN 3'-0" O.C. MAXIMUM SPACING.
- PRIOR TO GROUND CONNECTION ON ANY STRUCTURAL STEEL FRAMING, REMOVE ALL PAINT, GREASE, RUST, ETC.
- BOND STRUCTURAL STEEL OR REBAR TO NEAREST DOWN CONDUCTOR OR GROUNDING ROD.
- GROUNDING RODS AND BONDING TO BASE OF STRUCTURAL STEEL COLUMNS, MAY BE USED FOR THE LIGHTNING PROTECTION GROUNDING SYSTEM AS SHOWN.
- CONNECTIONS TO LIGHTNING PROTECTION GROUNDING ROD SHALL BE MADE AT A POINT NOT LESS THAN 2'-6" BELOW FINISHED GRADE AND 3'-0" AWAY FROM FOUNDATION WALL. SEPARATION BETWEEN RODS SHALL BE NOT LESS 6'.
- THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN A NEAT WORKMANLIKE AND INCONSPICUOUS MANNER. CONTRACTOR SHALL USE A STRUCTURAL COPPER ATTACHMENT CLAMP FOR LIGHTNING PROTECTION SYSTEM INSTALLATION.
- THE LIGHTNING PROTECTION INSTALLING CONTRACTOR SHALL PROVIDE PHOTOS OR VIDEO OF THE INSTALLATION. THIS INCLUDES BUT NOT LIMITED TO, BONDING CONNECTIONS (WATERLINE & STRUCTURAL STEEL), DOWN CONDUCTORS, GROUNDING RODS AND ALL BURIED, CONCEALED OR INACCESSIBLE CONNECTIONS AND COMPONENTS. PHOTOS SHALL BE FORWARDED TO THE LIGHTNING PROTECTION EQUIPMENT MANUFACTURER.
- A GROUND RESISTANCE TEST SHALL BE PERFORMED IMMEDIATELY AFTER DRIVING GROUNDING RODS. THE TEST RESULTS AND TEST DATE SHALL BE INCLUDED ON THE FINAL AS-BUILT DRAWING, AND THEN FORWARDED TO THE LIGHTNING PROTECTION EQUIPMENT MANUFACTURER.
- ALL UNDERGROUND GROUNDING CONNECTORS SHALL BE EXOTHERMIC WELD, ALL ABOVE GRADE GROUNDING CONNECTORS SHALL BE EXOTHERMIC WELD OR MECHANICAL COMPRESSION TYPE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH STANDARDS UL 96 AND UL 98A, AND SHALL DELIVER A SYSTEM WHICH COMPLIES WITH UL MASTER LABEL CERTIFICATION REQUIREMENTS. PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF FINAL COMPLETION, DEMONSTRATE COMPLIANCE BY DELIVERING TO THE ENGINEER A MASTER LABEL CERTIFICATE.
- THE CONTRACTOR SHALL BE CERTIFIED WITH A COMMERCIAL THIRD-PARTY INSPECTION COMPANY WHOSE SOLE WORK IS LIGHTNING PROTECTION, OR IS A UL LISTED LIGHTNING PROTECTION INSTALLER.



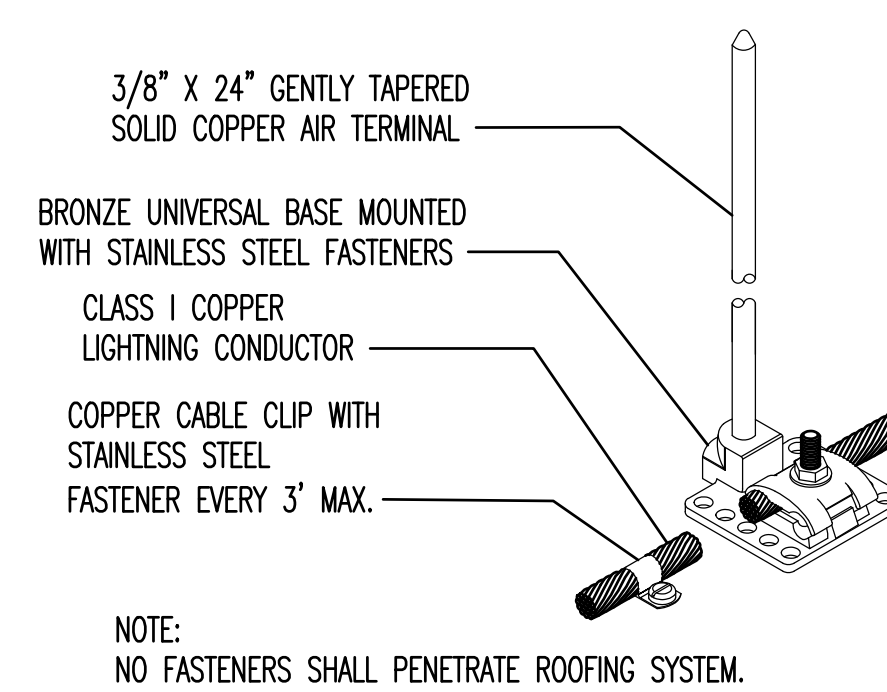
ROOF PLAN
SCALE: 1/8" = 1'-0"



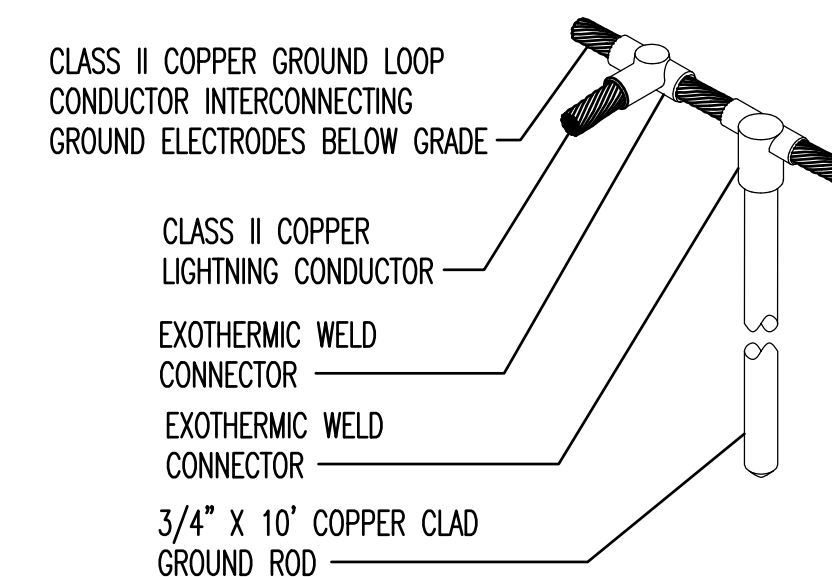
SOUTH SIDE ELEVATION PLAN
SCALE: 1/8" = 1'-0"



TYPICAL BONDING/SPLICING DETAILS
SCALE: NTS



AIR TERMINAL DETAIL
SCALE: NTS



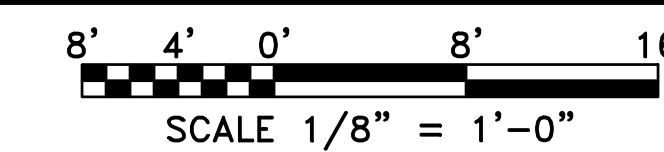
GROUND ROD DETAIL
SCALE: NTS

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NAME _____ DATE _____
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NJ Registered Engineer Lic. No. 24GE05050300



LIGHTNING PROTECTION AND GROUNDING PLAN
POWERHOUSE STACK REPLACEMENT
WOODBINE DEVELOPMENTAL CENTER

WOODBINE CAPE MAY COUNTY NEW JERSEY

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SHEET NO. 15	of 15