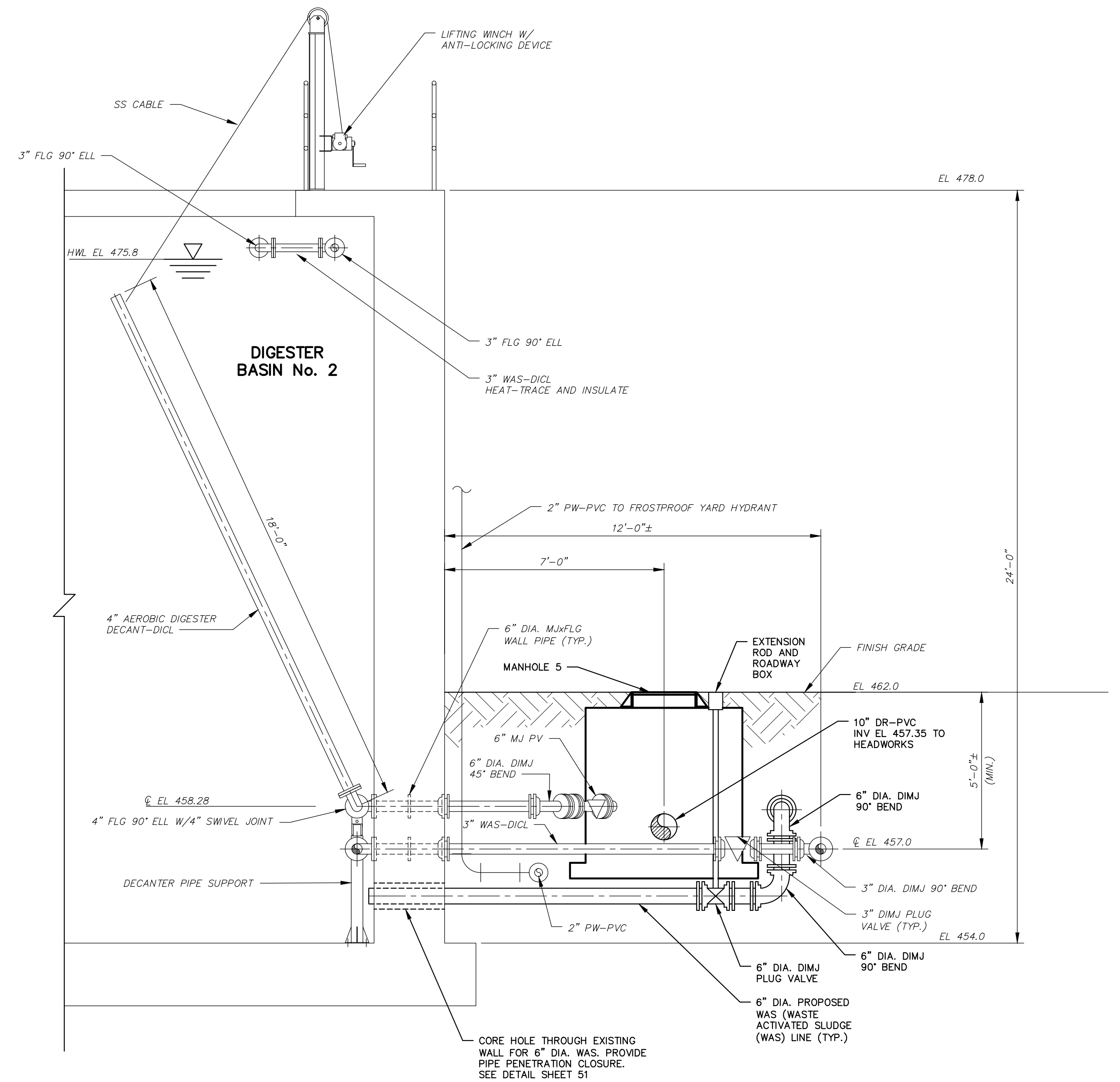


DIGESTER MODIFICATION PLAN
SCALE: 3/8" = 1'-0"

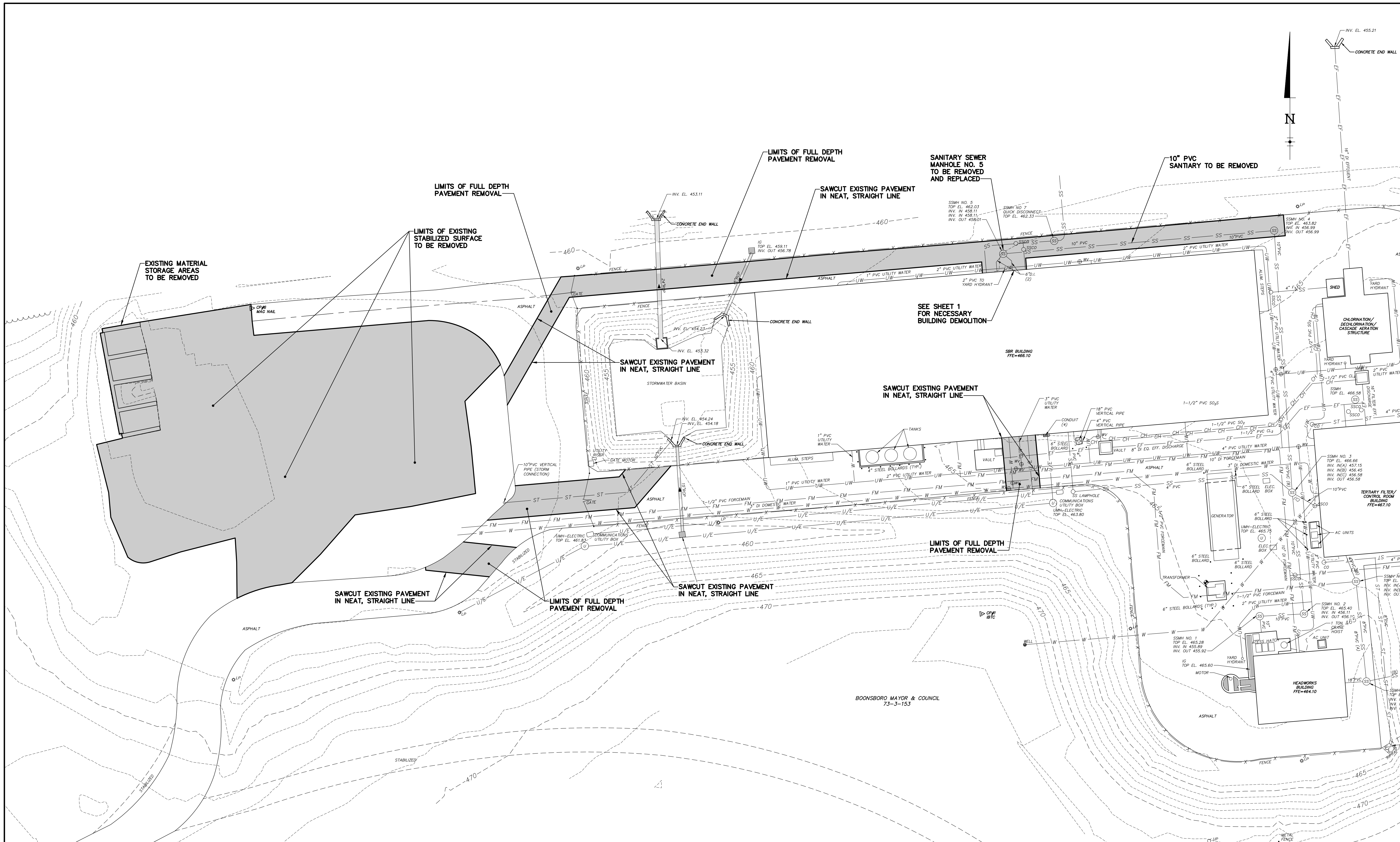


SECTION A-A - 1
SCALE: 3/8" = 1'-0"

NO.	DATE	DESCRIPTION
REVISIONS		

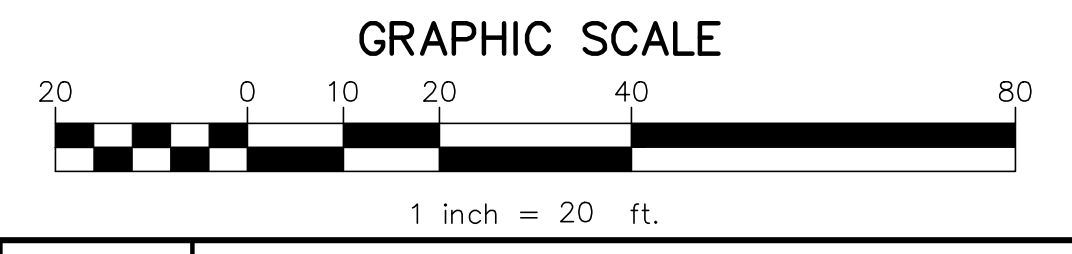
DIGESTER MODIFICATION PLAN AND SECTION		GWIN DOBSON & FOREMAN ENGINEERS 3121 Fairway Drive Altoona, PA 16602 814.943.5214 gdfengineers.com
TOWN OF BOONSBORO		
SLUDGE DEWATERING PROJECT		
BOONSBORO, WASHINGTON COUNTY, MARYLAND		SHEET NO:
SEAL	DATE: ___/___/21 JOB: 21061 SCALE: 3/8" = 1'-0" FILE: 21061_01 DRAWN BY: RLN CHECKED BY:	1

PLOT CREATED: 1/17/2022 10:57 AM



LEGEND EXISTING	
---	ROAD RIGHT-OF-WAY
---	PROPERTY LINE
---	PAVED ROAD
---	STABILIZED
W	DOMESTIC WATERLINE
UW	UTILITY WATERLINE
SS	SANITARY SEWER LINE
FM	SANITARY FORCEMAIN
EF	EFFLUENT LINE
CH	CHEMICAL FEED LINE
ST	STORM SEWER LINE
---	STORM SEWER LINE (12" AND LARGER)
U/E	UNDERGROUND ELECTRIC
---	CONTOUR (1')
---	CONTOUR (5')
---	TREELINE
LP	UTILITY POLE
LP	LIGHT POLE
---	STORM SEWER INLET
---	UTILITY MANHOLE
---	WATER VALVE
---	TREES, BUSHES

LEGEND DEMOLITION	
---	EXISTING FEATURE TO BE REMOVED / DEMOLISHED



NO.	DATE	DESCRIPTION

SEAL	SITE DEMOLITION PLAN		
	TOWN OF BOONSBORO		
DATE: 11/13/22	SLUDGE DEWATERING PROJECT		
	BOONSBORO, WASHINGTON COUNTY, MARYLAND		
FILE: 21061_13	JOB: 21061	SCALE: AS SHOWN	SHEET NO: 13
DRAWN BY: MAH	CHECKED BY: KWB		

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ENGINEERS
 3121 Fairway Drive
 Altoona, PA 16802
 814.943.5214
 gdfeengineers.com

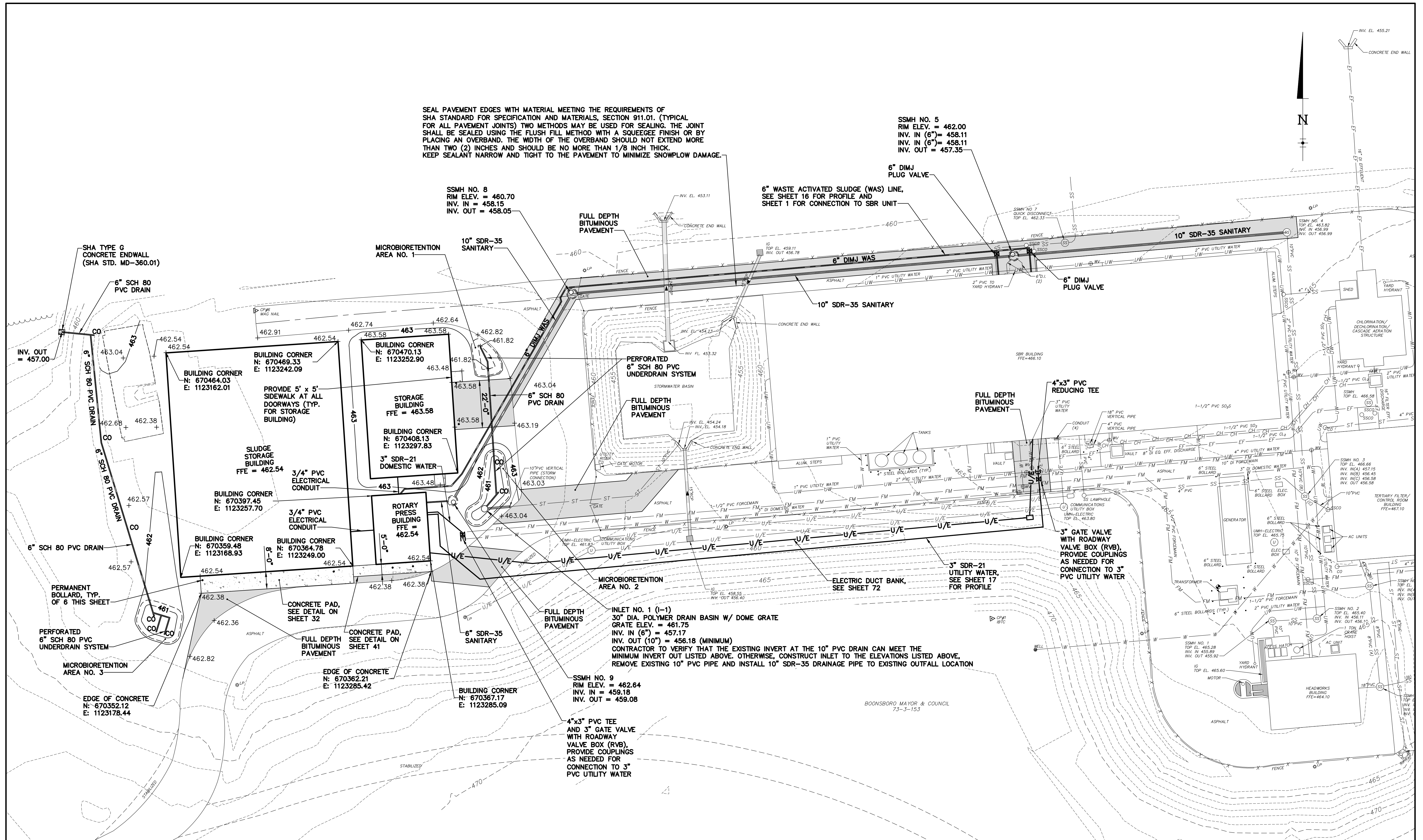
11/13/22 10:55 AM
 21061_13.DWG

SEAL PAVEMENT EDGES WITH MATERIAL MEETING THE REQUIREMENTS OF SHA STANDARD FOR SPECIFICATION AND MATERIALS, SECTION 911.01. (TYPICAL FOR ALL PAVEMENT JOINTS) TWO METHODS MAY BE USED FOR SEALING. THE JOINT SHALL BE SEALED USING THE FLUSH FILL METHOD WITH A SQUEEGEE FINISH OR BY PLACING AN OVERBAND. THE WIDTH OF THE OVERBAND SHOULD NOT EXTEND MORE THAN TWO (2) INCHES AND SHOULD BE NO MORE THAN 1/8 INCH THICK. KEEP SEALANT NARROW AND TIGHT TO THE PAVEMENT TO MINIMIZE SNOWPLOW DAMAGE.

SSMH NO. 5
RIM ELEV. = 462.00
INV. IN (6") = 458.11
INV. IN (6") = 458.11
INV. OUT = 457.35

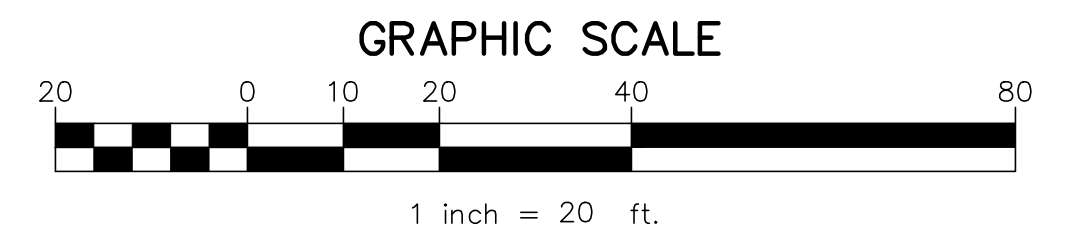
SSMH NO. 8
RIM ELEV. = 460.70
INV. IN = 458.15
INV. OUT = 458.05

6" WASTE ACTIVATED SLUDGE (WAS) LINE,
SEE SHEET 16 FOR PROFILE AND
SHEET 1 FOR CONNECTION TO SBR UNIT



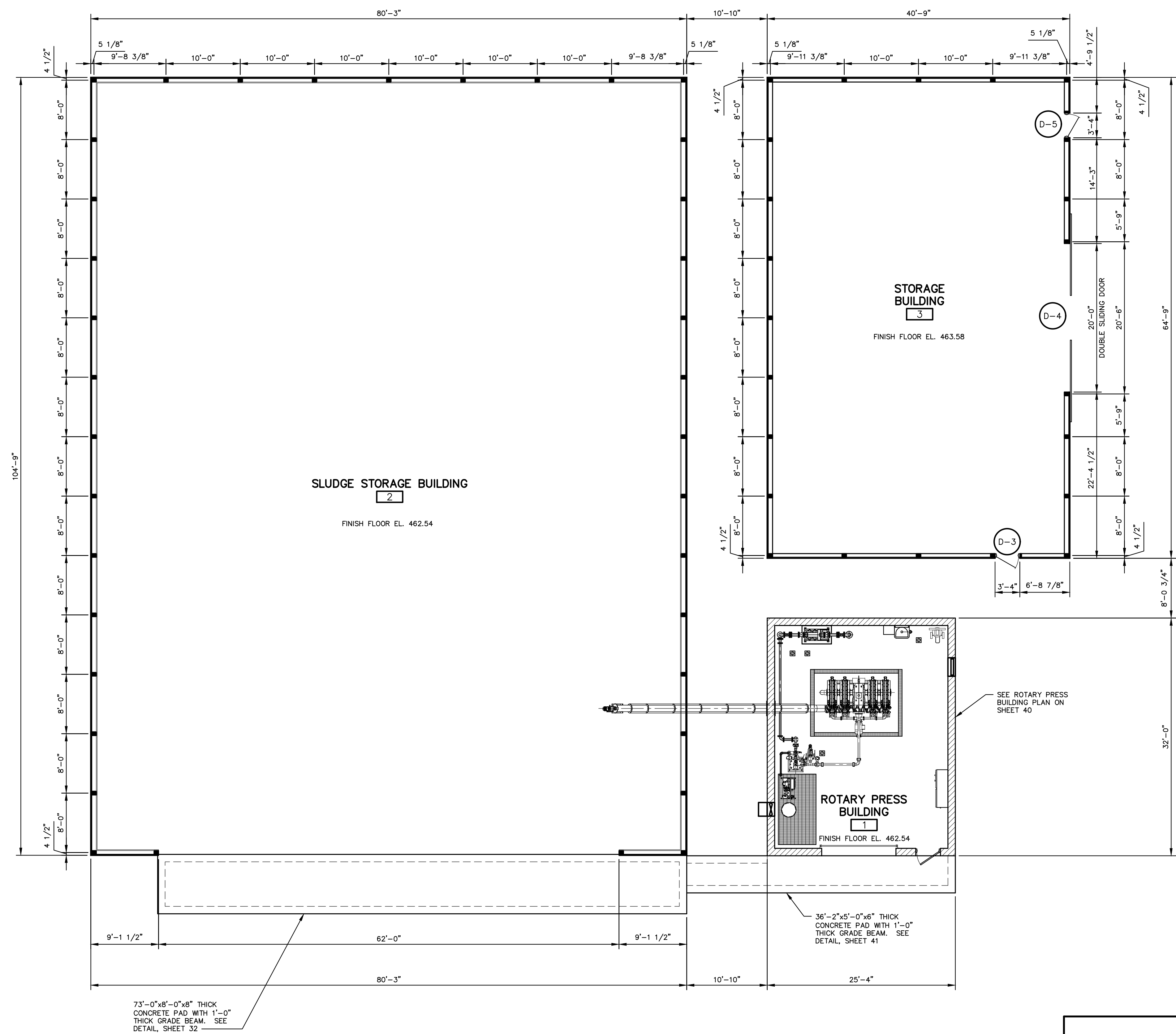
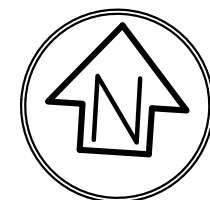
LEGEND EXISTING	
---	ROAD RIGHT-OF-WAY
---	PROPERTY LINE
---	PAVED ROAD
---	STABILIZED
---	DOMESTIC WATERLINE
---	UTILITY WATERLINE
---	SANITARY SEWER LINE
---	SANITARY FORCEMAIN
---	EFFLUENT LINE
---	CHEMICAL FEED LINE
---	STORM SEWER LINE
---	STORM SEWER LINE (12" AND LARGER)
---	UNDERGROUND ELECTRIC
---	CONTOUR (1')
---	CONTOUR (5')
---	TREELINE
---	UTILITY POLE
---	LIGHT POLE
---	STORM SEWER INLET
---	UTILITY MANHOLE
---	WATER VALVE
---	TREES, BUSHES

LEGEND PROPOSED	
---	CONTOUR (1')
---	CONTOUR (5')
---	SPOT ELEVATION
---	WATERLINE
---	SANITARY SEWER LINE
---	STORM SEWER LINE
---	CLEANOUT
---	UNDERGROUND ELECTRIC
---	UTILITY MANHOLE
---	BITUMINOUS PAVEMENT
---	CONCRETE



NO.	DATE	DESCRIPTION

SITE, GRADING AND UTILITY PLAN		
TOWN OF BOONSBORO		
SLUDGE DEWATERING PROJECT		
BOONSBORO, WASHINGTON COUNTY, MARYLAND		SHEET NO:
DATE: 11/14/22	JOB: 21061	SCALE: AS SHOWN
FILE: 21061_14	DRAWN BY: MAH	CHECKED BY: KWB
		14



OVERALL FLOOR PLAN
SCALE: 1/8" = 1'-0"

STRUCTURAL LOADING NOTES:

- CODE UTILIZED = ASCE 7-10 (PER IBC 2018).
- WIND LOAD:**
RISK CATEGORY I;
BASIC WIND SPEED V = 120 MPH
WIND DIRECTIONALITY FACTOR K_d = 0.85
EXPOSURE CATEGORY = C
TOPOGRAPHIC FACTOR K_{zt} = 1.0
GUST EFFECT FACTOR = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
INTERNAL PRESSURE COEFFICIENT GC_p = ±0.18
VELOCITY PRESSURE EXPOSURE COEFFICIENT, K_z AND K_z = 0.90
VELOCITY PRESSURE q_p = 28.2 PSF
ROOF SLOPE = 3.75:12, 17.4°
MEAN ROOF HEIGHT h = 16'
WALL DESIGN WIND PRESSURE p = 24.3 PSF/-17.1 PSF
ROOF DESIGN WIND PRESSURE p = -26.6 PSF/-19.5 PSF
- SNOW LOAD:**
RISK CATEGORY I
GROUND SNOW LOAD = 40 PSF
IMPORTANCE FACTOR I = 0.8
SLOPED ROOF SNOW LOAD = 22.2 PSF
CEILING AND INSULATION = 12 PSF MIN. BOTTOM CHORD
ROOFING MATERIAL LOAD = 10 PSF MIN. TOP CHORD
- SEISMIC LOAD:**
IMPORTANCE FACTOR I = 1.0
SEISMIC DESIGN CATEGORY = E
SITE CLASSIFICATION = D
BASIC STRUCTURAL SYSTEM AND SEISMIC RESISTING SYSTEM = BEARING WALL SYSTEM

LEGEND

- XXX INDICATES ROOM AREA NUMBER
- D- INDICATES DOOR (SEE DOOR SCHEDULE, SHEETS NO. 50)

NO.	DATE	DESCRIPTION
REVISIONS		

OVERALL FLOOR PLAN		 GWIN DOBSON & FOREMAN ENGINEERS 3121 Fairway Drive Altoona, PA 16602 814.943.5214 gdfengineers.com
TOWN OF BOONSBORO		
SLUDGE DEWATERING PROJECT		
BOONSBORO, WASHINGTON COUNTY, MARYLAND		SHEET NO:
DATE: ___/___/21	JOB: 21061	SCALE: 1/8" = 1'-0"
FILE: 21061_30	DRAWN BY: RLN	CHECKED BY:

30

PLOT CREATED: 1/17/2022 10:29 AM

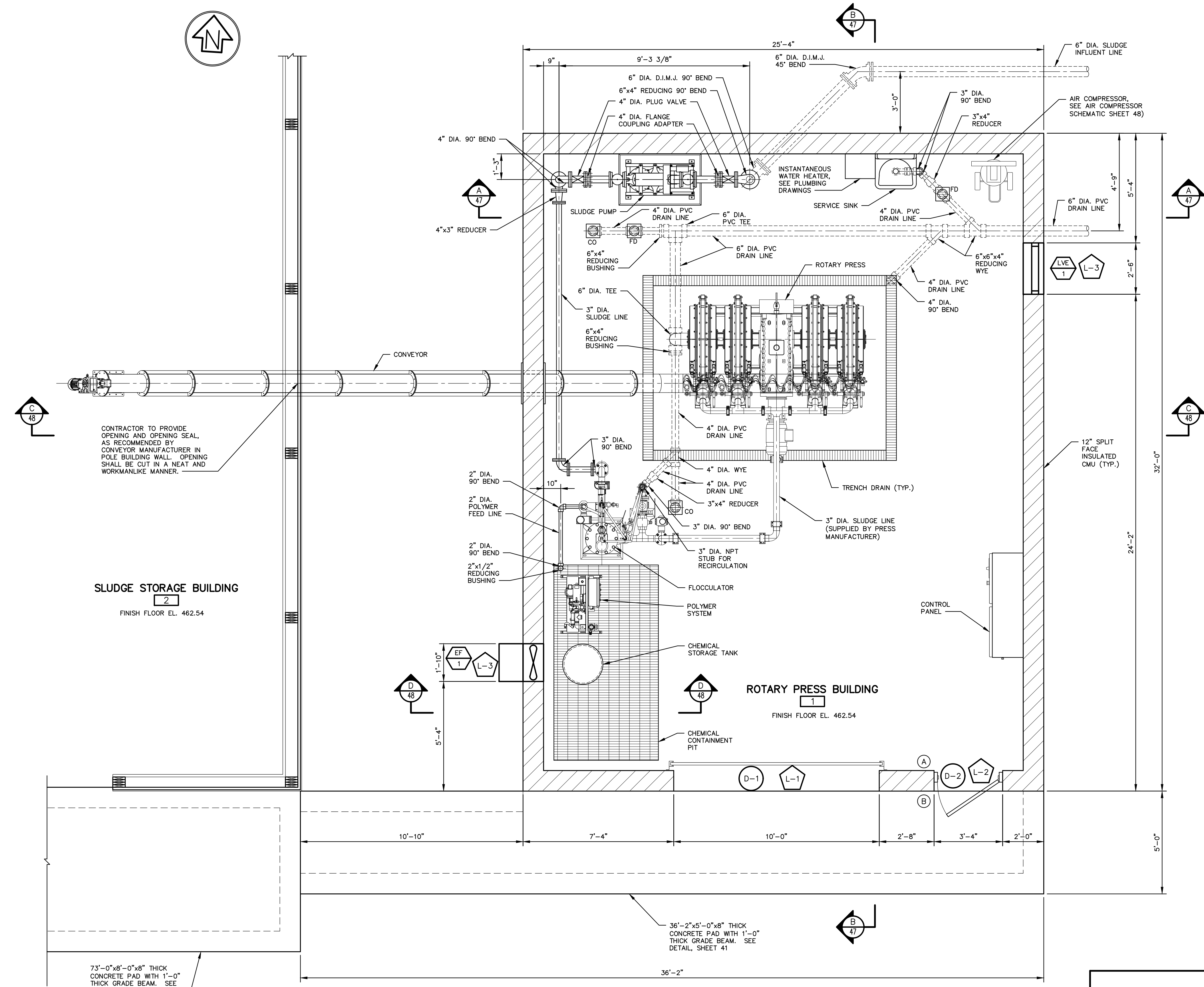
IBC 2018 CODE ANALYSIS TABLE	
USE AND OCCUPANCY CLASSIFICATION	U
TYPE OF CONSTRUCTION	V-B
BUILDING HEIGHT	1 STORY, 19'-9" ±
TOTAL DESIGNED OCCUPANCY	0
MAXIMUM TRAVEL DISTANCE TO EXIT	37'-0"
MINIMUM NUMBER OF EXITS	1

FIRE EXTINGUISHERS: A MINIMUM OF 1 WITH A 2A RATING IS PROVIDED FOR EACH AREA (SEE PLAN) IN ACCORDANCE WITH TABLE 906.3(1) OF THE IFC 2009

AREA SCHEDULE		
ROOM No.	ROOM NAME	AREA (SQ. FEET)
1	ROTARY PRESS BUILDING	700
TOTAL GROSS AREA		811

SIGN SCHEDULE	
(A)	EXIT
(B)	ENTRANCE

NOTE: 2" HIGH SIGNS, 4'-0" TO THE BOTTOM x AS LONG AS NEEDED FOR ROOM TITLE



- LEGEND**
- A.F.F. ABOVE FINISHED FLOOR
 - MCJ MASONRY CONTROL JOINT (SEE EXTERIOR ELEVATIONS, SHEET 46 FOR DIMENSIONS)
 - M.O. MASONRY OPENING
 - FD FLOOR DRAIN
 - CO CLEANOUT
 - FE INDICATES FIRE EXTINGUISHER
 - XXX INDICATES ROOM AREA NUMBER
 - D- INDICATES DOOR (SEE DOOR SCHEDULE, SHEETS NO. 50)
 - L- INDICATES LINTEL (SEE LINTEL SCHEDULE, SHEETS NO. 50)
 - INDICATES LOUVER/EXHAUST FAN, SEE HVAC PLAN AND SCHEDULE
 - 12" STANDARD CMU WITH #5 @ 32" (WITH INJECTED SPRAY FOAM INSULATION)
 - TRENCH DRAIN (SEE PLUMBING PLANS)

SLUDGE STORAGE BUILDING
2
FINISH FLOOR EL. 462.54

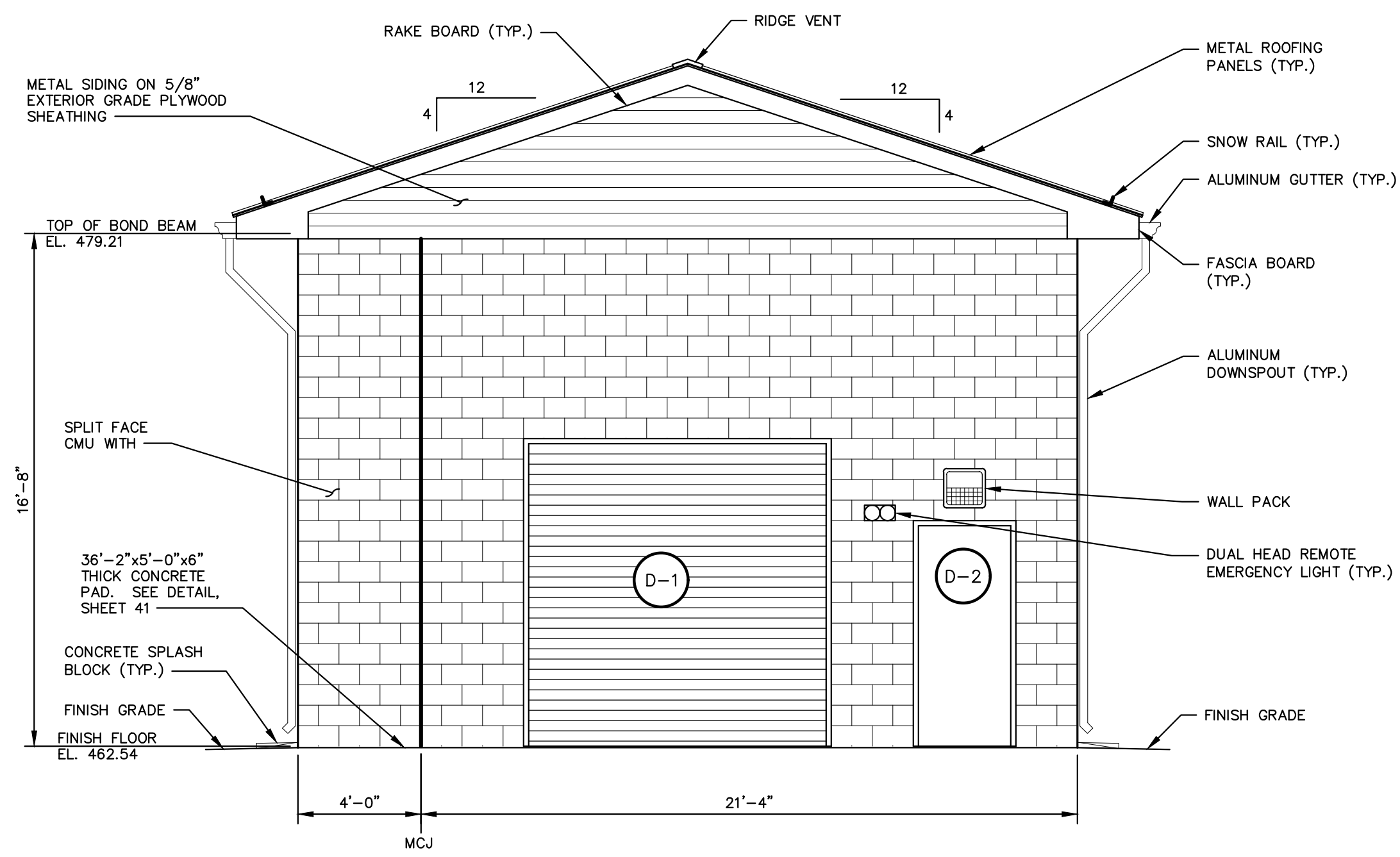
ROTARY PRESS BUILDING
1
FINISH FLOOR EL. 462.54

ROTARY PRESS BUILDING FLOOR PLAN
SCALE: 3/8" = 1'-0"

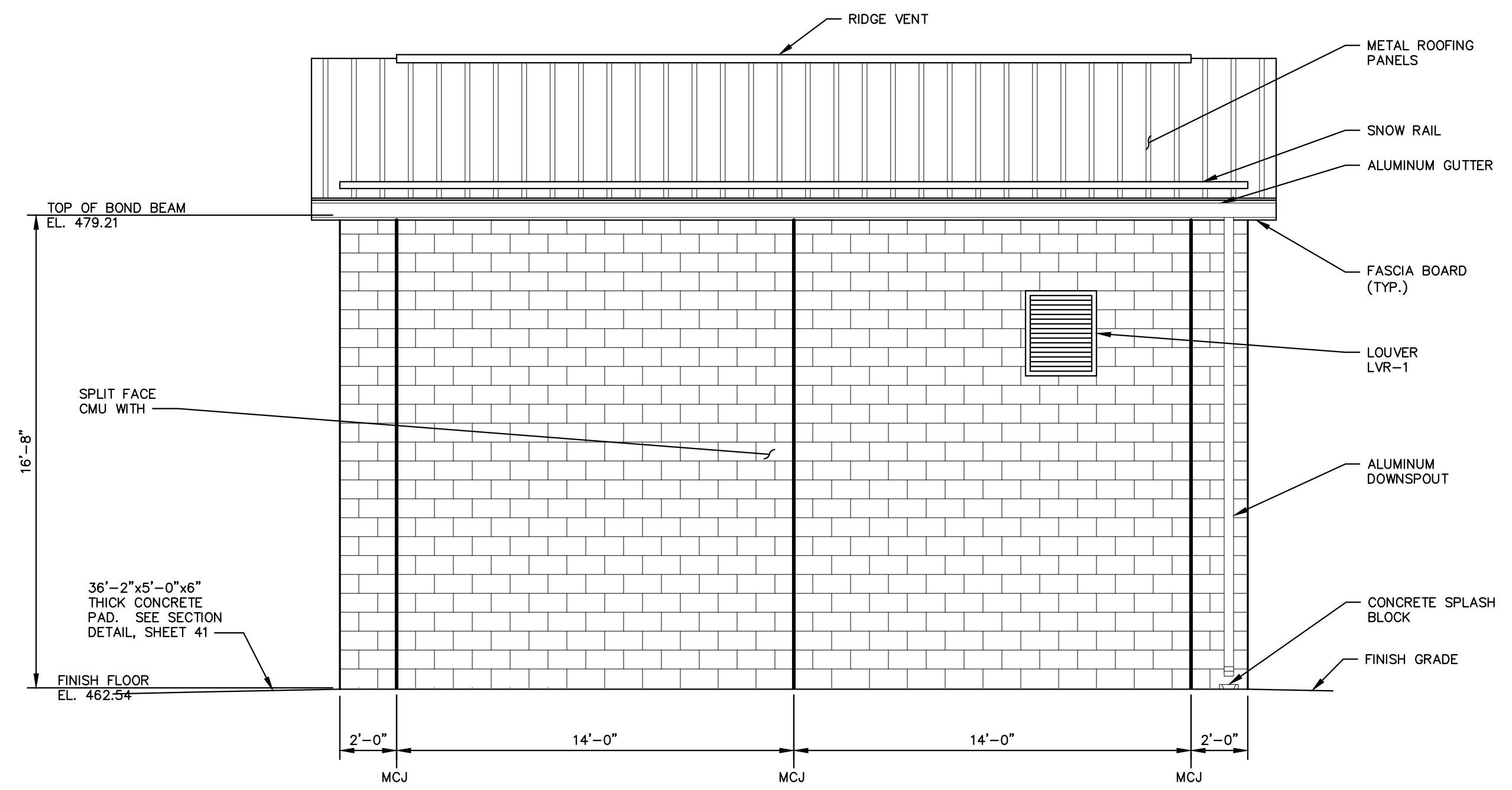
NO.	DATE	DESCRIPTION
REVISIONS		

ROTARY PRESS BUILDING FLOOR PLAN		<p>GWIN DOBSON & FOREMAN ENGINEERS 3121 Fairway Drive Aldona, PA 16602 814.943.5214 gdfengineers.com</p>
TOWN OF BOONSBORO		
SLUDGE DEWATERING PROJECT		
BOONSBORO, WASHINGTON COUNTY, MARYLAND		
SEAL	DATE: ___/___/21 JOB: 21061 FILE: 21061_40	SCALE: 3/8" = 1'-0" DRAWN BY: RLN CHECKED BY: SHEET NO: 40

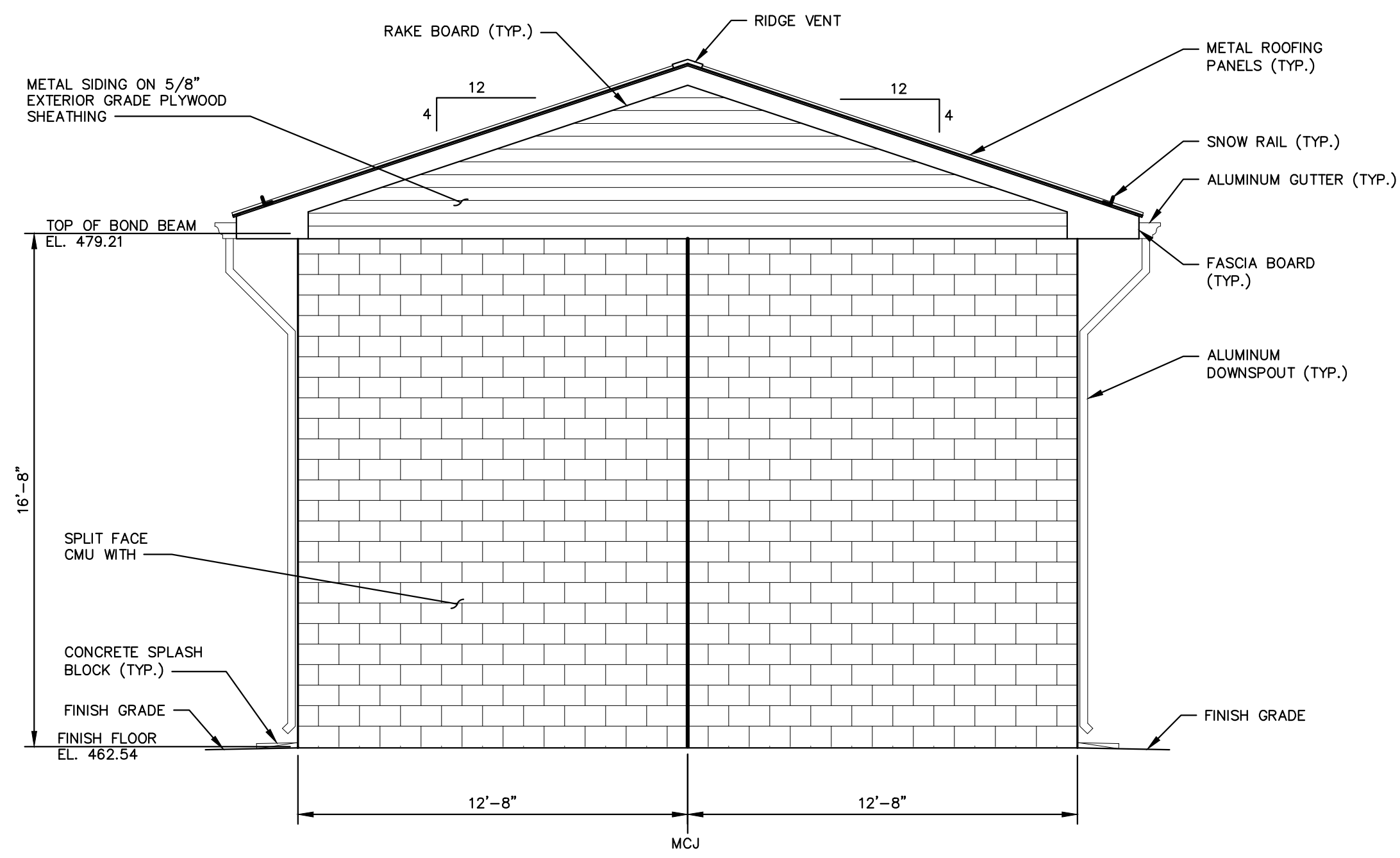
PLOT CREATED: 1/17/2022 10:29 AM



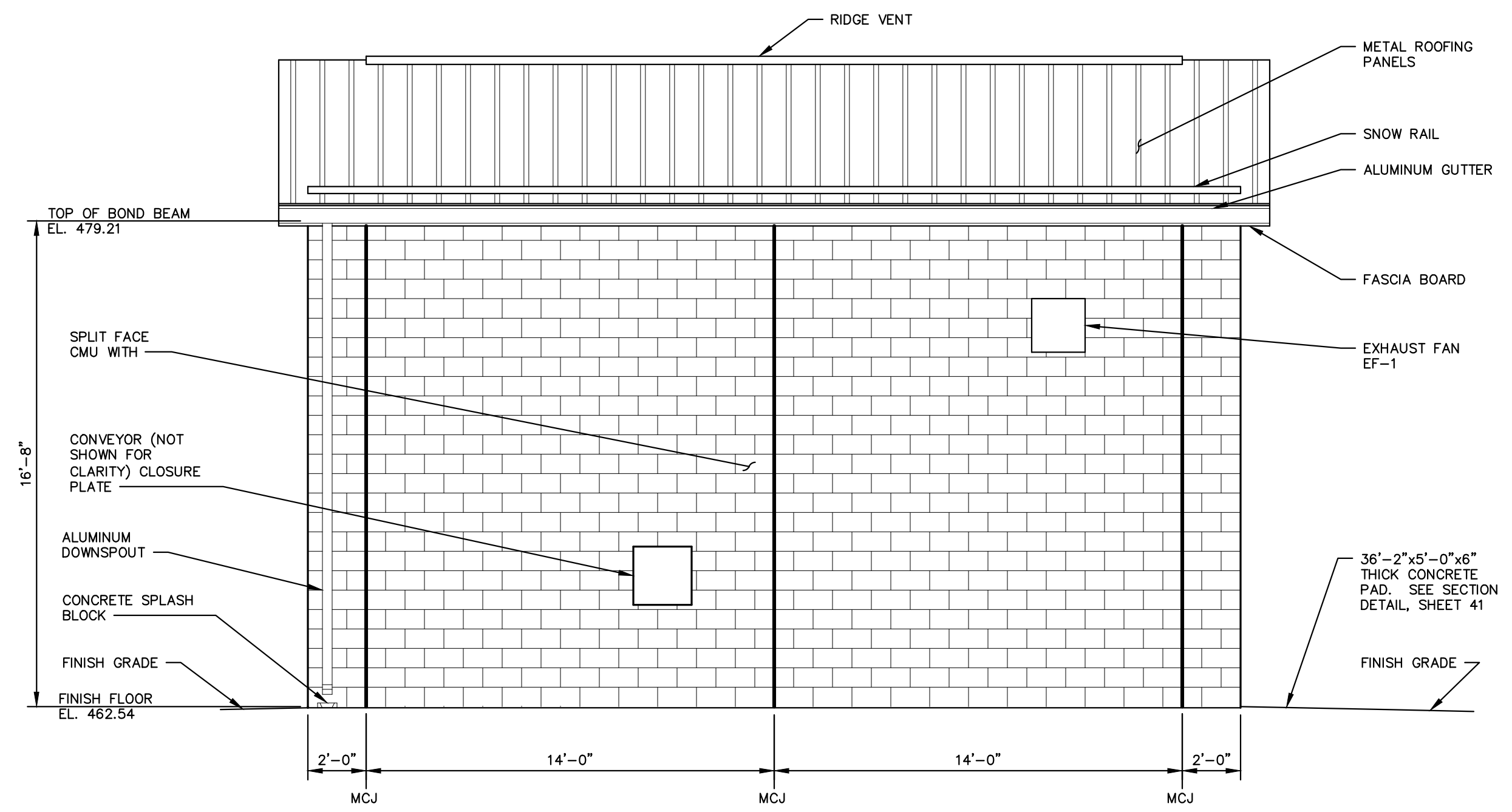
ROTARY PRESS BUILDING SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



ROTARY PRESS BUILDING EAST ELEVATION
SCALE: 1/4" = 1'-0"



ROTARY PRESS BUILDING NORTH ELEVATION
SCALE: 1/4" = 1'-0"



ROTARY PRESS BUILDING WEST ELEVATION
SCALE: 1/4" = 1'-0"

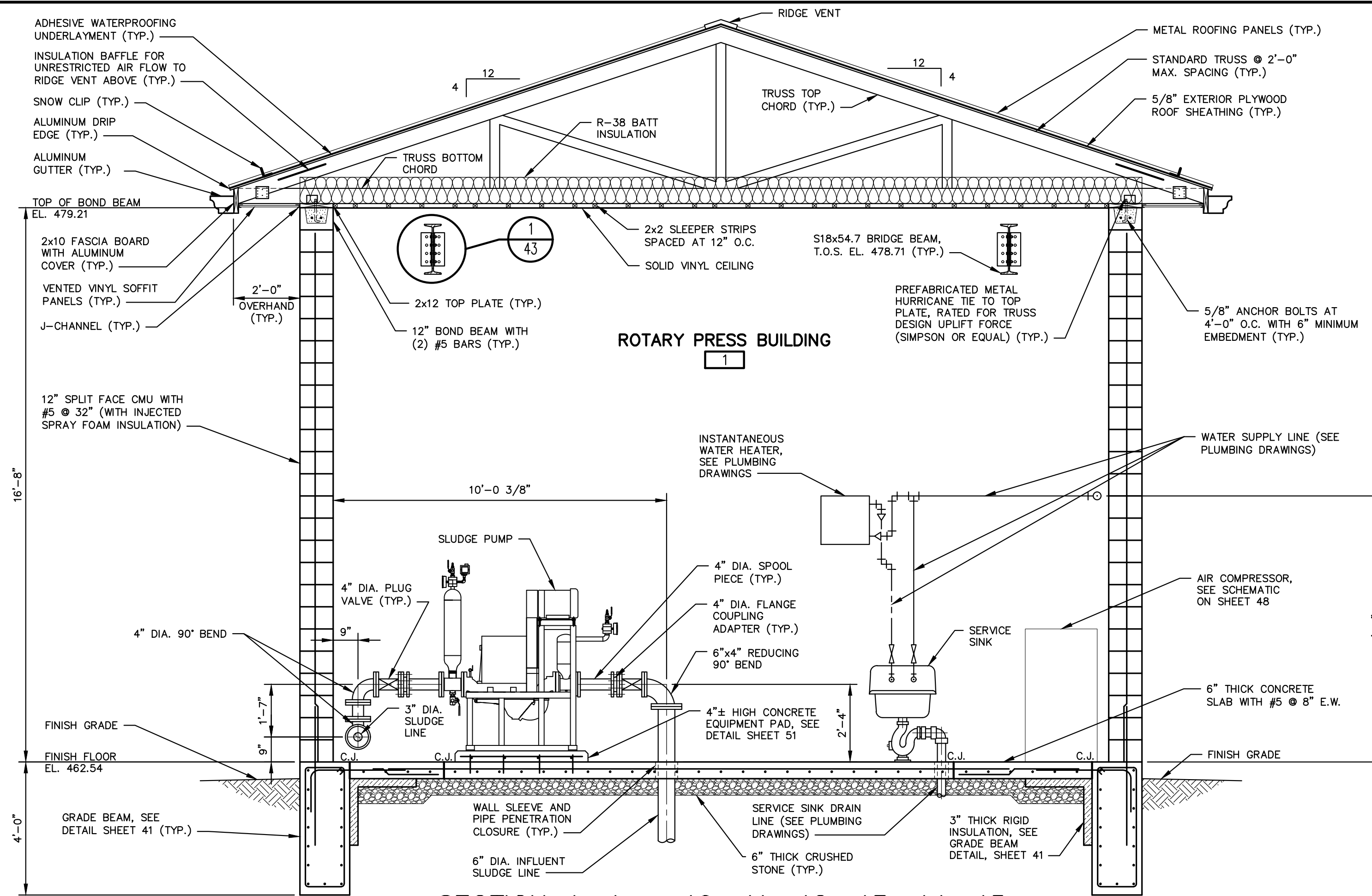
LEGEND

MCJ MASONRY CONTROL JOINT

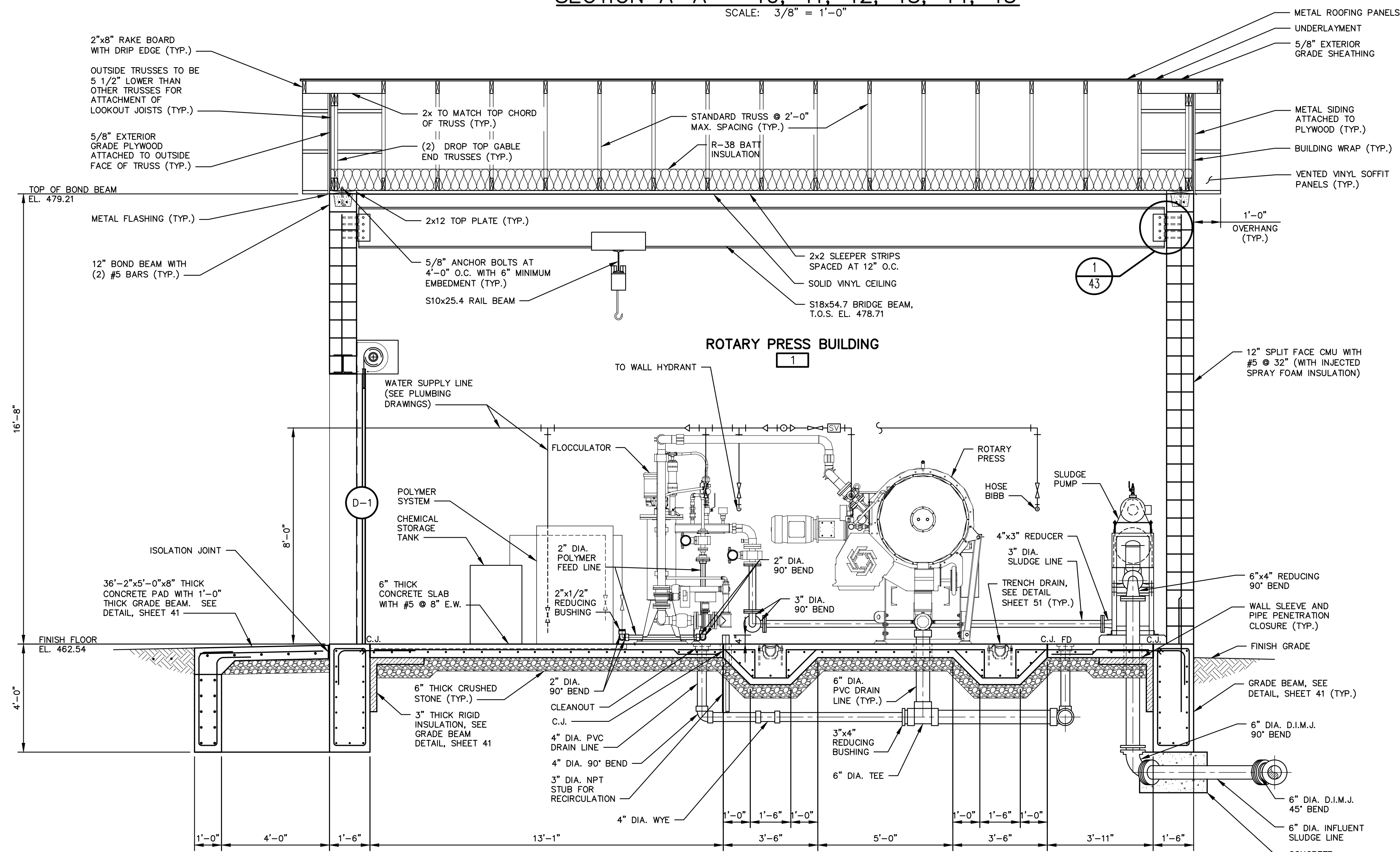
NO.	DATE	DESCRIPTION

SEAL	ROTARY PRESS BUILDING EXTERIOR ELEVATIONS			<p>GWIN DOBSON & FOREMAN ENGINEERS 3121 Fairway Drive Aldona, PA 16602 814.943.5214 gdfengineers.com</p>
	TOWN OF BOONSBORO			
SLUDGE DEWATERING PROJECT				
BOONSBORO, WASHINGTON COUNTY, MARYLAND				
DATE: --/--/21	JOB: 21061	SCALE: 3/8" = 1'-0"	SHEET NO: 46	
FILE: 21061_46	DRAWN BY: RLN	CHECKED BY:		

PLOT CREATED: 1/17/2022 10:02 AM



SECTION A-A - 40, 41, 42, 43, 44, 45
 SCALE: 3/8" = 1'-0"



SECTION B-B - 40, 41, 42, 43, 44, 45
 SCALE: 3/8" = 1'-0"

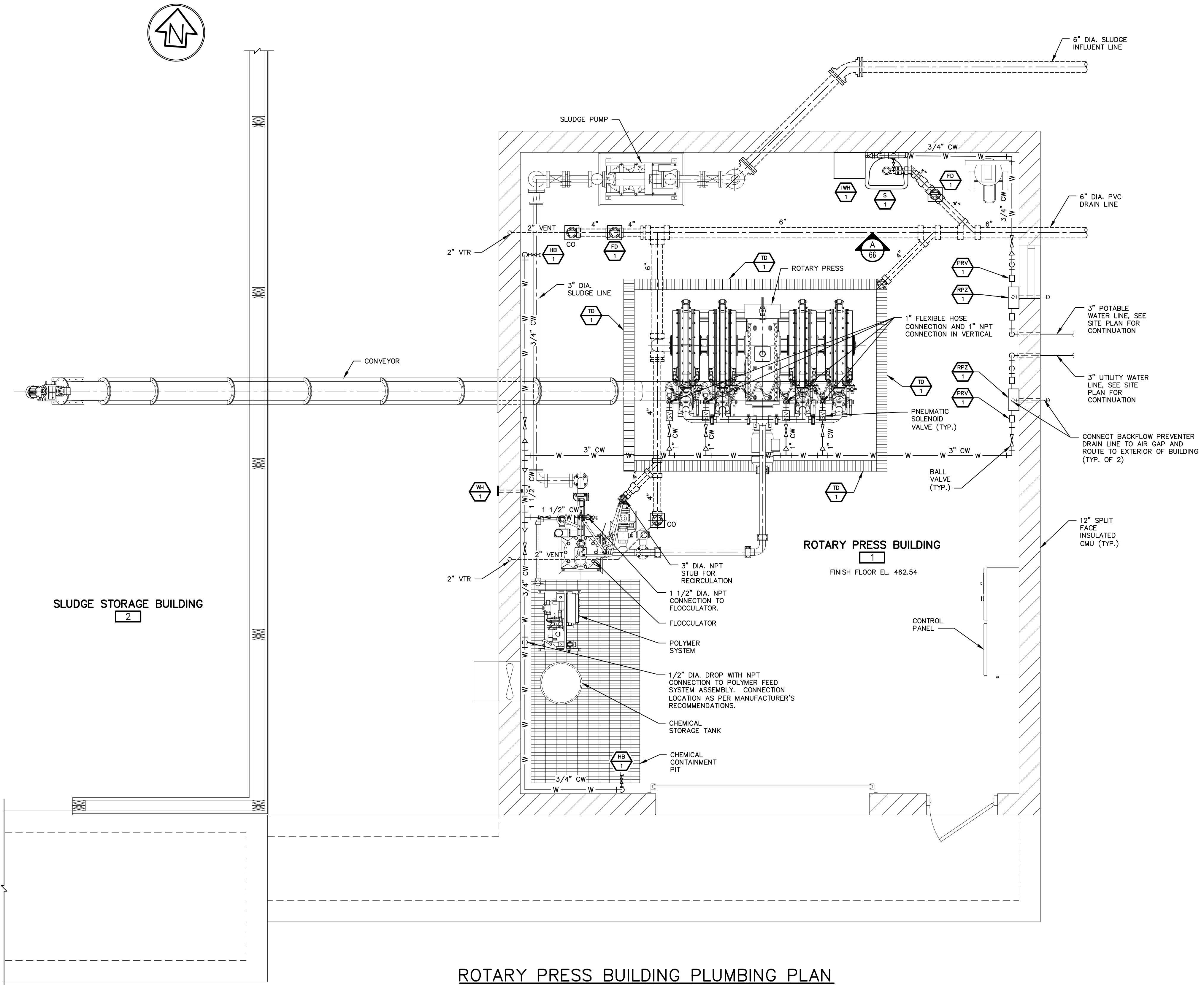
NO.	DATE	DESCRIPTION
REVISIONS		
ROTARY PRESS BUILDING SECTIONS		
TOWN OF BOONSBORO		
SLUDGE DEWATERING PROJECT		
BOONSBORO, WASHINGTON COUNTY, MARYLAND		
DATE: 11/21		JOB: 21061
FILE: 21061_47		DRAWN BY: RLN
SCALE: 3/8" = 1'-0"		CHECKED BY:

SEAL

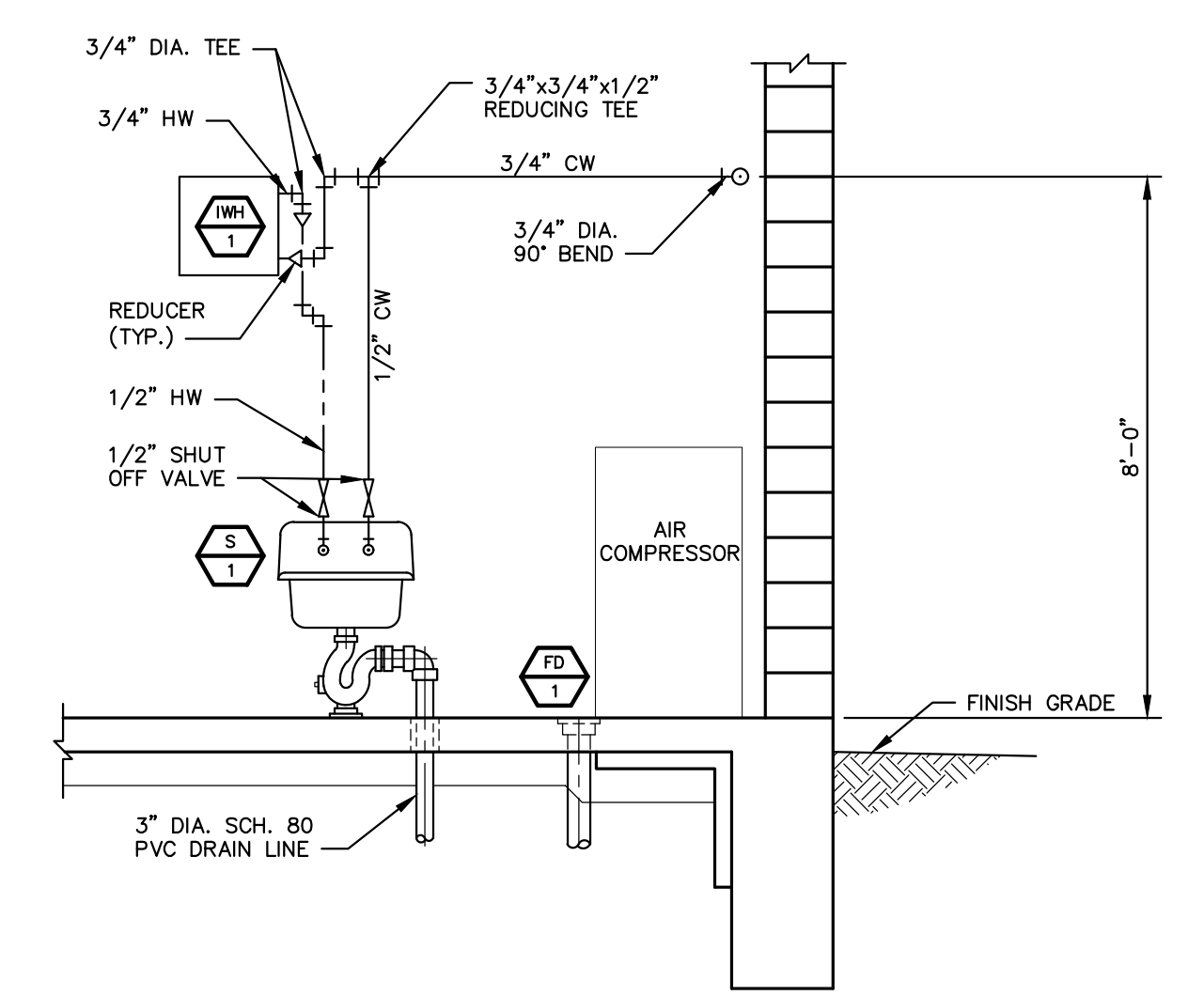
3121 Fairway Drive
 Altoona, PA 16602
 814.943.5214
 gdfengineers.com

SHEET NO:
47

PLOT CREATED: 1/7/2022 10:02 AM



ROTARY PRESS BUILDING PLUMBING PLAN
SCALE: 3/8" = 1'-0"



ELEVATION A - 66
SCALE: 3/8" = 1'-0"

LEGEND

- PLUMBING FIXTURE (SEE SCHEDULE, SHEET 65)
- COLD WATER LINE
- HOT WATER LINE
- VENT LINE
- CLEANOUT
- SOLENOID VALVE
- BALL VALVE

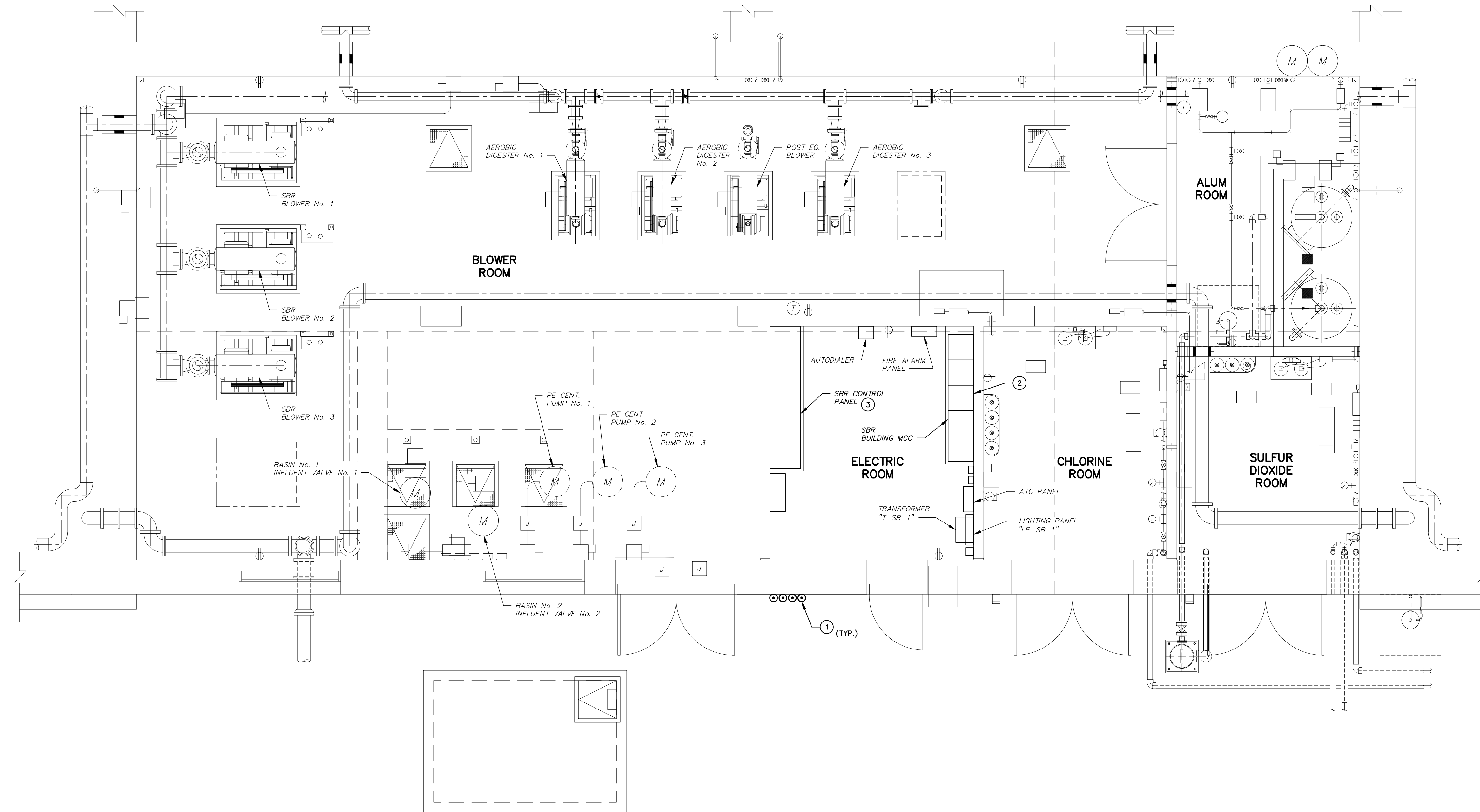
NOTE:
INSULATE ALL WATER SUPPLY LINES INSIDE BUILDING.

NO.	DATE	DESCRIPTION
REVISIONS		

SEAL	ROTARY PRESS BUILDING PLUMBING PLAN		
	TOWN OF BOONSBORO		
SLUDGE DEWATERING PROJECT			
BOONSBORO, WASHINGTON COUNTY, MARYLAND			
DATE: 11/21	JOB: 21061	SCALE: 3/8" = 1'-0"	SHEET NO: 66
FILE: 21061_66	DRAWN BY: RLN	CHECKED BY:	

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ENGINEERS
3121 Fairway Drive
Aldershot, PA 16602
814.943.5214
gdfeengineers.com

PLOT CREATED: 1/17/2022 10:29 AM



EXISTING SBR BUILDING PARTIAL POWER PLAN

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

PLAN NOTES:

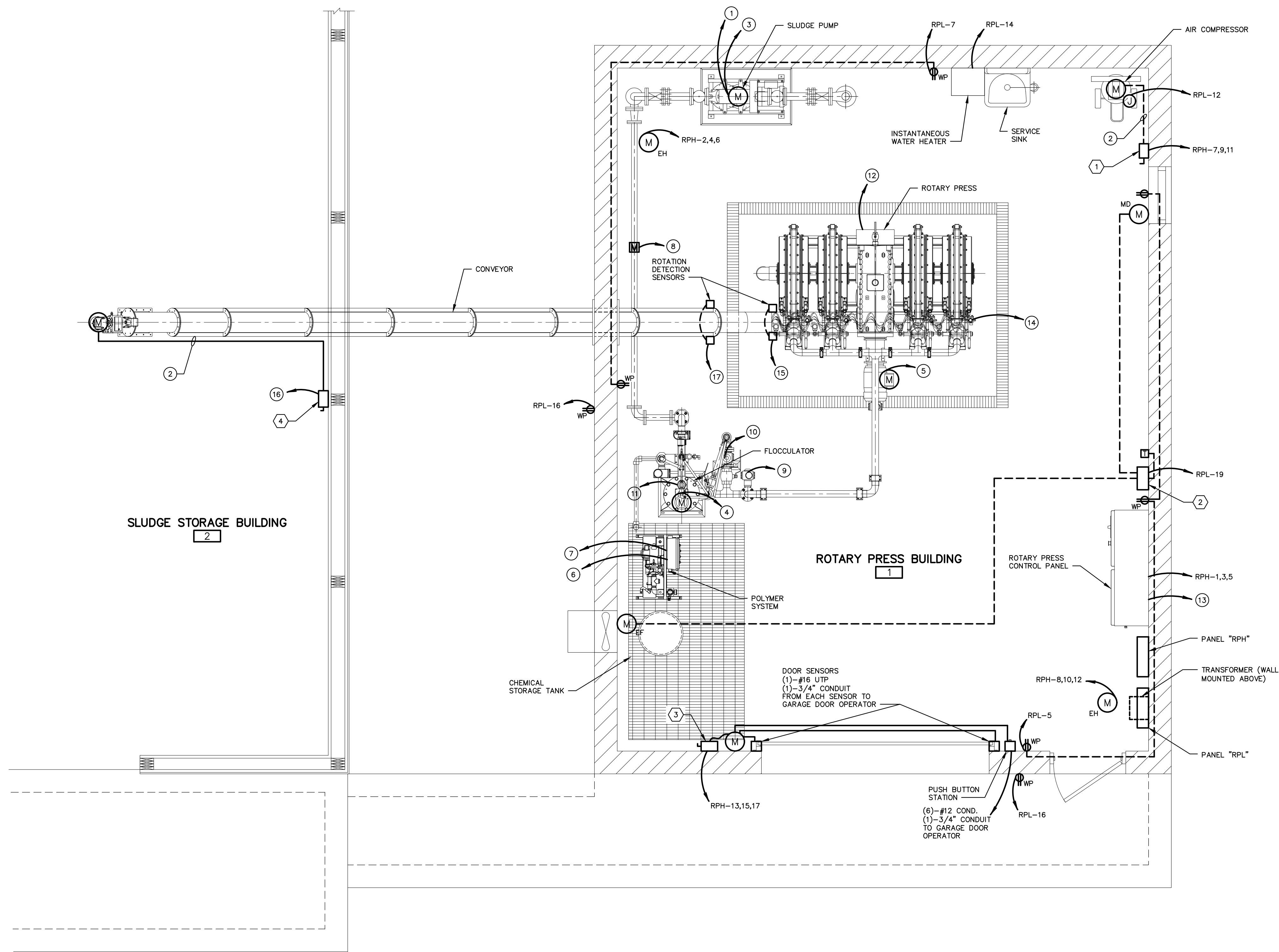
- ① CONDUITS SHALL BE ROUTED VERTICALLY ON EXTERIOR OF BUILDING AND STUBBED HIGH INTO ELECTRICAL ROOM. CONTRACTOR SHALL PROVIDE CONDUIT SUPPORTS AS REQUIRED ON EXTERIOR OF BUILDING, AS WELL AS, HANGING SUPPORTS ON THE INTERIOR OF THE BUILDING TO ROUTE CONDUITS TO EXISTING EQUIPMENT. CONTRACTOR SHALL CORE DRILL AS REQUIRED FOR CONDUIT PENETRATIONS. CONTRACTOR SHALL SEAL AROUND CONDUIT PENETRATIONS AND PAINT TO MATCH EXISTING WALL COLORS.
- ② PROVIDE ONE (1)-100A, 480V, 3 POLE, 4 WIRE CIRCUIT BREAKER BUCKET (MODEL #898SBF100) FOR EXISTING SQUARE D MODEL 6 MCC. PROVIDE ADDITIONAL SPACE FILLER PLATES AS REQUIRED.
- ③ SEE SPECIFICATION SECTION 16905 FOR MODIFICATIONS TO EXISTING SBR CONTROL PANEL.

NO.	DATE	DESCRIPTION

REVISIONS

EXISTING SBR BUILDING PARTIAL POWER PLAN		<p>GWIN DOBSON & FOREMAN ENGINEERS 3121 Fairway Drive Aldershot, PA 16602 814.943.5214 gdfeengineers.com</p>
TOWN OF BOONSBORO		
SLUDGE DEWATERING PROJECT		
BOONSBORO, WASHINGTON COUNTY, MARYLAND		
DATE: 11/21	JOB: 21061	SCALE: AS NOTED
FILE: 21061_71	DRAWN BY: HRO	CHECKED BY: MPR

SEAL



ROTARY PRESS BUILDING POWER PLAN
SCALE: 3/8" = 1'-0"

PLAN NOTES:

- 1 PROVIDE ONE (1)-#16 TSP IN ONE (1)-3/4" CONDUIT FROM SLUDGE PUMP TO ROTARY PRESS CONTROL PANEL FOR THERMAL FAULT RELAY.
- 2 PROVIDE THREE (3)-#12 CONDUCTORS, ONE (1)-#12 GROUND IN ONE (1)-3/4" CONDUIT.
- 3 PROVIDE THREE (3)-#12 CONDUCTORS, ONE (1)-#12 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO SLUDGE TRANSFER PUMP.
- 4 PROVIDE THREE (3)-#12 CONDUCTORS, ONE (1)-#12 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO FLOCCULATION MIXER.
- 5 PROVIDE THREE (3)-#12 CONDUCTORS, ONE (1)-#12 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO ROTARY PRESS DRIVE MOTOR.
- 6 PROVIDE TWO (2)-#16 TSP AND ONE (1)-#16 TSP (SPARE) IN ONE (1)-3/4" CONDUIT, SIX (6)-#16 CONDUCTORS, TWO (2)-#12 CONDUCTORS AND ONE (1)-#12 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO POLYMER SYSTEM JUNCTION BOX FOR POLYMER FEED CONTROL.
- 7 PROVIDE ONE (1)-#16 TSP IN ONE (1)-3/4" CONDUIT AND TWO (2)-#14 CONDUCTORS AND ONE (1)-#14 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO POLYMER FLOW METER.
- 8 PROVIDE ONE (1)-#16 TSP IN ONE (1)-3/4" CONDUIT, TWO (2)-#14 CONDUCTORS AND ONE (1)-#14 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO SLUDGE FLOW METER.
- 9 PROVIDE FOUR (4)-#16 CONDUCTORS AND ONE (1)-#16 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO DE-WATERING CONTROL VALVE.
- 10 PROVIDE FOUR (4)-#16 CONDUCTORS AND ONE (1)-#16 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO RECIRCULATION CONTROL VALVE.
- 11 PROVIDE ONE (1)-#16 TSP IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO INLET PRESSURE TRANSDUCER.

- 12 PROVIDE ONE (1)-#16 TSP AND ONE (1)-#16 TSP (SPARE) IN ONE (1)-3/4" CONDUIT AND FIFTEEN (15)-#16 CONDUCTORS, FOUR (4)-#16 CONDUCTORS (SPARES) AND ONE (1)-#16 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO ROTARY PRESS JUNCTION BOX.
- 13 PROVIDE ONE (1)-CAT6 CABLE IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO SBR CONTROL PANEL LOCATED IN ELECTRICAL ROOM AT THE SBR BUILDING FOR RELAYING I/O TO PLANT CONTROL PANEL.
- 14 PROVIDE THREE (3)-#12 CONDUCTORS, ONE (1)-#12 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO RECEIVING CONVEYOR MOTOR.
- 15 PROVIDE FOUR (4)-#16 CONDUCTORS, ONE (1)-#16 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO RECEIVING CONVEYOR ROTATION DETECTION SENSORS.
- 16 PROVIDE THREE (3)-#10 CONDUCTORS, ONE (1)-#10 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO INCLINE CONVEYOR MOTOR.
- 17 PROVIDE FOUR (4)-#16 CONDUCTORS, ONE (1)-#16 GROUND IN ONE (1)-3/4" CONDUIT FROM ROTARY PRESS CONTROL PANEL TO INCLINE CONVEYOR ROTATION DETECTION SENSORS.
- 18 PROVIDE TWO (2)-#16 CONDUCTORS IN ONE (1)-3/4" CONDUIT FROM SLUDGE PUMP TO ROTARY PRESS CONTROL PANEL FOR THERMAL FAULT RELAY.

EQUIPMENT NOTES:

- 1 30 AMP, 600 VOLT, THREE POLE, NON-FUSED DISCONNECT IN A NEMA 12 ENCLOSURE.
- 2 12"x12"x6" NEMA 12 ENCLOSURE, EXHAUST FAN CONTROL PANEL, SEE DETAIL ON SHEET 78.
- 3 30 AMP, 600 VOLT, SINGLE POLE NON-FUSED DISCONNECT IN A NEMA 12 ENCLOSURE.
- 4 30 AMP, 600 VOLT, THREE POLE, NON-FUSED DISCONNECT IN A NEMA 4x ENCLOSURE.

NO.	DATE	DESCRIPTION
REVISIONS		

ROTARY PRESS BUILDING POWER PLAN		 3121 Fairway Drive Altoona, PA 16602 814.943.5214 gdfengineers.com
TOWN OF BOONSBORO		
SLUDGE DEWATERING PROJECT		
BOONSBORO, WASHINGTON COUNTY, MARYLAND		
SEAL	DATE: ___/___/21 FILE: 21061_74	JOB: 21061 DRAWN BY: HRO CHECKED BY: MPR
		SCALE: 3/8" = 1'-0" SHEET NO: 74