

CDB - PROJECT NUMBER 822-010-127

CAMPUS BOILER REPLACEMENTS
 NORTHERN ILLINOIS UNIVERSITY
 DEKALB, DEKALB COUNTY, ILLINOIS
 CDB BUILDING INVENTORY NO.:

- WEST HEATING PLANT BUILDING CODE: 051
- EAST HEATING PLANT BUILDING CODE: 001A

FOR:
 STATE OF ILLINOIS
 CAPITAL DEVELOPMENT BOARD

USING AGENCY:
 NORTHERN ILLINOIS UNIVERSITY
 DEKALB, ILLINOIS 60115

BY:
 MIDDOUGH INC.
 700 COMMERCE DRIVE
 SUITE 200
 OAK BROOK, ILLINOIS 60523
 PHONE: 630-756-7000
 FAX: 630-756-7001

CONSULTANTS:
 GENERAL ENERGY CORPORATION (GEC)
 230 MADISON STREET
 OAK PARK, ILLINOIS 60302
 PHONE: 708-386-6000

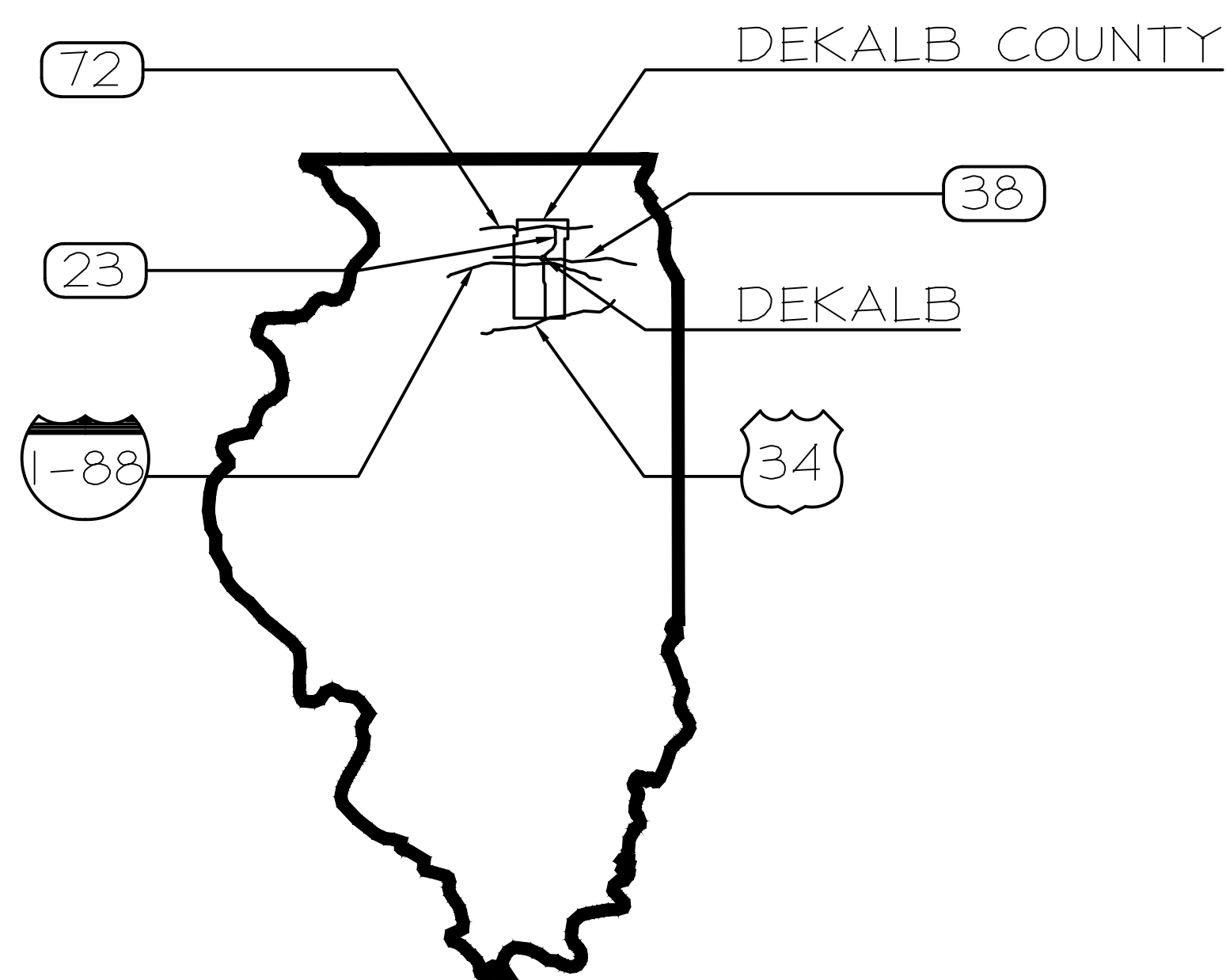
MELVIN COHEN AND ASSOCIATES, INC.
 223 W. JACKSON, SUITE 820
 CHICAGO, ILLINOIS 60606
 PHONE: 312-663-3700
 FAX: 312-663-4161

REFERENCE DRAWINGS

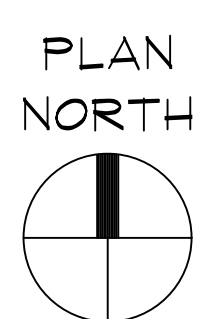
SHEET NO.	SHEET NAME TITLE
C-051-6528	NORTH WALL REMODELING
E-051-1809 SHEET 1	UTILITIES TUNNELS
E-051-1810 SHEET 2	UTILITIES TUNNELS
E-051-1811 SHEET 3	UTILITIES TUNNELS
E-203-2295 SHEET 5	VENT NO. 1 & 3 & DETAILS

INDEX OF DRAWINGS

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G-3	PLUMBING FIXTURE CALCULATIONS
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HD-2	WEST HEATING PLANT HIGH PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-2	WEST HEATING PLANT HIGH PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-3	WEST HEATING PLANT LOW PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
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HD-7	EAST HEATING PLANT HIGH PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-7	EAST HEATING PLANT HIGH PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-8	EAST HEATING PLANT LOW PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
HD-9	EAST HEATING PLANT BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM
H-9	EAST HEATING PLANT BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM
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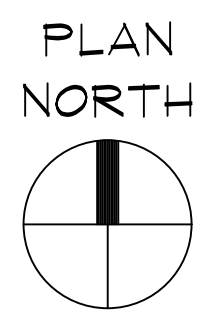
1 STATE LOCATION MAP
 G-1 NOT TO SCALE



WEST HEATING PLANT EAST HEATING PLANT

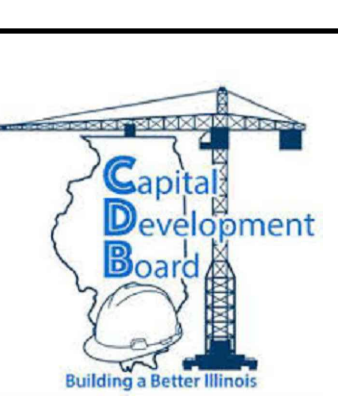
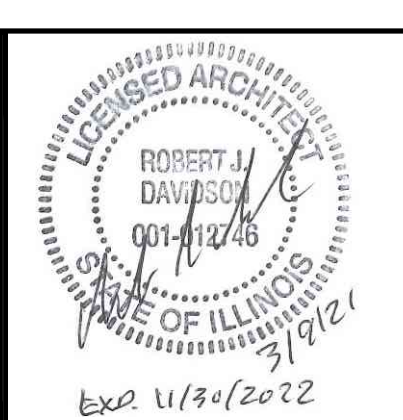


2 AREA LOCATION PLAN
 G-1 NOT TO SCALE



REVISIONS		
NO.	DATE	REMARKS
D	03/09/2021	REVISED BRIDGING DOCUMENTS
C	01/10/2020	FINAL BRIDGING DOCUMENTS
B	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL
A	09/13/2019	ISSUED FOR REVIEW

NOTE: DESIGN-BUILD ENTITY SHALL OBTAIN AND VERIFY ALL AS-BUILT CONDITIONS AND DIMENSIONS AT PROJECT SITE AND BE FULLY RESPONSIBLE FOR THE SAME. BRIDGING DOCUMENTS, DRAWINGS AND NARRATIVES ARE PROVIDED FOR DESIGN INTENT. THE DESIGN-BUILD ENTITY IS RESPONSIBLE FOR THE COMPLETE DESIGN OF A PROJECT THAT ADHERES TO ALL, SCOPE OF WORK REQUIREMENTS, CODES, STATE AND FEDERAL REGULATIONS AND GUIDELINES.



State of Illinois
JB PRITZKER, GOVERNOR
 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
COVER SHEET, LOCATION MAP & INDEX OF DRAWINGS	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. G-1
OF (63) SHEETS	

BUILDING DATA

PROJECT DESCRIPTION
 A. EXISTING BUILDING AREA: 13,326 SQUARE FEET
 B. NEW BUILDING ADDITION AREA: 16,544 SQUARE FEET
 C. TOTAL BUILDING AREA: 29,870 SQUARE FEET

- BUILDING CODES ADOPTED:
- NATIONAL FIRE PROTECTION ASSOCIATION / NFPA 101 LIFE SAFETY CODE 2018 EDITION
 - INTERNATIONAL BUILDING CODE - 2015 EDITION
 - INTERNATIONAL FIRE CODE-2015 EDITION
 - INTERNATIONAL PLUMBING CODE-2015 EDITION
 - INTERNATIONAL MECHANICAL CODE-2015 EDITION
 - INTERNATIONAL FUEL GAS CODE-2015 EDITION
 - NATIONAL ELECTRIC CODE-2014 EDITION
 - ILLINOIS PLUMBING CODE-2014 EDITION
 - ILLINOIS ENERGY CONSERVATION CODE-2018
 - ILLINOIS ACCESSIBILITY CODE-2018 EDITION
 - 2010 ADA STANDARDS FOR ACCESSIBILITY DESIGN (FEDERAL)

BUILDING OCCUPANCY: MIXED USE
 A. BUSINESS GROUP B: 5,288 SQUARE FEET
 B. FACTORY GROUP F-2: 24,582 SQUARE FEET

CONSTRUCTION TYPE: TYPE II-B

REQUIRED SEPARATION OF OCCUPANCIES GROUP B AND GROUP F-2: 2 HOURS

RECOMMEND FOLLOWING ROOMS FOR 2 HOUR FIRE RATED CONSTRUCTION ASSEMBLY: N-101, N-104 AND N-119

MEZZANINE FLOOR STRUCTURE SHALL BE 2 HOUR FIRE RATED UL DESIGN ASSEMBLY.

FIRE SPRINKLER PROTECTION
 AUTOMATIC SPRINKLER PROTECTION WILL NOT BE PROVIDED

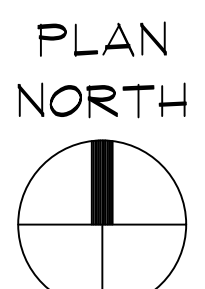
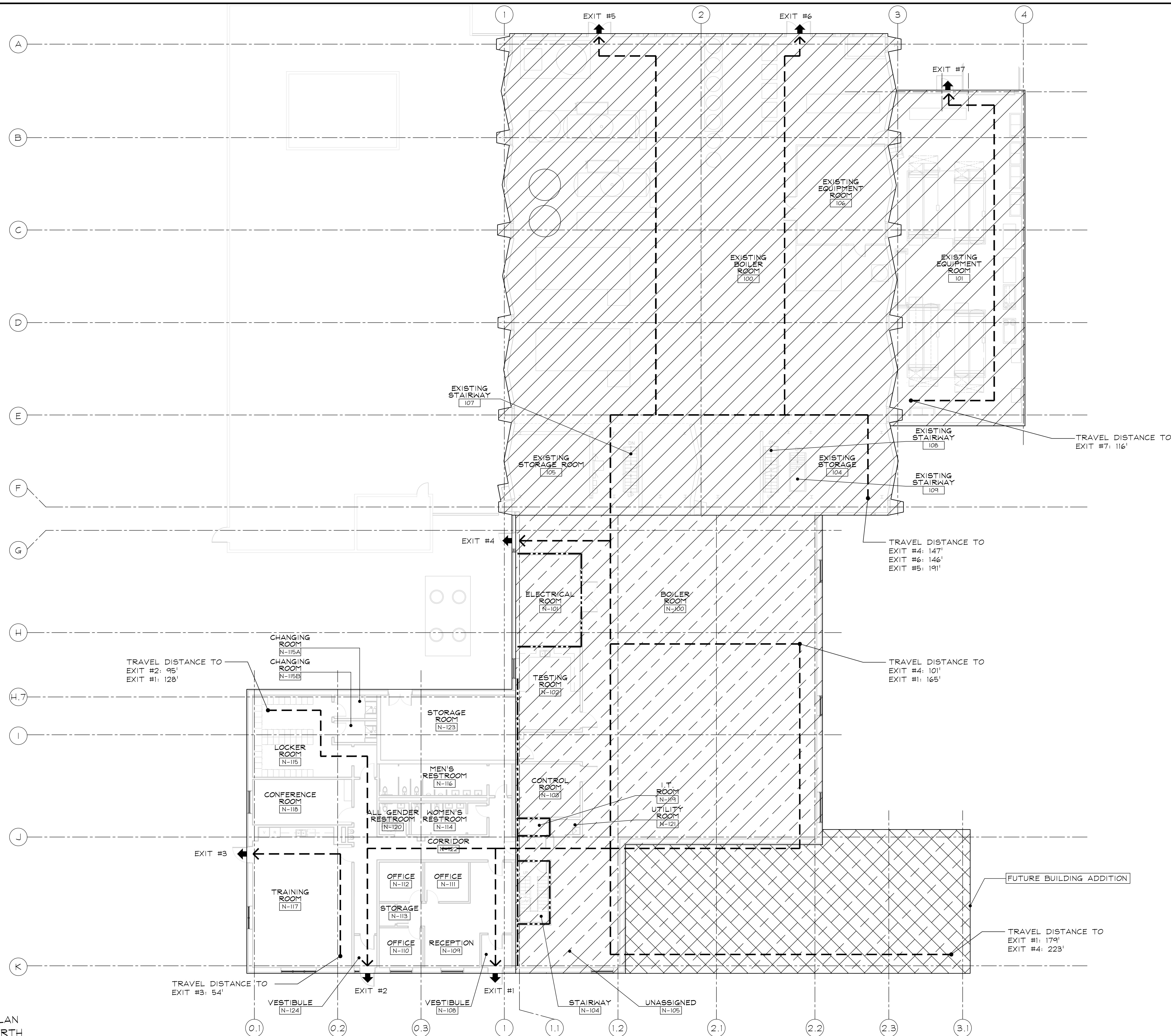
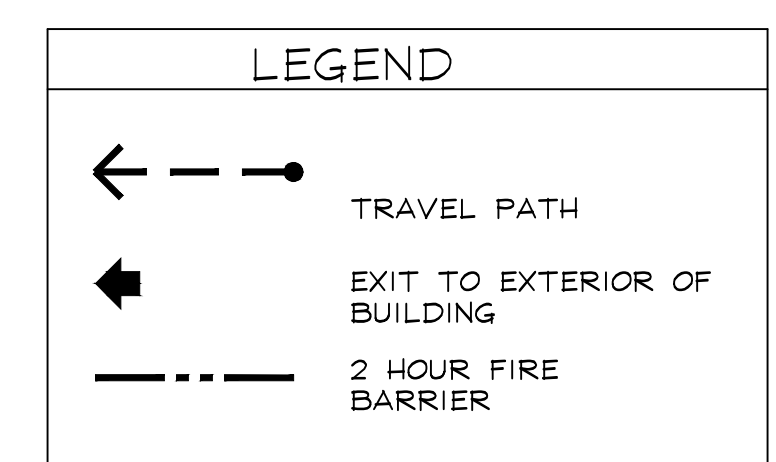
MAXIMUM TRAVEL DISTANCE
 GROUP B: 200 FEET
 GROUP F-2: 300 FEET

OCCUPANT LOAD - MEANS OF EGRESS
 GROUP B: 5,288 SF / 100 (BUSINESS AREAS) = 53 OCCUPANTS
 GROUP F-2: 24,582 SF / 300 (MECHANICAL EQUIPMENT ROOM) = 82 OCCUPANTS
 TOTAL OCCUPANT LOAD = 135 OCCUPANTS

- PROVIDE PORTABLE FIRE EXTINGUISHERS. MAXIMUM TRAVEL DISTANCE TO FIRE EXTINGUISHERS IS 75 FEET.
- PROVIDE EMERGENCY SHUT-OFF (E-STOP) AT EACH EXIT DOOR.

BUILDING OCCUPANCY LEGEND

- GROUP B - BUSINESS, NEW ADMINISTRATION/OFFICE BUILDING AREA 5,288 SF
- GROUP F-2 - FACTORY EXISTING BOILER ROOM AREA 10,300 SF
- GROUP F-2 - FACTORY EXISTING EQUIPMENT ROOM AREA 3,026 SF
- GROUP F-2 - FACTORY NEW BOILER ROOM ADDITION AREA 11,256 SF

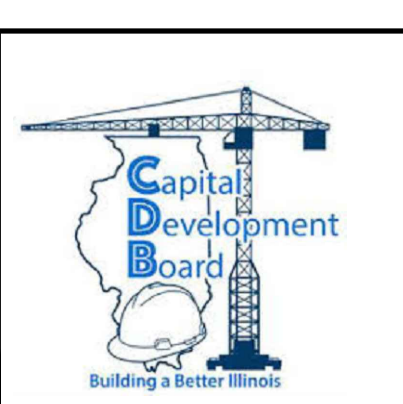
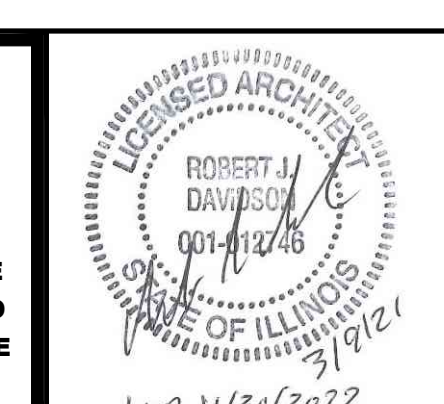


1 LIFE SAFETY PLAN
 G-3 SCALE: 3/32" = 1'-0"
 GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS
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A	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL

DRAWN	PREPARED
DAS	DAS
TRACED	APPROVED
CHECKED	APPROVED
EJM	RJD

NOTE: DESIGN-BUILD ENTITY SHALL OBTAIN AND VERIFY ALL AS-BUILT CONDITIONS AND DIMENSIONS AT PROJECT SITE AND BE FULLY RESPONSIBLE FOR THE SAME. BRIDGING DOCUMENTS, DRAWINGS AND NARRATIVES ARE PROVIDED FOR DESIGN INTENT. THE DESIGN-BUILD ENTITY IS RESPONSIBLE FOR THE COMPLETE DESIGN OF A PROJECT THAT ADHERES TO ALL, SCOPE OF WORK REQUIREMENTS, CODES, STATE AND FEDERAL REGULATIONS AND GUIDELINES.



State of Illinois
JB PRITZKER, GOVERNOR
 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
LIFE SAFETY PLAN WEST HEATING PLANT	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. G-2
	OF (63) SHEETS

PLUMBING FIXTURE CALCULATION NOTES

TITLE 77: PUBLIC HEALTH
CHAPTER 1: DEPARTMENT OF PUBLIC HEALTH
SUBCHAPTER 1: WATER AND SEWAGE PART 890 ILLINOIS PLUMBING CODE

SECTION 890.810 MINIMUM NUMBER OF PLUMBING FIXTURES

OCCUPANCY

OFFICE BUILDINGS:
NEW OFFICE BUILDING
5288 GROSS SQUARE FEET
5288 / 200 SF/PERSON = 26.44
THEREFORE 27 OCCUPANTS : 14 FEMALE + 14 MALE

POWER PLANT/INDUSTRIAL UNITS:

EXISTING HEATING PLANT
15,919 GROSS SQUARE FEET

NEW HEATING PLANT
11,256 GROSS SQUARE FEET

THE NEW HEATING PLANT SQUARE FOOTAGE INCLUDES THE FUTURE BUILDING AREA RELATIVE TO PLUMBING FIXTURE CALCULATIONS.

TOTAL 27,175
27,175 / 500 SF/PERSON = 54.35
THEREFORE 55 OCCUPANTS : 28 FEMALE + 28 MALE

TOTAL OCCUPANT LOAD:
42 FEMALE + 42 MALE

WATER CLOSETS:
36 - 55 FEMALES: 3 WATER CLOSETS REQUIRED
36 - 55 MALES : 3 WATER CLOSETS REQUIRED

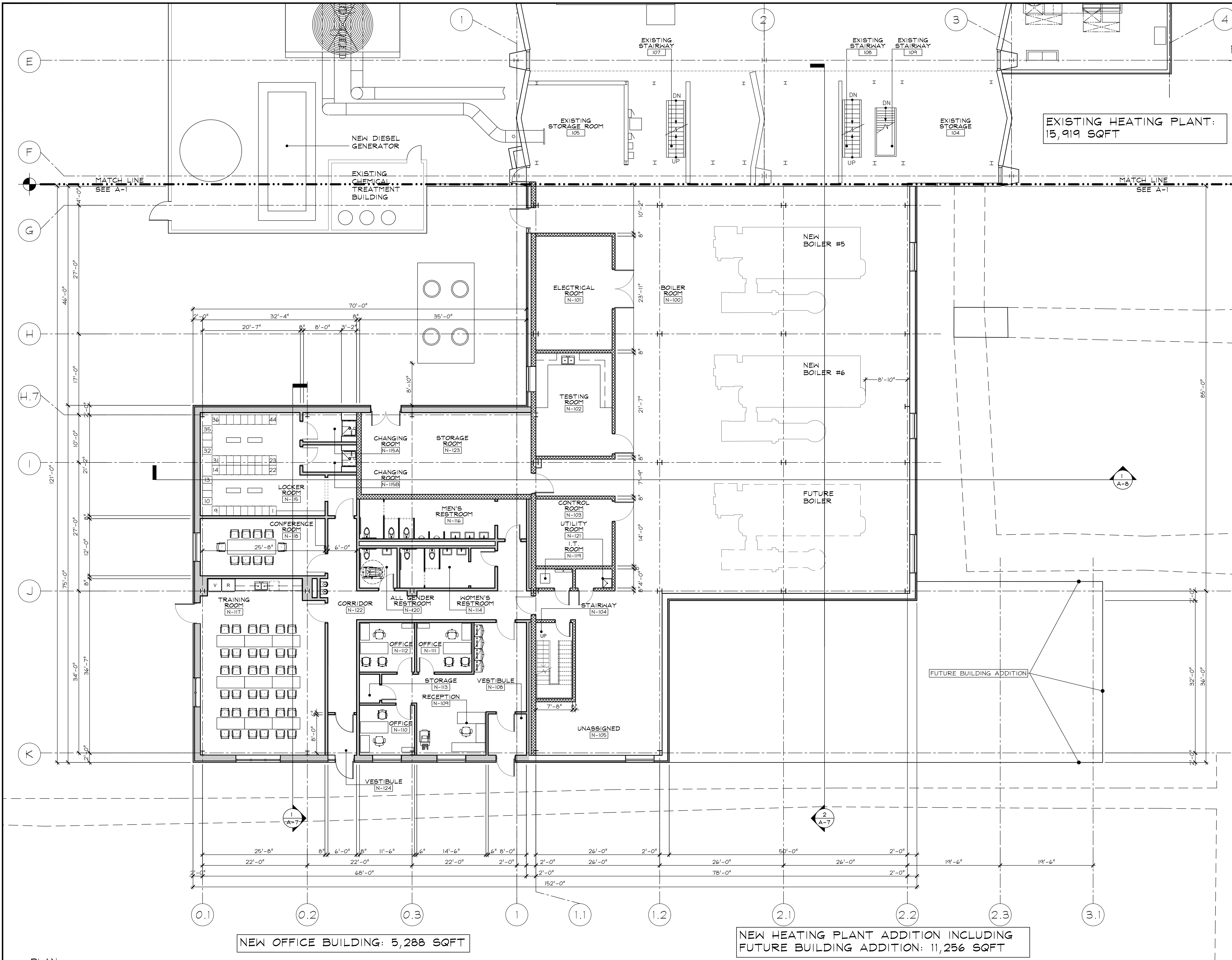
LAVATORIES:
36-60 FEMALES: 3 LAVATORIES REQUIRED
36-60 MALES: 3 LAVATORIES REQUIRED

FOOTNOTES:

QUESTIONS CONCERNING THE MINIMUM NUMBERS OF FIXTURES REQUIRED FOR BUILDING TYPES NOT LISTED IN APPENDIX A, TABLE B, SHALL BE REFERRED TO THE DEPARTMENT IN WRITING PRIOR TO CONSTRUCTION FOR A DECISION CONCERNING THE MINIMUM NUMBERS (AND TYPES) OF PLUMBING FIXTURES REQUIRED.

2 URINALS MAY BE SUBSTITUTED FOR WATER CLOSETS FOR MALES, NOT TO EXCEED HALF OF THE REQUIRED TOTAL NUMBER OF WATER CLOSETS. COMPARABLE FIXTURES FOR FEMALES MAY BE SUBSTITUTED FOR WATER CLOSETS FOR FEMALES, NOT TO EXCEED HALF OF THE REQUIRED TOTAL NUMBER OF WATER CLOSETS.

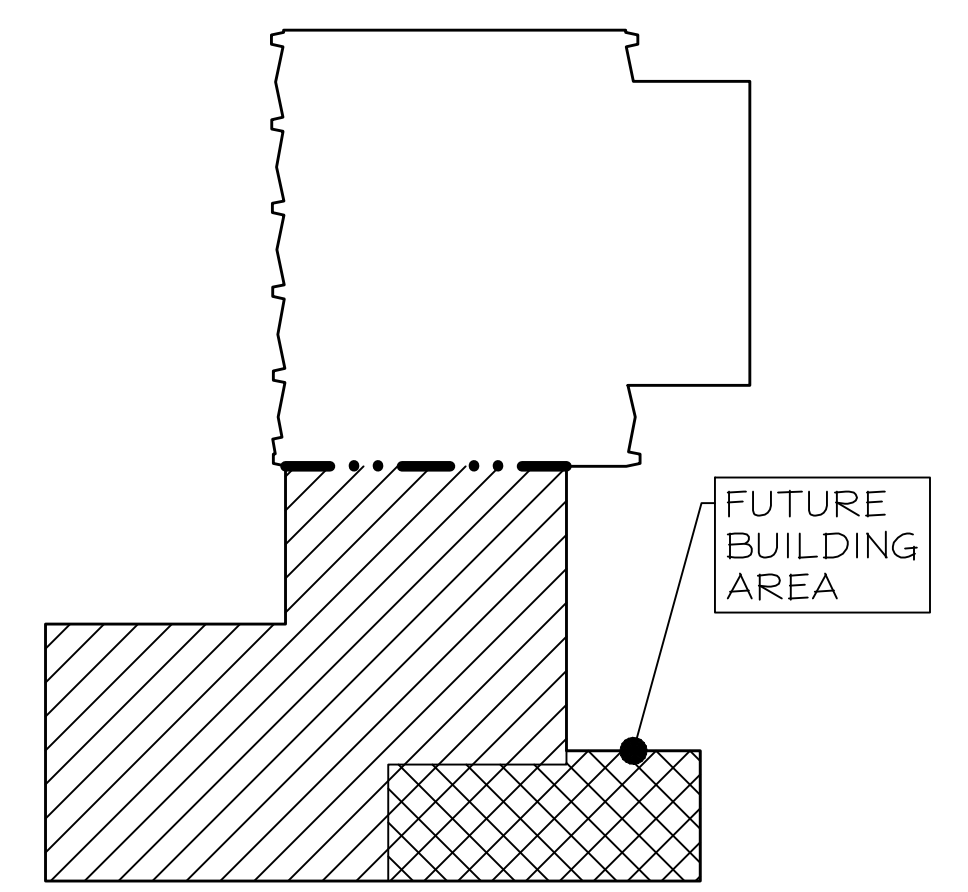
THE PLUMBING FIXTURES, WATER CLOSET AND LAVATORY, WITHIN THE ALL GENDER RESTROOM N-120 WILL BE APPLIED TO THE CODE REQUIRED WOMEN'S PLUMBING FIXTURES. CONTRACTOR WILL VERIFY ANALYSIS WITH ILLINOIS DEPARTMENT OF PUBLIC HEALTH.



NEW OFFICE BUILDING: 5,288 SQFT

NEW HEATING PLANT ADDITION INCLUDING FUTURE BUILDING ADDITION: 11,256 SQFT

ADDITION SQUARE FOOTAGE INCLUDING FUTURE AREA: 16,544 SQFT



PLAN NORTH
KEY PLAN
N.T.S.

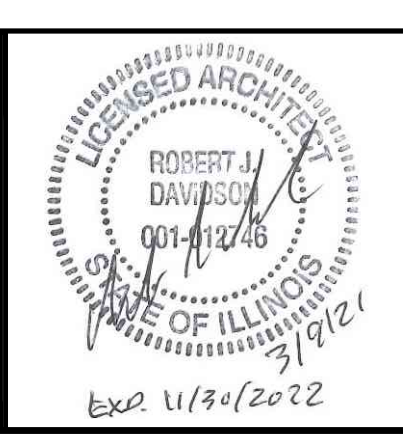
1 FIRST FLOOR-PLUMBING FIXTURE CALCULATION PLAN

G-3 SCALE: 1/8" = 1'-0"
GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
A	03/09/2021	REVISED BRIDGING DOCUMENTS

DRAWN DAS	PREPARED DAS
TRACED ---	APPROVED ---
CHECKED EJM	APPROVED RJD

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State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
FIRST FLOOR - PLUMBING FIXTURE CALCULATION PLAN WEST HEATING PLANT	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. G-3
	OF (63) SHEETS

TOPOGRAPHIC EXHIBIT
NORTHERN ILLINOIS UNIVERSITY
CAMPUS BOILER REPLACEMENT PROJECT

VERTICAL AND HORIZONTAL CONTROL

VERTICAL CONTROL (Source):
 National Geodetic Survey PID: MF0459
 Survey Disk in concrete monument
 Elevation= 854.94 (NAVD 88)

HORIZONTAL CONTROL (Source):
 National Geodetic Survey PID: AH2904
 Stainless Steel Rod in sleeve
 Northing: 1,935,791.33 (NAD 83)
 Easting: 898,825.31 (NAD 83)

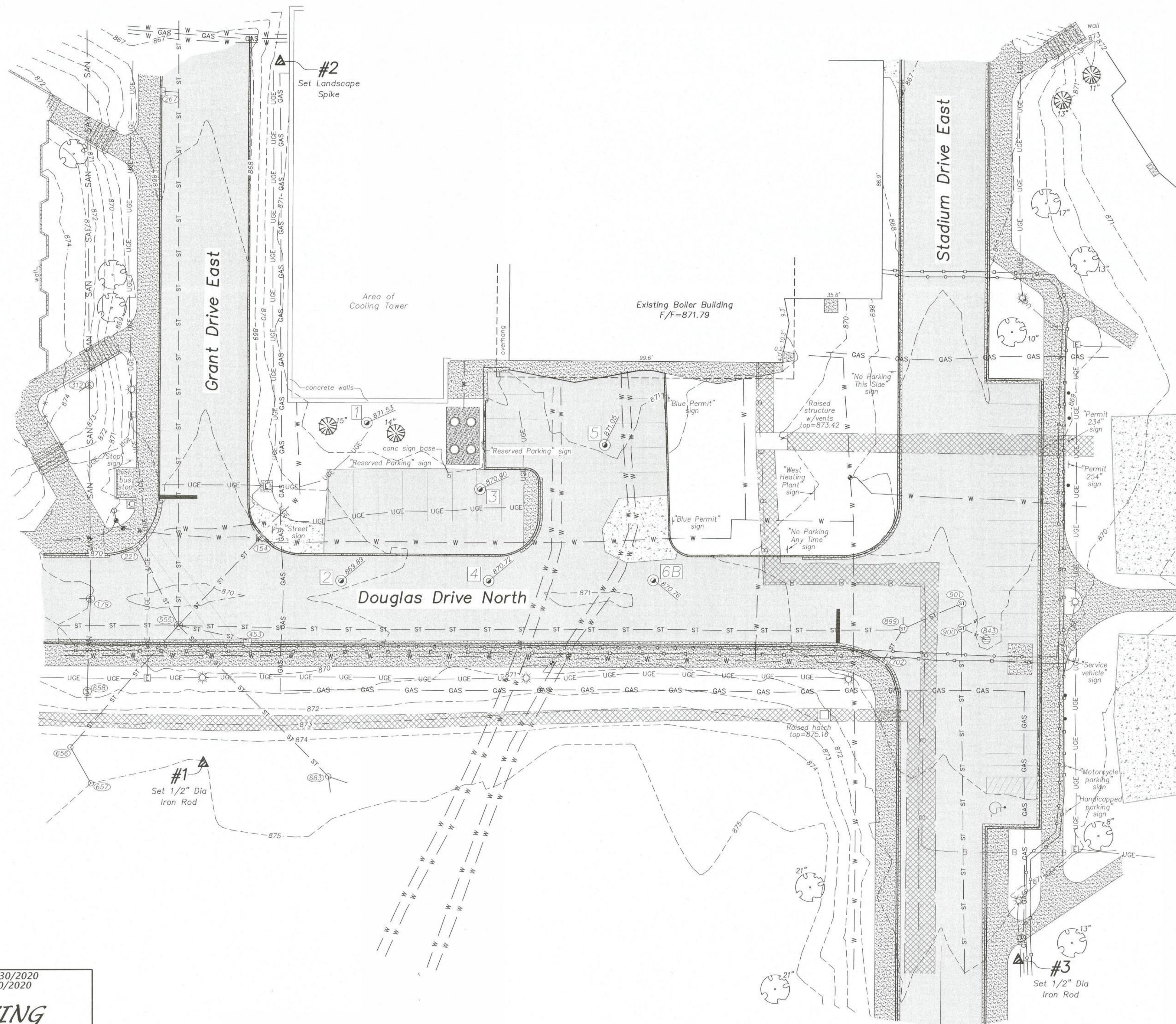
Control Point #1
 Northing: 1,919,923.14 (NAD 83)
 Easting: 863,701.13 (NAD 83)
 Elevation: 875.02 (NAVD 88)

Control Point #2
 Northing: 1,920,178.91 (NAD 83)
 Easting: 863,977.77 (NAD 83)
 Elevation: 870.64 (NAVD 88)

Control Point #3
 Northing: 1,919,851.70 (NAD 83)
 Easting: 863,977.77 (NAD 83)
 Elevation: 871.13 (NAVD 88)

UTILITY STRUCTURES (STRUCTURE #)

- | | |
|--|---|
| 154 curb inlet
Rim=869.18
SW Inv=866.00 | 657 inlet
Rim=875.00
NW Inv=866.08 |
| 179 Sanitary Manhole
Rim=869.99
N Inv=858.62
S Inv=858.72
W Inv=858.75 | 658 Sanitary Manhole
Rim=870.58
Bench=859.15 |
| 221 curb inlet
Rim=869.50
SE Inv=866.08 | 653 inlet
Rim=874.88
NW Inv=865.05
E/SE Inv=865.38
SE Inv=865.36 |
| 267 curb inlet
Rim=867.74
E Inv=864.31 | 702 curb inlet
Rim=869.44
NE Inv=865.41 |
| 312 Sanitary Manhole
Rim=873.83
Bench=858.48
SW Inv=858.48 | 843 inlet
Rim=868.91
NW Inv=865.20 |
| 453 curb inlet
Rim=869.38
W/NW Inv=866.31 | 899 storm manhole
Rim=869.41
W Inv=863.89
SW Inv=865.21
S Inv=864.11
NE Inv=857.33 |
| 555 storm manhole
Rim=869.74
N Inv=862.39
NE Inv=863.40
E Inv=862.58
SE/N Inv=866.00
SE/S Inv=862.66
S Inv=862.60
W Inv=862.65 | 900 storm manhole
Rim=869.21
N Inv=864.11
S Inv=864.18
E Inv=865.14
SE Inv=865.36 |
| 656 inlet
Rim=874.70
Bench=865.61 | 901 storm manhole
Rim=869.13
S Inv=864.19
SW Inv=857.55 |

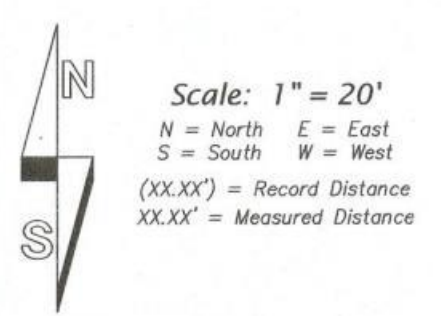
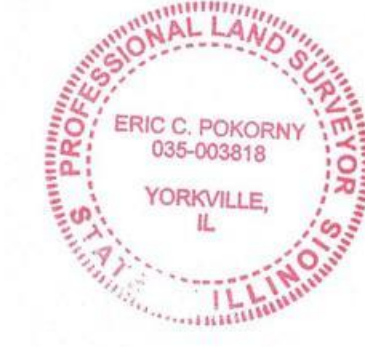


Legend

- 13" = coniferous tree and tree size
- 10" = deciduous tree and tree size
- sign = sign
- sign post = sign post
- handicapped parking = handicapped parking
- light pole = light pole
- electric handhole = electric handhole
- sanitary manhole = sanitary manhole
- inlet = inlet
- square inlet = square inlet
- storm manhole = storm manhole
- fire hydrant = fire hydrant
- water valve = water valve
- soil boring = soil boring
- control point = control point
- gas line = gas line
- fence = fence
- storm line = storm line
- sanitary line = sanitary line
- striping = striping
- FBO (fiber-optic line) = FBO (fiber-optic line)
- CHWS (chilled water supply service) = CHWS (chilled water supply service)
- CHWR (chilled water return service) = CHWR (chilled water return service)
- water line = water line
- underground electric line = underground electric line
- 719 = contour line
- concrete curb = concrete curb
- concrete curb and gutter = concrete curb and gutter
- gravel = gravel
- concrete = concrete
- tunnel = tunnel
- asphalt = asphalt

PREPARED ON AUGUST 20, 2019 BY:

Eric C. Pokorny
 ERIC C. POKORNY
 I.P.L.S. NO. 3818



Michel C. Ensalaco, P.L.S. 2768, Exp. 11/30/2020
 Eric C. Pokorny, P.L.S. 3818, Exp. 11/30/2020
TODD SURVEYING
 Professional Land Surveying Services
 "Cornerstone Surveying PC"
 759 John Street, Suite D
 Yorkville, IL 60560
 Phone: 630-892-1309 Fax: 630-892-5544
 Survey is only valid if original seal is shown in red.

Client:	Middough, Inc.
Book:	#2454/68/Drawn By: JSEP [Plot # 13584]
Reference:	
Field Work Completed:	8/14/2019
Rev. Date	Rev. Description
Project Number:	2019-0658

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS
B	01/10/2020	FINAL BRIDGING DOCUMENTS
A	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL

DRAWN	KGC	PREPARED	KGC
TRACED	---	APPROVED	---
CHECKED	AVS	APPROVED	RJD

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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
TOPOGRAPHIC SURVEY	
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	PROJECT NO. 822-010-127 DATE 03/09/2021 SHEET NO. C-0 OF (63) SHEETS

LEGEND

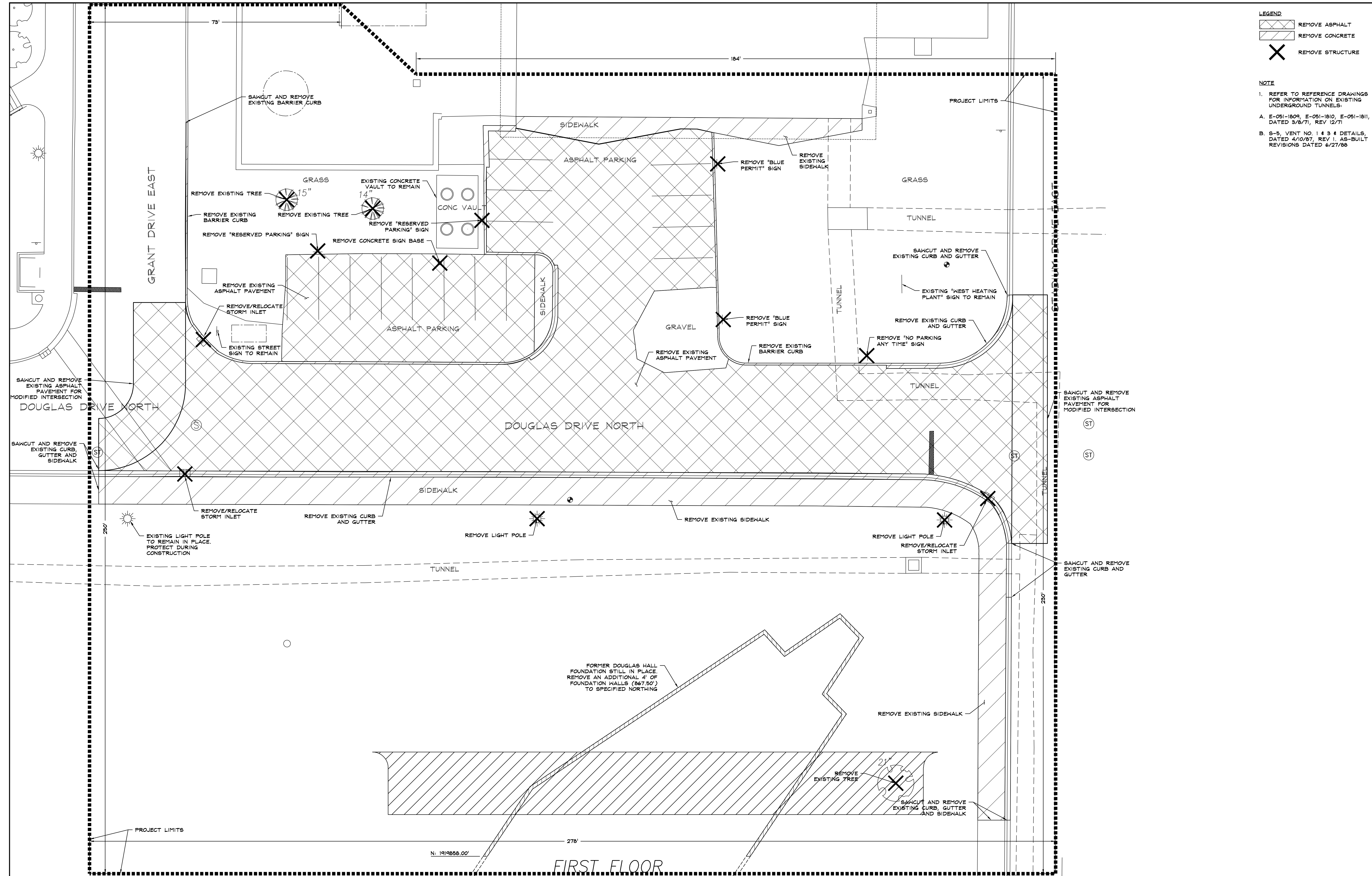
	REMOVE ASPHALT
	REMOVE CONCRETE
	REMOVE STRUCTURE

NOTE

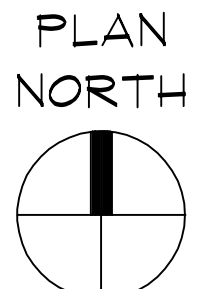
1. REFER TO REFERENCE DRAWINGS FOR INFORMATION ON EXISTING UNDERGROUND TUNNELS:

A. E-051-1809, E-051-1810, E-051-1811, DATED 3/8/71, REV 12/71

B. S-5, VENT NO. 1 & 3 & 4 DETAILS, DATED 4/10/87, REV 1. AS-BUILT REVISIONS DATED 6/27/88



FIRST FLOOR
FI FV 874 0'



1 SITE DEMOLITION PLAN
C-2
SCALE: 1" = 10'
GRAPHIC SCALE

REVISIONS

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C	03/09/2021	REVISED BRIDGING DOCUMENTS
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A	11/06/2019	ISSUED FOR FINAL REVIEW/APPROVAL

DRAWN KGC	PREPARED KGC
TRACED ---	APPROVED ---
CHECKED AVS	APPROVED RJD

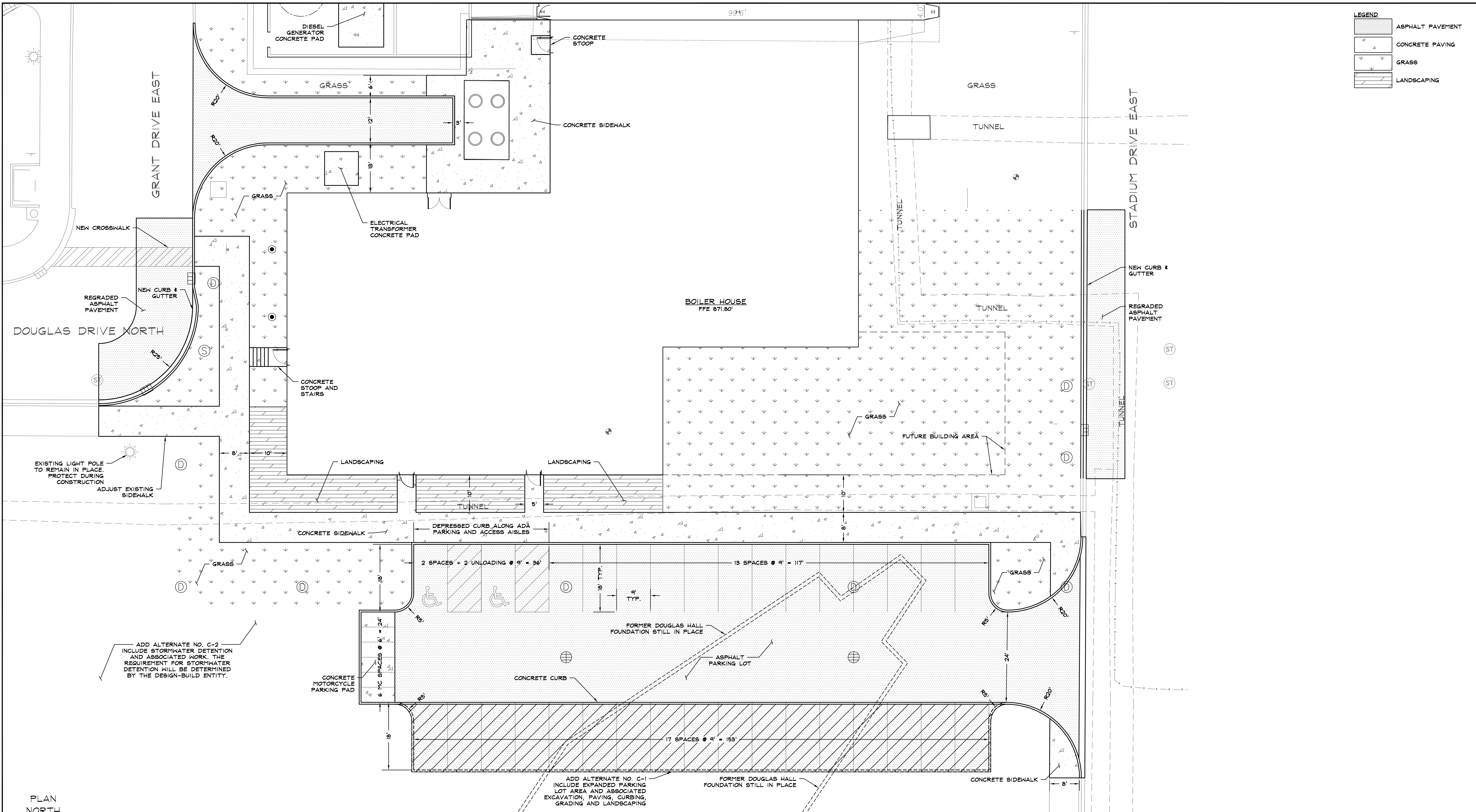
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State of Illinois
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
SITE DEMOLITION PLAN	
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	PROJECT NO. 822-010-127 DATE 03/09/2021 SHEET NO. C-1 OF (63) SHEETS

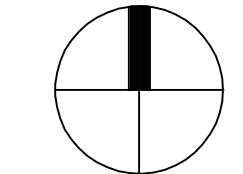
LEGEND	
	ASPHALT PAVING
	CONCRETE PAVING
	GRASS
	LANDSCAPING



ADD ALTERNATE NO. C-2
INCLUDE STORMWATER DETENTION
AND ASSOCIATED WORK. THE
REQUIREMENT FOR STORMWATER
DETENTION WILL BE DETERMINED
BY THE DESIGN-BUILD ENTITY.

ADD ALTERNATE NO. C-1
INCLUDE EXPANDED PARKING
LOT AREA AND ASSOCIATED
EXCAVATION, PAVING, CURBING,
GRADING AND LANDSCAPING

PLAN
NORTH



1
C-2
PROPOSED SITE PLAN
SCALE: 1" = 10'
GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS
B	01/10/2020	FINAL BRIDGING DOCUMENTS
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DRAWN KGC	PREPARED KGC
TRACED ---	APPROVED ---
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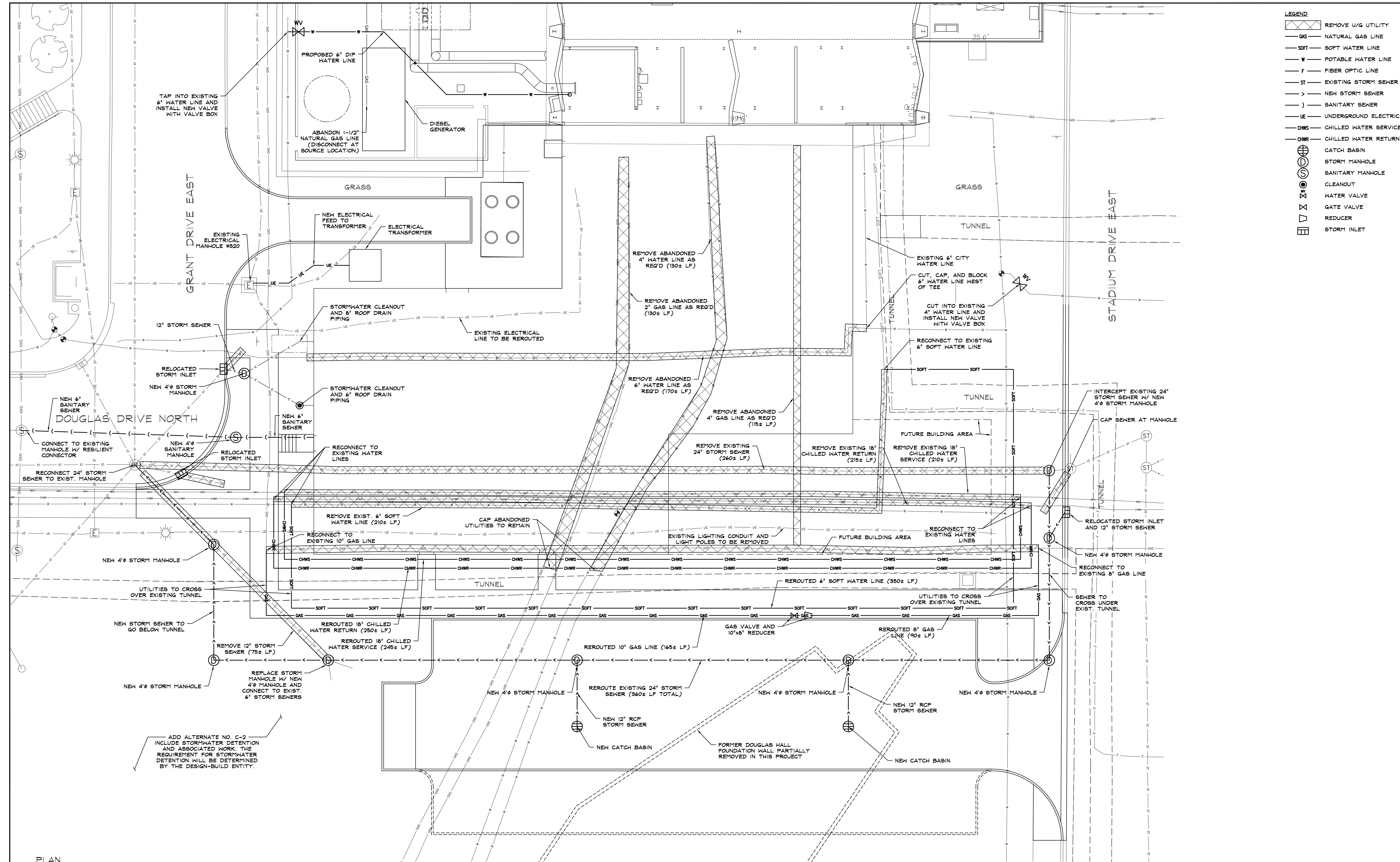


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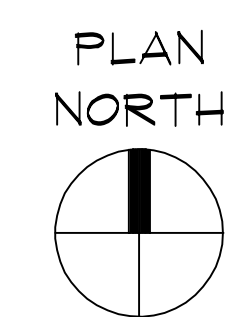
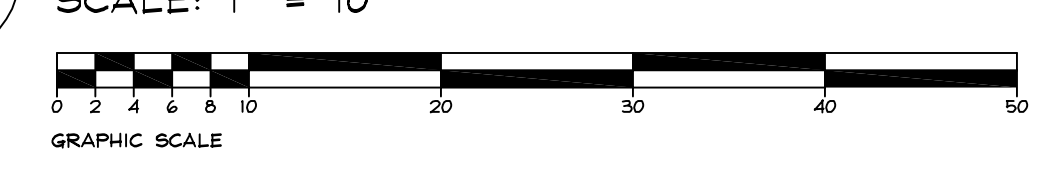
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
CIVIL SITE PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. C-2
	OF (63) SHEETS

LEGEND

	REMOVE U/G UTILITY
	NATURAL GAS LINE
	SOFT WATER LINE
	POTABLE WATER LINE
	FIBER OPTIC LINE
	EXISTING STORM SEWER
	NEW STORM SEWER
	SANITARY SEWER
	UNDERGROUND ELECTRIC
	CHILLED WATER SERVICE
	CHILLED WATER RETURN
	CATCH BASIN
	STORM MANHOLE
	SANITARY MANHOLE
	CLEANOUT
	WATER VALVE
	GATE VALVE
	REDUCER
	STORM INLET



1 PROPOSED UTILITY PLAN



ADD ALTERNATE NO. C-2
INCLUDE STORMWATER DETENTION
AND ASSOCIATED WORK. THE
REQUIREMENT FOR STORMWATER
DETENTION WILL BE DETERMINED
BY THE DESIGN-BUILD ENTITY.

REVISIONS		
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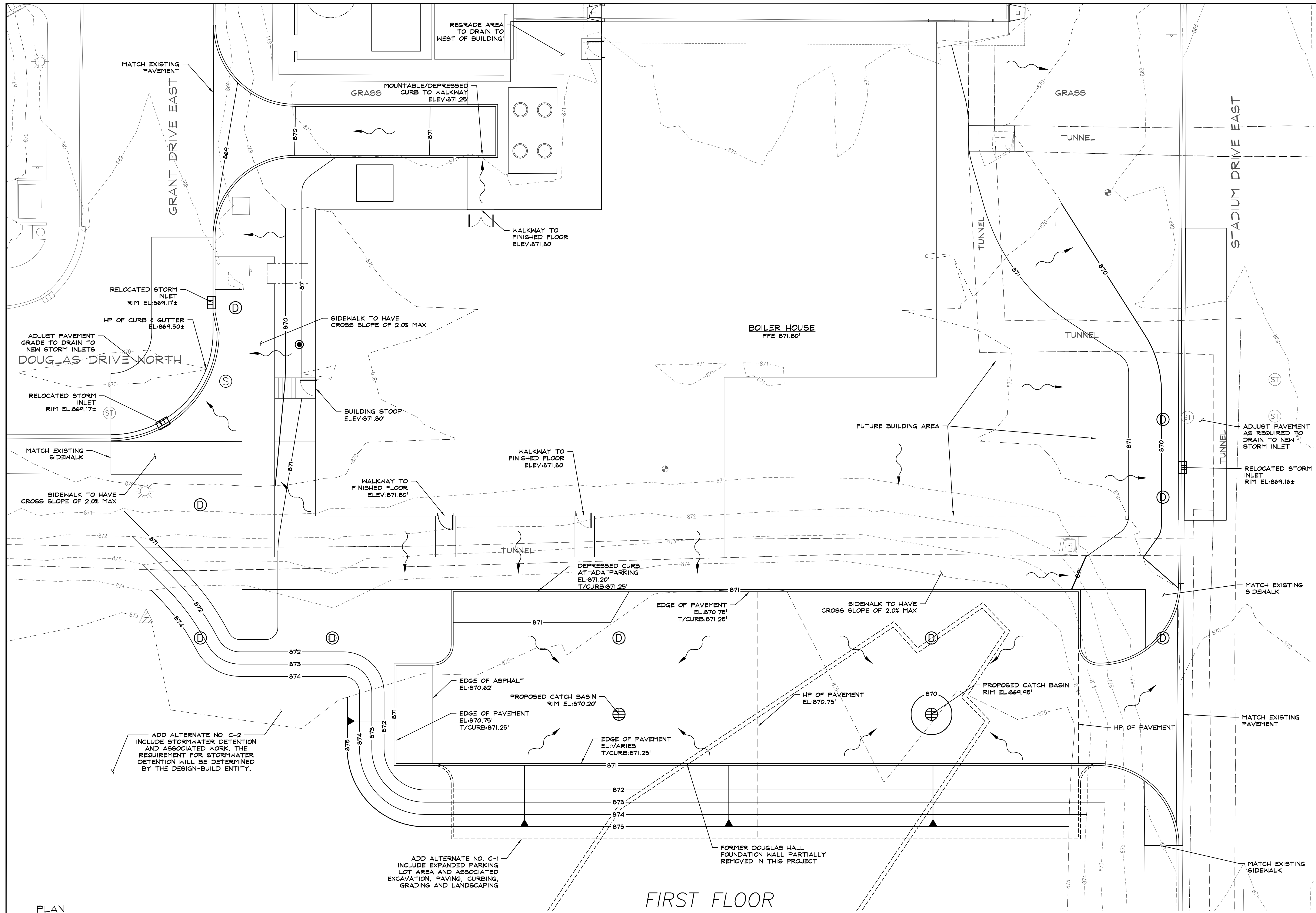


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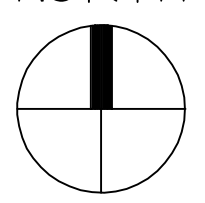
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

UNDERGROUND UTILITY PLAN		PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS		DATE 03/09/2021
C-3		SHEET NO.
		OF (63) SHEETS

LEGEND
 — 870 — NEW MAJOR CONTOUR
 — 871 — NEW MINOR CONTOUR
 - - 870 - - EX. MAJOR CONTOUR
 - - 871 - - EX. MINOR CONTOUR



PLAN NORTH



1 GRADING PLAN

C-4 SCALE: 1" = 10'



ADD ALTERNATE NO. C-2
 INCLUDE STORMWATER DETENTION
 AND ASSOCIATED WORK. THE
 REQUIREMENT FOR STORMWATER
 DETENTION WILL BE DETERMINED
 BY THE DESIGN-BUILD ENTITY.

ADD ALTERNATE NO. C-1
 INCLUDE EXPANDED PARKING
 LOT AREA AND ASSOCIATED
 EXCAVATION, PAVING, CURBING,
 GRADING AND LANDSCAPING

REVISIONS		
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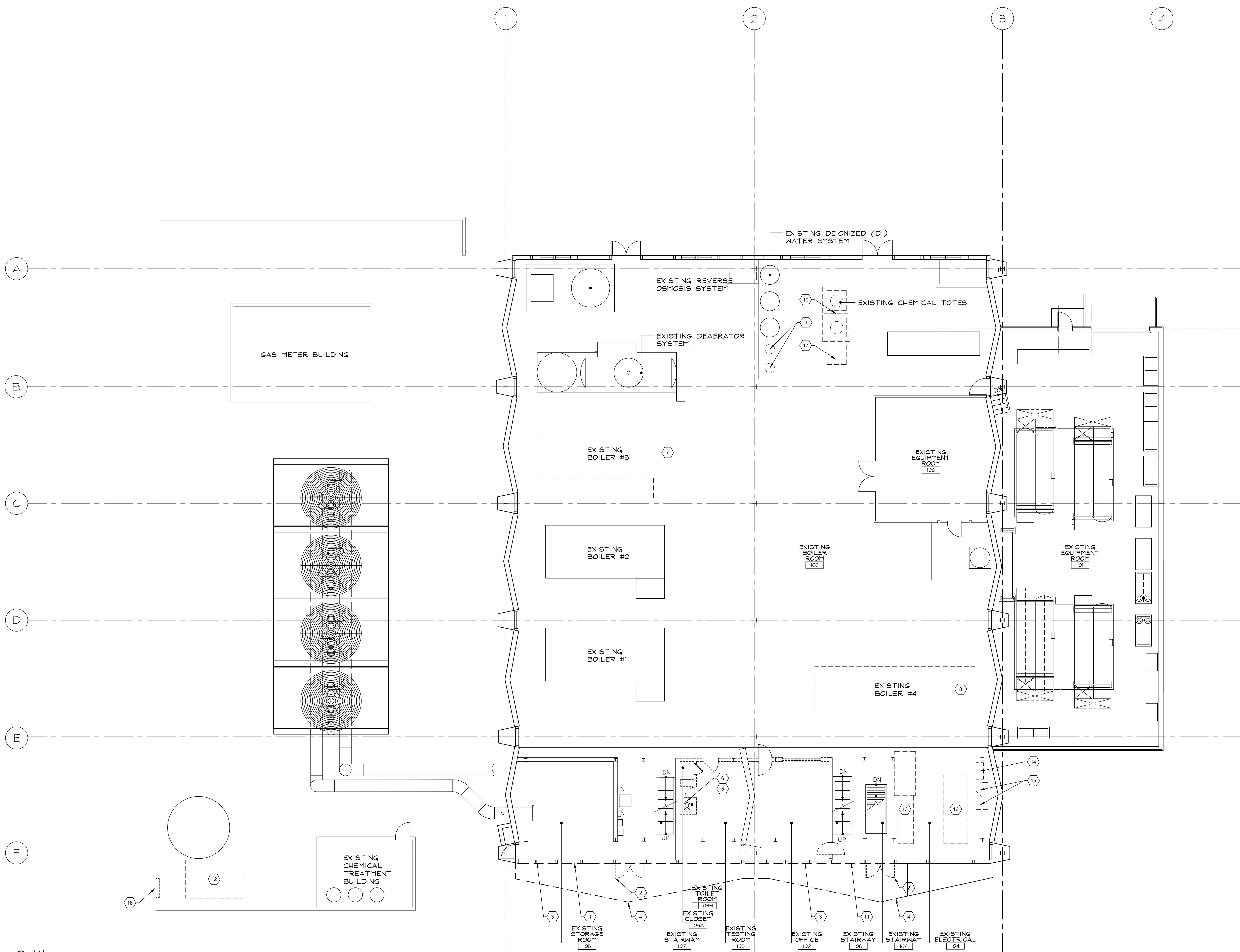
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
GRADING PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. C-4
	OF (63) SHEETS

KEYED DEMOLITION PLAN NOTES

1. REMOVE EXISTING EXTERIOR MASONRY WALLS. REFER TO REFERENCE DRAWING C-051-652B.
2. REMOVE EXISTING DOOR AND FRAME UNITS.
3. REMOVE EXISTING ALUMINUM MULLIONS.
4. REMOVE EXISTING EXTERIOR CONCRETE PLATFORM AND ASSOCIATED CONCRETE GRADE BEAM.
5. REMOVE EXISTING CASEWORK AND RELATED SINKS, WATER PIPING WASTE AND VENT PIPING.
6. REMOVE EXISTING WATER CLOSET AND ASSOCIATED WATER PIPING AND WASTE AND VENT PIPING.
7. REMOVE EXISTING BOILER #3 AND ALL ASSOCIATED SERVICE PIPING, EXHAUST STACK, CONTROLS, ELECTRICAL, ETC. EXISTING CONCRETE PAD TO REMAIN.
8. REMOVE EXISTING BOILER #4 AND ALL ASSOCIATED SERVICE PIPING, EXHAUST STACK, CONTROLS, ELECTRICAL, ETC. EXISTING CONCRETE PAD TO BE REMOVED. TURN EXISTING DISCONNECT OVER TO NORTHERN ILLINOIS UNIVERSITY.
9. REMOVE TWO EXISTING WATER SOFTENER TANKS AND ASSOCIATED SERVICE PIPING.
10. REMOVE EXISTING CHEMICAL TREATMENT SKIDS.
11. REMOVE EXISTING THROUGH WALL EXHAUST FANS LOCATED AT SOUTH EXTERIOR WALL BELOW ROOF DECK. REMOVE ASSOCIATED ELECTRICAL POWER WIRING AND CONDUIT AND SUPPORTS.
12. NORTHERN ILLINOIS UNIVERSITY TO REMOVE AND RELOCATE EXISTING GRADE MOUNTED GENERATOR UNIT. CONTRACTOR WILL DISCONNECT EXISTING GAS SERVICE AT SOURCE METER. CONTRACTOR WILL REMOVE EXISTING UNDERGROUND GAS PIPING AS REQUIRED BY NEW CONSTRUCTION ELEMENTS.
13. REMOVE EXISTING ELECTRICAL SUBSTATION AND ASSOCIATED POWER WIRING AND CONDUITS AND SUPPORTS.
14. REMOVE EXISTING ELECTRICAL PANEL "E" AND ASSOCIATED POWER WIRING AND CONDUITS AND SUPPORTS.
15. REMOVE EXISTING GENERATOR CONTROLS, WIRING AND CONDUITS AND SUPPORTS.
16. REMOVE EXISTING GENERATOR UNIT.
17. REMOVE AND RELOCATE EXISTING EMERGENCY EYE WASH / SHOWER.
18. PROVIDE NEW WALL OPENING AT EXISTING CONCRETE SCREEN WALL AS REQUIRED FOR NEW SECURITY GATE.

GENERAL NOTES

1. THERE ARE NO EXISTING DRAWINGS AVAILABLE FOR THE WEST HEATING PLANT.
2. THE EXISTING SOUTH WALL CONSTRUCTION IS SIMILAR TO THE NORTH WALL REMODELING PROJECT DRAWINGS. REFER TO REFERENCE DRAWING C-051-652B - NORTH WALL REMODELING.

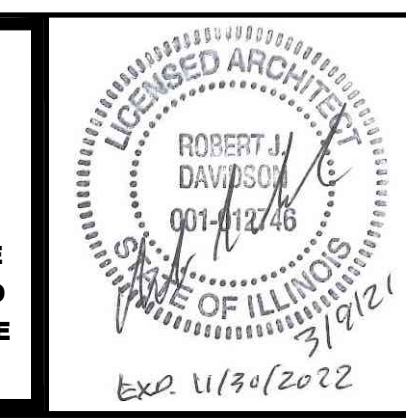


1 EXISTING FIRST FLOOR - DEMOLITION PLAN
 D-1 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
E	03/09/2021	REVISED BRIDGING DOCUMENTS
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C	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL
B	10/18/2019	ISSUED FOR REVIEW

DRAWN	PREPARED
DAS	DAS
TRACED	APPROVED
---	---
CHECKED	APPROVED
EJM	RJD

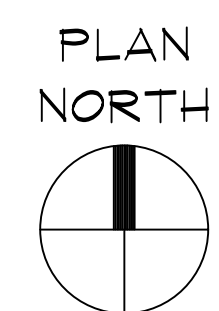
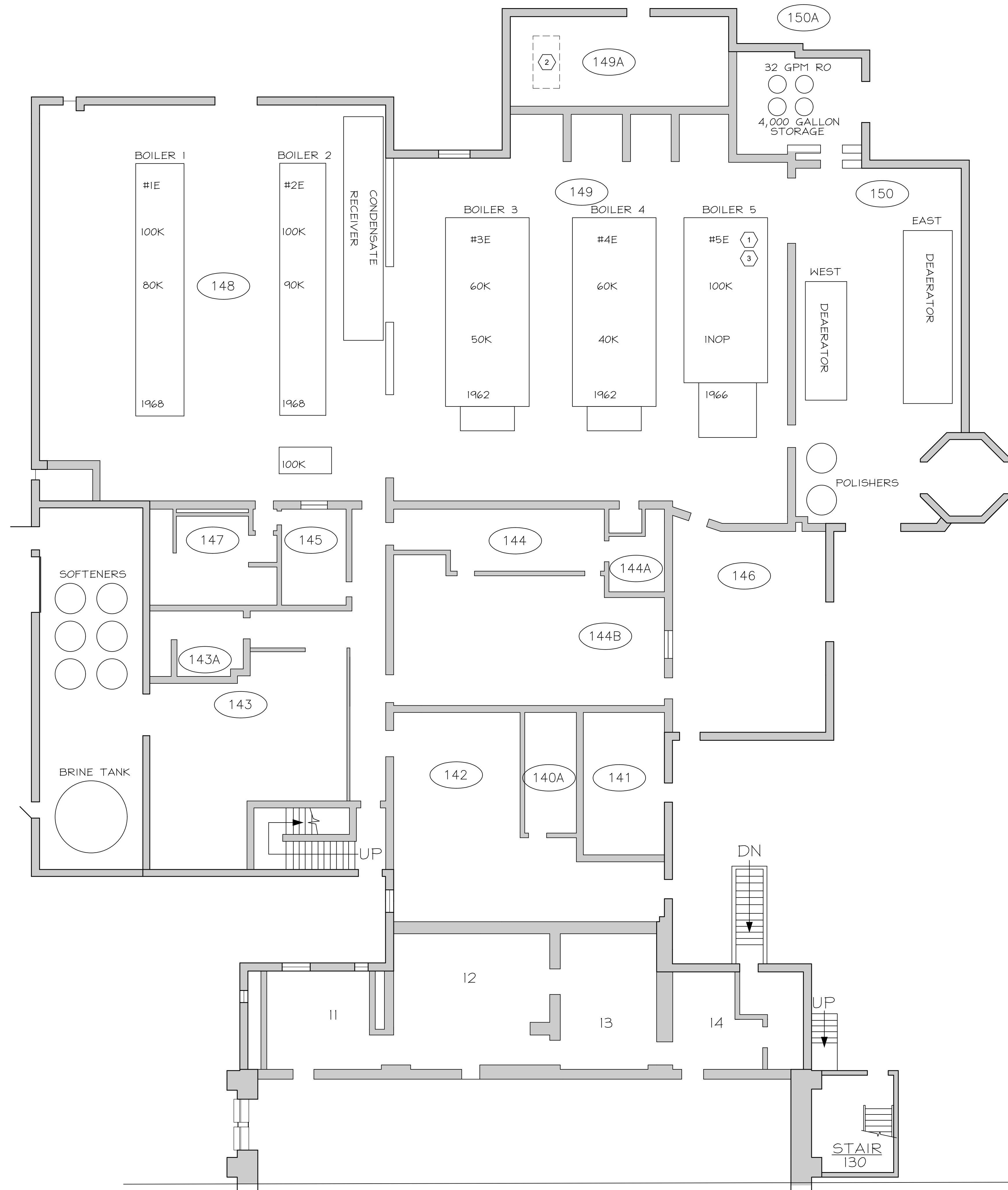
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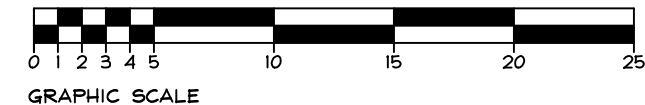
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
EXISTING WEST PLANT - DEMOLITION PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. D-1 OF (63) SHEETS

- EXISTING BOILER #5E AND ALL ASSOCIATED SERVICE PIPING, EXHAUST STACK, CONTROLS, ELECTRICAL AND EXISTING CONCRETE PAD TO REMAIN.
- REMOVE EXISTING STEAM POWERED CONDENSATE PUMPS IN BASEMENT. SALVAGE FOR REUSE.
- ADD ALTERNATE H-1: INCLUDE REMOVAL OF EXISTING EAST HEATING PLANT BOILER #5E AND ASSOCIATED WORK.



1 EXISTING EAST PLANT - DEMOLITION PLAN

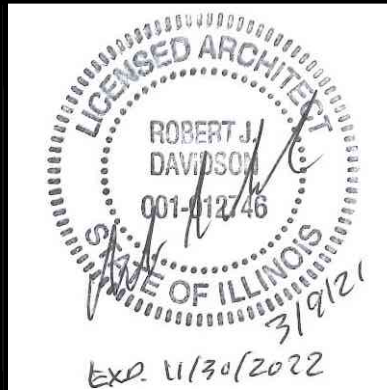
D-2 SCALE: 1/8" = 1'-0"



REVISIONS		
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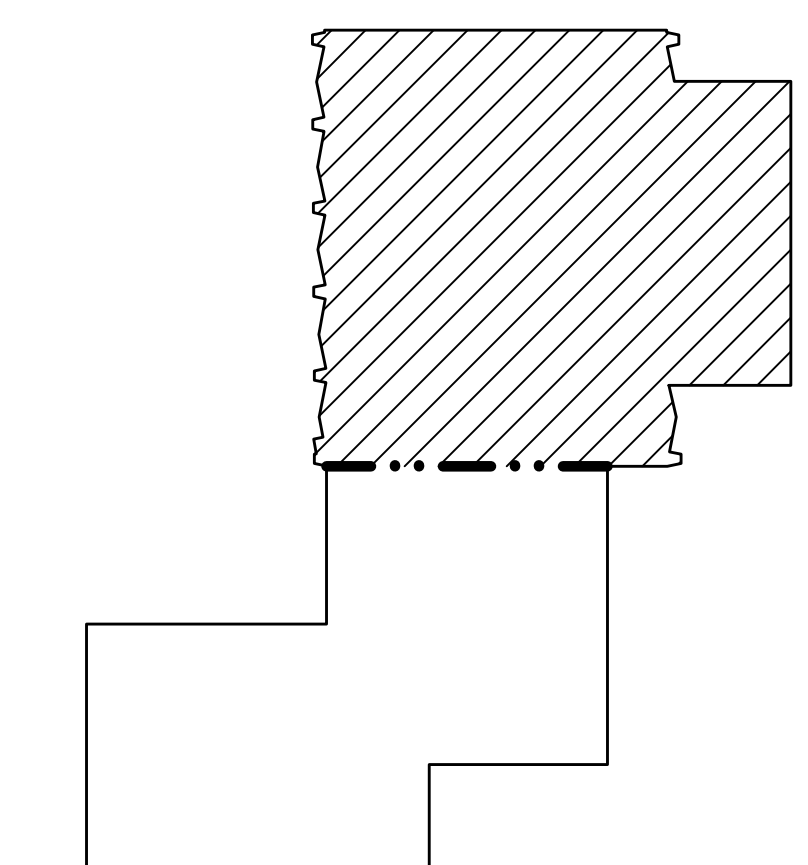
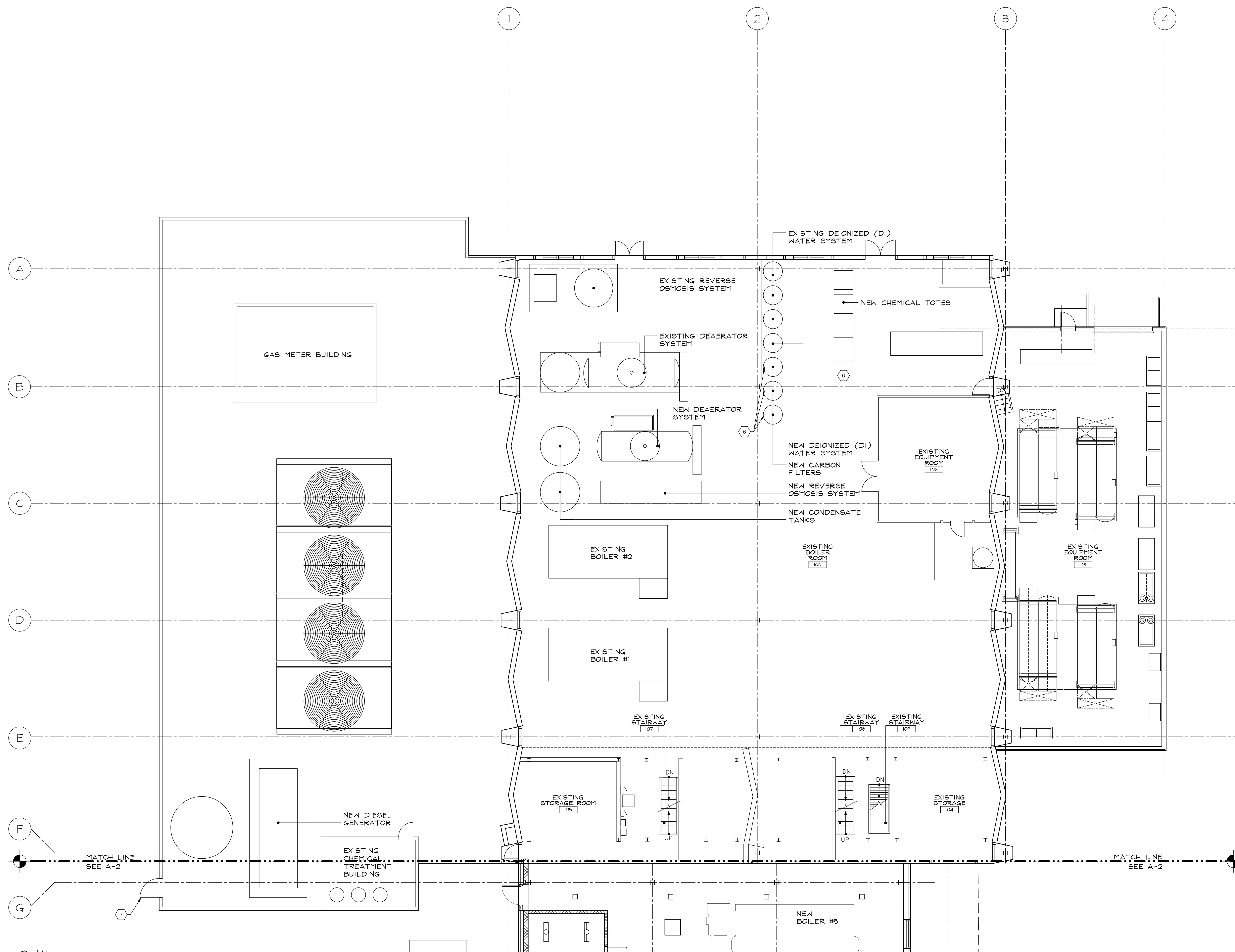
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

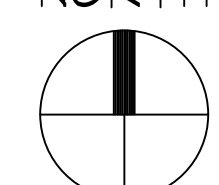
EXISTING EAST PLANT - DEMOLITION PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. D-2
	OF (63) SHEETS

GENERAL CONSTRUCTION NOTES

1. REFER TO ALL ARCHITECTURAL DRAWINGS FOR NEW CONSTRUCTION COMPONENTS.
2. REFER TO STRUCTURAL DRAWINGS FOR NEW CONSTRUCTION COMPONENTS.
3. REFER TO PLUMBING DRAWINGS FOR NEW CONSTRUCTION COMPONENTS.
4. REFER TO HEATING AND VENTILATION DRAWINGS FOR NEW CONSTRUCTION COMPONENTS.
5. REFER TO ELECTRICAL DRAWINGS FOR NEW CONSTRUCTION COMPONENTS.
6. REFER TO DRAWING H-5 AND H-14 FOR SODIUM BISULFITE BETTERMENT, NO. 2.
7. NEW STEEL GATE AND SECURITY PASSAGE HARDWARE.



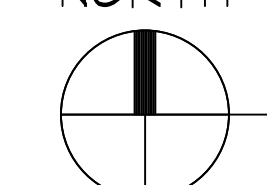
PLAN NORTH



1 FIRST FLOOR-CONSTRUCTION PLAN

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

PLAN NORTH



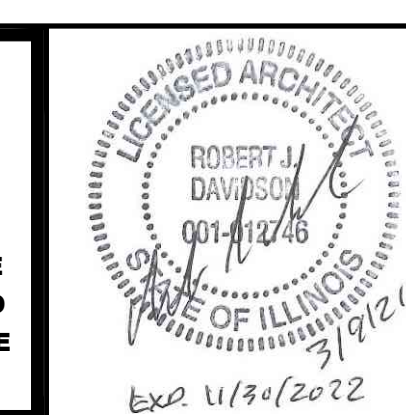
KEY PLAN

N.T.S.

REVISIONS		
NO.	DATE	REMARKS
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D	01/10/2020	FINAL BRIDGING DOCUMENTS
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DRAWN DAS	PREPARED DAS
TRACED ---	APPROVED ---
CHECKED EJM	APPROVED RJD

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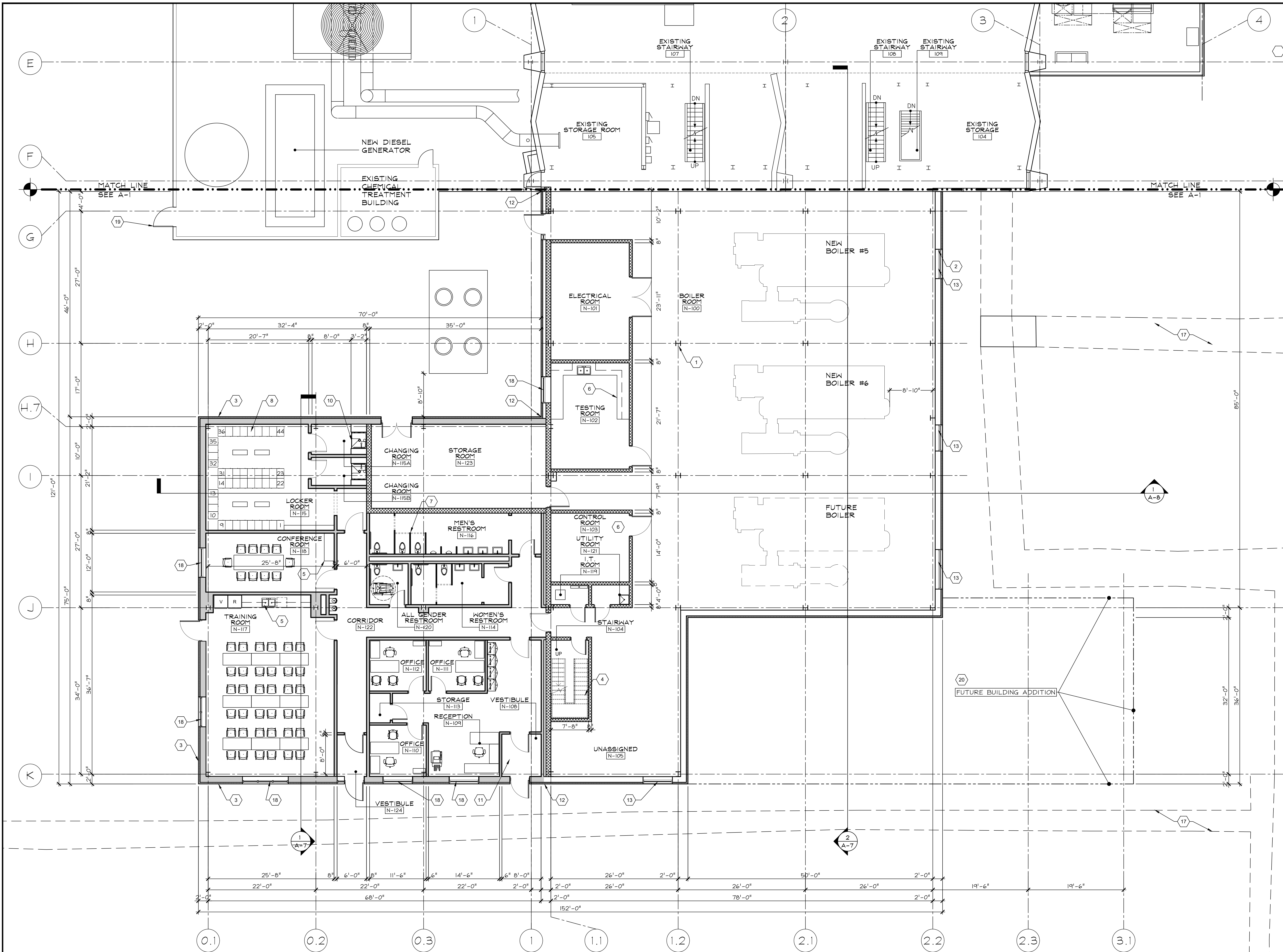


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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
FIRST FLOOR - CONSTRUCTION PLAN WEST HEATING PLANT	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. A-1
	OF (63) SHEETS

KEYED CONSTRUCTION PLAN NOTES

1. NEW STRUCTURAL STEEL COLUMNS. REFER TO STRUCTURAL DRAWINGS.
2. NEW EXTERIOR WALL SYSTEM AT BOILER ROOM AREA: 4-INCH THICK INSULATED METAL PANEL SYSTEM ON 14-INCH DEEP 12 GAUGE COLD-FORM METAL FRAMING MEMBERS, 16-INCH ON CENTER.
3. NEW EXTERIOR WALL SYSTEM AT ADMINISTRATION BUILDING AREA: 3-INCH THICK INSULATED METAL PANEL SYSTEM ON 6-INCH DEEP 12 GAUGE COLD-FORMED METAL FRAMING SYSTEM. NEW GYPSUM BOARD INTERIOR FINISH AND INSULATE STUD SPACE.
4. NEW CONCRETE FILLED METAL PAN STAIR UNIT.
5. NEW PLASTIC LAMINATE CLAD CASEWORK WITH PLASTIC LAMINATE COUNTERTOPS.
6. NEW METAL LABORATORY CASEWORK WITH EPOXY RESIN COUNTERTOPS.
7. NEW PHENOLIC-CORE TOILET PARTITIONS.
8. NEW METAL LOCKER UNITS.
9. NEW FIRE EXTINGUISHERS AND CABINETS. NOT SHOWN FOR DRAWING CLARITY.
10. NEW METAL SHOWER AND DRESSING UNITS.
11. NEW RECESSED ENTRANCE FLOOR MATS AT VESTIBULE SPACES, NOT SHOWN FOR DRAWING CLARITY.
12. NEW EXPANSION/CONTROL JOINT SYSTEM.
13. NEW GLAZED ALUMINUM CURTAIN WALL SYSTEM.
14. ALL NEW ROOMS SHALL BE PROVIDED WITH ROOM SIGNAGE, NOT SHOWN FOR DRAWING CLARITY.
15. NEW DOORS AND FRAMES REFER TO DOOR AND FRAME SCHEDULE ON SHEET A-9.
16. NEW INTERIOR PARTITIONS, REFER TO ROOM FINISH SCHEDULE ON SHEET A-9.
17. EXISTING UNDERGROUND TUNNEL. REFER TO REFERENCE DRAWINGS: E-051-1809 SHEET 1, E-051-1810 SHEET 2 AND E-051-1811 SHEET 3.
18. NEW ALUMINUM WINDOW UNITS.
19. NEW STEEL GATE AND SECURITY HARDWARE.
20. ADD ALTERNATE G-1: FUTURE BUILDING AREA INDICATED PROVIDE ALL CONSTRUCTION COMPONENTS AND ELEMENTS FOR A COMPLETE STRUCTURE INCLUDING BUT NOT LIMITED TO: FLOOR SLABS, EXTERIOR WALLS, INTERIOR FINISHES, ROOF STRUCTURE, ROOFING, PLUMBING, HEATING, VENTILATION AND ELECTRICAL SYSTEMS. CONSTRUCTION COMPONENTS AND ELEMENTS WILL MATCH THE ADJACENT BOILER ROOM BUILDING AREA.



1 FIRST FLOOR-CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE

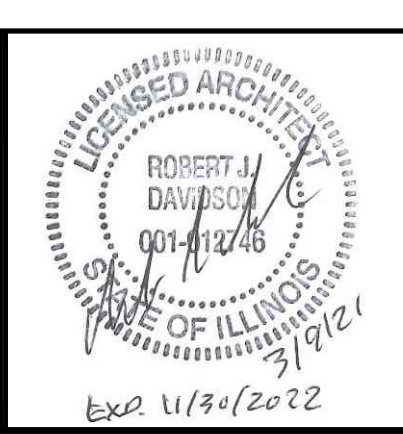
KEY PLAN
 N.T.S.

ADDITION SQUARE FOOTAGE: 13,404 SQFT

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

REVISIONS		DRAWN	PREPARED
NO.	DATE	DAS	DAS
G	03/09/2021	TRACED	APPROVED
F	01/10/2020	---	---
E	11/08/2019	CHECKED	APPROVED
D	10/24/2019	EJM	RJD

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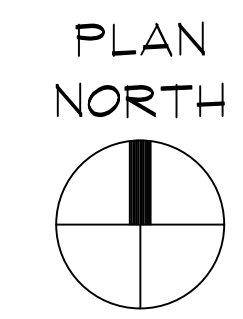
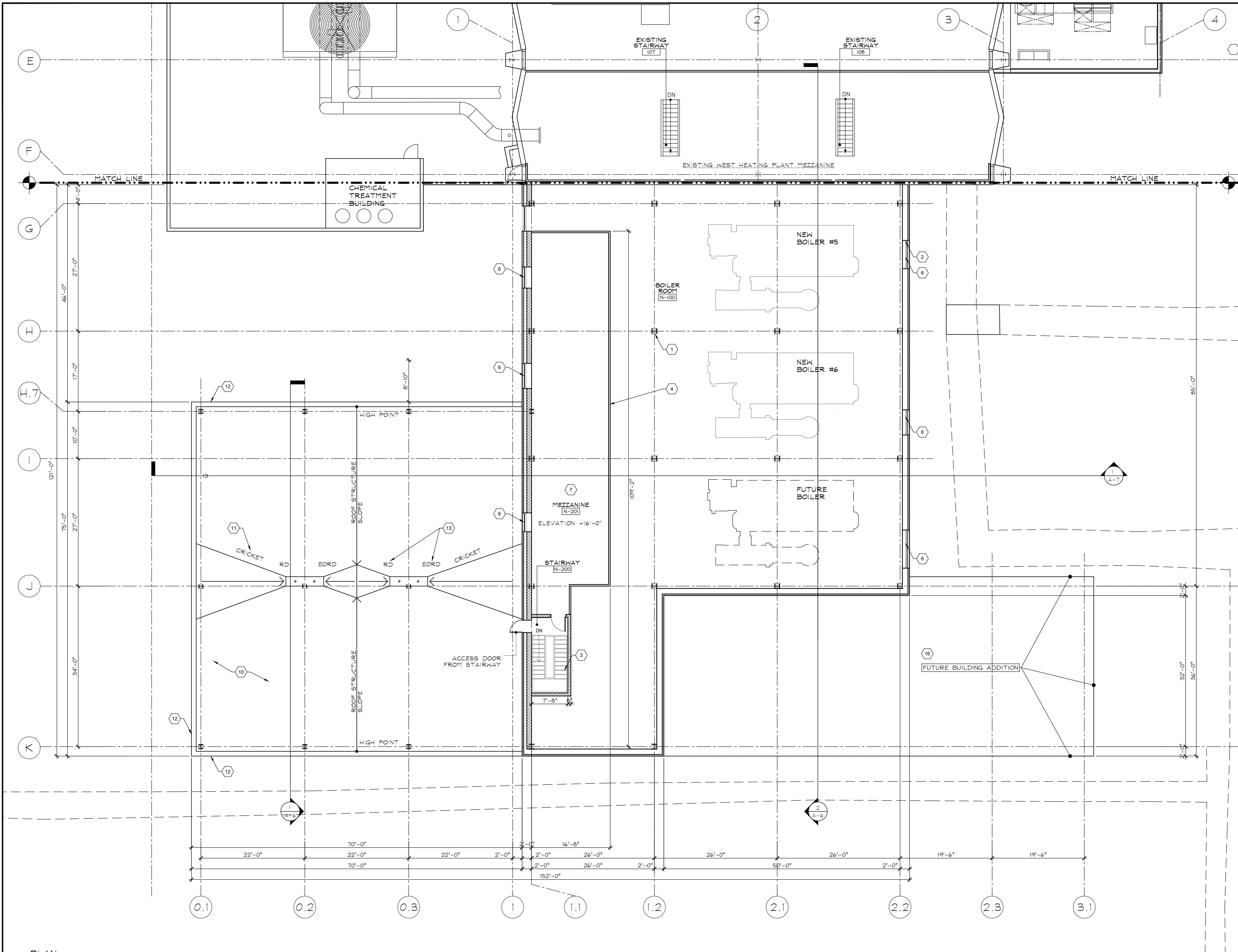


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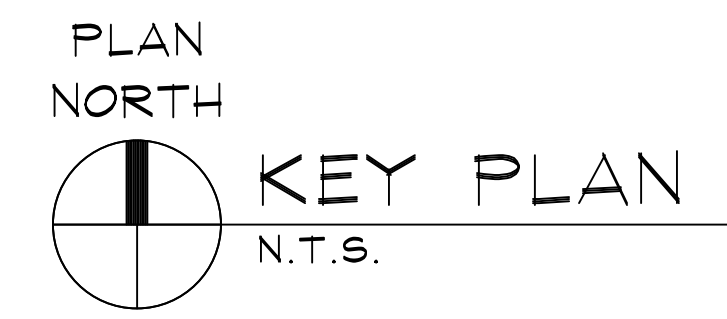
FIRST FLOOR - CONSTRUCTION PLAN WEST HEATING PLANT	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. A-2
	OF (63) SHEETS

KEYED CONSTRUCTION PLAN NOTES

1. NEW STRUCTURAL STEEL COLUMNS. REFER TO STRUCTURAL DRAWINGS.
2. NEW EXTERIOR WALL SYSTEM AT BOILER ROOM AREA: 4-INCH THICK INSULATED METAL PANEL SYSTEM ON 14-INCH DEEP 12 GAUGE COLD-FORM METAL FRAMING MEMBERS, 16-INCH ON CENTER.
3. NEW CONCRETE FILLED METAL PAN STAIR UNIT.
4. NEW IRON PIPE RAILING/TOE KICK SYSTEM AT PERIMETER OF MEZZANINE DECK.
5. NEW FIRE EXTINGUISHERS AND CABINETS. NOT SHOWN FOR DRAWING CLARITY.
6. NEW ALUMINUM LOUVERS.
7. NEW MEZZANINE DECK SHALL BE PRESTRESSED HOLLOW CORE SLABS WITH NOMINAL 2-INCH CONCRETE TOPPING, 2 HOUR FIRE RATED ASSEMBLY.
8. NEW DOORS AND FRAMES REFER TO DOOR AND FRAME SCHEDULE ON SHEET A-9.
9. NEW INTERIOR PARTITIONS REFER TO ROOM FINISH SCHEDULE ON SHEET A-9.
10. NEW ROOF SYSTEM: STYRENE-BUTADIENE-STYRENE/SBS MODIFIED BITUMINOUS MEMBRANE ROOFING, GRANULAR FACED, MOPPED DOWN, NO TORCH SYSTEM ALLOWED. ROOF FRAMING SYSTEM IS SLOPED.
11. NEW CRICKET AREAS TO BE TAPERED INSULATION SYSTEM.
12. NEW METAL COPING SYSTEM.
13. NEW ROOF DRAINS/RD AND EMERGENCY OVERFLOW ROOF DRAINS/EORD. REFER TO PLUMBING DRAWINGS.
14. REFER TO STRUCTURAL DRAWING FOR NEW ROOF FRAMING.
15. REFER TO HEATING AND VENTILATION DRAWING FOR NEW EQUIPMENT.
16. ADD ALTERNATE G-1: FUTURE BUILDING AREA INDICATED PROVIDE ALL CONSTRUCTION COMPONENTS AND ELEMENTS FOR A COMPLETE STRUCTURE INCLUDING BUT NOT LIMITED TO: EXTERIOR WALLS, INTERIOR FINISHES, ROOF STRUCTURE, ROOFING, PLUMBING, HEATING, VENTILATION AND ELECTRICAL SYSTEMS. CONSTRUCTION COMPONENTS AND ELEMENTS WILL MATCH THE ADJACENT BOILER ROOM BUILDING AREA.



1 MEZZANINE LEVEL - CONSTRUCTION PLAN
 A-3 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE

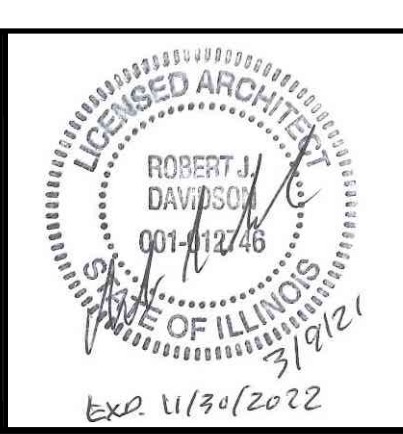


KEY PLAN
 N.T.S.

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS
B	01/10/2020	FINAL BRIDGING DOCUMENTS
A	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL

DRAWN DAS	PREPARED DAS
TRACED ---	APPROVED ---
CHECKED EJM	APPROVED RJD

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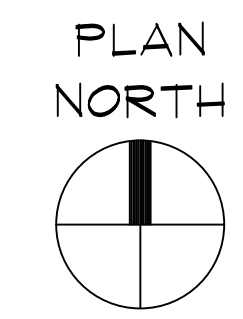
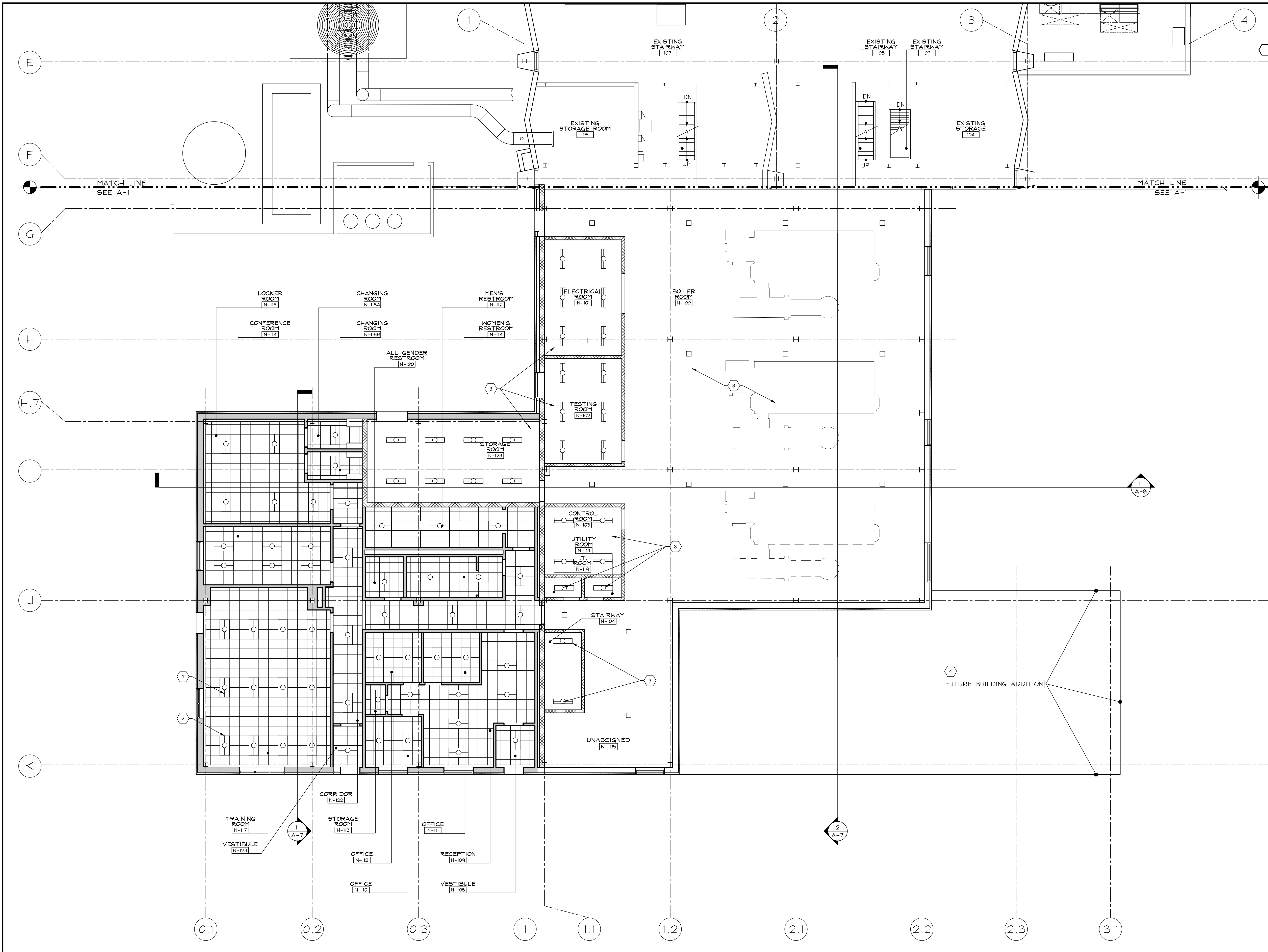


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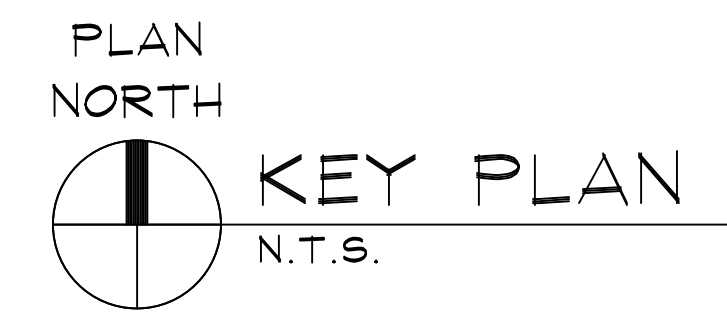
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION		
MEZZANINE LEVEL - CONSTRUCTION PLAN WEST HEATING PLANT	PROJECT NO. 822-010-127	DATE 03/09/2021
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	SHEET NO. A-3	OF (63) SHEETS

KEYED CONSTRUCTION PLAN NOTES

1. NEW SUSPENDED ACOUSTIC TILE CEILING SYSTEM.
2. NEW LAY-IN TYPE LED LIGHT FIXTURES.
3. EXPOSED CEILING AREAS.
4. ADD ALTERNATE G-1: FUTURE BUILDING AREA INDICATED PROVIDE ALL CONSTRUCTION COMPONENTS AND ELEMENTS FOR A COMPLETE STRUCTURE INCLUDING BUT NOT LIMITED TO: FLOOR SLABS, EXTERIOR WALLS, INTERIOR FINISHES, ROOF STRUCTURE, ROOFING, PLUMBING, HEATING, VENTILATION AND ELECTRICAL SYSTEMS. CONSTRUCTION COMPONENTS AND ELEMENTS WILL MATCH THE ADJACENT BOILER ROOM BUILDING AREA.



1 FIRST FLOOR - REFLECTED CEILING PLAN
 A-4 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE

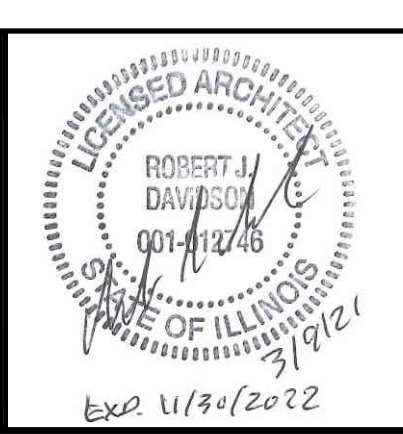


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DRAWN
DAS
PREPARED
DAS
TRACED

CHECKED
EJM
APPROVED
RJD

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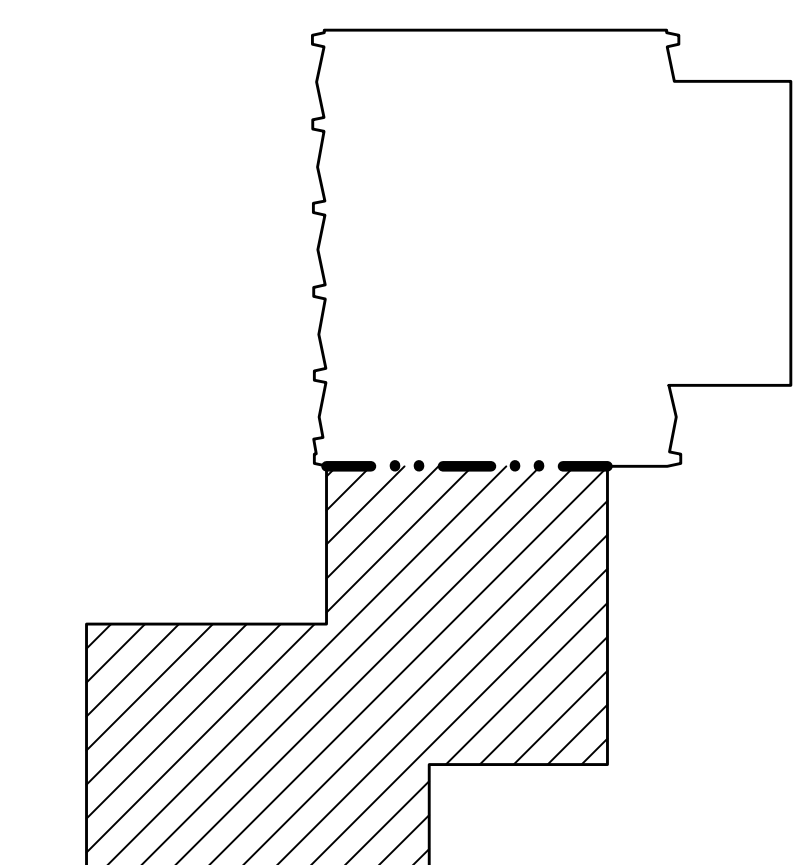
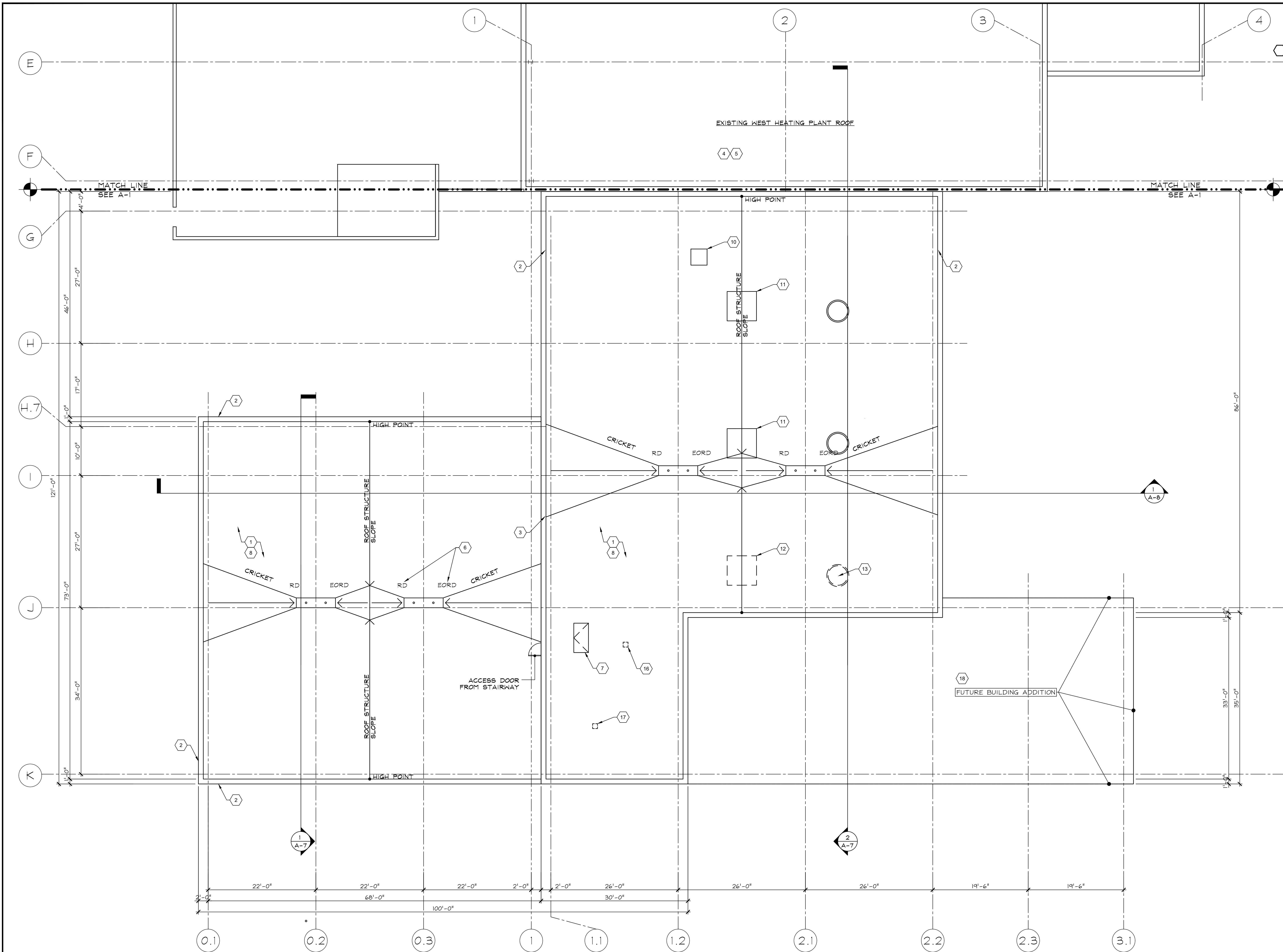


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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION		
FIRST FLOOR - REFLECTED CEILING PLAN WEST HEATING PLANT	PROJECT NO. 822-010-127	DATE 03/09/2021
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	SHEET NO. A-4	OF (63) SHEETS

KEYED CONSTRUCTION PLAN NOTES

1. NEW ROOF SYSTEM: STYRENE-BUTADIENE-STYRENE/SBS MODIFIED BITUMINOUS MEMBRANE ROOFING, GRANULAR FACED. MOPPED DOWN, NO TORCH SYSTEM ALLOWED. REFER TO STRUCTURAL ROOF FRAMING PLANS FOR SLOPE REQUIREMENTS. CRICKET AREAS INDICATED SHALL BE TAPERED INSULATION SYSTEM, 1/4" PER FOOT SLOPE.
2. NEW METAL COPING SYSTEM.
3. NEW EXPANSION JOINT SYSTEM ALONG LOWER LEVEL ROOF DECK AT BOILER ROOM EXTERIOR WALL.
4. EXISTING WEST HEATING PANT ROOF SYSTEM IS A MODIFIED MEMBRANE SYSTEM, GRANULAR FACED. PROVIDE NEW EXPANSION JOINT SYSTEM ALONG NEW WALL LENGTH.
5. NEW ROOFING INFILL AT ROOF DECK OPENINGS WHERE BOILER STACKS ARE SCHEDULED TO BE REMOVED.
6. NEW ROOF DRAINS/RD AND EMERGENCY OVERFLOW ROOF DRAINS/EORD. REFER TO PLUMBING DRAWINGS.
7. NEW ROOF HATCH/SCUTTLE UNIT.
8. NEW WALK-WAY PADS AT ROOF LEVEL EQUIPMENT CURBS. NOT SHOWN FOR DRAWING CLARITY.
9. REFER TO HEATING AND VENTILATION DRAWINGS FOR NEW EQUIPMENT MOUNTED AT ROOF LEVEL.
10. NEW ROOF MOUNTED EXHAUST FAN. REFER TO MECHANICAL DRAWING V-2 AND V-3.
11. NEW LOUVERED PENTHOUSE AND INSULATED CURB UNITS FOR BOILER COMBUSTION AIR.
12. FUTURE LOUVERED PENTHOUSE AND INSULATED CURB FOR BOILER COMBUSTION AIR.
13. FUTURE BOILER STACK.
14. NOT USED.
15. NOT USED.
16. FUTURE EXHAUST FAN AND INSULATED CURB FOR ELECTRICAL ROOM.
17. FUTURE EXHAUST FAN AND INSULATED CURB FOR GAS COMPRESSOR ROOM.
18. ADD ALTERNATE G-1: FUTURE BUILDING AREA INDICATED PROVIDE ALL CONSTRUCTION COMPONENTS AND ELEMENTS FOR A COMPLETE STRUCTURE INCLUDING BUT NOT LIMITED TO: FLOOR SLABS, EXTERIOR WALLS, INTERIOR FINISHES, ROOF STRUCTURE, ROOFING, PLUMBING, HEATING, VENTILATION AND ELECTRICAL SYSTEMS. CONSTRUCTION COMPONENTS AND ELEMENTS WILL MATCH THE ADJACENT BOILER ROOM BUILDING AREA.

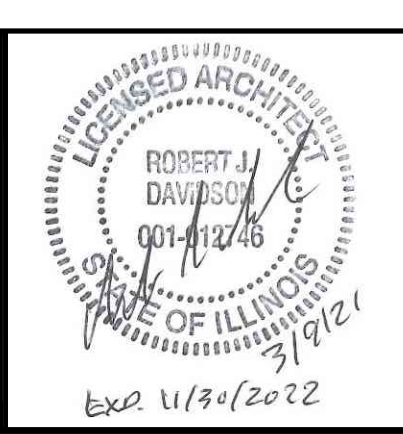


1 ROOF LEVEL - CONSTRUCTION PLAN
 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE

KEY PLAN
 N.T.S.

REVISIONS		DRAWN	PREPARED
NO.	DATE	DAS	DAS
G	03/09/2021	TRACED	APPROVED
F	01/10/2020	---	---
E	11/08/2019	CHECKED	APPROVED
D	10/18/2019	EJM	RJD

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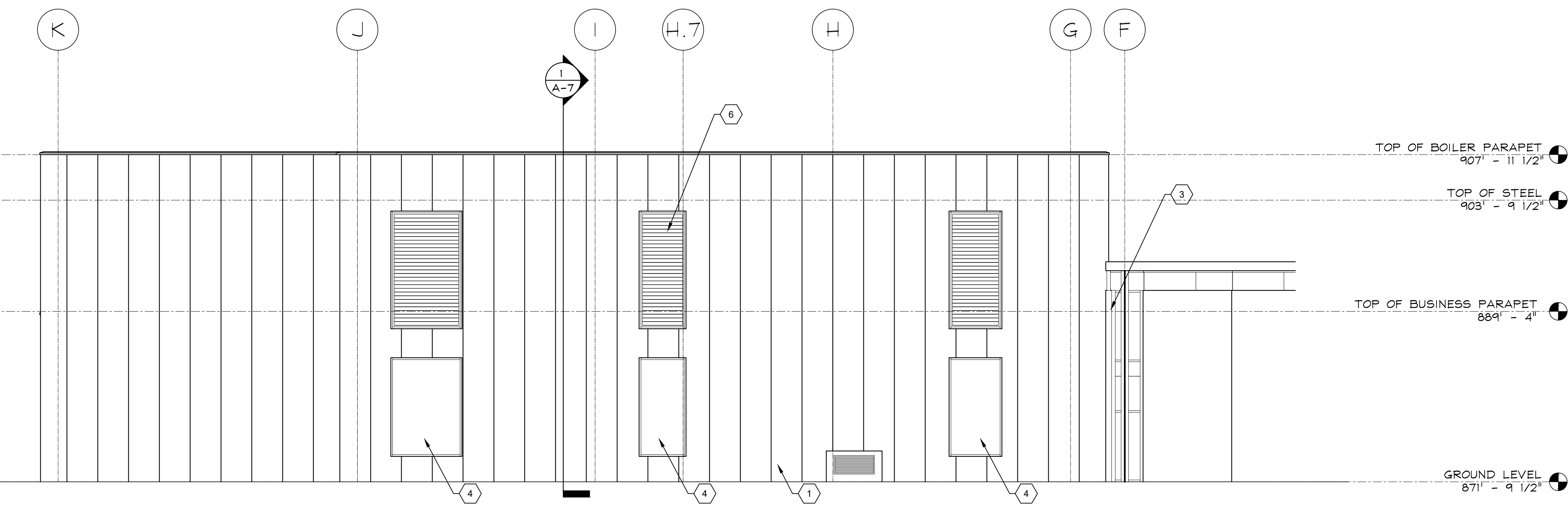


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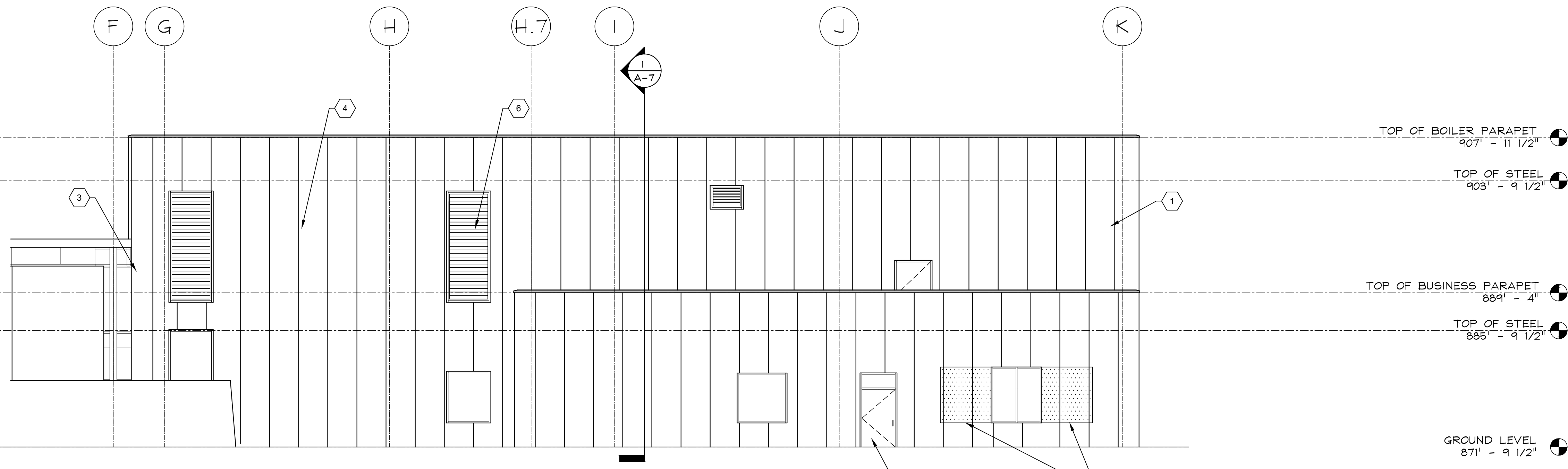
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
ROOF LEVEL - CONSTRUCTION PLAN WEST HEATING PLANT	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. A-5
	OF (63) SHEETS

KEYED BUILDING ELEVATION NOTES

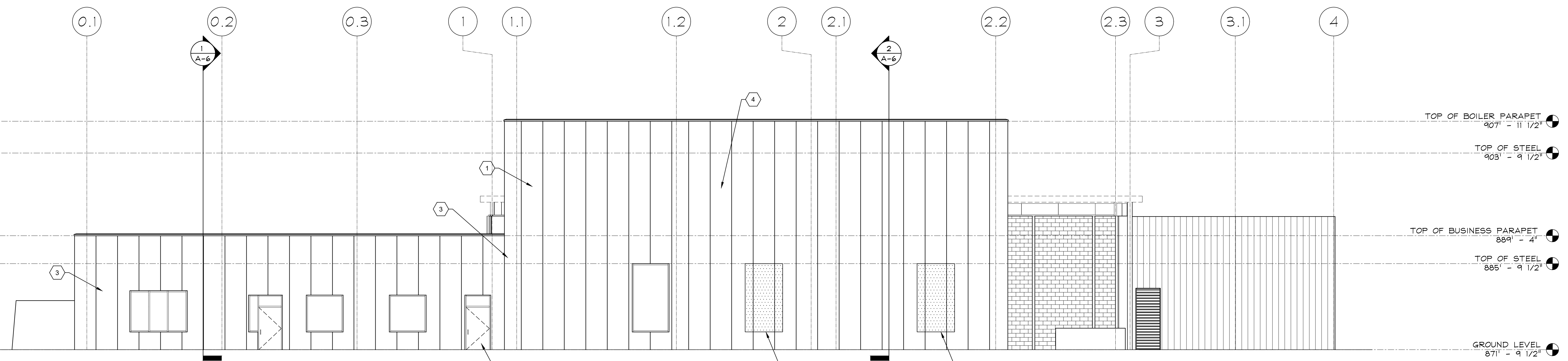
1. NEW EXTERIOR WALL SYSTEM AT BOILER ROOM AREA: 4-INCH THICK INSULATED METAL PANEL SYSTEM ON 14-INCH DEEP 12 GAUGE COLD-FORM METAL FRAMING MEMBERS, 16-INCH ON CENTER.
2. NEW EXTERIOR WALL SYSTEM AT ADMINISTRATION BUILDING AREA: 3-INCH THICK INSULATED METAL PANEL SYSTEM ON 6-INCH DEEP 12 GAUGE COLD-FORMED METAL FRAMING SYSTEM.
3. NEW EXPANSION/CONTROL JOINT SYSTEM.
4. NEW GLAZED ALUMINUM CURTAIN WALL SYSTEM.
5. NEW DOORS AND FRAMES REFER TO DOOR AND FRAME SCHEDULE ON A-9.
6. NEW HORIZONTAL FIXED LOUVERS. REFER TO VENTILATION DRAWINGS FOR FREE AIR SIZES.
7. ALUMINUM WINDOW UNITS DENOTED WITH THIS DESIGNATION WILL BE ADD ALTERNATE A-1.
8. GLAZED ALUMINUM CURTAIN WALL UNITS DENOTED WITH THIS DESIGNATION WILL BE ADD ALTERNATE A-1.



1 EAST ELEVATION
A-6 SCALE: 1/8" = 1'-0"
GRAPHIC SCALE



2 WEST ELEVATION
A-6 SCALE: 1/8" = 1'-0"
GRAPHIC SCALE

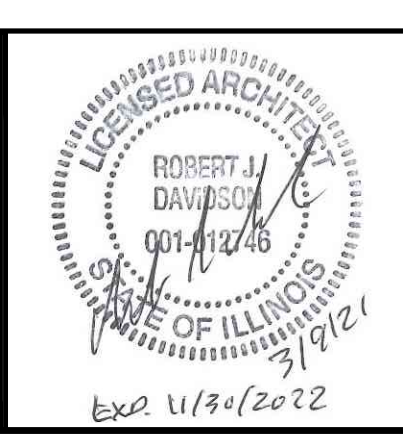


3 SOUTH ELEVATION
A-6 SCALE: 1/8" = 1'-0"
GRAPHIC SCALE

REVISIONS		
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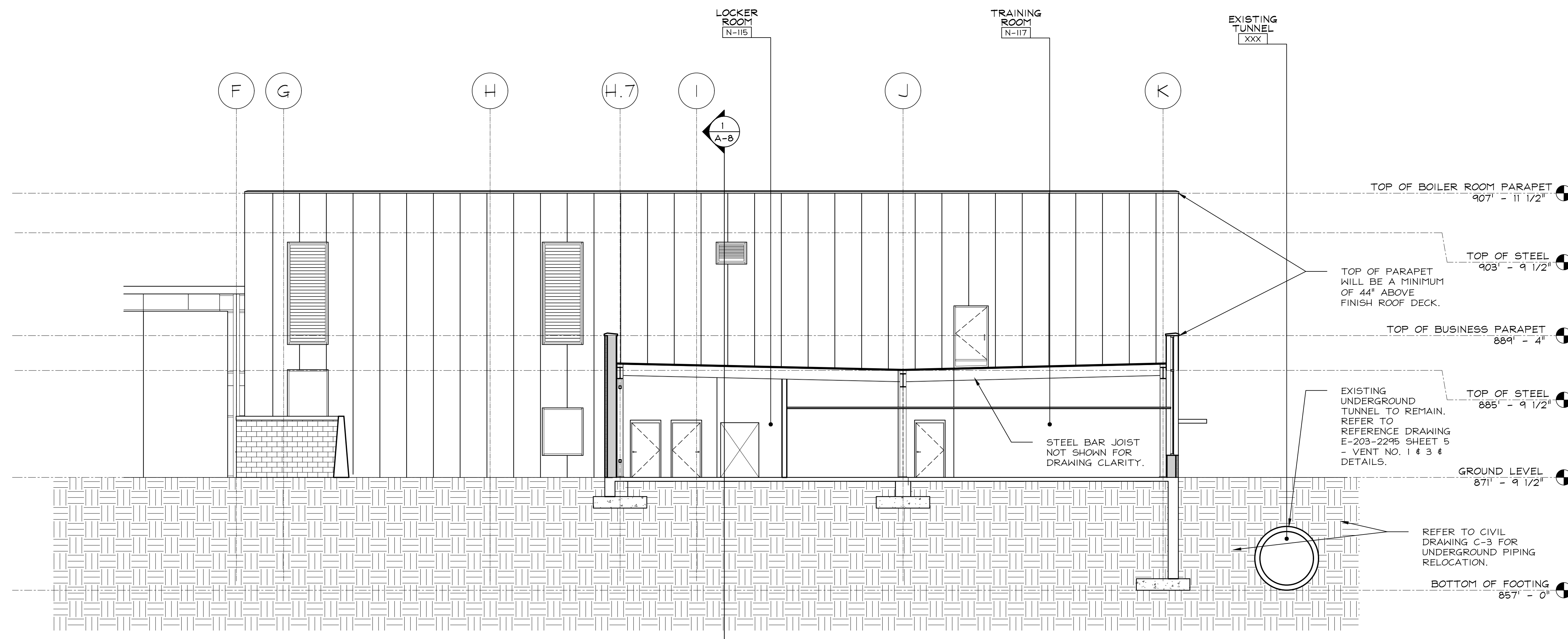


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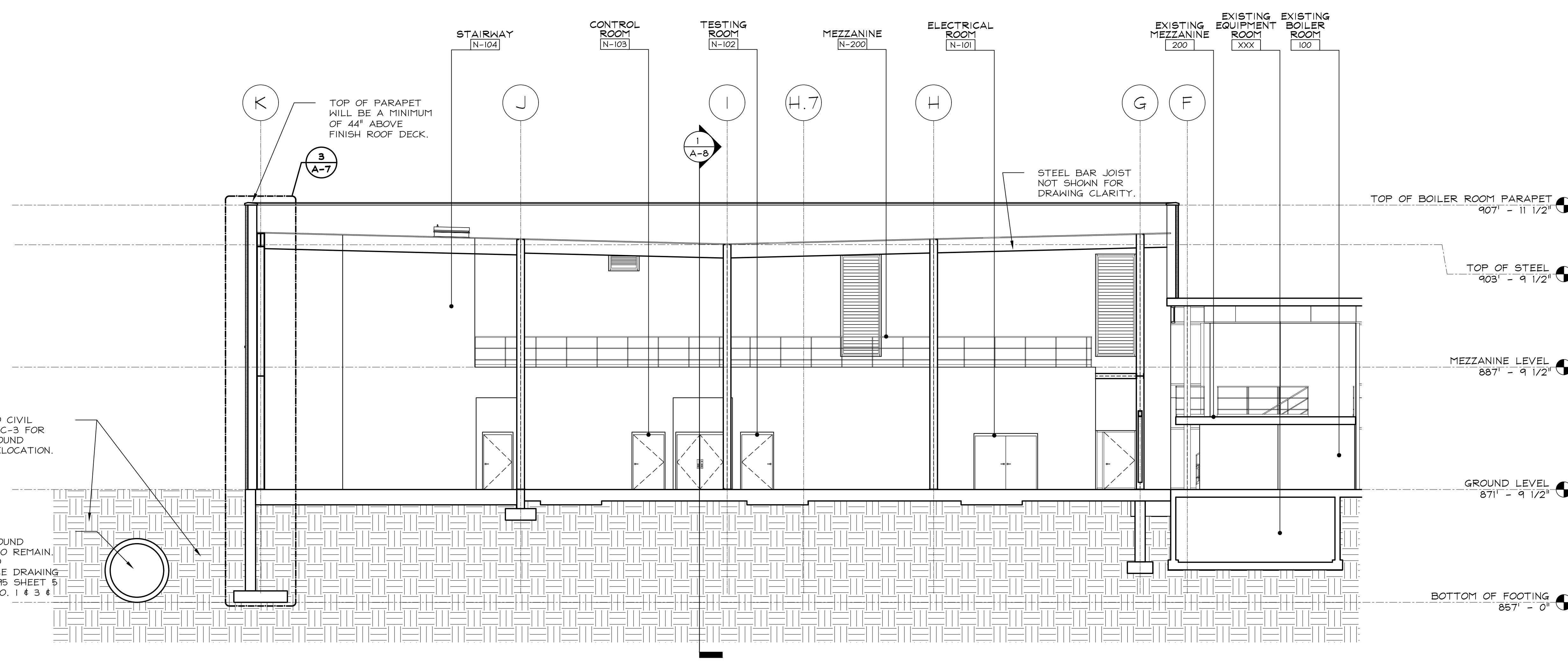
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
BUILDING ELEVATIONS WEST HEATING PLANT	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. A-6
	OF (63) SHEETS

KEYED BUILDING SECTION NOTES

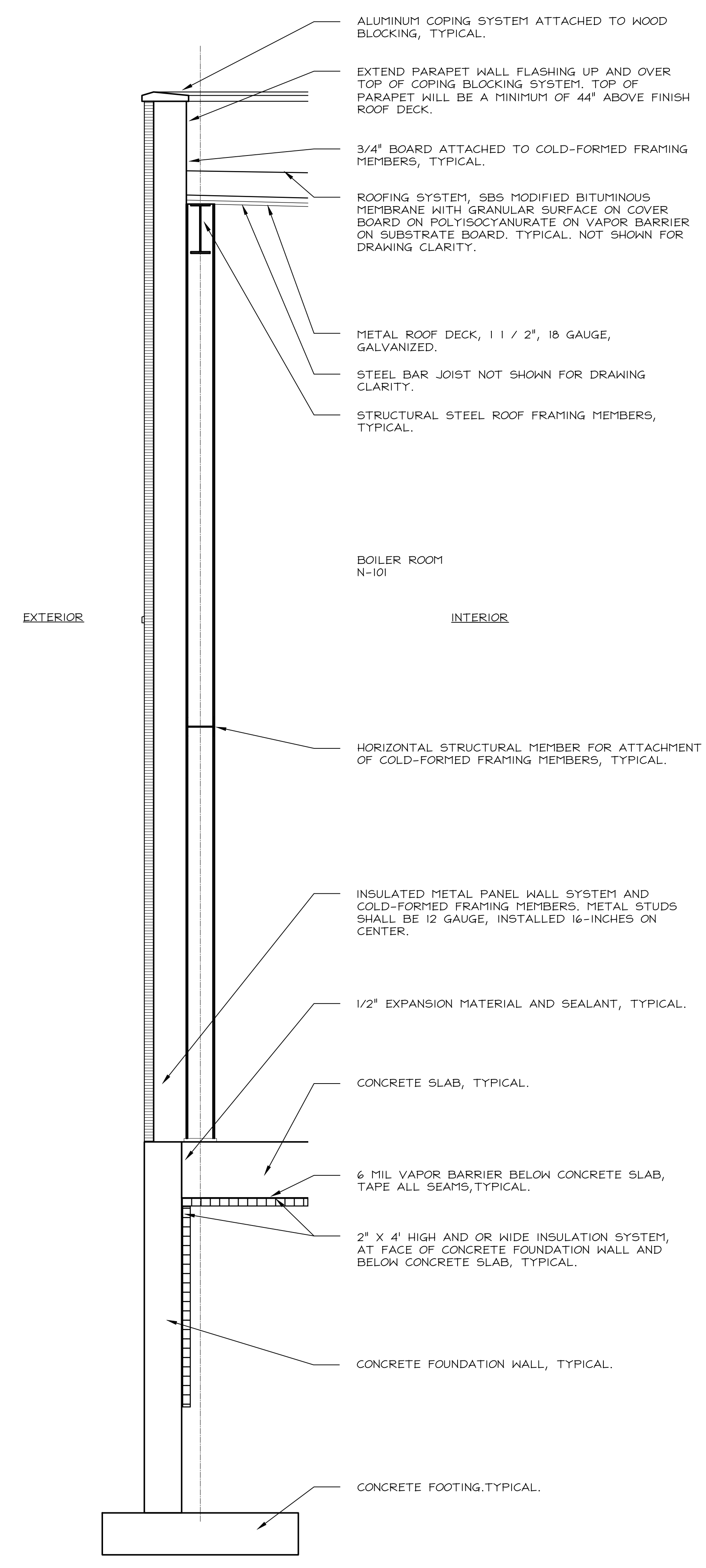
- EXISTING UNDERGROUND TUNNEL.
- REFER TO STRUCTURAL FOUNDATION PLAN FOR PROPOSED CONCRETE FOOTING ELEVATIONS.



1 BUILDING SECTION - LOOKING EAST
A-7 SCALE: 1/8" = 1'-0"
GRAPHIC SCALE



2 BUILDING SECTION - LOOKING WEST
A-7 SCALE: 1/8" = 1'-0"
GRAPHIC SCALE

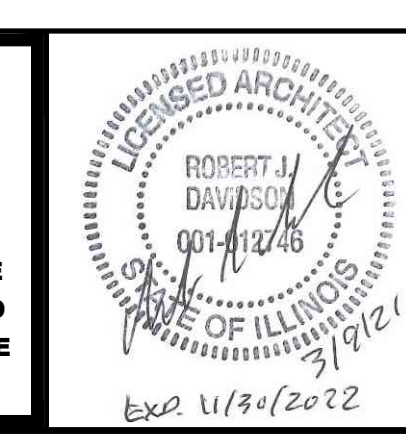


3 WALL SECTION
A-7 SCALE: 3/8" = 1'-0"

REVISIONS		
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EJM	RJD

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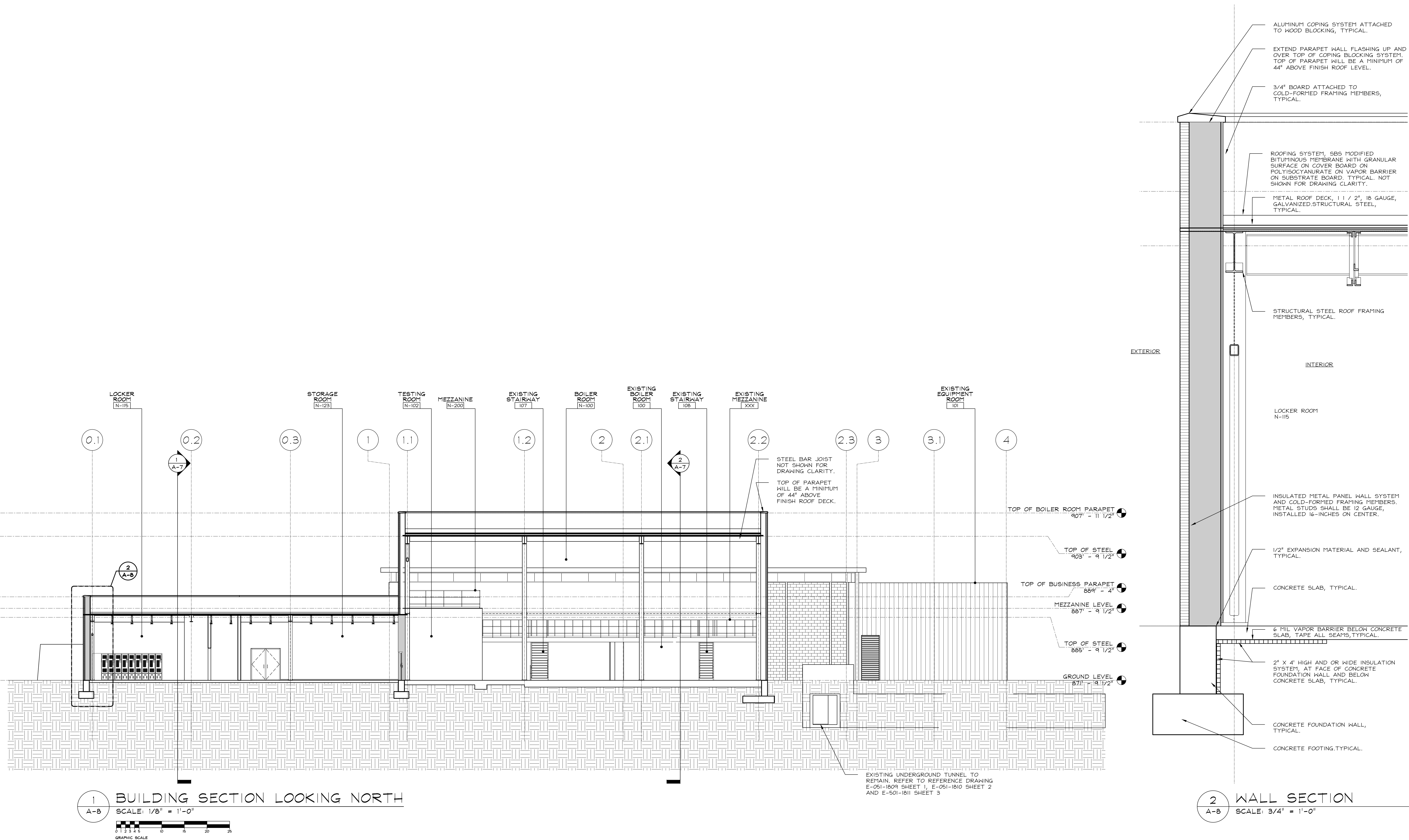


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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
BUILDING AND WALL SECTIONS WEST HEATING PLANT	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. A-7
	OF (63) SHEETS

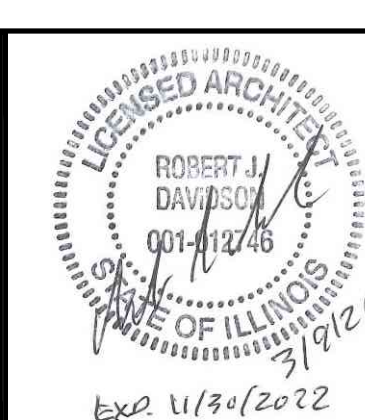
KEYED BUILDING SECTION NOTES

- EXISTING UNDERGROUND TUNNEL.
- REFER TO STRUCTURAL FOUNDATION PLAN FOR PROPOSED CONCRETE FOOTING ELEVATIONS.



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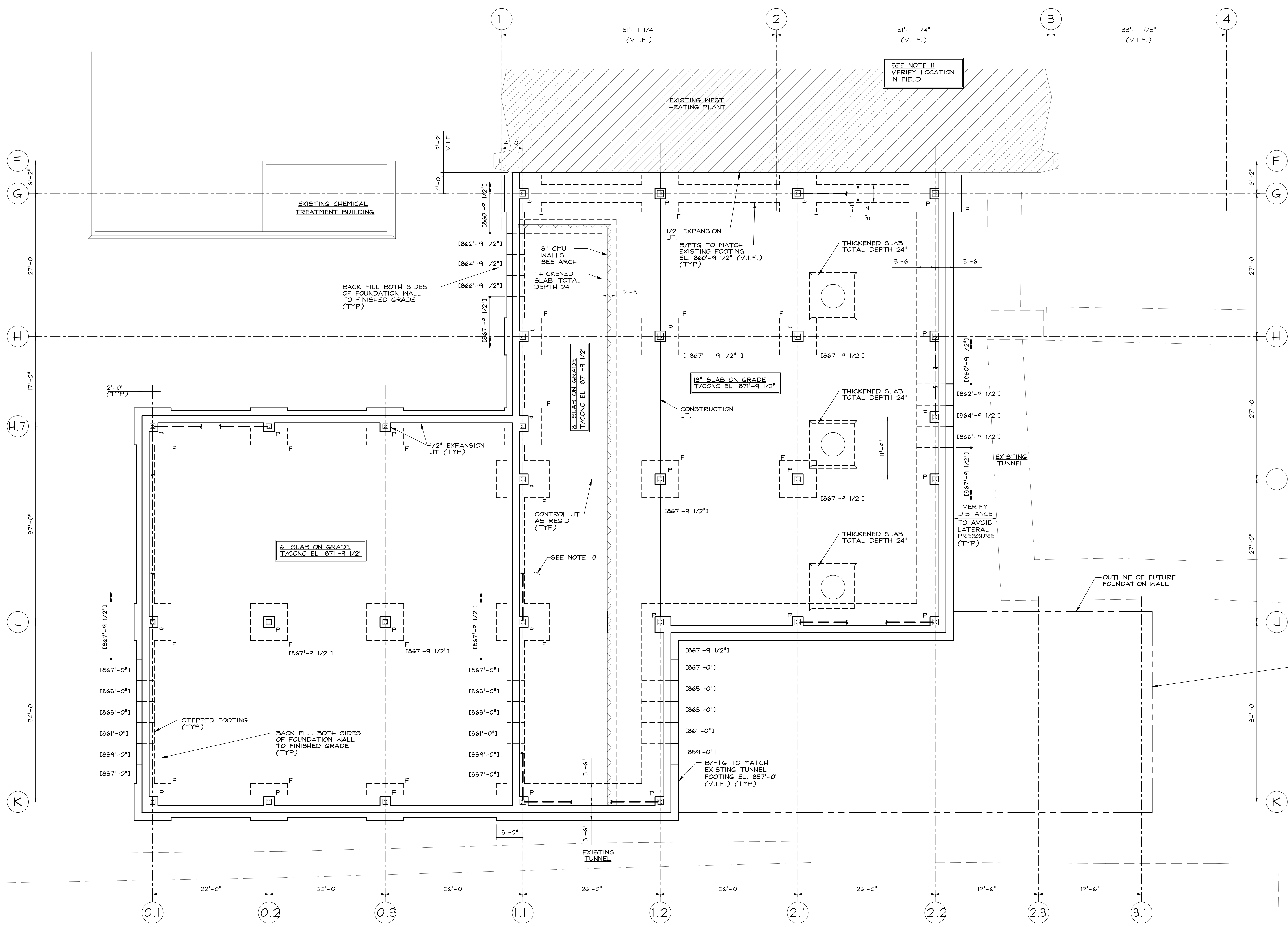


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Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
BUILDING AND WALL SECTIONS WEST HEATING PLANT	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. A-8
	OF (63) SHEETS

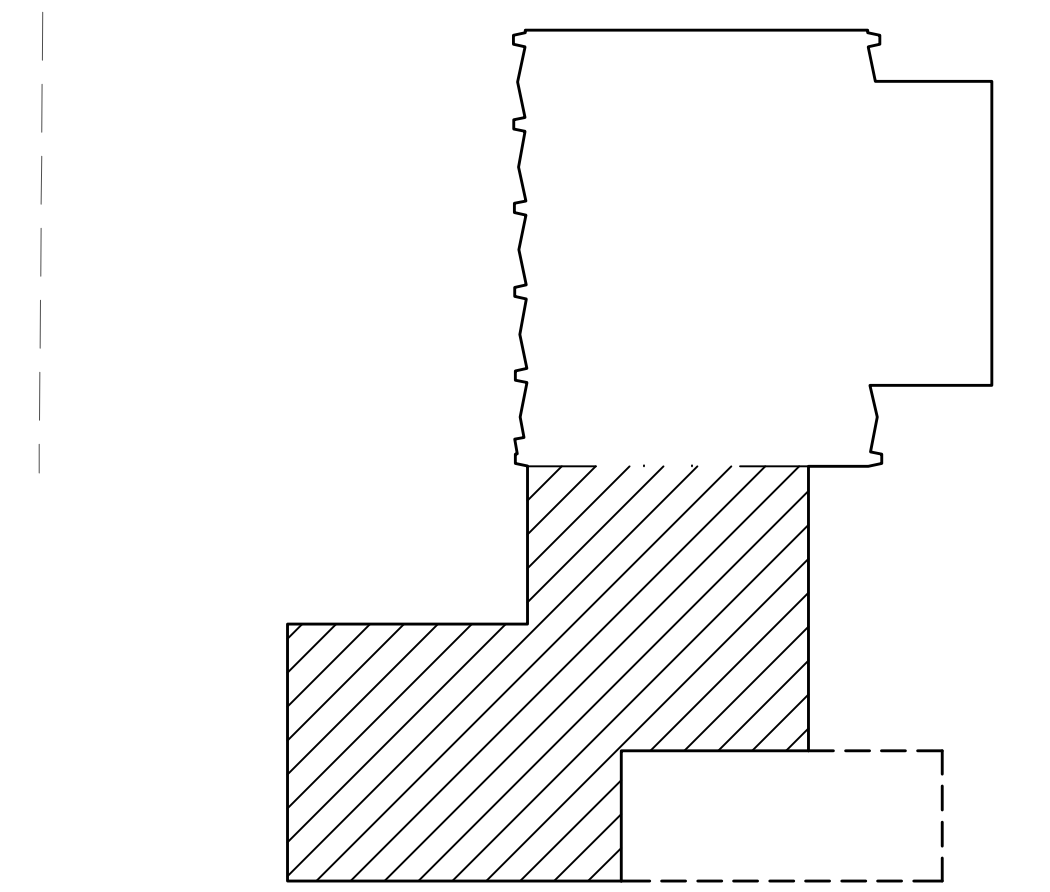
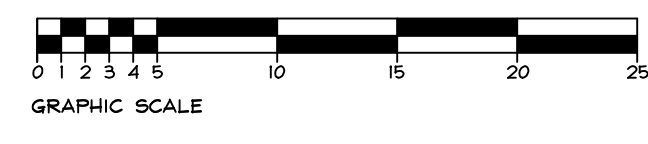
GENERAL FOUNDATION PLAN NOTES

- FOR STRUCTURAL GENERAL NOTES SEE DRAWING S-1.
- COORDINATE THIS DRAWING WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- V.I.F. INDICATES THAT DIMENSIONS TO BE VERIFIED IN FIELD PRIOR TO FABRICATION.
- FOR SLAB ON GRADE SEE PLAN.
- F INDICATES SPREAD FOOTING
- P INDICATED PIER
- : VERTICAL BRACING
- [XXX' - XX"] : INDICATES BOTTOM OF FOOTING. (ALL FOOTINGS, THICKNESS = 1'-6")
- FOOTINGS, PIERS AND SLABS FOR REFERENCE ONLY AND TO BE DETAILED IN DESIGN DEVELOPMENT PHASE.
- REFER TO DRAWING A-3 FOR NEW PRESTRESSED HOLLOW CORE MEZZANINE FLOOR ABOVE.
- REMOVE EXISTING CONCRETE PAD FOR BOILER #4. PROVIDE NEW SLAB ON GRADE FOR FLUSH FLOOR. VERIFY IN FIELD.



ADD ALTERNATE NO. S-1. INCLUDE THE FOUNDATION SYSTEM AND ASSOCIATED WORK FOR THE FUTURE BUILDING ADDITION AREA DENOTED. MATCH ADJACENT FOOTING AND FOUNDATION WALL DESIGN ALONG COLUMN LINE K (SIMILAR). NO CONCRETE FLOOR SLAB IS REQUIRED. FINAL DETAILING WILL BE REVIEWED WITH NIU.

1 FOUNDATION PLAN T/CONC 871' - 9 1/2"
 S-2 SCALE: 1/8" = 1'-0"

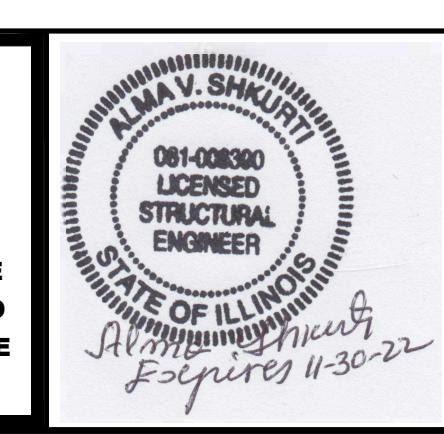


PLAN NORTH
KEY PLAN
 N.T.S.

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TRACED ---	APPROVED ---
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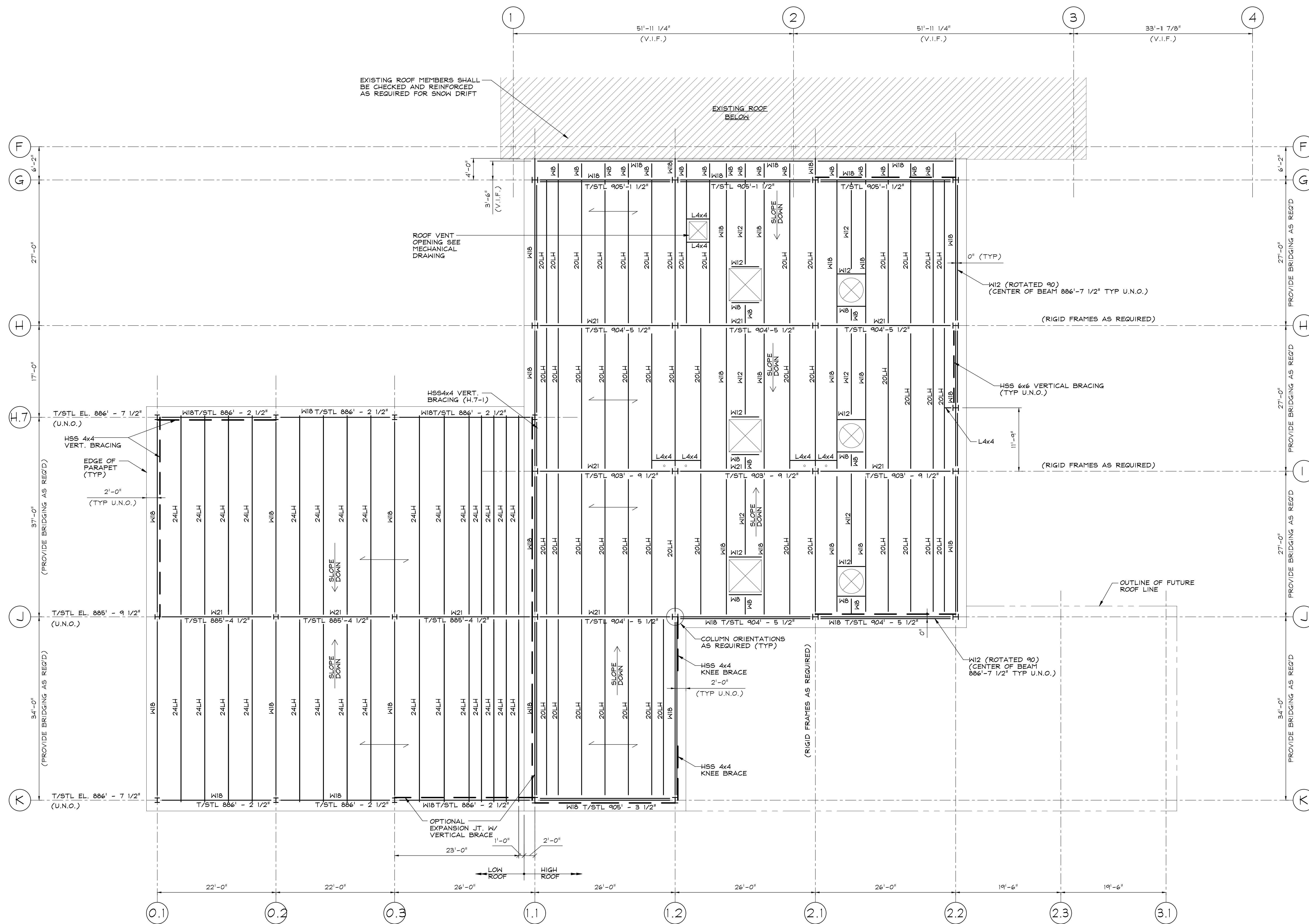


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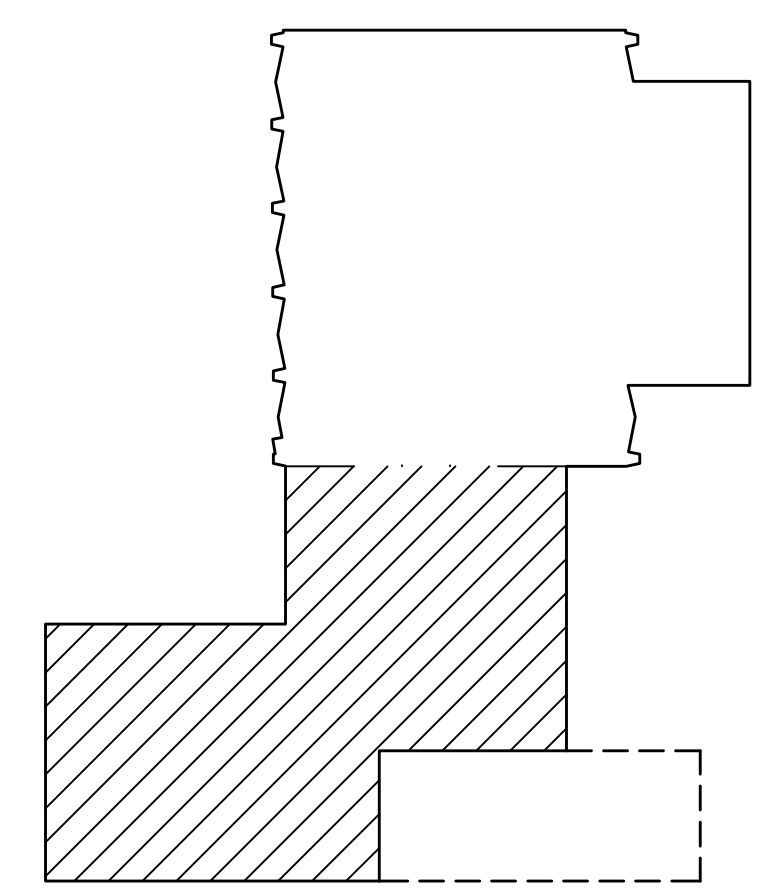
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
CONCEPT FOUNDATION PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. S-2
	OF (63) SHEETS

GENERAL ROOF FRAMING NOTES

- FOR STRUCTURAL GENERAL NOTES SEE DRAWING S-1.
- COORDINATE THIS DRAWING WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- V.I.F. INDICATES THAT DIMENSIONS TO BE VERIFIED IN FIELD PRIOR TO FABRICATION.
- ← : SPAN OF STEEL ROOF DECK



1 ROOF FRAMING PLAN T/STL EL. VARIES
 S-3 SCALE: 1/8" = 1'-0"
 JOISTS TO BE DESIGNED FOR AN ADDITIONAL COLLATERAL LOAD (PIPING) - MINIMUM 5 PSF

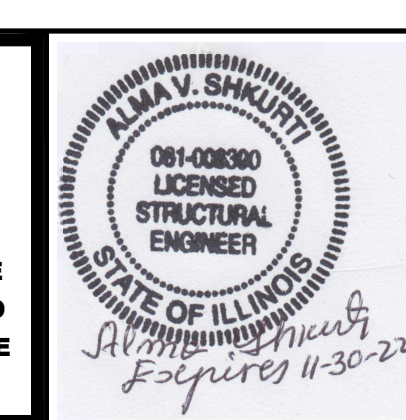


PLAN NORTH
KEY PLAN
 N.T.S.

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS
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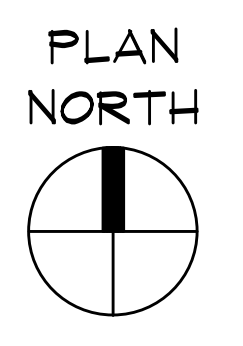
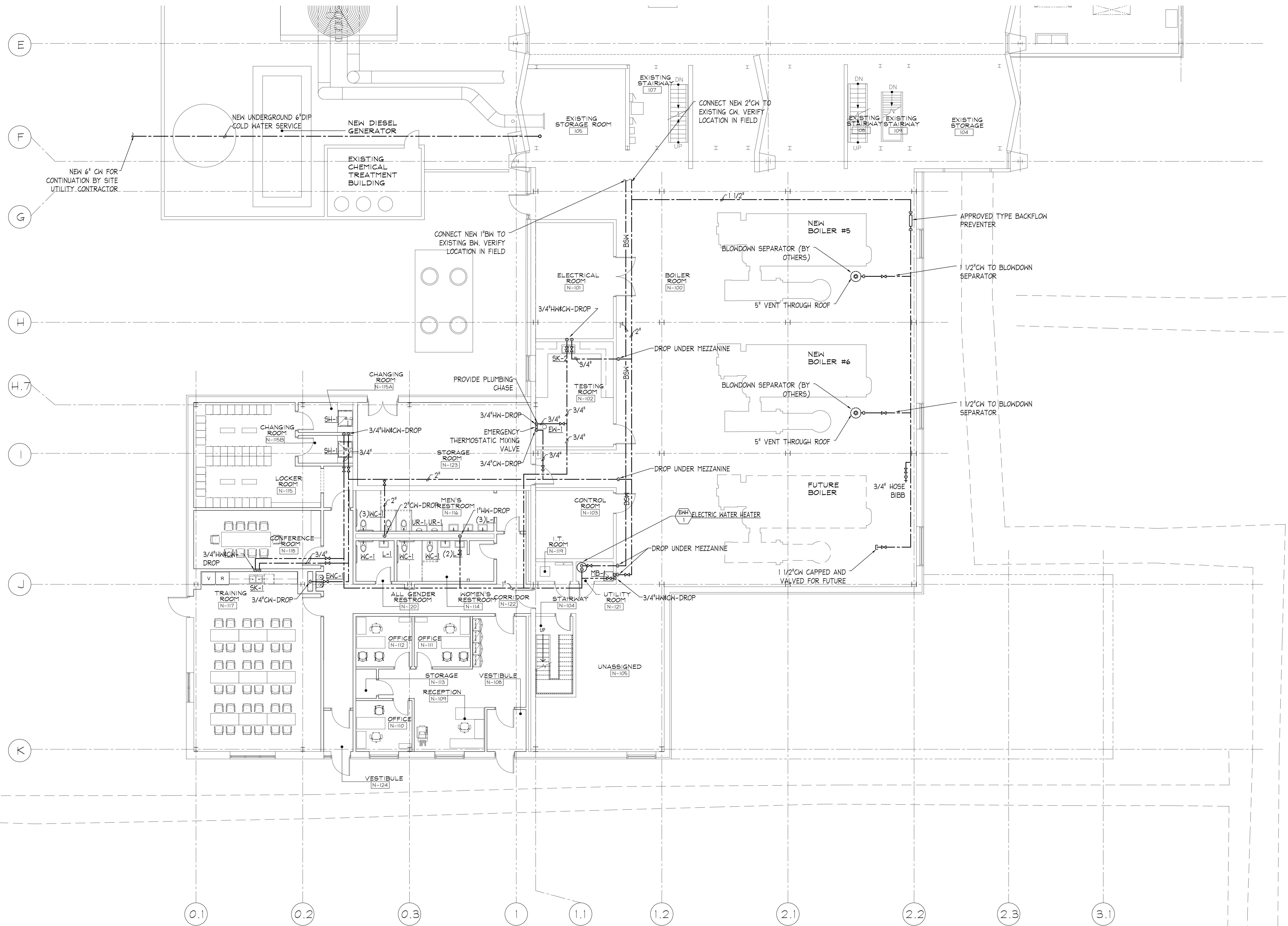
DRAWN DJB	PREPARED GJM/AVS
TRACED ---	APPROVED ---
CHECKED AVS	APPROVED RJD

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State of Illinois
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Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
CONCEPT ROOF FRAMING PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. S-3
	OF (63) SHEETS

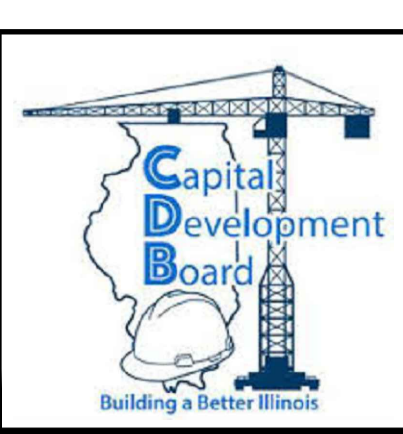
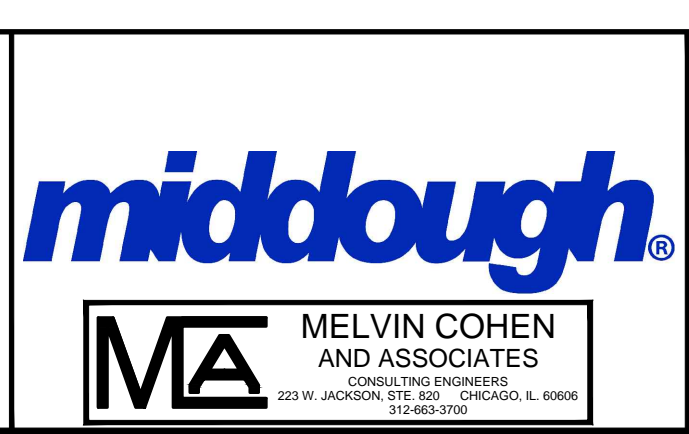


1 WATER PIPING PLUMBING FLOOR PLAN
 P-1 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS

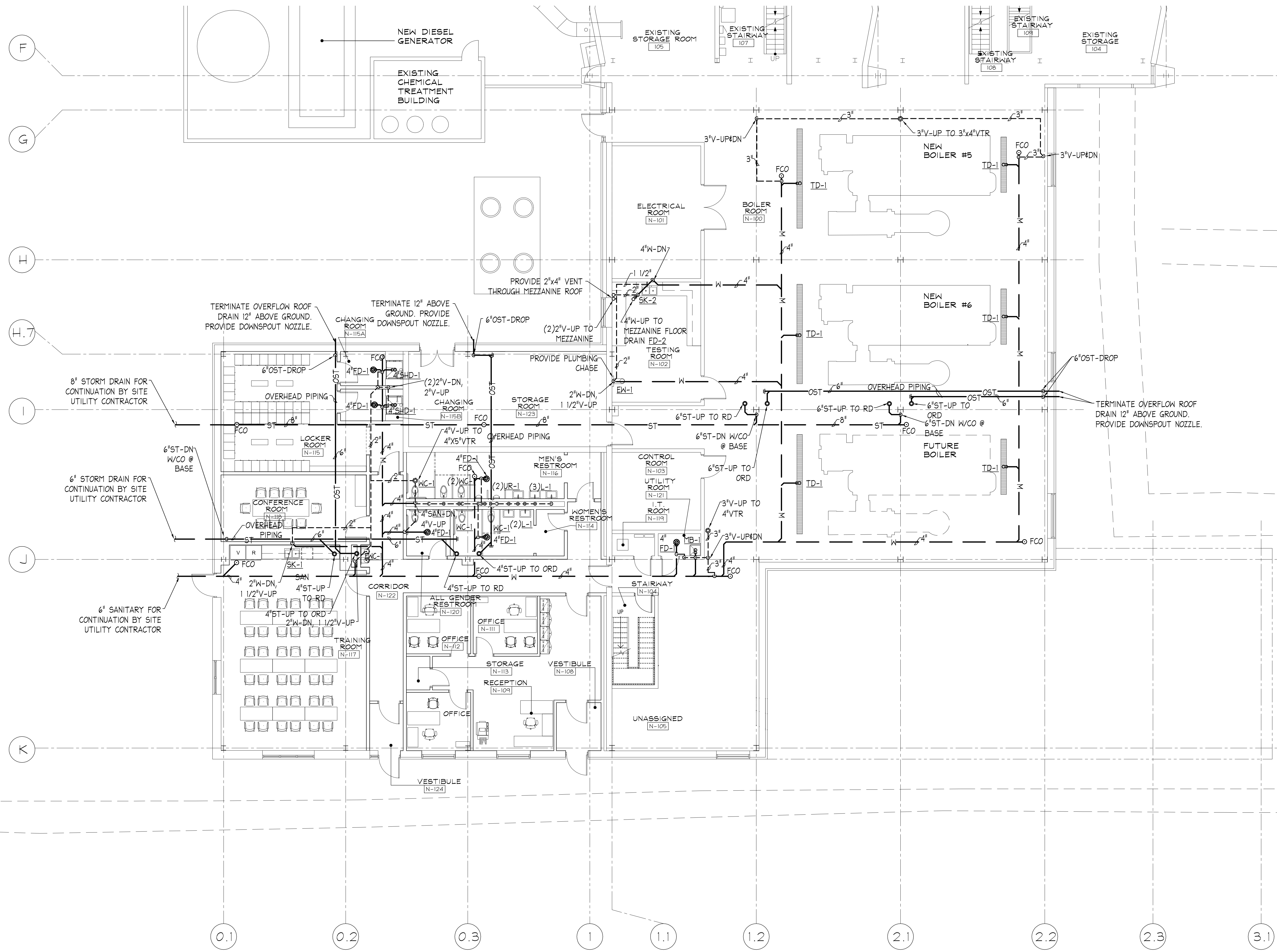
DRAWN	MCA	PREPARED	MCA
TRACED	---	APPROVED	---
CHECKED	MCA	APPROVED	RJD

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State of Illinois
JB PRITZKER, GOVERNOR
 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
WATER PIPING PLUMBING FLOOR PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. P-1 OF (63) SHEETS

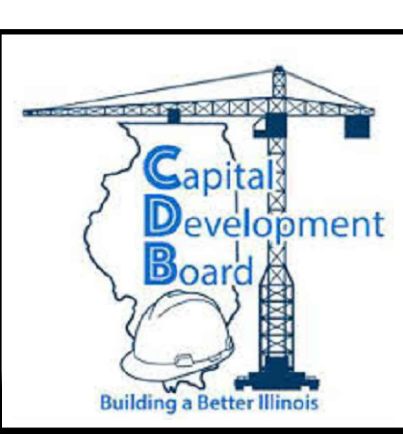


1 WASTE AND VENT PIPING PLUMBING FLOOR PLAN
 P-2 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS

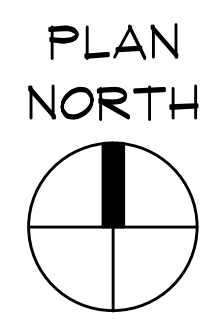
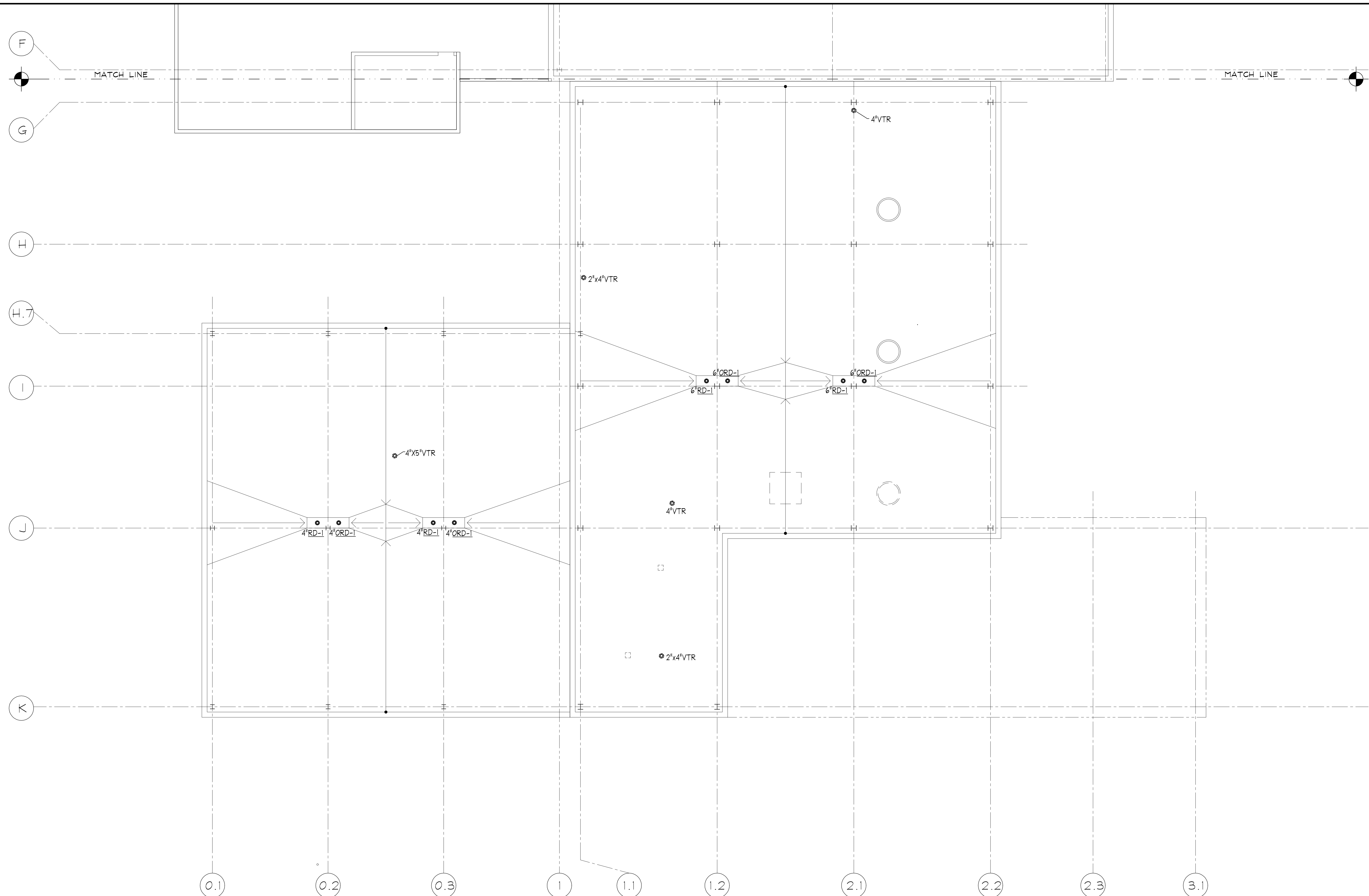
DRAWN MCA	PREPARED MCA
TRACED ---	APPROVED ---
CHECKED MCA	APPROVED RJD

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State of Illinois
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
WASTE AND VENT PIPING PLUMBING FLOOR PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. P-2
	OF (63) SHEETS

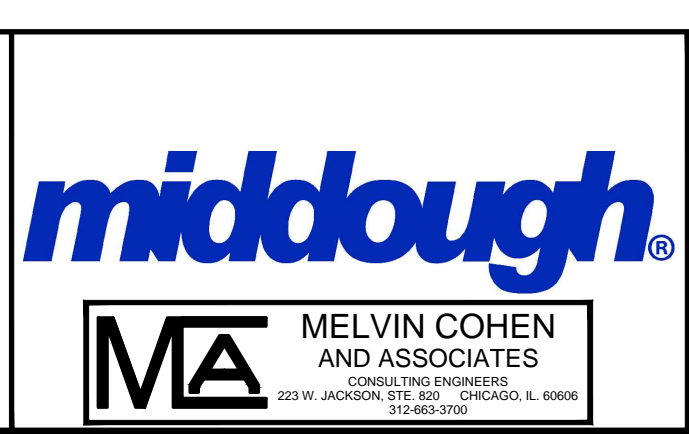


1 PLUMBING ROOF PLAN
 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS

DRAWN MCA	PREPARED MCA
TRACED ---	APPROVED ---
CHECKED MCA	APPROVED RJD

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State of Illinois
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
PLUMBING ROOF PLAN	PROJECT NO. B22-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. P-3 OF (63) SHEETS

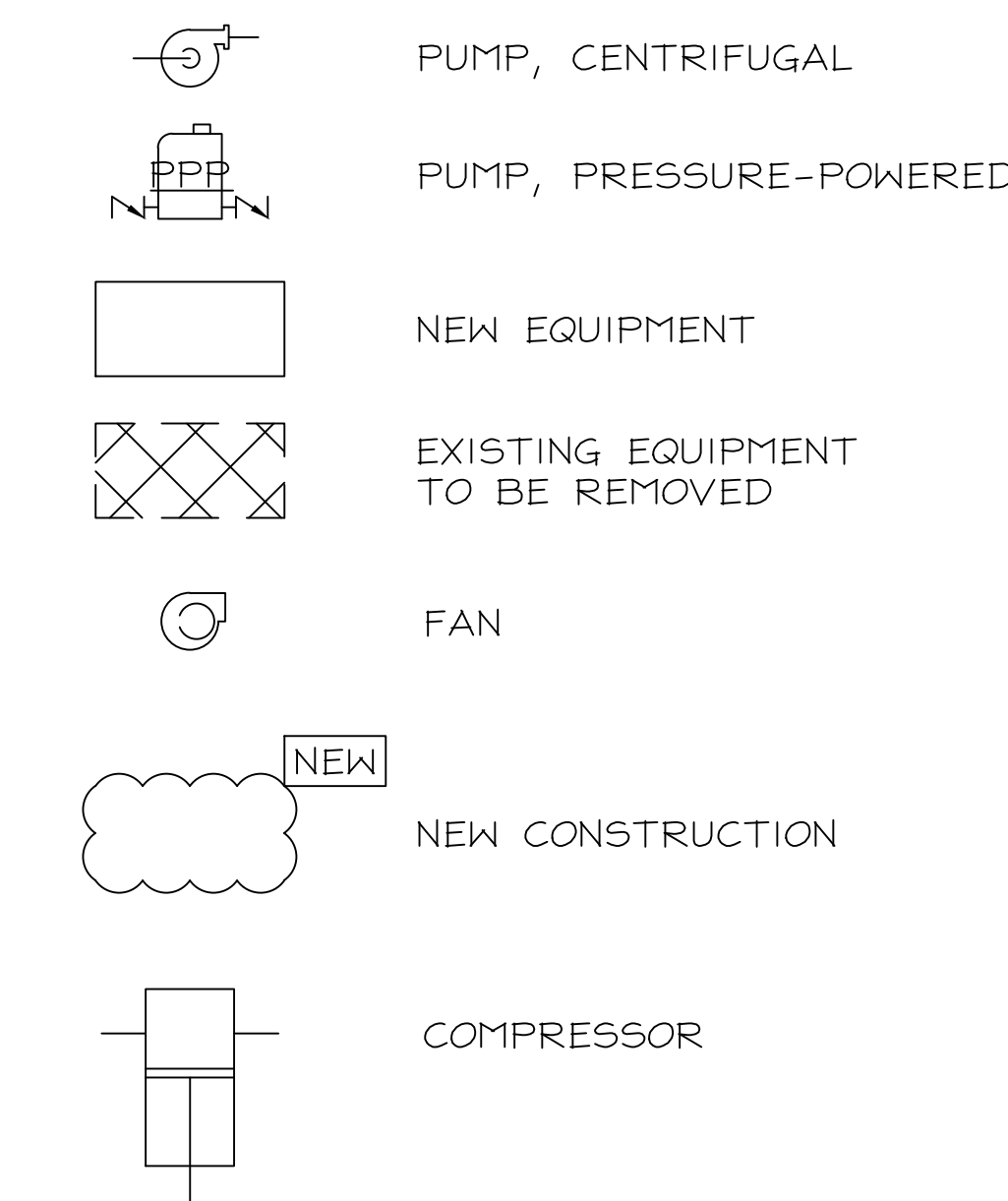
GENERAL INSTRUMENT SYMBOLS

LOCATION/ACCESSIBILITY	DISCRETE INSTRUMENTS	SHARED DISPLAY AND CONTROL (DCS)	PLC	DISCRETE HARDWARE INTERLOCK
FIELD MOUNTED 1. FIELD OR LOCALLY MOUNTED. 2. ACCESSIBLE TO AN OPERATOR AT DEVICE.				
PRIMARY LOCATION NORMALLY ACCESSIBLE TO AN OPERATOR 1. CENTRAL OR MAIN CONTROL ROOM. 2. FRONT OF MAIN PANEL OR CONSOLE MOUNTED. 3. VISIBLE ON VIDEO DISPLAY. 4. ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.				
PRIMARY LOCATION NORMALLY INACCESSIBLE TO AN OPERATOR 1. CENTRAL OR MAIN CONTROL ROOM. 2. REAR OF PANEL OR CABINET MOUNTED. 3. NOT VISIBLE ON VIDEO DISPLAY. 4. NOT NORMALLY ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.				
AUXILIARY LOCATION NORMALLY ACCESSIBLE TO AN OPERATOR 1. SECONDARY OR LOCAL CONTROL ROOM. 2. FIELD OR LOCAL CONTROL PANEL. 3. FRONT OF SECONDARY OR LOCAL PANEL MOUNTED. 4. VISIBLE ON VIDEO DISPLAY. 5. ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.				
AUXILIARY LOCATION NORMALLY INACCESSIBLE TO AN OPERATOR 1. SECONDARY OR LOCAL CONTROL ROOM. 2. FIELD OR LOCAL CONTROL PANEL. 3. REAR OF SECONDARY OR LOCAL PANEL OR CABINET MOUNTED. 4. NOT VISIBLE ON VIDEO DISPLAY. 5. NOT NORMALLY ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.				

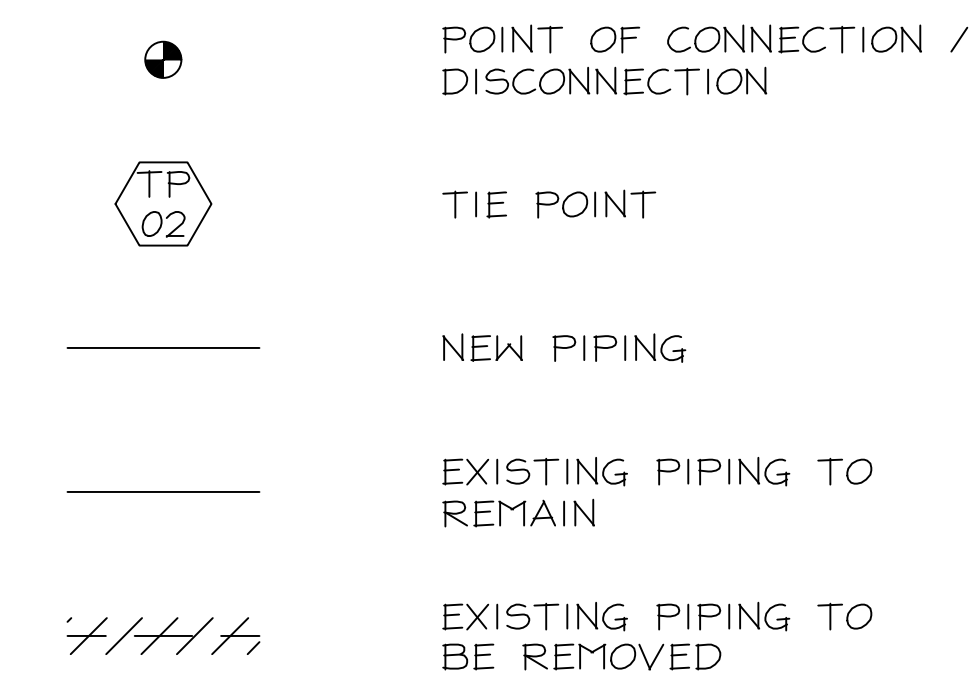
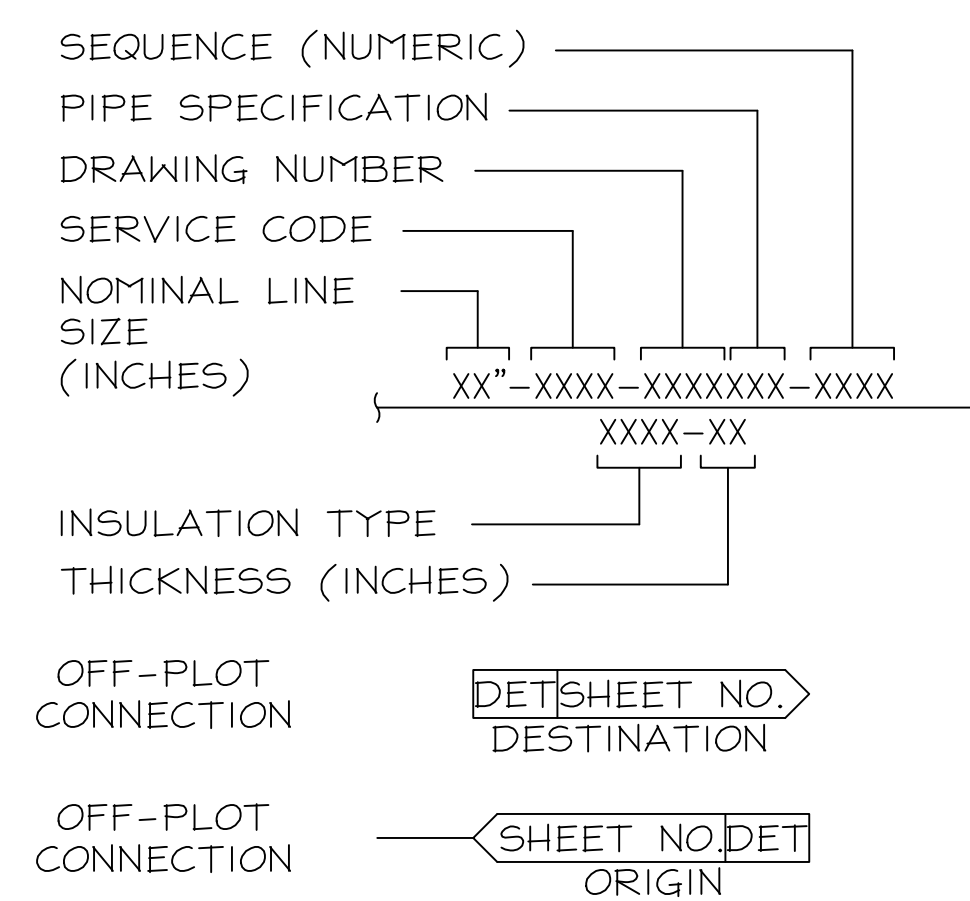
INSTRUMENT IDENTIFICATION LETTERS

FIRST LETTER	SUCCEEDING LETTERS				
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, FLAME, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE (TYPICALLY CONDUCTIVITY - ELECTRICAL)			CONTROL	CLOSED
D	USER'S CHOICE (TYPICALLY DENSITY OR SPECIFIC GRAVITY)	DIFFERENTIAL			DIVERT
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE OR GAUGING (DIMENSIONAL)		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW, LOCAL
M	USER'S CHOICE (TYPICALLY MOISTURE OR HUMIDITY)	MOMENTARY			MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY OR HEAT DUTY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	THROUGH
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

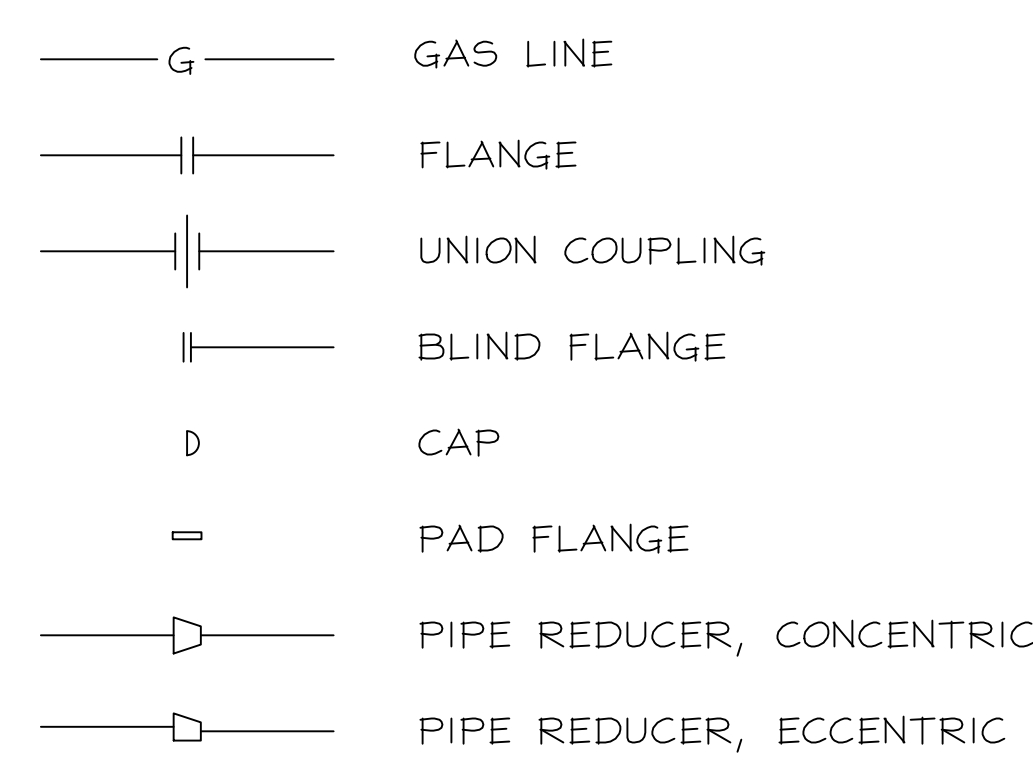
EQUIPMENT ITEMS



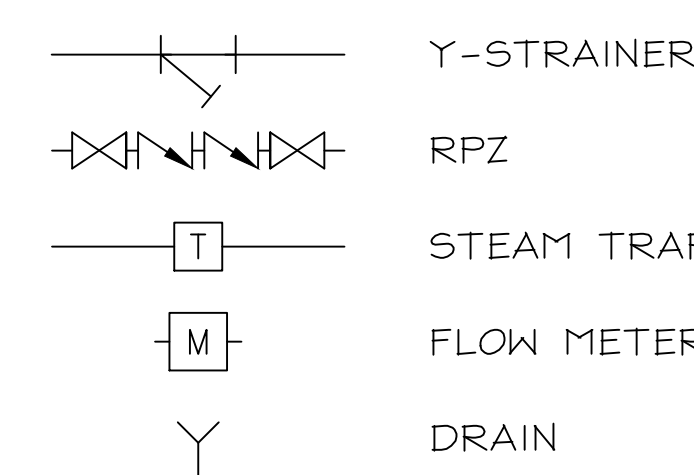
PIPING DATA IDENTIFICATION



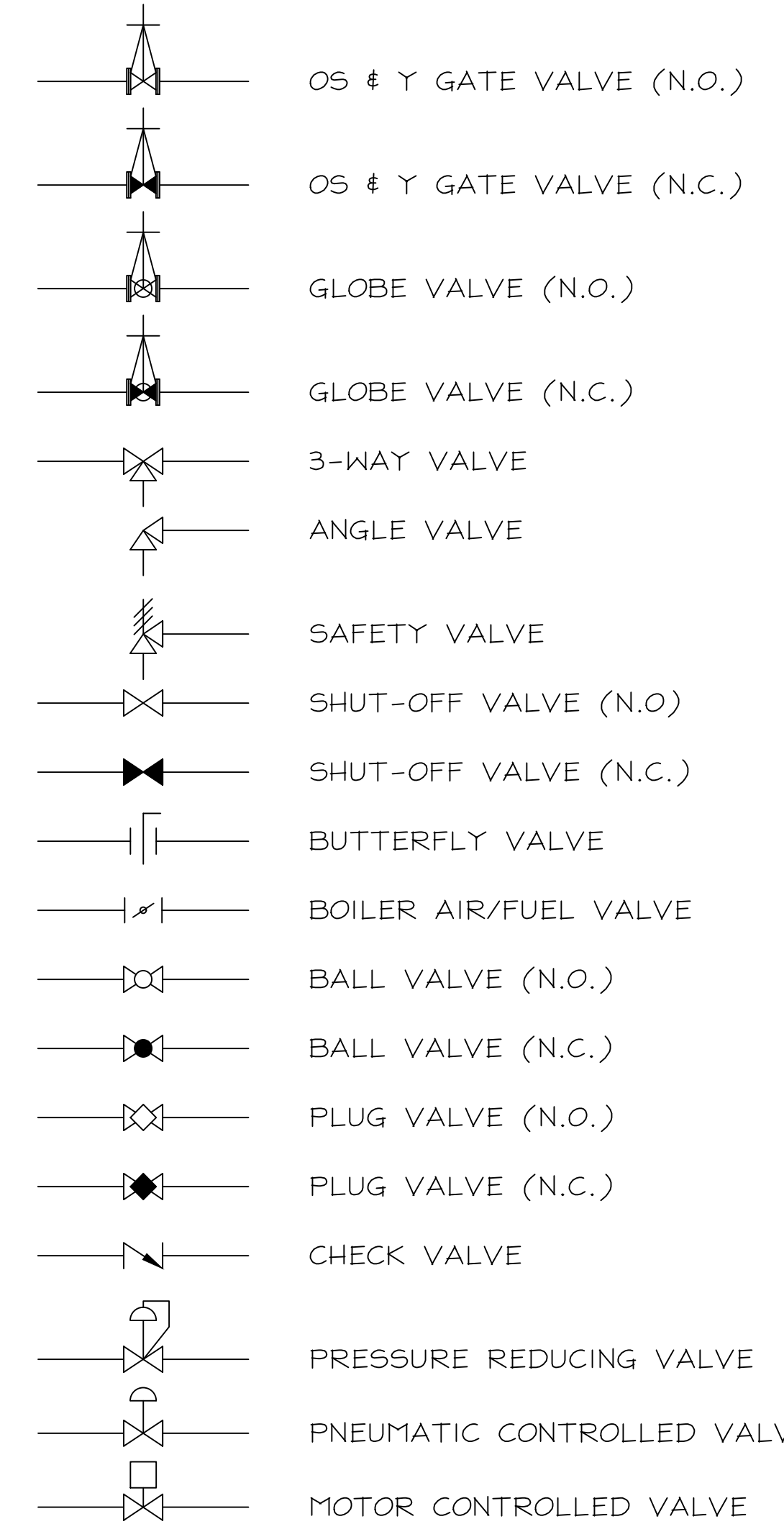
PIPING FITTINGS



PIPING SPECIALTY ITEMS



VALVE SYMBOLS



MECHANICAL ABBREVIATIONS

ADD.	ADDITIVE
A.F.F.	ABOVE FINISHED FLOOR
ALT.	ALTERNATE
ANRV	AUTOMATIC NON-RETURN VALVE
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
APP.	APPLICATION
AV	AIR VENT
BAS	BUILDING AUTOMATION SYSTEM
BFW	BOILER FEEDWATER
BO.	BOILER
BTUH	BRITISH THERMAL UNIT / HR
BW	BLEND WATER
CEMS	CAMPUS-WIDE EMS
CHW	CHILLED WATER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
COMB. AIR	COMBUSTION AIR
COND.	CONDENSATE
CPD	CONDENSATE PUMPED DISCHARGE
CUH	CABINET UNIT HEATER
CW	CITY WATER
CV	CONNECTOR
DET	DETAIL
DN	DOWN
DWH	DOMESTIC WATER HEATER
ECON.	ECONOMIZER
EHP	EAST HEATING PLANT
EL/ELEV.	ELEVATION
EMS	ENERGY MANAGEMENT SYSTEM
FD	FLOOR DRAIN
FR	FROM
FTR	FINNED-TUBE RADIATION
GA	GAGE OR GAUGE
HPR	HIGH PRESSURE RETURN
HPS	HIGH PRESSURE STEAM
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
ID	INSIDE DIAMETER
INSUL.	INSULATION
KPPH	THOUSAND POUNDS PER HOUR
LPR	LOW PRESSURE RETURN
LPS	LOW PRESSURE STEAM
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTUH
MD	MANUAL DAMPER
MS	MOTOR STARTER
MZ	MULTI-ZONE
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
OA	OUTDOOR AIR
OAD	OUTDOOR AIR DAMPER
OAI	OUTDOOR AIR INTAKE
OAL	OUTDOOR AIR LOUVER
PPP	PRESSURE-POWERED PUMP
P&ID	PIPING & INSTRUMENTATION DIAGRAM
RH	RELATIVE HUMIDITY
RO	REVERSE OSMOSIS EQUIPMENT
RPM	REVOLUTION PER MINUTE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
RV	RELIEF VENT
ST	STEAM TRAP
STM	STEAM
SV	SAFETY VALVE
SW	SOFTWATER
T	THERMOSTAT
TYP.	TYPICAL
V.B.	VACUUM BREAKER
VIB.ISO.	VIBRATION ISOLATOR
UH	UNIT HEATER
V.I.F.	VERIFY IN FIELD
VTR	VENT THRU ROOF
W. DRUM	WATER DRUM
WHP	WEST HEATING PLANT
WPD	WATER PRESSURE DROP

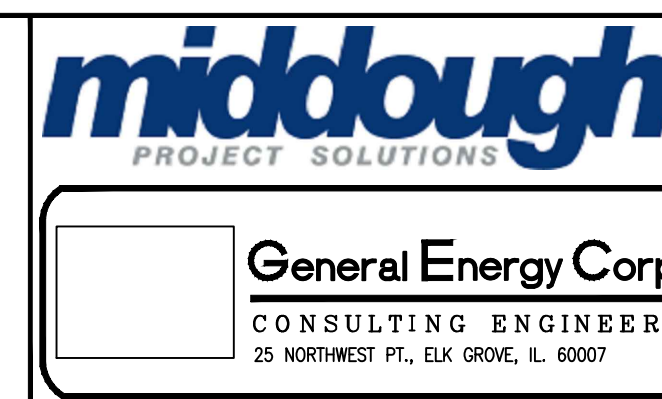
DRAWING LIST

H-0	SCHEMATIC DIAGRAM ABBREVIATIONS & SYMBOLS
HD-1	WHP GAS PIPING SCHEMATIC DIAGRAM
H-1	WHP GAS PIPING SCHEMATIC DIAGRAM
H-2	WHP HP STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
HD-2	WHP HP STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-2	WHP LP STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-3	WHP #1 BO. FEEDWATER PIPING SCHEMATIC DIAGRAM
HD-4	WHP #1 BO. FEEDWATER PIPING SCHEMATIC DIAGRAM
H-4	WHP #1 BO. FEEDWATER PIPING SCHEMATIC DIAGRAM
HD-5	WHP WATER TREATMENT PIPING SCHEMATIC DIAGRAM
H-5	WHP WATER TREATMENT PIPING SCHEMATIC DIAGRAM
H-6	EHP GAS PIPING SCHEMATIC DIAGRAM
HD-7	EHP HP STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-7	EHP HP STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-8	EHP LP STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
HD-9	EHP BO. FEEDWATER PIPING SCHEMATIC DIAGRAM
H-9	EHP BO. FEEDWATER PIPING SCHEMATIC DIAGRAM
H-10	EHP SOFTWATER PIPING SCHEMATIC DIAGRAM
H-11	TUNNEL PIPING SCHEMATIC DIAGRAM (FROM WHP)
H-12	TUNNEL PIPING SCHEMATIC DIAGRAM (FROM EHP)
H-13	WHP #2 FEEDWATER PIPING SCHEMATIC DIAGRAM
H-14	WHP CHEMICAL ADDITIVES SCHEMATIC DIAGRAM
H-15	WHP BOILERS 5 & 6 SCHEMATIC DIAGRAM
H-16	WHP INSTRUMENTATION AIR DIAGRAM
H-17	WHP PFD AND MATERIAL BALANCE
H-18	NORTH WHP PIPE ROUTING SCHEMATIC
H-19	SOUTH WHP PIPE ROUTING SCHEMATIC
H-20	EHP PIPE ROUTING SCHEMATIC
H-21	SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES
H-22	FIRST FLOOR HVAC PIPING PLAN
H-23	SCHEDULES

REVISIONS

NO.	DATE	REMARKS	DRAWN FT	PREPARED FT
D	03/09/2021	REVISED BRIDGING DOCUMENTS	TRACED	APPROVED
C	01/10/2020	FINAL BRIDGING DOCUMENTS	---	---
B	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL	CHECKED	APPROVED
A	09/13/2019	ISSUED FOR REVIEW	GD	PM

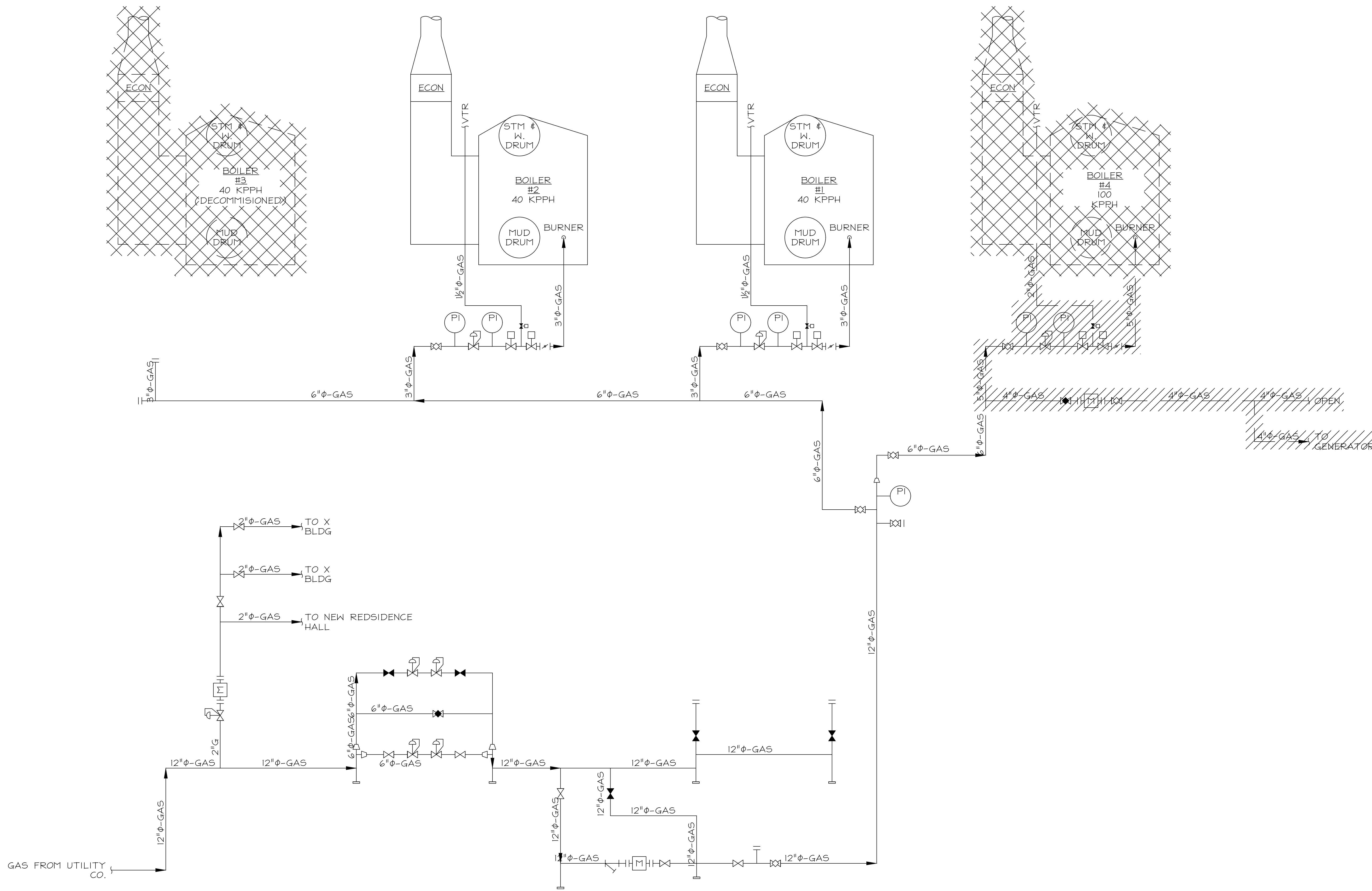
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State of Illinois
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 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

SCHEM. DIAG. ABBREVIATIONS & SYMBOLS	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. H-0
	OF (63) SHEETS

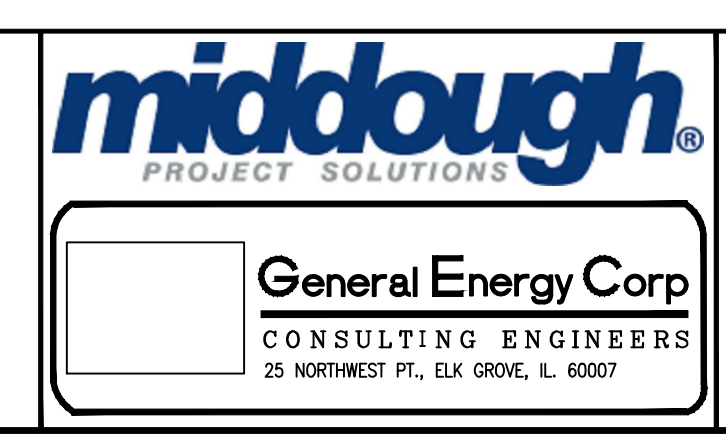


1 WEST HEATING PLANT GAS PIPING SCHEMATIC DIAGRAM
 HD-1 SCALE: NONE

REVISIONS		
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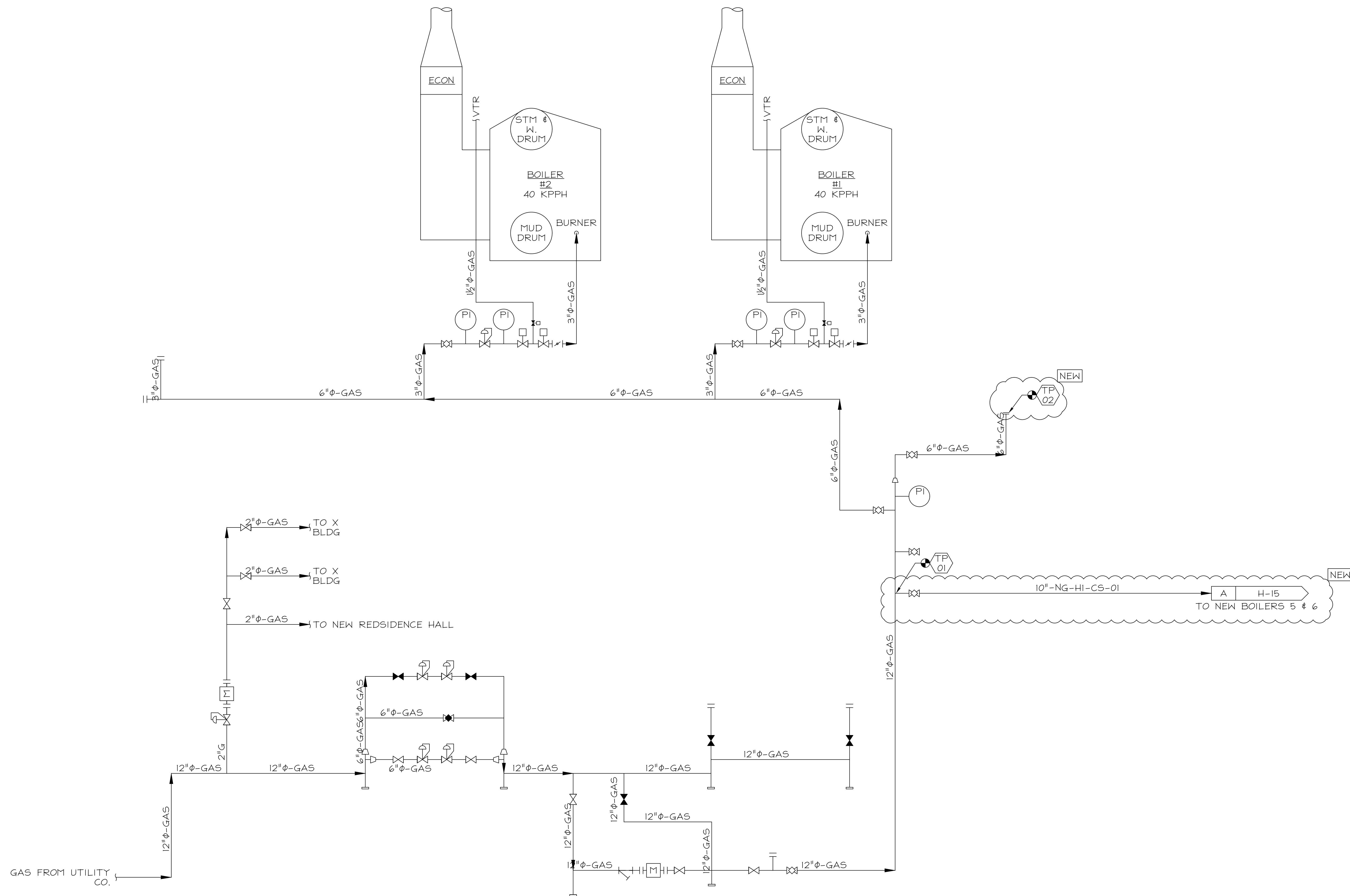
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FT	FT
TRACED	APPROVED
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CHECKED	APPROVED
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION		
WHP GAS PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127	DATE 03/09/2021
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	SHEET NO. HD-1	OF (63) SHEETS

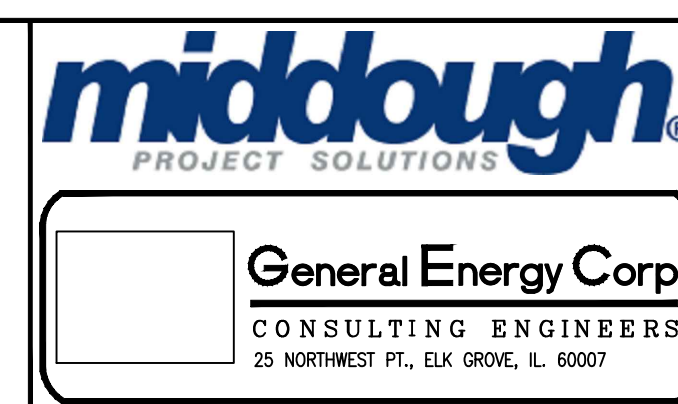


1 WEST HEATING PLANT GAS PIPING SCHEMATIC DIAGRAM
H-1 SCALE: NONE

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

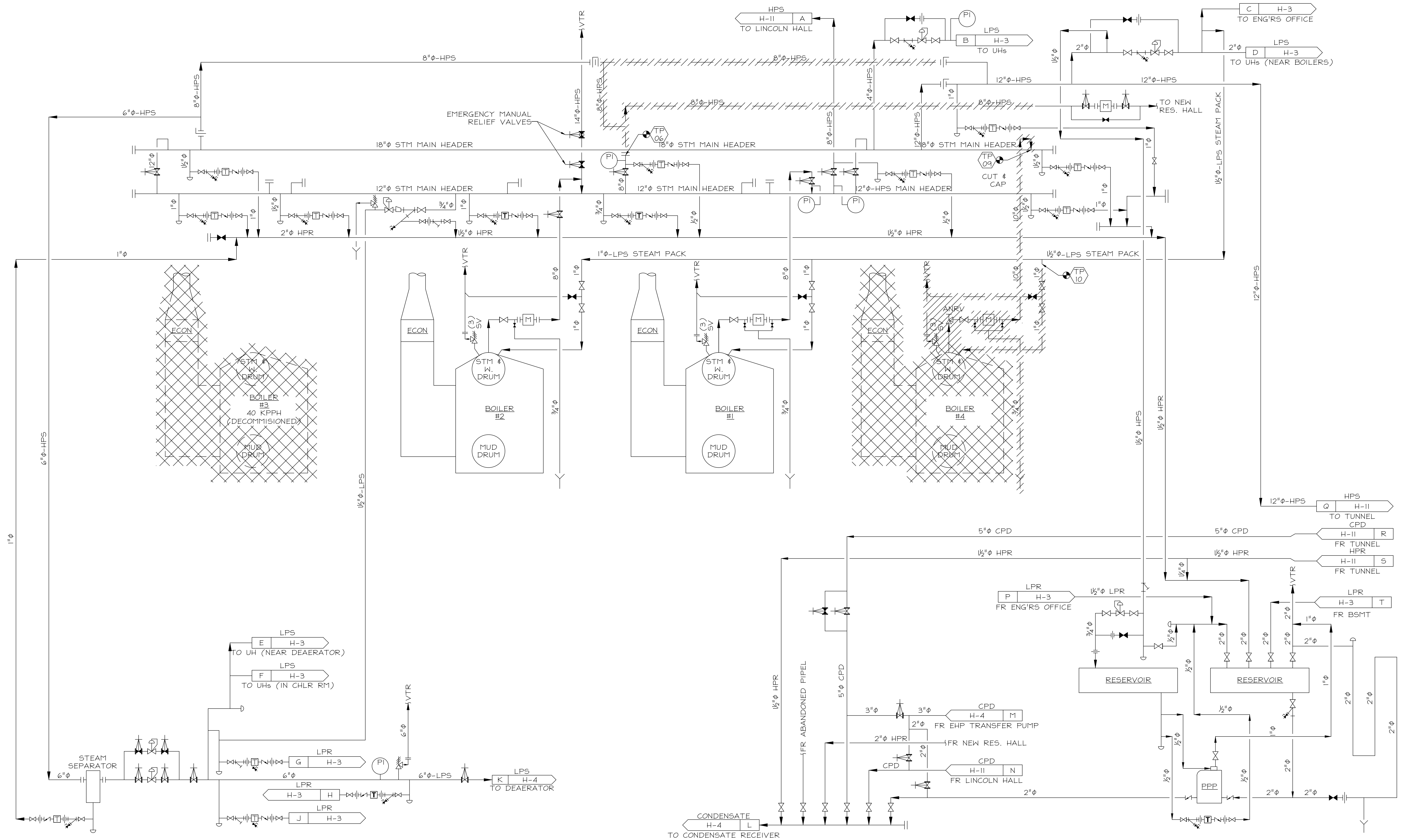
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WHP GAS PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. H-1
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1 WHP HIGH PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
 HD-2 SCALE: NONE

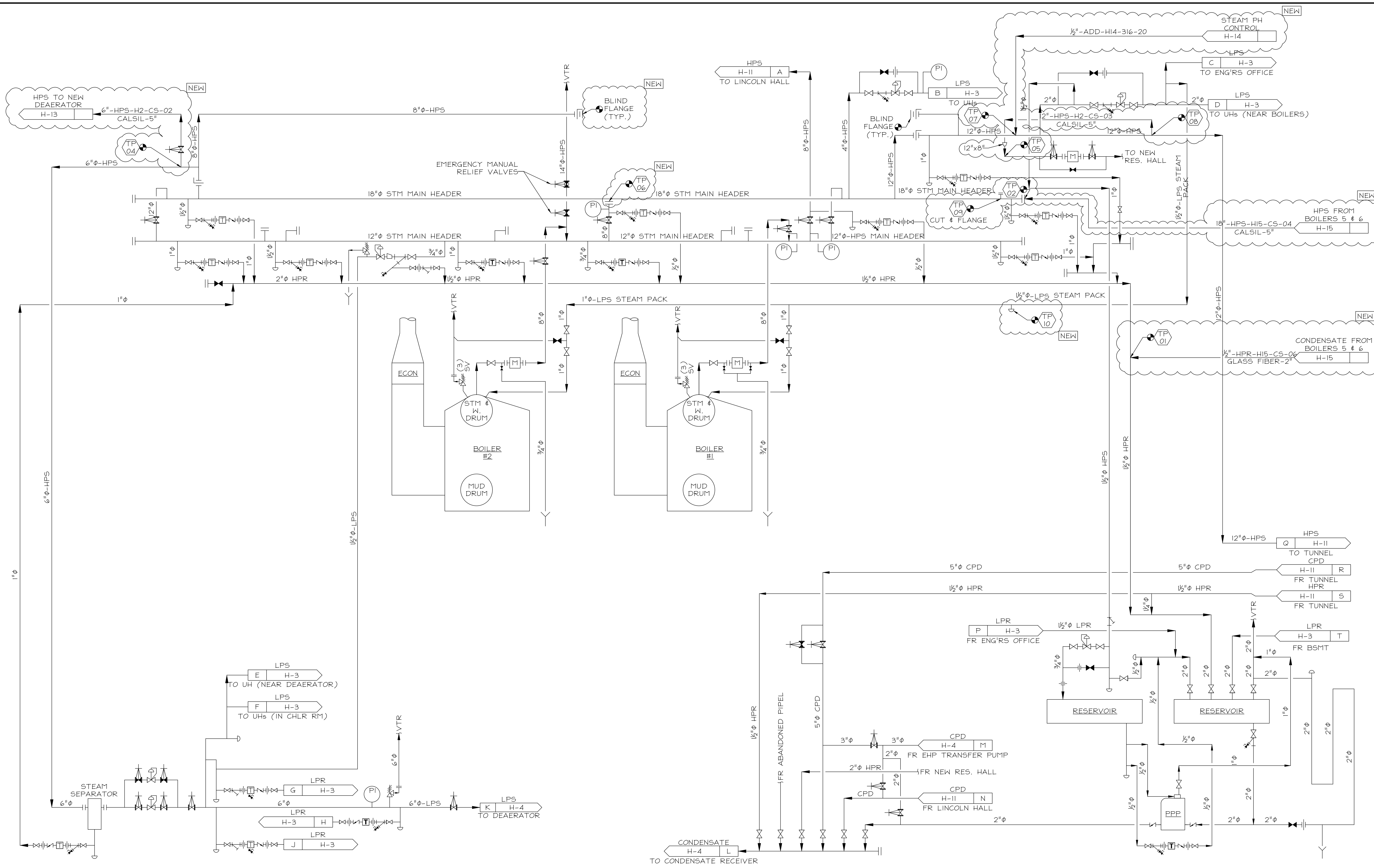
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NO.	DATE	FT	FT
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 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
WHP HP STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. HD-2
	OF (63) SHEETS



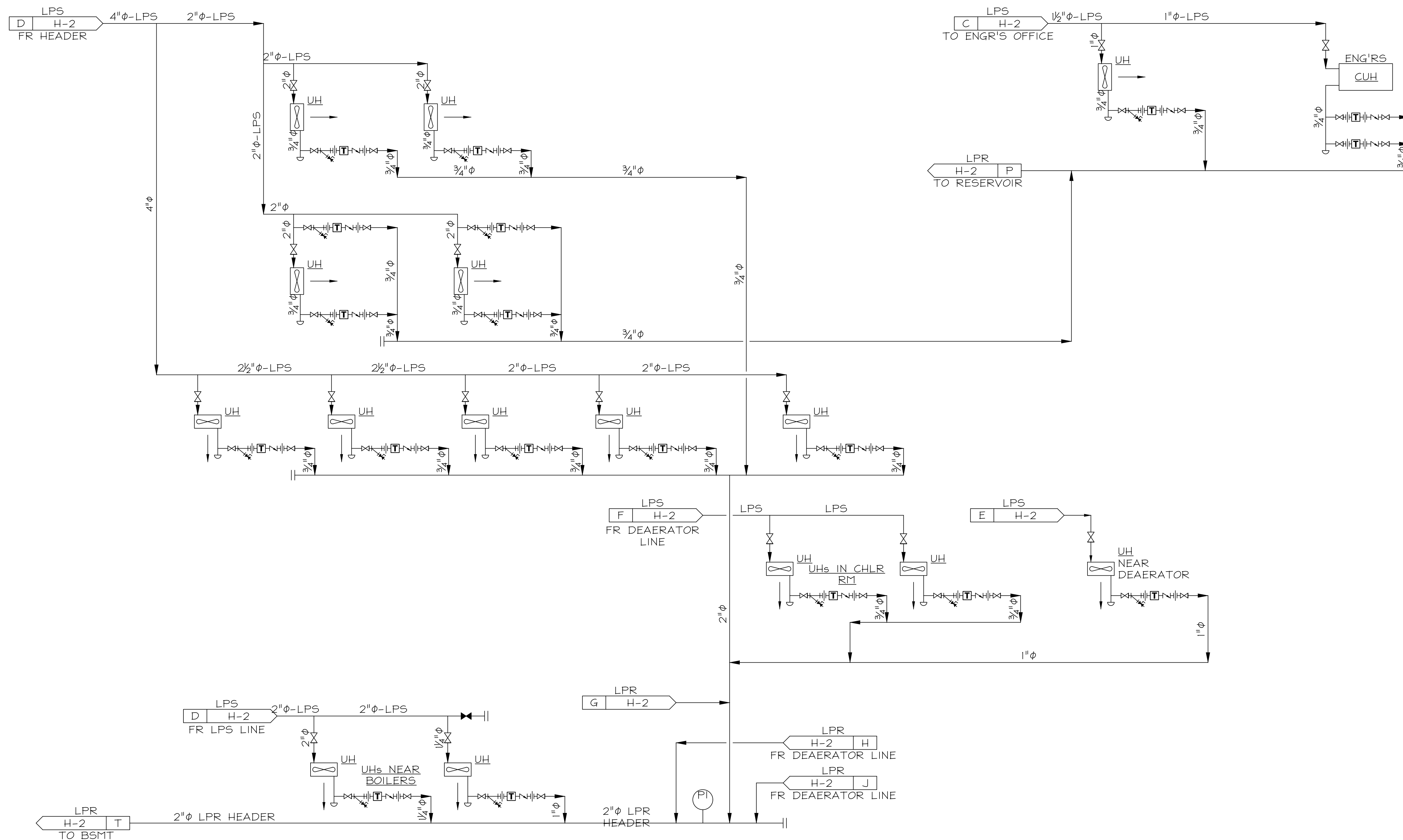
1 WHP HIGH PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
 H-2 SCALE: NONE

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TRACED	APPROVED	
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CHECKED GD	APPROVED PM	

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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
WHP HP STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-2
	OF (63) SHEETS



1 WHP LOW PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-3 SCALE: NONE

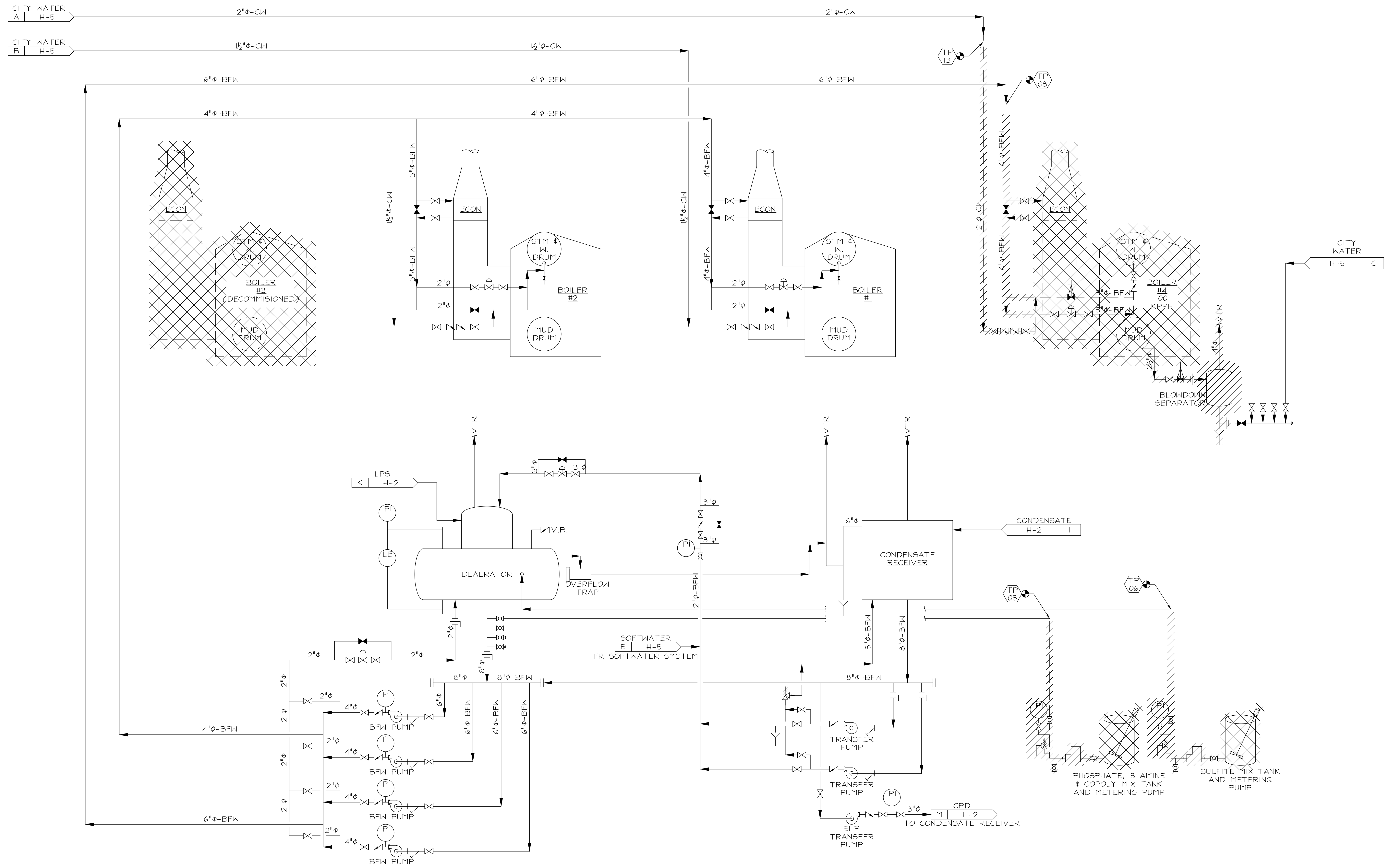
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CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-3
	OF (63) SHEETS



1 WHP BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM
 HD-4 SCALE: NONE

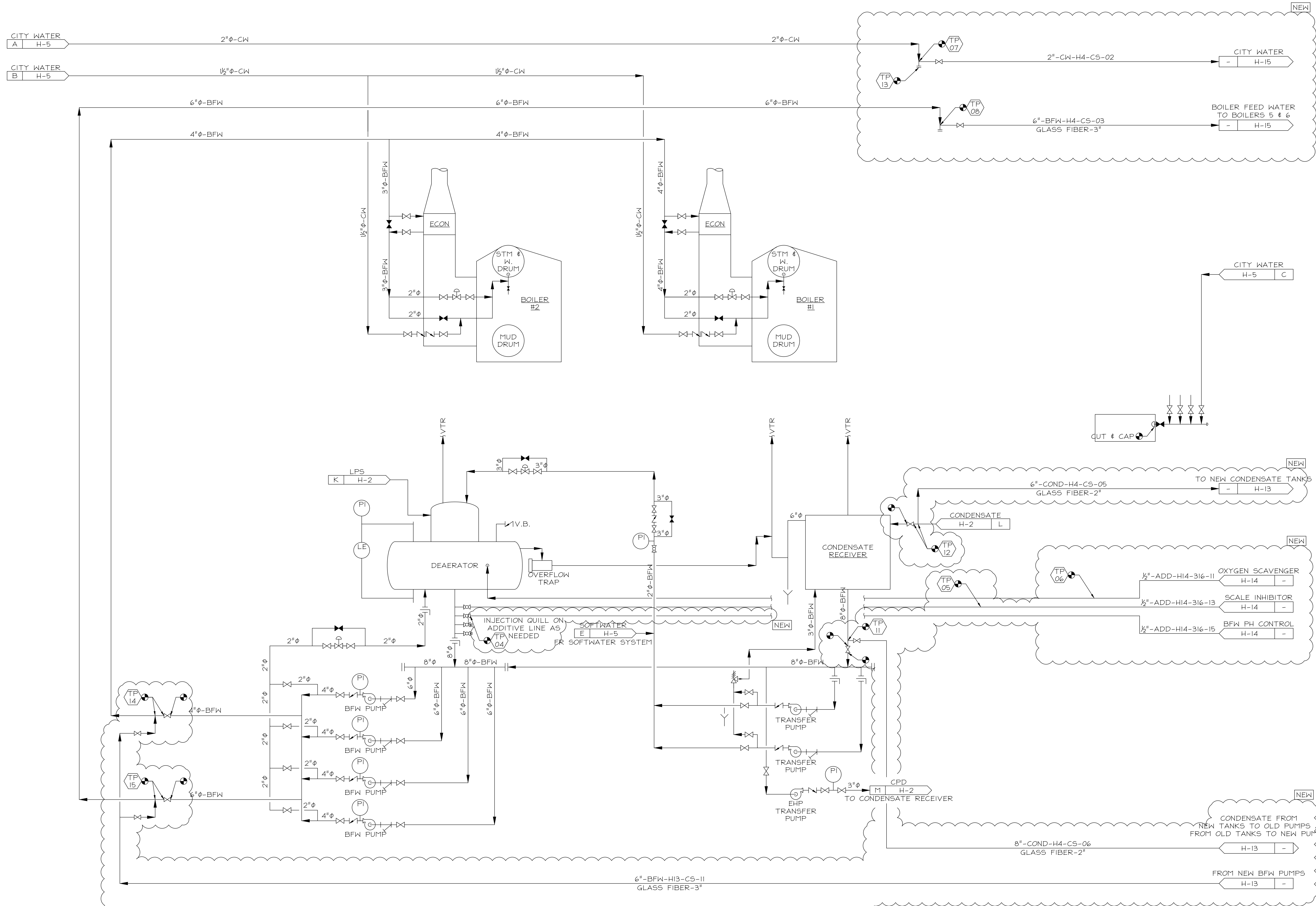
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State of Illinois
JB PRITZKER, GOVERNOR
 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
WHP BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. HD-4 OF (63) SHEETS



1 WHP BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM
H-4 SCALE: NONE

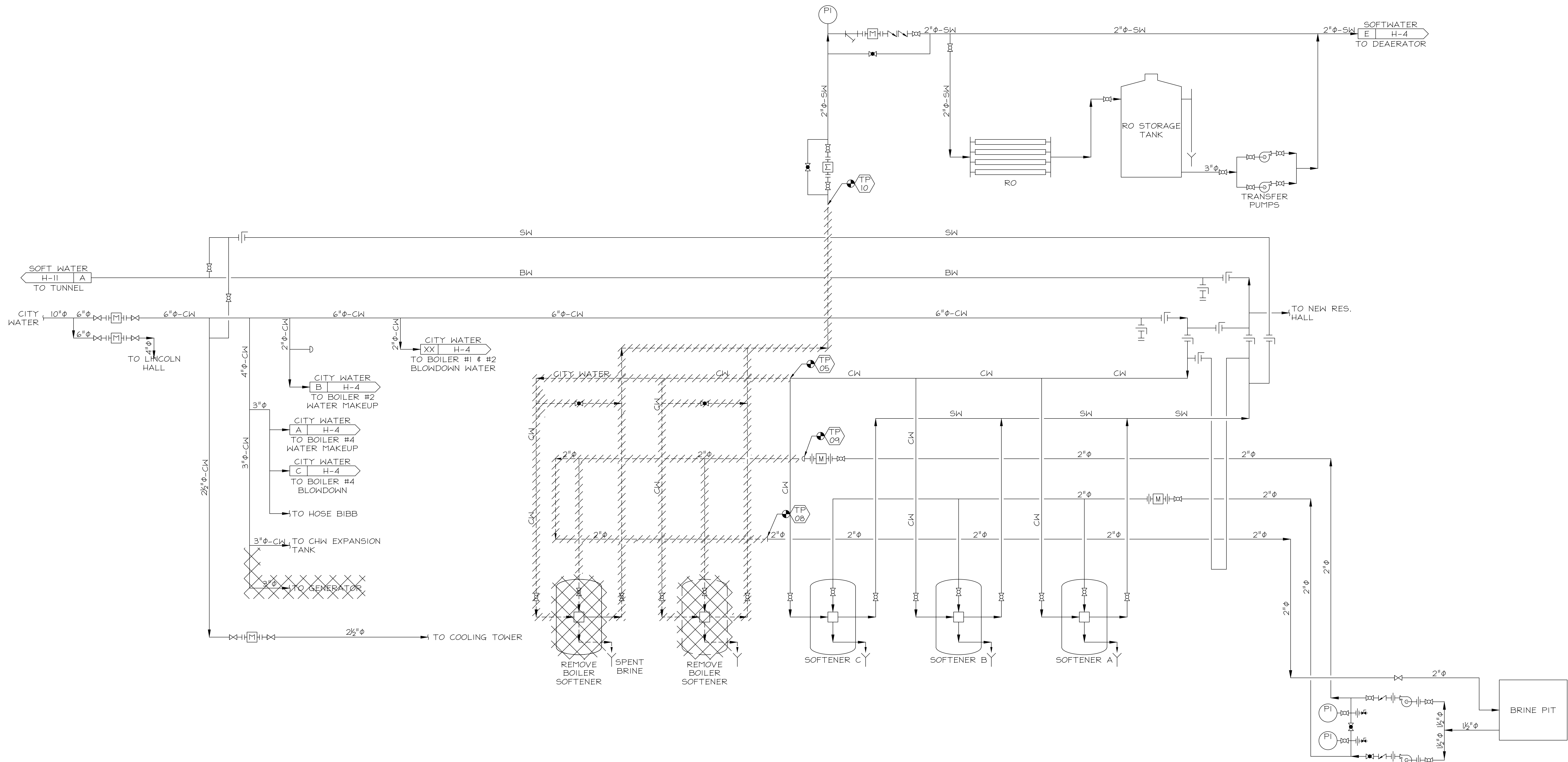
REVISIONS			DRAWN	PREPARED
NO.	DATE	REMARKS	FT	FT
D	03/09/2021	REVISED BRIDGING DOCUMENTS	TRACED	APPROVED
C	01/10/2020	FINAL BRIDGING DOCUMENTS	---	---
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State of Illinois
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
WHP BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-4
	OF (63) SHEETS



1 WHP WATER TREATMENT PIPING SCHEMATIC DIAGRAM
 HD-5 SCALE: NONE

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

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NO.	DATE	REMARKS	FT	FT
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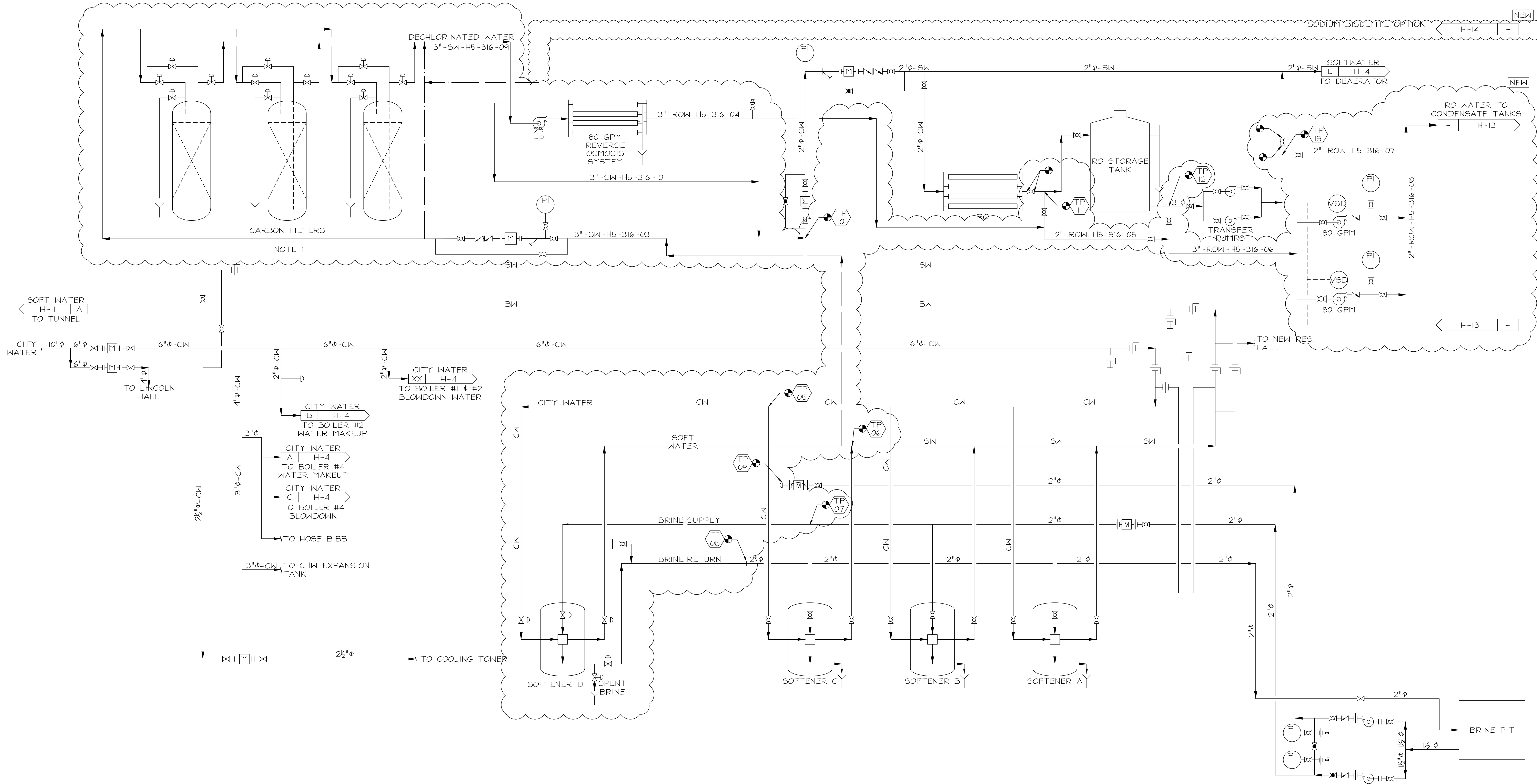
middough
PROJECT SOLUTIONS

General Energy Corp
CONSULTING ENGINEERS
25 NORTHWEST PL., ELK GROVE, IL 60007

Capital Development Board
Building a Better Tomorrow

State of Illinois
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WHP WATER TREATMENT PIPING SCHEMATIC DIAGRAM		PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS		DATE 03/09/2021
		SHEET NO. HD-5
		OF (63) SHEETS



NOTE 1: BETTERMENT NO. 2 - USES SODIUM BISULFITE FOR DECHLORINATION IN LIEU OF THE THREE CARBON FILTERS

1 WHP WATER TREATMENT PIPING SCHEMATIC DIAGRAM
H-5 SCALE: NONE

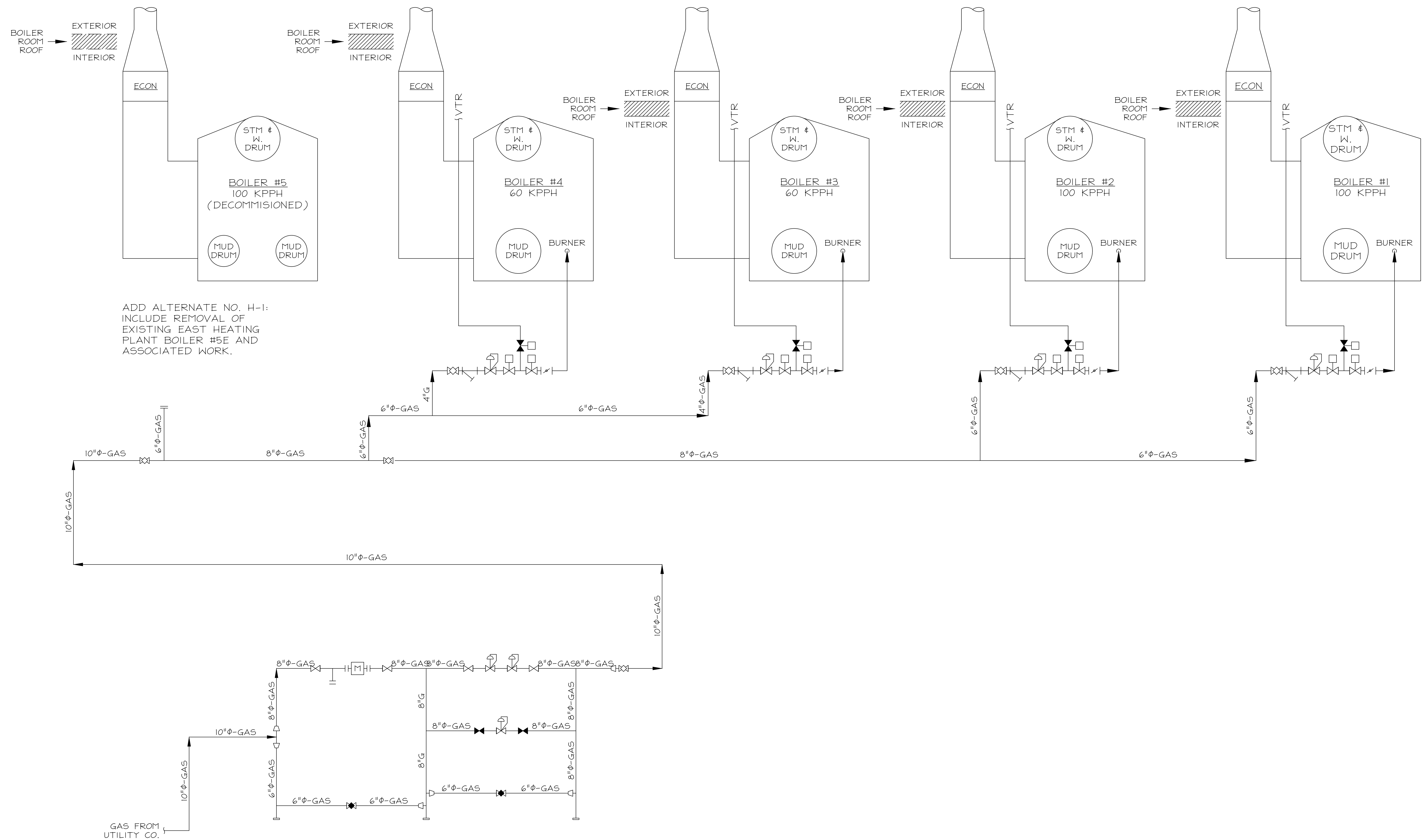
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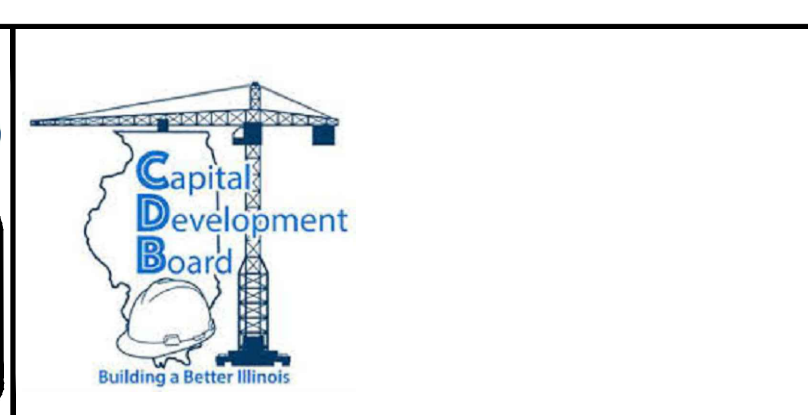
REVISIED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
WHP WATER TREATMENT PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-5
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1 EAST HEATING PLANT GAS PIPING SCHEMATIC DIAGRAM
HD-6 SCALE: NONE

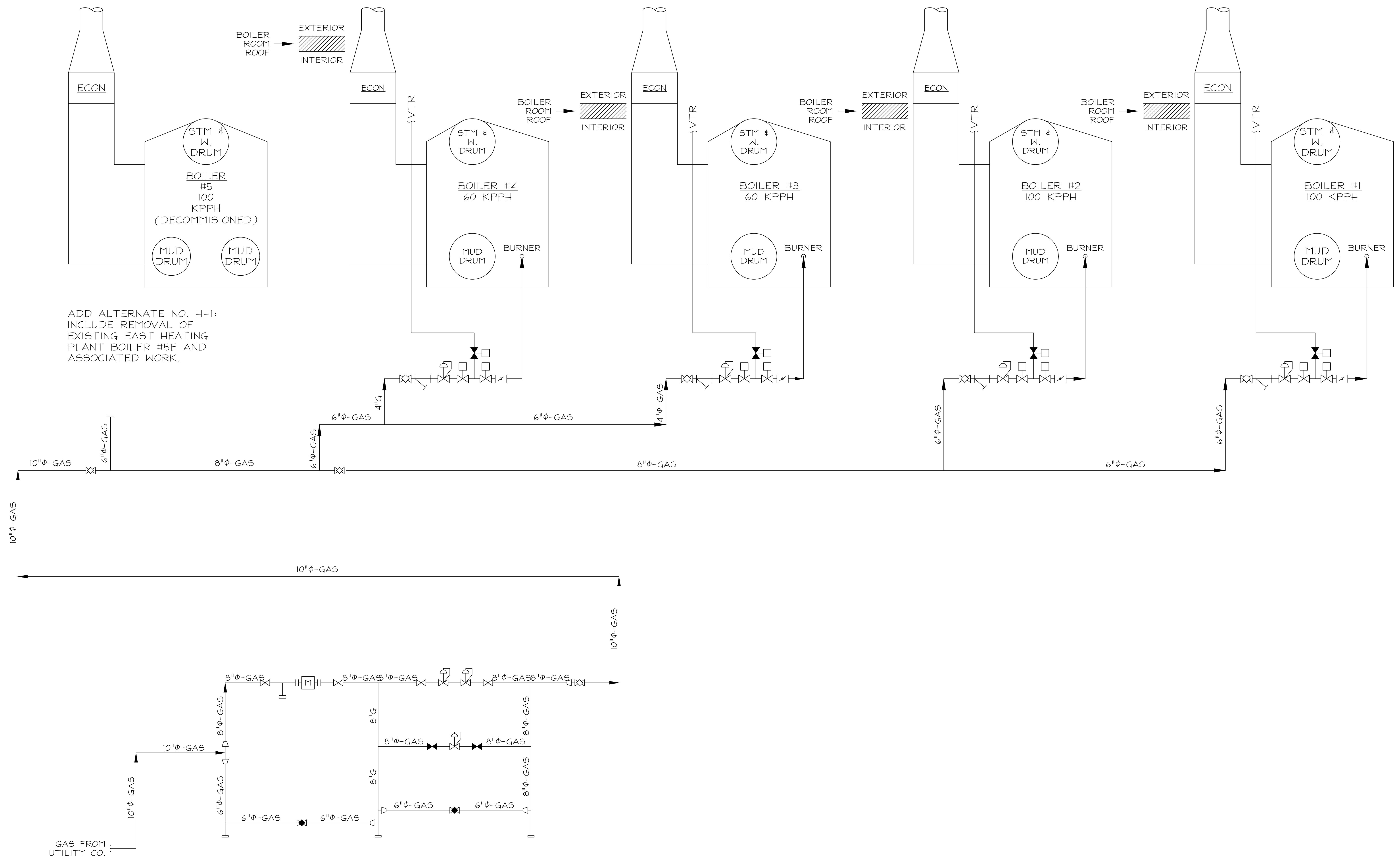
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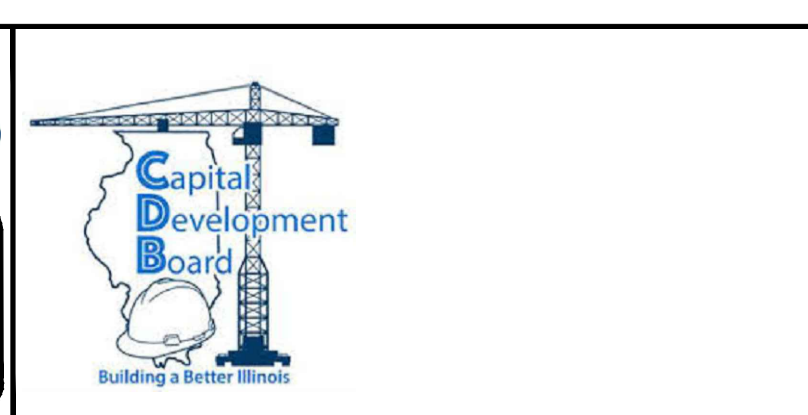
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
EHP GAS PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. HD-6
	OF (63) SHEETS



1 EAST HEATING PLANT GAS PIPING SCHEMATIC DIAGRAM
H-6 SCALE: NONE

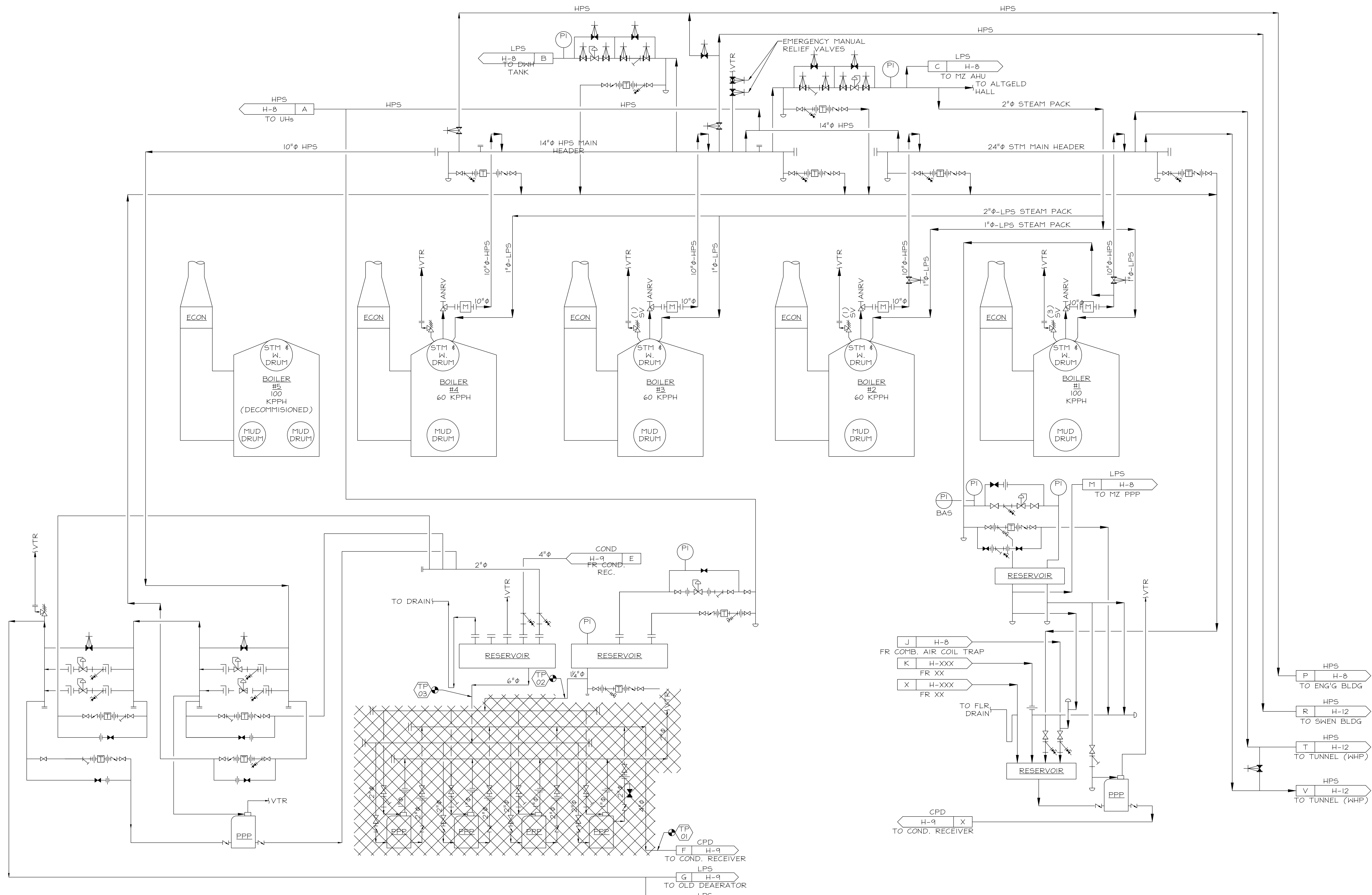
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State of Illinois
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Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
EHP GAS PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-6
	OF (63) SHEETS



1 EHP HIGH PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
 HD-7 SCALE: NONE

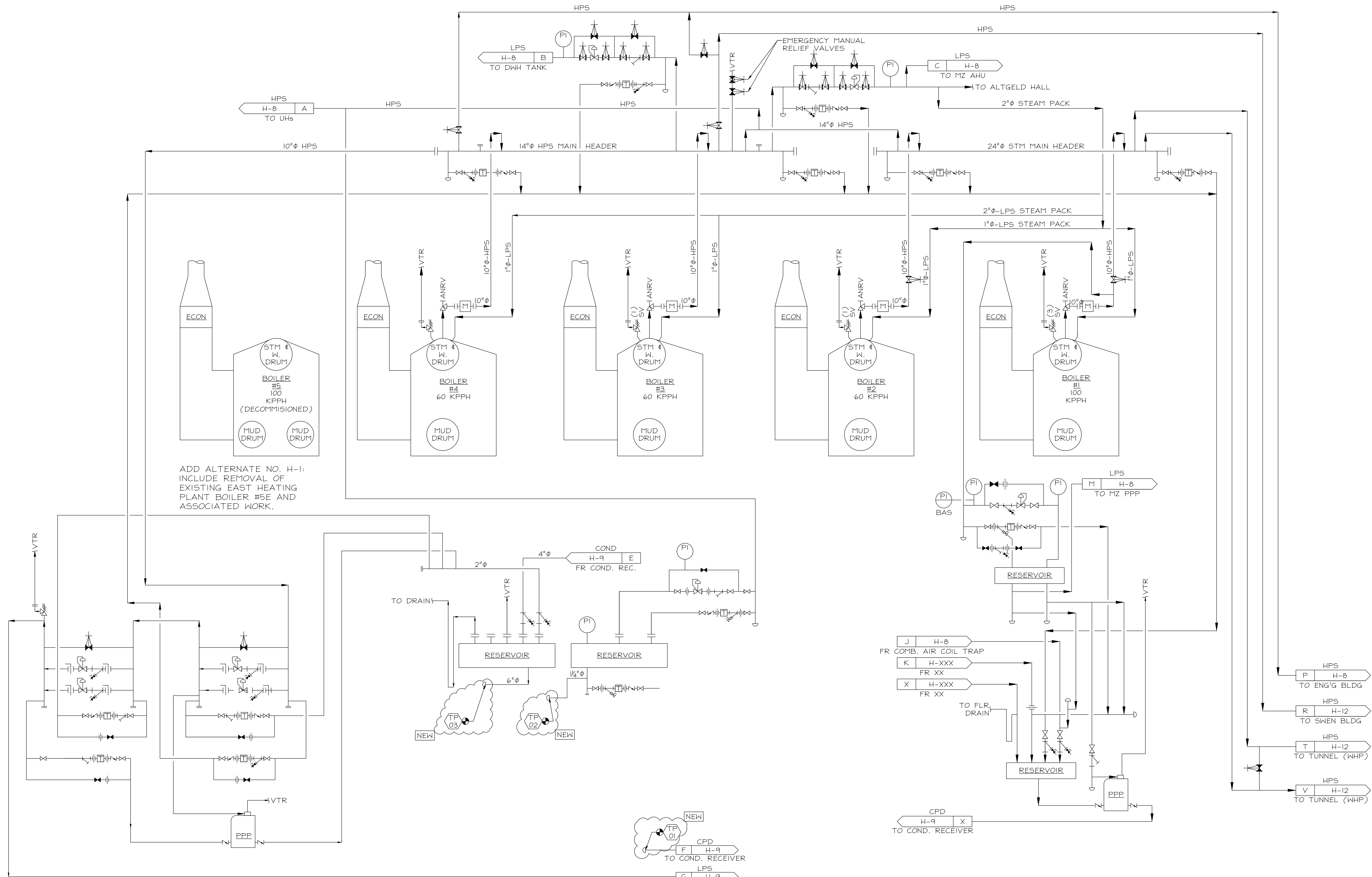
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NO.	DATE	FT	FT
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REVISIED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
EHP HP STEAM/CONDENSATE PIPING SCHEM. DIAG.	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. HD-7
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ADD ALTERNATE NO. H-1:
INCLUDE REMOVAL OF
EXISTING EAST HEATING
PLANT BOILER #5E AND
ASSOCIATED WORK.

1 EHP HIGH PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
HD-7 SCALE: NONE

TO CLEAVER BROOKS DEAEATOR

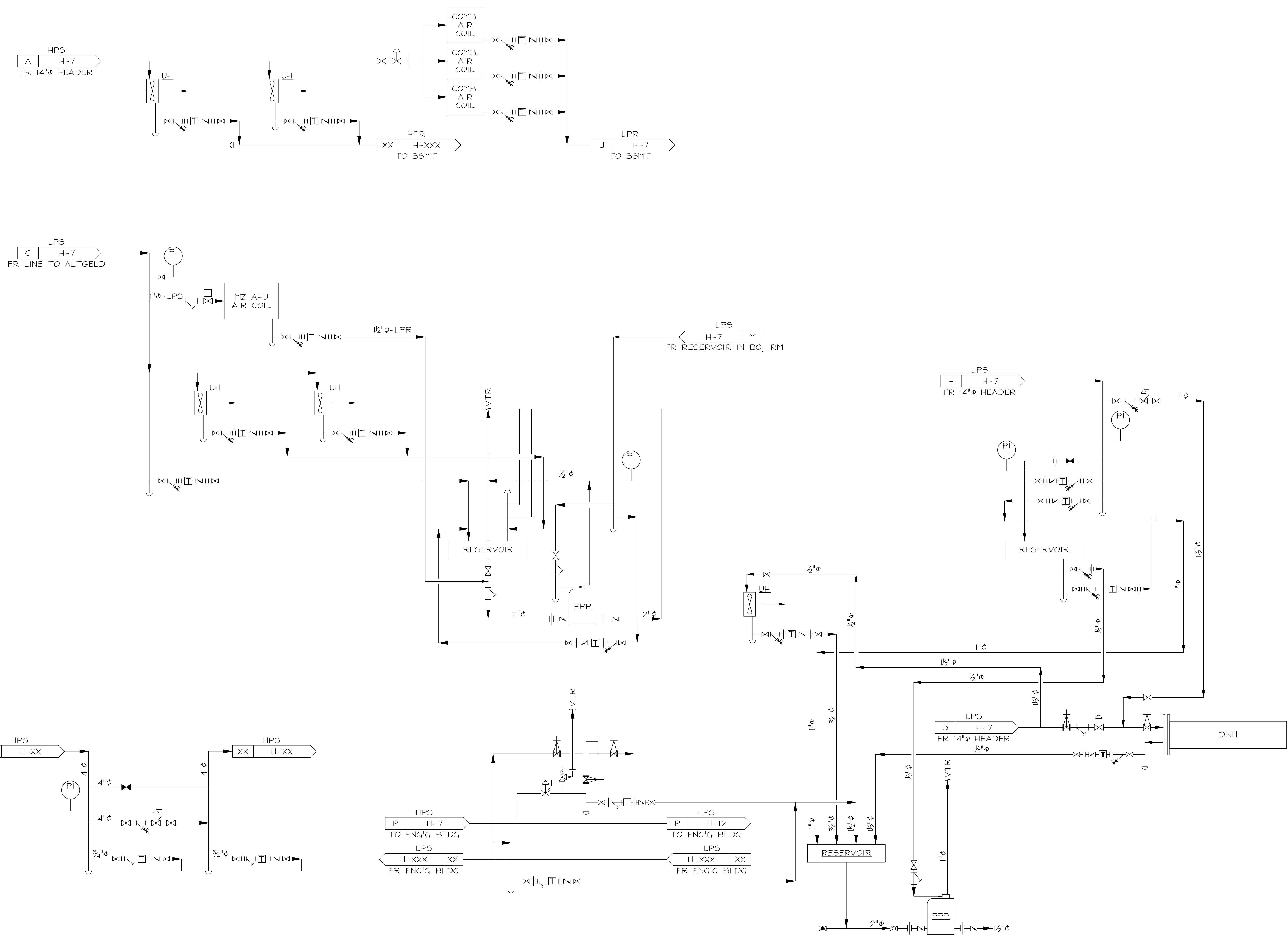
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
EHP HP STEAM/CONDENSATE PIPING SCHEM. DIAG.	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-7
	OF (63) SHEETS

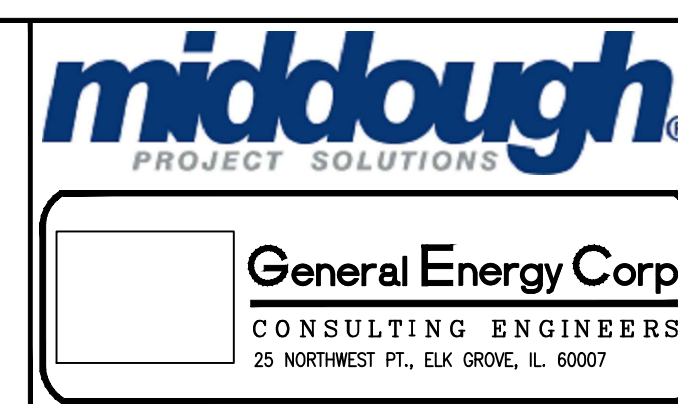


1 EHP LOW PRESSURE STEAM/CONDENSATE PIPING SCHEMATIC DIAGRAM
H-8 SCALE: NONE

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

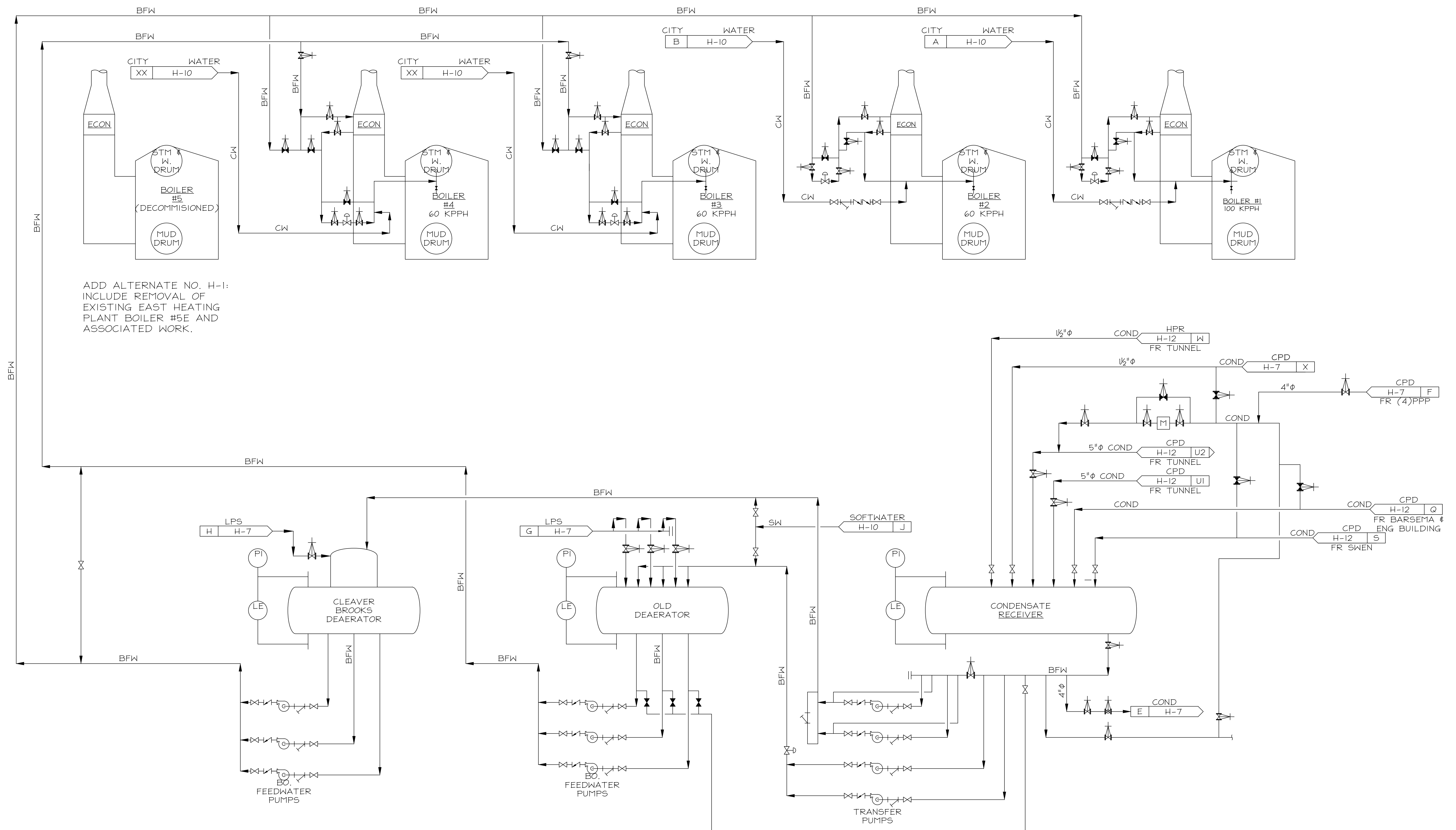
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EHP LP STEAM/COND PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. H-8
	OF (63) SHEETS



1 EHP BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM
HD-9 SCALE: NONE

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

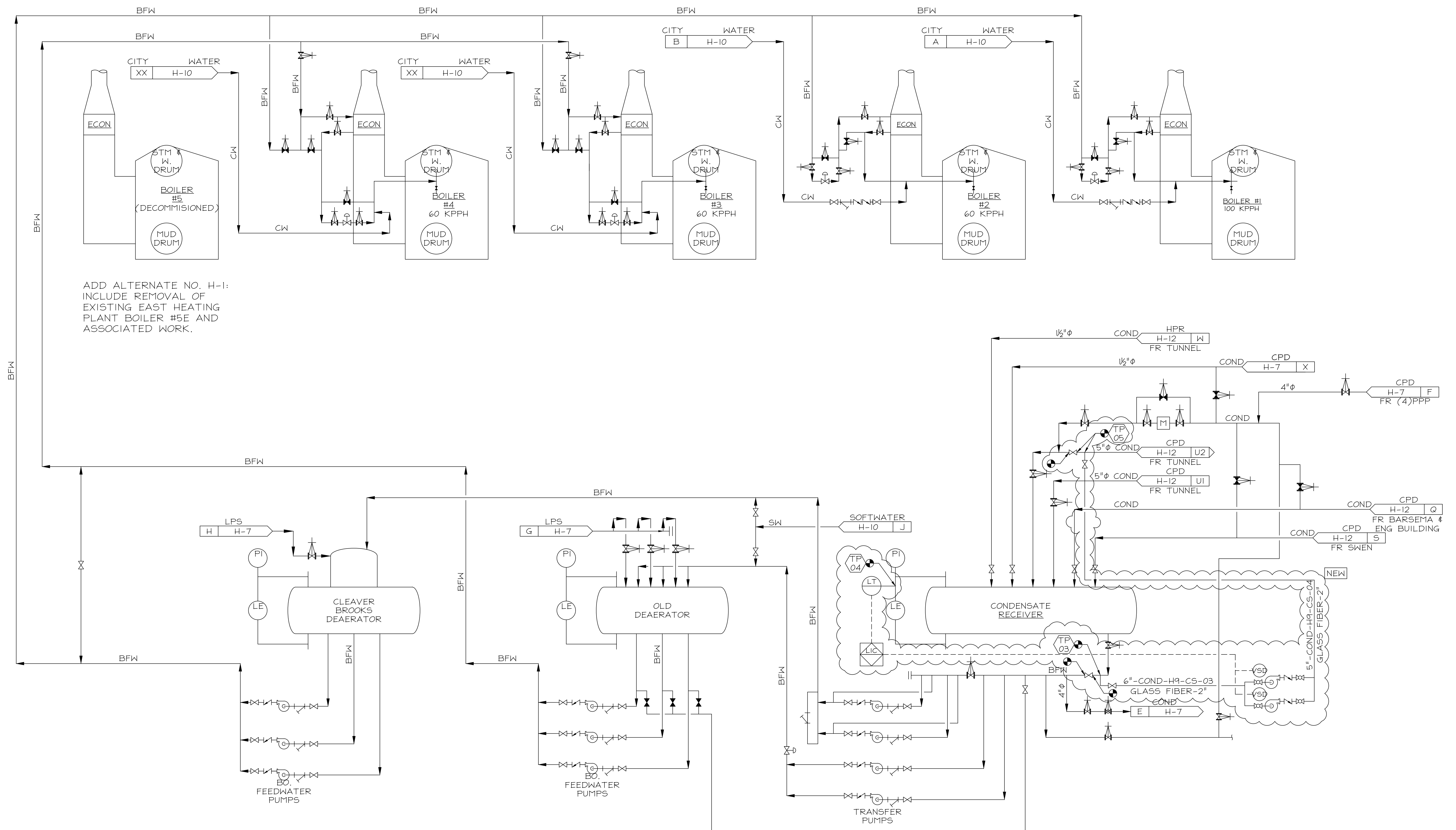
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EHP BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM		PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS		DATE 03/09/2021
		SHEET NO. HD-9
		OF (63) SHEETS



1 H-9 EHP BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM
SCALE: NONE

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

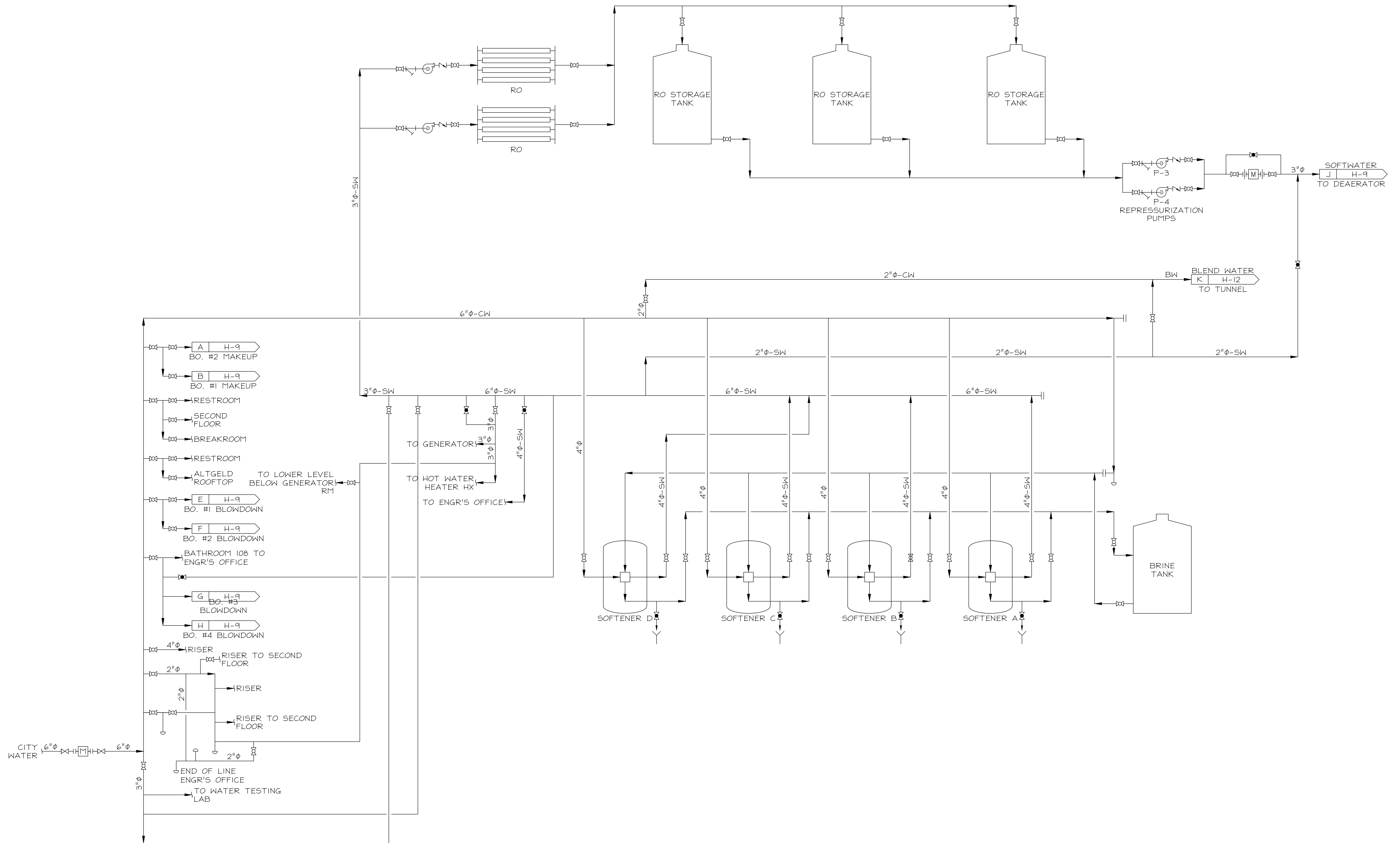
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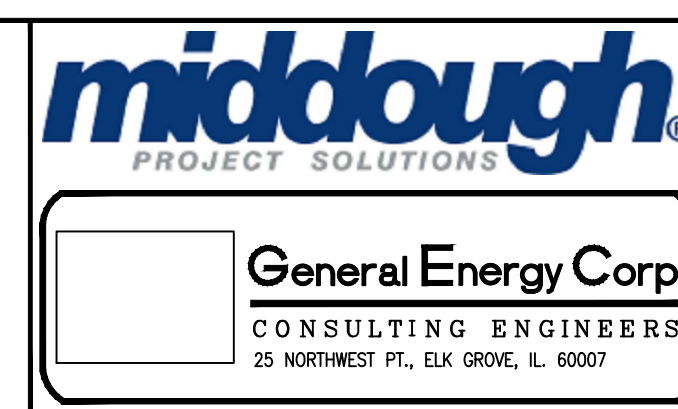
EHP BOILER FEEDWATER PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
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1 EHP WATER TREATMENT PIPING SCHEMATIC DIAGRAM
H-10 SCALE: NONE

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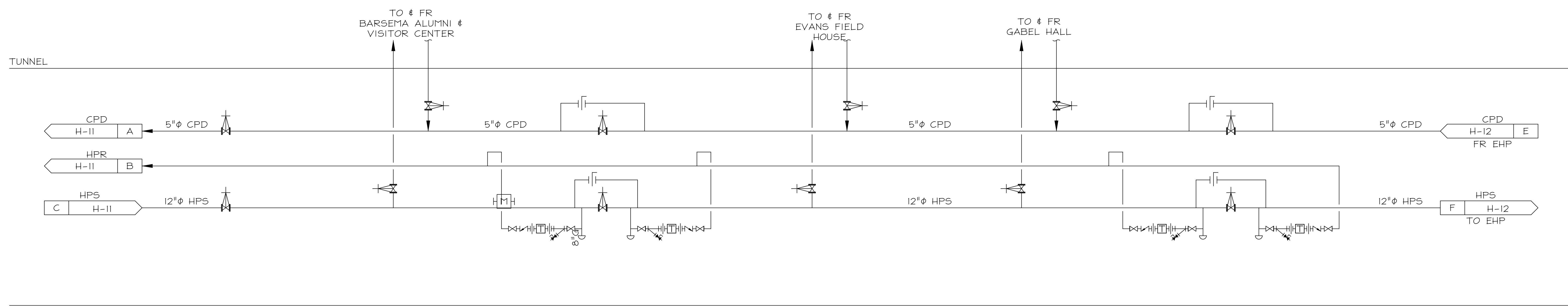
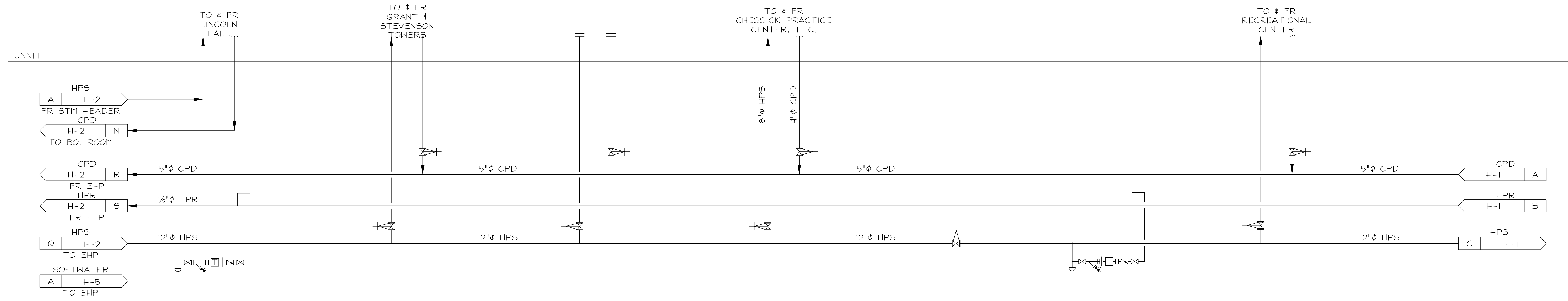
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State of Illinois
JB PRITZKER, GOVERNOR
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

EHP WATER TREATMENT PIPING SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-10
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1 TUNNEL PIPING SCHEMATIC DIAGRAM (FROM WEST HEATING PLANT)
H-11 SCALE: NONE

REVISIONS		
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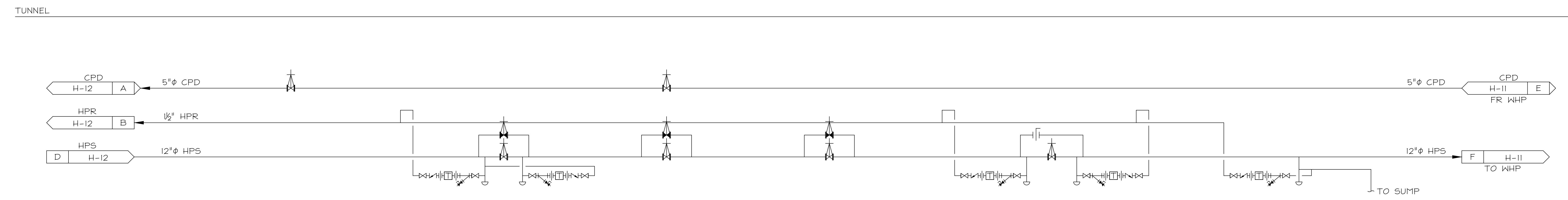
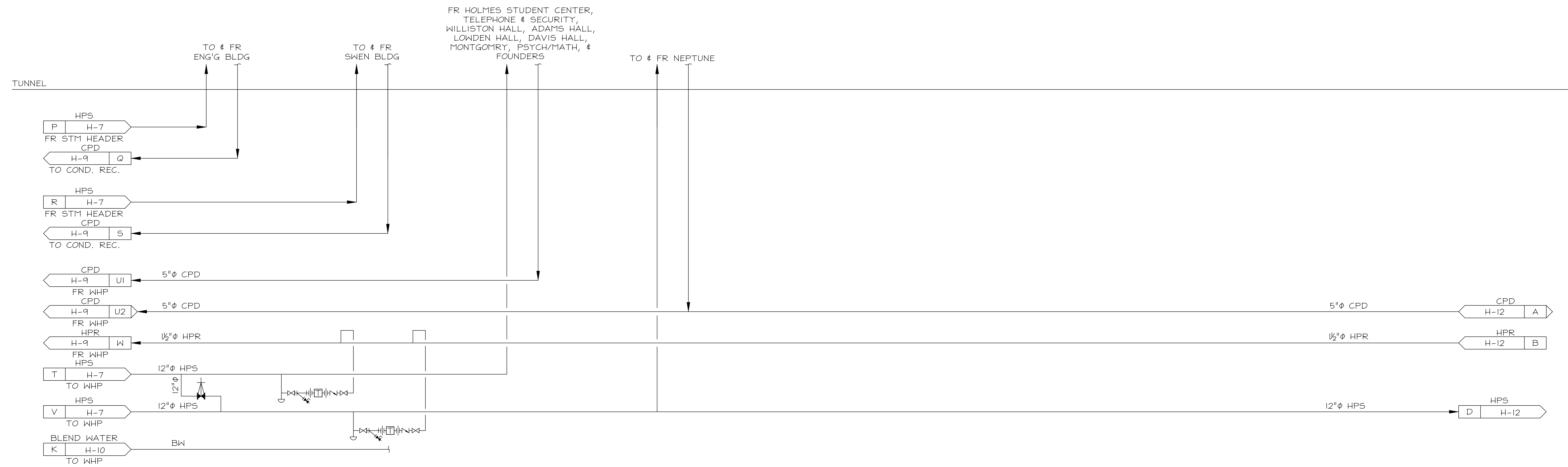
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TRACED	---	---	---
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
TUNNEL PIPING SCHEMATIC DIAGRAM (FROM WHP)	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-11
	OF (63) SHEETS



1 TUNNEL PIPING SCHEMATIC DIAGRAM (FROM EAST HEATING PLANT)
H-12 SCALE: NONE

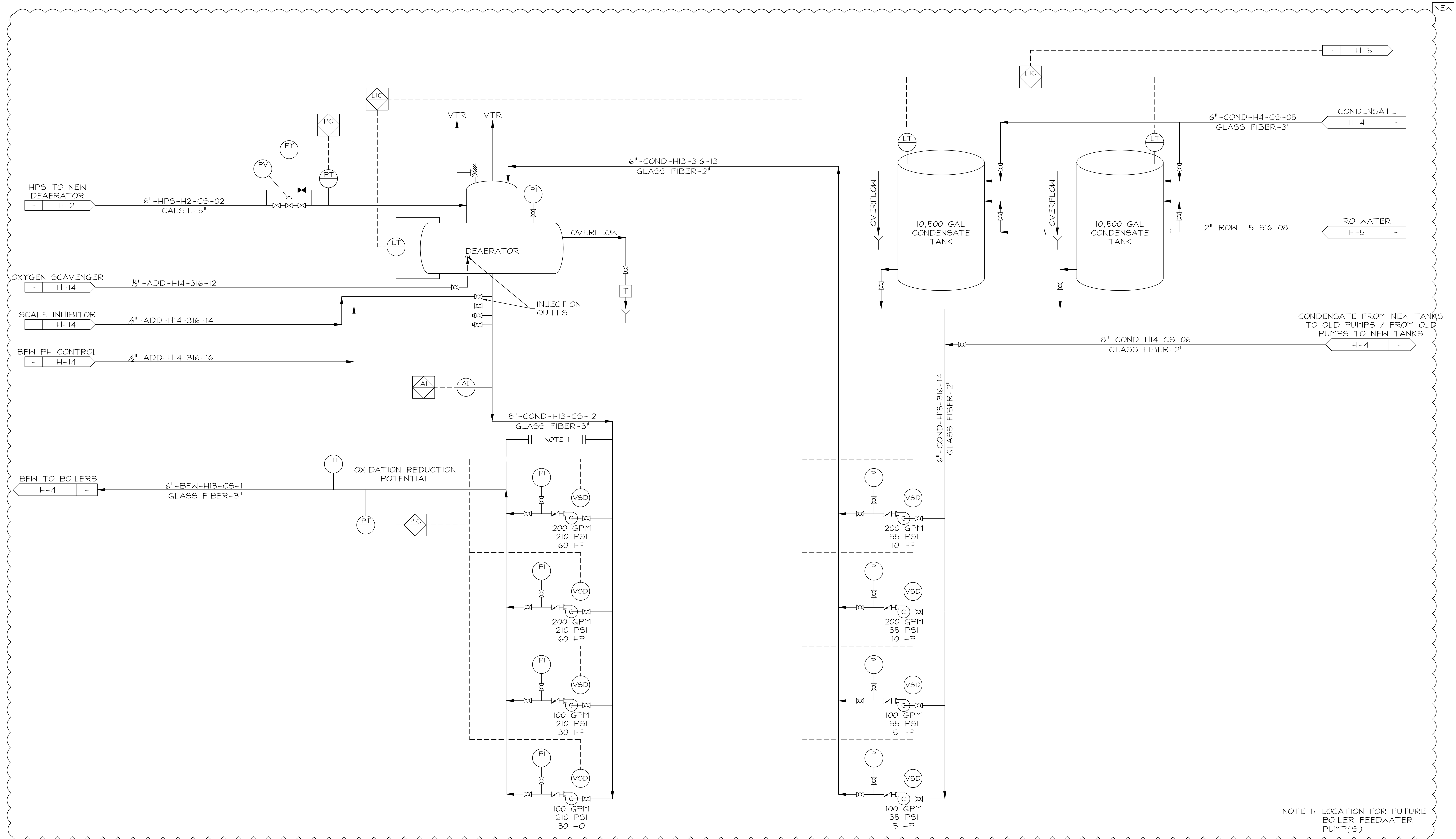
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REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
TUNNEL PIPING SCHEMATIC DIAGRAM (FROM EHP)	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. H-12
	OF (63) SHEETS



1 NEW DEAERATOR, TANKS, AND PUMPS SCHEMATIC DIAGRAM
H-13 SCALE: NONE

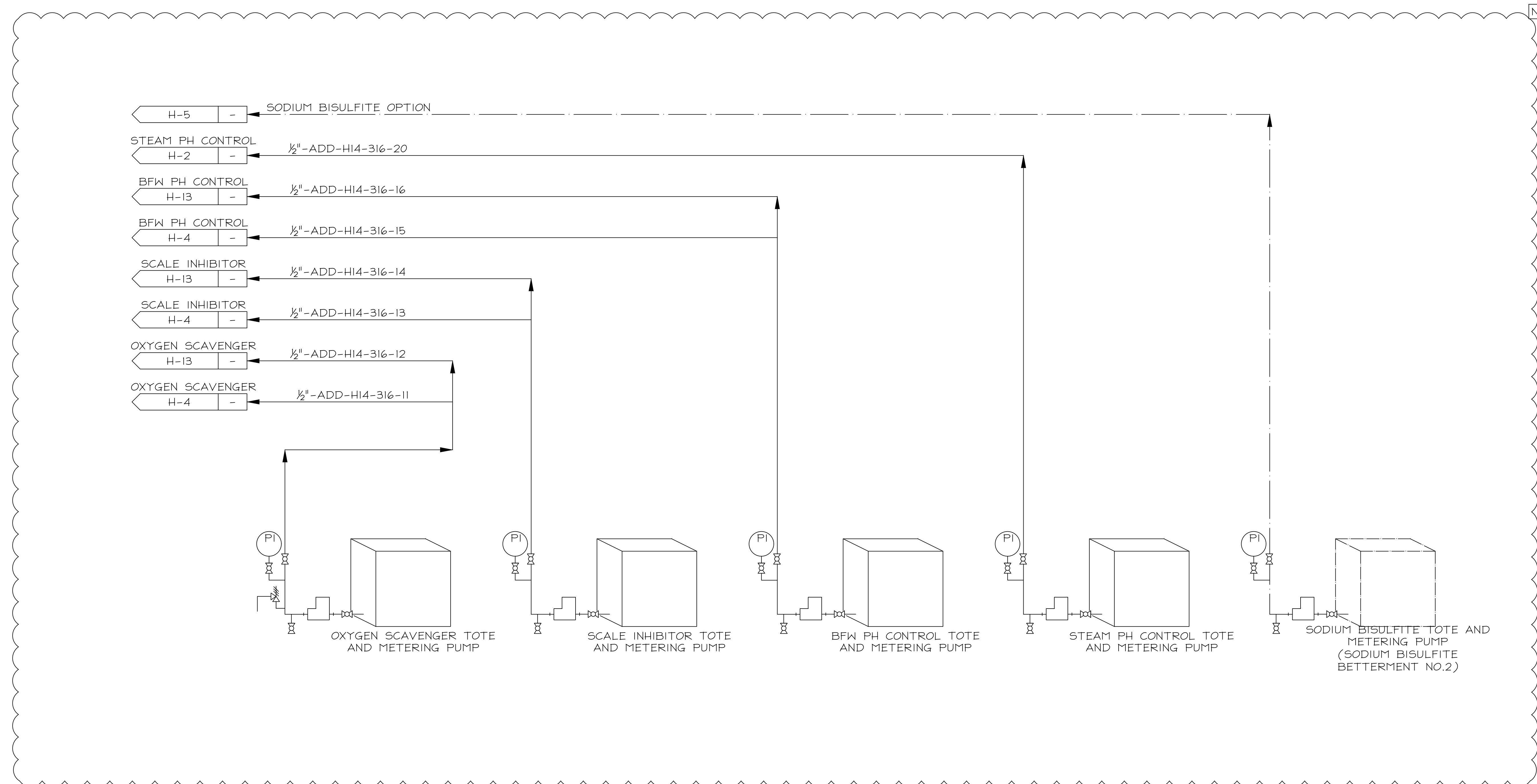
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Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
NEW DEAERATOR, TANKS, AND PUMPS SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. H-13
	OF (63) SHEETS



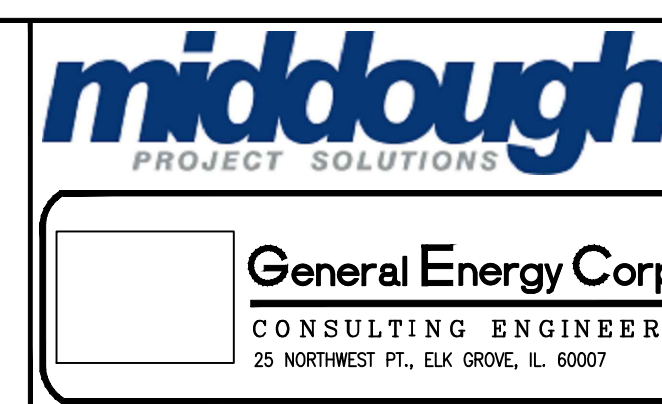
NEW

1 CHEMICAL ADDITIVES SCHEMATIC DIAGRAM
H-14 SCALE: NONE

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

REVISIONS			DRAWN	PREPARED
NO.	DATE	REMARKS	FT	FT
D	03/09/2021	REVISED BRIDGING DOCUMENTS	TRACED	APPROVED
C	01/10/2020	FINAL BRIDGING DOCUMENTS	---	---
B	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL	CHECKED	APPROVED
A	09/13/2019	ISSUED FOR REVIEW	GD	PM

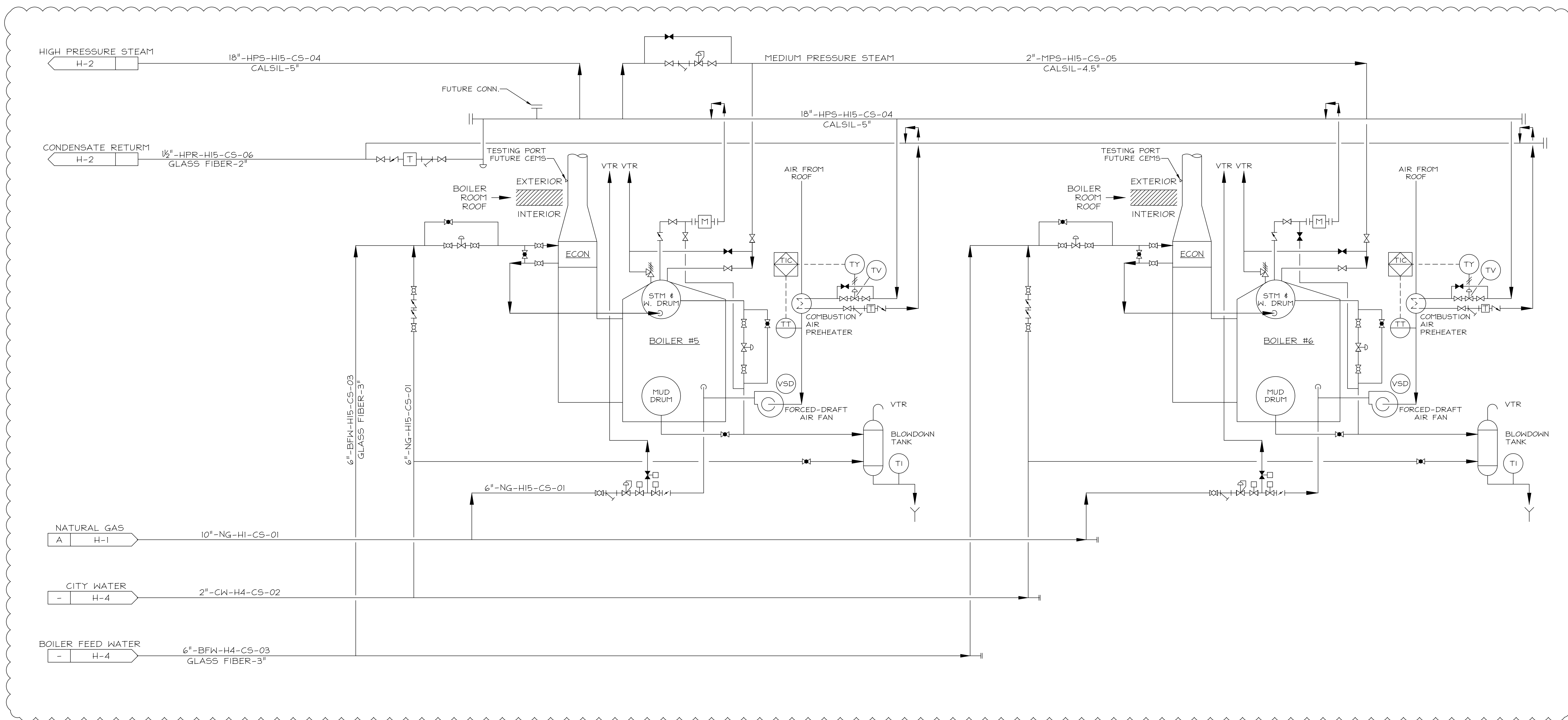
NOTE: DESIGN-BUILD ENTITY SHALL OBTAIN AND VERIFY ALL AS-BUILT CONDITIONS AND DIMENSIONS AT PROJECT SITE AND BE FULLY RESPONSIBLE FOR THE SAME. BRIDGING DOCUMENTS, DRAWINGS AND NARRATIVES ARE PROVIDED FOR DESIGN INTENT. THE DESIGN-BUILD ENTITY IS RESPONSIBLE FOR THE COMPLETE DESIGN OF A PROJECT THAT ADHERES TO ALL, SCOPE OF WORK REQUIREMENTS, CODES, STATE AND FEDERAL REGULATIONS AND GUIDELINES.



State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

CHEMICAL ADDITIVES SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. H-14
	OF (63) SHEETS

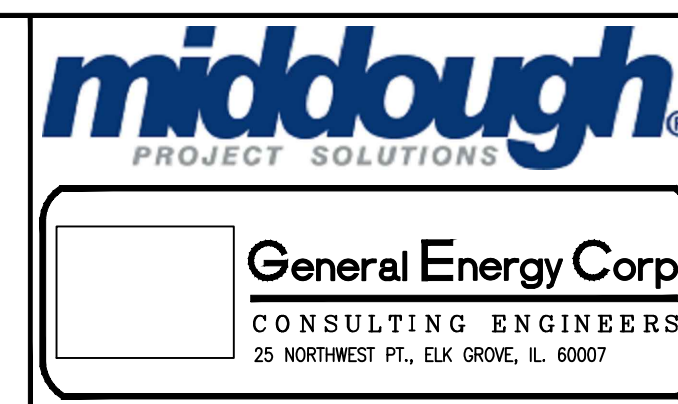
NEW



1 NEW BOILERS 5 & 6 SCHEMATIC DIAGRAM
H-15 SCALE: NONE

REVISIONS			DRAWN	PREPARED
NO.	DATE	REMARKS	FT	FT
D	03/09/2021	REVISED BRIDGING DOCUMENTS	TRACED	APPROVED
C	01/10/2020	FINAL BRIDGING DOCUMENTS	---	---
B	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL	CHECKED	APPROVED
A	09/13/2019	ISSUED FOR REVIEW	GD	PM

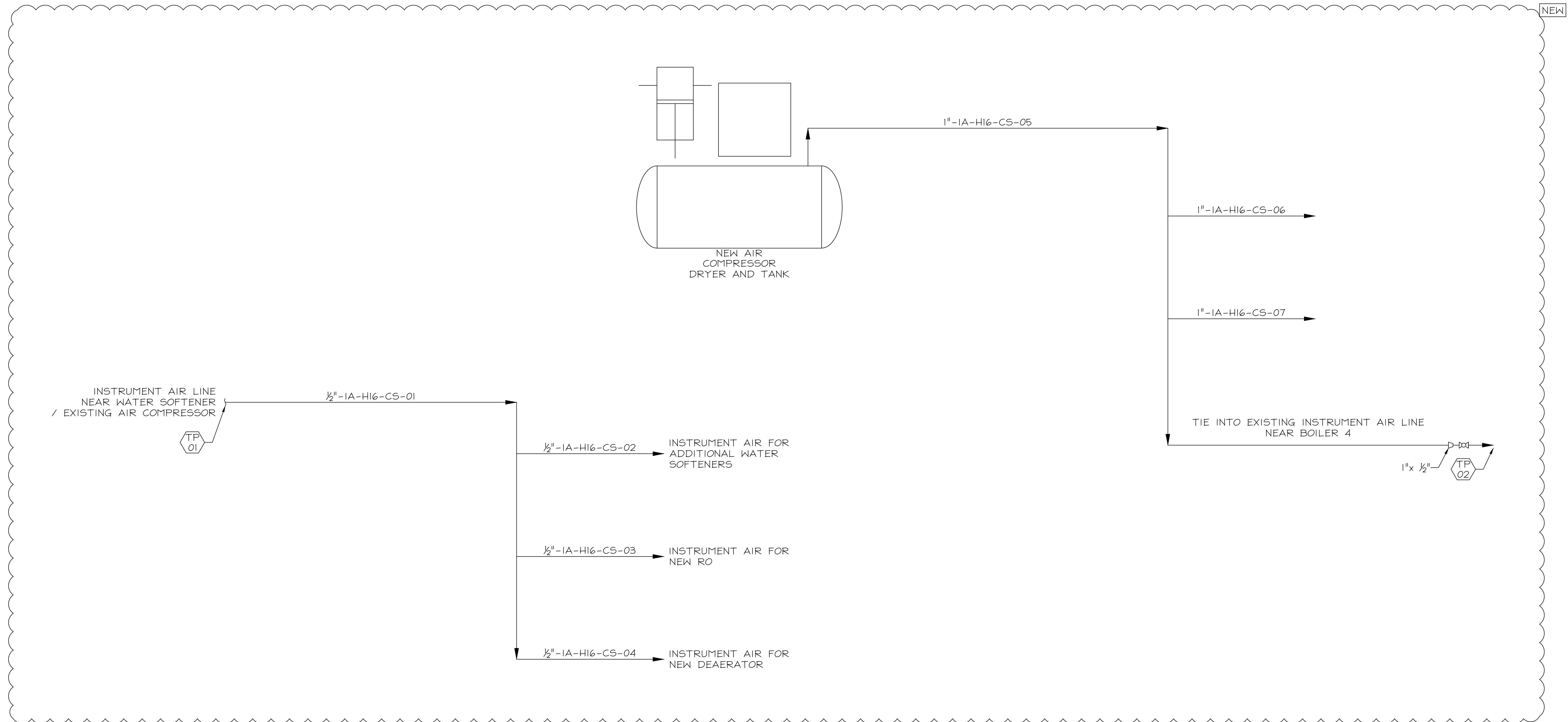
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State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

NEW BOILERS 5 & 6 SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. H-15
	OF (63) SHEETS



1 WHP INSTRUMENTATION AIR SCHEMATIC DIAGRAM
H-16 SCALE: NONE

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

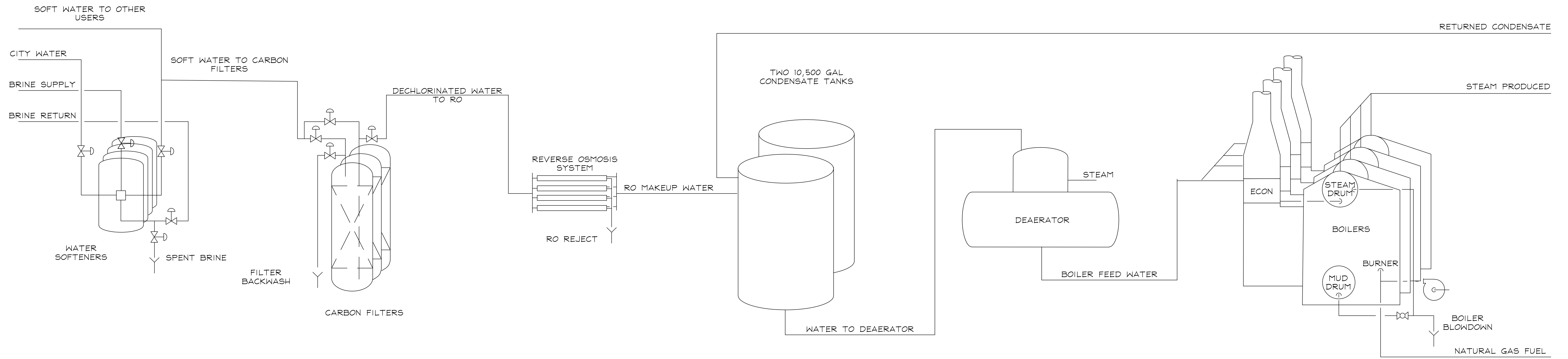
REVISIONS			DRAWN	PREPARED
NO.	DATE	REMARKS	FT	FT
D	03/09/2021	REVISED BRIDGING DOCUMENTS	TRACED	APPROVED
C	01/10/2020	FINAL BRIDGING DOCUMENTS	---	---
B	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL	CHECKED	APPROVED
A	09/13/2019	ISSUED FOR REVIEW	GD	PM

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State of Illinois
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Illinois Capital Development Board

WHP INSTRUMENTATION AIR SCHEMATIC DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. H-16
	OF (63) SHEETS



		BOILER PORTION OF CITY WATER**	BOILER PORTION OF SPENT BRINE**	SOFT WATER TO CARBON FILTERS	DECHLORINATED WATER TO RO	RO MAKEUP WATER	RO REJECT WATER	RETURNED CONDENSATE	WATER FROM CONDENSATE TANKS	WATER TO DEAERATOR / BOILER FEED WATER	BOILER BLOWDOWN	STEAM PRODUCED	NATURAL GAS FUEL
FUTURE PEAK ***	GPM	163	3.0	160	160	120	40	0	492	611	9.0		
	LB/H	81,053	1,503	79,550	79,550	59,663	19,888	0	244,838	304,500	4,500	300,000	16,576
	HHV (MMBTU/H)												361.80
FUTURE**	GPM	163	3.0	160	160	120	40	446		566	8.4		
	LB/H	81,053	1,503	79,550	79,550	59,663	19,888	222,000		281,663	4,163	277,500	15,333
	HHV (MMBTU/H)												334.67
ABSOLUTE PEAK *	GPM	109	2.0	106	106	80	27	0	328	408	6.0		
	LB/H	54,036	1,002	53,033	53,033	39,775	13,258	0	163,225	203,000	3,000	200,000	11,051
	HHV (MMBTU/H)												241.20
PEAK WINTER DAY	GPM	109	2.0	106	106	80	27	297		377	5.6		
	LB/H	54,036	1,002	53,033	53,033	39,775	13,258	148,000		187,775	2,775	185,000	10,222
	HHV (MMBTU/H)												223.11
COLD WINTER DAY	GPM	70	1.3	69	69	52	17	193		245	3.6		
	LB/H	35,050	650	34,400	34,400	25,800	8,600	96,000		121,800	1,800	120,000	6,630
	HHV (MMBTU/H)												144.72
WARM WINTER DAY	GPM	47	0.9	46	46	35	12	129		163	2.4		
	LB/H	23,367	433	22,933	22,933	17,200	5,733	64,000		81,200	1,200	80,000	4,420
	HHV (MMBTU/H)												96.48
HIGH FLOW SUMMER	GPM	23	0.4	23	23	17	5.8	64		82	1.2		
	LB/H	11,683	217	11,467	11,467	8,600	2,867	32,000		40,600	600	40,000	2,210
	HHV (MMBTU/H)												48.24
LOW FLOW SUMMER	GPM	12	0.2	12	12	8.6	2.9	32		41	0.6		
	LB/H	5,842	108	5,733	5,733	4,300	1,433	16,000		20,300	300	20,000	1,105
	HHV (MMBTU/H)												24.12

* ABSOLUTE PEAK IS RECOVERING FROM A POWER OUTAGE (SHORT-TERM LOSS OF STEAM FROM PLANT AND LOSS OF CONDENSATE RETURN FOR AN HOUR UNTIL STEAM PRESSURE IS REGAINED) ON COLD WINTER DAYS. CONDENSATE STORAGE TANKS PROVIDES NEEDED BFW.

** THE BOILER PORTION OF CITY WATER AND SPENT BRINE IS THE FRACTION NEEDED FOR THE BOILERS. THE MAJORITY OF SOFT WATER PRODUCED IN THE SOFTENERS IS USED ELSEWHERE ON CAMPUS.

*** THE DEAERATOR, BFW LINE AND NATURAL GAS FUEL LINE ARE SIZED FOR FUTURE EXPANSION.

1 PROCESS FLOW DIAGRAM & MATERIAL BALANCE
H-17 SCALE: N.T.S.

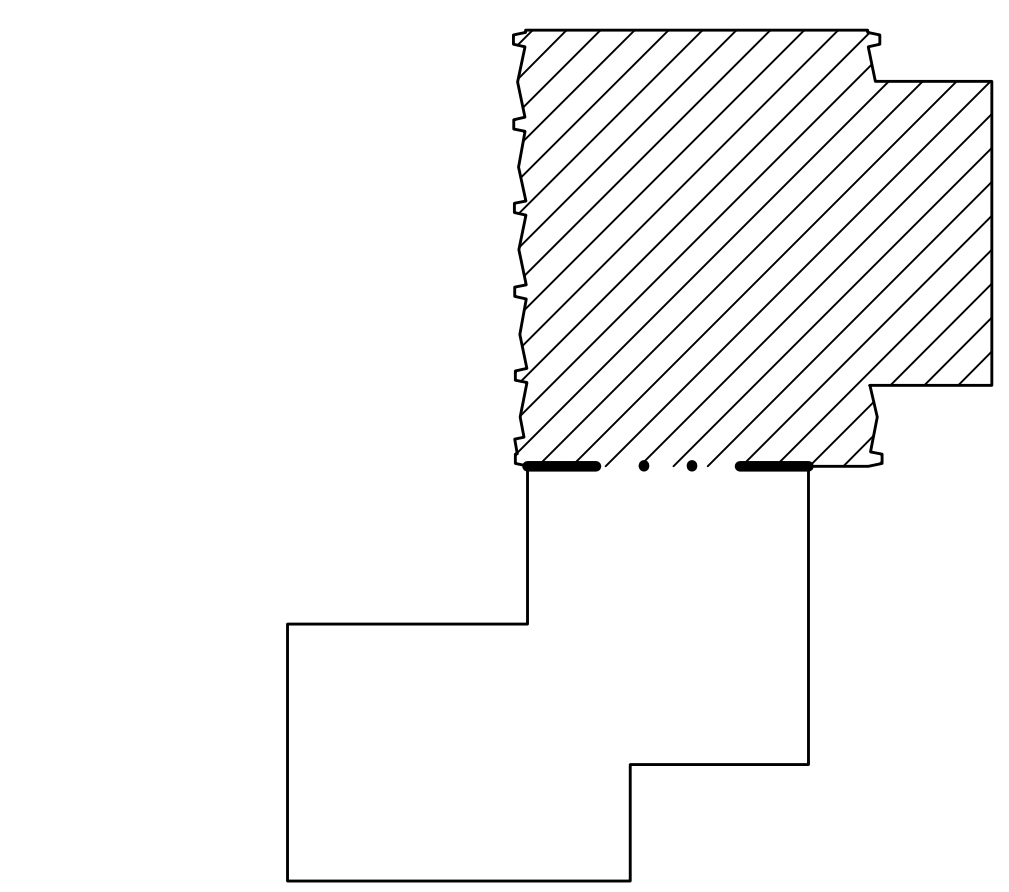
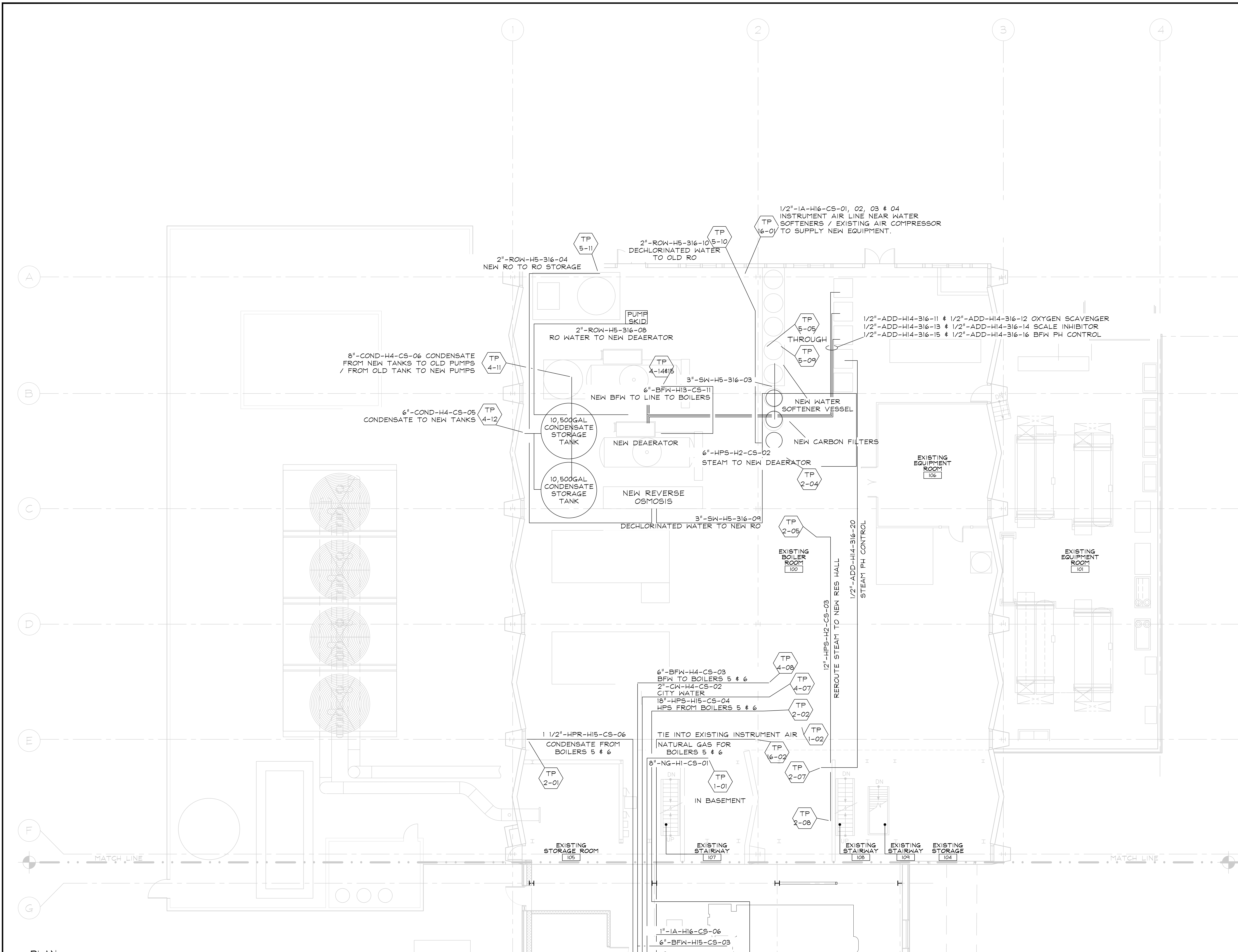
REVISIONS			DRAWN	PREPARED
NO.	DATE	REMARKS	RAK	DAS
			TRACED	APPROVED
C	03/09/2021	REVISED BRIDGING DOCUMENTS	---	---
B	01/10/2020	FINAL BRIDGING DOCUMENTS	CHECKED	APPROVED
A	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL	EJM	RJD

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State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
WHP PFD & MATERIAL BALANCE	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-17 OF (63) SHEETS



1 EXISTING FIRST FLOOR - PIPE ROUTING SCHEMATIC

KEY PLAN

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS
B	01/10/2020	FINAL BRIDGING DOCUMENTS
A	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL

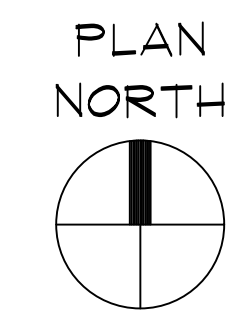
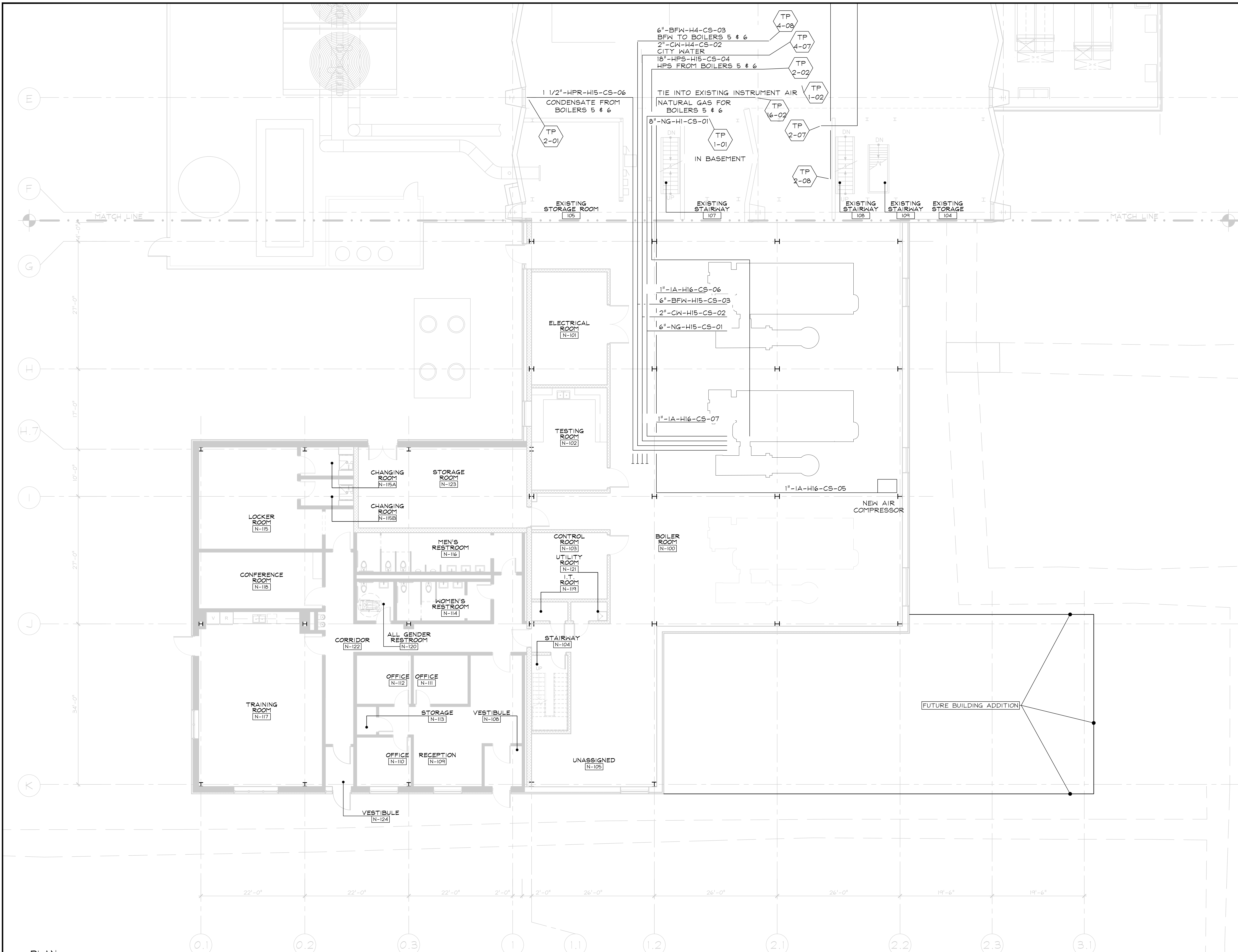
DRAWN RAK	PREPARED DAS
TRACED ---	APPROVED ---
CHECKED EJM	APPROVED RJD

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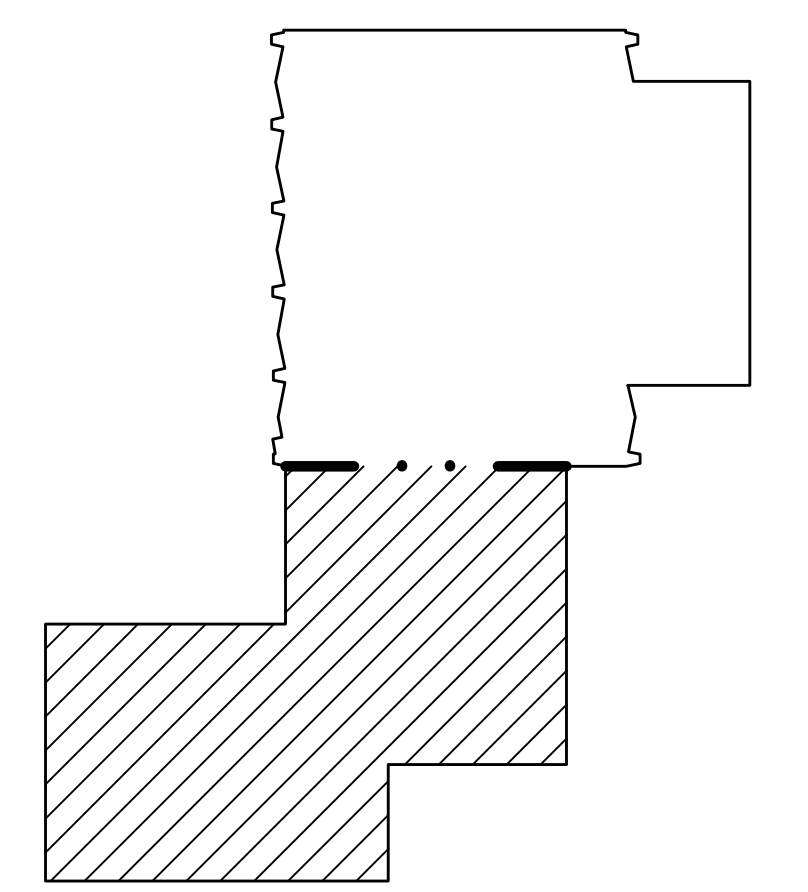
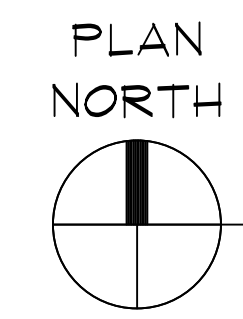


State of Illinois
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Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
NORTH WHP PIPE ROUTING SCHEMATIC	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-18 OF (63) SHEETS



1 FIRST FLOOR - PIPE ROUTING SCHEMATIC
 H-19 SCALE: 1/8" = 1'-0"
 GRAPHIC SCALE



KEY PLAN
 N.T.S.

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS
B	01/10/2020	FINAL BRIDGING DOCUMENTS
A	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL

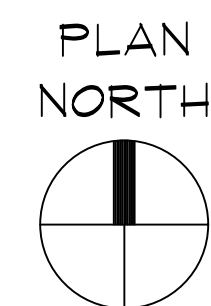
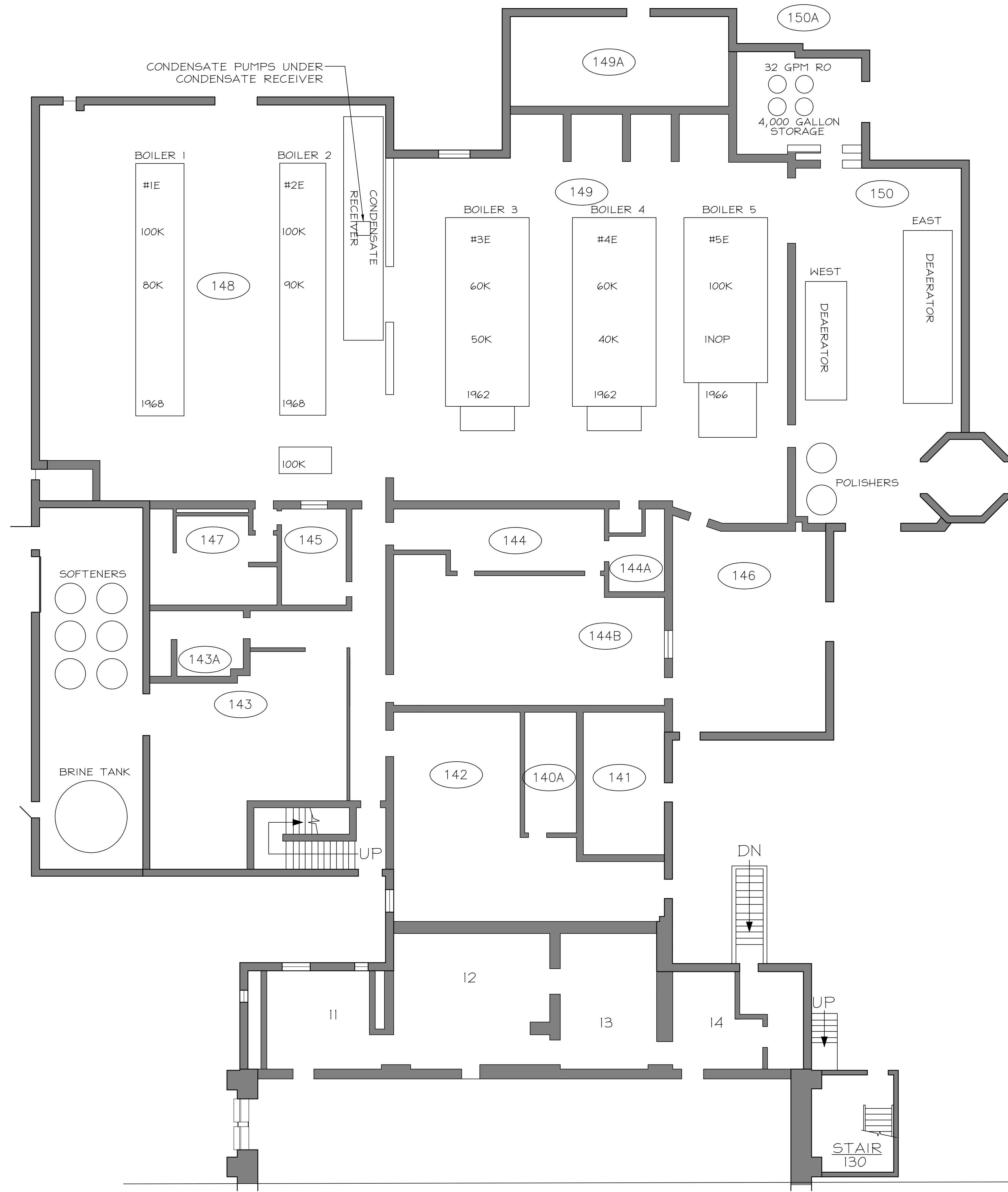
DRAWN RAK	PREPARED DAS
TRACED ---	APPROVED ---
CHECKED EJM	APPROVED RJD

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State of Illinois
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 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
SOUTH WHP PIPE ROUTING SCHEMATIC	
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	PROJECT NO. 822-010-127 DATE 03/09/2021 SHEET NO. H-19 OF (63) SHEETS



1
H-20
SCALE: 1/8" = 1'-0"
GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS
B	01/10/2020	FINAL BRIDGING DOCUMENTS
A	11/08/2019	ISSUED FOR FINAL REVIEW/APPROVAL

DRAWN RAK	PREPARED DAS
TRACED ---	APPROVED ---
CHECKED EJM	APPROVED RJD

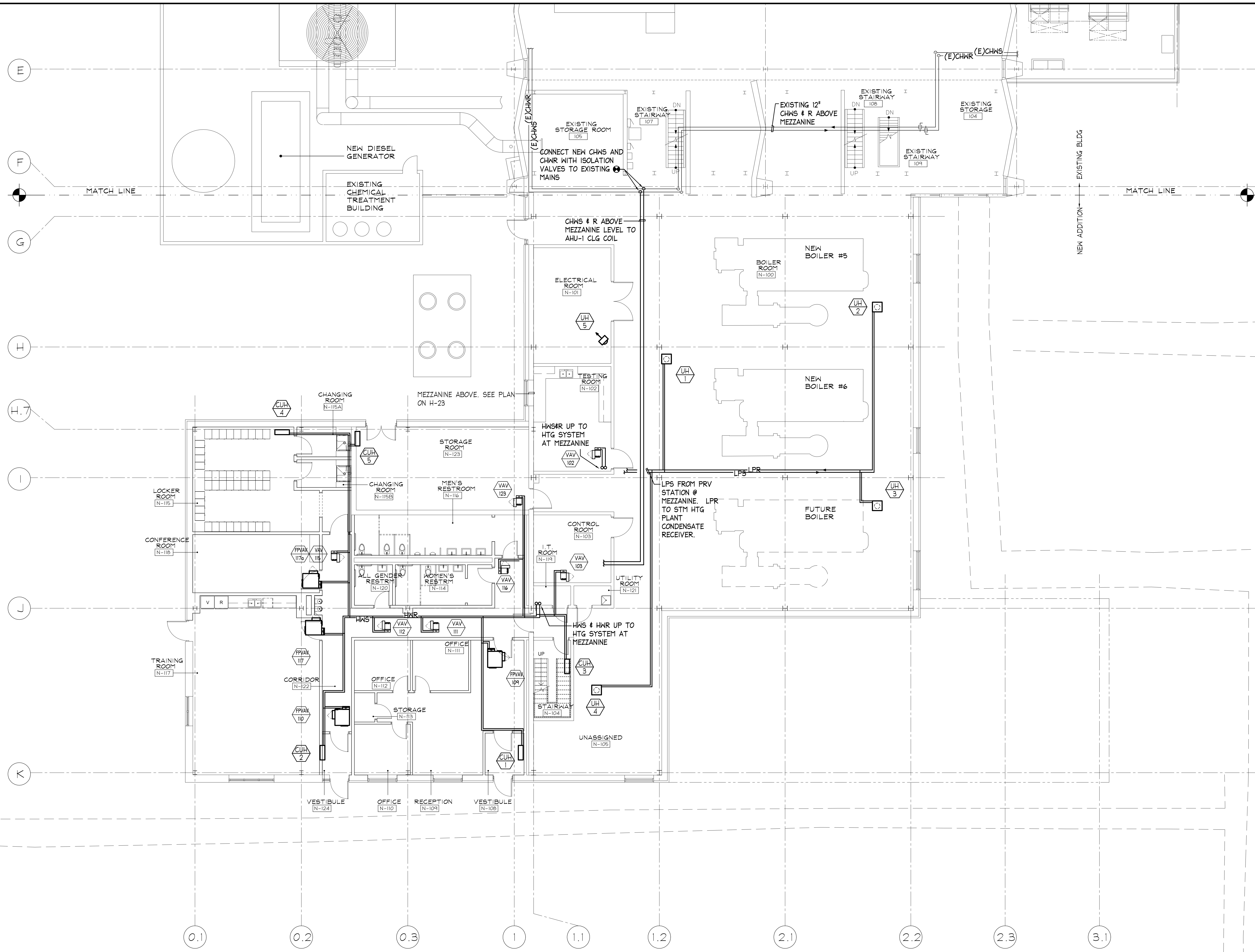
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State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION

EAST HEATING PLANT SCHEMATIC	PROJECT NO. B22-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-20 OF (63) SHEETS



PLAN NORTH

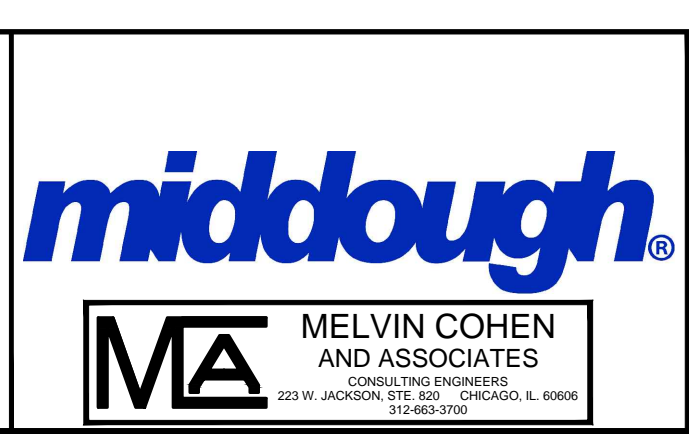
1 FIRST FLOOR HVAC PIPING PLAN

H-22 SCALE: 1/8" = 1'-0"

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS

DRAWN	MCA	PREPARED	MCA
TRACED	---	APPROVED	---
CHECKED	MCA	APPROVED	RJD

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State of Illinois
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 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
FIRST FLOOR HVAC PIPING PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-22 OF (63) SHEETS

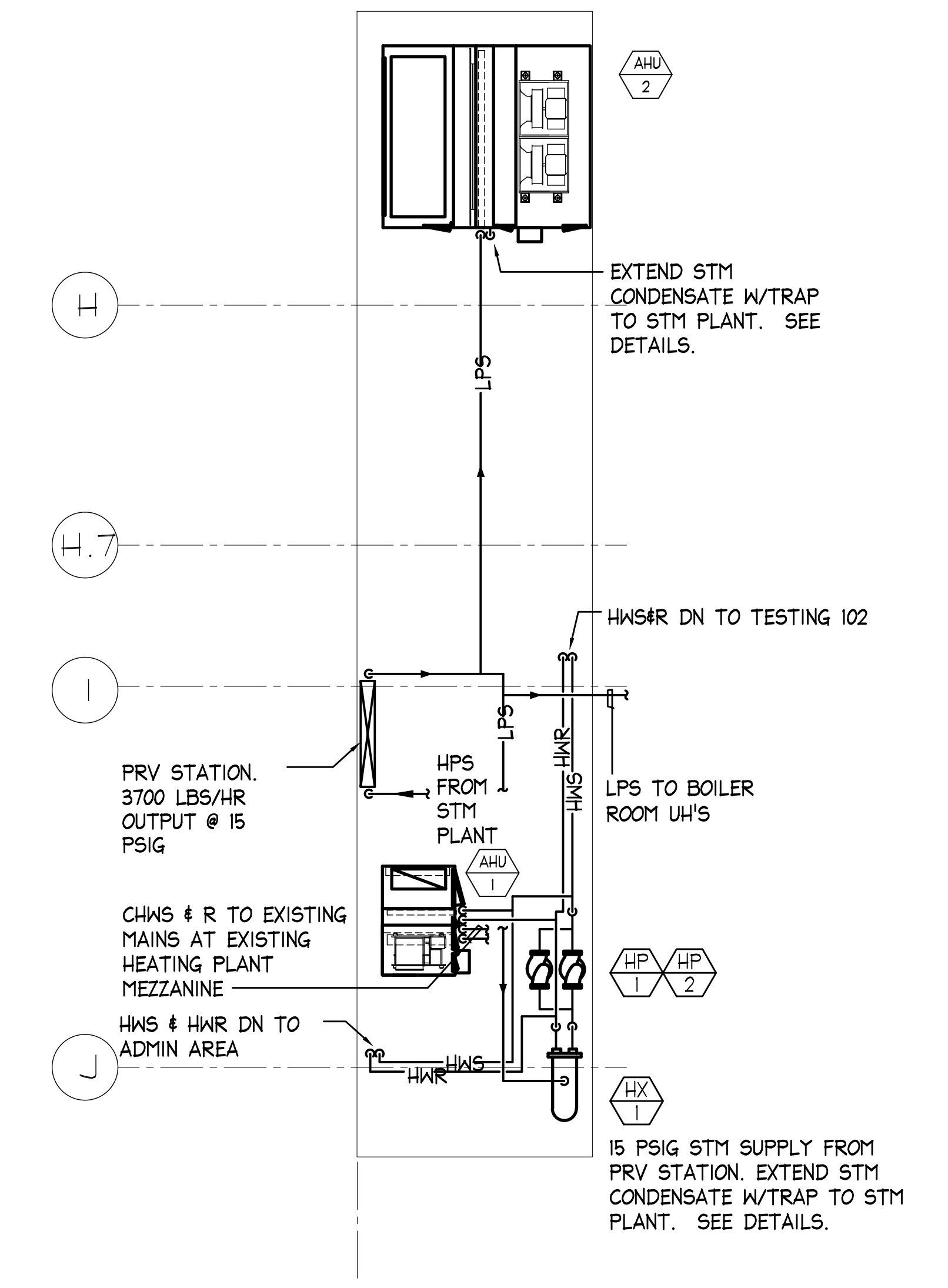
CABINET / UNIT HEATER SCHEDULE																												
TAG	LOCATION	MOUNTING	THERMOSTAT	UNIT SIZE	HEATING DATA				HYDRONIC COIL				STEAM COIL			FAN / MOTOR DATA			ELECTRICAL DATA			UNIT DIMENSIONS				MANUFACTURER	MODEL	REMARKS
					MBH	EAT	LAT	ROW	GPM	WPD	EWT	LWT	STEAM PRESS (PSIG)	CFM	QTY	HP	VOLT	PH	HZ	HEIGHT (IN.)	WIDTH (IN.)	DEPTH (IN.)	WEIGHT (LBS)					
CUH-1	VESTIBULE 108				20				1.3		180	150	--			37 W	120	1	60									CABINET HEATER
CUH-2	CORR. VESTIBULE				20				1.3		180	150	--			37 W	120	1	60									CABINET HEATER
CUH-3	STAIRWAY 104				20				1.3		180	150	--			37 W	120	1	60									CABINET HEATER
CUH-4	LOCKER 115				20				1.3		180	150	--			37 W	120	1	60									CABINET HEATER
CUH-5	STORAGE 123				20				1.3		180	150	--			37 W	120	1	60									CABINET HEATER
UH-1	BOILER RM 100	CEILING			65				--	--	--	--	3		1/20	120	1	60										VERTICAL UH
UH-2	BOILER RM 100	CEILING			65				--	--	--	--	3		1/20	120	1	60										VERTICAL UH
UH-3	BOILER RM 100	CEILING			80				--	--	--	--	3		1/20	120	1	60										VERTICAL UH
UH-4	BOILER RM 100	CEILING			100				--	--	--	--	3		1/8	120	1	60										VERTICAL UH
UH-5	ELECTRICAL 101	CEILING			3 KW				--	--	--	--	--		0.01	208	1	60										HORIZONTAL UH

STEAM TO LIQUID HEAT EXCHANGER SCHEDULE																				
TAG	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	TYPE	WATER CONDITIONS				STEAM PRESSURE			CONTROL VALVE		MANUFACTURER	MODEL	REMARKS				
					FLOW	EWT	LWT	WPD	CTRL VLV INLET	HX INLET	LBS/HR	[kg/HR]								
					GPM	[L/s]	[°F]	[°C]	[°F]	[°C]	FT	[kPa]	PSIG	[kPa]	PSIG	[kPa]				
HX-1	MEP RM 116	ADMINISTRATION	HW HEATING COILS	SHELL & TUBE	25	[2]	155	[68]	180	[82]	[]	15	[100]	3.0	[21]	312.5	[140]			ALL

1. PROVIDE WITH FLOOR STAND FOR SUPPORT.

PUMP SCHEDULE															
TAG	LOCATION	SERVICE	TYPE	FLUID TYPE	GPM	HEAD (FT)	MOTOR ELECTRICAL						MANUFACTURER	MODEL	REMARKS
							BHP	HP	RPM	VOLT	PH	HZ			
HP-1	MEZZANINE	HOT WATER HEATING	INLINE	WATER	25	75		2	480	3	60	ECM			1.2
HP-2	MEZZANINE	HOT WATER HEATING	INLINE	WATER	25	75		2	480	3	60	ECM			1.2

1. IN-LINE PUMP W/ INTEGRAL VFD AND SENSORLESS CONTROL.
2. (2) PUMPS W/ (1) AT 100% STANDBY.



PLAN NORTH

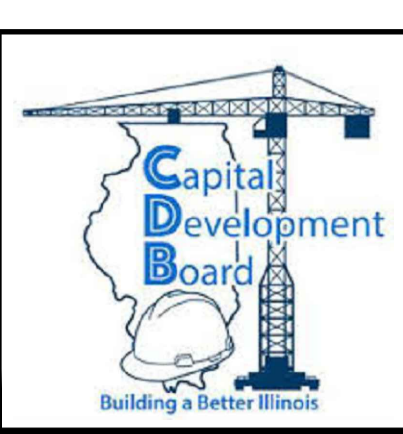
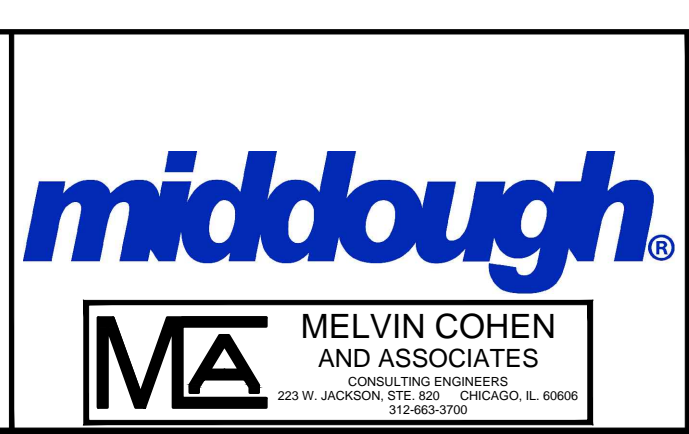
MEZZANINE HVAC PIPING PLAN

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

GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS

DRAWN MCA
PREPARED MCA
TRACED ---
CHECKED MCA
APPROVED ---
APPROVED RJD





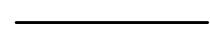

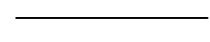

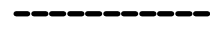

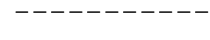

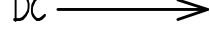


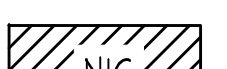



State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
MEZZANINE PIPING PLAN AND EQUIPMENT SCHEDULES	PROJECT NO. B22-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. H-23 OF (63) SHEETS

MECHANICAL GENERAL DEMOLITION NOTES

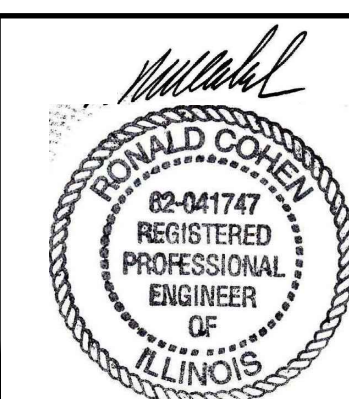
1. WHERE MECHANICAL SYSTEMS OR PORTIONS OF SYSTEMS ARE INDICATED TO BE REMOVED, REMOVE ALL MISCELLANEOUS COMPONENTS THAT ARE MADE OBSOLETE BY REMOVAL OF THE SYSTEM.
2. ALL DEMOLITION OF THE HVAC SYSTEM AS CALLED FOR ON THE CONTRACT DOCUMENTS SHALL BE UNDER THIS CONTRACTORS WORK. INCLUDE DEMOLITION OF ALL MECHANICAL COMPONENTS, NOT REQUIRED FOR THE NEW WORK, WHETHER SPECIFICALLY INDICATED ON CONTRACT DOCUMENTS OR NOT.
3. BEFORE STARTING ANY DEMOLITION ON HVAC EQUIPMENT WHICH HAS AN ELECTRICAL CONNECTION COORDINATE DISCONNECTING OF THE POWER SUPPLY WITH THE DIVISION 26 CONTRACTOR. DO NOT PROCEED WITH MECHANICAL DEMOLITION UNTIL ALL ELECTRICAL POWER HAS BEEN SAFELY DISCONNECTED FROM EQUIPMENT TO BE DEMOLISHED. REMOVE ALL EQUIPMENT, ELECTRICAL TEMPERATURE CONTROL WIRING AND CONDUIT AND COMPONENTS, ETC. THAT ARE BEING MADE OBSOLETE BY THE SCOPE OF THIS PROJECT.
4. WARNING: ASBESTOS-CONTAINING BUILDING MATERIALS ARE OR MAY BE PRESENT IN THIS BUILDING. NO PERSON MAY DISTURB ASBESTOS-CONTAINING BUILDING MATERIALS UNLESS THAT PERSON IS A LICENSED ASBESTOS WORKER AND CONDUCTS SUCH WORK IN ACCORDANCE WITH SPECIFICATION(S) CONTAINED IN THE PROJECT DOCUMENTS AND IN COMPLIANCE WITH ILLINOIS DEPARTMENT OF PUBLIC HEALTH RULES AND REGULATIONS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN CLEANUP THROUGHOUT THE COURSE OF THE DEMOLITION WORK.
6. ALL HVAC EQUIPMENT, MATERIAL, ETC. THAT IS BEING DEMOLISHED WILL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED. ALL SUCH ITEMS WILL BE REMOVED FROM THE BUILDING SITE BY THE CONTRACTOR. NO ITEM WHICH IS BEING REMOVED UNDER THE DEMOLITION CONTRACT MAY BE REUSED UNDER THE NEW WORK CONTRACT UNLESS NOTED ON THE DRAWINGS.
7. SEQUENCE OF ALL DEMOLITION WORK SHALL BE IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS AND/OR AS DIRECTED BY THE USING AGENCY.
8. CONTRACTOR TO PROTECT ALL WINDOWS AND BUILDING SURFACES DURING DEMOLITION. ANY COSTS INCURRED BY DAMAGE FROM CUTTING TORCHES, SPARKS, HEAT OR OTHER DEMOLITION PROCEDURES WILL BE BACK CHARGED TO THE CONTRACTOR.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL LABOR AND MATERIAL REQUIRED TO PATCH ALL OPENINGS IN EXISTING WALLS AND FIRE SEPARATIONS CREATED BY THE REMOVAL OF CONTRACTOR'S MATERIAL AND EQUIPMENT. WHERE THESE OPENINGS ARE NOT TO BE REUSED, PATCHING OF ALL EXISTING FLOOR, WALL AND ROOF OPENINGS IS THE RESPONSIBILITY OF THE CONTRACTOR.
10. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND SERVICE SIZES NOTED IN THESE DRAWINGS. ANY DISCREPANCY IN THE NOTED SIZES COULD NOT BE THE BASIS OF ADDITIONAL COST CLAIM.
11. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCURRED IN REPAIRS, RELOCATIONS, OR REPLACEMENT OF ANY CABLES, CONDUITS, OR OTHER SERVICES THAT ARE TO REMAIN BUT DAMAGED WITHOUT PROPER INVESTIGATIONS.
12. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND SERVICES FOR THE DEMOLITION, REMOVAL, AND LEGAL DISPOSAL OF EXISTING EQUIPMENT, DUCTWORK, PIPING, ASSOCIATED CONTROLS, ASSOCIATED STRUCTURAL SUPPORTS, HANGERS, RODS, SUPPORTS, ANCHORS, MISCELLANEOUS HARDWARE, MISCELLANEOUS EQUIPMENT, REMOVAL OF APPURTENANT EQUIPMENT AND MATERIALS, AND LAWFULLY DISPOSE OF ALL EQUIPMENT AND MATERIALS RENDERED OBSOLETE OFF THE PREMISES.
13. PROVIDE TEMPORARY WEATHER PROTECTION AT ALL ROOF OPENINGS WHERE MECHANICAL EQUIPMENT IS BEING REMOVED.

MECHANICAL SYMBOLS

	DIRECTION OF FLOW		CARBON DIOXIDE SENSOR
	NEW PIPING/DUCTWORK		SMOKE DETECTOR
	EXISTING PIPING / DUCTWORK		EQUIPMENT TAG
	EXISTING TO BE REMOVED		DETAIL TAG
	HIDDEN		CONNECT NEW WITH EXISTING
DC 	UNDERCUT DOOR		FLEXIBLE DUCT CONNECTION
	THERMOSTAT		AREA NOT IN SCOPE OF WORK
	HUMIDISTAT		VOLUME DAMPER
	CARBON MONOXIDE SENSOR		

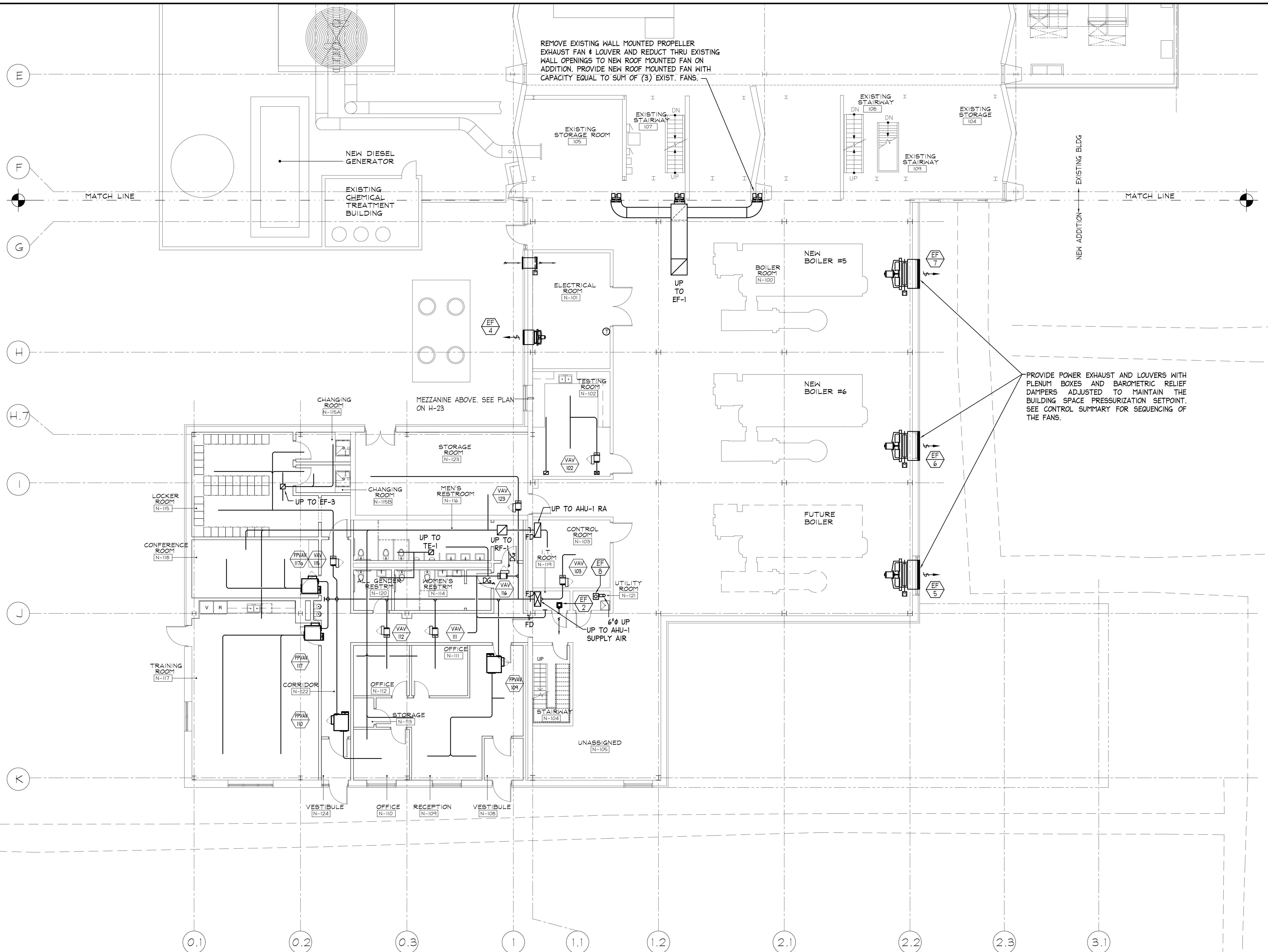
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NO.	DATE	REMARKS	MCA	MCA
			TRACED	APPROVED
			---	---
			CHECKED	APPROVED
C	03/09/2021	REVISED BRIDGING DOCUMENTS	MCA	RJD

NOTE: DESIGN-BUILD ENTITY SHALL OBTAIN AND VERIFY ALL AS-BUILT CONDITIONS AND DIMENSIONS AT PROJECT SITE AND BE FULLY RESPONSIBLE FOR THE SAME. BRIDGING DOCUMENTS, DRAWINGS AND NARRATIVES ARE PROVIDED FOR DESIGN INTENT. THE DESIGN-BUILD ENTITY IS RESPONSIBLE FOR THE COMPLETE DESIGN OF A PROJECT THAT ADHERES TO ALL SCOPE OF WORK REQUIREMENTS, CODES, STATE AND FEDERAL REGULATIONS AND GUIDELINES.



State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES	PROJECT NO. B22-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. V-1
	OF (63) SHEETS



PLAN NORTH

1 FIRST FLOOR VENTILATION PLAN

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

GRAPHIC SCALE

REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS

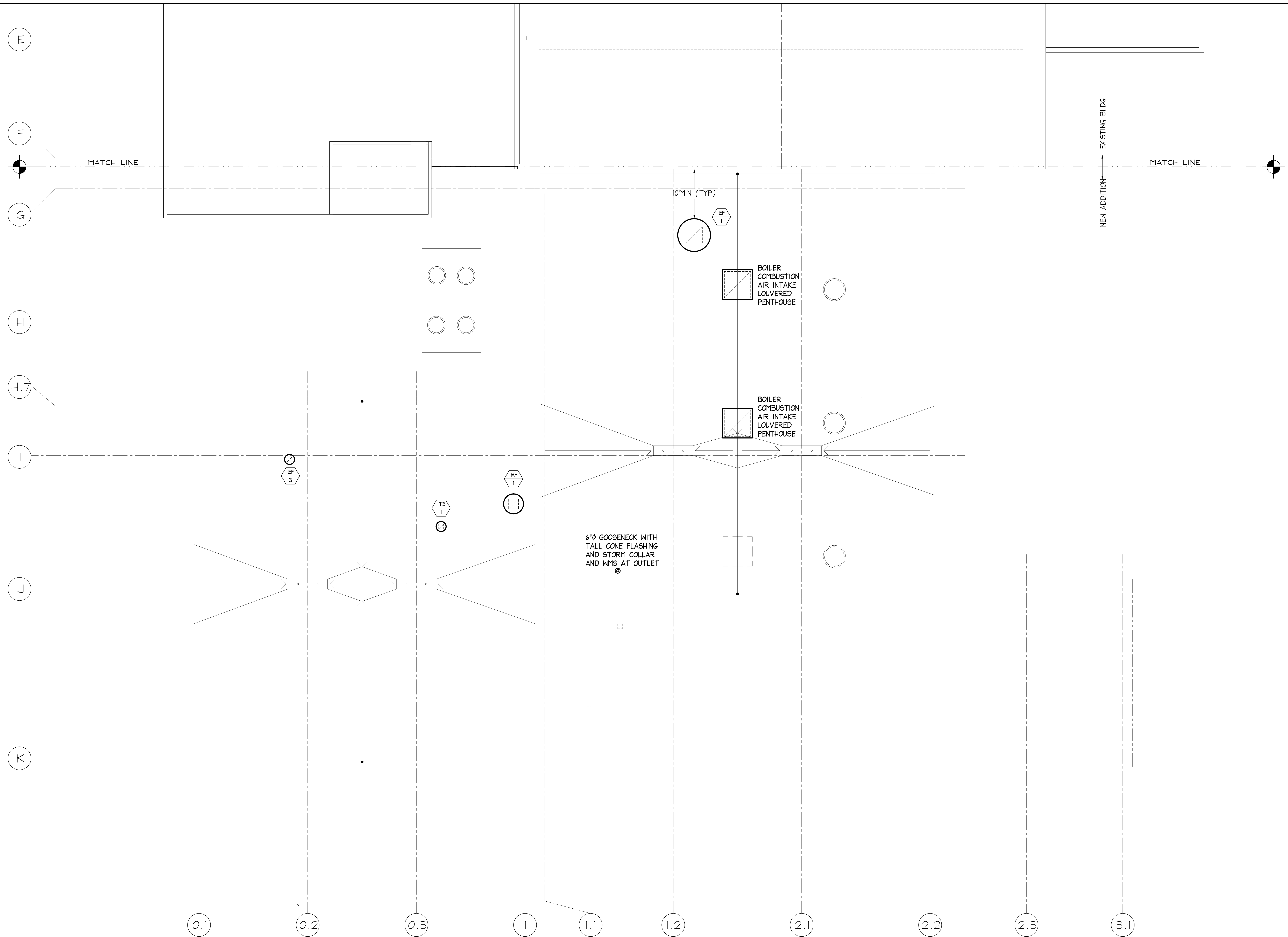
DRAWN	MCA	PREPARED	MCA
TRACED	---	APPROVED	---
CHECKED	MCA	APPROVED	RJD

NOTE: DESIGN-BUILD ENTITY SHALL OBTAIN AND VERIFY ALL AS-BUILT CONDITIONS AND DIMENSIONS AT PROJECT SITE AND BE FULLY RESPONSIBLE FOR THE SAME. BRIDGING DOCUMENTS, DRAWINGS AND NARRATIVES ARE PROVIDED FOR DESIGN INTENT. THE DESIGN-BUILD ENTITY IS RESPONSIBLE FOR THE COMPLETE DESIGN OF A PROJECT THAT ADHERES TO ALL SCOPE OF WORK REQUIREMENTS, CODES, STATE AND FEDERAL REGULATIONS AND GUIDELINES.

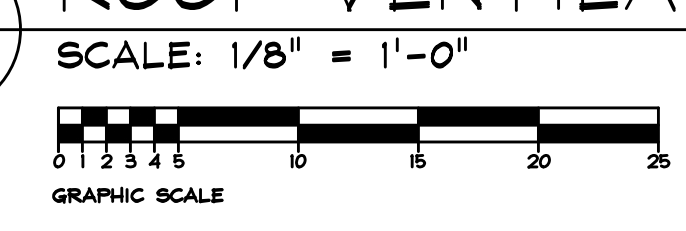


State of Illinois
JB PRITZKER, GOVERNOR
 Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
FIRST FLOOR VENTILATION PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. V-2
	OF (63) SHEETS



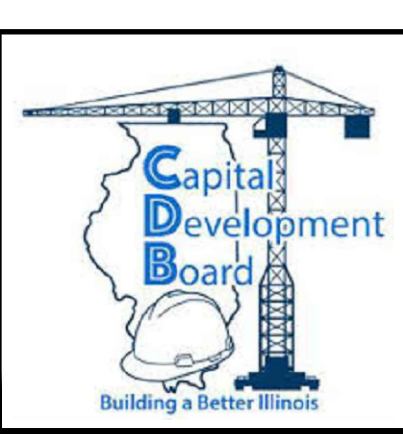
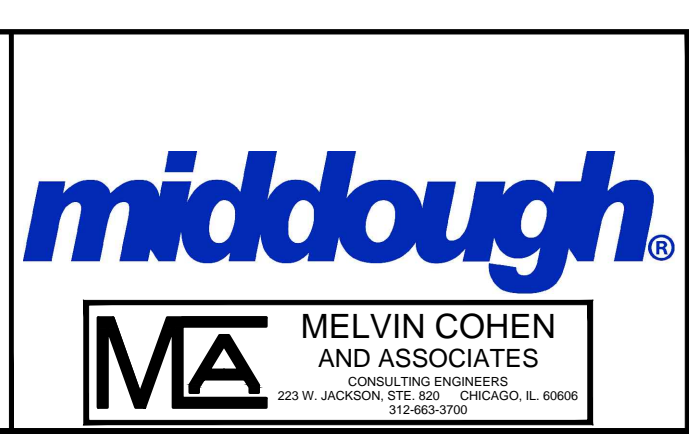
1 ROOF VENTILATION PLAN
V-2



REVISIONS		
NO.	DATE	REMARKS
C	03/09/2021	REVISED BRIDGING DOCUMENTS

DRAWN MCA	PREPARED MCA
TRACED ---	APPROVED ---
CHECKED MCA	APPROVED RJD

NOTE: DESIGN-BUILD ENTITY SHALL OBTAIN AND VERIFY ALL AS-BUILT CONDITIONS AND DIMENSIONS AT PROJECT SITE AND BE FULLY RESPONSIBLE FOR THE SAME. BRIDGING DOCUMENTS, DRAWINGS AND NARRATIVES ARE PROVIDED FOR DESIGN INTENT. THE DESIGN-BUILD ENTITY IS RESPONSIBLE FOR THE COMPLETE DESIGN OF A PROJECT THAT ADHERES TO ALL SCOPE OF WORK REQUIREMENTS, CODES, STATE AND FEDERAL REGULATIONS AND GUIDELINES.

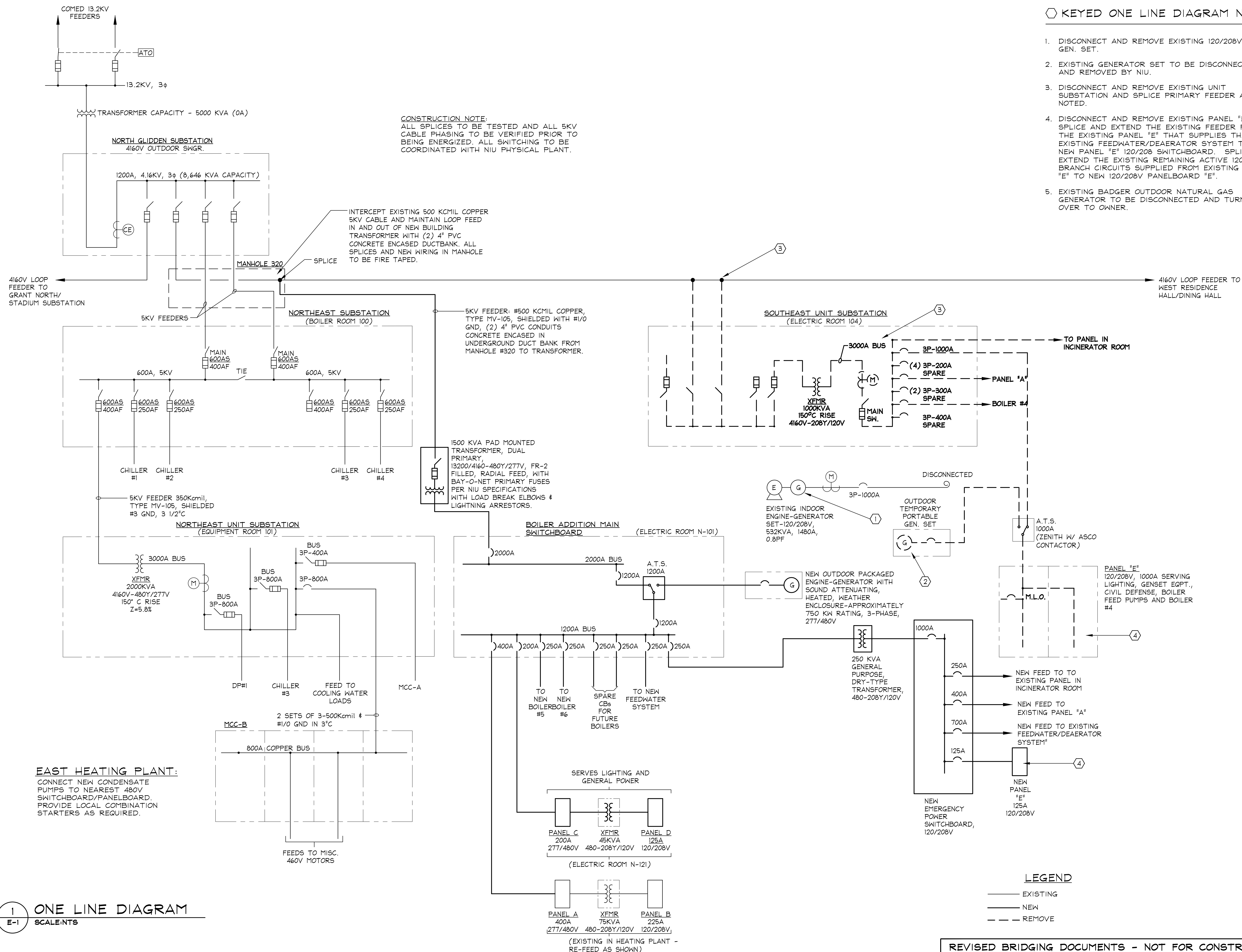


State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
ROOF VENTILATION PLAN	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021
	SHEET NO. V-3 OF (63) SHEETS

KEYED ONE LINE DIAGRAM NOTES

1. DISCONNECT AND REMOVE EXISTING 120/208V INDOOR GEN. SET.
2. EXISTING GENERATOR SET TO BE DISCONNECTED AND REMOVED BY NIU.
3. DISCONNECT AND REMOVE EXISTING UNIT SUBSTATION AND SPLICE PRIMARY FEEDER AS NOTED.
4. DISCONNECT AND REMOVE EXISTING PANEL "E". SPLICE AND EXTEND THE EXISTING FEEDER FROM THE EXISTING PANEL "E" THAT SUPPLIES THE EXISTING FEEDWATER/DEAERATOR SYSTEM TO THE NEW PANEL "E" 120/208 SWITCHBOARD. SPLICE AND EXTEND THE EXISTING REMAINING ACTIVE 120V BRANCH CIRCUITS SUPPLIED FROM EXISTING PANEL "E" TO NEW 120/208V PANELBOARD "E".
5. EXISTING BADGER OUTDOOR NATURAL GAS GENERATOR TO BE DISCONNECTED AND TURNED OVER TO OWNER.



CONSTRUCTION NOTE:
ALL SPLICES TO BE TESTED AND ALL 5KV CABLE PHASING TO BE VERIFIED PRIOR TO BEING ENERGIZED. ALL SWITCHING TO BE COORDINATED WITH NIU PHYSICAL PLANT.

INTERCEPT EXISTING 500 KCMIL COPPER 5KV CABLE AND MAINTAIN LOOP FEED IN AND OUT OF NEW BUILDING TRANSFORMER WITH (2) 4" PVC CONCRETE ENCASED DUCTBANK. ALL SPLICES AND NEW WIRING IN MANHOLE TO BE FIRE TAPED.

5KV FEEDER: #500 KCMIL COPPER, TYPE MV-105, SHIELDED WITH #1/0 GND, (2) 4" PVC CONDUITS CONCRETE ENCASED IN UNDERGROUND DUCT BANK FROM MANHOLE #320 TO TRANSFORMER.

1500 KVA PAD MOUNTED TRANSFORMER, DUAL PRIMARY. 13200/4160-480Y/277V, FR-2 FILLED, RADIAL FEED, WITH BAY-O-NET PRIMARY FUSES PER NIU SPECIFICATIONS WITH LOAD BREAK ELBOWS & LIGHTNING ARRESTORS.

EAST HEATING PLANT:
CONNECT NEW CONDENSATE PUMPS TO NEAREST 480V SWITCHBOARD/PANELBOARD. PROVIDE LOCAL COMBINATION STARTERS AS REQUIRED.

ONE LINE DIAGRAM
E-1 SCALES:NTS

LEGEND
— EXISTING
— NEW
- - - REMOVE

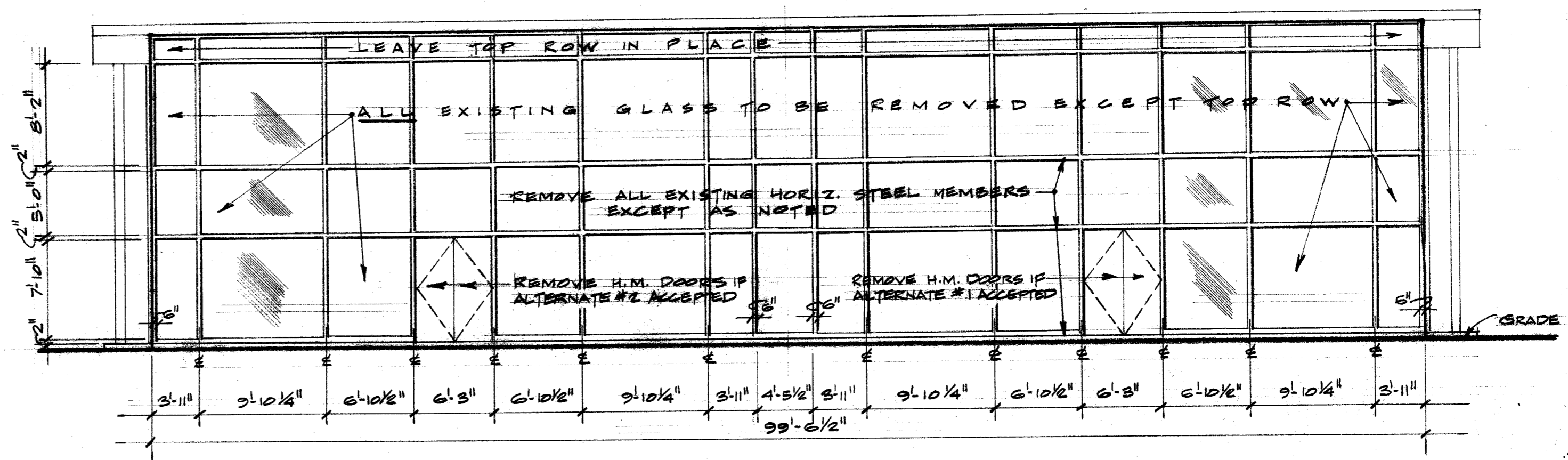
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NO.	DATE	VM1	GO
D	03/09/2021	TRACED	APPROVED
C	01/10/2020	---	---
B	11/08/2019	CHECKED	APPROVED
A	09/13/2019	---	---

NOTE: DESIGN-BUILD ENTITY SHALL OBTAIN AND VERIFY ALL AS-BUILT CONDITIONS AND DIMENSIONS AT PROJECT SITE AND BE FULLY RESPONSIBLE FOR THE SAME. BRIDGING DOCUMENTS, DRAWINGS AND NARRATIVES ARE PROVIDED FOR DESIGN INTENT. THE DESIGN-BUILD ENTITY IS RESPONSIBLE FOR THE COMPLETE DESIGN OF A PROJECT THAT ADHERES TO ALL, SCOPE OF WORK REQUIREMENTS, CODES, STATE AND FEDERAL REGULATIONS AND GUIDELINES.



State of Illinois
JB PRITZKER, GOVERNOR
Illinois Capital Development Board

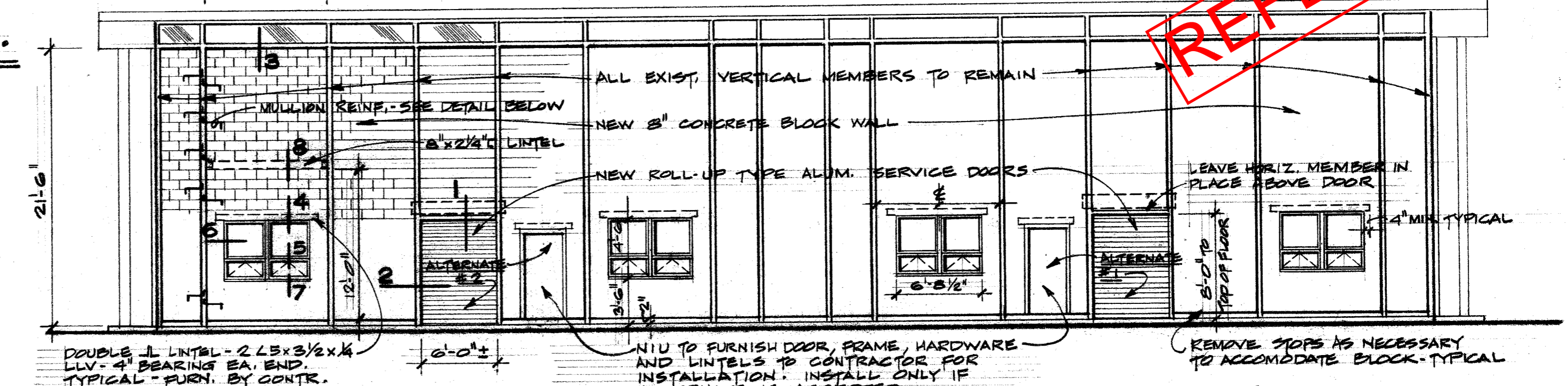
REVISED BRIDGING DOCUMENTS - NOT FOR CONSTRUCTION	
ONE LINE DIAGRAM	PROJECT NO. 822-010-127
CAMPUS BOILER REPLACEMENTS NORTHERN ILLINOIS UNIVERSITY DEKALB, DEKALB COUNTY, ILLINOIS	DATE 03/09/2021 SHEET NO. E-1 OF (63) SHEETS



EXISTING NORTH ELEVATION SHOWING DEMOLITION.

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

REFERENCE



REVISED NORTH ELEVATION.

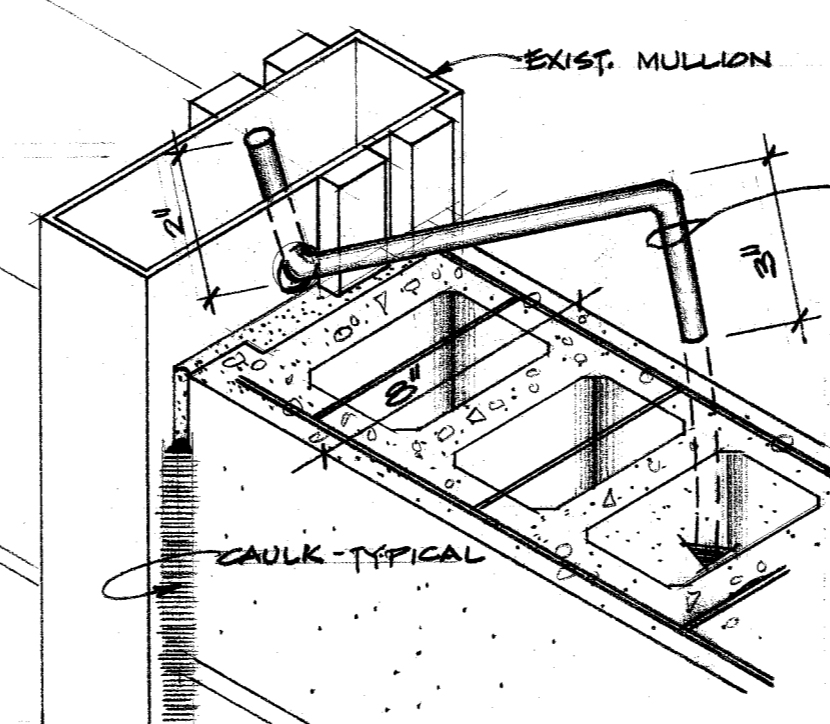
SCALE: 1/8" = 1'-0"

3" x 24" C, 11.5# LINTEL, MULLION TO MULLION.
1/4" WELD-TYPICAL
6" x 5/8" PLATE

#4 #2 BAR @ EVERY 5TH JOINT - DRILL HOLES (5/8" Ø) INTO MULLION - HOOK TO GO INTO FURTHEST CELL FROM MULLION - FILL BOTTOM OF CELL W/ PAPER AND FILL VOID FULL OF MORTAR - THIS DETAIL TO OCCUR IN EVERY OTHER COURSE BY JOINT REINF.

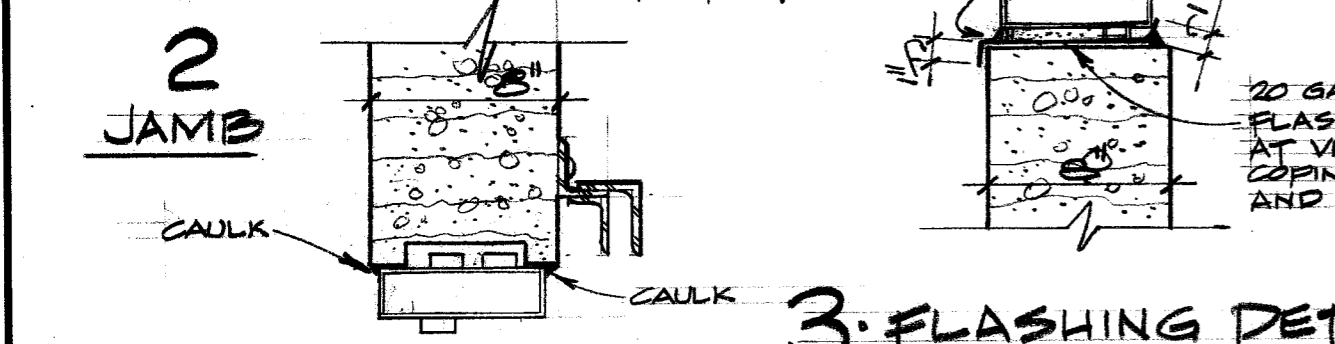
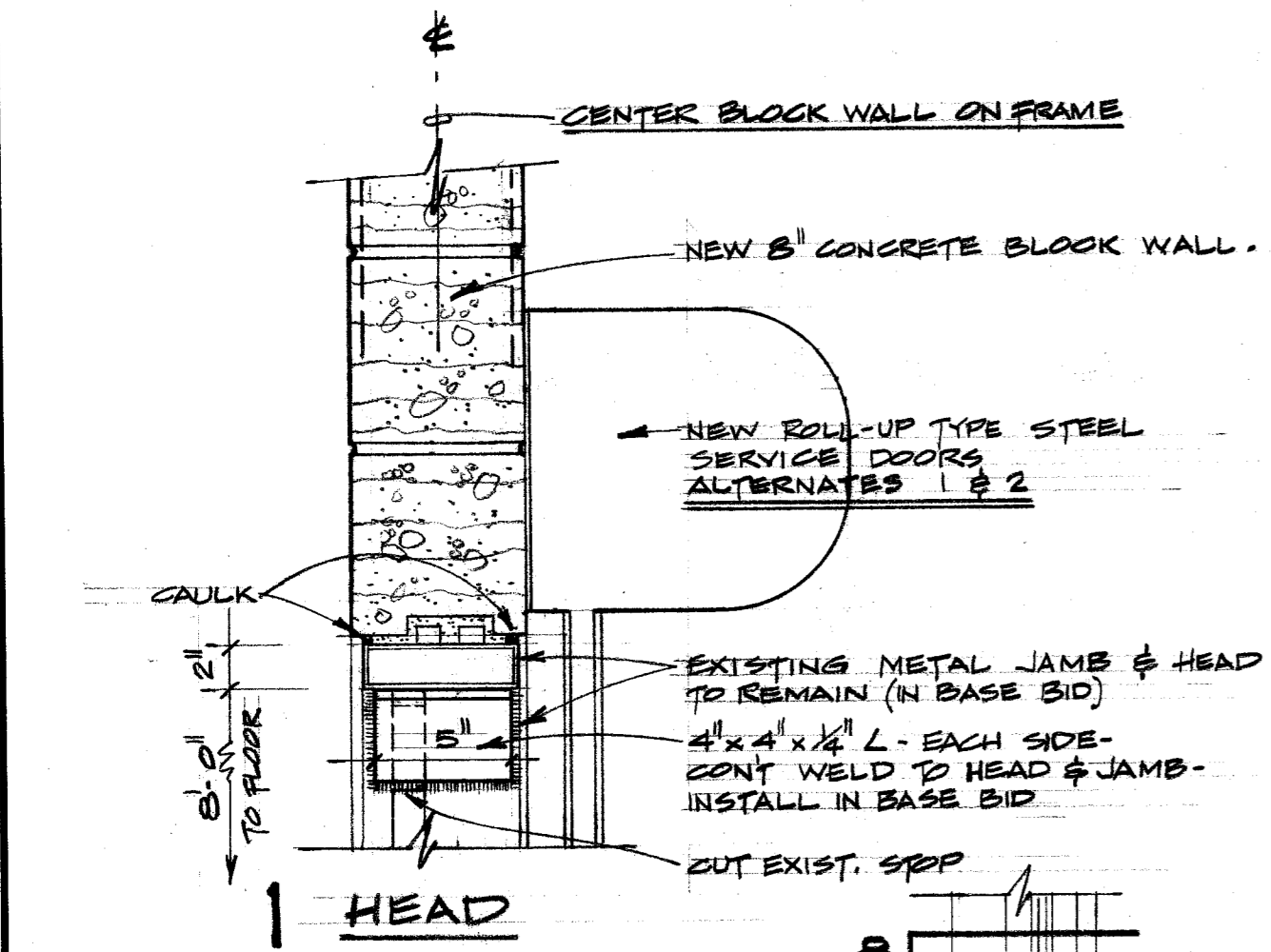
8. LINTEL DETAIL.

1/2" = 1'-0"



REINFORCING @ MULLION.

NO SCALE

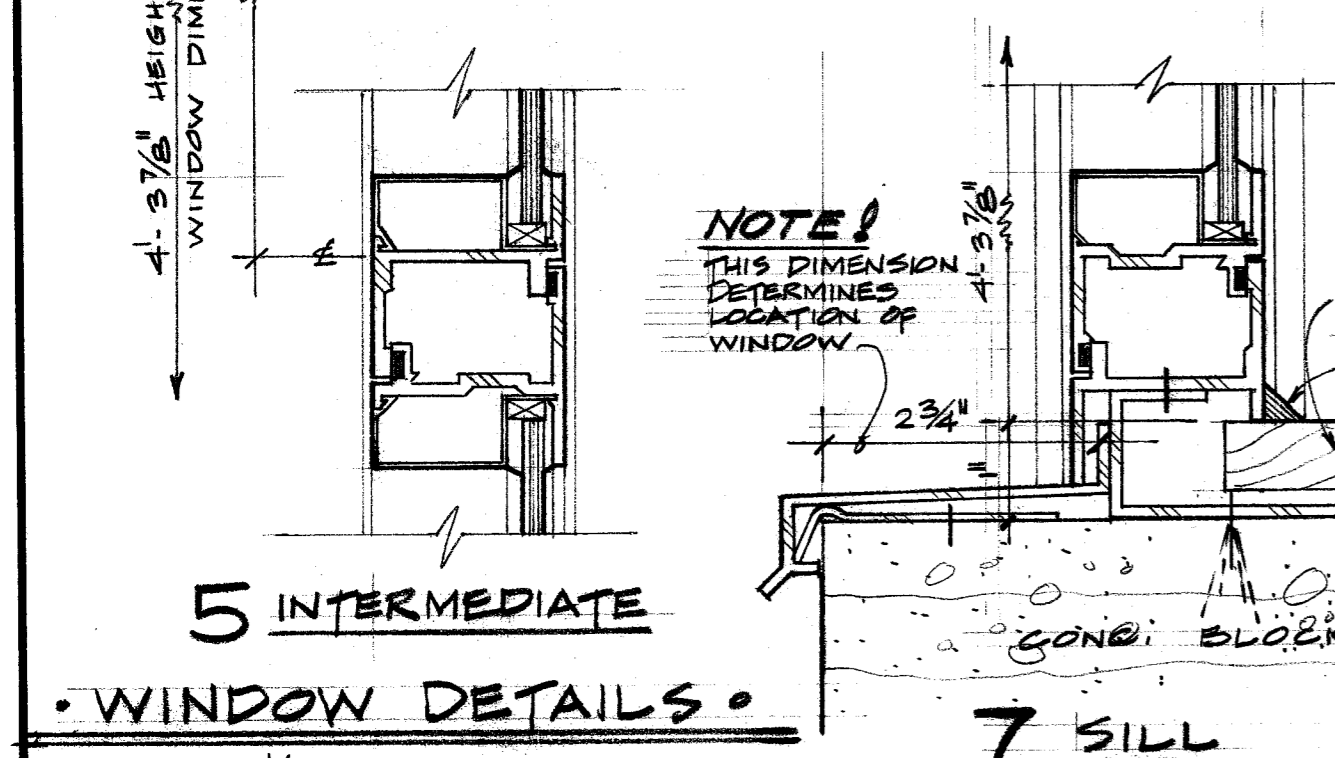
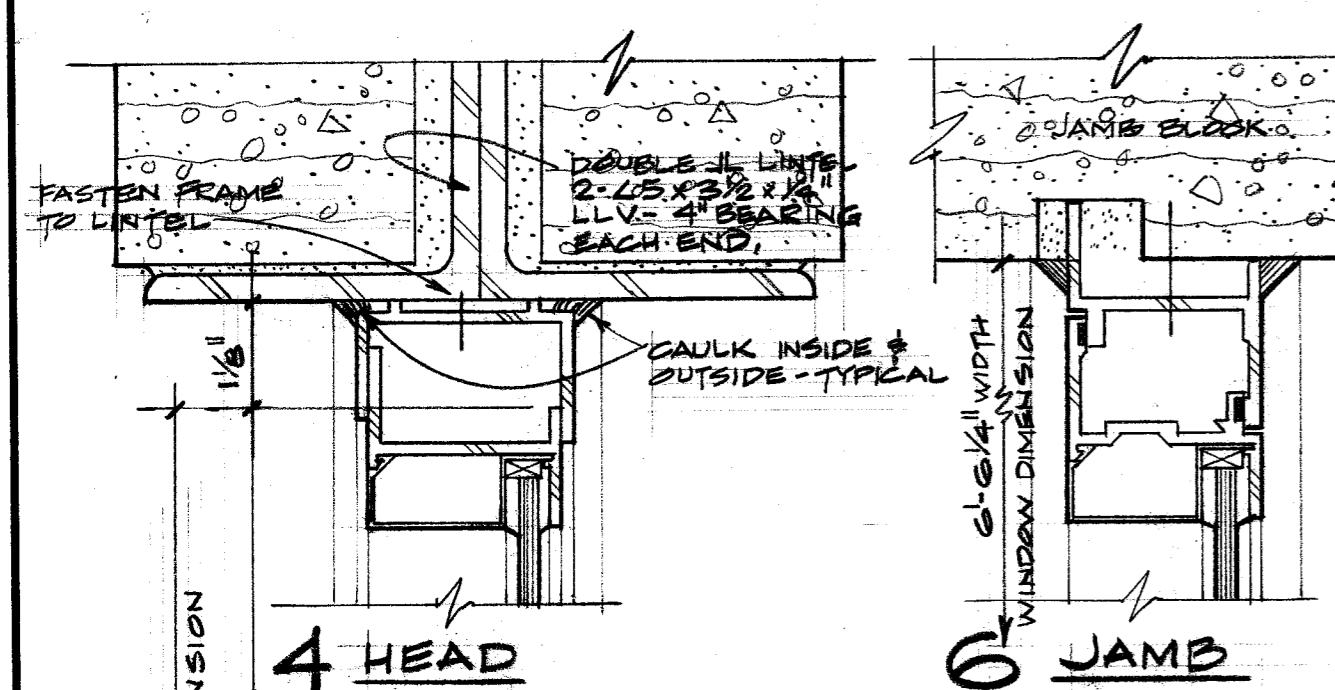


3. FLASHING DET.

1/2" = 1'-0"

SERVICE DOOR DETAILS.

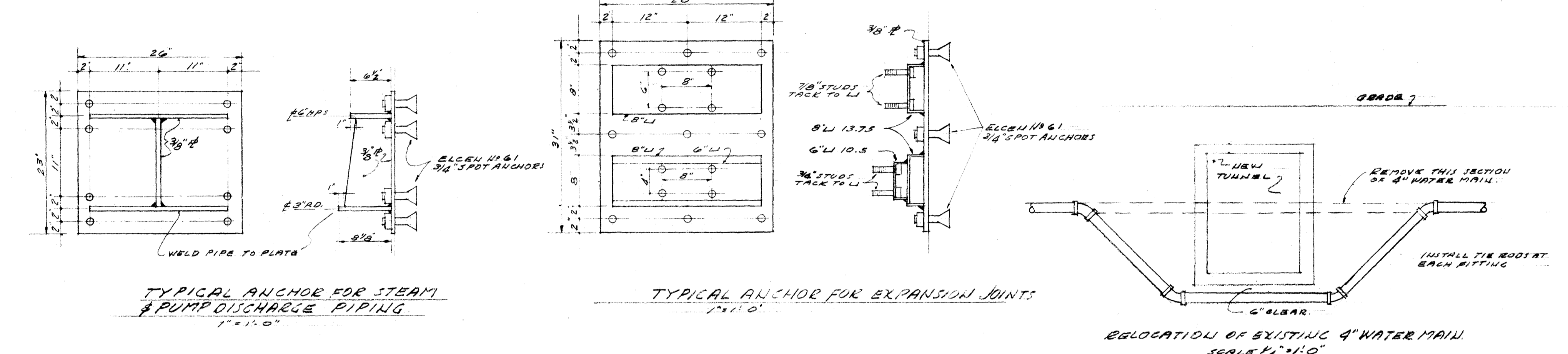
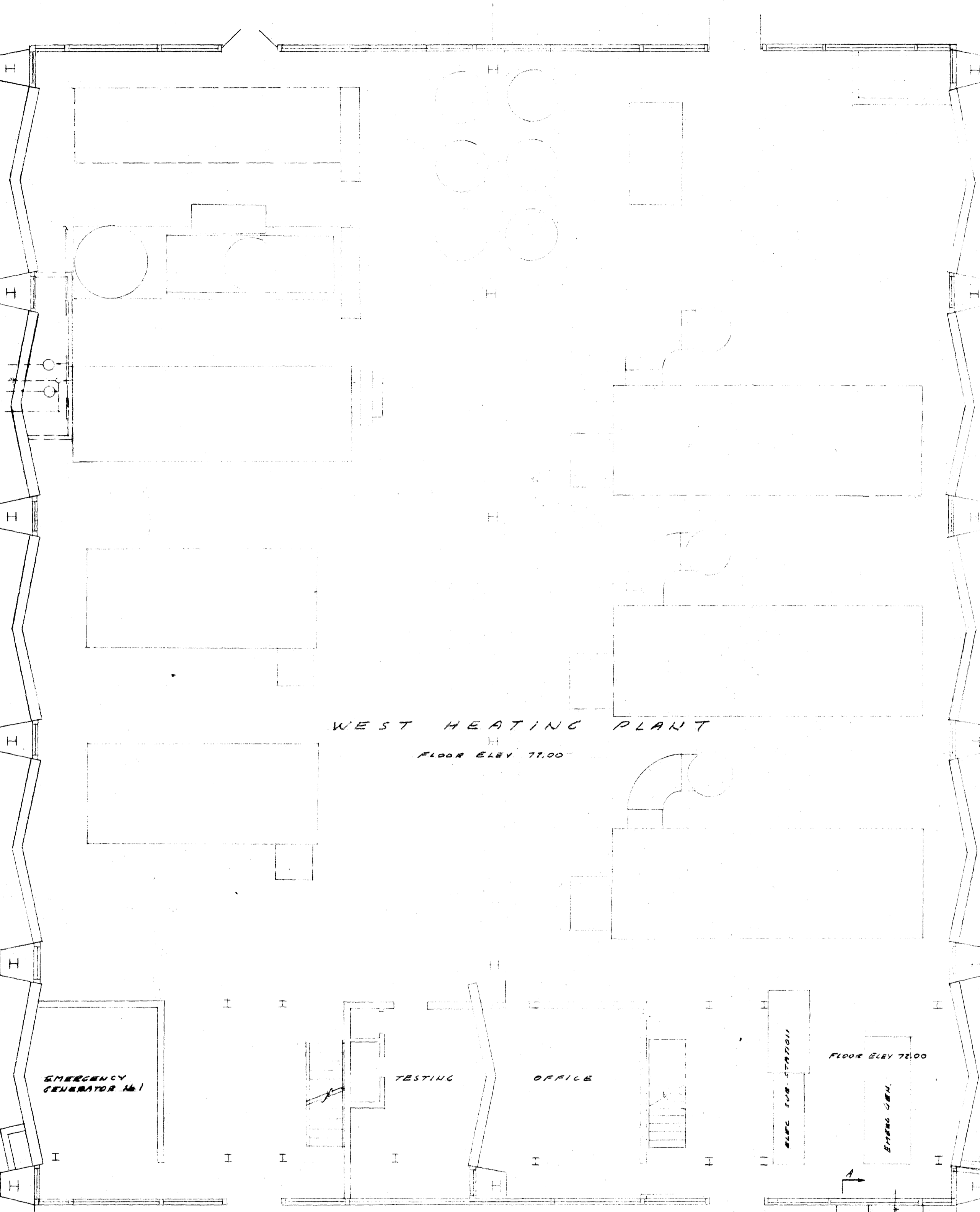
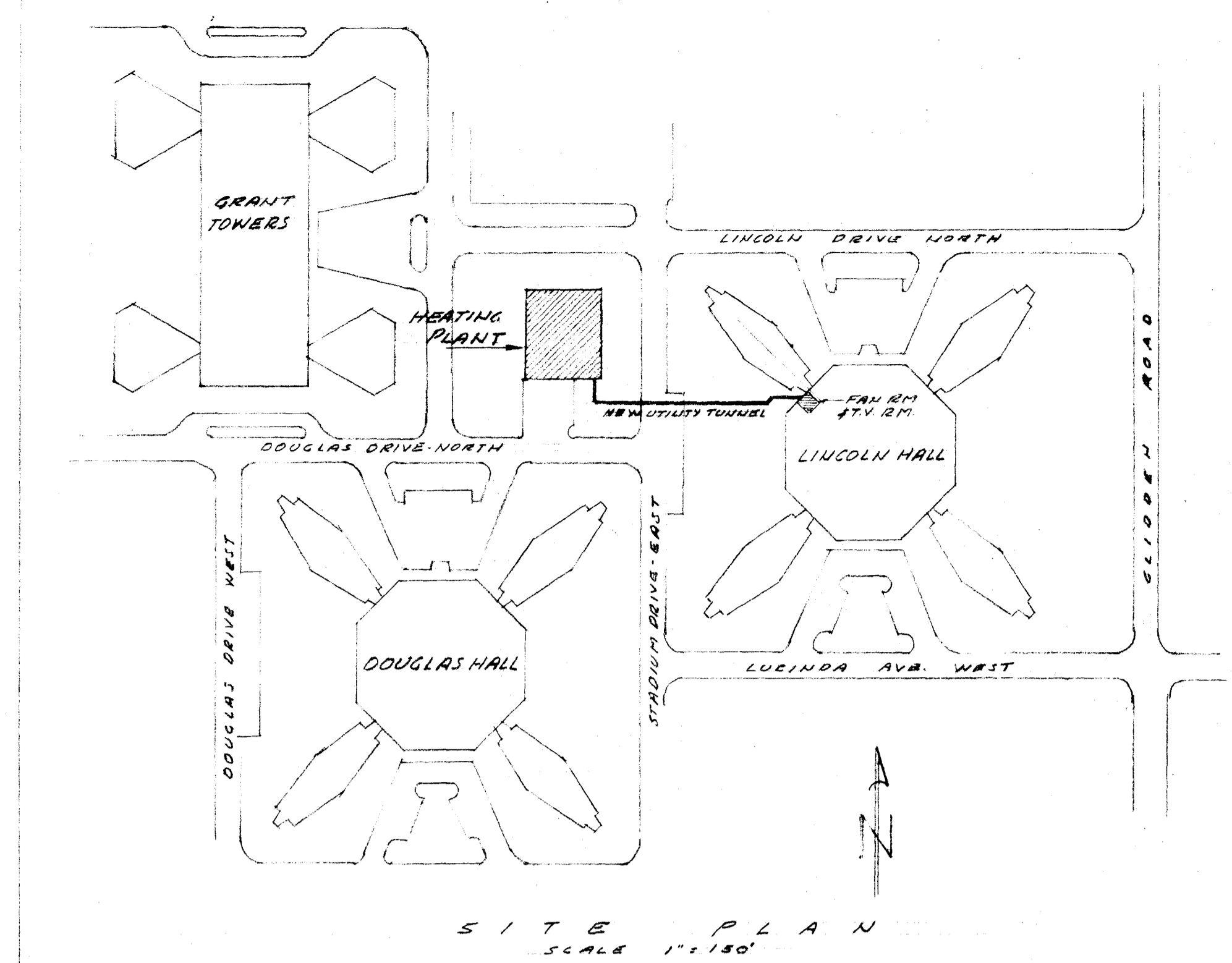
1/2" = 1'-0"



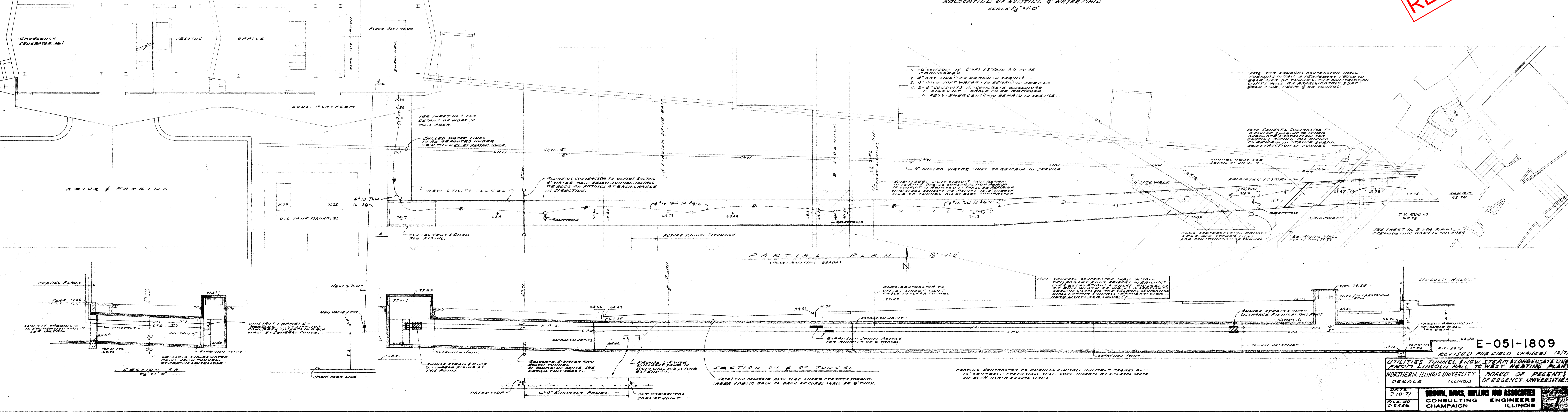
WINDOW DETAILS.

1/2" FULL SIZE

		NORTHERN ILL. UNIVERSITY PHYSICAL PLANT DE KALB, ILLINOIS	
		NORTH WALL REMODELING WEST HEATING PLANT	
REVISIONS		DIR. OF PHYSICAL PLANT <i>George H. Larson</i> APPROVED	DRAWN <i>Foland Pfeiffer</i> CHECKED <i>Foland Pfeiffer</i>
DATE 1-18-78		SCALE AS NOTED	C-051-6520



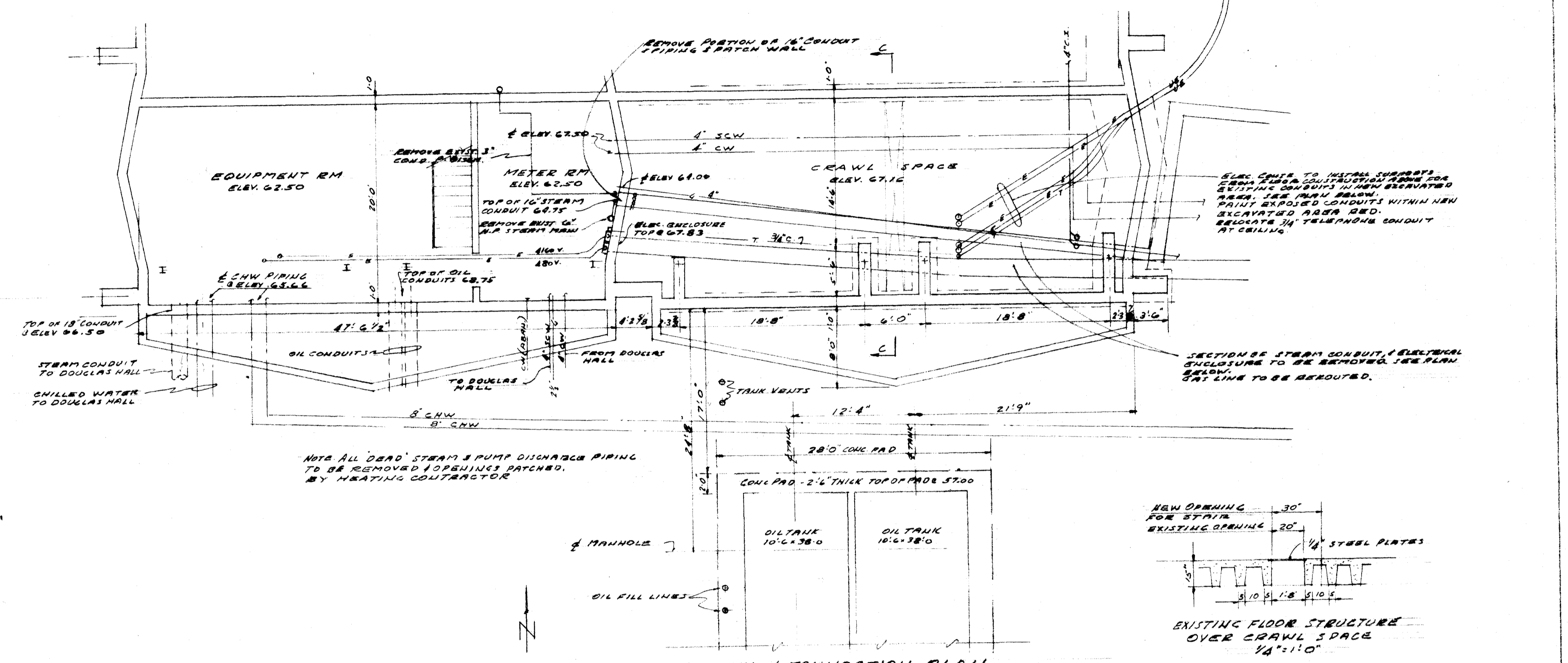
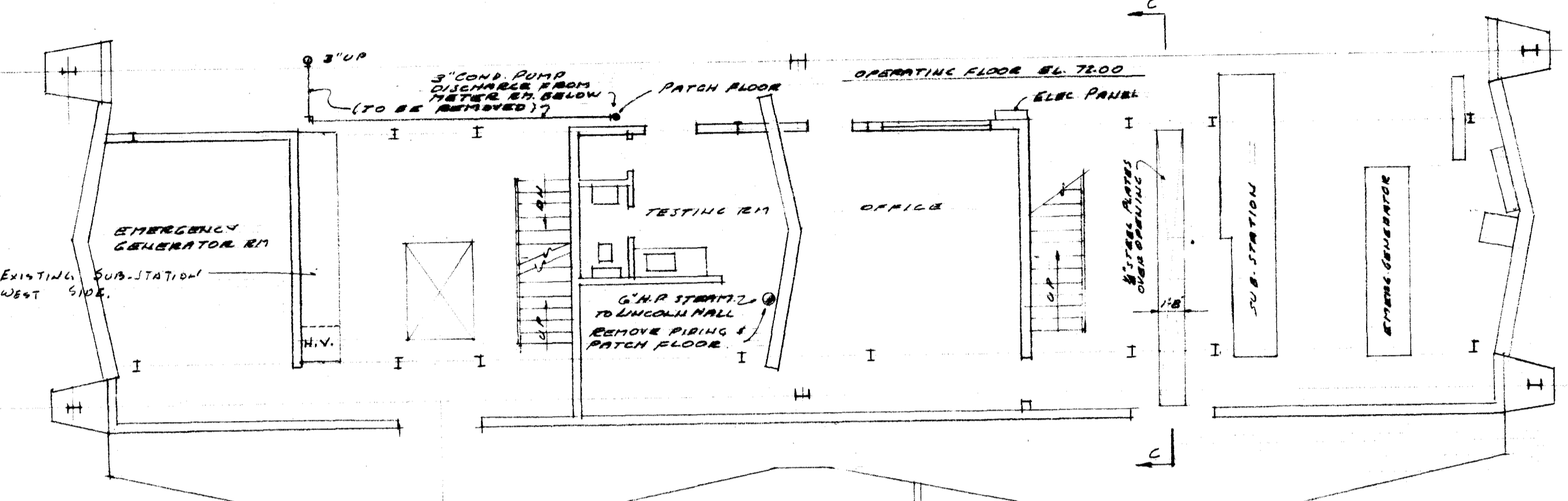
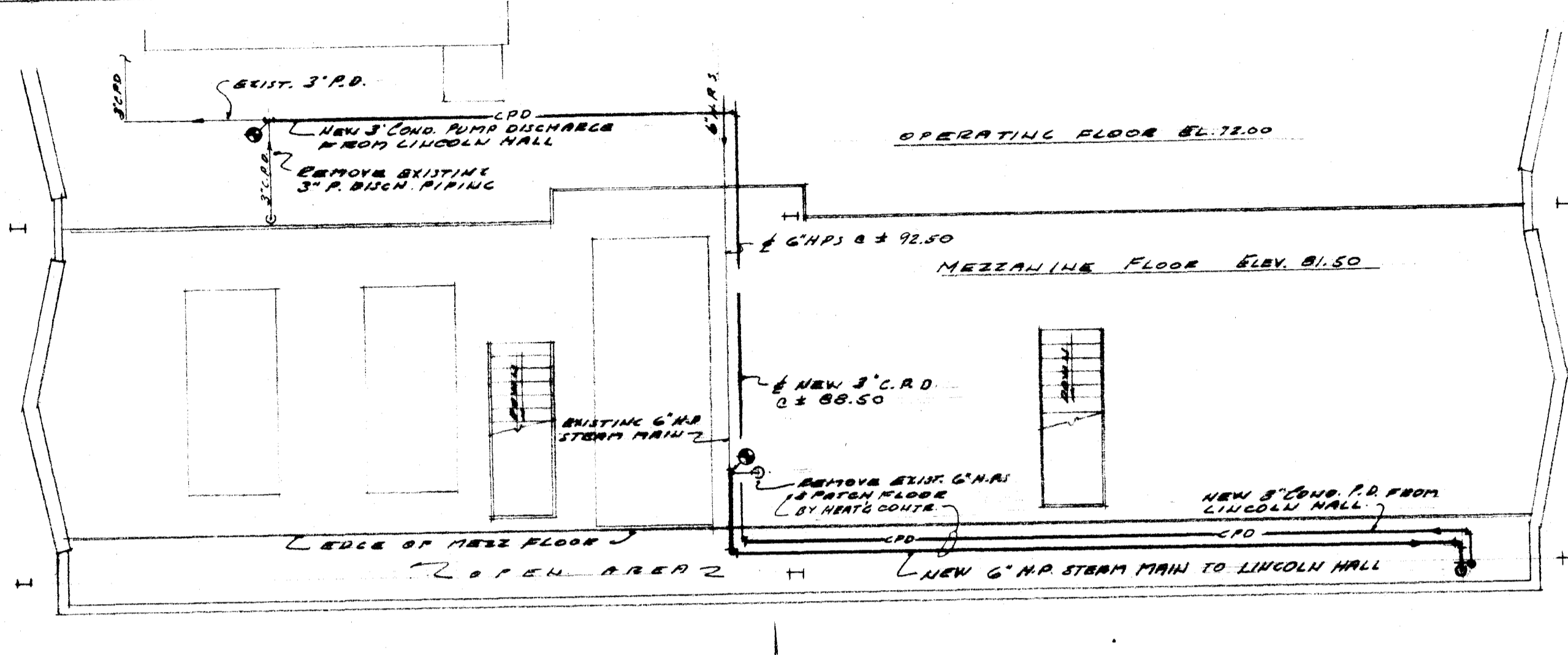
REFERENCE



E-051-1809
 REVISED FOR PINGO CHANGES 12/71
 UTILITIES TUNNEL FROM LINCOLN HALL TO WEST HEATING PLANT
 NORTHERN ILLINOIS UNIVERSITY BOARD OF REGENTS
 DEKALB ILLINOIS

DATE: 3/18/71
 FILE NO: C-556

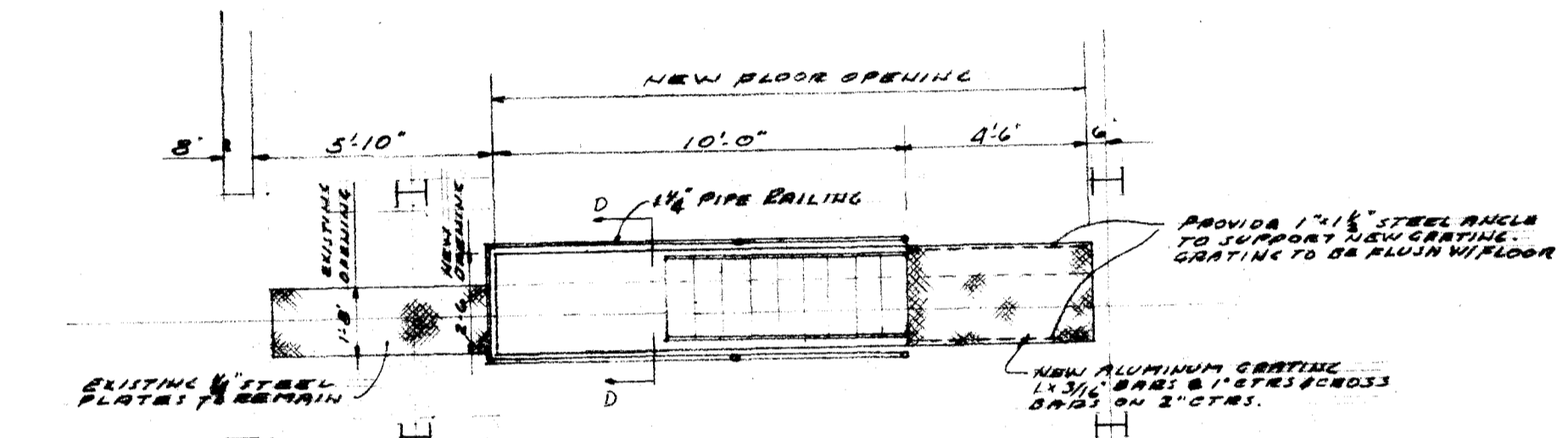
BROWN, DAVIS, HULLINS AND ASSOCIATES
 CONSULTING ENGINEERS
 CHAMPAIGN ILLINOIS



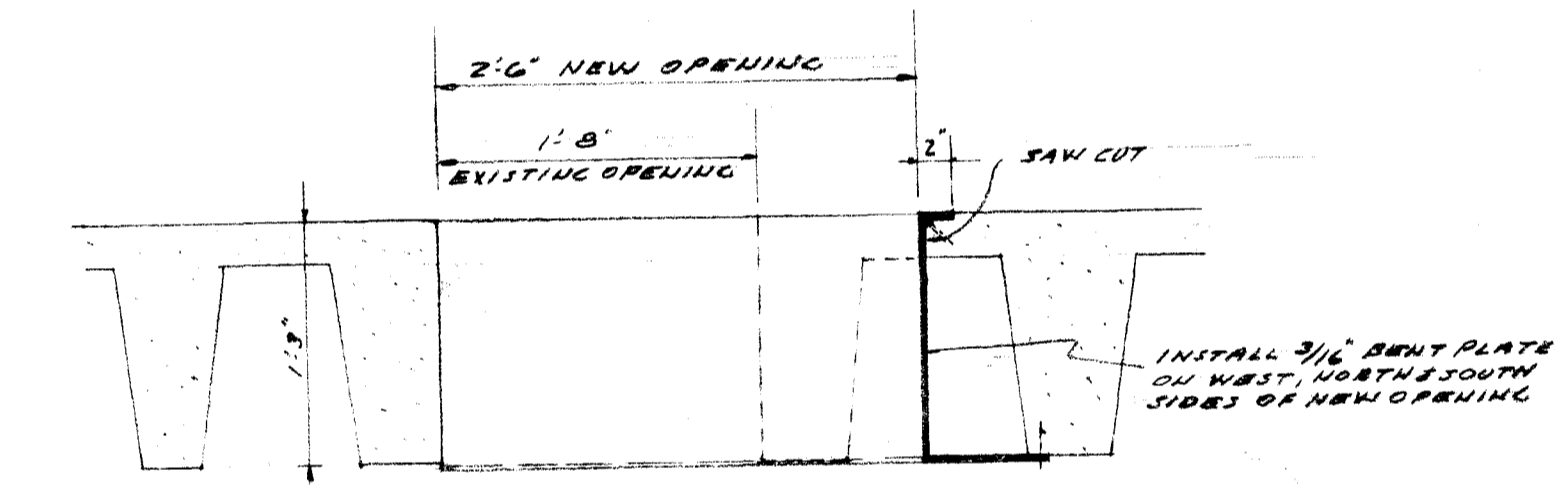
MEZZANINE FLOOR PLAN - PIPING REVISIONS
SCALE 1/4\"/>

EXISTING-PARTIAL FIRST FLOOR PLAN
SCALE 1/8\"/>

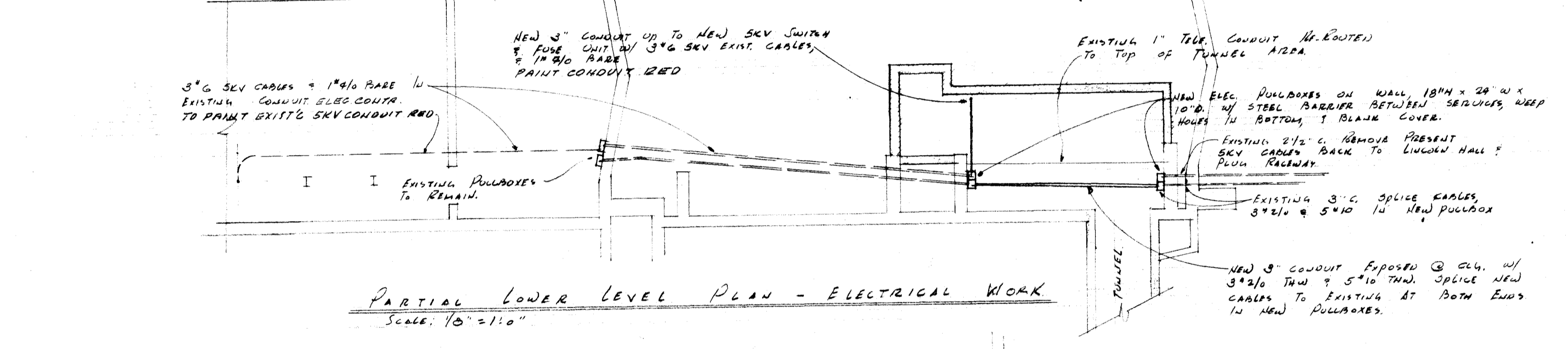
EXISTING-PARTIAL LOWER LEVEL & FOUNDATION PLAN
SCALE 1/8\"/>



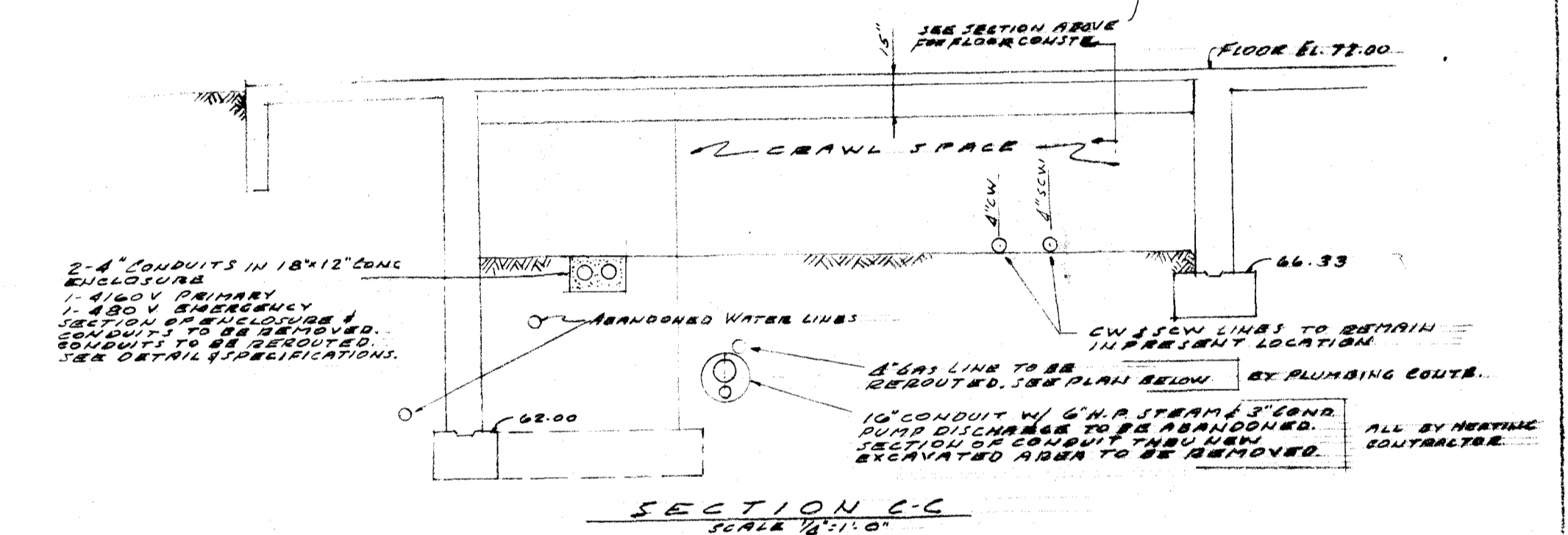
PLAN



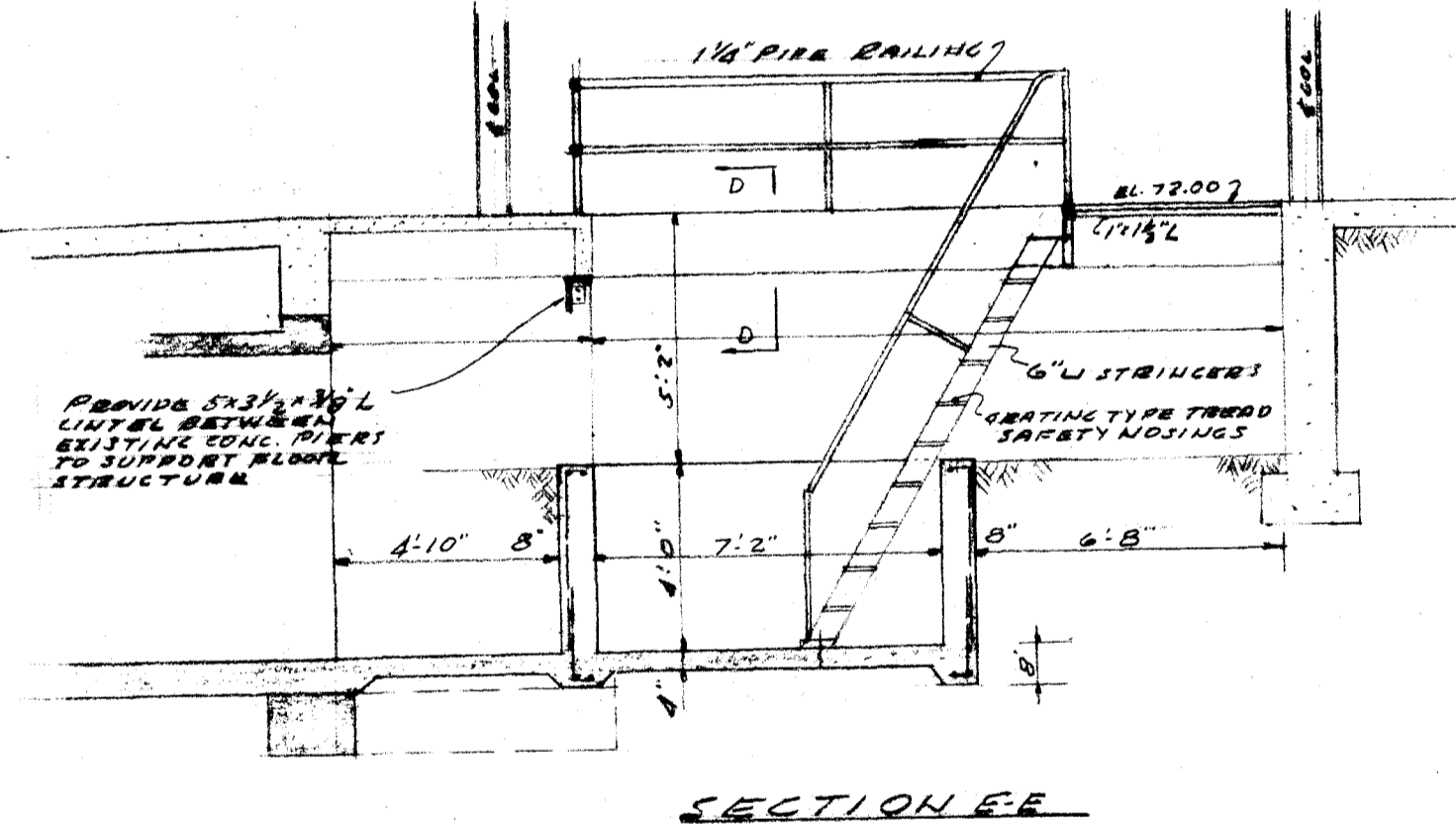
SECTION D-D
SCALE 1\"/>



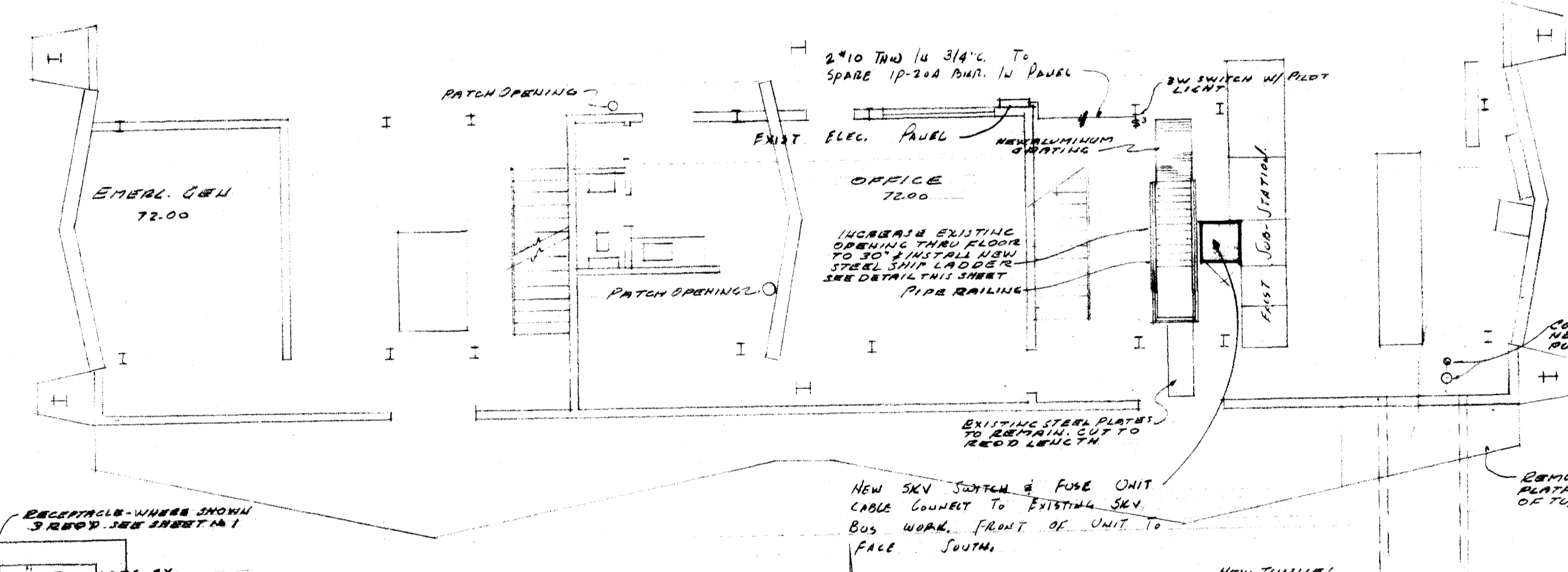
PARTIAL LOWER LEVEL PLAN - ELECTRICAL WORK
SCALE 1/8\"/>



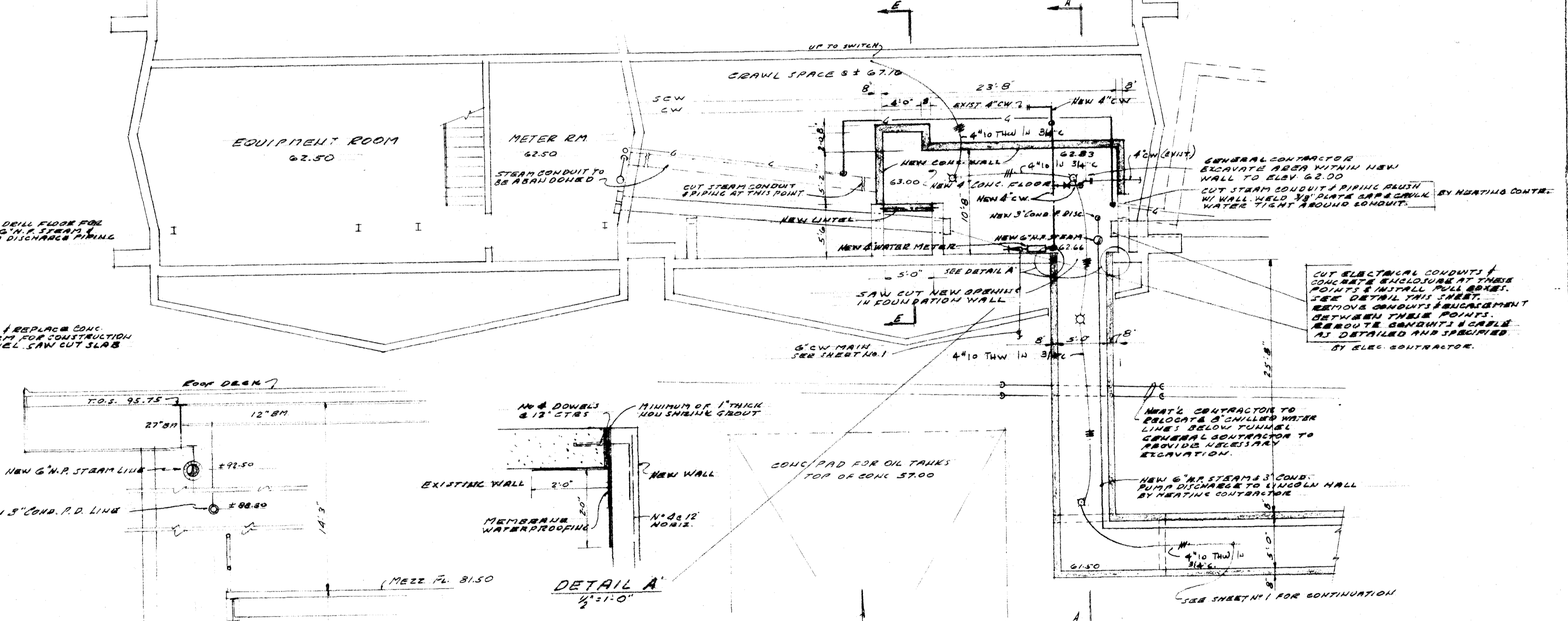
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SCALE 1\"/>



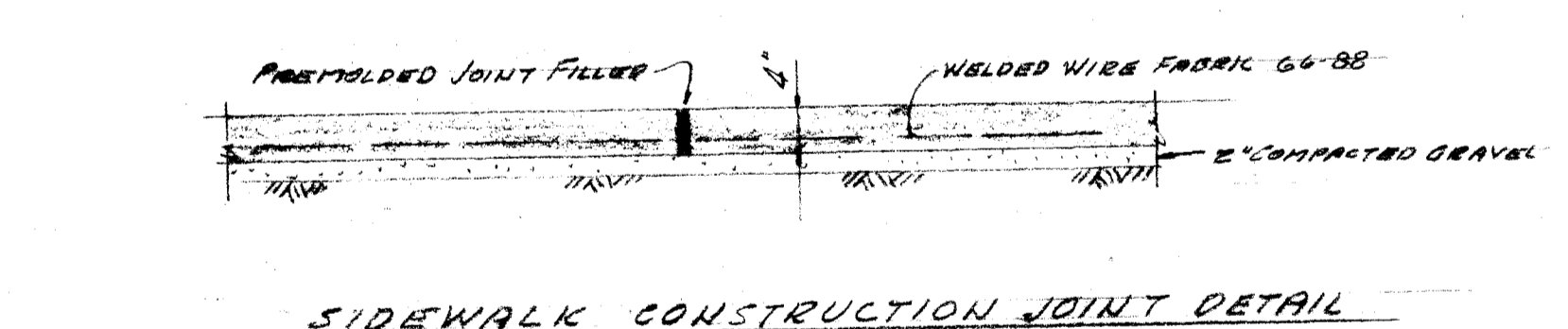
SECTION E-E
DETAIL 60\"/>



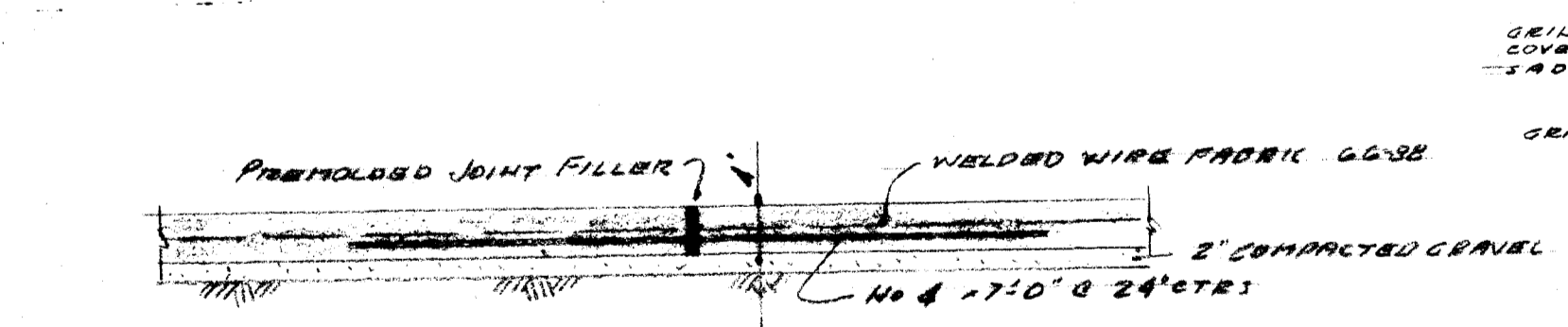
PARTIAL FIRST FLOOR PLAN - REVISED
SCALE 1/8\"/>



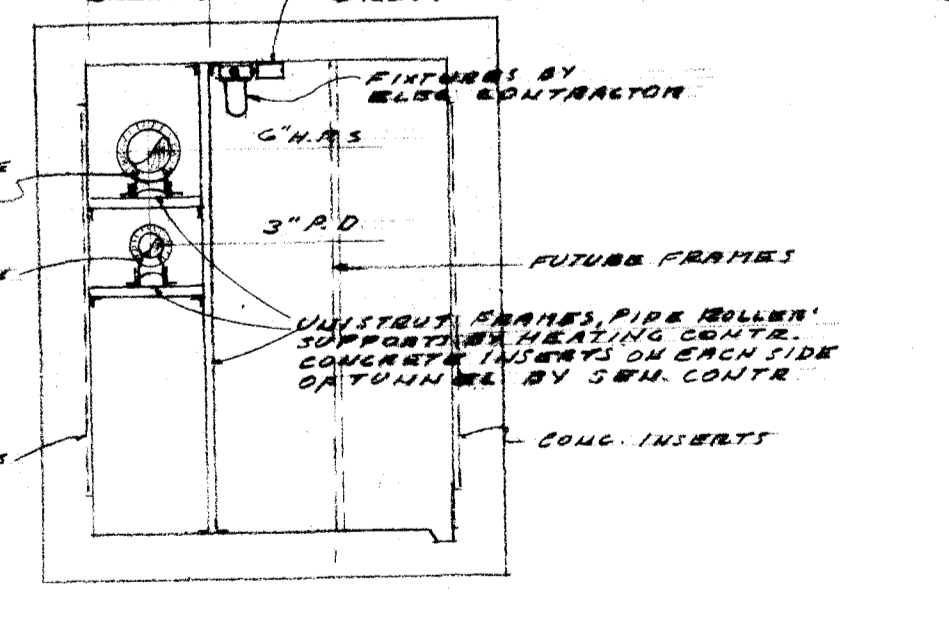
PARTIAL LOWER LEVEL & FOUNDATION PLAN - REVISED
SCALE 1/8\"/>



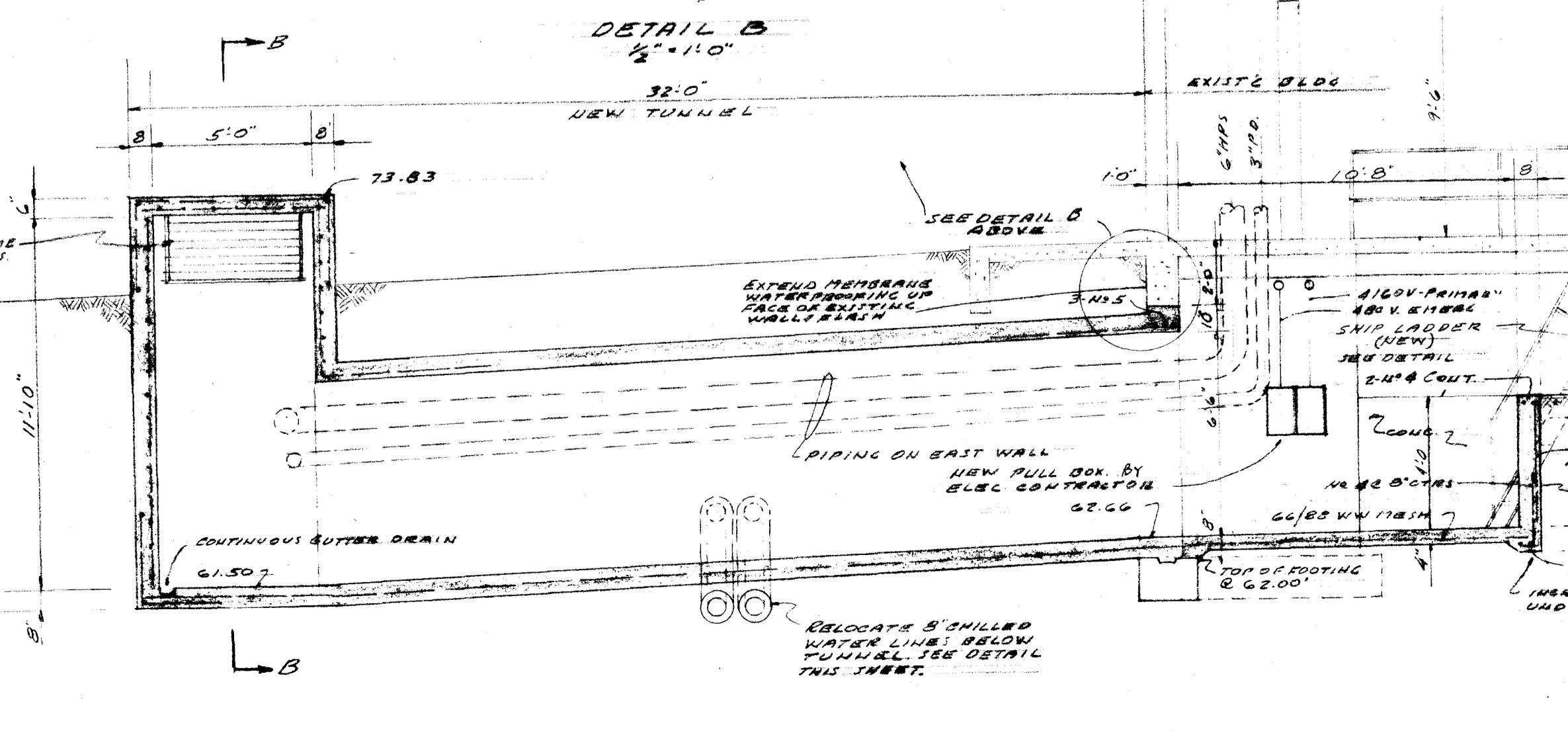
SIDEWALK CONSTRUCTION JOINT DETAIL



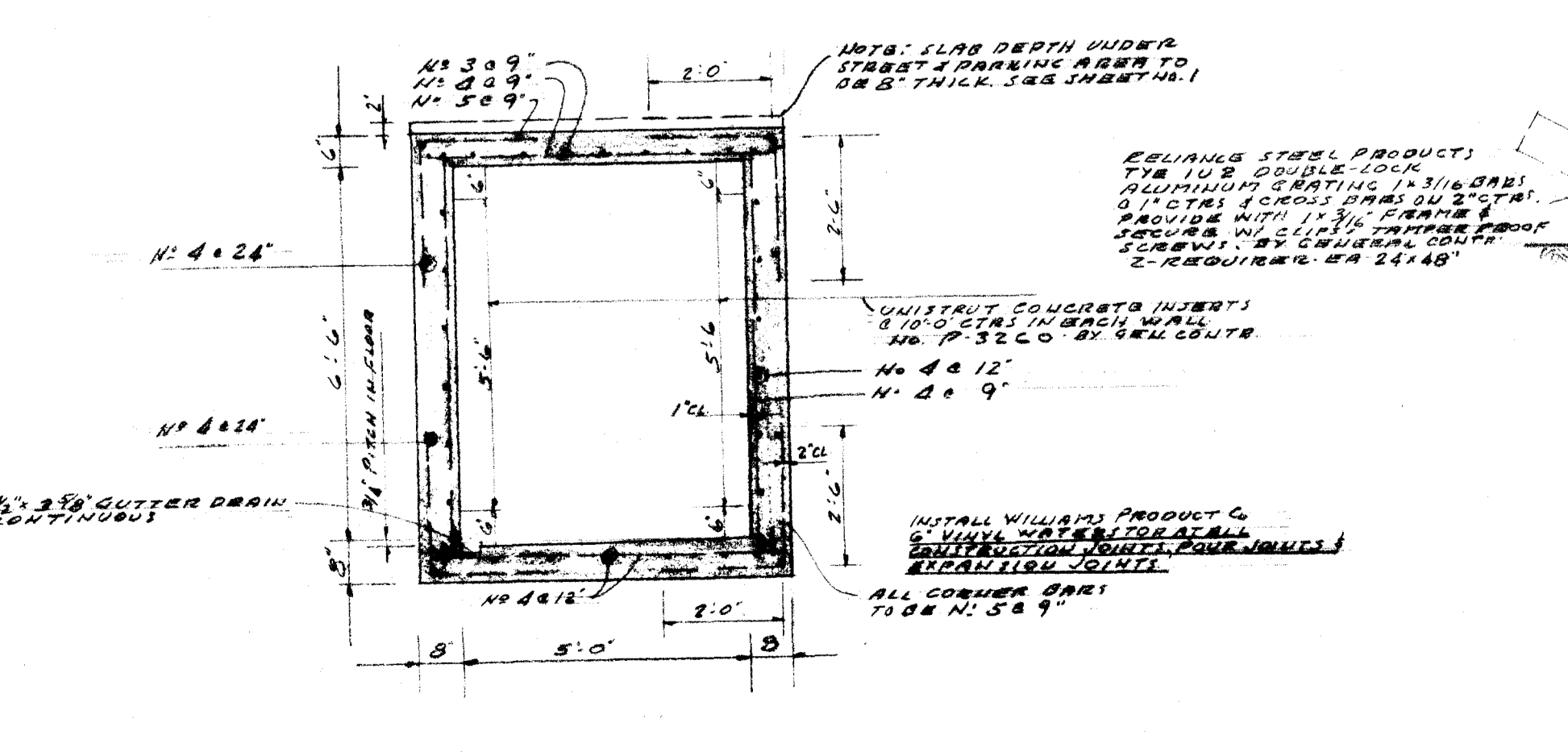
SIDEWALK EXPANSION JOINT DETAIL



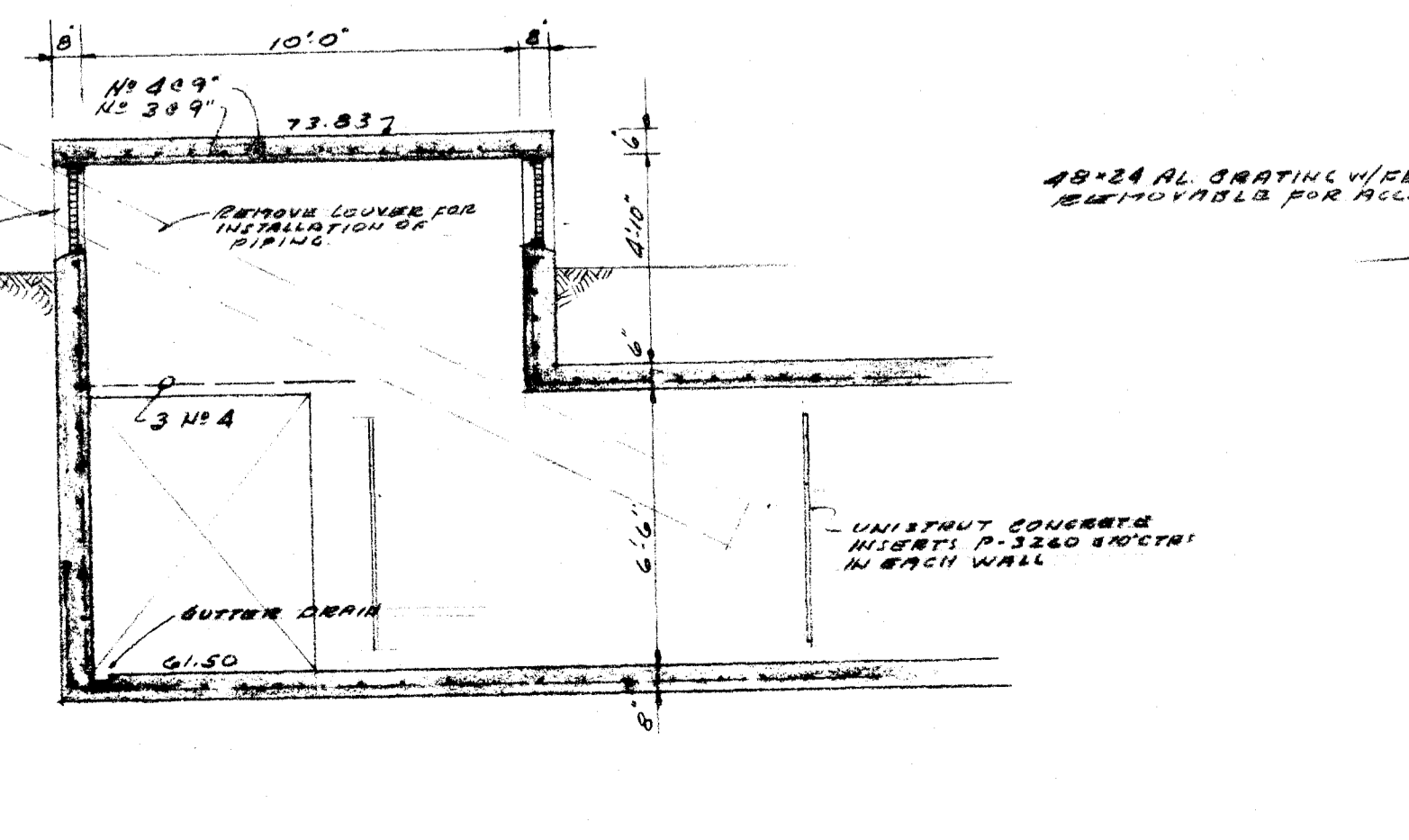
TYPICAL TUNNEL PIPING
SCALE 3/8\"/>



SECTION A-A
SCALE 1/4\"/>

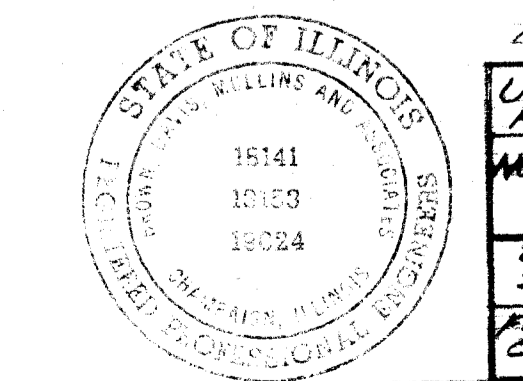


TYPICAL TUNNEL SECTION
SCALE 3/8\"/>

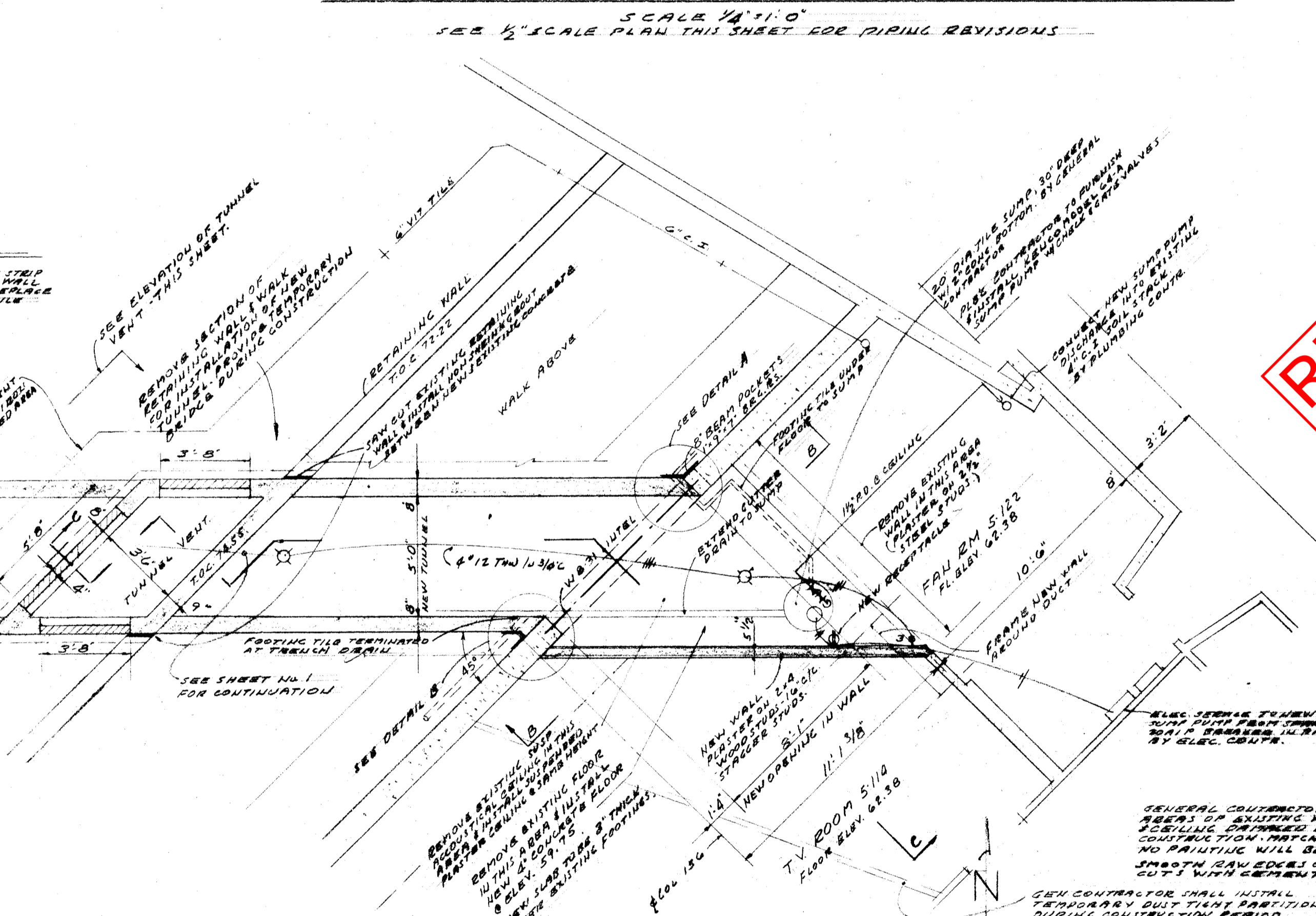
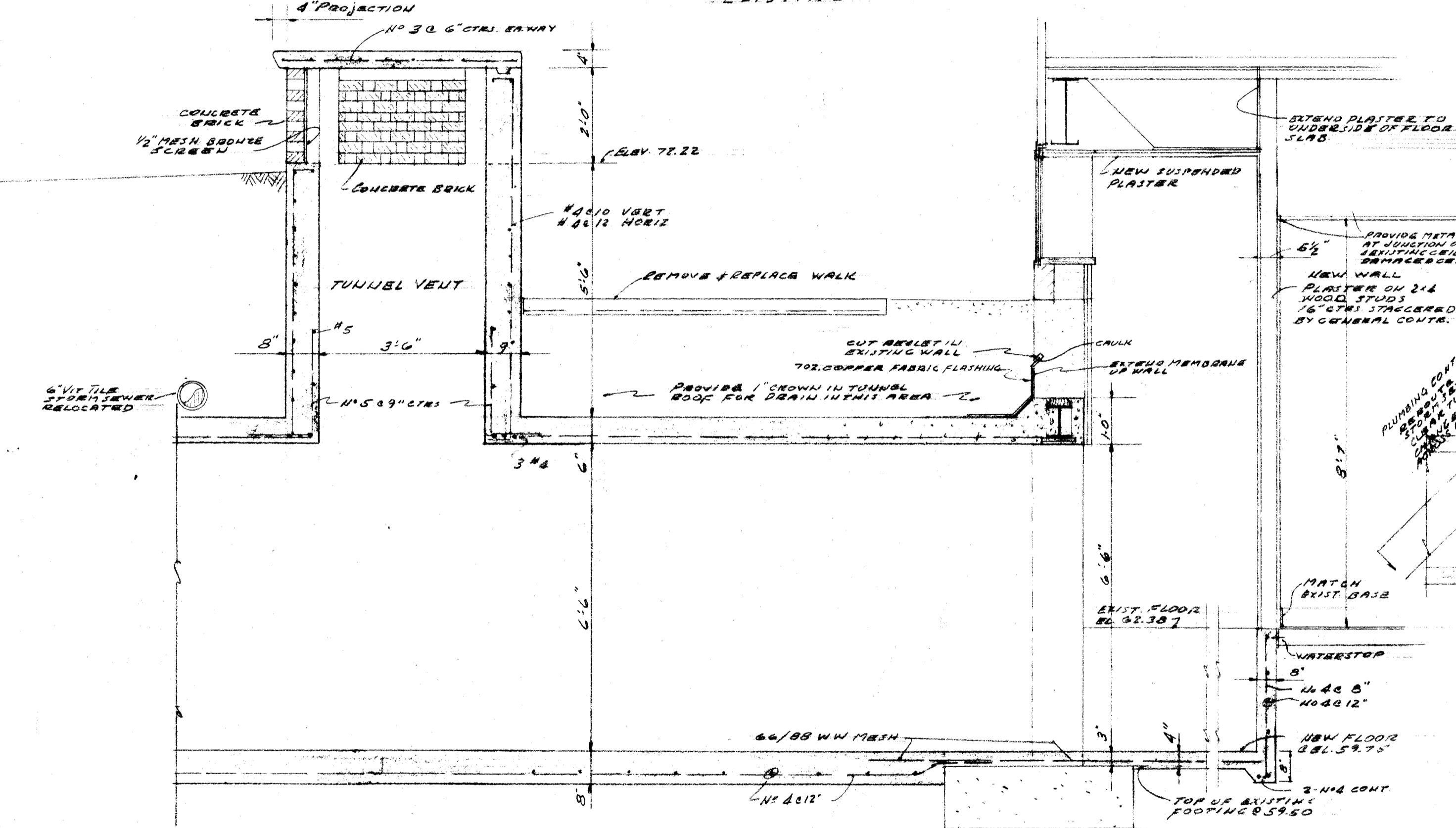
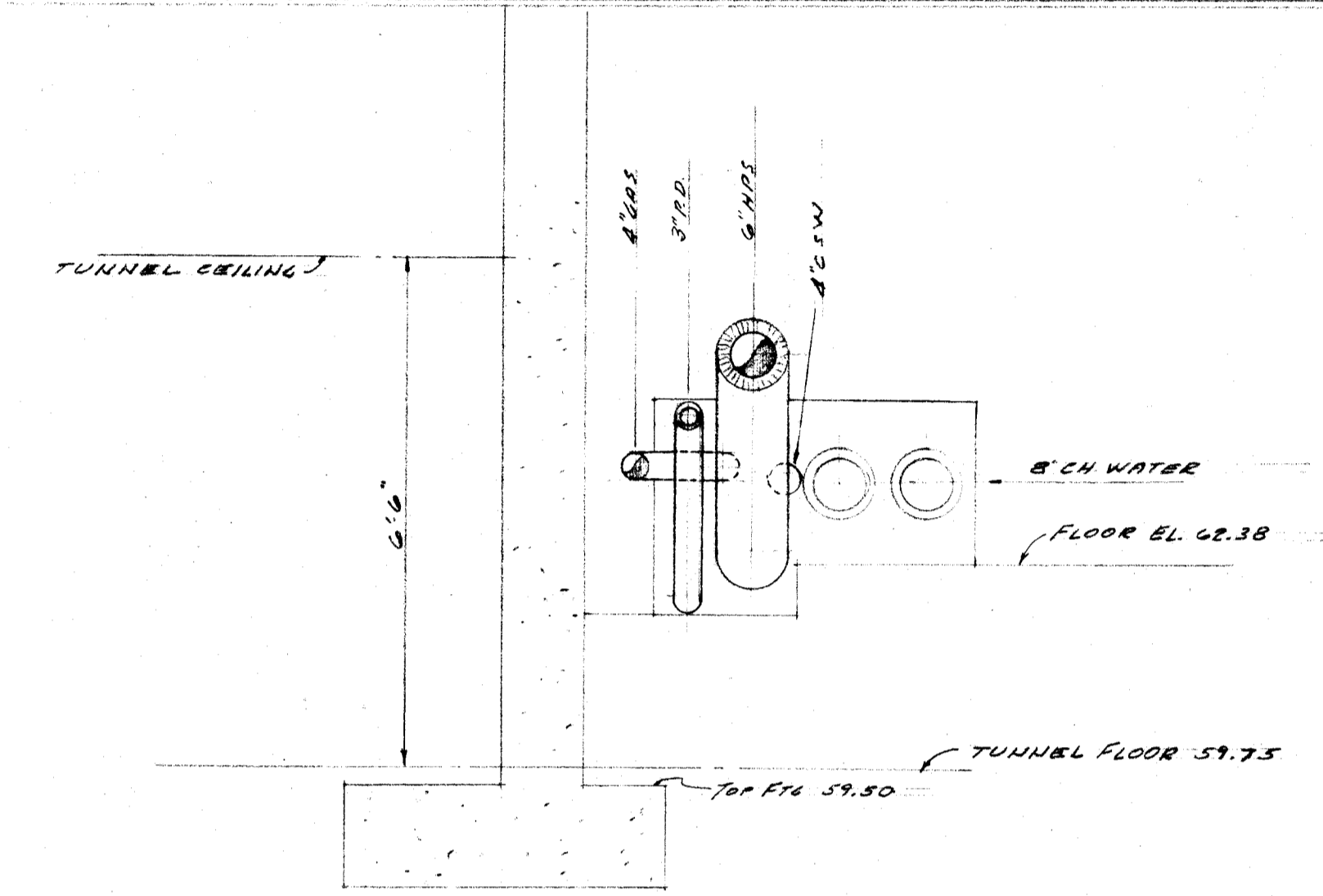
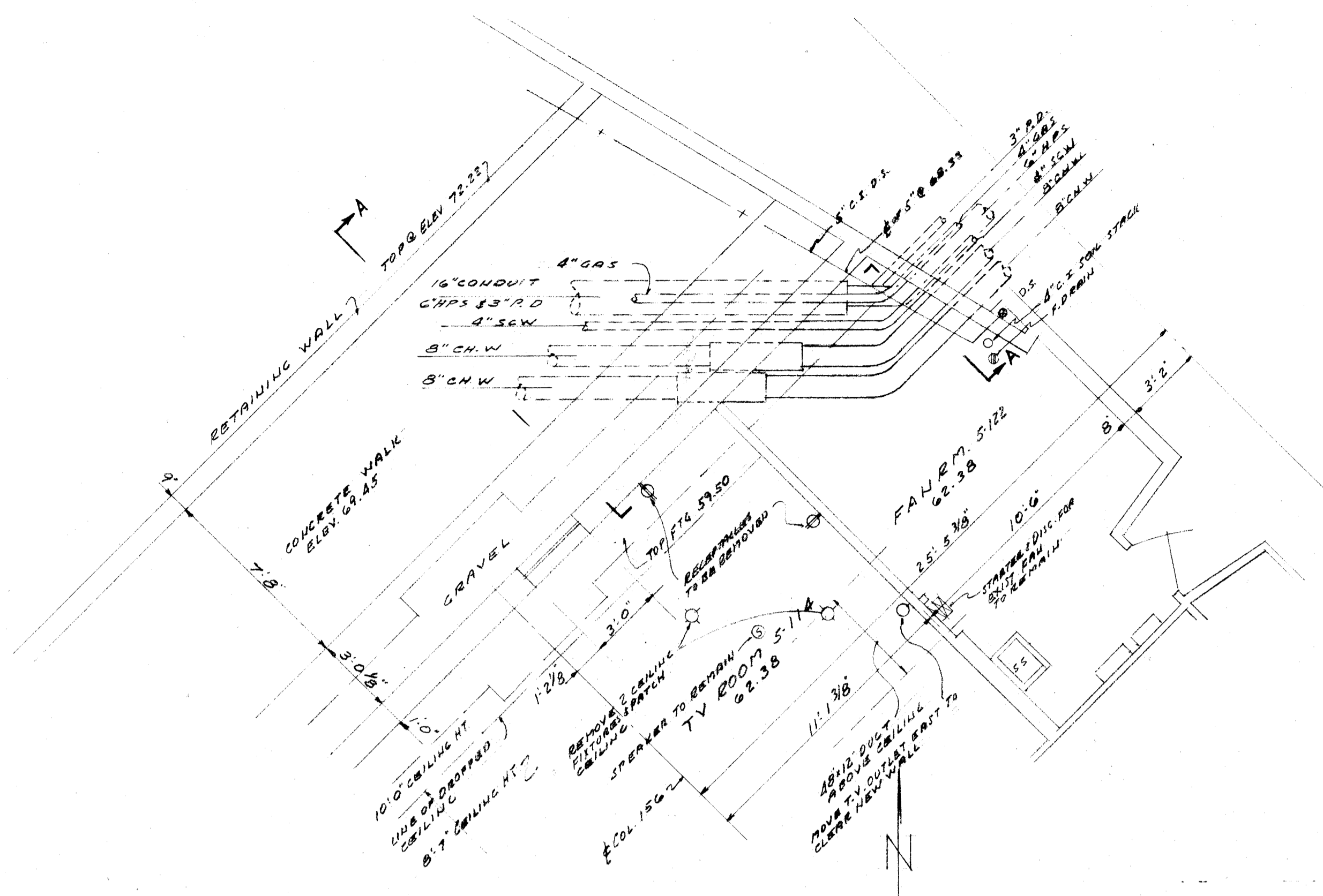
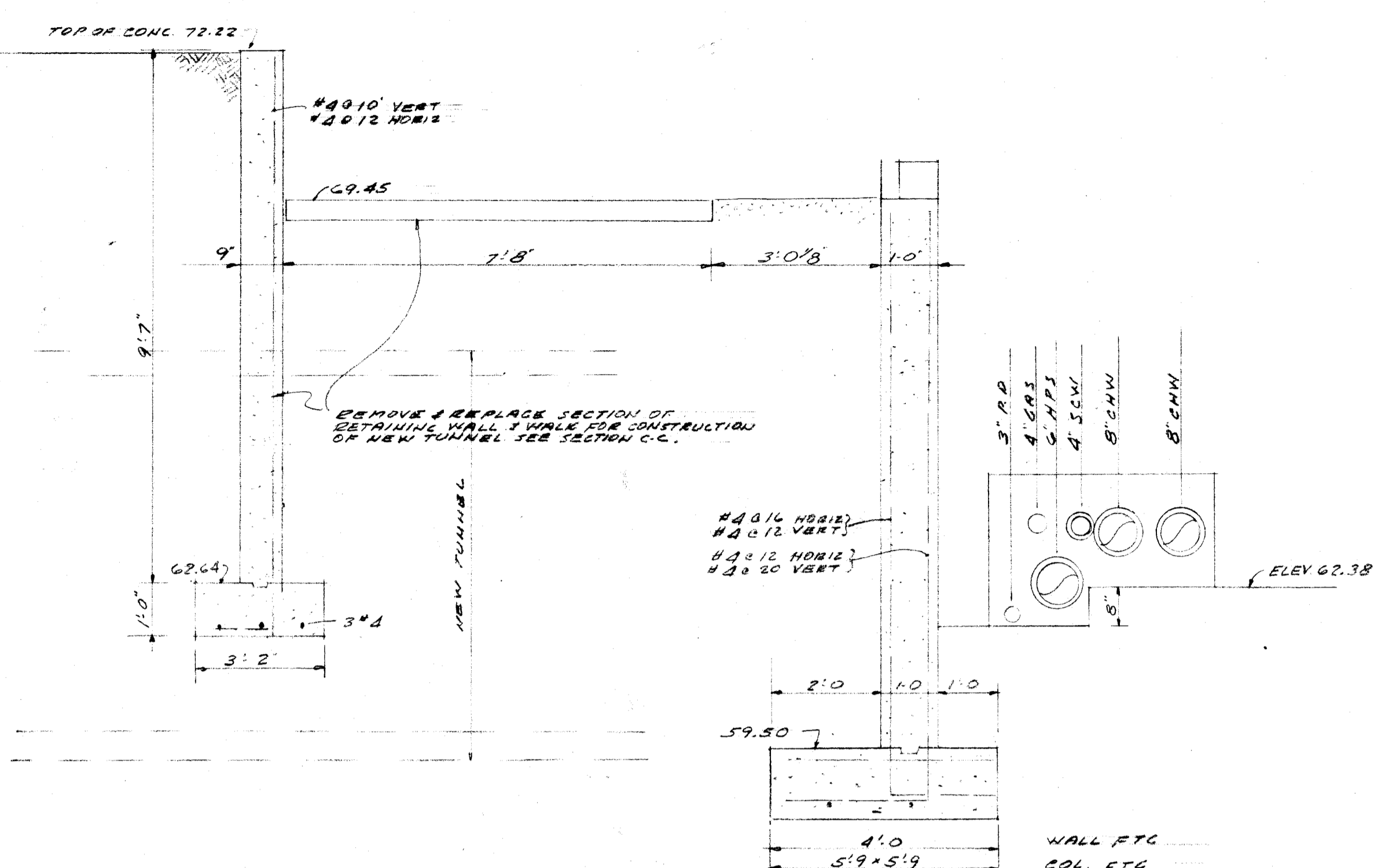
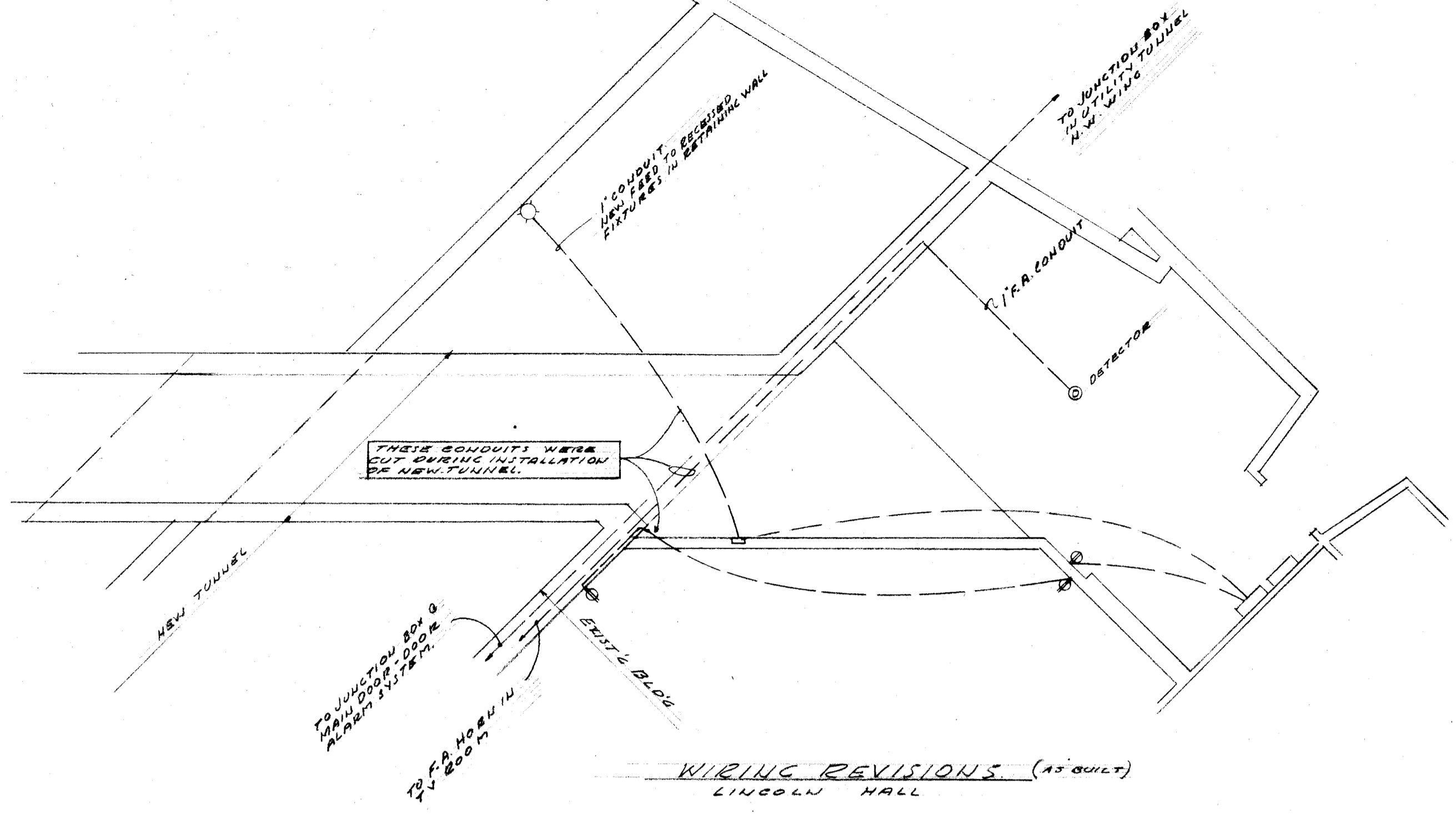


SECTION B-B
SCALE 1/4\"/>

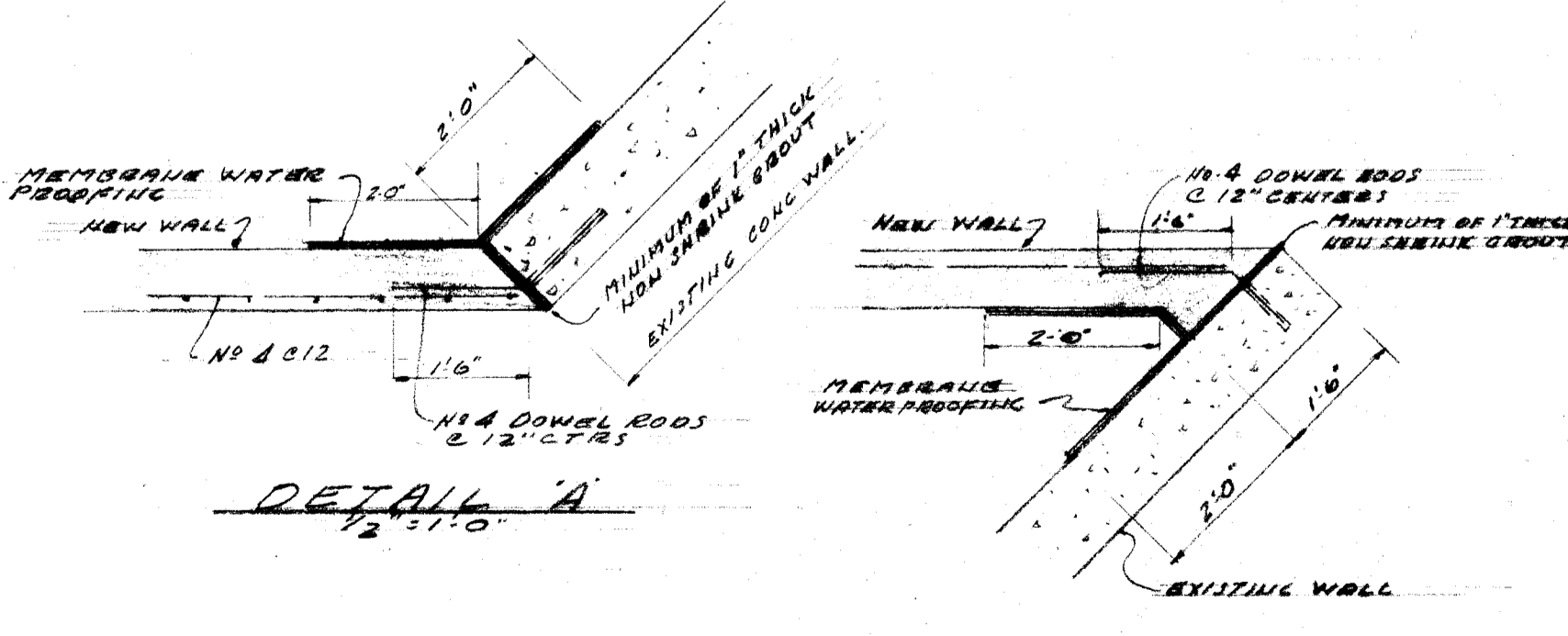
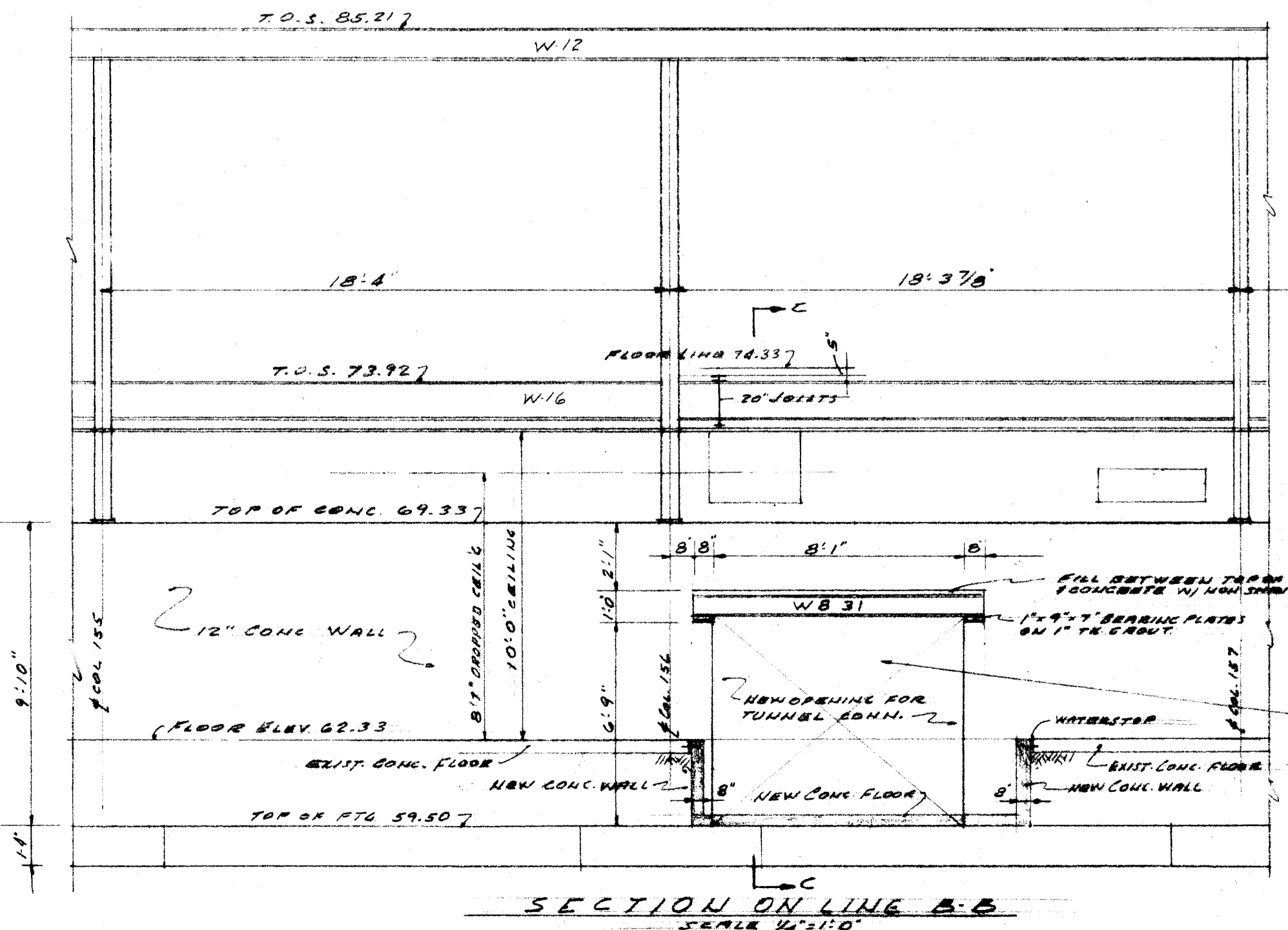
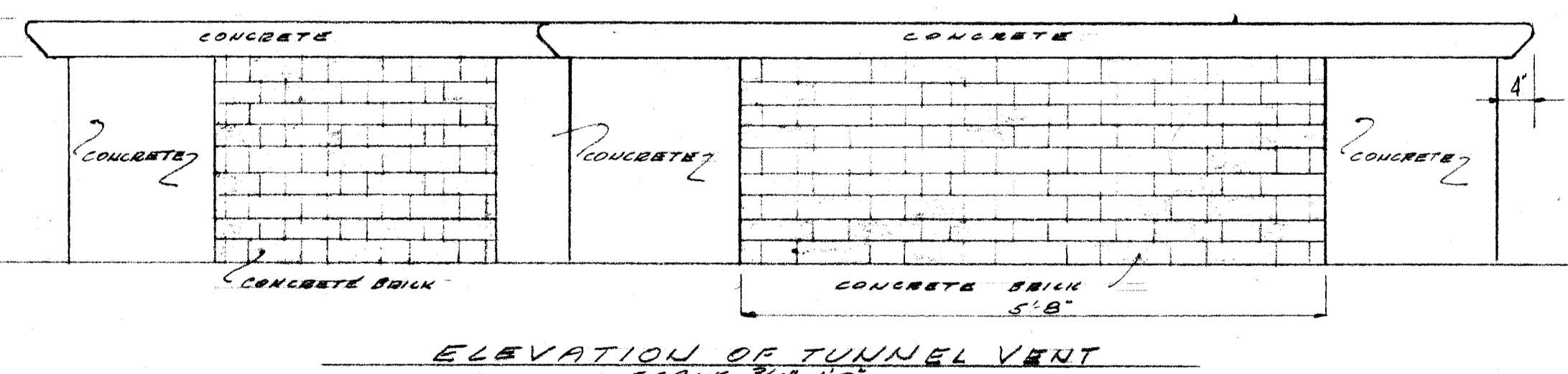
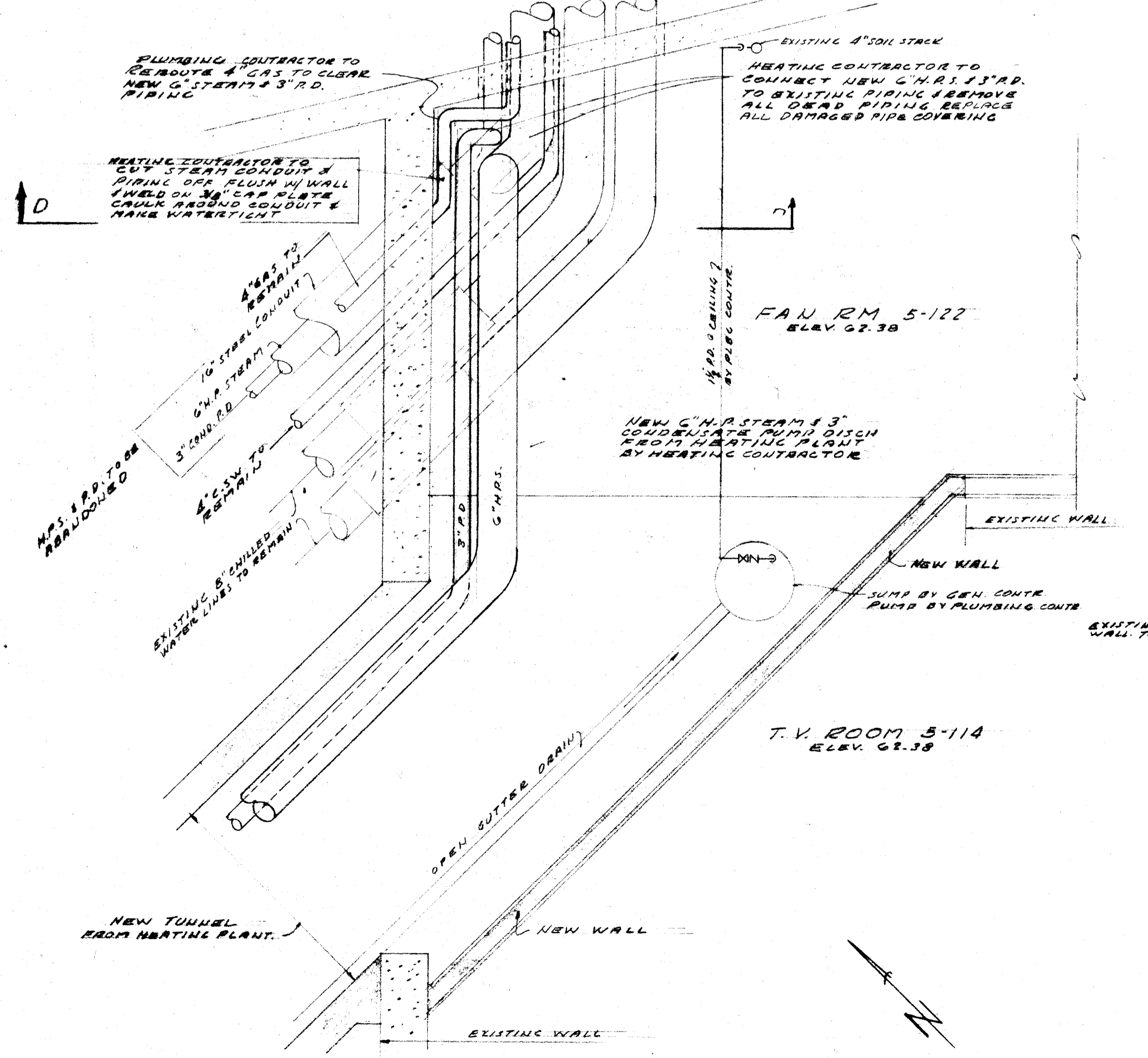
REFERENCE



E-051-1810
REVISED FOR FIELD SHEETS 12/21
UTILITIES TUNNEL NEW STEAM CONDUIT LINES
WEST LINCOLN HALL TO WEST HEATING PLANT
NORTHERN ILLINOIS UNIVERSITY BOARD OF REGENTS
CHAMPAIGN ILLINOIS
DATE 12/21/10
DESIGNER
DRAWN
CHECKED
DATE 12/21/10
CONSULTING ENGINEERS
CHAMPAIGN ILLINOIS
SHEET 2



REFERENCE



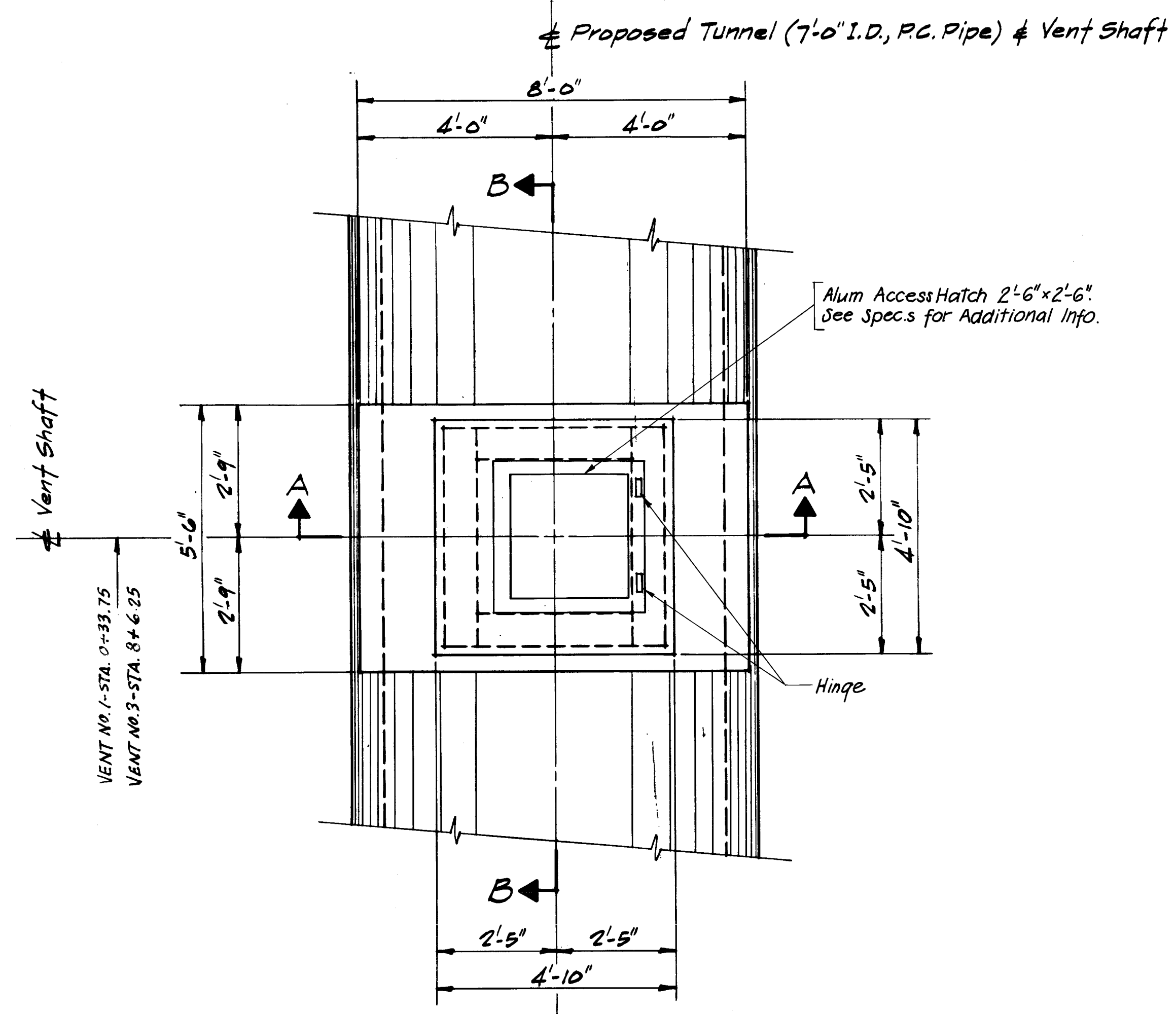
E-051-1811
REVISED FOR FIELD CHANGES 12/71

UTILITIES TUNNEL NEW STEAM AND CONDENSATE LINES FROM LINCOLN HALL TO WEST HEATING PLANT
NORTHERN ILLINOIS UNIVERSITY BOARD OF REGENTS
DEKALB ILLINOIS OF REGENCY UNIVERSITIES

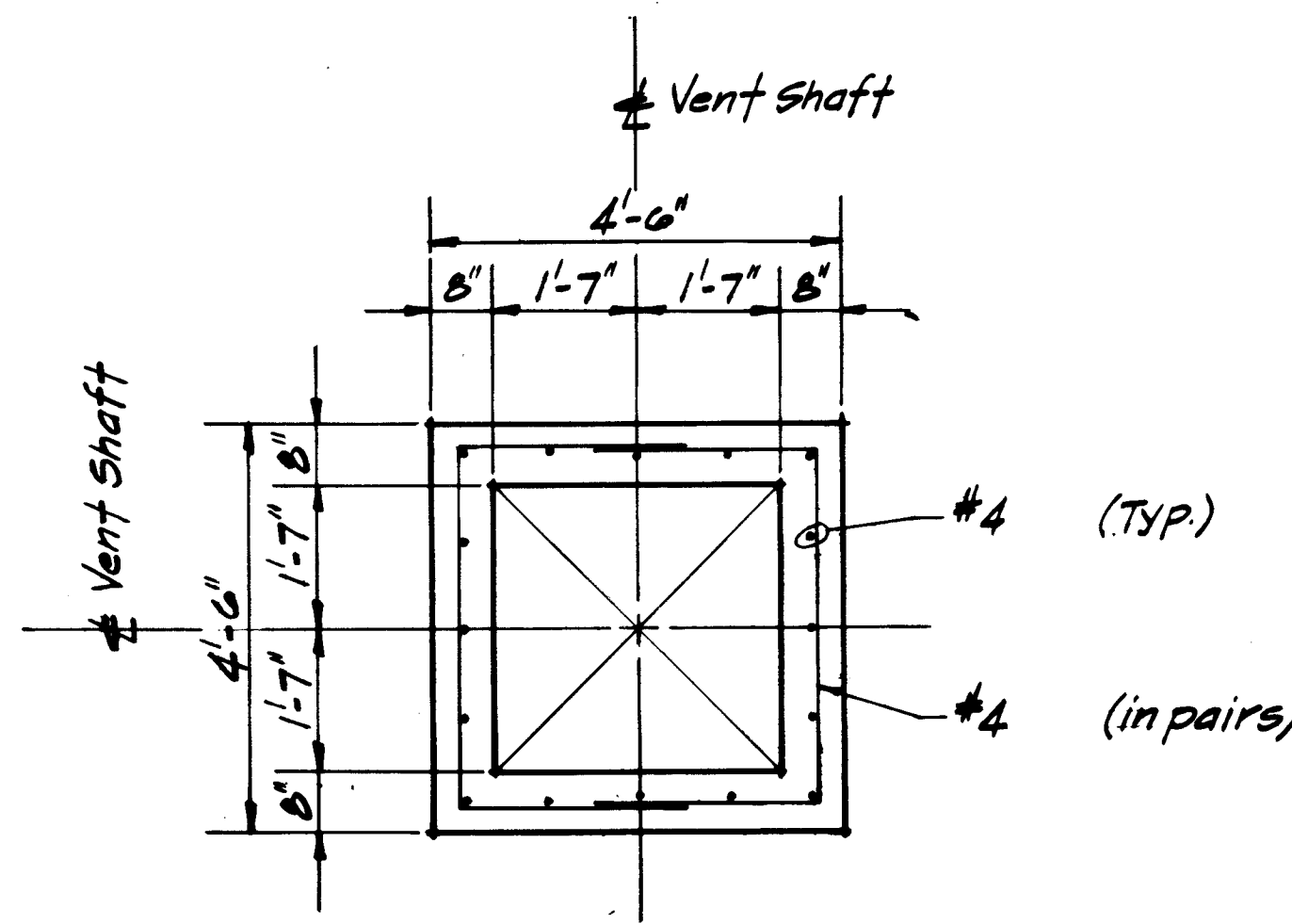
DATE: 3/10/71
SCALE: AS SHOWN

DESIGNED BY: [Signature]
CHECKED BY: [Signature]

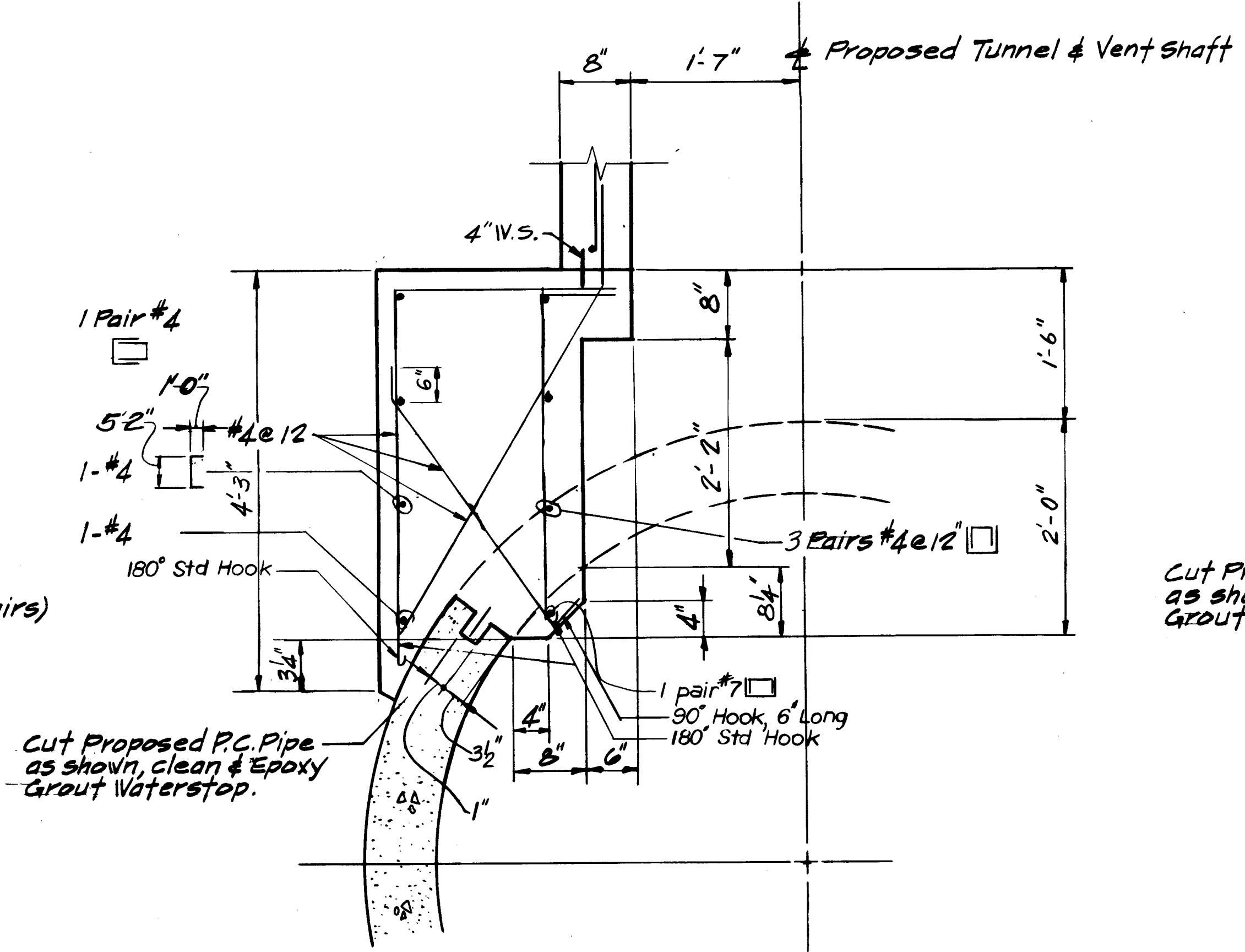
CONSULTING ENGINEERS
CHAMPAIGN ILLINOIS



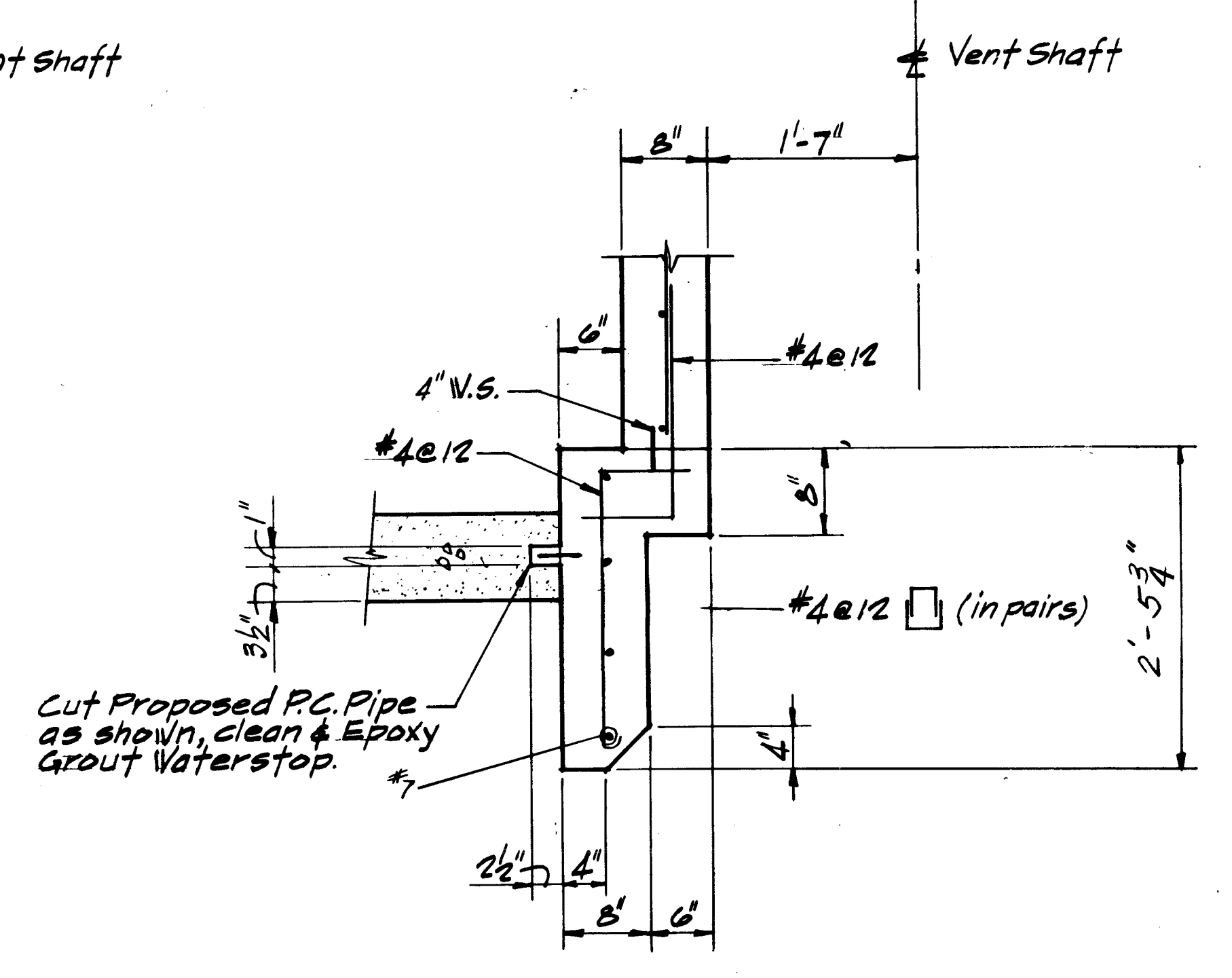
PLAN



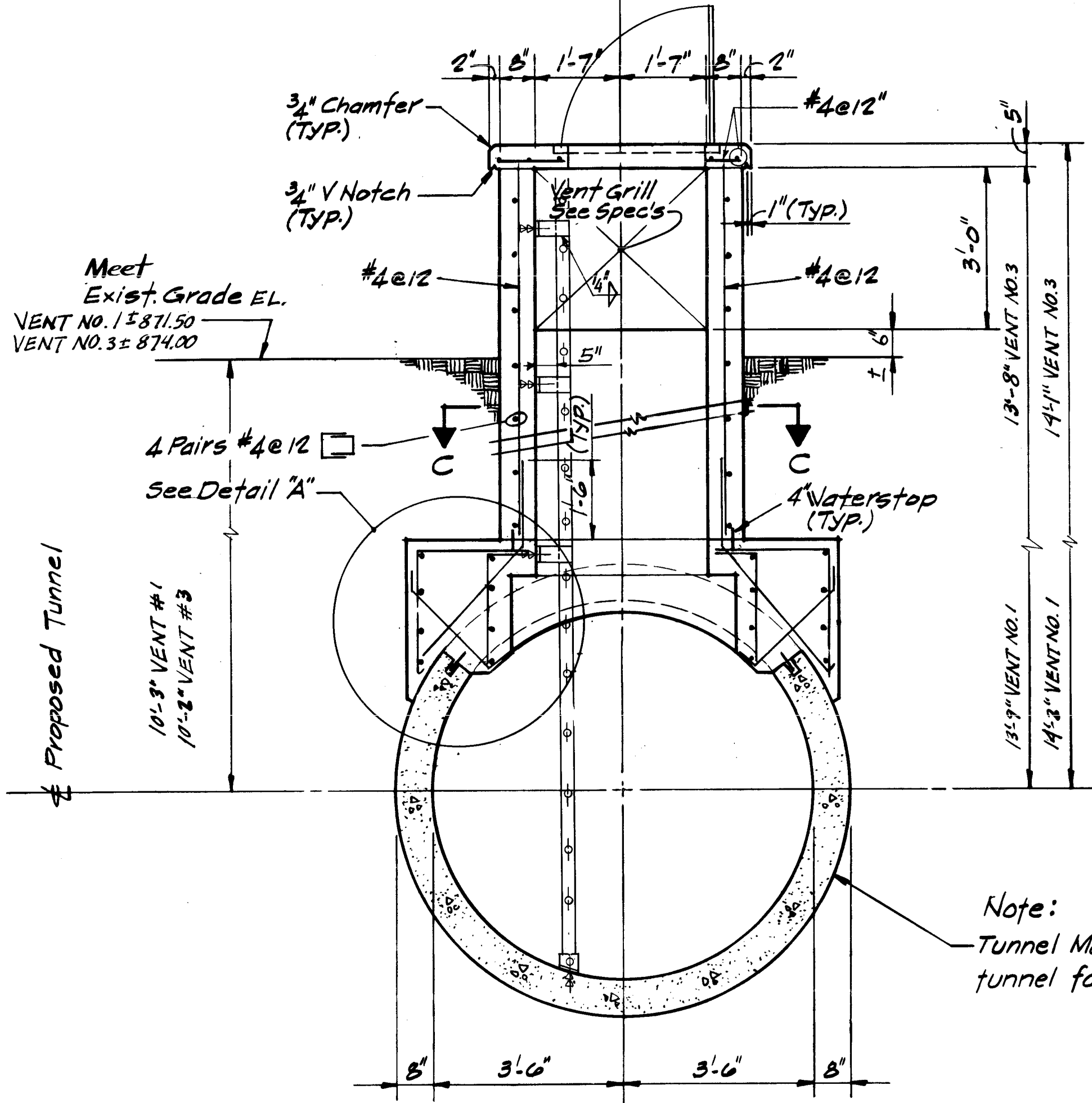
SECTION C-C



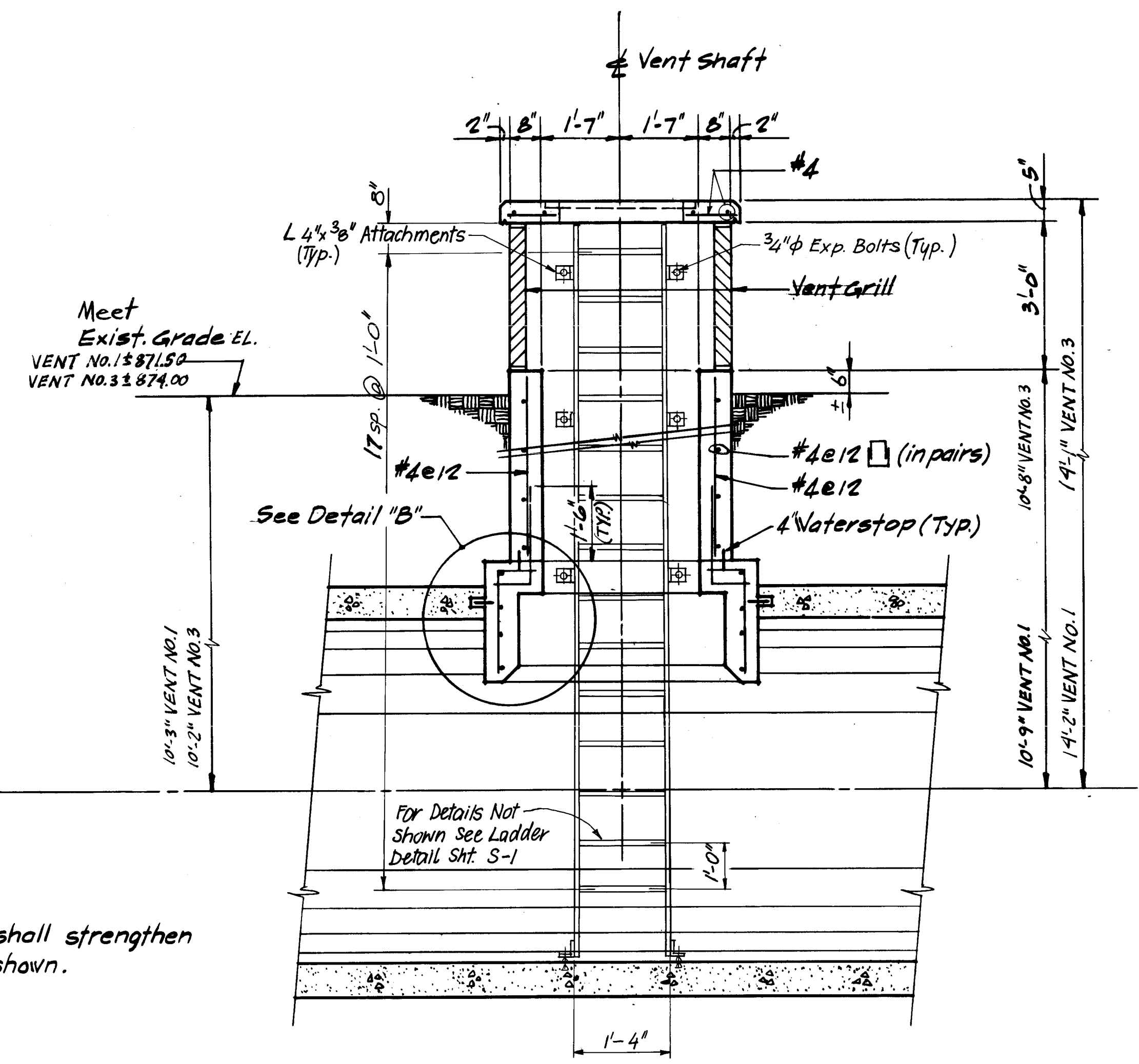
DETAIL "A"



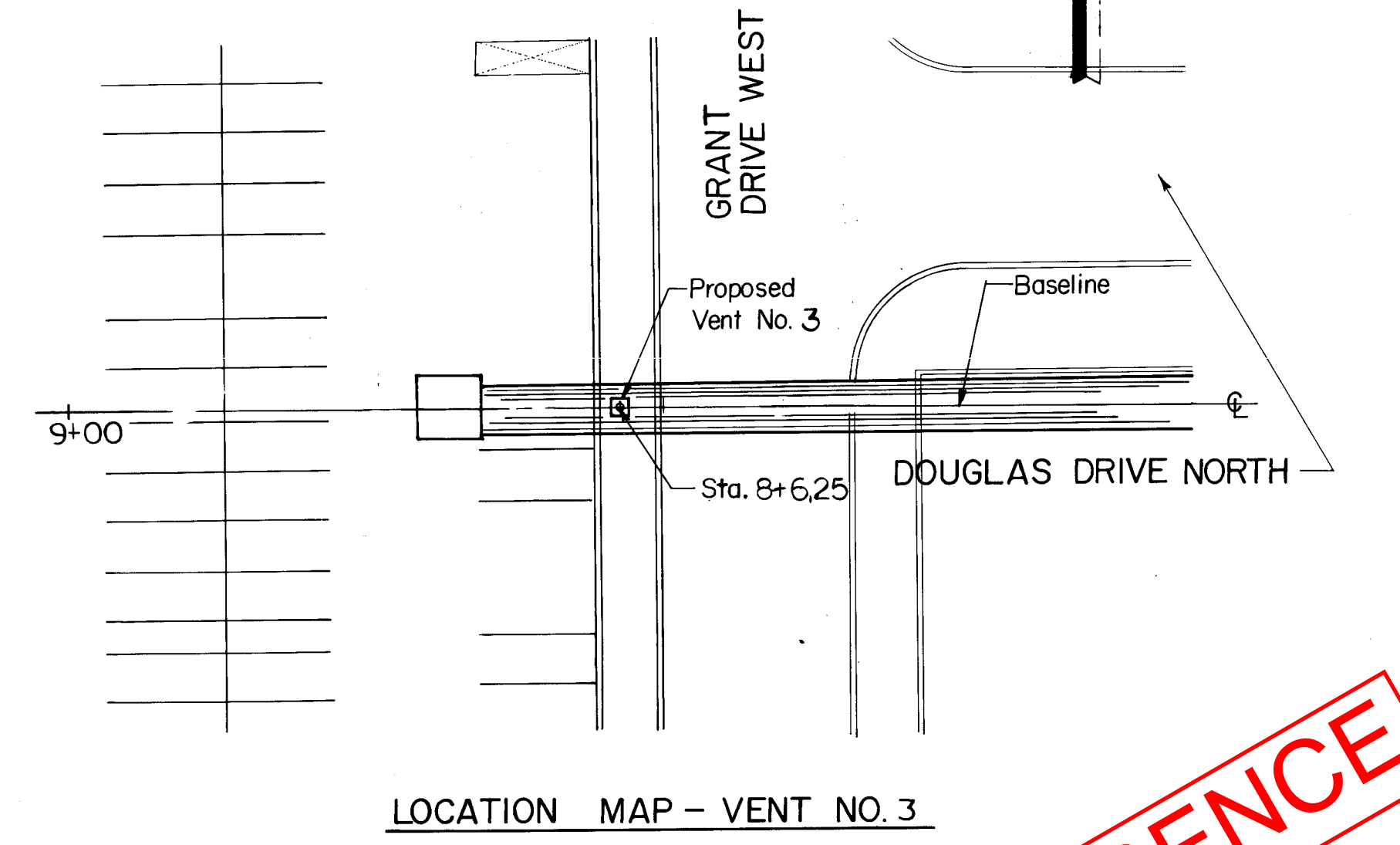
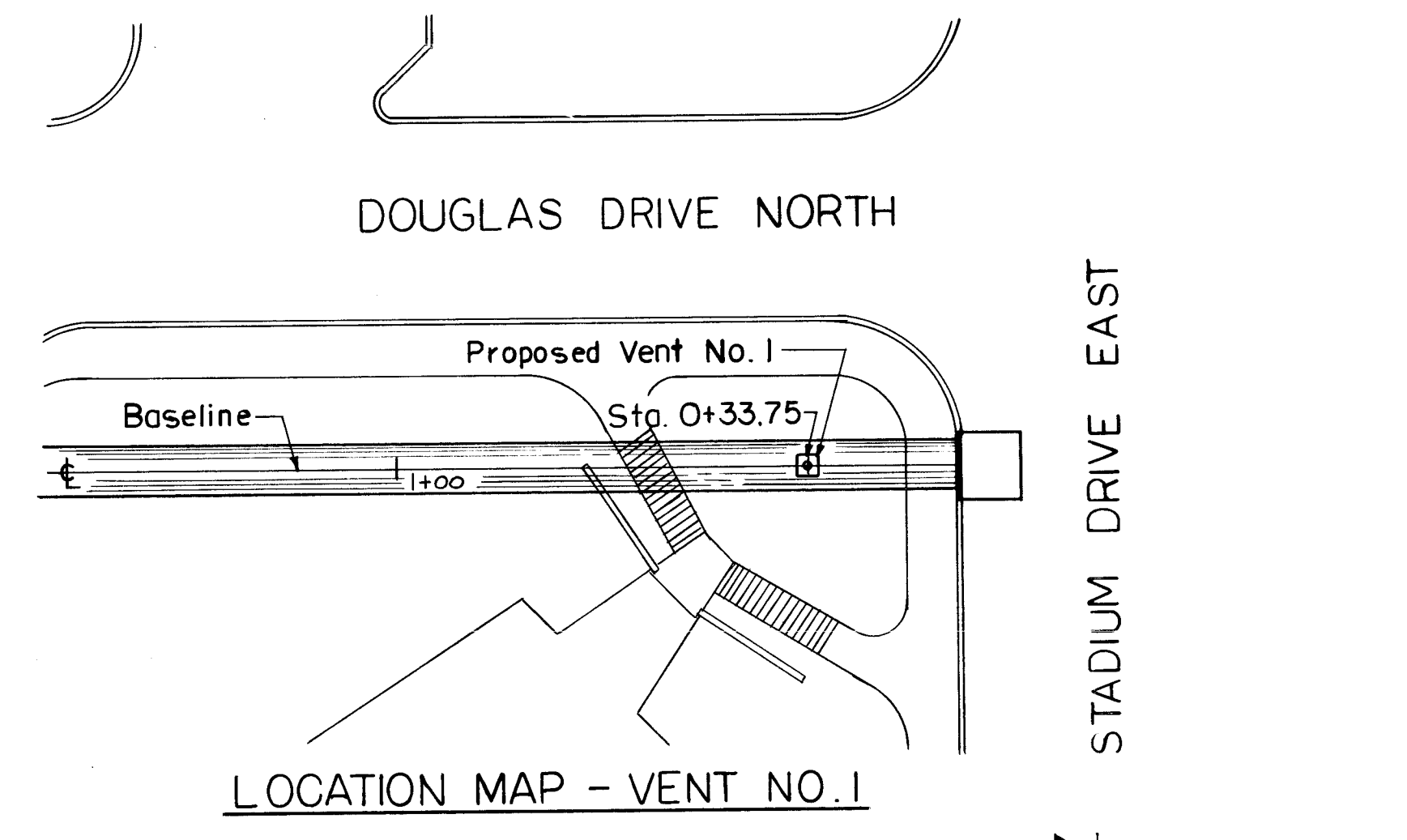
DETAIL "B"



SECTION A-A



SECTION B-B



ALTERNATE I

REFERENCE

THESE TRACINGS HAVE BEEN REVISED ACCORDING TO CONTRACTOR'S MARKED UP FIELD RECORD DRAWINGS. Drawings are not to scale unless otherwise indicated.

REVISIONS		DRAWN	APPROVED
NO.	DATE	REMARKS	
1	4/27/88	AS BUILT REVISION	TRACED APPROVED
			CHECKED APPROVED
			J.C. E.L.D.

TORNROSE, CAMPBELL & ASSOC., INC.
CONSULTING STRUCTURAL ENGINEERS
309 W WASHINGTON CHICAGO, IL 60606 312-853-6200

ROBERT G. BURKHARDT & ASSOC. INC. Consult. Eng.
407 S. Dearborn St. Chicago Illinois 60605
[312] 341-9292

NORTHERN ILL. UNIVERSITY
PHYSICAL PLANT DE KALB, ILLINOIS

REVISIONS	DIR. OF PHYSICAL PLANT	DRAWN
APPROVED	CHECKED	

VENT NO. 1 & 3 & DETAILS
STEAM LINE TUNNEL FROM WEST HEATING PLANT TO STEVENSON TOWERS - PHASE I

PROJECT NO.	1700
DATE	4/10/87
SHEET	S-5
OF SHEETS	