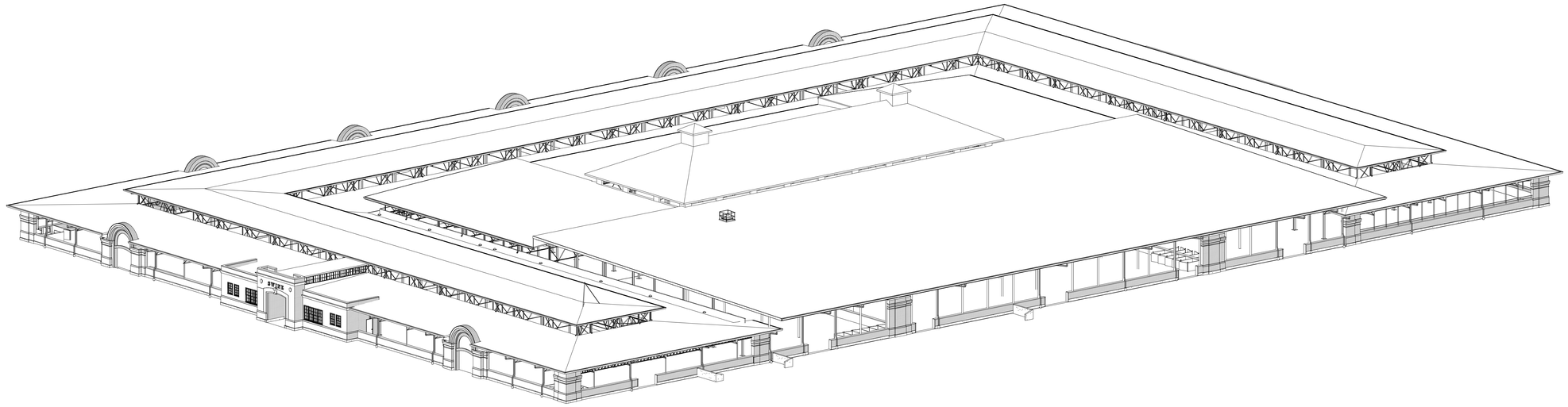
ISF SWINE BARN UPDATES - PHASE 2

IOWA STATE FAIRGROUNDS

E. 30TH AND UNIVERSITY AVE.,
DES MOINES, IOWA

Contract Project Number 251001.00
Iowa State Fair Project No. CSWB2601



GENERAL DRAWINGS	
G001	COVER SHEET - PHASE 2

DEMOLITION DRAWINGS	
CD100	SITE DEMOLITION PLAN - FOR REFERENCE ONLY
AD101	ARCHITECTURAL OVERALL DEMOLITION FLOOR PLAN
AD102	ARCH. ENLARGED DEMOLITION FLOOR PLANS
AD103	ARCHITECTURAL ROOF DEMOLITION PLANS
SD101	STRUCTURAL DEMOLITION PLANS
SD102	STRUCTURAL DEMOLITION ELEVATIONS
SD103	STRUCTURAL DEMOLITION ELEVATIONS
PD100	PLUMBING OVERALL DEMOLITION PLAN
PD101	PLUMBING DEMOLITION PLAN
MD101	MECHANICAL DEMO FLOOR PLAN
ED101-1	ELECTRICAL OVERALL DEMO SHEET

CIVIL DRAWINGS - FOR REFERENCE ONLY	
C001	CIVIL COVER SHEET
C002	CIVIL LEGEND AND GENERAL NOTES
C100	SITE OVERVIEW
C200	TYPICAL DETAILS
C201	TYPICAL DETAILS
C202	TYPICAL DETAILS
C203	FENCE DETAILS
C300	CIVIL QUANTITIES AND NOTES
C301	CIVIL QUANTITIES AND NOTES
C400	FENCING AND LANDSCAPING PLAN
C500	STORM SEWER PLAN
C501	STORM SEWER PROFILES
C502	STORM SEWER PROFILES
C503	STORM SEWER PROFILES
C504	SANITARY SEWER PLAN
C505	SANITARY SEWER PROFILES
C506	WATER MAIN PLAN AND PROFILES
C600	GEOMETRIC PLAN
C601	GEOMETRIC PLAN
C602	GEOMETRIC PLAN
C603	GEOMETRIC PLAN
C604	JOINTING PLAN
C605	JOINTING PLAN
C606	JOINTING PLAN
C607	JOINTING PLAN

ARCHITECTURAL DRAWINGS	
A001	ROOM FINISH SCHED., WALL TYPES AND DETAILS
A002	DOOR & FRAME SCHED., WINDOW ELEV., & DETAILS
A101	OVERALL FLOOR PLAN
A102	ENLARGED PLANS
A120	REFLECTED CEILING PLAN - LOW
A121	REFLECTED CEILING PLAN - HIGH
A130	OVERALL ROOF PLAN
A131	ROOF PLANS AND DETAILS
A201	EAST & WEST ELEVATIONS, GEN. RENOV. NOTES
A202	NORTH ELEVATION
A203	SOUTH ELEVATION
A210	INTERIOR ELEVATIONS AND DETAILS
A301	BUILDING AND WALL SECTIONS
A302	BUILDING AND WALL SECTIONS
A303	BUILDING AND WALL SECTIONS
A310	WALL SECTION & ELEV - RESTROOM GROUP "B"
A311	WALL SECTION - RESTROOM GROUP "B" & ENGLARGED RCPLANS
A312	WALL SECTION - RESTROOM GROUP "B" & ENLARGED ROOF PLANS
A313	WALL SECTION & ELEV - RESTROOM GROUP "C"
A314	WALL SECTION - RESTROOM GROUP "C' & DETAILS
A315	WALL SECTION - RESTROOM GROUP "C" & DETAILS

STRUCTURAL DRAWINGS	
S001	STRUCTURAL 3D IMAGES
S002	STRUCTURAL 3D IMAGES
S003	STRUCTURAL 3D IMAGES
S101	OVERALL FOOTING AND FOUNDATION PLAN
S102	WEST ENLARGED FTG. & FDN. PLAN
S103	EAST ENLARGED FTG. & FDN. PLAN
S104	ENLARGED FOOTING AND SLAB PLANS
S105	OVERALL LOW ROOF FRAMING PLAN
S106	ENLARGED LOW ROOF FRAMING PLANS
S107	ENLARGED MEZZANINE FRAMING PLANS
S108	OVERALL HIGH ROOF FRAMING PLAN
S109	ENLARGED HIGH ROOF FRAMING PLAN
S110	ENLARGED HIGH ROOF FRAMING PLAN
S301	STRUCTURAL SECTIONS & DETAILS
S302	STRUCTURAL SECTIONS & DETAILS
S303	STRUCTURAL SECTIONS & DETAILS
S304	STRUCTURAL SECTIONS & DETAILS
S305	STRUCTURAL SECTIONS & DETAILS
S306	STRUCTURAL SECTIONS & DETAILS
S307	STRUCTURAL SECTIONS & DETAILS
S308	STRUCTURAL SECTIONS & DETAILS
S309	STRUCTURAL SECTIONS & DETAILS
S310	STRUCTURAL SECTIONS & DETAILS
S311	STRUCTURAL SECTIONS & DETAILS
S312	STRUCTURAL SECTIONS & DETAILS
S501	STRUCTURAL DETAILS
S502	STRUCTURAL DETAILS
S900	STRUCTURAL NOTES

PLUMBING DRAWINGS	
P000	PLUMBING TITLE SHEET
P100	PLUMBING UNDERFLOOR OVERALL PLAN
P101	PLUMBING OVERALL PLAN
P103	PLUMBING UNDERFLOOR ENLARGED PLAN
P104	PLUMBING ENLARGED PLAN
P105	PLUMBING ROOF PLANS
P500-1	PLUMBING DETAILS
P600-1	PLUMBING SCHEDULES

MECHANICAL DRAWINGS	
M001	MECHANICAL TITLE SHEET
M101	MECHANICAL OVERALL PLAN
M102	MECHANICAL OVERALL ROOF PLAN
M104	MECHANICAL ENLARGED PLAN
M105	MECHANICAL RESTROOM ROOF PLAN
M500-1	MECHANICAL DETAILS & SCHEDULES

ELECTRICAL DRAWINGS	
E000-1	ELECTRICAL COVER SHEET
E101	ELECTRICAL OVERALL PLAN
E103	ELECTRICAL ROOF PLAN
EL101	ELECTRICAL OVERALL LIGHTING PLAN
EL103	LIGHTING & LIGHTING CONTROLS PLANS
EP101	ELECTRICAL ENLARGED POWER PLANS
E500-1	ELECTRICAL DETAILS
E600-1	ELECTRICAL SCHEDULES
E601-1	ELECTRICAL SCHEDULES

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MECHANICAL, PLUMBING, ELECTRICAL AND TECHNOLOGY
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5518 NW 88TH STREET
JOHNSTON, IOWA 50131
515-727-0700

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

COVER SHEET - PHASE 2

Project Number: 251001.00
Date: 03/10/2026

G001

SCALE:

LEGEND

- CHAINLINK FENCE REMOVAL
- PIPE REMOVAL
- PIPE ABANDONMENT
- EXTERIOR PAVEMENT REMOVAL
- SALVAGE BRICK PAVERS
- INTERIOR PAVEMENT REMOVAL (BY OTHERS)

REMOVE EXISTING EXTERIOR PAVEMENT

REMOVE SANITARY MANHOLE

WATER BASIN REMOVAL (BY OTHERS)

WATER BASIN REMOVAL (BY OTHERS)

WATER BASIN REMOVAL (BY OTHERS)

WATER BASIN REMOVAL (BY OTHERS)

TRIM TREE BRANCHES HANGING OVER BUILDING

OWNER TO SALVAGE BENCH

SALVAGE BRICK PAVERS

WATER BASIN REMOVAL (BY OTHERS)

INTERIOR PAVEMENT REMOVAL (BY OTHERS)

INGROUND SCALE SALVAGED (BY OTHERS)

WATER BASIN REMOVAL (BY OTHERS)

REMOVE EXISTING SIDEWALK PAVEMENT

OWNER TO SALVAGE BENCH

REMOVE WATER VALVE BOX

BATHROOM DEMOLITION (BY OTHERS)

BATHROOM DEMOLITION (BY OTHERS)

TRIM TREE BRANCHES HANGING OVER BUILDING

INGROUND SCALE SALVAGED (BY OTHERS)

SANITARY CLEANOUT REMOVAL (BY OTHERS)

WASH BASIN REMOVAL (BY OTHERS)

REMOVE STORM MANHOLE

REMOVE SANITARY MANHOLE

REMOVE PUSHWALL AND FOUNDATION

WASHRACK REMOVAL (BY OTHERS)

REMOVE HYDRANT, WATER VALVE & BOLLARDS

WASHRACK REMOVAL (BY OTHERS)

REMOVE SANITARY MANHOLE

REMOVE STORM INTAKE

OWNER TO RELOCATE ELECTRIC BOX

REMOVE STORM INTAKE

REMOVE STORM INTAKE

REMOVE STORM INTAKE

REMOVE STORM INTAKE

REMOVE EXISTING EXTERIOR PAVEMENT

REMOVE 562 LF CHAINLINK FENCE

REMOVE SANITARY MANHOLE

REMOVE STORM INTAKE

REMOVE EXISTING SIDEWALK PAVEMENT

REMOVE SANITARY MANHOLE

CONTRACTOR TO EVALUATE IF EXISTING PUSH WALL CAN BE SAVED DURING SANITARY SEWER CONSTRUCTION. IF NOT REMOVE PUSHWALL AND FOUNDATION

REMOVE 19 LF CHAINLINK FENCE

SCALE IN FEET
0 20 40

STORM SEWER ABANDONMENT	
SIZE (IN.)	TOTAL (LF)
8	
15	
18	

WATERMAIN ABANDONMENT	
SIZE (IN.)	TOTAL (LF)
6	

FOR REFERENCE ONLY

KIRKHAM MICHAEL

KIRKHAM, MICHAEL & ASSOCIATES
4390 114TH STREET
URBANDALE, IA 50322
Phone: (515) 393-4771

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

SITE DEMOLITION PLAN

Project Number: 251001.00
Date: 03/10/2026

CD100

SCALE:

NOTE: SEE SHEET AD102 FOR GENERAL DEMOLITION NOTES
SEE SHEET A201 FOR GENERAL RENOVATION NOTES

Wash 44
Wash 45
Elec. 46
Wash 49
Wash 50
Open Barn NW 43
Open Barn N-CTR 47
Open Barn NE 51
Open Barn Arena 48
Open Barn SW 42
Open Barn S-CTR 54
Open Barn SE 53
Wash 52
Wash 41

REMOVE AND SALVAGE EXIST. GATE ASSEMBLY FOR REINSTALLATION AFTER NEW CONCRETE SLAB IS PLACED, TYP. AT ALL DISTURBED NORTH, EAST, AND WEST ENTRANCES

DO NOT DISTURB EXIST. ELEC. ROOM

EXIST. ENTRANCE GATES TO BE SALVAGED AND RE PUT BACK IF IN GOOD CONDITON

REMOVE EXIST. WATER BASIN IN ITS ENTIRETY, SEE CIVIL SHEETS

REMOVE EXIST. WATER BASIN IN ITS ENTIRETY, SEE CIVIL SHEETS

REMOVAL OF EXISTING PORTABLE LIVESTOCK PENNING BY OWNER

REMOVE CONC. FLOOR SLAB SHOWN HATCHED IN ITS ENTIRETY, SEE CIVIL SHEETS FOR ADDITIONAL INFO

EXIST. MASONRY PIER TO REMAIN AND BE REBUILT IN PORTIONS WITH MISSING BRICK AS WELL AS 100% REPOINTED

REMOVE EXIST. WATER BASIN IN ITS ENTIRETY, SEE CIVIL SHEETS

REMOVE EXIST. WATER BASIN IN ITS ENTIRETY, SEE CIVIL SHEETS

EXIST. MASONRY PIER TO REMAIN AND BE REBUILT IN PORTIONS WITH MISSING BRICK AS WELL AS 100% REPOINTED

RESTROOM GROUP "D" - COMPLETE

1 A302

DO NOT DISTURB COMPLETED OFFICE AREA OF BUILDING AT WEST ENTRANCE

OFFICE / WOMENS GROUP "A" - COMPLETE

EXIST. SCALE TO BE REMOVED IN ITS ENTIRETY, INFILL WITH CONC. TO MATCH ADJACENT SURFACES

REMOVE CONC. FLOOR SLAB SHOWN HATCHED IN ITS ENTIRETY, SEE CIVIL SHEETS FOR ADDITIONAL INFO

DO NOT DISTURB COMPLETED NEW RESTROOM BUILDING ALONG EAST EXTERIOR WALL

REMOVE EXIST. WATER BASIN IN ITS ENTIRETY, SEE CIVIL SHEETS

REMOVE AND SALVAGE THESE (9) EXISTING LIVESTOCK PENNING, POSTS AND ASSOCIATED COMPONENTS IN THEIR ENTIRETY, TYP.

PROTECT CENTRAL ARENA POSTS, PENS AND PANELS, TYP. IF ANY POSTS ARE DISTURBED AS PART OF THE NEW CONCRETE, REPLACE EXIST. COMPONENTS IN SAME LOCATION

EXIST. BLEACHERS TO BE REMOVED IN THEIR ENTIRETY AND SALVAGED FOR REINSTALLATION

PROTECT CENTRAL ARENA POSTS, PENS AND PANELS, TYP. IF ANY POSTS ARE DISTURBED AS PART OF THE NEW CONCRETE, REPLACE EXIST. COMPONENTS IN SAME LOCATION

EXIST. BLEACHERS TO BE REMOVED IN THEIR ENTIRETY AND SALVAGED FOR REINSTALLATION

REMOVE AND SALVAGE THESE (9) EXISTING LIVESTOCK PENNING, POSTS AND ASSOCIATED COMPONENTS IN THEIR ENTIRETY, TYP.

REMOVE EXIST. WATER BASIN IN ITS ENTIRETY, SEE CIVIL SHEETS

REMOVE ALL DOWNSPOUTS INSIDE THE SWINE BARN IN THEIR ENTIRETY, TYP.

DO NOT DISTURB COMPLETED RESTROOM AREA OF BUILDING AT WEST ENTRANCE

2 AD102

A210 1 SIM

AD102

EXISTING 2-STORY MASONRY WALL TO REMAIN

REMOVAL OF EXISTING PORTABLE LIVESTOCK PENNING BY OWNER

SEE STRUCTURAL DEMOLITION PLANS FOR COLUMNS TO BE REMOVED, TYP.

WOOD WALLS LOCATED ABOVE EXIST. MASONRY WALL TO BE REMOVED IN THEIR ENTIRETY, TYP. SEE INTERIOR ELEVATION FOR MORE INFORMATION

2 SIM A210

RESTROOM GROUP "B"

REMOVE EXIST. DOWNSPOUTS IN THEIR ENTIRETY WHERE CONC. FLOOR SLAB IS REMOVED, TYP.

RESTROOM GROUP "C"

REMOVE EXIST. WATER BASIN IN ITS ENTIRETY, SEE CIVIL SHEETS

REMOVE EXIST. WATER BASIN IN ITS ENTIRETY, SEE CIVIL SHEETS

REMOVE EXISTING LIVESTOCK PENNING IN OPEN BARN SOUTH-CENTRAL AREA

EXIST. BRICK PIER TO BE DEMOLISHED TO TWO COURSES ABOVE ADJACENT PARTIAL HEIGHT WALL

EXIST. BRICK PIER TO BE DEMOLISHED TO TWO COURSES ABOVE ADJACENT PARTIAL HEIGHT WALL

EXIST. BLEACHERS TO BE REMOVED IN THEIR ENTIRETY AND SALVAGED FOR REINSTALLATION

EXIST. PARTIAL HEIGHT MASONRY WALL AND STL. CHANNEL CAP TO REMAIN UNDISTURBED

REMOVE EXIST LIVESTOCK PENNING, POSTS AND ASSOCIATED COMPONENTS, IN THEIR ENTIRETY, TYP.

PORTION OF EXIST. PARTIAL HEIGHT MASONRY WALL TO BE REMOVED IN ITS ENTIRETY, COORD. EXACT LOCATION W/ ARCHITECT

REMOVE CONC. WASH RACK WALLS. SEE CIVIL PLANS. REMOVE AND SALVAGE ALL INTERNAL WASH AREA PANELS AND ASSOCIATED HARDWARE

SALVAGE BRICK MASONRY FOR REINSTALLATION, TYP. UNLESS NOTED OTHERWISE

REMOVE CONC. FLOOR SLAB SHOWN HATCHED IN ITS ENTIRETY. SEE CIVIL SHEETS FOR ADDITIONAL INFO

REMOVE ALL TIMBER COLUMNS, AND FOOTINGS IN THEIR ENTIRETY, TYP. SEE STRUCT. DWGS FOR ADD'L INFORMATION

EXIST. IN-GROUND SCALE AND ASSOCIATED CONTROLS TO BE REMOVED IN ITS ENTIRETY, AND SALVAGED TO BE RETURNED TO OWNER

REMOVE CONC. WASH RACK WALLS, SEE CIVIL PLANS. REMOVE AND SALVAGE ALL INTERNAL WASH AREA PANELS AND ASSOCIATED HARDWARE

EXIST. PUSH WALL TO BE REMOVED IN ITS ENTIRETY, SEE CIVIL DRAWINGS

REMOVE AND REINSTALL EXIST. BRICK MASONRY PARTIAL HEIGHT WALL ONLY, CONC. BASE SHALL REMAIN UNDISTURBED, SEE STR

REMOVE EXIST. BRICK MASONRY FULL AND PARTIAL HEIGHT WALL AND CONC. BASE IN ITS ENTIRETY, SEE STR

REMOVE RAMP SYSTEM IN ITS ENTIRETY

REMOVE AND REINSTALL EXIST. BRICK MASONRY PARTIAL HEIGHT WALL ONLY, CONC. BASE SHALL REMAIN UNDISTURBED, SEE STR

W1 W2 W3 N1 N2 N3 N4 N5 E1 E2 E3 S1 S2 S3 S4 S5 S6

EDS

+/- 3' - 10" 10' - 0"

33' - 6 1/2" 38' - 0" 33' - 8 1/2" 37' - 3 1/2" 27' - 0" 27' - 0" 27' - 0" 18' - 0" 27' - 0" 27' - 0" 27' - 0" 27' - 0" 37' - 3 1/2" 33' - 8 1/2" 38' - 0" 33' - 6 1/2"

519' - 1"

33' - 8 1/8" 36' - 0" 13' - 7 7/8" 18' - 2 1/2" 15' - 0" 15' - 0" 15' - 0" 11' - 9 1/2" 12' - 5" 35' - 1" 11' - 9 1/2" 18' - 0" 18' - 0" 18' - 0" 18' - 2 1/2" 13' - 9 1/2" 19' - 0" 19' - 0" 33' - 6 1/2"

1 OVERALL DEMO FLOOR PLAN
1/16" = 1'-0"

N

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Phone: (515) 288-4821

No.	Date	Description

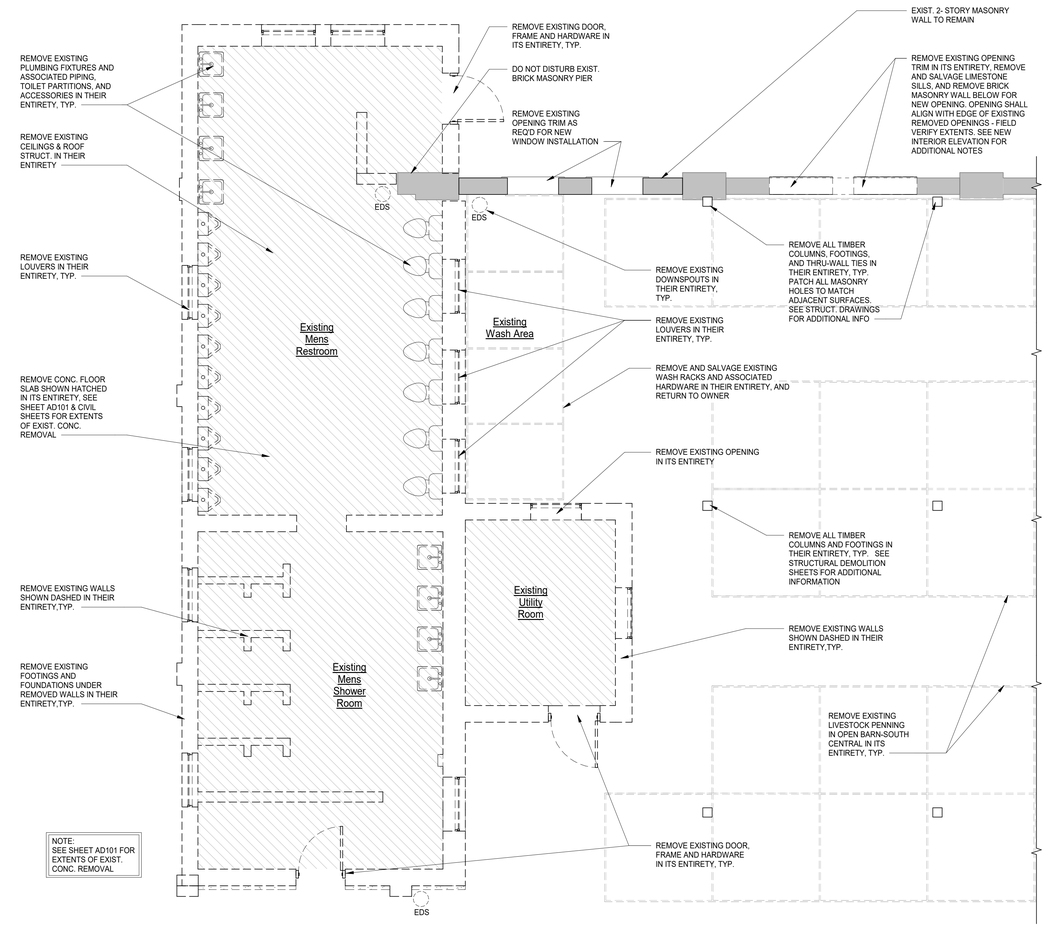
ISF SWINE BARN UPDATES - PHASE 2

ARCHITECTURAL
OVERALL DEMOLITION
FLOOR PLAN

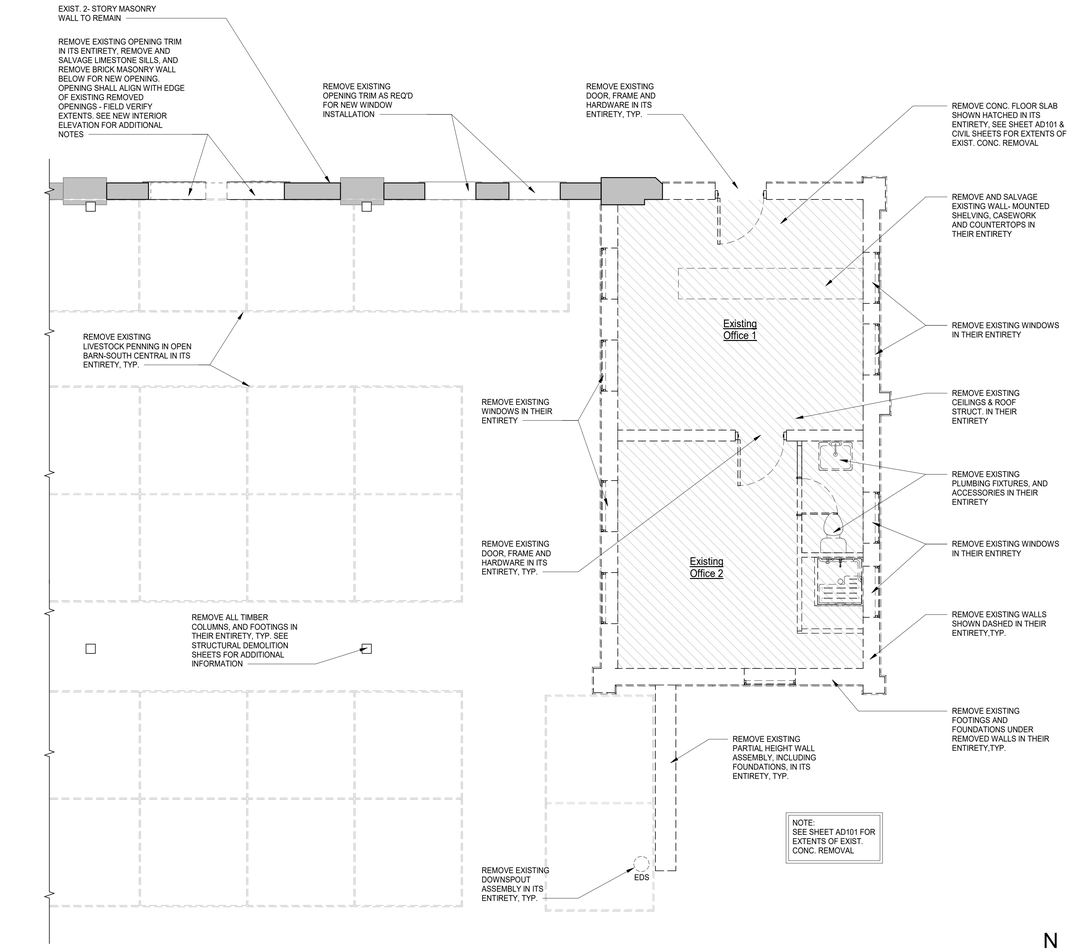
Project Number: 251001.00
Date: 03/10/2026

AD101

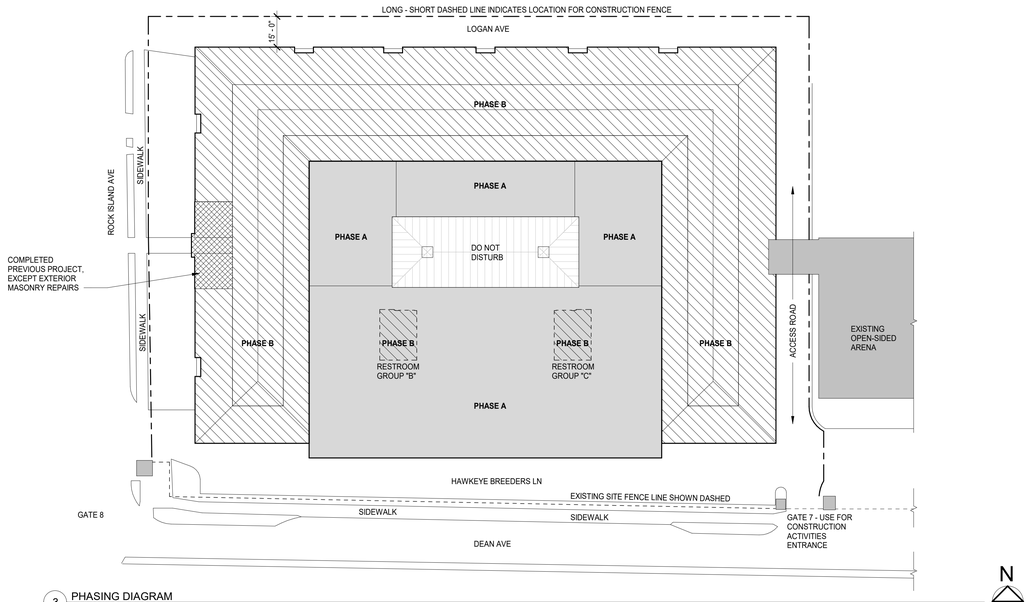
SCALE: 1/16" = 1'-0"



2 ENLARGED DEMO FLOOR PLAN - RESTROOM GROUP "B"
1/4" = 1'-0"



1 ENLARGED DEMO FLOOR PLAN - RESTROOM GROUP "C"
1/4" = 1'-0"



3 PHASING DIAGRAM
1" = 30'-0"

GENERAL DEMOLITION NOTES:

1. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION/PHASING EFFORTS WITH THE ARCHITECT-ENGINEER AND OWNER'S REP.
2. ALL DIMENSIONS TO BE FIELD VERIFIED FOR ACCURACY.
3. THE CONTRACTOR SHALL COORDINATE ANY DISRUPTION OF FAIRGROUND UTILITY SERVICES WITH THE IOWA STATE FAIR.
4. THE CONTRACTOR SHALL MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ENCLOSED INTERIOR SPACES AT ALL TIMES.
5. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
6. THE CONTRACTOR SHALL REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, PLUMBING FIXTURES, CEILINGS, SOFFITS, ETC. AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
7. THE CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
8. THE CONTRACTOR SHALL REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
9. THE CONTRACTOR SHALL PATCH FLOOR AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR REROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, ETC. AND FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
10. CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
11. PORTIONS OF EXISTING CONC. SLAB SHALL BE REMOVED AS REQUIRED FOR NEW PLUMBING TO CONNECT TO EXISTING WATER SERVICE. SEE CONCRETE FLOOR SLAB PLAN ON CIVIL DRAWINGS AND MECHANICAL DRAWINGS FOR DIAGRAMMIC LOCATIONS, COORDINATE ALL WORK.
12. SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
13. DEMOLITION DRAWINGS ARE PROVIDED TO REPRESENT A GENERAL SCOPE OF EXISTING CONDITIONS. THEY ARE NOT TO BE CONSTRUED AS COMPLETE IN SHOWING ALL SPECIFIC ITEMS TO BE REMOVED OR MODIFIED. REMOVAL AND MODIFICATION OF EXISTING ITEMS SHOULD INCLUDE ALL NECESSARY MEANS TO CONSTRUCT AND INSTALL NEW WORK.
14. REFER TO FLOOR PLANS AND INTERIOR ELEVATION FOR DIMENSIONS OF NEW OPENINGS NOT DIMENSIONED IN PLAN.
15. SEE GENERAL NOTES AND KEYNOTES ON ELEVATION SHEETS FOR ADDITIONAL INFORMATION.
16. CONTRACTOR TO REPAIR HOLES IN EXTERIOR WALL TO MATCH ADJACENT SURFACES.
17. LOCATIONS OF DETERIORATED SHEATHING AND RAFTERS ARE APPROXIMATE. CONFIRM ACTUAL LOCATION(S) WITH ARCHITECT PRIOR TO STARTING REMOVAL AND REPLACEMENT.
18. CONCRETE SLAB REMOVAL WITHIN THE EXTENTS OF THE BUILDING ARE PART OF THE DEMOLITION SCOPE OF THE GENERAL CONSTRUCTION PACKAGE. MOST CONCRETE SLAB REMOVAL AREAS ALIGN WITH AN EXISTING CONCRETE CONTROL JOINTS, HOWEVER THERE ARE A FEW EXCEPTIONS. DURING REMOVAL, THE CANTRACTOR SHALL MAKE EVERY EFFORT PROTECT EXISTING EDGES OF SLABS INTENDED TO REMAIN.

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No.	Date	Description

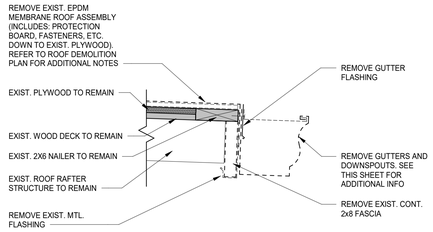
ISF SWINE BARN UPDATES - PHASE 2

ARCH. ENLARGED DEMOLITION FLOOR PLANS

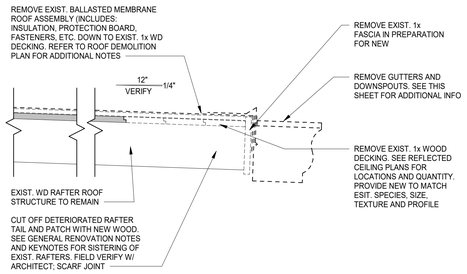
Project Number: 251001.00
Date: 03/10/2026

AD102

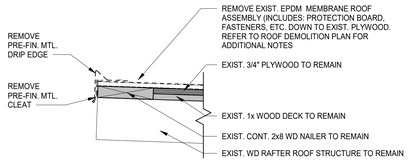
SCALE: As indicated



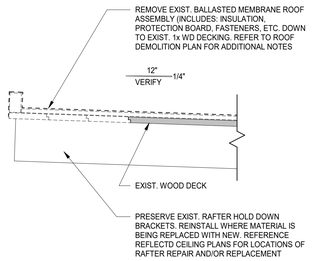
3 DEMOLITION DETAIL - GUTTER @ LOW ROOF AREA A1-A6
1 1/2" = 1'-0"



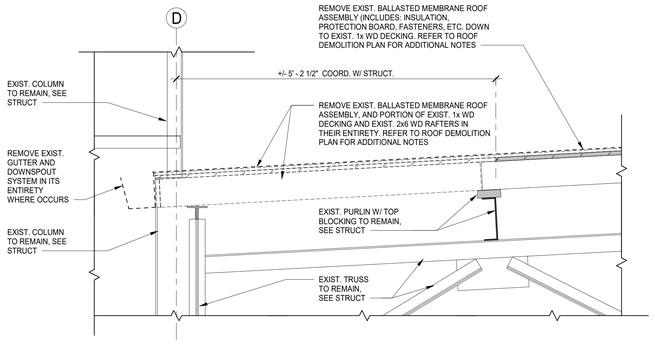
4 DEMOLITION DETAIL - GUTTER @ LOW/HIGH ROOF TYPE "R2"
1 1/2" = 1'-0"



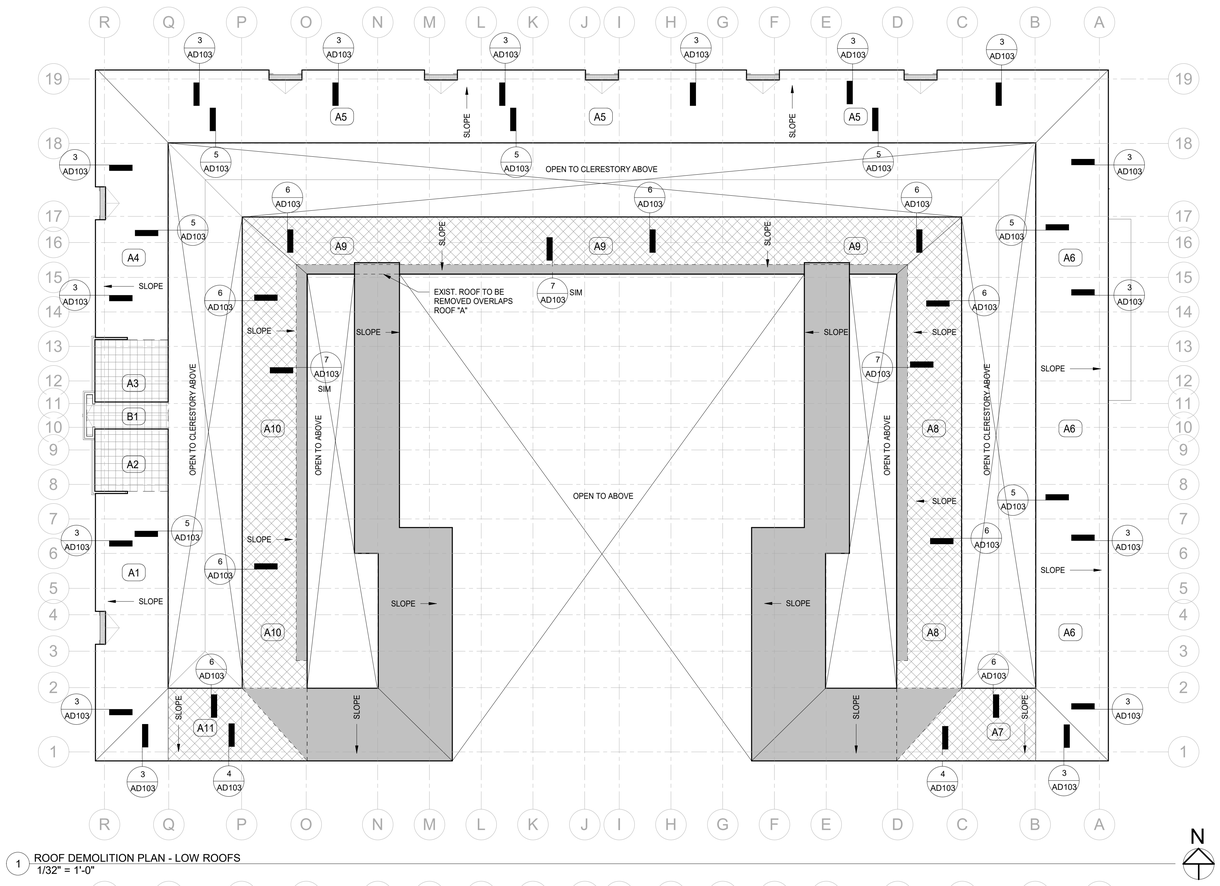
5 DEMOLITION DETAIL - ROOF EDGE @ LOW ROOF TYPE "R1"
1 1/2" = 1'-0"



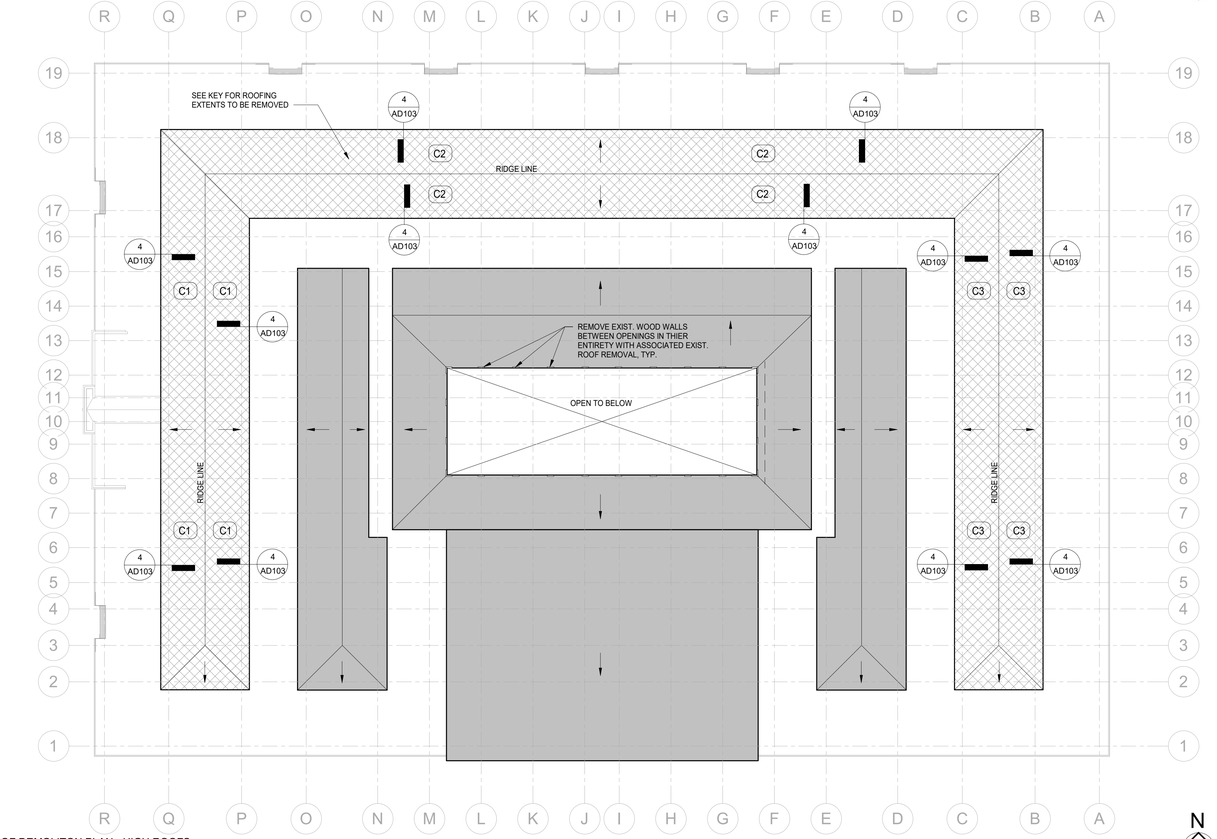
6 DEMOLITION DETAIL - ROOF EDGE @ LOW ROOF TYPE "R2"
1 1/2" = 1'-0"



7 DEMO DETAIL - DECK & STRUCT. REMOVAL FOR KNEE WALL
1" = 1'-0"



1 ROOF DEMOLITION PLAN - LOW ROOFS
1/32" = 1'-0"



2 ROOF DEMOLITON PLAN - HIGH ROOFS
1/32" = 1'-0"

KEY:

- REMOVE EXISTING ROOFING MEMBRANE, COVER BOARD, ROOF EDGE FLASHINGS, GUTTERS AND ASSOCIATED DOWNSPOUTS IN THIER ENTIRETY. EXISTING PLYWOOD AND 1x6 WOOD DECKING TO REMAIN UNDISTURBED
- REMOVE BALLASTED ROOFING MEMBRANE ASSEMBLY, ROOF DECK MATERIAL, ROOF EDGE FLASHINGS, GUTTERS AND ASSOCIATED DOWNSPOUTS IN THEIR ENTIRETY. COORDINATE WORK WITH STRUCTURAL DEMOLITION PLANS FOR STRUCTURAL STEEL AND WOOD TRUSS REMOVAL IN THIS AREA
- REMOVE EXISTING BALLASTED ROOFING MEMBRANE ROOF ASSEMBLY (INCLUDES: INSULATION, PROTECTION BOARD, FASTENERS, ETC. DOWN TO EXISTING 1x6 WOOD DECKING)
- DO NOT DISTURB EXISTING (RECENTLY COMPLETED) TPO MEMBRANE. CONTRACTOR TO COODINATE ALL ROOFING WORK TO MAINTAIN THIS MEMBRANE ROOF SYSTEM WARRANTY AT OVERLAP LOCATIONS
- X1 ROOF AREA

NOTE: REFER TO REFLECTED CEILING PLANS AND ELEVATIONS FOR ADDITIONAL DEMOLITION NOTES

K/O ARCHITECTS
www.k-o.com
KEFFER/OVERTON ASSOCIATES INC.
650 SOUTH PRAIRIE VIEW DRIVE
STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ARCHITECTURAL ROOF DEMOLITION PLANS

Project Number: 251001.00
Date: 03/10/2026

AD103

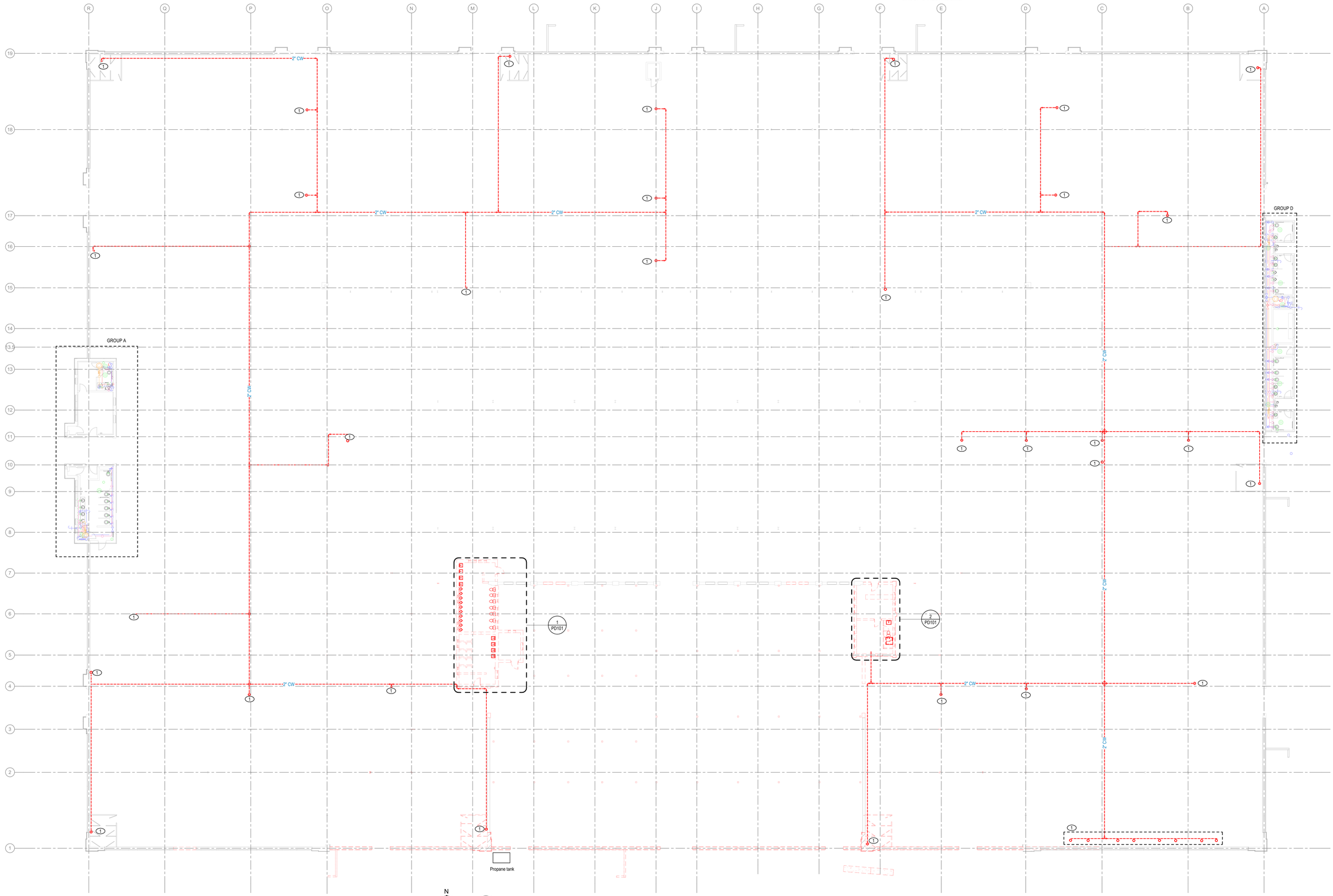
SCALE: As indicated

GENERAL NOTES

1. DEMO ALL ABOVE GROUND PLUMBING PIPING, HANGERS, SUPPORTS AND ACCESSORIES OUTSIDE OF GROUP-A AND GROUP-D RESTROOMS.

KEYED NOTES

1. DEMO ALL HOSEBIB AND HYDRANT CONNECTIONS BACK TO VERTICAL PIPE DROPS AT LOCATION.



N

1 PLUMBING OVERALL DEMOLITION PLAN - PHASE 2

1/16" = 1'-0"

K/O ARCHITECTS

www.k-o.com

KEFFER/OVERTON ASSOCIATES INC.
650 SOUTH PRAIRIE VIEW DRIVE
STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING OVERALL DEMOLITION PLAN

Project Number:	251001.00
Date:	03/10/2026

PD100

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

KED bluestone
5018 NW 88th Street
Johnston, IA 50131
515-727-0100
www.KEDbluestone.com

PROJECT NUMBER: 122-687
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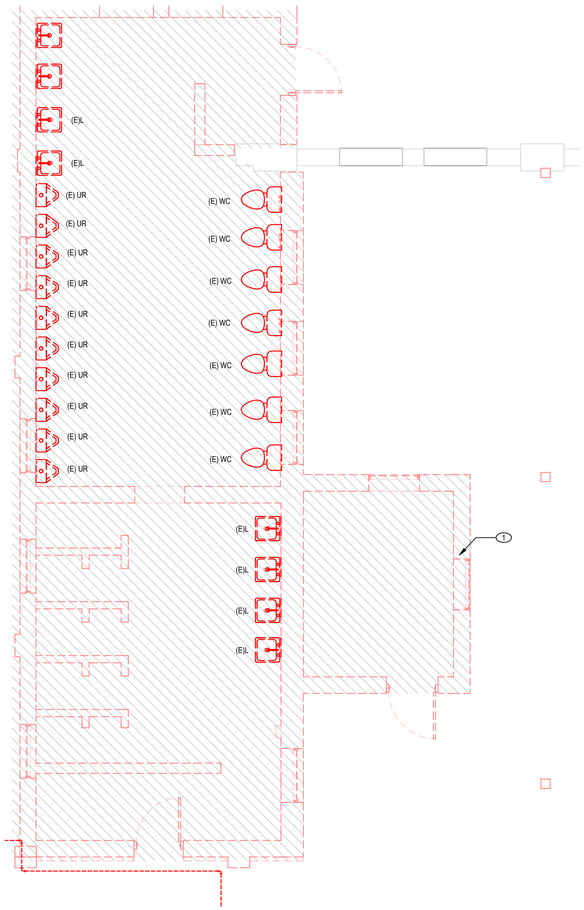
KEYED NOTES:

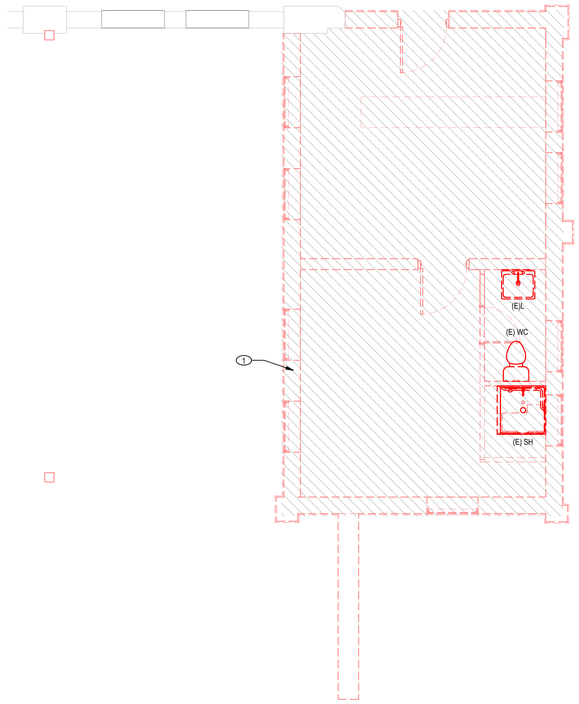
1. DEMOLISH ALL EXISTING PLUMBING PIPING, HANGERS, INSULATION, AND ACCESSORIES IN THIS AREA. BOTH ABOVE GRADE AND BELOW GRADE.



N

2 GROUP B PLUMBING DEMO ENLARGED PLAN - PHASE 2

1/4" = 1'-0"



N

1 GROUP C PLUMBING DEMO ENLARGED PLAN - PHASE 2

1/4" = 1'-0"

K/O

ARCHITECTS

www.k-o.com

KEFFER/OVERTON ASSOCIATES INC.
650 SOUTH PRAIRIE VIEW DRIVE
STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING DEMOLITION PLAN

Project Number: 251001.00

Date: 03/10/2026

PD101

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

KED bluestone
5518 NW 88th Street
Johnston, IA 50131
515-727-0700
www.KEDbluestone.com

PROJECT NUMBER: 123.087
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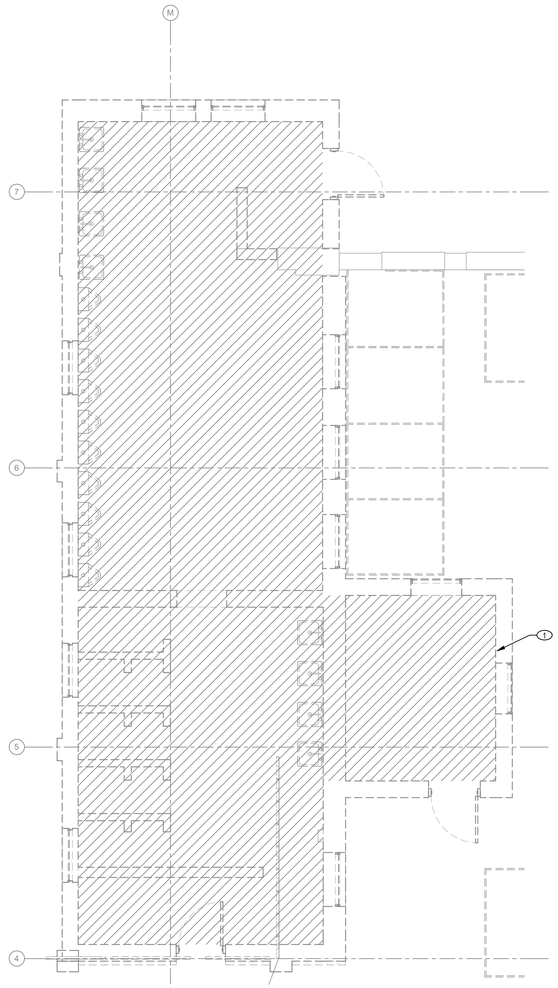
KEYED NOTES:

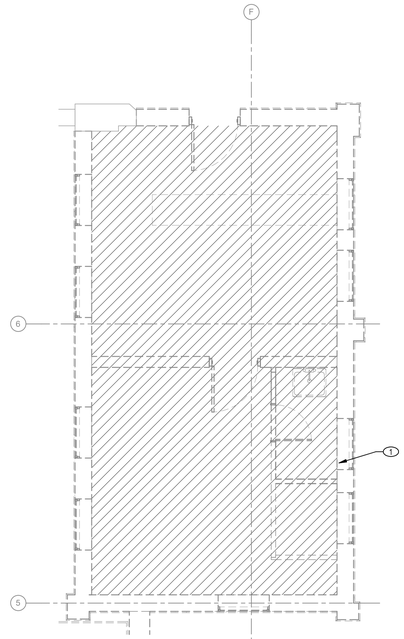
1. DEMOLISH ALL EXISTING HVAC DUCTWORK, HANGERS, INSULATION, AND ACCESSORIES IN THIS AREA.



N

2 GROUP B - MECHANICAL ENLARGED DEMOLITION PLAN - PHASE 2

1/4" = 1'-0"



N

1 GROUP C - MECHANICAL ENLARGED DEMOLITION PLAN - PHASE 2

1/4" = 1'-0"

K/O

ARCHITECTS

www.k-o.com

KEFFER/OVERTON ASSOCIATES INC.
650 SOUTH PRAIRIE VIEW DRIVE
STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

MECHANICAL DEMO FLOOR PLAN

Project Number:	251001.00
Date:	03/10/2026

MD101

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

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5518 NW 88th Street
Johnston, IA 50131
515-727-0700
www.KEDbluestone.com

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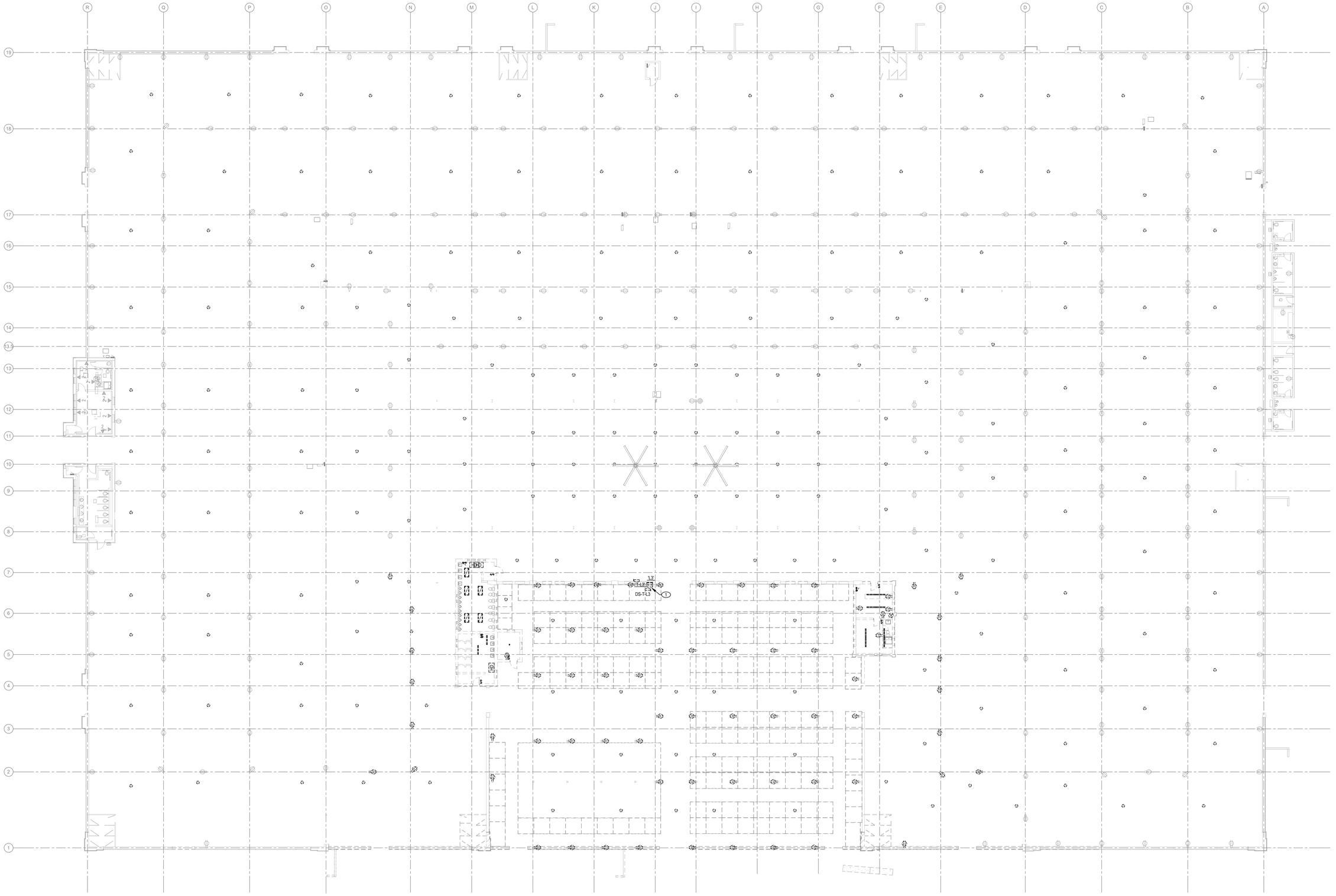
3/10/2026 6:27:31 PM

KEYED NOTES:

1. REMOVE TRANSFORMER, PANELBOARD, DISCONNECT SWITCH AND PREPARE FOR INSTALLATION TO THE NEW LOCATION.



N

1 ELECTRICAL DEMOLITION PLAN - PHASE 2

1/16" = 1'-0"

K/O ARCHITECTS

www.k-o.com

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STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ELECTRICAL OVERALL DEMO SHEET

Project Number:	251001.00
Date:	03/10/2026

ED101-1

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

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515-727-0100
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3/10/2026 6:27:45 PM

IOWA STATE FAIRGROUNDS
ISF SWINE BARN UPDATES - PHASE 2

DES MOINES, IOWA

INDEX OF SHEETS	
NO.	DESCRIPTION
C001	CIVIL COVER SHEET
C002	CIVIL LEGEND AND GENERAL NOTES
CD100	SITE DEMOLITION PLAN
C100	SITE OVERVIEW
C200-C202	TYPICAL DETAILS
C203	FENCE DETAILS
C300-C301	CIVIL QUANTITIES AND NOTES
C400	FENCING AND LANDSCAPING PLAN
C500	STORM SEWER PLAN
C501-C503	STORM SEWER PROFILES
C504	SANITARY SEWER PLAN
C505	SANITARY SEWER PROFILES
C506	WATER MAIN PLAN AND PROFILE
C600-C603	GEOMETRIC PLAN
C604-C607	JOINTING PLAN

THIS PLAN SET IS DESIGNED TO BE PRINTED AND VIEWED IN FULL-COLOR

CONTRACTOR SHALL CONTACT

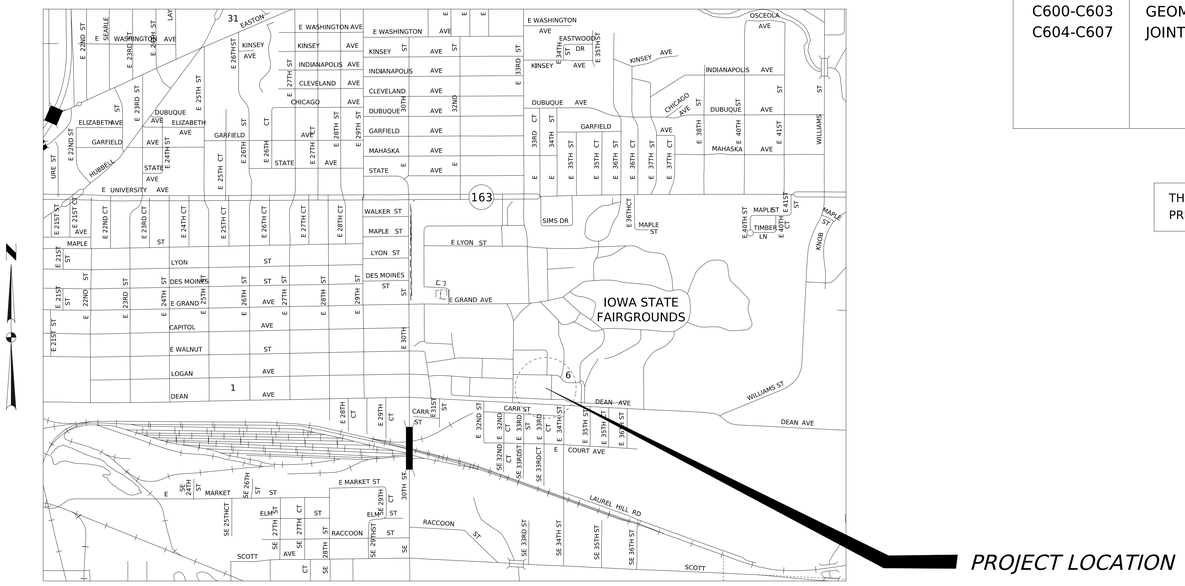
IOWA ONE CALL
800/292–8989
TOLL FREE
CALL–BEFORE–YOU–DIG

WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREAS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATIONS OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK. THE CONTRACTOR SHALL REPAIR ANY DAMAGED UTILITIES TO THE SATISFACTION OF THE UTILITY OWNER.

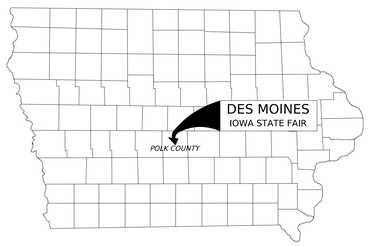
The Statewide Urban Specifications for Public Improvements, 2026 Edition, referred to herein as SUDAS, shall apply to construction work on this project, as specified in the estimate reference information. These specifications may be obtained by contacting:

SUDAS Program
2711 S. Loop Drive Suite 4700
Ames, IA 50010
Ph: 515-294-2869

These specifications are also available on-line at:
www.iowasudas.org



VICINITY MAP
NO SCALE



LOCATION MAP
NO SCALE

KIRKHAM MICHAEL

KIRKHAM, MICHAEL & ASSOCIATES
4390 114TH STREET
URBANDALE, IA 50322
Phone: (515) 393-4771

FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

CIVIL COVER SHEET

Project Number: 251001.00
Date: 03/10/2026

C001

SCALE:

LEGEND

	Existing or Found	Proposed
Temporary Easement Line	T/E	T/E
Property Line	PL	PL
Construction Limits		
Right-of-Way Line	R/W	R/W
Fence (Barbed, Field, Hog)	×	×
Fence (Chain Link)	# #	# #
Fence (Wood)		
Tree Line		
Bush	SB	
Coniferous Tree		
Deciduous Tree		
Bush To Be Removed	SB	
Coniferous Tree To Be Removed		
Deciduous Tree To Be Removed		
Storm Sewer Manhole		S-100
Storm Sewer Intake		S-100
Storm Pipe Designation		P-3
Area Intake		
Sanitary Manhole		
Fire Hydrant		
Water Valve	WV	
Water Yard Hydrant		
Guy Anchor	GA	
Power Pole with Light		
Power Pole		
Light Pole		
Traffic Signal		
Water Main	W	
Storm Sewer	ST	
Sanitary Sewer	SAN.	
Gas - MidAmerican	G	
Gas - Other	G2	
UG Elec - MidAmerican	E1	
UG Electric - Other	E2	
OH Electric	OE	
UG Phone - Mediacom	T1	
UG Phone - CenturyLink	T2	
UG Phone - Other	T3	
UG Fiber Optic - Mediacom	FO	
UG Fiber Optic - CenturyLink	FO2	
UG Fiber Optic - Aureon	FO3	
UG Fiber Optic - MCI/Verizon	FO4	
UG Fiber Optic - UPN	FO5	
UG Cable - Mediacom	TV	
UG Cable - Other	TV2	
UG Phone - Other	T3	

U.A.C.	USE AS CONSTRUCTED
N.I.C.	NOT IN CONTRACT

KM1

In order to avoid any unnecessary surface breaks or premature spalling, the contractor is cautioned to exercise extreme care when performing any of the necessary saw cutting operations for the proposed pavement removal.

KM2

The contractor shall protect all storm sewer inlets and utility accesses from siltation and debris during construction.

KM3

Contractor shall notify the owner 7 days prior to start of construction.

KM4

Before beginning construction, the contractor shall excavate all utilities that may be in conflict with the proposed construction. The contractor shall verify elevations of the utilities and notify the Project Engineer of conflicts. The cost of staging construction for utility installation, whether utility is shown or not shown on the plans, providing temporary supports for all utilities with assistance from affected utility company, and all costs involved in coordinating with utilities shall be included in and considered incidental to the contract bid price; and no additional compensation shall be allowed.

The contractor shall exercise all due caution and use construction methods and equipment to complete the work without damaging utilities. Any damage to such facilities due to the contractor's carelessness shall be corrected at the contractor's expense. The exact location and elevation of all utilities shall be determined by the contractor at the time of construction. It shall be the duty of the contractor to ascertain whether any additional facilities other than those shown on the plan may be present during the bidding or construction phase. Cost incidental to the project. The contractor shall exercise all due caution when working in the vicinity of pipelines carrying combustible or toxic materials which are present on this project. Pipeline locations shown on the plans represent the best information available at the time. The utilities listed below are anticipated on this project. Actual work and schedule may vary significantly.

Electric		
Gas	Communications	Telephone
Storm Sewer	Water	Sanitary Sewer

KM5

All work involved in this project shall be constructed on owner right-of-way or easements obtained by the owner. Contractor shall restrict its construction operations to within the designated right-of-way or construction easements. No materials, excavated material, or equipment shall be stored on, parked on, deposited on, or driven over any private property unless written authorization is obtained from the property owner by the contractor. A copy of such written agreement shall be made available to the owner and the engineer.

KM6

Street closing: The contractor shall give 7 days notice (excluding weekends) to the owner and must receive approval before closing any street to traffic.

KM7

The contractor shall hand deliver a notice of street closing to each abutting property 7 days before closing a street. The notices will be supplied by the engineer.

KM8

The contractor shall prepare a detailed schedule of work which shall be submitted at the preconstruction conference. The schedule shall show anticipated equipment and material deliveries and completion of major tasks in the project. Schedule shall indicate approximate start dates, duration and restrictions identified in the Construction Staging Notes.

KM9

The contractor, in cooperation with utility companies, shall verify abandoned utility lines including gas, water mains, telephone conduits, services, etc. and upon verification shall remove and dispose of the utilities within the work zone which shall be considered included in the unit prices for pipes and structures.

KM10

Contractor shall secure excavations of 30" or greater depth with safety fence or other means acceptable to the engineer during non work hours, or periods of inactivity.

KM11

The contractor's staging and material storage area shall be coordinated with the owner and engineer prior to construction. If this area is not otherwise included within the limits of project restoration, the contractor shall shape, fertilize and seed this area to restore it to its original condition, as determined suitable by the engineer. No additional payment will be made for this work.

KM12

The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins, or silt dikes.

SURVEY/CONSTRUCTION STAKING:

CONSTRUCTION STAKING WILL BE PERFORMED BY THE ENGINEER THROUGH AN EXISTING CONTRACT WITH THE OWNER. STAKING REQUESTS SHALL REQUIRE 48-HOURS NOTICE. CONTACT IS 515-270-0848.

RE-SETTING OF STAKES DUE TO CONTRACTORS CARELESSNESS WILL BE BILLED TO THE CONTRACTOR.

UTILITY CONTACTS

WATER, SEWER, FIBER,
TELECOM
IOWA STATE FAIRGROUNDS
SCOTT WORTH
515-262-3111, EXT 200

MID AMERICAN ELECTRIC
MARIO SZLAPKA
MARIO.SZLAPKA@MIDAMERICAN.COM
515-979-7392

MID AMERICAN GAS
TRAVIS HANEY
TRAVIS.HANEY@MIDAMERICAN.COM
515-305-1215

ENGINEER/OWNER

ENGINEER/SURVEYOR:

KIRKHAM MICHAEL & ASSOCIATES
CONTACT: MATTHEW KLINE, P.E.
4390 114TH STREET
URBANDALE, IOWA 50322
515-393-4773

OWNER:

IOWA STATE FAIRGROUNDS
SCOTT WORTH, OPERATIONS DIRECTOR
515-262-3111, EXT 200

TECHNICAL SPECIFICATIONS

THE STATEWIDE URBAN SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, CURRENT EDITION, REFERRED TO IN THIS PLAN AS SUDAS, SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT, EXCEPT AS MODIFIED IN THIS PLAN.

THESE SPECIFICATIONS MAY BE OBTAINED BY CONTACTING:

SUDAS PROGRAM
2711 LOOP DRIVE, SUITE 4700
AMES, IOWA 50010-8632
PHONE: 515-294-2869

ON LINE AT
www.iowasudas.org

KIRKHAM MICHAEL

KIRKHAM, MICHAEL & ASSOCIATES
4390 114TH STREET
URBANDALE, IA 50322
Phone: (515) 393-4771

FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

CIVIL LEGEND AND GENERAL NOTES

Project Number: 251001.00

Date: 03/10/2026

C002

SCALE:

LEGEND

- INTERIOR PAVEMENT
- EXTERIOR PAVEMENT
- SIDEWALK PAVEMENT
- BRICK PAVER SIDEWALK
- BATHROOM FLOOR SLAB
- PCC MOW STRIP

LOGAN AVE

ROCK ISLAND AVE

DEAN AVE

7" PCC PAVEMENT

6" PCC PAVEMENT

6" PCC SIDEWALK

6" PCC SIDEWALK

BRICK PAVER SIDEWALK

REFER TO STRUCTURAL DRAWINGS

REFER TO STRUCTURAL DRAWINGS

INSTALL PUSH WALL (TYP.)

INSTALL PUSH WALL IF EXISTING CANNOT BE SAVED DURING SANITARY SEWER CONSTRUCTION

7" PCC PAVEMENT

3" SLOPED CURB (TYP.)

SCALE IN FEET

0 20 40

KIRKHAM MICHAEL

KIRKHAM, MICHAEL & ASSOCIATES
4390 114TH STREET
URBANDALE, IA 50322
Phone: (515) 393-4771

FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

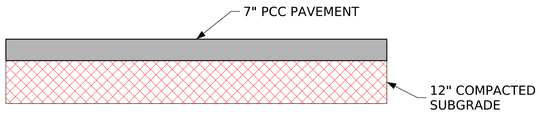
SITE OVERVIEW

Project Number: 251001.00

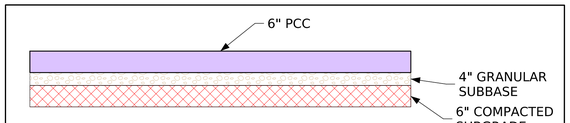
Date: 03/10/2026

C100

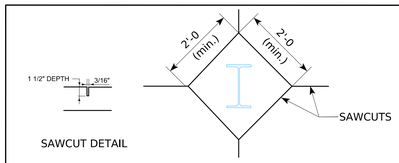
SCALE:

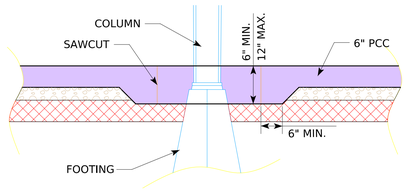


EXTERIOR PAVEMENT SECTION

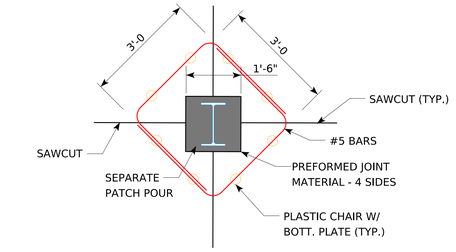


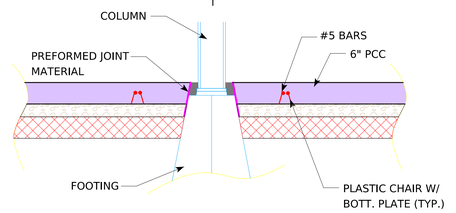
INTERIOR PAVEMENT SECTION



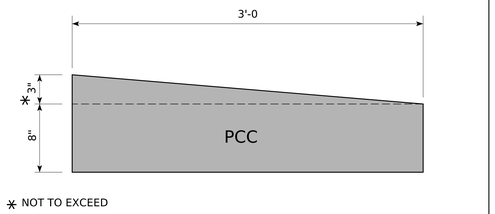


COLUMN BOX-OUT DETAIL

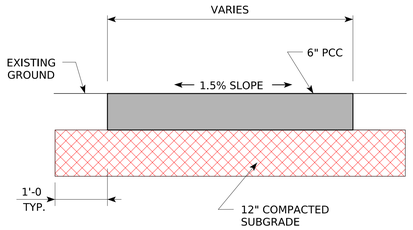




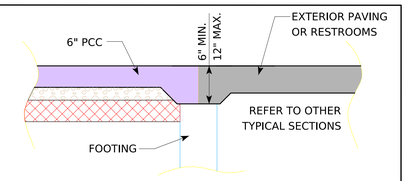
ALTERNATE COLUMN BOX-OUT DETAIL



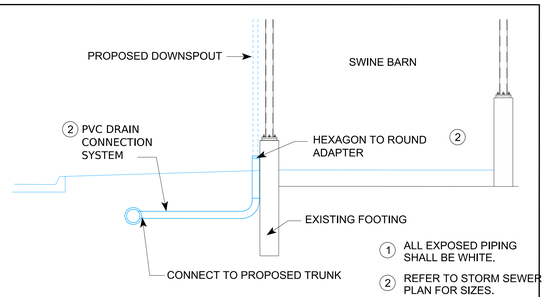
SLOPED CURB
(3" ADA COMPLIANT)



TYPICAL SECTION (SIDEWALK)



INTERIOR FLOOR DETAIL AT DOORWAYS

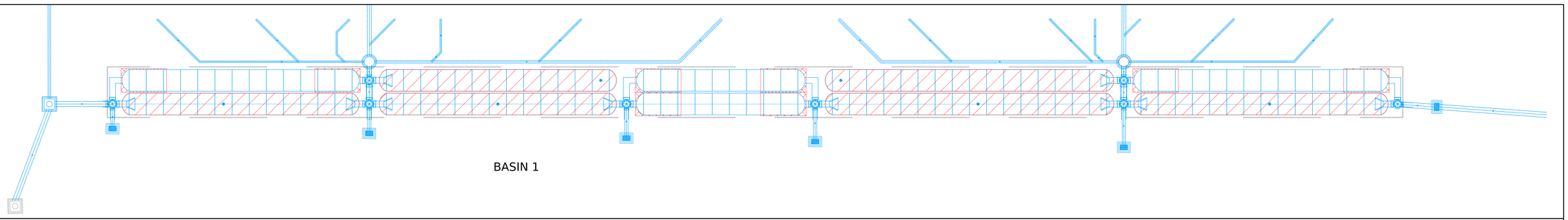


DRAIN CONNECTION DETAIL
(INSTALL AT EACH DOWNSPOUT)

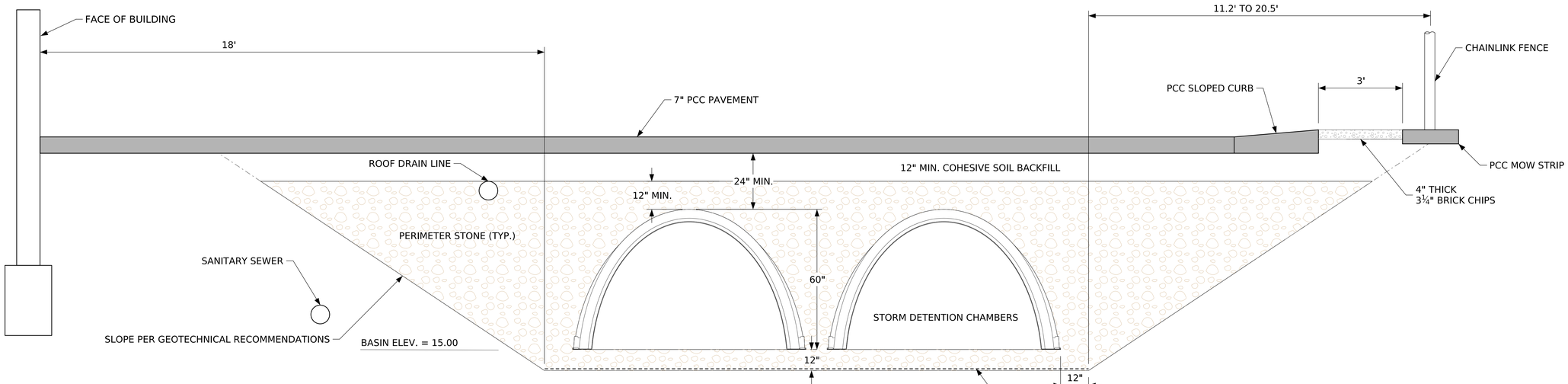
GENERAL CIVIL NOTES:

ALL CIVIL SITE WORK SHALL CONFIRM WITH THE 2026 EDITION OF THE STATEWIDE URBAN STANDARDS AND SPECIFICATIONS (SUDAS).

1. TOPSOIL AND GRADING & COMPACTION SHALL CONFORM WITH SECTION 2010.
2. TRENCHES AND TRENCH CONSTRUCTION SHALL CONFORM WITH SECTION 3010.
3. SANITARY SEWER WORK SHALL CONFORM WITH SECTION 4010.
4. STORM SEWER WORK SHALL CONFORM WITH SECTION 4020.
5. WATER MAIN WORK SHALL CONFORM WITH SECTION 5010
6. PCC PAVEMENT SHALL CONFORM WITH SECTION 7010.
7. PAVEMENT REMOVAL SHALL CONFORM WITH SECTION 7030.
8. SODDING SHALL CONFORM WITH SECTION 9020.



BASIN 1



BASIN TYPICAL SECTION

NOTES:
1. REFER TO SHEET C501 FOR BASIN DEPTHS AND FLOWLINES.
2. REFER TO GEOTECHNICAL BORING REPORT FOR EXISTING SUBSURFACE SOIL CONDITIONS AND SOIL TYPES.

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FOR REFERENCE ONLY

No.	Date	Description

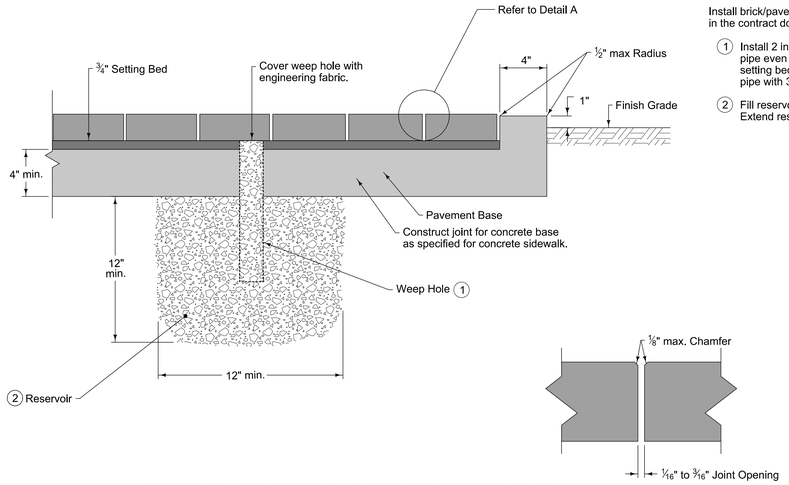
ISF SWINE BARN UPDATES - PHASE 2

TYPICAL DETAILS

Project Number:	251001.00
Date:	03/10/2026

C200

SCALE:

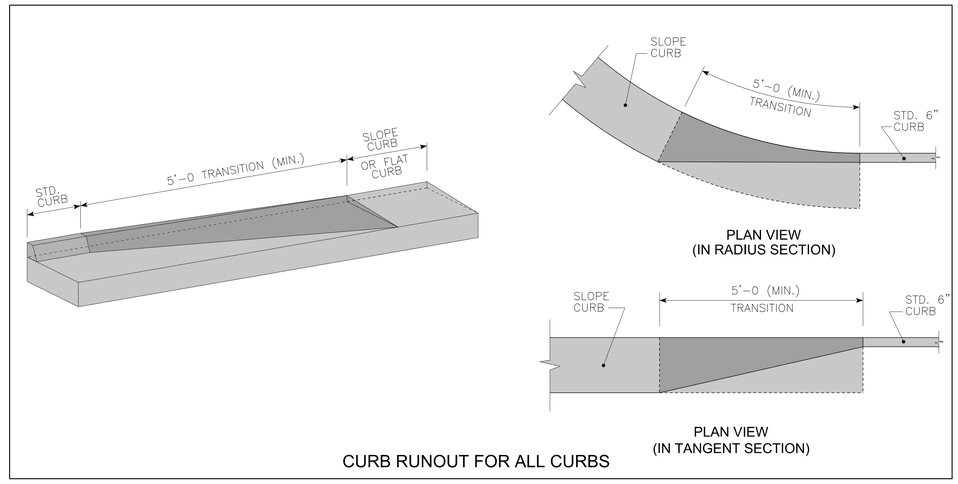


Install brick/paver sidewalk with pattern specified in the contract documents.

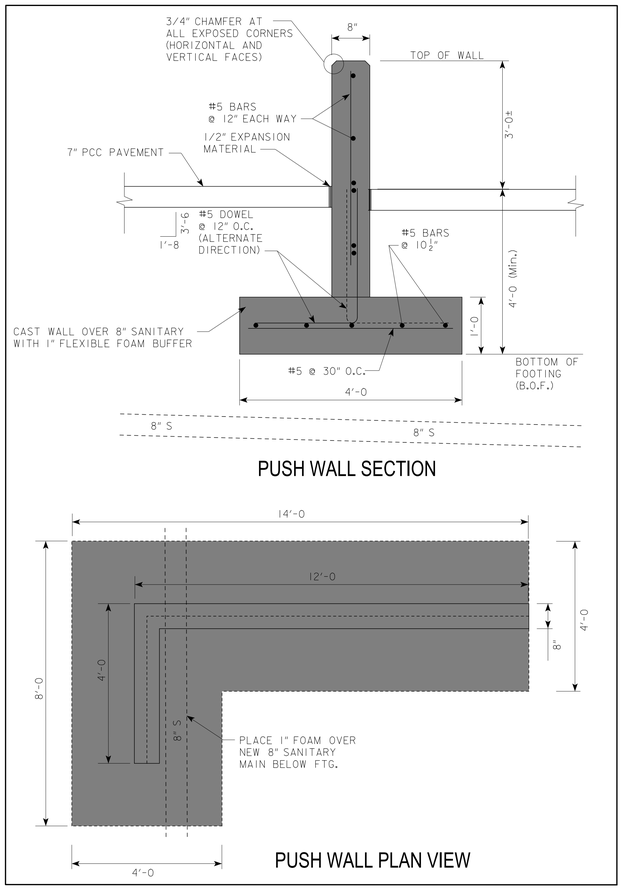
(1) Install 2 inch diameter, 12 inch long, PVC pipe even with the top of the asphalt setting bed at locations specified. Fill pipe with 3/4 inch clean rock.

(2) Fill reservoir with 3/4 inch clean rock. Extend reservoir to subdrain if present.

BRICK/PAVER SIDEWALK WITH PAVEMENT BASE



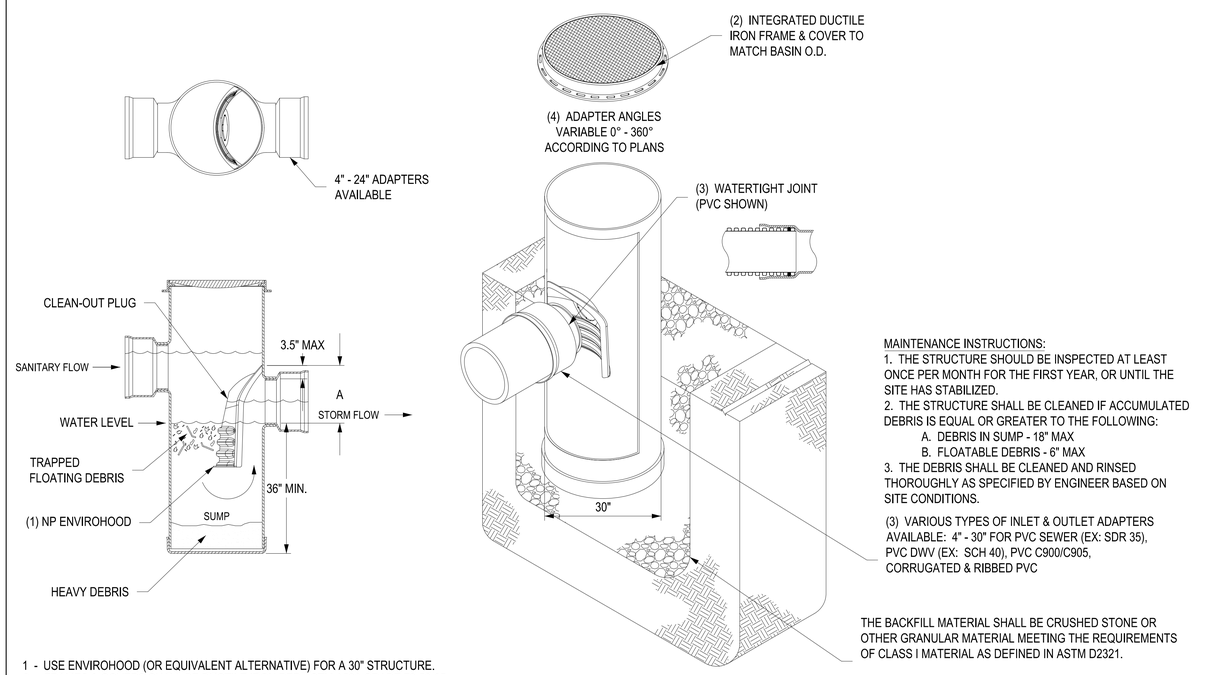
CURB RUNOUT FOR ALL CURBS



PUSH WALL SECTION

PUSH WALL PLAN VIEW

NYLOPLAST SANITARY CLEANOUT WITH ENVIROHOOD



MAINTENANCE INSTRUCTIONS:
1. THE STRUCTURE SHOULD BE INSPECTED AT LEAST ONCE PER MONTH FOR THE FIRST YEAR, OR UNTIL THE SITE HAS STABILIZED.
2. THE STRUCTURE SHALL BE CLEANED IF ACCUMULATED DEBRIS IS EQUAL OR GREATER TO THE FOLLOWING:
   A. DEBRIS IN SUMP - 18" MAX
   B. FLOATABLE DEBRIS - 6" MAX
3. THE DEBRIS SHALL BE CLEANED AND RINSED THOROUGHLY AS SPECIFIED BY ENGINEER BASED ON SITE CONDITIONS.

(3) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE: 4" - 30" FOR PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I MATERIAL AS DEFINED IN ASTM D2321.

1 - USE ENVIROHOOD (OR EQUIVALENT ALTERNATIVE) FOR A 30" STRUCTURE.
2 - FRAMES & COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR PVC SEWER (4" - 18").
4 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°.

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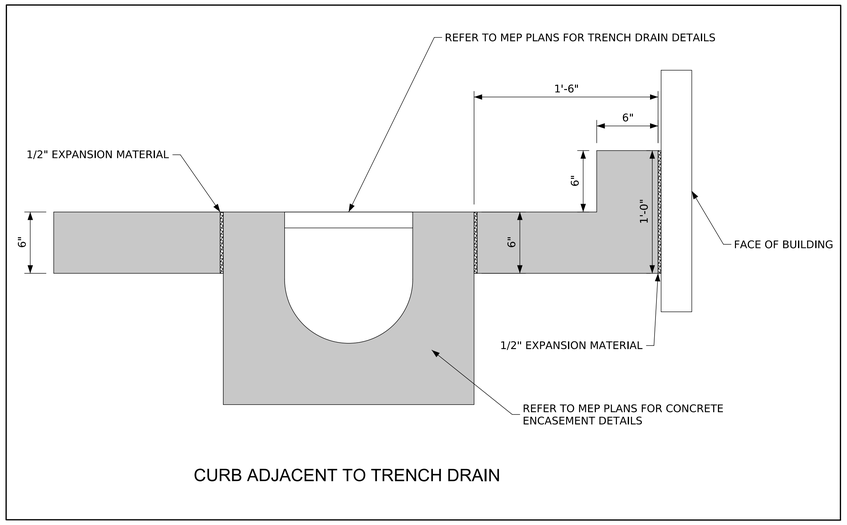
ISF SWINE BARN UPDATES - PHASE 2

TYPICAL DETAILS

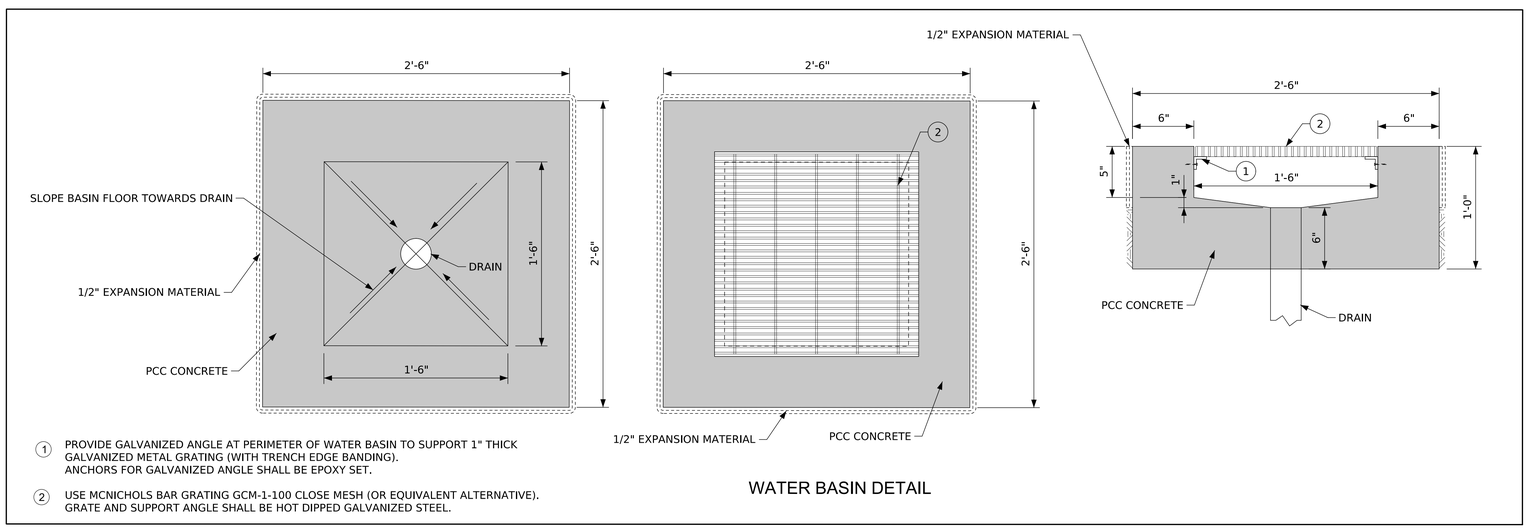
Project Number: 251001.00
Date: 03/10/2026

C201

SCALE:



CURB ADJACENT TO TRENCH DRAIN



1 PROVIDE GALVANIZED ANGLE AT PERIMETER OF WATER BASIN TO SUPPORT 1" THICK GALVANIZED METAL GRATING (WITH TRENCH EDGE BANDING). ANCHORS FOR GALVANIZED ANGLE SHALL BE EPOXY SET.

2 USE MCNICHOLS BAR GRATING GCM-1-100 CLOSE MESH (OR EQUIVALENT ALTERNATIVE). GRATE AND SUPPORT ANGLE SHALL BE HOT DIPPED GALVANIZED STEEL.

WATER BASIN DETAIL

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No.	Date	Description

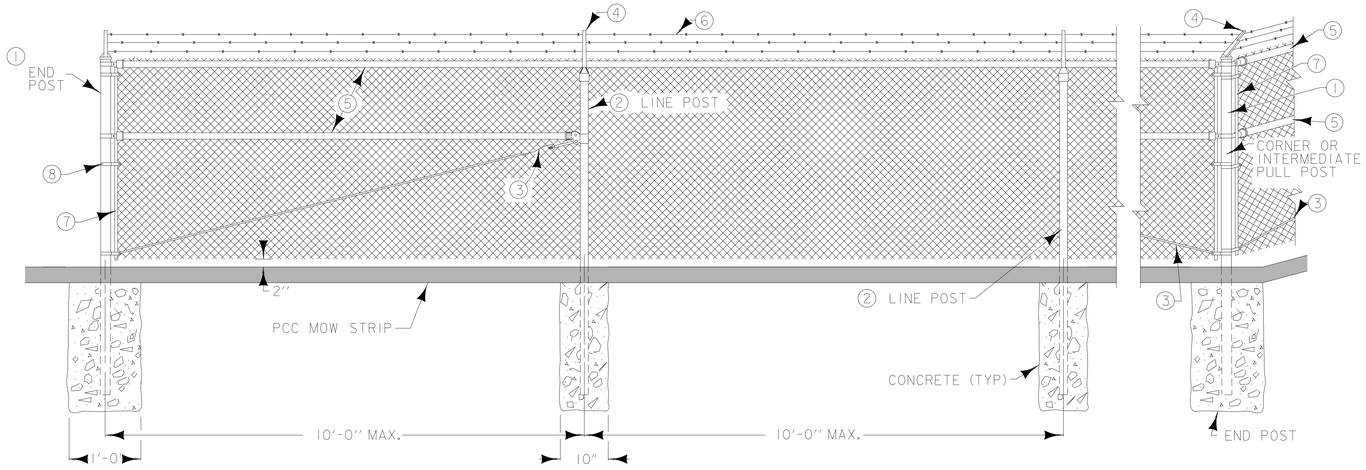
ISF SWINE BARN UPDATES - PHASE 2

TYPICAL DETAILS

Project Number: 251001.00
Date: 03/10/2026

C202

SCALE:



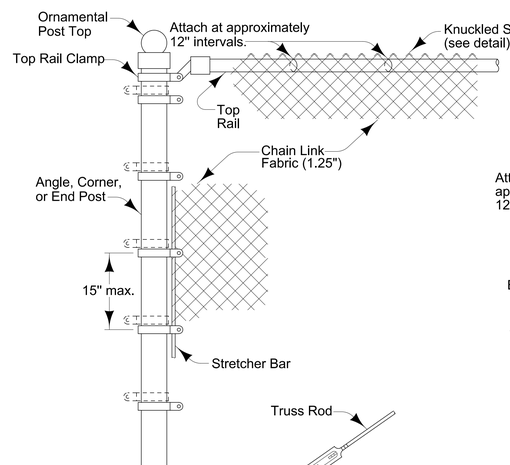
SIDEWALK CONNECTION WITH POST BASE PLATES NOT SHOWN IN THIS ELEVATION.

NOTE:
FENCE AND GATES SHALL BE 96" BLACK VINYL CHAIN LINK WITH 1.25" TIGHT MESH IN ALL AREAS AND WITH BARB WIRE ARMS (BLACK) AND 12.5 ga. BARB WIRE (BLACK)

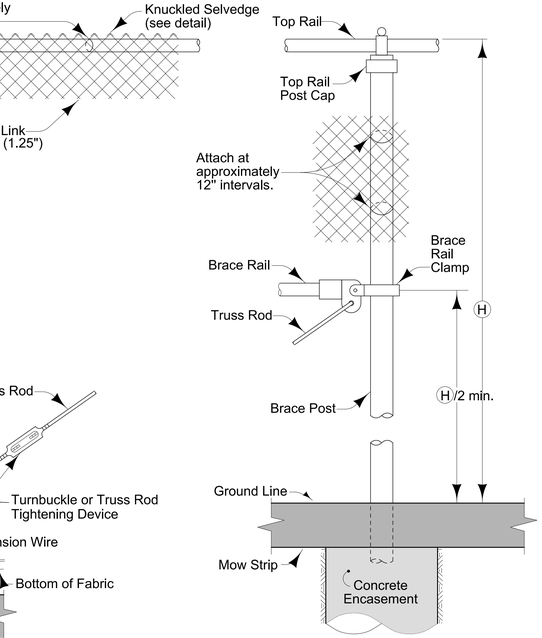
POST EXTENSION WITH CONCRETE FOOTINGS SHALL BE REQUIRED UNDER MOW STRIP.

LEGEND			
1	2½" NPS END POST	5	1¼" NPS TOP RAIL & BRACE
2	2" NPS LINE POST	6	BARBED WIRE
3	⅜" DIA. TRUSS ROD AND TIGHTNER	7	FLAT TENSION BAR
4	BARBED WIRE ARMS	8	BRACE BAND AND TENSION BAND

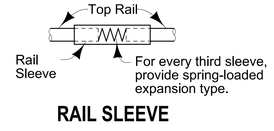
FENCE DETAILS



ANGLE, CORNER, OR END POST ASSEMBLY



BRACE POST ASSEMBLY



RAIL SLEEVE

Note:
Barb Wire Arms not shown.

FENCE POST FOOTING DEPTH AND DIAMETER

USE IN FENCE	FENCE HEIGHT					
	4'-0" and less		Over 4'-0" to 8'-0"		Over 8'-0"	
	X	Y	X	Y	X	Y
Line and Brace Posts	0'-8"	3'-0"	0'-10"	3'-0"	1'-0"	(2)
Terminal Post*	0'-10"	3'-0"	1'-0"	3'-0"	1'-4"	(2)

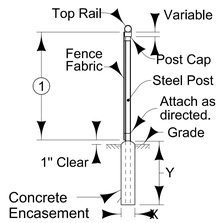
*Includes corner, angle, end, and pull posts.

Place fence fabric on roadway side of post. For areas around Fairground Infields the fence fabric side shall be determined by pedestrian traffic during Fair events.

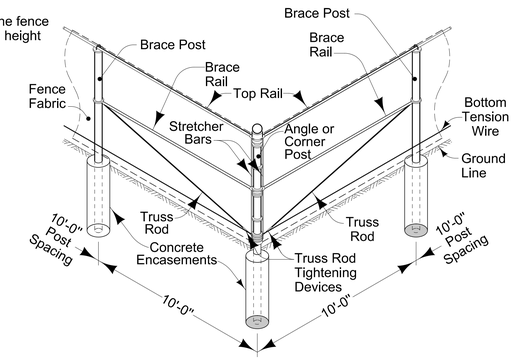
(1) Fabric width as specified in the contract documents.

(2) For fence heights greater than 8 feet, the depth of the fence post footing is 3 feet plus 3 inches for each 1 foot in height over 8 feet.

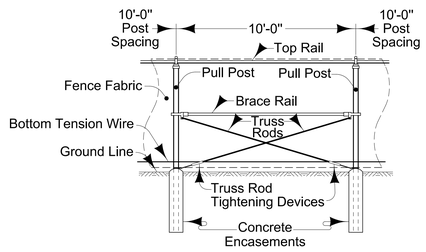
Note:
Mow Strip and Barb Wire Arms not shown.



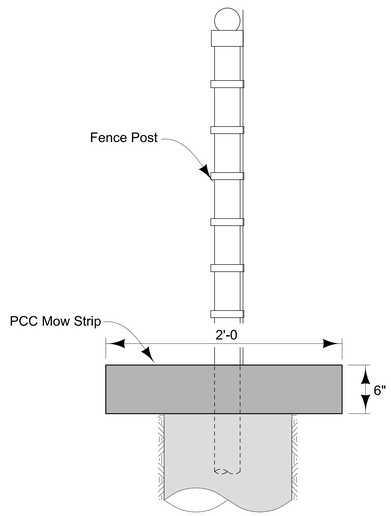
POST INSTALLATION



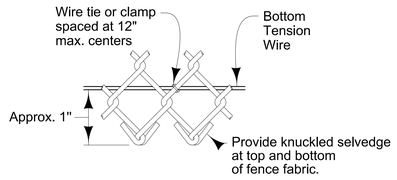
ANGLE OR CORNER POST INSTALLATION



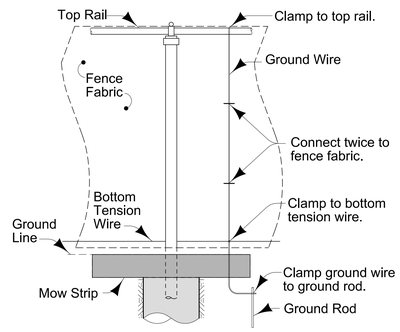
PULL POST INSTALLATION



TYPICAL SECTION 24" PCC MOW STRIP



BOTTOM TENSION WIRE AND KNUCKLED SELVEDGE



GROUND ROD INSTALLATION

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

FENCE DETAILS

Project Number: 251001.00
Date: 03/10/2026

C203

SCALE:

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS-BUILT
1	2010-D-1	TOPSOIL, ON-SITE	CY	200	
2	2010-E	EXCAVATION, CLASS 10	CY	775	
3	2010-G	SUBGRADE PREPARATION, 6 IN.	SY	9295	
4	2010-G	SUBGRADE PREPARATION, 12 IN.	SY	4173	
5	2010-J	SUBBASE, GRANULAR, 4 IN.	SY	9295	
6	2010-I	SUBDRADE TREATMENT, TYPE 2 GEOGRID	SY	2000	
7	3010-D	REMOVAL, DISPOSAL, AND REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL	CY	500	
8	4010-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 4 IN.	LF	245	
9	4010-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 6 IN.	LF	236	
10	4010-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 8 IN.	LF	508	
11	4010-E	SANITARY SEWER SERVICE STUB, PVC, 4 IN.	LF	140	
12	4010-E	SANITARY SEWER SERVICE STUB, PVC, 6 IN.	LF	40	
13	4010-H	REMOVAL OF SANITARY SEWER, LESS THAN 8 IN.	LF	750	
14	4010-I	SANITARY SEWER CLEANOUT	EA	6	
15	4020-A-1	STORM SEWER, TRENCHED, HDPE, 8 IN.	LF	1136	
16	4020-A-1	STORM SEWER, TRENCHED, HDPE, 12 IN.	LF	1270	
17	4020-A-1	STORM SEWER, TRENCHED, HDPE, 15 IN.	LF	54	
18	4020-A-1	STORM SEWER, TRENCHED, HDPE, 18 IN.	LF	506	
19	4020-A-1	STORM SEWER, TRENCHED, HDPE, 24 IN.	LF	114	
20	4020-D	REMOVAL OF STORM SEWER LESS THAN 24 IN.	LF	2670	
21	4020-G	STORM SEWER ABANDONMENT, FILL AND PLUG, 6 IN.	LF		
22	4020-G	STORM SEWER ABANDONMENT, FILL AND PLUG, 8 IN.	LF		
23	4020-G	STORM SEWER ABANDONMENT, FILL AND PLUG, 15 IN.	LF		
24	4020-G	STORM SEWER ABANDONMENT, FILL AND PLUG, 18 IN.	LF		
25	ESTIMATE REF	ROOF DRAIN CONNECTION TO STORM SEWER	EA	67	
26	5010-A-1	WATER MAIN, TRENCHED, PVC, 6 IN.	LF	741	
27	5010-C-2	FITTINGS, DIP, 6 IN.	LBS	260	
28	5010-D	WATER SERVICE STUB, PVC, 2 IN.	EA	2	
29	5010-G	WATER MAIN ABANDONMENT, FILL AND PLUG, 6 IN.	LF	242	
30	5010-H	WATER MAIN REMOVAL, 6 IN.	LF	487	
31	5020-A	VALVE, DIP, 6 IN.	EA	1	
32	5020-C	FIRE HYDRANT ASSEMBLY	EA	1	
33	5020-H	VALVE BOX REPLACEMENT	EA	3	
34	5020-K	VALVE BOX REMOVAL	EA	4	
35	6010-A	MANHOLE, SW-301, 48 IN.	EA	7	
36	6010-A	MANHOLE, SW-401, 48 IN.	EA	4	
37	6010-A	MANHOLE, SW-402, 4X4	EA	1	
38	6010-A	MANHOLE, NYLOPLAST, 24 IN.	EA	8	
39	6010-A	MANHOLE, NYLOPLAST DEBRIS BASIN	EA	8	
40	6010-B	INTAKE, SW-511	EA	6	
41	6010-G-1	CONNECTION TO EXISTING MANHOLE	EA	2	
42	6010-G-2	CONNECTION TO EXISTING INTAKE	EA	2	
43	6010-H-1	REMOVE MANHOLE	EA	5	
44	6010-H-2	REMOVE INTAKE	EA	6	
45	ESTIMATE REF	UNDERGROUND DETENTION BASIN SYSTEM	CF	41267	
46	ESTIMATE REF	STORM BASIN PERIMETER STONE	TON	907	
47	7010-A	PAVEMENT, PCC, 6 IN., BUILDING INTERIOR	SY	9295	
48	7010-A	PAVEMENT, PCC, 7 IN.	SY	4037	
49	7010-E	CURB AND GUTTER, 3 FT., 7 IN.	LF	605	
50	7030-A-1	REMOVAL OF SIDEWALK	SY	123	
51	7030-E	SIDEWALK, PCC, 6 IN.	SY	89	
52	7030-F	BRICK/PAVER SIDEWALK WITH PAVEMENT BASE	SY	34	
53	7030-G	DETECTABLE WARNINGS	SF	20	
54	7040-H	PAVEMENT REMOVAL, BUILDING EXTERIOR	SY	4037	
55	9010-B	HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	0.5	
56	9020-A	SOD	SQ	150	
57	9030-C	PLANTS & LANDSCAPING BEDS	LS	1	
58	ESTIMATE REF	BRICK CHIPS, 3/4 IN.	SY	117	
59	9040-D-1	FILTER SOCKS, 12 IN.	LF	1500	
60	9060-A-2	CHAIN LINK FENCE COMMERICAL, BLACK VINYL, 8 FT.	LF	562	
61	9060-C	BARBED WIRE, TYPE 1	LF	562	
62	9060-E	REMOVAL OF FENCE	LF	562	
63	9060-F	TEMPORARY FENCE, CHAIN LINK, 6 FT.	LF	600	
64	ESTIMATE REF	FENCE MOW STRIP, PCC	SY	124	
65	ESTIMATE REF	PCC PUSH WALL	EA	4	
66	ESTIMATE REF	BOLLARD, POUR-IN-PLACE, 36 IN.	EA	2	
67	ESTIMATE REF	PCC WATER BASIN	EA	22	
68	11,020-A	MOBILIZATION	LS	1	

NOTE:
1. THE CONTRACTOR SHALL SUBMIT ALL UNIT PRICES UPON NOTIFICATION OF PROJECT AWARD.
2. PRICES SHALL BE USED FOR PROGRESS PAYMENTS AND OVERRUN / UNDERRUN OF QUANTITIES.

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FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

CIVIL QUANTITIES AND NOTES

Project Number: 251001.00
Date: 03/10/2026

C300

SCALE:

ESTIMATE REFERENCE INFORMATION

ITEM NO.	ITEM CODE	DESCRIPTION
1	2010-D-1	TOPSOIL, ON-SITE
		CONTRACTOR SHALL STRIP, SALVAGE, AND RESPREAD EXISTING TOPSOIL IN ALL DISTURBED AREAS TO A DEPTH OF 8 IN. TOPSOIL CUT = XXX CY, TOPSOIL RESPREAD = XXX CY, TOPSOIL WASTE = XXXCY. WASTE TOPSOIL CAN BE DISPOSED OF AT THE ISF CAMPGROUNDS FILL SITE.
2	2010-E	EXCAVATION, CLASS 10, WASTE
		THE EXCAVATION QUANTITIES FOR THIS PROJECT ARE AS FOLLOWS: CUT = XXX CY, FILL+35% = XXXCY, IMPORT = XXX CY EXCAVATION QUANTITY IS FOR PLACEMENT OF 4-INCH GRANULAR SUBBASE BENEATH THE INTERIOR PAVING. EXCAVATION FOR THE UNDERGROUND DETENTION BASIN IS INCLUDED IN THAT BID ITEM.
3	2010-G	SUBGRADE PREPARATION, 6 IN.
4	2010-G	SUBGRADE PREPARATION, 12 IN.
		SUBGRADE PREPARATION IS REQUIRED BENEATH ALL NEW PAVEMENTS. PREPARATION SHALL BE 12-INCHES THICK FOR EXTERIOR PAVING, AND 6-INCHES THICK FOR INTERIOR PAVING.
5	2010-J	SUBBASE, GRANULAR, 4 IN.
		REFER TO THE TYPICAL SECTIONS FOR LOCATION OF 4" SUBBASE BENEATH THE INTERIOR BUILDING CONCRETE FLOOR.
6	2010-I	SUBDRADE TREATMENT, TYPE 2 GEOGRID
		ITEM IS FOR USE AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER FOR SOIL CONDITIONS REQUIRING EXTRA STABLIZATION.
7	3010-D	REMOVAL, DISPOSAL, AND REPLACEMENT OF UNSUITABLE BACKFILL MATERIAL
		ITEM IS FOR USE AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER FOR SOIL CONDITIONS REQUIRING REMOVAL AND REPLACEMENT.
8	4010-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 4 IN.
9	4010-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 6 IN.
10	4010-A-1	SANITARY SEWER GRAVITY MAIN, TRENCHED, PVC, 8 IN.
11	4010-E	SANITARY SEWER SERVICE STUB, PVC, 4 IN.
12	4010-E	SANITARY SEWER SERVICE STUB, PVC, 6 IN.
		REFER TO SHEETS C504 AND C505 FOR SANITARY SEWER WORK.
13	4010-H	REMOVAL OF SANITARY SEWER, LESS THAN 8 IN.
		REFER TO SHEET CD100 FOR PIPE REMOVAL LOCATIONS AND LIMITS.
14	4010-I	SANITARY SEWER CLEANOUT
		REFER TO SHEET C504 FOR LOCATIONS.
15	4020-A-1	STORM SEWER, TRENCHED, HDPE, 8 IN.
16	4020-A-1	STORM SEWER, TRENCHED, HDPE, 12 IN.
17	4020-A-1	STORM SEWER, TRENCHED, HDPE, 15 IN.
18	4020-A-1	STORM SEWER, TRENCHED, HDPE, 18 IN.
19	4020-A-1	STORM SEWER, TRENCHED, HDPE, 24 IN.
		REFER TO SHEETS C500-C503 FOR STORM SEWER LOCATIONS AND DETAILS.
20	4020-D	REMOVAL OF STORM SEWER LESS THAN 24 IN.
		REFER TO SHEET CD100 FOR PIPE REMOVAL LOCATIONS AND LIMITS.
21	4020-G	STORM SEWER ABANDONMENT, FILL AND PLUG, 6 IN.
22	4020-G	STORM SEWER ABANDONMENT, FILL AND PLUG, 8 IN.
23	4020-G	STORM SEWER ABANDONMENT, FILL AND PLUG, 15 IN.
24	4020-G	STORM SEWER ABANDONMENT, FILL AND PLUG, 18 IN.
		REFER TO SHEET CD100 FOR PIPE ABANDONMENT LOCATIONS AND LIMITS.
25	ESTIMATE REF	ROOF DRAIN CONNECTION TO STORM SEWER
		REFER TO SHEET C200 FOR THE STANDARD DETAIL, AND SHEET C500 FOR LOCATIONS. ITEM INCLUDES ALL MATERIALS, EQUIPMENT, AND LABOR TO INSTALL PER THE DETAIL. ALL EXPOSED PIPING SHALL BE WHITE. COORDINATE WITH THE BUILDING CONTRACTOR FOR FINAL LOCATIONS PRIOR TO INSTALLATION. MEASUREMENT AND PAYMENT SHALL BE AT THE BID UNIT PRICE FOR EACH CONNECTION.
26	5010-A-1	WATER MAIN, TRENCHED, PVC, 6 IN.
27	5010-C-2	FITTINGS, DIP, 6 IN.
28	5010-D	WATER SERVICE STUB, PVC, 2 IN.
		REFER TO SHEET C506 FOR WATER MAIN WORK. COORDINATE WITH BUILDING CONTRACTOR PRIOR TO FINAL BACKFILLING OF PIPES.
29	5010-G	WATER MAIN ABANDONMENT, FILL AND PLUG, 6 IN.
30	5010-H	WATER MAIN REMOVAL, 6 IN.
		REFER TO SHEET CD100 FOR PIPE REMOVAL & ABANDONMENT LOCATIONS AND LIMITS.
31	5020-A	VALVE, DIP, 6 IN.
32	5020-C	FIRE HYDRANT ASSEMBLY
33	5020-H	VALVE BOX REPLACEMENT
34	5020-K	VALVE BOX REMOVAL
		REFER TO SHEET C506 FOR WATER MAIN WORK.
35	6010-A	MANHOLE, SW-301, 48 IN.
36	6010-A	MANHOLE, SW-401, 48 IN.
37	6010-A	MANHOLE, SW-402, 4X4
38	6010-A	MANHOLE, NYLOPLAST, 24 IN.
39	6010-A	MANHOLE, NYLOPLAST DEBRIS BASIN
40	6010-B	INTAKE, SW-511
		REFER TO SHEETS C500-C503 FOR STORM SEWER LOCATIONS AND DETAILS.
41	6010-G-1	CONNECTION TO EXISTING MANHOLE
42	6010-G-2	CONNECTION TO EXISTING INTAKE
		REFER TO SHEETS C500-C503 FOR STORM SEWER LOCATIONS AND DETAILS.
43	6010-H-1	REMOVE MANHOLE
44	6010-H-2	REMOVE INTAKE
		REFER TO SHEET CD100 FOR REMOVALS.
45	ESTIMATE REF	UNDERGROUND DETENTION BASIN SYSTEM
		REFER TO SUPPLEMENTAL SPEC AND DETAILS PROVIDED BY STORMTECH. REFER TO SHEET C500 FOR BASIN LOCATION. BID PRICE SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO FURNISH AND INSTALL THE DETENTION BASIN SYSTEM AS SHOW IN THE PLANS AND SUPPLEMENTAL S ALL SPECIFICATIONS. WORK INCLUDES, BUT IS NOT LIMITED TO ALL MANUFACTURED DETENTION PRODUCTS INCLUDING DETENTION CHAMBERS, ENDCAPS, MANIFOLDS, FABRIC, INSPECTION PORTS, AND SUBDRAINS. PRICE SHALL INCLUDE ALL EXCAVATION, DISPOSAL, THE GRANULAR MATERIALS, BACKFILL, COMPACTION, AND LABOR TO INSTALL THE UNDERGROUND DETENTION SYSTEM. WASTE SOIL MAY BE DISPOSED OF AT THE FAIR CAMPGROUNDS FILL SITE. CONTRATOR TO USE SYSTEM DESIGNED BY "STORMTECH" IN THE SPECIFICATIONS OR PRE-APPROVED EQUAL. APPROVAL BY ENGINEERING REQUIRED TO BID. ANY ALTERNATE SYSTEM MUST MEET ALL LOAD FACTORS AND STORAGE VOLUMES SHOWN ON THESE PLANS AND NOT REQUIRED A REDESIGN OF SITE UTILITIES. INCLUDES ADS STORMGRID AS SHOWN ON THE STORMTECH PLANS.
46	ESTIMATE REF	STORM BASIN PERIMETER STONE
		ITEM IS FOR ADDITONAL PERIMETER BASIN STONE BEYOND THE VERTICAL LIMITS SHOWN ON THE STORMTECH PLAN SHEET 3 OF 6 DUE TO EXISTING SANDY SOILS. MEASUREMENT AND PAYMENT SHALL BE AT THE BID UNIT PRICE PER TON FOR ADDITIONAL PERIMETER STONE REQURIED DUE TO EXISTING SOIL CONDITIONS.
47	7010-A	PAVEMENT, PCC, 6 IN., BUILDING INTERIOR
		REFER TO SHEET C100 FOR PROJECT LIMITS. SEE SHEET C200 FOR TYPICAL SECTION AND ADDITIONAL DETAILS. REFER TO SHEETS C600-C607 FOR JOINTING AND GEOMETRICS. REFER TO SUPPLEMENTAL SPECIFICATION FOR INTERIOR CONCRETE FLOORS FOR ADDITIONAL REQUIREMENTS FOR CURING, SEALING, AND JOINT FILLING.
48	7010-A	PAVEMENT, PCC, 7 IN.
		REFER TO SHEET C100 FOR PROJECT LIMITS. SEE SHEET C200 FOR TYPICAL SECTION AND ADDITIONAL DETAILS. REFER TO SHEETS C600-C607 FOR JOINTING AND GEOMETRICS.
49	7010-E	CURB AND GUTTER, 3 FT., 7 IN.
		REFER TO SHEET C100 FOR PROJECT LIMITS. SEE SHEET C200 FOR TYPICAL SECTION AND ADDITIONAL DETAILS. REFER TO SHEETS C600-C607 FOR JOINTING AND GEOMETRICS.
50	7030-A-1	REMOVAL OF SIDEWALK
		REFER TO SHEET CD100 FOR REMOVAL LIMITS.
51	7030-E	SIDEWALK, PCC, 6 IN.
		REFER TO SHEET C100 FOR PROJECT LIMITS. SEE SHEET C200 FOR TYPICAL SECTION AND ADDITIONAL DETAILS. REFER TO SHEETS C600-C607 FOR JOINTING AND GEOMETRICS.
52	7030-F	BRICK/PAVER SIDEWALK WITH PAVEMENT BASE
		REFER TO SHEET C604 FOR LOCATION. REFER TO SUDAS DETAIL 7030.203 FOR DETAILS. ITEM INCLUDES SALVAGING EXISTING DONOR PAVERS AND REINSTALLING.
53	7030-G	DETECTABLE WARNINGS
		REFER TO SHEET C604 FOR LOCATION. DOMES SHALL BE CAST IRON.
54	7040-H	PAVEMENT REMOVAL, BUILDING EXTERIOR
		REFER TO SHEET CD100 FOR REMOVAL LIMITS.

ESTIMATE REFERENCE INFORMATION

ITEM NO.	ITEM CODE	DESCRIPTION
55	9010-B	HYDRAULIC SEEDING, SEEDING, FERTILIZING, AND MULCHING
		ITEM WILL BE USED AT THE OWNERS DISCRETION FOR STABLIIZING THE CONSTRUCTION SITE AND ESTABLISHING SEED.
56	9020-A	SOD
		ITEM WILL BE USED AT THE OWNERS DISCRETION AT THE END OF THE PROJECT FOR FINAL STABLIZATION.
57	9030-C	PLANTS & LANDSCAPING BEDS
58	ESTIMATE REF	BRICK CHIPS, 3/4 IN.
		REFER TO DETAIL ON SHEET C200. REFER TO SHEET C400 FOR LOCATION ALONG SOUTH FENCLINE. ITEM INCLUDES ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO FURNISH AND INSTALL BRICK CHIPS. ITEM INCLUDES HEAVY WEED BARRIER BELOW THE BRICK CHIPS. MEASUREMENT AND PAYMENT SHALL BE AT THE BID UNIT PRICE FOR EACH SQUARE YARD OF CHIPS INSTALLED.
59	9040-D-1	FILTER SOCKS, 12 IN.
		REFER TO SHEET C400 FOR LOCATIONS.
60	9060-A-2	CHAIN LINK FENCE, 96", 1.25" MESH, BLACK VINYL
61	9060-C	BARBED WIRE, TYPE 1
		REFER TO SHEET C202 FOR FENCE INSTALLATION DETAILS. SEE SHEET C400 FOR LOCATIONS.
62	9060-E	REMOVAL OF FENCE
		REFER TO SHEET CD100 FOR LOCATIONS.
63	9060-F	TEMPORARY FENCE, CHAIN LINK, 6 FT.
		REFER TO SHEET C400 FOR TEMPORARY FENCE LOCATION TO KEEP THE PROJECT SITE SECURE DURING RE-FENCING WORK.
64	ESTIMATE REF	FENCE MOW STRIP, PCC
		REFER TO SHEET C400 FOR LOCATION OF MOW STRIP. SEE SHEET C202 FOR DETAILS.
65	ESTIMATE REF	PCC PUSH WALL
		REFER TO SHEET C201 FOR WALL DETAILS. SEE SHEET C400 FOR LOCATIONS ON INSTALLATION. ITEM INCLUDES ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO CONSTRUCT PUSH WALLS PER THE DETAILS. MEASUREMENT AND PAYMENT SHALL BE AT THE BID UNIT PRICE FOR EACH PUSH WALL INSTALLED.
66	ESTIMATE REF	BOLLARD, POUR-IN-PLACE, 36 IN.
		REFER TO SHEET C400 FOR LOCATIONS. ITEM INCLUDES ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO FURNISH AND INSTALL BOLLARDS. MEASUREMENT AND PAYMENT SHALL BE AT THE BID UNIT PRICE FOR EACH BOLLARD INSTALLED.
67	ESTIMATE REF	PCC WATER BASIN
		REFER TO SHEET C202 FOR STANDARD DETAIL. REFER TO SHEET C400 FOR LOCATIONS. ITEM INCLUDES ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO CONSTRUCT WATER PITS. MEASUREMENT AND PAYMENT SHALL BE AT THE BID UNIT PRICE FOR EACH BASIN INSTALLED.
68	11,020-A	MOBILIZATION

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FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

CIVIL QUANTITIES AND NOTES

Project Number: 251001.00
Date: 03/10/2026

C301

SCALE:

LEGEND

- PCC MOW STRIP
- SOD
- 3¼" BRICK CHIPS

INSTALL SOD (TYP.)

INSTALL SOD (TYP.)

INSTALL SOD (TYP.)

INSTALL SOD (TYP.)

INSTALL SOD (TYP.)

INSTALL SOD (TYP.)

INSTALL SOD (TYP.)

INSTALL SOD (TYP.)

INSTALL SOD (TYP.)

INSTALL 2 BOLLARDS IN FRONT OF FIRE HYDRANT

INSTALL 570 LF OF 6' TEMPORARY SECURITY FENCE

INSTALL 562 LF OF 8' BLACK VINYL CHAINLINK FENCE WITH BARBED WIRE TOP

INSTALL 125 SY PCC MOW STRIP

INSTALL 4" THICK 3¼" BRICK CHIPS

INSTALL 19 LF OF 5' CHAINLINK FENCE

SCALE IN FEET

0 20 40

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

FENCING AND LANDSCAPING PLAN

Project Number: 251001.00

Date: 03/10/2026

C400

SCALE:

CORE PIPE THROUGH WALL FOUNDATION

CORE PIPE THROUGH WALL FOUNDATION

36 LF 8" PVC

POTHOLE SEWER PRIOR TO STARTING CONSTRUCTION

STORMTECH MC-7200 REFER TO DETAILS

NOTE:

1. ROOF DRAIN CONNECTIONS TO STORM TRUNKS SHALL USE WYES.

REFER TO MEP PLANS FOR CONNECTIONS TO ALL TRUNKS AND MAINS

A 6" HEXAGON TO 8" ROUND ADAPTOR
8" PVC DRAIN CONNECTION

B 8" HEXAGON TO 10" ROUND ADAPTOR
10" PVC DRAIN CONNECTION

SCALE IN FEET
0 20 40

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No.	Date	Description

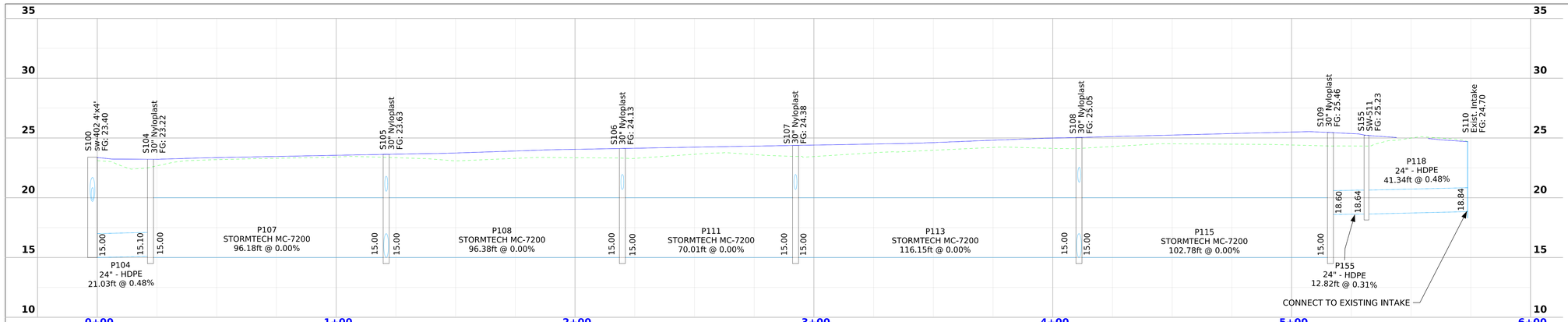
ISF SWINE BARN UPDATES - PHASE 2

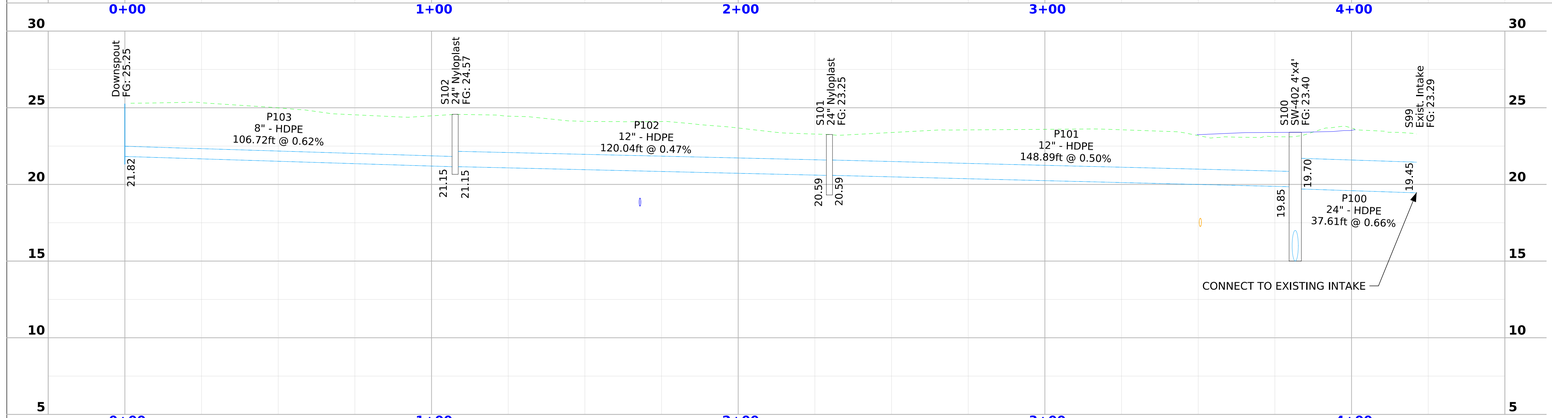
STORM SEWER PLAN

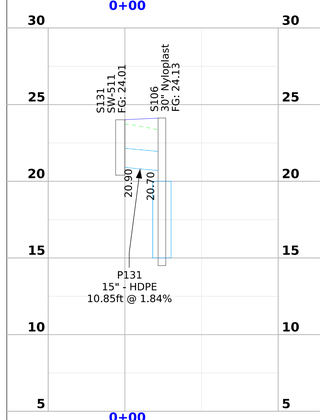
Project Number: 251001.00
Date: 03/10/2026

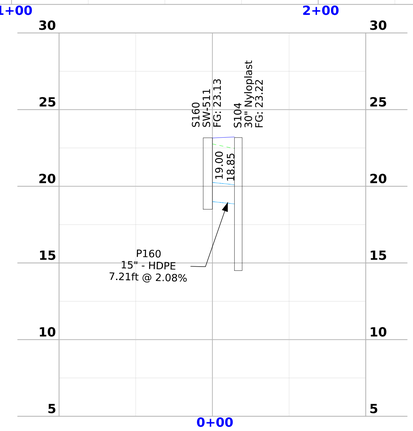
C500

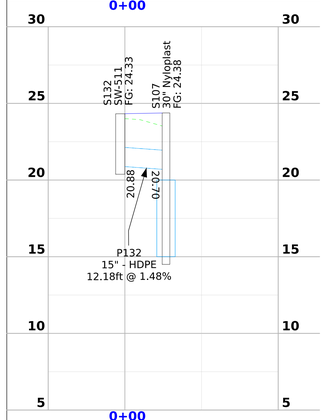
SCALE:











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No.	Date	Description

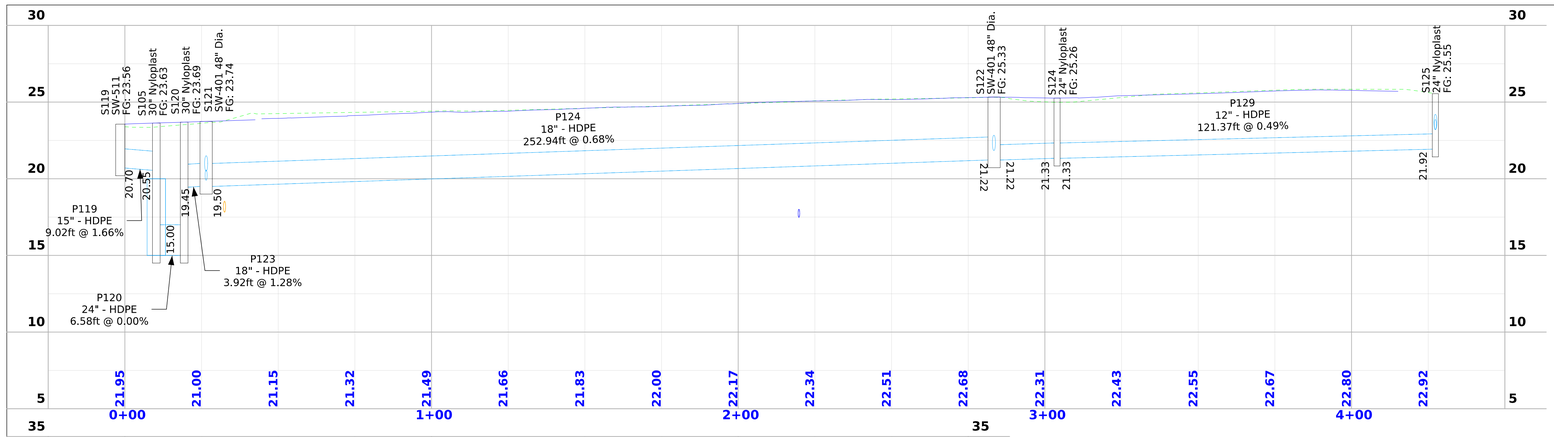
ISF SWINE BARN UPDATES - PHASE 2

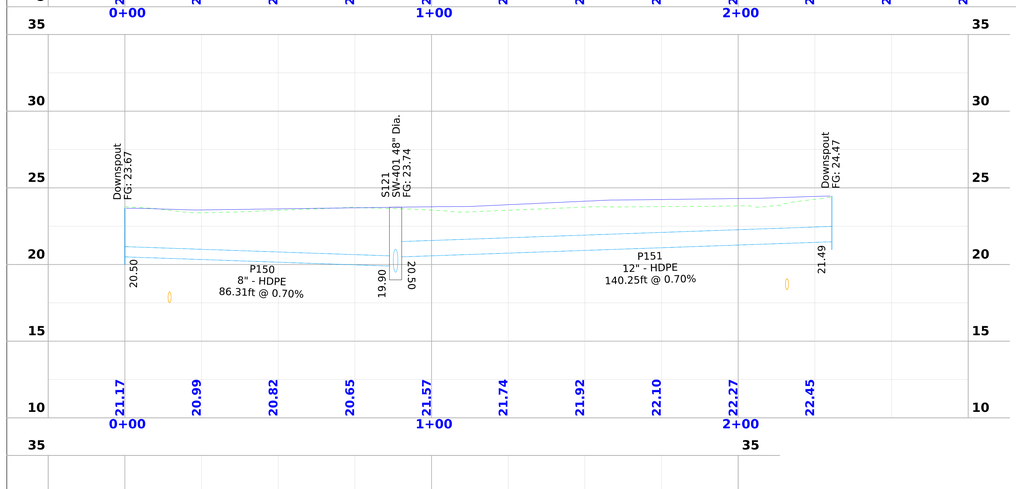
STORM SEWER PROFILES

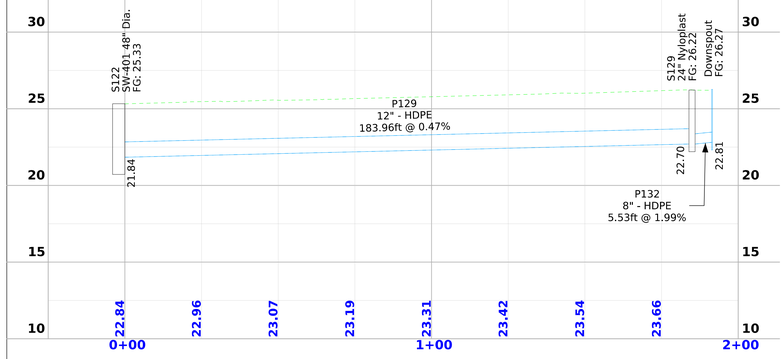
Project Number: 251001.00
Date: 03/10/2026

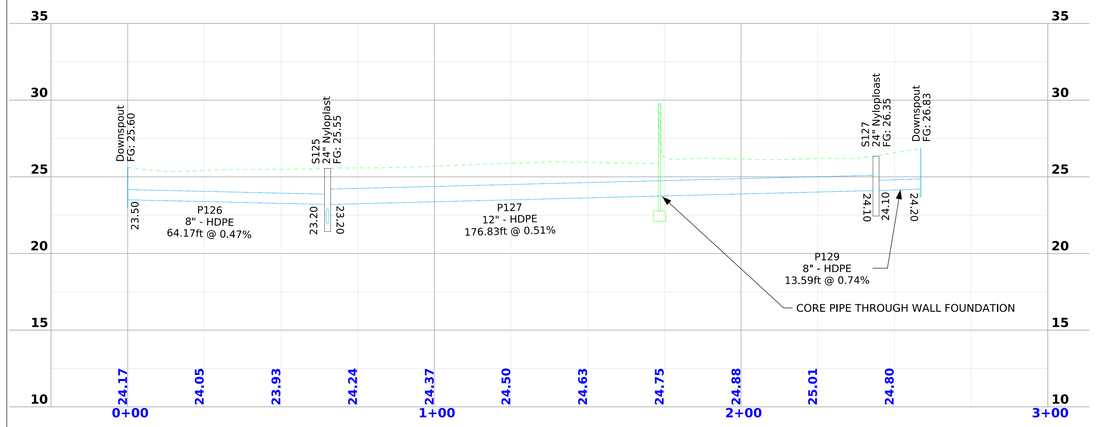
C501

SCALE:









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No.	Date	Description

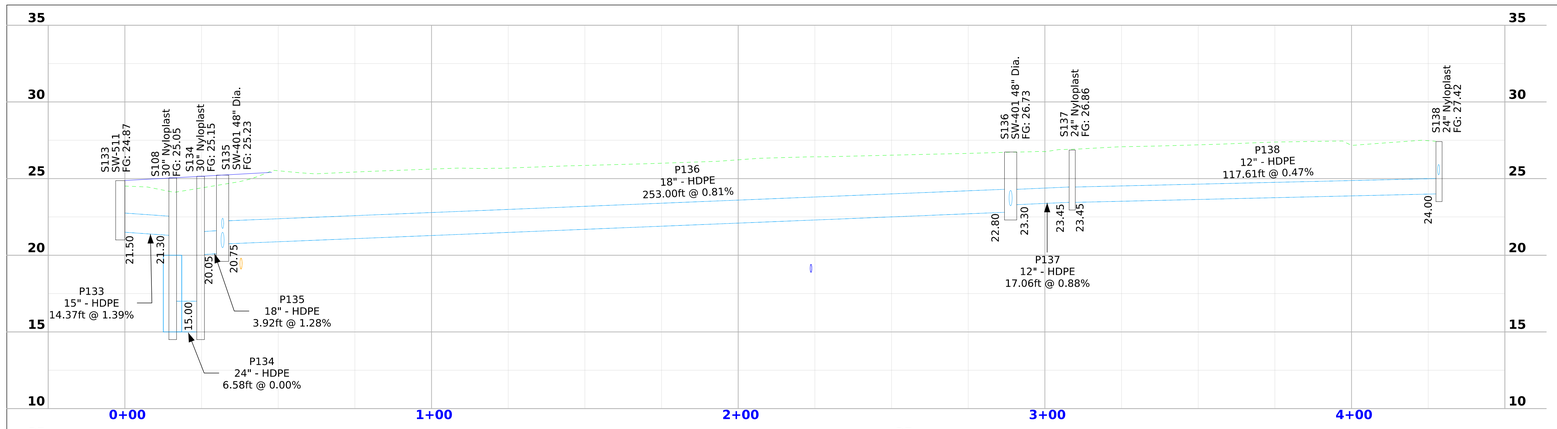
ISF SWINE BARN UPDATES - PHASE 2

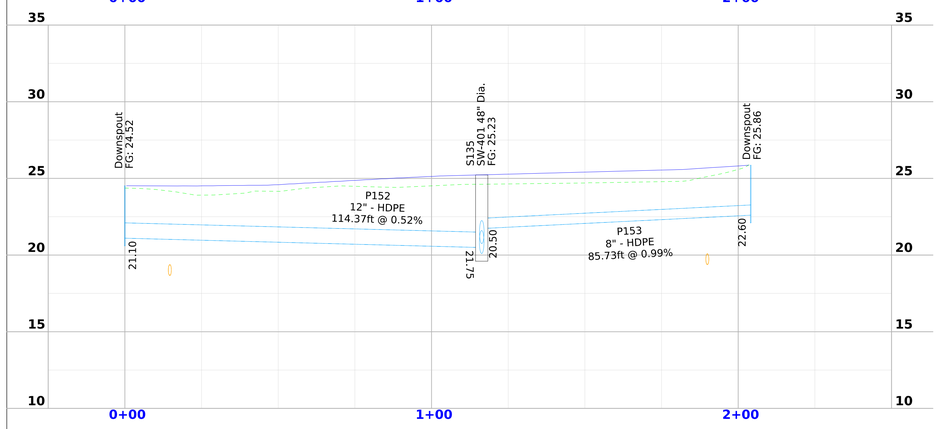
STORM SEWER PROFILES

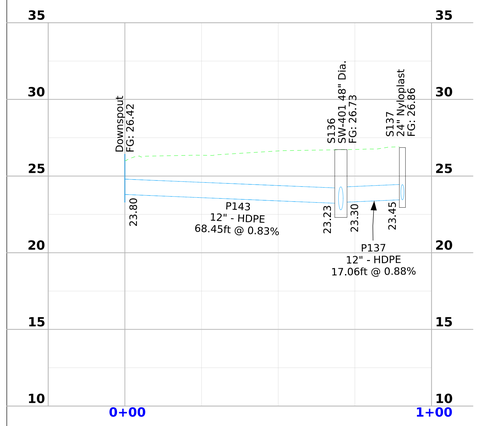
Project Number: 251001.00
Date: 03/10/2026

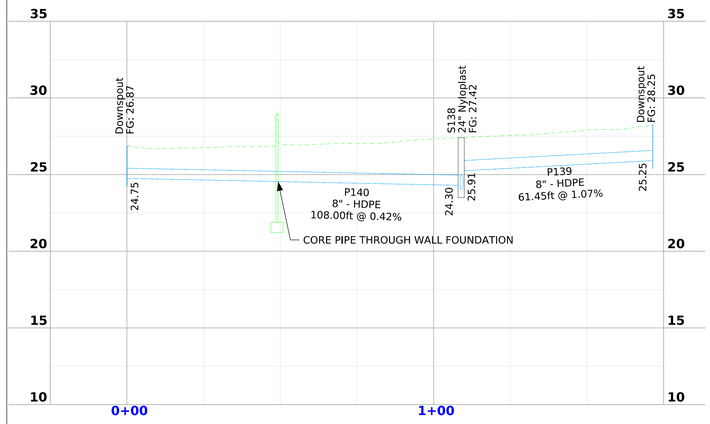
C502

SCALE:









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No.	Date	Description

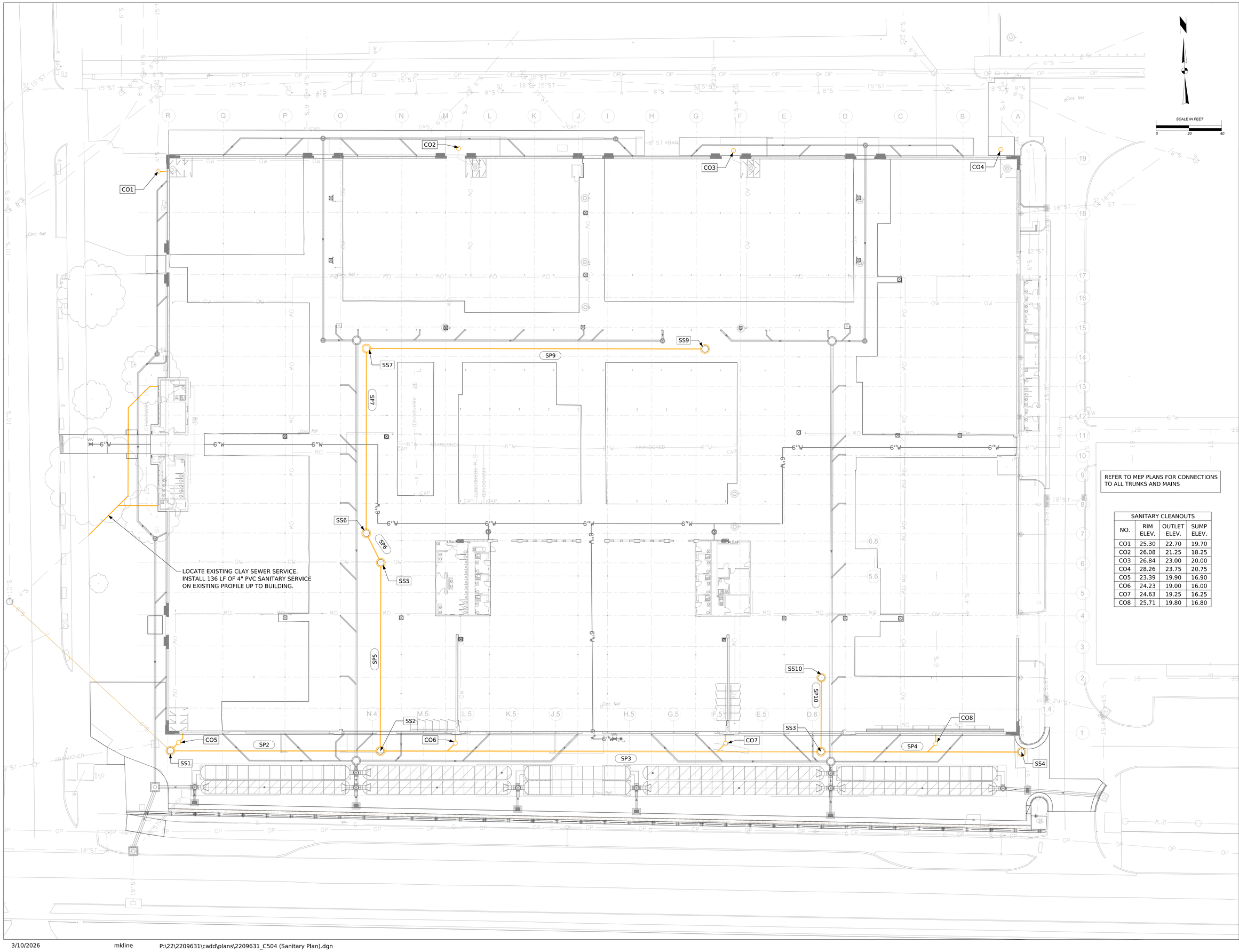
ISF SWINE BARN UPDATES - PHASE 2

STORM SEWER PROFILES

Project Number:	251001.00
Date:	03/10/2026

C503

SCALE:



REFER TO MEP PLANS FOR CONNECTIONS TO ALL TRUNKS AND MAINS

SANITARY CLEANOUTS			
NO.	RIM ELEV.	OUTLET ELEV.	SUMP ELEV.
CO1	25.30	22.70	19.70
CO2	26.08	21.25	18.25
CO3	26.84	23.00	20.00
CO4	28.26	23.75	20.75
CO5	23.39	19.90	16.90
CO6	24.23	19.00	16.00
CO7	24.63	19.25	16.25
CO8	25.71	19.80	16.80

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ISF SWINE BARN UPDATES - PHASE 2

SANITARY SEWER PLAN

Project Number: 251001.00
Date: 03/10/2026

C504

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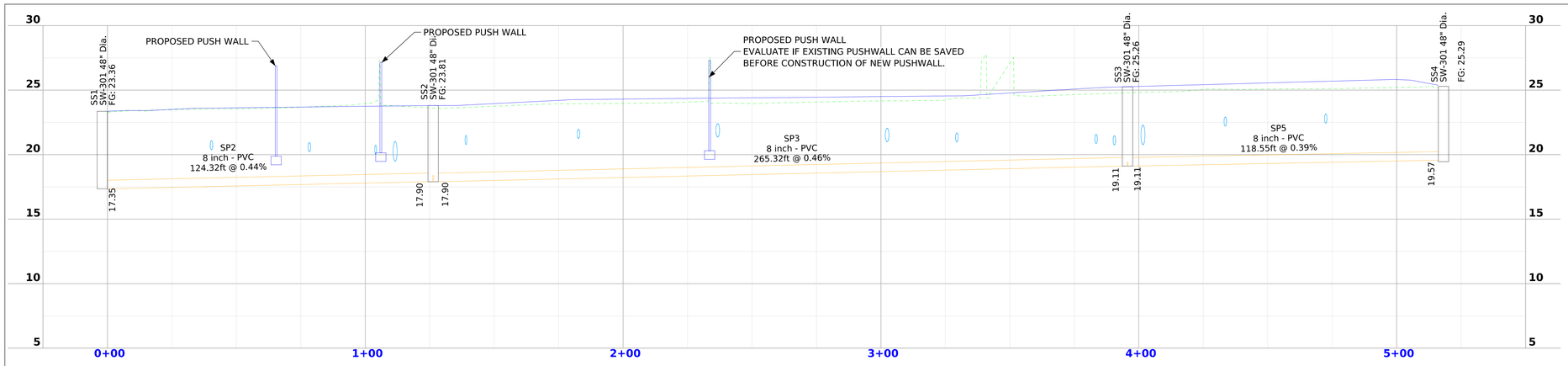

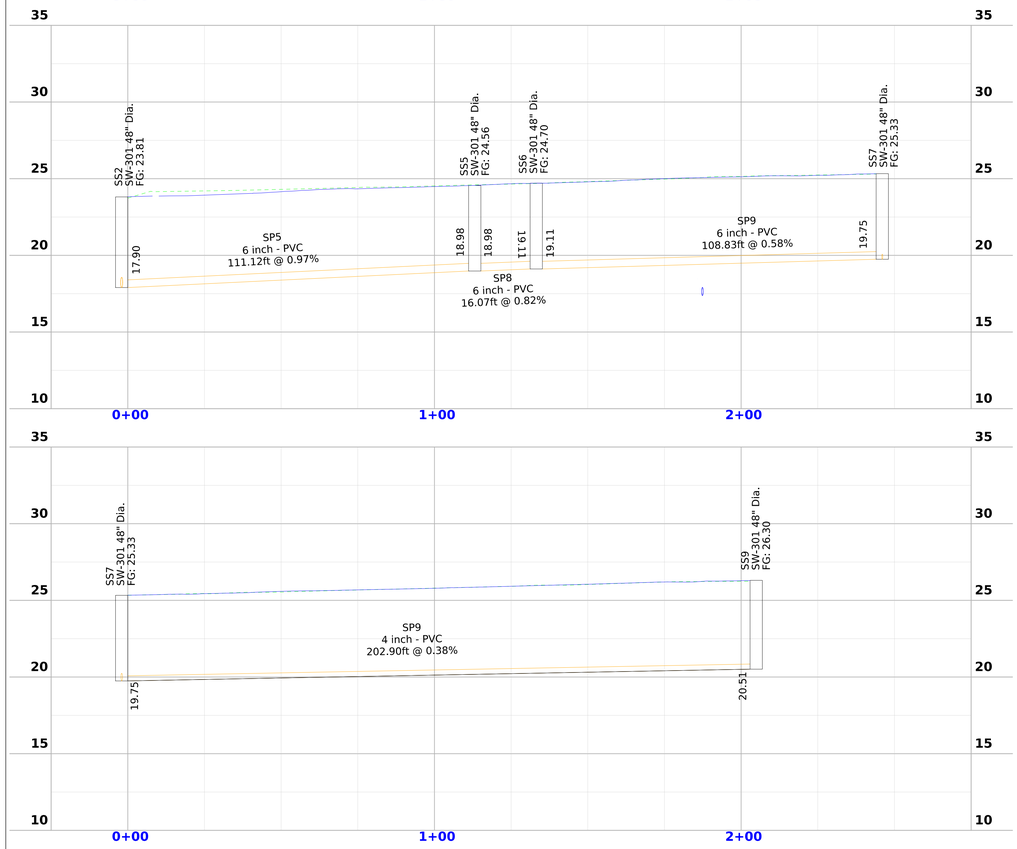

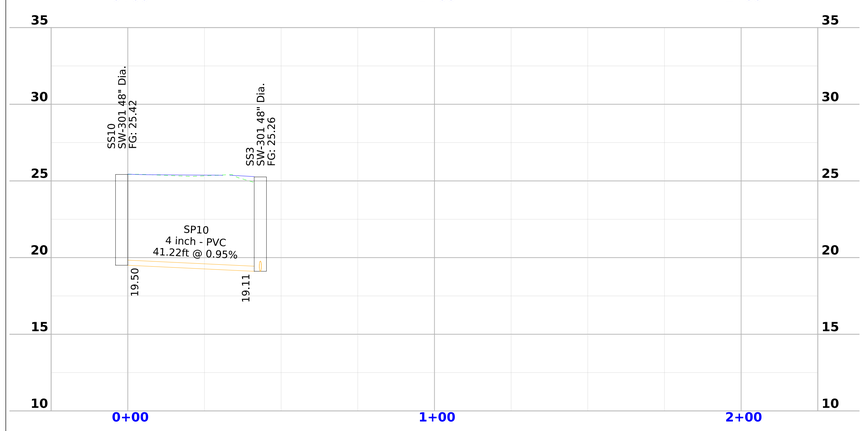

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No.	Date	Description

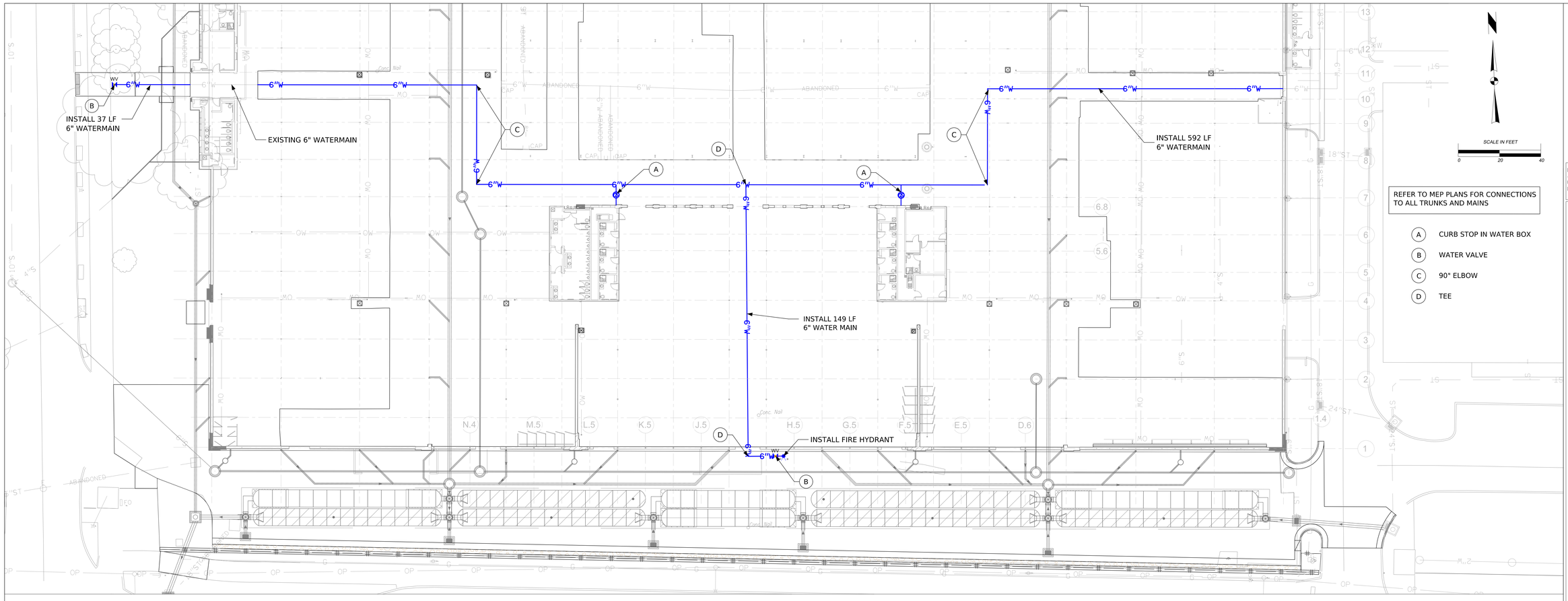
ISF SWINE BARN UPDATES - PHASE 2

SANITARY SEWER PROFILES

Project Number:	251001.00
Date:	03/10/2026

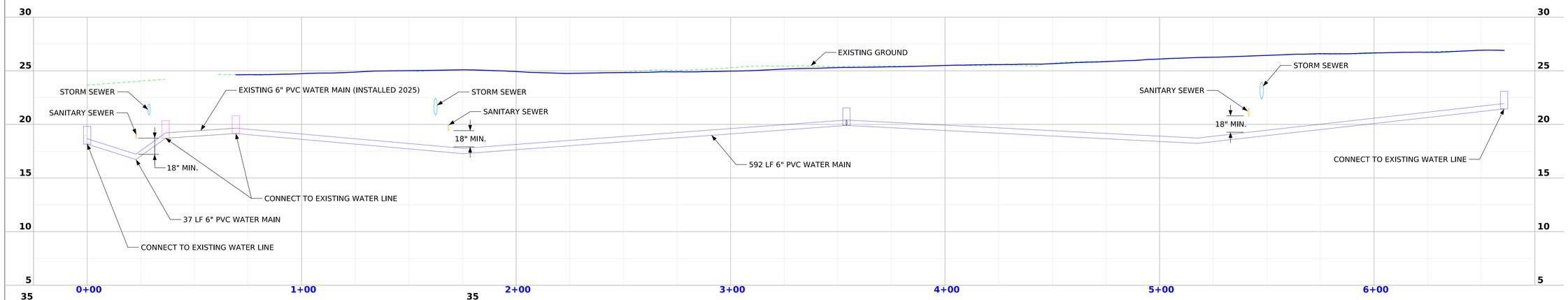
C505

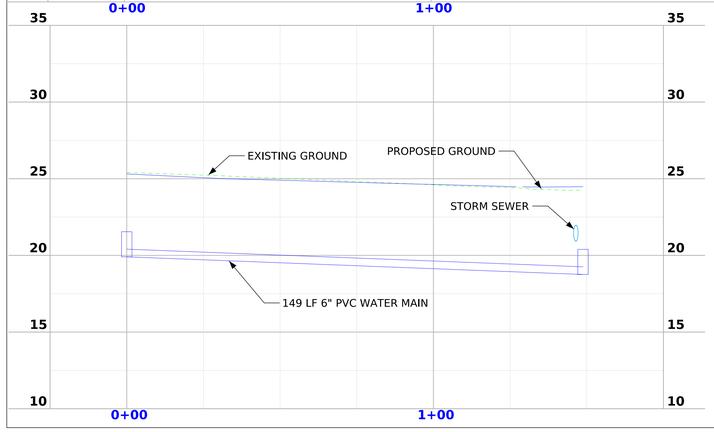
SCALE:



REFER TO MEP PLANS FOR CONNECTIONS TO ALL TRUNKS AND MAINS

- A — CURB STOP IN WATER BOX
- B — WATER VALVE
- C — 90" ELBOW
- D — TEE





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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

WATER MAIN PLAN AND PROFILES

Project Number: 251001.00
Date: 03/10/2026

C506

SCALE:

SCALE IN FEET
0 10 20

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FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

GEOMETRIC PLAN

Project Number: 251001.00
Date: 03/10/2026

C600

SCALE:

R Q P O N M L K J I

10+00 11+00 12+00

10+20.00
17.44 LT
24.94

NORTH BASELINE

25.16 25.61 25.80 25.45 25.83 25.70 26.04 25.77 26.12 26.06 26.45 26.02 26.52

INSTALL WATER BASIN (TYP.)
INSTALL TWO BOLLARDS

25.70 25.83 25.12 25.37 25.44 25.58 0.00 25.31

INSTALL WATER BASIN (TYP.)

26.65 0.00 26.25 0.00

INSTALL WATER BASIN (TYP.)

INSTALL WATER BASIN (TYP.)

25.28 25.37 25.49 25.44 25.67 25.77 25.88 26.01 0.00

25.25 25.36 0.00 25.52 25.64 25.76 25.90 26.00 0.00 0.00

25.14 0.00 25.41 25.82

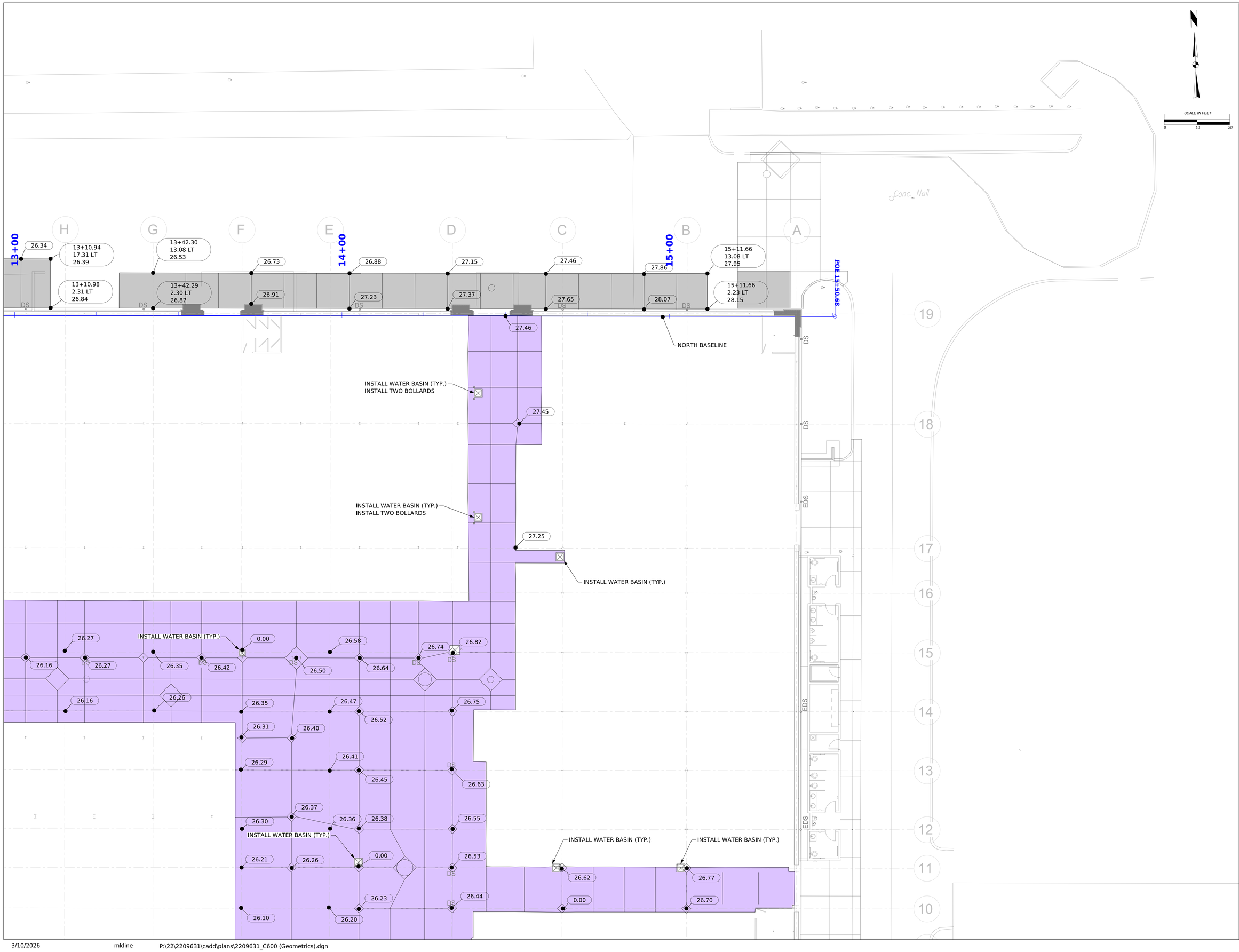
25.10 0.00 25.33 25.91

INSTALL WATER BASIN (TYP.)

0.00 0.00 0.00 25.04 0.00 24.78 24.98 25.09 25.28 25.21 25.70

INSTALL WATER BASIN (TYP.)

Conc. Nail



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FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

GEOMETRIC PLAN

Project Number: 251001.00
Date: 03/10/2026

C601

SCALE:

SCALE IN FEET
0 10 20

INSTALL WATER BASIN (TYP.)
INSTALL WATER BASIN (TYP.)
INSTALL WATER BASIN (TYP.)

1+00.00
29.53 LT
23.34

1+46.15
29.53 LT
23.68

1+00.46
3.82 RT
23.04

1+21.24
15.92 RT
23.22

1+38.14
22.28 RT
23.40

1+47.86
36.18 RT
23.22

1+47.95
44.77 RT
23.14

1+32.86
36.32 RT

1+47.89
47.77 RT
23.39

R 15'

SOUTH
BASELINE

1+00 2+00 3+00 4+00

N.4 M.5 L.5 K.5 J.5

0.38% EXIST. TRAIL

Conc. Nail

Conc. Nail

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Phone: (515) 393-4771

FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

GEOMETRIC PLAN

Project Number: 251001.00
Date: 03/10/2026

C602

SCALE:

3/10/2026 mkline P:\22\2209631\cadd\plans\2209631_C600 (Geometrics).dgn

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FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

GEOMETRIC PLAN

Project Number: 251001.00
Date: 03/10/2026

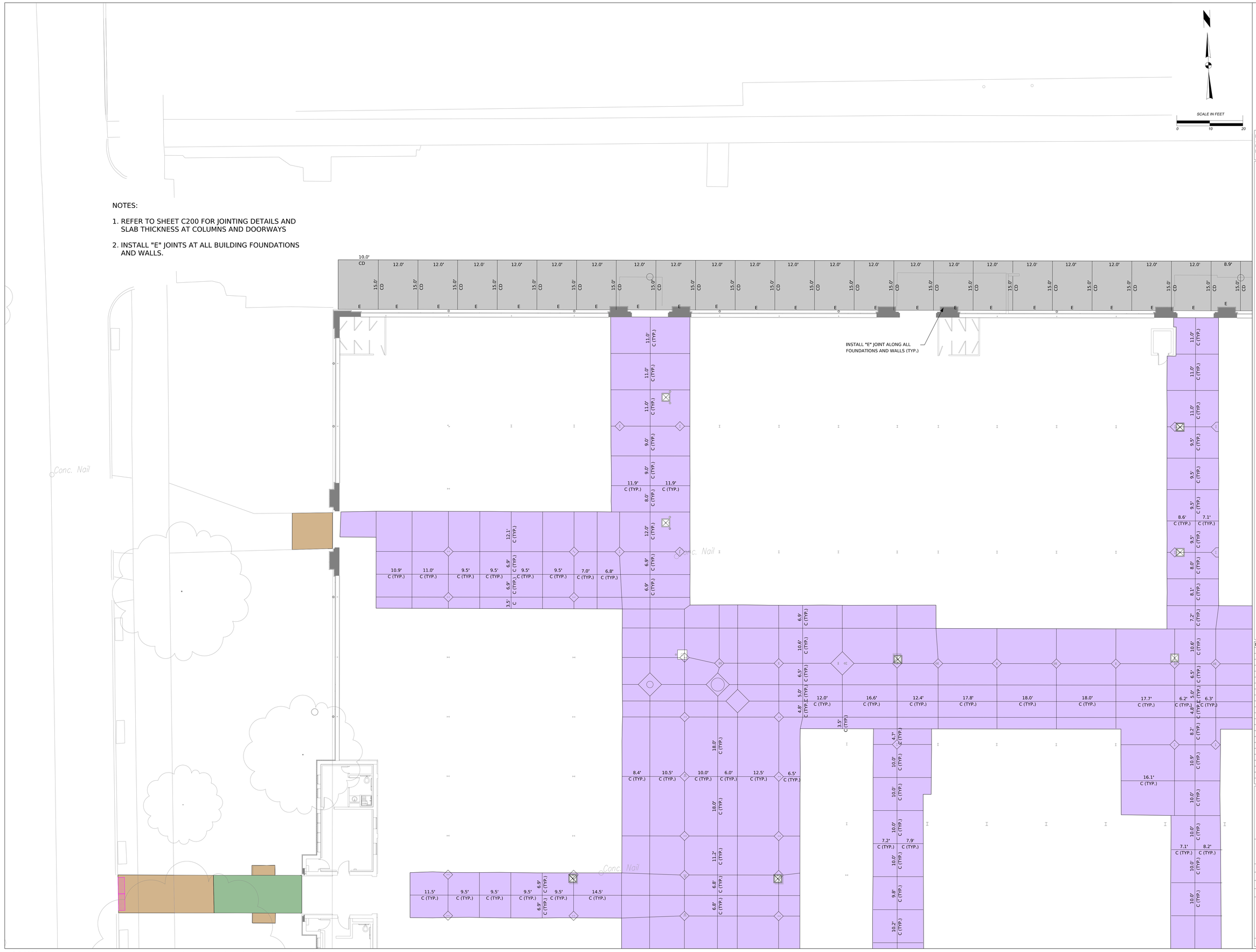
C603

SCALE:

NOTES:

1. REFER TO SHEET C200 FOR JOINTING DETAILS AND SLAB THICKNESS AT COLUMNS AND DOORWAYS

2. INSTALL "E" JOINTS AT ALL BUILDING FOUNDATIONS AND WALLS.



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FOR REFERENCE ONLY

No.	Date	Description

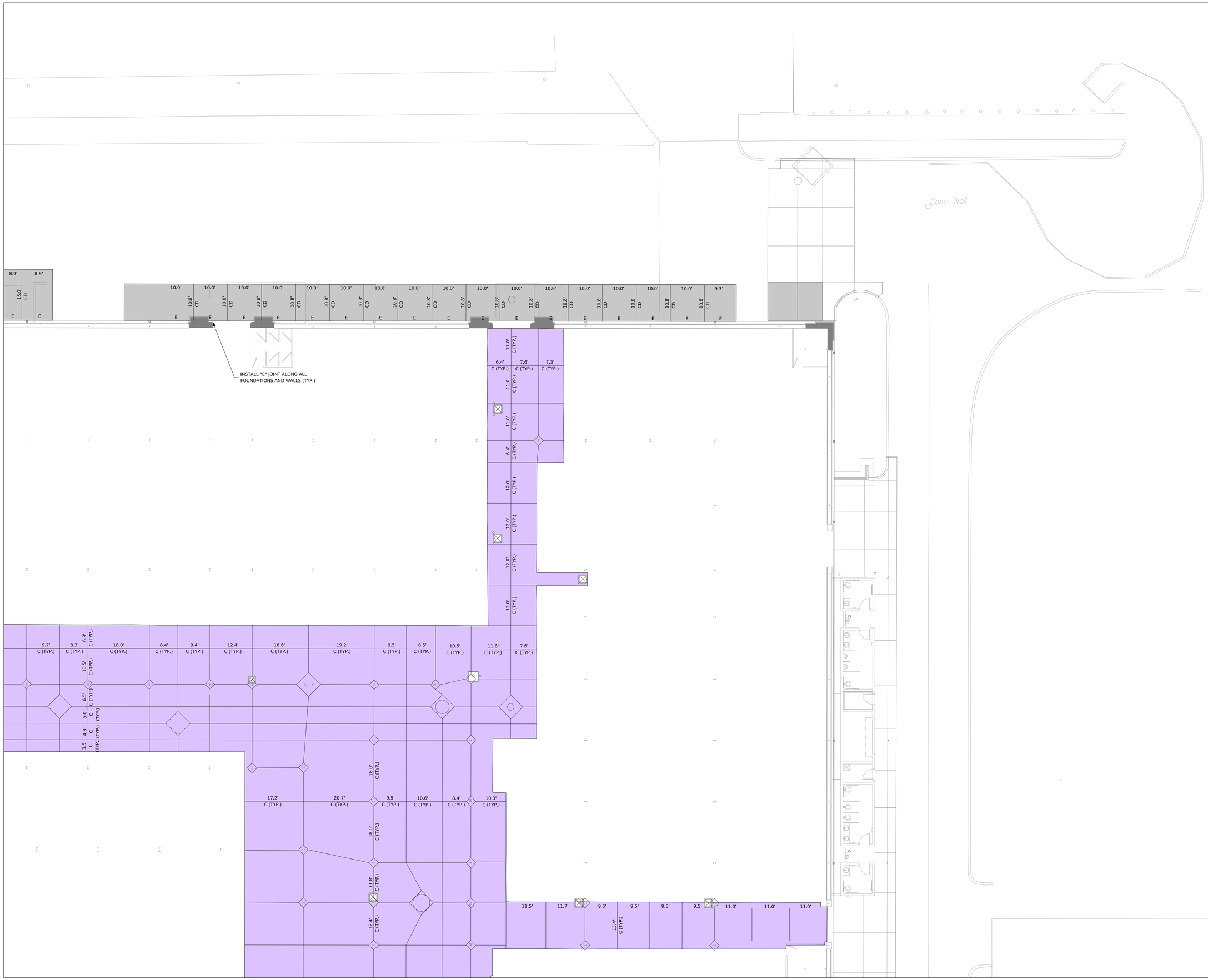
ISF SWINE BARN UPDATES - PHASE 2

JOINTING PLAN

Project Number: 251001.00
Date: 03/10/2026

C604

SCALE:



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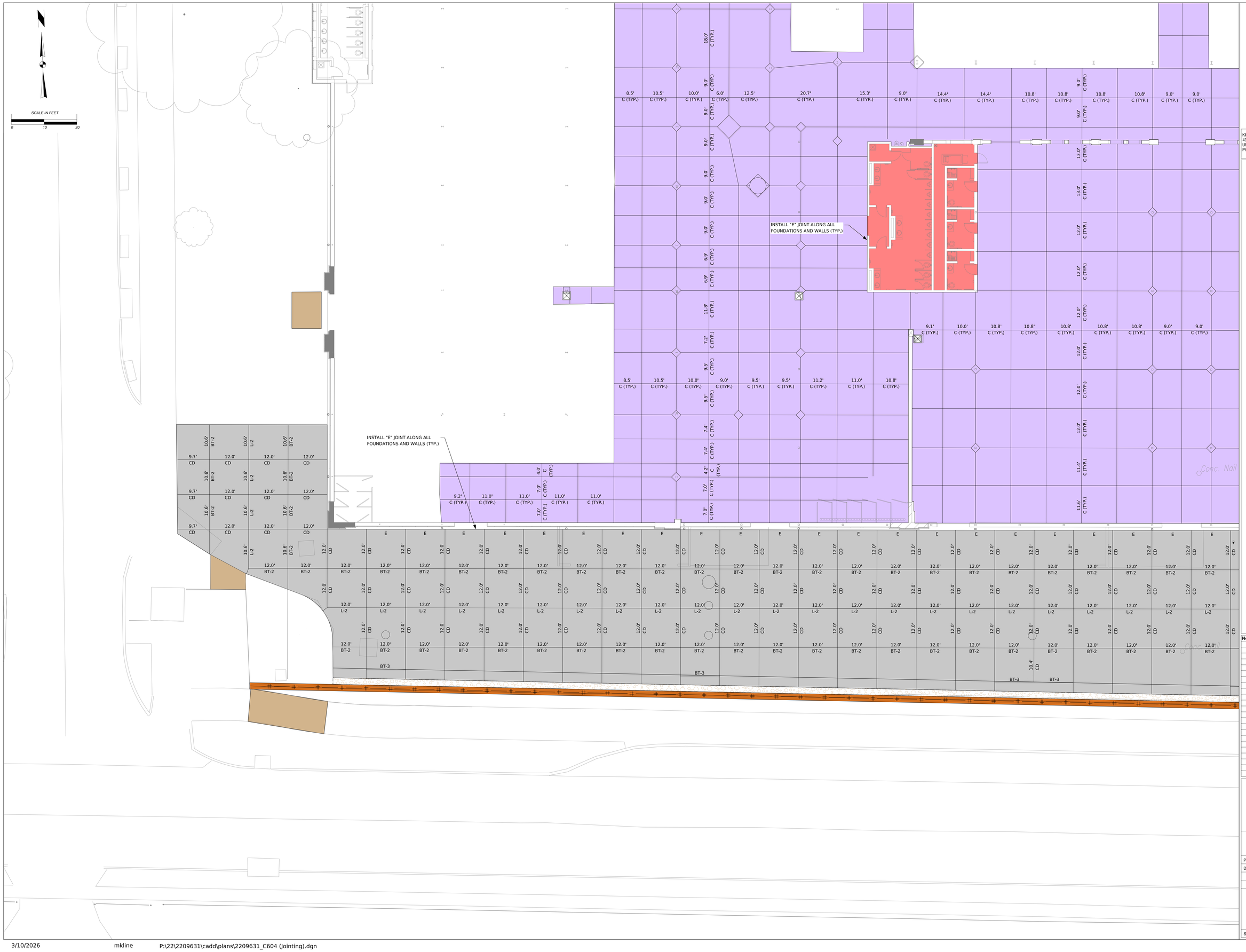
ISF SWINE BARN UPDATES - PHASE 2

JOINTING PLAN

Project Number: 251001.00
Date: 03/10/2026

C605

SCALE:



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FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

JOINTING PLAN

Project Number: 251001.00
Date: 03/10/2026

C606

SCALE:

INSTALL "E" JOINT ALONG ALL FOUNDATIONS AND WALLS (TYP.)

INSTALL "E" JOINT ALONG ALL FOUNDATIONS AND WALLS (TYP.)

SCALE IN FEET
0 10 20

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FOR REFERENCE ONLY

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

JOINTING PLAN

Project Number: 251001.00
Date: 03/10/2026

C607

SCALE:

MATERIAL SYMBOLS

STEEL STUD PARTITIONS

BRICK MASONRY

CMU MASONRY

CONCRETE

STEEL

EARTH FILL

GYPSUM BOARD

RIGID INSULATION

BATT INSULATION

GRAVEL FILL

JOINT SEALANT

GROUT / SAND

PLYWOOD

ARCHITECTURAL SYMBOLS

DETAIL NO / SHEET NO — DETAIL OR ENLARGED PLAN

L1 / H1 / P1 / M1 / DETAIL NO / SHEET NO — BUILDING / INTERIOR ELEVATION

DETAIL NO / SHEET NO — SECTION

B / 2 — COLUMN GRID LINES

ELEVATION REFERENCE

W1 — WALL TYPE

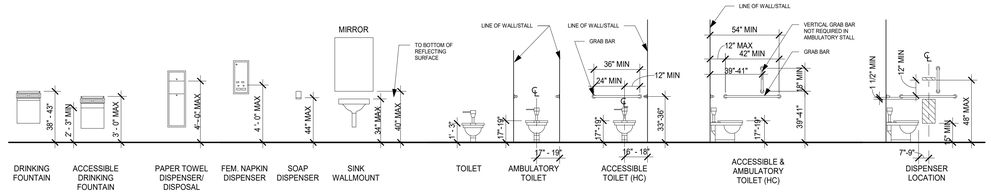
ROOM — ROOM NAME &

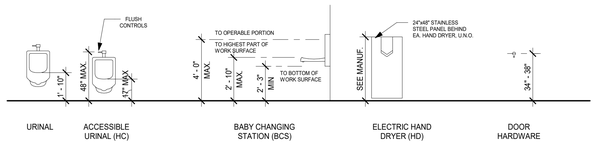
000 — ROOM NUMBER

000 — DOOR NUMBER

ABBREVIATIONS

@	AT	FCO	FLOOR CLEAN OUT	OC	ON CENTER	WC	WATER CLOSET
AFF	ABOVE FINISHED FLOOR	FF	FINISHED FLOOR	OPNG	OPENING	WR	WATER RESISTANT
AC PNL	ACOUSTICAL PANEL	FIN	FINISH	OD	OUTSIDE DIAMETER	WTRPRF	WATERPROOF
AC TL	ACOUSTICAL TILE	FE	FIRE EXTINGUISHER	OA	OVERALL	WT	WEIGHT
ADJ	ADJUSTABLE	FEC	FIRE EXTINGUISHER CABINET	OPP	OPPOSITE	WWF	WELDED WIRE FABRIC
AL	ALUMINUM	FHC	FIRE HOSE CABINET	ORIG	ORIGINAL	W/	WITH
&	AND	FHY	FIRE HYDRANT	PC	PILE CAP	W/O	WITHOUT
APPROX	APPROXIMATE	FLR	FLOOR	PNT	PAINT	WD	WOOD
ARCH	ARCHITECTURAL	FD	FLOOR DRAIN	PR	PAIR		
BLKG	BLOCKING	FLUOR	FLUORESCENT	PNL	PANEL		
BD	BOARD	FT	FOOT OR FEET	PTN	PARTITION		
BOT	BOTTOM	FTG	FOOTING	PLAM	PLASTIC LAMINATE		
BLDG	BUILDING	FDN	FOUNDATION	PL	PLATE		
BM	BEAM	GA	GAUGE	PLYWD	PLYWOOD		
CAB	CABINET	GALV	GALVANIZED	PVC	POLYVINYL CHLORIDE		
CUH	CABINET UNIT HEATER	GL	GLASS	LB	POUND		
CPT	CARPET	GND	GROUND	PRCST	PRE CAST		
CLG	CEILING	GYP BD	GYPSUM BOARD	QT	QUARRY TILE		
CTR	CENTER	HDW	HARDWARE	RAD	RADIUS		
CL	CENTER LINE	HD WD	HARDWOOD	REF	REFERENCE		
CT	CERAMIC TILE	HGT	HEIGHT	REFRIG	REFRIGERATOR		
CLR	CLEAR	HM	HOLLOW METAL	REINF	REINFORCED		
COL	COLUMN	HORIZ	HORIZONTAL	REBAR	REINFORCING BAR		
CONC	CONCRETE	HB	HOSE BIBB	REQD	REQUIRED		
CMU	CONCRETE MASONRY UNIT	HR	HOUR	R	RISER		
CJ	CONTROL JOINT	ID	INSIDE DIAMETER	RD	ROOF DRAIN		
CJA	CONTROL JOINT ABOVE	INSUL	INSULATION	RM	ROOM		
CONT	CONTINUOUS	INT	INTERIOR	RO	ROUGH OPENING		
CORR	CORRIDOR	I E	INVERT ELEVATION	SCHED	SCHEDULE		
DEPT	DEPARTMENT	JAN	JANITOR	SECT	SECTION		
DIA	DIAMETER	JT	JOINT	SHT	SHEET		
DIAG	DIAGONAL	KIT	KITCHEN	SIM	SIMILAR		
DTL	DETAIL	LAB	LABORATORY	SPEC	SPECIFICATION		
DIM	DIMENSION	LAV	LAVATORY	SQ	SQUARE		
DISP	DISPENSER	LT	LIGHT	SF	SQUARE FEET		
DBL	DOUBLE	LAM	LAMINATE	SS	STAINLESS STEEL		
DN	DOWN	LVR	LOUVER	STD	STANDARD		
DWR	DRAWER	MH	MANHOLE	STL	STEEL		
DWG	DRAWING	MFR	MANUFACTURER	STOR	STORAGE		
DF	DRINKING FOUNTAIN	MBL	MARBLE	STRUCT	STRUCTURAL		
DR	DOOR	MO	MASONRY OPENING	SUSP	SUSPENDED		
DS	DOWNSPOUT	MAX	MAXIMUM	TEL	TELEPHONE		
EA	EACH	MECH	MECHANICAL	TV	TELEVISION		
EW	EACH WAY	MTL	METAL	THK	THICK		
EWC	ELECTRIC WATER COOLER	MIN	MINIMUM	T & G	TONGUE AND GROOVE		
ELEC	ELECTRICAL	MATL	MATERIAL	T & B	TOP AND BOTTOM		
EP	ELECTRIC PANEL BOARD	MISC	MISCELLANEOUS	TYP	TYPICAL		
EL	ELEVATION	NOM	NOMINAL	UR	URINAL		
ELEV	ELEVATOR	N/A	NOT APPLICABLE	UNO	UNLESS NOTED OTHERWISE		
EMER	EMERGENCY	NIC	NOT IN CONTRACT	VERT	VERTICAL		
ENCL	ENCLOSURE	NTS	NOT TO SCALE	VEST	VESTIBULE		
EQ	EQUAL	NO	NUMBER	VB	VINYL BASE		
EQUIP	EQUIPMENT			VCT	VINYL COMPOSITION TILE		
EXST	EXISTING						
EXP	EXPANSION						
EJ	EXPANSION JOINT						
EXT	EXTERIOR						
EDS	EXISTING DOWNSPOUT						

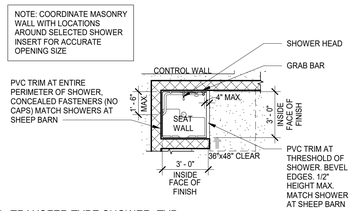




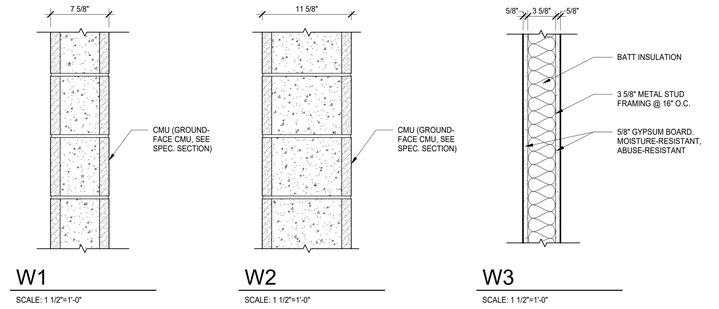
PLUMBING ELEVATION NOTES:

1. PLUMBING ELEVATION NOTES APPLY TO ALL INDIVIDUAL AND GROUP (MEN/WOMEN) TOILET ROOMS AND JANITOR ROOMS.
2. SEE TOILET ACCESSORIES SPEC SECTION FOR ADDITIONAL INFORMATION.
3. ALL TOILET ROOM LAVATORIES SHALL HAVE ONE (1) MIRROR MOUNTED ABOVE SINK.
4. ALL TOILET LOCATIONS SHALL HAVE A TOILET TISSUE DISPENSER.
5. ALL JANITOR MOP SINK LOCATIONS SHALL HAVE ONE UTILITY SHELF AS SPECIFIED.
6. ALL "HC" TOILET FIXTURES SHALL HAVE GRAB BAR COMBINATIONS AS SPECIFIED.
7. SEE PLUMBING ELEVATIONS FOR MOUNTING HEIGHTS.
8. ALL PLUMBING FIXTURES MUST BE PROTECTED DURING CONSTRUCTION. SCRATCHES TO FIBERGLASS SURFACES OF SHOWER UNITS WILL NOT BE TOLERATED. SCRATCHED SHOWER UNITS WILL BE REQUIRED TO BE REPLACED PRIOR TO SUBSTANTIAL COMPLETION.

PLUMBING ELEVATIONS
1/4" = 1'-0"



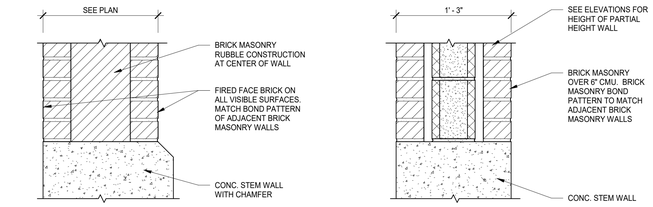
1 TRANSFER TYPE SHOWER, TYP.
1/4" = 1'-0"



W1
SCALE: 1 1/2"=1'-0"

W2
SCALE: 1 1/2"=1'-0"

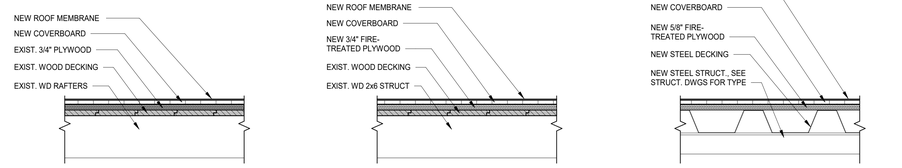
W3
SCALE: 1 1/2"=1'-0"



W4
SCALE: 1 1/2"=1'-0"

W5
SCALE: 1 1/2"=1'-0"

WALL TYPES
1 1/2" = 1'-0"



R1 — ROOF AREAS: A1 THRU A6
SCALE: 1 1/2"=1'-0"

R2 — ROOF AREAS: A7 THRU A11, C1 THRU C3
SCALE: 1 1/2"=1'-0"

R3 — ROOF AREAS: D1, E1, F1, G1
SCALE: 1 1/2"=1'-0"

ROOF TYPES
1 1/2" = 1'-0"

GENERAL NOTES:

1. GENERAL NOTES APPLY TO ALL ARCHITECTURAL SHEETS.
2. GENERAL RENOVATION NOTES ON SHEET A201 APPLY TO ALL ARCHITECTURAL SHEETS.
3. ALL DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CMU, FACE OF FRAMES, OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE.
4. DIMENSIONS FOR DOOR AND WINDOW OPENINGS ARE SHOWN NOMINAL. ALLOW FOR 1/4" SHIM AND SEALANT FOR ALL FRAMES.
5. WALL TYPES ARE DESIGNATED ON THE FLOOR PLANS. ALL SINGLE-WYTHE CMU WALLS SHALL BE TYPE "W1" UNLESS NOTED OTHERWISE. SEE THIS SHEET FOR WALL TYPES.
6. SEE REFLECTED CEILING PLANS AND WALL SECTIONS FOR WALL HEIGHTS.
7. ALL PENETRATIONS THROUGH WALLS SHALL BE SEALED.
8. THE GENERAL CONTRACTOR SHALL FURNISH AND INSTALL WOOD BLOCKING IN METAL STUD PARTITIONS FOR THE PRIOR ANCHORAGE OF ALL WALL ATTACHED ITEMS (I.E. SHELVING, ETC.)
9. SEE PLUMBING DRAWINGS FOR FLOOR DRAINS, TYP.
10. MAINTAIN A SECURE,WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
11. COORDINATE ALL DEMOLITION / PHASING EFFORTS WITH THE OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF THE IOWA STATE FAIRS' OPERATIONS AND TO PROVIDE BUILDING USER'S SAFETY.
12. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
13. SEE PLUMBING ELEVATIONS THIS SHEET FOR TYPICAL TOILET ROOM ACCESSORY MOUNTING HEIGHTS.
14. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED ACTIVITY.
15. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
16. PATCH FLOOR AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR REROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, ETC. AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
17. THE CONTRACTOR SHALL INCLUDE ALL OWNER FURNISHED AND INSTALLED ITEMS AND OWNER FURNISHED AND CONTRACTOR INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE AND SHALL COORDINATE WITH THE OWNER TO ACCOMMODATE THESE ITEMS.
18. PROVIDE CONTROL JOINTS IN GYP. BOARD WALLS AS SPECIFIED.
19. ALL DIMENSIONS TO BE FIELD VERIFIED FOR ACCURACY. CONSULT WITH ARCHITECT FOR LOCATION(S) OF CRITICAL DIMENSIONS TO BE MAINTAINED.
20. MASONRY CONTROL JOINTS ARE NOTED ON FLOOR PLANS AS "CJ". SEE TYPICAL DETAIL ON SHEET A501. SEE SPECIFICATION AND STRUCT DRAWINGS FOR CONTROL JOINTS IN CONCRETE FLOOR SLABS.

ROOM FINSH SCHEDULE - PHASE 2

Room Number	Room Name	Floor Finish	Base Finish	Wall Material	Wall Finish				Ceiling Finish	Ceiling Height	Remarks
					North	East	South	West			
20	Entry	CONC3	--	CMU	--	--	--	--	MTL1	9'-0"	
21	Men	CONC1	--	CMU	--	--	--	--	ACT1	9'-0"	3
22	Jan.	CONC3	--	CMU	--	--	--	--	--	EXP	1
23	Chase	CONC3	--	CMU	--	--	--	--	--	EXP	
24	Mech.	CONC3	--	CMU	--	--	--	--	--	EXP	
25	Toilet/Sh.	CONC2	--	CMU	--	--	--	--	ACT1/PNT1	9'-0" / -	3
26	Toilet/Sh.	CONC2	--	CMU	--	--	--	--	ACT1/PNT1	9'-0" / -	3
27	Toilet/Sh.	CONC2	--	CMU	--	--	--	--	ACT1/PNT1	9'-0" / -	3
28	Jan.	CONC3	--	CMU	--	--	--	--	--	EXP	1
29	Toilet/Sh.	CONC2	--	CMU	--	--	--	--	ACT1/PNT1	9'-0" / -	3
30	Toilet/Sh.	CONC2	--	CMU	--	--	--	--	ACT1/PNT1	9'-0" / -	3
31	Toilet/Sh.	CONC2	--	CMU	--	--	--	--	ACT1/PNT1	9'-0" / -	3
32	Chase	CONC3	--	CMU	--	--	--	--	--	EXP	
33	Office	CONC1	WB1	CMU/GWB	--	--	PNT2	--	ACT1	9'-0"	
34	Office	CONC1	WB1	CMU/GWB	--	--	--	PNT2	ACT1	9'-0"	2, 3
35	Utility	CONC3	WB1	CMU/GWB	--	PNT2	PNT2	--	--	EXP	2, 3
36	Toilet	CONC1	WB1	CMU/GWB	PNT2	PNT2	PNT2/--	--	ACT1	9'-0"	2, 3
37	Office	CONC1	WB1	CMU	--	--	--	--	ACT1	9'-0"	2, 3
38	Wash	CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	4, 5
39	Wash	CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	4, 5
40	Wash	CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	4, 5
41	Wash	CONC4	--	EXIST		--	--	--	PNT1	VARIES	5
42	Open Barn SW	EXIST/CONC4	--	EXIST/BR	--	--	--	--	PNT1	VARIES	5
43	Open Barn NW	EXIST/CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	5
44	Wash	CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	
45	Wash	CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	
46	Elec.	EXIST	--	EXIST	--	--	--	--	PNT1	VARIES	
47	Open Barn N-CTR	EXIST/CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	5
48	Open Barn Arena	EXIST/CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	5
49	Wash	CONC4	--	EXIST		--	--	--	PNT1	VARIES	
50	Wash	CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	
51	Open Barn NE	EXIST/CONC4	--	EXIST	--	--	--	--	PNT1	VARIES	5
52	Wash	EXIST	--	EXIST	--	--	--	--	PNT1	VARIES	
53	Open Barn SE	EXIST/CONC4	--	EXIST/BR	--	--	--	--	PNT1	VARIES	5
54	Open Barn S-CTR	EXIST/CONC4	--	EX/CMU/BR	--	--	--	--	PNT1	VARIES	5

ROOM FINSH SCHEDULE - PHASE 2 - MEZZANINE

Room Number	Room Name	Floor Finish	Base Finish	Wall Material	Wall Finish				Ceiling Finish	Ceiling Height	Remarks
					North	East	South	West			
201	Mezz.	CONC3/MEMB	--/MEMB	EXIST/CMU	--	--	--	--	PNT1	VARIES	
202	Mezz.	CONC3/MEMB	--/MEMB	EXIST/CMU	--	--	--	--	PNT1	VARIES	

ROOM FINISH SCHEDULE GENERAL NOTES:

1. EXPOSED NEW & EXISTING STEEL SHALL BE PAINTED, UNLESS NOTED OTHERWISE.
2. CEILING HEIGHT IS ABOVE FINISHED FLOOR.
3. EXISTING AND NEW MASONRY SHALL NOT BE PAINTED, UNLESS NOTED OTHERWISE.
4. ALL EXPOSED METAL DECK AT CEILINGS, SHALL BE PAINTED.
5. AT RESTROOM GROUPS "B' & "C", ALL PENETRATIONS THRU WALL MUST BE SEALED.
6. WHERE NEW CONC. FLOOR SLAB FINISH IN A ROOM IS NOTED AS "CONC1", IT SHALL TRANSITION TO CONCRETE FINISH AT DOORWAY LEADING INTO BARN SPACE TO MATCH EXISTING BARN SPACE FINISH ("CONC4"). SET TRANSITION OF THE FINISHES AT THE CENTER OF THE COMMUNICATING DOOR.
7. ROOM FINISH NOTES SURFACES WITH GROUND FACED CMU. PLEASE NOTE THAT CMU MUST BE GROUND FACED ON ALL WALLS VISIBLE TO THE PUBLIC AT A MINIMUM. COORDINATE WITH OWNER SUPPLIED CMU.
8. ALL EXISTING AND NEW STRUCTURE AND DECK SHALL BE PAINTED. ALL EXISTING AND NEW STEEL CHANNELS AT TOP OF PARTIAL HEIGHT WALLS SHALL BE PAINTED. COORD. COLOR WITH ARCHITECT.
9. FINISH ABBREVIATIONS:
   ACT- ACOUSTIC CEILING TILE
   BR - BRICK
   CMU - GROUND FACED CMU
   CONC - SEALED CONCRETE, SEE SPECIFICATION SEC. 03 3000.
   EX or EXIST. - EXISTING
   EXP - EXPOSED STRUCTURE
   GB, GYP or GWB - GYPSUM BOARD
   MEMB - ROOFING MEMBRANE
   PNT - PAINT
   WB - RUBBER WALL BASE

ROOM FINISH SCHEDULE REMARKS LEGEND:

1. PROVIDE 4'-0" HIGH x 4'-0" WIDE FRP WITH ASSOCIATED TRIM ON EACH WALL ADJACENT TO MOP SINK.
2. PROVIDE CONTROL JOINTS IN THIS ROOM AT GYP. SURFACES AT DOOR JAMBS, WINDOW JAMBS AND AS REQUIRED PER GYP. BOARD ASSEMBLIES SPECIFICATION.
3. CONCRETE FLOOR SLAB SHALL BE PLACED ON VAPOR BARRIER OVER 2" RIGID INSULATION OVER GRANULAR FILL AT THIS ROOM. PROVIDE BOND BREAK AT PERIMETER OF FLOOR SLAB. RIGID INSULATION SHALL BE 2" THICK XPS BOARD WITH A MINIMUM R-VALUE OF R-5 PER INCH OR BETTER
4. WASH AREA DIVIDERS AND POSTS ARE PART OF THE SCOPE OF THIS PROJECT. COORDINATE WORK WITH CIVIL CONTRACT AND DRAWINGS. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
5. FLOOR FINISH "CONC4" INDICATES CONCRETE SPECIFIED BY AND IN THE SCOPE OF THE CIVIL DOCUMENTS PORTION OF THIS PROJECT. SEE CIVIL DOCUMENTS FOR ADDITIONAL INFORMATION.

K/O
ARCHITECTS
www.k-o.com

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STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

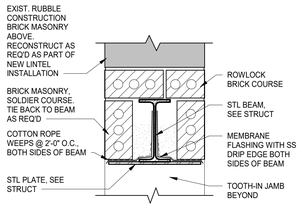
ISF SWINE BARN UPDATES - PHASE 2

ROOM FINISH SCHED., WALL TYPES AND DETAILS

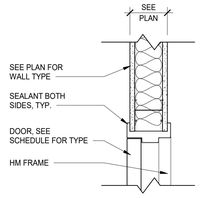
Project Number: 251001.00
Date: 03/10/2026

A001

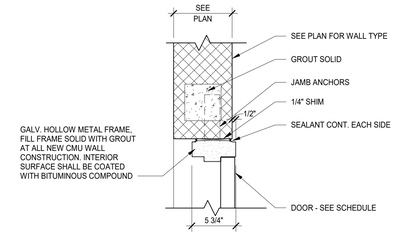
SCALE: As indicated



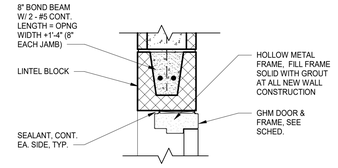
4 DETAIL - HEAD AT EXIST. MASONRY
1 1/2" = 1'-0"



3 JAMB DETAIL - HM @ GYP. (HEAD SIM)
1 1/2" = 1'-0"



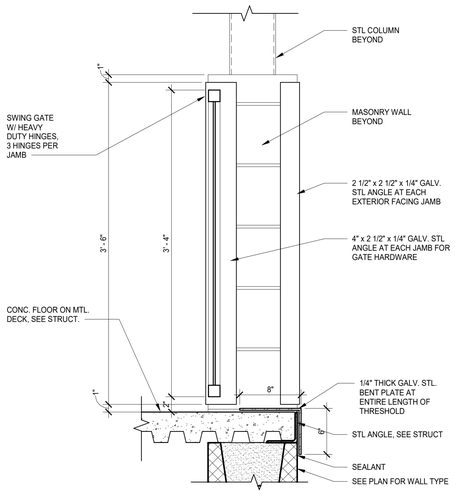
2 JAMB DETAIL - GHM @ CMU
1 1/2" = 1'-0"



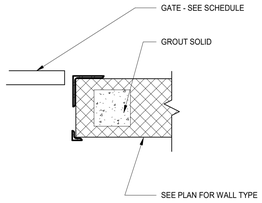
1 HEAD DETAIL - GHM @ CMU, TYP.
1 1/2" = 1'-0"

DOOR & FRAME SCHEDULE

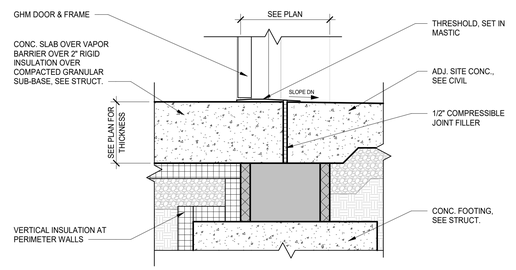
	DOOR					FRAME		HARDWARE	DETAILS		
NUMBER	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	TYPE	MATERIAL	SET	HEAD	JAMB	REMARKS
20A	3' - 0"	7' - 2"	1 3/4"	C	GHM	GHM1	GHM	05	1/A002	2/A002	
20B	3' - 0"	7' - 2"	1 3/4"	C	GHM	GHM1	GHM	05	1/A002	2/A002	
22	3' - 0"	7' - 4"	1 3/4"	A	GHM	GHM1	GHM	06	1/A002	2/A002	
24	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	06	1/A002	2/A002	2
25	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	07	1/A002	2/A002	2
26	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	07	1/A002	2/A002	2
27	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	07	1/A002	2/A002	2
28	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	02	1/A002	2/A002	2
29	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	07	1/A002	2/A002	2
30	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	07	1/A002	2/A002	2
31	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	07	1/A002	2/A002	2
32	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	06	1/A002	2/A002	
33	3' - 0"	7' - 2"	1 3/4"	B	GHM	GHM1	GHM	01	1/A002	2/A002	2
34	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	04	3/A002 SIM	3/A002	
35	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	02	3/A002 SIM	3/A002	
36	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	03	3/A002 SIM	3/A002	
37	3' - 0"	7' - 2"	1 3/4"	A	GHM	GHM1	GHM	01	1/A002	3/A002	2
201A	10' - 0"	3' - 6"	1 1/2"	C	GHM	--	GHM	08			1
201B	10' - 0"	3' - 6"	1 1/2"	C	GHM	--	GHM	08			1
202A	10' - 0"	3' - 6"	1 1/2"	C	GHM	--	GHM	08			1
202B	10' - 0"	3' - 6"	1 1/2"	C	GHM	--	GHM	08			1



10 DETAIL - MEZZANINE GATE SILL, TYP.
1 1/2" = 1'-0"



PLAN VIEW



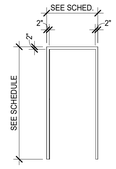
5 SILL DETAIL - HM DOOR
1 1/2" = 1'-0"

DOOR & FRAME GENERAL NOTES:

1. ALL HOLLOW METAL DOOR AND FRAME SETS SHALL BE GALVANIZED HOLLOW METAL AND SHALL BE FILLED SOLID WITH INSULATION AT METAL STUDS AND GROUTED SOLID AT CMU.
2. PAINT ALL HOLLOW-METAL DOORS AND FRAMES, UNLESS NOTED OTHERWISE.
3. ALL CMU FRAMES SHALL BE INSTALLED WITH 1/4" SHIM AND SEALANT AROUND PERIMETER OF FRAME.
4. SEE SPECIFICATION FOR DOOR HARDWARE.
5. SEE THIS SHEET FOR DOOR AND FRAME TYPE ELEVATIONS.
6. ALL DOOR AND WINDOW GLAZING TO BE INSULATED, UNLESS NOTED OTHERWISE.
7. NEW HM FRAMES IN NEW CMU SINGLE-WYTHE WALLS SHALL BE 5 3/4" DEEP. NEW HM FRAMES IN GYP. BOARD WALLS SHALL BE WIDE ENOUGH TO WRAP BOTH SIDES OF THE WALL, SEE DETAIL.
8. DOOR LOCKSETS TO BE INSTALLED BETWEEN 34 AND 48 INCHES AND THRESHOLDS NOT TO EXCEED 1/2 INCH.
9. NEW PAIRS OF GATES AT MASONRY OPENINGS AT SOUTH PARTIAL HEIGHT WALL SHALL MATCH CONSTRUCTION AND HARDWARE OF EXISTING GATES AT MASONRY OPENINGS. SEE DOOR TYPE "D" BELOW FOR ADDITIONAL INFORMATION.
10. DOOR AND FRAME SCHEDULE ABBREV.:
GHM - GALVANIZED HOLLOW METAL
STL - STEEL

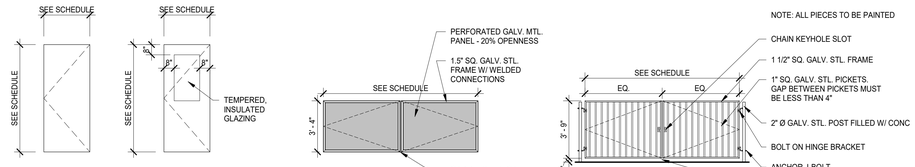
DOOR & FRAME REMARKS LEGEND:

1. PAIR OF GALV. STEEL GATES, SEE THIS SHEET FOR DETAILS.
2. USE SILL DETAIL ON THIS SHEET.



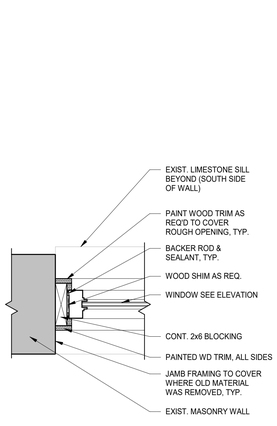
GHM1

FRAME TYPES
1/4" = 1'-0"

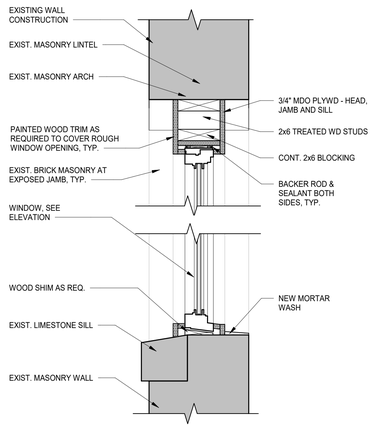


A — B (HALF GLASS (CLEAR)) — C — D

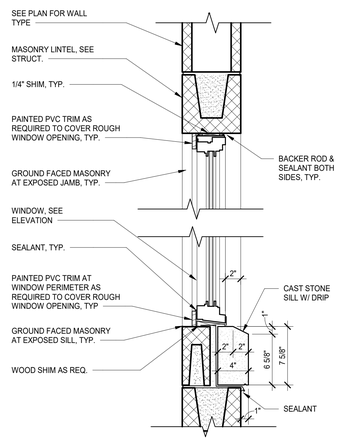
DOOR TYPES
1/4" = 1'-0"



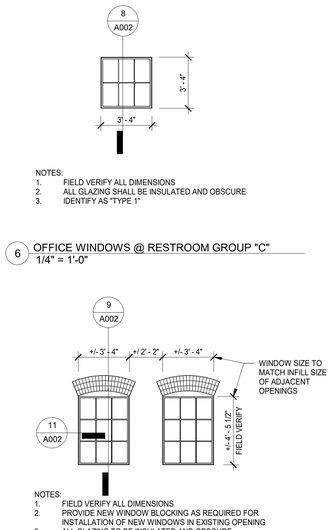
11 DETAIL - WINDOW JAMB @ EXIST. OPENING
1 1/2" = 1'-0"



9 DETAIL - WINDOW SECTION @ EXISTING OPENING
1 1/2" = 1'-0"



8 DETAIL - WINDOW SECTION @ GROUP "C"
1 1/2" = 1'-0"



6 OFFICE WINDOWS @ RESTROOM GROUP "C"
1/4" = 1'-0"

7 WINDOWS AT EXISTING OPENINGS
1/4" = 1'-0"

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Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

DOOR & FRAME SCHED., WINDOW ELEV., & DETAILS

Project Number: 251001.00
Date: 03/10/2026

A002

SCALE: As indicated

Wash 44
Wash 45
Elec. 46
Wash 49
Wash 50
Open Barn NW 43
Open Barn N-CTR 47
Open Barn NE 51
Open Barn Arena 48
Open Barn SW 42
Open Barn S-CTR 54
Open Barn SE 53
Mech. 24
Jan. 22
Entry 20
Men 21
Toilet/Sh. 25
Toilet/Sh. 26
Toilet/Sh. 27
Chase 23
RESTROOM GROUP "B"
Jan. 28
Toilet/Sh. 29
Toilet/Sh. 30
Toilet/Sh. 31
Chase 32
Office 33
Utility 35
Office 34
Toilet 36
Office 37
RESTROOM GROUP "C"
Wash 52
Wash 41
Wash 40
Wash 39
Wash 38
OFFICE / WOMENS GROUP "A" - COMPLETE
RESTROOM GROUP "D" - COMPLETE
NEW CONC. FLOOR SLAB BY OTHERS, SEE CIVIL DRAWINGS FOR EXTENTS
NEW WATERBASIN BY OTHERS, SEE DET. ON CIVIL DRAWINGS
EXISTING BRICK PIER, SEE NOTES ON DEMOLITION PLAN
NEW CONC. FLOOR SLAB INSIDE OF RESTROOM GROUP "B" AS PART OF THE GENERAL BUILDING CONTRACT
NEW CONC. FLOOR SLAB INSIDE OF RESTROOM GROUP "C" AS PART OF THE GENERAL BUILDING CONTRACT
PAINT CHANNEL AT TOP OF PARTIAL HEIGHT WALL IN ITS ENTIRETY
CAP NEW ENDS OF PARTIAL HEIGHT BRICK MASONRY WALLS WITH STL CHANNEL TO MATCH EXISTING CONDITIONS, TYP. SEE STRUCT.
NEW OPENING
NEW AND RESIZED MASONRY OPENINGS AT PARTIAL HEIGHT WALL AT ENTIRE SOUTH WALL TO RECEIVE NEW GATES, POSTS & HARDWARE TO MATCH STYLE OF EXIST. GATES. SEE NOTES ON SHEET A002, TYP.
CONC. FLOOR THIS AREA TO SLOPE TOWARDS TRENCH DRAIN, SEE CIVIL SHEETS
NEW TRENCH DRAIN, SEE PLUMBING SHEETS
+/- 306' - 4 1/2" (FIELD VERIFY) - LENGTH OF NEW CONC. BASE AND PARTIAL HEIGHT MASONRY WALLS
519' - 1"

1 OVERALL FLOOR PLAN
1/16" = 1'-0"

N

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No.	Date	Description

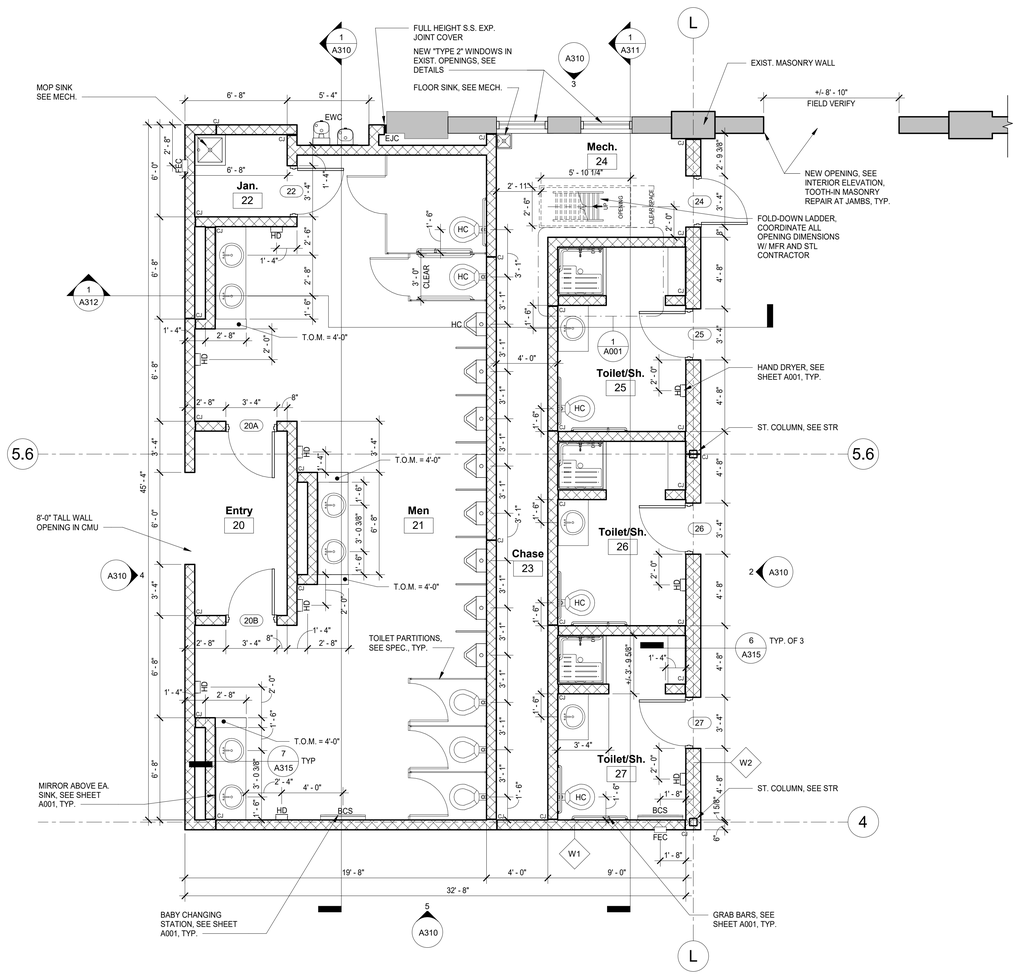
ISF SWINE BARN UPDATES - PHASE 2

OVERALL FLOOR PLAN

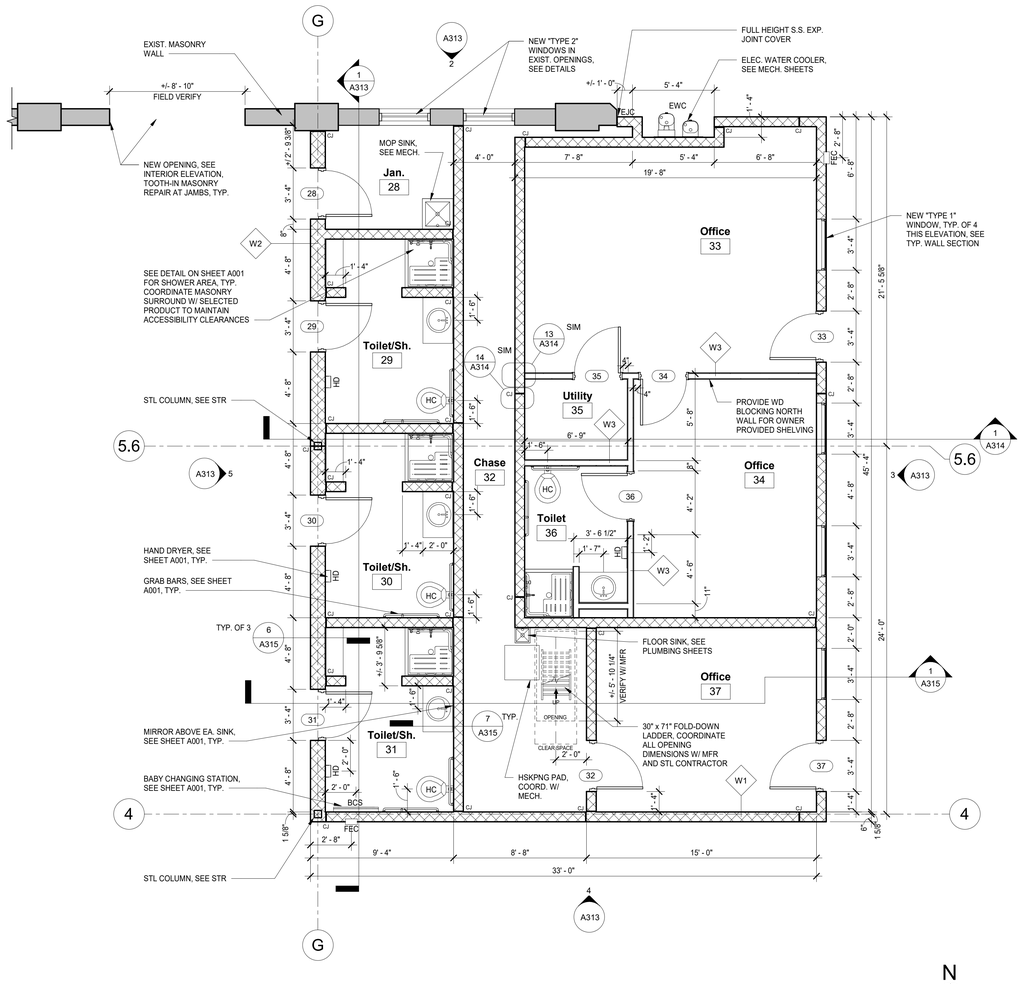
Project Number: 251001.00
Date: 03/10/2026

A101

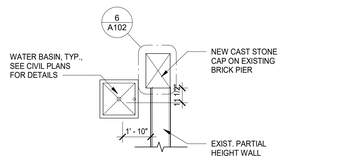
SCALE: 1/16" = 1'-0"



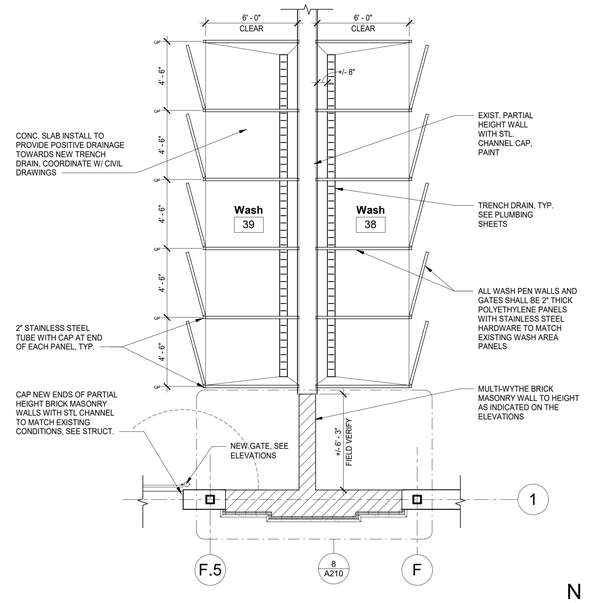
2 ENLARGED FLOOR PLAN - GROUP "B"
1/4" = 1'-0"



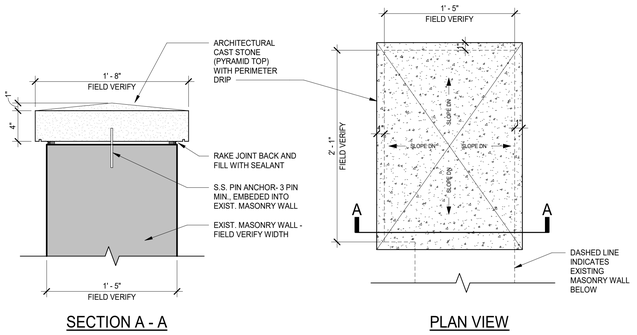
1 ENLARGED FLOOR PLAN - GROUP "C"
1/4" = 1'-0"



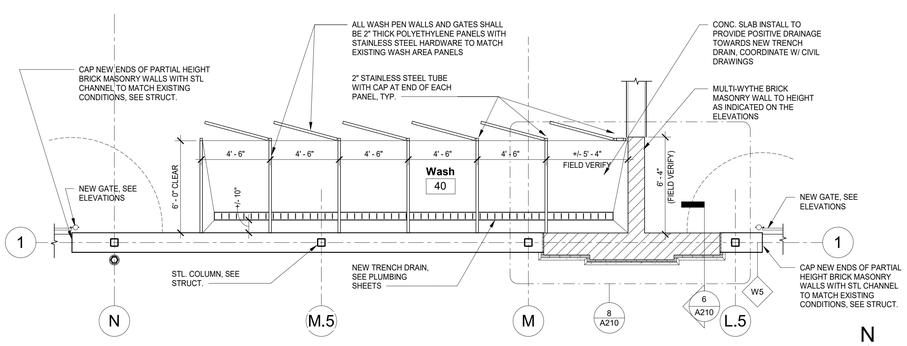
4 ENLARGED FLOOR PLAN - PIER AT WATER BASIN
1/4" = 1'-0"



3 ENLARGED PLAN - LARGE WASH AREA EAST
1/4" = 1'-0"



6 DETAIL - MASONRY WALL PRECAST CAP
1 1/2" = 1'-0"



5 ENLARGED PLAN - LARGE WASH AREA WEST
1/4" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ENLARGED PLANS

Project Number: 251001.00
Date: 03/10/2026

A102

SCALE: As indicated

NOTE: SEE SHEET A311 FOR REFLECTED CEILING PLAN NOTES
SEE ELEVATION SHEETS FOR KEYNOTE REFERENCE NOTES

OPEN TO CLERESTORY ABOVE

OPEN TO ARENA ROOF ABOVE

NO WORK IN THIS AREA

NO WORK IN THIS AREA

(DIAG. HATCHED AREA SHOWS APPROX. EXTENTS)

GROUP "D" RESTROOMS HIDDEN FOR CLARITY

FIRST FOUR (4) BOARDS STARTING FROM FASCIA, ROUGHLY 330 SF

RESTROOM GROUP "B"

RESTROOM GROUP "C"

CEILING FAN, TYP.. COORD. FINAL LOCATION WITH ARCHITECT. SEE MECH/ELEC DRAWINGS

NEW MASONRY PIER BELOW

NEW MASONRY PIER BELOW

EXTEND GUTTER AROUND FROM SOUTH FACE OF ROOF

EXTEND GUTTER AROUND FROM SOUTH FACE OF ROOF

REPAIR EXISTING DAMAGED BUILDING CORNER AS REQUIRED PRIOR TO NEW WORK INSTALLATION

NEW CONT. GUTTER WITH DOWNSPOUTS, SEE KEYNOTES ON ELEVATIONS

DASHED LINE INDITCATES ROOF OVERHANG (OF ROOF AREA "G1") ABOVE

REPAIR BRICK AT TOP OF PEDIMENT, SEE ELEVATION NOTES

1 REFLECTED CEILING PLAN - LOW ROOFS
1/16" = 1'-0"

N

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

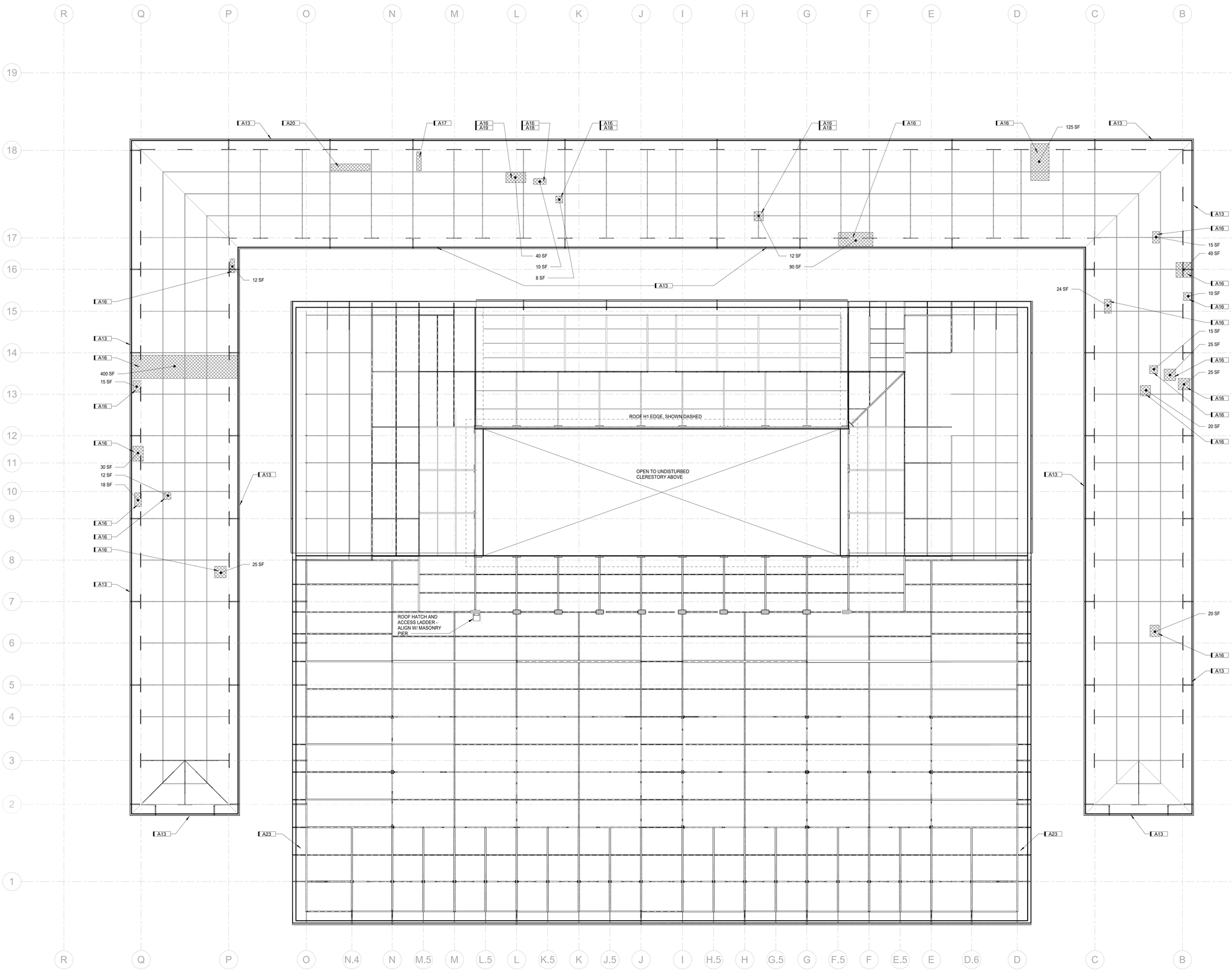
REFLECTED CEILING PLAN - LOW

Project Number: 251001.00
Date: 03/10/2026

A120

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

NOTE: SEE SHEET A311 FOR REFLECTED CEILING PLAN NOTES
SEE ELEVATION SHEETS FOR KEYNOTE REFERENCE NOTES



1 REFLECTED CEILING PLAN - HIGH ROOFS
1/16" = 1'-0"

N

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No.	Date	Description

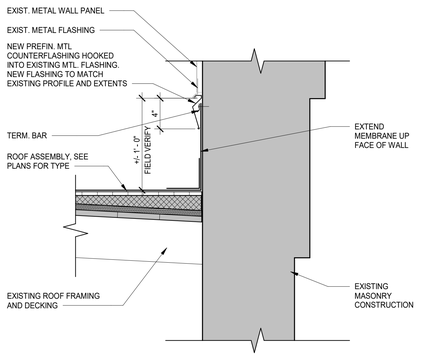
ISF SWINE BARN UPDATES - PHASE 2

REFLECTED CEILING PLAN - HIGH

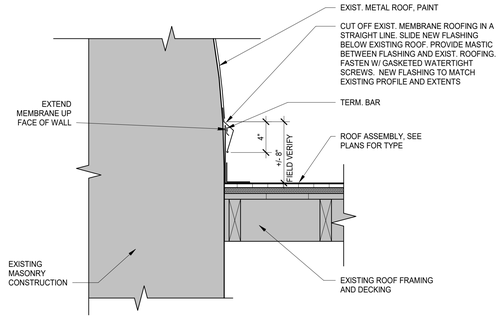
Project Number: 251001.00
Date: 03/10/2026

A121

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



3 DETAIL - ROOF A @ BACK OF EXIST. ENTRY PEDIMENTS
1 1/2" = 1'-0"



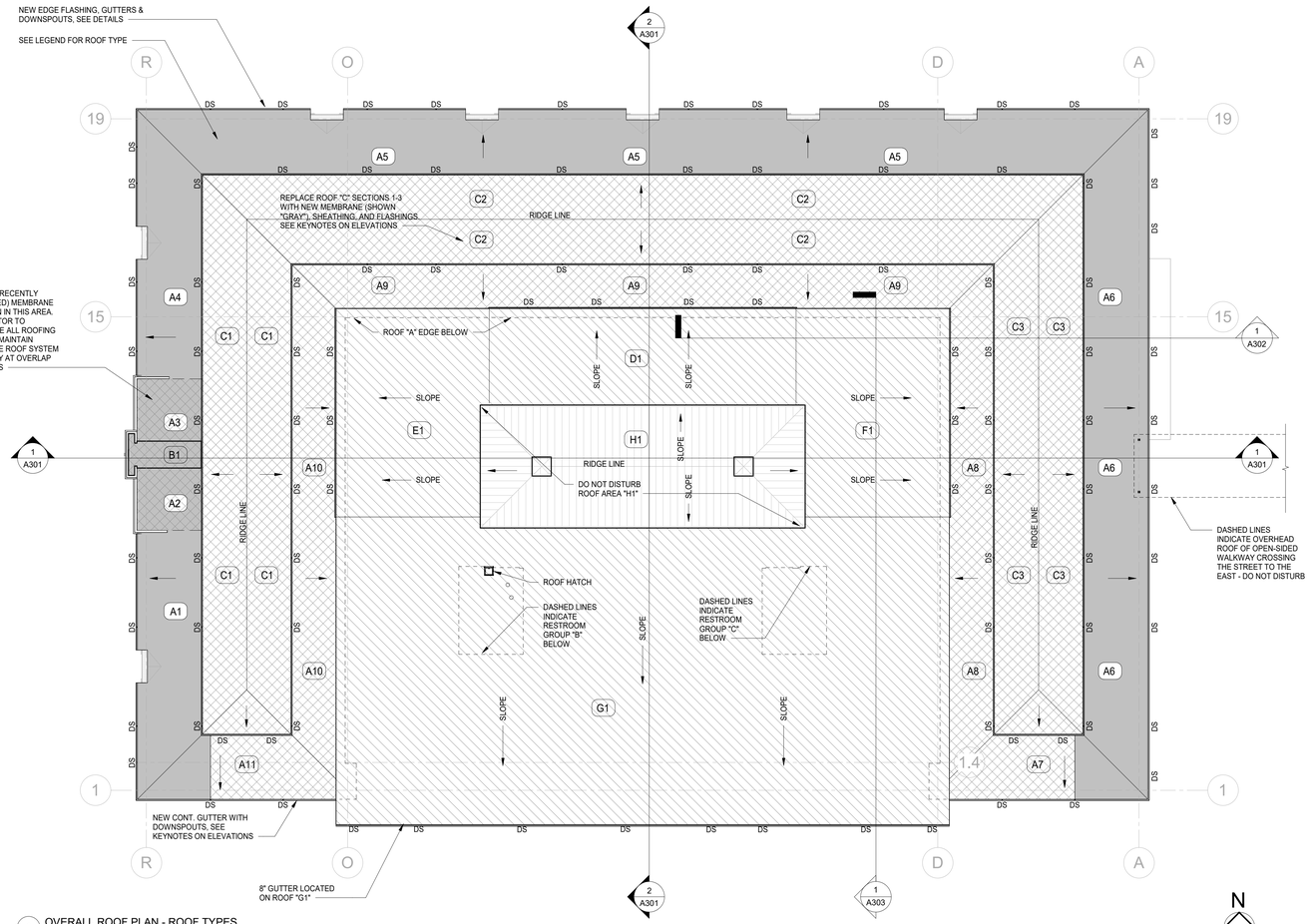
2 DETAIL - ROOF A @ SIDE OF EXIST. ENTRY PEDIMENTS
1 1/2" = 1'-0"

ROOF PLAN NOTES (APPLIES TO ALL ROOF PLAN SHEETS) :

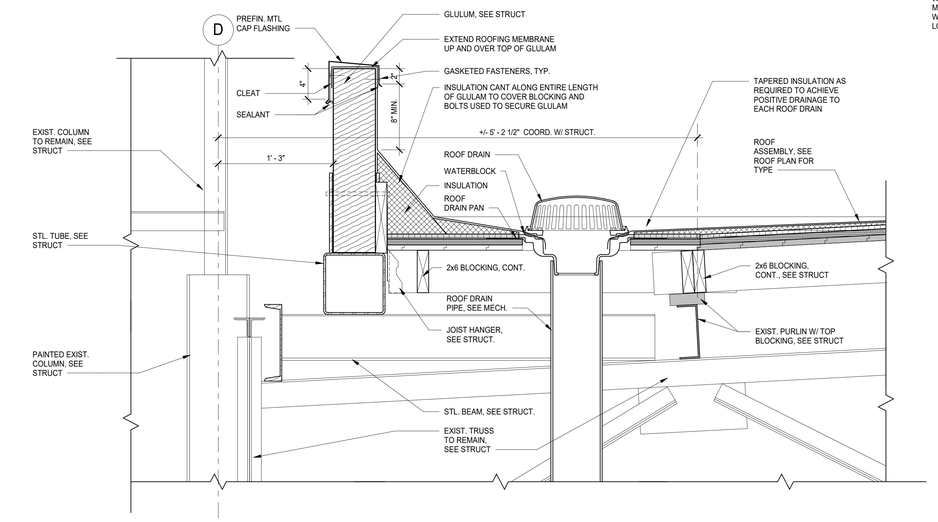
1. COORDINATE THE SIZE AND LOCATION OF ROOF PENETRATIONS FOR MECH. AND ELEC. EQUIPMENT. REFER TO MECH. AND ELEC. DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS SHEET. PROVIDE NEW FRAMING FOR ADDITIONAL EQUIPMENT SUPPORT. NOTIFY ARCHITECT OF OPENING SIZE PRIOR TO CUTTING OPENING.
2. FLASH ALL CURBS, VENTS AND STACKS PER MANUFACTURER'S RECOMMENDATIONS IF DETAIL NOT INDICATED ON PLANS.
3. INSULATE AND SEAL TO ENSURE ADEQUATE AIR INFILTRATION BARRIER AROUND ALL EXTERIOR PENETRATIONS TO PREVENT WATER PIPE FREEZING AT NOTED LOCATIONS, SEE PLUMBING DRAWINGS.
4. ALL ROOF SLOPES, INCLUDING FLATTENED ROOF AREAS TO OBTAIN POSITIVE DRAINAGE. PROVIDE TAPERED RIGID INSULATION TO MAINTAIN MINIMUM 1/4" PER FOOT SLOPE AT ALL FLATTENED ROOF AREAS AND CRICKETS.
5. ALL GUTTERS TO BE 7" PROFILE, WITH 5" PROFILE DOWNSPOUT, UNLESS NOTED OTHERWISE.
6. ARROWS ON THE PLAN INDICATE DIRECTION OF DRAINAGE. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS OF BUILDING AND DRAIN LOCATIONS AND OTHER PENETRATIONS.
7. REFER TO ADDITIONAL NOTES, KEYNOTES AND REQUIRMENTS ON ALL OTHER DOCUMENTS, DISCIPLINES AND SPECIFICATIONS.
8. DOWNSPOUTS SHALL BE LOCATED AS SHOWN ON ELEVATIONS. THE APPROXIMATE LOCATION IS NOTED AS "DS" ON THE ROOF PLAN.
9. SEE ROOF ASSEMBLIES ON SHEET A001 FOR ADDITIONAL INFORMATION.
10. SEE STRUCTURAL FOR BEARING HEIGHTS OF ROOFS.
11. PROVIDE ADDITIONAL LAYER OF MEMBRANE AT ALL DOWNSPOUTS THAT OUTLET ON A ROOF SURFACE BELOW, SEE SPECIFICATION FOR ADDITIONAL NOTES

ROOF LEGEND:

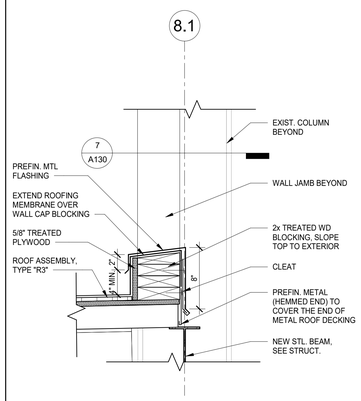
- ROOF TYPE "R1"
- ROOF TYPE "R2"
- ROOF TYPE "R3"
- EXISTING STANDING SEAM METAL ROOF
- X1 ROOF AREA
- SLOPE DOWN
- DS DOWNSPOUT
- RD ROOF DRAIN
- VTR VENT THRU ROOF



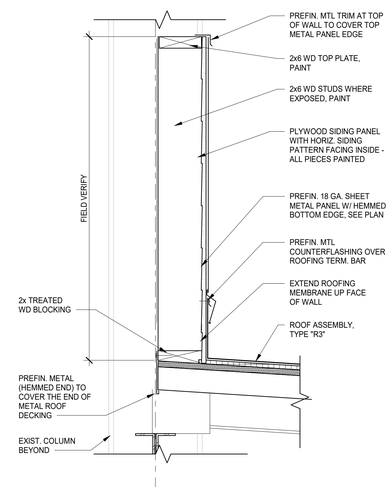
1 OVERALL ROOF PLAN - ROOF TYPES
1/32" = 1'-0"



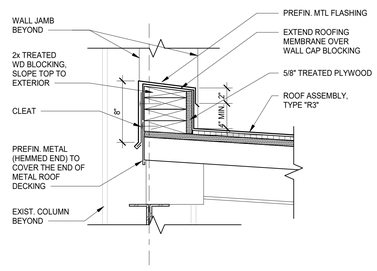
4 DETAIL - KNEE WALL @ ROOF A
1 1/2" = 1'-0"



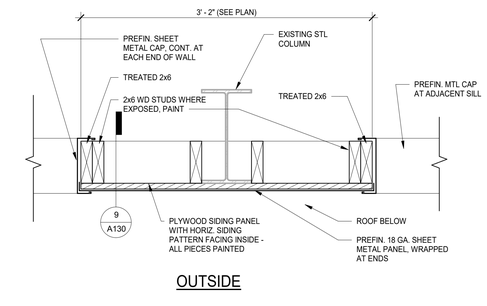
10 DETAIL- ARENA CLERESTORY AT SOUTH WALL
1 1/2" = 1'-0"



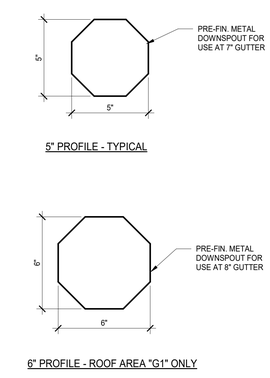
9 DETAIL - ARENA CLERESTORY WALL
1 1/2" = 1'-0"



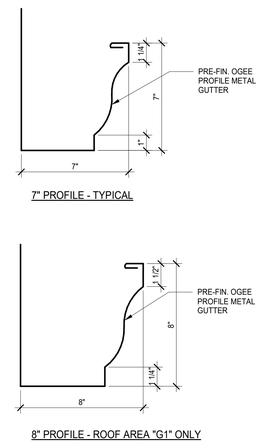
8 DETAIL - ROOF "SILL" AT ARENA CLERESTORY OPENINGS
1 1/2" = 1'-0"



7 DETAIL - PLAN VIEW AT ARENA CLERESTORY WALLS
1 1/2" = 1'-0"



6 DETAIL - DOWNSPOUT PROFILES
3" = 1'-0"



5 DETAIL - GUTTER PROFILES
3" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

OVERALL ROOF PLAN

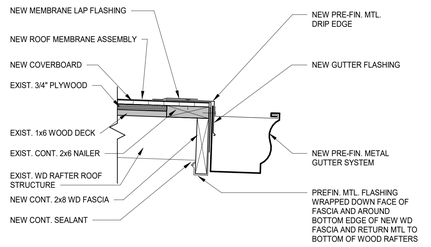
Project Number: 251001.00
Date: 03/10/2026

A130

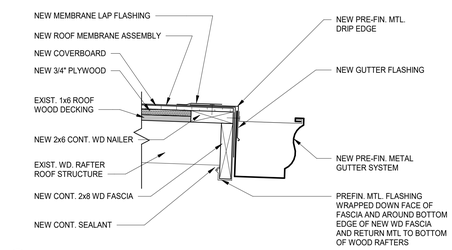
SCALE: As indicated

ROOF LEGEND:

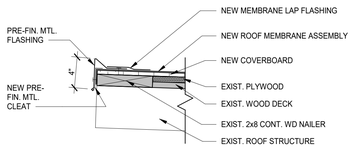
- ROOF TYPE "R1"
- ROOF TYPE "R2"
- ROOF TYPE "R3"
- EXISTING STANDING SEAM METAL ROOF
- X1 — ROOF AREA
- SLOPE DOWN
- DS — DOWNSPOUT
- RD — ROOF DRAIN
- VTR — VENT THRU ROOF



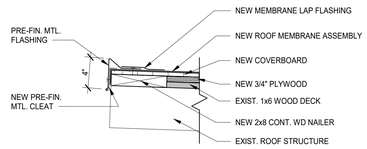
5 DETAIL - GUTTER @ LOW ROOF TYPE "R1"
1 1/2" = 1'-0"



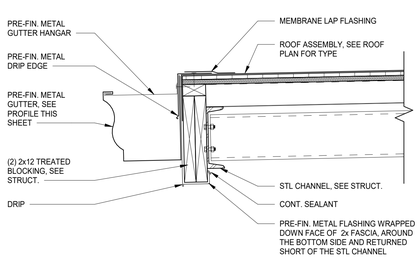
4 DETAIL - GUTTER @ LOW/HIGH ROOF TYPE "R2"
1 1/2" = 1'-0"



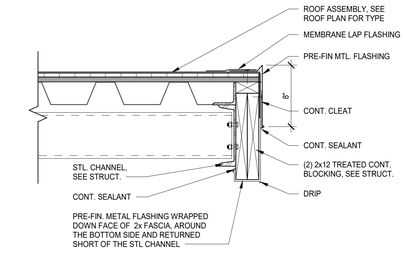
7 DETAIL - ROOF EDGE @ LOW ROOF TYPE "R1"
1 1/2" = 1'-0"



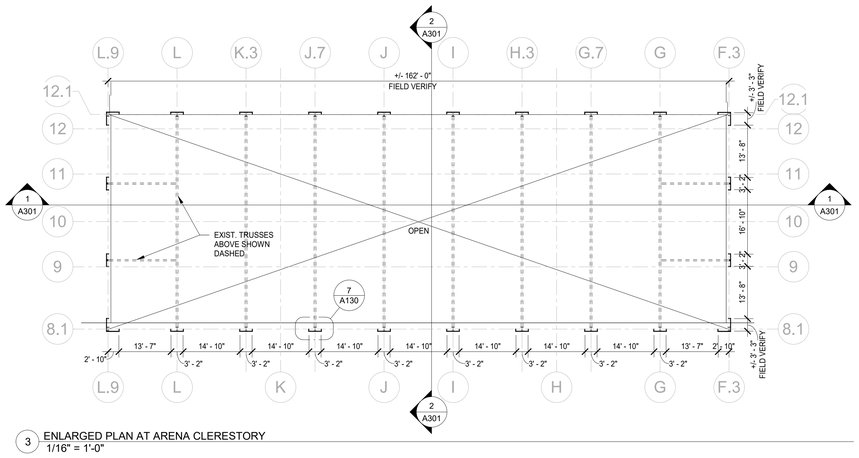
6 DETAIL - ROOF EDGE @ LOW ROOF TYPE "R2"
1 1/2" = 1'-0"



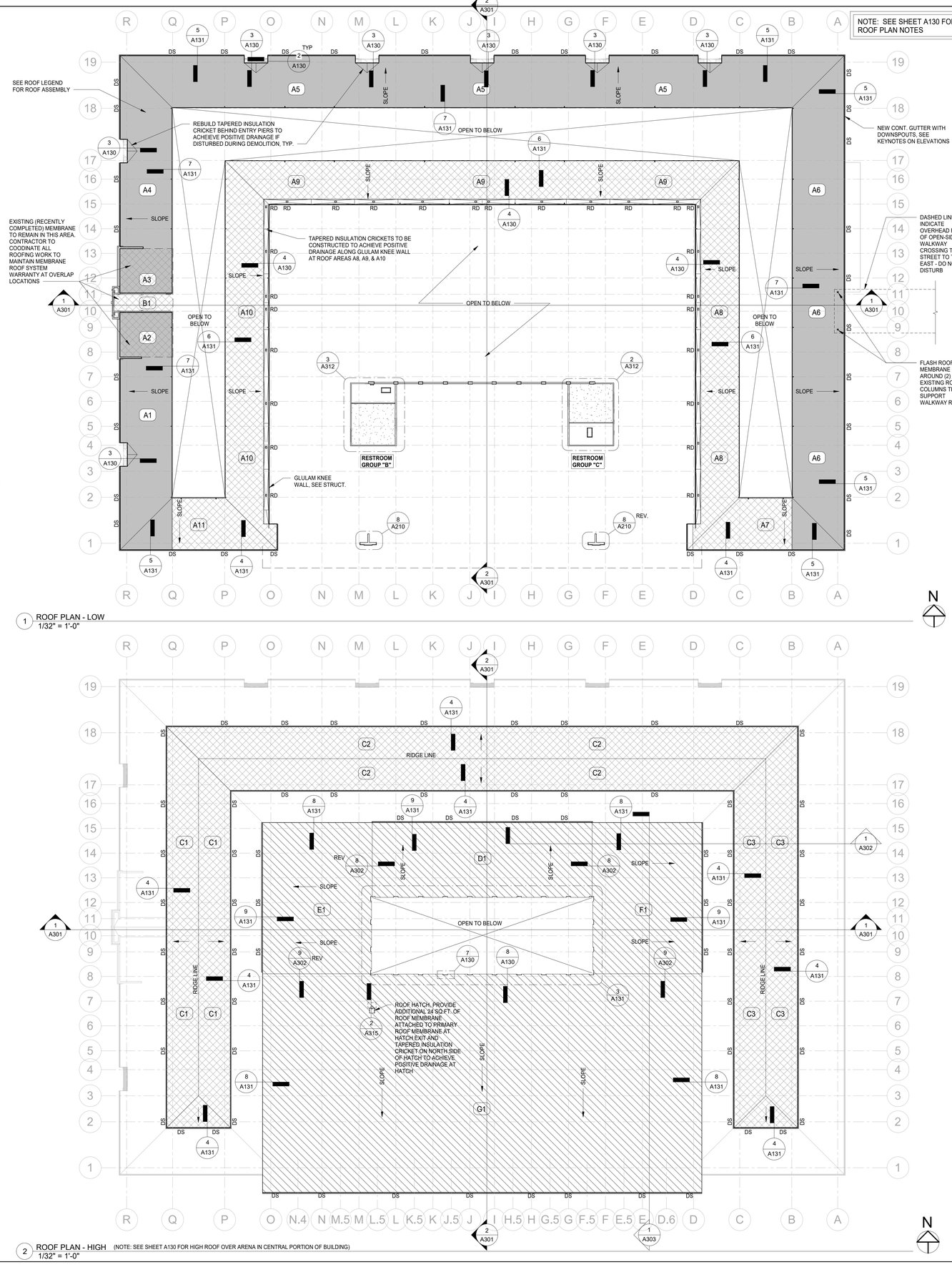
9 DETAIL - GUTTER AT ROOF W/ METAL DECK
1 1/2" = 1'-0"



8 DETAIL - RAKE AT ROOF W/ METAL DECK
1 1/2" = 1'-0"



3 ENLARGED PLAN AT ARENA CLERESTORY
1/16" = 1'-0"



1 ROOF PLAN - LOW
1/32" = 1'-0"

2 ROOF PLAN - HIGH (NOTE: SEE SHEET A130 FOR HIGH ROOF OVER ARENA IN CENTRAL PORTION OF BUILDING)
1/32" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ROOF PLANS AND DETAILS

Project Number: 251001.00
Date: 03/10/2026

A131

SCALE: As indicated

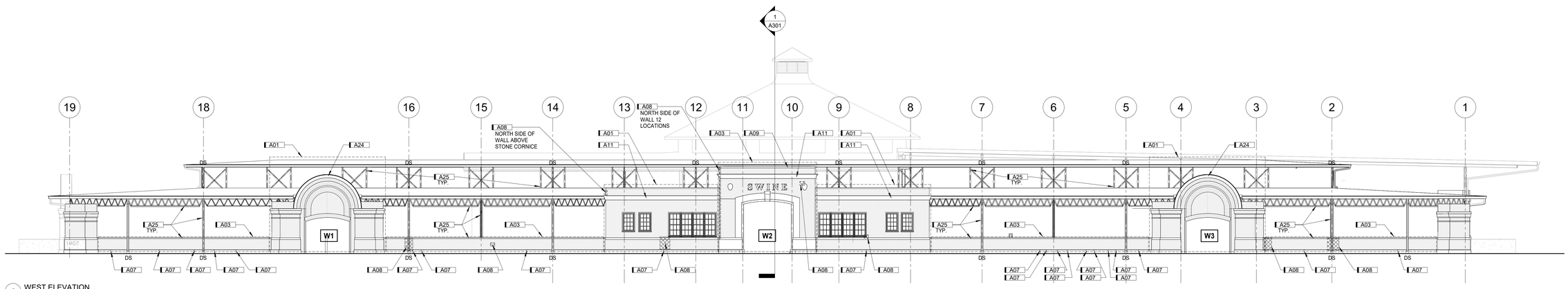
KEYNOTES - SHEET A201	
Key Value	Keynote Text
A01	Repoint 25% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A02	Repoint 50% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A03	Repoint 100% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A04	Rebuild wall with new masonry full depth this area. Clean all mortar from existing brick prior to reconstruction. Tooth in jambs and replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A05	Rebuild top six courses of wall with new and existing masonry full depth this area. Clean all mortar from existing brick prior to reconstruction. Replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A06	Patch existing concrete stem wall to match existing concrete color and texture with repair mortar methods this area.
A07	Repair full height wall crack in masonry and concrete stem wall with sealant joint to match color(s) of masonry or concrete and/or mortar. Texture with sand to match existing condition. Clean all mortar from face of existing brick from prior repair (as applicable) prior to repair. Replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. If crack in concrete stem wall exceeds 1/2-inch wide patch concrete stem wall to match existing concrete color and texture with repair mortar methods.
A08	Remove and replace all broken brick in this area. Clean all mortar from existing brick prior to reconstruction. Replace all broken or cracked brick with new brick masonry to match existing brick masonry bonding, coursing, color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A09	Remove stone cap all sides (all locations on west wall, and wrapping around north/south sides, and on east facing portions) of wall and prepare surface for reinstallation. Remove all mortar from removed stone surfaces. Clean mortar from top of brick and patch existing brick masonry wall. Fill any voids so brick masonry wall is level/smooth and full of mortar. After mortar cures set stainless steel rods in epoxy in top of wall. Provide two rods per piece of stone to be reinstalled. Install full depth through wall flashing on top of brick masonry wall, include turndown and 1/4-inch drip edge on all exposed sides of flashing. Seal flashing around stainless-steel rods. Flashing shall extend no more than 1/4-inch from face of masonry on non-membrane side of wall. Flashing shall extend over and turn down over termination bar. Flashing shall extend down wall 3 inches at all termination bar locations before terminating with a drip edge. Reinstall stone in mortar; drill stone out for stainless steel rods. Epoxy set two rods per piece of stone. Set lead joint covers in sealant on the top of all stone horizontal and vertical joints.

KEYNOTES - SHEET A201	
Key Value	Keynote Text
A10	Remove masonry wall for new opening. Cap jambs with steel, see structural Drawings. Repair nearby concrete stem wall as required to accept new opening.
A11	At stone cornice all locations (west wall and wrapping around north/south sides of wall), remove and replace existing stone wash (if existing). Add wash at all locations if stone is not sloped (gap wash at stone joint). Install lead joint covers in stone/wash joints set in sealant. Turn down vertical lip of cornice face only. Fill remaining joint with sealant and add weeps.
A12	Roof Areas A1, & A4-A6 and portions of A7 & A11: Remove existing roof assembly down to existing plywood on wood decking. Remove wood fascia. Replace with new fascia, cover board, metal flashings, membrane assembly, and gutters/downspouts as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A13	Roof Areas C and portions of A7, A8, A10 and A11: Remove existing roof assembly down to wood decking. Remove wood fascia and cut back decking to accept new roof Nailer. Replace with new Nailer, fascia, plywood, cover board, metal flashings, membrane assembly, and gutters/downspouts as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A14	Roof Areas A7, A8, A9, A10, and A11: Remove existing roof assembly down to wood decking. Cut back decking to accept new roof Nailer. Replace with new Nailer, plywood, cover board, metal flashings, and membrane assembly as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A15	Roof Areas A1, & A4-A6: Remove existing roof assembly down to existing plywood on wood decking. Replace with new cover board, metal flashings, and membrane assembly as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A16	Remove and replace deteriorated wood deck boards, cut boards to bear on a roof rafter at each end to avoid a weak location on roof. Rough square footage as indicated in each area.
A17	Replace or sister 1 deteriorated rafter (full length between purlins), this area.
A20	Replace or sister 8 deteriorated rafter (full length between purlins), this area.
A21	Roof Areas A8, A9, and A10: Remove existing roof assembly to accept new rafters and glulam beam knee wall as detailed on structural Drawings. Removal includes cutting back rafters approximately 5ft-0in, other removal includes ballasted membrane roofing, wood decking, protection board, fascia, gutters, downspouts, and blocking.
A22	Remove over framing this area, see structural Demolition Drawings.
A23	New roof assembly see structural Drawings.
A24	Remove all paint from metal cornice surfaces, front and top (approximately 4ft-0in wide). Use paint stripper, scrape, clean, prime, and repaint as specified.

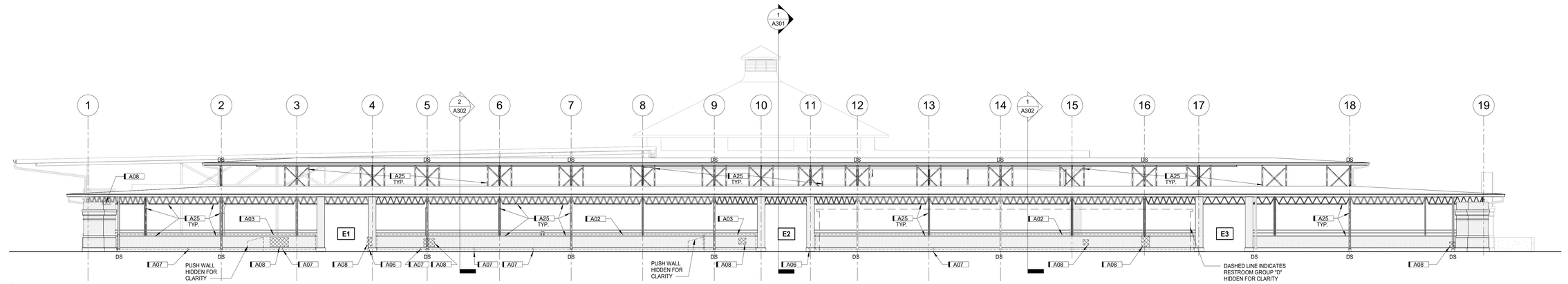
KEYNOTES - SHEET A201	
Key Value	Keynote Text
A25	Clean all painted interior and exterior surfaces using cleaning methods as described in specification. Remove all loose paint; use paint stripper (when needed) scrape, clean. Paint all exposed exterior and interior surfaces to include existing and new structural steel elements, knee cap wall, new and existing non-structural steel elements, new and existing wood elements. Do not paint masonry, concrete, prefinished trim, prefinished metal panels, gutters, downspouts, electrical/communications items, and plumbing/mechanical items.
A26	New multi-wythe solid brick masonry pier wall. Match existing brick masonry bonding, coursing, color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below. Install on new concrete foundation stem wall system.
A27	New multi-wythe knee wall, CMU masonry with brick masonry veneer both sides. Include steel cap channel on top of wall, paint as specified. Install on new foundation stem wall system.
A28	New opening cap jambs with steel channel to match existing, paint as specified.
A29	New hot dipped galvanized steel Gates, paint as specified.
A30	Rebuild brick masonry full height of structural beam to create a beam pocket (6 locations). See Detail 10/A210 as an example of finished product.

GENERAL RENOVATION NOTES (APPLIES TO ALL SHEETS):

1. REPORT ANY UNCOVERED DETERIORATED CONDITIONS TO ARCHITECT PRIOR TO COVERING UP ANY WORK.
2. REMOVE AND REPLACE ALL SEALANT ON MASONRY, STEEL, AND WOOD SURFACES ALONG ENTIRE EXTERIOR AND WITHIN ENTIRE INTERIOR OF BUILDING.
3. PRIOR TO BEGINNING WORK AND PRIOR TO SUBSTANTIAL COMPLETION CLEAN ALL BRICK AND STONE WALL MASONRY, AND CONCRETE WALL SURFACES OF INTERIOR AND EXTERIOR OF BUILDING. USE RESTORATION CLEANING METHODS AS DESCRIBED IN SPECIFICATIONS. REMOVE ALL BIOLOGICAL AND ENVIRONMENTAL STAINING. REMOVE ALL OVERSPRAY PAINT, AND EFFLORESCENCE ON MASONRY.
4. PRIOR TO BEGINNING WORK AND PRIOR TO SUBSTANTIAL COMPLETION CLEAN ALL EXISTING CONCRETE FLOOR SLABS TO REMAIN ON THE INTERIOR OF BUILDING. USE LOW PRESSURE WASH AND LIGHT SCRUB CLEANING METHODS AS DESCRIBED IN SPECIFICATIONS.
5. REMOVE ALL ANIMAL, BIRD AND INSECT NESTS OR INFESTATIONS THROUGHOUT THE ENTIRE STRUCTURE PRIOR TO COMMENCING THE CLEANING AND REPAIR PROCESS.
6. CLEAN ALL PAINTED INTERIOR AND EXTERIOR SURFACES USING LOW PRESSURE WASH AND LIGHT SCRUB CLEANING METHODS AND AS DESCRIBED IN SPECIFICATIONS. REMOVE ALL LOOSE PAINT – USE PAINT STRIPPER (WHEN NEEDED) SCRAPE, CLEAN, PRIME, AND REPAINT AS SPECIFIED.
7. REMOVE ALL LOOSE PAINT FROM WOOD SURFACES – SCRAPE, CLEAN, PRIME, AND REPAINT AS SPECIFIED.
8. PAINT ALL EXPOSED EXTERIOR AND INTERIOR SURFACES TO INCLUDE – EXISTING AND NEW STRUCTURAL STEEL ELEMENTS, NEW AND EXISTING NON-STRUCTURAL STEEL ELEMENTS, KNEE WALL CAP, NEW AND EXISTING WOOD ELEMENTS. DO NOT PAINT MASONRY, CONCRETE, PREFINISHED TRIM, PREFINISHED METAL PANELS, GUTTERS, DOWNSPOUTS, ELECTRICAL/COMMUNICATIONS ITEMS, AND PLUMBING/MECHANICAL ITEMS.
9. REMOVE ALL PAINT FROM METAL SURFACES – USE PAINT STRIPPER, SCRAPE, CLEAN, PRIME, AND REPAINT AS SPECIFIED.
10. REMOVE AND REPLACE METAL FLASHINGS, METAL FASCIA, GUTTER AND DOWNSPOUT ASSEMBLIES AROUND ENTIRE PERIMETER OF BUILDING AS DETAILED.
11. REMOVE ROOF MEMBRANE ASSEMBLY IN ITS ENTIRETY. SEE DEMOLITION PLAN FOR NOTES THAT DEFINE ELEMENTS TO BE REMOVED WITHIN DIFFERENT ROOF SYSTEMS AND ROOF SECTIONS.
12. REMOVE ALL ITEMS ATTACHED TO EXISTING MASONRY WALLS TYPICAL ALL LOCATIONS PRIOR TO CLEANING – INTERIOR AND EXTERIOR (FASTENERS, STRAPS, SIGNS, ETC.). REMOVE UNUSED THRU-WALL ITEMS (PIPES, BOLTS, ETC.) AND PATCH MASONRY WITH REPAIR MORTAR. IF ITEM APPEARS TO BE A UTILITY AND IT IS NOT KNOWN IF IT IS PART OF THE FUTURE PROJECT, REQUEST ASSISTANCE AND APPROVAL PRIOR TO REMOVAL. REPAIR AND REPLACE ALL MASONRY IF BROKEN OR MISSING AFTER REMOVAL OF ITEM, TO INCLUDE MORTAR JOINTS. REPAIRS SHALL BE FULL DEPTH OF ALL MASONRY WALLS USING REPAIR MORTAR OR POINTING MORTAR METHODS DEPENDING ON LOCATION OF REMOVED ITEM.
13. INFILL ALL GAPS AND HOLES IN EXISTING MASONRY WALLS FULL DEPTH WITH REPAIR MORTAR OR POINTING MORTAR DEPENDING ON LOCATION.
14. REPOINT 10% OF ALL EXISTING MASONRY THROUGHOUT INTERIOR AND EXTERIOR OF ENTIRE STRUCTURE ON ALL SIDES OF WALLS UNLESS NOTED OTHERWISE. CLEAN ALL MORTAR FROM FACE OF EXISTING BRICK FROM PRIOR REPAIRS (AS APPLICABLE).
15. REPLACE OR SISTER 75 RAFTER TAILS AROUND ENTIRE PERIMETER OF UPPER ROOF (ROOF AREA C) PRIOR TO INSTALLATION OF NEW FASCIA. VERIFY LOCATIONS WITH ARCHITECT.
16. REPLACE 1,500 SQUARE FEET OF DETERIORATED WOOD DECK BOARDS ON ROOFS BEYOND THE QUANTITY IDENTIFIED ON THE DRAWINGS.
17. REMOVE AND REPLACE 100% OF THE EXISTING WASH ON TOP OF ALL BRICK OR STONE MASONRY THROUGHOUT THE INTERIOR AND EXTERIOR OF THE STRUCTURE. PROVIDE WASH ON ALL BRICK MASONRY THAT EXTENDS BEYOND THE VERTICAL FACE OF THE BRICK MASONRY COURSE ABOVE.
18. REMOVE AND REPLACE 100 DAMAGED BRICKS BEYOND QUANTITY SHOWN IN DRAWINGS. CLEAN ALL MORTAR FROM EXISTING BRICK PRIOR TO RECONSTRUCTION. REPLACE ALL BROKEN OR CRACKED BRICK WITH NEW BRICK MASONRY TO MATCH EXISTING BRICK MASONRY BONDING, COURSING, COLOR, TEXTURE, SIZE, AND PROFILE. USE SOLID BRICK MASONRY (NO CORES) ON AREAS WHERE BRICK FACE EXTENDS BEYOND FACE OF BRICK ABOVE OR BELOW.



2 WEST ELEVATION
3/32" = 1'-0"



1 EAST ELEVATION
3/32" = 1'-0"

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No.	Date	Description

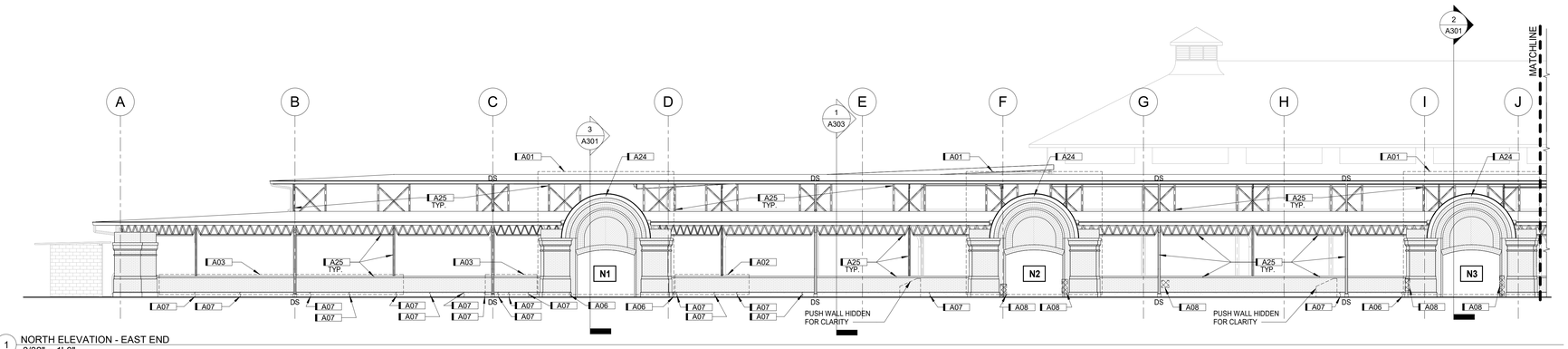
ISF SWINE BARN UPDATES - PHASE 2

EAST & WEST ELEVATIONS, GEN. RENOV. NOTES

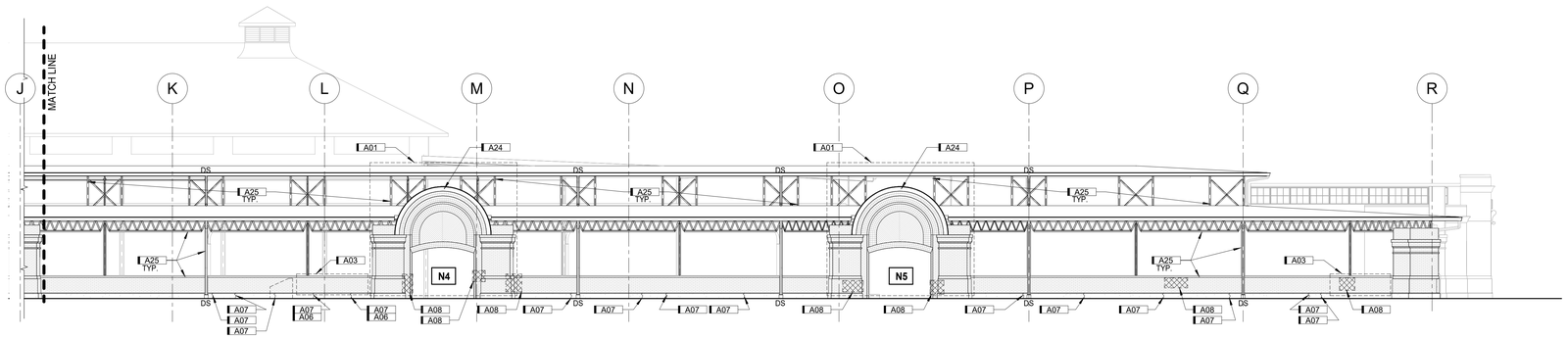
Project Number: 251001.00
Date: 03/10/2026

A201

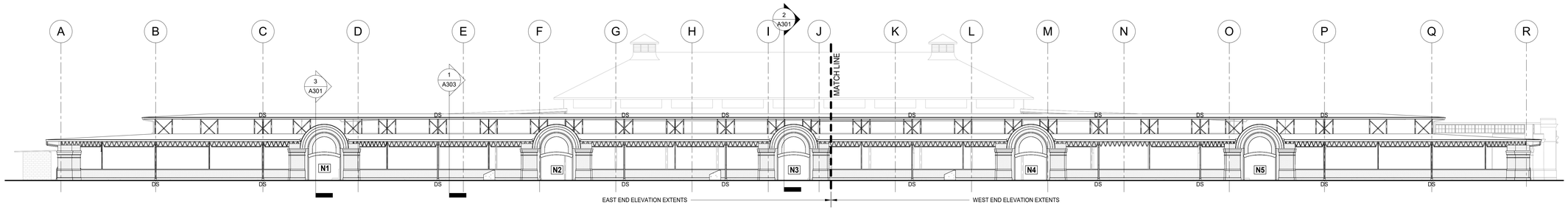
SCALE: As indicated



1 NORTH ELEVATION - EAST END
3/32" = 1'-0"



2 NORTH ELEVATION - WEST END
3/32" = 1'-0"



3 NORTH ELEVATION - OVERALL
1/16" = 1'-0"

KEYNOTES - SHEET A202	
Key Value	Keynote Text
A01	Repoint 25% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A02	Repoint 50% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A03	Repoint 100% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A04	Rebuild wall with new masonry full depth this area. Clean all mortar from existing brick prior to reconstruction. Tooth in jambs and replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A05	Rebuild top six courses of wall with new and existing masonry full depth this area. Clean all mortar from existing brick prior to reconstruction. Replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A06	Patch existing concrete stem wall to match existing concrete color and texture with repair mortar methods this area.
A07	Repair full height wall crack in masonry and concrete stem wall with sealant joint to match color(s) of masonry or concrete and/or mortar. Texture with sand to match existing condition. Clean all mortar from face of existing brick from prior repair (as applicable) prior to repair. Replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. If crack in concrete stem wall exceeds 1/2-inch wide patch concrete stem wall to match existing concrete color and texture with repair mortar methods.
A08	Remove and replace all broken brick in this area. Clean all mortar from existing brick prior to reconstruction. Replace all broken or cracked brick with new brick masonry to match existing brick masonry bonding, coursing, color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A09	Remove stone cap all sides (all locations on west wall, and wrapping around north/south sides, and on east facing portions) of wall and prepare surface for reinstallation. Remove all mortar from removed stone surfaces. Clean mortar from top of brick and patch existing brick masonry wall. Fill any voids so brick masonry wall is level/smooth and full of mortar. After mortar cures set stainless steel rods in epoxy in top of wall. Provide two rods per piece of stone to be reinstalled. Install full depth through wall flashing on top of brick masonry wall, include turndown and 1/4-inch drip edge on all exposed sides of flashing. Seal flashing around stainless-steel rods. Flashing shall extend no more than 1/4-inch from face of masonry on non-membrane side of wall. Flashing shall extend over and turn down over termination bar. Flashing shall extend down wall 3 inches at all termination bar locations before terminating with a drip edge. Reinstall stone in mortar; drill stone out for stainless steel rods. Epoxy set two rods per piece of stone. Set lead joint covers in sealant on the top of all stone horizontal and vertical joints.
A10	Remove masonry wall for new opening. Cap jambs with steel, see structural Drawings. Repair nearby concrete stem wall as required to accept new opening.
A11	At stone cornice all locations (west wall and wrapping around north/south sides of wall), remove and replace existing stone wash (if existing). Add wash at all locations if stone is not sloped (gap wash at stone joint). Install lead joint covers in stone/wash joints set in sealant. Turn down vertical lip of cornice face only. Fill remaining joint with sealant and add weeps.
A12	Roof Areas A1, & A4-A6 and portions of A7 & A11: Remove existing roof assembly down to existing plywood on wood decking. Remove wood fascia. Replace with new fascia, cover board, metal flashings, membrane assembly, and gutters/downspouts as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A13	Roof Areas C and portions of A7, A8, A10 and A11: Remove existing roof assembly down to wood decking. Remove wood fascia and cut back decking to accept new roof Nailer. Replace with new Nailer, fascia, plywood, cover board, metal flashings, membrane assembly, and gutters/downspouts as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A14	Roof Areas A7, A8, A9, A10, and A11: Remove existing roof assembly down to wood decking. Cut back decking to accept new roof Nailer. Replace with new Nailer, plywood, cover board, metal flashings, and membrane assembly as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A15	Roof Areas A1, & A4-A6: Remove existing roof assembly down to existing plywood on wood decking. Replace with new cover board, metal flashings, and membrane assembly as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A16	Remove and replace deteriorated wood deck boards, cut boards to bear on a roof rafter at each end to avoid a weak location on roof. Rough square footage as indicated in each area.
A17	Replace or sister 1 deteriorated rafter (full length between purlins), this area.
A20	Replace or sister 8 deteriorated rafter (full length between purlins), this area.
A21	Roof Areas A8, A9, and A10: Remove existing roof assembly to accept new rafters and glulam beam knee wall as detailed on structural Drawings. Removal includes cutting back rafters approximately 5ft-0in, other removal includes ballasted membrane roofing, wood decking, protection board, fascia, gutters, downspouts, and blocking.
A22	Remove over framing this area, see structural Demolition Drawings.
A23	New roof assembly see structural Drawings.
A24	Remove all paint from metal cornice surfaces, front and top (approximately 4ft-0in wide). Use paint stripper, scrape, clean, prime, and repaint as specified.
A25	Clean all painted interior and exterior surfaces using cleaning methods as described in specification. Remove all loose paint; use paint stripper (when needed) scrape, clean. Paint all exposed exterior and interior surfaces to include existing and new structural steel elements, knee cap wall, new and existing non-structural steel elements, new and existing wood elements. Do not paint masonry, concrete, prefinished trim, prefinished metal panels, gutters, downspouts, electrical/communications items, and plumbing/mechanical items.
A26	New multi-wythe solid brick masonry pier wall. Match existing brick masonry bonding, coursing, color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below. Install on new concrete foundation stem wall system.
A27	New multi-wythe knee wall, CMU masonry with brick masonry veneer both sides. Include steel cap channel on top of wall, paint as specified. Install on new foundation stem wall system.
A28	New opening cap jambs with steel channel to match existing, paint as specified.
A29	New hot dipped galvanized steel Gates, paint as specified.
A30	Rebuild brick masonry full height of structural beam to create a beam pocket (6 locations). See Detail 10/A210 as an example of finished product.

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Phone: (515) 288-4821

No.	Date	Description

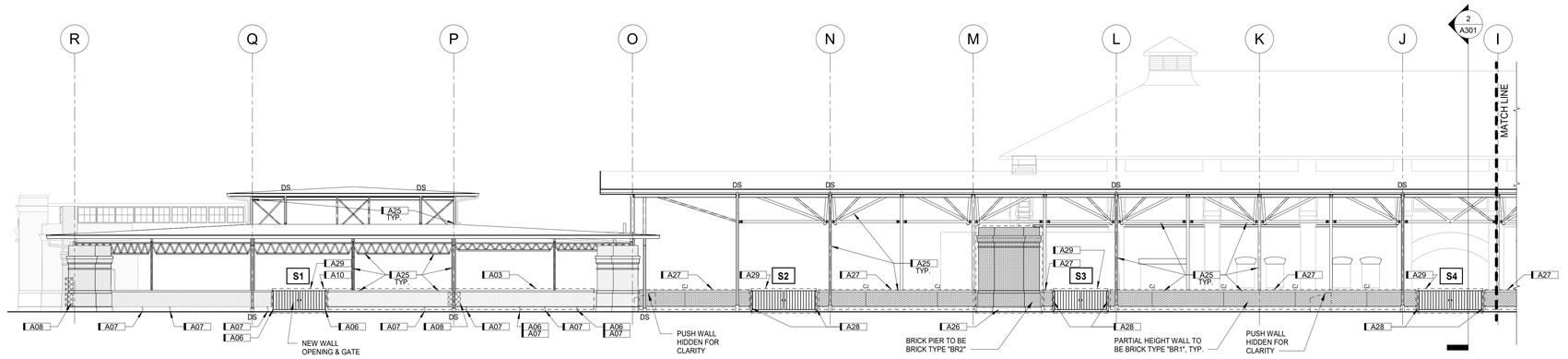
ISF SWINE BARN UPDATES - PHASE 2

NORTH ELEVATION

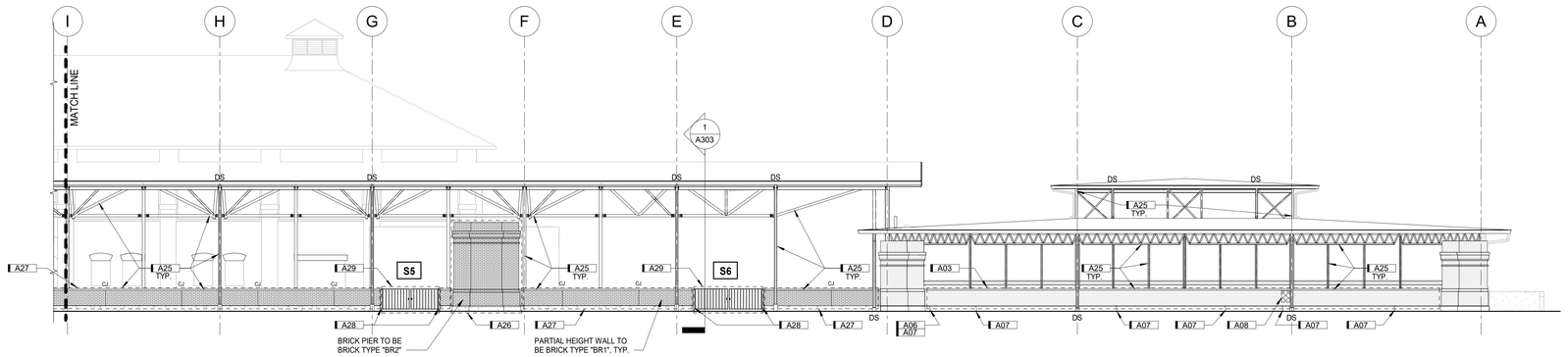
Project Number: 251001.00
Date: 03/10/2026

A202

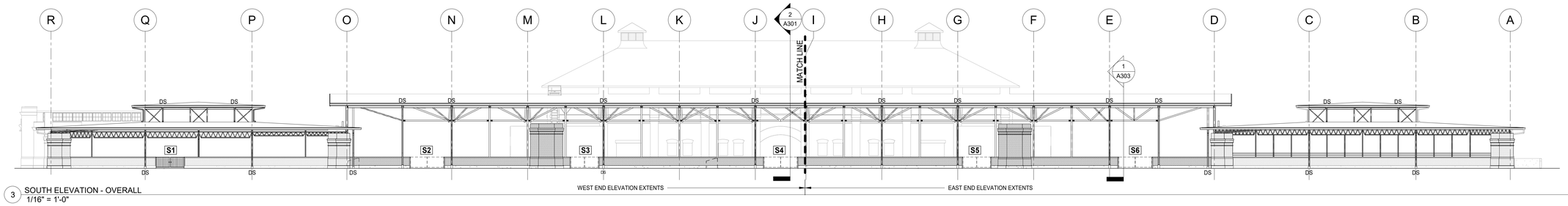
SCALE: As indicated



1 SOUTH ELEVATION - WEST END
3/32" = 1'-0"



2 SOUTH ELEVATION - EAST END
3/32" = 1'-0"



3 SOUTH ELEVATION - OVERALL
1/16" = 1'-0"

KEYNOTES - SHEET A203	
Key Value	Keynote Text
A01	Repoint 25% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A02	Repoint 50% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A03	Repoint 100% of all masonry joints full height, this area, both sides of wall. Clean all mortar from face of existing brick from prior repair (as applicable).
A04	Rebuild wall with new masonry full depth this area. Clean all mortar from existing brick prior to reconstruction. Tooth in jambs and replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A05	Rebuild top six courses of wall with new and existing masonry full depth this area. Clean all mortar from existing brick prior to reconstruction. Replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A06	Patch existing concrete stem wall to match existing concrete color and texture with repair mortar methods this area.
A07	Repair full height wall crack in masonry and concrete stem wall with sealant joint to match color(s) of masonry or concrete and/or mortar. Texture with sand to match existing condition. Clean all mortar from face of existing brick from prior repair (as applicable) prior to repair. Replace all broken or cracked brick, with new brick masonry to match existing brick masonry color, texture, size and profile. If crack in concrete stem wall exceeds 1/2-inch wide patch concrete stem wall to match existing concrete color and texture with repair mortar methods.
A08	Remove and replace all broken brick in this area. Clean all mortar from existing brick prior to reconstruction. Replace all broken or cracked brick with new brick masonry to match existing brick masonry bonding, coursing, color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below.
A09	Remove stone cap all sides (all locations on west wall, and wrapping around north/south sides, and on east facing portions) of wall and prepare surface for reinstallation. Remove all mortar from removed stone surfaces. Clean mortar from top of brick and patch existing brick masonry wall. Fill any voids so brick masonry wall is level/smooth and full of mortar. After mortar cures set stainless steel rods in epoxy in top of wall. Provide two rods per piece of stone to be reinstalled. Install full depth through wall flashing on top of brick masonry wall, include turndown and 1/4-inch drip edge on all exposed sides of flashing. Seal flashing around stainless-steel rods. Flashing shall extend no more than 1/4-inch from face of masonry on non-membrane side of wall. Flashing shall extend over and turn down over termination bar. Flashing shall extend down wall 3 inches at all termination bar locations before terminating with a drip edge. Reinstall stone in mortar; drill stone out for stainless steel rods. Epoxy set two rods per piece of stone. Set lead joint covers in sealant on the top of all stone horizontal and vertical joints.
A10	Remove masonry wall for new opening. Cap jambs with steel, see structural Drawings. Repair nearby concrete stem wall as required to accept new opening.
A11	At stone cornice all locations (west wall and wrapping around north/south sides of wall), remove and replace existing stone wash (if existing). Add wash at all locations if stone is not sloped (gap wash at stone joint). Install lead joint covers in stone/wash joints set in sealant. Turn down vertical lip of cornice face only. Fill remaining joint with sealant and add weeps.
A12	Roof Areas A1, & A4-A6 and portions of A7 & A11: Remove existing roof assembly down to existing plywood on wood decking. Remove wood fascia. Replace with new fascia, cover board, metal flashings, membrane assembly, and gutters/downspouts as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A13	Roof Areas C and portions of A7, A8, A10 and A11: Remove existing roof assembly down to wood decking. Remove wood fascia and cut back decking to accept new roof Nailer. Replace with new Nailer, fascia, plywood, cover board, metal flashings, membrane assembly, and gutters/downspouts as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A14	Roof Areas A7, A8, A9, A10, and A11: Remove existing roof assembly down to wood decking. Cut back decking to accept new roof Nailer. Replace with new Nailer, plywood, cover board, metal flashings, and membrane assembly as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A15	Roof Areas A1, & A4-A6: Remove existing roof assembly down to existing plywood on wood decking. Replace with new cover board, metal flashings, and membrane assembly as detailed in Drawings and to meet manufacturers roof warranty to be a complete watertight system.
A16	Remove and replace deteriorated wood deck boards, cut boards to bear on a roof rafter at each end to avoid a weak location on roof. Rough square footage as indicated in each area.
A17	Replace or sister 1 deteriorated rafter (full length between purlins), this area.
A20	Replace or sister 8 deteriorated rafter (full length between purlins), this area.
A21	Roof Areas A8, A9, and A10: Remove existing roof assembly to accept new rafters and glulam beam knee wall as detailed on structural Drawings. Removal includes cutting back rafters approximately 5ft-0in, other removal includes ballasted membrane roofing, wood decking, protection board, fascia, gutters, downspouts, and blocking.
A22	Remove over framing this area, see structural Demolition Drawings.
A23	New roof assembly see structural Drawings.
A24	Remove all paint from metal cornice surfaces, front and top (approximately 4ft-0in wide). Use paint stripper, scrape, clean, prime, and repaint as specified.
A25	Clean all painted interior and exterior surfaces using cleaning methods as described in specification. Remove all loose paint; use paint stripper (when needed) scrape, clean. Paint all exposed exterior and interior surfaces to include existing and new structural steel elements, knee cap wall, new and existing non-structural steel elements, new and existing wood elements. Do not paint masonry, concrete, prefinished trim, prefinished metal panels, gutters, downspouts, electrical/communications items, and plumbing/mechanical items.
A26	New multi-wythe solid brick masonry pier wall. Match existing brick masonry bonding, coursing, color, texture, size and profile. Use solid brick masonry (no cores) on areas where brick face extends beyond face of brick above or below. Install on new concrete foundation stem wall system.
A27	New multi-wythe knee wall, CMU masonry with brick masonry veneer both sides. Include steel cap channel on top of wall, paint as specified. Install on new foundation stem wall system.
A28	New opening cap jambs with steel channel to match existing, paint as specified.
A29	New hot dipped galvanized steel Gates, paint as specified.
A30	Rebuild brick masonry full height of structural beam to create a beam pocket (6 locations). See Detail 10/A210 as an example of finished product.

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

SOUTH ELEVATION

Project Number: 251001.00
Date: 03/10/2026

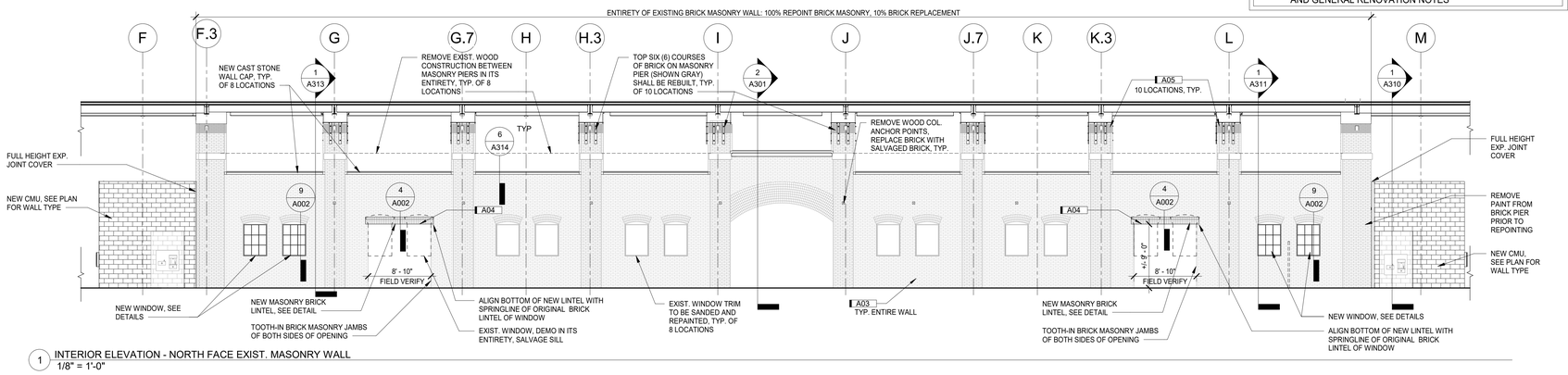
A203

SCALE: As indicated

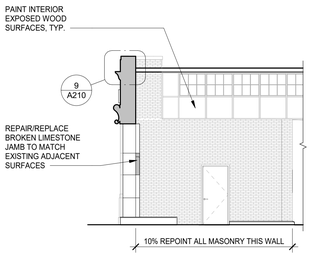
NOTE: SEE ELEVATION SHEETS FOR KEYNOTE REFERENCE NOTES AND GENERAL RENOVATION NOTES

REMOVE EXISTING LOOSE BRICK AROUND JOIST POCKET AND RECONSTRUCT JOIST POCKET TO LOOK LIKE PREVIOUSLY REPAIRED JOIST POCKET AS SHOWN IN THIS IMAGE

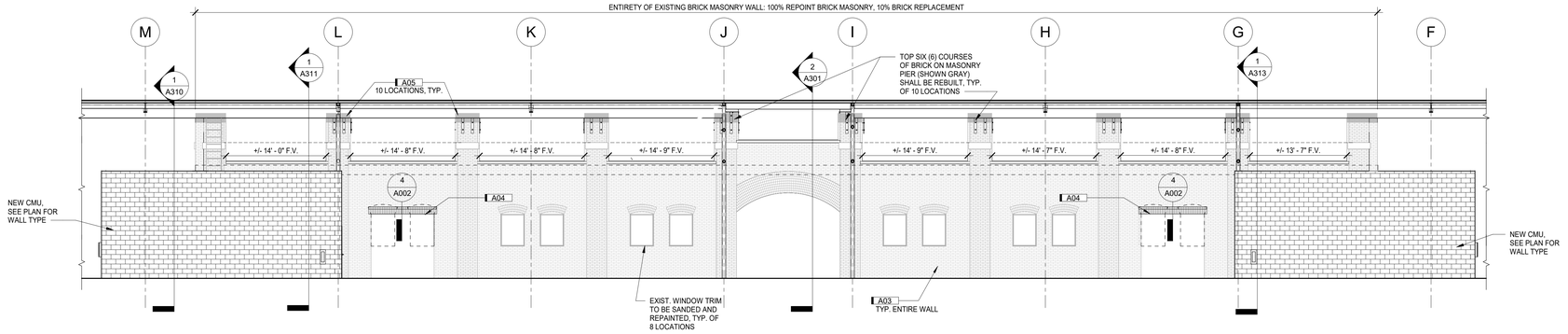
10 BEAM POCKET EXAMPLE
1/8" = 1'-0"



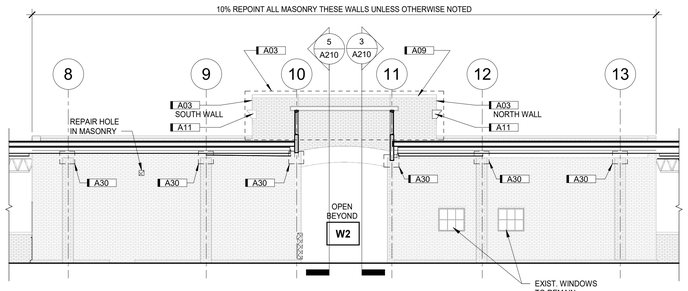
1 INTERIOR ELEVATION - NORTH FACE EXIST. MASONRY WALL
1/8" = 1'-0"



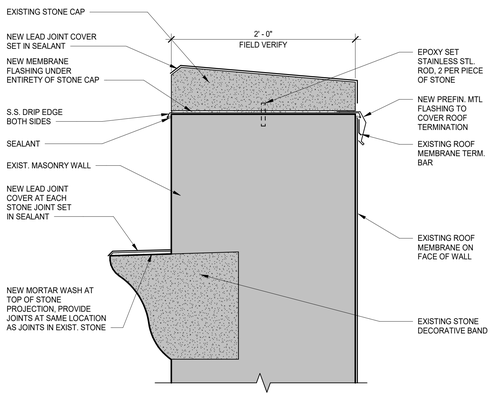
3 ELEVATION - W2 ENTRANCE NORTH WALL
1/8" = 1'-0"



2 INTERIOR ELEVATION - SOUTH FACE EXIST. MASONRY WALL
1/8" = 1'-0"

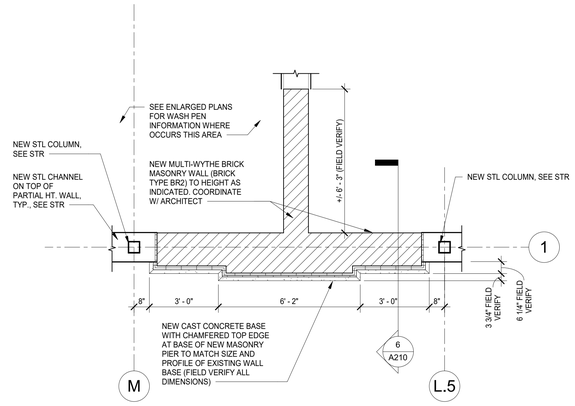


4 INTERIOR ELEVATION - RESTROOM GROUP "A" EAST WALL
1/8" = 1'-0"

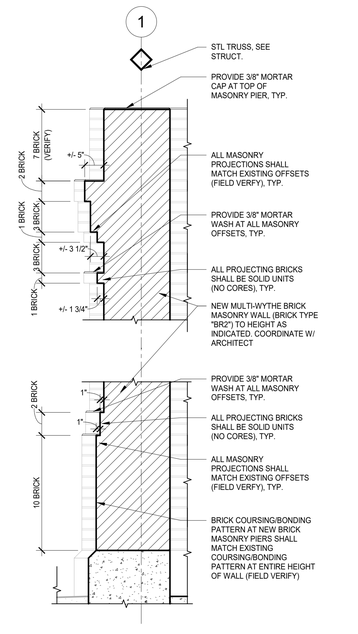


5 ELEVATION - W2 ENTRANCE SOUTH WALL
1/8" = 1'-0"

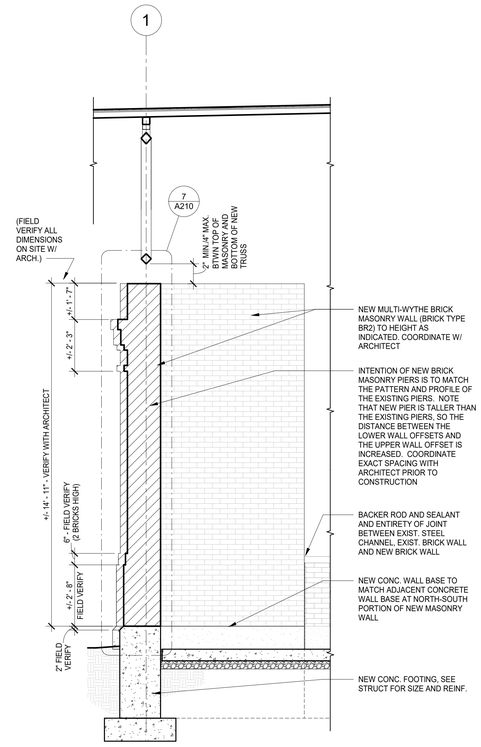
9 DETAIL - EXIST. WEST ENTRANCE "W2" PARAPET
1 1/2" = 1'-0"



8 DETAIL - PLAN VIEW AND NEW BRICK PEDIMENT
3/8" = 1'-0"



7 NEW MASONRY PIER CAP
3/4" = 1'-0"



6 WALL SECTION - NEW BRICK PIER
3/8" = 1'-0"

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No.	Date	Description

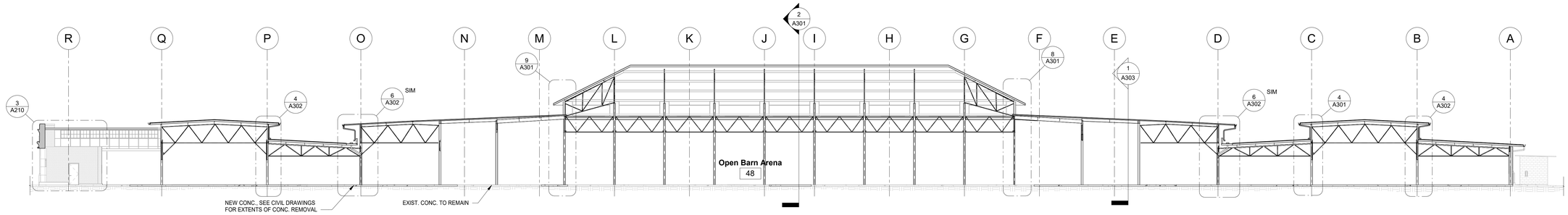
ISF SWINE BARN UPDATES - PHASE 2

INTERIOR ELEVATIONS AND DETAILS

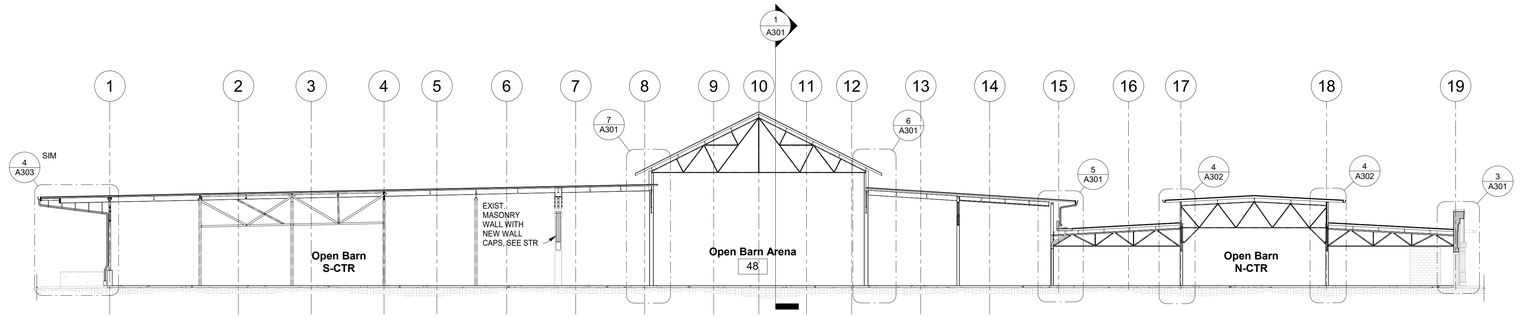
Project Number: 251001.00
Date: 03/10/2026

A210

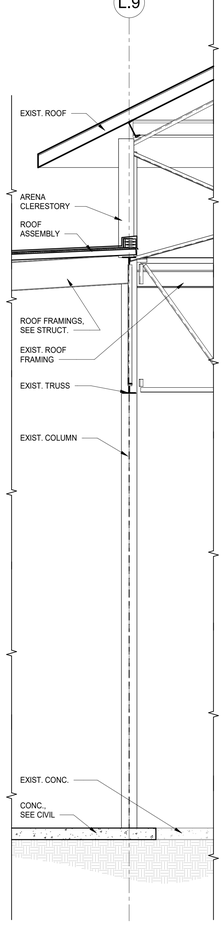
SCALE: As indicated



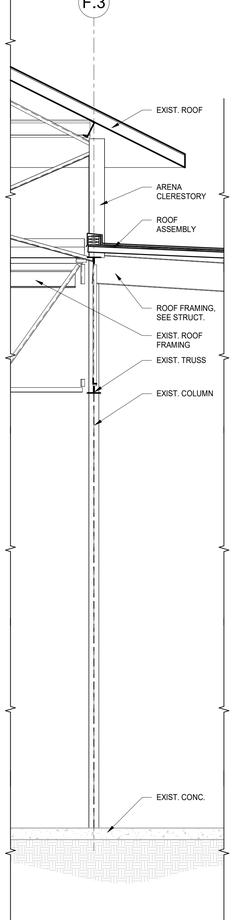
1 E-W BUILDING SECTION - LOOKING NORTH NEAR GRID 11
1/16" = 1'-0"



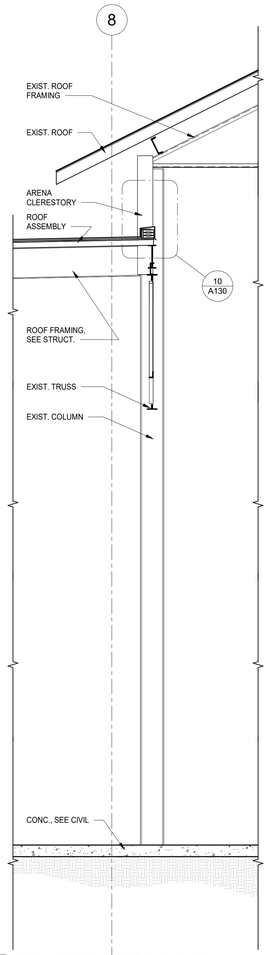
2 N-S BUILDING SECTION - LOOKING WEST NEAR GRID J
1/16" = 1'-0"



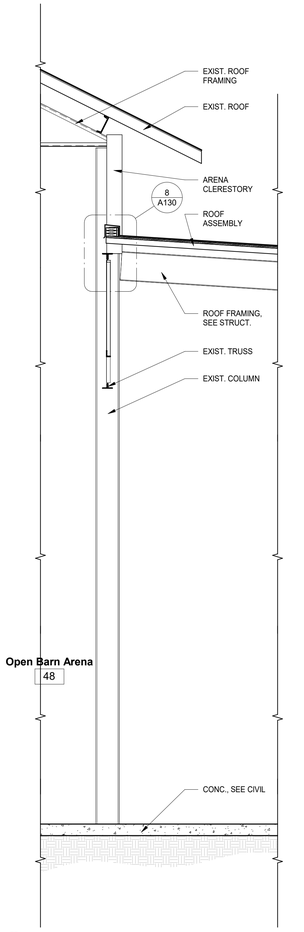
9 WALL SECTION - ROOF AREA H TO E
3/8" = 1'-0"



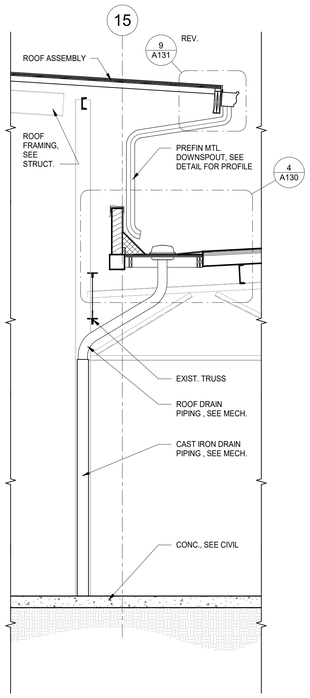
8 WALL SECTION - ROOF AREA H TO F
3/8" = 1'-0"



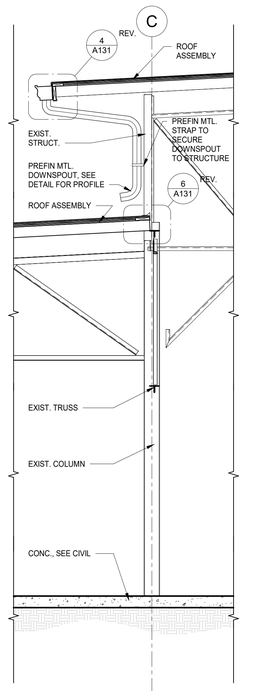
7 WALL SECTION - ROOF AREA H TO G
3/8" = 1'-0"



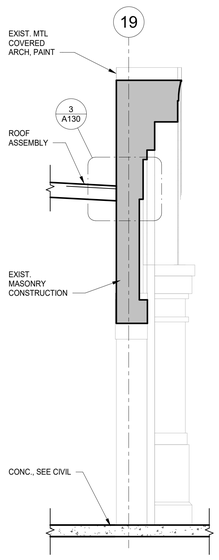
6 WALL SECTION - ROOF AREA H TO D
3/8" = 1'-0"



5 WALL SECTION - ROOF AREA D TO A
3/8" = 1'-0"



4 WALL SECTION - ROOF AREA C TO A-"R2"
3/8" = 1'-0"



3 WALL SECTION - ROOF A @ EXIST. MASONRY ARCH
3/8" = 1'-0"

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No.	Date	Description

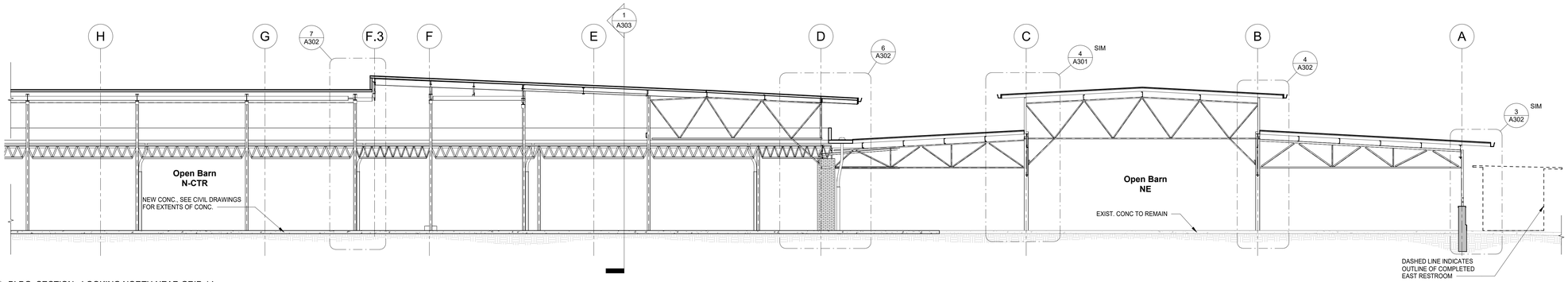
ISF SWINE BARN UPDATES - PHASE 2

BUILDING AND WALL SECTIONS

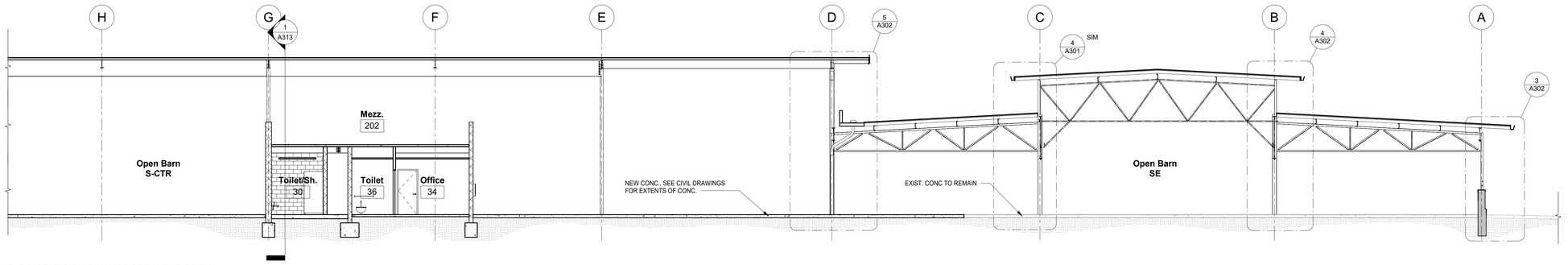
Project Number: 251001.00
Date: 03/10/2026

A301

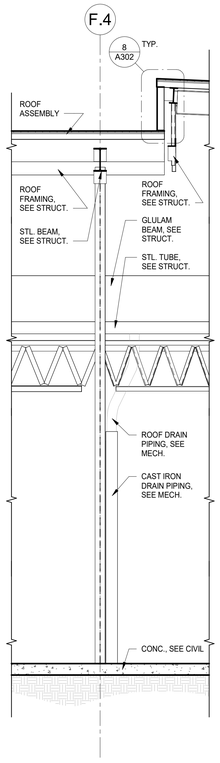
SCALE: As indicated



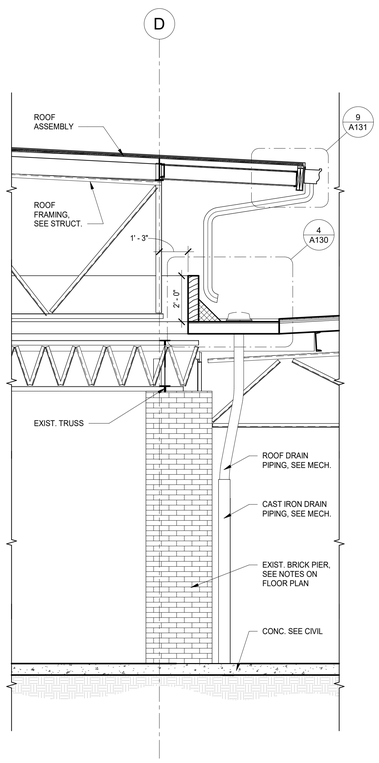
1 BLDG. SECTION - LOOKING NORTH NEAR GRID 14
1/8" = 1'-0"



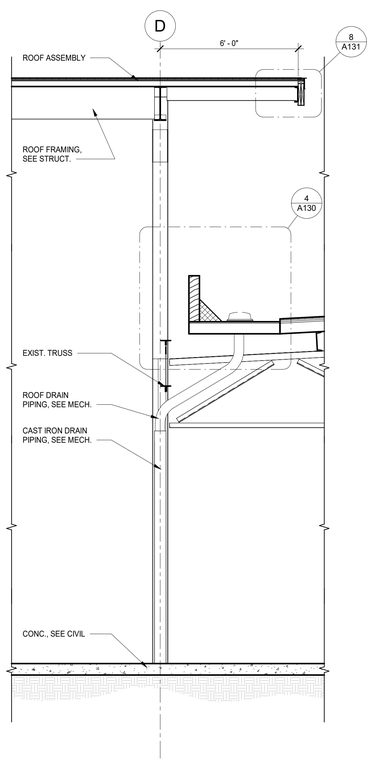
2 BLDG. SECTION - LOOKING NORTH NEAR GRID 6
1/8" = 1'-0"



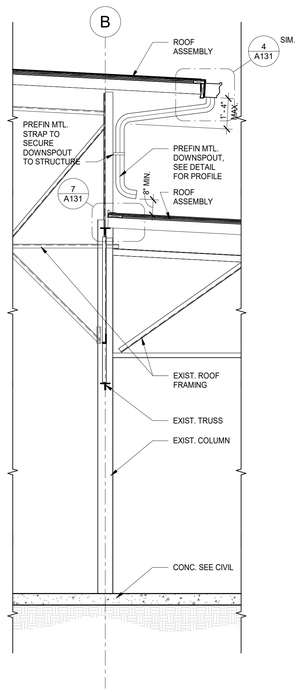
7 WALL SECTION - ROOF F TO D
3/8" = 1'-0"



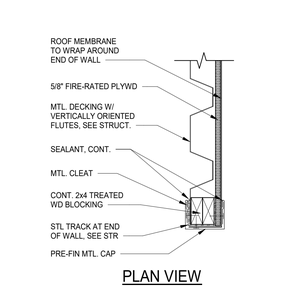
6 WALL SECTION - ROOF F GUTTER TO A
3/8" = 1'-0"



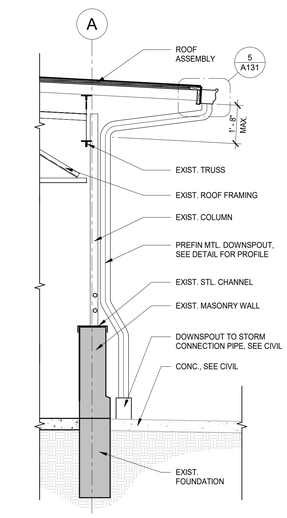
5 WALL SECTION - ROOF G TO A
3/8" = 1'-0"



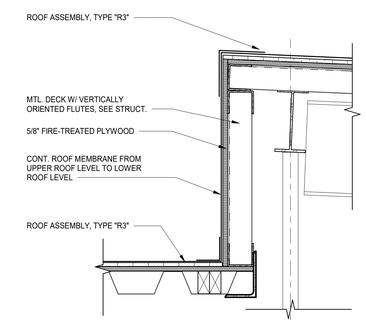
4 WALL SECTION - ROOF C TO A-"R1"
3/8" = 1'-0"



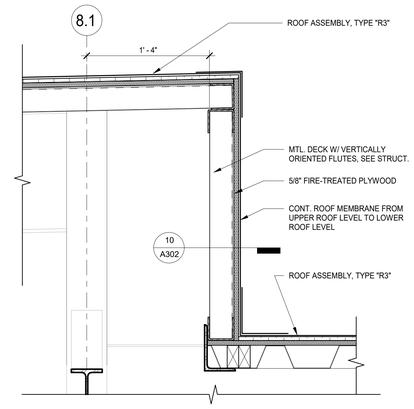
10 DETAIL - PLAN VIEW ROOF TRANSITION INFILL
1 1/2" = 1'-0"



3 WALL SECTION - ROOF A DOWNSPOUT
3/8" = 1'-0"



8 DETAIL - ROOF TRANSITION INFILL
1 1/2" = 1'-0"



9 DETAIL - ROOF TRANSITION INFILL NEAR GRID 8
1 1/2" = 1'-0"

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No.	Date	Description

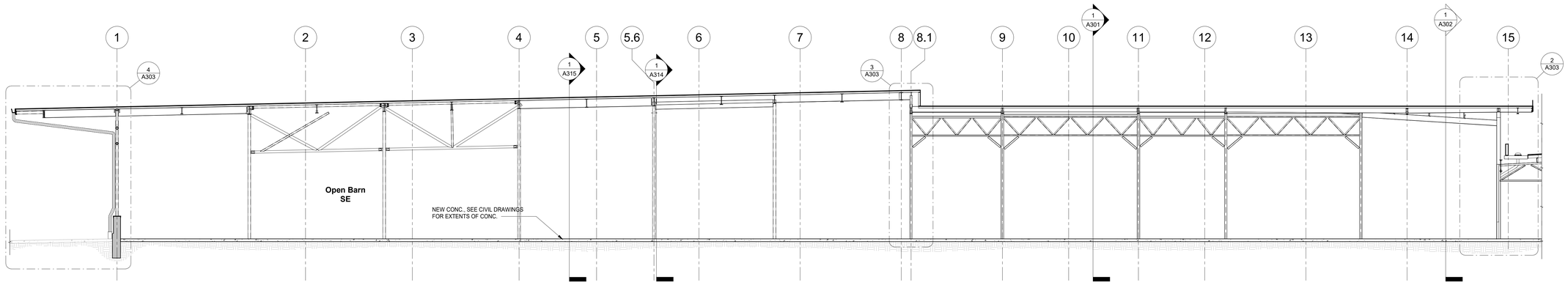
ISF SWINE BARN UPDATES - PHASE 2

BUILDING AND WALL SECTIONS

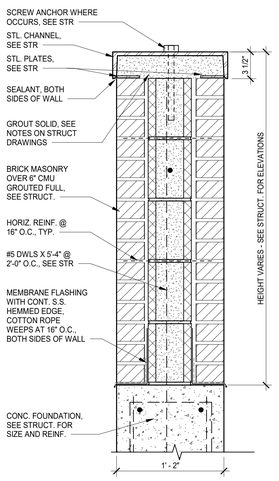
Project Number: 251001.00
Date: 03/10/2026

A302

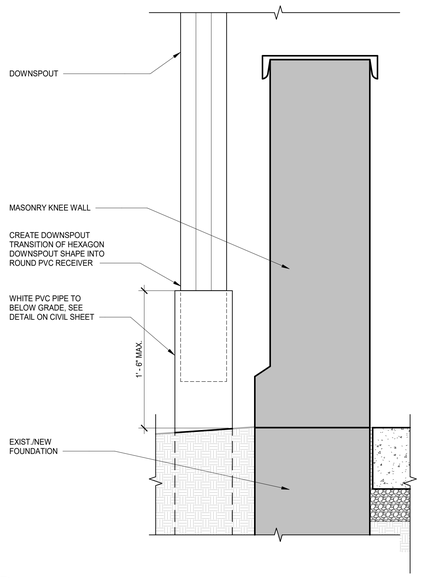
SCALE: As indicated



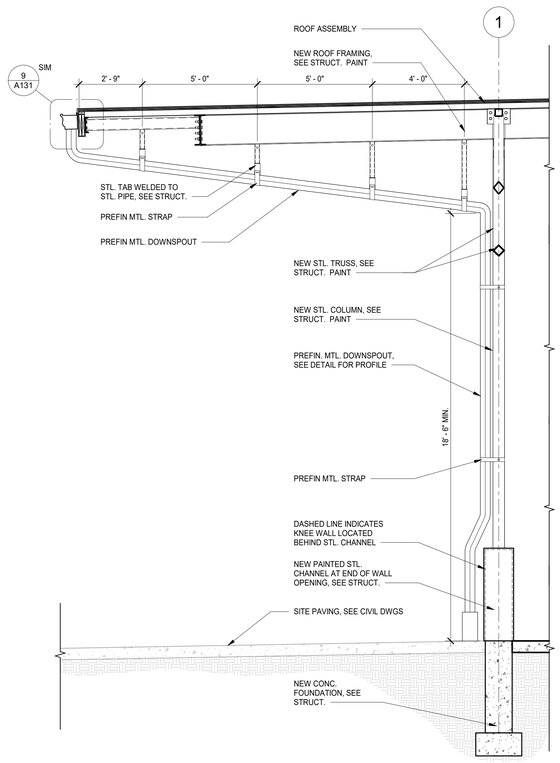
1 BLDG. SECTION - LOOKING WEST NEAR GRID E
1/8" = 1'-0"



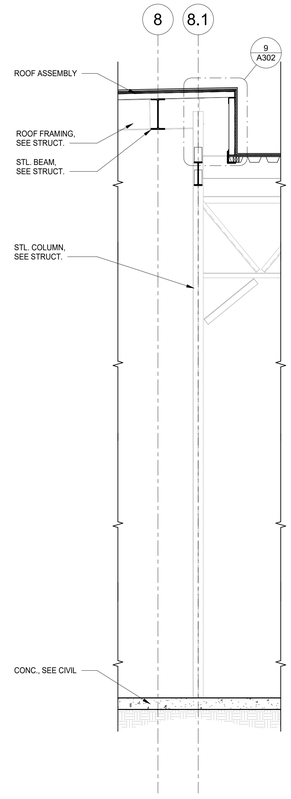
6 DETAIL - MASONRY KNEE WALL @ SOUTH
1 1/2" = 1'-0"



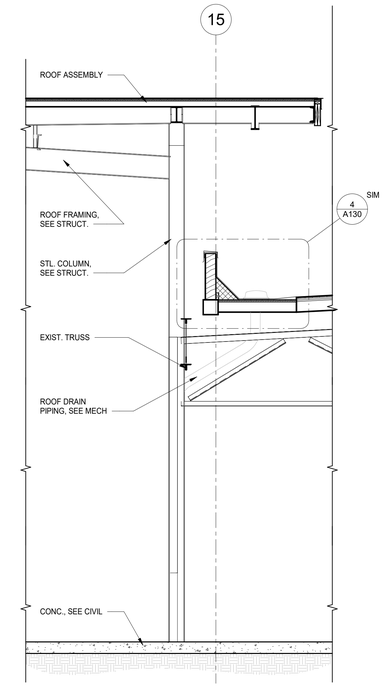
5 DETAIL - DOWNSPOUT AT BASE, TYP.
1 1/2" = 1'-0"



4 WALL SECTION - ROOF AREA "G1" DOWNSPOUT
3/8" = 1'-0"



3 WALL SECTION - ROOF AREA "G1" TO "F1"
3/8" = 1'-0"



2 WALL SECTION - NORTH EDGE OF ROOF AREA "F1" TO "A9"
3/8" = 1'-0"

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No.	Date	Description

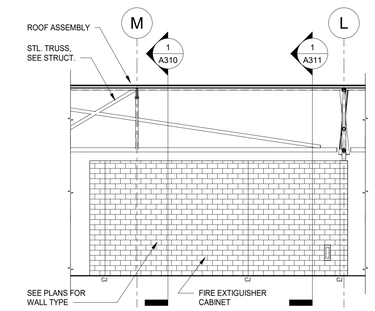
ISF SWINE BARN UPDATES - PHASE 2

BUILDING AND WALL SECTIONS

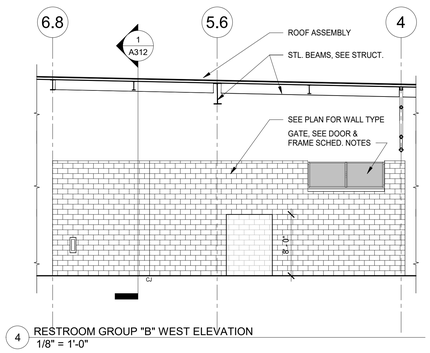
Project Number: 251001.00
Date: 03/10/2026

A303

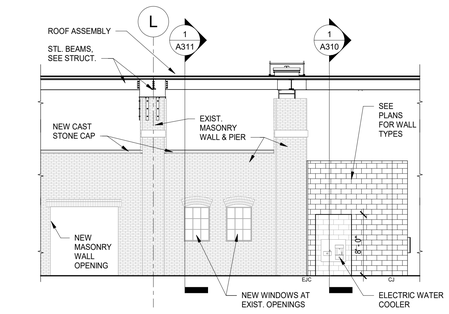
SCALE: As indicated



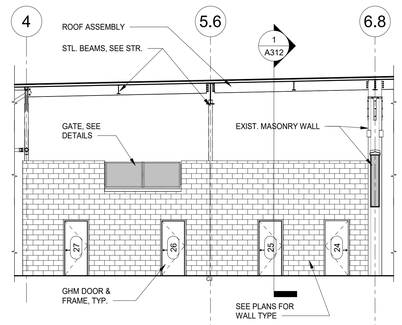
5 RESTROOM GROUP "B" SOUTH ELEVATION
1/8" = 1'-0"



4 RESTROOM GROUP "B" WEST ELEVATION
1/8" = 1'-0"

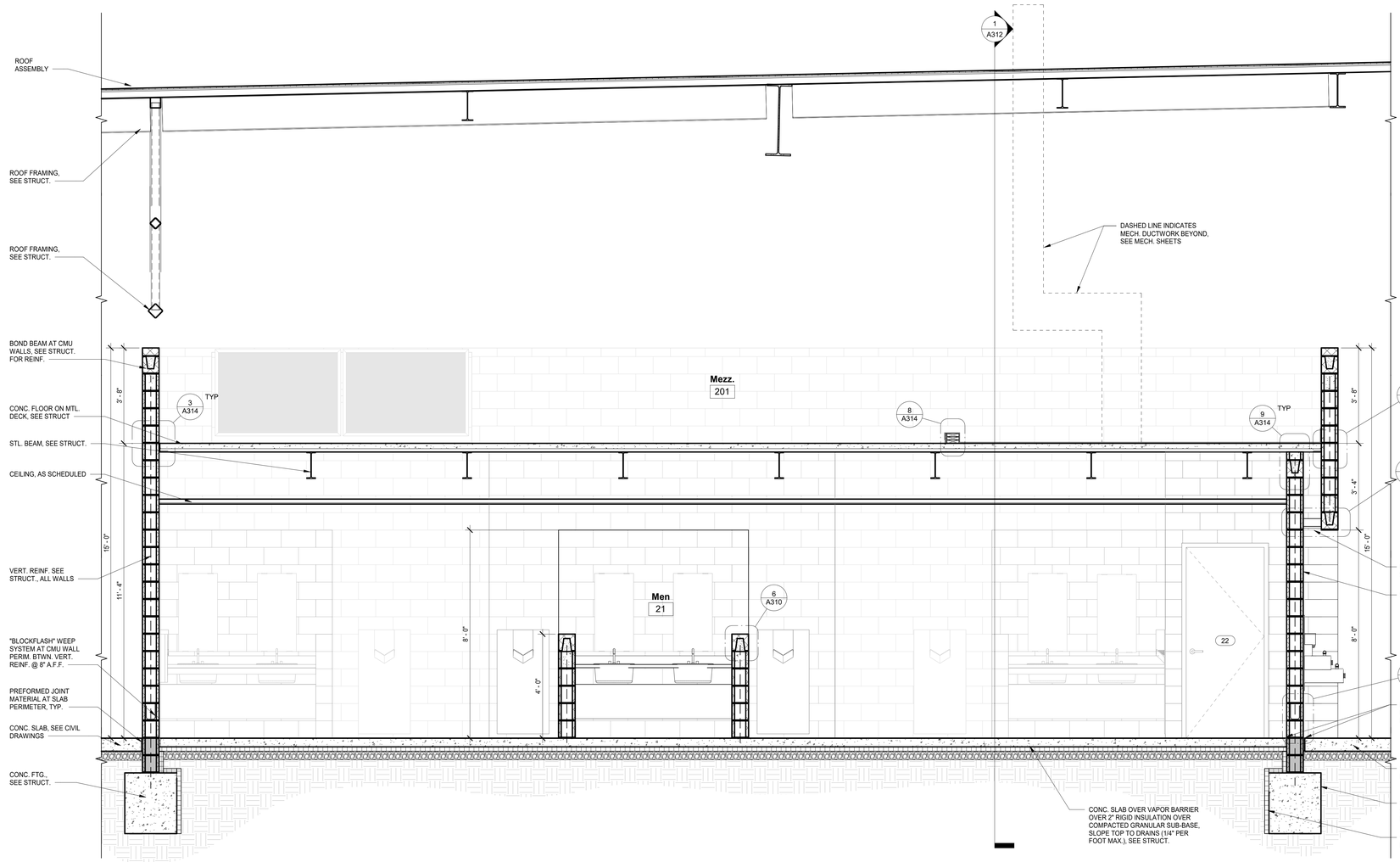


3 RESTROOM GROUP "B" NORTH ELEVATION
1/8" = 1'-0"



2 RESTROOM GROUP "B" EAST ELEVATION
1/8" = 1'-0"

6 DETAIL - TOP OF PARTIAL HEIGHT WALL AT MEN'S
1 1/2" = 1'-0"



1 SECTION THRU RESTROOM GROUP "B" MENS
1/2" = 1'-0"

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No.	Date	Description

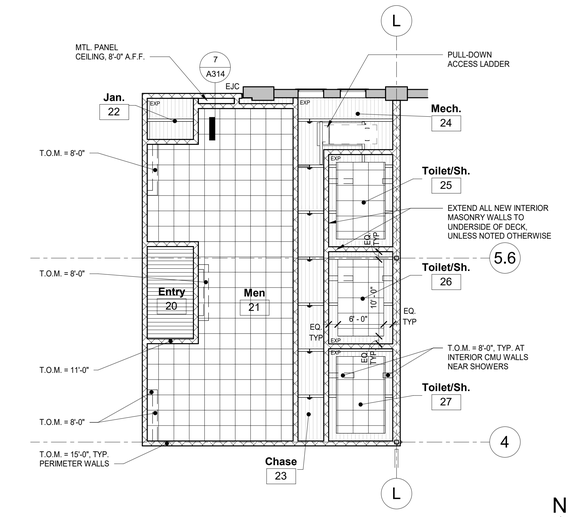
ISF SWINE BARN UPDATES - PHASE 2

WALL SECTION & ELEV - RESTROOM GROUP "B"

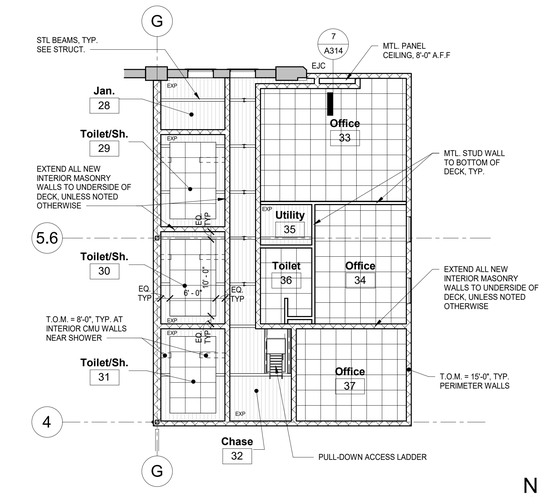
Project Number: 251001.00
Date: 03/10/2026

A310

SCALE: As indicated



3 ENLARGED RCP - RESTROOM GROUP "B"
1/8" = 1'-0"



2 ENLARGED RCP - RESTROOM GROUP "C"
1/8" = 1'-0"

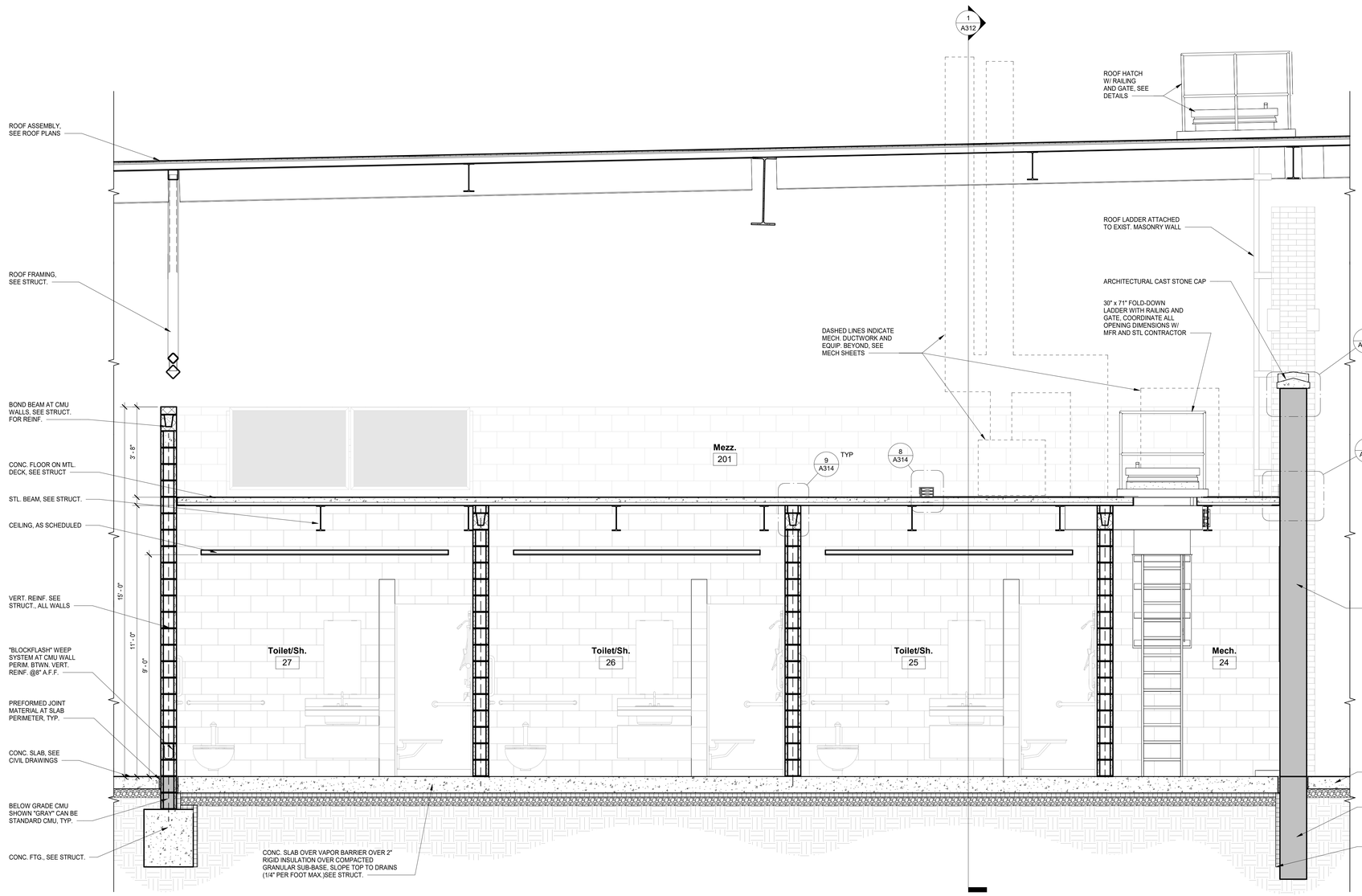
REFLECTED CEILING PLAN NOTES (APPLIES TO ALL RCP SHEETS):

1. SEE REFLECTED CEILING PLAN FOR WALL HEIGHT DESIGNATIONS.
2. REFER TO ADDITIONAL NOTES, KEYNOTES AND REQUIREMENTS ON ALL OTHER DOCUMENTS, DISCIPLINES AND SPECIFICATIONS.
3. PAINT ALL GYPSUM BOARD CEILINGS. SEE FINISH SCHEDULE.
4. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
5. CEILING HEIGHTS ARE SHOWN ON THE ROOM FINISH SCHEDULE, UNLESS NOTED OTHERWISE.
6. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM , UNLESS NOTED OTHERWISE. PLACE ALL CEILING MOUNTED EQUIPMENT IN THE CENTER OF THE CEILING TILE UNLESS OTHERWISE NOTED. COORDINATE ALL DISCREPANCIES WITH ARCHITECT PRIOR TO INSTALLATION.
7. SEE ALL ARCHITECTURAL SHEETS FOR ADDITIONAL INFORMATION ON FINISHED SOFFIT, BULKHEAD, CEILING, ETC. WHERE NOT INDICATED ON REFLECTED CEILING PLAN.
8. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECH. GRILLES, DIFFUSERS, DUCTWORK, AND ELECTRICAL FIXTURES WITH EACH RESPECTIVE TRADE.
9. ALL WALLS (FRAMING & GYP. BOARD) EXTEND TO UNDERSIDE OF STRUCTURE ABOVE, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL PROVIDE SLIP CONNECTION AT TOP OF WALL, TYP. SEE TYP. DETAIL.
10. LOCATIONS OF DETERIORATED SHEATHING AND RAFTERS ARE APPROXIMATE. CONFIRM ACTUAL LOCATION(S) WITH ARCHITECT PRIOR TO STARTING REMOVAL AND REPLACEMENT
11. SEE GENERAL RENOVATION NOTES AND KEYNOTES ON SHEET A201 FOR ADDITIONAL NOTES RELATED TO REFLECTED CEILING PLANS.

CEILING LEGEND:

METAL DECK CEILING

24"X24" ACOUSTIC CEILING TILE



1 SECTION THRU RESTROOM GROUP "B" TOILET / SHOWERS
1/2" = 1'-0"

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No.	Date	Description

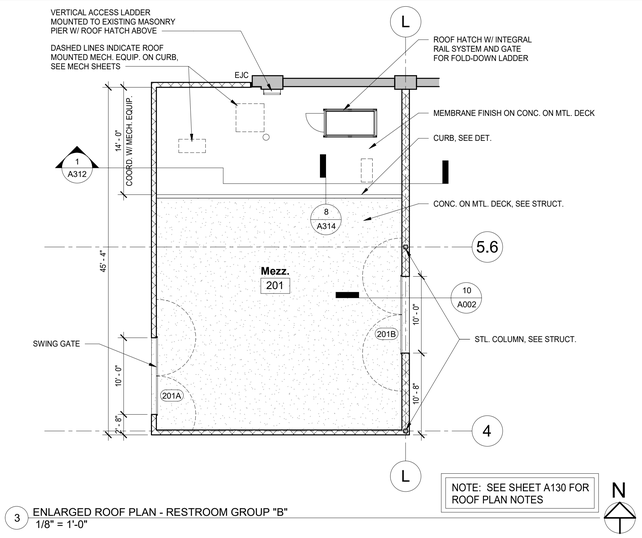
ISF SWINE BARN UPDATES - PHASE 2

WALL SECTION - RESTROOM GROUP "B" & ENGLARGED RCPLANS

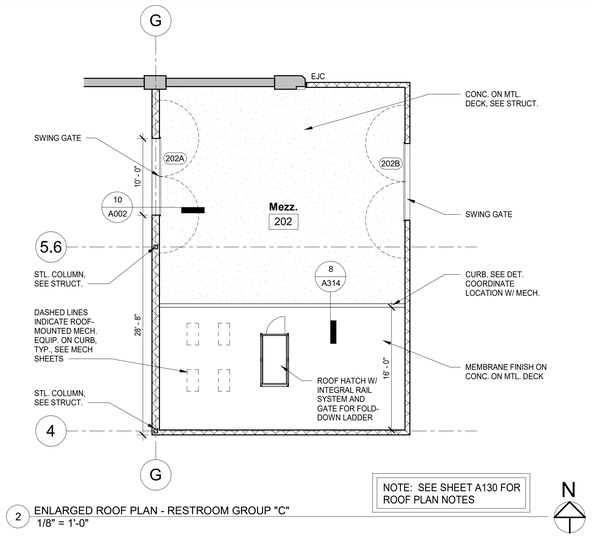
Project Number: 251001.00
Date: 03/10/2026

A311

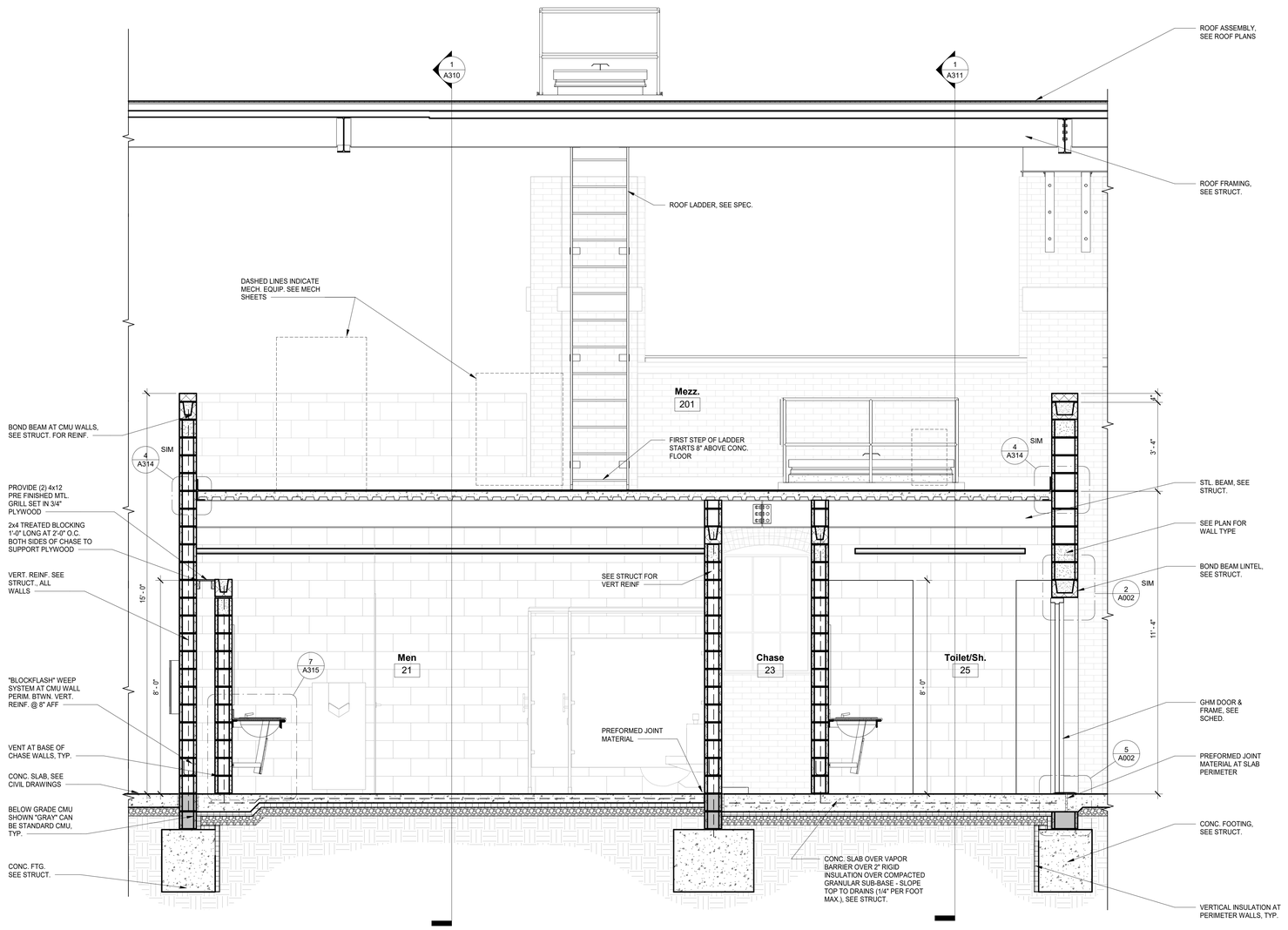
SCALE: As indicated



3 ENLARGED ROOF PLAN - RESTROOM GROUP "B"
1/8" = 1'-0"



2 ENLARGED ROOF PLAN - RESTROOM GROUP "C"
1/8" = 1'-0"



1 SECTION @ RESTROOM GROUP B
1/2" = 1'-0"

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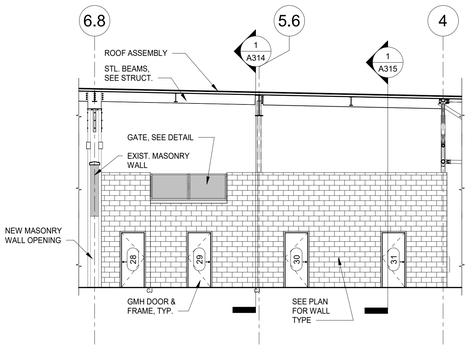
ISF SWINE BARN UPDATES - PHASE 2

WALL SECTION - RESTROOM GROUP "B" & ENLARGED ROOF PLANS

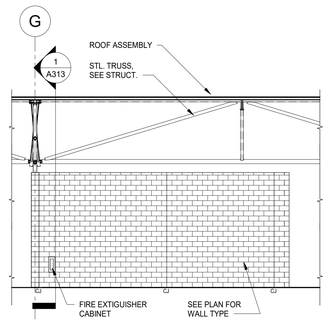
Project Number: 251001.00
Date: 03/10/2026

A312

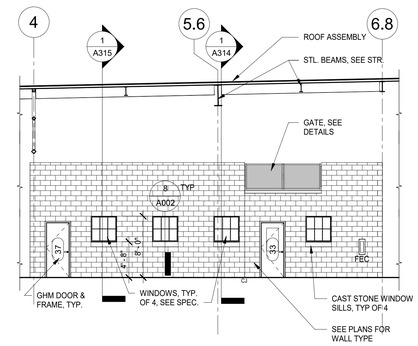
SCALE: As indicated



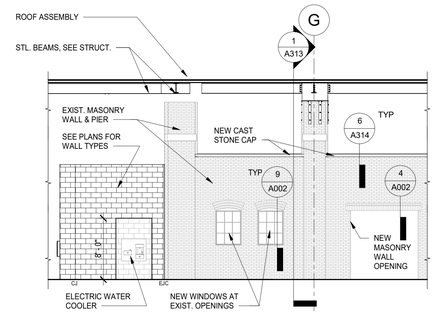
5 RESTROOM GROUP "C" WEST ELEVATION
1/8" = 1'-0"



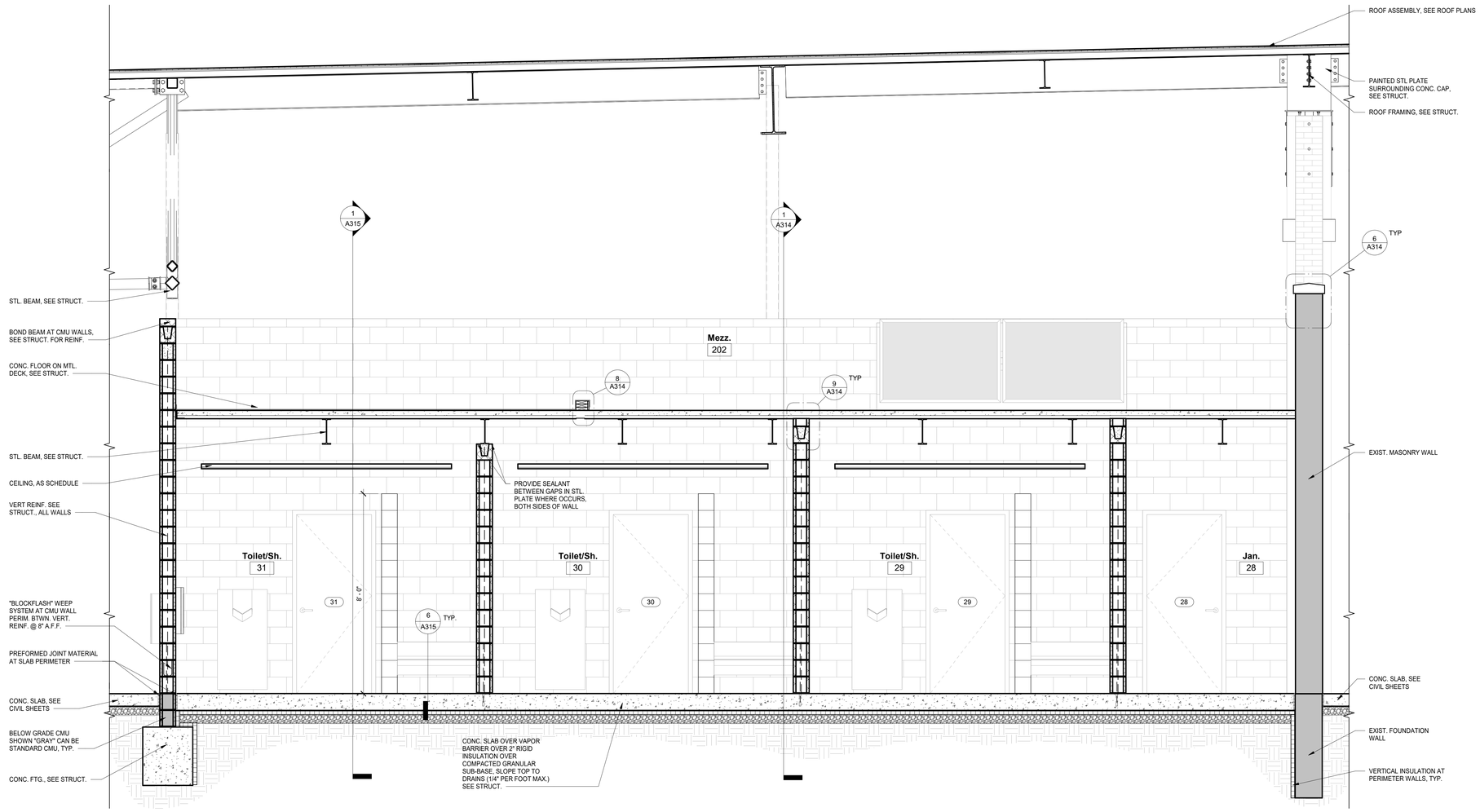
4 RESTROOM GROUP "C" SOUTH ELEVATION
1/8" = 1'-0"



3 RESTROOM GROUP "C" EAST ELEVATION
1/8" = 1'-0"



2 RESTROOM GROUP "C" NORTH ELEVATION
1/8" = 1'-0"



1 SECTION THRU RESTROOM GROUP C TOILET / SHOWER
1/2" = 1'-0"

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No.	Date	Description

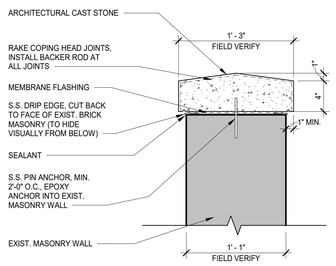
ISF SWINE BARN UPDATES - PHASE 2

WALL SECTION & ELEV - RESTROOM GROUP "C"

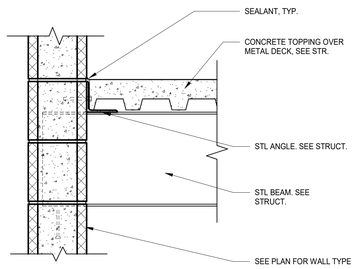
Project Number: 251001.00
Date: 03/10/2026

A313

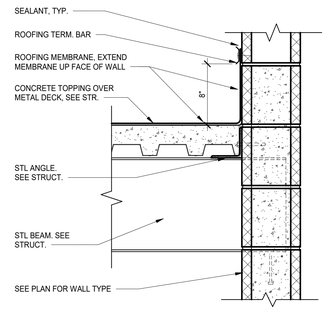
SCALE: As indicated



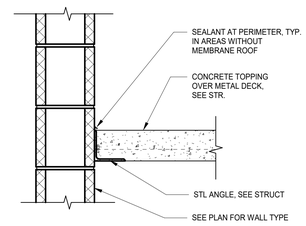
6 DETAIL - EXIST. MASONRY WALL PARAPET
1 1/2" = 1'-0"



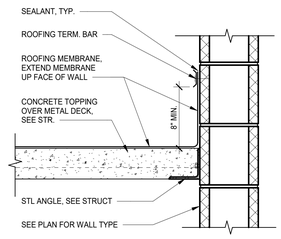
5 DETAIL - MEZZ. FLOOR TO BEARING WALL
1 1/2" = 1'-0"



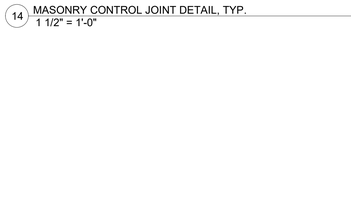
4 DETAIL - MEZZ. FLOOR TO BEARING WALL W/ MEMBRANE
1 1/2" = 1'-0"



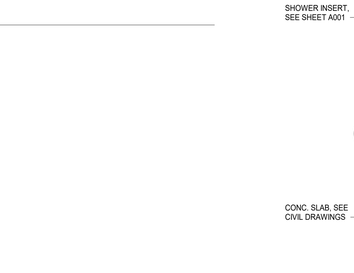
3 DETAIL - MEZZ. FLOOR TO CMU WALL
1 1/2" = 1'-0"



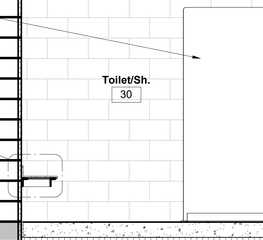
2 DETAIL - MEZZ. FLOOR TO CMU WALL AT ROOF MEMBRANE
1 1/2" = 1'-0"



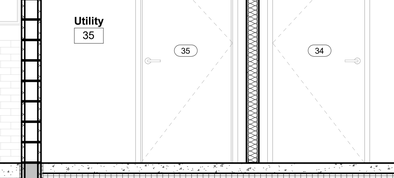
11 MEZZ. FLOOR TO EXIST. MASONRY WALL
1 1/2" = 1'-0"



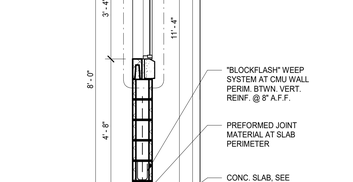
10 DETAIL - MASONRY BLOCK FLASH
1 1/2" = 1'-0"



9 DETAIL - CMU @ BOTTOM OF MTL. DECK, TYP
1 1/2" = 1'-0"



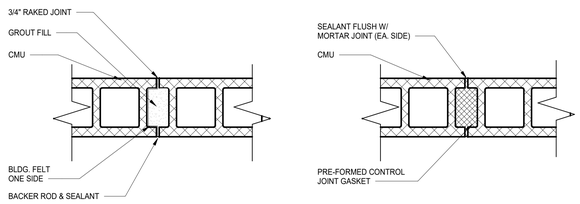
8 DETAIL - MEZZ. CURB WALL
1 1/2" = 1'-0"



7 DETAIL - CEILING ABOVE EWC
1 1/2" = 1'-0"

13 DETAIL - GYP. BD/CMU WALL INTERSECTION
1 1/2" = 1'-0"

12 DETAIL - SLIP CONNECTION MTL. STUD WALL, TYP.
1 1/2" = 1'-0"



NOTE: EITHER OPTION A OR B MAY BE USED AT INT. CONTROL JOINTS. EXTERIOR CONTROL JOINT DETAILS ARE SHOWN USING OPTION A (OPTION B MAY BE SUBSTITUTED

14 MASONRY CONTROL JOINT DETAIL, TYP.
1 1/2" = 1'-0"

1 SECTION @ RESTROOM GROUP C
1/2" = 1'-0"

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No.	Date	Description

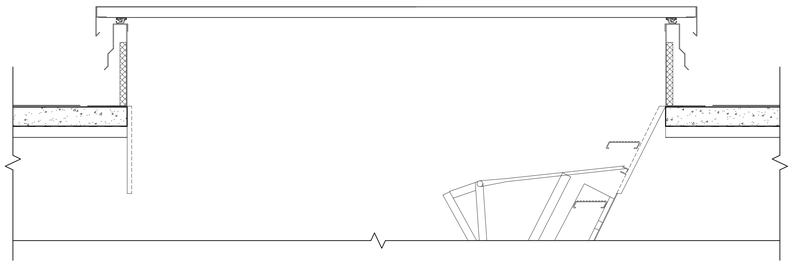
ISF SWINE BARN UPDATES - PHASE 2

WALL SECTION - RESTROOM GROUP "C" & DETAILS

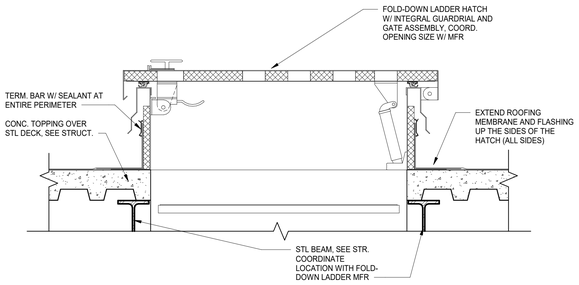
Project Number: 251001.00
Date: 03/10/2026

A314

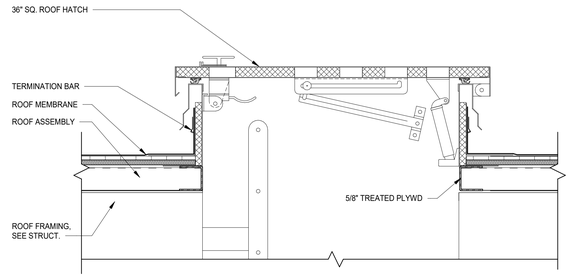
SCALE: As indicated



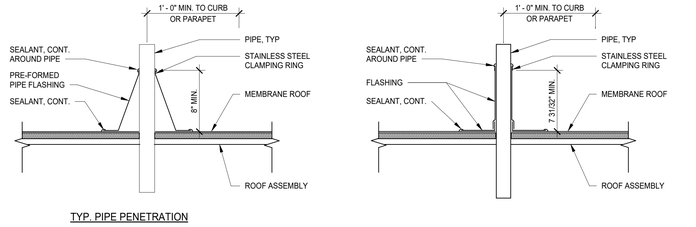
4 DETAIL - FOLD DOWN LADDER TO ROOF HATCH
1 1/2" = 1'-0"



3 DETAIL - FOLD DOWN LADDER
1 1/2" = 1'-0"



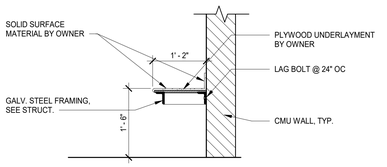
2 DETAIL - ROOF HATCH
1 1/2" = 1'-0"



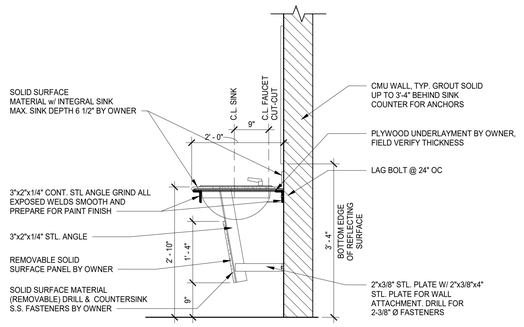
TYP. PIPE PENETRATION

USE WHERE TYP. PIPE PENETRATION DETAIL CANNOT BE USED

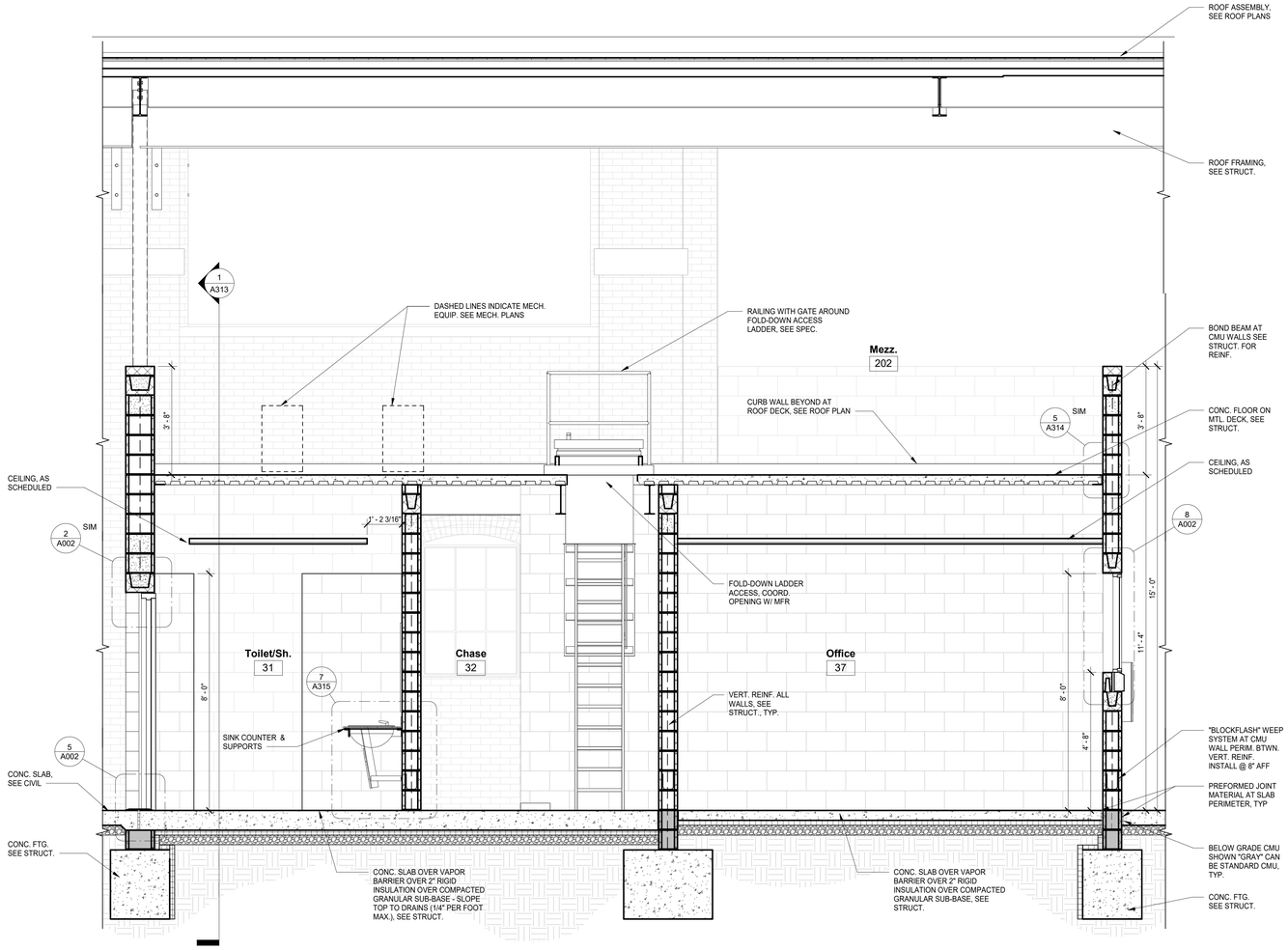
5 PIPE PENTRATION DETAIL
1 1/2" = 1'-0"



6 SHOWER AREA BENCH, TYP.
3/4" = 1'-0"



7 LAVATORY SECTION, TYP.
3/4" = 1'-0"



1 WALL SECTION THRU AREA C
1/2" = 1'-0"

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ISF SWINE BARN UPDATES - PHASE 2

WALL SECTION - RESTROOM GROUP "C" & DETAILS

Project Number: 251001.00
Date: 03/10/2026

A315

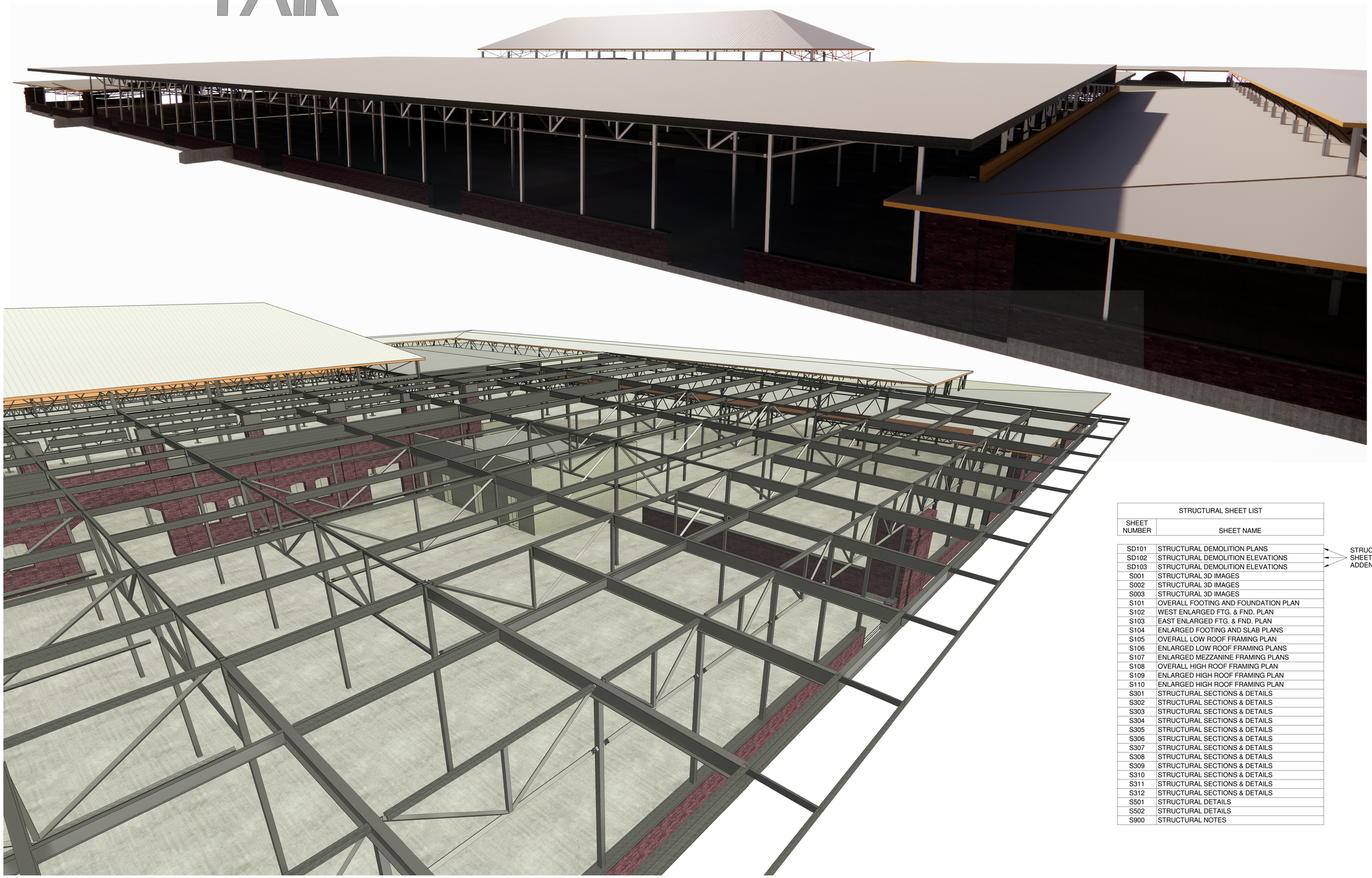
SCALE: As indicated

IOWA STATE FAIR

ISF SWINE BARN UPDATES - PHASE 2

IOWA STATE FAIRGROUNDS
DES MOINES, IOWA

KORPELA ENGINEERING



STRUCTURAL SHEET LIST	
SHEET NUMBER	SHEET NAME
SD101	STRUCTURAL DEMOLITION PLANS
SD102	STRUCTURAL DEMOLITION ELEVATIONS
SD103	STRUCTURAL DEMOLITION ELEVATIONS
S001	STRUCTURAL 3D IMAGES
S002	STRUCTURAL 3D IMAGES
S003	STRUCTURAL 3D IMAGES
S101	OVERALL FOOTING AND FOUNDATION PLAN
S102	WEST ENLARGED FTG. & FND. PLAN
S103	EAST ENLARGED FTG. & FND. PLAN
S104	ENLARGED FOOTING AND SLAB PLANS
S105	OVERALL LOW ROOF FRAMING PLAN
S106	ENLARGED LOW ROOF FRAMING PLANS
S107	ENLARGED MEZZANINE FRAMING PLANS
S108	OVERALL HIGH ROOF FRAMING PLAN
S109	ENLARGED HIGH ROOF FRAMING PLAN
S110	ENLARGED HIGH ROOF FRAMING PLAN
S301	STRUCTURAL SECTIONS & DETAILS
S302	STRUCTURAL SECTIONS & DETAILS
S303	STRUCTURAL SECTIONS & DETAILS
S304	STRUCTURAL SECTIONS & DETAILS
S305	STRUCTURAL SECTIONS & DETAILS
S306	STRUCTURAL SECTIONS & DETAILS
S307	STRUCTURAL SECTIONS & DETAILS
S308	STRUCTURAL SECTIONS & DETAILS
S309	STRUCTURAL SECTIONS & DETAILS
S310	STRUCTURAL SECTIONS & DETAILS
S311	STRUCTURAL SECTIONS & DETAILS
S312	STRUCTURAL SECTIONS & DETAILS
S501	STRUCTURAL DETAILS
S502	STRUCTURAL DETAILS
S900	STRUCTURAL NOTES

STRUCTURAL DEMOLITION SHEETS WILL BE ISSUED IN ADDENDUM

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No.	Date	Description
	031026	ISSUE

ISF - SWINE BARN UPDATES - PHASE 2

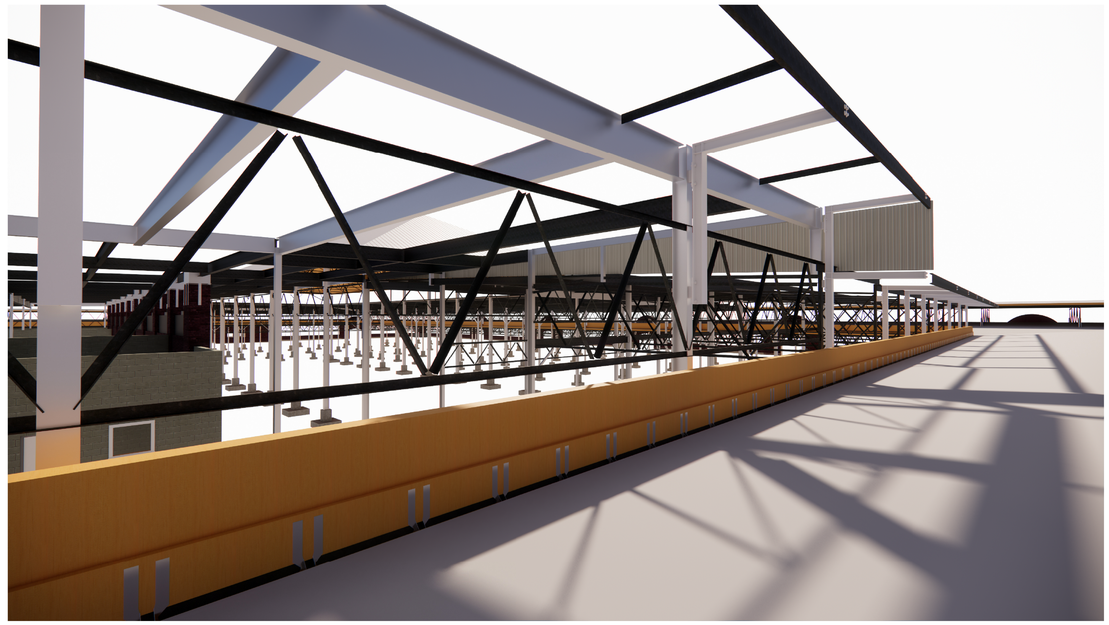
STRUCTURAL 3D IMAGES

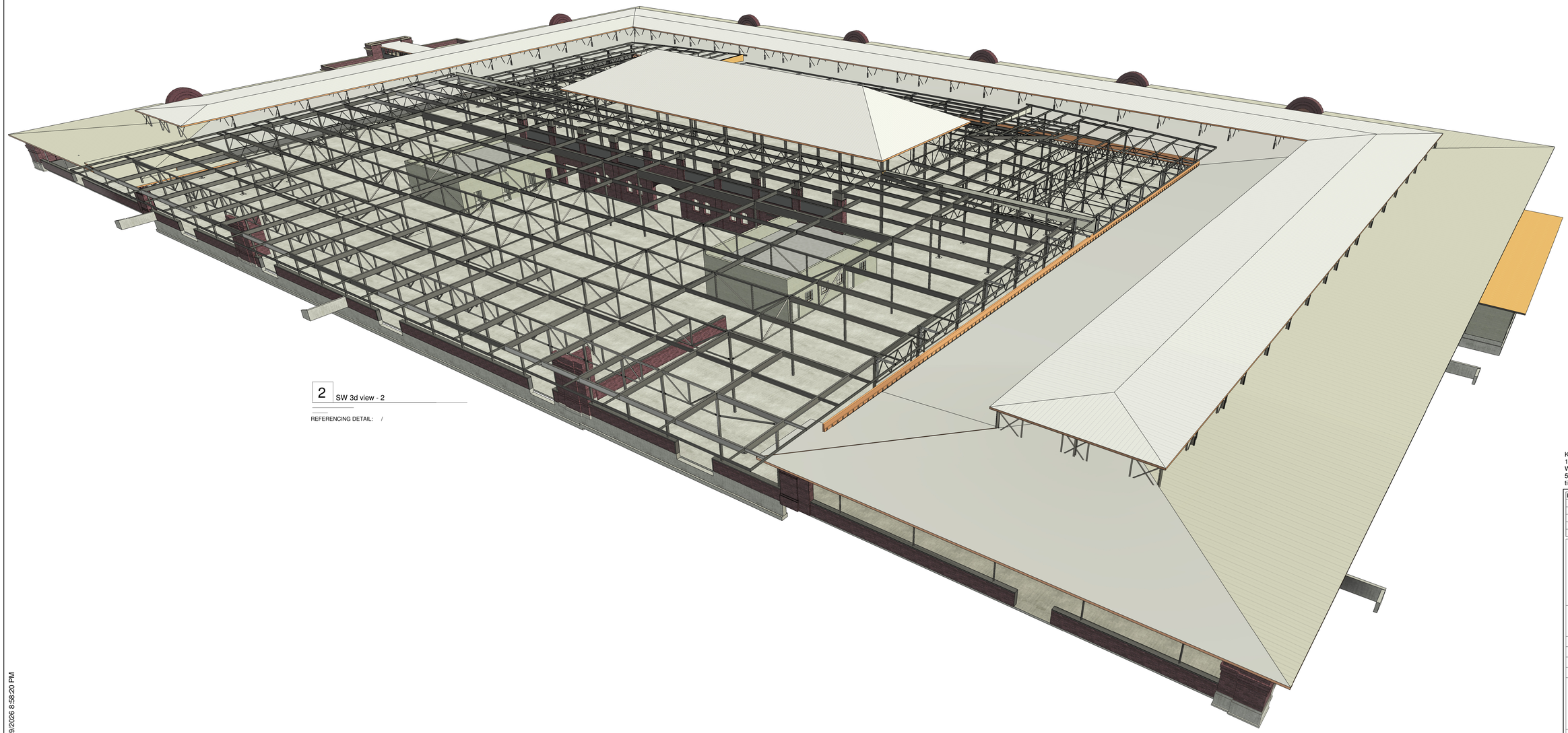
Project Number: CSWB2601
Date: 03/10/2026

S001

SCALE:

3/9/2026 8:57:57 PM





2 SW 3d view - 2

REFERENCING DETAIL: /

3/9/2026 8:58:20 PM

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No.	Date	Description
	031026	ISSUE

ISF - SWINE BARN UPDATES - PHASE 2

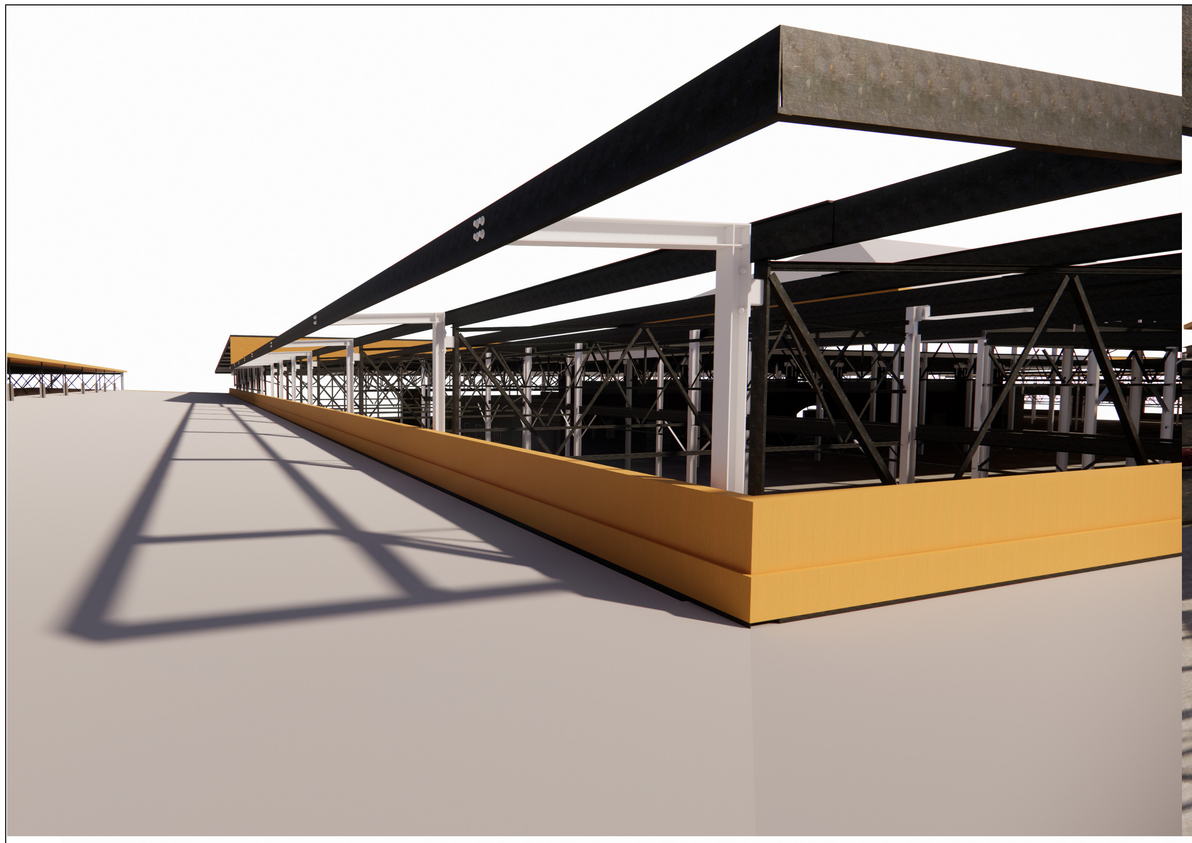
STRUCTURAL 3D IMAGES

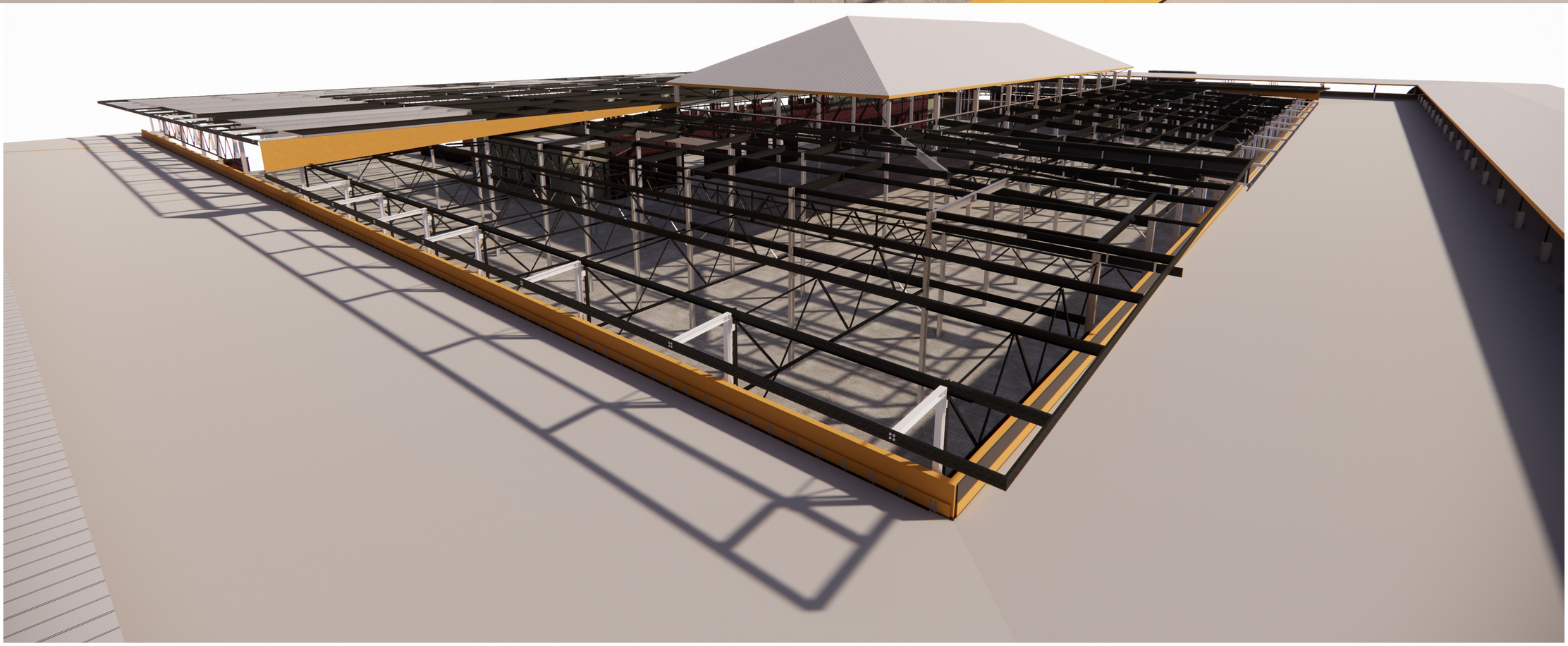
Project Number: CSWB2601

Date: 03/10/2026

S002

SCALE:





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No.	Date	Description
	031026	ISSUE

ISF - SWINE BARN UPDATES - PHASE 2

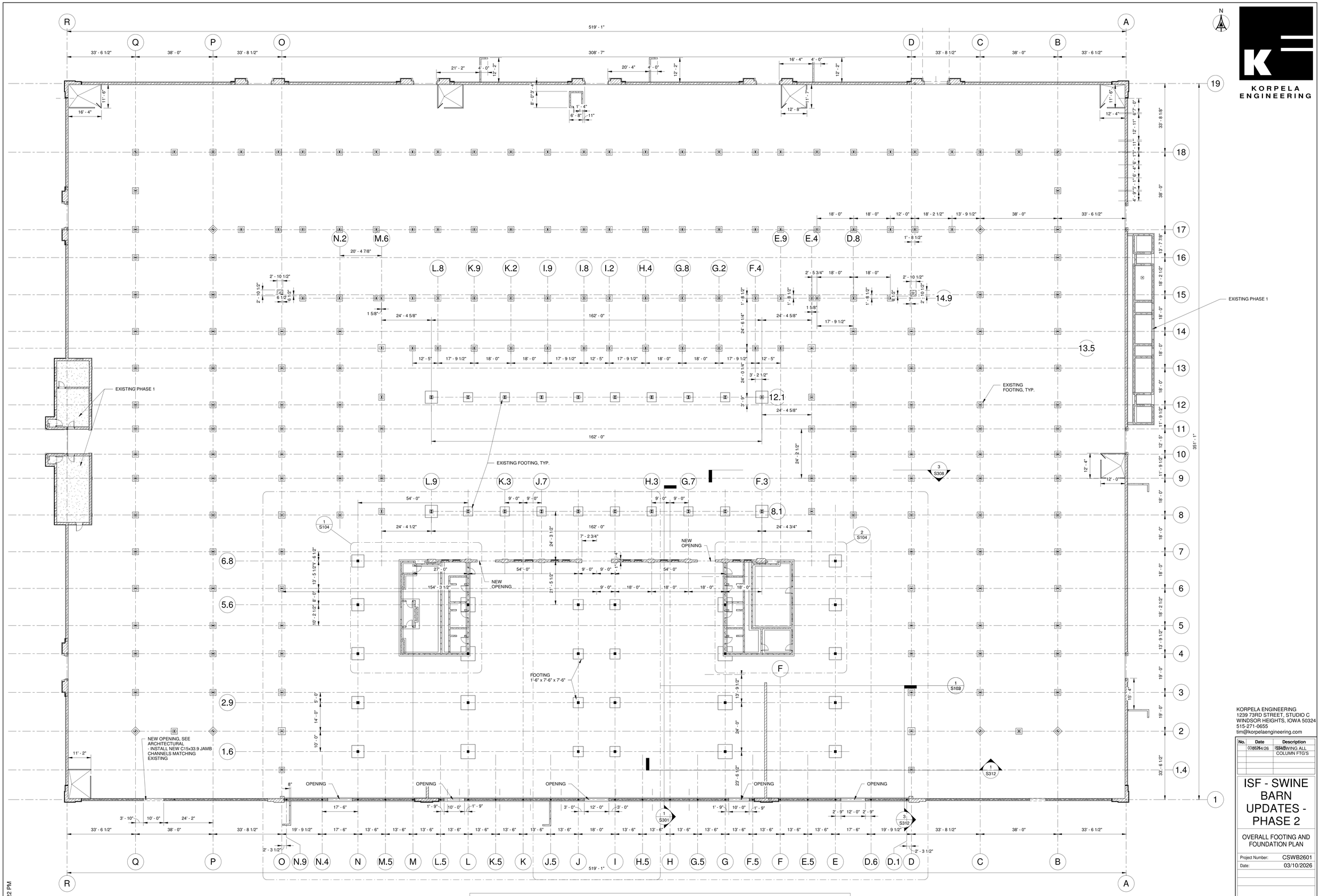
STRUCTURAL 3D IMAGES

Project Number:	CSWB2601
Date:	03/10/2026

S003

SCALE:

3/9/2026 8:58:21 PM



NOTE: SEE CIVIL FOR INTERIOR SLAB REMOVAL AND REPLACEMENT, PLAN AND DETAILS

1 OVERALL FOOTING AND FOUNDATION PLAN

1/16" = 1'-0"

REFERENCING DETAIL: 1 / SD102

3/9/2026 8:58:22 PM

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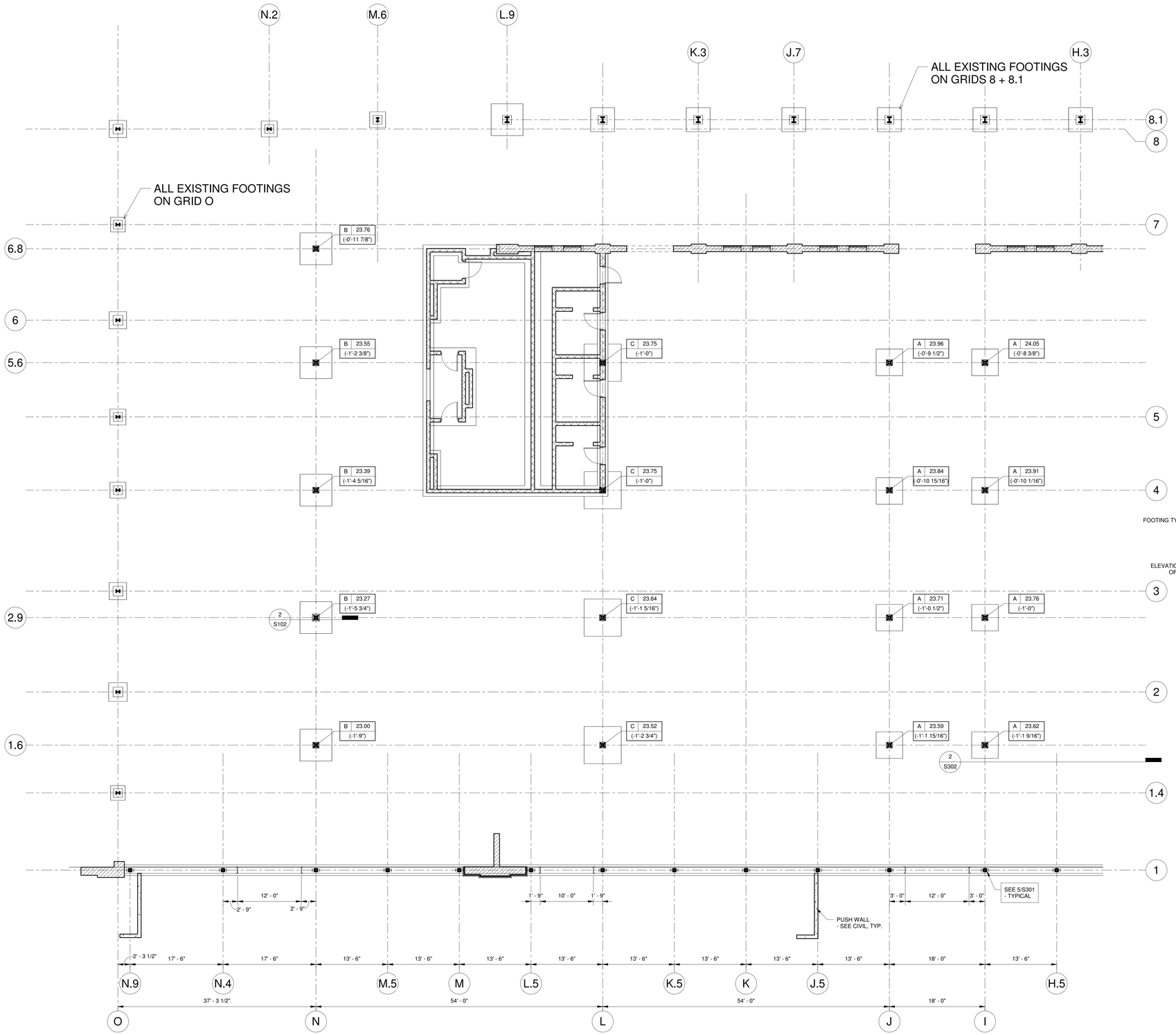
No.	Date	Description
	03/03/26	ISSUED FOR BIDDING
	03/04/26	ISSUED FOR PERMIT
		ADDED SWING ALL COLUMN FTG'S

ISF - SWINE BARN UPDATES - PHASE 2

OVERALL FOOTING AND FOUNDATION PLAN

Project Number:	CSWB2601
Date:	03/10/2026
SCALE:	1/16" = 1'-0"

S101



NOTE: SEE CIVIL FOR INTERIOR SLAB REMOVAL AND REPLACEMENT, PLAN AND DETAILS

1 ENLARGED FTG. & FND. PLAN - WEST

1/8" = 1'-0"

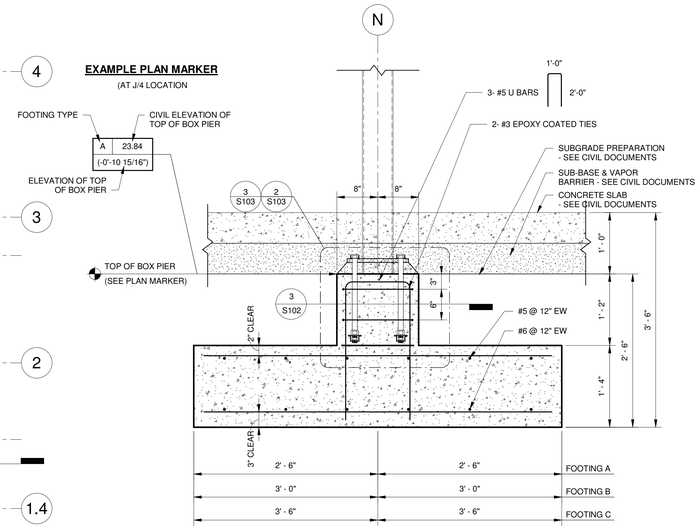
REFERENCING DETAIL: 1 / S101

KORPELA ENGINEERING

Box Pier Plan Marker Schedule (030626) **ISF Swine Barn Improvements phase 2**
Iowa State Fair Grounds

Location	Footing Type	Top of Box Pier Civil Elevation	Top of Box Pier Structural Elevation	Bottom of Deck Line Structural Elevation
E/1.6	B	24.21	(-0'-6 ½")	(+23'-7 ½")
E/2.9	B	24.34	(-0'-4 15/16")	(+24'-1 ½")
E/4	B	24.54	(-0'-2 ½")	(+24'-7 ½")
E/5.6	B	24.68	(-0'-0 13/16")	(+25'-1 ½")
E/6.8	B	24.77	(+0'-0 1/4")	(+25'-6 7/8")
G/1.6	C	23.88	(-0'-10 7/16")	(+23'-7 ½")
G/2.9	C	24.19	(-0'-6 3/4")	(+24'-1 ½")
G/4	C	24.50	(-0'-3")	(+24'-7 ½")
G/5.6	C	24.50	(-0'-3")	(+25'-1 ½")
I/1.6	A	23.62	(-1'-1 9/16")	(+23'-7 ½")
I/2.9	A	23.76	(-1'-0")	(+24'-1 ½")
I/4	A	23.91	(-0'-10 1/16")	(+24'-7 ½")
I/5.6	A	24.05	(-0'8 3/8")	(+25'-1 ½")
J/1.6	A	23.59	(-1'-1 15/16")	(+23'-7 ½")
J/2.9	A	23.71	(-1'-0 ½")	(+24'-1 ½")
J/4	A	23.84	(-0'-10 15/16")	(+24'-7 ½")
J/5.6	A	23.96	(-0'-9 ½")	(+25'-1 ½")
L/1.6	C	23.52	(-1'-2 3/4")	(+23'-7 ½")
L/2.9	C	23.64	(-1'-1 5/16")	(+24'-1 ½")
L/4	C	23.75	(-1'-0")	(+24'-7 ½")
L/5.6	C	23.75	(-1'-0")	(+25'-1 ½")
N/1.6	B	23.00	(-1'-9")	(+23'-7 ½")
N/2.9	B	23.27	(-1'-5 3/4")	(+24'-1 ½")
N/4	B	23.39	(-1'-4 5/16")	(+24'-7 ½")
N/5.6	B	23.55	(-1'-2 3/8")	(+25'-1 ½")
N/6.8	B	23.76	(-0'-11 7/8")	(+25'-6 7/8")

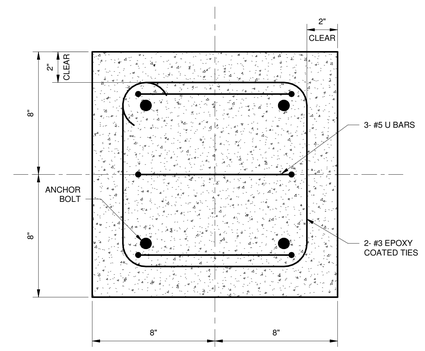
EXAMPLE PLAN MARKER
(AT J/4 LOCATION



2 MASTER FOOTING AND BOX PIER DETAIL

1" = 1'-0"

REFERENCING DETAIL: 1 / S102



3 PLAN SECTION AT BOX PIER

3" = 1'-0"

REFERENCING DETAIL: 2 / S102

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ISF - SWINE BARN UPDATES - PHASE 2

WEST ENLARGED FTG. & FND. PLAN

Project Number: CSWB2601
Date: 03/10/2026

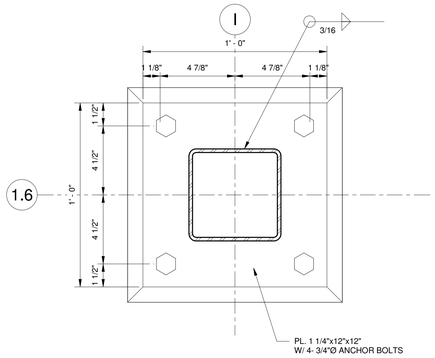
S102

SCALE: As indicated

3/9/2026 8:58:22 PM

Box Pier Plan Marker Schedule (030626) **ISF Swine Barn Improvements phase 2**
Iowa State Fair Grounds

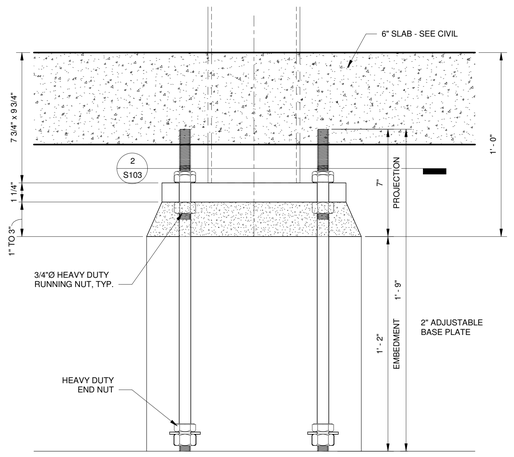
Location	Footing Type	Top of Box Pier Civil Elevation	Top of Box Pier Structural Elevation	Bottom of Deck Line Structural Elevation
E/1.6	B	24.21	(-0'-6 ½")	(+23'-7 ½")
E/2.9	B	24.34	(-0'-4 15/16")	(+24'-1 ½")
E/4	B	24.54	(-0'-2 ½")	(+24'-7 ½")
E/5.6	B	24.68	(-0'-0 13/16")	(+25'-1 ½")
E/6.8	B	24.77	(+0'-0 1/4")	(+25'-6 7/8")
G/1.6	C	23.88	(-0'-10 7/16")	(+23'-7 ½")
G/2.9	C	24.19	(-0'-6 3/4")	(+24'-1 ½")
G/4	C	24.50	(-0'-3")	(+24'-7 ½")
G/5.6	C	24.50	(-0'-3")	(+25'-1 ½")
I/1.6	A	23.62	(-1'-1 9/16")	(+23'-7 ½")
I/2.9	A	23.76	(-1'-0")	(+24'-1 ½")
I/4	A	23.91	(-0'-10 1/16")	(+24'-7 ½")
I/5.6	A	24.05	(-0'8 3/8")	(+25'-1 ½")
J/1.6	A	23.59	(-1'-1 15/16")	(+23'-7 ½")
J/2.9	A	23.71	(-1'-0 ½")	(+24'-1 ½")
J/4	A	23.84	(-0'-10 15/16")	(+24'-7 ½")
J/5.6	A	23.96	(-0'-9 ½")	(+25'-1 ½")
L/1.6	C	23.52	(-1'-2 3/4")	(+23'-7 ½")
L/2.9	C	23.64	(-1'-1 5/16")	(+24'-1 ½")
L/4	C	23.75	(-1'-0")	(+24'-7 ½")
L/5.6	C	23.75	(-1'-0")	(+25'-1 ½")
N/1.6	B	23.00	(-1'-9")	(+23'-7 ½")
N/2.9	B	23.27	(-1'-5 3/4")	(+24'-1 ½")
N/4	B	23.39	(-1'-4 5/16")	(+24'-7 ½")
N/5.6	B	23.55	(-1'-2 3/8")	(+25'-1 ½")
N/6.8	B	23.76	(-0'-11 7/8")	(+25'-6 7/8")



2 BASE PLATE PLAN DETAIL

3" = 1'-0"

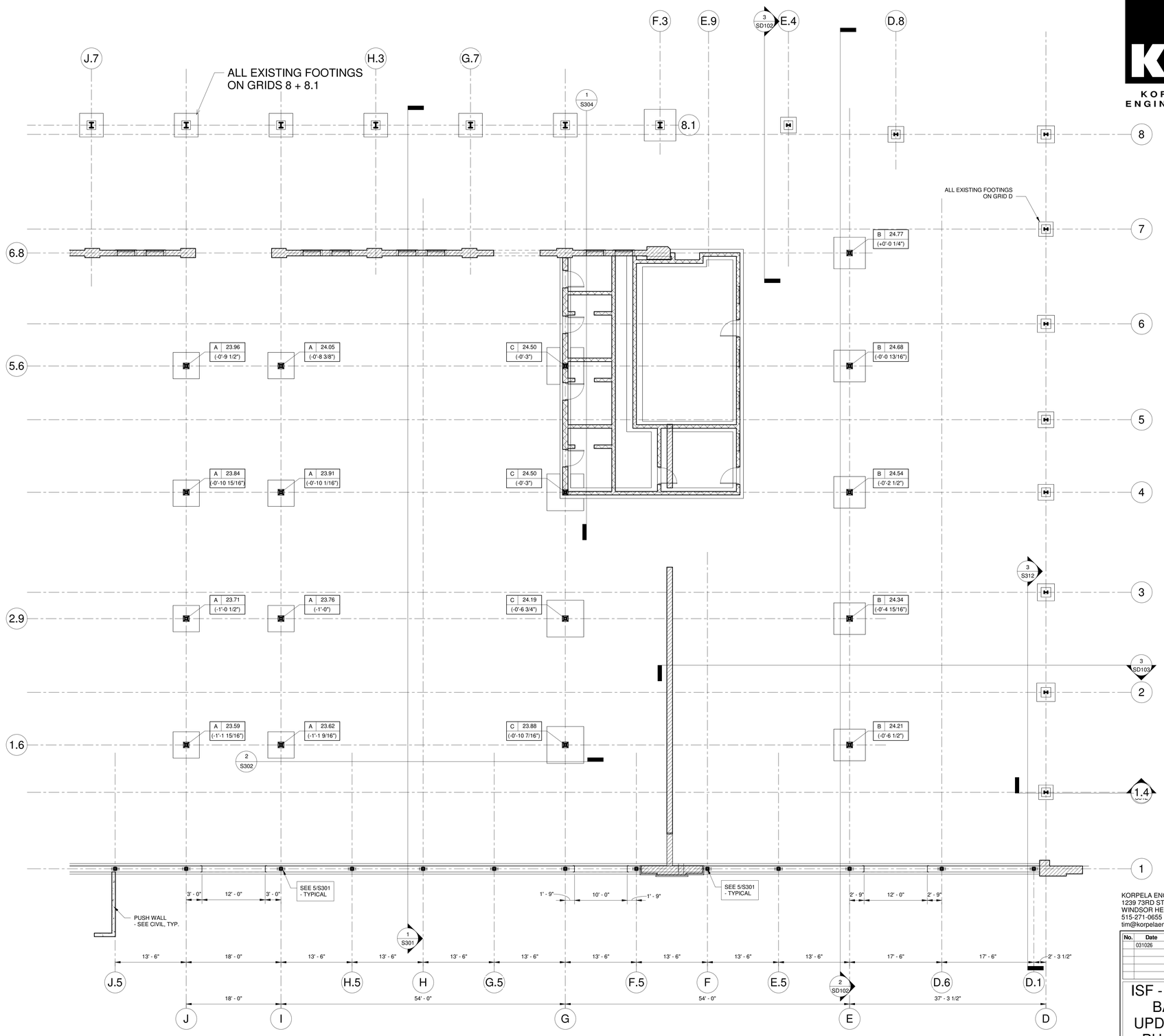
REFERENCING DETAIL: 2 / S102



3 COLUMN BASE PLATE W/ FIELD ADJUSTABILITY

3" = 1'-0"

REFERENCING DETAIL: 2 / S102



1 ENLARGED FTG. & FND. PLAN - EAST

1/8" = 1'-0"

REFERENCING DETAIL: 1 / S101

NOTE: SEE CIVIL FOR INTERIOR SLAB REMOVAL AND REPLACEMENT, PLAN AND DETAILS

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No.	Date	Description
	031026	ISSUE

ISF - SWINE BARN UPDATES - PHASE 2

EAST ENLARGED FTG. & FND. PLAN

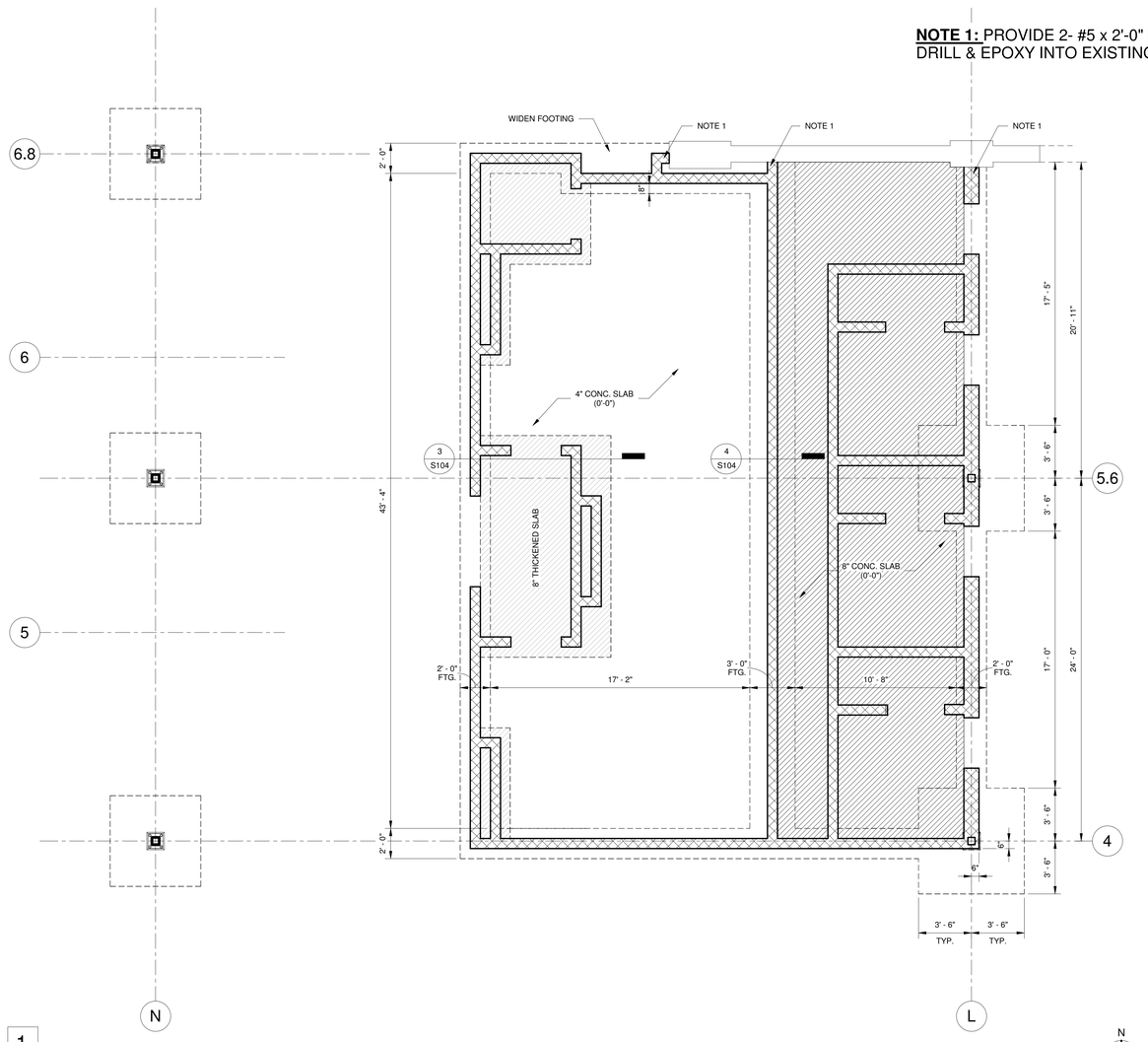
Project Number: CSWB2601
Date: 03/10/2026

S103

SCALE: As indicated

3/9/2026 8:58:23 PM

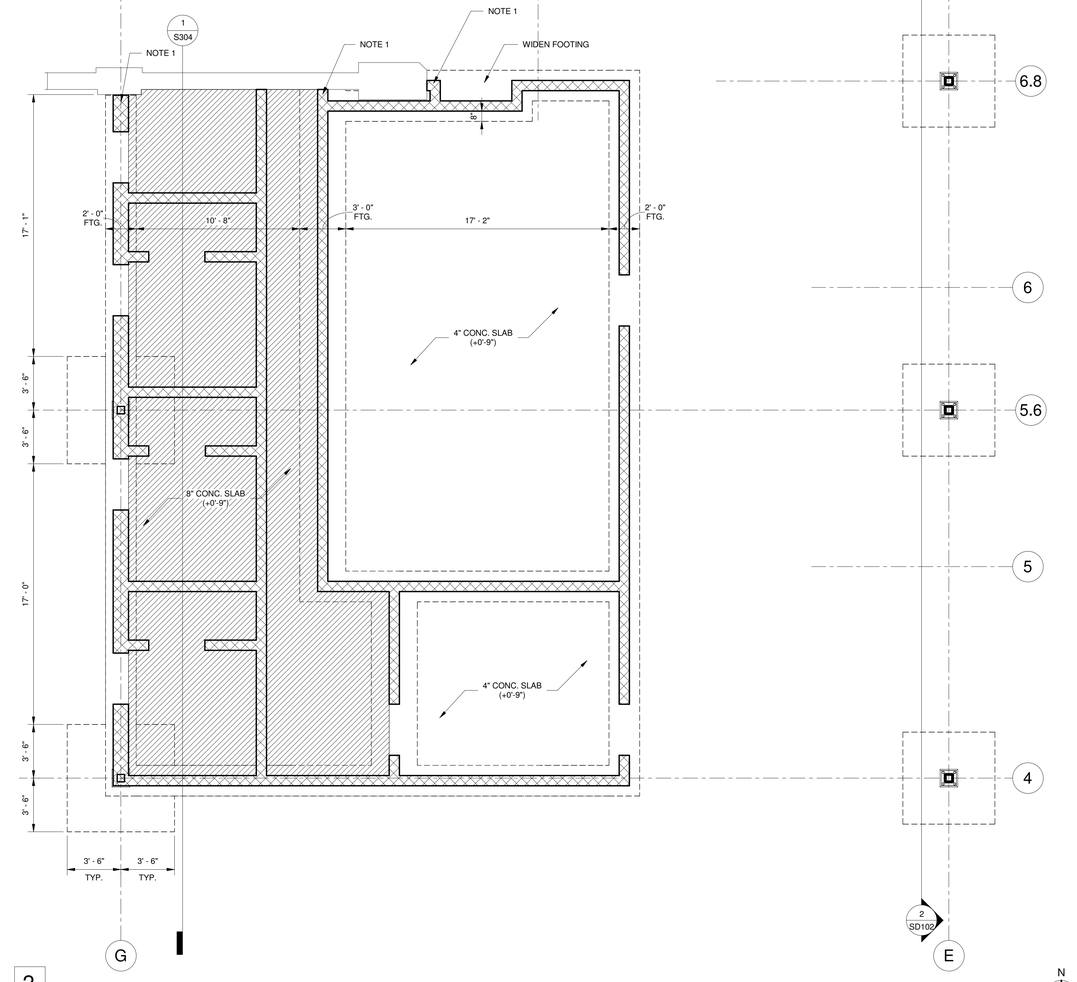
NOTE 1: PROVIDE 2- #5 x 2'-0" DWLS
DRILL & EPOXY INTO EXISTING W/ 8" EMBED



1 ENLARGED PLAN - GROUP "B"

1/4" = 1'-0"

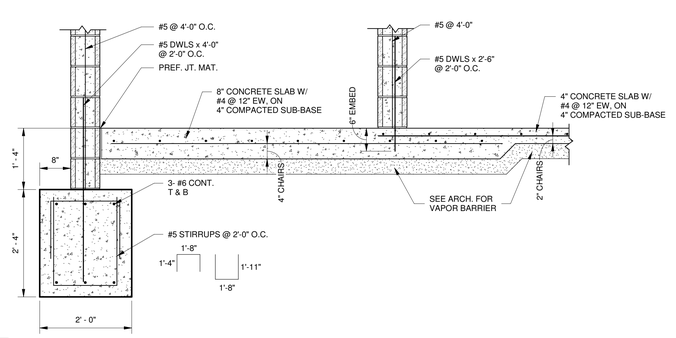
REFERENCING DETAIL: 1 / S101



2 ENLARGED PLAN - GROUP "C"

1/4" = 1'-0"

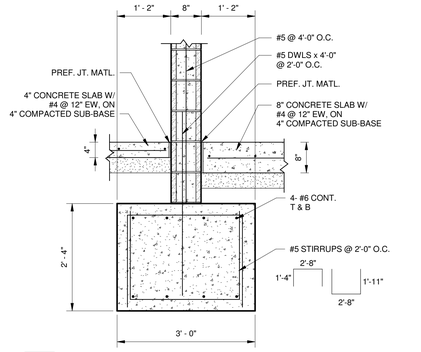
REFERENCING DETAIL: 1 / S101



3 2'-0" WIDE FND. SECTION @ R.R.
THICKENED SLAB

3/4" = 1'-0"

REFERENCING DETAIL: 1 / S104



4 3'-0" WIDE FND. SECTION @ R.R.
CENTER WALL

3/4" = 1'-0"

REFERENCING DETAIL: 1 / S104

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No.	Date	Description
	031026	ISSUE

ISF - SWINE BARN UPDATES - PHASE 2

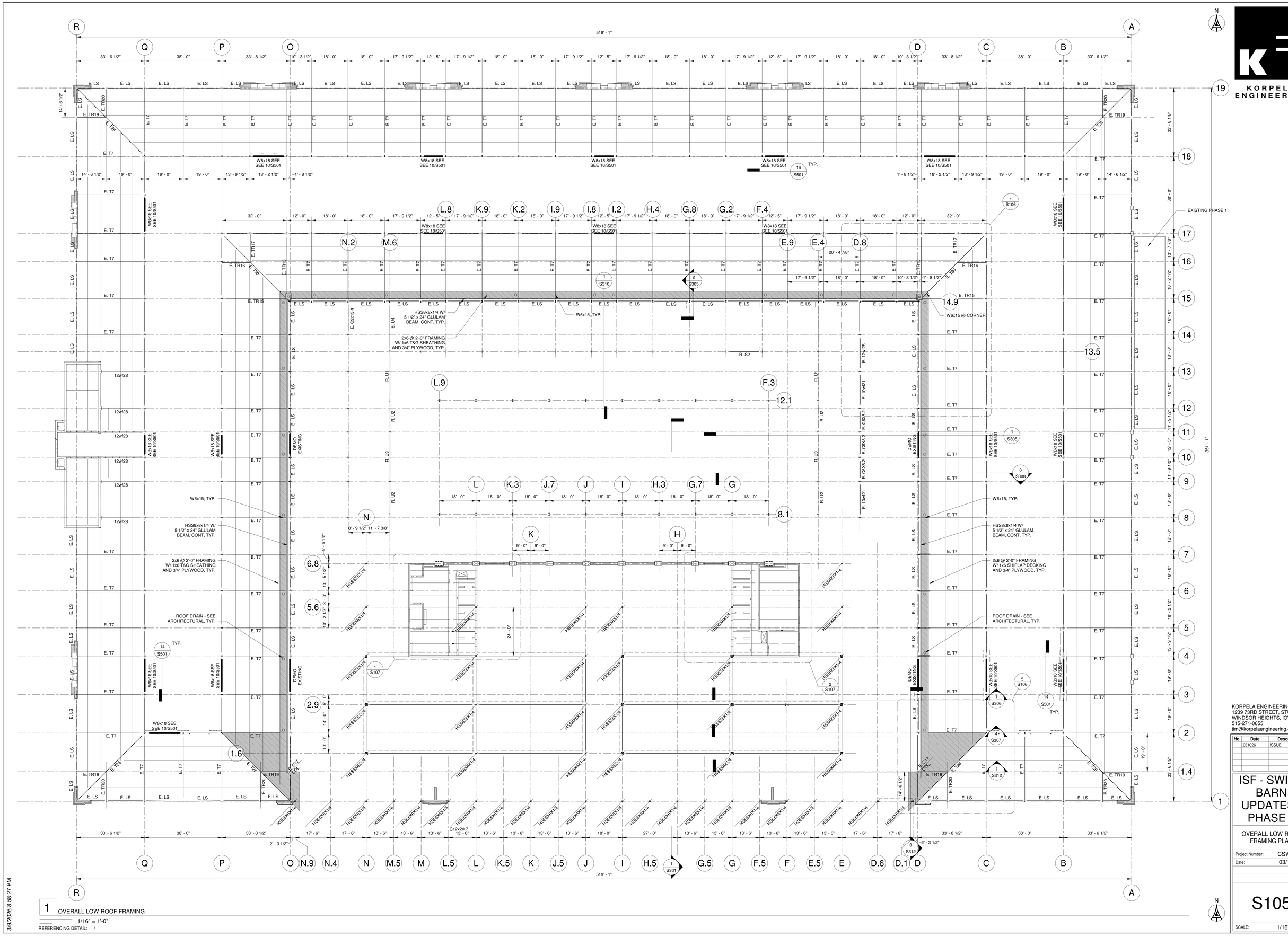
ENLARGED FOOTING AND SLAB PLANS

Project Number:	CSWB2601
Date:	03/10/2026

S104

SCALE: As indicated

3/9/2026 8:58:24 PM



1 OVERALL LOW ROOF FRAMING

1/16" = 1'-0"

REFERENCING DETAIL: /

3/9/2026 8:58:27 PM

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No.	Date	Description
	031026	ISSUE

ISF - SWINE BARN UPDATES - PHASE 2

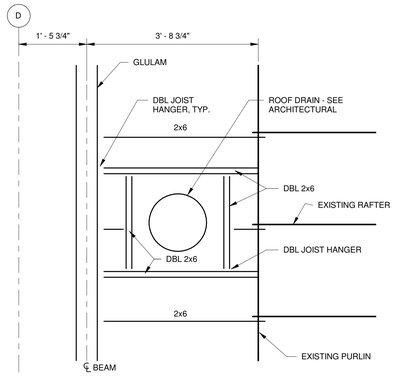
OVERALL LOW ROOF FRAMING PLAN

Project Number: CSWB2601

Date: 03/10/2026

S105

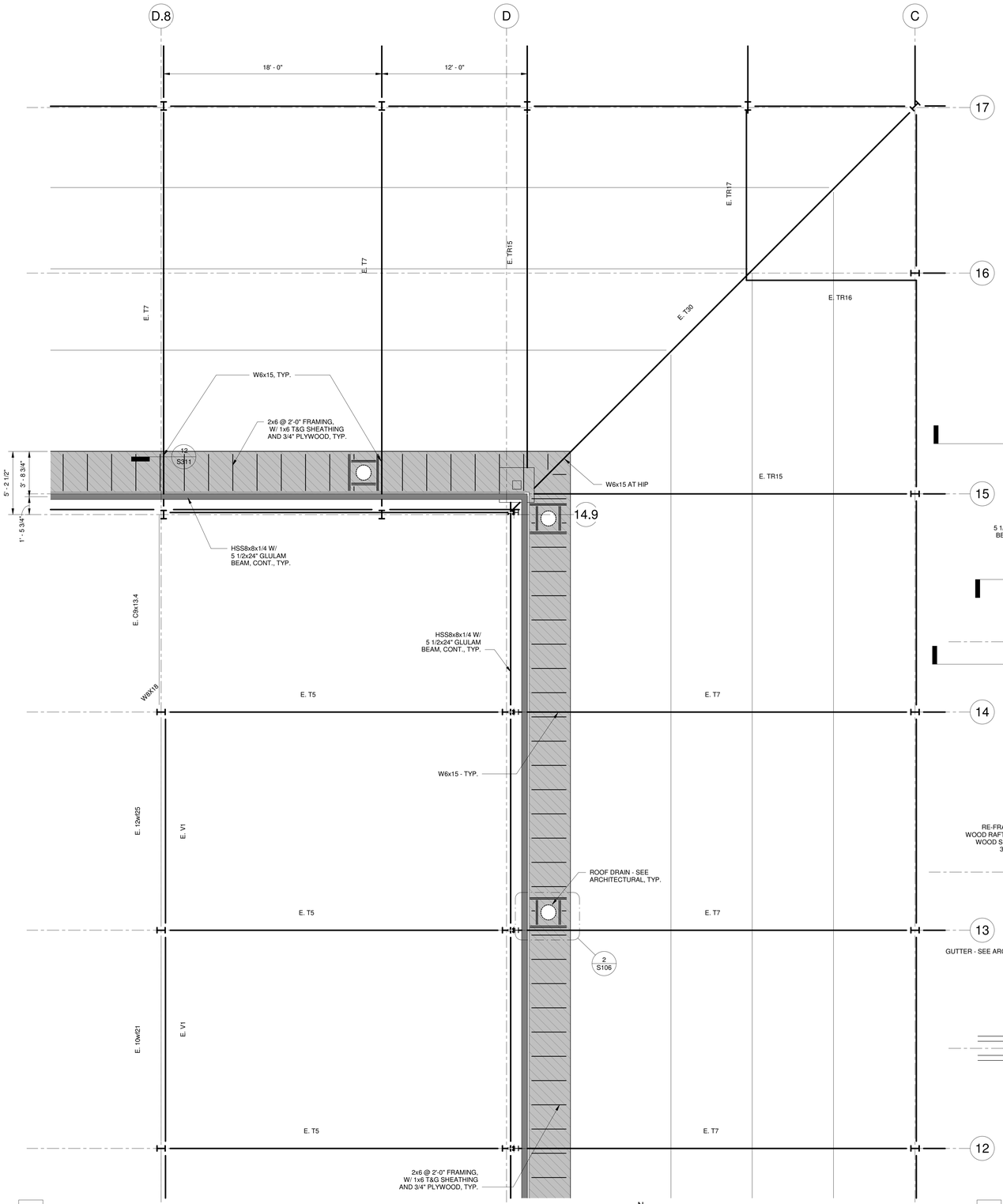
SCALE: 1/16" = 1'-0"



2 TYPICAL DRAIN SUMP PAN FRAMING DETAIL

3/4" = 1'-0"

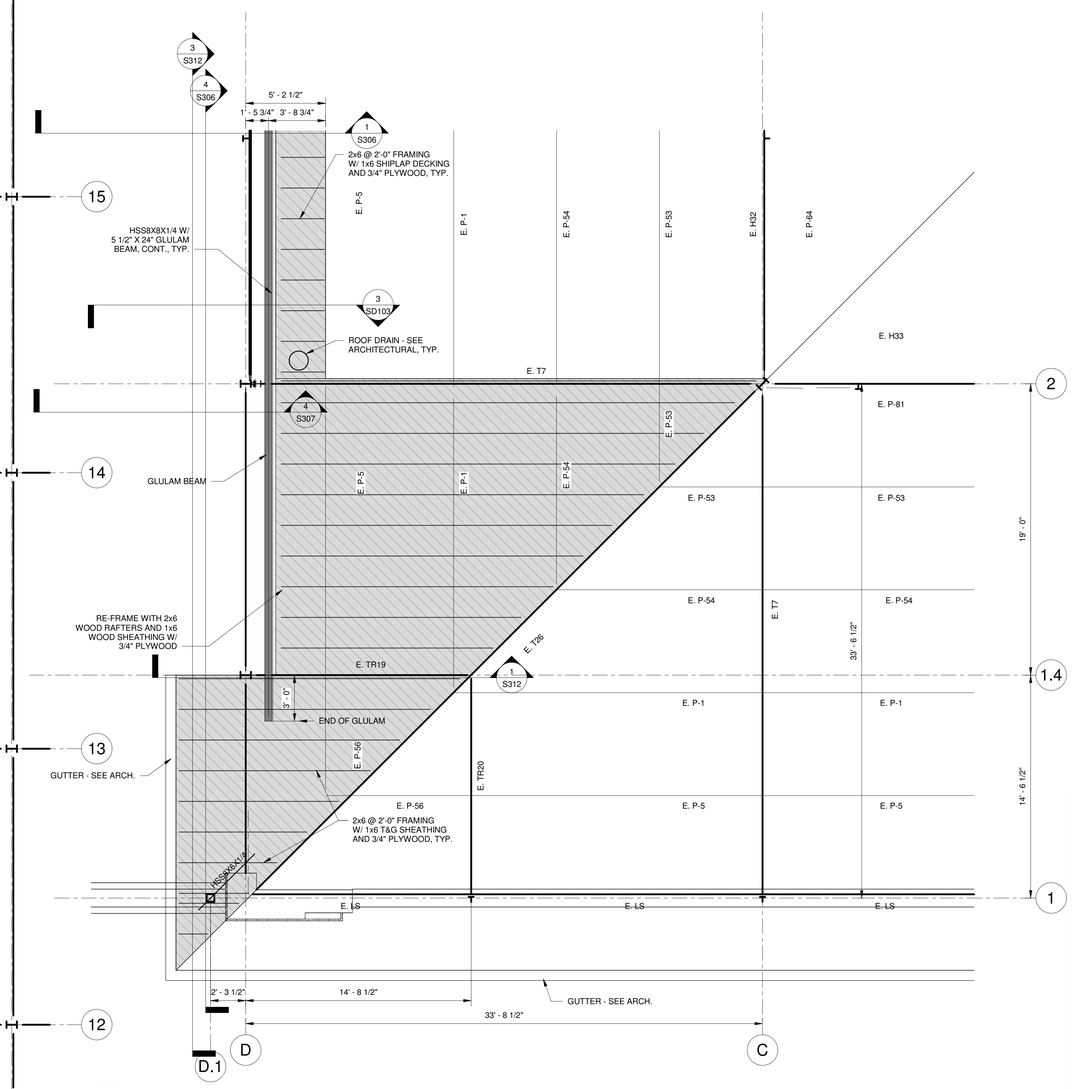
REFERENCING DETAIL: 1 / S106



1 LOW ROOF FRAMING AT ROOF DRAIN LINE

1/4" = 1'-0"

REFERENCING DETAIL: 1 / S105



5 HIP FRAMING RECONFIGURATION PLAN AT LOW ROOF

1/4" = 1'-0"

REFERENCING DETAIL: 1 / S105

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No.	Date	Description
	031026	ISSUE

ISF - SWINE BARN UPDATES - PHASE 2

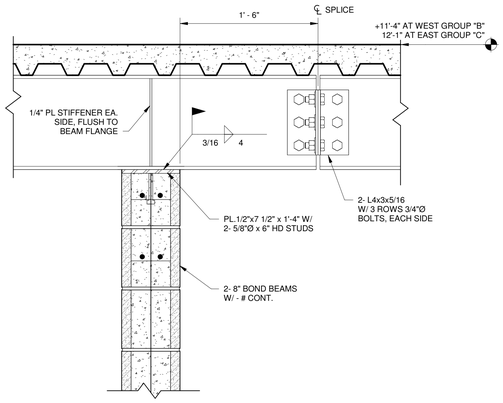
ENLARGED LOW ROOF FRAMING PLANS

Project Number:	CSWB2601
Date:	03/10/2026

S106

SCALE: As indicated

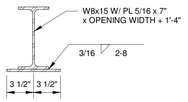
3/9/2026 8:58:28 PM



4 NEW ROOF BEAM SPLICE

1 1/2" = 1'-0"

REFERENCING DETAIL: 1 / S107



10 TYPICAL MECHANICAL LINTEL ML6

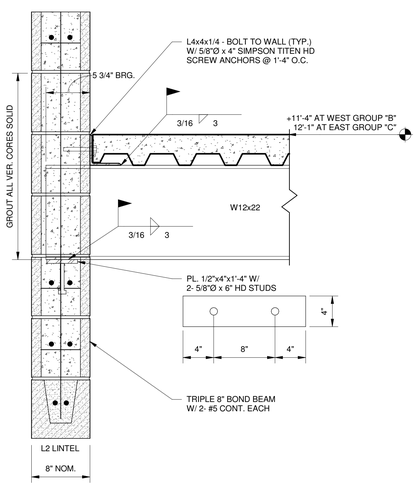
1 1/2" = 1'-0"

REFERENCING DETAIL: /

13 MECHANICAL ML5 LINTEL

1 1/2" = 1'-0"

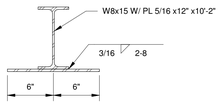
REFERENCING DETAIL: /



3 NEW ROOF BEAM BEARING AND L2 LINTEL

1 1/2" = 1'-0"

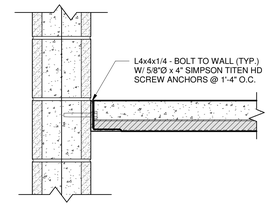
REFERENCING DETAIL: 1 / S107



14 L4 LINTEL

1 1/2" = 1'-0"

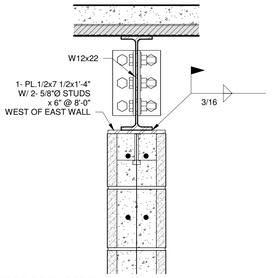
REFERENCING DETAIL: /



5 ANGLE LEDGER DETAIL

1 1/2" = 1'-0"

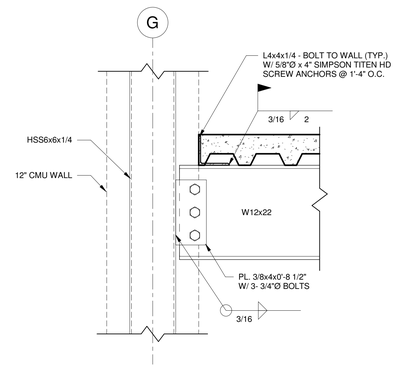
REFERENCING DETAIL: 1 / S107



7 CMU TO BEAM DETAIL

1 1/2" = 1'-0"

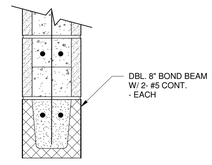
REFERENCING DETAIL: 2 / S107



6 BEAM TO COLUMN DETAIL

1 1/2" = 1'-0"

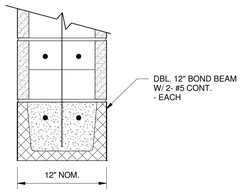
REFERENCING DETAIL: 2 / S107



11 L1 LINTEL

1 1/2" = 1'-0"

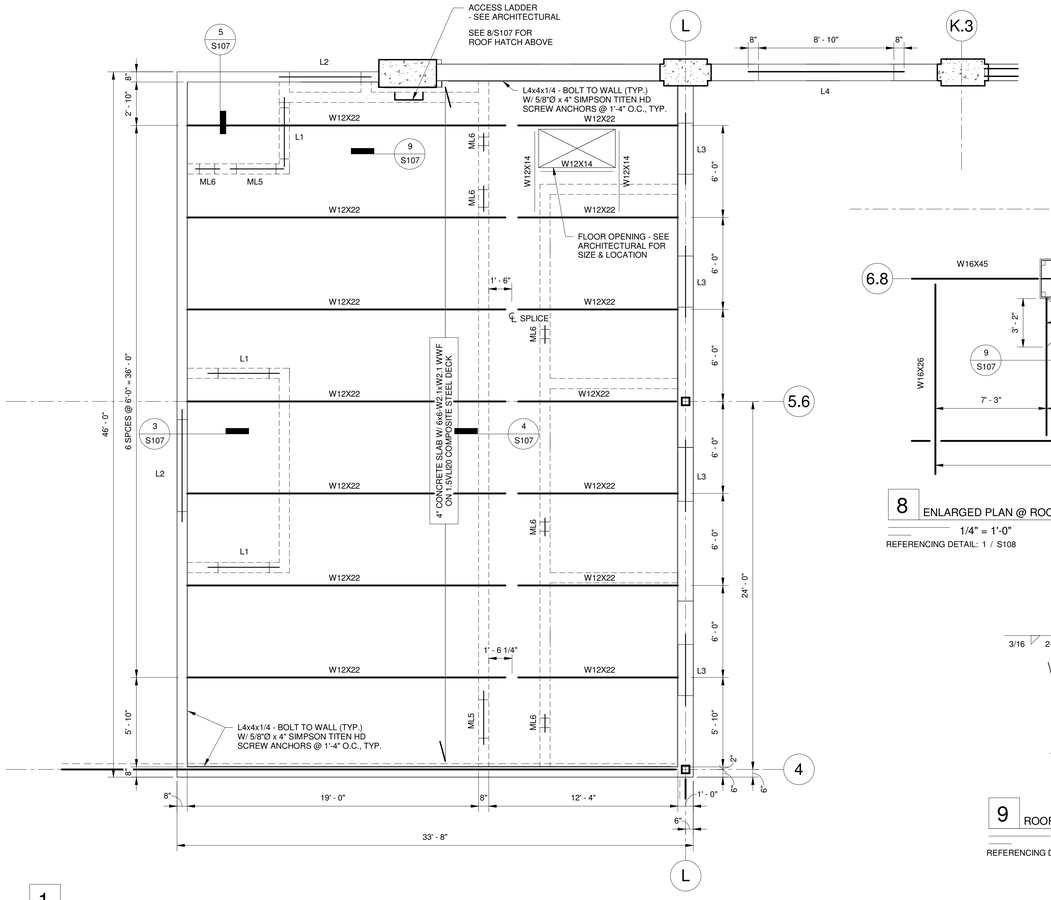
REFERENCING DETAIL: /



12 L3 LINTEL

1 1/2" = 1'-0"

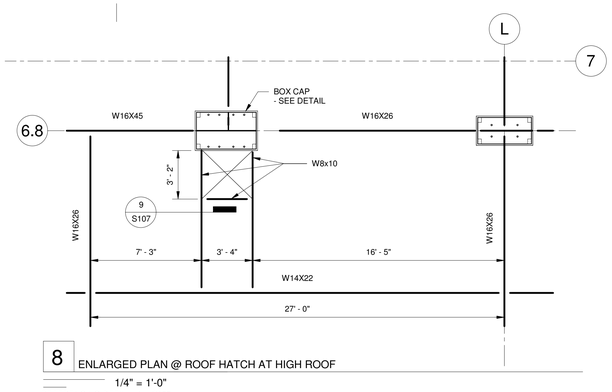
REFERENCING DETAIL: /



1 MEZZANINE FLOOR PLAN - GROUP "B"

1/4" = 1'-0"

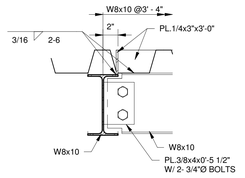
REFERENCING DETAIL: 1 / S105



8 ENLARGED PLAN @ ROOF HATCH AT HIGH ROOF

1/4" = 1'-0"

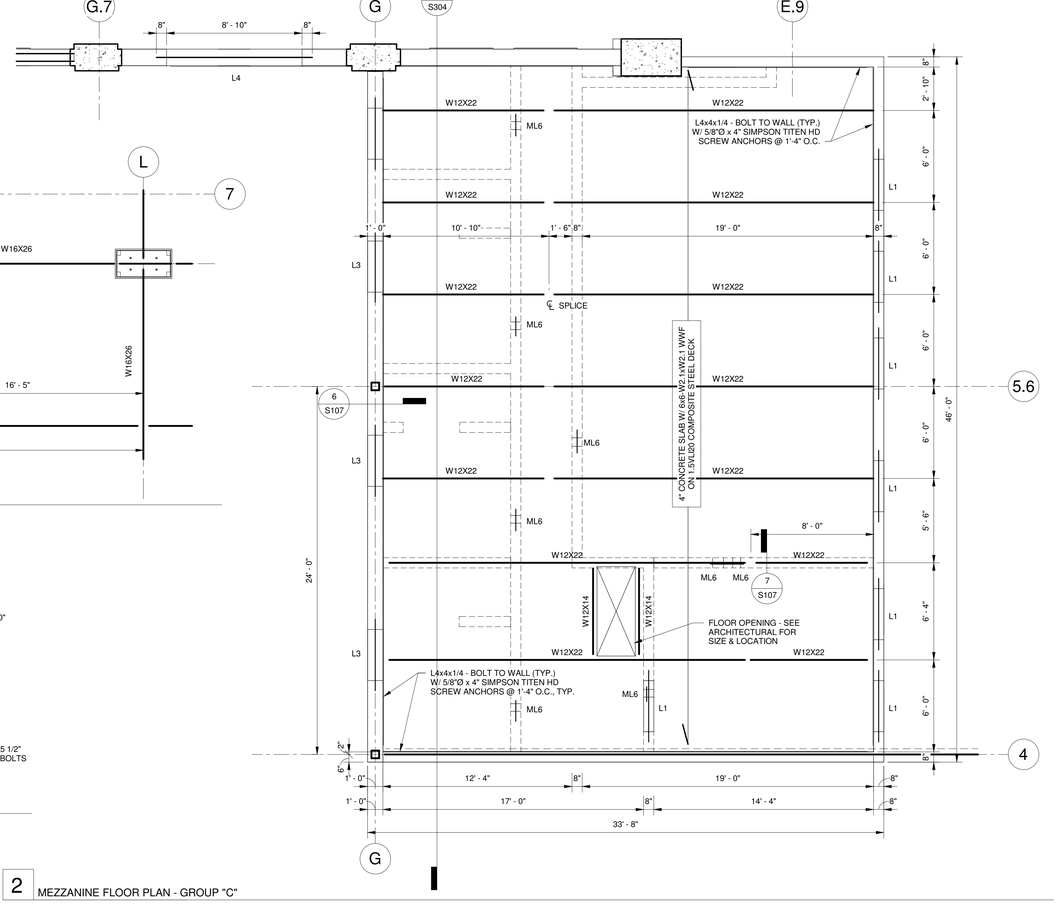
REFERENCING DETAIL: 1 / S108



9 ROOF HATCH BEAM DETAIL

1 1/2" = 1'-0"

REFERENCING DETAIL: 1 / S107



2 MEZZANINE FLOOR PLAN - GROUP "C"

1/4" = 1'-0"

REFERENCING DETAIL: 1 / S105

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ISF - SWINE BARN UPDATES - PHASE 2

ENLARGED MEZZANINE FRAMING PLANS

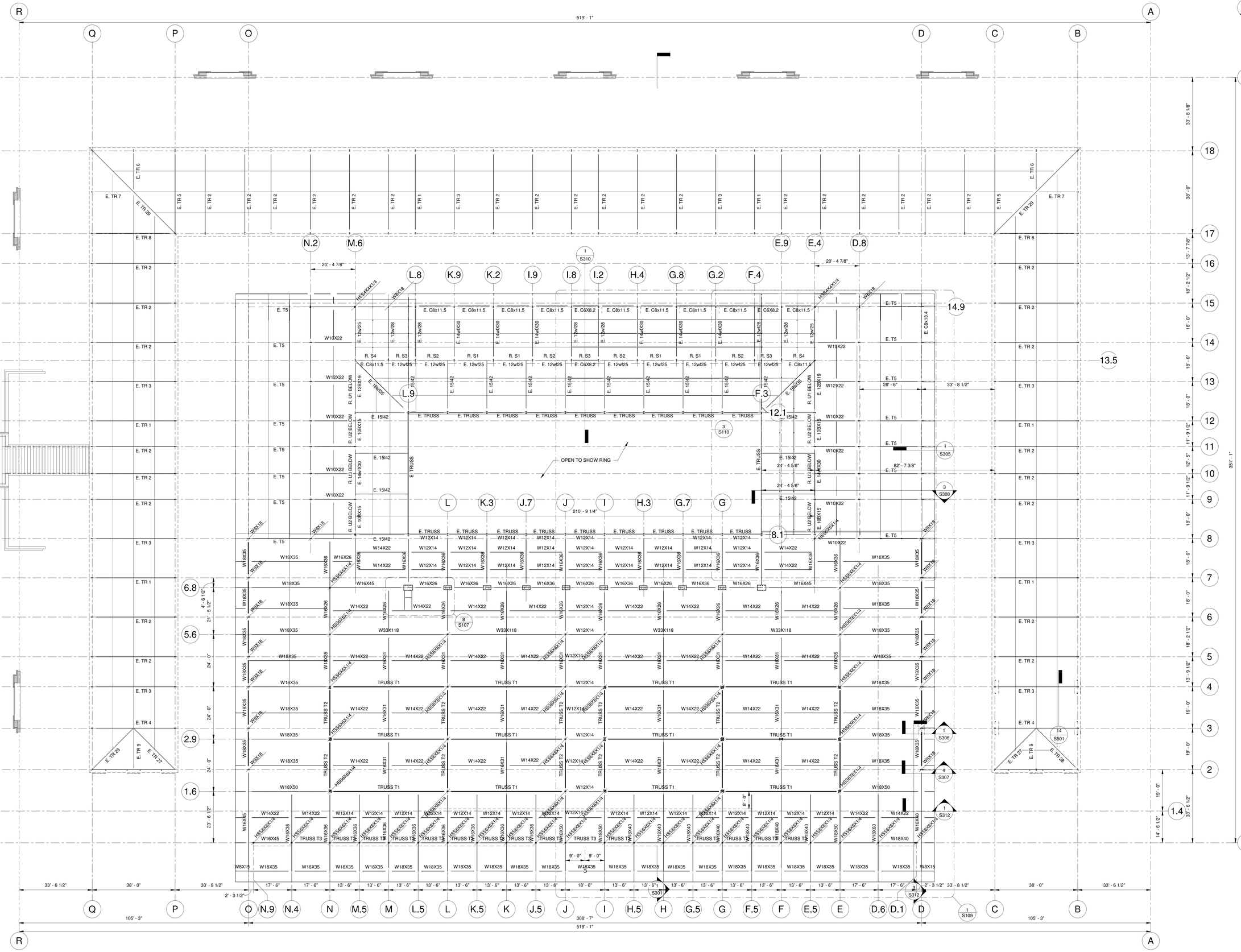
Project Number: CSWB2601

Date: 03/10/2026

S107

SCALE: As indicated

3/9/2026 8:58:29 PM



1 OVERALL HIGH ROOF FRAMING

1/16" = 1'-0"

REFERENCING DETAIL: /

3/9/2026 8:58:35 PM

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OVERALL HIGH ROOF FRAMING PLAN

Project Number: CSWB2601
Date: 03/10/2026

S108

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

ROTATED N

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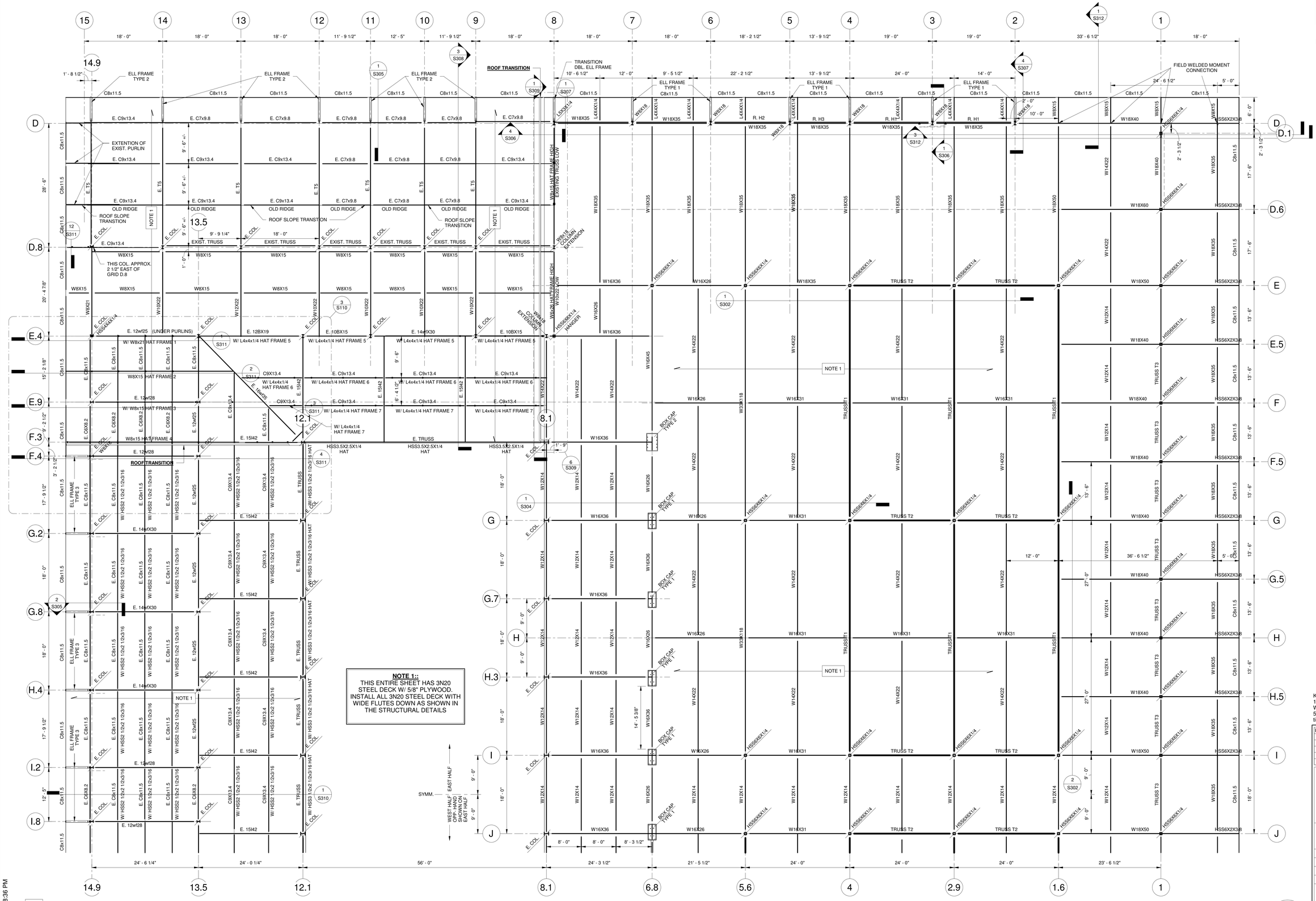

1 ENLARGED HIGH ROOF FRAMING

1/8" = 1'-0"

REFERENCING DETAIL: 1 / S108

3/9/2026 8:58:36 PM

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ENLARGED HIGH ROOF FRAMING PLAN

Project Number: CSWB2601

Date: 03/10/2026

S109

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

ROTATED

N

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11 10 9 8 7

D D.8 E.4 E.9 F.3 F.4 G.2 E G

28' - 6" 20' - 4 7/8" 15' - 2 1/8" 9' - 2 1/2" 3' - 2 1/2" 17' - 9 1/2"

C8x11.5 ELL FRAME TYPE 2 E. C9x13.4 E. C7x9.8 TRANSITION DBL ELL FRAME LXX4X1/4 ELL FRAME TYPE 1 W18X35 W8X18

EXTENTION OF EXIST. PURLIN

E. T5 OLD RIDGE ROOF SLOPE TRANSTION ROOF SLOPE TRANSTION AT OLD RIDGE W8X15 W18X35

E. V1 E. V3 E. V2 W8X15 THIS COL. APPROX. 2 1/2" EAST OF GRID D.8 1'- 9"

W8X15 14.9 13.5 W8X21 FIELD WELDED MOMENT CONNECTION W10X22 W12X22 W16X36 W16X26

HSS4X4X1/4 E. 12wf25 (UNDER PURLINS) W/ W8x21 HAT FRAME 1 E. 12BX19 E. 10BX15 E. 14wfX30 W/ L4x4x1/4 HAT FRAME 5 HSS6X6X1/4 HANGER

E. C8x11.5 W8X15 HAT FRAME 2 C9X13.4 W/ L4x4x1/4 HAT FRAME 6 E. 15l42 E. 6wf35 W14X22

W8X18 E. 12wf28 W/ W8x15 HAT FRAME 3 E. C9x13.4 W/ L4x4x1/4 HAT FRAME 7

E. C6X8.2 E. 12wf25 12.1 8.1

HSS2x2x1/4 STUB COL. TYP. W8x15 HAT FRAME 4 E. 15l42 E. TRUSS HSS3.5X2.5X1/4 HAT HSS3.5X2.5X1/4 HAT HSS3.5X2.5X1/4 HAT W16X36

ELL FRAME TYPE 3 E. 12wf28 CLOSURE WALL - SEE DETAIL

C9X13.4 W/ HSS2 1/2x2 1/2x3/16 E. TRUSS 18' - 0" W12X14

ELL FRAME TYPE 3 E. 14wfX30 W16X36

3 ENLARGED NORTH FRAMING PLAN

1/4" = 1'-0"

REFERENCING DETAIL: 1 / S108

3/9/2026 8:58:37 PM

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ENLARGED HIGH ROOF FRAMING PLAN

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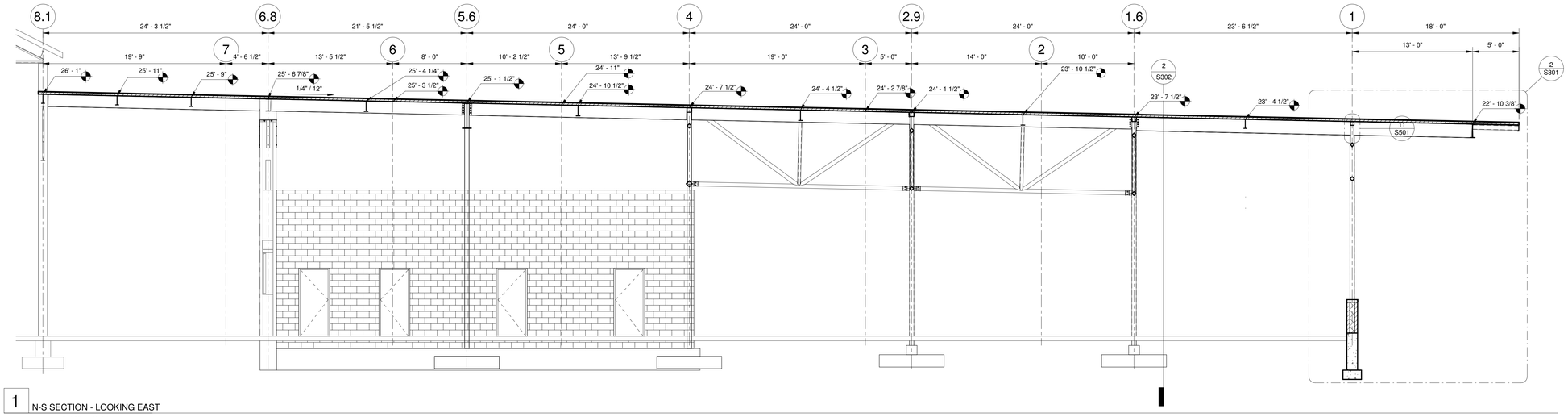
Date: 03/10/2026

S110

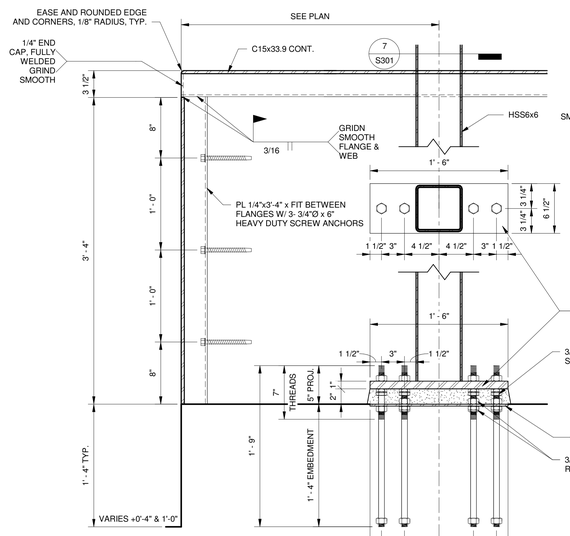
SCALE: 1/4" = 1'-0"



1 N-S SECTION - LOOKING EAST

3/16" = 1'-0"

REFERENCING DETAIL: 1 / S101

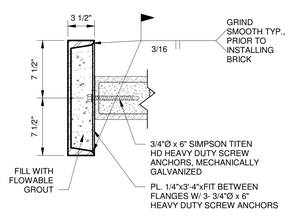


BRICK NOT SHOWN

5 BASE PLATE DETAIL

1 1/2" = 1'-0"

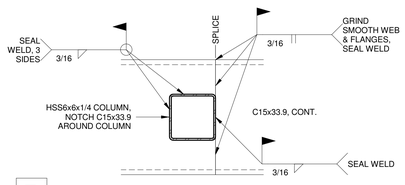
REFERENCING DETAIL: 3 / S301



6 CHANNEL JAMB SECTION DETAIL

1 1/2" = 1'-0"

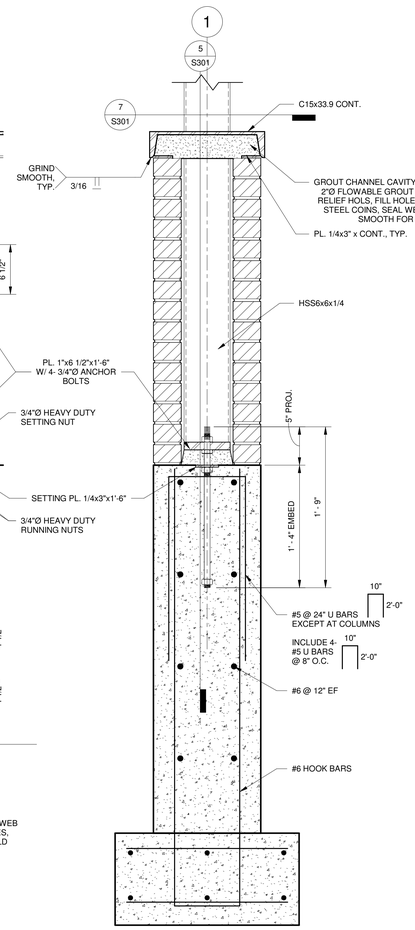
REFERENCING DETAIL: /



7 COL. TO CHANNEL DETAIL

1 1/2" = 1'-0"

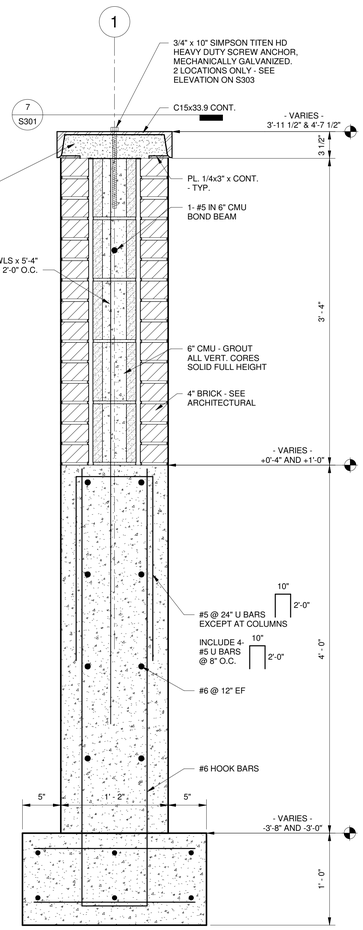
REFERENCING DETAIL: 3 / S301



3 COLUMN DETAIL @ GRID 1 @ MASONRY KNEE WALL

1 1/2" = 1'-0"

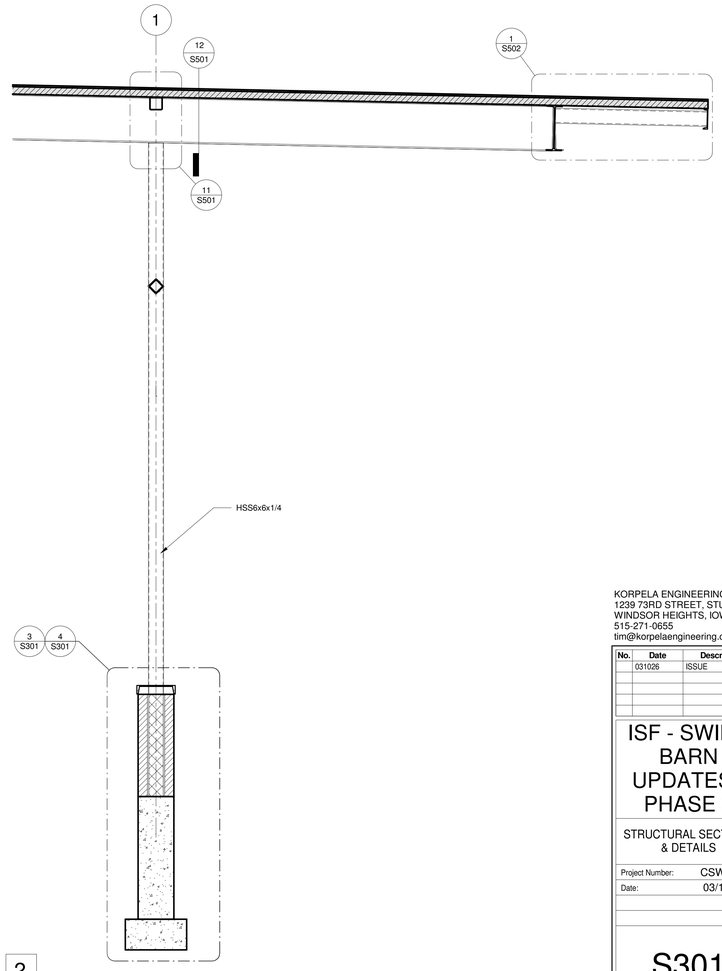
REFERENCING DETAIL: 2 / S301



4 FOUNDATION AND MASONRY KNEE WALL DETAIL @ GRID 1

1 1/2" = 1'-0"

REFERENCING DETAIL: 2 / S301



2 SECTION @ SOUTH ROOFS

1/2" = 1'-0"

REFERENCING DETAIL: 1 / S301

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ISF - SWINE BARN UPDATES - PHASE 2

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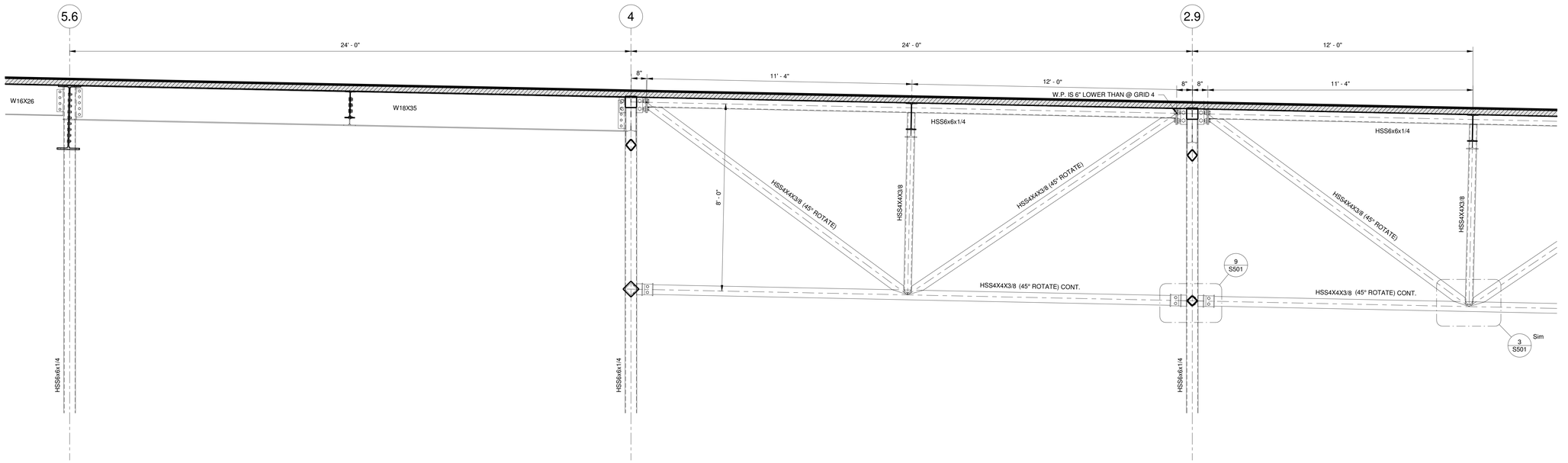
S301

SCALE: As indicated

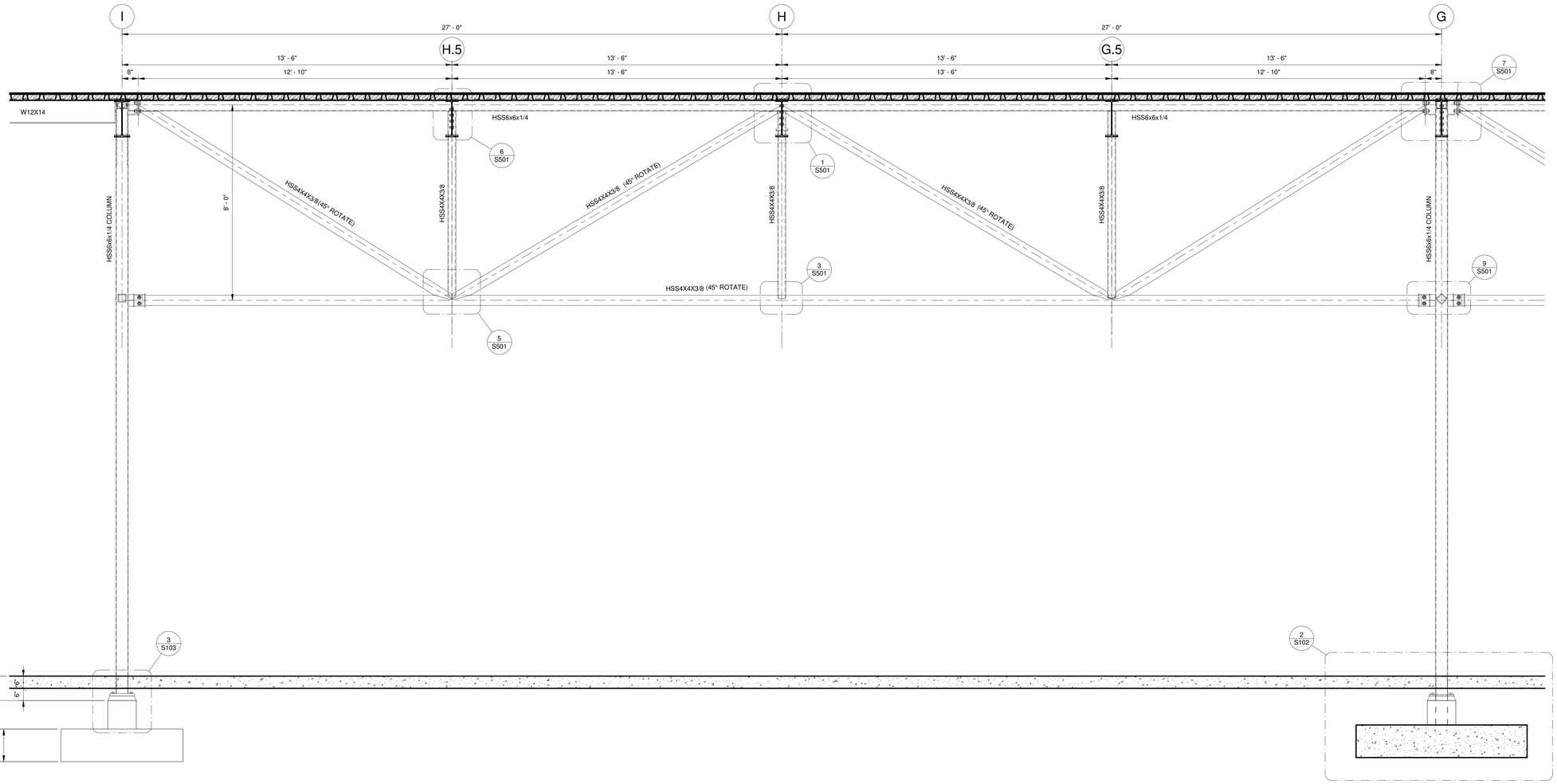
3/9/2026 8:58:38 PM



1 TRUSS T-2 ELEVATION

1/2" = 1'-0"

REFERENCING DETAIL: 1 / S109



2 TRUSS T-1 ELEVATION

1/2" = 1'-0"

REFERENCING DETAIL: 1 / S102

3/9/2026 8:58:39 PM

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ISF - SWINE BARN UPDATES - PHASE 2

STRUCTURAL SECTIONS & DETAILS

Project Number: CSWB2601

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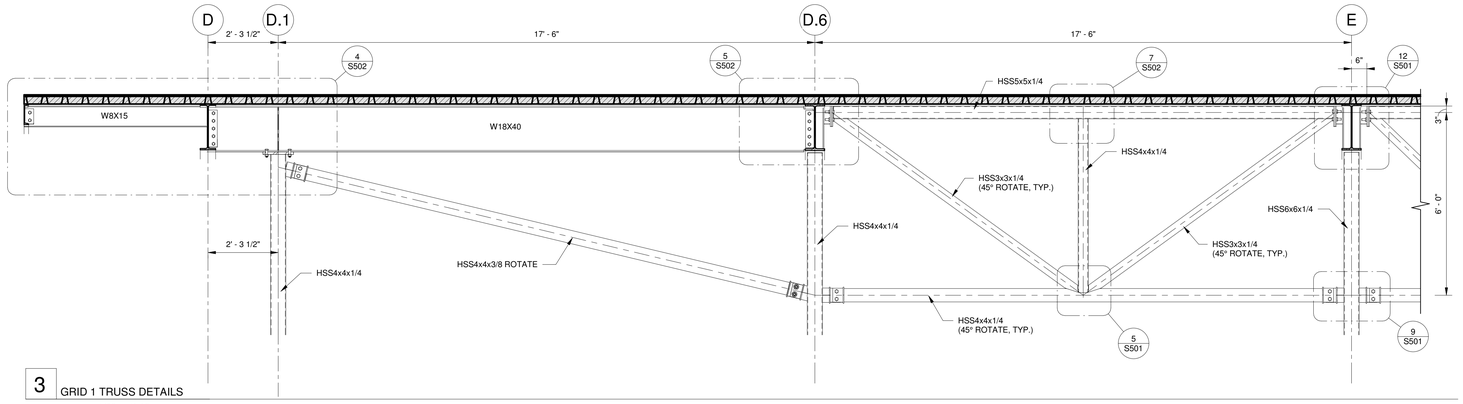
S302

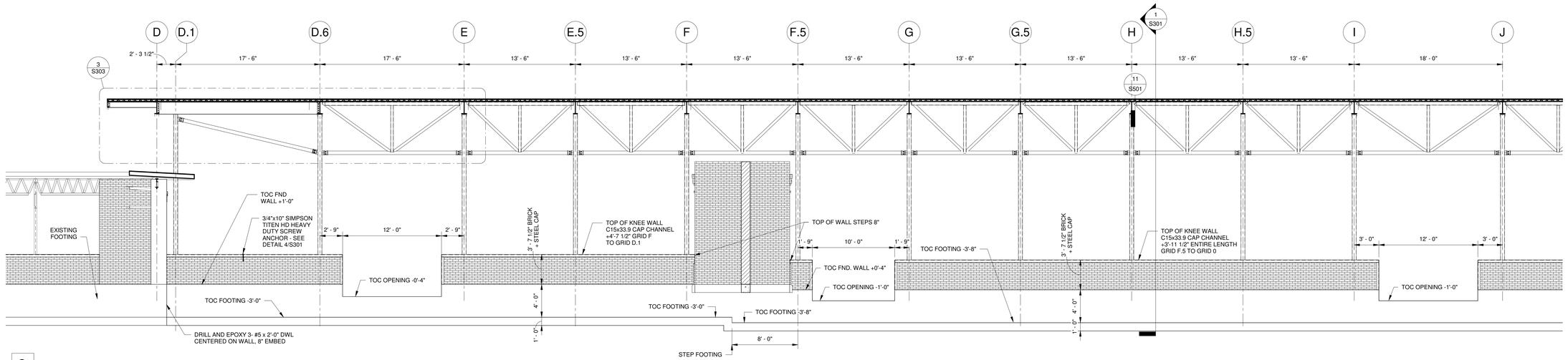
SCALE: 1/2" = 1'-0"



3 GRID 1 TRUSS DETAILS

1/2" = 1'-0"

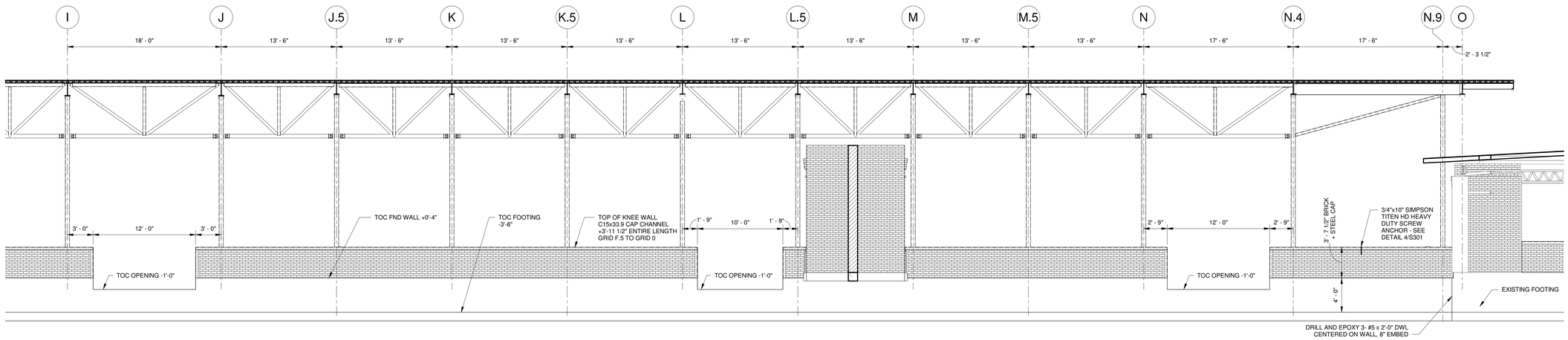
REFERENCING DETAIL: 2 / S303



2 ENLARGED FRAMING ELEVATION @ GRID 1 - EAST

3/16" = 1'-0"

REFERENCING DETAIL: /



1 ENLARGED FRAMING ELEVATION @ GRID 2

3/16" = 1'-0"

REFERENCING DETAIL: /

3/9/2026 8:58:40 PM

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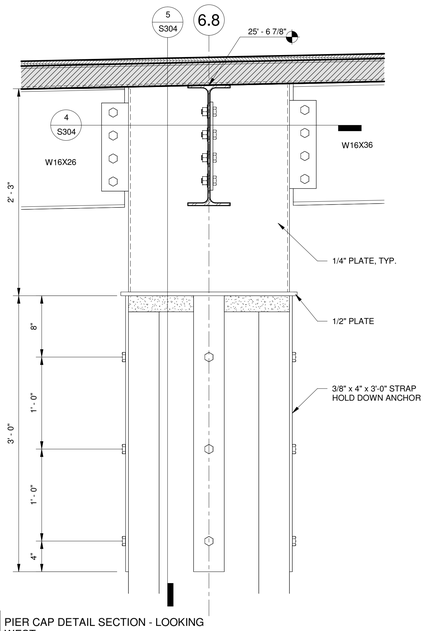
S303

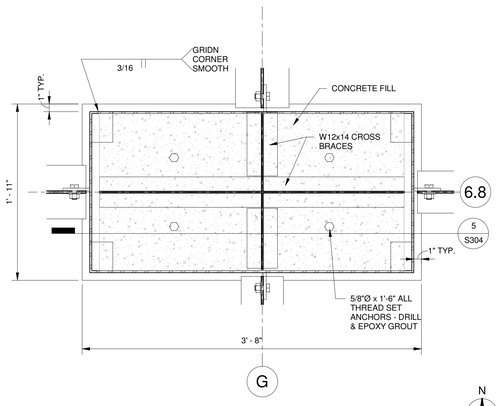
SCALE: As indicated



3 PIER CAP DETAIL SECTION - LOOKING WEST

1 1/2" = 1'-0"

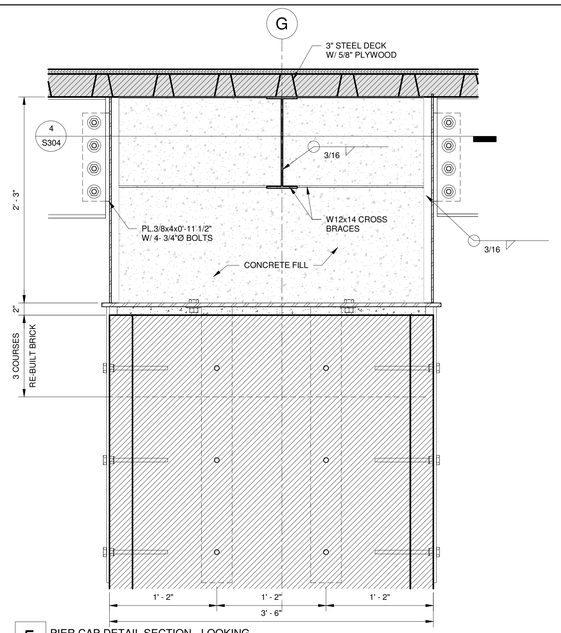
REFERENCING DETAIL: 1 / S304



4 PIER CAP PLAN DETAIL

1 1/2" = 1'-0"

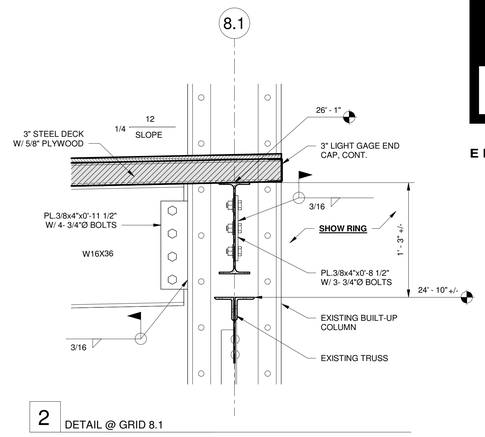
REFERENCING DETAIL: 3 / S304



5 PIER CAP DETAIL SECTION - LOOKING NORTH

1 1/2" = 1'-0"

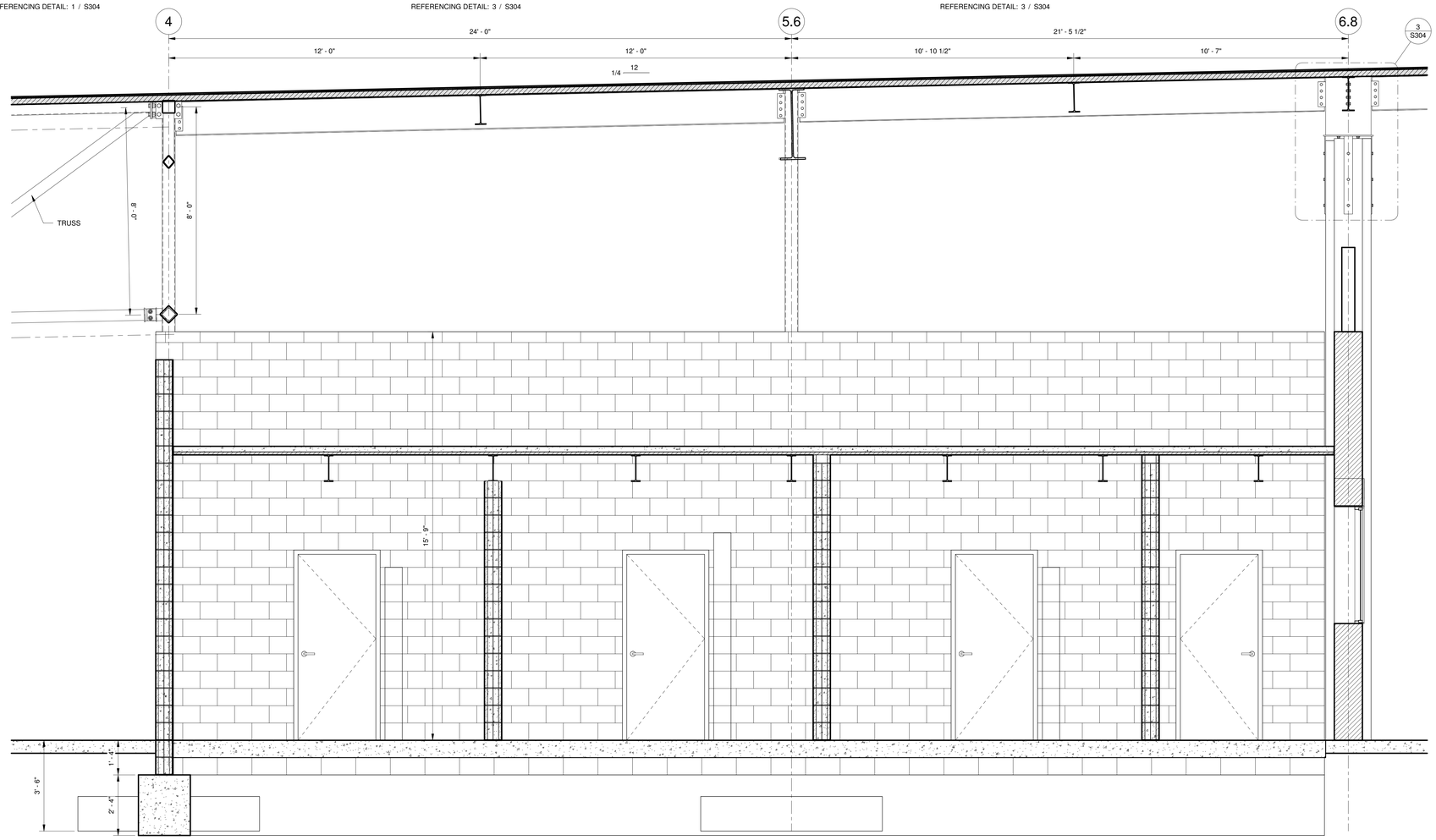
REFERENCING DETAIL: 3 / S304



2 DETAIL @ GRID 8.1

1 1/2" = 1'-0"

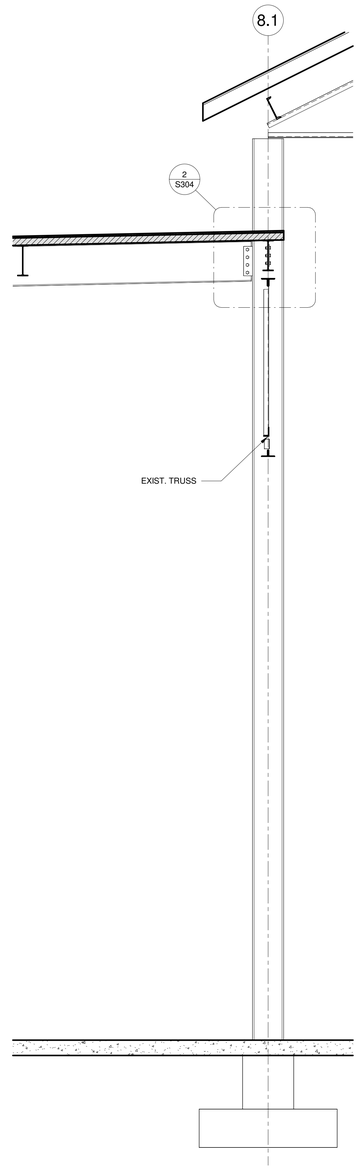
REFERENCING DETAIL: 1 / S304



1 Detail 40

1/2" = 1'-0"

REFERENCING DETAIL: 1 / S103



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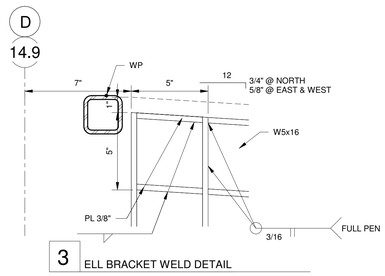
S304

SCALE: As indicated

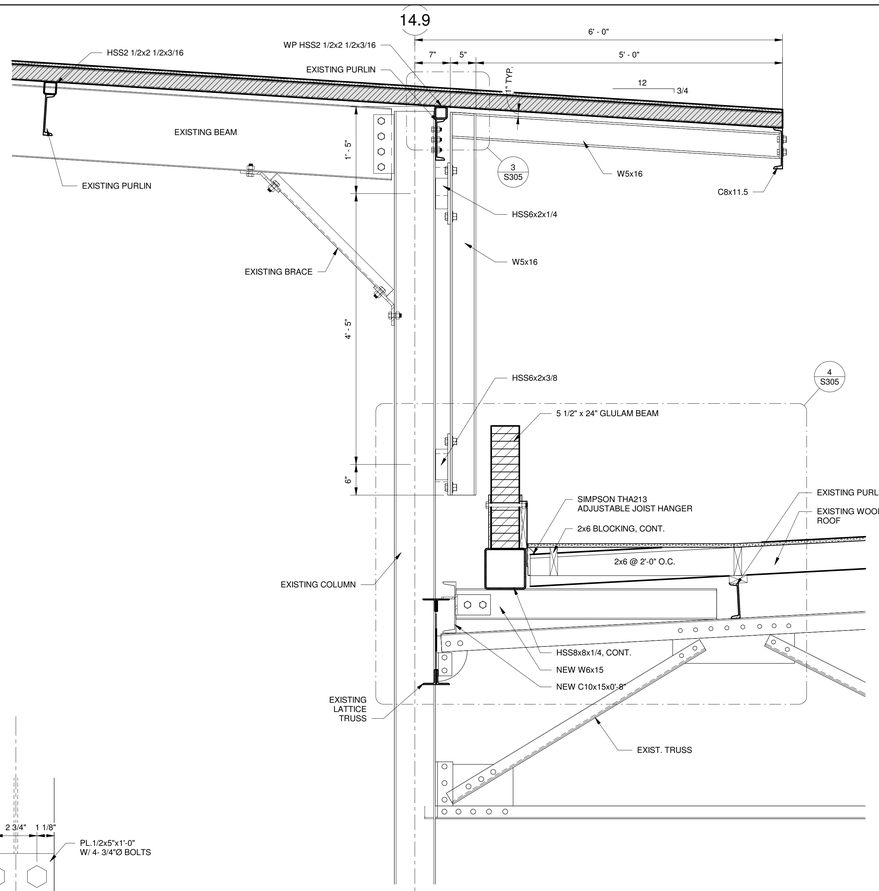
3/9/2026 8:58:42 PM



3 ELL BRACKET WELD DETAIL

3" = 1'-0"

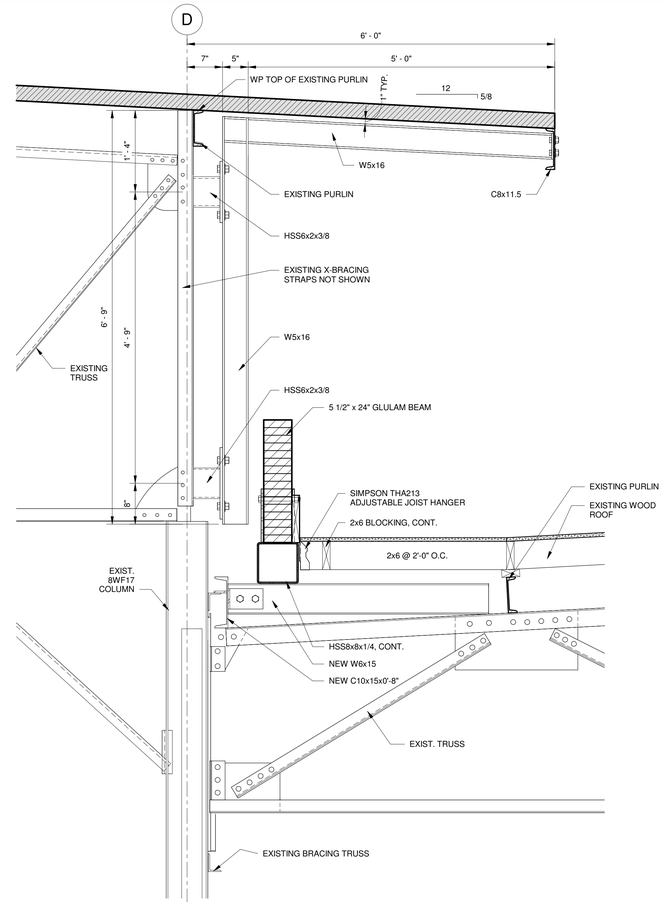
REFERENCING DETAIL: 2 / S305



2 ELL BRACKET SECTION @ GRID 14.9

1" = 1'-0"

REFERENCING DETAIL: 1 / S105



1 ELL BRACKET SECTION @ GRID D

1" = 1'-0"

REFERENCING DETAIL: 1 / S105

4 GLULAM DETAIL

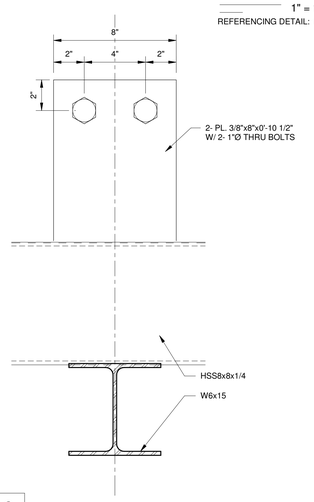
3" = 1'-0"

REFERENCING DETAIL: 2 / S305

5 ELL FRAME TUBE CONNECTOR

3" = 1'-0"

REFERENCING DETAIL: 4 / S305



6 ELL FRAME TUBE PLATES

3" = 1'-0"

REFERENCING DETAIL: 4 / S305

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S305

SCALE: As indicated

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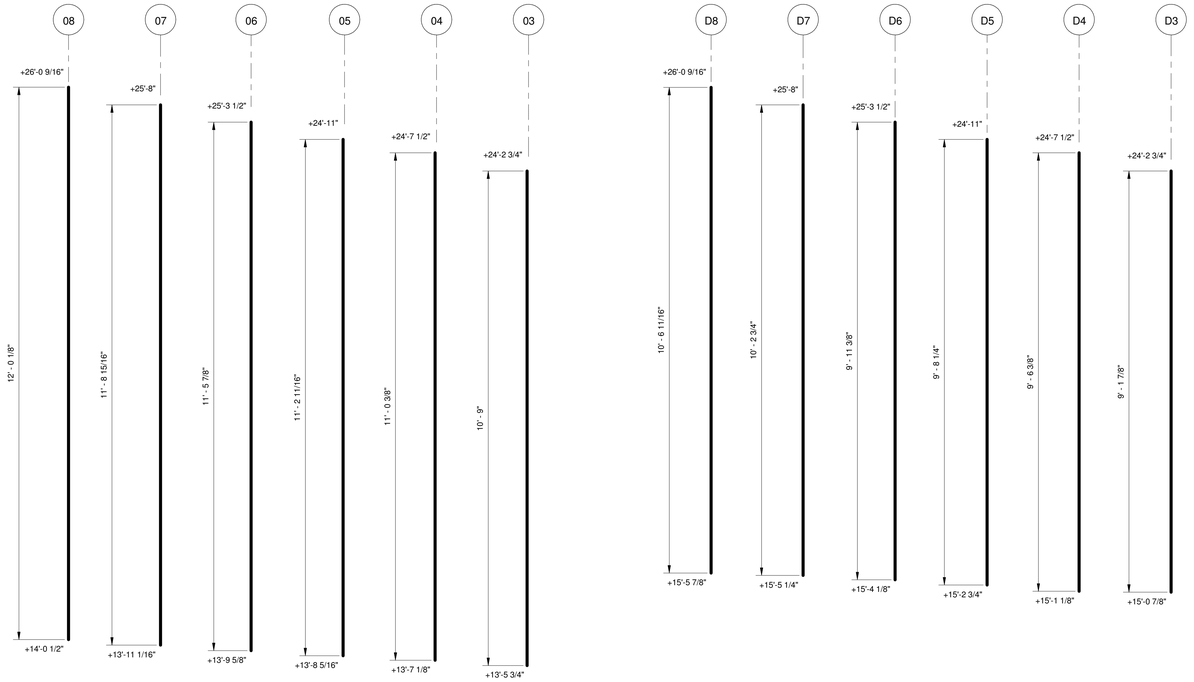
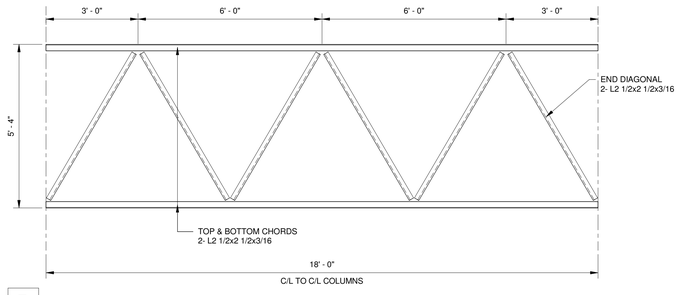


2 STEEL COLUMN EXTENSION SCHEDULE

3/4" = 1'-0"

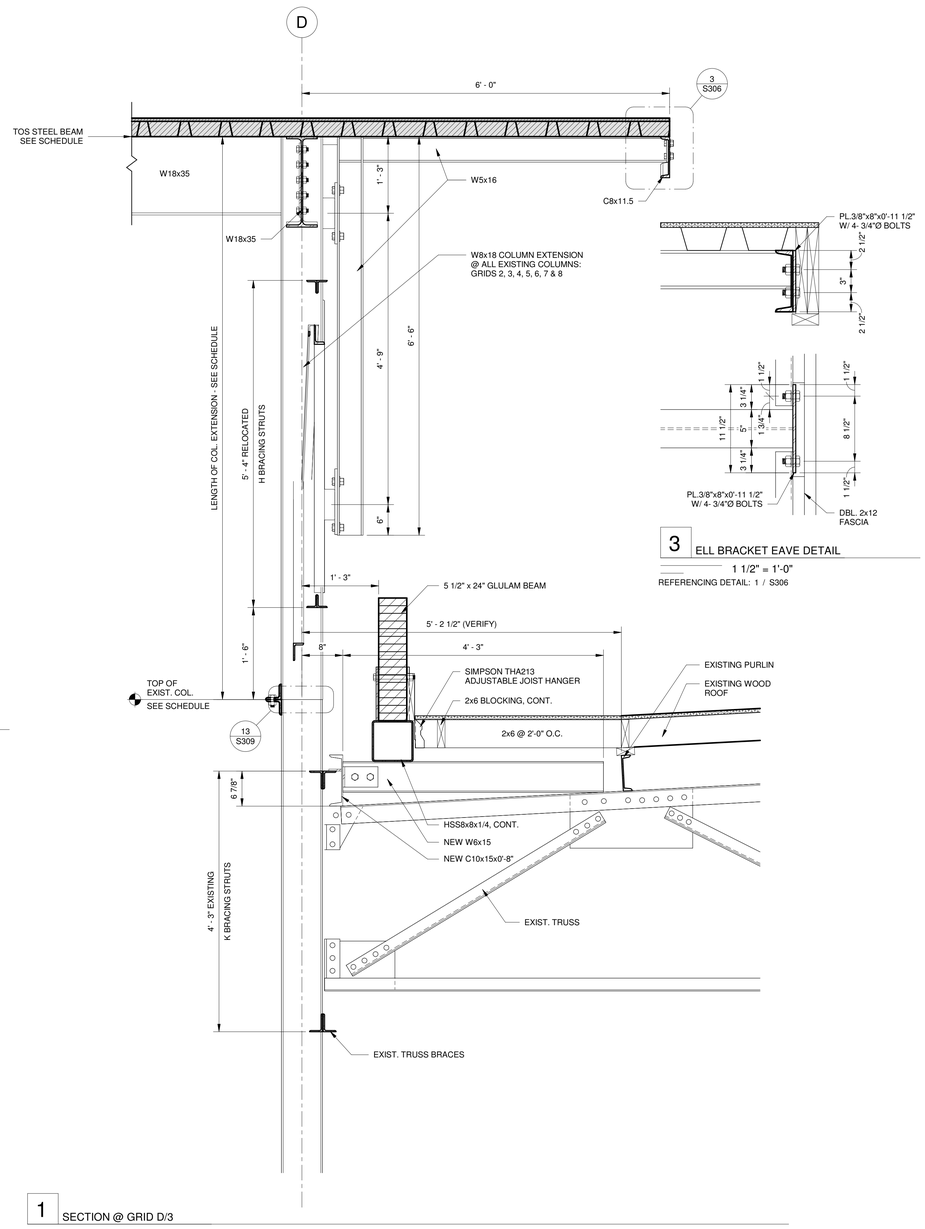
REFERENCING DETAIL: /



5 NEW "H" TYPE

1/2" = 1'-0"

REFERENCING DETAIL: 4 / S306



1 SECTION @ GRID D/3

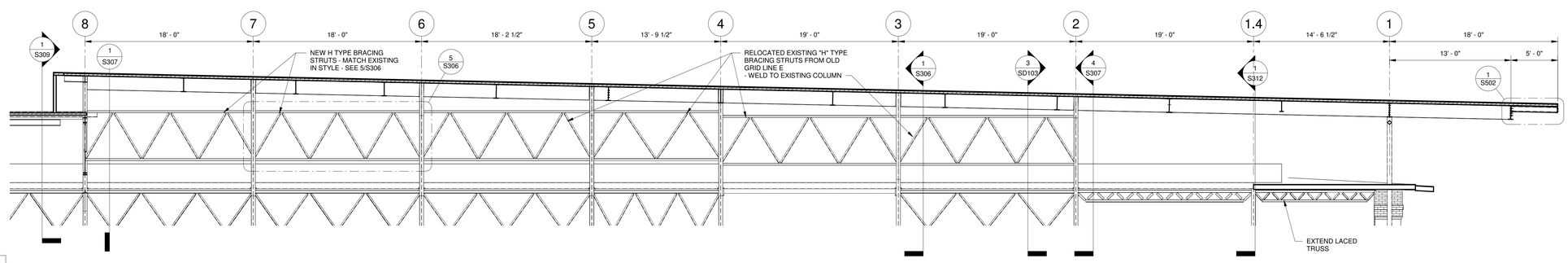
1" = 1'-0"

REFERENCING DETAIL: 1 / S105

3 ELL BRACKET EAVE DETAIL

1 1/2" = 1'-0"

REFERENCING DETAIL: 1 / S306



4 FRAMING ELEVATION @ GRID D

3/16" = 1'-0"

REFERENCING DETAIL: 5 / S106

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ISF - SWINE BARN UPDATES - PHASE 2

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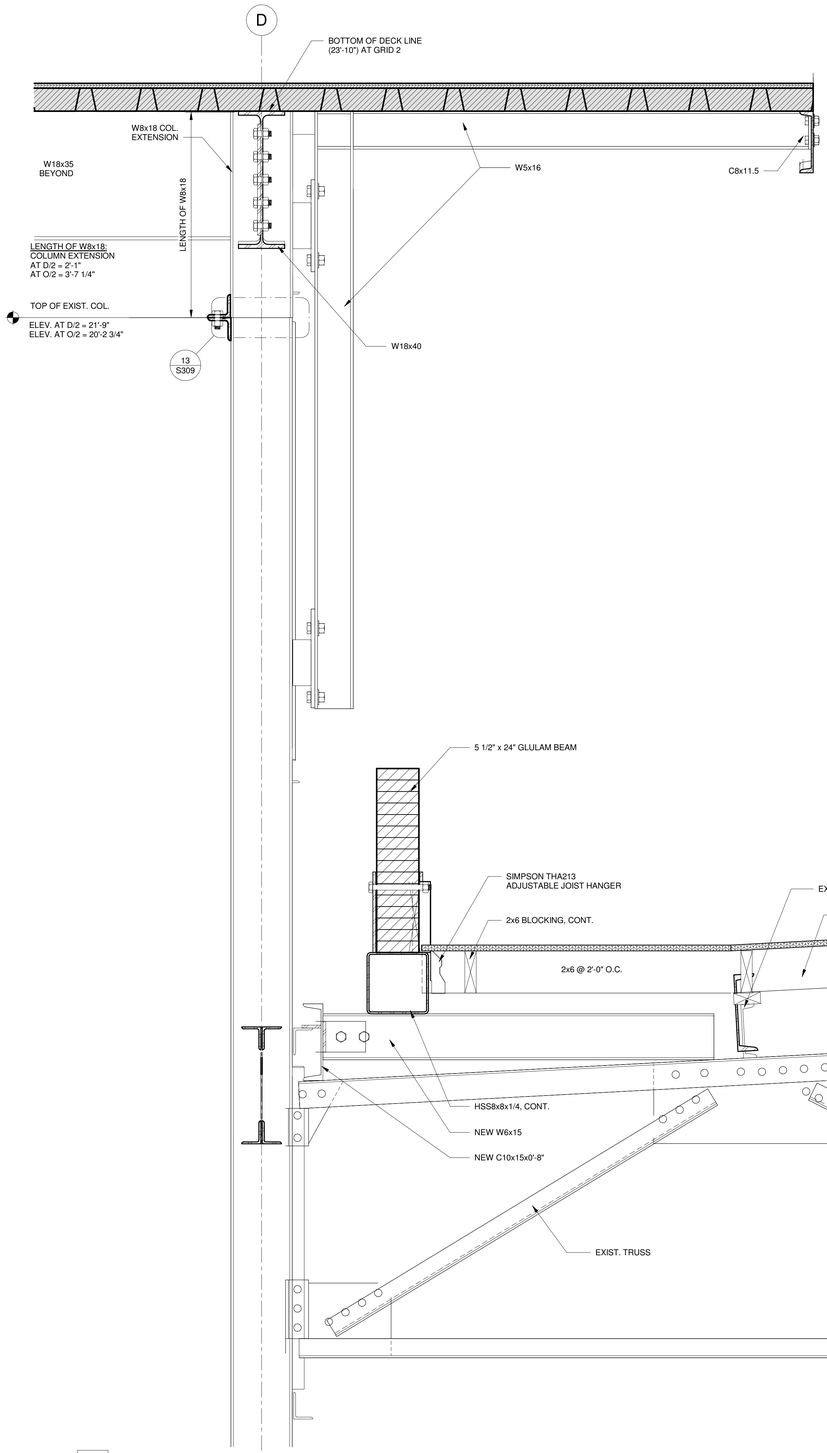
S306

SCALE: As indicated

3/9/2026 8:58:44 PM



4 SECTION @ GRID D/2 & O/2

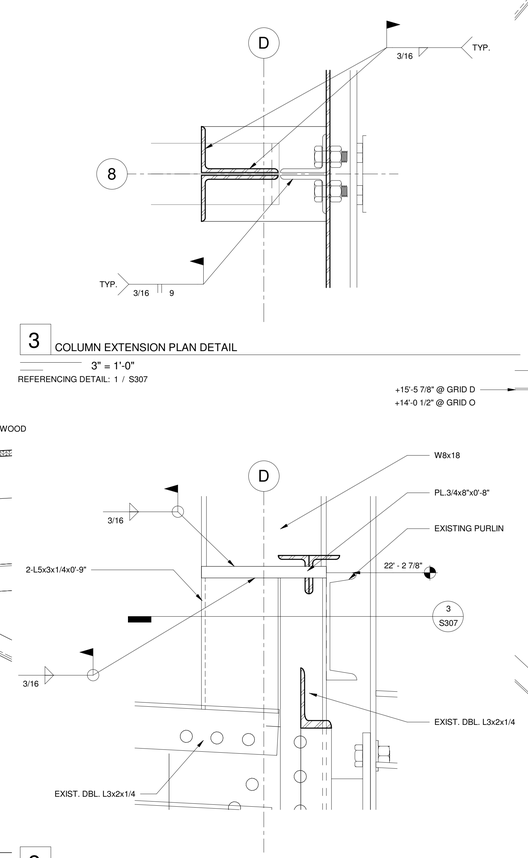
1 1/2" = 1'-0"

REFERENCING DETAIL: 1 / S105

3 COLUMN EXTENSION PLAN DETAIL

3" = 1'-0"

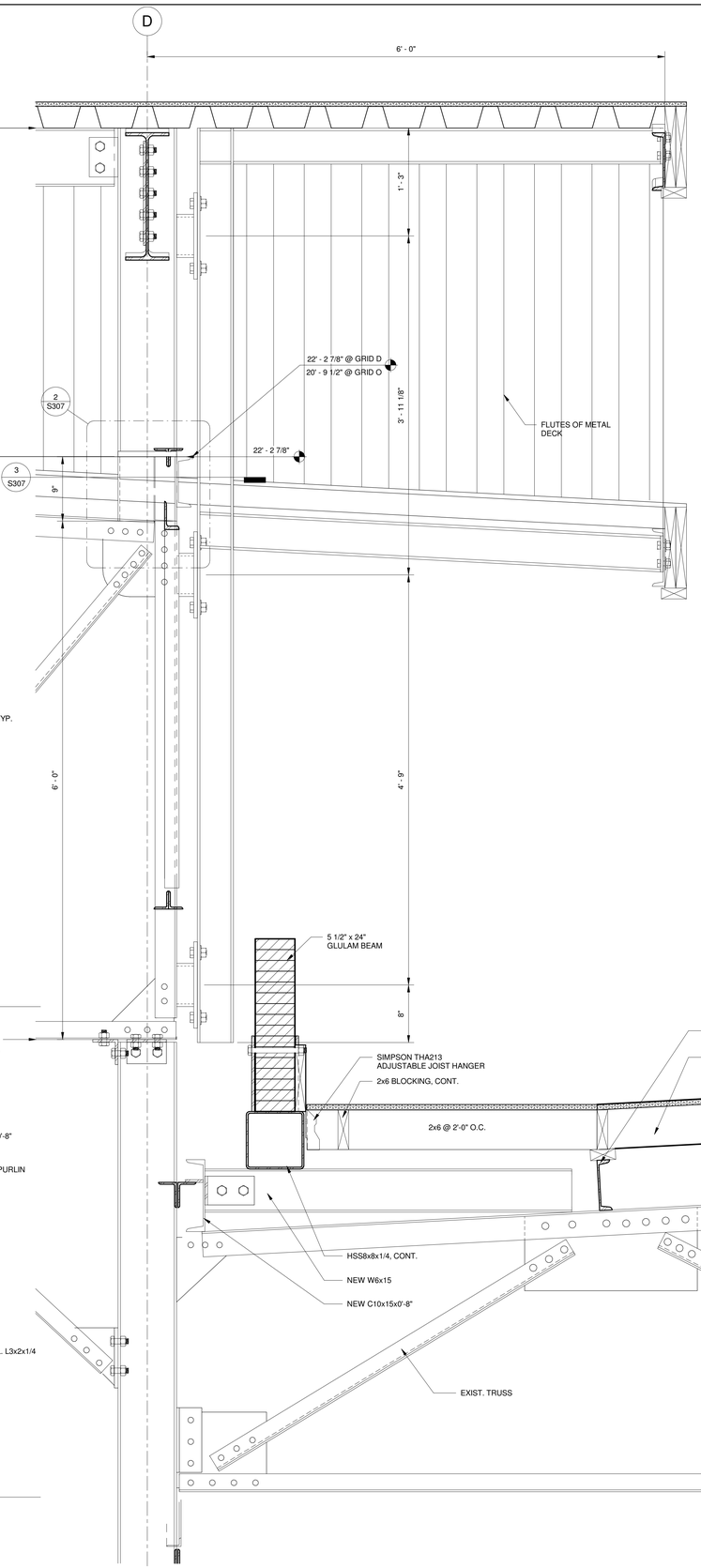
REFERENCING DETAIL: 1 / S307



2 COLUMN EXTENSION ELEVATION

3" = 1'-0"

REFERENCING DETAIL: 1 / S307



1 SECTION @ D/8

1 1/2" = 1'-0"

REFERENCING DETAIL: 1 / S109

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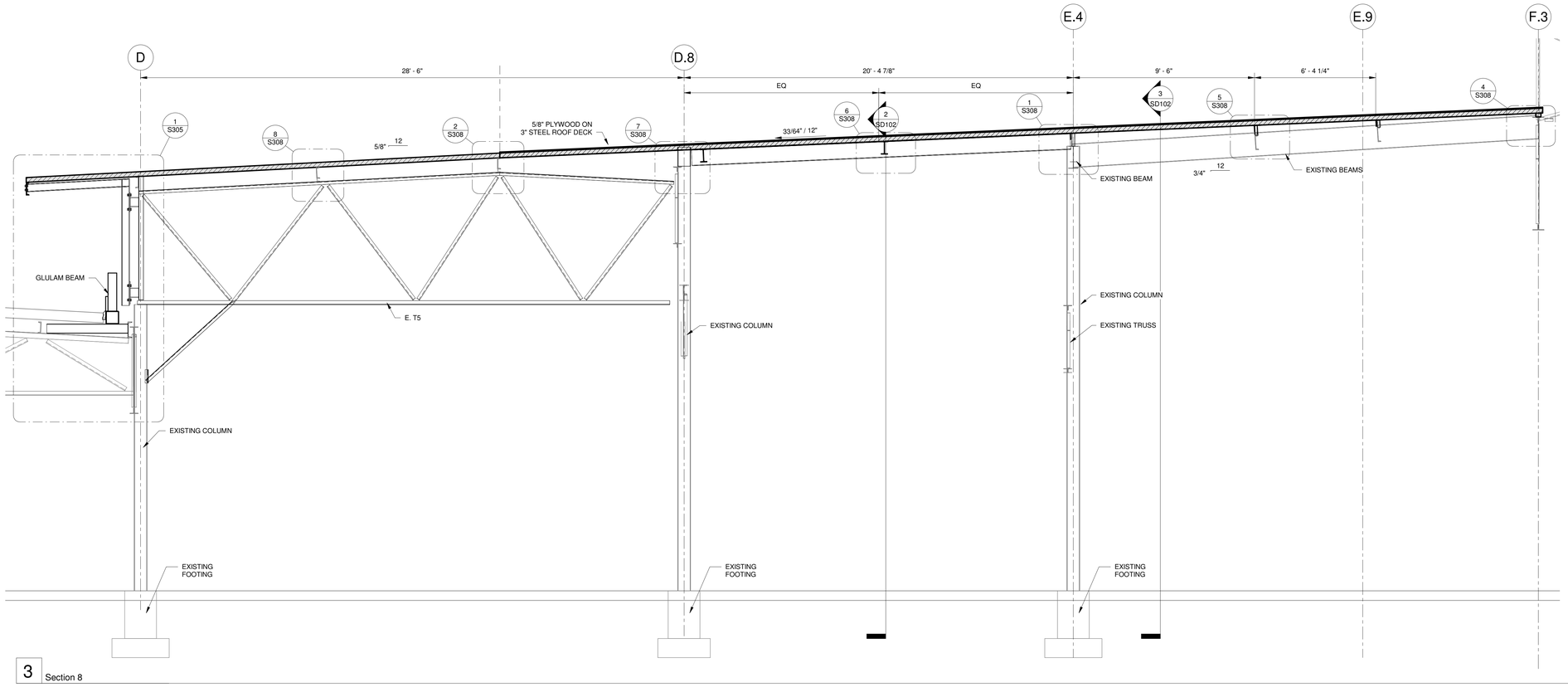
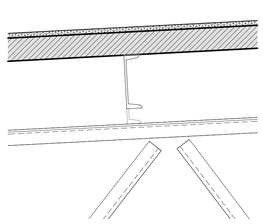


3 Section 8

3/8" = 1'-0"

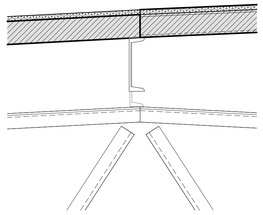
REFERENCING DETAIL: 1 / S101



8 east plane - int. new roof1

1 1/2" = 1'-0"

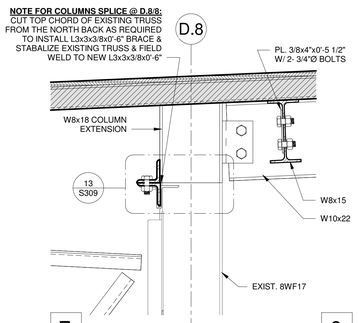
REFERENCING DETAIL: 3 / S308



2 east plane - int. new roof

1 1/2" = 1'-0"

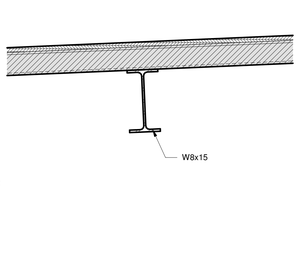
REFERENCING DETAIL: 3 / S308



7 central plane - int. new roof1

1 1/2" = 1'-0"

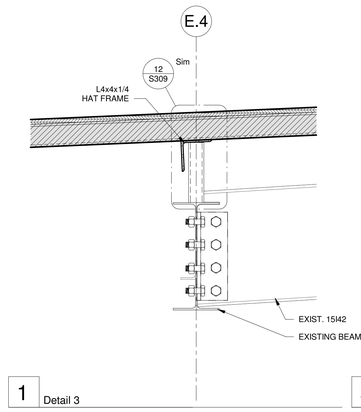
REFERENCING DETAIL: 3 / S308



6 central plane - int. new roof3

1 1/2" = 1'-0"

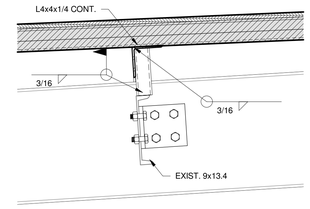
REFERENCING DETAIL: 3 / S308



1 Detail 3

1 1/2" = 1'-0"

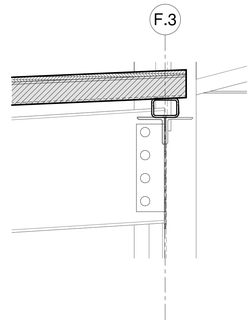
REFERENCING DETAIL: 3 / S308



5 west plane - int. roof

1 1/2" = 1'-0"

REFERENCING DETAIL: 3 / S308



4 west edge - int. roof

1 1/2" = 1'-0"

REFERENCING DETAIL: 3 / S308

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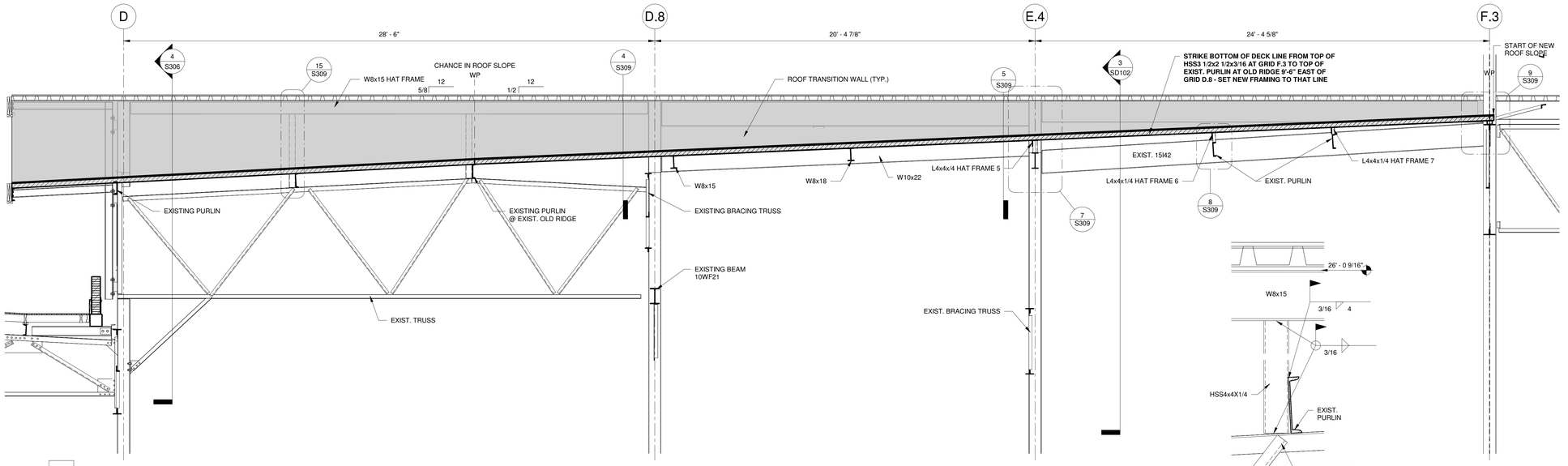


1 FRAMING ELEVATION @ GRID 8

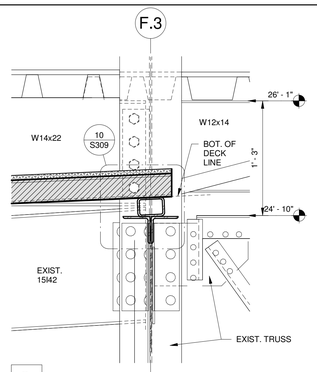
3/8" = 1'-0"

REFERENCING DETAIL: 1 / S109

15 SECTION AT W8x15 HAT FRAME

1 1/2" = 1'-0"

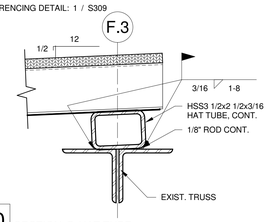
REFERENCING DETAIL: 1 / S309



9 DECK BEARING @ GRID F.1

1 1/2" = 1'-0"

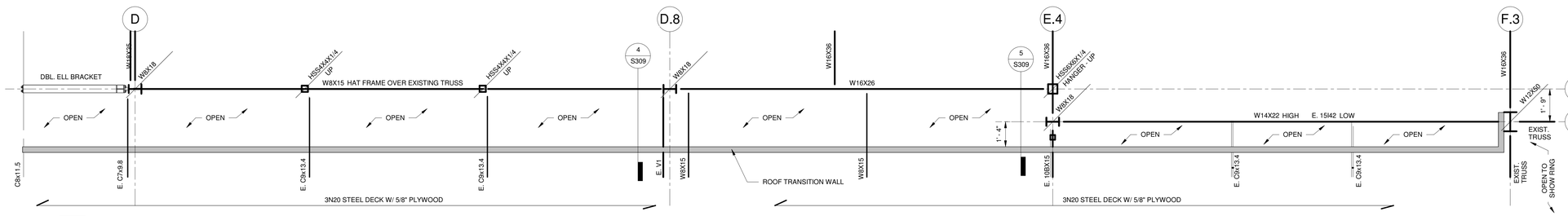
REFERENCING DETAIL: 1 / S309



10 SECTION @ HAT TUBE

3" = 1'-0"

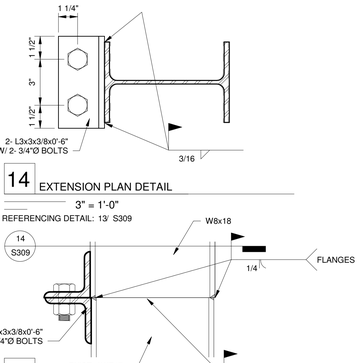
REFERENCING DETAIL: 9 / S309



6 PLAN AT BOTTOM OF ROOF TRANSITION

3/8" = 1'-0"

REFERENCING DETAIL: 1 / S109



14 EXTENSION PLAN DETAIL

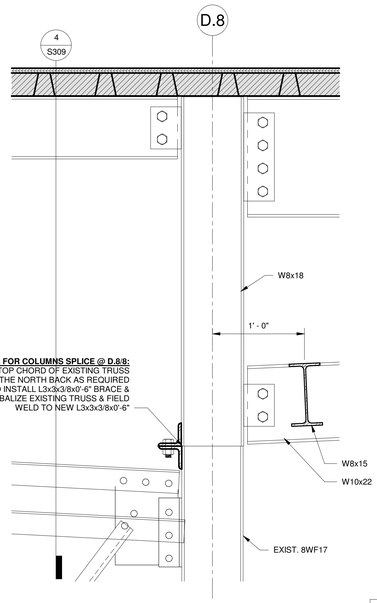
3" = 1'-0"

REFERENCING DETAIL: 13/ S309

13 EXTENSION SECTION DETAIL

3" = 1'-0"

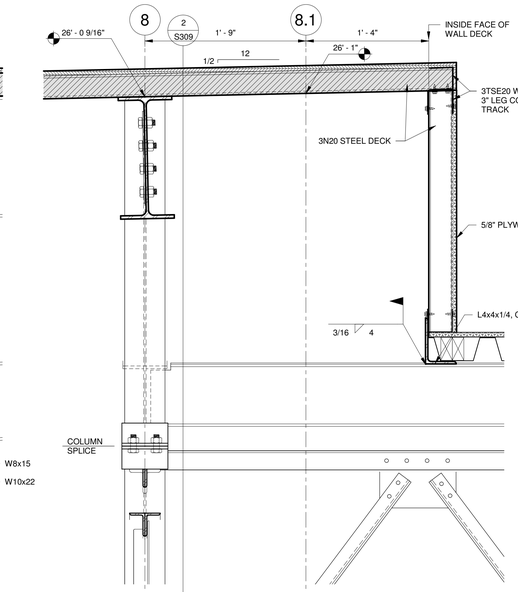
REFERENCING DETAIL: 1 / S306



2 Detail 49

1 1/2" = 1'-0"

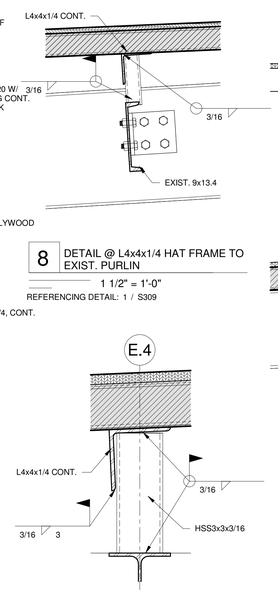
REFERENCING DETAIL: 4 / S309



4 DETAIL @ GRIDS 8/D.8

1 1/2" = 1'-0"

REFERENCING DETAIL: 3 / S110



8 DETAIL @ L4x4x1/4 HAT FRAME TO EXIST. PURLIN

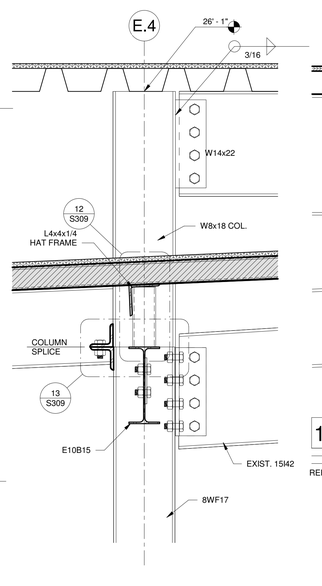
1 1/2" = 1'-0"

REFERENCING DETAIL: 1 / S309

12 DETAIL @ L4x4x1/4 HAT FRAME TO EXIST. BEAM

3" = 1'-0"

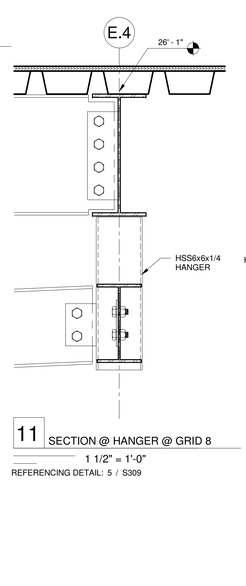
REFERENCING DETAIL: 1 / S308



7 DETAIL @ 8/E.4 - LOOKING SOUTH

1 1/2" = 1'-0"

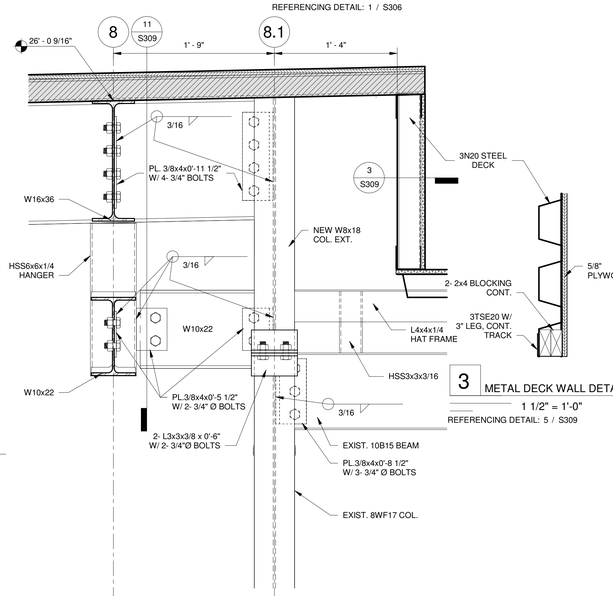
REFERENCING DETAIL: 1 / S309



11 SECTION @ HANGER @ GRID 8

1 1/2" = 1'-0"

REFERENCING DETAIL: 5 / S309



3 METAL DECK WALL DETAIL

1 1/2" = 1'-0"

REFERENCING DETAIL: 5 / S309

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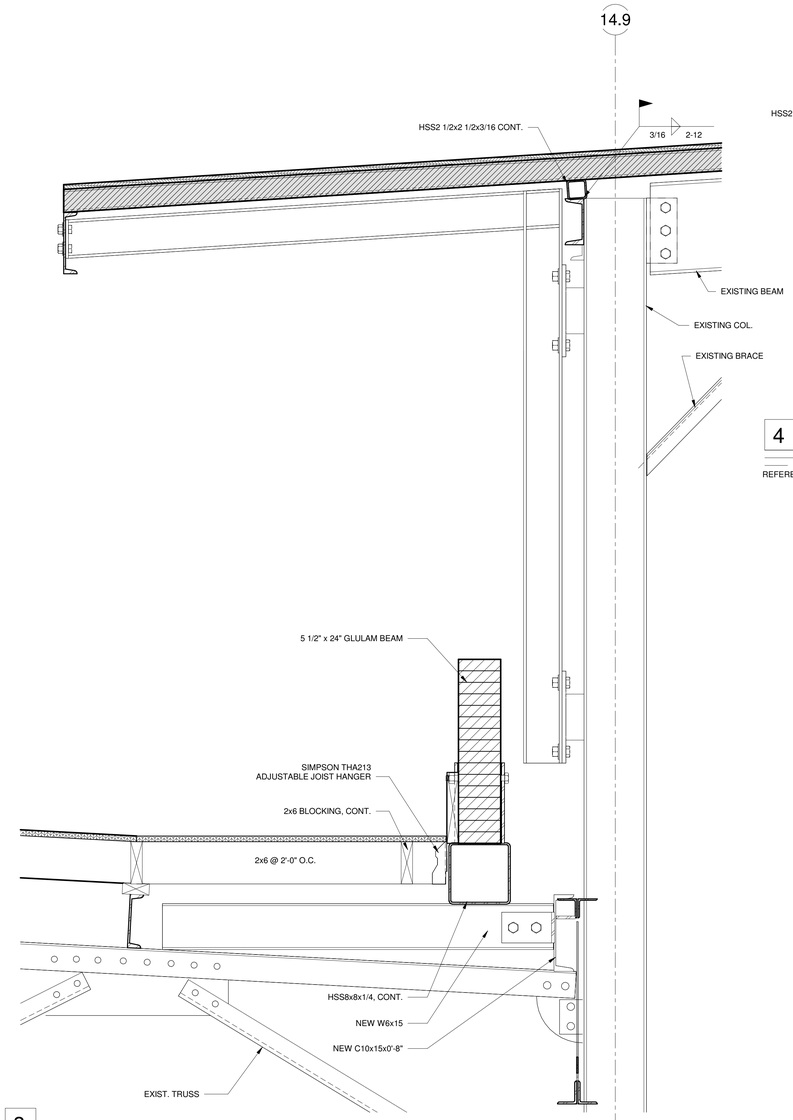
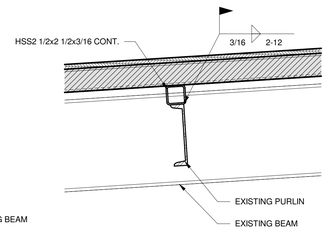


3 NORTH ROOF - NORTH DETAIL

1 1/2" = 1'-0"

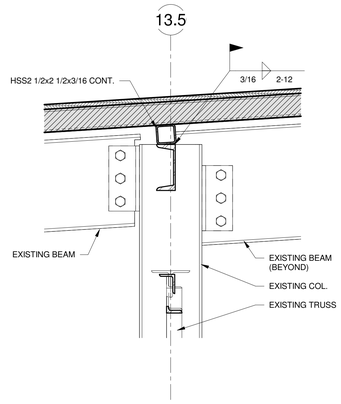
REFERENCING DETAIL: 1 / S310



4 NORTH ROOF - NORTH PURLIN

1 1/2" = 1'-0"

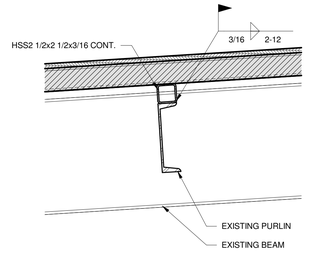
REFERENCING DETAIL: 1 / S310



5 NORTH ROOF - SECTION @ DETAIL 13.5

1 1/2" = 1'-0"

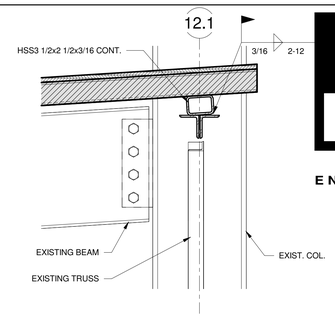
REFERENCING DETAIL: 1 / S310



6 NORTH ROOF - SOUTH PURLIN

1 1/2" = 1'-0"

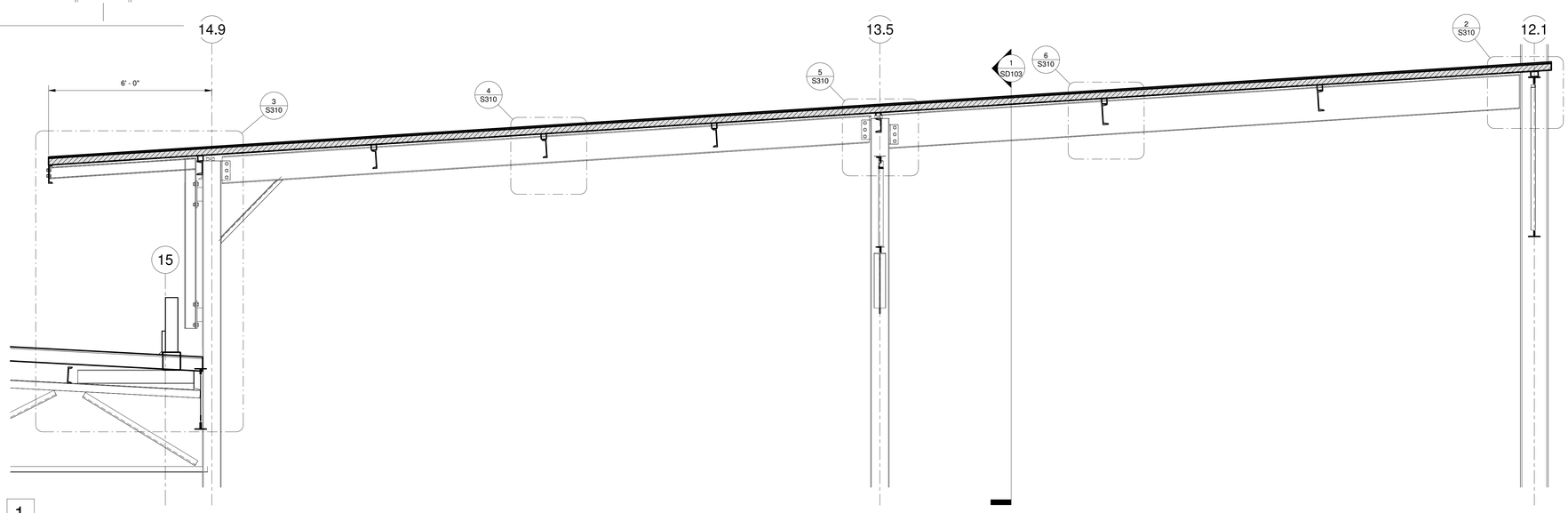
REFERENCING DETAIL: 1 / S310



2 NORTH ROOF - SOUTH DETAIL

1 1/2" = 1'-0"

REFERENCING DETAIL: 1 / S310



1 NORTH ROOF SECTION @ C/L

1/2" = 1'-0"

REFERENCING DETAIL: 1 / S105

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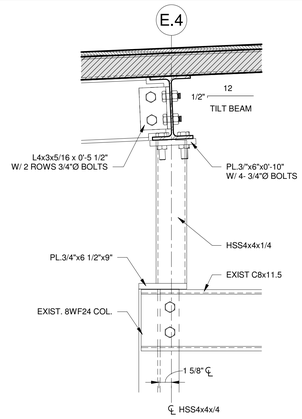
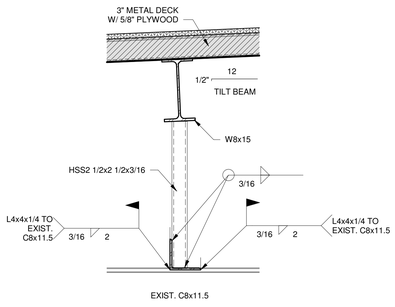


8 SECTION @ E.4 LOOKING SOUTH

1 1/2" = 1'-0"

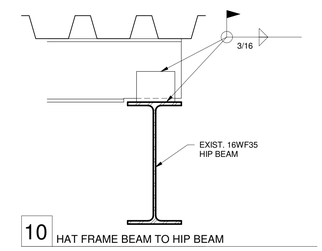
REFERENCING DETAIL: 1 / S311



9 SECTION @ HAT FRAME 2

1 1/2" = 1'-0"

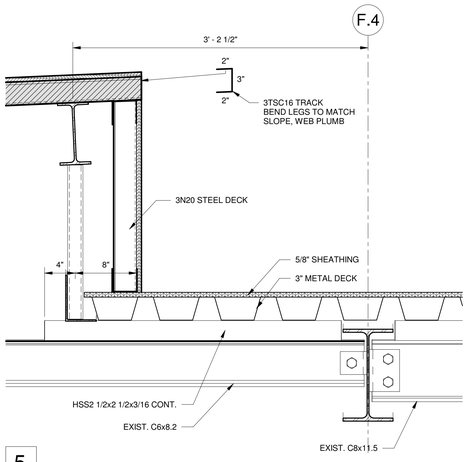
REFERENCING DETAIL: 2 / S311



10 HAT FRAME BEAM TO HIP BEAM

1 1/2" = 1'-0"

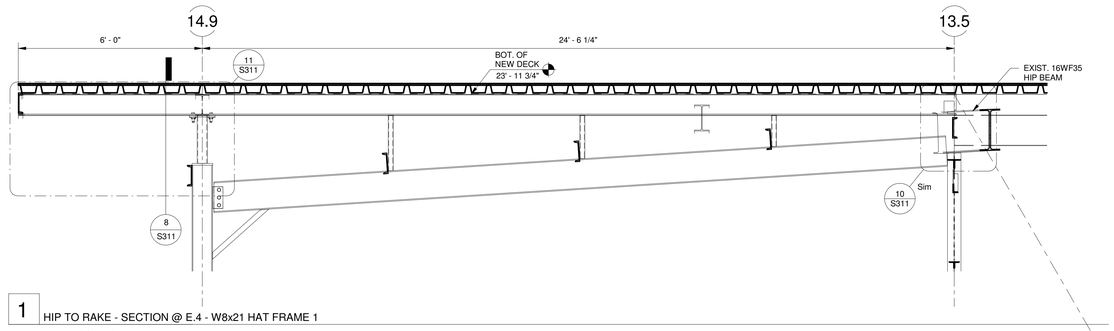
REFERENCING DETAIL: 1 / S311



5 NORTH TRANSITION SECTION DETAIL - NORTH

1 1/2" = 1'-0"

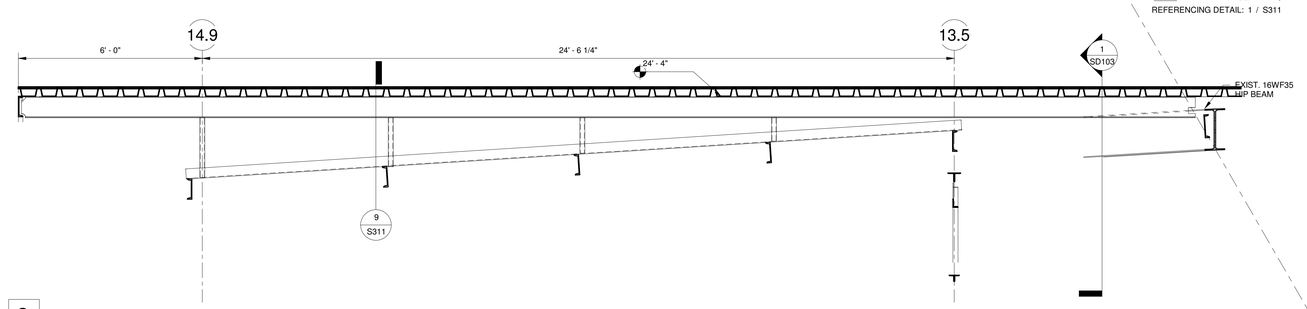
REFERENCING DETAIL: 4 / S311



1 HIP TO RAKE - SECTION @ E.4 - W8x21 HAT FRAME 1

1/2" = 1'-0"

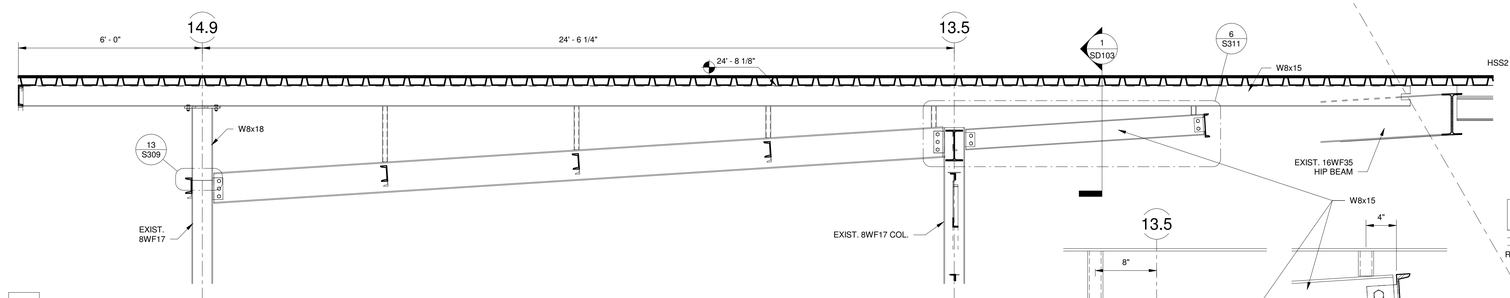
REFERENCING DETAIL: 1 / S109



2 HIP TO RAKE - SECTION 2 - W8x15 HAT FRAME 2

1/2" = 1'-0"

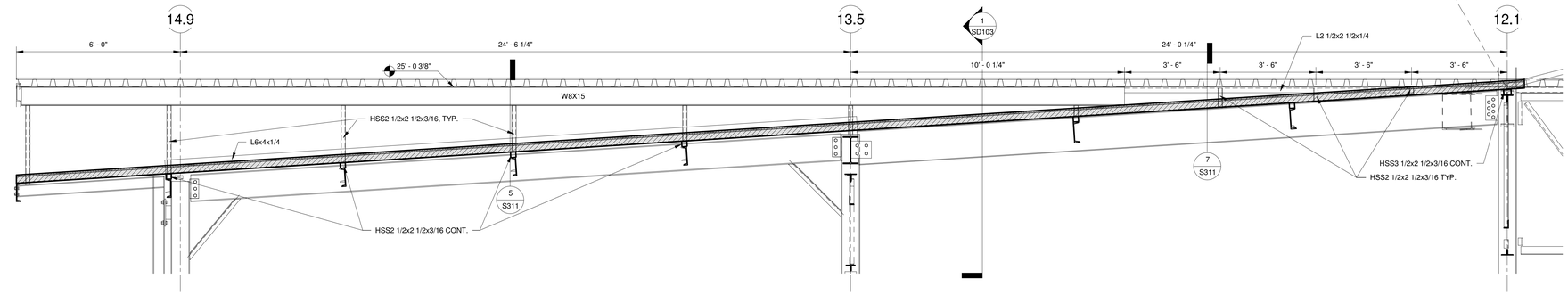
REFERENCING DETAIL: 1 / S109



3 HIP TO RAKE - SECTION 3 - W8x15 HAT FRAME 3

1/2" = 1'-0"

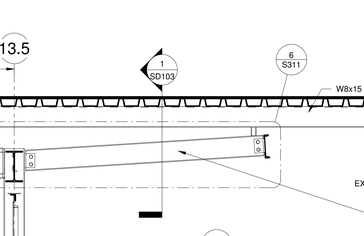
REFERENCING DETAIL: 1 / S109



4 HIP TO RAKE - SECTION 4 - W8x15 HAT FRAME 4

1/2" = 1'-0"

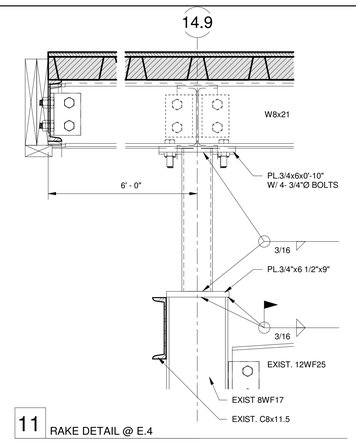
REFERENCING DETAIL: 1 / S109



6 Detail 48

1 1/2" = 1'-0"

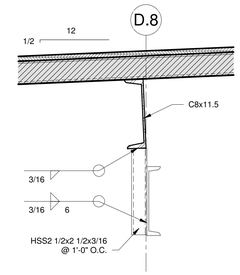
REFERENCING DETAIL: 3 / S311



11 RAKE DETAIL @ E.4

1 1/2" = 1'-0"

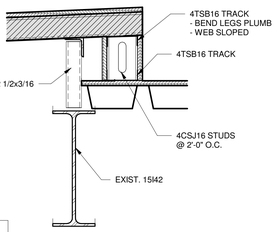
REFERENCING DETAIL: 1 / S311



12 PURLIN STAND-OFF DETAIL

1 1/2" = 1'-0"

REFERENCING DETAIL: 1 / S106



7 NORTH TRANSITION SECTION DETAIL - SOUTH

1 1/2" = 1'-0"

REFERENCING DETAIL: 4 / S311

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No.	Date	Description
	031026	ISSUE

ISF - SWINE BARN UPDATES - PHASE 2

STRUCTURAL SECTIONS & DETAILS

Project Number: CSWB2601

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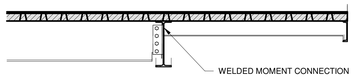
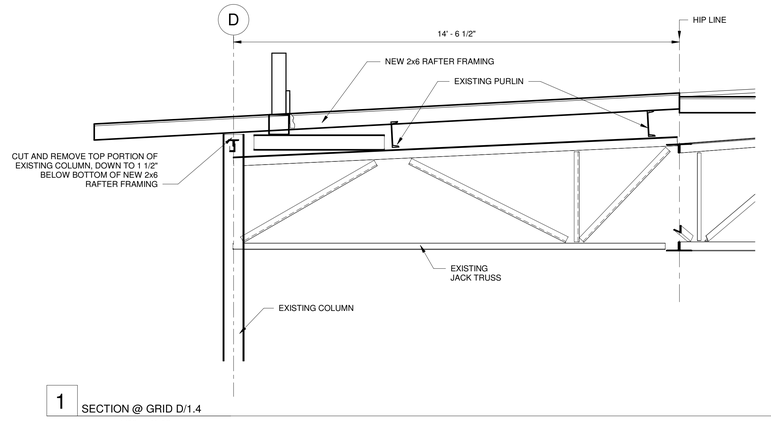
S311

SCALE: As indicated

3/9/2026 8:58:50 PM

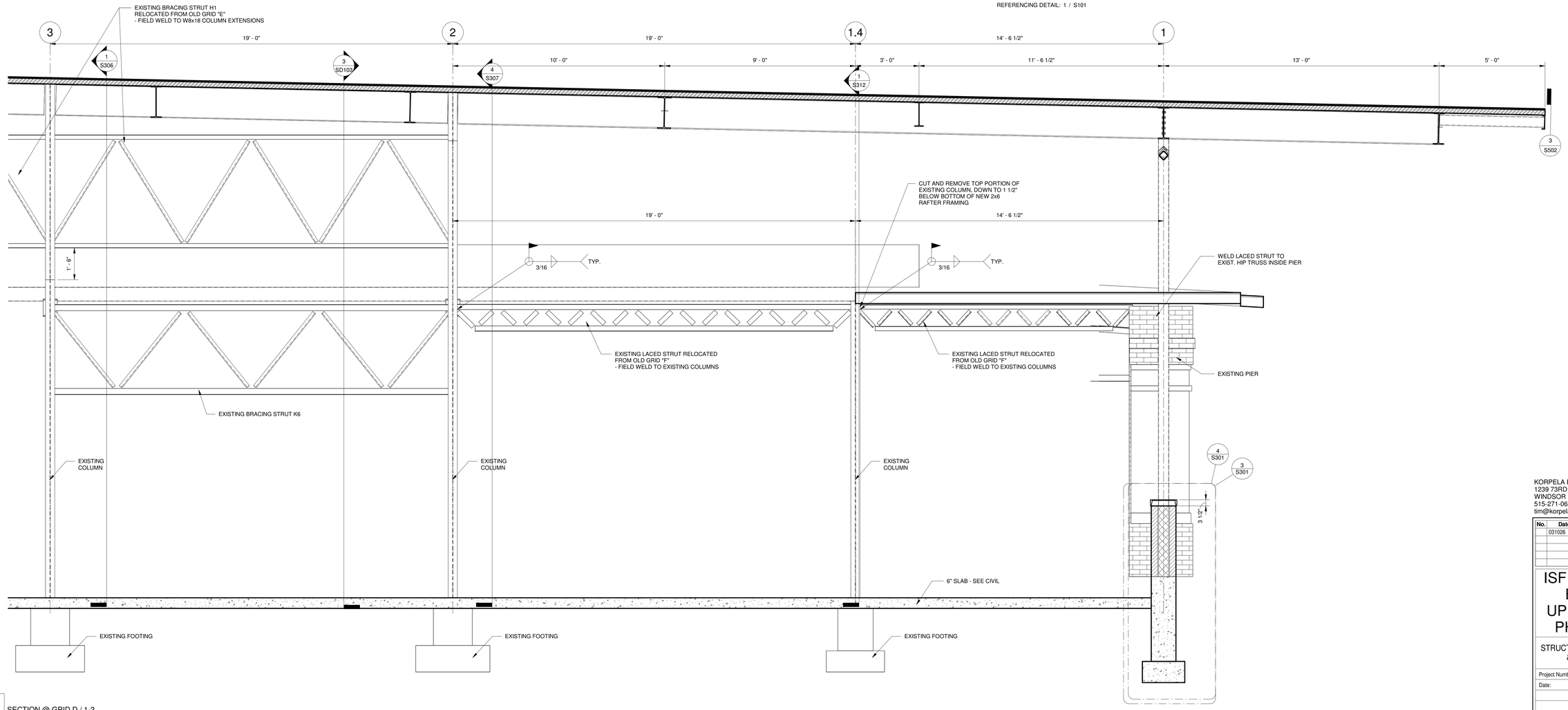




1 SECTION @ GRID D/1.4

1/2" = 1'-0"

REFERENCING DETAIL: 1 / S101



3 SECTION @ GRID D / 1-2

1/2" = 1'-0"

REFERENCING DETAIL: 1 / S101

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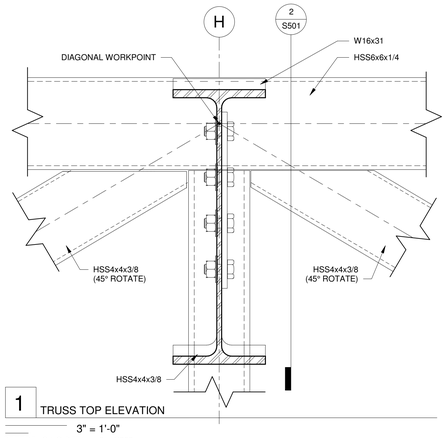
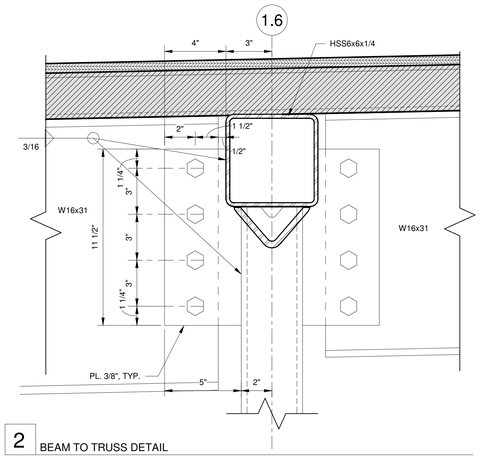
SCALE: 1/2" = 1'-0"



1 TRUSS TOP ELEVATION

3" = 1'-0"

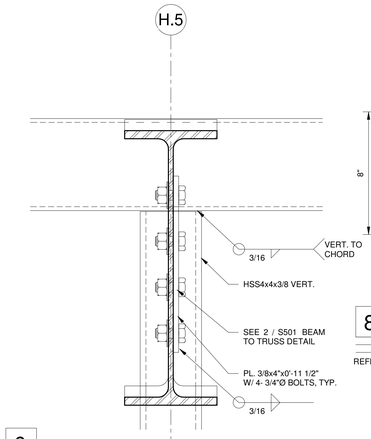
REFERENCING DETAIL: 2 / S302



2 BEAM TO TRUSS DETAIL

3" = 1'-0"

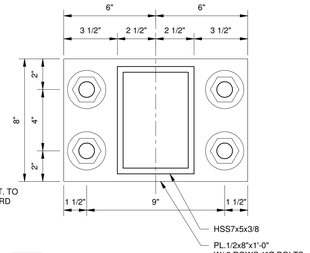
REFERENCING DETAIL: 1 / S501



6 BEAM TO TRUSS CONNECTION

3" = 1'-0"

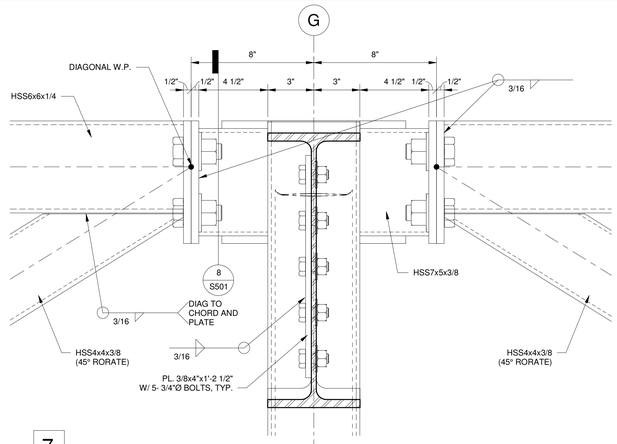
REFERENCING DETAIL: 2 / S302



8 TRUSS CONNECTOR PLATE DETAIL

3" = 1'-0"

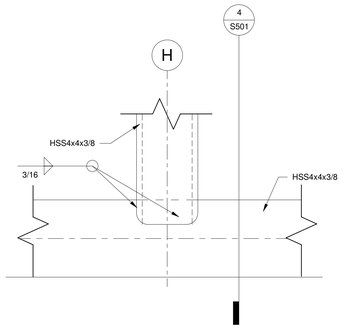
REFERENCING DETAIL: 7 / S501



7 TRUSS TO TRUSS TOP DETAIL

3" = 1'-0"

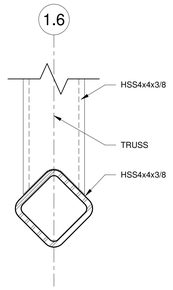
REFERENCING DETAIL: 2 / S302



3 TRUSS BOTTOM ELEVATION

3" = 1'-0"

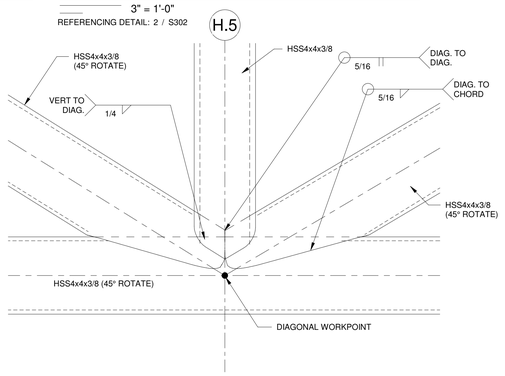
REFERENCING DETAIL: 1 / S302



4 TRUSS BOTTOM SECTION

3" = 1'-0"

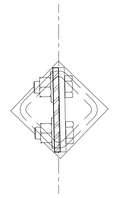
REFERENCING DETAIL: 3 / S501



5 TRUSS BOTTOM WEB AND VERT.

3" = 1'-0"

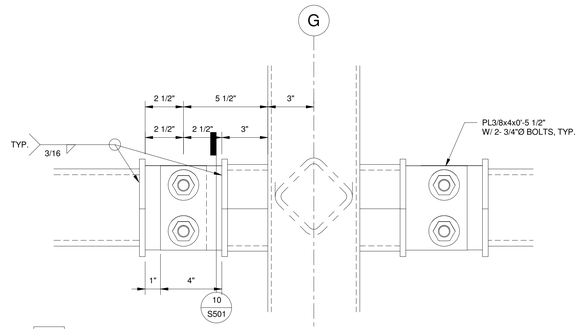
REFERENCING DETAIL: 2 / S302



10 TRUSS BOTTOM CONNECTION SECTION DETAIL

3" = 1'-0"

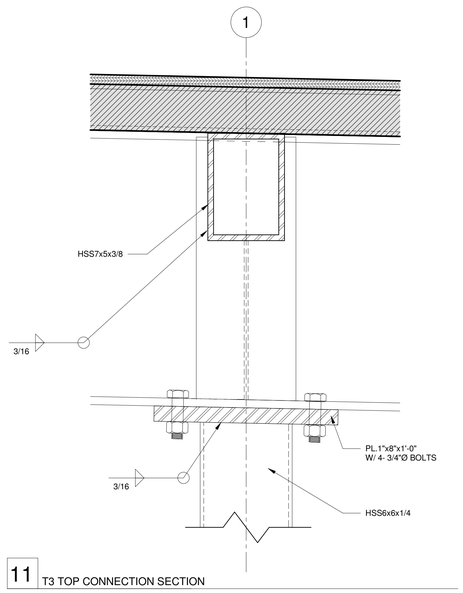
REFERENCING DETAIL: 9 / S501



9 TRUSS BOTTOM CONNECTION DETAIL

3" = 1'-0"

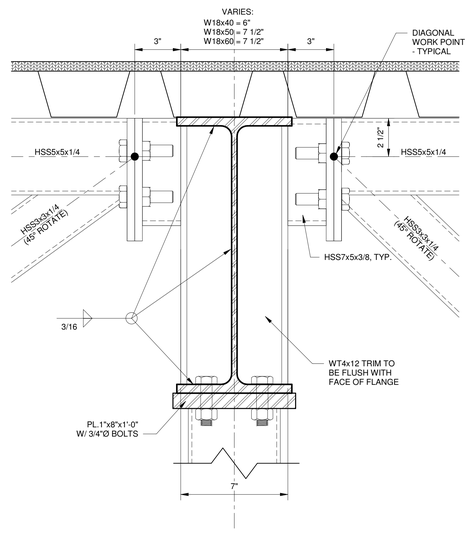
REFERENCING DETAIL: 1 / S302



11 T3 TOP CONNECTION SECTION

3" = 1'-0"

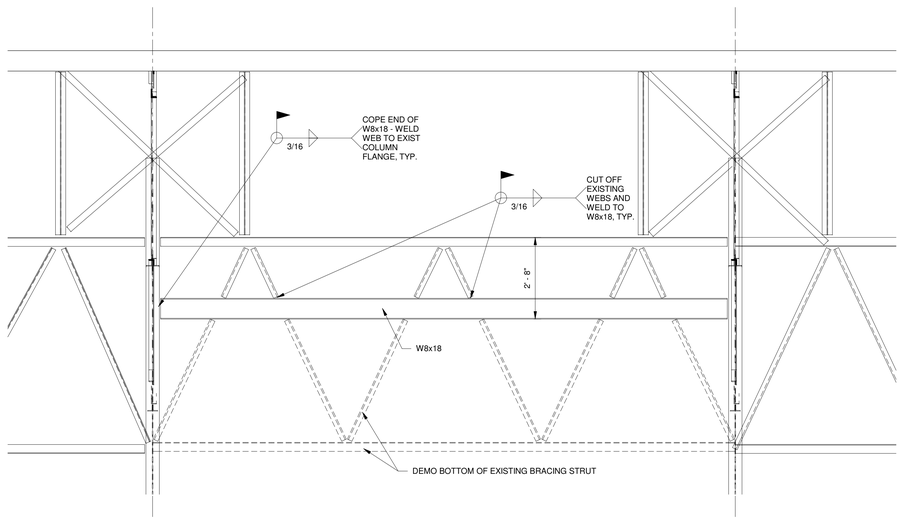
REFERENCING DETAIL: 1 / S301



12 T3 TRUSS TOP

3" = 1'-0"

REFERENCING DETAIL: 2 / S301



14 BRACING STRUT MODIFICATION DETAIL

1/2" = 1'-0"

REFERENCING DETAIL: 1 / S105

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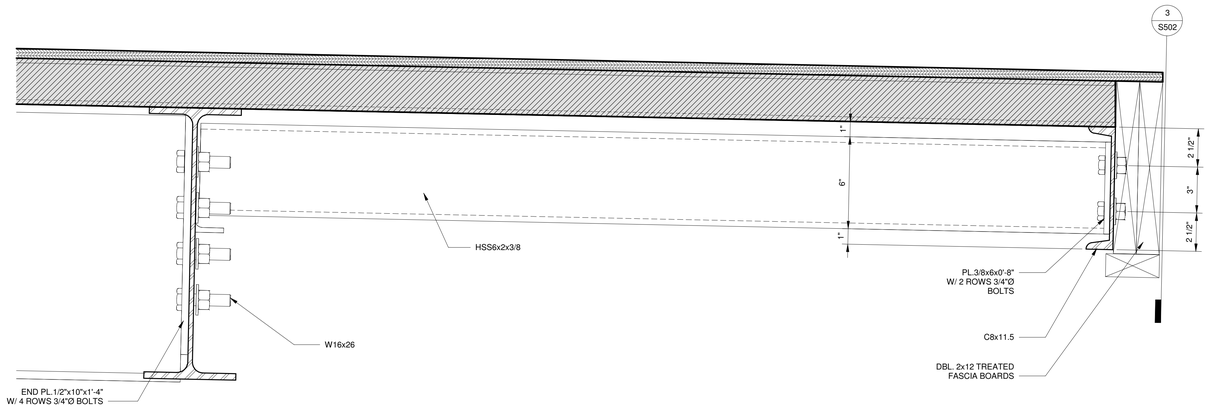
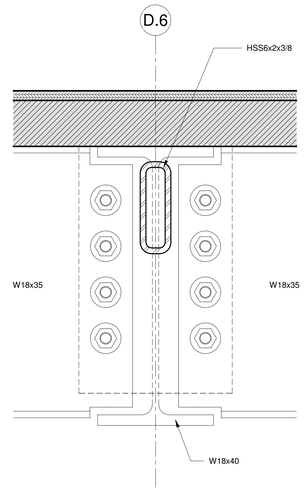


1 TUBE OUTLOOKER ELEVATION

3" = 1'-0"

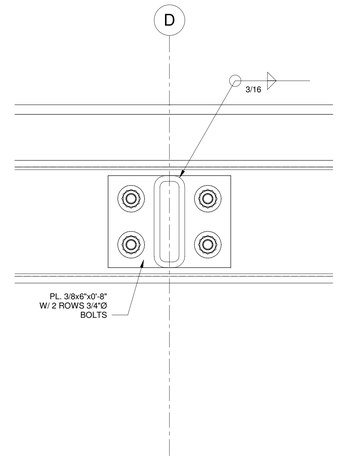
REFERENCING DETAIL: 2 / S301



2 TUBE OUTLOOKER SECTION

3" = 1'-0"

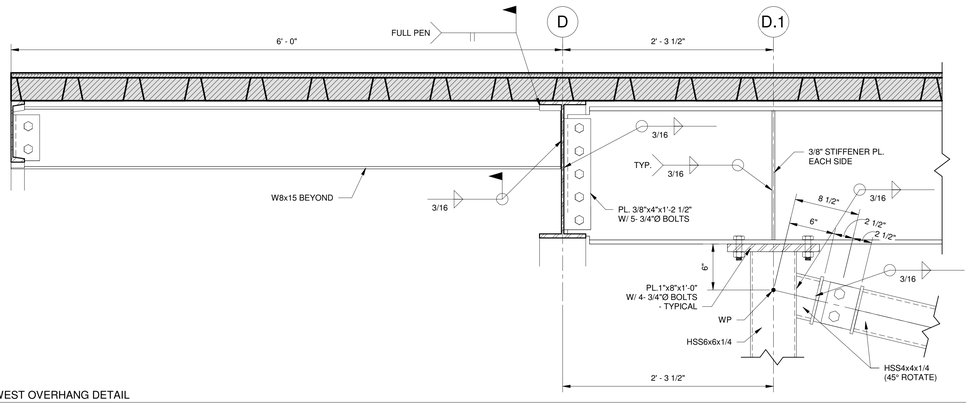
REFERENCING DETAIL: /



3 SOUTH FASCIA CHANNEL CONNECTION ELEVATION

3" = 1'-0"

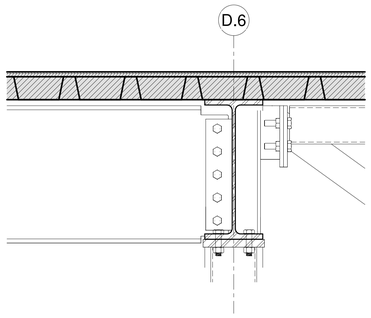
REFERENCING DETAIL: 3 / S312



4 EAST/WEST OVERHANG DETAIL

1 1/2" = 1'-0"

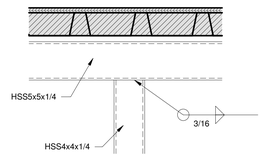
REFERENCING DETAIL: 3 / S303



5 TRUSS 3 - UPPER CONNECTION

1 1/2" = 1'-0"

REFERENCING DETAIL: 3 / S303



7 TRUSS 3 - VERT WEB @ TOP

1 1/2" = 1'-0"

REFERENCING DETAIL: 3 / S303

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ISF - SWINE BARN UPDATES - PHASE 2

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DIVISION 1 - GENERAL REQUIREMENTS

1000 - DESIGN AND BUILDING CODES:

1000-1. INTERNATIONAL BUILDING CODE 2018,
1000-2. AMERICAN CONCRETE INSTITUTE 318
1000-3. AMERICAN INSTITUTE OF STEEL CONSTRUCTION FOURTEENTH EDITION 2011
1000-4. NATIONAL FOREST PRODUCTS ASSOCIATION NATIONAL DESIGN SPECIFICATION

1001 - LATERAL LOADS:

1001-1. INTERNATIONAL BUILDING CODE 2015, CRITERIA :
1001-3. WIND:
- BASIC WIND SPEED: 120 PSF
- EXPOSURE B, URBAN
- INTERNAL PRESSURE COEFICIENT: GCPI = +0.18 AND -0.18
- COMPONENTS AND CLADDING MINIMUM PRESSURE = 25 PSF

1001-4. SNOW:
- GROUND SNOW = 30SPF
- ROOF SNOW = 24PSF
- SNOW EXPOSURE FACTOR CE = 0.9
- THERMAL FACTOR CT = 1.0

1002 - LIVE LOADS:

1002-1. ROOF SNOW LOADS	24 PSF + drift
1002-2. WIND UPWARD AND DOWNWARD	30 PSF

1003 - NET ALLOWABLE SOIL BEARING PRESSURES:

1003-1. COLUMN FOOTINGS	1500 PSF
1003-2. WALL FOOTINGS	1500 PSF

1003-3. SITE SOILS TO BE VERIFIED BY AN APPROVED GEOTECHNICAL TESTING AGENCY PRIOR TO CONSTRUCTION. MITIGATE AND REPLACE UNACCEPTABLE SOILS AS DIRECTED IN THE GEOTECHNICAL TESTING AGENCY. PROVIDE FOR CONSTRUCTION DEWATERING AS REQUIRED.

1004 - CONCRETE COMPRESSIVE STRENGTHS - MINIMUM 28 DAY F'C

1004-1. TYPICAL-UNLESS NOTED OTHERWISE	4000 PSI
1004-2. FOOTINGS	4000 PSI
1004-3. FOUNDATION WALLS	4000 PSI
1004-4. SLABS ON GRADE	4000 PSI
1004-5. SUSPENDED SLABS AND COLUMNS	5000 PSI

1005 - REINFORCING STEEL

1005-1. DEFORMED BARS:	ASTM A615, GR 60 (UNLESS OTHERWISE NOTED)
1005-2. WELDABLE REINFORCING:	ASTM A706, GR 60
1005-3. PLAIN BARS:	ASTM A82
1005-4. WELDED WIRE FABRIC:	ASTM A185
1005-5. EPOXY COATING:	ASTM A775

1006 - STRUCTURAL STEEL:

1006-1. ROLLED SECTIONS	ASTM A572, GR. 50
1006-2. STRUCTURAL TUBES	ASTM A500, GR. B
1006-3. PIPE	ASTM A53, GR. B
1006-4. CONNECTION MATERIAL AND PLATE	ASTM A36
1006-5. STIFFENER PLATES	ASTM A36
1006-6. HIGH STRENGTH BOLTS	ASTM A325/A490 (3/4" DIAMETER U.N.O.)
1006-7. ANCHOR BOLTS	ASTM A307

1008 - SPECIAL INSPECTION REQUIREMENTS:

THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTION BASED ON SECTION 1704 OF THE 2018 INTERNATIONAL BUILDING CODE. THE OWNER WILL EMPLOY SPECIAL INSPECTORS WHO SHALL PROVIDE SPECIAL INSPECTIONS DURING:

1008-1. STRUCTURAL CONNECTIONS WITH WELDS GREATER THAN 3/16" IN THICKNESS
1008-2. STRUCTURAL CONNECTIONS WITH HIGH STRENGTH BOLTS
1008-3. CONCRETE MASONRY CONSTRUCTION
1008-4. STRUCTURAL CONCRETE COMPRESSIVE STRENGTH

1009 - GENERAL NOTES:

1009-1. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPES, INSERTS, ETC., WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
1009-2. FIELD VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND ELEVATIONS SHOWN ON THE DRAWINGS. ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT.
1009-3. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, EACH BIDDER SHALL VISIT THE PREMISES AND ACQUAINT HIMSELF FULLY WITH THE EXISTING CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPES OF EQUIPMENT, ETC. THE BID SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK WITHIN THE EXISTING CONDITIONS. DISRUPTION OF NORMAL ACTIVITIES IN THE WORK AREA MUST BE KEPT TO A MINIMUM.
1009-4. SHOP DRAWINGS PREPARED BY SUPPLIERS, SUBCONTRACTORS, ETC. SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED, INITIALED, AND DATED AS BEING REVIEWED BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR.
1009-5. SHOP DRAWINGS PREPARED BY THE SUBCONTRACTORS, SUPPLIERS, ETC. SHALL BE REVIEWED BY THE ARCHITECT FOR CONFORMANCE WITH DESIGN CONCEPT ONLY. REVIEW BY THE ARCHITECT SHALL NOT BEGIN WITHOUT THE PRIOR COORDINATION AND REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR. WORK SHALL NOT BEGIN WITHOUT THE REVIEW BY THE ENGINEER.
1009-6. DETAILS AND NOTES ON THE STRUCTURAL DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR SITUATIONS ELSEWHERE. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS.
1009-7. OPTIONS ARE FOR THE CONTRACTOR'S CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND SHALL COORDINATE ALL DETAILS. THE COST OF ADDITIONAL DESIGN WORK NECESSITATED BY SELECTION OF AN OPTION SHALL BE BORNE BY THE CONTRACTOR.
1009-1. THE COST OF ADDITIONAL DESIGN WORK DUE TO ERRORS OR OMISSIONS BY THE CONTRACTOR IN CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.
1009-2. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW OR RECORD SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF IOWA.
1009-3. ALL ELEVATIONS GIVEN THUS (+16'-0") ARE TO TOP OF FOOTING, TOP OF FOUNDATION WALL, JOIST BEARING, TOP OF STEEL, TOP OF SLAB, ETC. WITH REFERENCE TO THE FINISHED FIRST FLOOR SLAB = (0'-0").

1010 - CONSTRUCTION PROCEDURES AND SAFETY REQUIREMENTS:

1010-1. COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL LAWS, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ADOPTED PURSUANT THERETO.
1010-2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL SEQUENCES OF CONSTRUCTION, AND BRACING OF ALL PORTIONS OF THE STRUCTURE (INCLUDING WALLS, BEAMS, EXCAVATIONS, ECT.) UNTIL THE STRUCTURE IS FINISHED AND COMPLETE.
1010-3. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKMEN AND OTHER PERSONS DURING CONSTRUCTION. PROVIDE ALL NECESSARY MEASURES TO AVOID EXCESSIVE STRESSES AND TO HOLD THE STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND HOISTS, GUYING, ETC.
1010-4. ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED. OBSERVATION VISITS TO THE SITE BY STRUCTURAL ENGINEER'S FIELD REPRESENTATIVES SHALL NOT INCLUDE THE ITEMS NOTED ABOVE.
1010-5. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. RETAIN THE SERVICES OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF IOWA TO DESIGN AND SUPERVISE ANY SCAFFOLDING FOR WORKMEN, AND ALL SHORING OF FORMS AND ELEMENTS OF THE CONSTRUCTION.
1010-6. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW AND/OR RECORD SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF IOWA.

DIVISION 3 - CONCRETE

3300 - CONCRETE AND REINFORCING

3300-1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS: ACI 301, ACI 304, ACI 311, ACI 315, ACI 318, AND ACI 347 UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3300-2. CONCRETE MATERIALS:

3300-2-A.	ASTM C150	TYPE I PORTLAND CEMENT
3300-2-B.	ASTM C33	NORMAL WEIGHT AGGREGATES
3300-2-C.	ASTM C330	LIGHT WEIGHT AGGREGATES
3300-2-D.	WATER	POTABLE

3300-3. CHLORIDES CONTENT SHALL BE LIMITED BY ACI REQUIREMENTS FOR TYPE OF EXPOSURE.
3300-4. UNLESS OTHERWISE NOTED, PRINCIPAL REINFORCEMENT SHALL HAVE THE FOLLOWING PROTECTION:

3300-4-A.SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3 INCHES
3300-4-B.FORMED SURFACES EXPOSED TO EARTH OR WATER	2 INCHES
3300-4-C.SLABS	1 INCH (TOP)
	3/4 INCH (BOT.)
3300-4-D. BEAMS, COLUMNS	2 INCHES
3300-4-E. WALLS (INTERIOR SURFACES)	1 INCH
3300-4-F. TIES/STIRRUPS	1 ½ INCHES

3300-7. PROVIDE ADEQUATE BOLSTERS, HI-CHAIRS, SUPPORT BARS, ETC., TO MAINTAIN SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING BARS. PROVIDE ACCESSORIES WHICH ARE PLASTIC TIPPED OR GALVANIZED WITH TURNED UP ENDS FOR REINFORCEMENT AT ALL FACES OF EXPOSED CONCRETE, INTERIOR OR EXTERIOR.
3300-10. CROSS REFERENCE STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR INSERTS, ANCHOR BOLTS, NOTCHES, LEDGES, LUGS, ETC. REQUIRED ON BEAMS. WIDTH AND DEPTH OF BEAMS GIVEN ARE OVERALL OUT-TO-OUT DIMENSIONS OF CONCRETE.
3300-11. ALL FIELD BENDING OF REINFORCING SHALL BE DONE COLD. HEATING OF BARS WILL NOT BE PERMITTED.
3300-12. NO ALUMINUM OF ANY TYPE SHALL BE ALLOWED IN THE CONCRETE WORK UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.
3300-13. MAXIMUM O.D. OF EMBEDDED CONDUIT SHALL BE NO LARGER THAN 1/3 OF THE SLAB THICKNESS. NO CONDUIT SHALL BE PLACED ABOVE THE WELDED WIRE FABRIC IN SLABS, ON-GRADE OR CONCRETE FILL PLACED ONTO COMPOSITE METAL DECK.
3300-14. CONCRETE WHICH WILL BE SUBJECTED TO REPEATED CYCLES OF FREEZE-THAW DURING THE LIFE OF THE STRUCTURE SHALL HAVE A WATER-CEMENT RATIO NOT EXCEEDING 6 GALLONS PER BAG AND SHALL CONTAIN ENTRAINED AIR. SEE ACI 301 FOR ADDITIONAL REQUIREMENTS.
3300-15. MECHANICALLY VIBRATE CONCRETE EXCEPT THAT SLABS-ON-GRADE NEED ONLY BE VIBRATED AROUND UNDER FLOOR DUCTS AND OTHER EMBEDDED ITEMS. VIBRATE TOPS OF COLUMNS AND DRILLED PIERS.
3300-16. DO NOT CAST UNEXPOSED WALLS OR GRADE BEAMS IN LENGTHS OVER 60'-0". WAIT 48 HOURS BETWEEN ADJACENT POURS.
3300-17. ALL CONSTRUCTION JOINTS BETWEEN ADJACENT CONCRETE POURS OR BETWEEN CONCRETE AND MASONRY SHALL BE KEYED. JOINTS MUST BE KEPT FREE OF DIRT, DEBRIS, FORM OILS, ETC. TO ASSURE PROPER BOND WITH ADJACENT POUR OR MASONRY CONSTRUCTION.
3300-18. DO NOT PLACE PIPES, DUCTS, REGLETS OR CHACES IN STRUCTURAL CONCRETE OR COMPOSITE FLOOR SYSTEMS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT.

DIVISION 5 - STRUCTURAL STEEL

5120 - STRUCTRURAL STEEL:

5120-1. STRUCTURAL STEEL DETAILS, FABRICATION, AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION - ASD. UNLESS OTHERWISE SHOWN OR SPECIFIED. SHOP PAINT STRUCTURAL STEEL WITH A STANDARD GREY PRIMER.
5120-2. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING CALLED FOR. CERTIFICATES SHALL BE NOT MORE THAN 6 MONTHS OLD AND SHALL BE THOSE ISSUED BY AN ACCEPTABLE TESTING AGENCY.
5120-3. ALL WELDS TO BE E70XX ELECTRODES UNLESS NOTED OTHERWISE.
5120-4. FIELD CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP CONNECTIONS SHALL BE WELDED UNLESS OTHERWISE INDICATED. WELDS INDICATED WITH A SHOP WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. WELDS SHALL BE DESIGNED TO BE FULLY EQUIVALENT IN STRENGTH TO BOLTED CONNECTIONS DETAILED TO MINIMIZING BENDING IN THE CONNECTION.
5120-5. UNLESS OTHERWISE NOTED ALL WELDS SHALL BE CONTINUOUS 3/16" FILLET WELDS. ALL FULL AND/OR PARTIAL PENETRATION WELDS SHALL BE FULLY DETAILED ON THE SHOP DRAWING.
5120-6. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS LATEST EDITION.
5120-7. FABRICATOR SHALL SELECT AISC SIMPLE SHEAR CONNECTIONS FOR NON-COMPOSITE BEAMS CAPABLE OF CARRYING EITHER REACTION FORCE WHEN NDICATED OR 50% OF THE TOTAL UNIFORM LOAD FOR THE GIVEN SIZE, SPAN, AND GRADE OF THE BEAM, AS TABULATED IN THE AISC TABLES FOR ALLOWABLE LOADS.
5120-8. SIMPLE SHEAR CONNECTIONS SHALL BE STANDARD DOUBLE ANGLE OR SINGLE SHEAR PLATES, UNLESS NOTED OTHERWISE. SELECT CONNECTIONS FROM THE AISC, SIMPLE SHEAR CONNECTIONS DESIGN AID PUBLISHED 1990 WHENEVER POSSIBLE. ALL BOLTED CONNECTIONS SHALL HAVE MINIMUM 2 BOLTS.
5120-9. ALL STEEL BEAMS BEARING ON MASONRY SHALL HAVE A MINIMUM OF 8 IN. OF BEARING. PROVIDE 3/8" THICK BEARING PLATES 1"↑ LESS IN WIDTH THAN THE NOMINAL CMU THICKNESS. PROVIDE WALL ANCHORS UNLESS OTHERWISE NOTED.
5120-10.GROUT UNDER BEAM BEARING PLATES AND COLUMN BASE PLATES SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 6000 PSI.
5120-11.MINIMUM EMBEDMENT OF BOLTS IN MASONRY, GROUT, OR CONCRETE: 9 INCHES WITH THE HEAD AT THE EMBEDDED END.
5120-12.HOLES (OPENINGS), ETC., REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OF HOLES AND CUTS IN THE FIELD SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT.
5120-13.FURNISH AND INSTALL MISCELLANEOUS STEEL (CURBS, HANGERS, EXPANSION JOINT ANGLES, STRUTS, ETC.) AS CALLED FOR OR AS NECESSARY PER ARCHITECTURAL AND MECHANICAL/ELECTRICAL DRAWINGS.
5120-14.SEE ARCHITECTURAL DRAWINGS FOR FIREPROOFING OF STRUCTURAL STEEL.
5120-15.DO NOT PRIME MEMBERS WHICH ARE TO RECEIVE SPRAY-ON FIREPROOFING UNLESS DIRECTED BY THE ARCHITECT.
5120-16.USE LOAD INDICATOR WASHERS WITH ALL HIGH STRENGTH BOLTS REQUIRING FULLY TIGHTENED CONDITIONS.
5120-17.SEE SPECIFICATIONS FOR MINIMUM TESTING REQUIREMENTS FOR MATERIALS, CONNECTIONS, WELDING AND ERECTION

05312 - STEEL ROOF DECK:

5312-1. MATERIAL, DETAILING, DESIGN, MANUFACTURE, AND ERECTION OF METAL DECKS SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) SPECIFICATION.
5312-2. METAL DECK SHALL BE CAPABLE OF PROVIDING A DIAPHRAGM SHEAR CAPACITY AS NOTED BELOW IN ACCORDANCE WITH THE CURRENT ICBO RESEARCH RECOMMENDATIONS FOR SIMPLE SPAN CONDITIONS (MINIMUM FACTOR OF SAFETY SHALL BE 2.0):

5312-2-A. ROOF DECK	300 PLF

5312-3. IN NO CASE SHALL WELDING TO STEEL MEMBERS BE LESS THAN 5/8" DIAMETER PUDDLE WELDS AT 12" O.C. (SEE FASTENING DETAILS) AT ALL SUPPORTS AND EDGES. PROVIDE 16 GAGE WELDING WASHERS WHEN RECOMMENDED BY THE MANUFACTURER FOR THE GAGE OF METAL DECK SPECIFIED BELOW. SIDE LAPS SHALL BE FASTENED WITH #10 TEK SCREWS, MINIMUM THREE AT EACH MIDSPAN. OPENING EDGES SHALL RECEIVE THE SAME WELDING AS REQUIRED AT DECK ENDS. ALL WELDING BY CERTIFIED WELDERS EXPERIENCED IN LIGHT GAGE METAL DECK WORK.
5312-4. THE DECK MANUFACTURER SHALL FURNISH ALL CLOSURE PLATES, POUR STOPS, RIDGE AND VALLEY PLATES, SUMP PANS AND DRAIN PLATES, WELDING WASHERS, AND OTHER ACCESSORIES REQUIRED TO PROVIDE A FINISHED SURFACE FOR INSULATION AND ROOFING OR CONCRETE SLABS.
5312-5. INSTALL DECK WITH A MINIMUM 2 INCH END LAP CENTERED OVER SUPPORTS.
5312-6. ALL METAL ROOF DECK SHALL BE PAINTED.
5312-7. NO LOADS SHALL BE PERMITTED TO BE HUNG FROM METAL ROOF DECKING OR FORM DECK (CORRUGATED OR RIBBED). ALL HANGERS FOR DUCTWORK, PIPING, ETC. SHALL BE HUNG DIRECTLY FROM THE STRUCTURAL STEEL OR SUPPLEMENTARY MEMBERS ACCEPTABLE TO THE ARCHITECT. ALL HANGING LOADS, LOCATIONS, AND DETAILS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT

DIVISION 31 - SITEWORK

31200 - FOOTINGS AND FOUNDATIONS

31200-1.ALL FOOTINGS SHALL BE PLACED ONTO CONTROLLED COMPACTED FILL. FOOTING ELEVATIONS SHOWN DESIGNATE A MINIMUM DEPTH OF FOOTINGS WHERE A SAFE SOIL BEARING PRESSURE IS EXPECTED (SEE DESIGN CRITERIA). FOOTINGS SHALL BE LOWERED AND PIERS AND/OR WALLS EXTENDED AS REQUIRED TO REACH THE DESIGN BEARING PRESSURE.
31200-2.ENTIRE FOOTPRINT OF BUILDING TO BE PROOFROLLED WITH TANDEM AXEL DUMP TRUCK WEIGHING 25 TONS MINUMUM. GEOTECHNICAL TESTING AGENCY TO OBSERVE AND REPORT ON PROOFROLLING
31200-3.GENERAL MACHINE EXCAVATION FOR FOOTINGS SHALL STOP NOT LESS THAN 4" ABOVE THE ELEVATION OF BOTTOMS OF FOOTINGS. FINAL EXCAVATION TO THE REQUIRED UNDISTURBED SOIL ELEVATION SHALL BE DONE BY HAND NOT MORE THAN 12 HOURS BEFORE THE FOOTING IS PLACED.
31200-4.ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND CERTIFIED BY A QUALIFIED INDEPENDENT SOILS TESTING FIRM.
31200-5.NO FOOTING SHALL BE PLACED AGAINST SUBGRADES CONTAINING FREE WATER, FROST, OR ICE.
31200-6.UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS.
31200-7.WHERE REQUIRED, ALL NECESSARY CHANGES IN ELEVATION OF WALL FOOTINGS SHALL BE MADE IN STEPS OF 1 VERTICAL TO 2 HORIZONTAL. LOCATION OF STEPS SHALL BE COORDINATED WITH THE WALL FORMING SYSTEM AND AT LEAST 2'-0" APART.
31200-8.LONGITUDINAL REINFORCING IN WALL FOOTINGS SHALL BE CONTINUOUS AT STEP DOWNS. SLOPE OR STEP BOTTOM BARS IN WALL TO FOLLOW STEPS IN FOOTING UNLESS OTHERWISE SHOWN. SEE TYPICAL STEP-DOWN FOOTING DETAIL.
31200-9.LAP WALL FOOTING REINFORCING A BAR DIAMETERS OR A MINIMUM OF 1'-6" AT SPLICES, UNLESS OTHERWISE NOTED.
31200-10.PROVIDE CORNER BARS IN FOOTINGS THE SAME SIZE AND NUMBER AS THE CONTINUOUS REINFORCING, LAPPED 2'-0" WITH MAIN STEEL.
31200-11.REINFORCING IN WALL FOOTINGS BETWEEN COLUMNS SHALL EXTEND INTO COLUMN FOOTINGS A MINIMUM OF 2'-0".
31200-12.REINFORCING IN FOOTINGS SHALL BE ACCURATELY PLACED, SPACED, SUPPORTED, AND SECURED BEFORE PLACING CONCRETE (DO NOT "FLOAT" REINFORCING INTO FOOTINGS).
31200-13.PIPES EXTENDING UNDER FOOTINGS SHALL BE PLACED BEFORE POURING FOOTING AND THE VOID PRODUCED IN LAYING THE PIPE SHALL BE FILLED WITH CONCRETE.
31200-15.BACKFILL PLACED AGAINST WALLS AND GRADE BEAMS SHALL BE DONE EVENLY ON BOTH SIDES.
31200-16.BACKFILL AGAINST BASEMENT FOUNDATION WALLS SHALL NOT BE PLACED UNTIL GROUND LEVEL FLOOR AND LOWER LEVEL SLABS ARE IN PLACE AND CURED UNLESS THE WALL IS PROPERLY BRACED. ALL BRACING, IF USED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUBMIT ALL CALCULATIONS AND DETAILS TO THE STRUCTURAL ENGINEER FOR RECORD (SEE GENERAL NOTES).
31200-17.BACKFILL PLACED DIRECTLY ADJACENT TO BASEMENT AND RETAINING WALLS SHALL BE COMPACTED CLEAN FREE DRAINING GRANULAR MATERIAL. F OR A MINIMUM 2'-6" FROM FACE OF WALL. PROVIDE A 1'-6" DEEP CAP OF COMPACTED APPROVED IMPERVIOUS COHESIVE MATERIAL AT TOP OF GRANULAR BACKFILL. ALL BACKFILL SHALL BE COMPACTED USING HAND OPERATED EQUIPMENT; NO HEAVY EQUIPMENT SHALL BE ALLOWED WITHIN 5 FEET OF ANY WALL.
31200-18.ALL UNACCEPTABLE FILL AND TOP SOIL SHALL BE REMOVED FROM BELOW ALL PROPOSED SLABS-ON-GRADE AND THE EXPOSED NATURAL SOIL SHALL BE PROOF ROLLED AND THE COMPACTION VERIFIED BY A QUALIFIED INDEPENDENT SOILS TESTING FIRM PRIOR TO PLACING FILL. AREAS EXHIBITING WEAKNESS SHALL BE REMOVED AND REPLACED BY ACCEPTABLE COMPACTED FILL.
31200-19.A MINIMUM 6 INCHES OF COMPACTED GRANULAR FILL SHALL BE PLACED UNDER ALL SLABS-ON-GRADE. ALL FILL REQUIRED TO ATTAIN FINAL SUB-GRADE FOR SLABS AND WALLS SHALL BE AN ACCEPTABLE MATERIAL PLACED AND COMPACTED AS DIRECTED BY THE PROJECT SOILS CONSULTANT RECOMMENDATIONS.

STRUCTURAL NARRATIVE FOR ISF SWINE BARN UPDATES – PHASE 2

HISTORY
THE ORIGINAL PORTION OF THE SWINE BARN WAS CONSTRUCTED ROUGHLY 1907. THIS PORTION WAS IN THE SHAPE OF A "U" AND CONSISTED OF THE THREE ROOF BAYS – GRIDS A TO D, GRIDS O TO R, AND GRIDS 15 TO 19. THE SHOW RING (AREA CURRENTLY BOUND BY GRIDS E.4 TO M.6 AND 6.8 TO 13.5) WAS ORIGINALLY CONSTRUCTED ON SOUTH SIDE OF THE OLD MASONRY WALL ON GRID 6.8 SOMETIME AFTER 1907 AND WAS RELOCATED TO THE NORTH SIDE OF GRID 6.8 IN 1936.

IN 1936 THE AREA INTERIOR TO THE ORIGINAL "U" SHAPE WAS INFILLED WITH NEW ROOF AND THE SHOW RING (RELOCATED) BOUND ON EAST AND WEST BY GRIDS D AND O RESPECTIVELY AND TO THE SOUTH BY GRID 15. THIS CONSTRUCTION MAINTAINED AN EXTERIOR COURTYARD BOUND BY THE OLD MASONRY WALL AT 6.8 AND LOW MASONRY WALLS AT OLD GRIDS F AND M. THE 1936 CONSTRUCTION INCLUDED THE MASONRY FAÇADE AND ROOMS (OFFICE AND WOMENS RESTROOM) AT THE EAST ENTRANCE AS WELL AS THE INTERIOR MENS RESTROOM AND EAST OFFICE.

ROUGHLY IN 1944 THE COURTYARD WAS COVERED WITH WOOD TRUSSES CREATING A LOW ROOF FROM GRID 6.8 TO 1. IT IS THOUGHT THAT WOOD WAS USED IN 1944 IN LIEU OF STEEL DUE TO THE 2ND WORLD WAR AND STEEL AVAILABILITY. THE BUILDING HAS REMAINED LARGELY UNCHANGED SINCE ROUGHLY 1944.

THE STRUCTURAL MODIFICATIONS INCLUDED IN THIS MARCH 10TH, 2026 SET GENERALLY REMOVE AND REPLACE THE 1936 AND 1944 ROOF CONSTRUCTION WHILE MAINTAINING THE HIGHEST PORTIONS OF THE RELOCATED SHOW RING AND THE 1907 ORIGINAL CONSTRUCTION.

EXISTING ORIGINAL CONSTRUCTION DOCUMENTS
PORTIONS OF THE ORIGINAL DOCUMENTS EXIST AND ARE AVAILABLE UPON REQUEST. DOCUMENTS FOR THE ORIGINAL 1907, THE SHOW RING, THE 1936 REVISIONS ARE AVAILABLE IN PART. SOME ARE SHOP DRAWINGS.

3D IMAGES ON S001 S002 S003
3D IMAGES ARE PROVIDED ON S001 S002 AND S003. THE INTENTION OF THESE IMAGES IS TO PROVIDE A VISUALIZATION OF THE NEW FRAMING SOLUTIONS – ESPECIALLY AS RELATED TO THE EXISTING REMAINING CONSTRUCTION. THESE IMAGES ARE CREATED IN THE STRUCTURAL 3D MODEL AND ARE NOT PRECISE. STEEL CONNECTIONS MOSTLY ARE ABSENT IN THE 3D VIEW AS THE MODEL DOES NOT CONTAIN THEM. COLOR AND TEXTURE IN THE MODELING ELEMENTS ARE NOT INTENDED TO BE REPRESENTATIVE OF THE FINAL SOLUTION.

REQUIRED FIELD MEASURING AND VERIFICATION RELATIVE TO EXISTING
THE STRUCTURAL DRAWINGS HAVE UTILIZED THE AVAILABLE EXISTING ORIGINAL DOCUMENTS TO GENERALLY ESTABLISH GRID LINE DIMENSIONS. THESE DIMENSIONS MAY VARY AND DIFFER FROM THAT INDICATED ON THE DRAWINGS AND WILL REQUIRE THE CONTRACTOR TO FIELD MEASURE AND VERIFY.

INTERIOR CONCRETE SLAB
THE INTERIOR CONCRETE SLAB AND ASSOCIATED SUBBASE AND SUBGRADE PREPARATIONS ARE BEING DEFINED AND PREPARED BY THE CIVIL ENGINEERING COMPANY KIRKHAM AND MICHAEL. LOOK TO THE CIVIL DOCUMENTS FOR THE INTERIOR SLAB ON GRADE CONSTRUCTION.

THE EXCEPTION TO THIS IS THE SLAB ON GRADE CONSTRUCTION ASSOCIATED WITH THE GROUP "B" AND "C" ROOM BUILD-OUT.

SLOPING BUILDING AND FLOOR AS RELATED TO AN ESTABLISHED ELEVATION 0'-0"
THE EXISTING SWINE BARN IS BUILT ON A SLOPING GRADE. HIGH POINT OF GRADE IS THE NE CORNER AND THE LOW POINT OF GRADE IS THE SW CORNER WITH ROUGHLY 4 FEET PLUS OF CHANGE. THE EXISTING STEEL FRAMING GENERALLY FOLLOWS THE GRADE SLOPE. THIS FACT MAKES THE ESTABLISHMENT OF ELEVATION 0'-0" BASICALLY UN-USEFUL FOR MOST OF THE BUILDING.

THE ELEVATION 0'-0" DOES HAVE MEANING AND IS UTILIZED FOR THE ENTIRE AREA OF THE NEW HIGH ROOF AT AND SOUTH OF GRID 8 & 8.1. THIS PORTION OF THE ROOF WILL BE ERECTED LEVEL AS RELATED TO THE EAST WEST DIRECTION AND WILL SLOPE AT ¼" PER FOOT FROM 8 & 8.1 TO THE SOUTH. THIS MEANS THE PORTIONS OF THIS HIGH ROOF CANTILEVERED OVER THE EXISTING LOW ROOF AT GRID D WILL AT A LESSER DISTANCE THAN AT GRID O.

ALL NEW FOOTINGS AND ALL STRUCTURAL STEEL AT AND SOUTH OF GRID 8 & 8.1 HAVE ELEVATIONS INDICATED RELATIVE TO 0'-0".

CIVIL ELEVATION 24.75 IS EQUAL TO STRUCTURAL ELEVATION 0'-0" BEING THE FLOOR OF MENS ROOM 21.

STEEL BOX CAPS AT OLD MASONRY WALL ON GRID 6.8
THE NEW HIGH ROOF AT THE OLD MASONRY WALL GRID 6.8 IS RAISED ROUGHLY 2'-1" ABOVE THE EXISTING ROOF. TO EXTEND THE MASONRY PIERS A STEEL BOX CAP HAS BEEN DESIGNED TO ACCEPT NEW STEEL BEAM FRAMING AND BRIDGE THE GAP DOWN TO THE MASONRY PIERS. THESE STEEL BOX CAPS ALSO SERVE TO RESTRAIN THE NEW ROOF FROM WIND UPLIFT BY UTILIZING STRAPS ANCHORED TO THE MASONRY.

STEEL ROOF DECK
ALL NEW STEEL ROOF DECK IS 3N20 STYLE. THE DECK IS TO BE INSTALLED WITH THE WIDER FLUTES DOWN. THE REASON FOR THIS IS TO BETTER HIDE AND OBSCURE THE SCREW FASTENERS IN THE NARROW FLUTES AND IS FURTHER ACCOMMODATED BY CAPPING THE DECK WITH 5/8" PLYWOOD WHICH CAN SPAN THE DISTANCE ON TOP BETWEEN THE NARROW FLUTES.

STRUCTURAL STEEL ELL BRACKETS AT HIGH ROOF PERIMETER
A SERIES OF STEEL ELL BRACKETS HAVE BEEN DESIGNED AT THE NEW HIGH ROOF PERIMETER AT THE EAST, WEST AND NORTH SIDES. THE BRACKETS ALLOW FOR A NEW 6 FOOT CANTILEVER OVER THE LOW ROOF BELOW. THE DETAILING OF THE BRACKETS ARE SIMILAR BUT ARE ALSO DETAILED AND DIMENSIONED DIFFERENT AS RELATED TO LOCATION AND SUPPORTING FRAMING ELEMENTS.

EXISTING COLUMN EXTENSIONS
THE NEW HIGH ROOF IS PLACED ABOVE IT'S CURRENT POSITION REQUIRING EXTENDING EXISTING STEEL COLUMNS UP. THIS IS ESPECIALLY TRUE AT ALL COLUMNS AT GRIDS D AND O AT AND SOUTH OF GRID 8 AND IS ALSO REQUIRED AT VARIOUS OTHER LOCATIONS.

**A

GENERAL PLAN SYMBOLS

- PLAN REVISION NUMBER
- DETAIL NUMBER ON SHEET / SHEET NUMBER WHERE DETAIL IS PLACED
- KEYNOTE SYMBOL
- CONTINUATION SYMBOL
- POINT WHERE NEW CONNECTS TO EXISTING
- Room Name / Number — ROOM NAME / NUMBER
- AREA BEING DEMOLISHED
- AREA NOT IN CONTRACT
- MARK — SCHEDULED EQUIPMENT (UNDERLINED)
- MARK — NONSCHEDULED EQUIPMENT
- (E) MARK — EXISTING EQUIPMENT - HALFTONE - (E) PREFIX
- (R) MARK — EXISTING RELOCATED EQUIPMENT - (R) PREFIX

ABBREVIATIONS

▲T	TEMPERATURE DIFFERENCE	LB	POUND
Ø	ROUND	LB/HR	POUNDS PER HOUR
ABV	ABOVE	LD	LINEAR DIFFUSER
AC	AIR CONDITIONING	LP	LOW PRESSURE
AD	AREA DRAIN	LP	LIQUEFIED PETROLEUM GAS
ADD	ADDENDUM	LVR	LOUVER
A/E	ARCHITECT / ENGINEER	LWT	LEAVING WATER TEMPERATURE
AFF	ABOVE FINISHED FLOOR	MA	MIXED AIR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MAX	MAXIMUM
ALT	ALTERNATE	MBH	ONE THOUSAND BTU PER HOUR
AP	ACCESS PANEL	M.C.	MECHANICAL CONTRACTOR
ARCH	ARCHITECT/ARCHITECTURAL	MD	MOTORIZED DAMPER
BAS	BUILDING AUTOMATION SYSTEM	MECH	MECHANICAL
BFF	BELOW FINISHED FLOOR	MFR	MANUFACTURER
BHP	BRAKE HORSEPOWER	MIN	MINIMUM
BLW	BELOW	MISC	MISCELLANEOUS
BTU	BRITISH THERMAL UNITS	MP	MEDIUM PRESSURE
BTUH	BRITISH THERMAL UNITS PER HOUR	MTR	MOTOR
CAP	CAPACITY	MUA	MAKE-UP/AIR
CB	CATCH BASIN	NC	NOISE CRITERIA
CD	CEILING DIFFUSER	NC	NORMALLY CLOSED
CFM	CUBIC FEET PER MINUTE	NIC	NOT IN CONTRACT
CFH	CUBIC FEET PER HOUR	NG	NATURAL GAS
CLG	CEILING	NO	NUMBER
C.M.	CONSTRUCTION MANAGER	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CV	CONTROL VALVE	O	OXYGEN
CW	COLD WATER	OA	OUTSIDE AIR
D	DEGREE	ORD	OVERFLOW ROOF DRAIN
DB	DRY BULB	PD	PRESSURE DROP
DDC	DIRECT DIGITAL CONTROLS	PIV	POST INDICATOR VALVE
DIA	DIAMETER	PLBG	PLUMBING
DN	DOWN	PRESS	PRESSURE
DW	DEIONIZED WATER	PRV	PRESSURE REDUCING VALVE
EAT	ENTERING AIR TEMPERATURE	PSI	POUNDS PER SQUARE INCH
E.C.	ELECTRICAL CONTRACTOR	PSIG	POUNDS PER SQUARE INCH GAUGE
ELEC	ELECTRICAL	PWR	POWER
EQUIP	EQUIPMENT	R	DUCT RISER
EWC	ELECTRIC WATER COOLER	RA	RETURN AIR
EWT	ENTERING WATER TEMPERATURE	RCP	RADIANT CEILING PANEL
EA	EXHAUST AIR	RD	ROOF DRAIN
EG	EXHAUST GRILLE	REC	RECESSED
EXIST	EXISTING	RED	REDUCER
F	DEGREES FAHRENHEIT	RG	RETURN GRILLE
FCO	FLOOR CLEAN OUT	RH	RELATIVE HUMIDITY
FD	FLOOR DRAIN	RLA	RELIEF AIR
FDC	FIRE DEPARTMENT CONNECTION	RM	ROOM
FL	FLOOR	RPM	REVOLUTIONS PER MINUTE
FO	FUEL OIL	SA	SUPPLY AIR
FOV	FUEL OIL VENT	SAN	SANITARY
FOR	FUEL OIL RETURN	SD	SMOKE DAMPER
FOS	FUEL OIL SUPPLY	SF	SQUARE FOOT
FPC	FIRE PROTECTION CONTRACTOR	SG	SUPPLY GRILLE
FPM	FEET PER MINUTE	SM	SURFACE MOUNT
FS	FLOOR SINK	SP	STATIC PRESSURE
FT	FOOT/FEET	SR	SUPPLY REGISTER
FTR	FIN TUBE RADIATION	STM	STEAM
GAL	GALLON	T	THERMOSTAT
GF	GAS-FIRED	T.C.	TEMP CONTROLS CONTRACTOR
G.C.	GENERAL CONTRACTOR	TD	TEMPERATURE DROP
GPM	GALLONS PER MINUTE	TD	TRENCH DRAIN
GW	GREASE WASTE	TEMP	TEMPERATURE
HB	HOSE BIBB	TYP	TYPICAL
HP	HORSE POWER	UG	UNDERGROUND
HP	HIGH PRESSURE	VAC	VACUUM
HTG	HEATING	V	VENT
HTR	HEATER	VAV	VARIABLE AIR VOLUME
HW	HOT WATER	VENT	VENTILATION
HYD	HYDRANT	VTR	VENT THROUGH ROOF
ID	INDIRECT DRAIN	W	WASTE
IN	INCH	WB	WET BULB
I.E.	INVERT ELEVATION	WCO	WALL CLEAN OUT
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR	WH	WALL HYDRANT
LAT	LEAVING AIR TEMPERATURE	YCO	YARD CLEANOUT

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ERV	ENERGY RECOVERY VENTILATOR
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
BCU	BLOWER COIL UNIT	GRV	GRAVITY ROOF VENTILATOR
CH	CHILLER	HP	HEAT PUMP
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	P	PUMP
CP	CONDENSER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RF	RETURN FAN
DC	DUCT MOUNTED COIL	RHC	REHEAT COIL
CP	DOMESTIC WATER CIRCULATING PUMP	RTU	ROOFTOP UNIT
EF	EXHAUST FAN	SP	SUMP PUMP
EDC	ELECTRIC DUCT COIL	UH	UNIT HEATER
ET	EXPANSION TANK	WH	WATER HEATER

* NOTE *

ALL GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL SUBSEQUENT SHEETS IN SHEET LIST. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

PLUMBING PIPING

- 2" — NOMINAL PIPE SIZE
- 2" CW — EXISTING PIPE TO REMAIN
- PIPE TO BE DEMOLISHED
- COLD WATER TYPE
- CW — COLD WATER
- SCW — SOFTENED COLD WATER
- HOT WATER TYPE
- HW — HOT WATER
- HW 140° — HOT WATER 140°
- SHW — SOFTENED HOT WATER
- HOT WATER RECIRC TYPE
- HWC — HOT WATER RECIRC
- HWC 140° — HOT WATER RECIRC 140°
- SHWC — SOFTENED HOT WATER RECIRC
- DI — DEIONIZED WATER
- DIR — DEIONIZED WATER RETURN
- RO — REVERSE OSMOSIS
- ROR — REVERSE OSMOSIS RETURN
- WS — WATER SERVICE
- ST — STORM
- STO — STORM OVERFLOW
- SAN — SANITARY
- PD — PUMPED DISCHARGE
- V — VENT
- AW — ACID WASTE
- AV — ACID VENT
- GSAN — GREASE SANITARY
- GV — GREASE VENT
- OW — OIL WASTE
- OV — OIL VENT
- CA — COMPRESSED AIR

PIPE FITTINGS

- PIPE RISE / DROP
- PIPE ELBOW
- PIPE TEE HORIZONTAL / RISER / DROP
- PIPE CAP / CLEANOUT / CONTINUATION
- P-TRAP

PIPE ACCESSORIES

- BALANCING VALVE
- BALL VALVE
- SOLENOID VALVE
- GATE VALVE
- GENERIC ISOLATION VALVE
- PRESSURE REDUCING VALVE
- UNION
- STRAINER
- WATER METER
- ANGLE VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- INLINE PUMP
- HOSE BIBB/ HYDRANT
- PRESSURE GAUGE
- AIR VENT
- PRESSURE RELIEF
- BACKFLOW PREVENTER
- BACKFLOW PREVENTER

FIXTURE SYMBOLS

- FD-1 — FLOOR DRAIN
- FCO — FLOOR CLEANOUT
- FS — FLOOR SINK
- RD — ROOF DRAIN
- RD — COMBINATION ROOF DRAIN

MEDICAL GAS PIPING

- CO2 — CARBON DIOXIDE
- IA — INSTRUMENT AIR
- MA — MEDICAL AIR
- MAI — MEDICAL AIR INTAKE
- VAC — MEDICAL VACUUM SUCTION
- MVE — MEDICAL VACUUM EXHAUST
- N — NITROGEN GAS
- NO2 — NITROUS OXIDE GAS
- O2 — OXYGEN GAS
- WG — WASTE ANESTHESIA GAS DISPOSAL

GENERAL NOTES - PLUMBING DEMOLITION

1. THE PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS AND DIMENSIONS.
2. WHEN CONNECTING TO EXISTING SYSTEMS THE PLUMBING CONTRACTOR SHALL BE REQUIRED TO MOVE PIPING UP TO 5'-0" IN ANY DIRECTION AND ADJUST CONNECTION SIZES UP OR DOWN TO THE NEXT NOMINAL PIPE SIZE WITHOUT ANY ADDITIONAL COST.
3. ALL FIXTURES AND EQUIPMENT SHOWN TO BE REMOVED SHALL INCLUDE ALL ASSOCIATED PIPING, INSULATION, CONTROLS, WIRING, HANGERS AND CONCRETE PADS UNLESS OTHERWISE NOTED. SEAL PENETRATIONS FROM DEMOED PIPING.
4. REMOVAL OF EXISTING PLUMBING FIXTURES AND PIPING WILL REQUIRE EXISTING RISERS, MAINS AND BRANCH PIPING TO BE VALVED AND CAPPED TO ALLOW THE REMAINING SYSTEMS TO REMAIN FULLY FUNCTIONAL. PROVIDE AND INSTALL NEW ISOLATION VALVES WHERE REQUIRED FOR COMPLETION OF THE WORK.
5. ALL PIPING SHOWN TO BE REMOVED SHALL TAKEN BACK TO WITHIN 12" OF THE NEAREST ACTIVE MAIN AND CAPPED.
6. ALL PIPING RISERS AND MAINS SHALL BE REFILLED WITH PROPER FLUID AND PROPERLY VENTED ONCE NEW WORK HAS BEEN INSTALLED.
7. EXISTING PIPING TO REMAIN SHALL BE PROTECTED DURING DEMOLITION AND NEW CONSTRUCTION ACTIVITIES.
8. CONTRACTOR SHALL REMOVE ALL MATERIALS NOT INDICATED TO BE SALVAGED FROM THE PROJECT SITE. ALL REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR WHO SHALL BE DISPOSED OF LEGALLY. OWNER SHALL HAVE RIGHT OF REFUSAL ON SALVAGEABLE ITEMS REMOVED AS A RESULT OF RENOVATION ACTIVITIES.
9. PATCH/SEAL ALL OPENINGS LEFT FROM DEMOLISHED PIPING. PATCHING SHALL MATCH EXISTING.
10. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH CONCRETE CORING REQUIRED FOR INSTALLATION OF NEW PLUMBING SYSTEMS. COPING OF THE EXISTING CONCRETE SURFACE TO THE NEW FLOOR DRAIN SHALL BE BY THE GENERAL CONTRACTOR. CONSTRUCTION MANAGER. CONCRETE CORING ACTIVITIES SHOULD BE CLOSELY COORDINATED WITH THE GENERAL CONTRACTOR/ CONSTRUCTION MANAGER. PLUMBING CONTRACTOR SHALL MARK INTENDED CONCRETE CORING LOCATIONS AND REVIEW WITH OWNER PRIOR TO PROCEEDING WITH WORK.
11. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH CONCRETE CUTTING, EXCAVATING, BACKFILL AND PATCHING REQUIRED FOR INSTALLATION OF NEW PLUMBING SYSTEMS. CONCRETE CUTTING ACTIVITIES SHOULD BE CLOSELY COORDINATED WITH THE GENERAL CONTRACTOR/ CONSTRUCTION MANAGER. PLUMBING CONTRACTOR SHALL MARK INTENDED CONCRETE CUTTING LOCATIONS AND REVIEW WITH OWNER PRIOR TO PROCEEDING WITH WORK. PATCH CONCRETE TO MATCH EXISTING.
12. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH WALL CUTTING REQUIRED FOR REMOVAL AND/OR INSTALLATION OF THE PLUMBING SYSTEMS. WALL CUTTING ACTIVITIES SHALL BE CLOSELY COORDINATED WITH THE GENERAL CONTRACTOR/ CONSTRUCTION MANAGER. THE PLUMBING CONTRACTOR SHALL MARK INTENDED CUTTING LOCATIONS AND REVIEW WITH OWNER PRIOR TO PROCEEDING WITH WORK. PATCH WALLS TO MATCH EXISTING.
13. GENERAL CONTRACTOR/ CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH WALL CUTTING REQUIRED FOR REMOVAL AND/OR INSTALLATION OF THE PLUMBING SYSTEMS. THE PLUMBING CONTRACTOR SHALL MARK INTENDED CUTTING LOCATIONS AND REVIEW WITH OWNER PRIOR TO PROCEEDING WITH WORK. PATCH WALLS TO MATCH EXISTING.
14. SOME WORK INDICATED IS TO BE PERFORMED IN AN EXISTING FINISHED AREA. (FIELD VISIT REQUIRED). PLUMBING CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR/ CONSTRUCTION MANAGER AND MAINTENANCE PERSONNEL. SCHEDULE NIGHT AND/OR WEEKEND WORK TO MINIMIZE DISRUPTIONS TO EXISTING TENANTS.
15. SOME WORK INDICATED IS TO BE PERFORMED IN AN EXISTING FINISHED AREA. (FIELD VISIT REQUIRED). PLUMBING CONTRACTOR SHALL COORDINATE PARTIAL CEILING REMOVAL AND REPLACEMENT WITH GENERAL CONTRACTOR/ CONSTRUCTION MANAGER AND MAINTENANCE PERSONNEL. SCHEDULE NIGHT AND/OR WEEKEND WORK TO MINIMIZE DISRUPTIONS TO EXISTING TENANTS. CEILINGS MUST BE REPLACED BEFORE START OF BUSINESS.
16. SOME WORK INDICATED IS TO BE ACCOMPLISHED IN AN EXISTING FINISHED AREA. (FIELD VISIT REQUIRED). PLUMBING CONTRACTOR SHOULD COORDINATE CONCRETE CORING WITH GENERAL CONTRACTOR/ CONSTRUCTION MANAGER AND MAINTENANCE PERSONNEL. SCHEDULE NIGHT AND/OR WEEKEND WORK TO MINIMIZE DISRUPTIONS TO EXISTING TENANTS. PLUMBING CONTRACTOR SHALL TAKE PRECAUTIONS NECESSARY TO MINIMIZE CONSTRUCTION DEBRIS TRANSFER TO ADJACENT NON-WORK AREAS.
17. COORDINATE ALL SHUT-DOWNS WITH GENERAL CONTRACTOR/ CONSTRUCTION MANAGER AND OWNER TO MINIMIZE SHUT-DOWNS TO OCCUPIED AREAS. ALL REQUIRED SHUT-DOWNS SHALL BE KEPT TO THE SHORTEST DURATION POSSIBLE.
18. NOTIFY OWNER'S REPRESENTATIVE THREE WORKING DAYS IN ADVANCE OF A SINGLE SHUTDOWN PERIOD TO MAKE CONNECTIONS TO EXISTING SYSTEM PIPING, TEST/CERTIFY SYSTEM, AND RETURN TO SERVICE.

GENERAL NOTES - PLUMBING

1. ALL PLUMBING WORK SHOULD BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION:
   - 2021 IOWA STATE PLUMBING CODE
   - UNIFORM PLUMBING CODE
   - 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
   - LOCAL CODES, INCLUDING ALL AMENDMENTS AND ORDINANCES.
2. THESE DRAWINGS ARE DIAGRAMMATIC, NOT ALL PIPING, FITTINGS, OFFSETS, VALVES OR OTHER ACCESSORIES ARE SHOWN. THE PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL ANY/ALL NECESSARY PIPING, FITTINGS, VALVES, REGULATORS, GAUGES, HANGERS, INSULATION, EQUIPMENT, FIXTURES, ETC. REQUIRED FOR A COMPLETE FUNCTIONAL SYSTEM AS SHOWN ON PLUMBING PLANS AND AS OUTLINED IN SPECIFICATION INFORMATION UNLESS OTHERWISE NOTED.
3. PLUMBING CONTRACTOR SHOULD UTILIZE THESE PLANS AND PROVIDE RECORD DRAWING COMMENTARY REFLECTING ACTUAL INSTALLATION. PROVIDE ONE HARD-COPY SET TO ARCHITECT/ENGINEER.
4. PLUMBING CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL FEES AND PERMITS REQUIRED TO ACCOMPLISH THIS WORK.
5. PLUMBING CONTRACTOR SHOULD REVIEW ANTICIPATED MAN/MATERIAL LIFT EQUIPMENT WITH OWNER'S REPRESENTATIVE PRIOR TO UTILIZING FOR INSTALLATION. DAMAGED FLOORING RESULTING FROM UNAPPROVED EQUIPMENT WILL BE REPLACED AT THE PLUMBING CONTRACTOR'S EXPENSE.
6. REFER TO WRITTEN SPECIFICATIONS FOR EQUIPMENT AND MATERIAL RELATED TO THIS WORK.
7. COORDINATE SEQUENCE OF PLUMBING WORK CLOSELY WITH GENERAL CONTRACTOR/ CONSTRUCTION MANAGER AND OTHER TRADES TO AVOID CONFLICTS.
8. ADA COMPLIANCE SHALL BE MAINTAINED WHERE ADJUSTMENTS ARE MADE TO FIXTURES LOCATED WITHIN ADA TOILET ROOMS.
9. PLUMBING CONTRACTOR SHOULD TAKE PRECAUTIONS NECESSARY TO MINIMIZE CONSTRUCTION DEBRIS TRANSFER TO ADJACENT NON-WORK AREAS.
10. PRIOR TO COMMENCING WORK ON THIS PROJECT, VERIFY DEPTH, SIZE, LOCATION AND CONDITION OF ALL EXISTING UTILITIES IN FIELD. SHOULD CONDITIONS EXIST OTHER THAN THOSE INDICATED WHICH WOULD CAUSE THE DESIGN TO BE ALTERED, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IMMEDIATELY.
11. PLUMBING UTILITY CONNECTIONS SHALL EXTEND TO 5'-0" OUTSIDE OF THE BUILDING FOR CONNECTION BY THE SITE UTILITIES CONTRACTOR.
12. COORDINATE ALL BELOW FLOOR PLUMBING PIPING AND EQUIPMENT WITH STRUCTURAL PLANS.
13. COORDINATE INSTALLATION OF PLUMBING WORK WITH ALL OTHER TRADES SO AS TO AVOID UNNECESSARY DELAY OR INTERFERENCES. PLUMBING CONTRACTOR SHALL REVIEW ARCHITECTURAL AND EQUIPMENT SHEETS.
14. PLUMBING CONTRACTOR SHALL RUN ALL DOMESTIC WATER, WASTE AND VENT, NATURAL GAS, MEDICAL GAS, COMPRESSED AIR, AND STORM PIPING AS HIGH AS POSSIBLE WITHIN THE CEILING / TRUSS SPACE. COORDINATE THE LOCATION OF ALL PIPING WITH THE STRUCTURAL PLANS, ARCHITECTURAL CEILING HEIGHTS, AND OTHER TRADES TO AVOID CONFLICTS. NOTIFY GENERAL CONTRACTOR/ CONSTRUCTION MANAGER AS SOON AS ANY CONFLICTS ARE DETECTED. FAILURE TO PROPERLY COORDINATE PIPE ROUTING WITH OTHER TRADES WILL BE REQUIRED TO BE MOVED AT THE PLUMBING CONTRACTOR'S EXPENSE.
15. PLUMBING CONTRACTOR SHALL COORDINATE PIPE ROUTING TO AVOID ROOF HATCHES, SKYLIGHTS, EQUIPMENT SERVICE ACCESS AND ACCESS PANELS.
16. PLUMBING CONTRACTOR SHALL FIELD VERIFY MEANS AND METHODS REQUIRED TO BRING PLUMBING FIXTURES, EQUIPMENT AND MATERIAL INTO THE BUILDING. COORDINATE STORAGE AND LAY DOWN AREAS WITH THE GENERAL CONTRACTOR/ CONSTRUCTION MANAGER PRIOR TO BRINGING MATERIALS TO THE PROJECT SITE.
17. REFERENCE ARCHITECTURAL DRAWINGS FOR CODE-RATED WALLS, FLOORS, AND CEILINGS. PROVIDE UL RATED, FM APPROVED FIRE STOP AT ALL NEW PLUMBING PIPE PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS AND CEILINGS.
18. ALL DOMESTIC WATER AND VENT PIPING DROPS TO PLUMBING FIXTURES SHALL BE CONCEALED IN THE WALL UNLESS OTHERWISE NOTED.
19. FLUSH NEW WATER PIPING AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO CONNECTING ANY FIXTURES OR EQUIPMENT.
20. PROVIDE WATER HAMMER ARRESTORS SERVING QUICK-CLOSING VALVES IN EACH BRANCH OR AT APPLIANCE OR FIXTURE.
21. ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILING SHALL BE INSTALLED BEHIND AN ACCESS PANEL. REFERENCE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPES, HEIGHTS, AND OTHER CEILING MOUNTED ITEMS.
22. INSTALL SHUT-OFF VALVES ON ALL HOT & COLD WATER LINES TO FIXTURE OR APPLIANCE. ALL EXPOSED WATER AND WASTE LINES TO BE CHROME PLATED.
23. ALL VALVES, UNIONS, ETC. SHALL BE SAME SIZE AS PIPE UNLESS OTHERWISE INDICATED ON DRAWINGS.
24. ALL PLUMBING PIPING SHALL BE SUPPORTED. SEE SPECIFICATIONS.
25. FURNISH & INSTALL ALL BACKFLOW PROTECTION DEVICES REQUIRED BY AUTHORITY HAVING JURISDICTION. BACKFLOW DEVICES REQUIRING TESTING SHALL BE INSTALLED NO HIGHER THAN 5'-0" ABOVE FINISHED FLOOR.
26. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR TESTS AND CERTIFICATION OF REDUCED PRESSURE BACKFLOW DEVICE PER AUTHORITY HAVING JURISDICTION. BACKFLOW CERTIFICATION SHALL BE POSTED ON BACKFLOW DEVICE ONCE TESTING HAS BEEN COMPLETED.
27. ALL WATER LINES SHALL BE RUN OVERHEAD UNLESS OTHERWISE NOTED.
28. PROVIDE ESCUTCHEON PLATES AND SILICONE SEALANT AT ALL UTILITY PENETRATIONS INTO WALLS, CEILINGS, AND FLOORS. DO NOT USE CAULKS OR EXPANDING FOAMS FOR SEALANT.
29. COORDINATE FLOOR DRAIN AND CLEANOUT ROUGH-IN WITH SELECTED FLOOR COVERING SYSTEM.
30. DO NOT UTILIZE COMBINATION WASTE AND VENT SYSTEM FOR SINKS AND LAVATORIES ROUGHED IN ABOVE FLOOR.
31. NOTIFY LOCAL INSPECTOR PRIOR TO BACKFILL OF ALL UNDER SLAB PLUMBING. ANY WORK COVERED PRIOR TO INSPECTION SHALL BE UNCOVERED AT THE INSPECTOR'S REQUEST.
32. FILL/SEAL ALL DRAIN TRAPS WITH MINERAL OIL.
33. PROVIDE TRAP PRIMERS FOR FLOOR DRAINS IN RESTROOMS, WHERE REQUIRED BY CODES. PROVIDE DEEP SEAL TRAPS FOR FLOOR DRAINS WITHOUT TRAP PRIMERS.
34. DO NOT USE PVC MATERIALS IN PLENUM AREAS USED AS RETURN AIR PATHS. REFERENCE ARCHITECTURAL CEILING PLAN AND MECHANICAL PLANS.
35. VERIFY THE LOCATION AND INVERT ELEVATION OF THE SANITARY SEWER ON THE SITE PLAN AND REVISE THE SEWER SYSTEM AS REQUIRED.
36. VERIFY THE LOCATION AND INVERT ELEVATION OF THE STORM SEWER ON THE SITE PLAN AND REVISE THE SEWER SYSTEM AS REQUIRED.
37. ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, GRAB BARS, ETC. AND THE OWNERS REPRESENTATIVE PRIOR TO ANY INSTALLATION.
38. ALL PLUMBING FIXTURE VENTS SHALL TERMINATE A MINIMUM OF 12 INCHES AND A MAXIMUM OF 24 INCHES FROM ANY VERTICAL SURFACE AND A MINIMUM OF 10'-0" FROM ANY OUTSIDE AIR INTAKE OR OPENABLE DOOR, WINDOW, ETC., SHIFT VENT THRU ROOF AS REQUIRED.
39. ALL FLOOR SINKS AND FLOOR DRAINS IN TRAFFIC AREAS SHALL BE INSTALLED FLUSH TO FLOOR SURFACE.
40. PROVIDE AIR GAPS FOR INDIRECT DRAINS AS REQUIRED BY CODE. AIR GAP SHALL BE A MINIMUM 2 TIMES THE DIAMETER OF THE INDIRECT DRAIN.
41. DO NOT ROUTE PIPING DIRECTLY ABOVE OR BELOW ELECTRICAL PANELS, INCLUDING PANEL SERVICE CLEARANCES.
42. DO NOT SUSPEND PIPING FROM OTHER PIPING, DUCTWORK OR CONDUIT. ALL PIPING SHALL BE SUPPORTED FROM BUILDING STRUCTURE USING THE APPROPRIATE ATTACHMENTS.
43. PIPE SPACING SHOWN ON THE DRAWINGS IS FOR CLARITY ONLY. PIPING SHALL BE INSTALLED TO CONSERVE SPACE WHERE POSSIBLE.
44. REFER TO MECHANICAL SHEETS FOR PLUMBING CONNECTIONS TO MECHANICAL EQUIPMENT.
45. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND INSTALLING ALL LOW VOLTAGE CABLING AND POWER WIRING/CONDUIT INDICATED THIS PLAN UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE ALL WORK WITH ELECTRICAL CONTRACTOR PRIOR TO BID.
46. SEE PLUMBING FIXTURE SCHEDULE FOR BRANCH PIPING SIZES TO INDIVIDUAL FIXTURES. BRANCH PIPE SIZES SHALL MATCH SCHEDULE UNLESS OTHERWISE NOTED.

PLUMBING SHEET INDEX

P000	PLUMBING TITLE SHEET
PD100	PLUMBING OVERALL DEMOLITION PLAN
PD101	PLUMBING DEMOLITION PLAN
P100	PLUMBING UNDERFLOOR OVERALL PLAN
P101	PLUMBING OVERALL PLAN
P103	PLUMBING UNDERFLOOR ENLARGED PLAN
P104	PLUMBING ENLARGED PLAN
P105	PLUMBING ROOF PLANS
P500-1	PLUMBING DETAILS
P600-1	PLUMBING SCHEDULES

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING TITLE SHEET

Project Number: 251001.00
Date: 03/10/2026

P000

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

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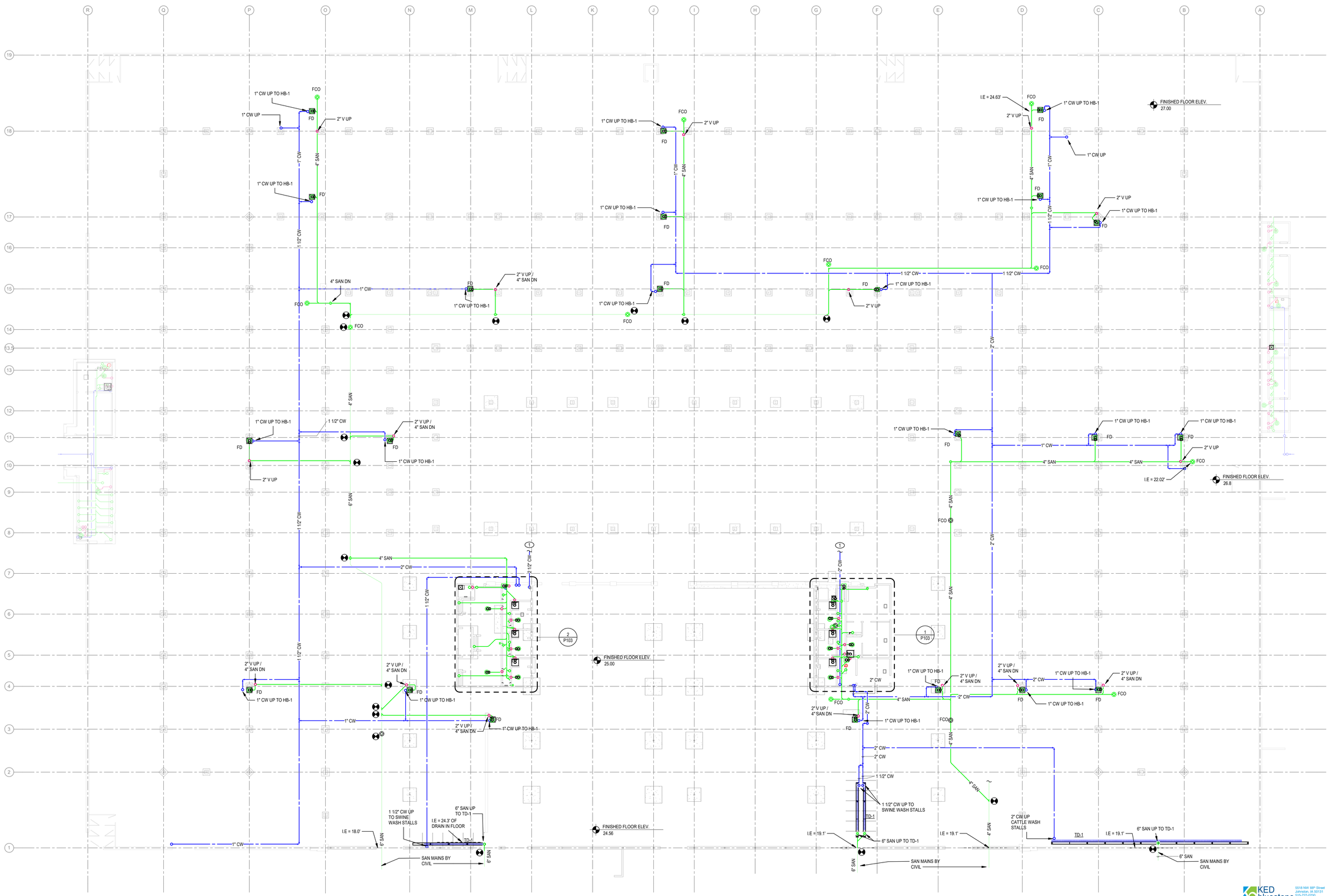
GENERAL NOTES:

1. ALL ABOVE GRADE WATER PIPING SHALL BE DRAINABLE.

KEYED NOTES:

1. CONNECT TO NEW 6" CW MAIN UNDERFLOOR.



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1 PLUMBING UNDERFLOOR OVERALL PLAN - PHASE 2

1/16" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING UNDERFLOOR OVERALL PLAN

Project Number: 251001.00

Date: 03/10/2026

P100

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

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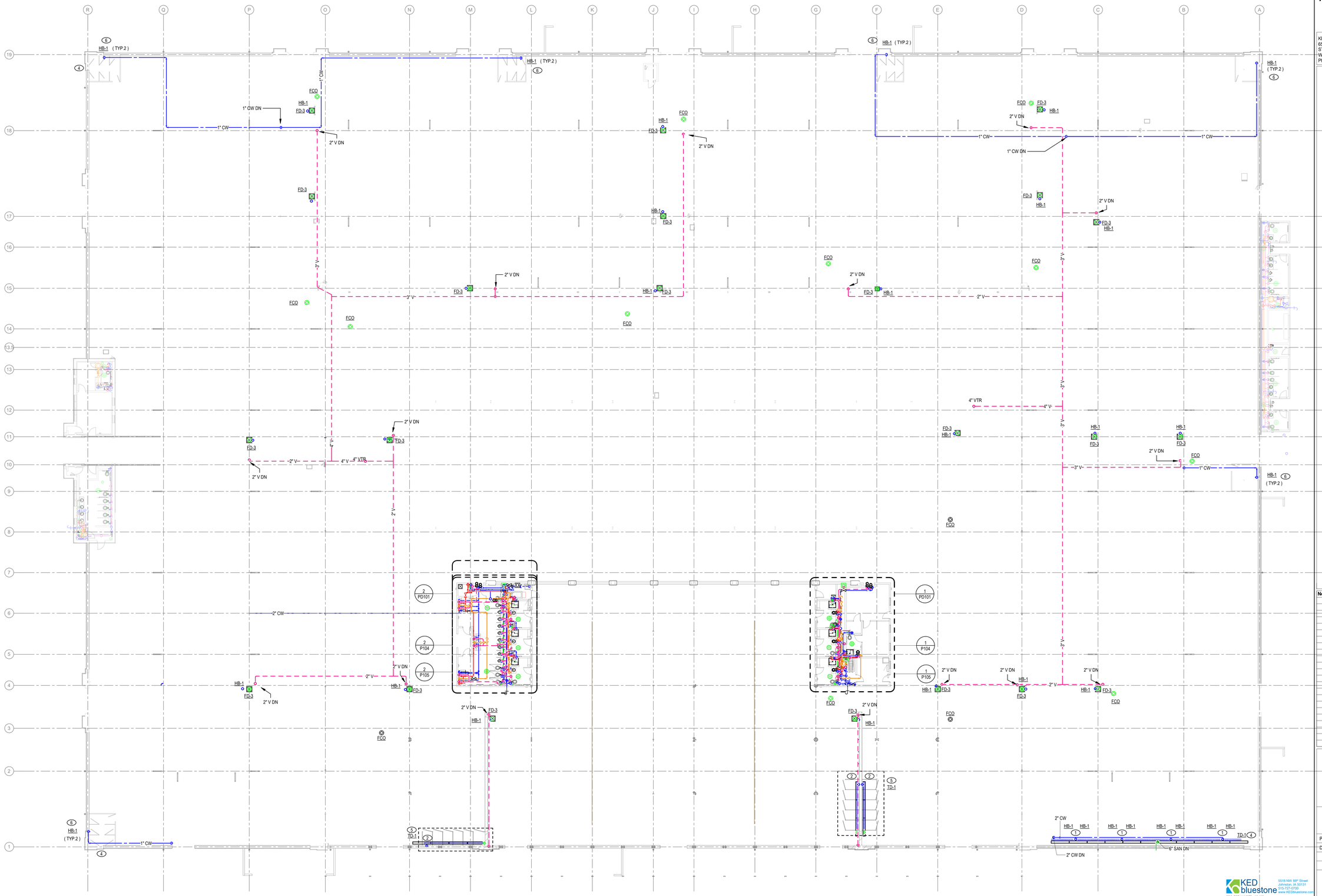
GENERAL NOTES:

1. ALL PIPING TO WASH STALLS SHALL BE DRAINABLE.
2. ALL PIPING ROUTED THROUGH FLOOR ASSEMBLIES SHALL BE INSTALLED WITHIN 6" OF FOOTINGS AND COLUMNS.
3. ALL PIPING ROUTED ALONG STRUCTURE ABOVE GRADE SHALL BE INSTALLED WITHIN 6" OF THE STRUCTURE AND KEPT FLUSH TO WALLS WHERE FEESIBLE AND AS INDICATED IN DRAWINGS.

KEYED NOTES:

1. 1" CW DROP TO FEED TWO HOSE BIB CONNECTIONS AT EITHER SIDE OF VERTICAL RUN. ALL PIPING TO BE INSTALLED FLUSH TO WALL.
2. 2" CW UP THROUGH GRADE TO MAKE INDIVIDUAL 1" HOSE BIB CONNECTION CENTERED AT EACH STALL. ALL PIPING TO BE INSTALLED FLUSH TO WALL.
3. INSTALL POLYPROPYLENE TRENCH DRAIN WITH END CONNECTION TO 6" SAN BELOW GRADE. SAN CONNECTS TO CATCH BASIN BEFORE ENTERING SANITARY MAIN. TRENCH DRAIN TO HAVE ADA SLOTTED GRATING
4. INSTALL POLYPROPYLENE TRENCH DRAIN THROUGH ENTIRE LIENGTH OF WASH STALLS. CONNECT TO 6" SAN AT CENTER OF DRAIN LENGTH. SANITARY CONNECTS TO CATCH BASIN BEFORE ENTERING SANITARY MAIN. TRENCH DRAIN TO HAVE ADA SLOTTED GRATING
5. INSTALL POLYPROPYLENE TRENCH DRAIN THROUGH ENTIRE LIENGTH OF WASH STALLS. END CONNECTION TO 6" SAN BELOW GRADE. TRENCH DRAIN TO HAVE ADA SLOTTED GRATING. SANITARY CONNECTS TO CATCH BASIN BEFORE ENTERING SANITARY MAIN.
6. 1" CW DROP TO FEED TWO HOSE BIB CONNECTIONS CENTERED WITH IN TWO WASH STALLS.



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1 PLUMBING OVERALL PLAN - PHASE 2
1/16" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING OVERALL PLAN

Project Number:	251001.00
Date:	03/10/2026
SCALE:	1/16" = 1'-0"

P101

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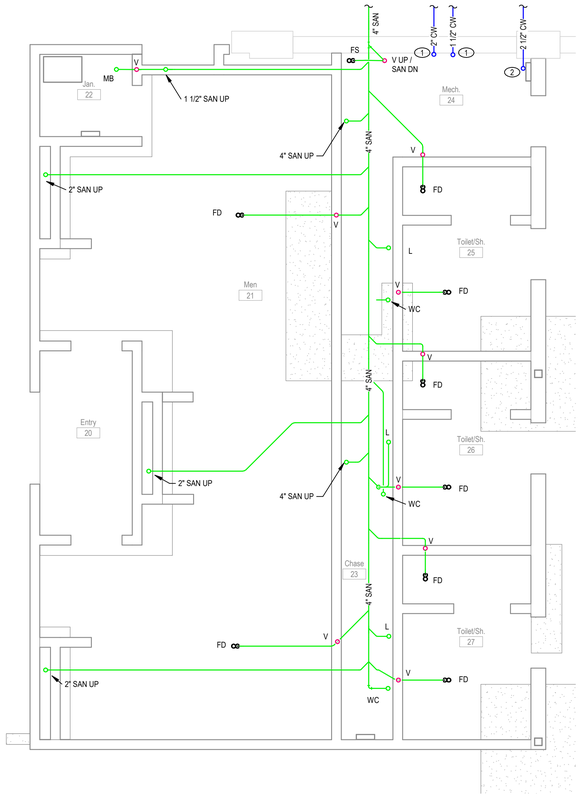
KEYED NOTES:

1. COLD WATER UP TO ABOVE GRADE. SEE P100 AND P101 FOR CONTINUATION. COLD WATER SUPPLY PIPING SHALL BE DRAINED AND WINTERIZED DURING THE WINTER MONTHS.
2. COLD WATER CONNECTS TO 6" CW MAIN BELOW GROUND. SEE SEE P100 FOR CONTINUATION.



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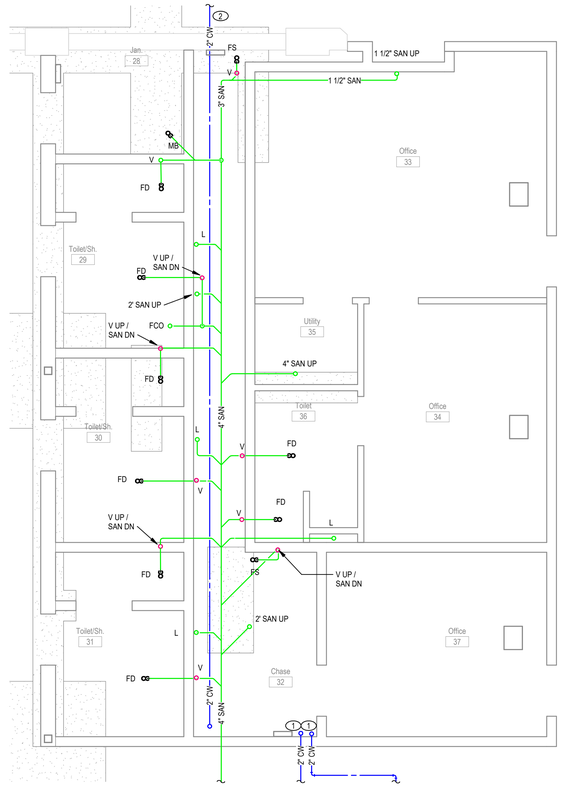
2 GROUP B PLUMBING UNDER FLOOR PLAN - PHASE 2

1/4" = 1'-0"



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1 GROUP C PLUMBING UNDERFLOOR PLAN - PHASE 2

1/4" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING UNDERFLOOR ENLARGED PLAN

Project Number:	251001.00
Date:	03/10/2026

P103

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

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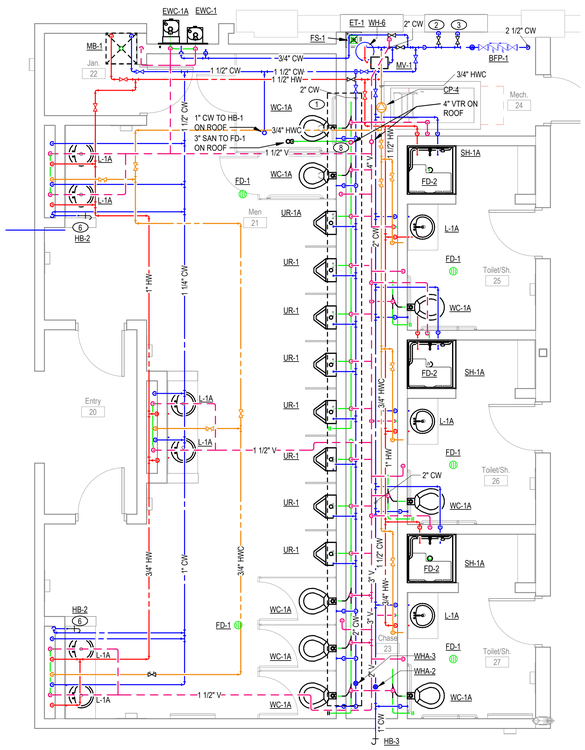
KEYED NOTES:

1. ALL WASHCLOSETS TO ACCOMPANY INDIVIDUAL CLEAN OUT. CLEANOUTS TERMINATE IN CHASE WHEN ACCISSIBLE OR ROUTED TO WALL TO BE ACCESSIBLE FROM RESTROOM. COORDINATE PLACEMENT WITH OTHER DISCIPLINES.
2. 2" CW LINE TO WEST WASH PITS. SEE P100 FOR CONTINUATION. COLD WATER SUPPLY PIPING SHALL BE DRAINED AND WINTERIZED DURING THE WINTER MONTHS.
3. 2" CW LINE TO WEST WASH STALLS. SEE P100 FOR CONTINUATION. COLD WATER SUPPLY PIPING SHALL BE DRAINED AND WINTERIZED DURING THE WINTER MONTHS.
4. 2" CW LINE TO EAST WASH PITS. SEE P100 FOR CONTINUATION. COLD WATER SUPPLY PIPING SHALL BE DRAINED AND WINTERIZED DURING THE WINTER MONTHS.
5. 2" CW LINE TO EAST WASH STALLS. SEE P100 FOR CONTINUATION. COLD WATER SUPPLY PIPING SHALL BE DRAINED AND WINTERIZED DURING THE WINTER MONTHS.
6. HOSE BIB INSTALLED UNDERNEATH LAVATRORY.
7. 3" VENT UP TO 4" VENT THROUGH ROOF.
8. 2" VENT UP TO 4" VENT THROUGH ROOF



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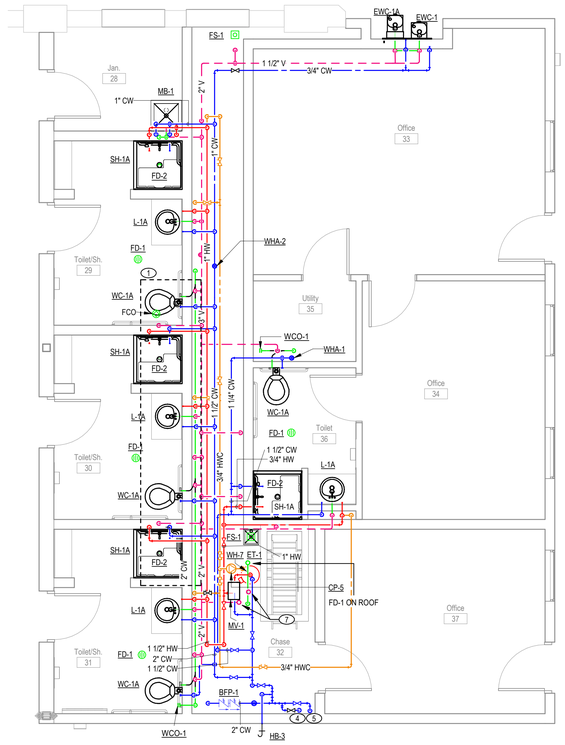
2 GROUP B PLUMBING ENLARGED PLAN - PHASE 2

1/4" = 1'-0"



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1 GROUP C PLUMBING ENLARGED PLAN - PHASE 2

1/4" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING ENLARGED PLAN

Project Number:	251001.00
Date:	03/10/2026

P104

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

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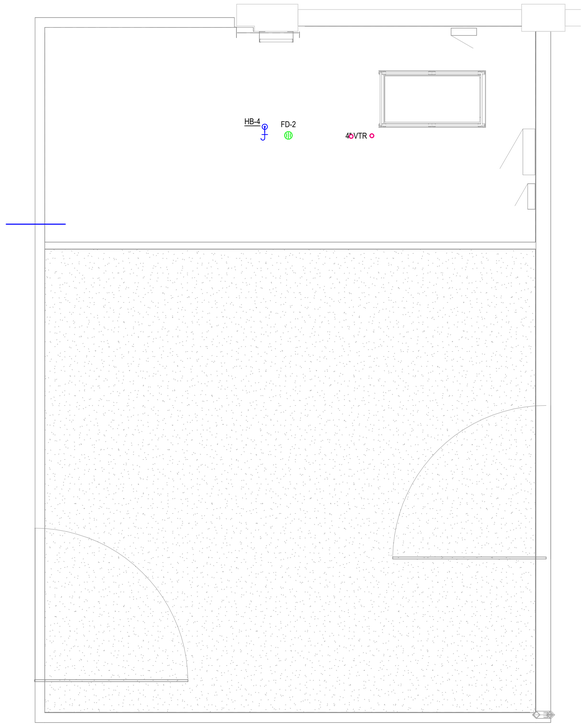

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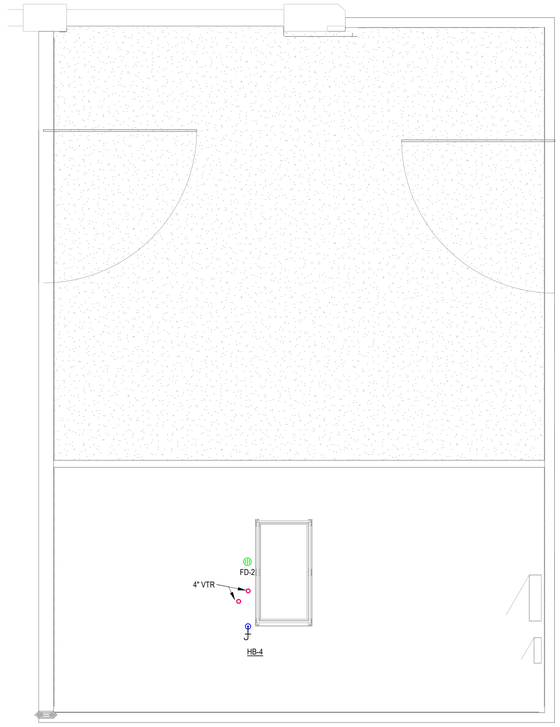
2 GROUP B PLUMBING ROOF PLAN - PHASE 2

1/4" = 1'-0"



N

1 GROUP C PLUMBING ROOF PLAN - PHASE 2

1/4" = 1'-0"

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STUDIO 103
WEST DES MOINES, IOWA 50266
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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING ROOF PLANS

Project Number: 251001.00
Date: 03/10/2026

P105

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

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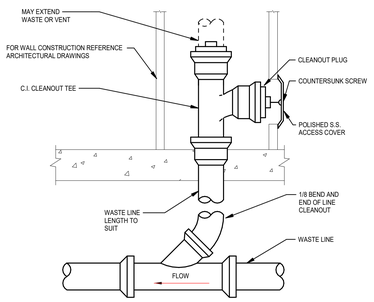
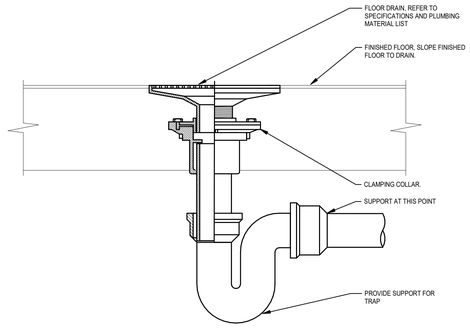


12 WALL CLEANOUT

N.T.S.

GENERAL NOTES:

1. REFER TO PIPING APPLICATION SCHEDULE AND SPECIFICATIONS FOR ALLOWED JOINT TYPES.
2. INSTALL WALL CLEANOUTS IN ALL LOCATIONS SHOWN ON THE FLOOR PLANS.
3. INSTALL WALL CLEANOUTS IN DRAIN LINES AND RISERS SERVING ALL OF THE FOLLOWING PLUMBING FIXTURES:
   A. URINALS
   B. SINKS
4. COORDINATE ALL WALL CLEANOUT LOCATIONS AND ELEVATIONS WITH ARCHITECTURAL PLANS AND ELEVATIONS PRIOR TO ROUGH IN.

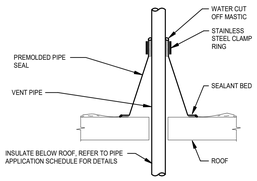


10 FLOOR DRAIN - ON GRADE

N.T.S.

GENERAL NOTES:

1. REFER TO PLUMBING MATERIAL LIST FOR SPECIFIC DRAIN OPTIONS & ACCESSORIES.

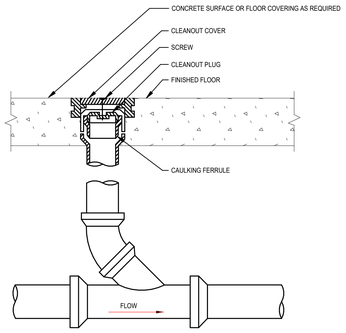


9 VENT THRU ROOF

N.T.S.

GENERAL NOTES:

1. PIPE SEAL SHALL BE COMPATIBLE WITH ROOFING SYSTEM.
2. THE MINIMUM PIPE SIZE FOR ALL ROOF PENETRATIONS SHALL BE 4"
3. ALL VENTS SHALL BE A MINIMUM OF 10' FROM ALL OUTSIDE AIR INTAKES. FIELD COORDINATE WITH ALL TRADES PRIOR TO ROUGH-IN.

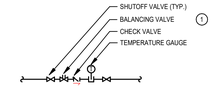


6 FLOOR CLEANOUT

N.T.S.

GENERAL NOTES:

1. REFER TO PIPING APPLICATION SCHEDULE AND SPECIFICATIONS FOR ALLOWED JOINT TYPES.
2. INSTALL FLOOR CLEANOUTS IN ALL OF THE FOLLOWING LOCATIONS:
   A. ALL LOCATIONS SHOWN ON THE FLOOR PLANS
   B. IN ALL HORIZONTAL BRANCHES THAT ARE GREATER THAN 5'-0" IN LENGTH
   C. EVERY 100' OF DEVELOPED PIPING LENGTH
   D. EACH AGGREGATE HORIZONTAL CHANGE IN DIRECTION EXCEEDING 135°.

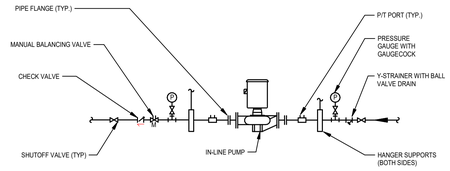


4 HOT WATER CIRC VALVE ASSEMBLY

N.T.S.

KEYED NOTES:

1. ADJUST BALANCING VALVE AS NECESSARY TO MAINTAIN A RECIRCULATION WATER TEMPERATURE OF 110°F. BALANCING CONTRACTOR TO PROVIDE A REPORT SHOWING BALANCING VALVE INSTALLATION LOCATIONS, VALVE SETPOINTS, & RECIRCULATION WATER TEMPERATURE AS PART OF THE FINAL TESTING & BALANCING REPORT.

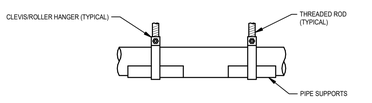


3 RECIRCULATION PUMP

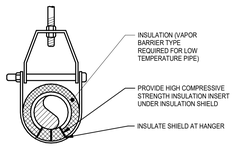
N.T.S.

GENERAL NOTES:

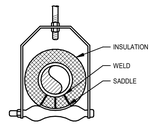
1. SUPPORT PUMP INDEPENDENTLY OF PIPING ON STRUCTURAL STEEL FRAME FROM STRUCTURE OR FLOOR. PIPING MAY BE SUPPORTED FROM SAME FRAME AS PUMP, BUT PIPING MAY NOT BE SUPPORTED BY PUMP ALONE.



SIDE VIEW

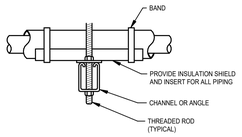


CLEVIS HANGER SECTION

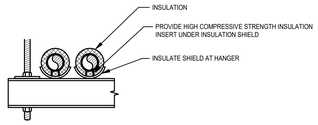


ROLLER HANGER SECTION

CLEVIS/ROLLER HANGER



SIDE VIEW



SECTION

TRAPEZE HANGER

11 PIPE HANGERS

N.T.S.

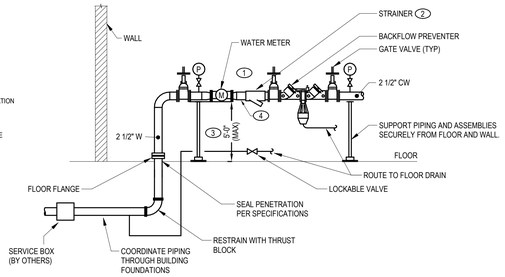
GENERAL NOTES:

1. SEE SPECIFICATIONS FOR HANGER AND INSULATION REQUIREMENTS.

MAXIMUM PIPE/TUBING SUPPORT SPACING, FEET

NOM. SIZE	THRU 3/4"	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
STEEL PIPE - STD. WT.	7 FT	9	11	12	13	15	16	17	20	20	22	23	24	25	25	25	25	25
COPPER TUBING	5 FT	6	7	8	8	10	10	12	15	15	15	-	-	-	-	-	-	-
SCH. 40 PVC, CPVC (73°F)	3 FT	4	4	5	6	6	6	8	9	9	10	11	12	-	-	-	-	-
SCH. 80 PVC, CPVC (73°F)	3 FT	4	4	5	6	6	7	8	10	10	11	12	13	-	-	-	-	-
SCH. 40 CPVC (140°F)	-	-	-	-	5	6	6	6	7	7	7	7	8	-	-	-	-	-
SCH. 80 CPVC (140°F)	-	-	-	-	6	6	7	7	8	8	9	9	10	-	-	-	-	-
SDR 11 HDPE PIPE (73°F)	-	-	-	-	-	-	7	8	10	10	11	13	14	15	16	17	18	19

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

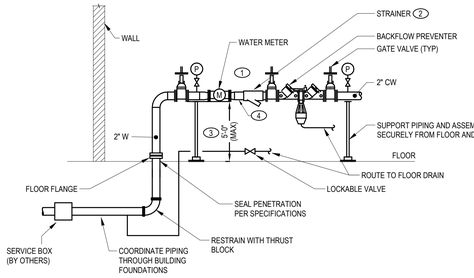


8 WATER SERVICE ENTRANCE - GROUP B

N.T.S.

KEYED NOTES:

1. VERIFY METER SIZE, QUANTITY, & INSTALLATION REQUIREMENTS WITH UTILITY. PROVIDE & INSTALL REMOTE METERING EQUIPMENT WHEN REQUIRED. MAINTAIN UPSTREAM AND DOWNSTREAM PIPE DIAMETERS AS REQUIRED BY METER MANUFACTURER.
2. STRAINER MAY BE SUPPLIED INTEGRAL TO BACKFLOW PREVENTER ASSEMBLY.
3. INSTALL THE BACKFLOW PREVENTER ASSEMBLY AT A MINIMUM DISTANCE FROM THE FLOOR OF 12".
4. INSTALL 2" DRAIN BELOW GRADE ON WATER SERVICE PIPING TO ALLOW FOR DRAINING OF THE SYSTEM TO BELOW GRADE DURING COLD WINTER MONTHS WHEN NOT IN USE.
5. PROVIDE WITH A NORMALLY CAPPED 1" FEMALE CONNECTION TO ALLOW FOR COMPRESSED AIR TO BE USED TO PURGE THE WATER FROM THE WATER PIPING DURING COLD WINTER MONTHS WHEN NOT IN USE.

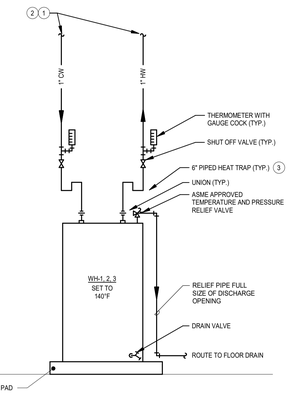


5 WATER SERVICE ENTRANCE - GROUP C

N.T.S.

KEYED NOTES:

1. VERIFY METER SIZE, QUANTITY, & INSTALLATION REQUIREMENTS WITH UTILITY. PROVIDE & INSTALL REMOTE METERING EQUIPMENT WHEN REQUIRED. MAINTAIN UPSTREAM AND DOWNSTREAM PIPE DIAMETERS AS REQUIRED BY METER MANUFACTURER.
2. STRAINER MAY BE SUPPLIED INTEGRAL TO BACKFLOW PREVENTER ASSEMBLY.
3. INSTALL THE BACKFLOW PREVENTER ASSEMBLY AT A MINIMUM DISTANCE FROM THE FLOOR OF 12".
4. INSTALL 2" DRAIN BELOW GRADE ON WATER SERVICE PIPING TO ALLOW FOR DRAINING OF THE SYSTEM TO BELOW GRADE DURING COLD WINTER MONTHS WHEN NOT IN USE.
5. PROVIDE WITH A NORMALLY CAPPED 1" FEMALE CONNECTION TO ALLOW FOR COMPRESSED AIR TO BE USED TO PURGE THE WATER FROM THE WATER PIPING DURING COLD WINTER MONTHS WHEN NOT IN USE.

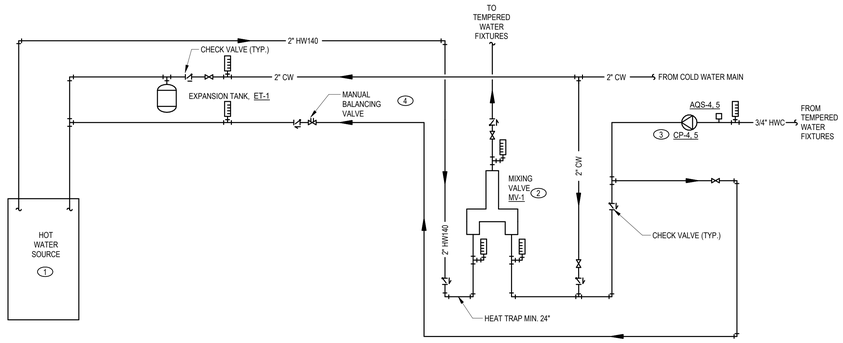


2 WATER HEATER - ELECTRIC

N.T.S.

KEYED NOTES:

1. SEE DOMESTIC HOT WATER FLOW DIAGRAM FOR CONTINUATION.
2. REFER TO FLOOR PLANS FOR PIPE SIZES.
3. IN LIEU OF 6" PIPED HEAT TRAPS, CONTRACTOR MAY PROVIDE A DIELECTRIC HEAT TRAP FITTING WITH BALL FLOAT (IN PROPER FLOW ORIENTATION) AT THE INLET AND OUTLET OF THE HEATER.



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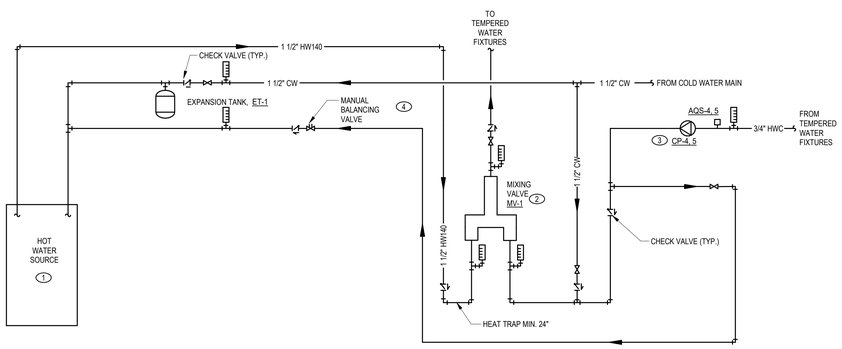
7 WATER HEATER - DOMESTIC HOT WATER FLOW DIAGRAM- GROUP B

12" = 1'-0"

KEYED NOTES:

1. REFER TO HOT WATER HEATER DETAIL FOR ADDITIONAL PIPING REQUIREMENTS.
2. VERIFY FLOW DIAGRAM & PIPING ARRANGEMENT WITH MANUFACTURERS INFORMATION PRIOR TO INSTALLATION.
3. REFER TO DOMESTIC HOT WATER RECIRCULATION PUMP DETAIL FOR ADDITIONAL PIPING & SPECIALTY REQUIREMENTS.
4. BALANCING VALVE SHALL BE A COMBINED LOCKABLE BALANCING VALVE AND SHUTOFF VALVE WITH INTEGRAL PT PORTS & DRAIN CONNECTIONS ON INLET & OUTLET OF VALVE.



1 WATER HEATER - DOMESTIC HOT WATER FLOW DIAGRAM - GROUP C

N.T.S.

KEYED NOTES:

1. REFER TO HOT WATER HEATER DETAIL FOR ADDITIONAL PIPING REQUIREMENTS.
2. VERIFY FLOW DIAGRAM & PIPING ARRANGEMENT WITH MANUFACTURERS INFORMATION PRIOR TO INSTALLATION.
3. REFER TO DOMESTIC HOT WATER RECIRCULATION PUMP DETAIL FOR ADDITIONAL PIPING & SPECIALTY REQUIREMENTS.
4. BALANCING VALVE SHALL BE A COMBINED LOCKABLE BALANCING VALVE AND SHUTOFF VALVE WITH INTEGRAL PT PORTS & DRAIN CONNECTIONS ON INLET & OUTLET OF VALVE.

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No.	Date	Description
1	07.25.2025	ADDENDUM #1

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING DETAILS

Project Number: 251001.00
Date: 03/10/2026

P500-1

SCALE: 12" = 1'-0"

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LAVATORIES AND SINK SCHEDULE

MARK	ADA	MANUFACTURER	DESCRIPTION		
		TRIM	FIXTURE	TRIM	ACCESSORIES
L-1	L-1A	ZURN Z-86100-XL SERIES	FIXTURE: STAINLESS STEEL BOWL BY OTHERS	SLOW-CLOSING METERING FAUCET, SINGLE HOLE, VANDAL-RESISTANT ADA COMPLIANT HANDLE. ADJUSTABLE CYCLE TIME, VANDAL-RESISTANT PRESSURE COMPENSATING OUTLET, PERFORATED DRAIN GRATE, MAXIMUM FLOW DELIVERED PER USE SHALL NOT EXCEED 0.25 GPM. EQUAL TO ZURN Z-86100-XL. QUARTER-TURN 3/8" CHROME PLATED HEAVY BRASS ANGLE SUPPLIES WITH CHROME PLATED SOFT COPPER RISERS OR FLEXIBLE BRAIDED STAINLESS STEEL RISERS AND CHROME ESCUTCHEONS. PERFORATED DRAIN GRATE, CHROME-PLATED P-TRAP, TAILPIECE AND ESCUTCHEON.	PROVIDE WITH TMV-1. INSTALL BELOW FIXTURE IN ACCESSIBLE LOCATION. UNIT TO MIX 120 DEGREE F. HOT WATER SUPPLY AND 40 DEGREE F. COLD WATER SUPPLY FOR 110 DEGREE F. OUTLET. SHALL CONFORM TO THE REQUIREMENTS OF ASSE 1070.

CIRCULATION PUMP SCHEDULE

PUMP													PUMP CONTROLLER				
MARK	MANUFACTURER	MODEL	TYPE	PUMP SPEED	PUMP CONSTRUCTION		FLOWRATE PER PUMP (GPM)	HEAD (FT.)	ELECTRICAL				MARK	ELECTRICAL			NOTES
					HOUSING	IMPELLER			HP	VOLT	PHASE	DISCONNECT BY		VOLT	PHASE	DISCONNECT BY	
CP-4	GRUNDFOS	UPS	INLINE	SINGLE SPEED	BRONZE	COMPOSITE	3	15	FHP	120	1	E.C.	AQS-4	120	1	E.C.	1, 2, 3
CP-5	GRUNDFOS	UPS	INLINE	SINGLE SPEED	BRONZE	COMPOSITE	2.5	15	FHP	120	1	E.C.	AQS-5	120	1	E.C.	1, 2, 3

NOTES:
1. PROVIDE PUMP WITH IMMERSION TYPE AQUASTAT TEMPERATURE SENSOR FOR PUMP OPERATION. REFER TO WATER HEATER DETAIL FOR ADDITIONAL INSTALLATION REQUIREMENTS.
2. PROVIDE PUMP WITH FLANGED CONNECTIONS.
3. REFER TO DOMESTIC WATER PIPING DIAGRAM AND PUMP DETAILS FOR ADDITIONAL REQUIREMENTS.

PIPING APPLICATION SCHEDULE

SYSTEM	LOCATION	DESIGN WORKING PRESSURE (PSI)	MATERIAL	JOINTS	INSULATION APPLICATION			NOTES
					USAGE SIZE RANGE	THICKNESS (IN.)	TYPE	
DOMESTIC COLD WATER	ABOVE GRADE	125	TYPE L COPPER	SOLDER OR MECHANICAL PRESS CONNECTION	1-1/4" OR LESS	1/2"	ELASTOMERIC FOAM OR FIBERGLASS	-
					1-1/2" & GREATER	1"		
	BELOW GRADE	125	TYPE K COPPER	SOLDER	LESS THAN 3"	-	-	-
DOMESTIC HOT WATER/ HOT WATER RECIRCULATION	ABOVE GRADE	125	TYPE L COPPER	SOLDER OR MECHANICAL PRESS CONNECTION	1-1/4" OR LESS	1"	ELASTOMERIC FOAM OR FIBERGLASS	-
					1-1/2" & GREATER	1-1/2"		
SANITARY/VENT	BELOW GRADE	N/A	CAST IRON AND/OR SCH 40 PVC	BELL & SPIGOT, NO HUB, OR SOLVENT	ALL	-	-	-
	ABOVE GRADE	N/A	CAST IRON, DWV COPPER, AND/OR SCH 40 PVC	BELL & SPIGOT, NO HUB, SOLDER, OR SOLVENT	ALL	1"	FIBERGLASS	1
EQUIPMENT DRAINS (GRAVITY & PUMPED)	ABOVE GRADE	N/A	DWV COPPER	SOLDER	ALL	1"	FIBERGLASS	2

NOTES:
1. INSULATE RISERS WITHIN 10' OF VENT THROUGH ROOF CONNECTION.
2. INSULATION ONLY REQUIRED FOR COLD SERVICE PIPING. EQUIPMENT DRAIN PIPING LESS THAN 5' IN LENGTH NEED NOT BE INSULATED.

WATER HEATER SCHEDULE (DOMESTIC)

MARK	MANUFACTURER	MODEL	FUEL	INPUT (KW)	HW SETPOINT	RECOVERY RATE (GPH) (NOTE 1)	WORKING PRESSURE	STORAGE TANK SIZE (GAL)				NOTES
			GAS OR ELECTRIC						VOLT	PH	DISCONNECT BY	
WH-6	A.O. SMITH	DRE-52	ELEC	12.0	140	49	150 PSI	50	208	1	EC	1, 2
WH-7	A.O. SMITH	DRE-52	ELEC	12.0	140	49	150 PSI	50	208	1	EC	1, 2

NOTES:
1. RECOVERY RATE BASED ON 90 DEGREE TEMPERATURE RISE.
2. INSTALL WATER HEATER ON WALL BRACKET. REFER TO SHEET P500 FOR MORE INFORMATION.

PLUMBING CONNECTION SCHEDULE

FIXTURE	CW	HW	SAN	VENT	NOTES
DRINKING FOUNTAIN	1/2"	-	1 1/2"	1 1/4"	1, 2
FLOOR DRAIN (STANDARD)	-	-	3"	2"	1
FLOOR DRAIN (SHOWER FLOOR DRAIN)			2"	2"	1
FLOOR DRAIN (BACKFLOW PREVENTER)			4"	2"	1
HOSE BIBB	3/4"	-	-	-	2
LAVATORY	1/2"	1/2"	1 1/4"	1 1/4"	1, 2
MOP BASIN	3/4"	3/4"	3"	1 1/2"	1, 2
URINAL	1"	-	2"	1 1/2"	1, 2
WATER CLOSET (FLUSH VALVE)	3/4"	-	4"	2"	1, 2

NOTES:
1. ALL BELOW GRADE SANITARY AND VENT PIPING SHALL BE A MIMMUM OF 2".
2. ALL SUPPLY PIPING SERVING MORE THAN A SINGLE FIXTURE SHALL HAVE A MINIMUM PIPE SIZE OF 3/4".

PLUMBING MATERIAL LIST

FIXTURE	ADA (NOTE 1)	MANUFACTURER (NOTE 2)	DESCRIPTION
BFP-1	-	WATTS LF009	FIXTURE: REDUCED PRESSURE BACKFLOW PREVENTER, SPRING LOADED CHECKS WITH A DIFFERENTIAL PRESSURE RELIEF VALVE BETWEEN THE CHECK VALVES. BRONZE WITH BRONZE, PLASTIC OR STAINLESS STEEL INTERNAL PARTS AND STAINLESS STEEL SPRINGS. THE WETTED SURFACE OF THE BACKFLOW PREVENTER SHALL CONTAIN LESS THAN 0.25% LEAD BY WEIGHT. UNITS SHALL INCLUDE FOUR TEST COCKS WITH SHUT-OFF VALVES AND SHALL BE BACKFLOW TESTED AT THE FACTORY. RATED FOR 175 PSI AT 33 DEGREES F. TO 140 DEGREES F. MAXIMUM PRESSURE DROP 15 PSI AT 10 FPS REGARDLESS OF SIZE. FLOW PRESSURE DROP CURVES SHALL BE SUBMITTED. ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE. WITH SHUTOFF, BALL VALVES ON BOTH SIDES OF UNIT AND AIR GAP DRAIN FITTING. PROVIDE AND INSTALL BRONZE OR EPOXY COATED STRAINER UPSTREAM FROM UNIT. APPROVED BY: USC FCCC & HR, AWWA C511-92, ASSE 1013, IAPMO AND SBCCI LISTED. UNIT SHALL BE SAME SIZE AS PIPE IF NO SIZE IS SHOWN ON THE DRAWING.
ET-1	-	WATTS DETA	FIXTURE: EXPANSION TANK - WELDED STEEL CONSTRUCTION, STAINLESS STEEL SYSTEM CONNECTION, HEAVY DUTY BUTYL DIAPHRAGM AND RIGID POLYPROPYLENE LINER MECHANICALLY BONDED TO TANK TO PROVIDE A 100% NON-CORROSIVE WATER RESERVOIR. DIAPHRAGM AND LINER SHALL BE APPROVED FOR USE IN POTABLE WATER SYSTEMS. ALL WETTED COMPONENTS OF FDA APPROVED MATERIALS. TANK SHALL HAVE A WORKING TEMPERATURE OF 200°F AND A WORKING PRESSURE OF 150 PSIG. MINIMUM TANK VOLUME TO BE 3.5.0 GALLONS. MINIMUM ACCEPTING VOLUME TO BE 2.3 GALLONS. FACTORY PRE-CHARGED TO 40 PSIG. PROVIDE STANDARD SCHRADER AIR VALVE FOR FIELD CHARGING. COORDINATE FIELD CHARGE PRESSURE WITH THE ACTUAL STATIC SYSTEM PRESSURE ADJACENT TO THE EXPANSION TANK CONNECTION.
EWC-1	EWC-1A	ELKAY EZ SERIES	FIXTURE: ELECTRIC WATER COOLER WITH INTEGRAL [VANDAL RESISTANT] BOTTLE FILLER WITH WATER FILTER- WALL HUNG, SINGLE UNIT, PUSH BAR OR LEVER OPERATING CONTROLS ON FRONT AND BOTH SIDES, BUILT-IN FLOW REGULATOR, DRAIN & TRAP ASSEMBLY, 18 GAUGE STAINLESS STEEL CABINETS AND NON-SPLASH BASINS. STREAM PROJECTORS WITH PROTECTIVE HOODS. ADA COMPLIANT WITH APRON INSTALLED UNDER UNIT. 7.8 GPH OF WATER FROM 80 DEGREES F. TO 50 DEGREES F. AT 90 DEGREES F. ROOM TEMPERATURE. TANK TESTED TO 125 PSIG. ADJUSTABLE THERMOSTAT, MOUNTING ACCESSORIES, TANK DRAIN AND ANGLE STOPS. CORD AND PLUG. COMPRESSOR TO OPERATE ON HFC-134a REFRIGERANT. EWC SHALL CONFORM TO ANSI A117.1-1986. WATER SYSTEM SHALL BE OF LEAD FREE CONSTRUCTION. ACCESSORIES: PROVIDE WITH 3 SPARE WATER FILTERS PER UNIT.
FCO-1	-	ZURN Z-1400	FIXTURE: FLOOR CLEANOUT - CAST IRON THREADED ADJUSTABLE HOUSING, FLANGED FERRULE WITH PLUG AND SECURED STAINLESS STEEL TOP. TOP STYLE SHALL MATCH FLOOR FINISH AS FOLLOWS: UNFINISHED FLOOR - ROUND SOLID SCORIATED TOP, TILE- ROUND RECESSED TOP.
FD-1	-	ZURN Z415 SERIES	FIXTURE: FLOOR DRAIN - 6" DIAMETER NICKEL BRONZE ADJUSTABLE TOP WITH SURFACE MEMBRANE CLAMP, 3" BOTTOM OUTLET, CAST IRON BODY WITH 1/2" TRAP PRIMER CONNECTION, FLASHING COLLAR, DEEP SEAL TRAP.
FD-2	-	ZURN FD-2322	FIXTURE: 5" SHOWER FLOOR DRAIN - CHROME PLATED BRONZE GRATE ADJUSTABLE TOP, CAST IRON BODY WITH SURFACE MEMBRANE CLAMP, 2" BOTTOM OUTLET, FLASHING COLLAR, DEEP SEAL TRAP.
FD-3	-	ZURN Z415 SERIES	FIXTURE: FLOOR DRAIN - 6" DIAMETER NICKEL BRONZE ADJUSTABLE TOP WITH SURFACE MEMBRANE CLAMP, 4" BOTTOM OUTLET, CAST IRON BODY WITH 1/2" TRAP PRIMER CONNECTION, FLASHING COLLAR, DEEP SEAL TRAP.
FS-1		ZURN Z-1900 SERIES	FIXTURE: FLOOR SINK - 12" x 12" NICKEL BRONZE RIM AND FULL GRATE, 4" BOTTOM OUTLET, 8" DEEP RECEPTOR WITH ALUMINUM DOME STRAINER, CAST IRON BODY WITH ACID RESISTANT COATED INTERIOR, SEEPAGE FLANGE, SEEPAGE HOLES, & CLAMPING COLLAR, DEEP SEAL TRAP.
HB-1	-	WOODFORD MODEL Y2	FIXTURE: HOSE BIBB - FREEZELESS YARD HYDRANT, 3/4" MALE HOSE THREAD, 3/4" I.P.S. INLET, ONE PIECE PLUNGER, AUTOMATIC DRAINING, BACKFLOW PROTECTED, LOCKABLE HANDLE, 4 FOOT BURY DEPTH.
HB-2		WOODFORD MODEL 21	FIXTURE: INDOOR WALL HYDRANT, BRASS CONSTRUCTION, VACUUM BREAKER, 3/4" COLD MALE HOSE CONNECTION, STANDARD FINISH, METAL WHEEL HANDLE.
HB-3		WOODFORD MODEL B67	FIXTURE: FREEZELESS WALL HYDRANT, [CONCEALED TYPE WITH FLUSH MOUNTED WALL BOX WITH STANDARD FINISH,] AUTOMATIC DRAINING, VACUUM BREAKER, 3/4" MALE HOSE THREAD, BRASS VALVE BODY AND SEAT, NON-FERROUS METAL STEM, STANDARD FINISH, WALL CLAMP. FURNISH TWO LOOSE KEY OPERATORS. ASSE 1019 APPROVED AND LISTED.
HB-4		WOODFORD MODEL SRH	FIXTURE: HOSE BIBB - FREEZELESS ROOF HYDRANT, 3/4" MALE HOSE THREAD DUAL CHECK BACKFLOW PREVENTER ON OUTLET WITH INTEGRAL VENT, 3/4" NPT INLET, ONE PIECE PLUNGER, EPDM OR TPO ROOF BOOT. PROVIDE MANUFACTURERS CAST IRON HYDRANT SUPPORT, MOUNTING SYSTEM.
MB-1	-	FIAT MSB	FIXTURE: MOP BASIN - MOLDED STONE, 24"x24"x10", STAINLESS STEEL DRAIN WITH COMBINATION DOME STRAINER AND LINT BASKET, 3" OUTLET. DEEP SEAL TRAP. TRIM: TWO HANDLE EXPOSED MIXING FAUCET, 6" WRISTBLADE HANDLES, POLISHED CHROME PLATED, 3/4" HOSE THREAD SPOUT WITH INTEGRAL VACUUM BREAKER, WALL BRACE, PAIL HOOK, INTEGRAL STOPS. EQUAL TO DELTA 28C2385-RB. ACCESSORIES: STAINLESS STEEL BUMPER GUARD ON ALL OPEN SIDES. FRICTION HINGE MOP HANGER, HOSE, AND HOSE BRACKET. STAINLESS STEEL WALL GUARDS.
TD-1	-	SMITH ACO 9800 SERIES	FIXTURE: TRENCH DRAIN, HEAVY DUTY POLYPROPYLENE CONSTRUCTION, FOR ON-GRADE INSTALLATION ONLY, 12" NOMINAL WIDTH, 0.5% SLOPED BOTTOM, 40" MODULAR SECTIONS. TOTAL TRENCH DRAIN LENGTH AND OUTLET LOCATION SHOWN ON PLAN. GRATE: CLASS B, ACID RESISTANT EPOXY COATED DUCTILE IRON, ADA, ANTI-SLIP, HEEL PROOF, GRATE. NOTE: CATCH BASIN BY OTHERS
MV-1		LAWLER 800 SERIES	FIXTURE: LEAD FREE THERMOSTATIC MIXING VALVE - MASTER HIGH/LOW MIXING VALVE FOR TEMPERED WATER CONTROL. BRONZE BODY CONSTRUCTION WITH STAINLESS STEEL PISTON AND LINER, ROUGH BRONZE FINISH. UNION INLETS WITH STRAINERS AND CHECK STOPS. DIAL THERMOMETER ON OUTLET. RATED FOR 60 GPM OUTPUT MAXIMUM AT 10 PSI DIFFERENTIAL AND 3 GPM OUTPUT MINIMUM. UNIT TO MIX 140 DEGREE F. HOT WATER SUPPLY AND 40 DEGREE F. COLD WATER SUPPLY FOR 120 DEGREE F. OUTLET. SHALL CONFORM TO THE REQUIREMENTS OF ASSE 1017. ACCESSORIES: ALSO PROVIDE MIXING VALVE WITH (1) ADDITIONAL COMPLETE REBUILD KIT INCLUDING THERMOSTATIC ELEMENT, STOP CHECKS, PISTON & LINER, BONNET, PUSHER, & ALL ASSOCIATED O-RINGS & GASKETS. PROVIDE STEEL MOUNTING FRAME OR SURFACE MOUNTED STAINLESS STEEL CABINET WITH LOCKING DOOR TO ENCLOSE VALVE, INLET STOPS, OUTLET THERMOMETER, AND OUTLET VALVES. CONFIGURATION OF VALVE AND BOX SHALL BE AS INDICATED ON THE PLANS.
UR-1	UR-1A	KOHLER BARDON	FIXTURE: URINAL - WALL HUNG, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, WASHOUT, WATER SAVING 1.0 GALLON PER FLUSH, 3/4" TOP SPUD, 2" OUTLET, ELONGATED RIM AND EXTENDED SIDE SHIELDS. TRIM: FLUSH VALVE - EXPOSED, CHROME PLATED 3/4" I.P.S. SCREWDRIVER STOP-CHECK VALVE, VACUUM BREAKER, WALL AND SPUD FLANGES, 1.0 GALLONS PER FLUSH, 3 YEAR WARRANTY. FLOOR MOUNTED CARRIER AND ACCESSORIES TO MATCH INSTALLATION REQUIREMENTS. EQUAL TO SLOAN REGAL SERIES. ACCESSORIES: PROVIDE WITH WALL CLEANOUT WCO-1.
WHA-#	-	ZURN 1260XL	FIXTURE: WATER HAMMER ARRESTOR, COPPER BODY, BRASS CONNECTIONS, SWEAT OR NPT, ACETAL OR BRASS PISTON WITH BUNA NITRILE O-RINGS AND LEAD FREE SOLDER. PRE-CHARGED AT FACTORY. SIZE AS FOLLOWS (# -(FIXTURE UNITS RANGE)): 1 (1-11 SFU), 2 (12-32 SFU), 3 (33-60 SFU), 4 (61-113 SFU), 5 (114-154), 6 (115-330). INSTALL APPROPRIATELY SIZED WATER HAMMER ON EACH WATER LINE SERVING FLUSH VALVE FIXTURES. SIZE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
WC-1	WC-1A	ZURN Z-5615 SERIES	FIXTURE: WATER CLOSET - WALL HUNG, WHITE VITREOUS CHINA, SIPHON JET, ELONGATED BOWL, 1-1/2" TOP SPUD. TRIM: FLUSH VALVE - EXPOSED CHROME PLATED 1" I.P.S. SCREWDRIVER STOP-CHECK VALVE, VACUUM BREAKER, WALL AND SPUD FLANGES, 1.6 GALLONS PER FLUSH. 3 YEAR WARRANTY. EQUAL TO SLOAN REGAL (MANUAL) SERIES. ACCESSORIES: WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC SELF-SUSTAINING SEAT WITH CHECK HINGE AND STAINLESS STEEL OR PLATED STEEL POSTS AND NUTS. CLOSET CARRIER (COMBINATION CHAIR CARRIER AND DRAINAGE FITTING) AND ACCESSORIES TO MATCH INSTALLATION REQUIREMENTS.
-	WC-2A	ZURN Z-5551 SERIES	FIXTURE: TANK TYPE, ACCESSIBLE WATER CLOSET - WALL MOUNTED, BOTTOM OUTLET, WHITE VITREOUS CHINA, SIPHON JET, 1.6 GALLONS PER FLUSH, ELONGATED BOWL. ACCESSORIES: WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED, SOLID PLASTIC SELF-SUSTAINING SEAT WITH CHECK HINGE AND STAINLESS STEEL OR PLATED STEEL POSTS AND NUTS. QUARTER-TURN CHROME PLATED HEAVY BRASS ANGLE SUPPLY LOOSE KEY STOP WITH CHROME PLATED SOFT COPPER RISER OR FLEXIBLE BRAIDED STAINLESS STEEL RISER.
WCO-1	-	ZURN Z-1446	FIXTURE: WALL CLEANOUTS SHALL HAVE CAST IRON ACCESS BODY, GAS AND WATERTIGHT THREADED PLUG, ROUND STAINLESS STEEL ACCESS COVER AND EXTENDED MACHINE SCREW.
SH-1	SH-1A	AQUATIC 1363 SERIES	FIXTURE: SHOWER - ONE PIECE WHITE GELCOATED REINFORCED FIBERGLASS, NOMINAL SIZE OF 36"x36"x78". RIGHT OR LEFT HAND AS SHOWN ON DRAWINGS. SLIP-RESISTANT FLOOR, UNIT SHALL COMPLY WITH ASTM F-446, ANSI A117.1-1992, AND ADA REQUIREMENTS. UNIT SHALL BE RECESSED IN SUB-FLOOR TO ALLOW FOR A MAXIMUM CURB HEIGHT OF 1/2" OR LESS ABOVE THE FINISHED FLOOR. TRIM: SEE SHV-1. ACCESSORIES: FOLD DOWN PHENOLIC SIMULATED TEAKWOOD SEAT, LEFT OR RIGHT HAND SEAT LOCATION AS SHOWN ON DRAWINGS. 1 1/2" OD, 18 GAUGE TYPE 304 STAINLESS STEEL WRAP AROUND GRAB BAR MOUNTED HORIZONTALLY ON BACK WALL AND VALVE WALL, MOUNTED WITH STAINLESS STEEL NUTS AND BOLTS AND FASTENED FROM THE BACKSIDE OF THE UNIT WITH MIN. 3" x 3" METAL PLATES. 1" OD 18 GAUGE TYPE 304 STAINLESS STEEL CURTAIN ROD (INSTALLED AS HIGH AS POSSIBLE) WITH COMMERCIAL GRADE VINYL SHOWER CURTAIN. PROVIDE 3" FLOOR DRAIN WITH 4" NICKEL BRONZE STRAINER.
SHV-1	-	POWERS E700 SERIES	FIXTURE: THERMOSTATIC & PRESSURE (T&P) BALANCED MIXING SHOWER VALVE - BRASS OR BRONZE CONSTRUCTION, WASHERLESS DESIGN, CHROME PLATED METAL SINGLE LEVER CONTROL WITH OFF-COLD-HOT TEMPERATURE RANGE INDICATOR DIAL, INTEGRAL CHECK-STOPS, ADJUSTABLE SAFETY LIMIT STOP SET TO 110 DEGREES F DISCHARGE. ASSE 1016-T/P LISTED. ACCESSORIES: CHROME PLATED BRASS SHOWER HEAD WITH PIVOT BALL JOINT. PROVIDE WITH CHROME PLATED BRASS ARM AND FLANGE KIT FOR CONNECTION TO WATER SUPPLY. MAXIMUM FLOW TO BE 1.5 GPM. SWIVEL CONNECTOR TO 24" CHROME PLATED MOUNTING SLIDE BAR.

K/O ARCHITECTS
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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

PLUMBING SCHEDULES

Project Number: 251001.00
Date: 03/10/2026

P600-1

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

KED bluestone
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PROJECT NUMBER: 122-087
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ABBREVIATIONS

▲T	TEMPERATURE DIFFERENCE	LB	POUND
Ø	ROUND	LB/HR	POUNDS PER HOUR
ABV	ABOVE	LD	LINEAR DIFFUSER
AC	AIR CONDITIONING	LP	LOW PRESSURE
AD	AREA DRAIN	LP	LIQUEFIED PETROLEUM GAS
ADD	ADDENDUM	LVR	LOUVER
A/E	ARCHITECT / ENGINEER	LWT	LEAVING WATER TEMPERATURE
AFF	ABOVE FINISHED FLOOR	MA	MIXED AIR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MAX	MAXIMUM
ALT	ALTERNATE	MBH	ONE THOUSAND BTU PER HOUR
AP	ACCESS PANEL	M.C.	MECHANICAL CONTRACTOR
ARCH	ARCHITECT/ARCHITECTURAL	MD	MOTORIZED DAMPER
BAS	BUILDING AUTOMATION SYSTEM	MECH	MECHANICAL
BFF	BELOW FINISHED FLOOR	MFR	MANUFACTURER
BHP	BRAKE HORSEPOWER	MIN	MINIMUM
BLW	BELOW	MISC	MISCELLANEOUS
BTU	BRITISH THERMAL UNITS	MP	MEDIUM PRESSURE
BTUH	BRITISH THERMAL UNITS PER HOUR	MTR	MOTOR
CAP	CAPACITY	MUA	MAKE-UP/AIR
CB	CATCH BASIN	NC	NOISE CRITERIA
CD	CEILING DIFFUSER	NC	NORMALLY CLOSED
CFM	CUBIC FEET PER MINUTE	NIC	NOT IN CONTRACT
CFH	CUBIC FEET PER HOUR	NG	NATURAL GAS
CLG	CEILING	NO	NUMBER
C.M.	CONSTRUCTION MANAGER	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CV	CONTROL VALVE	O	OXYGEN
CW	COLD WATER	OA	OUTSIDE AIR
D	DEGREE	ORD	OVERFLOW ROOF DRAIN
DB	DRY BULB	PD	PRESSURE DROP
DDC	DIRECT DIGITAL CONTROLS	PIV	POST INDICATOR VALVE
DIA	DIAMETER	PLBG	PLUMBING
DN	DOWN	PRESS	PRESSURE
DW	DEIONIZED WATER	PRV	PRESSURE REDUCING VALVE
EAT	ENTERING AIR TEMPERATURE	PSI	POUNDS PER SQUARE INCH
E.C.	ELECTRICAL CONTRACTOR	PSIG	POUNDS PER SQUARE INCH GAUGE
ELEC	ELECTRICAL	PWR	POWER
EQUIP	EQUIPMENT	R	DUCT RISER
EWC	ELECTRIC WATER COOLER	RA	RETURN AIR
EWT	ENTERING WATER TEMPERATURE	RCP	RADIANT CEILING PANEL
EA	EXHAUST AIR	RD	ROOF DRAIN
EG	EXHAUST GRILLE	REC	RECESSED
EXIST	EXISTING	RED	REDUCER
F	DEGREES FAHRENHEIT	RG	RETURN GRILLE
FCO	FLOOR CLEAN OUT	RH	RELATIVE HUMIDITY
FD	FLOOR DRAIN	RLA	RELIEF AIR
FDC	FIRE DEPARTMENT CONNECTION	RM	ROOM
FL	FLOOR	RPM	REVOLUTIONS PER MINUTE
FO	FUEL OIL	SA	SUPPLY AIR
FOV	FUEL OIL VENT	SAN	SANITARY
FOR	FUEL OIL RETURN	SD	SMOKE DAMPER
FOS	FUEL OIL SUPPLY	SF	SQUARE FOOT
FPC	FIRE PROTECTION CONTRACTOR	SG	SUPPLY GRILLE
FPM	FEET PER MINUTE	SM	SURFACE MOUNT
FS	FLOOR SINK	SP	STATIC PRESSURE
FT	FOOT/FEET	SR	SUPPLY REGISTER
FTR	FIN TUBE RADIATION	STM	STEAM
GAL	GALLON	T	THERMOSTAT
GF	GAS-FIRED	T.C.	TEMP CONTROLS CONTRACTOR
G.C.	GENERAL CONTRACTOR	TD	TEMPERATURE DROP
GPM	GALLONS PER MINUTE	TD	TRENCH DRAIN
GW	GREASE WASTE	TEMP	TEMPERATURE
HB	HOSE BIBB	TYP	TYPICAL
HP	HORSE POWER	UG	UNDERGROUND
HP	HIGH PRESSURE	VAC	VACUUM
HTG	HEATING	V	VENT
HTR	HEATER	VAV	VARIABLE AIR VOLUME
HW	HOT WATER	VENT	VENTILATION
HYD	HYDRANT	VTR	VENT THROUGH ROOF
ID	INDIRECT DRAIN	W	WASTE
IN	INCH	WB	WET BULB
I.E.	INVERT ELEVATION	WCO	WALL CLEAN OUT
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR	WH	WALL HYDRANT
LAT	LEAVING AIR TEMPERATURE	YCO	YARD CLEANOUT

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ERV	ENERGY RECOVERY VENTILATOR
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
BCU	BLOWER COIL UNIT	GRV	GRAVITY ROOF VENTILATOR
CH	CHILLER	HP	HEAT PUMP
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	P	PUMP
CP	CONDENSER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RF	RETURN FAN
DC	DUCT MOUNTED COIL	RHC	REHEAT COIL
CP	DOMESTIC WATER CIRCULATING PUMP	RTU	ROOFTOP UNIT
EF	EXHAUST FAN	SP	SUMP PUMP
EDC	ELECTRIC DUCT COIL	UH	UNIT HEATER
ET	EXPANSION TANK	WH	WATER HEATER

* NOTE *

ALL GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL SUBSEQUENT SHEETS IN SHEET LIST. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

GENERAL PLAN SYMBOLS

- PLAN REVISION NUMBER
- DETAIL NUMBER ON SHEET / SHEET NUMBER WHERE DETAIL IS PLACED
- KEYNOTE SYMBOL
- POINT WHERE NEW CONNECTS TO EXISTING
- Room Name / Number — ROOM NAME / NUMBER
- AREA BEING DEMOLISHED
- AREA NOT IN CONTRACT
- MARK — SCHEDULED EQUIPMENT (UNDERLINED)
- MARK — NONSCHEDULED EQUIPMENT
- (E) MARK — EXISTING EQUIPMENT - HALFTONE - (E) PREFIX
- (R) MARK — EXISTING RELOCATED EQUIPMENT - (R) PREFIX

DUCTWORK SYMBOLS

- 24/12 — RECT. DUCT SIZE (WIDTH / HEIGHT)
- 18Ø — ROUND DUCT SIZE (DIAMETER)
- 18/12Ø SUPPLY AIR — OVAL DUCT SIZE (WIDTH / HEIGHT)
- 18/12 — EXISTING DUCT TO REMAIN
- 16/12 — DUCT TO BE DEMOLISHED
- SA — SUPPLY AIR
- RA — RETURN AIR
- EA — EXHAUST AIR
- OA — OUTSIDE AIR
- FLUE — FLUE GAS VENT
- CA — COMBUSTION AIR
- RECT. SUPPLY DUCT RISE / DROP
- ROUND SUPPLY DUCT RISE / DROP
- RECT. RETURN DUCT RISE / DROP
- ROUND RETURN DUCT RISE / DROP
- RECT. EXHAUST DUCT RISE / DROP
- ROUND EXHAUST DUCT RISE / DROP
- FLEXIBLE DUCTWORK

AIR TERMINALS

- SUPPLY GRILLE, REGISTER, DIFFUSER
- RETURN GRILLE, REGISTER, DIFFUSER
- EXHAUST GRILLE, REGISTER, DIFFUSER
- CD / EXD / 100 — MARK / NECK / CFM — DIFFUSER CALLOUT SYMBOL
- CD / XXX — MARK / CFM N/A — DIFFUSER CALLOUT SYMBOL UNDEFINED CFM

DAMPER TYPES

- MANUAL DAMPER
- MOTORIZED DAMPER
- BACKDRAFT DAMPER
- SMOKE DAMPER
- FIRE DAMPER
- COMB. FIRE/ SMOKE DAMPER

MECHANICAL PIPING SYMBOLS

- 2" — NOMINAL PIPE SIZE
- 2" CHWS — EXISTING PIPE TO REMAIN
- PIPE TO BE DEMOLISHED
- BD — BOILER BLOW DOWN
- BFW — BOILER FEED-WATER
- CHWS — CHILLED-WATER SUPPLY
- CHWR — CHILLED-WATER RETURN
- CWS — CONDESNER-WATER SUPPLY
- CWR — CONDESNER-WATER RETURN
- FOS — FUEL OIL SUPPLY
- FOR — FUEL OIL RETURN
- GLS — GEOTHERMAL LOOP SUPPLY
- GLR — GEOTHERMAL LOOP RETURN
- HWS — HOT-WATER SUPPLY
- HWR — HOT-WATER RETURN
- RL — REFRIGERANT LINESET
- LPS — LOW PRESSURE STEAM SUPPLY
- LPR — LOW PRESSURE STEAM RETURN
- MPS — MEDIUM PRESSURE STEAM SUPPLY
- MPR — MEDIUM PRESSURE STEAM RETURN
- HPS — HIGH PRESSURE STEAM SUPPLY
- HPR — HIGH PRESSURE STEAM SUPPLY
- NG — NATURAL GAS
- LP — LIQUID PROPANE
- D — CONDENSATE DRAIN

PIPE FITTINGS

- PIPE RISE / DROP
- PIPE ELBOW
- PIPE TEE HORIZONTAL / RISER / DROP
- PIPE CAP / CONTINUATION

PIPE ACCESSORIES

- BALANCING VALVE
- BALL VALVE
- ELEC. CONTROL VALVE
- GATE VALVE
- GENERIC ISOLATION VALVE
- PRESSURE REDUCING VALVE
- 2-WAY ELEC. CONTROL VALVE
- 3-WAY ELEC. CONTROL VALVE
- FLOW SENSOR
- PRESSURE SENSOR
- TEMPERATURE SENSOR & WELL
- UNION
- STRAINER
- ANGLE VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- GAS METER
- INLINE PUMP
- HOSE BIBB/ HYDRANT
- PRESSURE GAUGE
- AIR VENT
- PRESSURE RELIEF
- STEAM TRAP

DATA DEVICES

- THERMOSTAT
- HUMIDISTAT
- TEMPERATURE & HUMIDITY DETECTOR
- TEMPERATURE & CO2 DETECTOR
- GENERIC DETECTOR
- DDC SENSOR. SEE ABBREVIATIONS LIST

GENERAL NOTES - MECHANICAL DEMOLITION

1. CONTRACTOR SHALL VISIT THE JOB SITE AND EXAMINE THE DRAWINGS OF OTHER TRADES PRIOR TO BIDDING TO THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND THE SCOPE OF THE PROJECT. FAILURE TO DO SO DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO UNDERSTAND THE SCOPE OR OF UNDERSTANDING ANY FIELD CONDITIONS WHICH COULD BE REASONABLY EXPECTED TO BE KNOWN BY A THOROUGH INVESTIGATION.
2. AN ATTEMPT HAS BEEN MADE TO SHOW ALL HVAC EQUIPMENT, PIPING, DUCTWORK AND DIFFUSERS. ALL CONTRACTORS SHALL VISIT THE SITE TO VERIFY COMPONENTS, LOCATIONS AND SIZES SHOWN OR NOT SHOWN. ALL COMPONENTS INDICATED FOR DEMOLITION NEED TO BE REMOVED AS NOTED ON THE DRAWINGS.
3. IT IS MANDATORY THAT THE EXISTING BUILDING REMAIN IN CONTINUOUS AND UNINTERRUPTED OPERATION DURING REPLACEMENT/UPGRADE OF THE HVAC SYSTEM. THE SPECIFIC AREAS UNDER CONSTRUCTION AT ANY SCHEDULED TIME ARE EXCLUSIVE OF THE STATEMENT. SERVICES TO THE EXISTING BUILDING SHALL BE KEPT ON CONTINUOUS OPERATION INCLUDED DOMESTIC WATER; SANITARY; STORM; STEAM HEATING HOT WATER; HVAC SUPPLY, RETURN, AND EXHAUST DUCTWORK. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECT CONSTRUCTION SHALL BE ARRANGED WITH THE OWNER, A MINIMUM OF TWO WEEKS IN ADVANCE. TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARY SERVICES SHALL BE REMOVED ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL.
4. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTING, RELOCATING AND RECONNECTION OF EXISTING EQUIPMENT AND MATERIAL. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND REFINISHING SHALL MATCH EXISTING SUBSTRATE AS NEARLY AS POSSIBLE, FINISH WORK BY OTHERS.
5. EXCEPT WHERE OTHERWISE SHOWN OR NOTED ON THE DRAWINGS, ALL EXISTING EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED WHERE THEY INTERFERE WITH PROPOSED NEW CONSTRUCTION AND/OR INTERFERE WITH PROPOSED USAGE OF SPACE BY OWNER AS FOLLOWS:
   a. REMOVE ANY PIPES PROTRUDING ABOVE FINISHED FLOOR OR THROUGH WALL AND CAP AND FINISH OVER WITH MATERIAL TO MATCH EXISTING.
   b. REMOVE PIPING, DUCTWORK, EQUIPMENT, ETC. INCLUDING ABANDONED TO SOURCE OF SUPPLY AND/OR MAIN LINES AS NOTED. CAP AT NEAREST ACTIVE MAIN. SUPPLY AND RETURN MAINS TO BE CAPPED. REMOVE ALL ASSOCIATED CLAMPS, HANGERS, SUPPORTS, ETC. ASSOCIATED WITH REMOVAL.
   c. IN REMODELED/ALTERED AREAS ANY PIPING OR DUCTWORK PASSING THROUGH THE REMODELED AREAS TO SERVE (OR BEING SERVED FROM EXISTING ADJACENT, REMOTE, OR SURROUNDING AREA THAT ARE TO REMAIN) SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE RE-ROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN THE REMODELED AREA.
   d. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK. MATCH ORIGINAL CONSTRUCTION. VERIFY ALTERNATIVE OR SPECIAL REPAIR METHODS WITH A/E BEFORE PROCEEDING WITH DEMOLITION.
   e. REPAIR ANY PIPING OR DUCT INSULATION THAT IS DAMAGED OR REMOVED DURING CONSTRUCTION.
6. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONTRACTOR\ CONSTRUCTION MANAGER AND ALL OTHER TRADES.
7. ITEMS THAT ARE NOT IN THE REQUIRED SCOPE OF DEMOLITION, OR AS SPECIFICALLY NOTED, SHALL REMAIN IN PLACE. SUCH ITEMS, INCLUDING ASSOCIATED EQUIPMENT, FIXTURES, DOMESTIC PLUMBING, SANITARY AND STORM PIPING, SHALL BE MAINTAINED OPERATIONAL AND IN GOOD CONDITION BY THIS CONTRACTOR.

GENERAL NOTES - MECHANICAL

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS AS INDICATED ON DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY MOST CURRENT INTERNATIONAL MECHANICAL CODE AND ANY APPLICABLE LOCAL CODES. PROVIDE CLEARANCE FOR INSPECTION, REPAIR, REPLACEMENT, AND SERVICE TO ALL EQUIPMENT TO INCLUDE A MINIMUM OF 36 INCHES FROM ALL OBSTRUCTIONS (WALLS, STRUCTURE, DUCTWORK, PIPES, ETC.). CLEARANCE SHALL MAINTAIN ACCESS TO ALL ELECTRICAL PANELS, ACCESS DOORS, CONTROLLERS, VALVES, JUNCTION BOXES AND OPERATORS AND INCLUDE THE AREA DIRECTLY IN FRONT OF AND ABOVE THE SYSTEM COMPONENTS. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, FLANGES, ACCESSORIES, AND OTHER APPARATUS REQUIRING ACCESS ARE ACCESSIBLE.
2. MECHANICAL CONTRACTOR SHALL VISIT THE JOB SITE AND EXAMINE THE DRAWINGS OF OTHER TRADES PRIOR TO BIDDING TO THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND THE SCOPE OF THE PROJECT. FAILURE TO DO SO DOES NOT RELIEVE THE MECHANICAL CONTRACTOR OF THE RESPONSIBILITY TO UNDERSTAND THE SCOPE OR OF UNDERSTANDING ANY FIELD CONDITIONS WHICH COULD BE REASONABLY EXPECTED TO BE KNOWN BY A THOROUGH INVESTIGATION.
3. DRAWINGS ARE DIAGRAMMATICAL IN NATURE. IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY DUCT, FITTING, TRANSITION, DAMPER, ETC., AND IT IS UNDERSTOOD THAT WHILE THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE PROPER INSTALLATION ACCORDING TO THE TRUE INTENT AND MEANING OF THE DRAWINGS, LOCAL CODES AND STANDARD PRACTICES SHALL BE PROVIDED. MECHANICAL CONTRACTOR TO PROVIDE ALL DUCTWORK TRANSITIONS, FLEXIBLE CONNECTIONS, AND ACCESSORIES AS REQUIRED. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION. REPORT ANY PROBLEMS OR CONFLICTS TO THE OWNER OR ENGINEER.
4. ANY MINOR CHANGES IN THE LOCATION OF EQUIPMENT, DUCTS, PIPE CONTROL DEVICES, ETC., FROM THOSE LOCATIONS SHOWN ON THE DRAWINGS SHALL BE MADE WITHOUT EXTRA COST IF SO DIRECTED BY THE OWNERS REPRESENTATIVE OR ENGINEER BEFORE THE INSTALLATION IS MADE. A MINOR CHANGE IN LOCATION SHALL BE CONSIDERED TO BE WITHIN 6'-0" OF THE ORIGINALLY INDICATED LOCATIONS.
5. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED.
6. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.
7. INSTALL SYSTEMS, MATERIALS AND EQUIPMENT LEVEL AND PLUMB. PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS WHERE INSTALLED EXPOSED IN FINISHED SPACES AND GIVING RIGHT-OF-WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIED SLOPE.
8. INSTALL ALL HVAC EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
9. ALL OPENINGS IN FIRE-RATED AND SMOKE-RATED WALLS DUE TO DUCTWORK, PIPING AND CONTROL CONDUIT SHALL BE FIRE-STOPPED WITH AN APPROVED FIRE STOP MATERIAL. COORDINATE INSTALLATION WITH ARCHITECTURAL CODE PLANS.
10. PROVIDE ACCESS DOORS IN DUCTWORK OR WALLS/CEILING FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL FANS, VALVES, COILS, AND MECHANICAL EQUIPMENT.
11. LOCATIONS AND SIZES OF ALL FLOOR, CEILING AND WALL OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED AND THE OWNER.
12. WHERE NEW WORK OCCURS, MECHANICAL CONTRACTOR SHALL PATCH AND SEAL ALL WALLS, FLOORS AND CEILINGS TO MATCH EXISTING. MECHANICAL CONTRACTOR SHALL VERIFY WITH OWNER ALL PATCHING MATERIALS AND INSTALLATION METHODS.
13. MECHANICAL CONTRACTOR SHALL PROVIDE MANUAL BALANCE DAMPERS IN ALL BRANCH TAKE-OFFS TO SUPPLY DIFFUSERS. PROVIDE ADDITIONAL MANUAL BALANCE DAMPERS IN MAIN AND SUB-MAIN DUCTS AS REQUIRED TO ENSURE THE SUPPLY AND RETURN AIR SYSTEMS CAN BE BALANCED TO THE SPECIFIED DESIGN AIRFLOW.
14. IN AREAS WHERE A CEILING GRID EXISTS, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF EXISTING CEILING GRID AND TILES AS NECESSARY FOR INSTALLATION OF VENTILATING WORK. ANY PORTION OF THE EXISTING TILES OR GRID WHICH BECOME DAMAGED DURING REMOVAL SHALL BE REPLACED BY THE MECHANICAL CONTRACTOR.
15. DO NOT ROUTE DUCT OR PIPING ABOVE OR BELOW ELECTRICAL PANELS INCLUDING SERVICE CLEARANCES.
16. ALL RECTANGULAR AND/OR ROUND SUPPLY AND RETURN DUCTWORK SHOWN ON THE PLANS MAY BE CONVERTED TO EQUIVALENT ROUND/RECTANGULAR DUCTWORK AT THE DISCRETION OF THE MECHANICAL CONTRACTOR. ANY DUCT CONVERSIONS SHALL BE SUBMITTED AS PART OF THE DUCTWORK SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER.
17. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING METHODS OF BRINGING IN MECHANICAL EQUIPMENT THROUGH BUILDING INTO MECHANICAL ROOMS.
18. PIPING SHALL NOT BE SUPPORTED FROM OTHER PIPING, CONDUIT, OR DUCTWORK.
19. COORDINATE PIPE ROUTING TO AVOID RUNNING PIPING BELOW ROOF HATCHES, SKYLIGHTS AND ACCESS PANELS.
20. ALL CONTROL WIRING ROUTED EXPOSED IN SPACES SUCH AS MECHANICAL ROOMS OR ABOVE HARD CEILINGS SHALL BE ROUTED IN CONDUIT. CONTROL WIRING ROUTED ABOVE ACCESSIBLE CEILINGS IS NOT REQUIRED TO BE RUN IN CONDUIT, BUT SHOULD BE SECURELY STRAPPED TO PERMANENT SUPPORTS FOR A CLEAN INSTALLATION.
21. ALL THERMOSTATS SHALL BE MOUNTED AT SAME ELEVATION AS ADJACENT LIGHT SWITCHES UNLESS NOTED OTHERWISE.

MECHANICAL SHEET INDEX

M001	MECHANICAL TITLE SHEET
M0101	MECHANICAL DEMO FLOOR PLAN
M101	MECHANICAL OVERALL PLAN
M102	MECHANICAL OVERALL ROOF PLAN
M104	MECHANICAL ENLARGED PLAN
M105	MECHANICAL RESTROOM ROOF PLAN
M500-1	MECHANICAL DETAILS & SCHEDULES

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STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

MECHANICAL TITLE SHEET

Project Number: 251001.00
Date: 03/10/2026

M001

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

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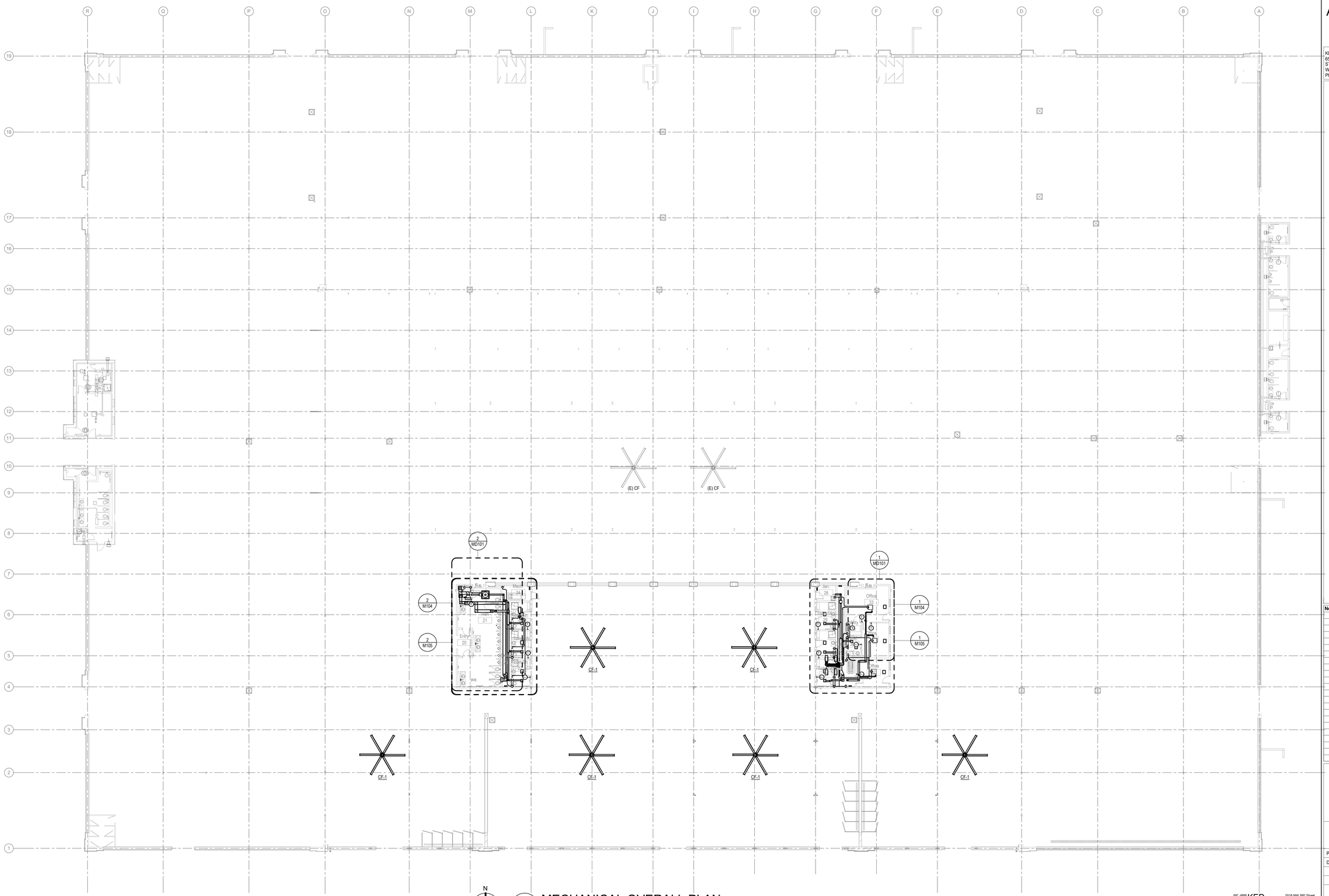

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1 MECHANICAL OVERALL PLAN

1/16" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

MECHANICAL OVERALL PLAN

Project Number:	251001.00
Date:	03/10/2026

M101

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

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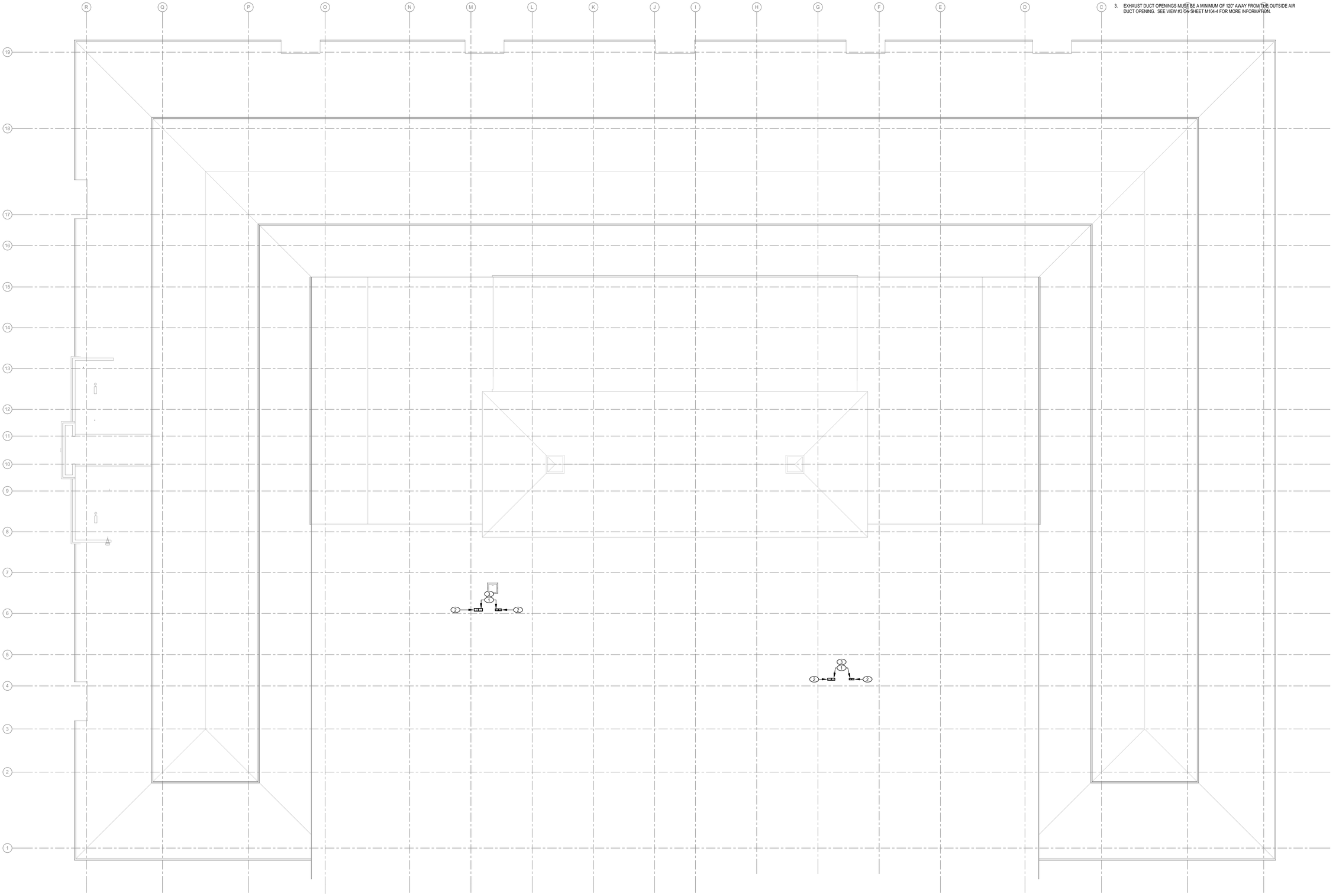
KEYED NOTES:

1. MAKE DUCT PENETRATION THROUGH UPPER ROOF WATER TIGHT.
2. COVER DUCT OPENING WITH BIRDSCREEN.
3. EXHAUST DUCT OPENINGS MUST BE A MINIMUM OF 120" AWAY FROM THE OUTSIDE AIR DUCT OPENING. SEE VIEW #3 ON SHEET M104-4 FOR MORE INFORMATION.



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1 ROOF-MECHANICAL PLAN PHASE 2

1/16" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

MECHANICAL OVERALL ROOF PLAN

Project Number:	251001.00
Date:	03/10/2026

M102

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

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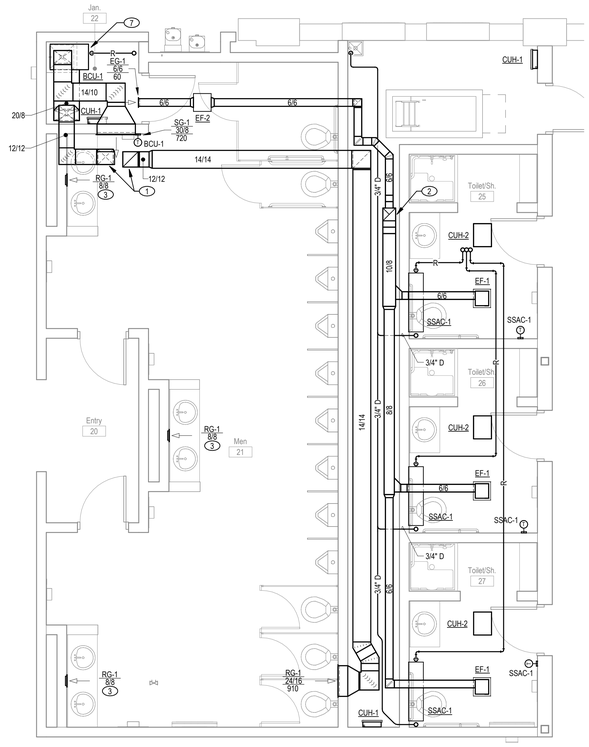
KEYED NOTES:

1. 14X10 OUTSIDE AIR AND 12X12 RETURN AIR UP THROUGH ROOF TO ERV-1.
2. 10X10 EXHAUST AIR UP.
3. INSTALL 8X8 RG-1 IN SECOND BLOCK COURSE BENEATH LAVATORIES.
4. 12X12 EXHAUST AIR UP.
5. 8X8 OUTSIDE AIR UP.
6. BALANCE MANUAL DAMPER TO 35 CFM.
7. ROUTE CONDENSATE DRAIN FROM BCU-1 COOLING COIL TO MOP SINK IN THIS ROOM.
8. DISCHARGE CONDENSATE DRAIN TO FLOOR DRAIN IN THIS AREA.



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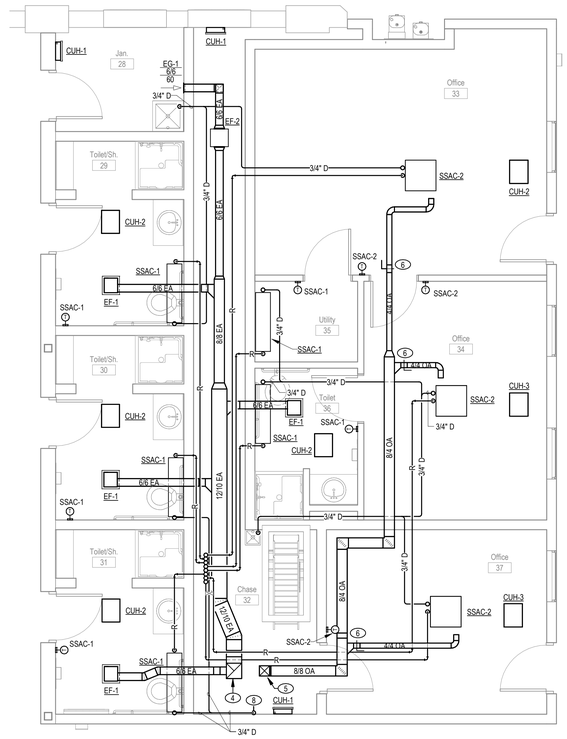
2 GROUP B - MECHANICAL ENLARGED PLAN

1/4" = 1'-0"



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1 GROUP C - MECHANICAL ENLARGED PLAN

1/4" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

MECHANICAL ENLARGED PLAN

Project Number:	251001.00
Date:	03/10/2026

M104

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

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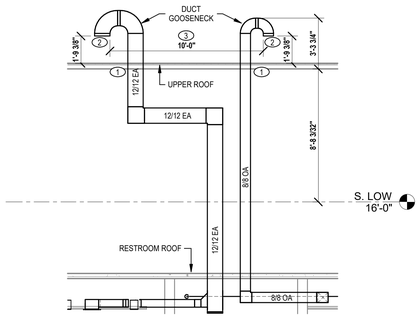
KEYED NOTES:

1. MAKE DUCT PENETRATION THROUGH UPPER ROOF WATER TIGHT.
2. COVER DUCT OPENING WITH BIRDSCREEN.
3. DUCT OPENINGS MUST BE A MINIMUM OF 120" APART AS SHOWN.
4. 14X14 OUTSIDE AIR UP.
5. REFRIGERANT LINESETS DOWN THROUGH ROOF. PIPING PENETATIONS TO BE MADE THROUGH PIPE PORTAL.
6. 10X10 EXHAUST AIR UP.
7. 10X10 EXHAUST AIR DOWN.



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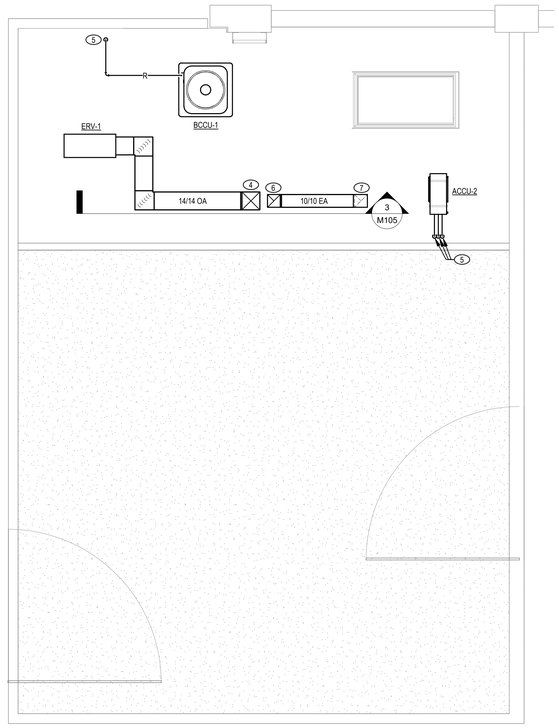
4 GROUP C RESTROOM DUCT GOOSENECKS

1/4" = 1'-0"



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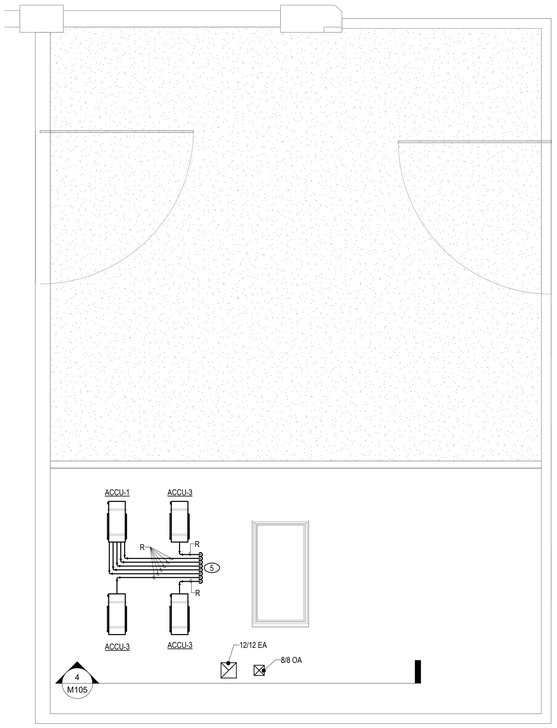
2 GROUP B - MECHANICAL PLAN

1/4" = 1'-0"



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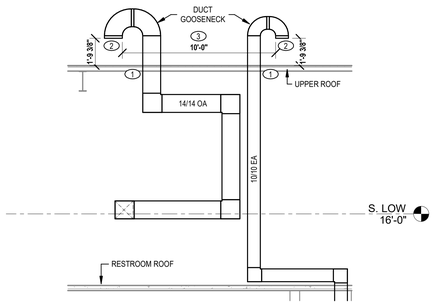
1 GROUP C - MECHANICAL PLAN

1/4" = 1'-0"



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3 GROUP B RESTROOM DUCT GOOSENECKS

1/4" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

MECHANICAL RESTROOM ROOF PLAN

Project Number:	251001.00
Date:	03/10/2026

M105

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

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FAN SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	TYPE	AIRFLOW (CFM)	S.P. (IN. W.C.)	MAX FAN RPM	DRIVE	WHEEL DIA. (INCHES)	MAX. AMCA SONES	FAN CONSTRUCTION		ELECTRICAL (FAN)							DAMPER			CONTROL TYPE
											HOUSING (STEEL OR ALUM)	WHEEL (STEEL, ALUM. OR POLY)	BHP	MHP	VOLT	PH	DISCONNECT		STARTER BY	TYPE (MOTORIZED OR GRAVITY)	VOLT	PH	
																	BY	TYPE					
EF-1	GREENHECK	SP	TOILET ROOMS	CEILING FAN	100	0.5	895	DIRECT	5.625	3.7	POLY	POLY	0.06	FHP	120	1	MFR	NON-FUSED	MFR	GRAVITY	N/A		1
EF-2	GREENHECK	CSP	JAN. 22 & JAN. 28	INLINE FAN	60	0.5	825	DIRECT	6.750	2.3	STEEL	STEEL	0.06	FHP	120	1	MFR	NON-FUSED	MFR	GRAVITY	N/A		1

CONTROL TYPE:
TYPE 1. INTERLOCKED TO ROOM LIGHT SWITCH

CABINET UNIT HEATER SCHEDULE - ELECTRIC

MARK	MANUFACTURER	MODEL	CONFIGURATION			ELECTRIC HEATING COIL		CONTROLS TYPE	CABINET DIMENSIONS			ELECTRICAL							NOTES
			CABINET	MOUNTING	DISCHARGE	NUMBER OF STAGES	KW		LENGTH (IN.)	WIDTH (IN.)	DEPTH (IN.)	HP	VOLT	PH	FLA	MCA	MOCP	DISCONNECT	
																		BY	TYPE
CUH-1	INDEECO	933	VERTICAL	SURFACE	FRONT	1	1.5	1	18.25	14.375	5.00	FHP	120	1	12.5	15.7	20	MFR	NON-FUSED	1
CUH-2	INDEECO	931	HORIZONTAL	RECESSED	BOTTOM	1	4.0	1	18.25	14.375	3.75	FHP	208	1	19.2	24.0	30	MFR	NON-FUSED	1
CUH-3	INDEECO	931	HORIZONTAL	RECESSED	BOTTOM	1	2.0	1	18.25	14.375	3.75	FHP	208	1	9.8	12.3	20	MFR	NON-FUSED	1

NOTES:
1. VERIFY FINAL COLOR SELECTION WITH ARCHITECT.

CONFIGURATION NOTES:
CABINET: HORIZONTAL OR VERTICAL
MOUNTING: CONCEALED / RECESSED / SEMI-RECESSED / SURFACE
DISCHARGE: BOTTOM / TOP / DUCTED

CONTROL TYPES:
1. UNIT MOUNTED THERMOSTAT

PIPING APPLICATION SCHEDULE

SYSTEM (NOTE 1)	LOCATION	DESIGN WORKING PRESSURE (PSI)	MATERIAL	JOINTS	USAGE SIZE RANGE	INSULATION APPLICATION		NOTES
						THICKNESS (IN.)	TYPE (NOTES 2, 3)	
REFRIGERANT	GENERAL	500	ACR COPPER	FLARED END WITH SOLDER	LESS THAN 1-1/2"	1"	ELASTOMERIC FOAM	4
					1-1/2" & GREATER	1-1/2"		
HVAC EQUIPMENT DRAINS (GRAVITY & PUMPED CONDENSATE)	ABOVE GRADE (RETURN AIR PLENUM)	N/A	DWV COPPER	SOLDER	ALL	1"	FIBERGLASS	5

NOTES:
1. REFER TO EACH PIPING SPECIFICATION FOR SPECIFIC PIPING REQUIREMENTS.
2. SEE SPECIFICATION SECTION 230719 FOR COMPLETE INSULATION AND JACKETING REQUIREMENTS. ALL INSULATION SHALL BE PLENUM RATED MEETING ASTM E84 WHERE INSTALLED IN A RETURN AIR PLENUM.
3. INSTALL RIGID CALCIUM SILICATE INSERTS AT ALL PIPING HANGERS.
4. PAINT EXPOSED & EXTERIOR INSULATION WITH TWO COATS EXTERIOR GRADE LATEX.
5. INSULATION ONLY REQUIRED FOR COLD SERVICE PIPING. EQUIPMENT DRAIN PIPING LESS THAN 5' IN LENGTH NEED NOT BE INSULATED.

CEILING FAN SCHEDULE

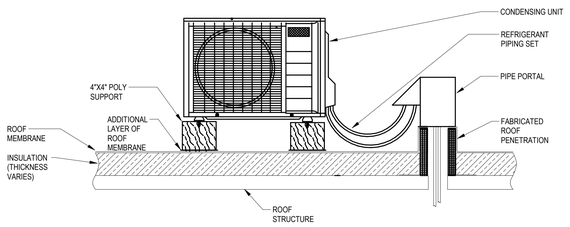
MARK	MANUFACTURER	MODEL	SERVICE	DIAMETER (FT)	# OF AIRFOILS	MAX FAN RPM	DRIVE	MAX SOUND LEVEL (dBA)	ELECTRICAL						NOTES
									HP	VOLT	PH	MOCP	DISCONNECT		
													BY	TYPE	
CF-1	BIG ASS FANS	POWERFOIL 6	BARN	20	6	70	VARIABLE SPEED	55	2	208	1	20	MFR	NON-FUSED	1, 2, 3

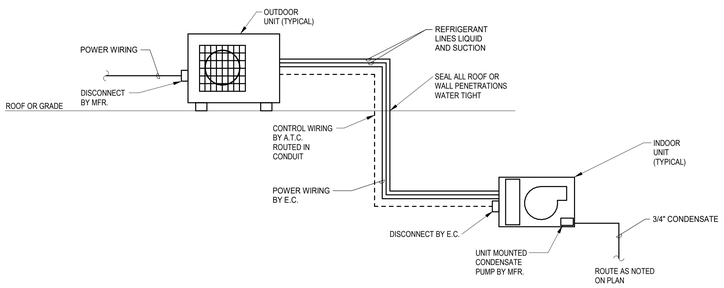
NOTES:
1. PROVIDE FAN WITH SPEED CONTROLLER. INSTALL CONTROLLER NEXT TO FAN DISCONNECTS.
2. COORDINATE MOUNTING HEIGHT WITH OTHER HANGING ITEMS AND MAINTAIN MANUFACTUER'S REQUIRED CLEARANCES.
3. COORDINATE COLOR WITH ARCHITECT.

CONDENSING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE (NOTE 1)	NOMINAL DESIGN TONS	REFRIGERANT	AMBIENT TEMP. (°F)	ELECTRICAL (NOTE 3)							CONTROLS	NOTES
							VOLT	PH	FLA	MCA	MOCP	DISCONNECT			
												BY	TYPE		
BCCU-1	TRANE	5TTR	BCU-1	4.0	R-454B	96	208	1	21	25	45	EC	NON-FUSED	NOTE 2	3

NOTES:
1. CONDENSING UNIT PERFORMANCE TO MATCH THE ASSOCIATED COOLING COIL.
2. PROVIDE WITH PACKAGED CONTROLS BY MFR.
3. UNIT TO SIT ON A CONCRETE PAD WITH FROST FOOTINGS. COORDINATE SIZE OF PAD WITH FINAL EQUIPMENT SELECTION.





3 SPLIT SYSTEM
N.T.S.

GENERAL NOTES:

1. VERIFY REFRIGERANT PIPING LENGTH AND ELEVATION CHANGE. DO NOT EXCEED MANUFACTURER'S REQUIREMENTS.
2. MAINTAIN ALL REQUIRED SERVICE CLEARANCES TO MEET MANUFACTURER'S REQUIREMENTS.

DUCTWORK APPLICATION SCHEDULE

AIR HANDLING SYSTEM	EQUIPMENT SERVICE	AIRSTREAM	DUCTWORK LOCATION (ALL DUCT CONCEALED UNLESS NOTED OTHERWISE)	SYSTEM TYPE (CONSTANT VOLUME OR VAV OR BOTH)	ACTUAL PRESSURE RATING (IN W.C.) (NOTES 4, 5, & 6)			DUCTWORK MATERIAL	SINGLE OR DOUBLE WALL	DUCT SHAPE	INSULATION APPLICATION (NOTE 1)				NOTES
					SEAL CLASS	BCU-1	ERV-1			ROUND / RECT / FLAT OVAL	MINIMUM R-VALUE (NOTE 2)	THICKNESS (IN.) (NOTE 3)	TYPE	LINER, WRAP, OR BOARD	
BLOWER COIL UNIT ENERGY RECOVERY VENTILATION UNIT	BCU-1 ERV-1	SUPPLY AIR	OUTDOOR EXPOSED	BOTH	C	+1"	+1"	GALVANIZED SHEET METAL	SINGLE	RECT	R-12	3"	B	BOARD	7
		SUPPLY AIR	INDOOR EXPOSED	BOTH	C	+1"	+1"	GALVANNEALED SHEET METAL	SINGLE	RECT	R-4	1"	C OR D	LINER	8
					C	+1"	+1"		SINGLE	ROUND	R-4	1"	F	LINER	8
		SUPPLY AIR	FAN TO AIR OUTLET	CONSTANT VOLUME	C	+1"	+1"	GALVANIZED SHEET METAL	SINGLE	RECT / ROUND / FLAT OVAL	R-6	2.2"	A	WRAP	
					C	+1"	+1"				R-6	1-1/2"	C OR D	LINER	
BLOWER COIL UNIT ENERGY RECOVERY VENTILATION UNIT	BCU-1 ERV-1	RETURN AIR	AIR INLET TO AHU / RTU	BOTH	C	-1"	-1"	GALVANIZED SHEET METAL	SINGLE	RECT / ROUND / FLAT OVAL	R-6	2.2"	A	WRAP	
					C	-1"	-1"				R-6	1-1/2"	C OR D	LINER	
		RETURN AIR	INDOOR EXPOSED	BOTH	C	-1"	-1"	GALVANNEALED SHEET METAL	SINGLE	RECT	R-4	1"	C OR D	LINER	8
					C	-1"	-1"		SINGLE	ROUND	R-4	1"	F	LINER	8
		RETURN AIR	OUTDOOR EXPOSED	BOTH	C	-1"	-1"	GALVANIZED SHEET METAL	SINGLE	RECT	R-12	3"	B	BOARD	7
MOISTURE LADEN EXHAUST	EF-1 EF-2	EXHAUST AIR	INLET TO EXHAUST FAN	-	A	N / A		ALUMINUM	SINGLE	RECT / ROUND / FLAT OVAL	-	NONE	-	-	
											R-4	1-1/2"	A	WRAP	
DUCTWORK ACCESSORIES	GENERAL	GENERAL	-	-	N/A	N / A		-	-	-	R-6	2.2"	A	WRAP	

NOTES:
1. DUCT DIMENSIONS SHOWN ON PLAN ARE CLEAR INSIDE DIMENSIONS AND DO NOT INCLUDE INSULATION.
2. R-VALUE LISTED IN SCHEDULE IS THE MINIMUM ALLOWABLE INSTALLED R-VALUE.
3. INSULATION THICKNESS LISTED IS THE MINIMUM ALLOWABLE INSULATION THICKNESS. CONTRACTOR TO VERIFY REQUIRED INSULATION THICKNESS BASED ON INSULATION DENSITY USED.
4. DUCT SEAL CLASS TO BE BASED ON PRESSURE CLASS AS NOTED BELOW:
   CLASS A: -10"W.C. THRU -4" W.C.
   CLASS B: -3" W.C.
   CLASS C: -2" W.C. THRU +2"W.C.
   CLASS B: +3" W.C.
   CLASS A: +4"W.C. THRU +10" W.C.
5. ACTUAL DUCT CONSTRUCTION SHALL EXCEED THE ACTUAL PRESSURE RATING LISTED AND FALL INTO ONE OF THE STANDARD DUCT PRESSURE CLASS RATINGS AS FOLLOWS:
   0.5", 1", 2", 3", 4", 6", 10" (POSITIVE OR NEGATIVE)
6. ALL DUCTWORK BETWEEN A FAN AND A FIRE, FIRE / SMOKE OR SMOKE DAMPER REQUIRES A PRESSURE RELIEF DOOR TO PROTECT THE DUCTWORK DURING A CLOSURE OF THE DAMPER WHILE THE FAN IS STILL OPERATING. REFER TO THE PRESSURE RELIEF DOOR SCHEDULE AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
7. DUCTWORK INSULATION TO BE METAL JACKETED AND SEALED WATERTIGHT. SLOPE DUCTWORK WITH ADEQUATE SLOPE TO PREVENT PONDING WATER.
8. ALL EXPOSED DUCTWORK TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.

INSULATION TYPES:
TYPE A: FLEXIBLE FIBERGLASS - OUTSIDE WRAP
TYPE B: SEMI-RIGID FIBERGLASS BOARD (EXTERIOR OF DUCT)
TYPE C: FLEXIBLE FIBERGLASS LINER
TYPE D: PREFORMED RIGID FIBERGLASS ACOUSTICAL LINER
TYPE E: FLEXIBLE MINERAL FIBER DUCT WRAP
TYPE F: FLEXIBLE FIBERGLASS SPIRAL DUCT LINER

ENERGY RECOVERY VENTILATION UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	SUPPLY / FRESH AIR STREAM (NOTE 2)			RETURN / EXHAUST AIR STREAM (NOTE 2)			SUMMER AIR TEMPERATURES - DB / WB (°F)			WINTER AIR TEMPERATURES - DB / WB (°F)			FILTERS		ELECTRICAL (NOTE 1)						ROOF CURB			NOTES
				AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN. W.C.)	FAN WATTS	AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN. W.C.)	FAN WATTS	OUTSIDE AIR	RETURN AIR	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	SUPPLY AIR	SUPPLY AIR	EXHAUST AIR	VOLT	PH	MCA	MOCP	DISCONNECT		CONTROLS BY	TYPE	HEIGHT (IN.) (NOTE 3)	PROVIDED BY	
																						BY	TYPE				
ERV-1	RENEWAIRE	HE10	BCU-1	720	0.5	246	910	0.5	372	96.0 / 78.0	75.0 / 65.3	79.9 / 70.5	-10.0 / -10.0	72.0 / 51.3	52.8 / 40.4	MERV 8	MERV 8	208.0	1.0	3.9	15.0	MFR	NON-FUSED	MFR	STANDARD	14"	MFR	4, 5

NOTES:
1. PROVIDE WITH SINGLE POINT POWER CONNECTION.
2. UNIT MANUFACTURER TO VERIFY TOTAL STATIC PRESSURE AND MOTOR HORSEPOWER REQUIRED BASED ON ACTUAL UNIT PERFORMANCE.
3. HEIGHT LISTED IS THE MINIMUM REQUIRED HEIGHT ABOVE THE FINISHED ROOF LEVEL. COORDINATE REQUIRED CURB HEIGHT WITH ARCHITECTURAL DRAWINGS AND ROOF CONSTRUCTION.
4. CONTRACTOR TO PROVIDE THE NECESSARY DUCTWORK TRANSFORMATION PIECES & FLEXIBLE DUCTWORK CONNECTIONS FOR ALL ENERGY RECOVERY UNITS. FIELD COORDINATE REQUIREMENTS WITH APPROVED EQUIPMENT SHOP DRAWINGS PRIOR TO DUCT FABRICATION.
5. UNIT TO BE RATED FOR OUTDOOR INSTALLATION.

SPLIT SYSTEM HEAT PUMP SCHEDULE - INDOOR & OUTDOOR UNITS

MARK	MANUFACTURER	MODEL	SERVICE	NOMINAL CAPACITY (TONS)	SEER	HEATING COP @ 47°F	INDOOR UNIT									DIMENSIONS (IN.)			ELECTRICAL (NOTE 1)						NOTES
							AIRFLOW (CFM)	REFRIGERANT	MAXIMUM LINESET LENGTH (FT.) (NOTE 2)	COOLING EAT		HEATING EAT		TOTAL COOLING MBH	TOTAL HEATING MBH	FILTERS	LENGTH	DEPTH	HEIGHT	VOLT	PH	MCA	MOCP	DISCONNECT	
										DB (°F)	WB (°F)	DB (°F)	WB (°F)											BY	TYPE
SSAC-1	MITSUBISHI	MSZ SERIES	ALL TOILETS	0.5	35.0	4.8	420	R-454B	65	80	67	70	60	6.0	9.0	1" WASHABLE	39.3	12	9.75	208	1	1	N/A	AT OUTDOOR UNIT		2, 3, 4
SSAC-2	MITSUBISHI	SLZ SERIES	OFFICE 33	0.75	16.6	3.4	300	R-454B	100	80	67	70	60	9.0	12.0	1" WASHABLE	22.5	22.5	8.25	208	1	1	N/A	AT OUTDOOR UNIT		2, 3, 4
ACCU-1	MITSUBISHI	PUZ SERIES	4 X SSAC-1	2	N/A			R-454B	65	N/A				24.0	29.0	N/A	37.5	14	37.2	208	1	26	35	EC	NON-FUSED	3
ACCU-2	MITSUBISHI	SUZ SERIES	3 X SSAC-1	1.5	N/A			R-454B	65	N/A				18.0	20.0	N/A	33.1	13	34.7	208	1	28	35	EC	NON-FUSED	3
ACCU-3	MITSUBISHI	SUZ SERIES	SSAC 2	0.75	N/A			R-454B	100	N/A				9.0	12.0	N/A	31.5	13	34.7	208	1	24	30	EC	NON-FUSED	3

NOTES:
1. PROVIDE WITH A SINGLE POINT POWER CONNECTION TO THE CONDENSING UNIT. INDOOR UNIT TO BE POWERED FROM THE OUTDOOR UNIT. WIRING BY E.C.
2. PROVIDE WITH WALL MOUNTED THERMOSTAT AND CONTROLS.
3. COORDINATE INDOOR AND OUTDOOR UNIT LOCATIONS WITH FINAL PIPING ROUTING. INSTALL PER MANFUACTURERS REQUIREMENTS.
4. PROVIDE WITH PLENUM RATED UNIT MOUNTED CONDENSATE PUMP EQUAL TO LITTLE GIANT.

BLOWER COIL UNIT SCHEDULE

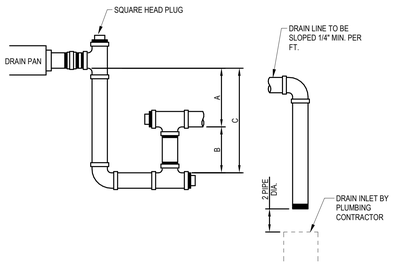
MARK	MANUFACTURER	MODEL	SERVICE	SUPPLY FAN					OUTSIDE AIR (CFM) (NOTE 4)	REHEAT COIL (ELECTRIC)			DX COOLING COIL (NOTE 2)						FILTER	ELECTRICAL							NOTES
				AIRFLOW (CFM)	ESP (IN. W.C.) (NOTE 1)	FAN TYPE	BHP	HP		KW	STAGES	DISCONNECT	EAT DB (°F)	EAT WB (°F)	MAX. UNIT LAT DB (°F)	UNIT LAT WB (°F)	TOTAL MBH	REFRIGERANT		VOLT	PH	FLA	MCA	MOCP	DISCONNECT	CONTROLS	
BCU-1	TRANE	BLOWER COIL	MEN 21	720	1.0	FC	0.473	0.5	720	9.0	SCR	NOTE 6	80	71	55	52	42.2	R-454B	1" THROWAWAY	208	3	27.5	34.3	35	BY MFR.	NOTE 3	1, 2, 5

NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES 0.4." W.C. FOR DIRTY FILTERS
2. MATCH COOLING COIL PERFORMANCE TO THE ASSOCIATED CONDENSING UNIT. SIZE AND ROUTE ALL REFRIGERANT PIPING PER MANUFACTURERS REQUIREMENTS
3. UNIT CONTROLS TO BE PROVIDED BY UNIT MFR.
4. UNIT TO SUPPLY 100% OUTSIDE AIR FROM ERV-1.
5. UNIT ENERGY EFFICIENCY RATING TO COMPLY WITH 2015 IECC.
6. ELECTRIC HEATING COIL TO BE PROVIDED WITH INTERLOCKING DISCONNECT SWITCH.

GRILLES, REGISTERS, & DIFFUSERS SCHEDULE

MARK	MANUFACTURER	MODEL	STYLE	BORDER (NOTE 1)	INLET SIZE (INCH) (NOTE 2)	FACE SIZE (INCH)	DAMPER NEEDED	MATERIAL	COLOR
EG-1	TITUS	350FL	35° DEFLECTION	SURFACE	SEE DWG.	INLET + 1 3/4"	YES	ALUMINUM	WHITE
RG-1	TITUS	350RL	35° DEFLECTION	SURFACE	SEE DWG.	INLET + 1 3/4"	NO	STEEL	WHITE
SG-1	TITUS	300RL	DOUBLE DEFLECTION	SURFACE	SEE DWG.	INLET + 1 3/4"	YES	STEEL	WHITE

NOTES:
1. CONTRACTOR SHALL DETERMINE PROPER MARGIN STYLE TO MATCH CEILING TYPE.
2. BRANCH DUCT TO DIFFUSERS SHALL BE AT THE SAME SIZE AS THE DIFFUSER NECK, UNLESS SHOWN OTHERWISE.

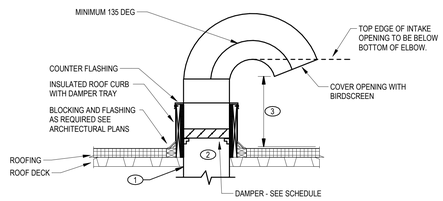


2 CONDENSATE DRAIN (DRAW THROUGH)
N.T.S.

GENERAL NOTES:

1. FILL TRAP MANUALLY ON INITIAL START-UP.
2. TRAP EACH COMPONENT DRAIN CONNECTION.
3. PIPE SIZE SHALL NOT BE LESS THAN DRAIN PAN CONNECTION SIZE.
4. DRAW THROUGH UNITS:
   A=SP+1"
   B=(SP+1)/2"
   C=A+B"

   SP TO BE MAXIMUM STATIC PRESSURE (SP) ON THE DRAIN PAN INCLUDING MAXIMUM FILTER PRESSURE DROP AND PRESSURE DROP OF FUTURE COMPONENTS OF UNIT IF APPLICABLE.
5. RAISE COIL SECTION OR ENTIRE AIR HANDLING UNIT WITH STRUCTURAL MEMBERS OR STANDS TO PROVIDE TRAP HEIGHT



1 DUCTWORK GOOSENECK - INTAKE OR EXHAUST
N.T.S.

GENERAL NOTES:

1. ROOF CURB PROVIDED BY MECHANICAL CONTRACTOR. COORDINATE INSTALLATION AND FLASHING WITH THE GENERAL CONTRACTOR.
2. MECHANICAL CONTRACTOR SHALL COORDINATE ROOF OPENING AND CURB SIZE REQUIRED FOR DUCT PENETRATION.

KEYED NOTES:

1. COORDINATE DUCT INSULATION AND CONSTRUCTION WITH DUCT USAGE SCHEDULE.
2. REFER TO PLAN FOR DUCT SIZES AND ROUTING.
3. OUTSIDE AIR INTAKE TO BE A MINIMUM OF 24" ABOVE ROOF. EXHAUST AIR OUTLET TO BE A MINIMUM OF 18" ABOVE ROOF.

K/O ARCHITECTS
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KEFFER/OVERTON ASSOCIATES INC.
650 SOUTH PRAIRIE VIEW DRIVE
STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

MECHANICAL DETAILS & SCHEDULES

Project Number: 251001.00
Date: 03/10/2026

M500-1

SCALE: As indicated

KED bluestone
5518 NW 88th Street
Johnston, IA 50131
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PROJECT NUMBER: 120-667
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ELECTRICAL ABBREVIATIONS

1P	1 POLE (2P, 3P, 4P, ETC.)	LTNG	LIGHTNING
A	6" ABOVE COUNTER OR BACKSPLASH TO CENTERLINE OF DEVICE	LV	LOW VOLTAGE
		M	INSTALL DEVICE IN MILLWORK
A, AMP	AMPERE	MAX	MAXIMUM
AC	ABOVE COUNTER	MAG.S	MAGNETIC STARTER
ACLG	ABOVE CEILING	M/C	MOMENTARY CONTACT
AF	AMP FRAME	MC	MECHANICAL CONTRACTOR
AFF	ABOVE FINISHED FLOOR	MCB	MAIN CIRCUIT BREAKER
AFG	ABOVE FINISHED GRADE	MCC	MOTOR CONTROL CENTER
AFCI	ARC FAULT CIRCUIT	MDC	MAIN DISTRIBUTION CENTER
	INTERRUPTER	MDP	MAIN DISTRIBUTION PANEL
AHU	AIR HANDLING UNIT	MFR	MANUFACTURER
AL	ALUMINUM	MFS	MAIN FUSED DISCONNECT SWITCH
ALT	ALTERNATE	MH	MANHOLE
AMP	AMPERE	MIC	MICROPHONE
AMPL	AMPLIFIER	MIN	MINIMUM
ANNUN	ANNUNCIATOR	MISC	MISCELLANEOUS
APPROX	APPROXIMATELY	MLO	MAIN LUGS ONLY
AQ-STAT	AQUASTAT	MMS	MANUAL MOTOR STARTER
ARCH	ARCHITECT, ARCHITECTURAL	MOA	MULTIOUTLET ASSEMBLY
AS	AMP SWITCH	MSP	MOTOR STARTER PANELBOARD
AT	AMP TRIP	MSBD	MAIN SWITCHBOARD
A.T.C.	AUTOMATIC TEMPERATURE CONTROLS CONTRACTOR	MSS	MOTOR STARTER SWITCH
		MT	MOUNT
ATS	AUTOMATIC TRANSFER SWITCH	MTS	MANUAL TRANSFER SWITCH
AUTO	AUTOMATIC	MTR	MOTOR, MOTORIZED
AUX	AUXILIARY	N.C.	NORMALLY CLOSED
AV	AUDIO VISUAL	NEC	NATIONAL ELECTRICAL CODE
AWG	AMERICAN WIRE GAUGE	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
B	BLACK DEVICE COLOR WITH BLACK UNBREAKABLE THERMOPLASTIC COVER PLATE	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
BATT	BATTERY	NIC	NOT IN CONTRACT
BD	BOARD	NL	NIGHT LIGHT
BLDG	BUILDING	N.O.	NORMALLY OPEN
BMS	BUILDING MANAGEMENT SYSTEM	NPF	NORMAL POWER FACTOR
C	CONDUIT	NTS	NOT TO SCALE
CAB	CABINET	OC	ON CENTER
CAT	CATALOG	OH	OVERHEAD
CATV	CABLE TELEVISION	OL	OVERLOADS
CB	CIRCUIT BREAKER	PA	PUBLIC ADDRESS
CCTV	CLOSED CIRCUIT TELEVISION	PB	PULL BOX OR PUSHBUTTON
CKT	CIRCUIT	PC	PLUMBING CONTRACTOR
CLG	CEILING	PE	PNEUMATIC ELECTRIC
CM	CONSTRUCTION MANAGER	PED	PEDESTAL
COMB	COMBINATION	PF	POWER FACTOR
CMPR	COMPRESSOR	PH	PHASE
CONN	CONNECTION	PIV	POST INDICATING VALVE
CONST	CONSTRUCTION	PNL	PANEL
CONT	CONTINUATION OR CONTINUOUS	PP	POWER POLE
CONTR	CONTRACTOR	PR	PAIR
CONV	CONVECTOR	PRI	PRIMARY
CP	CIRCULATING PUMP	PROJ	PROJECTION
CRT	CATHODE-RAY TUBE	PRV	POWER ROOF VENTILATOR
CT	CURRENT TRANSFORMER	PT	POTENTIAL TRANSFORMER
CTR	CENTER	PVC	POLYVINYL CHLORIDE (CONDUIT)
CU	COPPER	PWR	POWER
DEPT	DEPARTMENT	QUAN	QUANTITY
DET	DETAIL	RAC	RIGID ALUMINUM CONDUIT
DIA	DIAMETER	RCPT	RECEPTACLE
DISC	DISCONNECT	REQD	REQUIRED
DIST	DISTRIBUTION	RM	ROOM
DN	DOWN	RMC	RIGID METALLIC CONDUIT
DO	AUTOMATIC DOOR OPENER	RTU	ROOF TOP UNIT
DPR	DAMPER	SC	SURFACE CONDUIT
DS	SAFETY DISCONNECT SWITCH	SEC	SECONDARY
DT	DOUBLE THROW	SHT	SHEET
DWG	DRAWING	SIM	SIMILAR
EC	ELECTRICAL CONTRACTOR	SLD	SINGLE-LINE DIAGRAM
ELEC	ELECTRIC, ELECTRICAL	S/N	SOLID NEUTRAL
ELEV	ELEVATOR	SPEC	SPECIFICATION
ELU	EMERGENCY LIGHTING UNIT	SPKR	SPEAKER
EM	EMERGENCY	SP	SPARE
EMS	ENERGY MANAGEMENT SYSTEM	SPP	SINGLE-POINT POWER
EMT	ELECTRICAL METALLIC TUBING	SR	SURFACE RACEWAY
EP	ELECTRIC PNEUMATIC	SS	STAINLESS STEEL
EPO	EMERGENCY POWER OFF	SSW	SELECTOR SWITCH
EQUIP	EQUIPMENT	S/S	STOP/START PUSHBUTTONS
EWC	ELECTRIC WATER COOLER	STA	STATION
EXIST	EXISTING	STD	STANDARD
EXH	EXHAUST	SURF	SURFACE MOUNTED
EXP	EXPLOSION PROOF	SW	SWITCH
FA	FIRE ALARM	SWBD	SWITCHBOARD
FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL	SYM	SYMMETRICAL
		SYS	SYSTEM
FACP	FIRE ALARM CONTROL PANEL	TEL	TELEPHONE
FCU	FAN COIL UNIT	TERM	TERMINAL
FIXT	FIXTURE	T	TAMPER RESISTANT
FLR	FLOOR	TL	TWIST LOCK
FLUOR	FLUORESCENT	T-STAT	THERMOSTAT
F.P.C.	FIRE PROTECTION CONTRACTOR	TTC	TELEPHONE TERMINAL CABINET
FU	FUSE	TV	TELEVISION
FUDS	FUSED SAFETY DISCONNECT SWITCH	TVTC	TELEVISION TERMINAL CABINET
GA	GAUGE	TYP	TYPICAL
GAL	GALLON	UC	UNDER COUNTER
GALV	GALVANIZED	UE	UNDERGROUND ELECTRICAL
GC	GENERAL CONTRACTOR	UG	UNDERGROUND
GEN	GENERATOR	UH	UNIT HEATER
GFI	GROUND FAULT CIRCUIT INTERRUPTER	UT	UNDERGROUND TELEPHONE
GFP	GROUND FAULT PROTECTOR	UTIL	UTILITY
GND	GROUND	UV	ULTRAVIOLET
GYP BD	GYPSUM BOARD	V	VOLT
HWC-#	DOMESTIC WATER CIRCULATING PUMP	VA	VOLT-AMPERES
HOA	HANDS-OFF-AUTOMATIC SWITCH	VDT	VIDEO DISPLAY TERMINAL
H	INSTALL DEVICE HORIZONTALLY	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HPF	HIGH POWER FACTOR	VOL	VOLUME
HT	HEIGHT	W	WATT
HTG	HEATING	W/	WITH
HTR	HEATER	WG	WIRE GUARD
HV	HIGH VOLTAGE	WH	WATER HEATER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	W/O	WITHOUT
		WP	WEATHERPROOF
IC	INTERRUPTING CAPACITY	XFMR	TRANSFORMER
IG	ISOLATED GROUND	XFR	TRANSFER
IMC	INTERMEDIATE METAL CONDUIT	XX	LOCATION-SPECIFIC MOUNTING HEIGHT ABOVE FINISHED FLOOR TO CENTERLINE OF DEVICE
INCAND	INCANDESCENT		
IR	INFRARED		
I/W	INTERLOCK WITH		
J-BOX	JUNCTION BOX	∠	ANGLE
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR	@	AT
KV	KILOVOLT	▲	DELTA
KVA	KILOVOLT-AMPERE	'	FEET
KVAR	KILOVOLT-AMPERE REACTIVE	"	INCHES
KW	KILOWATT	#	NUMBER
KWH	KILOWATT HOUR	Ø	PHASE
LOC	LOCATE OR LOCATION	C	CENTER LINE
LT	LIGHT	P	PLATE
LTG	LIGHTING		

BREAKER FUNCTION SCHEDULE

SYMBOL	DESCRIPTION
A	ARC FAULT INTERUPTER (AFCI)
AR	ARC ENERGY REDUCTION MAINTENANCE SWITCH
E	EXISTING BREAKER TO REMAIN
EM	PROVIDE IDENTIFICATION PER NEC 700.12(I)(2)(4)
EN	EXISTING BREAKER SERVING NEW CIRCUIT
G	GROUND FAULT CIRCUIT INTERUPTER (GFCI)PROTECTION (5mA)
GE	GROUND FAULT CIRCUIT INTERUPTER FOR EQUIPMENT (30mA)
GF	ADJUSTABLE GROUND FAULT PROTECTION FOR EQUIPMENT
HL	HANDLE LOCK TO LOCK BREAKER IN CLOSED POSITION
K#	KEY INTERLOCK (# REPRESENTS GROUPED KEYING)
LSI	LONG-TIME, SHORT-TIME, INSTANTANEOUS ADJUSTMENT
LSIG	LONG-TIME, SHORT-TIME, INSTANTANEOUS ADJUSTMENT, AND GROUND FAULT ADJUSTMENT
LSIA	LONG-TIME, SHORT-TIME, INSTANTANEOUS ADJUSTMENT, AND GROUND FAULT ALARM
N	NEW BREAKER IN EXISTING PANEL
NE	NEW BREAKER SERVING EXISTING CIRCUIT
SD	DENOTE SERVICE DISCONNECT
ST	SHUNT TRIP (120V OPERATED UNLESS NOTED OTHERWISE)

EQUIPMENT/DEVICE HOME RUN KEY

1. BRANCH CIRCUIT WIRING SHALL BE #12AWG UNLESS NOTED OTHERWISE ON THE PLAN OR IN THE SCHEDULES.
2. AS A MINIMUM USE 10 AWG CONDUCTOR FOR 20 AMPERE, 120 VOLT BRANCH CIRCUIT HOME RUNS LONGER THAN 100 FEET AND 277 VOLT BRANCH CIRCUIT HOME RUNS LONGER THAN 200 FEET.
3. REFER TO SPECIFICATION SECTION 260519 FOR ADDITIONAL REQUIREMENTS.

EQUIPMENT GROUNDING CONDUCTOR
PHASE CONDUCTOR (SHORT LINE)
NEUTRAL CONDUCTOR (LONG LINE)

GENERAL PLAN SYMBOLS

MARK	SCHEDULED EQUIPMENT (UNDERLINED)
MARK	NONSCHEDULED EQUIPMENT
(E) MARK	EXISTING EQUIPMENT - HALFTONE - (E) PREFIX
(R) MARK	EXISTING RELOCATED EQUIPMENT - (R) PREFIX
# / #	SECTION VIEW, TOP REPRESENTS DETAIL NUMBER, BOTTOM REPRESENTS SHEET NUMBER
# / #	ENLARGED VIEW, TOP REPRESENTS VIEW NUMBER, BOTTOM REPRESENTS SHEET NUMBER
	NEW WORK BY THE E.C. (DARK SOLID LINE)
	NEW UNDERGROUND WORK BY THE E.C. (DARK DASHED LINE)
	WORK BY OTHERS AND/OR EXISTING (LIGHT SOLID LINE)
	DEMO WORK BY THE E.C. (DARK DASHED LINE)
	MATCHLINE
X	KEYED NOTE
1	LIGHTING CONTROL SYMBOL (DIAMOND)
1	KITCHEN EQUIPMENT SYMBOL (OCTOGON)

GENERAL ELECTRICAL SYMBOLS

J J	ELECTRICAL CONNECTION TO EQUIPMENT
EPO	EMERGENCY STOP PUSH BUTTON. REFER TO SCHEDULE FOR ADDITIONAL INFORMATION.
DPM	DIGITAL POWER METER, LCD DISPLAY, MONITORING OF VOLTAGE, CURRENT, POWER, PF, FREQUENCY, MINIMAX AND AVERAGE VALUES, AND ENERGY
PP	AUTOMATIC DOOR PUSH PAD
	PANELBOARD - SEE SCHEDULES FOR MORE INFORMATION
	UTILITY TRANSFORMER - PROVIDED BY UTILITY
	SWITCHBOARD - SEE SCHEDULES FOR MORE INFORMATION
T	TRANSFORMER - SEE SCHEDULES FOR MORE INFORMATION
	DISCONNECT SWITCH, SEE SCHEDULES FOR MORE INFORMATION
	POWER METER
	COMBINATION STARTER, SEE SCHEDULES FOR MORE INFORMATION
	ELECTRICAL EQUIPMENT, DASHED LINES INDICATE CODE REQUIRED CLEARANCES. SEE SCHEDULES FOR MORE INFORMATION

GENERAL POWER SYMBOLS

SYMBOL	DESCRIPTION
	DUPLEX / DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, EMERGENCY POWER. REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION
	DUPLEX / DOUBLE DUPLEX RECEPTACLE, REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION.
CD CR	CORD REEL / CORD DROP. REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION
	SIMPLEX RECEPTACLE, NEMA 5-20R
	SPECIAL RECEPTACLE
	RECESSED FLOOR BOX OR POKE-THRU
	CEILING MOUNTED RECEPTACLE. REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION
	SURFACE MOUNT MULTI-OUTLET ASSEMBLY, SEE GENERAL ELECTRICAL SCHEDULE FOR ADDITIONAL INFORMATION

GENERAL FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION
FAP	CONTROL PANEL
NEP	NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL
FAA	REMOTE ANNUNCIATOR PANEL
PIV	POST INDICATOR VALVE AND TAMPER SWITCH
PS	AIR PRESSURE SWITCH
TS	VALVE TAMPER SWITCH
FS	WATER FLOW SWITCH
SR	BEAM SMOKE REFLECTOR
SB B#	LINEAR BEAM SMOKE DETECTOR
SD	LINEAR BEAM SMOKE DETECTOR
DSD	DUCT SMOKE DETECTOR
RI	DUCT SMOKE DETECTOR REMOTE INDICATOR STATION
H	HEAT DETECTOR ADDRESSABLE
J	LINEAR HEAT DETECTION CABLE
F	ADDRESSABLE FIRE ALARM MANUAL PULL STATION
SD	SMOKE DETECTOR
	AUDIO/VISUAL NOTIFICATION APPLIANCE, CEILING MOUNTED
	VISUAL NOTIFICATION APPLIANCE, CEILING MOUNTED
	SPEAKER NOTIFICATION APPLIANCE, CEILING MOUNTED
	SPEAKER/VISUAL NOTIFICATION APPLIANCE, CEILING MOUNTED
A	HORN NOTIFICATION APPLIANCE, WALL MOUNTED
A	AUDIO/VISUAL NOTIFICATION APPLIANCE, WALL MOUNTED
S	SPEAKER NOTIFICATION APPLIANCE, WALL MOUNTED
S	SPEAKER/VISUAL NOTIFICATION APPLIANCE, WALL SWITCH
	VISUAL NOTIFICATION APPLIANCE, WALL MOUNTED
AM	ADDRESSABLE MONITOR MODULE
AR	ADDRESSABLE RELAY MODULE
	MAGNETIC DOOR HOLDER
HD	HVAC ELEVATOR HOISTWAY DAMPER
SD	HVAC SMOKE DAMPER
ZAM	ZONE ADAPTER MODULES
CO	CO DETECTOR
VCC	VOICE COMMAND CENTER
DCD	DUCT CO DETECTOR
F	BELL
FHS	HIGH FIDELITY SPEAKER - CEILING MOUNT
FH	HIGH FIDELITY SPEAKER - WALL MOUNT
ASD	AIR SAMPLING SMOKE DETECTOR
FSD	FIRE SMOKE DAMPER

GENERAL SWITCH SYMBOLS

SYMBOL	DESCRIPTION
$	SWITCH,REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION.
DR	REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION
IR	REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION
UR	REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION

NURSE CALL SYMBOLS

SYMBOL	DESCRIPTION
N	REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION
D	REFER TO SUBSCRIPT SCHEDULE FOR MORE INFORMATION

GENERAL LIGHTING SYMBOLS

SYMBOL	DESCRIPTION
	CRITICAL FIXTURE (FULL SHADED)
	LIFE SAFETY (HALF SHADED)
	RECESSED MOUNTED (DIAGONAL SLASH)
	SURFACE MOUNTED
	SURFACE OR PENDANT FIXTURE (DOTS)
	POLE MOUNTED SITE FIXTURE
	RECESSED DOWNLIGHT
	EMERGENCY FIXTURE
	SINGLE / DOUBLE FACED EXIT SIGN
	EMERGENCY REMOTE HEAD (SINGLE/DOUBLE)
	COMBINATION EXIT/EMERGENCY FIXTURE
	WALL MOUNTED FIXTURE (STEM OR STEMS)
	CYLINDRICAL FIXTURE (ARROW INDICATES WALL WASH)

GENERAL NOTES

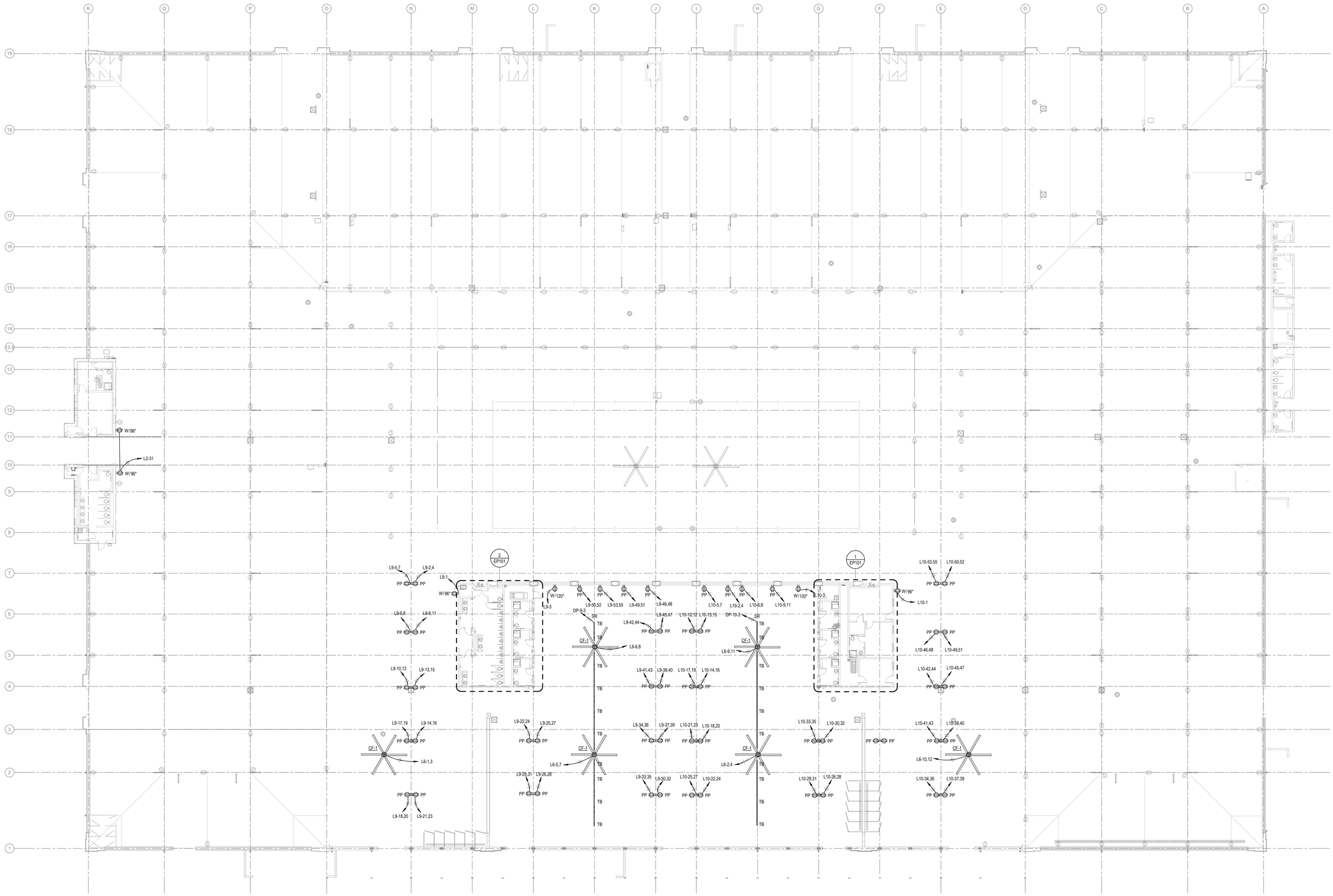
1. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES INCLUDING BUT NOT LIMITED TO THE NATIONAL ELECTRICAL CODE, THE INTERNATIONAL BUILDING CODE, AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES, AND INTERNATIONAL ENERGY CONSERVATION CODE. THE AUTHORITY HAVING JURISDICTION SHALL HAVE THE FINAL DECISION ON ALL INSTALLATIONS AND PRACTICES.
2. ALL MATERIAL FURNISHED SHALL BE NEW, FREE OF DEFECTS, AND LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY UNLESS NOTED OTHERWISE.
3. INSTALLATION OF EQUIPMENT SHALL BE IN ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ). PLACE ALL CABLE/WIRING IN CONDUIT OR RACEWAY UNLESS NOTED OTHERWISE. DO NOT LIE ON, OR SUPPORT CABLE FROM, CEILING DEVICES, PIPING OR DUCTWORK. PROVIDE NEW WIRING FOR ALL BRANCH CIRCUITS AND FEEDERS.
4. FEEDERS ON DRAWINGS ARE SCHEMATIC ONLY. CONDUIT RUNS SHALL COMPLY WITH CONDUIT SPECIFICATIONS AND CONTAIN BENDS THAT ARE NOT GREATER THAN 90 DEGREES. CONDUITS ABOVE GRADE SHALL BE RAN PARALLEL TO OR PERPENDICULAR WITH BUILDING LINES AND STRUCTURE.
5. ALL FEEDER AND BRANCH CIRCUITS TO PANELS, MOTORS, LIGHTS, RECEPTACLES, GENERAL DISTRIBUTION, ETC. SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR SIZED ACCORDING TO THE N.E.C. THE CONDUIT SYSTEM SHALL NOT BE CONSIDERED AN ACCEPTABLE GROUND.
6. REFER TO MECHANICAL EQUIPMENT SCHEDULES FOR DETAILED INFORMATION ON EQUIPMENT, DISCONNECTS, AND CONTROLS. E.C. SHALL PROVIDE AND INSTALL ITEMS AS NOTED BY THE E.C. ON THE MECHANICAL SCHEDULES.
7. ELECTRICAL INSTALLATION SHALL BE INSTALLED IN PHASES AS DIRECTED BY THE G.C. PROVIDE TEMPORARY AND PERMANENT CONNECTIONS AS REQUIRED TO MEET THE PHASING REQUIREMENTS. COORDINATE ALL REQUIRED OUTAGES WITH THE G.C. AND OWNER AS OUTLINED IN THE SPECIFICATIONS.
8. RELOCATE EXISTING CONDUITS, WIRING, AND BOXES AS REQUIRED FOR INSTALLATION OF MECHANICAL EQUIPMENT AND PIPING, TEMPORARY AND PERMANENT WALLS, AND STRUCTURES.
9. ALL WIRING AND FEEDER SIZES ON DRAWINGS ARE SIZED FOR COPPER WIRING UNLESS SPECIFICALLY NOTED OTHERWISE.
10. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE INSTALLATION OF ELECTRICAL SYSTEM AND THOSE REQUIRING ELECTRICAL CONNECTIONS TO MAINTAIN NEC REQUIRED CLEARANCES, INCLUDING BUT NOT LIMITED TO AREAS ABOVE ACCESSIBLE CEILINGS.
11. PROVIDE CABLE OR CONDUIT AND WIRE AS REQUIRED TO ACHIEVE CIRCUITING AS SHOWN. SIZE CONDUCTOR PER NEC AMPACITIES AND WIRE FILL CRITERIA. PROVIDE DEDICATED NEUTRALS AND GROUND CONDUCTOR FOR CIRCUITING, UNLESS NOTED OTHERWISE.
12. CONDUIT FOR POWER WIRING SHALL BE PERMITTED TO BE LOCATED BENEATH FLOOR SLAB UNLESS NOTED OTHERWISE. RACEWAYS FOR LOW VOLTAGE CABLING FOR CONTROL, TELECOMMUNICATIONS, AND OTHER LOW VOLTAGE SYSTEMS SHALL NOT BE ALLOWED BENEATH, NOR WITHIN THE FLOOR SLAB UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. WHERE CABLING IS ROUTED BENEATH OR WITHIN THE FLOOR SLAB, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE CABLING IS LISTED FOR SUCH USE.
13. ALL ELECTRICAL CONDUCTORS SHALL BE STRANDED COPPER WITH TYPE THHN-THWN INSULATION UNLESS SPECIFICALLY NOTED OTHERWISE. THE MINIMUM WIRE SIZE SHALL BE #12 AWG.
14. ALL NEW CIRCUITS REQUIRING NEUTRAL CONDUCTORS SHALL HAVE DEDICATED NEUTRALS. SHARED NEUTRALS ARE NOT ALLOWED.
15. A GREEN GROUNDING CONDUCTOR SHALL BE CONNECTED TO ALL LOADS SERVED. THE CONDUCTOR SHALL BE SIZED PER THE NATIONAL ELECTRICAL CODE TO ACCOMMODATE THE LOAD SERVED. ALL GROUNDING CONDUCTORS SHALL BE INSTALLED IN CONDUIT.
16. ALL BUILDING WIRING SHALL BE INSTALLED IN CONDUIT, MINIMUM SIZE SHALL BE 3/4".
17. ALL HOME RUN CONDUITS SHALL BE A MINIMUM OF 1" CONDUIT WITH 4-11/16" DEEP JUNCTION BOXES. ALL JUNCTION BOX COVERS SHALL BE CLEARLY MARKED TO IDENTIFY CIRCUIT NUMBERS IN THE ENCLOSURES. EACH HOME RUN RACEWAY SYSTEM SHALL HAVE SPARE CAPACITY FOR A MINIMUM OF 1 ADDITIONAL CIRCUIT AND ASSOCIATED DEDICATED NEUTRAL CONDUCTORS.
18. MC CABLING IS NOT PERMITTED UNLESS SPECIFICALLY NOTED OTHERWISE.
19. ALL CONDUITS SHALL BE CONCEALED IN WALLS, ABOVE CEILINGS, ETC. WHERE POSSIBLE. ALL CONDUIT ROUTED EXPOSED IN FINISHED SPACES SHALL BE A PRE-MANUFACTURED SURFACE RACEWAY (IE: WIREMOLD OR EQUAL) WITH THE EQUIVALENT USABLE AREA OF THE SUBSTITUTED CONDUIT. EXPOSED SURFACE RACEWAY SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM ARCHITECT/ENGINEER. ALL EXPOSED SURFACE RACEWAY SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO WALLS AND CEILINGS. SURFACE WIREWAY SHALL BE FACTORY OR FIELD PAINTED TO MATCH MOUNTING SURFACE.
20. COORDINATE THE EXACT LOCATION OF ALL DEVICES LOCATED ABOVE OR BELOW COUNTERS, ETC. WITH OTHER TRADES, ARCHITECTURAL ELEVATIONS, AND REVIEWED SUBMITTALS PRIOR TO ROUGH-IN. ARCHITECTURAL ELEVATIONS AND DETAILS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON ELECTRICAL DRAWINGS.
21. ALL CUTTING AND PATCHING REQUIRED FOR CONDUITS, DEVICES OR OTHER ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
22. ALL PENETRATIONS THROUGH FIRE-RATED WALLS, FLOORS, AND CEILINGS SHALL BE SEALED WITH A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) APPROVED FIRE-RATED SYSTEM EQUAL TO OR EXCEEDING THE RATING OF THE MATERIAL PENETRATED.
23. COORDINATE LOCATIONS OF ALL ELECTRICAL ITEMS INCLUDING LIGHTING FIXTURES, CEILING MOUNTED DEVICES (OCCUPANCY SENSORS, FIRE ALARM DETECTORS, SPEAKERS, ETC.) WITH EACH OTHER AND WITH ALL SPRINKLER HEADS, AIR SUPPLY DIFFUSER AND RETURN GRILLES. ALL CEILING DEVICES SHALL BE CENTERED IN CEILING TILE, WHERE POSSIBLE.
24. COORDINATE ALL MOUNTING OF ELECTRICAL MATERIALS , EQUIPMENT AND DEVICES REQUIRED FOR EQUIPMENT/DEVICES SUPPLIED BY OTHERS. ELECTRICAL ITEMS SHALL BE MOUNTED TO AVOID ANY INTERFERENCE WITH OTHER EQUIPMENT OPERATION OR ACCESS. ALL INSTALLATIONS OF ELECTRICAL ITEMS FOR EQUIPMENT/DEVICES SUPPLIED BY OTHERS SHALL BE COORDINATED AND APPROVED BY SUPPLYING CONTRACTOR PRIOR TO ROUGH-IN.
25. BOXES LOCATED ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" OR A FIRE RATED MATERIAL EQUAL TO OR GREATER THAN THE FIRE WALL MATERIAL RATING SHALL BE INSTALLED AROUND THE BOX. BOXES LOCATED ON OPPOSITE SIDES OF NON-FIRE RATED WALLS SHALL BE OFFSET A MINIMUM 6".
26. REMOVE AND INSTALL ALL CEILING TILES NECESSARY TO PERFORM REQUIRED ELECTRICAL WORK. ALL CEILING TILES WHICH ARE DAMAGED DURING REMOVAL/REINSTALLATION, SHALL BE REPLACED WITH NEW TILES OF THE SAME MANUFACTURER AND MODEL OF EXISTING TILE.
27. ALL REQUEST FOR CHANGE PROPOSALS IN THIS PROJECT SHALL INCLUDE A BREAKDOWNS OF MATERIALS, LABOR, AND SUBCONTRACTORS, WITH SUFFICIENT DETAIL FOR ENGINEER EVALUATION. EACH SEPARATE PROPOSAL REQUEST ITEM SHALL INCLUDE SEPARATE MATERIALS AND LABOR BREAKDOWNS. SUPPLIER BACK-UP PRICING SHALL BE INCLUDED ON THE SUPPLIERS' LETTERHEAD. ALL LABOR UNITS ASSOCIATED WITH THE NEW MATERIAL INSTALLATIONS SHALL NOT EXCEED 75% OF THE NECA 1 "NORMAL CONDITION" LABOR RATES, WITHOUT SPECIFIC APPROVAL.
28. EXISTING CIRCUITS SHOWN ARE BASED ON EXISTING DRAWINGS AND NEW CIRCUITS ARE SHOWN FOR DESIGN INTENT USING EXISTING CIRCUITS. CONTRACTOR MAY USE DISCRETION WITH EXISTING CONDITIONS TO MAKE CIRCUIT CHANGES. ALL CHANGES SHALL BE RECORD ON AS-BUILT DRAWINGS.

DEMOLITION NOTES

1. REFER TO SPECIFICATION SECTION 260502 FOR ADDITIONAL DEMOLITION INFORMATION.
2. DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED FOR THIS PROJECT. THEY ARE NOT INTENDED TO INDICATE THE LOCATION OF ALL DEVICES, JUNCTION BOXES, CONDUITS, ETC. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO VERIFY ALL RELEVANT EXISTING CONDITIONS.
3. INSPECT AND TEST EXISTING ELECTRICAL DEVICES AND EQUIPMENT, INTENDED FOR REMOVAL AND REINSTALLATION, FOR GOOD CONDITION AND PROPER OPERATION PRIOR TO DEMOLITION. RECORD DEFICIENCIES PRIOR TO DISCONNECTION OR REMOVAL. PHOTOGRAPH, RECORD AND REPORT ALL SUCH EXISTING ITEMS DETERMINED TO BE DAMAGED, INOPERATIVE, OR OTHERWISE COMPROMISED. DAMAGED ITEMS FOUND TO BE DAMAGED OR INOPERATIVE AFTER REMOVAL SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
4. WHERE LIGHT FIXTURES, SWITCHES, RECEPTACLES, OR OTHER ELECTRICAL ITEMS ARE BEING REMOVED, ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE PANELBOARD OR FEEDER JUNCTION BOX SERVING THE DEVICE SHALL ALSO BE REMOVED, UNLESS THE CONDUIT CAN BE USED FOR NEW CONDUCTORS.
5. NO PROJECT DEMOLITION SHALL OCCUR UNTIL COORDINATION WITH ANY/ALL TRADES' AFFECTED DEVICES, EQUIPMENT, WIRING, PIPING, DUCTWORK, OR OTHER COMPONENTS HAS BEEN COMPLETED. DEMOLITION OR NEW WORK THAT CAUSES DAMAGE TO COMPONENTS INTENDED TO REMAIN OR BE REMOVED AND REINSTALLED SHALL BE REPAIRED/REPLACED AT CONTRACTOR'S EXPENSE.
6. EXISTING CONDUIT IN GOOD CONDITION MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED. EQUIPMENT GROUNDING (E.G.) CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
7. INVESTIGATION OF EXISTING POWER AND LIGHTING SYSTEMS WILL BE REQUIRED BY THE E.C. AS PART OF THE BIDDING PROCESS TO DETERMINE THE FULL EXTENT OF DEMOLITION WORK REQUIRED. THE E.C. SHALL BE RESPONSIBLE FOR REMOVAL OF SOME PORTIONS OF POWER AND LIGHTING SYSTEMS NOT EXPLICITLY SHOWN ON THESE DRAWINGS BUT ARE REQUIRED FOR THIS PHASE OF THE PROJECT. COORDINATE WITH THE G.C., OWNER, AND ENGINEER TO DETERMINE WHICH PORTIONS OF EXISTING SYSTEMS MUST REMAIN ACTIVE AND WHICH PORTIONS MUST BE REMOVED.
8. COORDINATE WORK IN PHASES WITH GENERAL CONTRACTOR AND OWNER TO FACILITATE DEMOLITION AND NEW CONSTRUCTION.
9. E.C. SHALL FIELD VERIFY ACTUAL LOCATION AND SIZES OF EXISTING CONDUIT, WIRING, AND EQUIPMENT.
10. REMOVE POWER, LIGHTING, CONTROL, AND COMMUNICATIONS DEVICES SHOWN, UNLESS NOTED OTHERWISE. REMOVE ALL UNUSED CONDUIT, RACEWAYS, WIRING, JUNCTION BOXES, DISCONNECTS, HANGERS AND ACCESSORIES COMPLETELY BACK TO THE SOURCE.
11. MAKE PROVISIONS AND BACK-FEED OR RE-CIRCUIT ANY ITEMS THAT ARE EXISTING TO REMAIN WHICH ARE AFFECTED BY DEMOLITION. COORDINATE OUTAGES WITH OWNER A MINIMUM OF 4 WORKING DAYS PRIOR TO THE OUTAGE OR AS NOTED IN THE SPECIFICATIONS.
12. ALL SALVAGE SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER TO A LOCATION ON SITE AS DESIGNATED BY THE OWNER. IN THE EVENT THE OWNER DOES NOT WANT TO RETAIN THE SALVAGE MATERIAL, THE MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OR RECYCLED BY THE CONTRACTOR.
13. RELOCATE CONDUITS ABOVE CEILING AS REQUIRED TO ACCOMMODATE PLUMBING PIPING AND HVAC MODIFICATIONS ASSOCIATED WITH THE REMODELING.
14. PROVIDE CUTTING, PATCHING, AND RESTORATION OF FINISHES AS NECESSARY FOR COMPLETION OF WORK. PATCH AND REPAIR ALL FLOOR, WALL, AND CEILING OPENINGS DUE TO DEMOLITION WHICH WILL NOT BE REUSED. RESTORE SURFACE TO MATCH EXISTING SURFACES/CONDITIONS. COORDINATE WORK WITH THE FINISH CONTRACTORS.
15. EXISTING OPENINGS IN WALLS TO REMAIN SHALL BE PATCHED WITH DRYWALL, TAPED AND PAINTED TO MATCH EXISTING CONDITIONS. BLANK COVERPLATES OVER UNUSED OPENINGS ARE NOT ALLOWED. ALL ABANDONED CONDUITS EXTENDING FROM WALLS ABOVE CEILINGS SHALL BE CUT OFF FLUSH WITH THE STUD AND PLUGGED.
16. PROVIDE BLANK PLATES ON ALL EXISTING UNUSED OPENINGS. [PAINT TO MATCH EXISTING SURFACE] BLANK PLATES TO MATCH [EXISTING] [NEW] DEVICE PLATES.
17. PROTECT ALL WALLS, CEILINGS, FLOORS, LIGHTS, AND OTHER FINISHED SURFACES THAT ARE NOT SCHEDULED FOR DEMOLITION. IF DAMAGED, THE RESPONSIBLE CONTRACTOR SHALL REPAIR TO MATCH EXISTING C

GENERAL NOTES:

1. ALL CONDUIT ROUTING SHALL BE COORDINATED WITH ENGINEER AND OWNER PRIOR TO INSTALLATION. SUBMIT CONDUIT ROUTING PLAN PRIOR TO START OF INSTALLATION. INTENT IS TO MOUNT CONDUITS ON STRUCTURAL MEMBERS TO MAKE CONDUITS AS INCONSPICUOUS AS POSSIBLE.



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1 OVERALL ELECTRICAL PLAN - PHASE 2

1/16" = 1'-0"

K/O ARCHITECTS

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650 SOUTH PRAIRIE VIEW DRIVE
STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ELECTRICAL OVERALL PLAN

Project Number:	251001.00
Date:	03/10/2026

E101

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

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Johnston, IA 50131
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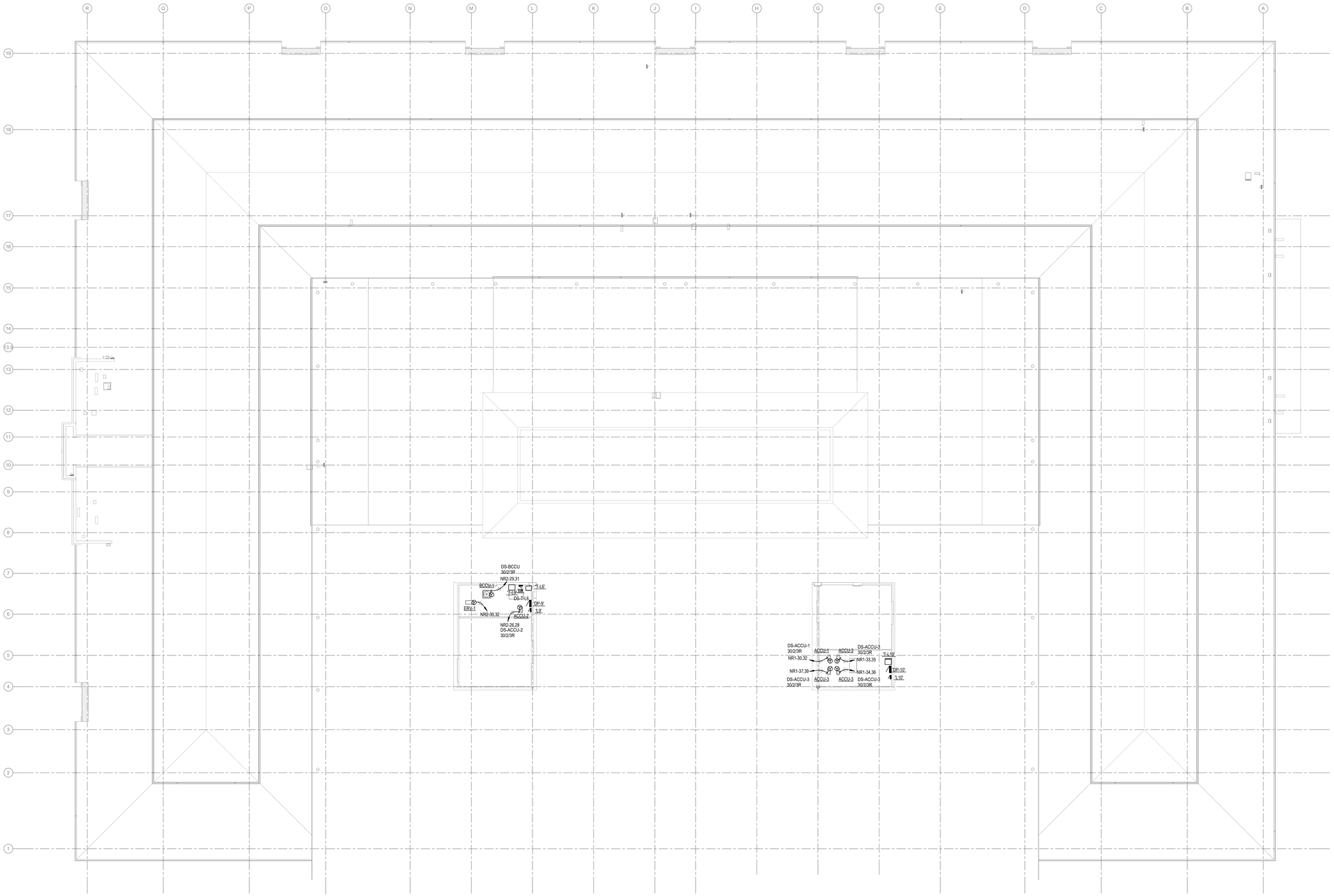
GENERAL NOTES:

1. ALL CONDUIT ROUTING SHALL BE COORDINATED WITH ENGINEER AND OWNER PRIOR TO INSTALLATION. SUBMIT CONDUIT ROUTING PLAN PRIOR TO START OF INSTALLATION. INTENT IS TO MOUNT CONDUITS ON STRUCTURAL MEMBERS TO MAKE CONDUITS AS INCONSPICUOUS AS POSSIBLE.



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1 ROOF-ELECTRICAL PLAN - PHASE 2

1/16" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ELECTRICAL ROOF PLAN

Project Number: 251001.00

Date: 03/10/2026

E103

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

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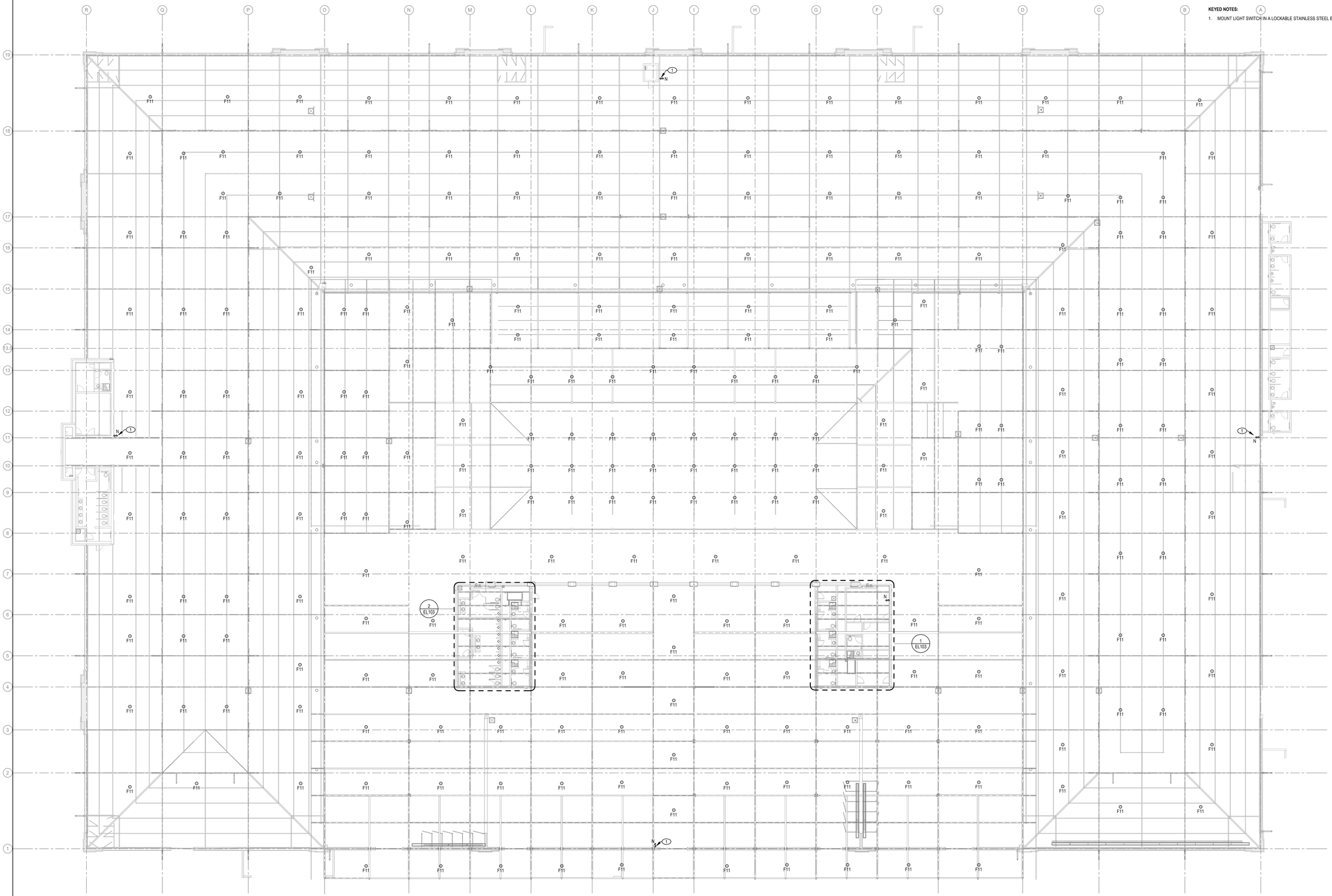
GENERAL NOTES:

1. REUSE EXISTING LIGHTING CIRCUITS FOR NEW LIGHT FIXTURES IN OPEN AREA
2. ALL CONDUIT ROUTING SHALL BE COORDINATED WITH ENGINEER AND OWNER PRIOR TO INSTALLATION. SUBMIT CONDUIT ROUTING PLAN PRIOR TO START OF INSTALLATION. INTENT IS TO MOUNT CONDUITS ON STRUCTURAL MEMBERS TO MAKE CONDUITS AS INCONSPICUOUS AS POSSIBLE.

KEYED NOTES:

1. MOUNT LIGHT SWITCH IN A LOCKABLE STAINLESS STEEL BOX.



1 ELECTRICAL OVERALL LIGHTING PLAN
1/16" = 1'-0"

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ISF SWINE BARN UPDATES - PHASE 2

ELECTRICAL OVERALL LIGHTING PLAN

Project Number: 251001.00
Date: 03/10/2026

EL101

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

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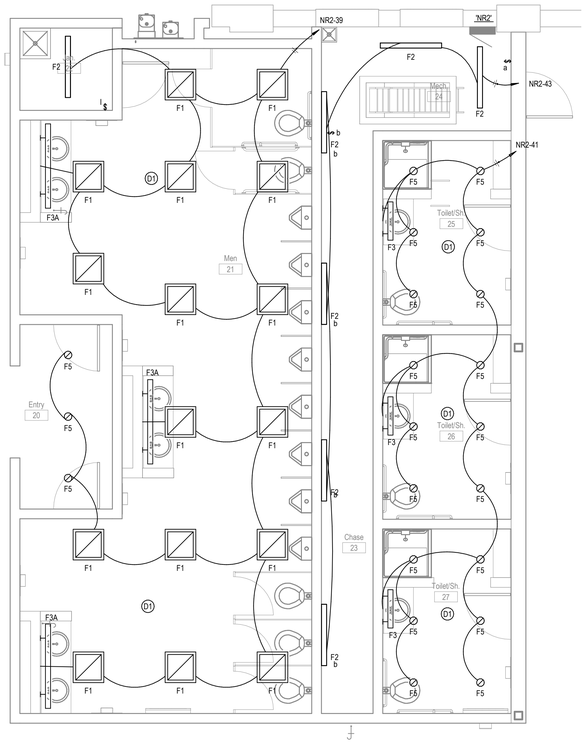
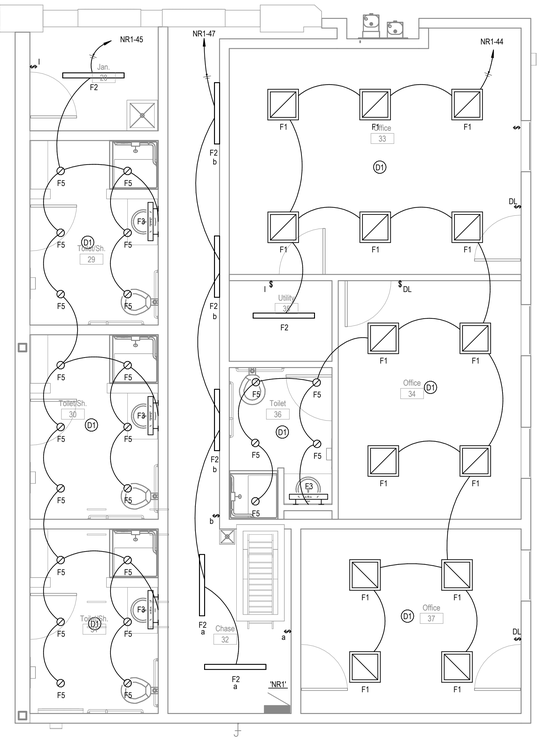
KEYED NOTES:

1. MOUNT LIGHT FIXTURE ON THE WALL



2 GROUP B ELECTRICAL LIGHTING PLAN - PHASE 2

1/4" = 1'-0"



1 GROUP C ELECTRICAL LIGHTING PLAN - PHASE 2

1/4" = 1'-0"

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ISF SWINE BARN UPDATES - PHASE 2

LIGHTING & LIGHTING CONTROLS PLANS

Project Number:	251001.00
Date:	03/10/2026

EL103

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

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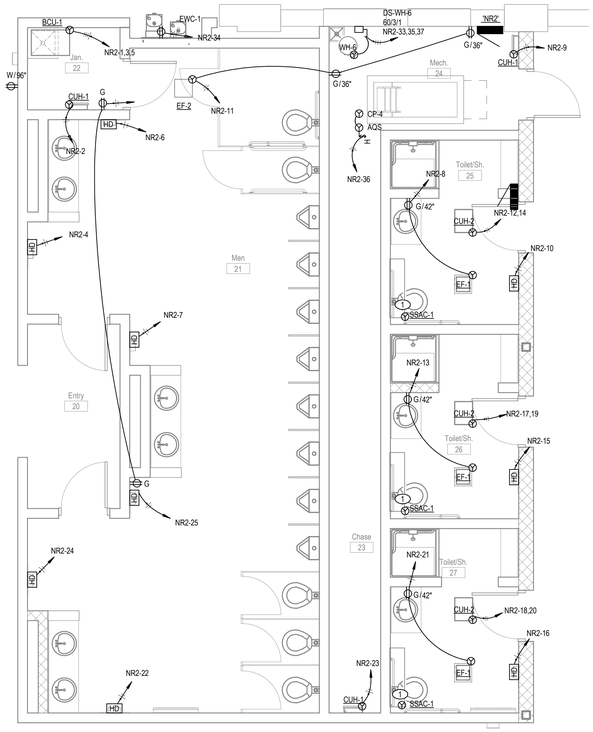
KEYED NOTES:

1. INTERIOR UNIT FED FROM EXTERIOR UNIT



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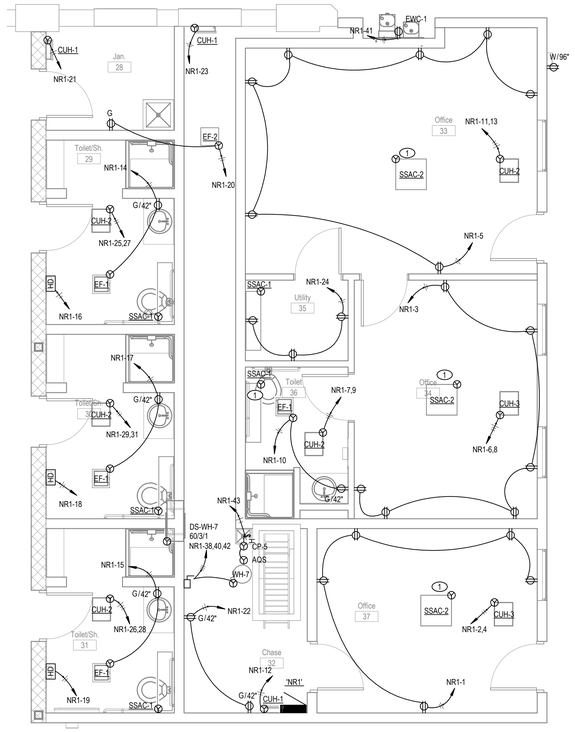
2 GROUP B ELECTRICAL POWER PLAN - PHASE 2

1/4" = 1'-0"



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1 GROUP C ELECTRICAL POWER PLAN - PHASE 2

1/4" = 1'-0"

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No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ELECTRICAL ENLARGED POWER PLANS

Project Number:	251001.00
Date:	03/10/2026

EP101

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

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PANEL "___#___"

FED FROM "___#___"

(VOLTAGE)

(AIC RATING)

PHASE A - BLACK
PHASE B - RED
PHASE C - BLUE
NEUTRAL - WHITE
GROUND - GREEN

ENGINEER: KEDbluestone

CONTRACTOR:

2 PANEL BOARD NAMEPLATE

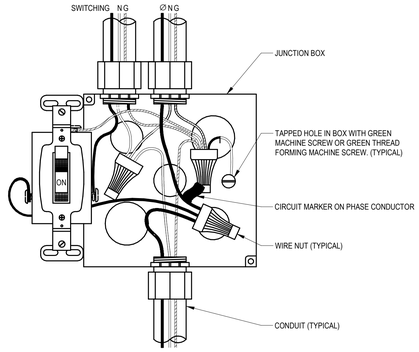
N.T.S.

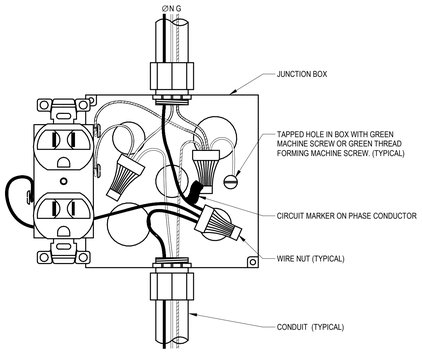
NOTES:

1. FOR 208V SYSTEMS, FOLLOW COLORS AS SHOWN.
2. FOR 480/277 SYSTEMS, COLOR SHALL BE AS FOLLOWS:

   PHASE A - BROWN
   PHASE B - ORANGE
   PHASE C - YELLOW
   NEUTRAL - GRAY
   GROUND - GREEN

3. NAME PLATE SHALL BE PERMANENTLY ATTACHED TO PANELBOARD. REFER TO SPECIFICATION SECTION 260553 FOR NAMEPLATE CONSTRUCTION REQUIREMENTS.



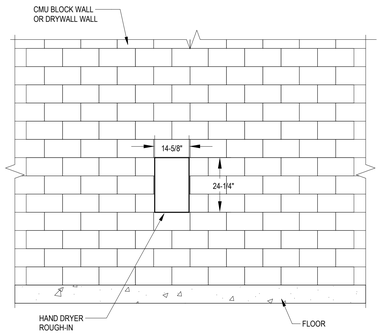


1 RECEPTACLE-SWITCH WIRING DETAIL

N.T.S.

NOTES:

1. GREEN GROUND CONDUCTOR SHALL BE CONTINUOUS SO THAT REMOVAL OF DEVICE WILL NOT INTERFERE WITH GROUND CONTINUITY PER 250.148 (B).
2. INSTALL AN EQUIPMENT BONDING JUMPER TO THE METALLIC BOX USING A LISTED GROUNDING SCREW PER 250.146. THE BONDING JUMPER MAY BE OMITTED ON SURFACE MOUNTED BOXES.
3. PROVIDE SEPARATE NEUTRAL FOR EACH CIRCUIT.



3 HAND DRYER ROUGH-IN

N.T.S.

NOTES:

1. VERIFY WITH ARCHITECTURAL DRAWINGS FOR ACTUAL HEIGHT OF HAND DRYER. COORDINATE WITH MASONRY CONTRACTOR SO TOP OF OPENING LANDS ON A MASONRY JOINT. MAXIMUM HEIGHT OF NOZZLE IS 48".

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KEFFER/OVERTON ASSOCIATES INC.
650 SOUTH PRAIRIE VIEW DRIVE
STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description
3	09.23.2025	PR-1

ISF SWINE BARN UPDATES - PHASE 2

ELECTRICAL DETAILS

Project Number: 251001.00
Date: 03/10/2026

E500-1

SCALE: 12" = 1'-0"

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MINIMUM BRANCH CIRCUIT FEEDER SIZE (RHW, THHW, THW, THWN, XHHW, XHWN, USE, ZE) BASED ON NEC 2020 AT 75°C			
BREAKER SIZE	PHASE/NEUTRAL	GRD	CONDUIT
20A	#12	#12	3/4"
25A	#10	#10	3/4"
30A	#10	#10	3/4"
35A	#8	#10	1"
40A	#8	#10	1"
50A	#6	#10	1"
60A	#4	#10	1-1/4"
70A	#4	#8	1-1/4"
80A	#3	#8	1-1/2"
100A	#1	#8	2"

NEMA 5-20R RECEPTACLE SUBSCRIPT SCHEDULE PHASE 2

SUBSCRIPT	DESCRIPTION	MODEL
W	DUPLEX GROUND FAULT TAMPER RESISTANT RECEPTACLE, SPECIFICATION GRADE WITH DIE-CAST WEATHERPROOF COVER (WHILE IN USE), NEMA 5-20R	HUBBELL GFRS352ST/WP26E LEVITON PASS & SEYMOUR COOPER
PP	TEMPORARY POWER PANEL, FOUR NAME 5-20R GFI PROTECTED OUTLETS, NEMA 3R RATED	MIDWEST U014C010
NO SUBSCRIPT	DUPLEX GROUND FAULT TAMPER RESISTANT RECEPTACLE, HEAVY DUTY SPECIFICATION GRADE, NEMA 5-20R	HUBBELL HBL5362 LEVITON PASS & SEYMOUR COOPER
G	DUPLEX GROUND FAULT TAMPER RESISTANT RECEPTACLE, SPECIFICATION GRADE, NEMA 5-20R	HUBBELL GFRS352ST LEVITON PASS & SEYMOUR COOPER

SWITCH SUBSCRIPT SCHEDULE PHASE 2

SUBSCRIPT	DESCRIPTION	MODEL
	SINGLE POLE SWITCH, COMMERCIAL GRADE, 20 AMP	COOPER HUBBELL LEVITON PASS & SEYMOUR
DL	DIMMER, LOW VOLTAGE 0-10 VOLT, COMMERCIAL GRADE, 20 AMP	WATTSTOPPER RH4FBL3PTC COOPER HUBBELL LEVITON PASS & SEYMOUR
I	OCCUPANCY SENSOR WALL SWITCH, PASSIVE INFRARED, 180 DEGREE COVERAGE, 120/277V	WATTSTOPPER PW-100 SENSOR SWITCH WSD HUBBELL LHIRS1 COOPER
N	N LIGHT AIR MULTI ZONE DIMMER SWITCH	ACUITY

CEILING MOUNTED OCCUPANCY SENSOR SCHEDULE PHASE 2

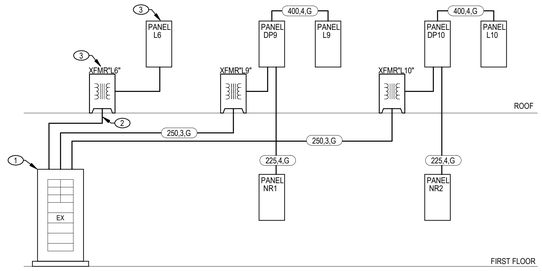
SUBSCRIPT	DESCRIPTION	MODEL
D1	OCCUPANCY SENSOR, DUAL TECHNOLOGY, LOW VOLTAGE, CEILING MOUNT, 360 DEGREE COVERAGE, UP TO 1000 SF COVERAGE	WATTSTOPPER DT-305 SENSOR SWITCH HUBBELL COOPER

LUMINAIRE SCHEDULE Copy 1

TYPE	DESCRIPTION	MANUFACTURER/MODEL	FINISHES	LIGHT SOURCE	MOUNTING	DELIVERED LUMENS	CRI	CCT	DIMMING	DISTRIBUTION	WATTS	VOLTAGE
F1	2'X2' RECESSED LED FLAT PANEL, BACK LIT	COLUMBIA CBT METALUX CGTS	WHITE	LED	RECESSED	4200	80	4000 K	0-10V	GENERAL	32 W	120 V
F2	4' STRIP, ACRYLIC DROP LENS	COLUMBIA MPS4 LITHONIA CSS METALUX SLSTP	WHITE	LED	SURFACE	4800	80	4000 K	0-10V	GENERAL	38 W	120 V
F3	30" LINEAR WALL MOUNTED THREE SIDED FIXTURE, SQUARE FIXTURE, CENTERED ON SINK, EXTRUDED ALUMINUM WITH DIE CAST END CAPS AND JOINERS, SATIN ACRYLIC LENS, MOUNT AT 90° AFF	AXIS LIGHTING AIR LED LUMENWERX QUAWW	WHITE	LED	WALL	500 PER FOOT	80	4000 K	0-10V	WIDE	15 W	120 V
F3A	SAME AS F3, 66" LENGTH	AXIS LIGHTING AIR LED	WHITE	LED	WALL	500 PER FOOT	80	4000 K	0-10V	WIDE	28 W	120 V
F5	6" SURFACE MOUNTED LED DOWNLIGHT, WHITE, ALUMINUM HOUSING TRIM RING, CAPABLE OF MOUNTING IN A STANDARD 4" SQUARE JUNCTION BOX, WET LOCATION RATED	PRESCOLITE LBSD-RD HALO SMX6RL	WHITE	LED	CEILING	1000	80	4000 K	0-10V	WIDE	12 W	120 V
F11	ROUND HIGH BAY LED LIGHT FIXTURE, DIRECT/INDIRECT DISTRIBUTION, MINIMUM 31920 DIRECT, 8150 INDIRECT DELIVERED LUMENS, NLIGHT AIR COMPATIBLE	METEOR LIGHTING WHIZ 2.0	BLACK	LED	SUSPENDED	40000	85	4000 K	0-10V	WIDE	340 W	277 V

GENERAL ELECTRICAL SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER
	CONNECTION TO MECHANICAL EQUIPMENT	MOTOR/EQUIPMENT FURNISHED AND INSTALLED BY M.C.
PANEL 'NR1', 'NR2'	BRANCH CIRCUIT PANELBOARD, 208/120V, 3-PHASE, 4-WIRE, NEMA 1 HOUSING, REFER TO PANEL SCHEDULES FOR DETAILS	SQUARE D NQ SIEMENS CUTLER-HAMMER GENERAL ELECTRIC
PANEL 'L9', 'L10'	BRANCH CIRCUIT PANELBOARD, 208/120V, 3-PHASE, 4-WIRE, NEMA 3R HOUSING, REFER TO PANEL SCHEDULES FOR DETAILS	SQUARE D NQ SIEMENS CUTLER-HAMMER GENERAL ELECTRIC
T-L9, T-L10	DRY-TYPE TRANSFORMER, DOE 2016 COMPLIANT, 150 KVA, 480V PRIMARY, 208/120V SECONDARY, 6 TAPS (2+, 4-), ALUMINUM WINDINGS, 150 DEGREE C TEMP RISE, MOUNT ABOVE THE STRUCTURE BELOW THE ROOF	SQUARE D 7400 EE300T3H HAMMOND POWER SOLUTIONS GE SIEMENS CUTLER-HAMMER
DIST PANEL 'DP9', 'DP10'	DISTRIBUTION PANEL, 208/120V, 3-PHASE, 4-WIRE, NEMA 3R HOUSING, REFER TO PANEL SCHEDULES FOR DETAILS	SQUARE D I-LINE HAMMOND POWER SOLUTIONS GE SIEMENS CUTLER-HAMMER
DS-XXX A/B/C	DISCONNECT SWITCH, HEAVY DUTY, SIZE INDICATED ON PLANS (A/B/C) WHERE A = RATING IN AMPS, B = NUMBER OF POLES, C = NEMA RATING (E.G. 1 = NEMA 1), XXX = NAME OF LOAD SERVED	SQUARE D CLASS 3110 SIEMENS CUTLER-HAMMER GENERAL ELECTRIC
SR	3 PHASE BUSWAY CONTINUOUS OPEN CHANNEL RAIL, TRACK STYLE, 250A, 90' TOTAL LENGTH INCLUDING 10' STARTER RAIL WITH STANDARD END FEED	EATON POWERWAVE 2
TB	1 PHASE BUSWAY TAP-OFF BOX, TWO 50AMP LOCKABLE RECEPTACLES, PERMANENTLY AFFIX LABEL FACE OF TAP-BOX DENOTE PHASES SERVED FROM (PHASES A&B, B&C, A&C) PROVIDE TWO SPIDEX BOXES 'LEX PH050B1-NMW-15CC' (PORTABLE POWER DISTRIBUTION UNIT 208 50A INPUT, 5X20A GFI PROTECTED DUPLEX RECEPTACLES OUTPUT) PER EACH TAP OFF BOX	EATON POWERWAVE 2
HD	ELECTRIC HAND DRYER, 120V, 1400W, ADA COMPLIANT, SURFACE MOUNTED, BRUSHED STAINLESS STEEL FINISH, MOUNT AT 4'-4" TO TOP OF UNIT INLESS NOTED OTHERWISE	DYSON AB12



PANEL FEEDER SCHEDULE - COPPER

CALL OUT	OCPD RATING	PARALLEL SETS	PHASE	NEUTRAL	GRD	CONDUIT
225,4,G	225	1	#4/0	#4/0	#4	2-1/2"
400,4,G	400	1	600KCM	600KCM	#3	4"
250,3,G	250	1	250KCM		#4	2-1/2"

PANEL FEEDER SCHEDULE - ALUMINUM

CALL OUT	OCPD RATING	PARALLEL SETS	PHASE	NEUTRAL	GRD	CONDUIT
225,4,G	225	1	300KCM	300KCM	#2	3"
400,4,G	400	2	250KCM	250KCM	#1	2-1/2"
250,3,G	250	1	350KCM		#2	3"

1 ELECTRICAL RISER DIAGRAM

N.T.S.

KEYNOTES:

1. PROVIDE TWO NEW 3P 250A BREAKERS.
2. EXTEND EXISTING FEEDER TO THE NEW LOCATION. VERIFY EXISTING FEEDER SIZE ON SITE.
3. RELOCATE EXISTING TRANSFORMER, DISCONNECT SWITCH AND PANELBOARD.

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STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ELECTRICAL SCHEDULES

Project Number: 251001.00
Date: 03/10/2026

E600-1

SCALE: As indicated

KED bluestone
5518 NW 88th Street
Johnston, IA 50131
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DISTRIBUTION PANELBOARD: DP-9

LOCATION: Toilet/Sh. 25 | **VOLTAGE:** 208/120 Wye | **MAIN DEVICE:** MCB 600A
MOUNTING: SURFACE | **PHASE:** 3 | **BUS RATING:** 600
ENCLOSURE: NEMA 3R | **WIRE:** 4 | **NEUTRAL RATING:** 100.00%
FED FROM: | **LUGS:** | **A.I.C. RATING:** 25000

CKT #	CIRCUIT DESCRIPTION	A	B	C	FRAME	TRIP	POLES	FEEDER RACEWAY & CONDUCTORS	NOTES
1	L9	21.3	22.7	21.4	400 A	400 A	3		
2	NR2	20.4	12.6	18.1	225 A	225 A	3		
3	BUSWAY WEST	0	0	0	400 A	20 A	3		
4	SPACE	--			--	--	1	--	
5	SPACE	--			--	--	1	--	
6	SPACE	--			--	--	1	--	
7	SPACE	--			--	--	1	--	
8	SPACE	--			--	--	1	--	
9	SPACE	--			--	--	1	--	
10	SPACE	--			--	--	1	--	
11	SPACE	--			--	--	1	--	
12	SPACE	--			--	--	1	--	
	TOTAL CONNECTED KVA BY PHASE	41.7 kVA	35.2 kVA	39.5 kVA					
	TOTAL CONNECTED AMPS BY PHASE	353 A	294 A	334.8 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD	PANELBOARD TOTALS	
HVAC	48487 VA	100.00%	48487 VA	**TOTAL CONNECTED KVA**	116.4 kVA
Lighting	1022 VA	100.00%	1022 VA	**TOTAL CALCULATED KVA**	88.1 kVA
Receptacle	66800 VA	57.49%	38400 VA		
Lighting - Interior	129 VA	125.00%	161 VA		
Heating	0 VA	0.00%	0 VA	**TOTAL CONNECTED AMPS**	323.2 A
				TOTAL CALCULATED AMPS	244.5 A

NOTES:

DISTRIBUTION PANELBOARD: DP-10

LOCATION: Office 37 | **VOLTAGE:** 208/120 Wye | **MAIN DEVICE:** MCB 600A
MOUNTING: SURFACE | **PHASE:** 3 | **BUS RATING:** 600
ENCLOSURE: NEMA 1 | **WIRE:** 4 | **NEUTRAL RATING:** 100.00%
FED FROM: | **LUGS:** | **A.I.C. RATING:** 25000

CKT #	CIRCUIT DESCRIPTION	A	B	C	FRAME	TRIP	POLES	FEEDER RACEWAY & CONDUCTORS	NOTES
1	L10	22.7	21.4	21.3	400 A	400 A	3		
2	NR1	22.6	21.2	20.8	225 A	225 A	3		
3	BUSWAY EAST	0	0	0	400 A	20 A	3		
4	SPACE	--			--	--	1	--	
5	SPACE	--			--	--	1	--	
6	SPACE	--			--	--	1	--	
7	SPACE	--			--	--	1	--	
8	SPACE	--			--	--	1	--	
9	SPACE	--			--	--	1	--	
10	SPACE	--			--	--	1	--	
11	SPACE	--			--	--	1	--	
12	SPACE	--			--	--	1	--	
	TOTAL CONNECTED KVA BY PHASE	45.3 kVA	42.6 kVA	42 kVA					
	TOTAL CONNECTED AMPS BY PHASE	378 A	356 A	350.2 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD	PANELBOARD TOTALS	
HVAC	58340 VA	100.00%	58340 VA		
Lighting	982 VA	100.00%	982 VA	**TOTAL CONNECTED KVA**	130 kVA
Receptacle	70580 VA	57.08%	40290 VA	**TOTAL CALCULATED KVA**	99.7 kVA
Lighting - Interior	60 VA	125.00%	75 VA		
Heating	0 VA	0.00%	0 VA	**TOTAL CONNECTED AMPS**	360.7 A
				TOTAL CALCULATED AMPS	276.7 A

NOTES:

BRANCH PANELBOARD: L6

LOCATION: Mech. 24 | **VOLTAGE:** 208/120 Wye | **MAIN DEVICE:** MLO
MOUNTING: SURFACE | **PHASE:** 3 | **BUS RATING:** 200
ENCLOSURE: NEMA 3R | **WIRE:** 4 | **NEUTRAL RATING:** 100.00%
FED FROM: | **LUGS:** | **A.I.C. RATING:** EXISTING

CKT #	CKT BKR A / P		NOTES	CIRCUIT DESCRIPTION	KVA LOAD 'PHASE A'	KVA LOAD 'PHASE B'	KVA LOAD 'PHASE C'	CIRCUIT DESCRIPTION	NOTES	CKT BKR P / A		CKT #
1	20 A	2		CF-1	1.4	1.4		CF-1		2	20 A	2
3							1.4					4
5	20 A	2		CF-1			1.4	CF-1		2	20 A	6
7					1.4	1.4						8
9	20 A	2		CF-1			1.4	CF-1		2	20 A	10
11							1.4					12
13	20 A	1		SPARE	0	0		SPARE		1	20 A	14
15	20 A	1		SPARE			0	SPARE		1	20 A	16
17	20 A	1		SPARE				SPARE		1	20 A	18
19	20 A	1		SPARE	0	0		SPARE		1	20 A	20
21	20 A	1		SPARE			0	SPARE		1	20 A	22
23	20 A	1		SPARE				SPARE		1	20 A	24
25	20 A	1		SPARE	0	0		SPARE		1	20 A	26
27	20 A	1		SPARE			0	SPARE		1	20 A	28
29	20 A	1		SPARE				SPARE		1	20 A	30
31	20 A	1		SPARE	0	0		SPARE		1	20 A	32
33	20 A	1		SPARE			0	SPARE		1	20 A	34
35	20 A	1		SPARE				SPARE		1	20 A	36
37	20 A	1		SPARE				SPARE		1	20 A	38
39	20 A	1		SPARE	0	0		SPARE		1	20 A	40
41	20 A	1		SPARE			0	SPARE		1	20 A	42
				TOTAL CONNECTED KVA BY PHASE	5.5 kVA	5.5 kVA	5.5 kVA					
				TOTAL CONNECTED AMPS BY PHASE	45.8 A	45.8 A	45.8 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD	PANELBOARD TOTALS	
HVAC	16474 VA	100.00%	16474 VA	**TOTAL CONNECTED KVA**	16.5 kVA
				TOTAL CALCULATED KVA	16.5 kVA
				TOTAL CONNECTED AMPS	45.7 A
				TOTAL CALCULATED AMPS	45.7 A

NOTES:

BRANCH PANELBOARD: NR1

LOCATION: Chase 32 | **VOLTAGE:** 208/120 Wye | **MAIN DEVICE:** MCB 225A
MOUNTING: SURFACE | **PHASE:** 3 | **BUS RATING:** 225
ENCLOSURE: NEMA 1 | **WIRE:** 4 | **NEUTRAL RATING:** 100.00%
FED FROM: DP-10 | **LUGS:** STANDARD | **A.I.C. RATING:** 22000

CKT #	CKT BKR A / P		NOTES	CIRCUIT DESCRIPTION	A	B	C	CIRCUIT DESCRIPTION	NOTES	CKT BKR P / A		CKT #
1	20 A	1		RECEPTACLE	0.9	1		CUH-3 OFFICE 37		2	20 A	2
3	20 A	1		RECEPTACLE		1.1	1					4
5	20 A	1		RECEPTACLE			1.3	CUH-3 OFFICE 34		2	20 A	6
7	20 A	2		CUH-2 TOILET 36	2	1						8
9						2	0.4	RCPT TOILET 36		1	20 A	10
11	20 A	2		CUH-2 OFFICE 33			2	CUH-1		1	20 A	12
13					2	0.4		RCPT TOILET 29		1	20 A	14
15	20 A	1		RCPT TOILET 31		0.4	0	HAND DRYER TOILET 29		1	20 A	16
17	20 A	1		RCPT TOILET 30			0.4	HAND DRYER TOILET 30		1	20 A	18
19	20 A	1		HAND DRYER TOILET 31	0	0.4		RCPT JAN 28, EF-2		1	20 A	20
21	20 A	1		CUH-1 JAN 28		1.5	0.4	RECEPTACLE		1	20 A	22
23	20 A	1		CUH-1			1.5	RECEPTACLE		1	20 A	24
25	30 A	2		CUH-2 TOILET 29	2	2		CUH-2 OFFICE 31		2	30 A	26
27						2	2					28
29	30 A	2		CUH-2 TOILET 30			2	ACCU-1		2	30 A	30
31					2	2.1						32
33	30 A	2		ACCU-3		2.1	2.1	ACCU-3		2	30 A	34
35							2.1					36
37	30 A	2		ACCU-3	2.1	4		WH-7		3	45 A	38
39						2.1	4					40
41	20 A	1	G	DRINKIN FOUNTAIN			0.2	4				42
43	20 A	1		CP-5	0.3	0.6		LIGHTING		1	20 A	44
45	20 A	1		LIGHTING		0.3	0	SPARE		1	20 A	46
47	20 A	1		LIGHTING			0.2	0	SPARE		1	20 A	48
49	20 A	1		SPARE	0	0		SPARE		1	20 A	50
51	20 A	1		SPARE		0	0	SPARE		1	20 A	52
53	20 A	1		SPARE			0	0	SPARE		1	20 A	54
55	20 A	1		SPARE	0	0		SPARE		1	20 A	56
57	20 A	1		SPARE		0	0	SPARE		1	20 A	58
59	20 A	1		SPARE			0	0	SPARE		1	20 A	60
61	20 A	1		SPARE	0	0		SPARE		1	20 A	62
63	20 A	1		SPARE		0	0	SPARE		1	20 A	64
65	20 A	1		SPARE			0	0	SPARE		1	20 A	66
67	20 A	1		SPARE	0	0		SPARE		1	20 A	68
69	20 A	1		SPARE		0	0	SPARE		1	20 A	70
71	20 A	1		SPARE			0	0	SPARE		1	20 A	72
73	20 A	1		SPARE	0	0		SPARE		1	20 A	74
75	20 A	1		SPARE		0	0	SPARE		1	20 A	76
77	20 A	1		SPARE			0	0	SPARE		1	20 A	78
79	20 A	1		SPARE	0	0		SPARE		1	20 A	80
81	20 A	1		SPARE		0	0	SPARE		1	20 A	82
83	20 A	1		SPARE			0	0	SPARE		1	20 A	84
				TOTAL CONNECTED KVA BY PHASE	22.6 kVA	21.2 kVA	20.8 kVA					
				TOTAL CONNECTED AMPS BY PHASE	189.2 A	177.2 A	173.1 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD	PANELBOARD TOTALS	
HVAC	58340 VA	100.00%	58340 VA		
Lighting	982 VA	100.00%	982 VA	**TOTAL CONNECTED KVA**	64.6 kVA
Receptacle	5220 VA	100.00%	5220 VA	**TOTAL CALCULATED KVA**	64.6 kVA
Lighting - Interior	60 VA	125.00%	75 VA		
Heating	0 VA	0.00%	0 VA	**TOTAL CONNECTED AMPS**	179.3 A
				TOTAL CALCULATED AMPS	179.4 A

NOTES:

BRANCH PANELBOARD: NR2

LOCATION: Mech. 24 | **VOLTAGE:** 208/120 Wye | **MAIN DEVICE:** MCB 225A
MOUNTING: SURFACE | **PHASE:** 3 | **BUS RATING:** 225
ENCLOSURE: NEMA 1 | **WIRE:** 4 | **NEUTRAL RATING:** 100.00%
FED FROM: DP-9 | **LUGS:** STANDARD | **A.I.C. RATING:** 22000

CKT #	CKT BKR A / P		NOTES	CIRCUIT DESCRIPTION	A	B	C	CIRCUIT DESCRIPTION	NOTES	CKT BKR P / A		CKT #
1					3	1.5		CUH-1 MENS 21		1	20 A	2
3	35 A	3		BCU-1			3	0	HAND DRYER MENS 21	1	20 A	4
5							3	0	HAND DRYER MENS 21	1	20 A	6
7	20 A	1		HAND DRYER MENS 21	0	0.4		RCPT TOILET 25		1	20 A	8
9	20 A	1		CUH-1		1.5	0	HAND DRYER TOILET 25		1	20 A	10
11	20 A	1		RECEPTACLE			0.5	2	CUH-2 TOILET 25	2	30 A	12
13	20 A	1		RCPT TOILET 26	0.4	2						14
15	20 A	1		HAND DRYER TOILET 26		0	0	HAND DRYER TOILET 27		1	20 A	16
17	30 A	2		CUH-2 TOILET 26			2	2	CUH-2 TOILET 27	2	30 A	18
19					2	2						20
21	20 A	1		RCPT TOILET 27		0.4	0	HAND DRYER MENS 21		1	20 A	22
23	20 A	1		CUH-1			1.5	0	HAND DRYER MENS 21	1	20 A	24
25	20 A	1		HAND DRYER MENS 21	0	2.5		ACCU-2		2	30 A	26
27	20 A	1		RECEPTACLE		0.4	2.5					28
29	30 A	2		BCCU-1			2.2	0.3	ERV-1	2	15 A	30
31					2.2	0.3						32
33						4	0.2		DRINKIN FOUNTAIN	G	1	20 A	34
35	45 A	3		WH-6			4	0.3	HVAC	1	20 A	36
37					4	0			SPARE	1	20 A	38
39	20 A	1		LIGHTING		0.7	0		SPARE	1	20 A	40
41	20 A	1		LIGHTING			0.3	0	SPARE	1	20 A	42
43	20 A	1		LIGHTING	0.2	0			SPARE	1	20 A	44
45	20 A	1		SPARE		0	0		SPARE	1	20 A	46
47	20 A	1		SPARE			0	0	SPARE	1	20 A	48
49	20 A	1		SPARE	0	0			SPARE	1	20 A	50
51	20 A	1		SPARE		0	0		SPARE	1	20 A	52
53	20 A	1		SPARE			0	0	SPARE	1	20 A	54
55	20 A	1		SPARE	0	0			SPARE	1	20 A	56
57	20 A	1		SPARE		0	0		SPARE	1	20 A	58
59	20 A	1		SPARE			0	0	SPARE	1	20 A	60
61	20 A	1		SPARE	0	0			SPARE	1	20 A	62
63	20 A	1		SPARE		0	0		SPARE	1	20 A	64
65	20 A	1		SPARE			0	0	SPARE	1	20 A	66
67	20 A	1		SPARE	0	0			SPARE	1	20 A	68
69	20 A	1		SPARE		0	0		SPARE	1	20 A	70
71	20 A	1		SPARE			0	0	SPARE	1	20 A	72
73	20 A	1		SPARE	0	0			SPARE	1	20 A	74
75	20 A	1		SPARE		0	0		SPARE	1	20 A	76
77	20 A	1		SPARE			0	0	SPARE	1	20 A	78
79	20 A	1		SPARE	0	0			SPARE	1	20 A	80
81	20 A	1		SPARE		0	0		SPARE	1	20 A	82
83	20 A	1		SPARE			0	0	SPARE	1	20 A	84
				TOTAL CONNECTED KVA BY PHASE	20.4 kVA	12.6 kVA	18.1 kVA					
				TOTAL CONNECTED AMPS BY PHASE	177.3 A	104.7 A	157.8 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD	PANELBOARD TOTALS	
HVAC	48487 VA	100.00%	48487 VA		
Lighting	1022 VA	100.00%	1022 VA	**TOTAL CONNECTED KVA**	51.1 kVA
Receptacle	1440 VA	100.00%	1440 VA	**TOTAL CALCULATED KVA**	51.1 kVA
Lighting - Interior	129 VA	125.00%	161 VA		
Heating	0 VA	0.00%	0 VA	**TOTAL CONNECTED AMPS**	141.8 A
				TOTAL CALCULATED AMPS	141.9 A

NOTES:

BRANCH PANELBOARD: L10

LOCATION: Office 37 | **VOLTAGE:** 208/120 Wye | **MAIN DEVICE:** MLO
MOUNTING: SURFACE | **PHASE:** 3 | **BUS RATING:** 400
ENCLOSURE: NEMA 3R | **WIRE:** 4 | **NEUTRAL RATING:** 100.00%
FED FROM: DP-10 | **LUGS:** | **A.I.C. RATING:** 22000

CKT #	CKT BKR A / P		NOTES	CIRCUIT DESCRIPTION	KVA LOAD 'PHASE A'	KVA LOAD 'PHASE B'	KVA LOAD 'PHASE C'	CIRCUIT DESCRIPTION	NOTES	CKT BKR P / A		CKT #
1	20 A	1		RECEPTACLE	0.2	1.3		POWER PANEL		2	50 A	2
3	20 A	1		RECEPTACLE		0.2	1.3					4
5	50 A	2		POWER PANEL			1.3	1.3	POWER PANEL	2	50 A	6
7					1.3	1.3						8
9	50 A	2		POWER PANEL		1.3	1.3		POWER PANEL	2	50 A	10
11							1.3	1.3				12
13	50 A	2		POWER PANEL	1.3	1.3			POWER PANEL	2	50 A	14
15						1.3	1.3					16
17	50 A	2		POWER PANEL			1.3	1.3	POWER PANEL	2	50 A	18
19					1.3	1.3						20
21	50 A	2		POWER PANEL		1.3	1.3		POWER PANEL	2	50 A	22
23							1.3	1.3				24
25	50 A	2		POWER PANEL	1.3	1.3			POWER PANEL	2	50 A	26
27						1.3	1.3					28
29	50 A	2		POWER PANEL			1.3	1.3	POWER PANEL	2	50 A	30
31					1.3	1.3						32
33	50 A	2		POWER PANEL		1.3	1.3		POWER PANEL	2	50 A	34
35							1.3	1.3				36
37	50 A	2		POWER PANEL	1.3	1.3			POWER PANEL	2	50 A	38
39						1.3	1.3					40
41	50 A	2		POWER PANEL			1.3	1.3	POWER PANEL	2	50 A	42
43					1.3	1.3						44
45	50 A	2		POWER PANEL		1.3	1.3		POWER PANEL	2	50 A	46
47							1.3	1.3				48
49	50 A	2		POWER PANEL	1.3	1.3			POWER PANEL	2	50 A	50
51						1.3	1.3					52
53	50 A	2		POWER PANEL			1.3	0	SPARE	1	20 A	54
55					1.3	0			SPARE	1	20 A	56
57	20 A	1		SPARE		0	0		SPARE	1	20 A	58
59	20 A	1		SPARE			0	0	SPARE	1	20 A	60
61	20 A	1		SPARE	0	0			SPARE	1	20 A	62
63	20 A	1		SPARE		0	0		SPARE	1	20 A	64
65	20 A	1		SPARE			0	0	SPARE	1	20 A	66
67	20 A	1		SPARE	0	0			SPARE	1	20 A	68
69	20 A	1		SPARE		0	0		SPARE	1	20 A	70
71	20 A	1		SPARE			0	0	SPARE	1	20 A	72
73	20 A	1		SPARE	0	0			SPARE	1	20 A	74
75	20 A	1		SPARE		0	0		SPARE	1	20 A	76
77	20 A	1		SPARE			0	0	SPARE	1	20 A	78
79	20 A	1		SPARE	0	0			SPARE	1	20 A	80
81	20 A	1		SPARE		0	0		SPARE	1	20 A	82
83	20 A	1		SPARE			0	0	SPARE	1	20 A	84
				TOTAL CONNECTED KVA BY PHASE	22.7 kVA	21.4 kVA	21.3 kVA					
				TOTAL CONNECTED AMPS BY PHASE	189.2 A	178.8 A	177.1 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD	PANELBOARD TOTALS	
Receptacle	65360 VA	57.65%	37680 VA	**TOTAL CONNECTED KVA**	65.4 kVA
				TOTAL CALCULATED KVA	37.7 kVA
				TOTAL CONNECTED AMPS	181.4 A
				TOTAL CALCULATED AMPS	104.6 A

NOTES:

BRANCH PANELBOARD: L9

LOCATION: | **VOLTAGE:** 208/120 Wye | **MAIN DEVICE:** MLO
MOUNTING: SURFACE | **PHASE:** 3 | **BUS RATING:** 400
ENCLOSURE: NEMA 3R | **WIRE:** 4 | **NEUTRAL RATING:** 100.00%
FED FROM: DP-9 | **LUGS:** | **A.I.C. RATING:** 22000

CKT #	CKT BKR A / P		NOTES	CIRCUIT DESCRIPTION	KVA LOAD 'PHASE A'	KVA LOAD 'PHASE B'	KVA LOAD 'PHASE C'	CIRCUIT DESCRIPTION	NOTES	CKT BKR P / A		CKT #
1	20 A	1		RECEPTACLE	0.2	1.3		POWER PANEL		2	50 A	2
3	20 A	1		RECEPTACLE		0.2	1.3					4
5	50 A	2		POWER PANEL			1.3	1.3	POWER PANEL	2	50 A	6
7					1.3	1.3						8
9	50 A	2		POWER PANEL		1.3	1.3		POWER PANEL	2	50 A	10
11							1.3	1.3				12
13	50 A	2		POWER PANEL	1.3	1.3			POWER PANEL	2	50 A	14
15						1.3	1.3					16
17	50 A	2		POWER PANEL			1.3	1.3	POWER PANEL	2	50 A	18
19					1.3	1.3						20
21	50 A	2		POWER PANEL		1.3	1.3		POWER PANEL	2	50 A	22
23							1.3	1.3				24
25	50 A	2		POWER PANEL	1.3	1.3			POWER PANEL	2	50 A	26
27						1.3	1.3					28
29	50 A	2		POWER PANEL			1.3	1.3	POWER PANEL	2	50 A	30
31					1.3	1.3						32
33	50 A	2		POWER PANEL		1.3	1.3		POWER PANEL	2	50 A	34
35							1.3	1.3				36
37	50 A	2		POWER PANEL	1.3	1.3			POWER PANEL	2	50 A	38
39						1.3	1.3					40
41	50 A	2		POWER PANEL			1.3	1.3	POWER PANEL	2	50 A	42
43					1.3	1.3						44
45	50 A	2		POWER PANEL		1.3	1.3		POWER PANEL	2	50 A	46
47							1.3	1.3				48
49	50 A	2		POWER PANEL	1.3	1.3			POWER PANEL	2	50 A	50
51						1.3	1.3					52
53	50 A	2		POWER PANEL			1.3	0	SPARE	1	20 A	54
55					1.3	0			SPARE	1	20 A	56
57	20 A	1		SPARE		0	0		SPARE	1	20 A	58
59	20 A	1		SPARE			0	0	SPARE	1	20 A	60
61	20 A	1		SPARE	0	0			SPARE	1	20 A	62
63	20 A	1		SPARE		0	0		SPARE	1	20 A	64
65	20 A	1		SPARE			0	0	SPARE	1	20 A	66
67	20 A	1		SPARE	0	0			SPARE	1	20 A	68
69	20 A	1		SPARE		0	0		SPARE	1	20 A	70
71	20 A	1		SPARE			0	0	SPARE	1	20 A	72
73	20 A	1		SPARE	0	0			SPARE	1	20 A	74
75	20 A	1		SPARE		0	0		SPARE	1	20 A	76
77	20 A	1		SPARE			0	0	SPARE	1	20 A	78
79	20 A	1		SPARE	0	0			SPARE	1	20 A	80
81	20 A	1		SPARE		0	0		SPARE	1	20 A	82
83	20 A	1		SPARE			0	0	SPARE	1	20 A	84
				TOTAL CONNECTED KVA BY PHASE	22.7 kVA	21.4 kVA	21.3 kVA					
				TOTAL CONNECTED AMPS BY PHASE	189.2 A	178.8 A	177.1 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	CALCULATED LOAD	PANELBOARD TOTALS	
Receptacle	65360 VA	57.65%	37680 VA	**TOTAL CONNECTED KVA**	65.4 kVA
				TOTAL CALCULATED KVA	37.7 kVA
				TOTAL CONNECTED AMPS	181.4 A
				TOTAL CALCULATED AMPS	104.6 A

NOTES:

K/O ARCHITECTS
www.k-o.com

KEFFER/OVERTON ASSOCIATES INC.
650 SOUTH PRAIRIE VIEW DRIVE
STUDIO 103
WEST DES MOINES, IOWA 50266
Phone: (515) 288-4821

No.	Date	Description

ISF SWINE BARN UPDATES - PHASE 2

ELECTRICAL SCHEDULES

Project Number: 251001.00
Date: 03/10/2026

E601-1

SCALE:

KED bluestone
5518 NW 88th Street
Johnston, IA 50131
515-727-0700
www.KEDbluestone.com

PROJECT NUMBER: 122-087
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