

Proposed Sow Unit Plans For:
CFC Fulton Properties, LLC
Bivouac Sow Farm
15197 Great Cove Road
Big Cove Tannery, PA 17212

Design Engineer:

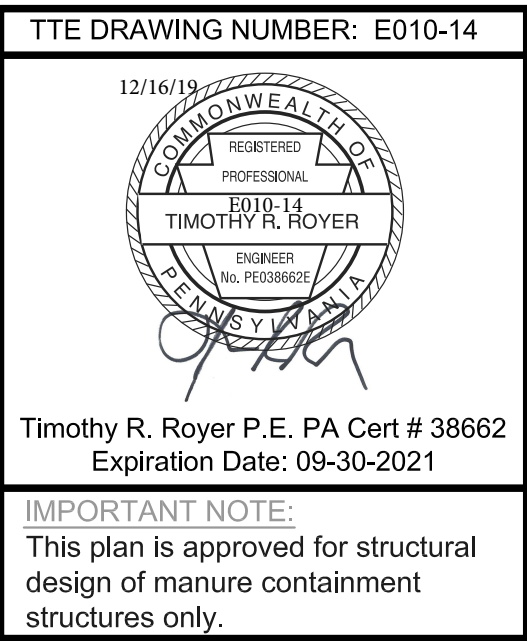


22 Denver Road, Suite B Denver, PA 17517
Phone: 717-335-2750 Fax: 717-335-2753

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Note:
This plan is only approved for the structural design of manure containment structures only. Additional information may be required to obtain a building permit. The contractor shall review all local, state, and federal building codes prior to the start of construction to insure building conformance.



Contractor / Builder:
Farmer Boy Ag Systems
50 West Stoever Avenue
Myerstown, PA 17067
Ph: 717-866-7565



LOCATION MAP nts
Ayr Township, Fulton County



AERIAL PHOTO OF SITE nts

Project Work Items
Bivouac Farm
Ayr Township, Fulton County, PA

- 1. Construction of the proposed sow unit will consist of three new barns as follows. A new 160'-8"x 767' gestation barn with a 9' deep under barn manure storage facility, a new 71'x 338' gilt grower barn with a 6' deep under barn manure storage facility, and a 120'x 510' farrowing barn with 2' deep under barn manure reception channels.
- 2. A copy of the specifications and drawings shall be on site during all phases of the proposed construction.
- 3. It is the responsibility of the contractor to implement all measures necessary to protect work in progress from environmental conditions such as temperature extremes, surface and ground water, etc.
- 4. PA One Call- it is the responsibility of the excavator to comply with the provisions of the Pennsylvania Code to check for all underground utilities before performing any excavation work. Refer to the instructions below.
- 5. Install necessary warning signs and safety measures according to the design plans.

Additional Requirements:

- 1. REGULATIONS: All federal, state and local laws, rules and regulations governing the construction of this facility shall be strictly followed. The owner or operator is responsible for obtaining all construction permits.
- 2. NUTRIENT MANAGEMENT PLAN: This design is not a Nutrient Management System. The storage facility will provide environmental benefits if properly managed according to the overall Nutrient Plan.
- 3. PA ONE CALL: The contractor shall contact PA One Call for a project serial number prior to start of construction. Call 811 or 1-800-242-1776 to coordinate all digging activities with utilities that may be in the area.
- 4. PRE-CONSTRUCTION MEETING: A meeting between the owner, interested government agencies, and contractor(s) shall be required prior to any excavation or construction work to ensure understanding of the intent of this plan.
- 5. NECESSARY PERMITS: Construction shall not begin until the Water Quality Management Permit has been obtained for this CAFO expansion.
- 6. CONTRACTOR VERIFICATION: The contractor is responsible for verifying actual field measurements as shown on the plans.
- 7. WARNING SIGNS: Install "Warning" signs at clearly visible locations as required on the design plans.
- 8. The items checked below from are included as part of this contract package.

PA NRCS Construction Specifications which apply:

- ☒ 313 Waste Storage Facility
- ☒ 606 Subsurface Drain
- ☒ 634 Manure Transfer
- ☒ 620 Underground Outlet

Other Items

- ☒ Requirements for Notification by Contractor
- ☒ OSHA Information Sheet
- ☒ Agricultural Construction Safety Fact Sheet
- ☒ Warning Sign Fact Sheet
- ☒ Pre-construction Checklist
- ☒ Construction Notification

Revision #1 TTE drawing # E010-14, certified 12/16/2019. This drawing will replace TTE original drawing # E010-14, certified 6/27/2019.

Original Certified Date	6/27/2019
Revision 1 Certified Date	12/16/2019
TTE Drawing Number: E010-14	

Existing Line Legend

Contour Line
Contour Line Index
Property Boundary
Right of Way
Existing Buildings
Existing Lane
Benchmark

Proposed Line Legend

Contour Line
Contour Line Index
Roof Dripline Drain Pipe
New Buildings
New Lane
New Vegetated Swale
HDPE pipe (see plan for sizes)
Fabric Fence
Line of Disturbance
Soil Boundary
Drainage Area Boundary
National Pollution Discharge
Elimination System Boundary
Manure Storage Soil Test Pit

Bivouac Farm - Soil Test Pit Logs

Excavated 3/14/14 and 9/29/15
Soils Map Types:
KaC - Klinesville channery silt loam, 8 to 15 percent slopes
KaD - Klinesville channery silt loam, 15 to 25 percent slopes

Soil Test Pit #1
0" to 9" topsoil
9" to 40" channery silt loam
40" to 60" very channery loam
60" to 96" very channery loam, shaley
96" no water, no refusal
Total TP depth = 8'
Existing grade EL = 869'
Bottom TP EL = 861'
Proposed Pit FF EL = 841.67'
Note: 19.3' above Pit FF, informational only, not used to meet PA313 Soils Investigation.

Soil Test Pit #3
0" to 8" topsoil
8" to 30" channery silt loam
30" to 60" very channery loam
60" to 84" very channery loam, shaley
84" no water, no refusal
Total TP depth = 7'
Existing grade EL = 842.5'
Bottom TP EL = 835.5'
Proposed Pit FF EL = 841.67'
Note: 6.1' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

Soil Test Pit #5
0" to 8" topsoil
8" to 30" channery silt loam
30" to 60" very channery silt loam
60" to 80" very channery loam
80" to 102" very channery loam, shaley
102" no water, no refusal
Total TP depth = 8.5'
Existing grade EL = 849'
Bottom TP EL = 840.5'
Proposed Pit FF EL = 850'
Note: 9.5' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

Soil Test Pit #7
0" to 6" topsoil
6" to 20" channery silt loam
20" to 50" very channery silt loam
50" to 72" very channery loam
72" to 90" very channery loam, shaley
90" no water, no refusal
Total TP depth = 7.5'
Existing grade EL = 839'
Bottom TP EL = 831.5'
Proposed Pit FF EL = 841.67'
Note: 10.1' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

Soil Test Pit #9
0" to 7" topsoil, channery silt loam
7" to 23" very channery silt loam
23" to 46" fractured bedrock at 46"
46" to 120" 90% loose shale
120" no water, no refusal
Total TP depth = 10'
Existing grade EL = 848.5'
Bottom TP EL = 838.5'
Proposed Pit FF EL = 841.67'
Note: 3.1' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

Soil Test Pit #11
0" to 8" topsoil, silt loam
8" to 30" channery silt loam
30" to 68" very channery silt loam
68" to 120" fractured bedrock at 68"
120" no water, no refusal
Total TP depth = 10'
Existing grade EL = 849'
Bottom TP EL = 839'
Proposed Pit FF EL = 850'
Note: 11' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

Soil Test Pit #2
0" to 8" topsoil
8" to 30" channery silt loam
30" to 72" very channery silt loam
72" to 144" very channery loam, shaley
144" no water, no refusal
Total TP depth = 12'
Existing grade EL = 863'
Bottom TP EL = 851'
Proposed Pit FF EL = 841.67'
Note: 9.3' above Pit FF, informational only, not used to meet PA313 Soils Investigation.

Soil Test Pit #4
0" to 7" topsoil
7" to 30" channery silt loam
30" to 60" very channery silt loam
60" to 78" very channery loam
78" no water, no refusal
Total TP depth = 6.5'
Existing grade EL = 825'
Bottom TP EL = 818.5'
Proposed Pit FF EL = 850'
Note: 31.5' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

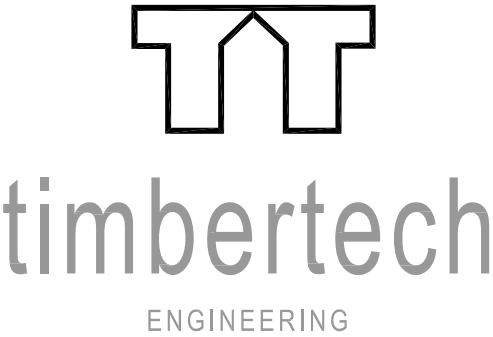
Soil Test Pit #6
0" to 8" topsoil
8" to 20" channery silt loam
20" to 50" very channery silt loam
50" to 96" very channery loam, shaley
96" no water, no refusal
Total TP depth = 8'
Existing grade EL = 845.5'
Bottom TP EL = 837.5'
Proposed Pit FF EL = 850'
Note: 12.5' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

Soil Test Pit #8
0" to 8" topsoil, silt loam
8" to 30" channery silt loam
30" to 40" very channery silt loam
40" to 57" very channery silt loam
57" to 80" extremely stoney silt loam
80" to 120" fractured bedrock at 80"
120" no water, no refusal
Total TP depth = 10'
Existing grade EL = 848.5'
Bottom TP EL = 838.5'
Proposed Pit FF EL = 841.67'
Note: 3.1' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

Soil Test Pit #10
0" to 9" topsoil, silt loam
9" to 30" channery silt loam
30" to 79" very channery silt loam
79" to 107" fractured bedrock at 107"
107" to 120" 90% fractured shale
120" no water, no refusal
Total TP depth = 10'
Existing grade EL = 844'
Bottom TP EL = 834'
Proposed Pit FF EL = 850'
Note: 16' below Pit FF, this test pit was used to meet PA313 Soils Investigation.

Note:
Topographic & property boundary surveying & site plan related work has been completed by CES Engineering, LLC 6765 Brown Lane Petersburg, PA 16669.

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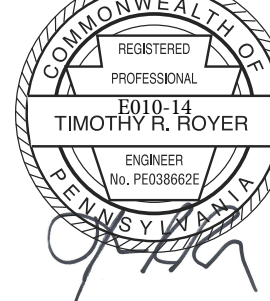
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IMPORTANT NOTE:
This plan is approved for structural design of manure containment structures only.

12/16/19



Timothy R. Royer PA Eng. Cert # 38662
Expiration Date: 09-30-2021

CONTRACTOR:

Farmer Boy Ag Systems
50 West Stoever Avenue
Myerstown, PA 17067
Ph: 717-866-7665

DRAWING TITLE:

Site Plan

PROJECT:

Proposed Sow Unit Plans:
CFC Fulton Properties, LLC
Bivouac Sow Farm
15197 Great Cove Road
Big Cove Tannery, PA 17212

PROJECT START DATE:

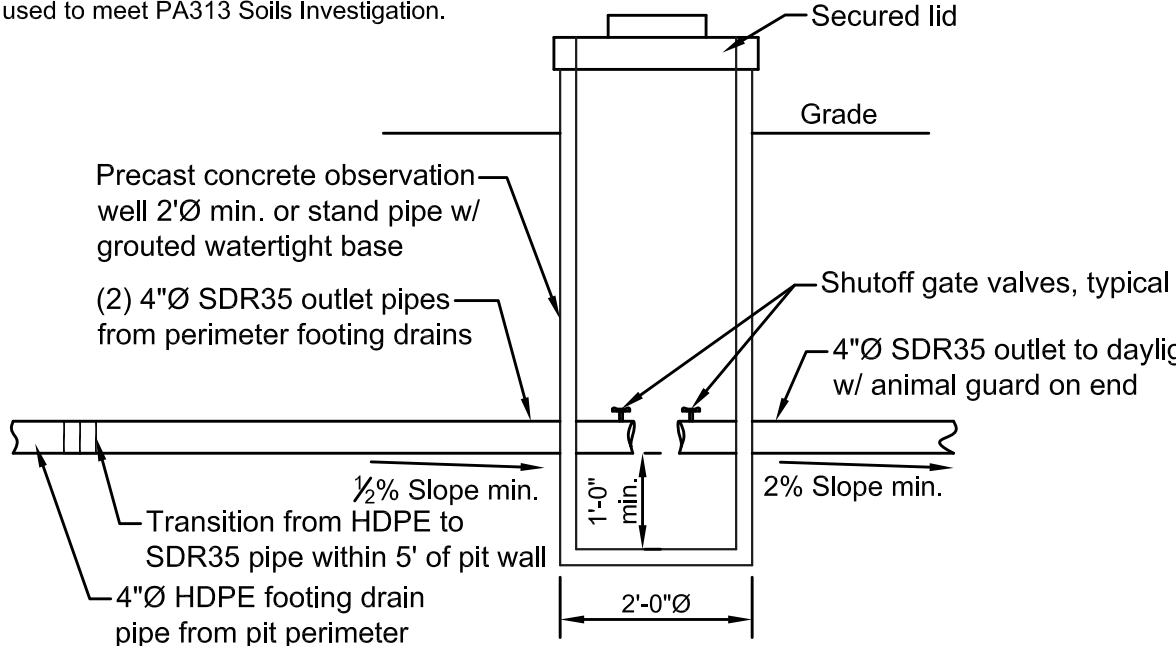
PROGRESS PRINT DATE:

REVISIONS:	DATE:	BY:
Added soil logs	12/11/19	ram
Added soil test pits #8-11	12/11/19	ram

DRAWING NUMBER:

E010-14

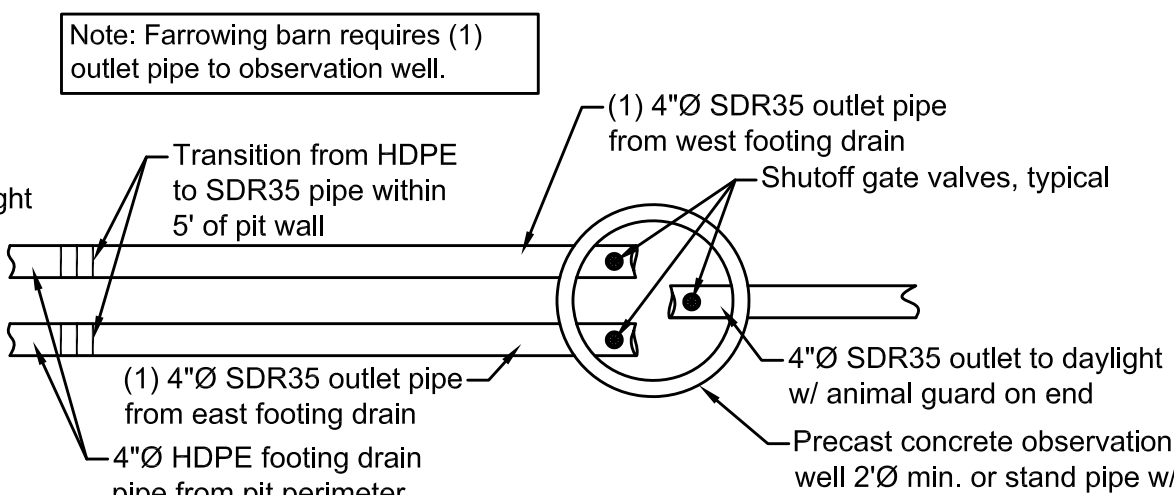
BY: ram
PAGE: S1 of S1



Observation Well

Scale 1/2" = 1'-0"

Side View



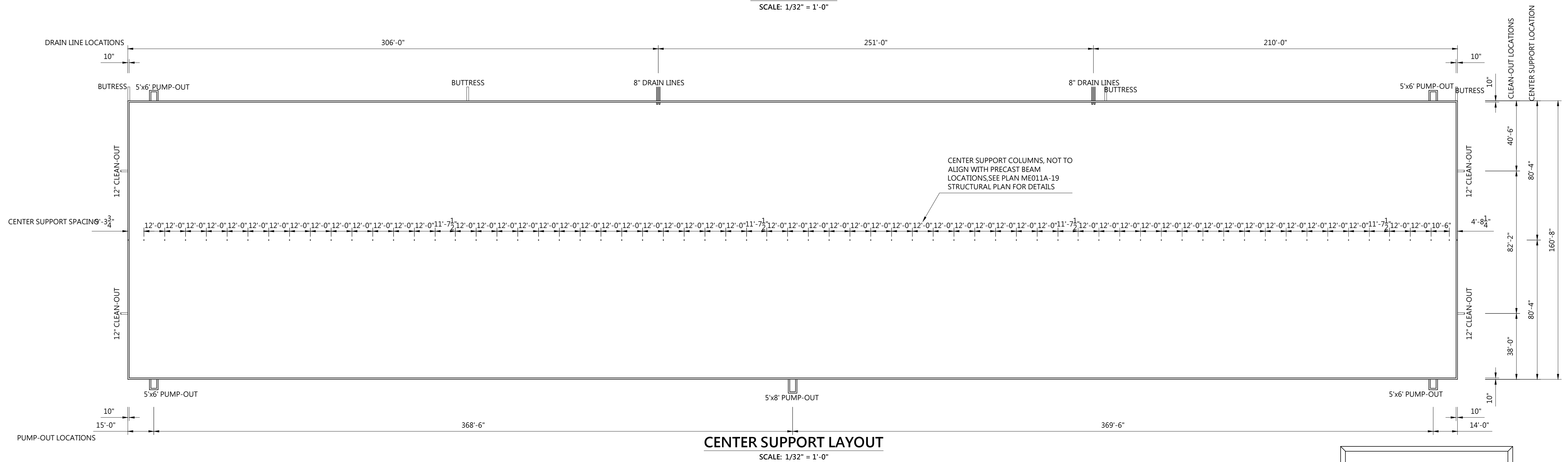
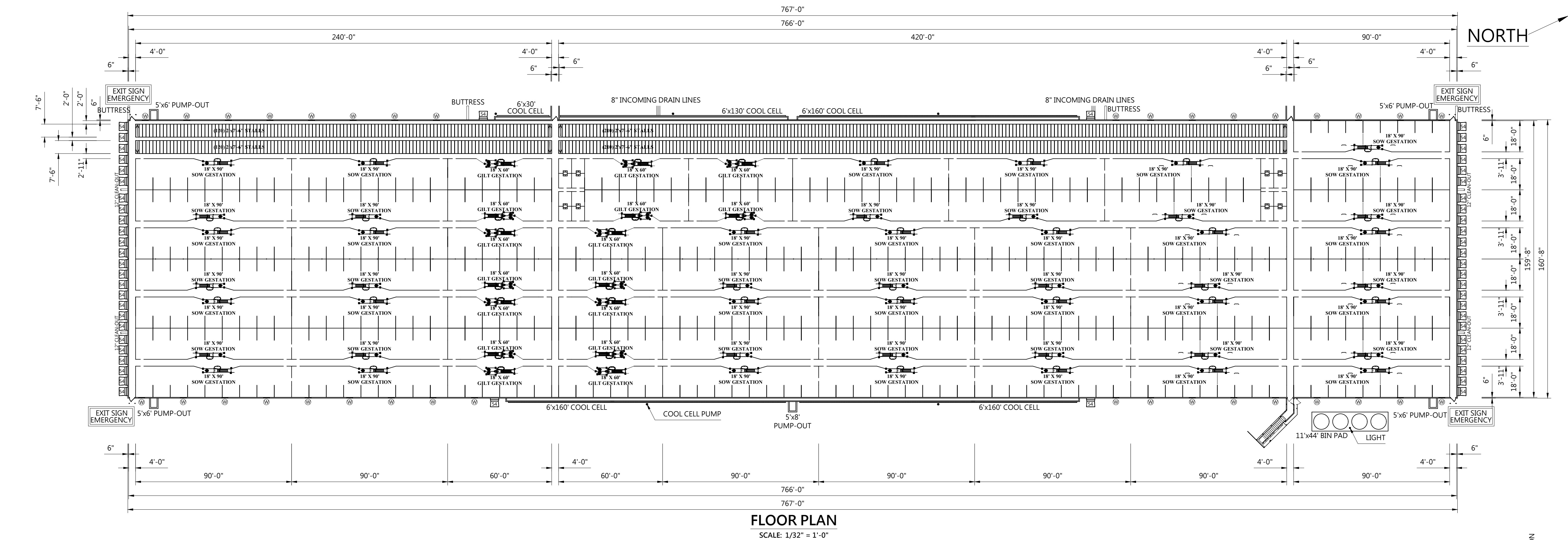
Observation Well

Scale 1/2" = 1'-0"

Top View

Site Plan

Scale 1" = 50'



REVISION #1 TTE DRAWING #ME011AP-19, CERTIFIED ON DATE LISTED IN SEAL BLOCK. THIS DRAWING WILL REPLACE TTE ORIGINAL DRAWING # ME011AP-19, CERTIFIED 6/27/19

PRECAST NOTE:
ALL PRECAST CONCRETE COMPONENTS AND THEIR CONNECTION TO POURED CONCRETE WALLS AND SLABS/FOOTINGS ARE DESIGNED AND SPECIFIED BY OTHERS.

IMPORTANT NOTE:
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12/16/19
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
TIMOTHY R. ROYER
No. PE038662
TIMOTHY R. ROYER P.E. PA Cert # 38662
Expiration Date: 09-30-2021

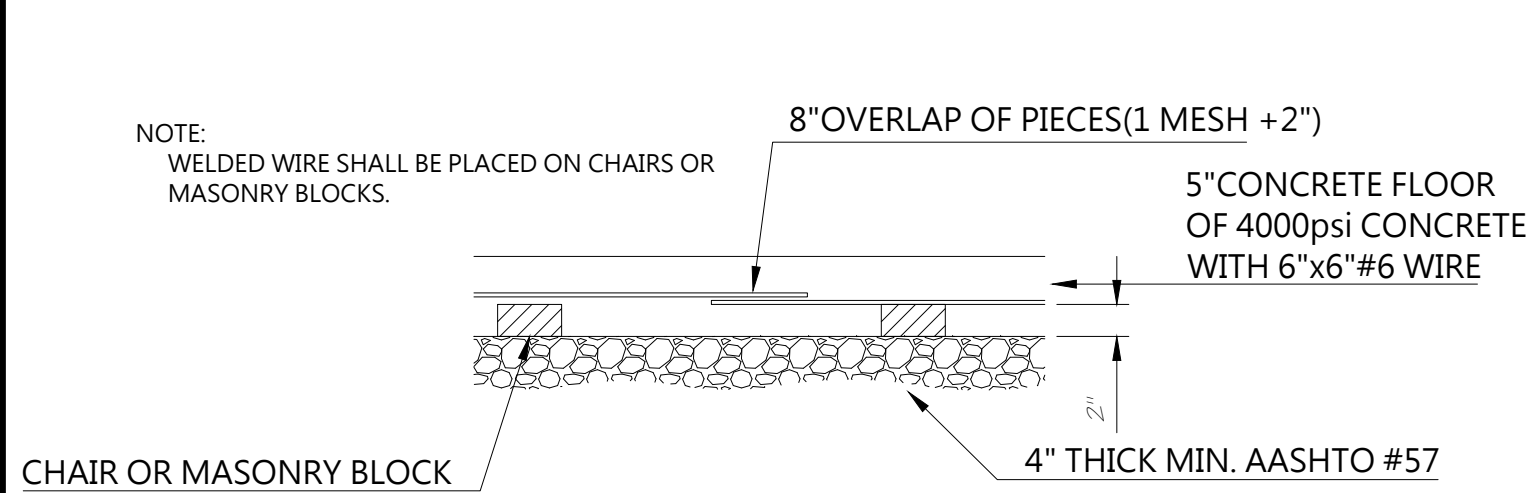
DWG. BY:	FILENAME:
J. MARTIN	BIVOUAC
DATE:	12/12/19
SCALE:	1/16" = 2'-0"
SHEET TITLE:	GESTATION FLOOR PLAN
DRAWING NUMBER:	BIVC200AP

FARMER BOY AG
SYSTEMS • SUPPLIES • SERVICE
PROJECT: **BIVOUAC SOW FARM**
15197 Great Cove Rd.
Big Cove Tannery, PA 17212

FBA
SALES REPRESENTATIVE:
Dale Martin
JOB NUMBER:
CUSTOMER NUMBER:
REVISION, DATE:
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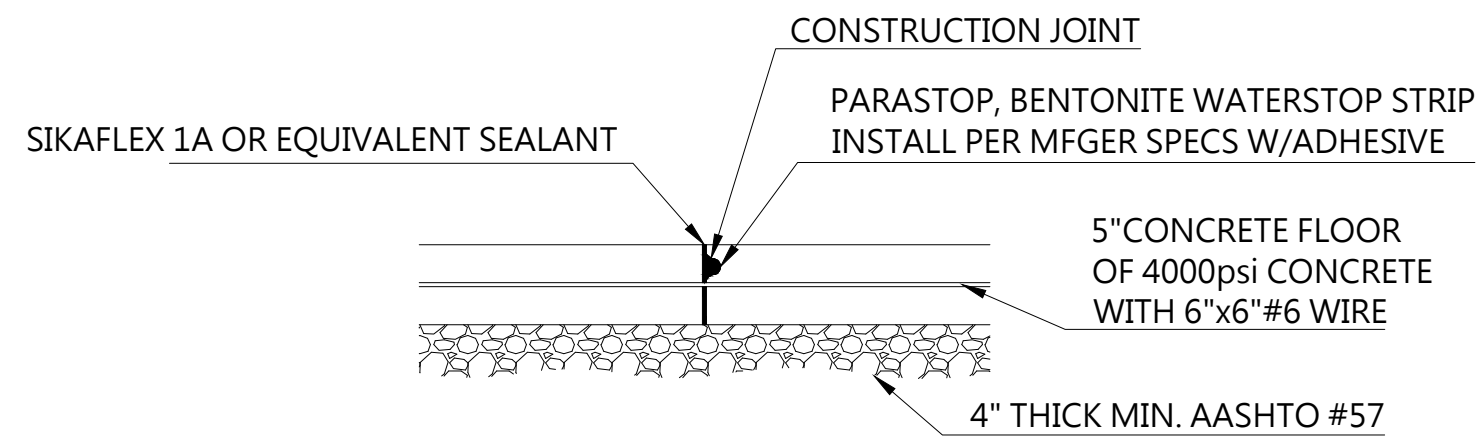


DWG. BY: J. MARTIN	FILENAME: BIVOUAC
DATE: 12/12/19	
SCALE: 1/16" = 2' - 0"	
SHEET TITLE: GESTATION OVERALL PIT	
DRAWING NUMBER: BIVC202AP	



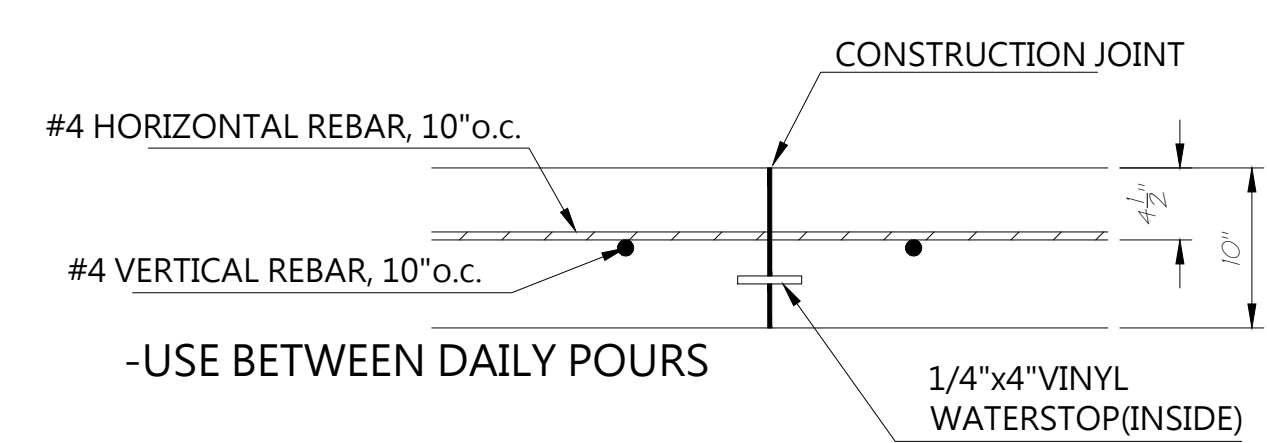
FLOOR/WIRE DETAIL

SCALE: 1"=1'-0"



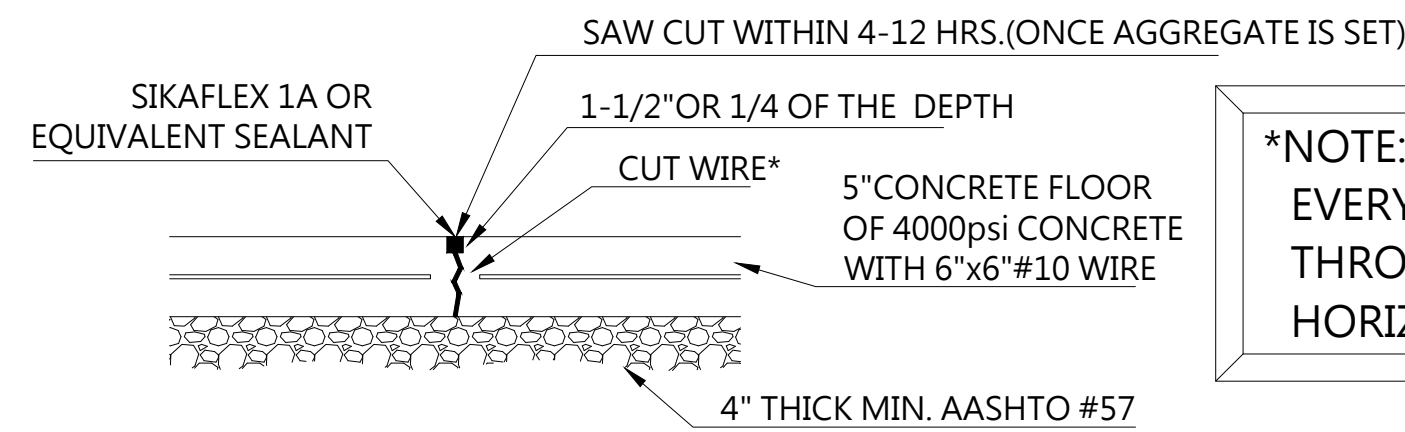
FLOOR CONSTRUCTION JOINT DETAIL

SCALE: 1"=1'-0"



WALL CONSTRUCTION JOINT DETAIL

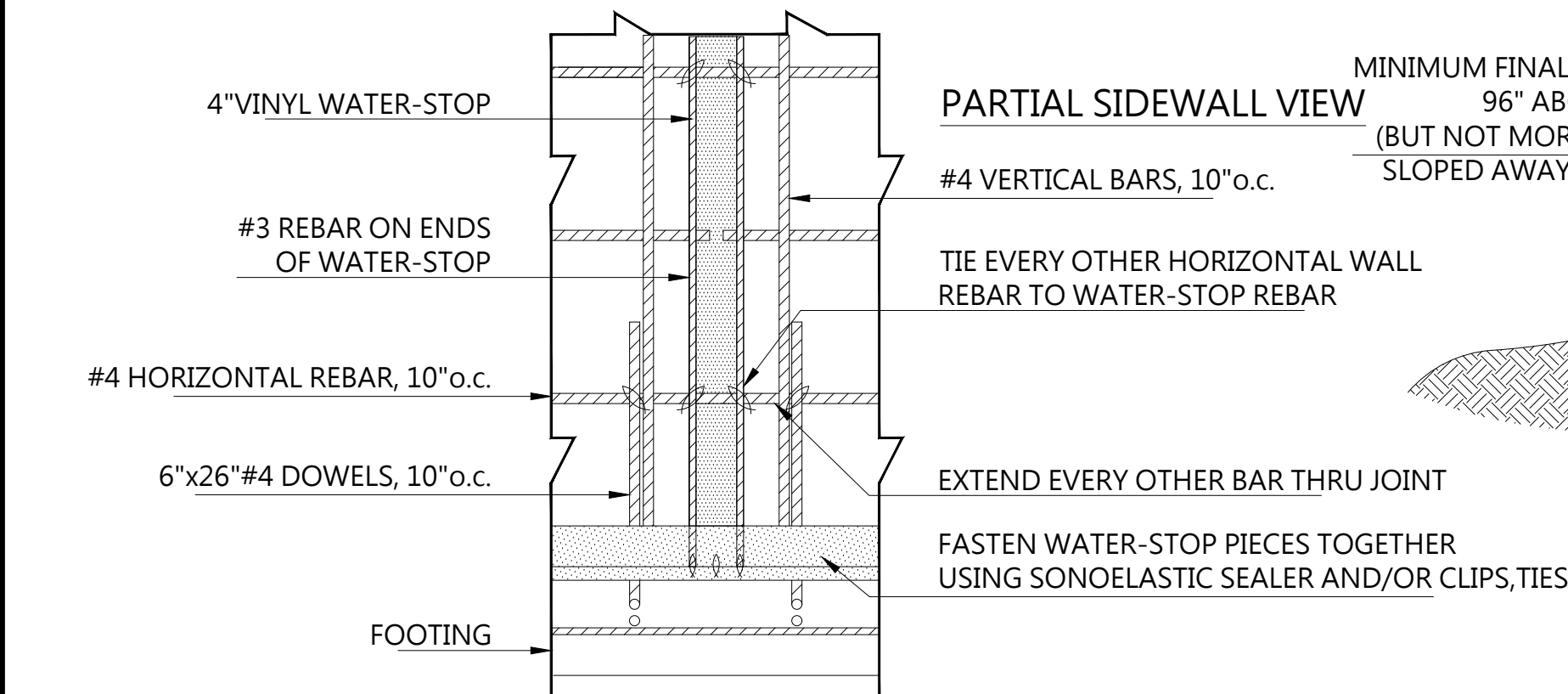
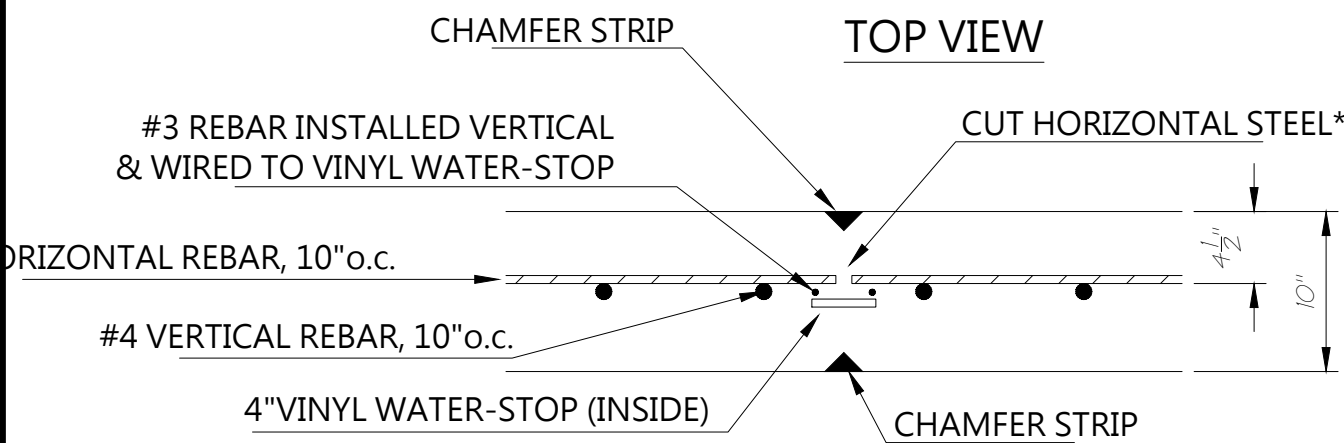
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*NOTE: EVERY OTHER BAR SHALL EXTEND THROUGH SHRINKAGE JOINTS. CUT 1/2 OF HORIZONTAL STEEL AT THESE LOCATIONS.

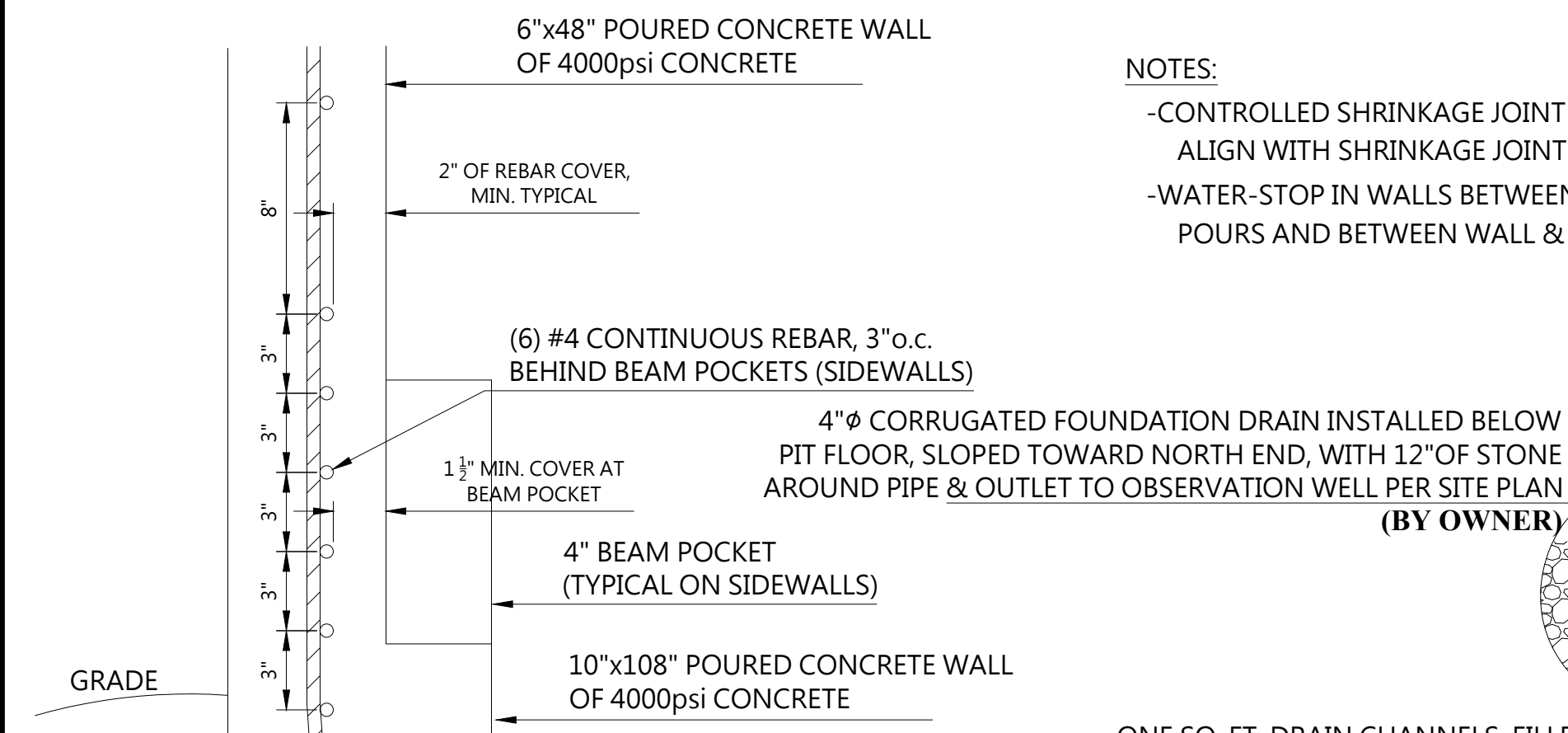
CONTROLLED SHRINKAGE JOINT IN FLOOR DETAIL

SCALE: 1"=1'-0"



CONTROLLED SHRINKAGE IN WALL DETAIL

SCALE: 1"=1'-0"

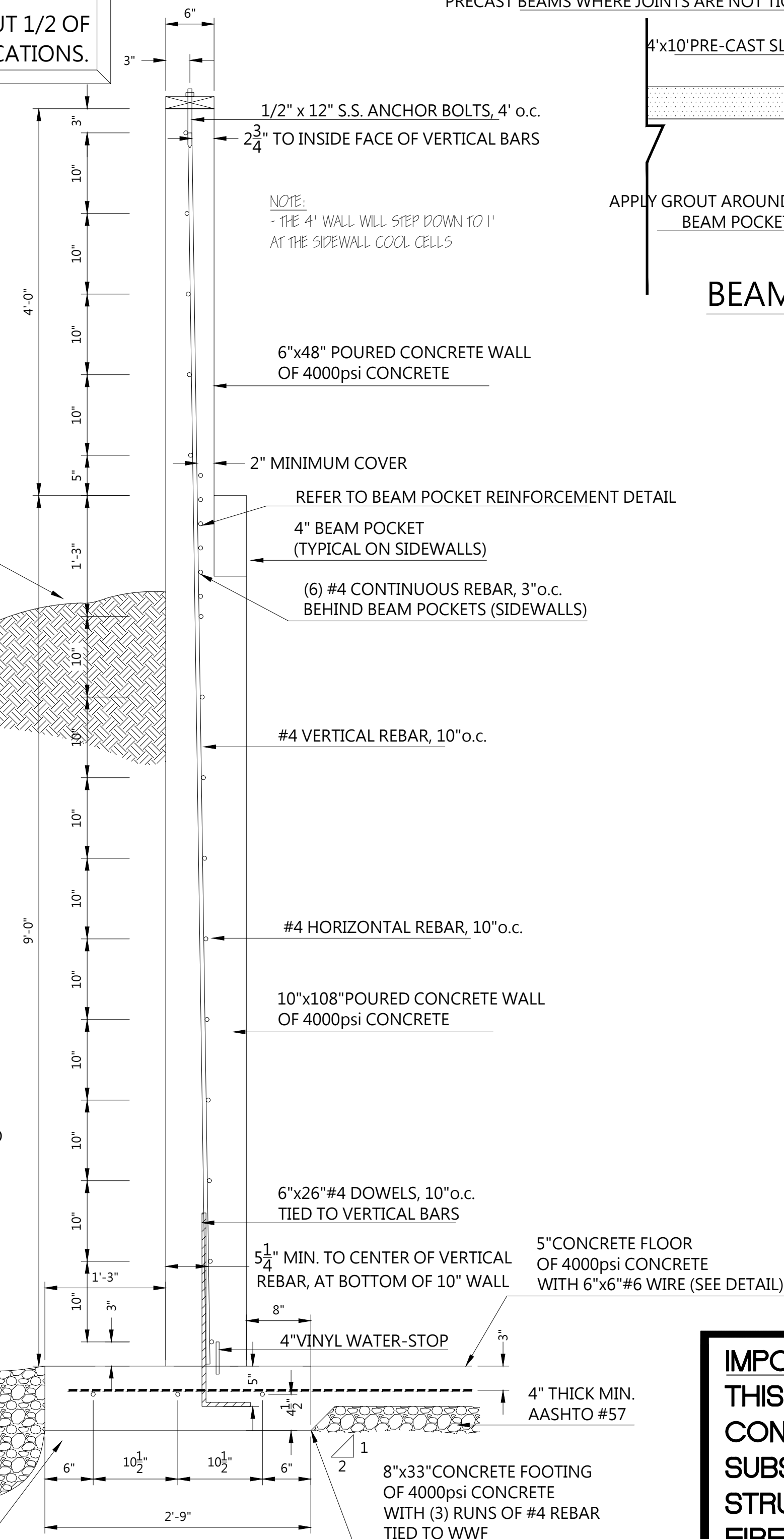


NOTES:
-CONTROLLED SHRINKAGE JOINT IN WALLS TO ALIGN WITH SHRINKAGE JOINT IN FLOOR
-WATER-STOP IN WALLS BETWEEN DAILY POURS AND BETWEEN WALL & FOOTER

ONE SQ. FT. DRAIN CHANNELS, FILLED WITH CRUSHED STONE 50" o.c., UNDER PERIMETER FOOTING (BY OWNER)

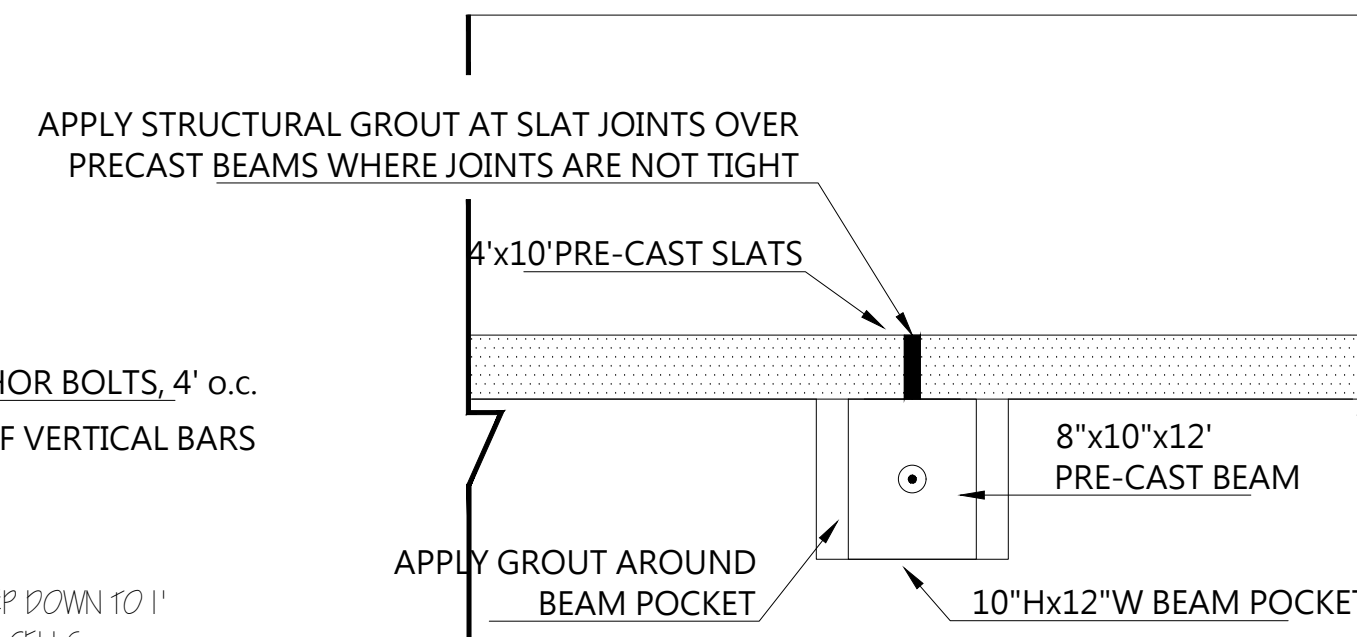
BEAM POCKET REINFORCEMENT DETAIL

SCALE: 2"=1'-0"



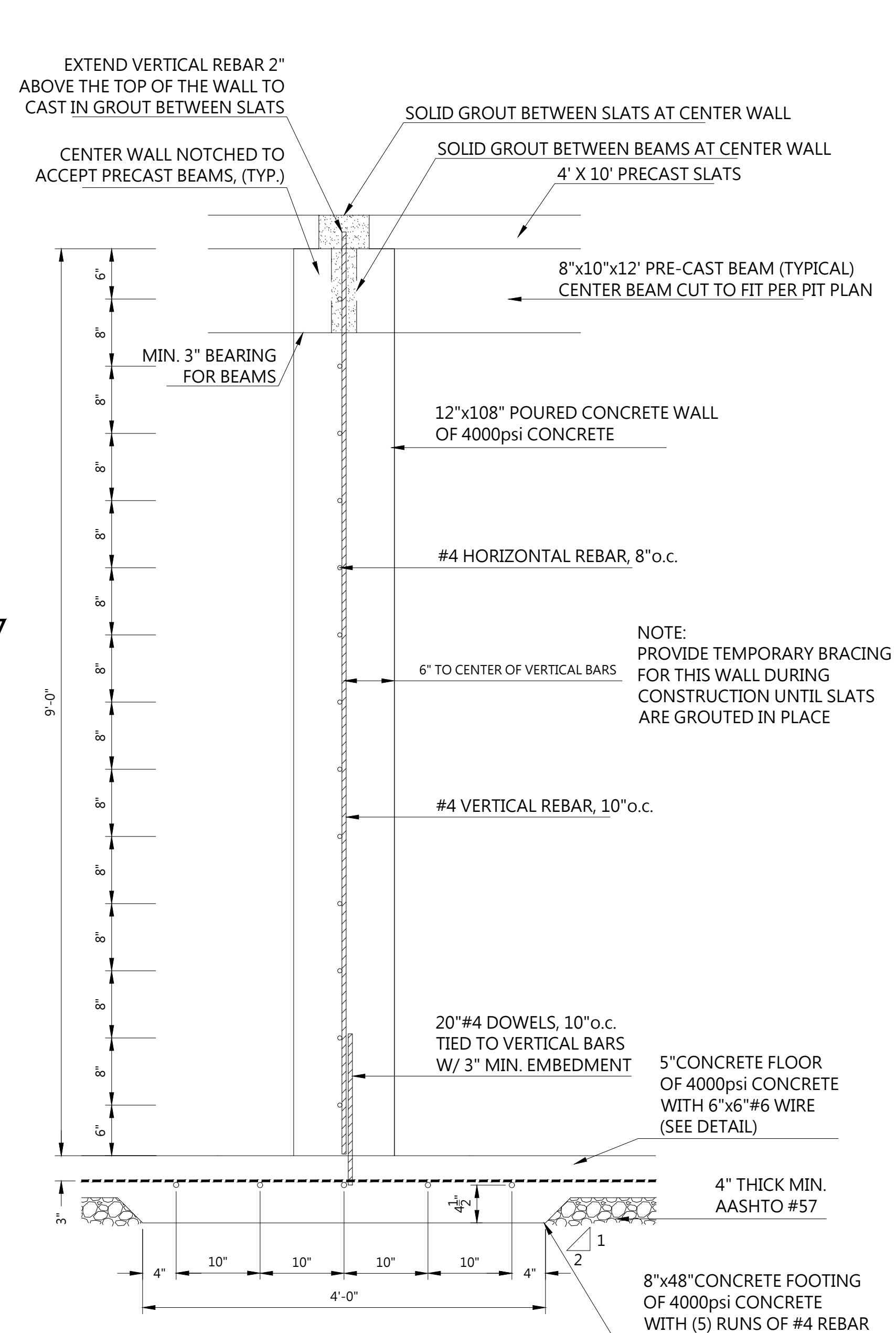
TYPICAL SIDEWALL DETAIL

SCALE: 1"=1'-0"



BEAM POCKET DETAIL

SCALE: 1"=1'-0"



CENTER WALL DETAIL

SCALE: 1"=1'-0"

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
TIMOTHY R. ROYER
No. PE008602

Timothy R. Royer P.E. PA Cert # 38662
Expiration Date: 09-30-2021

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15197 Great Cove Rd.
Big Cove Tannery, PA 17212

FBA

SALES REPRESENTATIVE:
Dale Martin

JOB NUMBER:

CUSTOMER NUMBER:

REVISION, DATE:

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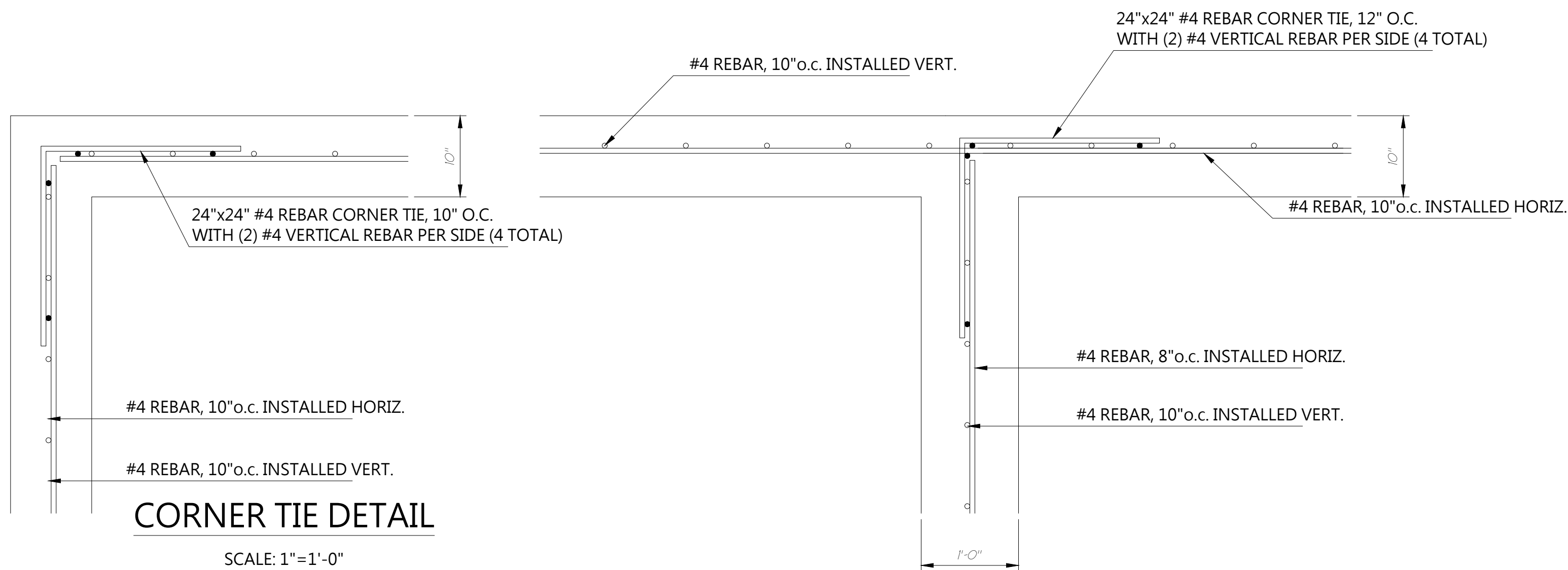
DWG. BY: J. MARTIN
FILENAME: BIVOUAC

DATE: 12/12/19

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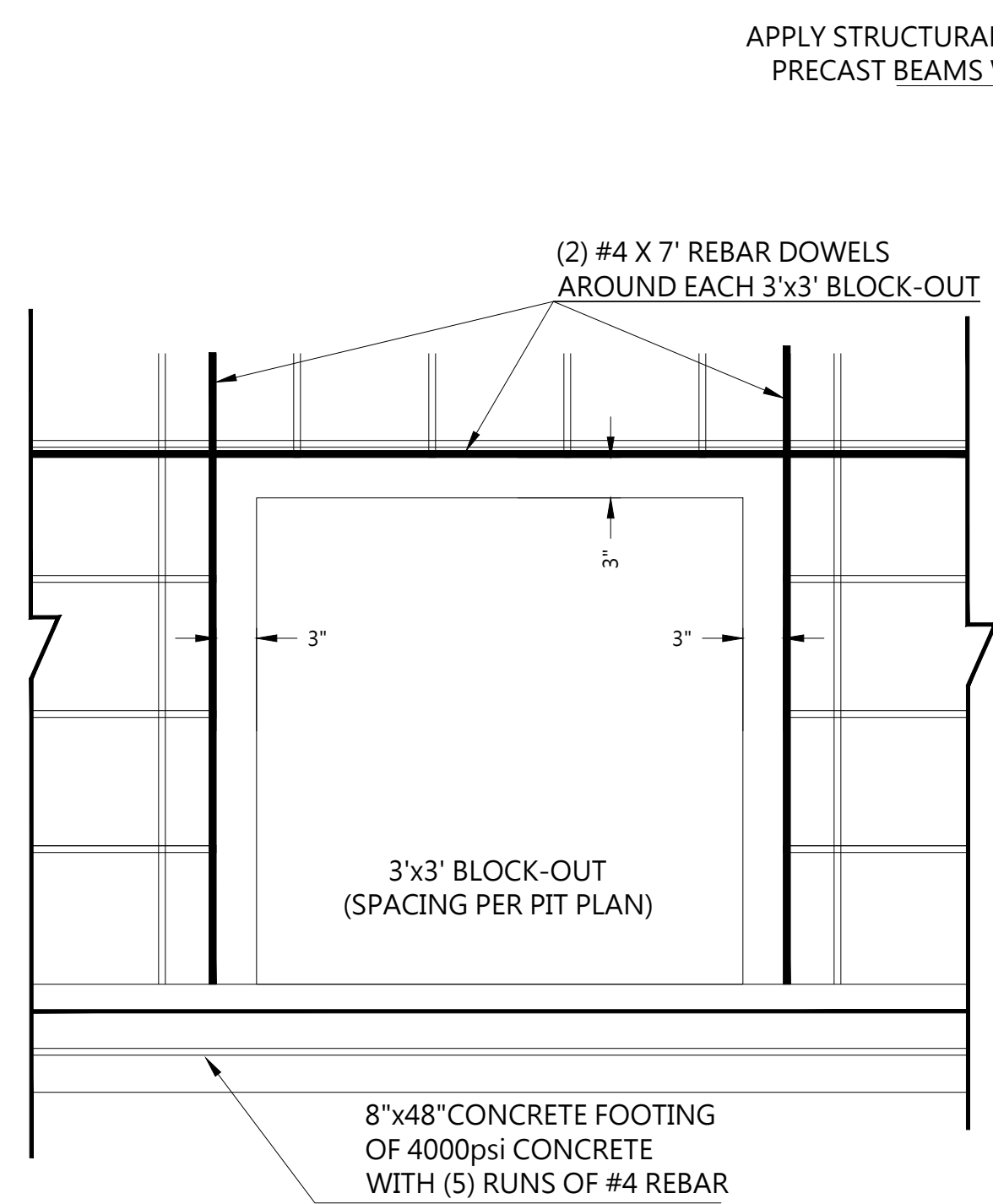
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GESTATION CONC. DETAILS

DRAWING NUMBER:
BIVC206AP



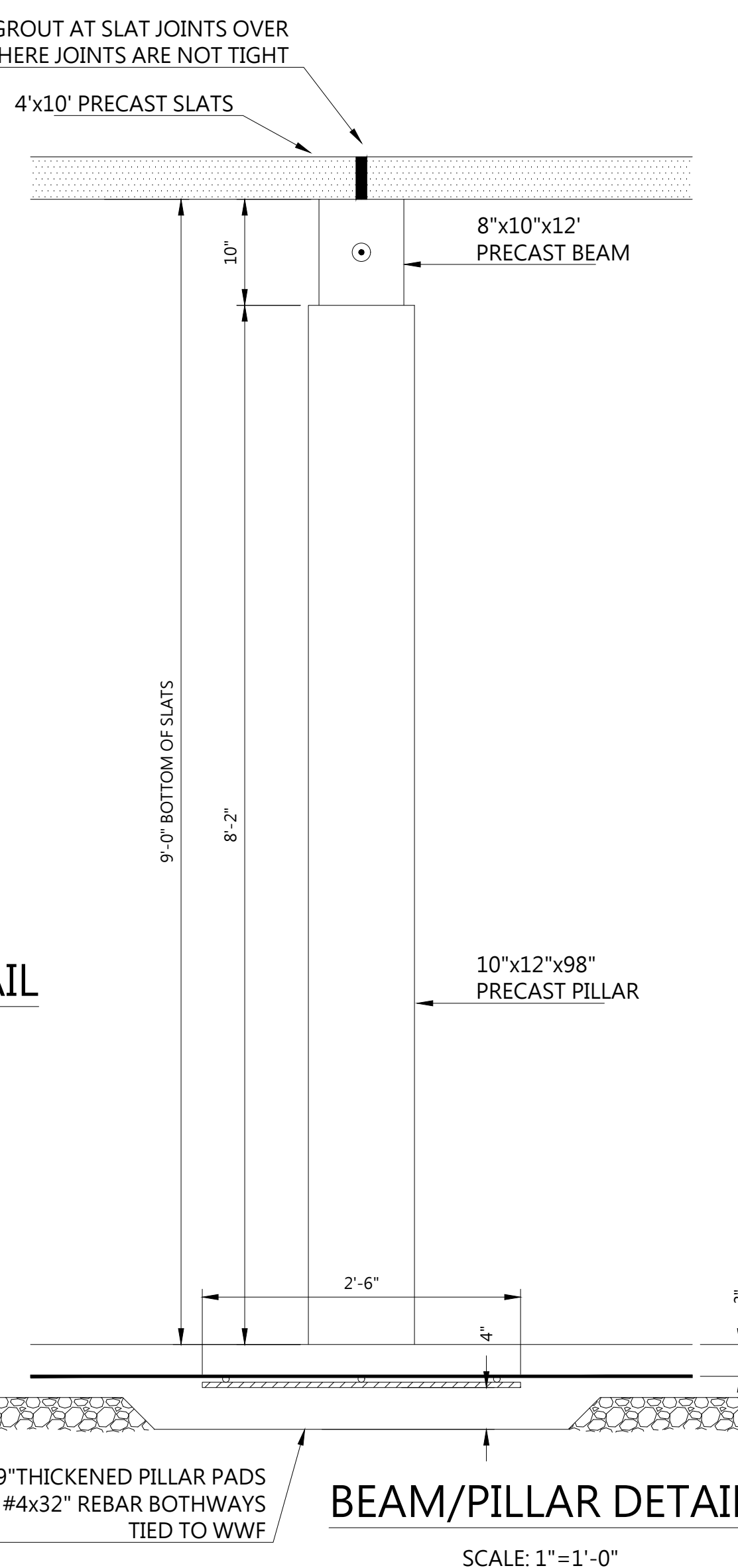
CORNER TIE DETAIL

SCALE: 1"=1'-0"



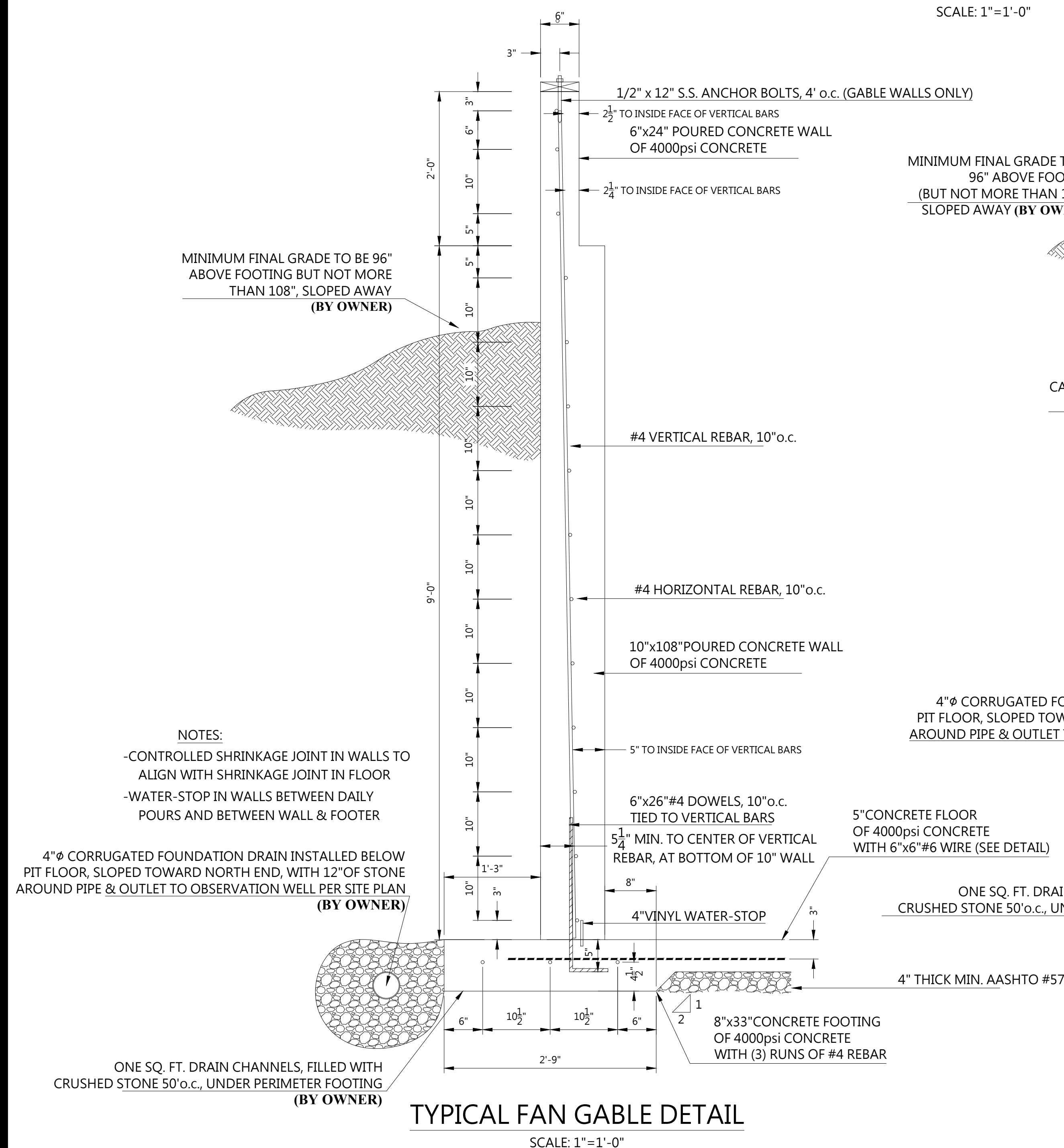
3'x3' CENTER WALL BLOCK-OUT DETAIL

SCALE: 1"=1'-0"



BEAM/PILLAR DETAIL

SCALE: 1"=1'-0"



TYPICAL FAN GABLE DETAIL

SCALE: 1"=1'-0"

MINIMUM FINAL GRADE TO BE 96" ABOVE FOOTING (BUT NOT MORE THAN 108"), SLOPED AWAY (BY OWNER)

8" DIA. SDR35 PVC MANURE TRANSFER PIPE FROM MATERNITY BLDG.

8" Ø SDR35 PVC SLEEVE CAST IN WALL BETWEEN REBAR, 2" MINIMUM COVER

PARASTOP BENTONITE WATER STOP AROUND PIPE

SEE TYPICAL COOL CELL DETAIL FOR POURED WALL SPECS

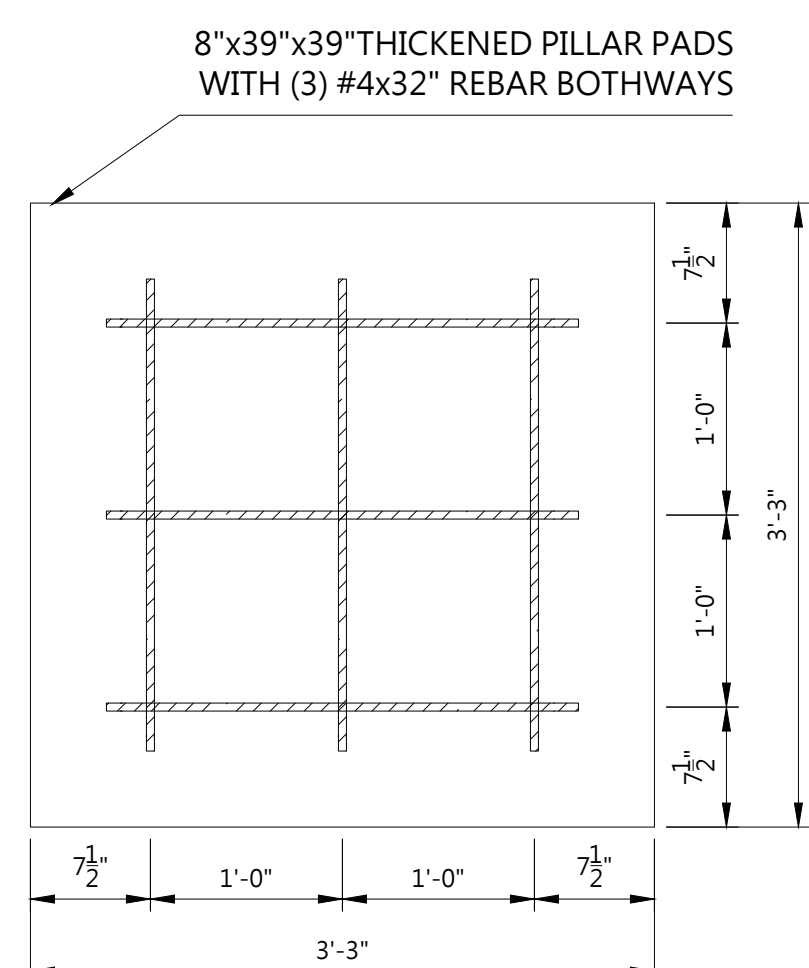
4" Ø CORRUGATED FOUNDATION DRAIN INSTALLED BELOW PIT FLOOR, SLOPED TOWARD NORTH END, WITH 12" OF STONE AROUND PIPE & OUTLET TO OBSERVATION WELL PER SITE PLAN (BY OWNER)

ONE SQ. FT. DRAIN CHANNELS, FILLED WITH CRUSHED STONE 50" o.c., UNDER PERIMETER FOOTING (BY OWNER)

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SCALE: 1"=1'-0"



PILLAR PAD DETAIL

SCALE: 1"=1'-0"

TYPICAL MANURE PIPE THRU WALL DETAIL

SCALE: 1"=1'-0"

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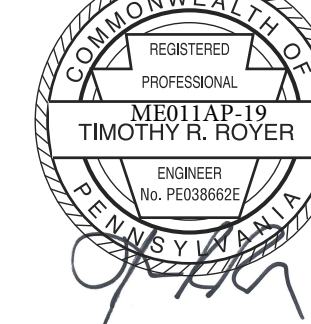
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Expiration Date: 09-30-2021

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JOB NUMBER:

CUSTOMER NUMBER:

REVISION, DATE:

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DWG. BY:

J. MARTIN

FILENAME:

BIVOUAC

DATE:

12/12/19

SCALE:

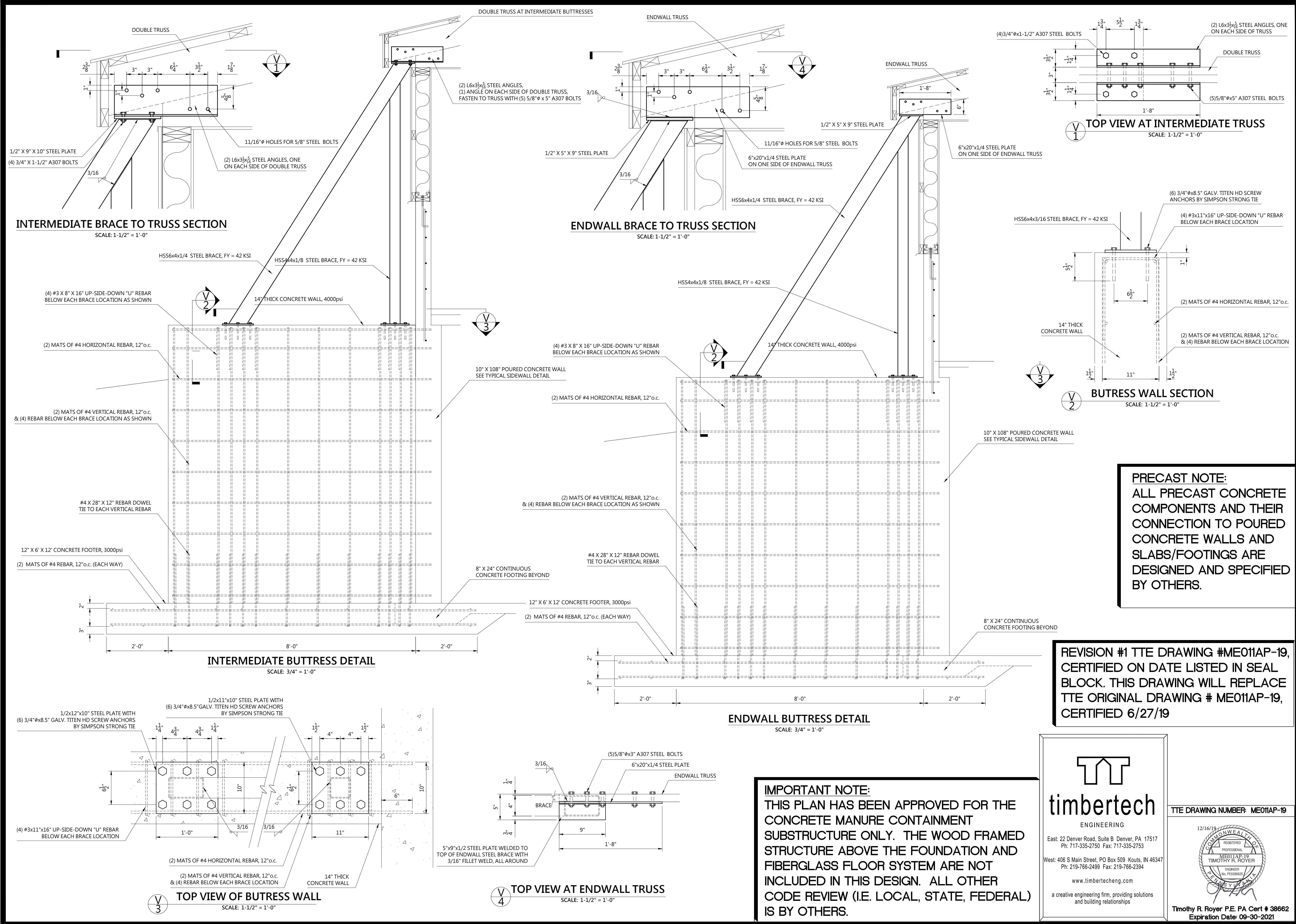
1/8"=1'-0"

SHEET TITLE:

GESTATION ADD. CONCR. DETAILS

DRAWING NUMBER:

BIVC208AP



FARMER BOY AG
SYSTEMS • SUPPLIES • SERVICE

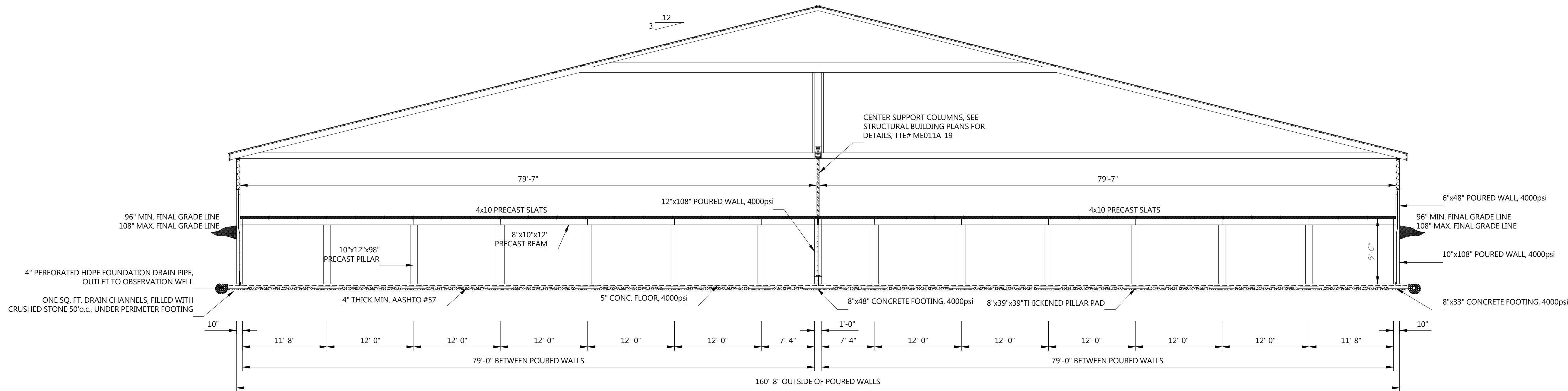
BIVOUAC SOW FARM
15197 Great Cove Rd.
Big Cove Tannery, PA 17212

FBA

SALES REPRESENTATIVE:
Dale Martin
JOB NUMBER:
CUSTOMER NUMBER:
REVISION, DATE:

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DWG. BY: *J. MARTIN* FILENAME: *BIVOUAC*
DATE: 12/12/19
SCALE: 3/8" = 1'-0"
SHEET TITLE:
GESTATION BUTRESS DETAILS
DRAWING NUMBER:
BIVC210AP



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

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TTE DRAWING NUMBER: ME011AP-19

Timothy R. Hoyer P.E. PA Cert # 38662
Expiration Date: 09-30-2021

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PROJECT:
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15197 Great Cove Rd.
Big Cove Tannery, PA 17212

FBA

SALES REPRESENTATIVE:
Dale Martin

JOB NUMBER:

CUSTOMER NUMBER:

REVISION,DATE:

DWG.BY:
J.MARTIN

FILENAME:
BIVOUCAC

DATE: 12/12/19

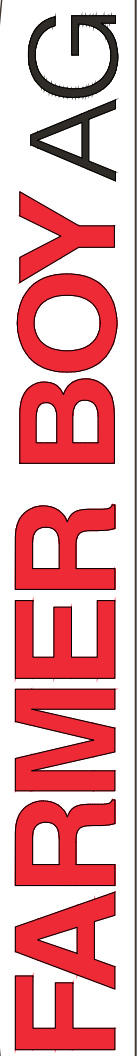
SCALE: 1/8"=1'-0"

SHEET TITLE:
**GESTATION
CROSS SECTION**

DRAWING NUMBER:
BIVC212AP

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JOB NUMBER:

CUSTOMER NUMBER:

REVISION, DATE:

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DWG.BY:

J. MARTIN

FILENAME:

BN/OUAC

DATE: 12/12/19

SCALE: $3/64" = 1' - 0"$

SHEET TITLE:

FARROWING FLOOR PLAN

DRAWING NUMBER:


BIVC300BP



FARROWING FLOOR PLAN

SCALE: 3/64" = 1'-0"

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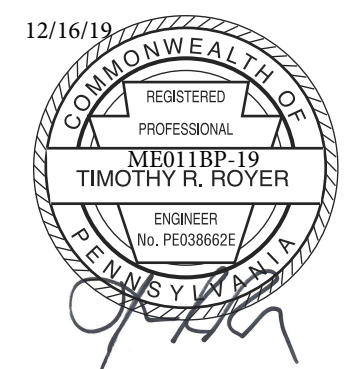
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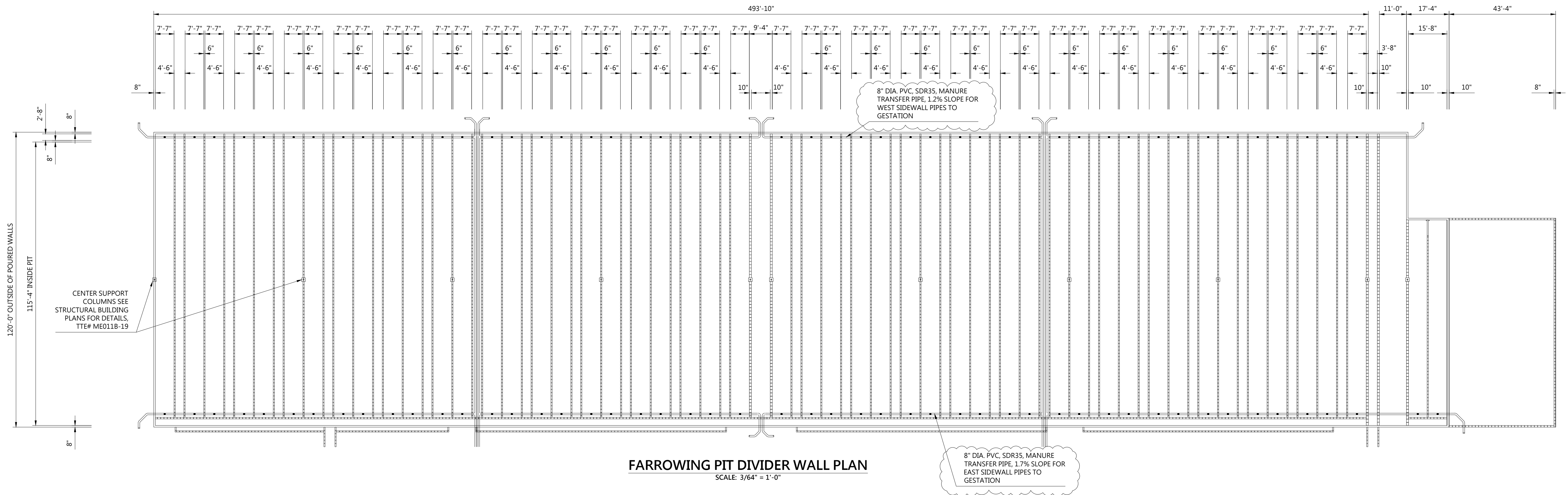
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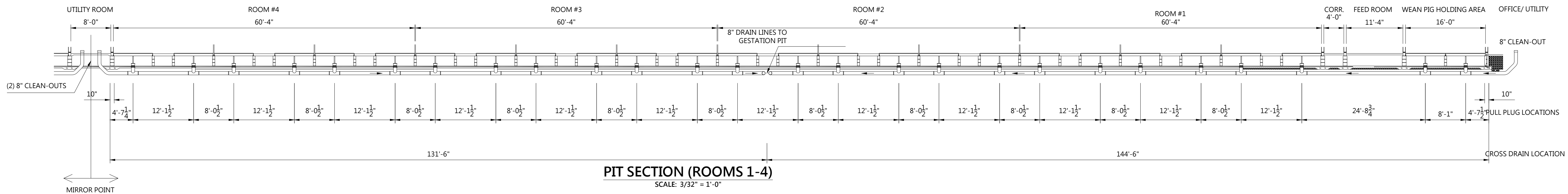
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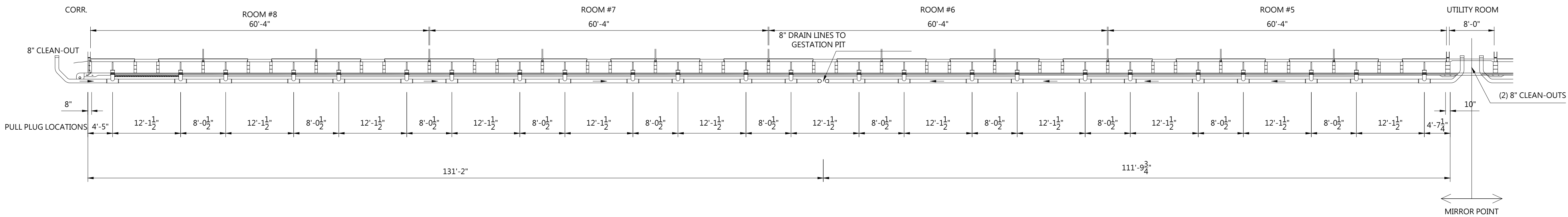
Timothy R. Royer P.E. PA Cert # 38662
Expiration Date: 09-30-2021



FARROWING PIT DIVIDER WALL PLAN
SCALE: 3/64" = 1'-0"



PIT SECTION (ROOMS 1-4)
SCALE: 3/32" = 1'-0"



PIT SECTION (ROOMS 5-8)
SCALE: 3/32" = 1'-0"

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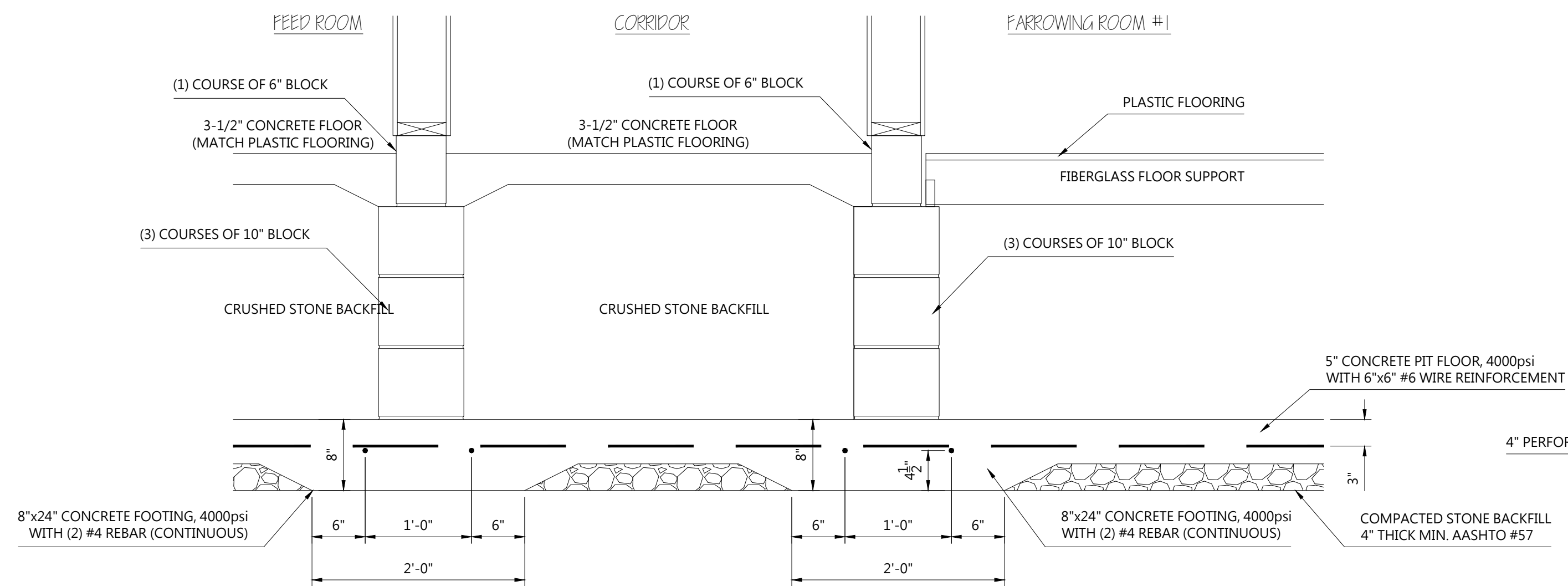
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12/16/19
REGISTERED PROFESSIONAL
TIMOTHY R. ROYER
ENGINEER
No. PE038662
Timothy R. Royer P.E. PA Cert # 38662
Expiration Date: 09-30-2021

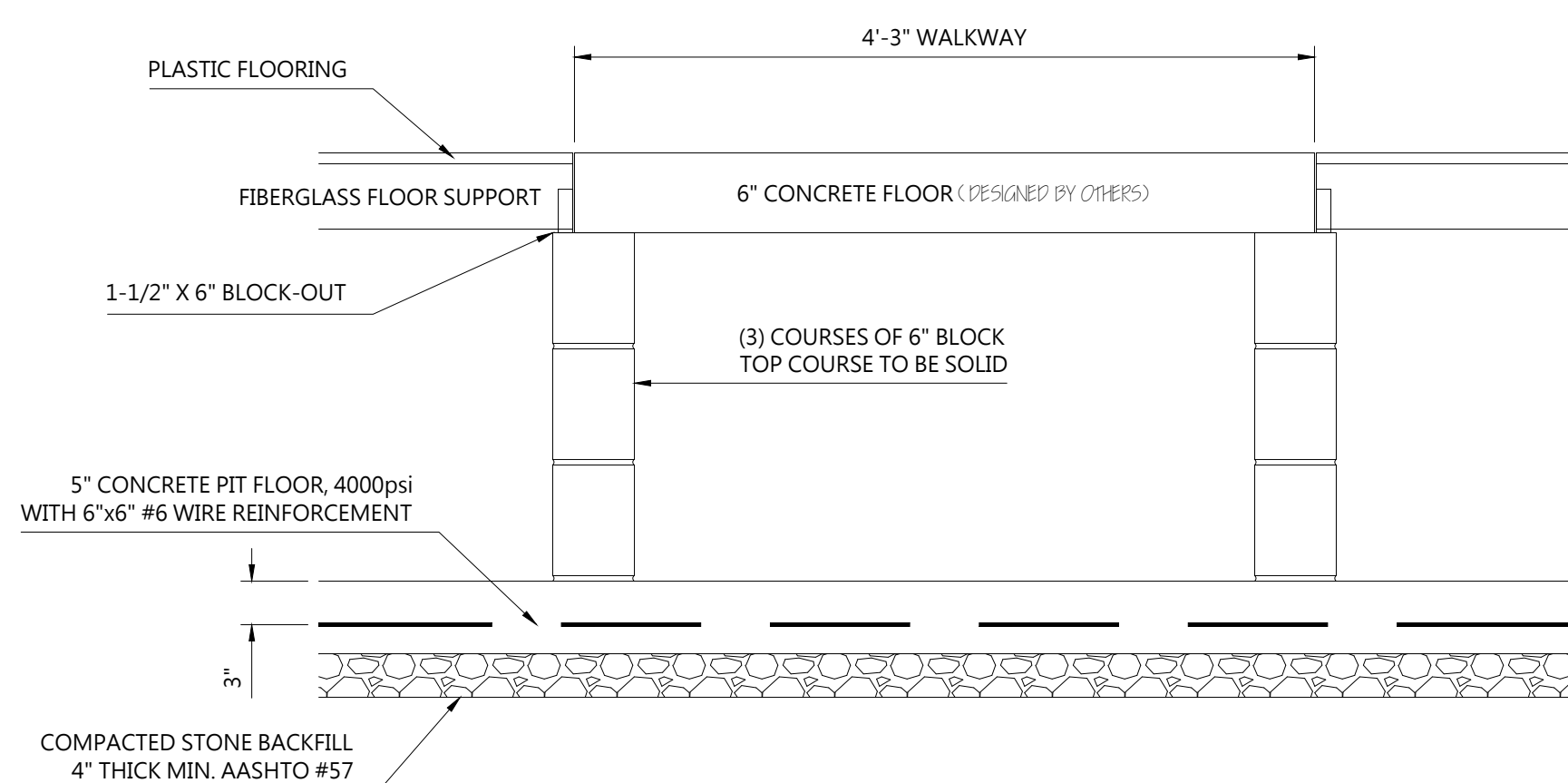
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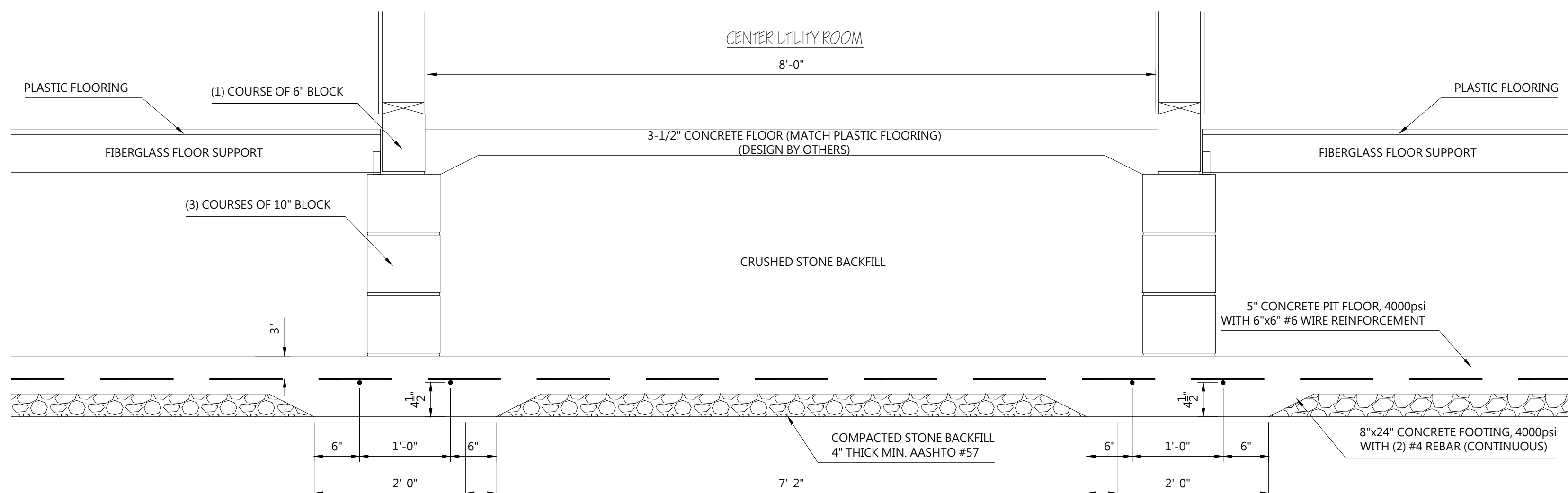
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SALES REPRESENTATIVE:
Dale Martin
JOB NUMBER:
CUSTOMER NUMBER:
REVISION, DATE:
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DWG. BY: J. MARTIN
FILENAME: BIVOUCAC
DATE: 12/12/19
SCALE: 3/64" = 1'-0"
SHEET TITLE: **FARROWING PIT SECTIONS**
DRAWING NUMBER: **BIVC304BP**



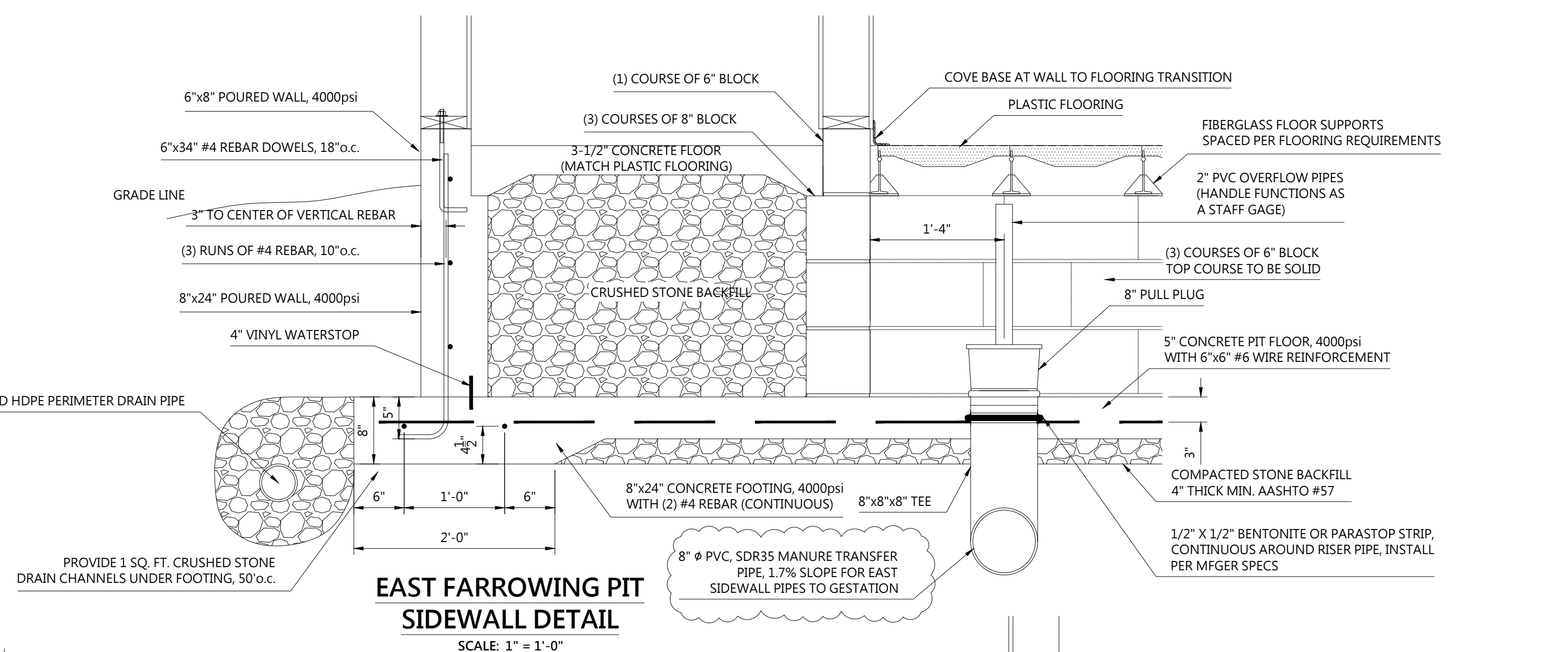
FARROWING CROSS WALK WALL DETAIL
SCALE: 1" = 1'-0"



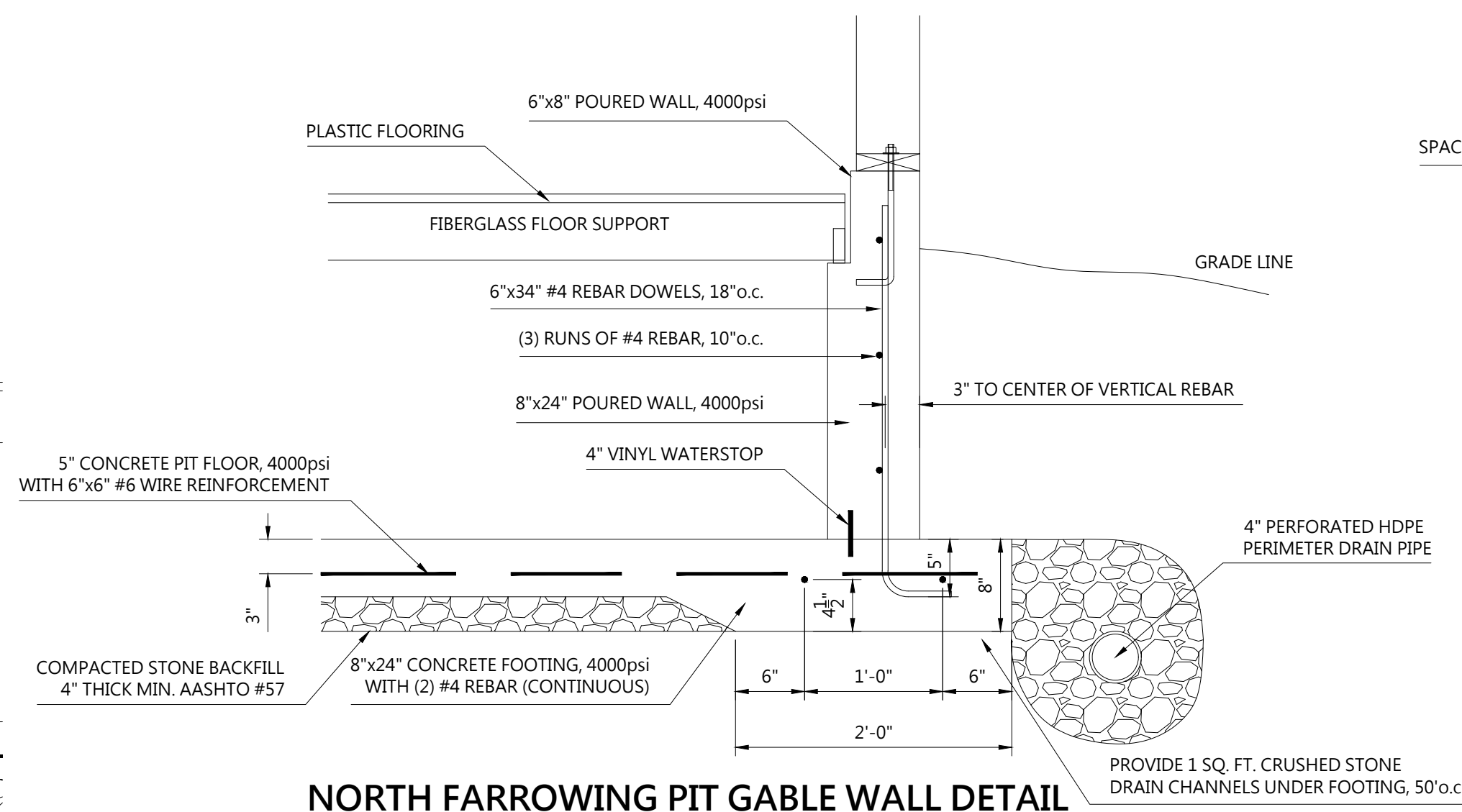
ROOM WALKWAY DETAIL (TYPICAL)
SCALE: 1" = 1'-0"



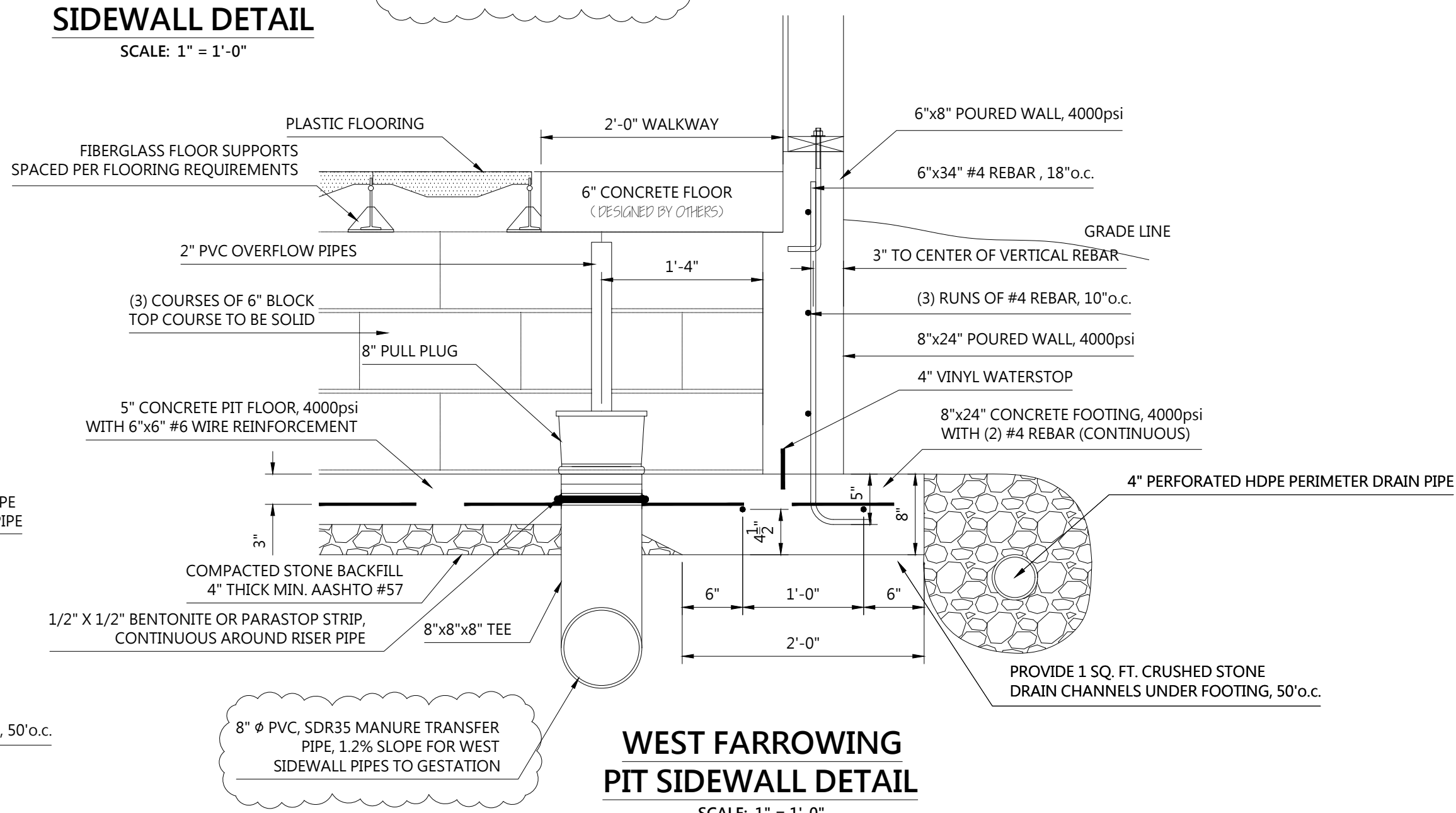
CENTER UTILITY PIT DETAIL
SCALE: 1" = 1'-0"



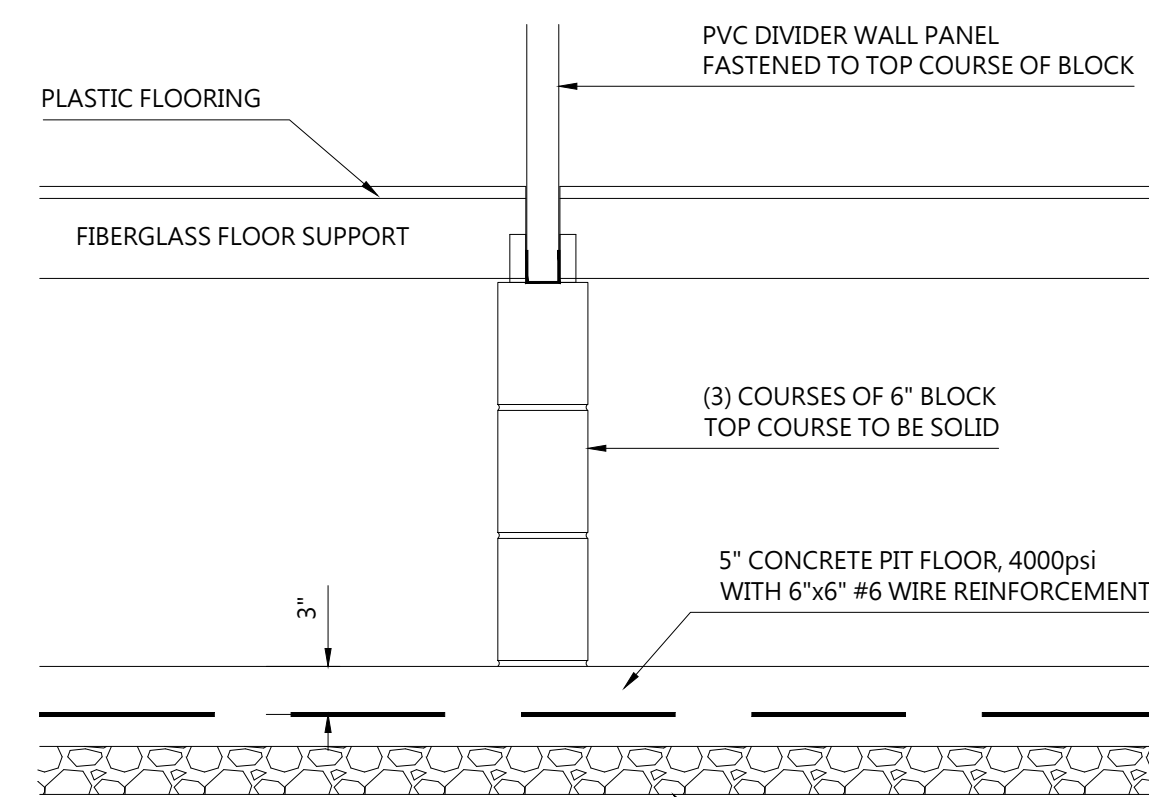
**EAST FARROWING PIT
SIDEWALL DETAIL**
SCALE: 1" = 1'-0"



NORTH FARROWING PIT GABLE WALL DETAIL
SCALE: 1" = 1'-0"



**WEST FARROWING
PIT SIDEWALL DETAIL**
SCALE: 1" = 1'-0"



TYPICAL ROOM DIVIDER PIT DETAIL
SCALE: 1" = 1'-0"

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12/16/19
REGISTERED PROFESSIONAL
TIMOTHY R. ROYER
ENGINEER
NO. PEG00002
TIMOTHY R. ROYER P.E. PA Cert # 38662
Expiration Date: 09-30-2021

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CUSTOMER NUMBER:
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DWG. BY: *J. MARTIN* FILENAME: *BIVOUAC*
DATE: 12/12/19
SCALE: 1" = 1'-0"
SHEET TITLE: **FARROWING PIT DETAILS**
DRAWING NUMBER: **BIVC306BP**

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Dale Martin

JOB NUMBER:

CUSTOMER NUMBER:

REVISION, DATE:

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DWG. BY:

J. MARTIN

FILENAME:

BIVOUCAC

DATE:

12/12/19

SCALE:

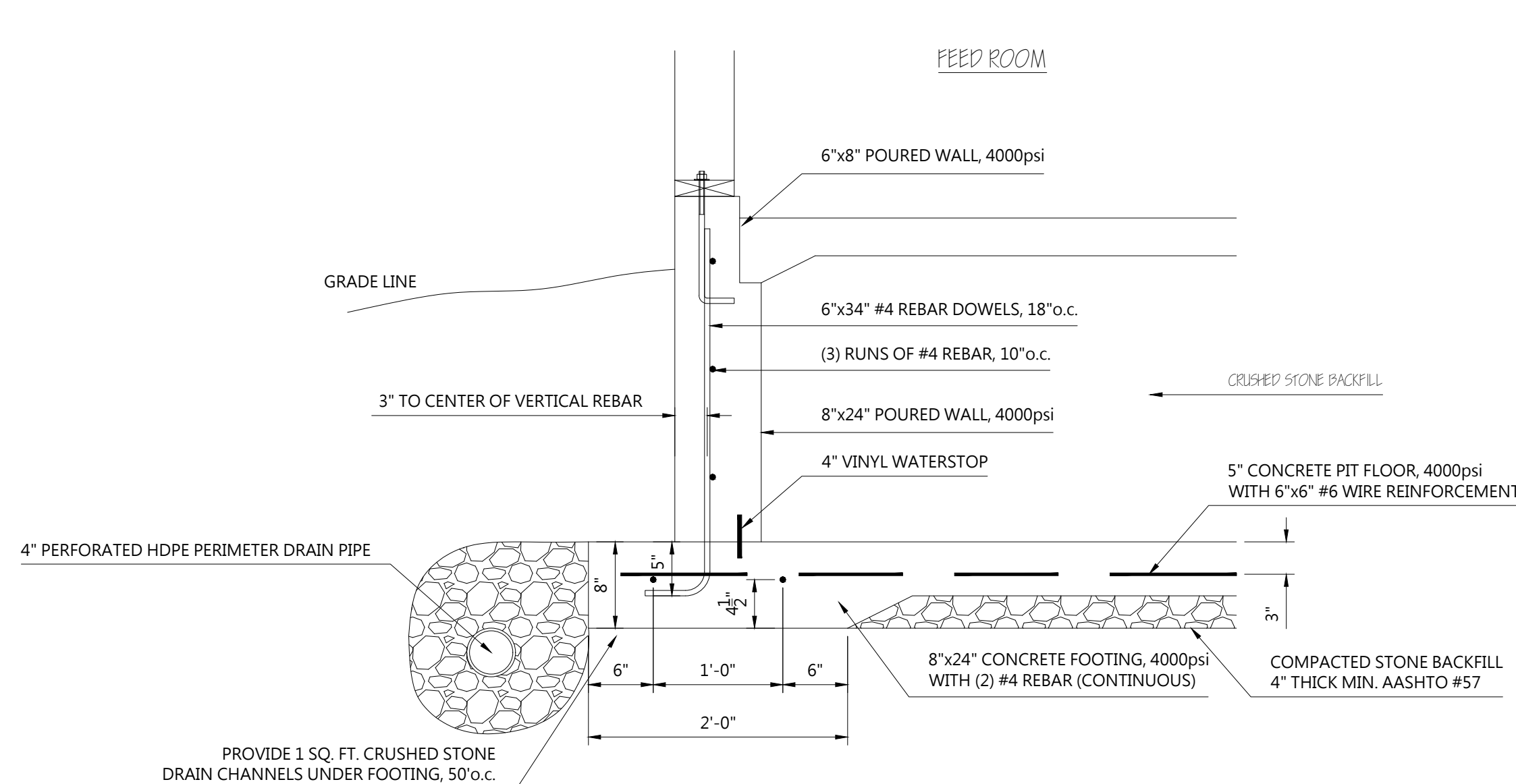
1" = 1'-0"

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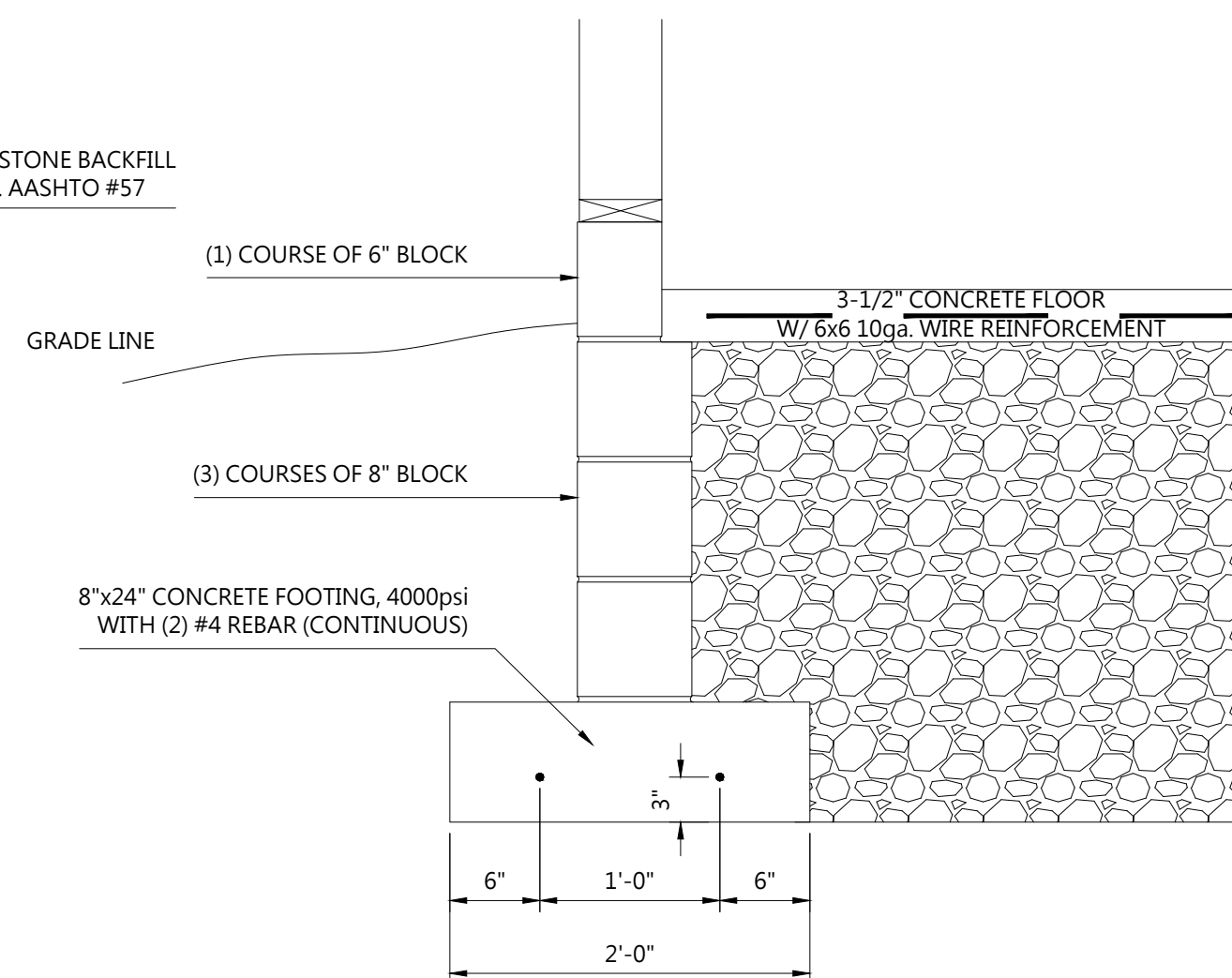
**HOLDING AREA
PIT DETAILS**

DRAWING NUMBER:

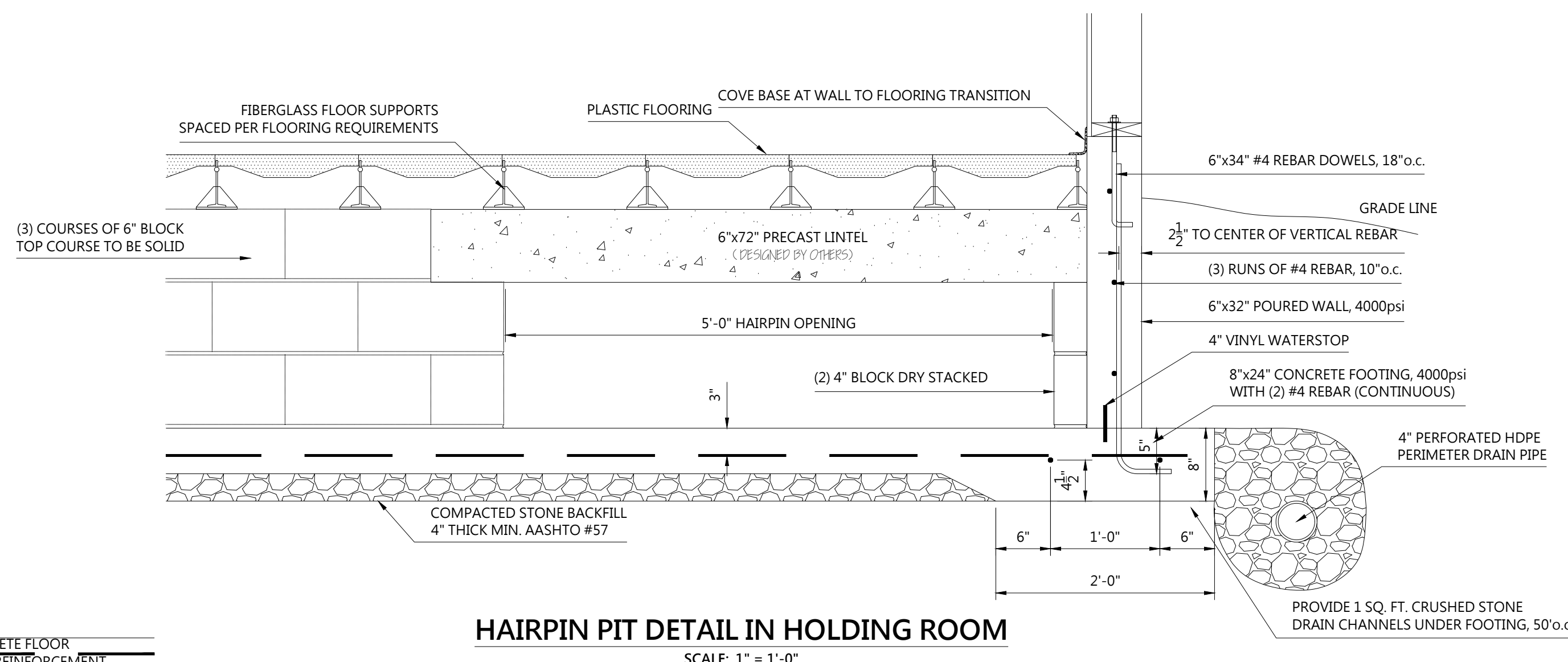
BIVC308BP



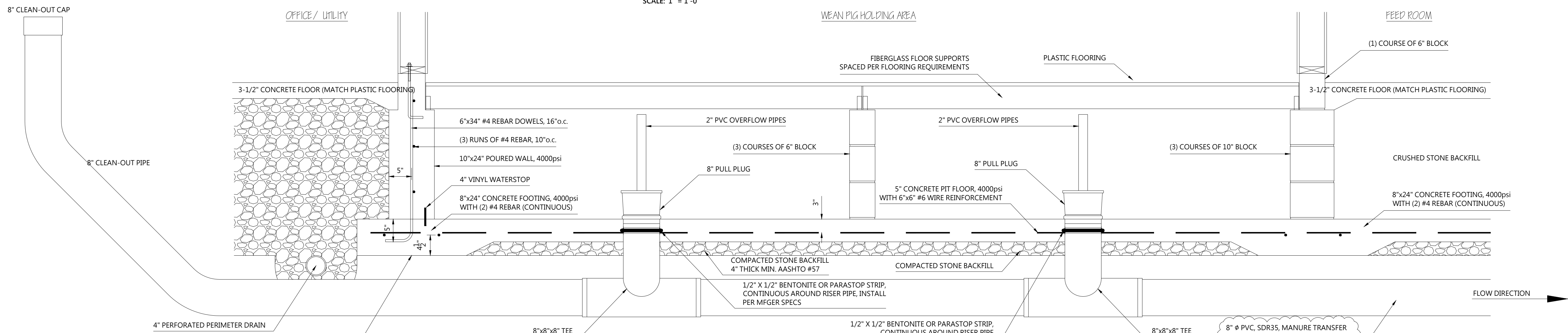
SOUTH FARROWING PIT GABLE WALL DETAIL
SCALE: 1" = 1'-0"



AG WORKROOM FOUNDATION DETAIL
SCALE: 1" = 1'-0"



HAIRPIN PIT DETAIL IN HOLDING ROOM
SCALE: 1" = 1'-0"



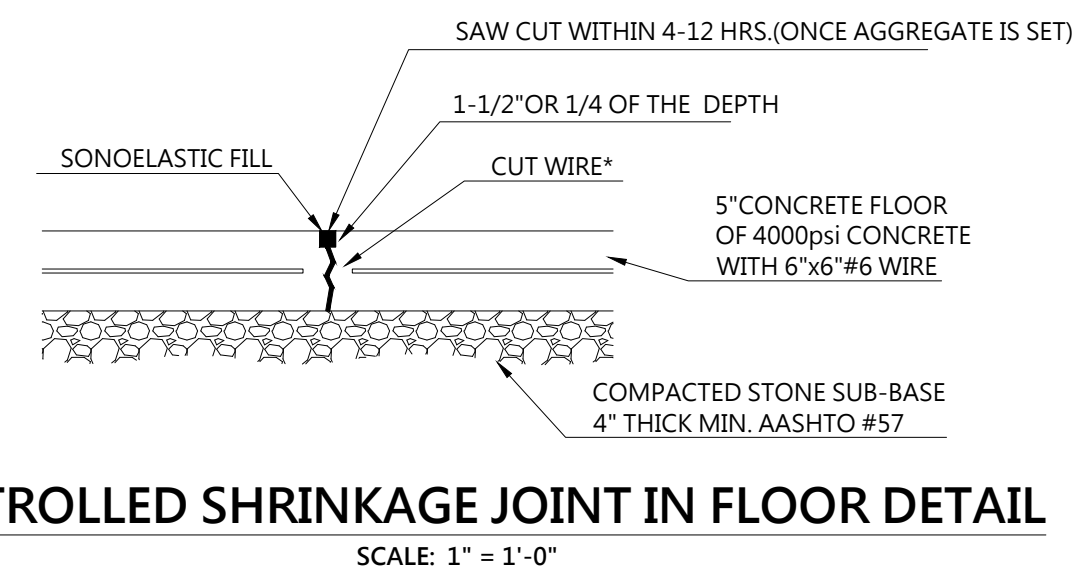
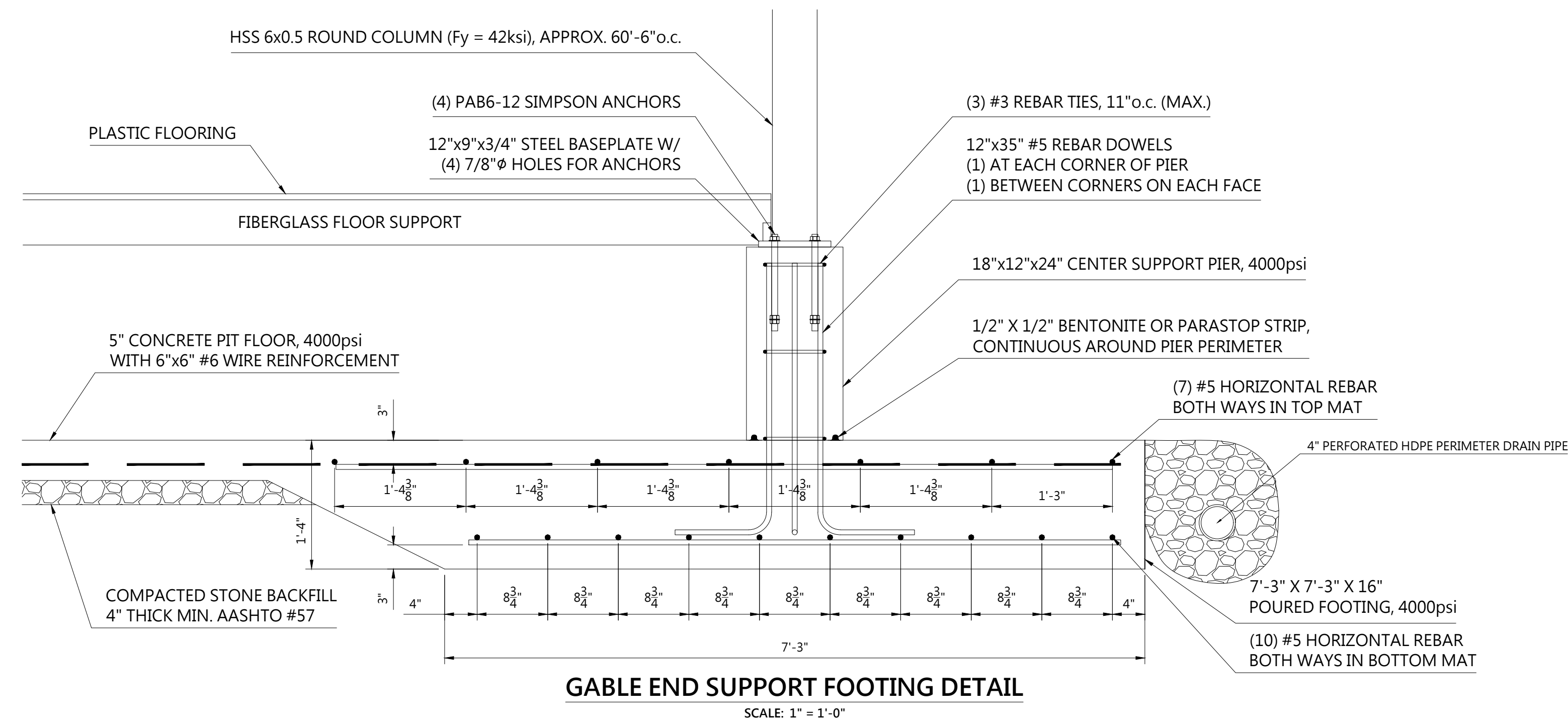
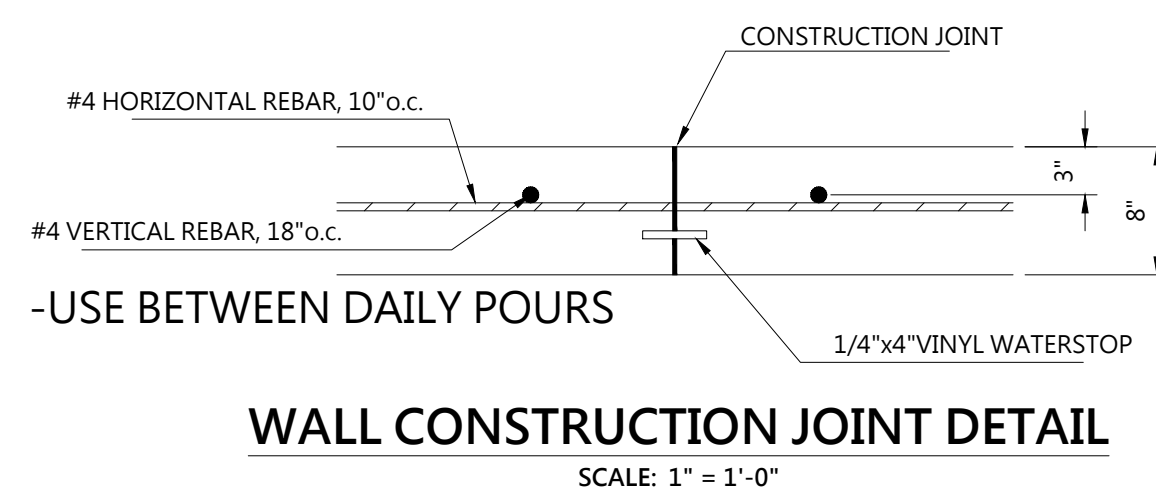
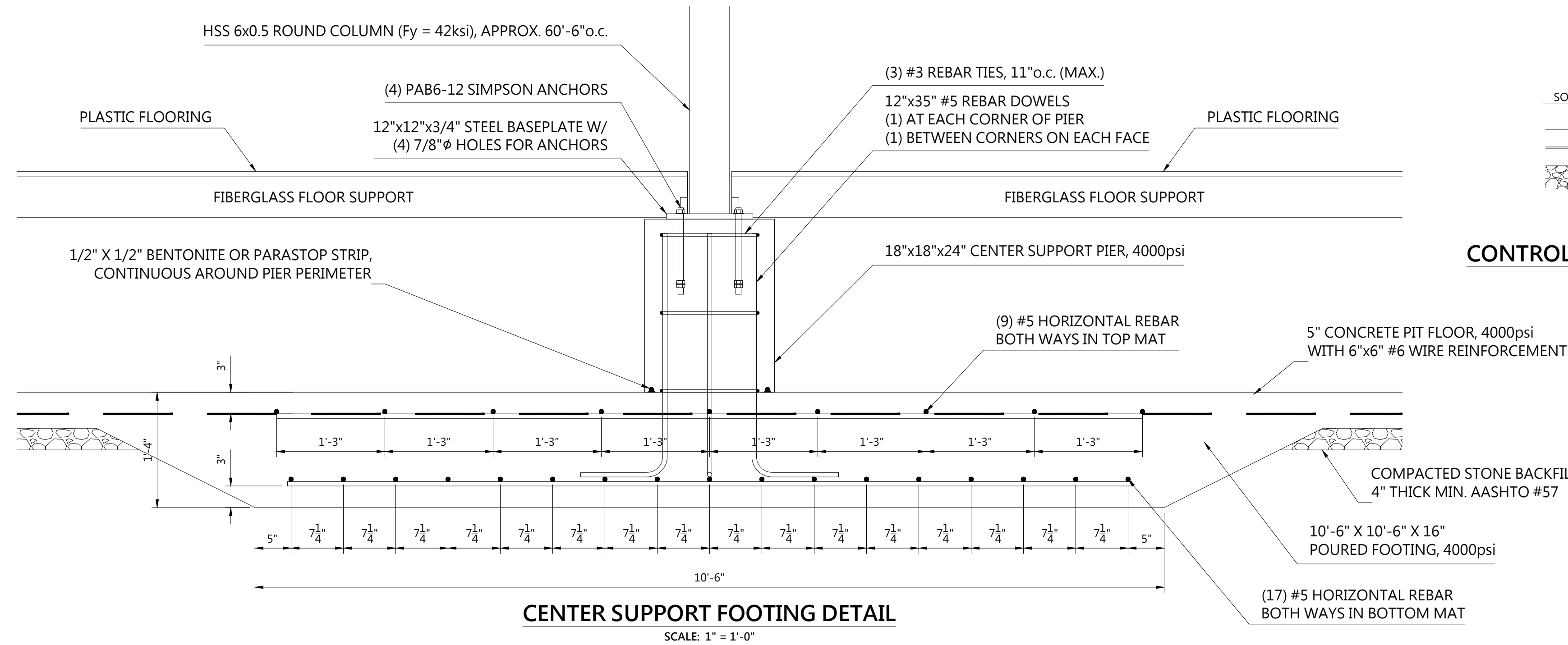
HOLDING ROOM PIT SECTION
SCALE: 1" = 1'-0"

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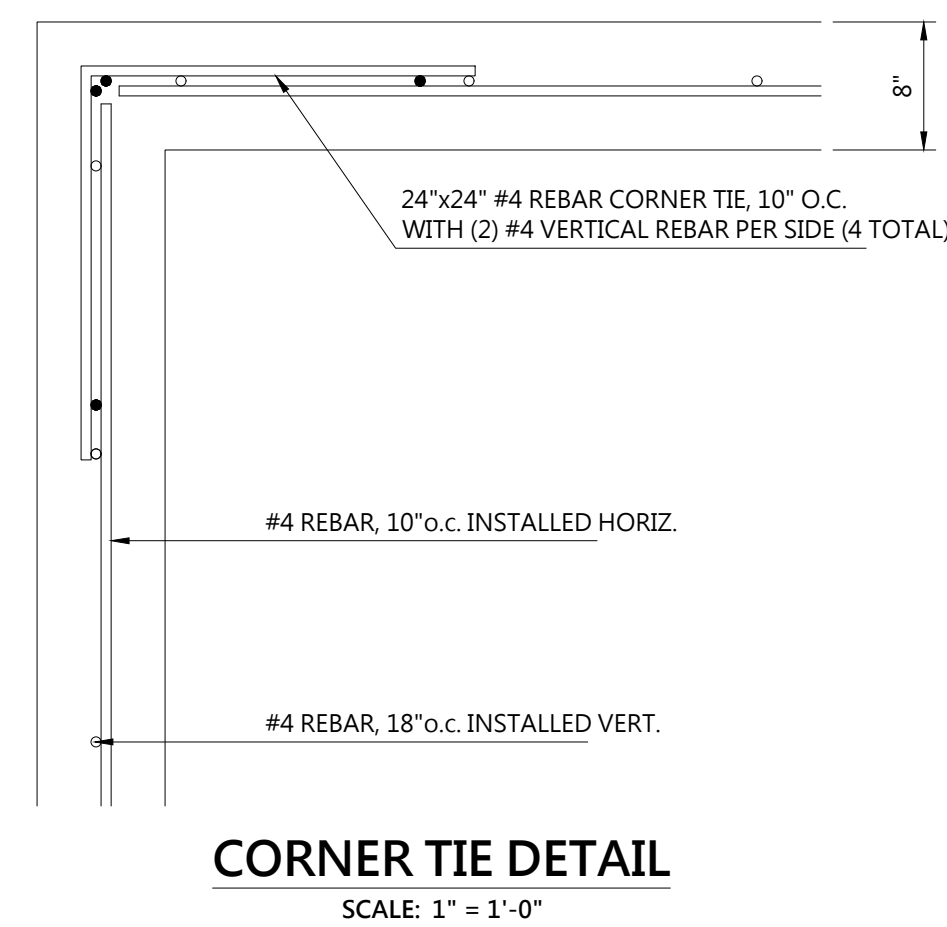
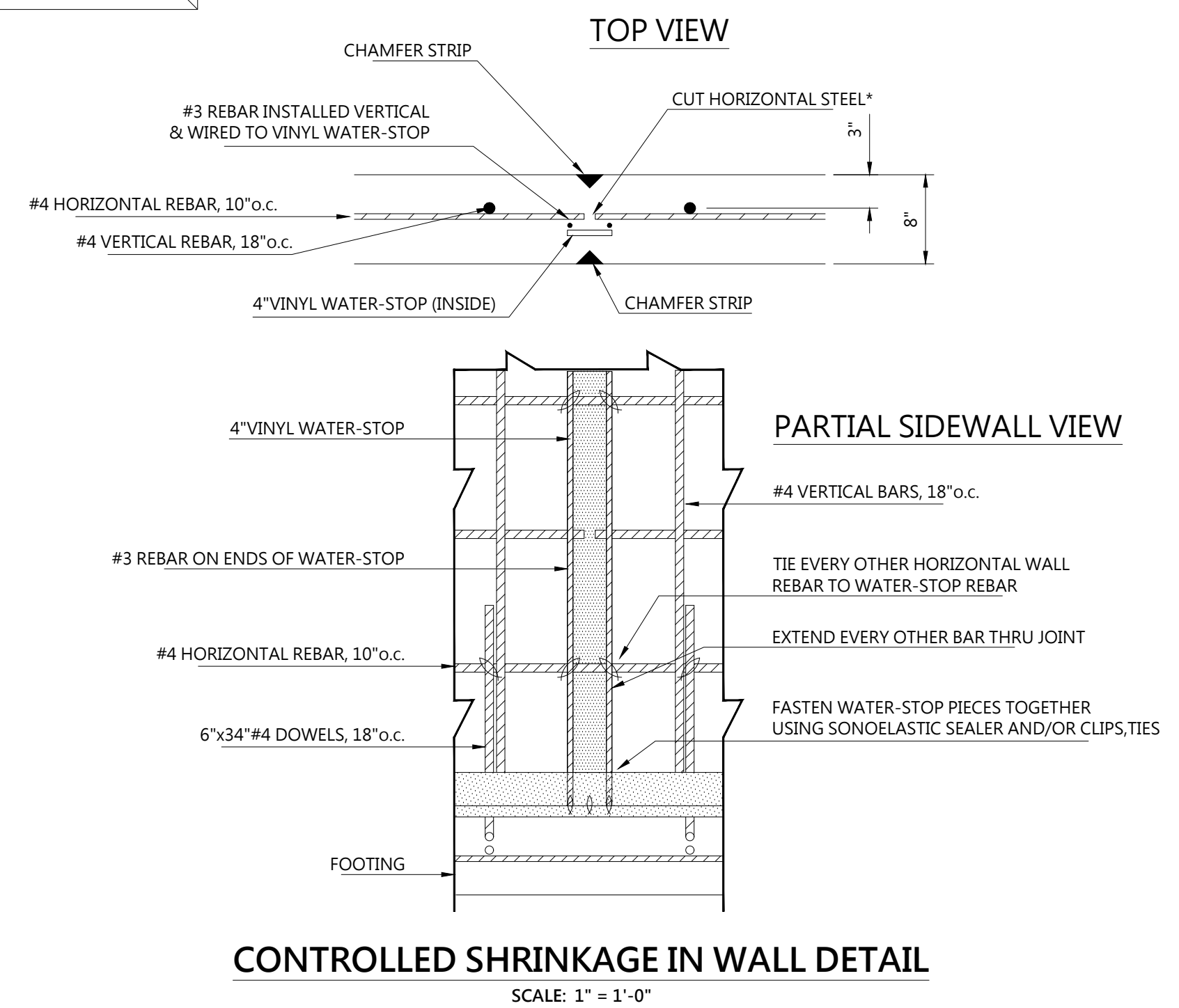
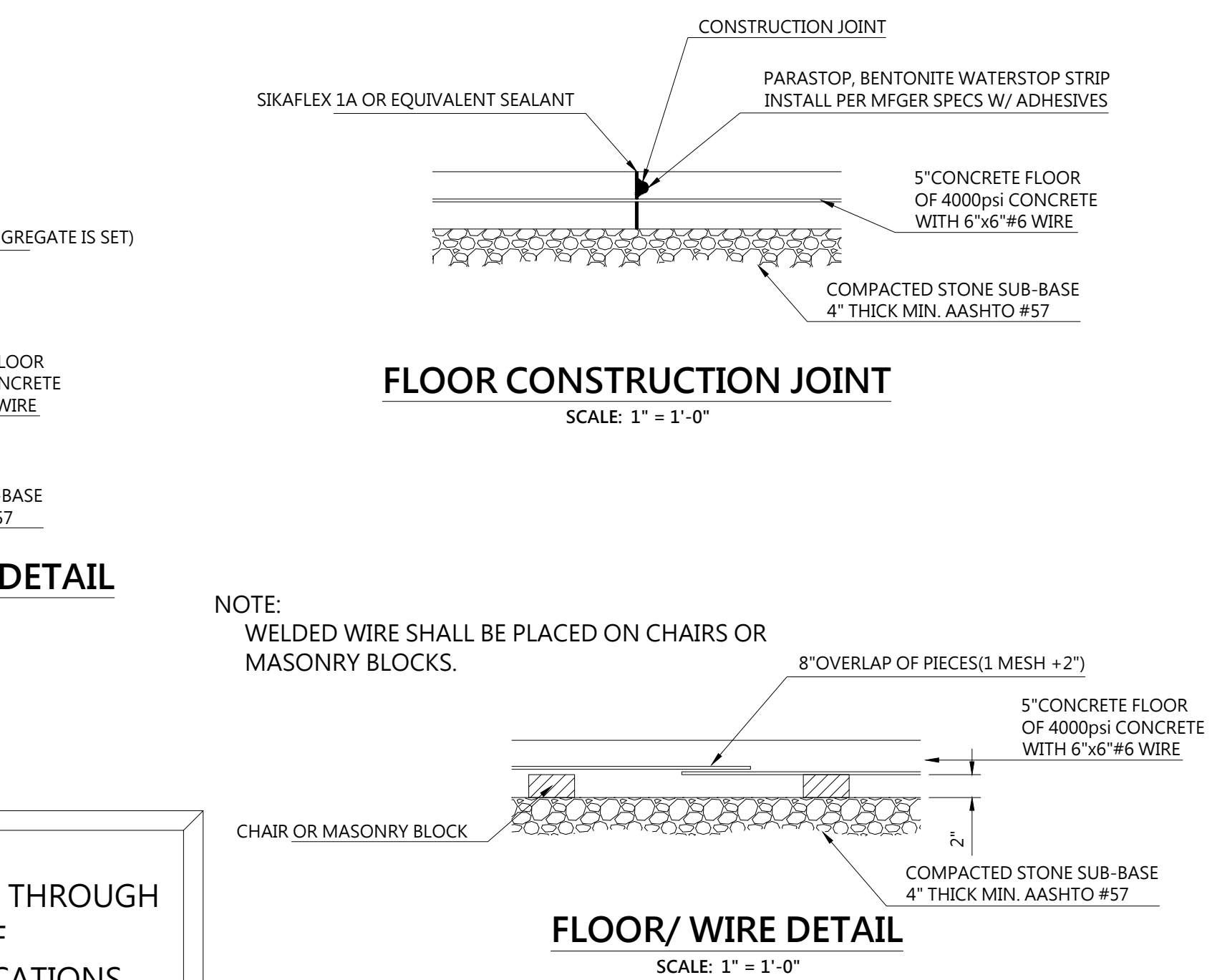
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TTE DRAWING NUMBER: ME011BP-19
12/16/19
TIMOTHY R. ROYER
REGISTERED PROFESSIONAL ENGINEER
PA 0038662
Timothy R. Royer P.E. PA Cert # 38662
Expiration Date: 09-30-2021

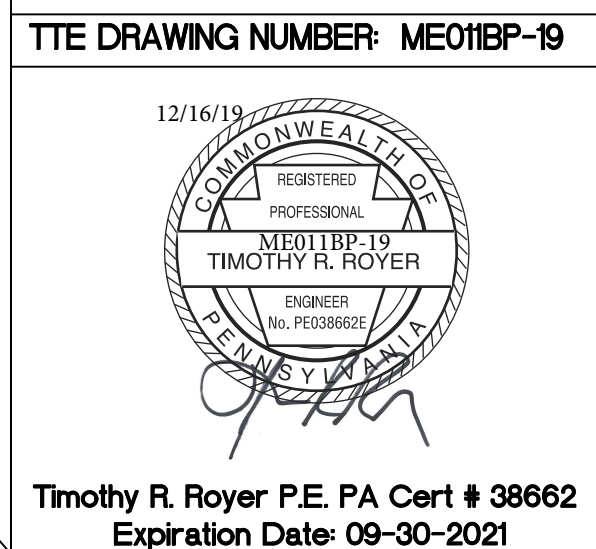
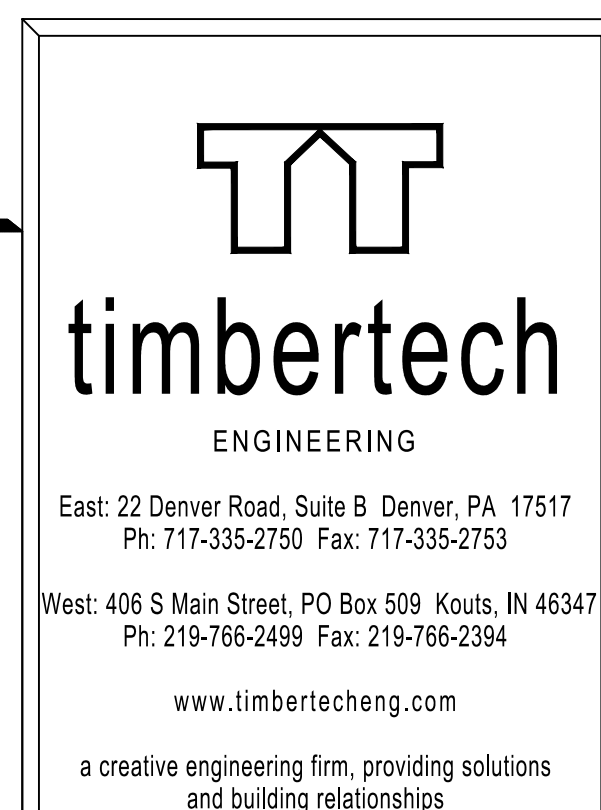


*NOTE:
EVERY OTHER BAR SHALL EXTEND THROUGH SHRINKAGE JOINTS. CUT HALF OF HORIZONTAL STEEL AT THESE LOCATIONS.



REVISION #1 TTE DRAWING #ME01BP-19,
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15197 Great Cove Rd.
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FBA

SALES REPRESENTATIVE:

Dale Martin

JOB NUMBER:

CUSTOMER NUMBER:

REVISION, DATE:

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DWG.BY:

J. MARTIN

LENAME:

BNOUAC

DATE: 10/10/2018

12/12/19

SCALE: 1" = 100'

$$1'' = 1' - 0''$$

SHEET TITLE:

CONC. DETAILS
SUPPORT DETAIL

DRAWING NUMBER:

BIVC310BP

PROJECT.

SALES REPRESENTATIVE:

JOB NUMBER

CUSTOMER NUMBER:

REVISION DATE

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DWG.BY:

DATE: 12 / 12 / 10

SCALE: 3/16"=1' 0"

SHEET TITLE:

DRAWING NUMBER:



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

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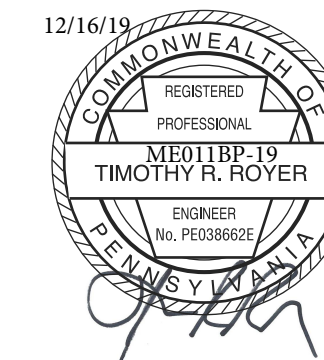
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Timothy R. Royer P.E. PA Cert # 38662
Expiration Date: 09-30-2021

PROJECT:
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FBA

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DWG. BY:

J. MARTIN

FILENAME:

BIVOUAC

DATE:

12/12/19

SCALE:

3/64"=1'-0"

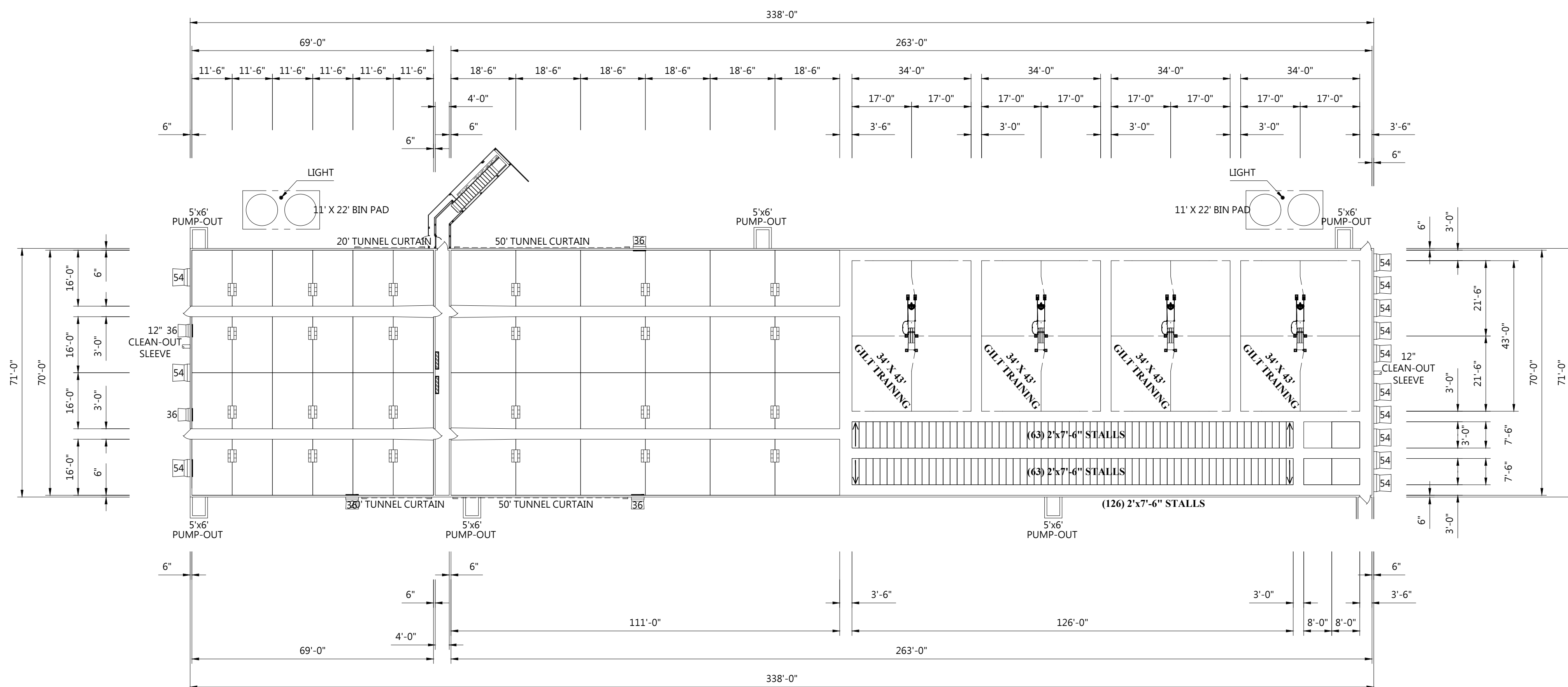
SHEET TITLE:

**GILT
FLOOR PLAN**

DRAWING NUMBER:

BIVC400CP

NORTH



FLOOR PLAN

SCALE: 3/64" = 1'-0"

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CERTIFIED ON DATE LISTED IN SEAL
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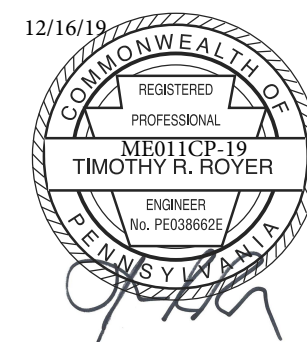
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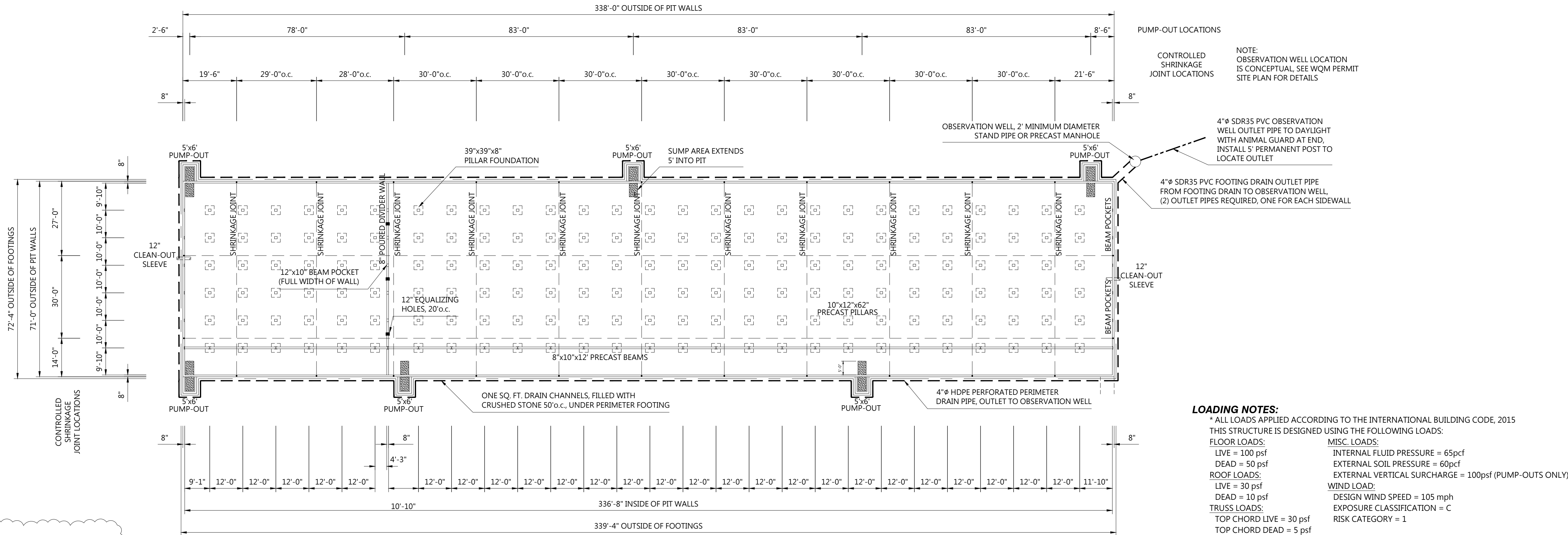
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TTE DRAWING NUMBER: ME01ICP-19



Timothy R. Royer P.E. PA Cert # 38662
Expiration Date: 09-30-2021



PIT & PILLAR PLAN

SCALE: 3/64" = 1'-0"

GENERAL NOTES:

ALL CONSTRUCTION SHALL ADHERE TO THE PENNSYLVANIA TECHNICAL GUIDE PA3135 WASTE STORAGE STRUCTURE CONSTRUCTION SPECIFICATION. ALL DIMENSION ARE NOMINAL.

A. ALL CONCRETE AND REINFORCING WORK SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE'S "STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318). ALL CONCRETE SHALL DEVELOP A MINIMUM 28 DAY DESIGN STRENGTH F_{CD} OF 4000psi. ALL CONCRETE SHALL HAVE 3/4" MAXIMUM AGGREGATE SIZE AND A SLUMP OF 5" +/- 1".

B. ALL CONCRETE SHALL BE FURNISHED WITH THE PROPER ADMIXTURE TO OBTAIN 6% +/- 1% OF AIR ENTRAINMENT.

C. ACCESSORIES SHALL BE AS SPECIFIED IN THE LATEST EDITION OF "CONCRETE REINFORCING STEEL INSTITUTE HANDBOOK." MAXIMUM SPACING OF ACCESSORIES SHALL BE 4". ALL ACCESSORIES TO HAVE GALVANIZED OR PLASTIC COATED FEET. NO ALUMINUM ITEMS SHALL BE EMBEDDED IN CONCRETE.

D. 1. DURING HOT WEATHER (80°F AND ABOVE) THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS OF ACI-305 "HOT WEATHER CONCRETING." THE TEMPERATURE OF THE CONCRETE SHALL BE MAINTAINED BELOW 90°F DURING MIXING AND CONVEYING AND SHALL NOT BE PLACED IF ITS TEMPERATURE RISES ABOVE 90°F. ALL EXPOSED SURFACES SHALL BE KEPT CONSTANTLY MOIST DURING THE TIME BETWEEN PLACEMENT AND FINISHING AND DURING CURING.

2. DURING COLD WEATHER (40°F AND BELOW) THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS OF ACI-306 "COLD WEATHER CONCRETING." IF CONCRETING MUST OCCUR AT TEMPERATURES BELOW 40°F, FACILITIES MUST BE PROVIDED TO PREVENT THE CONCRETE FROM FREEZING. NON-CHLORIDE ACCELERATORS MAY BE USED HOWEVER CHLORIDE ACCELERATORS AND ANTIFREEZE COMPOUNDS MAY NOT BE USED. THE TEMPERATURE OF THE CONCRETE SHALL NOT BE LESS THAN 50°F AT THE TIME OF PLACEMENT AND SHALL NOT BE ALLOWED TO FALL BELOW 40°F FOR A PERIOD OF SEVEN DAYS. CONCRETE PLACEMENT SHALL NOT OCCUR DESPITE ANY COLD WEATHER PROCEDURES IF THE AIR TEMPERATURE IS PREDICTED TO FALL BELOW 32°F WITHIN 24 HOURS AFTER PLACEMENT.

E. CONCRETE IN ALL WALLS SHALL BE ALLOWED TO CURE FOR A MINIMUM OF 14 DAYS BEFORE BACKFILL IS PLACED AGAINST WALLS.

F. REINFORCING STEEL TO MEET ASTM SPECIFICATIONS A-615, LATEST REVISION WITH SUPPLEMENT REQUIREMENTS (S1) GRADE 60. ALL WELDED WIRE FABRIC (WWF) SHALL MEET A-185, LATEST REVISION.

G. REINFORCING SHALL BE CONTINUOUS AND LAP A MINIMUM OF 40 BAR DIAMETERS. WELDED WIRE FABRIC SHALL BE LAPPED A MINIMUM OF 8". HORIZONTAL LAP SPICES SHALL BE STAGGERED.

H. ALL CONCRETE IS REINFORCED CONCRETE UNLESS SPECIFICALLY CALLED OUT AS "NOT REINFORCED". REINFORCE ALL CONCRETE NOT OTHERWISE SHOWN WITH THE SAME STEEL AS IN SIMILAR SECTIONS OR AREAS.

LOADING NOTES:

* ALL LOADS APPLIED ACCORDING TO THE INTERNATIONAL BUILDING CODE, 2015 THIS STRUCTURE IS DESIGNED USING THE FOLLOWING LOADS:

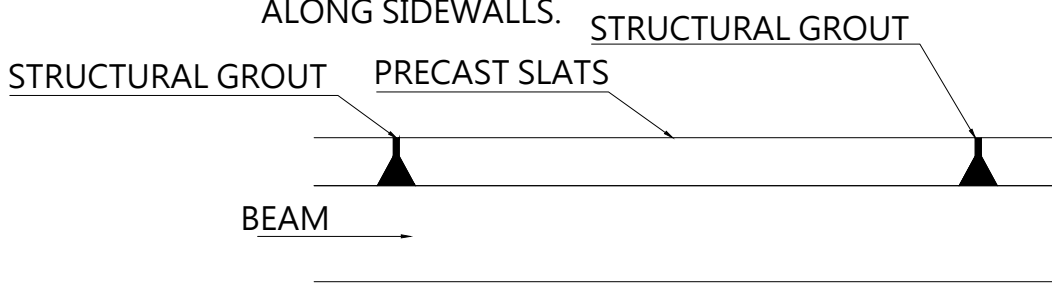
FLOOR LOADS: LIVE = 100 psf DEAD = 50 psf ROOF LOADS: LIVE = 30 psf DEAD = 10 psf TRUSS LOADS: TOP CHORD LIVE = 30 psf TOP CHORD DEAD = 5 psf BOTTOM CHORD LIVE = 0 BOTTOM CHORD DEAD = 5 psf MISC. LOADS: INTERNAL FLUID PRESSURE = 65pcf EXTERNAL SOIL PRESSURE = 60pcf EXTERNAL VERTICAL SURCHARGE = 100psf (PUMP-OUTS ONLY) WIND LOAD: DESIGN WIND SPEED = 105 mph EXPOSURE CLASSIFICATION = C RISK CATEGORY = 1

CONTROLLED SHRINKAGE NOTES:

- A. SHRINKAGE JOINTS SHOULD NOT INTERFERE WITH ANY PILLAR FOOTERS (NOTE JOINT SPACING ON PLAN)
- B. NOTE WALL & FLOOR JOINTS ARE ALIGNED

BEAM/SLAT NOTES:

- A. PRECAST BEAM SETTING: STARTING AT ONE END, KEEP BEAMS CENTERED ON PILLARS AND KEEP SQUARE AND TIGHT. APPLY STRUCTURAL GROUT TO ANY JOINTS NOT TIGHT PRIOR TO BACKFILLING.
- B. PRECAST SLAT SETTING: START WITH TWO ROWS AGAINST SIDEWALL KEEPING SLATS SQUARE AND TIGHT. PROCEED WITH SETTING TWO ROWS TIGHT AND SQUARE AGAINST CENTER WALL. APPLY STRUCTURAL GROUT TO CENTER JOINTS PRIOR TO BACKFILLING.
- C. INSTALL STRUCTURAL GROUT ABOVE BEAMS BETWEEN JOINTS AT EACH JOINT 48" FROM EACH GABLE END ALSO REQUIRED AT JOINTS ALONG SIDEWALLS.



PRECAST NOTE:

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REVISION 1 CHANGE:
UPDATED MANURE STORAGE SUBGRADE NOTES

MANURE STORAGE FACILITY SUBGRADE GENERAL NOTES:

1. ANY AREA TO RECEIVE FILL. SOIL PLACEMENT SHALL HAVE ALL ORGANIC MATERIALS AND TOPSOIL REMOVED. THE BUILDING SUBGRADE SHALL BE VISUALLY INSPECTED BY THE SOIL TESTING AGENCY TO CONFIRM PROCEEDING WITH PLACEMENT OF FILL MATERIAL. SINCE THE MANURE STORAGE FACILITY IS LOCATED UNDER THE BUILDING, THE BUILDING SUBGRADE IS THE SAME AS THE MANURE STORAGE SUBGRADE.

2. THE BUILDING SUBGRADE STRUCTURAL SOIL FILL MATERIAL SHALL BE INSTALLED IN 6"-8" LOOSE LIFTS WITH EACH LIFT BEING COMPACTED AND TESTED BEFORE THE NEXT LIFT IS INSTALLED UNDER THE SUPERVISION OF THE SOIL TESTING AGENCY. INSPECTION OF THE SUBGRADE INSTALLATION WILL BE BASED ON THE PA NRCS TECHNICAL GUIDE SPECIFICATIONS AND STANDARDS.

3. FOR THE BUILDING SUBGRADE, STRUCTURAL SOIL FILL MATERIAL FOR THE UPPER AREAS WITH LESS THAN 6" OF FILL DEPTH IS TO BE 4" MINUS MATERIAL INSTALLED IN 6"-8" LOOSE LIFTS OR AS DIRECTED BY THE SOIL TESTING AGENCY FOR PROPER COMPACTION OF EXCAVATED MATERIAL AT THIS SITE. AREAS WITH GREATER THAN 6" OF FILL DEPTH MAY BE ROCK FILL MATERIAL IN THE LOWER ONE-HALF OF FILL HEIGHTS OVER 6". ROCK FILL IS TO BE 16" MINUS MATERIAL INSTALLED IN 16" LOOSE LIFTS OR AS DIRECTED BY THE SOIL TESTING AGENCY FOR PROPER COMPACTION OF EXCAVATED MATERIAL AT THIS SITE.

4. SATISFACTORY STRUCTURAL FILL MATERIALS ARE OF ASTM D2487 UNIFIED SOIL CLASSIFICATION GROUPS GW, GP, GM, GC, SW, SP, AND SM. ALL FILL MATERIALS SHALL BE FREE OF DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND ANY OTHER DELETERIOUS MATERIALS.

5. THE BUILDING SUBGRADE SHALL BE GRADED AND COMPACTED TO A DENSITY OF AT LEAST 95 PERCENT OF THE STANDARD PROCTOR DENSITY WITH SOIL AT OPTIMUM MOISTURE CONTENT OR UP TO 2% HIGHER. SLOPES SHALL NOT BE STEEPER THAN 2 TO 1. ALL FILLS AND EXCAVATED SLOPES SHALL BE THOROUGHLY COMPACTED USING A SHEEPSFOOT OR SMOOTH WHEEL VIBRATORY ROLLER.

6. NUCLEAR DENSITY AND MOISTURE CONTENT TESTING SHALL BE COMPLETED DURING CONSTRUCTION FOR A STRUCTURAL SOIL FILL AT A RATE OF AT LEAST 1 TEST PER 2,500 SQ. FT. PER CONSTRUCTED LIFT TO VERIFY PROPER COMPACTION USING THE STANDARD PROCTOR DENSITY RESULTS. FOR ROCK FILL MATERIAL VISUAL NON-MOVEMENT INSPECTION SHALL BE COMPLETED BY THE SOIL TESTING AGENCY. COMPACTION TESTING AND NON-MOVEMENT VISUAL INSPECTION OF FILL MATERIAL IS REQUIRED AT AND BELOW A 1:1 DOWNWARD SLOPE FROM THE BUILDING FOOTINGS.

7. WHEN NEW SOILS PLACEMENTS ARE JOINED TO COMPLETED PLACEMENT AREAS A BENCHING OR STAIR STEPPING TECHNIQUE SHALL BE USED TO ADEQUATELY TIE IN THE NEW SOILS. THIS WILL PROVIDE STAGGERED LIFT JOINTS FOR PROPER COMPACTION.

8. CORRECTION PROCEDURES FOR SOIL NOT MEETING THE DENSITY OR MOISTURE REQUIREMENTS SHALL BE AS FOLLOWS:
100 WET: REMOVE THE MATERIAL OR SCARIFY THE SOIL AND LET IT DRY THEN REWORK IT.
100 DRY: REMOVE THE MATERIAL OR ADD WATER TO THE SOIL AND REWORK IT.

9. IF CONSTRUCTION OCCURS DURING COLD WEATHER, THE PLACEMENT SOIL SHALL BE VERIFIED THAT IT IS NOT FROZEN PRIOR TO COMPACTION.

10. THE BUILDING SUBGRADE SOIL UNDER THE FLOOR SLABS OF THE MANURE STORAGE SHALL HAVE A PERMEABILITY LESS THAN OR EQUAL TO 1.0 X 10⁻⁴ CM/ SEC. A FLEXIBLE WALL PERMEABILITY TEST (FALLING HEAD, RAISING TAIL WATER SETUP) OF A REMODELED SAMPLE OF REPRESENTATIVE MATERIAL IS SUFFICIENT. AT LEAST ONE SAMPLE WILL BE TESTED FROM EACH BUILDING SUBGRADE.

11. IF THE BUILDING SUBGRADE UNDER THE FLOOR SLAB OF THE MANURE STORAGE CONSISTS OF ANY BEDROCK OR BEDROCK WITH OPEN JOINTS, FRACTURES, OR SOLUTION CHANNELS A SEPARATION LAYER SHALL BE PROVIDED CONSISTING OF A MINIMUM OF 1 FOOT THICK SOIL WITH A PERMEABILITY LESS THAN OR EQUAL TO 1 X 10⁻⁴ CM/ SEC BETWEEN THE FLOOR SLAB/ FOOTINGS OF THE MANURE STORAGE AND THE BEDROCK OF AN ALTERNATIVE THAT WILL ACHIEVE EQUAL PROTECTION. ALL BEDROCK ENCOUNTERED UNDER THE FLOOR SLAB OR FOOTINGS SHALL BE OVER-EXCAVATED AND REPLACED WITH A MINIMUM 1 FOOT THICK SOIL SEPARATION LAYER. THE SOIL SEPARATION LAYER SHALL BE PLACED ACCORDING TO THE STRUCTURAL SOIL FILL REQUIREMENTS.

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Big Cove Tannery, PA 17212

FBA

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Dale Martin

JOB NUMBER:

CUSTOMER NUMBER:

REVISION, DATE:

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DWG. BY:

J. MARTIN

FILENAME:

BIVOUAC

DATE:

12/12/19

SCALE:

3/64" = 1'-0"

SHEET TITLE:

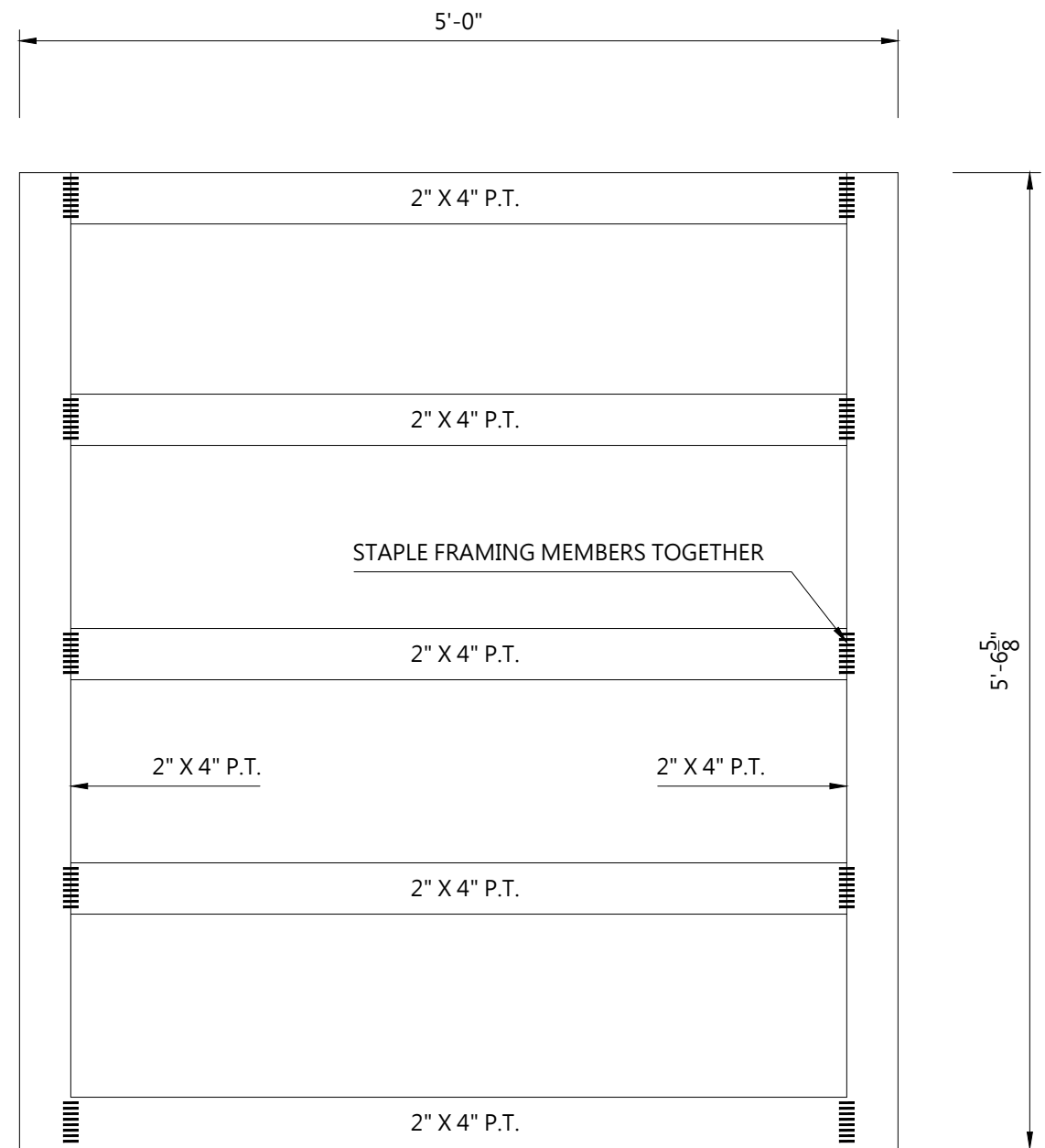
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CONCRETE SPECS

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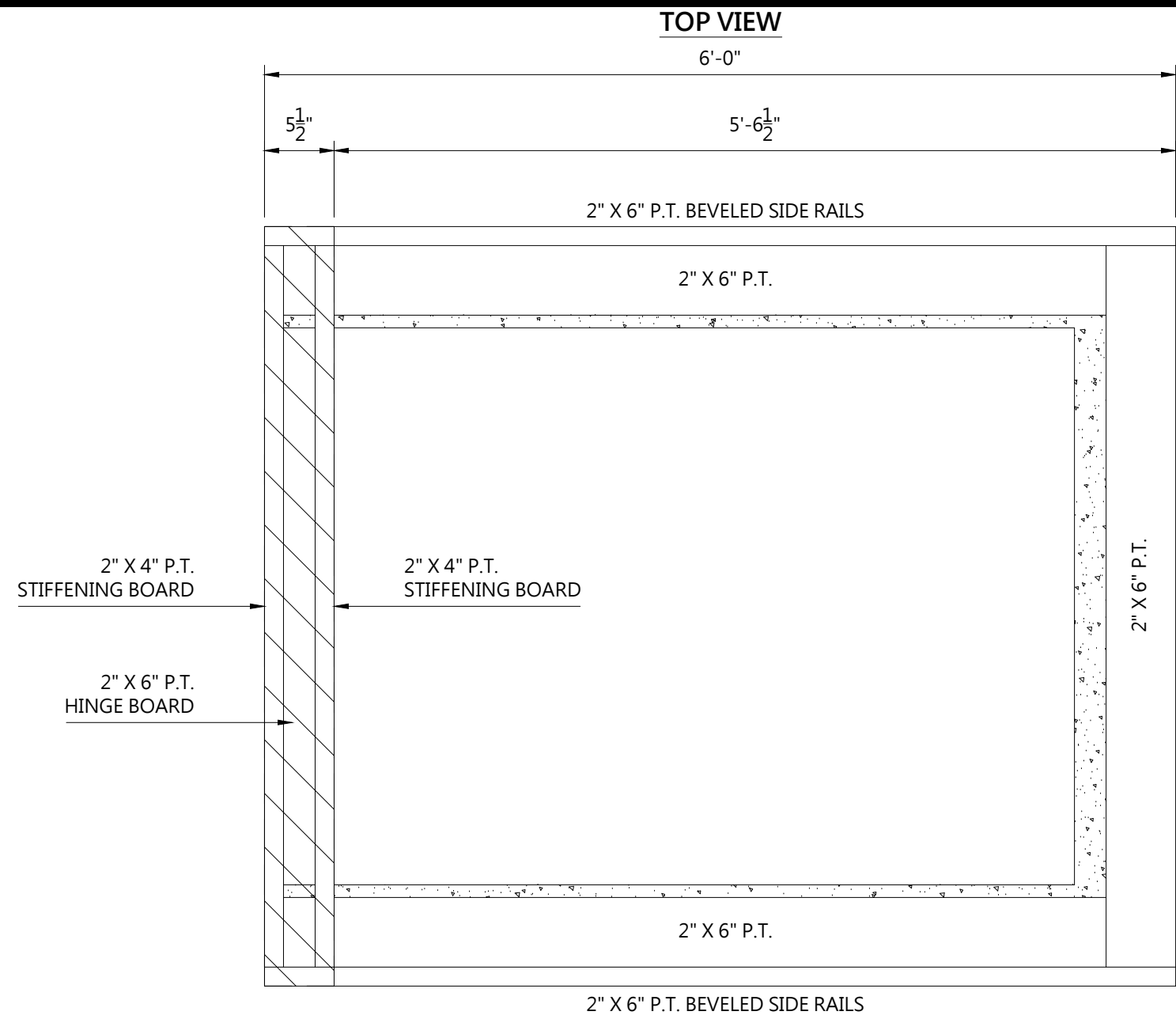
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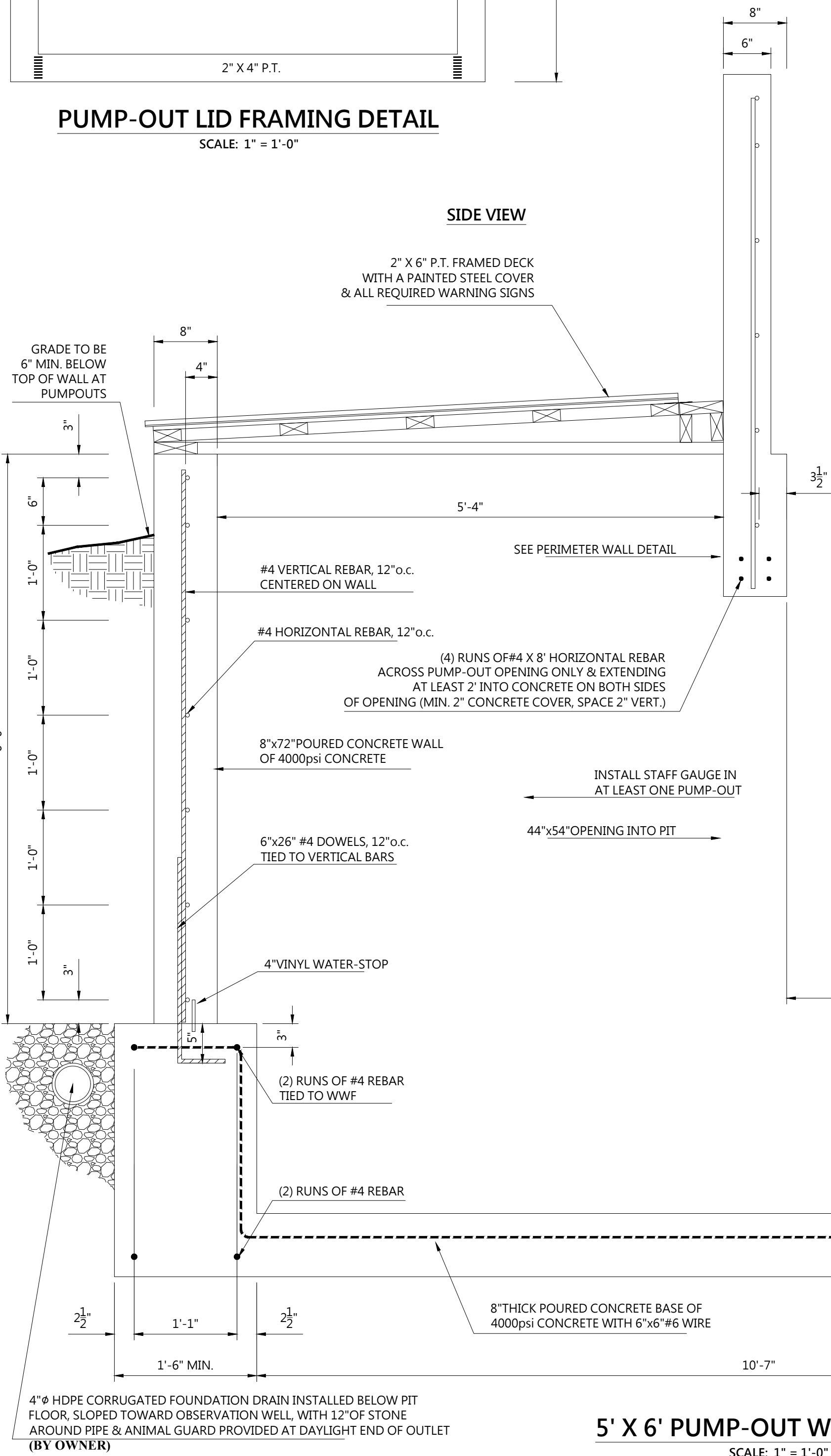
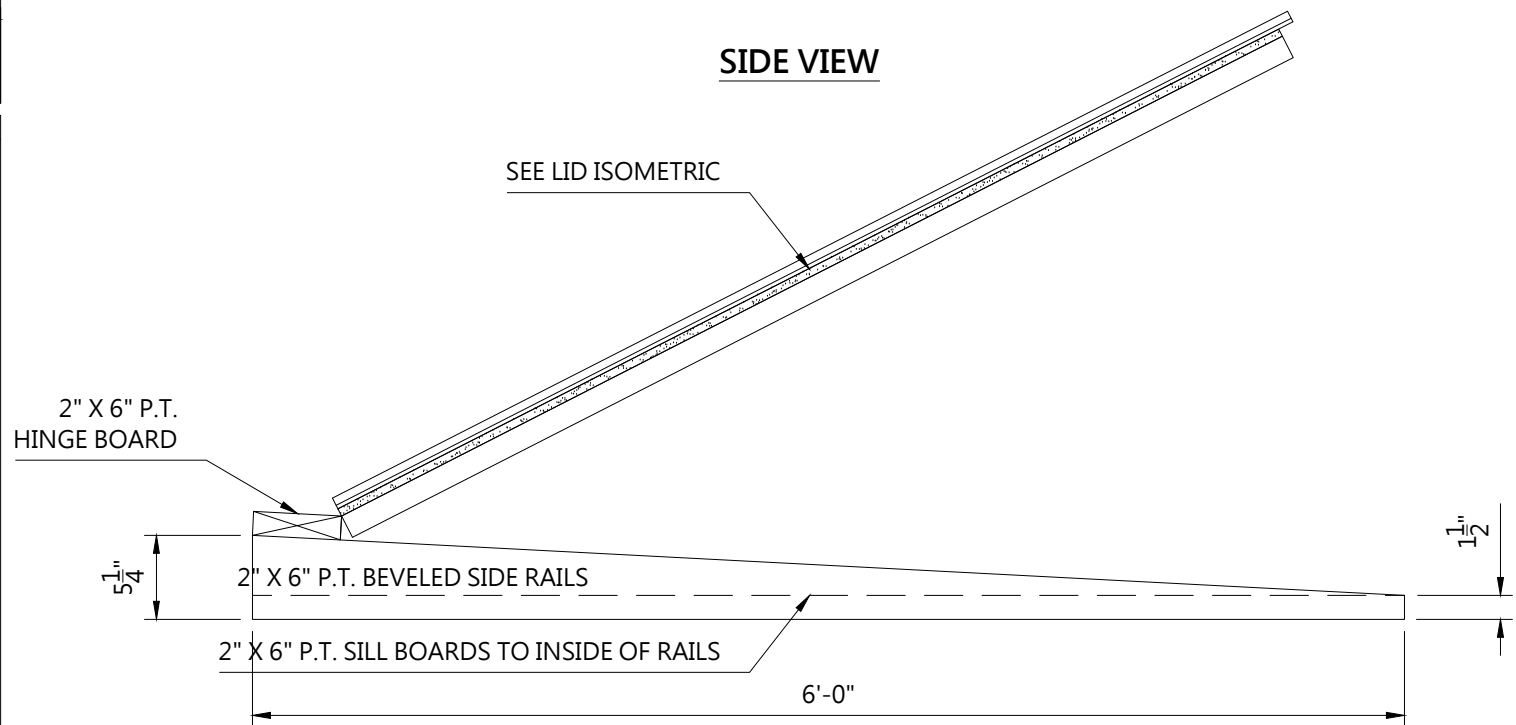
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PROFESSIONAL ENGINEER
PA 0000000000
TIMOTHY R. ROYER
PA 0000000000
Timothy R. Royer P.E. PA Cert # 38662
Expiration Date: 09-30-2021



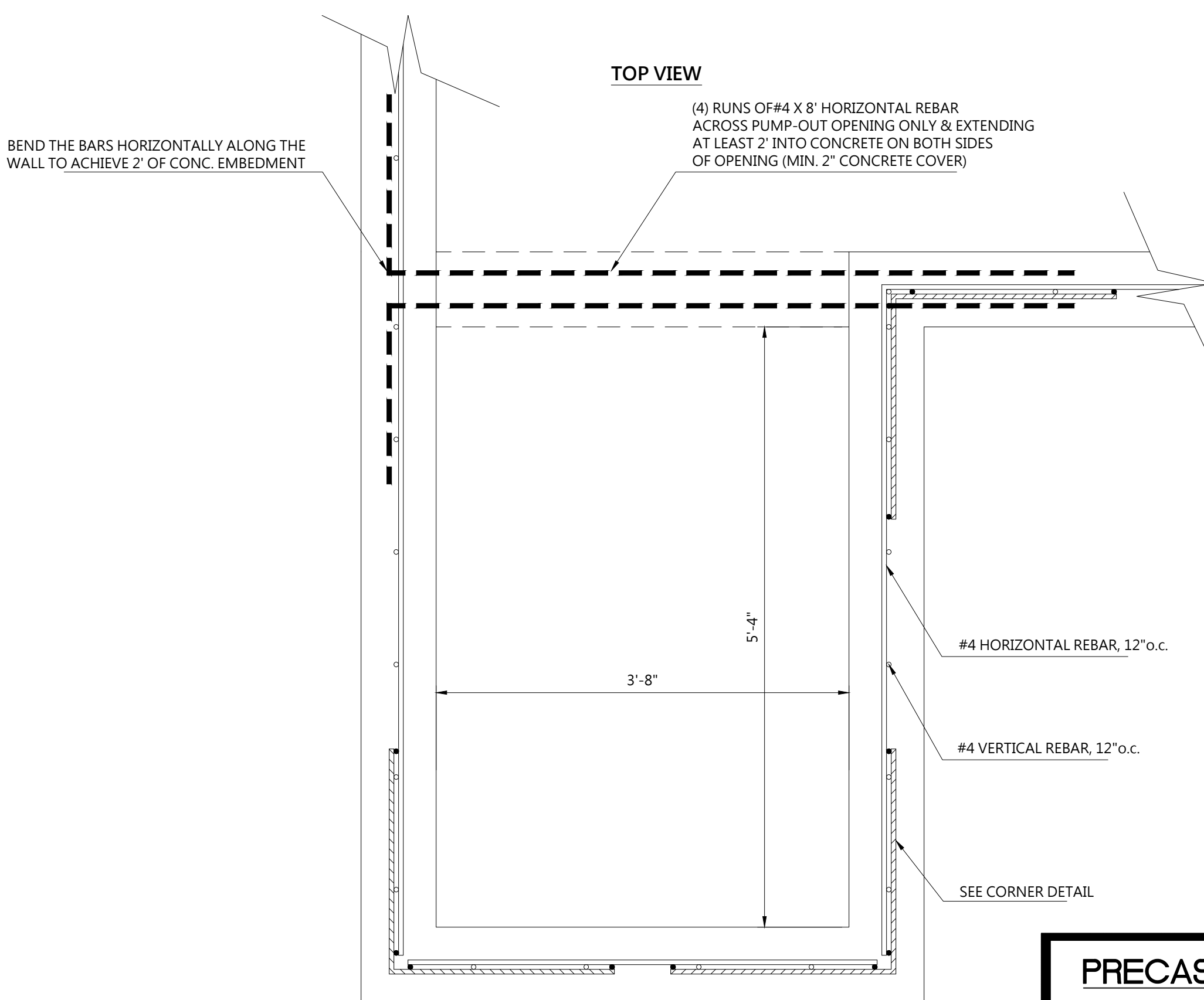
PUMP-OUT LID FRAMING DETAIL
SCALE: 1" = 1'-0"



PUMP-OUT SILL FRAMING DETAIL
SCALE: 1" = 1'-0"



5' X 6' PUMP-OUT WALL DETAIL
SCALE: 1" = 1'-0"



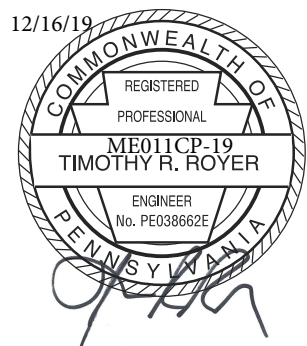
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Big Cove Tannery, PA 17212

FBA

SALES REPRESENTATIVE:

Dale Martin

JOB NUMBER:

CUSTOMER NUMBER:

REVISION, DATE:

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FILENAME:

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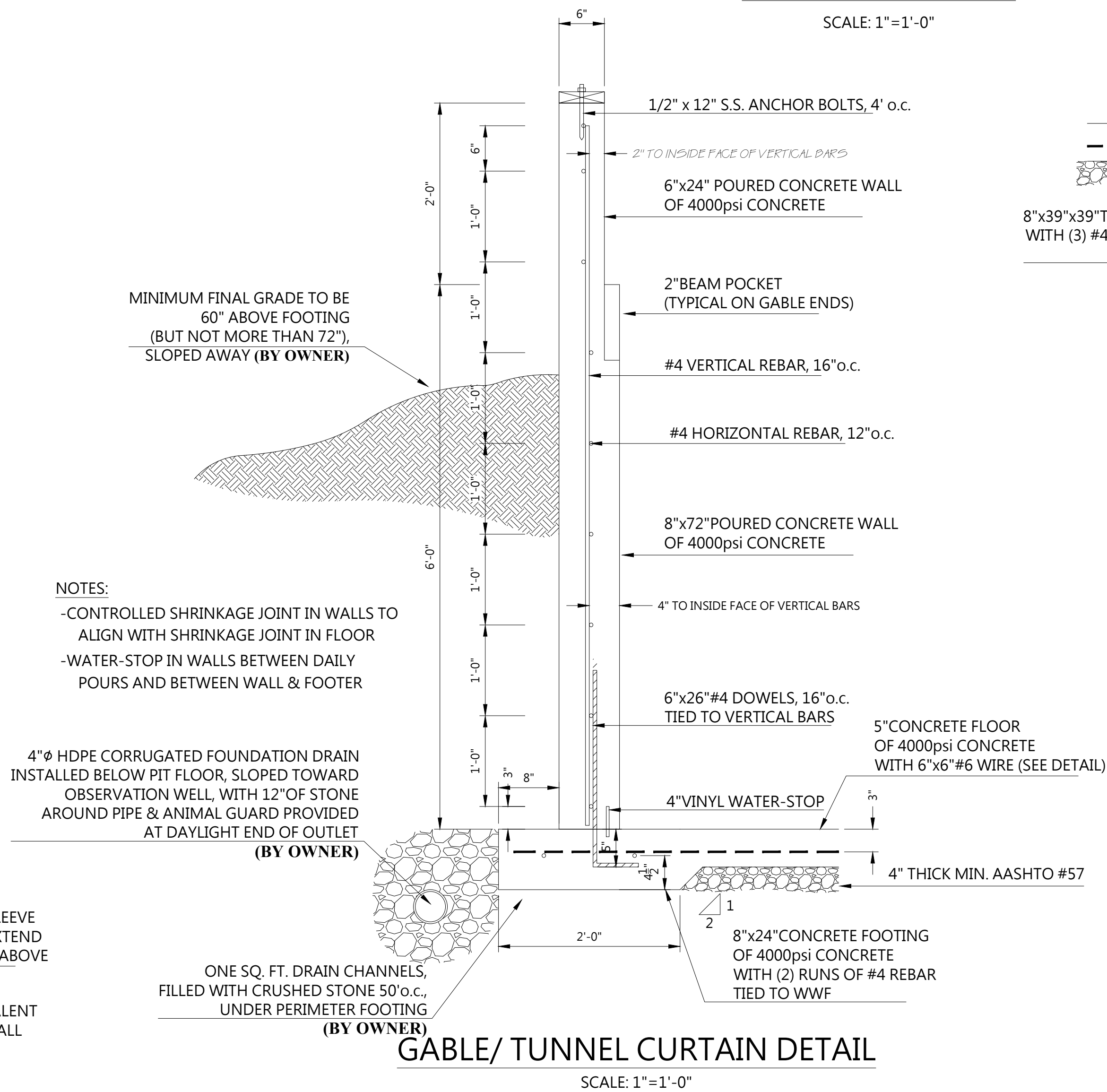
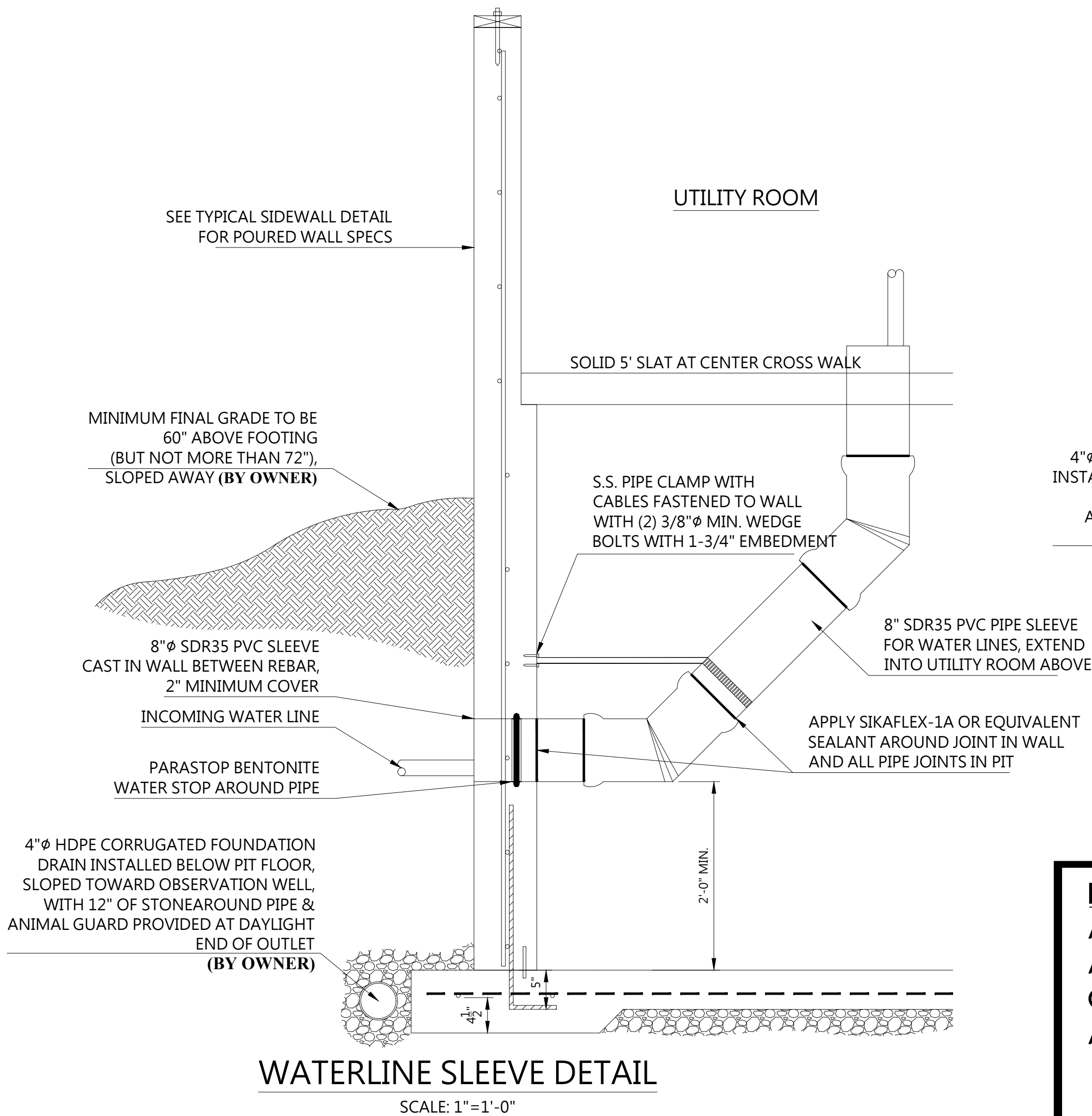
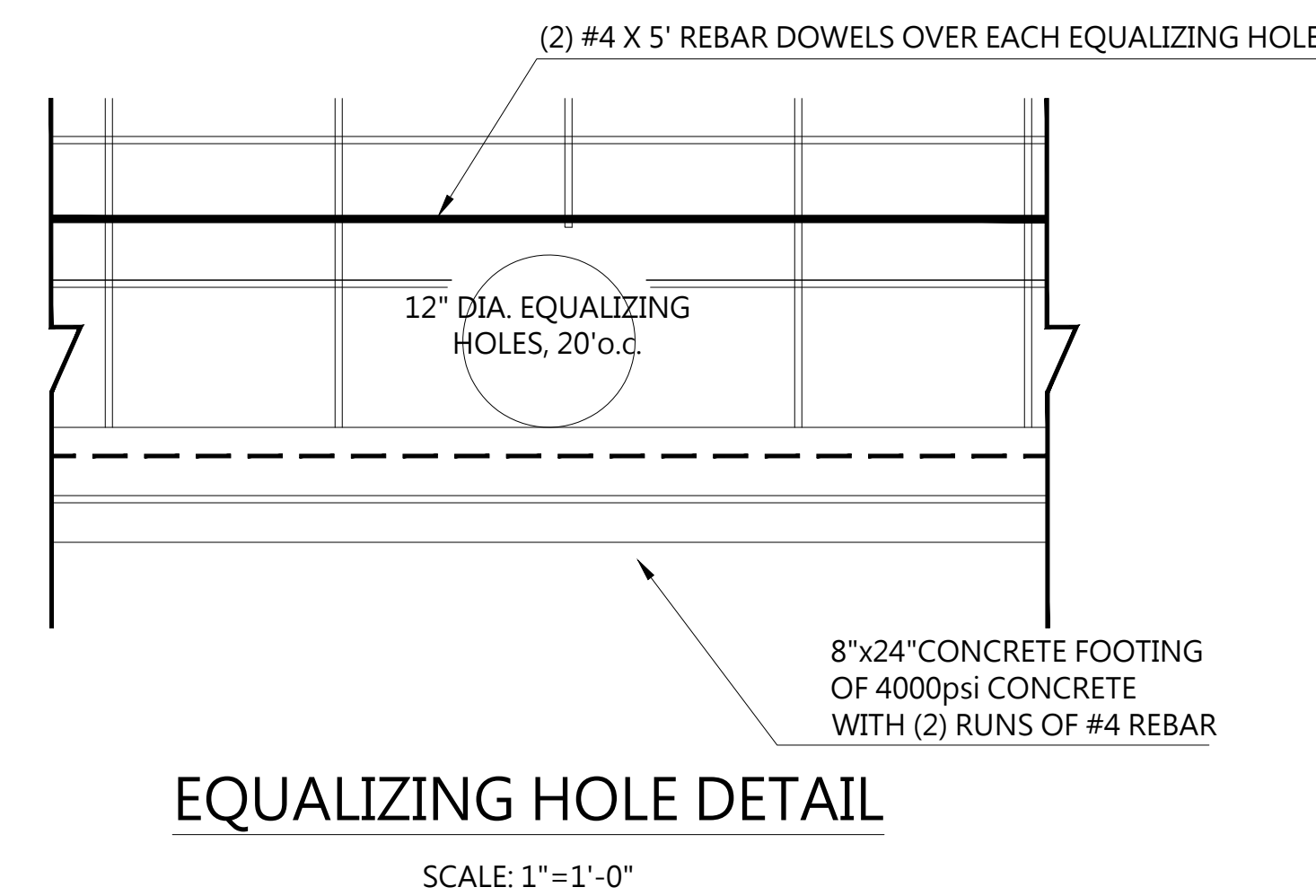
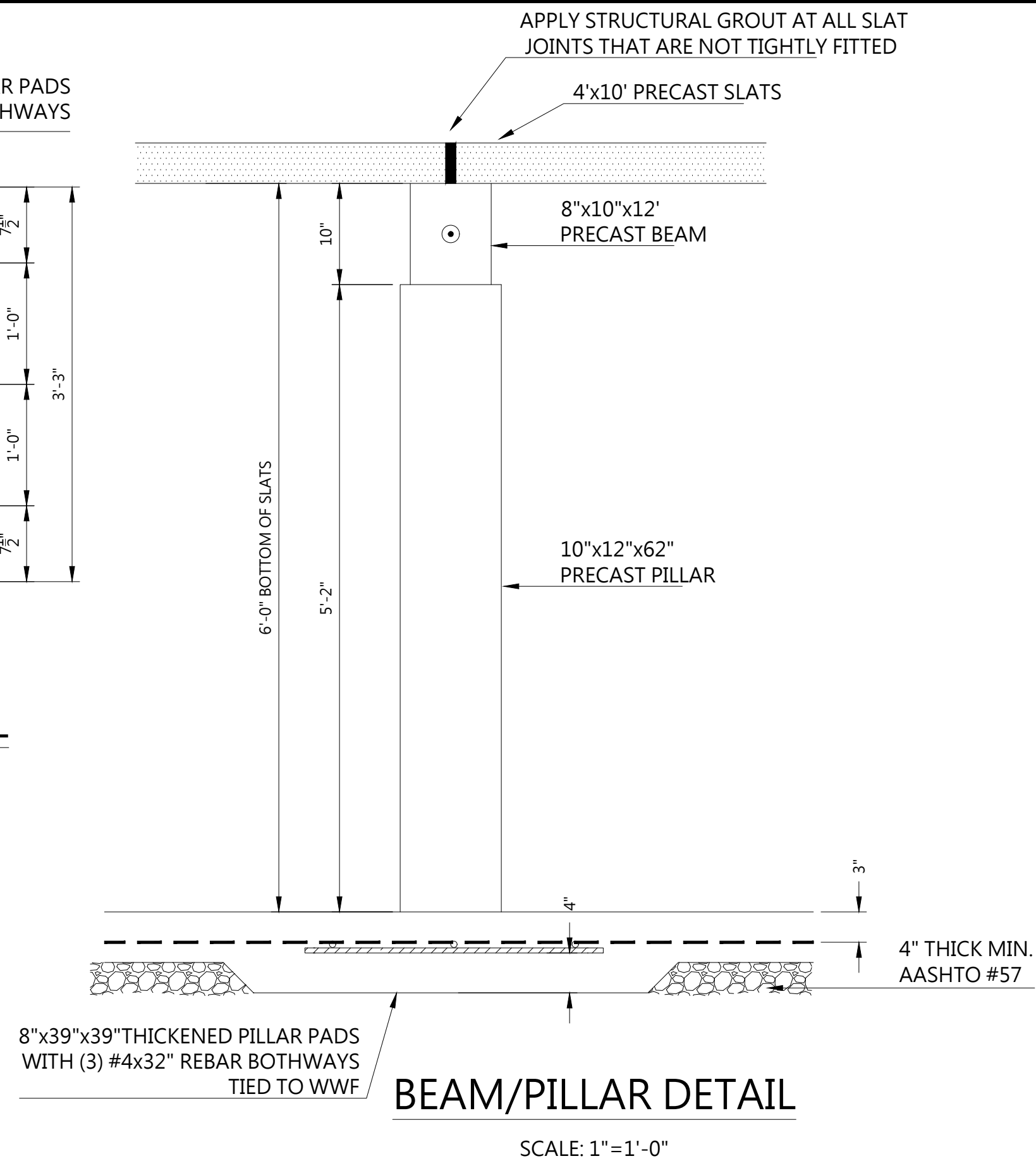
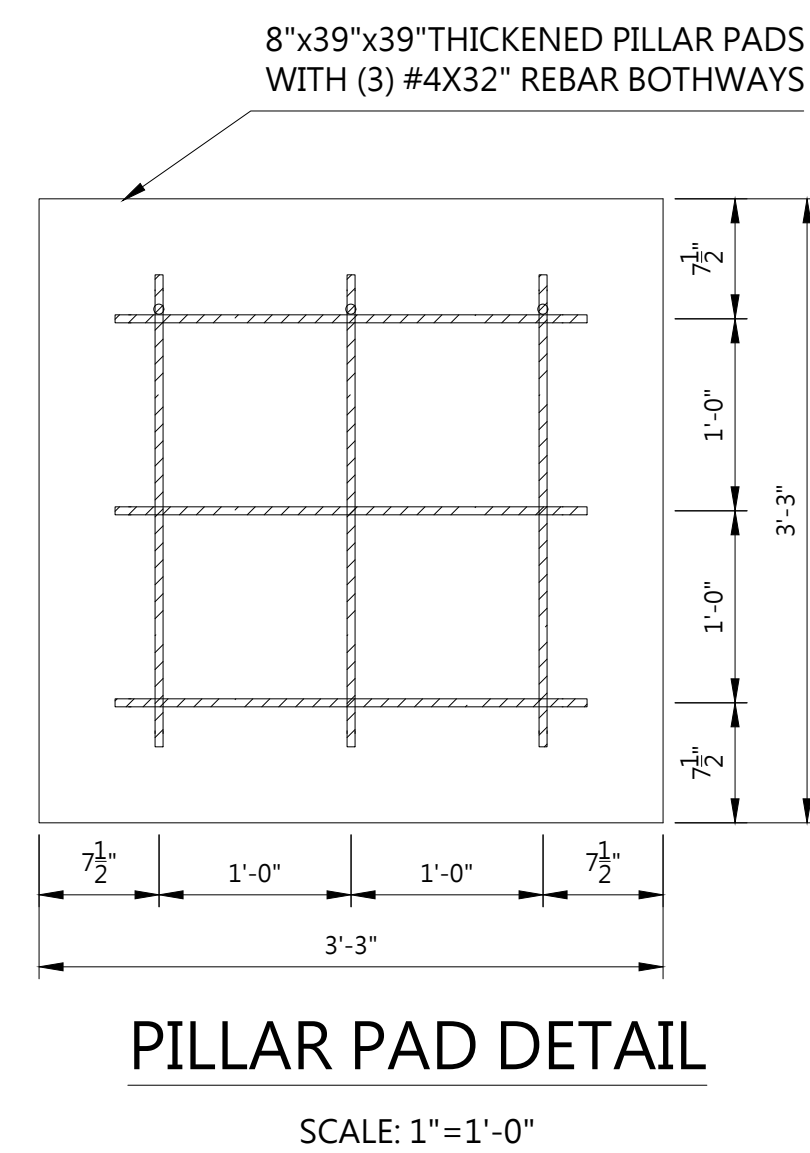
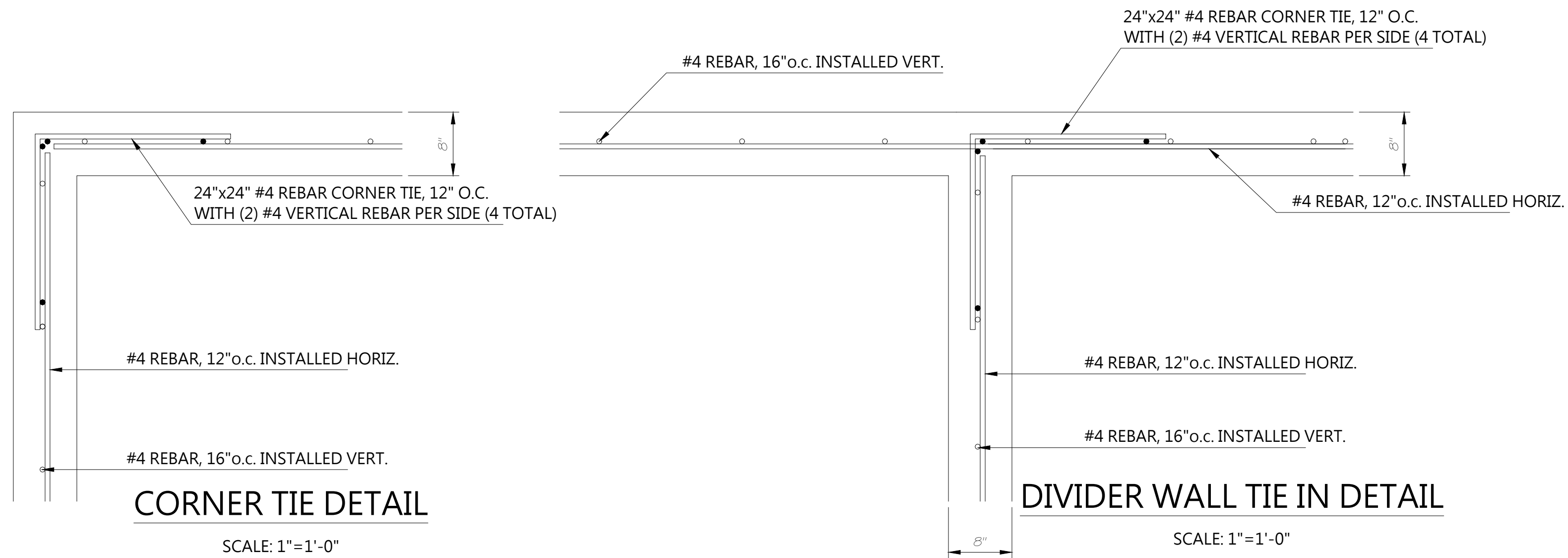
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PROFESSIONAL
TIMOTHY R. ROYER
ENGINEER
No. PED20052

Timothy R. Royer P.E. PA Cert # 38662
Expiration Date: 09-30-2021

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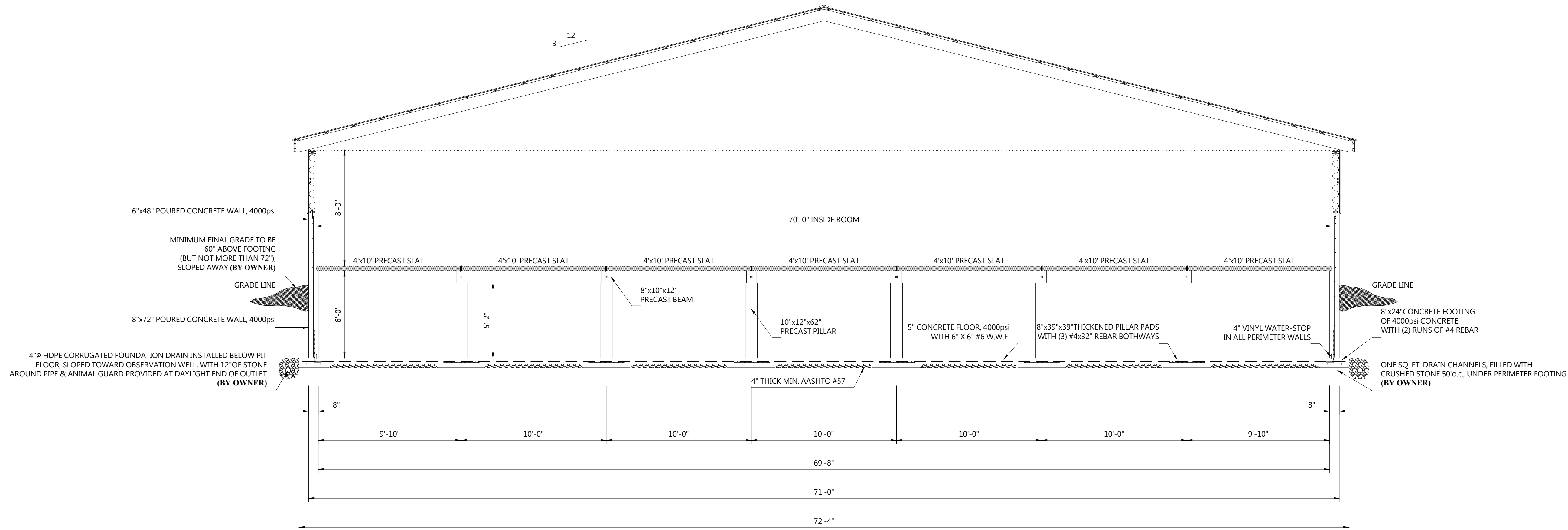
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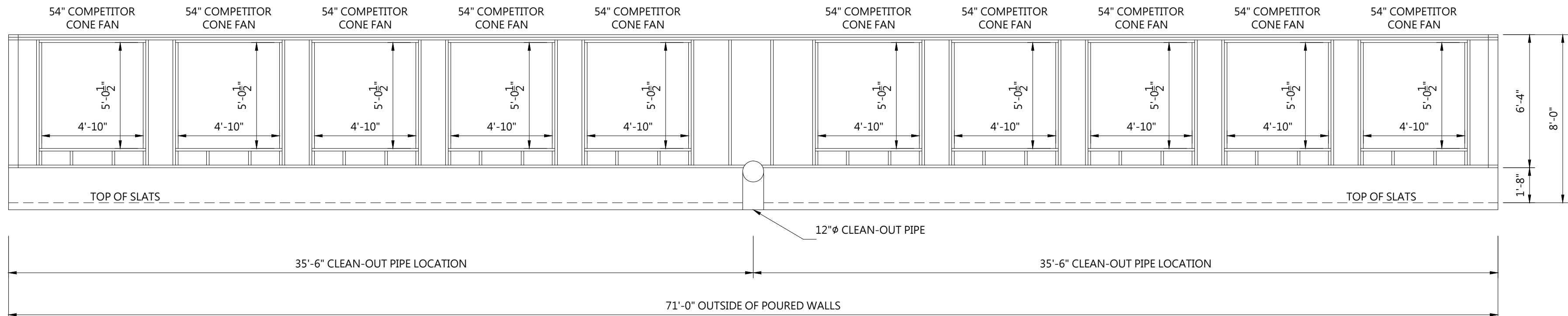
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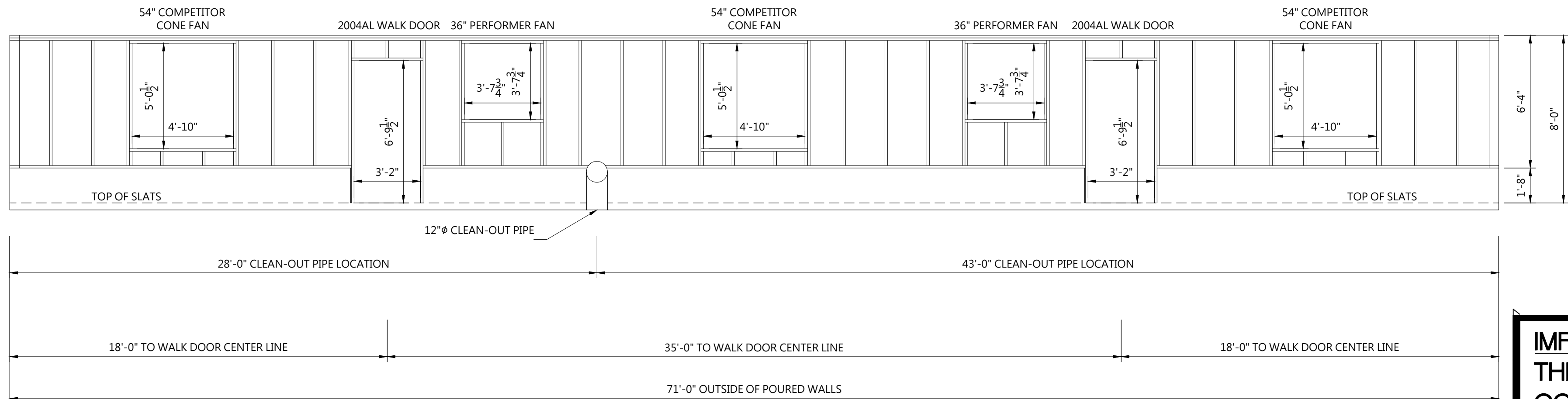
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CROSS SECTION
SCALE: 1/4" = 1'-0"



GILT FINISHER GABLE ELEVATION
SCALE: 1/4" = 1'-0"



GILT GROWER GABLE ELEVATION
SCALE: 1/4" = 1'-0"

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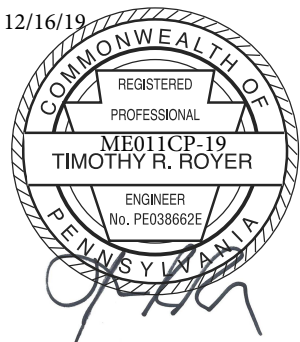
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FILENAME: BIVOUAC

DATE: 12/12/19

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SHEET TITLE:
GILT CROSS SECTION

DRAWING NUMBER:
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