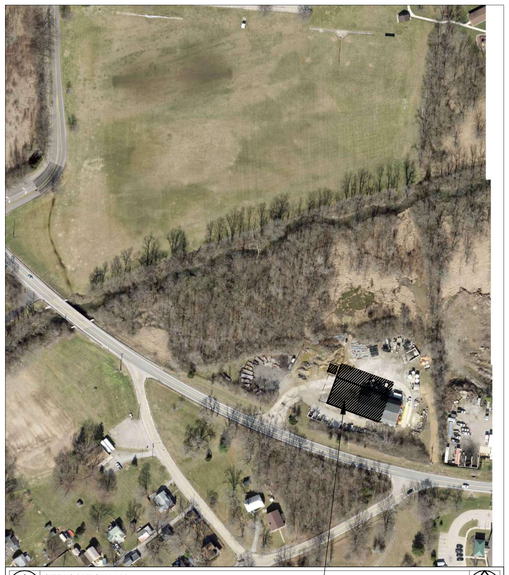
CITY OF BEAVERCREEK

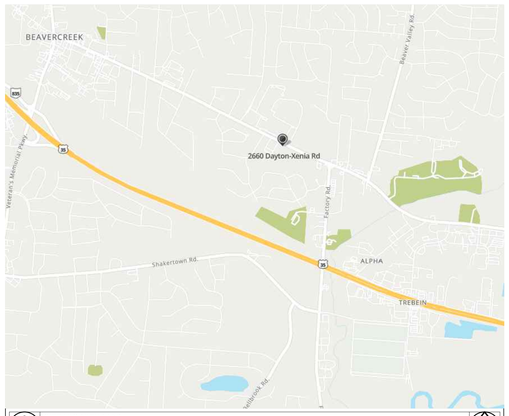
SALT BARN & NINE ACRES SITE IMPROVEMENTS

2260 DAYTON-XENIA ROAD **BEAVERCREEK, OHIO 45434**

BID DOCUMENTS **10/05/2023**



1 G0.1 SITE LOCATION MAP
NTS



2 G0.1 SITE VICINITY MAP
NTS

CODE INFORMATION

CODE INFORMATION

PROJECT DESCRIPTION: DEMOLITION OF EXISTING STRUCTURE AND CONSTRUCTION OF NEW PRE-ENGINEERED METAL SALT STORAGE BUILDING, A BRINE STORAGE BUILDING AND AN EQUIPMENT STORAGE SHED

PROJECT TYPE: NEW CONSTRUCTION

BUILDING USE GROUP: LOW HAZARD STORAGE (S-2)

CONSTRUCTION TYPE: TYPE 2-B

GROSS AREA:

SALT STORAGE BUILDING (INCLUDING BRINE BUILDING)	TOTAL SQ. FT.	= 13,300 SF
SALT STORAGE BUILDING LEAN TO (ALTERNATE 1)	TOTAL SQ. FT.	= 1,400 SF
STORAGE SHED	TOTAL SQ. FT.	= 400 SF
TOTAL BUILDING SQ. FT.		= 15,100 SF

NUMBER OF EXITS: ONE(1) PER STRUCTURE

OCCUPANT LOAD: 2 PERSONS

FIRE PROTECTION:
FIRE SUPPRESSION = N/A
FIRE ALARM = N/A

SHEET INDEX

Beavercreek

ARCHITECTS
MECHANICAL, ELECTRICAL, & PLUMBING ENGINEERS
LANDSCAPE ARCHITECTS
TECHNOLOGY DESIGNERS
INTERIOR DESIGNERS

GARMANN MILLER

38 SOUTH LINCOLN DRIVE
PO BOX 71 MINSTER, OHIO 45865
419.628.4240

555 METRO PLACE NORTH
SUITE 320 DUBLIN, OHIO 43017
614.502.4240

2 WEST MAIN STREET
CARMEL, INDIANA 46032
317.343.9343

CERTIFIED BY:

CERTIFIED BY:

STATE OF OHIO
CHRISTOPHER MONNIN
E-67075
REGISTERED
PROFESSIONAL ENGINEER

CHRISTOPHER MONNIN
LICENSE #E-67075
EXPIRATION DATE: 12/31/2023

CERTIFIED BY:

GARMANN MILLER
MINSTER, OHIO | COLUMBUS, OHIO | INDIANAPOLIS, INDIANA
cmdesign.com

NEW BUILDING FOR
CITY OF BEAVERCREEK
SALT BARN & NINE ACRES SITE IMPROVEMENTS
2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS

BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	JCR	MCM

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
G0.1

LEGEND

- 1030 - Existing Contour Major
- 1029 - Existing Contour Minor
- 1030 - Proposed Contour Major
- 1029 - Proposed Contour Minor
- STM - Existing Storm Sewer
- UT - Existing Communications
- UE - Existing Underground Electric
- G - Existing Gas
- SAN - Existing Sanitary Sewer
- WTR - Existing Water
- Proposed Storm Sewer
- UT - Proposed Communications
- UE - Proposed Underground Electric
- G - Proposed Gas
- Proposed Sanitary Sewer
- WTR - Proposed Water
- x - Fence
- Storm Manhole
- Catch Basins
- Curb Inlet
- Drywell
- Sanitary Manhole
- Cleanout
- Water Manhole
- WV - Water Valve
- Water Meter
- Fire Hydrant
- Water Shutoff Valve
- Post
- Traffic Control Cabinet
- Traffic Pullbox
- Signal Pedestal
- Unknown Pullbox
- Flag Pole
- Signs
- BM - Project Control
- Deciduous Tree
- Evergreen Tree
- Telephone Manhole
- Telephone Pedestal
- Unknown Valve
- Electic Manhole
- Power Pole
- Light Pole
- Power & Light Pole
- Blank Pole
- Guy Anchor
- GV - Gas Valve
- GS - Gas Shutoff Valve
- Gas Regulator

N

0 30' 60'
GRAPHIC SCALE: 1"=30'

STATE OF OHIO
PETER
S.
BATTAGLIA
E51255
REGISTERED
PROFESSIONAL ENGINEER

[illegible]

GARMANN MILLER
MINSTER, OHIO | COLUMBUS, OHIO | INDIANAPOLIS, INDIANA
creategm.com

NEW BUILDING FOR

CITY OF BEAVERCREEK SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS

BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

SHEET TITLE:
EXISTING CONDITIONS

SHEET NUMBER:
C100

DWG NAME: Q:\Garmann Miller\0125630A.00 - Beavercreek Salt Storage\Dev\Drawings\0125630A_C100.dwg SAVE DATE: 7/11/2023 3:50 PM SAVED BY: jhollis

LEGEND

- 1030 - Existing Contour Major
- 1029 - Existing Contour Minor
- 1030 - Proposed Contour Major
- 1029 - Proposed Contour Minor
- STM - Existing Storm Sewer
- UT - Existing Communications
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- G - Existing Gas
- SAN - Existing Sanitary Sewer
- WTR - Existing Water
- Proposed Storm Sewer
- UT - Proposed Communications
- UE - Proposed Underground Electric
- G - Proposed Gas
- Proposed Sanitary Sewer
- WTR - Proposed Water
- x - Fence
- Storm Manhole
- Catch Basins
- Curb Inlet
- Drywell
- Sanitary Manhole
- Cleanout
- Water Manhole
- WV - Water Valve
- Water Meter
- Fire Hydrant
- Water Shutoff Valve
- Existing Pavement to be removed
- Sawcut Existing Pavement
- Post
- Traffic Control Cabinet
- Traffic Pullbox
- Signal Pedestal
- Unknown Pullbox
- Flag Pole
- Signs
- BM - Project Control
- Deciduous Tree
- Evergreen Tree
- Telephone Manhole
- Telephone Pedestal
- Unknown Valve
- Electic Manhole
- Power Pole
- Light Pole
- Power & Light Pole
- Blank Pole
- Guy Anchor
- GV - Gas Valve
- GS - Gas Shutoff Valve
- Gas Regulator

KEYNOTE DESCRIPTION

1. EXISTING STRUCTURE TO BE REMOVED
2. EXISTING ELECTRIC UTILITY TO BE REMOVED
3. EXISTING WATER LINE TO BE REMOVED
4. EXISTING FENCE TO BE REMOVED
5. CONCRETE PAD TO BE REMOVED
6. EXISTING LIGHT POLE TO BE REMOVED
7. EXISTING WATER LINE TO BE PROTECTED
8. EXISTING STORM SEWER TO BE REMOVED BEYOND THIS POINT
9. EXISTING CATCH BASIN TO BE REMOVED
10. SIGN TO BE REMOVED
11. CONCRETE CMU BLOCK TO BE REMOVED AND STORED
12. EXISTING STORM LINE TO BE CAPPED AND ABANDONED IN PLACE
13. ALL EQUIPMENT AND STOCK ITEMS TO BE REMOVED BY THE CITY PRIOR TO THE START OF CONSTRUCTION

NOTE: SAW CUT FROM THE EDGE OF PAVEMENT INTO EXISTING PAVEMENT ALONG THE LENGTH OF THE PROPOSED ENTRANCE A MINIMUM OF 1 FOOT TO ENSURE SOUND FULL DEPTH JOINT.

N

0 30' 60'
GRAPHIC SCALE: 1"=30'

STATE OF OHIO
PETER S. BATTAGLIA E51255
REGISTERED PROFESSIONAL ENGINEER

GARMANN MILLER
MINSTER, OHIO | COLUMBUS, OHIO | INDIANAPOLIS, INDIANA
creategm.com

NEW BUILDING FOR

CITY OF BEAVERCREEK SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

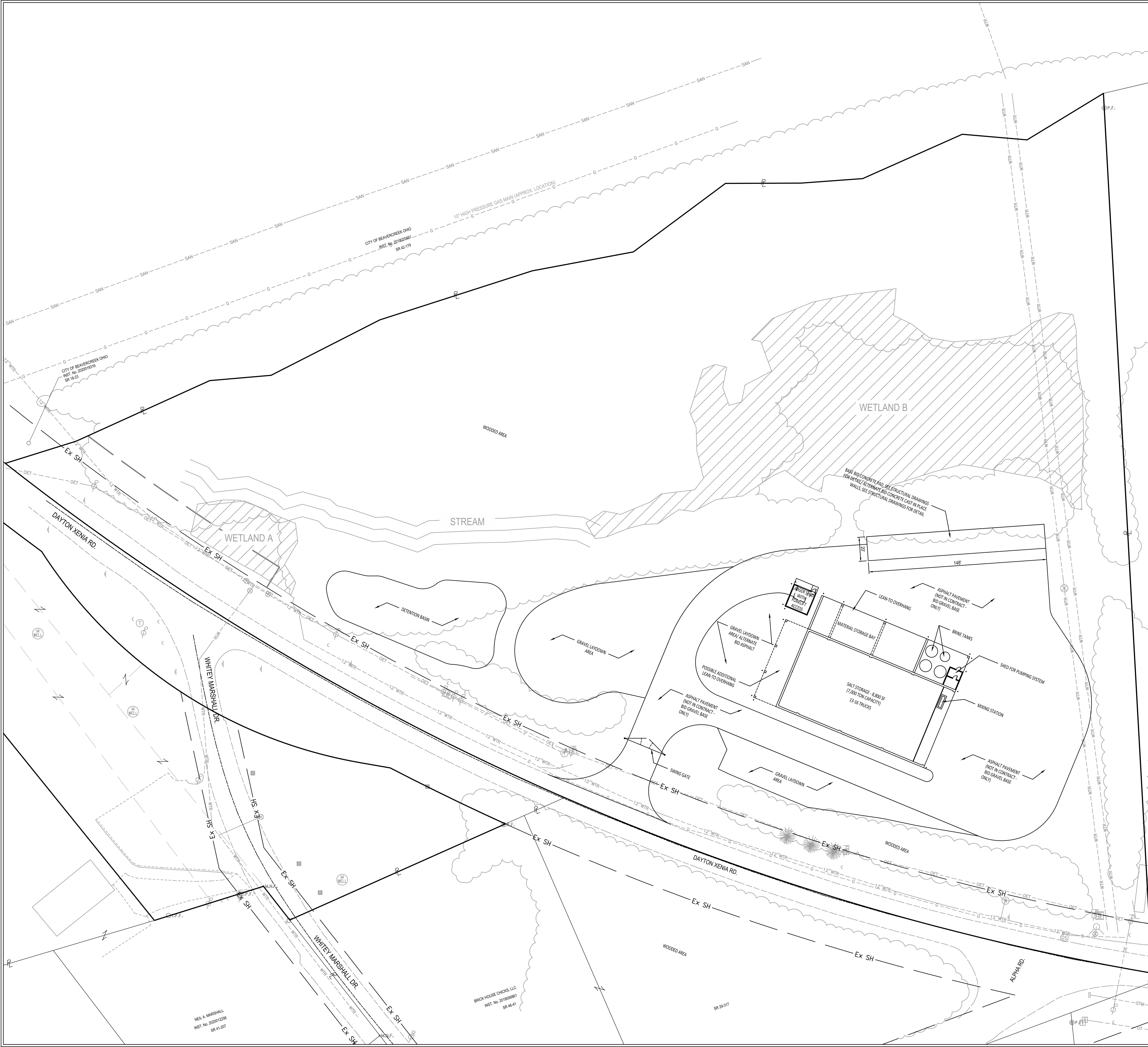
ISSUANCES/REVISIONS

BID DOCUMENTS 10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C200



LEGEND

1030	- Existing Contour Major
1029	- Existing Contour Minor
1030	- Proposed Contour Major
1029	- Proposed Contour Minor
STM	- Existing Storm Sewer
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UE	- Existing Underground Electric
G	- Existing Gas
SAN	- Existing Sanitary Sewer
WTR	- Existing Water
	- Proposed Storm Sewer
UT	- Proposed Communications
UE	- Proposed Underground Electric
G	- Proposed Gas
	- Proposed Sanitary Sewer
WTR	- Proposed Water
x	- Fence
	- Storm Manhole
	- Catch Basins
	- Curb Inlet
	- Drywell
	- Sanitary Manhole
	- Cleanout
	- Water Manhole
WV	- Water Valve
	- Water Meter
	- Fire Hydrant
	- Water Shutoff Valve
	- Post
	- Traffic Control Cabinet
	- Traffic Pullbox
	- Signal Pedestal
	- Unknown Pullbox
	- Flag Pole
	- Signs
BM	- Project Control
	- Deciduous Tree
	- Evergreen Tree
	- Telephone Manhole
	-Telephone Pedestal
	- Unknown Valve
	- Electic Manhole
	- Power Pole
	- Light Pole
	- Power & Light Pole
	- Blank Pole
	- Guy Anchor
GV	- Gas Valve
GS	- Gas Shutoff Valve
	- Gas Regulator

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NEW BUILDING FOR

CITY OF BEAVERCREEK SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS

BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

SHEET TITLE:
SITE PLAN

STATE OF OHIO
PETER BATTAGLIA
E51245
REGISTERED PROFESSIONAL ENGINEER

SHEET NUMBER:
C300

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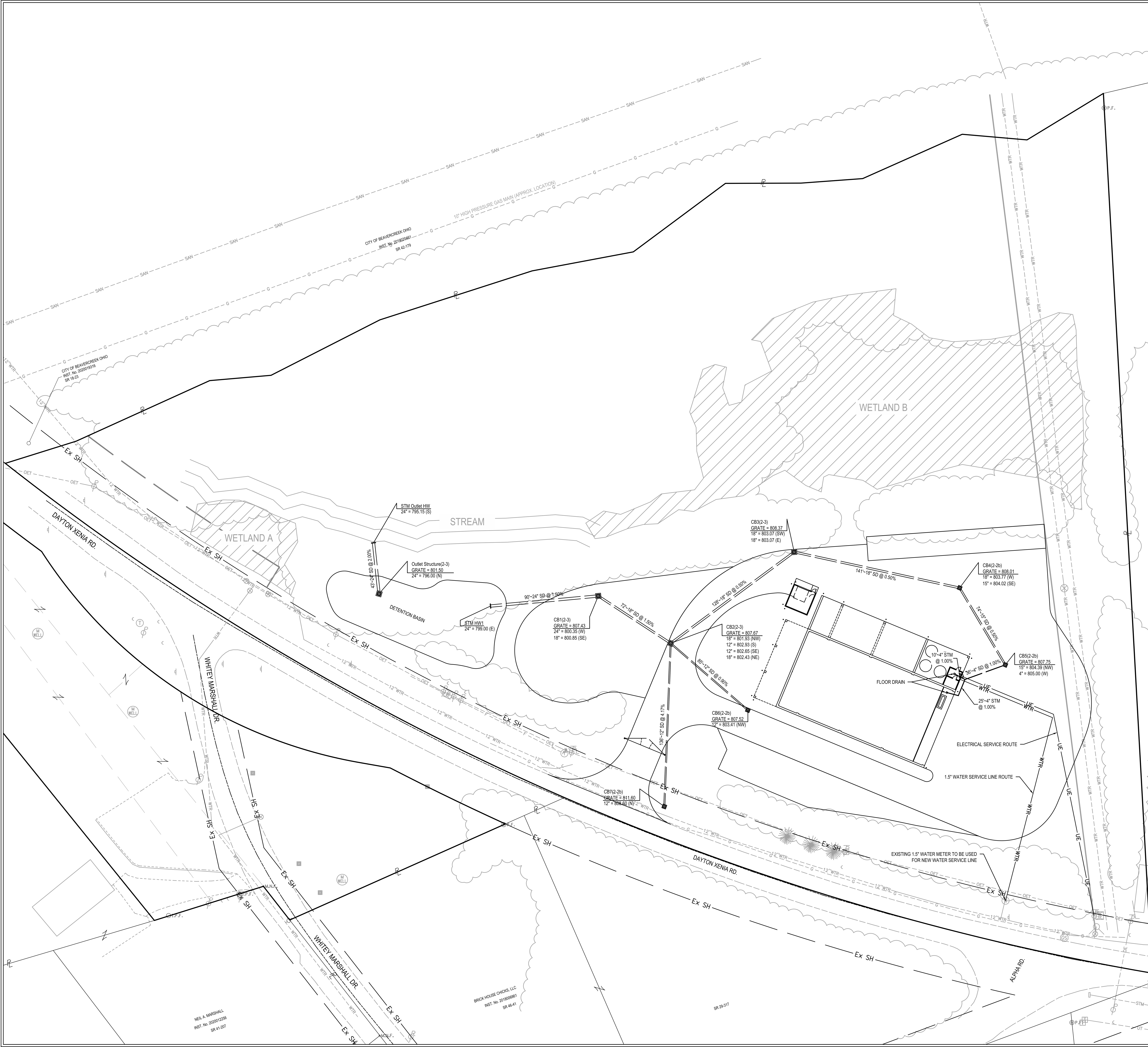

LEGEND

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- 1029 - Proposed Contour Minor
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- Light Pole
- Power & Light Pole
- Blank Pole
- Guy Anchor
- GV - Gas Valve
- GS - Gas Shutoff Valve
- Gas Regulator

STORMWATER NOTES

STORM BASIN DETAILS:

DRAINAGE AREA: 2.35 ACRES

SEDIMENT SETTLING VOLUME: 1,987 CU FT

N

0 30' 60'
GRAPHIC SCALE: 1"=30'

STATE OF OHIO
PETER
BATTAGLIA
E51255
REGISTERED
PROFESSIONAL ENGINEER

[illegible]

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creategm.com

NEW BUILDING FOR

CITY OF BEAVERCREEK SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

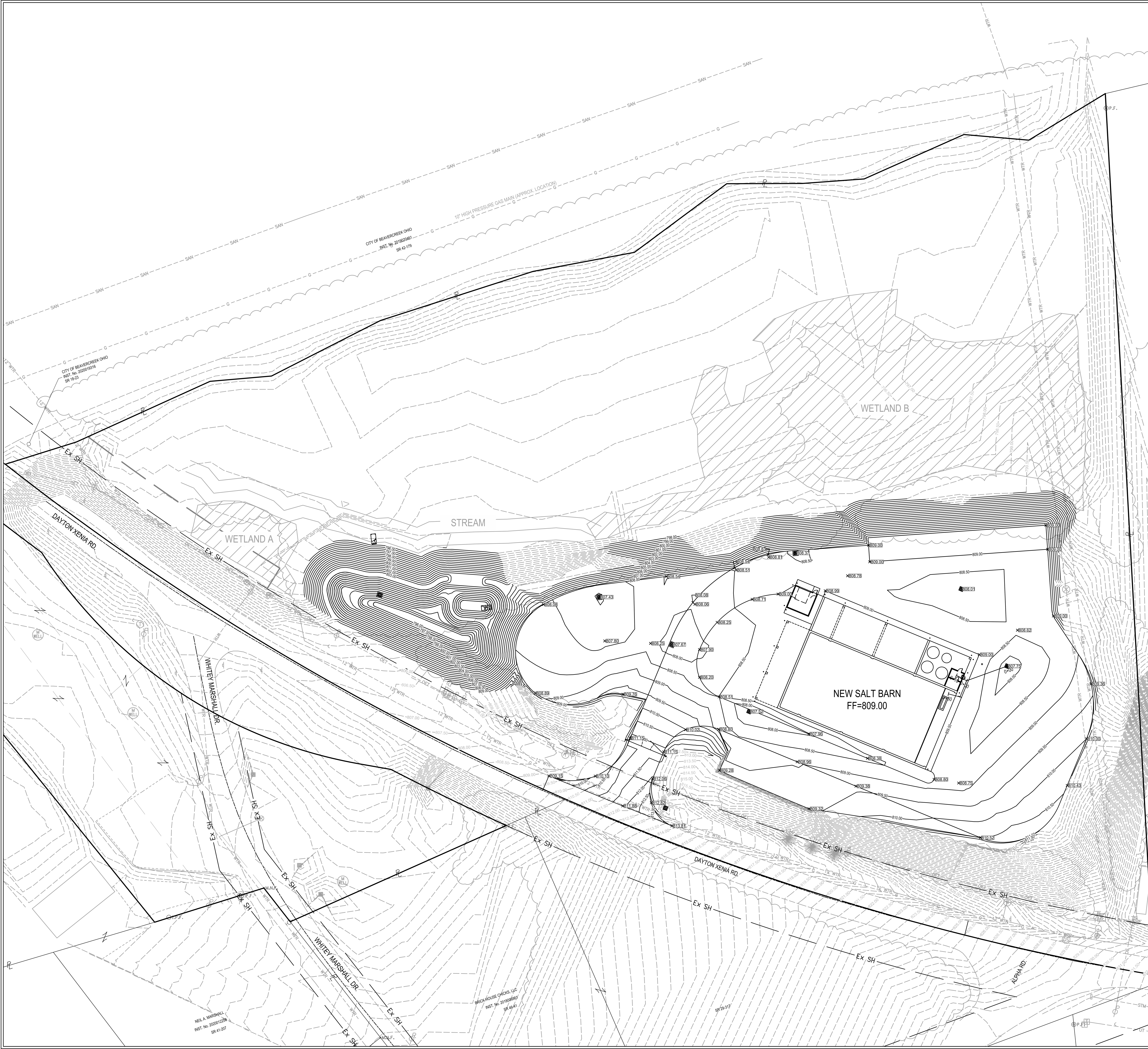
2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C400



LEGEND

1030 - Existing Contour Major	- Post
1029 - Existing Contour Minor	- Traffic Control Cabinet
1030 - Proposed Contour Major	- Traffic Pullbox
1029 - Proposed Contour Minor	- Signal Pedestal
STM - Existing Storm Sewer	- Unknown Pullbox
UT - Existing Communications	- Flag Pole
UE - Existing Underground Electric	- Signs
G - Existing Gas	- Project Control
SAN - Existing Sanitary Sewer	- Deciduous Tree
WTR - Existing Water	- Evergreen Tree
- Proposed Storm Sewer	- Telephone Manhole
UT - Proposed Communications	-Telephone Pedestal
UE - Proposed Underground Electric	- Unknown Valve
G - Proposed Gas	- Electic Manhole
- Proposed Sanitary Sewer	- Power Pole
WTR - Proposed Water	- Light Pole
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- Catch Basins	- Guy Anchor
- Curb Inlet	GV - Gas Valve
- Drywell	GS - Gas Shutoff Valve
- Sanitary Manhole	- Gas Regulator
- Cleanout	
- Water Manhole	
WV - Water Valve	
- Water Meter	
- Fire Hydrant	
- Water Shutoff Valve	

0 30' 60'
GRAPHIC SCALE: 1"=30'

STATE OF OHIO
PETER S. BATTAGLIA
E-51265
REGISTERED
PROFESSIONAL ENGINEER

[illegible]

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NEW BUILDING FOR

CITY OF BEAVERCREEK SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

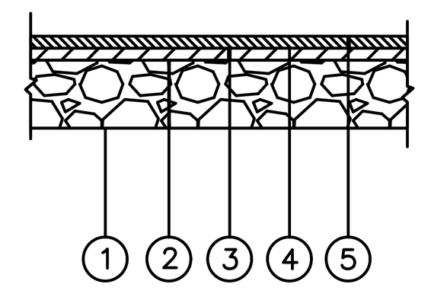
ISSUANCES/REVISIONS

BID DOCUMENTS 10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C500



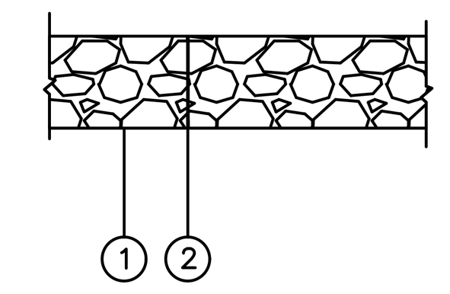
1. ITEM 203 ~ SUBGRADE COMPACTION – 8" MINIMUM
2. ITEM 304 ~ AGGREGATE BASE, 10" COURSE
3. ITEM 402 ~ ASPHALTIC CONCRETE, 3" INTERMEDIATE COURSE
4. ITEM 407 ~ TACK COAT, ASPHALT RC–2, RATE 0.05 TO 0.25 GAL./S.Y.
5. ITEM 404 ~ ASPHALTIC CONCRETE, 1.5" SURFACE COURSE

ITEMS NOT IN CONTRACT BY OTHERS (items 3–5)

NOTE:

1. ALL ITEM NUMBERS REFER TO STATE OF OHIO DEPARTMENT OF TRANSPORTATION. CONSTRUCTION AND MATERIALS SPECIFICATIONS, JANUARY 2023 EDITION OR LATEST REVISION THEREOF.

PAVEMENT SECTION
NOT TO SCALE

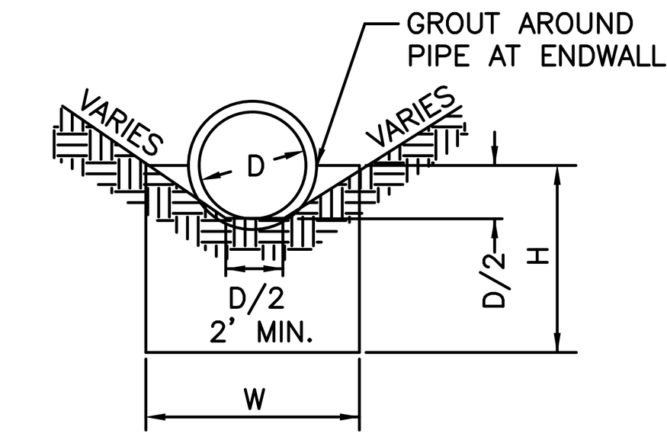


1. ITEM 203 ~ SUBGRADE COMPACTION – 8" MINIMUM
2. ITEM 304 ~ AGGREGATE BASE, 8" COURSE

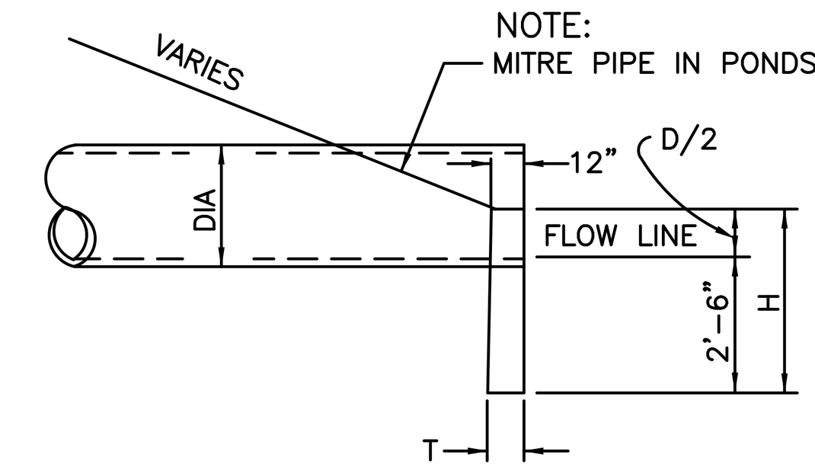
NOTE:

1. ALL ITEM NUMBERS REFER TO STATE OF OHIO DEPARTMENT OF TRANSPORTATION. CONSTRUCTION AND MATERIALS SPECIFICATIONS, JANUARY 2023 EDITION OR LATEST REVISION THEREOF.

GRAVEL LAYDOWN AREA SECTION
NOT TO SCALE



CONCRETE PIPE
CIRCULAR



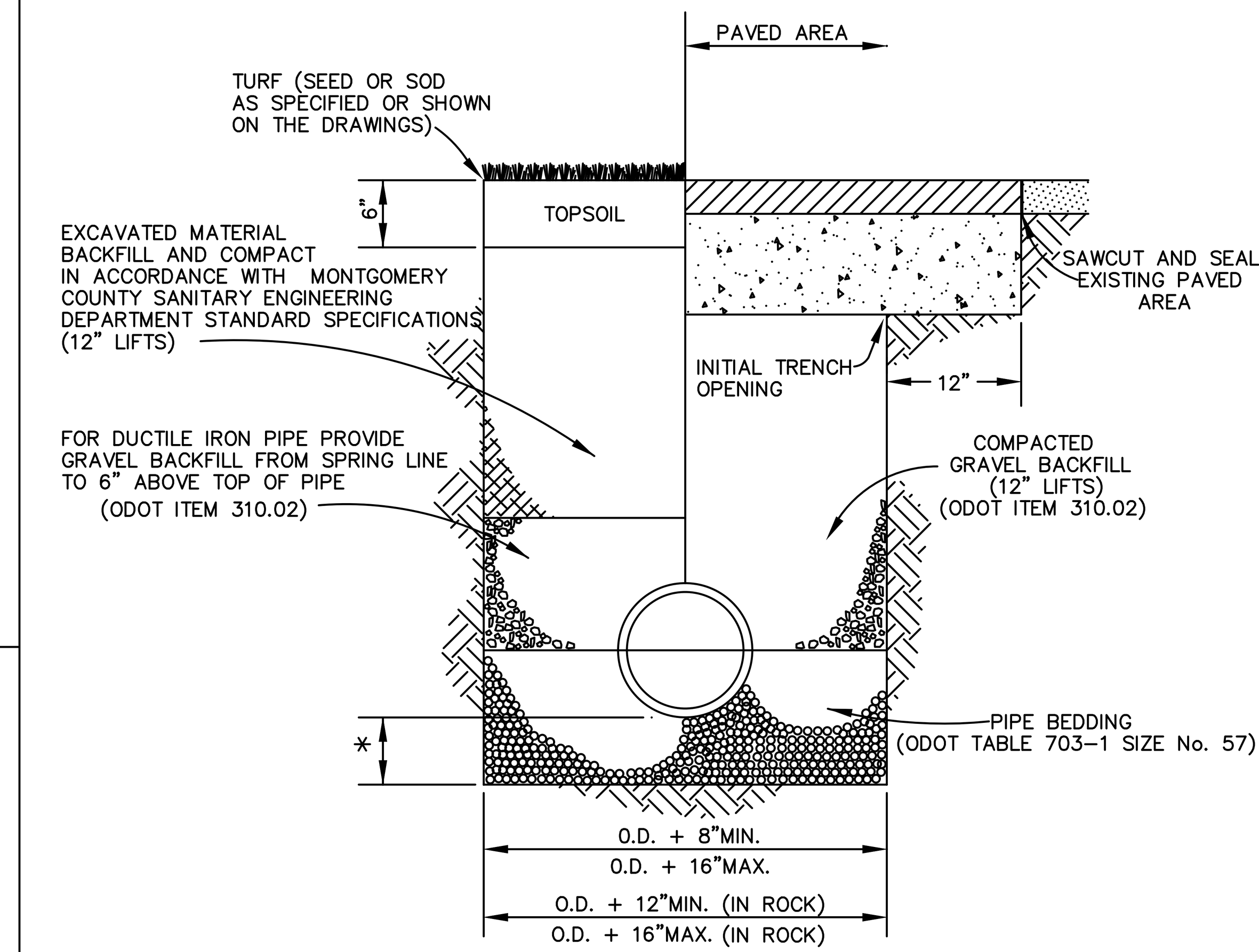
PROFILE

NOTE:
REINFORCING STEEL SHALL BE 5/8" ROUND. MINIMUM COVER FOR ALL BARS SHALL BE 2" UNLESS OTHERWISE NOTED

D	W	H	T
12"	2'–0"	3'–0"	12"
15"	2'–6"	3'–2"	12"
18"	3'–0"	3'–3"	12"
21"	3'–6"	3'–4"	12"
24"	4'–0"	3'–6"	12"
27"	4'–6"	3'–8"	12"
30"	5'–0"	3'–9"	12"
33"	5'–6"	3'–10"	12"
36"	6'–0"	4'–0"	12"
39"	6'–6"	4'–2"	12"
42"	7'–0"	4'–3"	12"
48"	8'–0"	4'–6"	14"
54"	9'–3"	4'–9"	14"
60"	10'–6"	5'–6"	16"
66"	11'–9"	5'–9"	18"
72"	13'–0"	6'–0"	18"
78"	14'–3"	6'–3"	20"
84"	15'–6"	6'–6"	22"
90"	16'–9"	6'–9"	22"
96"	18'–0"	7'–0"	24"
102"	19'–3"	7'–3"	26"
108"	20'–6"	7'–6"	26"
114"	21'–9"	7'–9"	28"
120"	23'–0"	8'–0"	30"

HALF HEIGHT ENDWALL DETAIL
CIRCULAR PIPE

FOR PAVEMENT AND TURF RESTORATION
SEE MONTGOMERY COUNTY SANITARY ENGINEERING
DEPARTMENT STANDARD SPECIFICATIONS SECTION 02512

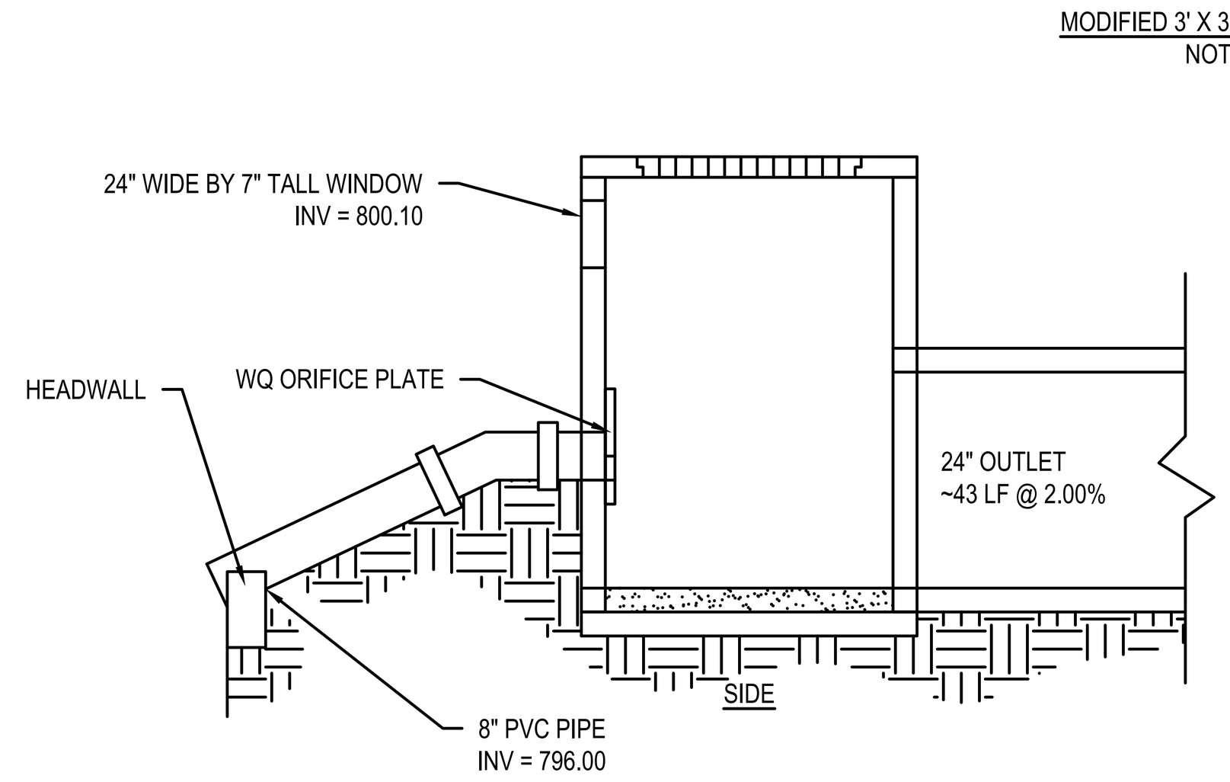


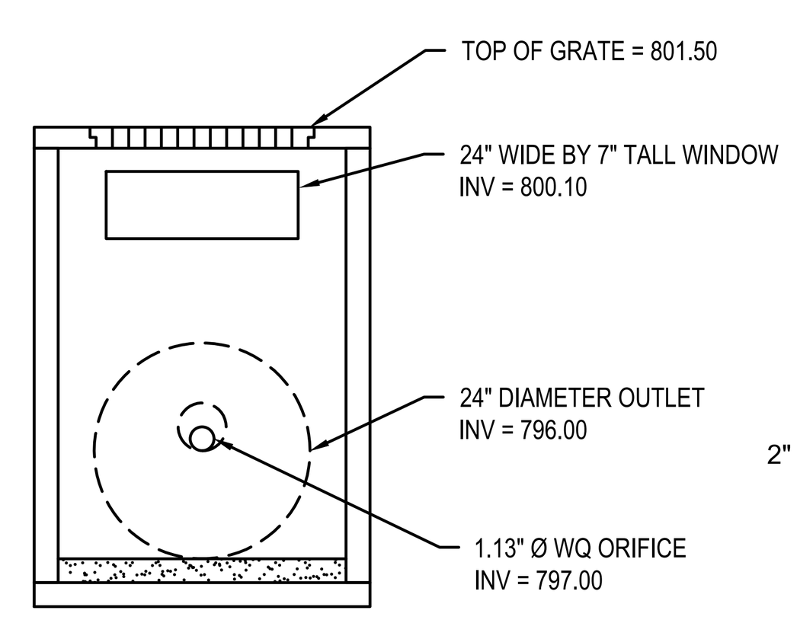
*6" OR PIPE O.D. (INCHES) / 8 WHICHEVER IS LARGER

**RIGID PIPE = DUCTILE IRON, CONCRETE PRESSURE PIPE, PVC COMPOSITE OR REINFORCED CONCRETE PIPE

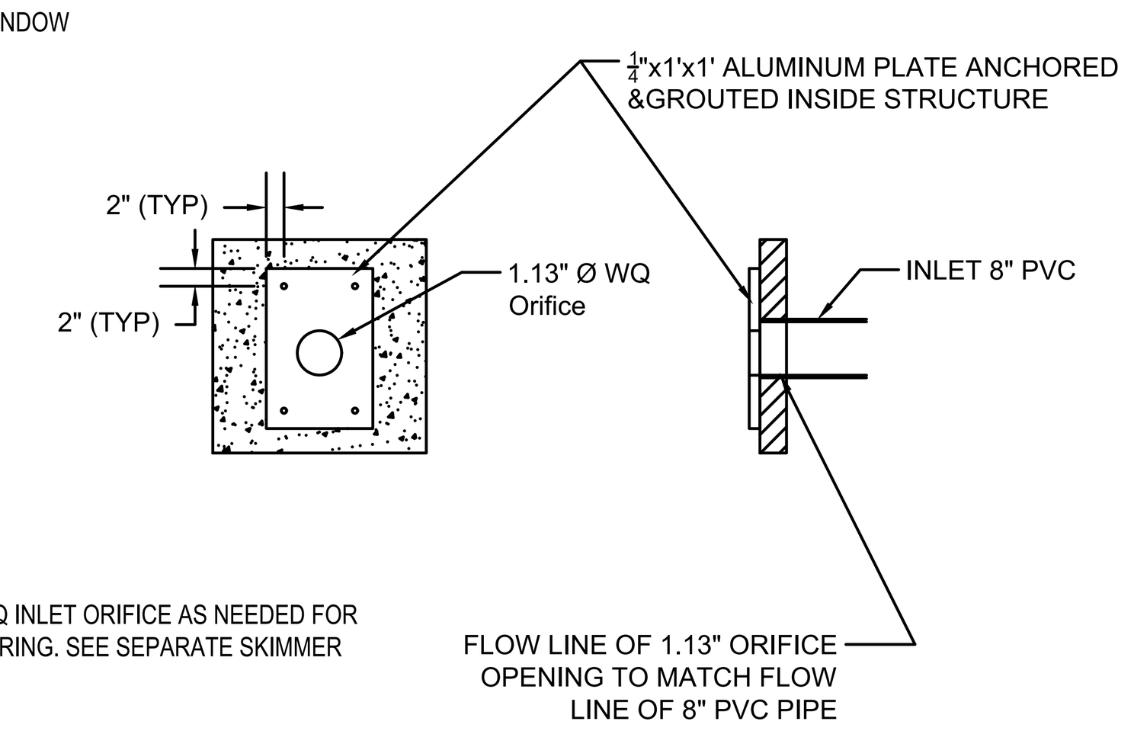
PIPE BEDDING AND TRENCH DETAIL FOR RIGID PIPE
NTS

MODIFIED 3' X 3' CATCH BASIN DETAIL
NOT TO SCALE





WATER QUALITY ORIFICE PLATE DETAIL
NOT TO SCALE



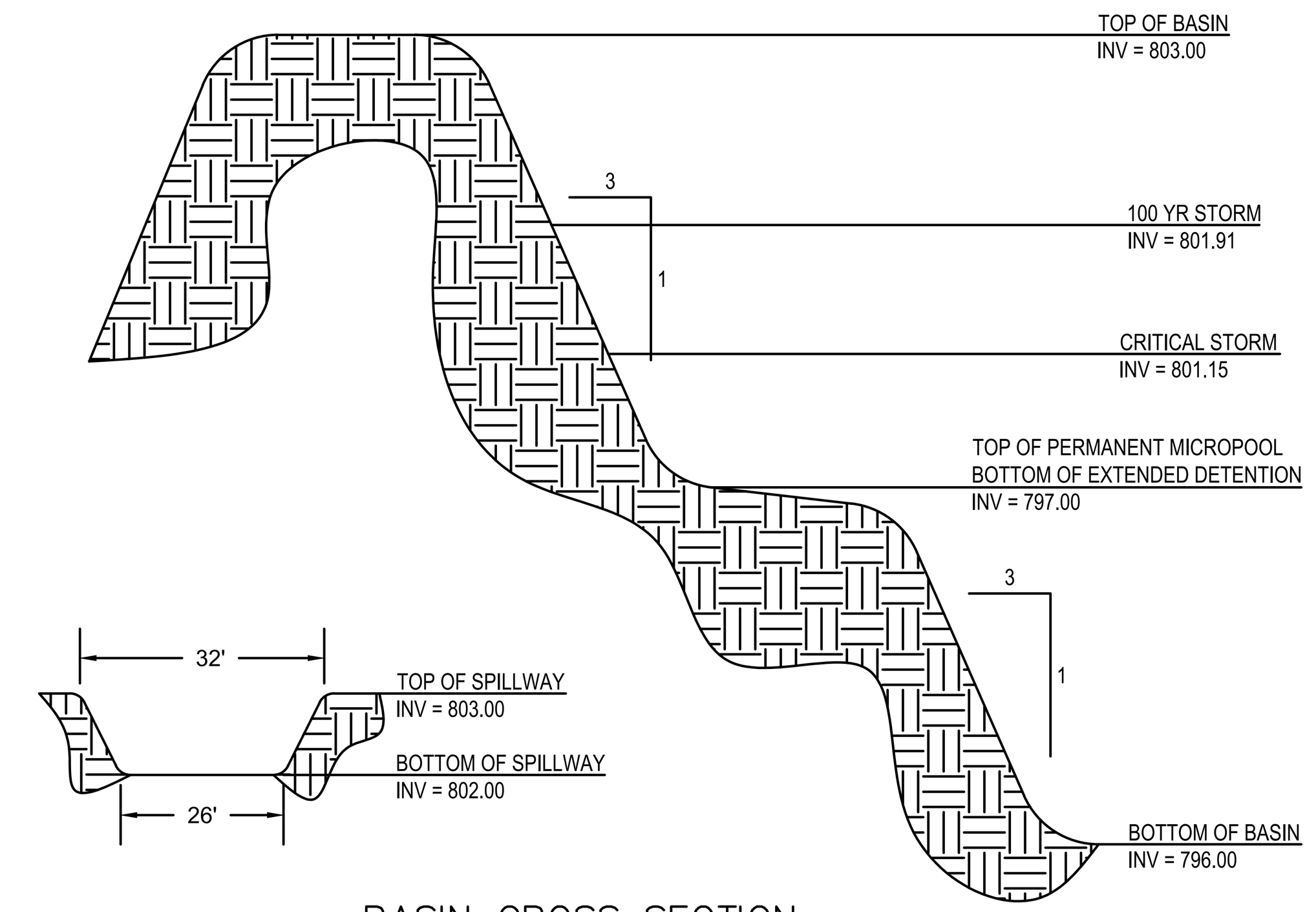
SKIMMER NOTE

ATTACH SKIMMER TO 8" WQ INLET ORIFICE AS NEEDED FOR TEMPORARY WQv DEWATERING. SEE SEPARATE SKIMMER DETAIL ON PAGE C701.

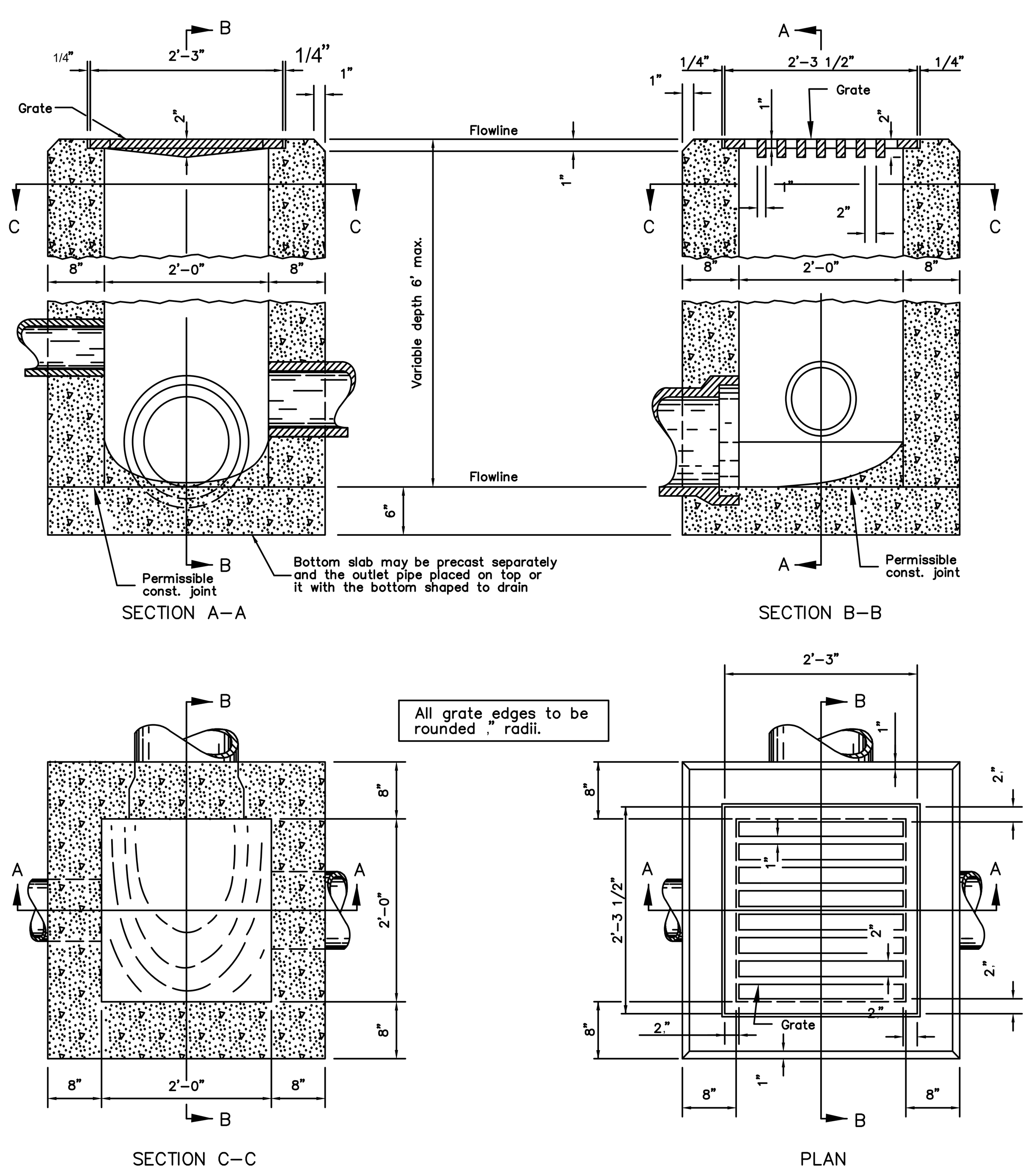
THE SKIMMER END CAP SHALL HAVE A 1.13" Ø ORIFICE.

UPON COMPLETION OF ALL CONSTRUCTION, GRADING, AND SITE STABILIZATION THE SKIMMER MAY BE REMOVED AND THE 8" PVC MICRO POOL OUTLET ATTACHED IN ITS PLACE WITH THE APPROPRIATELY SIZED ORIFICE PLATE AS DETAILED HERE.

BASIN OUTLET STRUCTURE DETIAL
NOT TO SCALE



BASIN CROSS SECTION
NOT TO SCALE



CATCH BASIN No. 2–2B

NOTES

CATCH BASINS 2–2A, 2–2B & 2–2C: This sheet depicts Catch Basin 2–2B & 2–2C. See Sheet 1 of 2 for Catch Basin 2–2A.

CB–2–2B GRATE: Furnish a design essentially the same and equally as strong as the one shown (see Construction Information table), or meet the requirements of CMS 711.14. Provide grate openings and dimensions as shown here unless otherwise shown in the plans.

If necessary, bicycle safe grates will be specified in the plans. Furnish Neenah No. R–4859–S or EJ No. 5110M3 (00511043) grates or approved equals.

Place grate elevation 4" to 6" below normal ditch and return to normal 10' to 15' each side of inlet.

CB–2–2C FRAME & GRATE: Where the catch basin is specified for use in a parking lot, Furnish Neenah No. R–1878–A5G or EJ No. V–5622 (45622010) frame and V–5622 (45622030) grate or approved equals. If necessary, bicycle safe grates will be specified in the plans. Furnish Neenah No. R–3405 grate or EJ No. 5250M (00525031) grate or approved equals.

On cast–in–place and precast units, provide a level surface on the catch basin 4" below the plan grate elevation for setting the frame and grate assembly. Provide a concrete apron to encase and secure the frame of a width not less than the thickness of the catch basin walls that the frame was placed on or as shown in the plans. Slope apron to provide local depression.

GRATE TEXT: Cast the following text into the top of the grate:

"DRAINS TO WATERWAY" and "DUMP NO WASTE"

Print text in bold, capital letters at least 1/2" high. "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

WALLS: Construct brick or cast–in–place walls with a nominal 8" thickness. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and handling without damage.

CONCRETE: Use 4000 psi compressive strength for cast–in–place concrete. Meet the requirements of CMS 706.13 for all precast concrete and mark with the catch basin number.

PRECAST BASE: If a precast base is used, set it deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Do not use brick layers to adjust the top elevation.

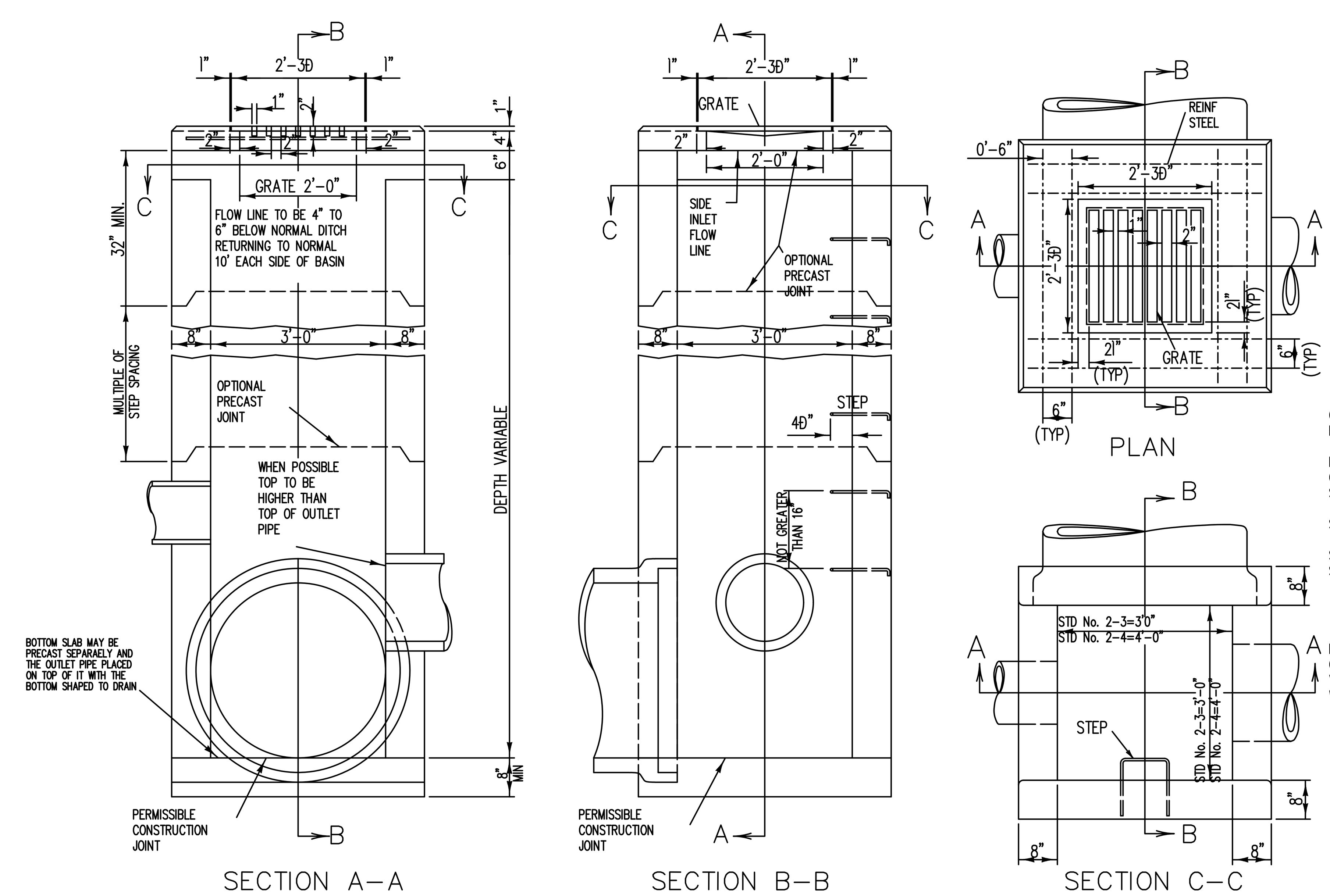
LOCATION AND ELEVATION: When given on the plans, location and elevation are at the top center of the grate.

MINIMUM DEPTH: The minimum depth of CB No. 2–2B is the outside diameter (O.D.) of the outlet pipe plus 4". The minimum depth of CB No. 2–2C is the outside diameter (O.D.) of the outlet pipe plus 8".

OPENINGS: Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under Item 611 – Catch Basin, No. 2–(2B or 2C).

CONSTRUCTION INFORMATION
Minimum weight of grate, 120 lbs.



GRATING ~ THE DESIGN SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS THE ONE SHOWN HEREON.
WEIGHT OF GRATE, MINIMUM, 120 lbs.

BRICK, CONCRETE BLOCK OR CAST–IN–PLACE WALLS HAVE A NOMINAL THICKNESS OF 8 INCHES. PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES AND BE REINFORCED SUFFICIENTLY TO PERMIT SHIPPING AND HANDLING WITHOUT DAMAGE.

CONCRETE, CAST–IN–PLACE, TO BE CLASS C. ALL PRECAST CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13 WITH 6 ⊡ 2% AIR VOID CONTENT IN THE HARDENED CONCRETE AND BE MARKED WITH CATCH BASIN NUMBER.

REINFORCING IN THE TOP TO BE No. 4 BARS 6 INCHES CENTER TO CENTER. FOR STANDARD No. 2–3 USE 8 BARS AND FOR STANDARD No. 2–4 USE 12 BARS.

OPENINGS FOR PIPES SHALL BE O.D. +2" WHEN FABRICATED OR FIELD CUT.

LOCATION AND ELEVATION WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE. WHEN SIDE OPENINGS ARE PROVIDED, ELEVATION SHALL BE THE FLOW LINE OF THE SIDE INLET.

SIDE INLETS SHALL BE PROVIDED ONLY WHEN SPECIFIED ON THE PLANS.

STEPS SHALL BE PROVIDED WHERE THE DEPTH EXCEEDS 72" AND SHALL MEET THE REQUIREMENTS OF MH–1

CATCH BASIN SIZE	OUTLET PIPE SIZE
2–3	12" TO 33"
2–4	36" TO 42"

INLETS OVER 12 FEET IN DEPTH SHALL BE PRECAST OR CAST–IN–PLACE CONCRETE: REINFORCED WITH No. 4 BARS ON 12" CENTERS BOTH VERTICALLY AND HORIZONTALLY WITH 2" CLEARANCE FROM INSIDE WALL FACE.

STANDARD No.2–3 & No.2–4 CATCH BASIN
NOT TO SCALE

STATE OF OHIO
PETER S. BATTAGLIA
E51265
REGISTERED PROFESSIONAL ENGINEER
[illegible]

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NEW BUILDING FOR
CITY OF BEAVERCREEK SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS
2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS

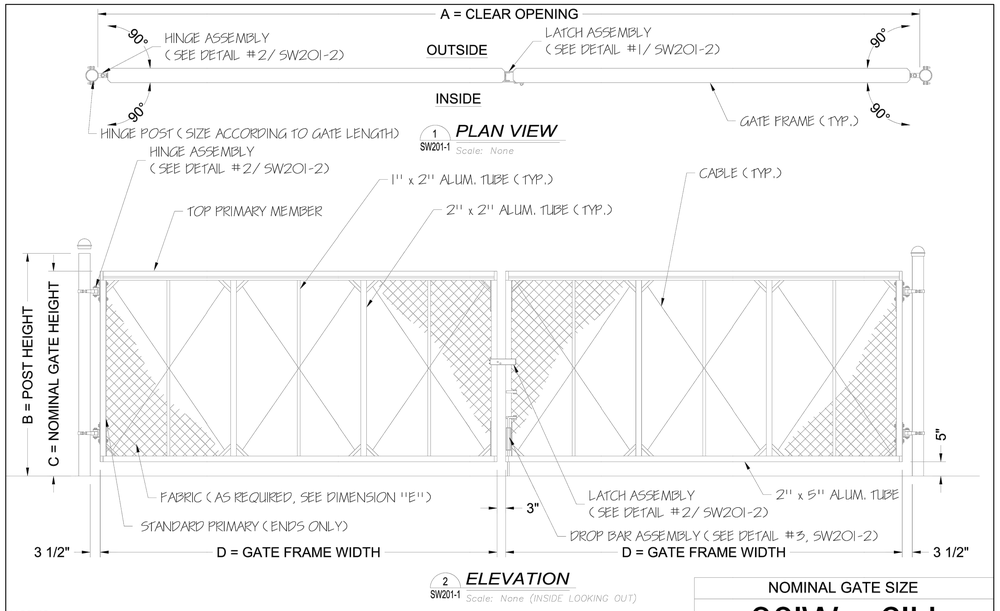
BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

SHEET TITLE:
DETAILS

SHEET NUMBER:
C600

DWG NAME: Q:\Garmann Miller\0125630A.00 - Beavercreek Salt Storage\Dev\Drawings\0125630A_C600.dwg SAVE DATE: 10/5/2023 10:20 AM SAVED BY: dfrancisco



1 SW201-1 **PLAN VIEW** Scale: None

2 SW201-1 **ELEVATION** Scale: None (INSIDE LOOKING OUT)

NOMINAL GATE SIZE

30'W x 6'H

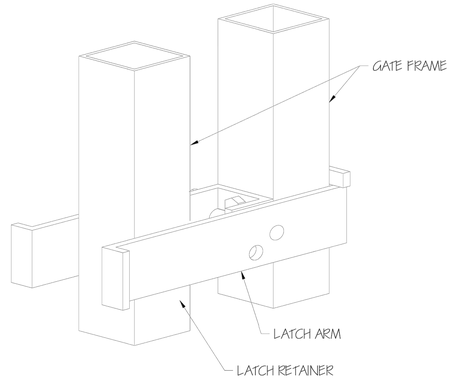
NOTES:
1. HANGER POST SIZE WILL VARY DEPENDING ON THE CLEAR OPENING WIDTH.
2. ALL FITTINGS PROVIDED FOR 6 5/8" O.D. POSTS STANDARD. OTHER SIZES AVAILABLE UPON REQUEST.
3. BARB ARMS AND DROP BAR ASSEMBLY ARE OPTIONAL.
4. GATE ELEVATION IS VIEWED FROM THE INSIDE OF THE SECURE AREA LOOKING OUT.

CRITICAL DIMENSION CHART

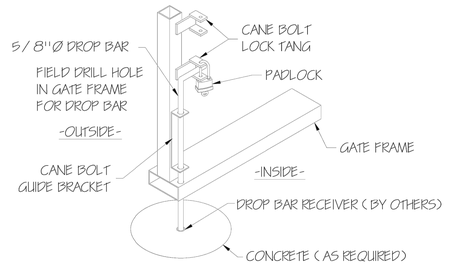
A	CLEAR OPENING	30'-0"
B	POST HEIGHT	6'-6"
C	NOMINAL GATE HEIGHT	6'-0"
D	OVERALL GATE LENGTH	14'-7"
E	FABRIC HEIGHT	5'-0"

SWING GATE DETAIL

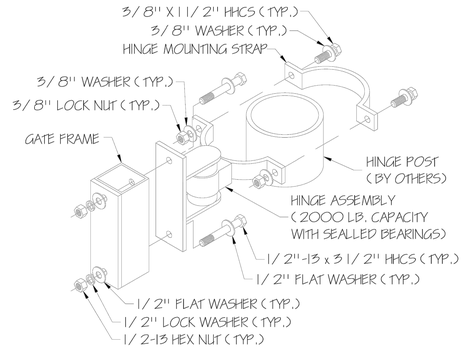
NOT TO SCALE



1 SW201-2 **LATCH ASSEMBLY** Scale: None



3 SW201-2 **DROP BAR ASSEMBLY** Scale: None



2 SW201-2 **HINGE ASSEMBLY** Scale: None

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NEW BUILDING FOR

CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2360 DAYTON-XENIA ROAD

BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS

BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

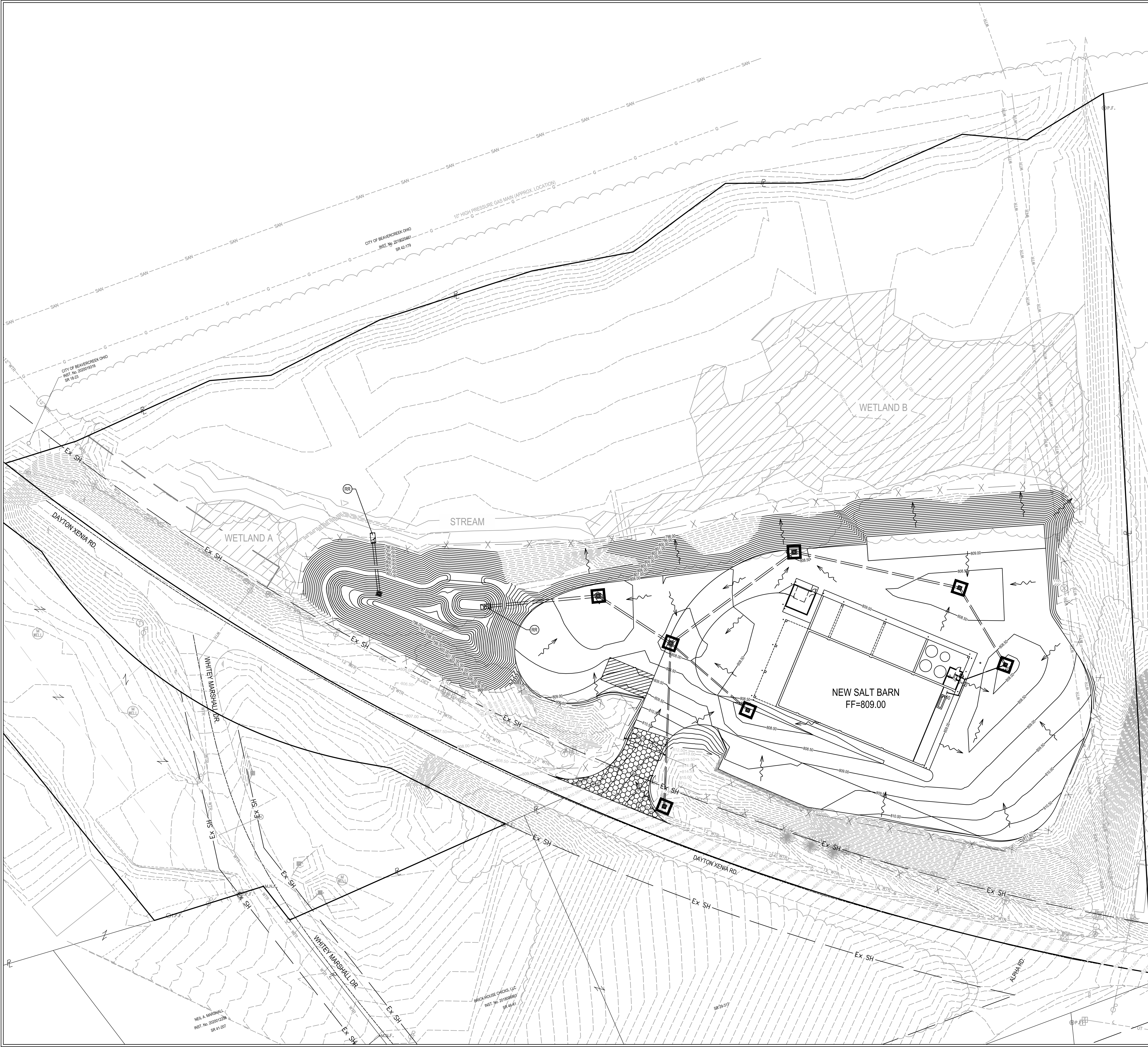
SHEET TITLE:

DETAILS

SHEET NUMBER:

C601

STATE OF OHIO
PETER PATTAGLIA
PROFESSIONAL ENGINEER



LEGEND

1030	- Existing Contour Major	⬡	- Post
1029	- Existing Contour Minor		- Traffic Control Cabinet
1030	- Proposed Contour Major	TR	- Traffic Pullbox
1029	- Proposed Contour Minor		- Signal Pedestal
STM	- Existing Storm Sewer	U	- Unknown Pullbox
UT	- Existing Communications		- Flag Pole
UE	- Existing Underground Electric		- Signs
G	- Existing Gas	BM	- Project Control
SAN	- Existing Sanitary Sewer		- Deciduous Tree
WTR	- Existing Water		- Evergreen Tree
	- Proposed Storm Sewer	T	- Telephone Manhole
UT	- Proposed Communications	T	-Telephone Pedestal
UE	- Proposed Underground Electric	⊗	- Unknown Valve
G	- Proposed Gas	E	- Electic Manhole
	- Proposed Sanitary Sewer		- Power Pole
WTR	- Proposed Water		- Light Pole
x	- Fence		- Power & Light Pole
ST	- Storm Manhole		- Blank Pole
	- Catch Basins	←	- Guy Anchor
	- Curb Inlet	GV	- Gas Valve
	- Drywell	GS	- Gas Shutoff Valve
SA	- Sanitary Manhole	G	- Gas Regulator
	- Cleanout		
W	- Water Manhole		
WV	- Water Valve		
W	- Water Meter		
	- Fire Hydrant		
WS	- Water Shutoff Valve		

562.00	PROPOSED MAJOR CONTOUR
561.75	PROPOSED MINOR CONTOUR
562.00	EXISTING MAJOR CONTOUR
561.25	EXISTING MINOR CONTOUR
	CONSTRUCTION ENTRANCE, SEE SHEET C701
▨	CONCRETE WASHOUT, SEE SHEET C701
RR	RIP RAP OUTLET PROTECTION, ROCK ODOT TYPE C, SEE SHEET C701
	INLET PROTECTION, SEE SHEET C701
	DRAINAGE FLOW ARROW
X X	SILT FENCE, SEE SHEET C701

N

0 30' 60'
GRAPHIC SCALE: 1"=30'

STATE OF OHIO
PETER
BATTAGLIA
E51265
PROFESSIONAL ENGINEER
REGISTERED

[illegible]

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NEW BUILDING FOR

CITY OF BEAVERCREEK SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

SHEET TITLE:
SWPPP

SHEET NUMBER:
C700

DWG NAME: Q:\Garmann Miller\0125630A.00 - Beavercreek Salt Storage\Dev\Drawings\0125630A_C700.dwg SAVE DATE: 9/27/2023 2:36 PM SAVED BY: jhollis

SWPPP NOTES

1. THE EROSION CONTROL MEASURES INCLUDED IN THE EROSION CONTROL PLAN AND EROSION CONTROL DETAILS SHALL BE INSTALLED AS THE FIRST STEP OF GRADING AND 7 DAYS PRIOR TO INITIAL REMOVAL OF VEGETATION. SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL THROUGHOUT ALL EARTH-DISTURBING ACTIVITY. SEDIMENT SHALL BE PREVENTED FROM DISCHARGING FROM THE PROJECT SITE BY INSTALLING AND MAINTAINING SILT FENCE, INLET PROTECTION, SEDIMENT BASINS, ETC. AS SHOWN ON THIS PLAN. RIP RAP OUTLET PROTECTION AT THE OUTFALL OF THE STORM SEWER SYSTEM SHALL BE INSTALLED AT THE TIME OF THE CONSTRUCTION OF THE OUTFALL. THE ROCK TO BE USED FOR THE RIP RAP SHALL BE ODOT TYPE C STONE. STRUCTURAL PRACTICES SHALL BE USED TO CONTROL EROSION FROM ALL SITES REMAINING DISTURBED FOR MORE THAN 14 DAYS.
2. THE CONTRACTOR SHALL CONTROL WASTES, GARBAGE, DEBRIS, WASTEWATER, AND OTHER SUBSTANCES ON THE SITE IN SUCH A WAY ACTION OF WINDS, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL OR MANAGEMENT OF ALL WASTES AND UNUSED BUILDING MATERIAL, APPROPRIATE TO THE NATURE OF THE WASTE OR MATERIAL IS REQUIRED. COMPLIANCE IS REQUIRED WITH ALL STATE OR LOCAL REGULATIONS REGARDING WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEMS.
3. PUBLIC OR PRIVATE ROADWAYS SHALL BE CLEARED OF ACCUMULATED SEDIMENT. BULK CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE POINT OF LIKELY ORIGIN OR OTHER SUITABLE LOCATION.
4. ALL ON-SITE STORM DRAIN INLETS SHALL BE PROTECTED AGAINST SEDIMENTATION WITH DANDY BAGS, FILTER FABRIC, OR EQUIVALENT BARRIERS AS SHOWN ON THESE PLANS.
5. EXCEPT AS PREVENTED BY INCLEMENT WEATHER CONDITIONS, ALL DISTURBED AREAS MORE THAN 50 FEET AWAY FROM THE STREAM OR WETLANDS TO REMAIN INACTIVE FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY STABILIZED BY SEEDING, SODDING, MULCHING, COVERING, OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES WITHIN SEVEN (7) DAYS. ALL DISTURBED AREAS LESS THAN 50 FEET AWAY FROM THE STREAM OR WETLANDS TO REMAIN INACTIVE FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY STABILIZED BY SEEDING, SODDING, MULCHING, COVERING, OR BY OTHER EQUIVALENT EROSION CONTROL MEASURES WITHIN TWO (2) DAYS. PERMANENT SOIL STABILIZATION SHALL BE PROVIDED WITHIN 2 DAYS AFTER FINAL GRADE IS ESTABLISHED FOR AREAS WITHIN 50 FEET OF THE STREAM OR WETLANDS AND WITHIN 7 DAYS FOR ALL OTHER AREAS.
6. THIS EROSION CONTROL PLAN SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE CONSTRUCTION SITE. ALL MEASURES INVOLVING EROSION CONTROL PRACTICES SHALL BE INSTALLED UNDER THE GUIDANCE OF QUALIFIED PERSONNEL EXPERIENCED IN EROSION CONTROL, AND FOLLOWING THE PLANS AND SPECIFICATIONS INCLUDED HEREIN.
7. DURING THE PERIOD OF CONSTRUCTION ACTIVITY, ALL SEDIMENT BASINS AND OTHER EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR. AT COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE TRANSFER OF MAINTENANCE RESPONSIBILITIES, IF REQUIRED, WITH THE CITY OF BEAVERCREEK. MAINTENANCE SHALL BE IN ACCORDANCE WITH CHAPTER 6 OF OHIO'S STANDARDS FOR STORMWATER MANAGEMENT, LAND DEVELOPMENT, AND URBAN STREAM PROTECTION.
8. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH OHIO'S STANDARDS FOR STORMWATER MANAGEMENT, LAND DEVELOPMENT, AND URBAN STREAM PROTECTION.
9. EXISTING VEGETATION SHALL BE PROTECTED AS MUCH AS PRACTICAL.
10. POST-CONSTRUCTION STORM WATER MANAGEMENT: LOCAL LAWS REGARDING THE DISCHARGING OF OIL AND OTHER POLLUTANTS INTO STORM SEWERS OR DRAINAGEWAYS SHALL APPLY.
11. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSPECTED BY QUALIFIED INSPECTION PERSONNEL AND IN ACCORDANCE WITH THE CONDITIONS OF APPLICABLE NPDES PERMITS.
12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE REMOVED AND DISPOSED OF WITHIN THIRTY DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY PRACTICES ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION.
13. THIS EROSION CONTROL PLAN MUST BE RETAINED ON-SITE AT ALL TIMES DURING THE PERIOD OF CONSTRUCTION.

SITE DESCRIPTION

THE EXISTING SITE CONSISTS OF SALT STORAGE BARN, SEVERAL GRAVEL LAY DOWN AREAS, A BRINE CREATION STATION, A COUPLE OF MATERIAL STORAGE BAYS, AND A PAVED ACCESS ROAD. THE SITE CURRENTLY SHEET DRAINS TO THE NORTH AWAY FROM DAYTON XENIA ROAD INTO A WETLAND AND STREAM IN THE WOODED AREA TO THE NORTH OF THE SITE. FROM THERE THE STREAM THEN DRAINS INTO BEAVER CREEK ON THE NORTHERN EDGE OF THE SITE.

LATITUDE = 39°42'48.14"N

LONGITUDE = 84°01'07.35"W

SCOPE AND PURPOSE

THE PURPOSE OF THIS PROJECT IS TO REDEVELOP THE EXISTING SALT BARN FACILITY WITH A NEW SALT BARN FACILITY. THIS PROJECT WILL INVOLVE THE CREATION OF A NEW SALT BARN, A COUPLE OF GRAVEL LAYDOWN AREAS, AND ACCOMPANYING PAVEMENT.

CONSTRUCTION SEQUENCE/ SCHEDULE

1. OBTAIN PLAN APPROVAL AND APPLICABLE PERMITS
2. LAYOUT WORK LIMITS
3. INSTALLATION OF SILT FENCE AND CONSTRUCTION ENTRANCE AS SHOWN.
4. INSTALLATION OF RETENTION BASIN, STORM SEWERS, CATCH BASINS, INLET PROTECTION, SWALES, AND CHECK DAMS AS SHOWN.
5. ROUGH GRADE
6. INSTALLATION OF OUTLET PROTECTION
7. CONSTRUCT GRAVEL STORAGE AREAS, DRIVEWAYS, AND STRUCTURES
8. FINAL SURFACE GRADING
9. FINAL SITE STABILIZATION AND PERMANENT SEEDING

MONITORING AND MAINTENANCE GUIDELINES

A QUALIFIED INSPECTION PERSON SHALL HAVE WEEKLY INSPECTIONS TO MONITOR THE SITE DURING AND AFTER CONSTRUCTION INSPECTIONS SHALL ALSO HAPPEN WITHIN 24 HOURS OF EVERY RUNOFF PRODUCING RAINFALL OF 0.5" WITHIN A 24 HOUR PERIOD. SEDIMENT TO BE REMOVED FROM BEHIND SEDIMENT FENCE WHEN SEDIMENT IS 6" DEEP AT SILT FENCE WITHIN 3 DAYS OF INSPECTION. SEDIMENT REMOVED DURING MAINTENANCE SHALL BE DISPOSED OF ALONG SLOPES AND SEEDED AS OTHER PROPOSED AREAS. AN INSPECTION CHECKLIST SHALL BE COMPLETED AND SIGNED AFTER EVERY INSPECTION AND KEPT FOR A PERIOD OF 3 YEARS AFTER FINAL CONSTRUCTION. IF A BMP IS FOUND TO BE INOPERABLE OR MISSING, A NEW BMP SHALL BE CONSTRUCTED TO REPLACE IT WITHIN 10 DAYS OF INSPECTION.

STORMWATER CALCULATIONS

DRAINAGE CALCULATIONS AND DESIGN WAS PREFORMED UTILIZING NRCS TR55 METHOD FOR THE CALCULATION OF RUNOFF RATES AND VOLUMES FOR THE SITE. NRCS TR55 METHODOLOGY WAS ALSO UTILIZED FOR THE CALCULATION OF TIME TO CONCENTRATION (TC). THE COMPOSITE CURVE NUMBER FOR THE SITE IN ITS PRE DEVELOPED CONDITION WAS DETERMINED TO BE 88 WITH A TC OF 10 MIN. THE COMPOSITE CURVE NUMBER FOR THE SITE IN ITS POST DEVELOPED CONDITION WAS DETERMINED TO BE 92 WITH A TC OF 10 MIN.

THE SITE HYDROLOGIC SOIL GROUP IS TYPE C WAS USED.

THE CRITICAL STORM FOR THE SITE WAS DETERMINED TO BE A 5 YEAR STORM. THIS WAS DETERMINED USING CRITICAL STORM METHOD.

THE TREATMENT OF THE WATER QUALITY WILL BE HANDLED VIA A DRY DETENTION BASIN. THIS DETENTION BASIN UTILIZES A STAGE OUTLET STRUCTURE, FOREBAY, AND PERMANENT MICRO POOL TO ENSURE AN ADEQUATE DRAW DOWN TIME FOR THE PURPOSE OF WATER QUALITY TREATMENT. THE DETAILS OF THE STAGE OUTLET STRUCTURE CAN BE FOUND ON PAGE C600. DETAILS FOR THE CAPACITY OF THE BASIN, FOREBAY, AND PERMANENT MICROPOOL AS WELL AS THE DRAW DOWN TIME, VOLUME TREATED IN THE FIRST 1/3 OF THE MINIMUM DRAW DOWN TIME OF 48 HRS, TOP ELEVATION OF THE BASIN, CRITICAL STORM ELEVATION, 100 YR STORM ELEVATION, WATER QUALITY VOLUME ELEVATION, AND THE WATER QUALITY ORIFICE ELEVATION ARE SHOWN BELOW.

DETENTION BASIN:

CAPACITY OF PERMANENT MICROPOOL IN BASIN = 756 CU FT

CAPACITY OF FOREBAY = 778 CU FT

CAPACITY OF BASIN NOT INCLUDING MICROPOOL = 25,088 CU FT

BASIN DRAWDOWN TIME = 58 HR

WATER QUALITY VOLUME DRAINED IN FIRST 16 HR = 3,078 CU FT

TOP OF BASIN ELEVATION = 803.00 FT

CRITICAL STORM ELEVATION = 801.15 FT

100 YR STORM ELEVATION = 801.91 FT

WATER QUALITY VOLUME ELEVATION = 800.10 FT

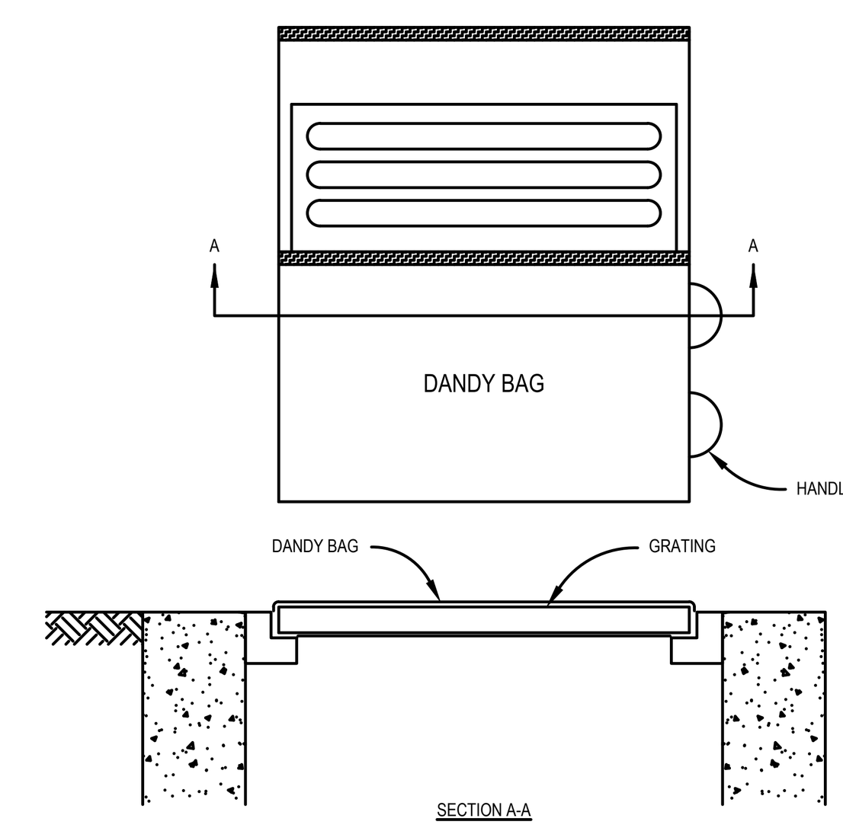
WATER QUALITY ORIFICE INVERT ELEVATION = 797.00 FT

STORMWATER RUNOFF RATES

STORM	PRE-DEV(CFS)	OFF-SITE(CFS)	ALLOWABLE(CFS)	POST-DEV(CFS)	BASIN(CFS)
1-YR	4.41	0.98	5.38	5.63	1.12
2-YR	5.84	1.36	5.38	7.12	3.22
5-YR	7.83	1.93	*5.38	9.13	4.94
10-YR	9.37	2.38	11.75	10.68	5.88
25-YR	11.45	2.99	14.44	12.74	10.52
50-YR	13.10	3.49	16.59	14.37	14.13
100-YR	14.79	4.00	18.78	16.03	17.39

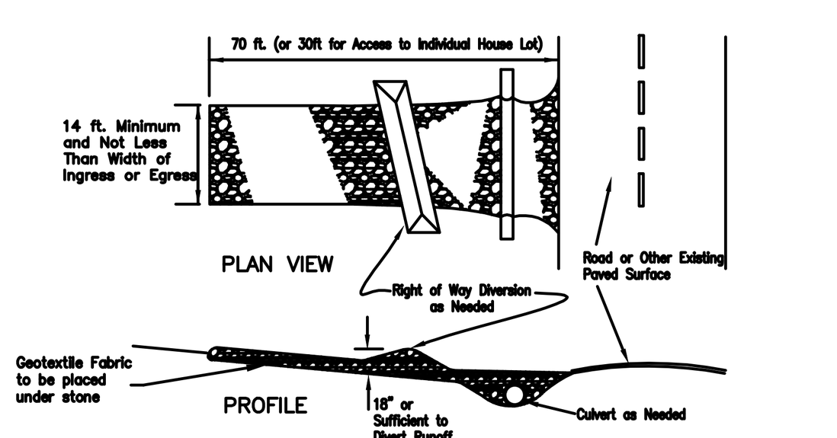
* - CRITICAL STORM ALLOWABLE FLOW

Specifications
for
Dandy Bag



INSTALLATION : STAND GRATE ON END. PLACE DANDY BAG OVER GRATE. FLIP GRATE OVER SO THAT OPEN END IS UP. PULL UP SLACK. TUCK FLAP IN. BE SURE END OF GRATE IS COMPLETELY COVERED BY FLAP OR DANDY BAG WILL NOT FIT PROPERLY. HOLDING HANDLES, CAREFULLY PLACE DANDY BAG WITH GRATE INSERTED INTO CATCH BASIN FRAME SO THAT RED DOT ON THE TOP OF THE DANDY BAG IS VISIBLE.

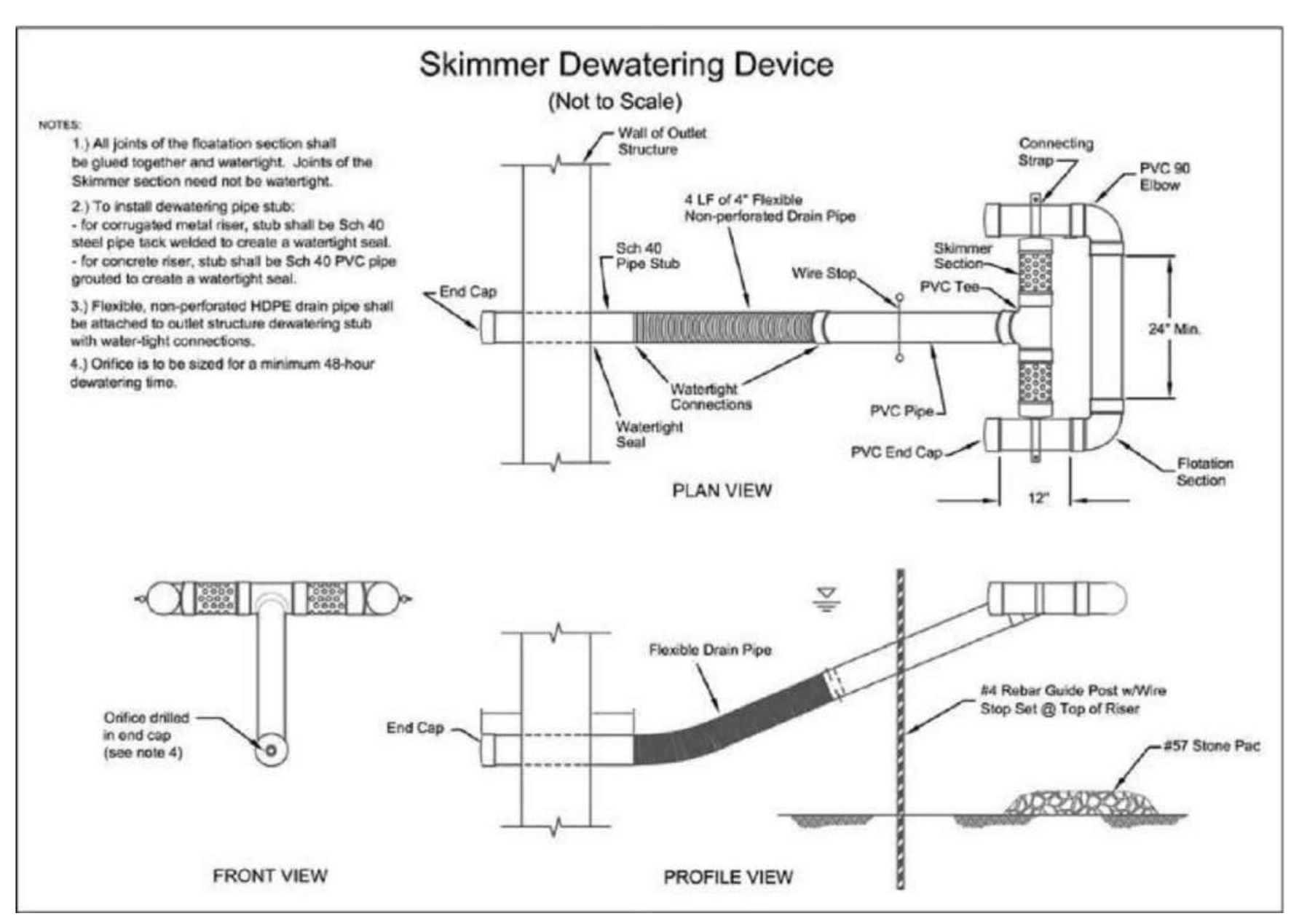
Specifications
for
Construction Entrance



1. Stone Size—ODOT # 2 (1.5–2.5 inch) stone shall be used, or recycled concrete equivalent.
2. Length—The Construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (exception: apply 30 ft. minimum to single residence lots).
3. Thickness —The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty use.
4. Width —The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress occurs.
5. Geotextile —A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot–proof polymeric fibers and meet the following specifications:
6. Timing—The construction entrance shall be installed as soon as is practicable before major grading activities.
7. Culvert —A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed out onto paved surfaces.
8. Water Bar —A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and ut onto paved surfaces.
9. Maintenance —Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, ashed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
10. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off–site tracking. Vehicles that enter and leave the construction–site shall be restricted from muddy areas.
11. Removal—the entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.

GEOTEXTILE SPECIFICATION FOR CONSTRUCTION ENTRANCE	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm
Permitivity	1x10–3 cm/sec.

Specifications
for
Skimmer



SKIMMER END CAP NOTE

THE SIZING FOR THE ORIFICE IN THE END CAP IS DETAILED FOR EACH BASIN ON DETAIL PAGE C600.

ON-SITE SOIL CLASSIFICATION

CcD2 - CASCO-ELDEAN LOAMS, 12 TO 18 PERCENT SLOPES, MODERATELY ERODED, HYDROLOGIC SOIL GROUP B

EmC2 - ELDEAN SILT LOAM, 6 TO 12 PERCENT SLOPES, MODERATELY ERODED, HYDROLOGIC SOIL GROUP B

OcB - OCKLEY SILT LOAM, SOUTHERN OHIO TILL PLAIN, 2 TO 6 PERCENT SLOPES, HYDROLOGIC SOIL GROUP B

So - SLOAN SILTY CLAY LOAM, HYDROLOGIC SOIL GROUP B/D

DRAINAGE AREAS AND WATER QUALITY

CURRENT EXISTING SITE IMPERVIOUS AREA = 2.00 ACRES CURRENT EXISTING SITE PERVIOUS AREA = 0.60 ACERS
POST DEVELOPED SITE IMPERVIOUS AREA = 2.07 ACRES POST DEVELOPED SITE PERVIOUS AREA = 0.53 ACERS
OFFSITE PASS THROUGH IMPERVIOUS AREA = 0.27 ACRES
TOTAL DRAINAGE AREA = 3.39 ACRES
TOTAL DISTURBED AREA = 2.60 ACRES
WATER QUALITY VOLUME = 7,434 CU FT

Specifications
for
Permanent Seeding

Site Preparation

1. Subsoiler, plow, or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip–prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.
3. Topsoil shall be applied where needed to establish vegetation.

Seedbed Preparation

1. Lime—Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 pounds per 1,000–sq. ft. or 2 tons per acre.
2. Fertilizer—Fertilizer shall be applied as recommended by a soil test. In place of a soil test, fertilizer shall be applied at a rate of 25 pounds per 1,000–sq. ft. or 1000 pounds per acre of a 10–10–10 or 12–12–12 analyses.
3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring–tooth harrow, or other suitable field implement to a depth of 3 inches. On sloping land, the soil shall be worked on the contour.

Seeding Dates and Soil Conditions

Seeding should be done March 1 to May 31 or August 1 to September 30. If seeding occurs outside of the abovespecified dates, additional mulch and irrigation may be required to ensure a minimum of 80% germination. Tillage for seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

Dormant Seedings

1. Seedings should not be made from October 1 through November 20. During this period, the seeds are likely to germinate but probably will not be able to survive the winter.
2. The following methods may be used for Dormant Seeding :
   - From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
   - From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and nchor. Increase the seeding rates by 50% for this type of seeding.
   - Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro–seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
   - Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

Mulching

1. Mulch material shall be applied immediately after seeding. Dormant seeding shall be mulched. 100% of the ground surface shall be covered with an approved material.
2. Materials
   - Straw—If straw is used it shall be unrotted small–grain straw applied at the rate of 2 tons per acre or 90 pounds (two to three bales) per 1,000–sq. ft. The mulch shall be spread uniformly by hand or mechanically pplied so the soil surface is covered. For uniform distribution of handspread mulch, divide area into approximately 1,000–sq.– ft. sections and spread two 45–lb. bales of straw in each section.
   - Hydroseeders—If wood cellulose fiber is used, it shall be applied at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
   - Other—Other acceptable mulches include rolled erosion control mattings or blankets applied according to manufacturer s recommendations or wood chips applied at 6 tons per acre.
3. Straw and Mulch Anchoring Methods Straw mulch shall be anchored immediately to minimize loss by wind or water.
   - Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 inches.
   - Mulch Netting—Netting shall be used according to the manufacturer s recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
   - Asphalt Emulsion—Asphalt shall be applied as recommended by the manufacture or at the rate of 160 gallons per acre.
   - Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri–Tac), DCA–70, Petroset, Terra Tack or equivalent may be used at rates specified by the manufacturer.
   - Wood Cellulose Fiber—Wood cellulose fiber shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water with the mixture containing a maximum of 50 pounds cellulose per 100 gallons of water.

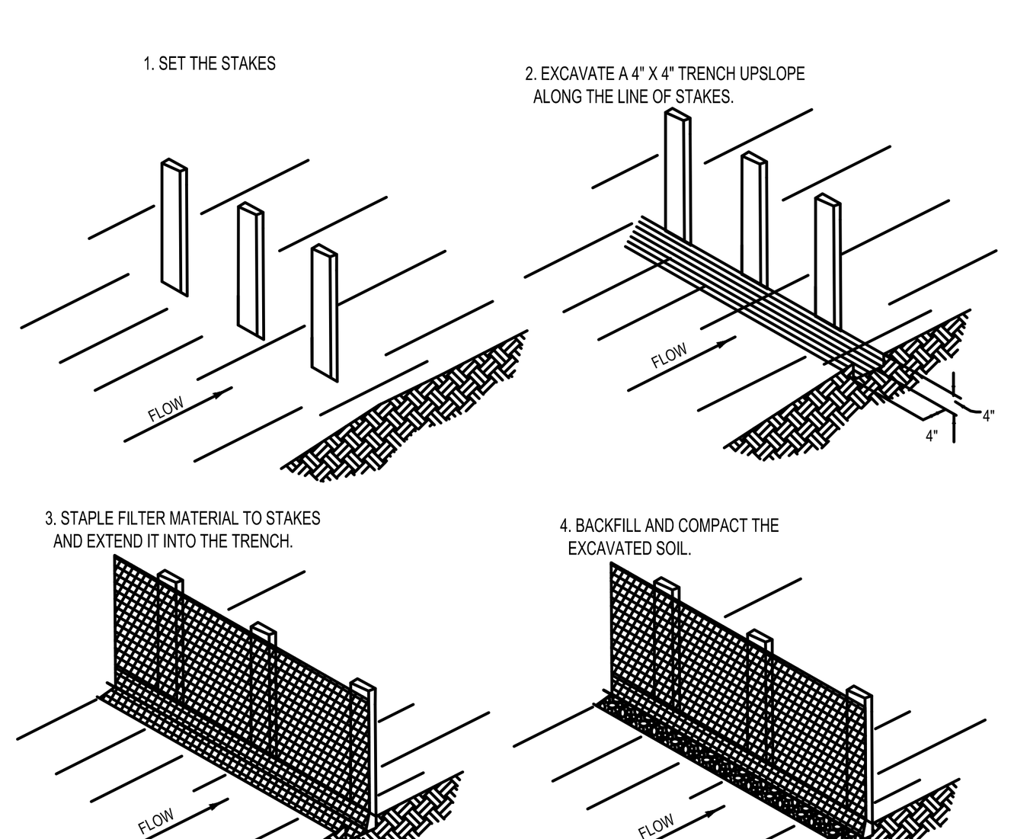
Irrigation

Permanent seeding shall include irrigation to establish vegetation during dry weather or on adverse site conditions, which require adequate moisture for seed germination and plant growth.

Irrigation rates shall be monitored to prevent erosion and damage to seeded areas from excessive runoff.

PERMANENT SEEDING			
Seed Mix	Seeding Rate lb./ac.	Seeding Rate lb/1,000SF	Notes:
General Use			
Creeping Red Fescue Domestic Ryegrass Kentucky Bluegrass	20 – 40 10 – 20 20 – 40	$\frac{1}{2}$ – 1 $\frac{1}{4}$ – $\frac{1}{2}$ $\frac{1}{2}$ – 1	For close mowing & for waterways with <2.0 ft/sec velocity.
Tall Fescue	40 – 50	1 – $1\frac{1}{4}$	
Turf–type (dwarf) Fescue	90	$2\frac{1}{4}$	
Steep Banks or Cut Slopes			
Tall Fescue	40 – 50	1 – $1\frac{1}{4}$	
Crown Vetch Tall Fescue	10 – 20 20 – 30	$\frac{1}{4}$ – $\frac{1}{2}$ $\frac{1}{2}$ – $\frac{3}{4}$	Do not seed later than Augtust.
Flat Pea Tall Fescue	20 – 25 20 – 30	$\frac{1}{2}$ – $\frac{3}{4}$ $\frac{1}{2}$ – $\frac{3}{4}$	Do not seed later than August.
Road Ditches and Swales			
Tall Fescue	40 – 50	1 – $1\frac{1}{4}$	
Turf–type (Dwarf) Fescue Kentucky Bluegrass	90 5	$2\frac{1}{4}$ 0.1	
Lawns			
Kentucky Bluegrass Perennial Ryegrass	100 – 120	2 2	
Kentucky Bluegrass Creeping Red Fescue	100 – 120	2 1 – $1\frac{1}{2}$	For Shaded areas
Note: Other approved seed species may be substituted.			

Specifications
for
Silt Fence



Specifications
for
Manintenance of Permanent Seeding

Mantenance

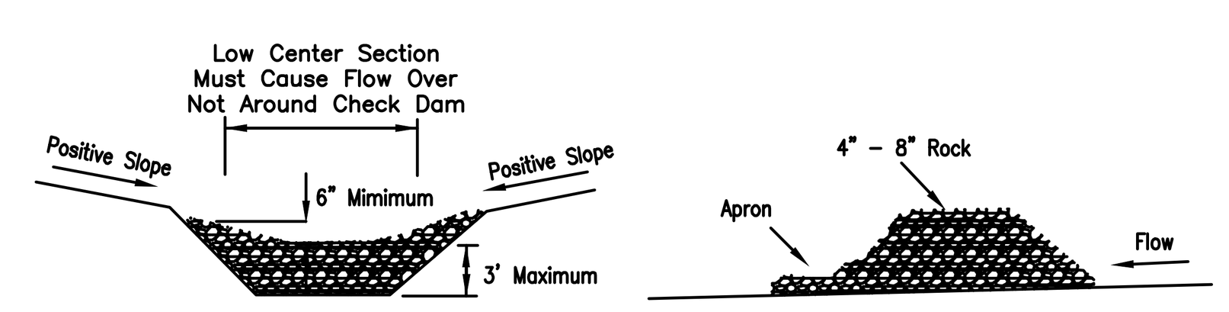
1. Expect emergence within 4 to 28 days after seeding, with legumes typically following grasses. Check permanent seedlings within 4 to 6 weeks after planting. Look for:
   - Vigorous seedlings; Uniform ground surface coverage with at least 30% growth density;
   - Uniformity with legumes and grasses well intermixed;
   - Green, not yellow, leaves. Perennials should remain green throughout the summer, at least at the plant bases.
2. Permanent seeding shall not be considered established for at least 1 full year from the time of planting. Inspect the seeding for soil erosion or plant loss during this first year. Repair bare and sparse areas. Fill gullies. Re–fertilize, re–seed, and re–mulch if required. Consider no–till planting. A minimum of 70% growth density, based on a visual inspection, must exist for an adequate permanent vegetative planting.
   - If stand is inadequate or plant cover is patchy, identify the cause of failure and take corrective action: choice of plant materials, lime and fertilizer quantities, poor seedbed preparation, or weather. If vegetation fails to grow, have the soil tested to determine whether pH is in the correct range or nutrient deficiency is a problem.
   - Depending on stand conditions, repair with complete seedbed preparation, then over–seed or re–seed.
   - If it is the wrong time of year to plant desired species, over–seed with small grain cover crop to thicken the stand until timing is right to plant perennials or use temporary seeding. See Temporary Seeding standard.
3. Satisfactory establishment may require re–fertilizing the stand in the second growing season.
   - Do not fertilize cool season grasses in late May through July (i.e. Kentucky Bluegrass, Orchardgrass, Perrenial Ryegrass, Smooth Brome, Fescues, Timothy, Reed Canarygrass and Garrison Grass)
   - Grass that looks yellow may be nitrogen deficient. In lieu of a soil test, an application of 50 lbs. of N–P–K per acre in early spring will help cool season grasses compete against weeds or grow more successfully.
   - Do not use nitrogen fertilizer if the stand contains more than 20 percent legumes.
4. Long–term maintenance fertilization rates shall be established by following soil test recommendations or by using the rates shown in Table 2.5. Consider mowing after plants reach a height of 6 to 8 inches. Mow grasses tall, at least 3 inches in height and minimize compaction during the mowing process. Vegetation on structural practices such as embankments and grass–lined channels need to be mowed only to prevent woody plants from invading the stand.

Common Problems / Concerns

- Insufficient topsoil or inadequately tilled, limed, and/or fertilized seedbed:— results in poor establishment of vegetation.
- Unsuitable species or seeding mixture:— results in competition with the perennials.
- Nurse crop rate too high in the mixture: — results in competition with the perennials.
- Seeding done at the wrong time of year: — results in poor establishment of vegetation, also plant hardiness is significantly decreased.
- Mulch rate inadequate:— results in poor germination and failure.

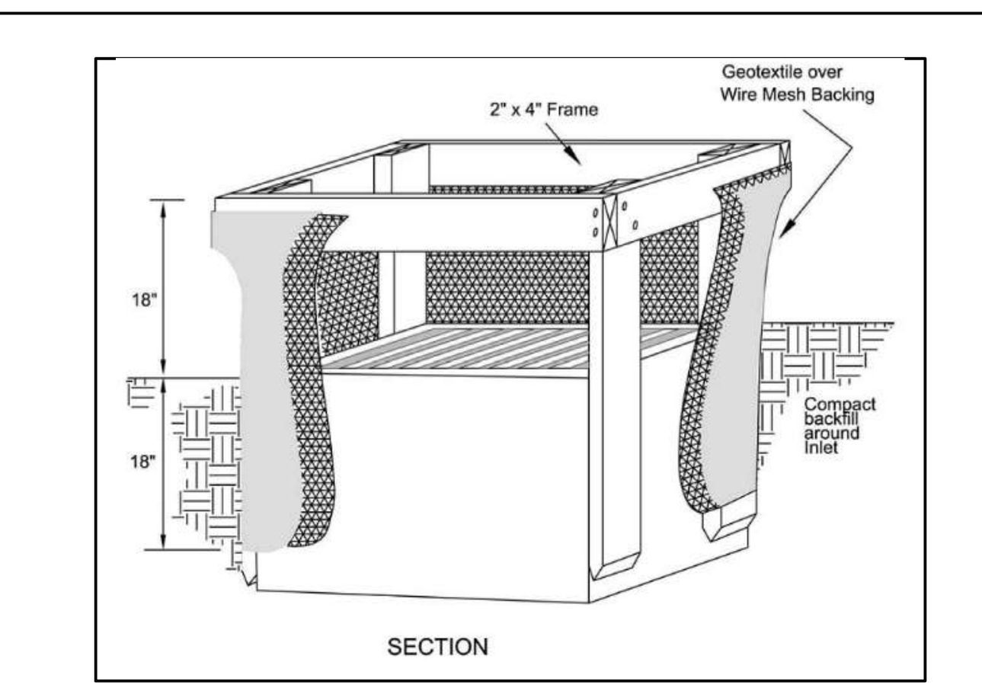
MAINTENANCE FOR PERMANENT SEEDINGS: FERTILIZATION AND MOWING					
Mixture	Formula	lb./ac.	lb./1,00 SF	Time	Mowing
Creeping Red Fescue Rygrass Kentucky Bluegrass	10–10–10	500	12	Fall, yearly or as needed.	Not closer that 3"
Tall Fescue	10–10–10	500	12		Not closer than 4"
Turf–type (Dwarf) Fescue	10–10–10	500	12		Not closer than 2"
Crown Vetch Fescue	0–20–20	400	10	Spring, yearly following establishment and every 4–7 yr. thereafter	Do not mow
Flat Pea Fescue	0–20–20	400	10		Do not mow
Note: Following soil test recommendations is preferred to fertilizer rates shown above.					

Specifications
for
Rock Check Dam



1. The check dam shall be constructed of 4–8 inch diameter stone, placed so that it completely covers the width of the channel. ODOT Type D stone is acceptable, but should be underlain with a gravel filter consisting of ODOT No. 3 or 4 or suitable filter fabric.
2. Maximum height of check dam shall not exceed 3.0 feet.
3. The midpoint of the rock check dam shall be a minimum of 6 inches lower than the sides in order to direct across the center and away from the channel sides.
4. The base of the check dam shall be entrenched approximately 6 inches.
5. Spacing of check dams shall be in a manner such that the toe of the upstream dam is at the same elevation as the top of the downstream dam.
6. A Splash Apron shall be constructed where check dams are expected to be in use for an extended period of time, a stone apron shall be constructed immediately downstream of the check dam to prevent flows from undercutting the structure. The apron should be 6 in. thick and its length two times the height of the dam.
7. Stone placement shall be performed either by hand or mechanically as long as the center of check dam is lower than the sides and extends across entire channel.
8. Side slopes shall be a minimum of 2:1.

Specifications
for
Geotextile Inlet Protection



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the inlet becomes functional.
2. The earth around the inlet shall be excavated completely to a depth at least 18 inches.
3. The wooden frame shall be constructed of 2-inch by 4-inch construction grade lumber. The 2-inch by 4-inch posts shall be driven one (1) ft. into the ground at four corners of the inlet and the top portion of 2-inch by 4-inch frame assembled using the overlap joint shown. The top of the frame shall be at least 6 inches below adjacent roads if ponded water will pose a safety hazard to traffic.
4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
5. Geotextile material shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 inches below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
6. Backfill shall be placed around the inlet in compacted 6-inch layers until the earth is even with notch elevation on ends and top elevation on sides.
7. A compacted earth dike or check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression. The top of the dike shall be at least 6 inches higher than the top of the frame.

Specifications
for
Temporary Seeding

Temporary Seeding Species Selection			
Seeding Dates	Species	Lb./1000 ft2	Lb/Acre
March 1 to August 15	Oats Tall Fescue Annual Ryegrass	3 1 1	128 (4 bushel) 40 40
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 40 40
	Annual Ryegrass Perennial Ryegrass Creeping Red Fescue Kentucky Bluegrass	1.25 3.25 0.4 0.4	55 142 17 17
August 16 to November	Rye Tall Fescue Annual Ryegrass	Oats Tall Fescue Annual Ryegrass	
	wheat Tall Fescue Annual Ryegrass	Oats Tall Fescue Annual Ryegrass	
	perennial Ryegrass Tall Fescue Annual Ryegrass	Oats Tall Fescue Annual Ryegrass	
	Annual Ryegrass Perennial Ryegrass Creeping Red Fescue Kentucky Bluegrass	1.25 3.25 0.4 0.4	40 40 40
November 1 to February 29	Use mulch only or dormant seeding		

1. Structural erosion and sediment control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction site.
2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 days or greater. These idle areas shall be seeded within 7 days after grading.
3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. Temporary seeding should not be postponed if ideal seedbed preparation is not possible.
4. Soil Amendments—Temporary vegetation seeding rates shall establish adequate stands of vegetation, which may require the use of soil amendments. Base rates for lime and fertilizer shall be used.
5. Seeding Method—Seed shall be applied uniformly with a cyclone spreader, drill, cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on–site and the seeding shall be done immediately and without interruption.

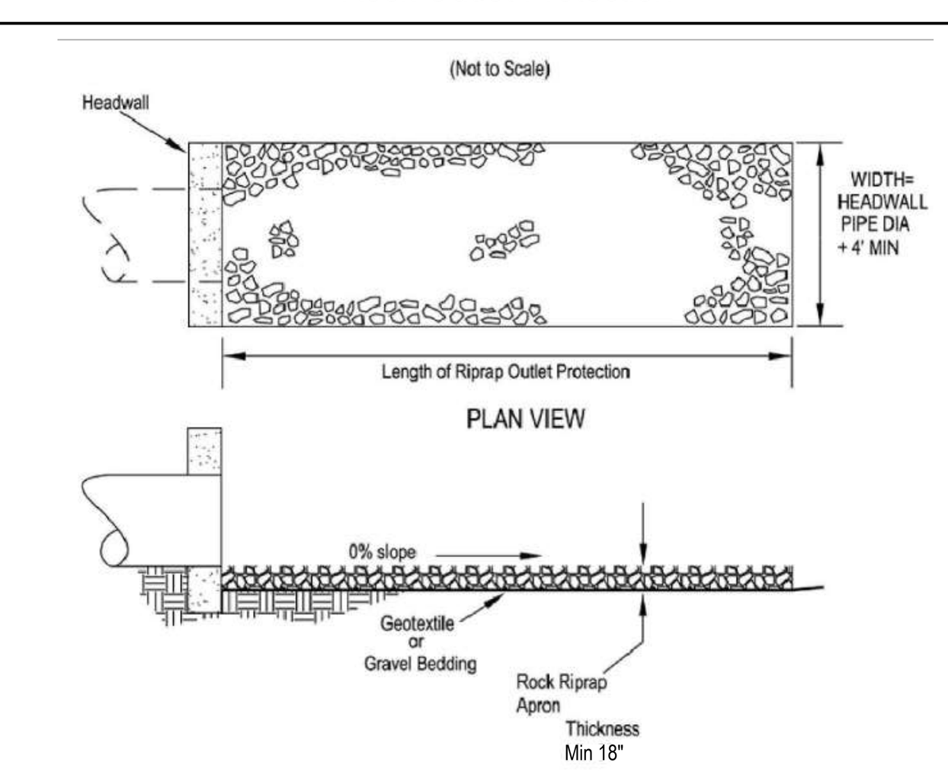
Mulching Temporary Seeding

1. Applications of temporary seeding shall include mulch, which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates on favorable, very flat soil conditions may not need mulch to achieve adequate stabilization.

Materials:
- Straw—If straw is used, it shall be unrotted small–grain straw applied at a rate of 2 tons per acre or 90 lbs./ 1,000 sq. ft. (2–3 bales)
- Hydroseeders—If wood cellulose fiber is used, it shall be used at 2000 lbs./ ac. or 46 lb./ 1,000–sq.–ft.
- Other—Other acceptable mulches include mulch mattings applied according to manufacturer s recommendations or wood chips applied at 6 ton/ ac.3. Straw Mulch shall be anchored immediately to minimize loss by wind or water.

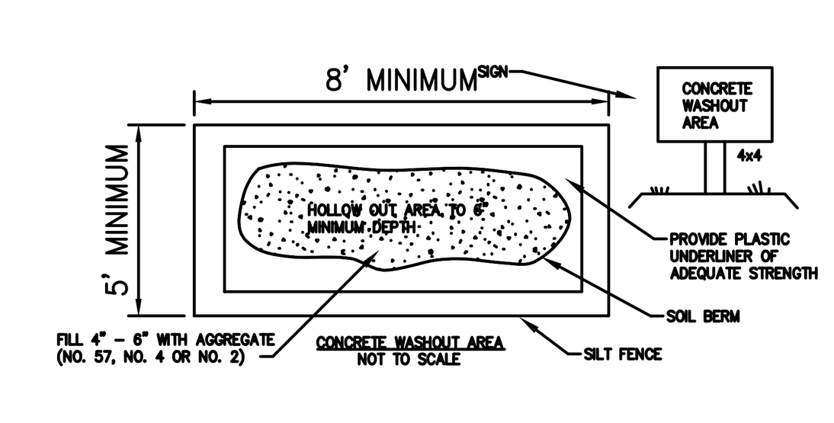
Anchoring methods:
- Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but left to a length of approximately 6 inches.
- Mulch Netting—Netting shall be used according to the manufacturers recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri–Tac), DCA–70, Petroset, Terra Track or equivalent may be used at rates recommended by the manufacturer.
- Wood–Cellulose Fiber—Wood–cellulose fiber binder shall be applied at a net dry wt. of 750 lb./ac. The wood–cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb. / 100 gal.

Specifications
for
Rock Outlet Protection



1. Subgrade for the filter or bedding and riprap shall be prepared to the required lines and grades as shown on the plan. The subgrade shall be cleared of all trees, stumps, roots, sod, loose rock, or other material.
2. Riprap shall conform to the grading limits as shown on the plan.
3. Geotextile shall be securely anchored according to manufacturers recommendations.
4. Geotextile shall be laid with the long dimension parallel to the direction of flow and shall be laid loosely but without wrinkles and creases. Where joints are necessary, strips shall be placed to provide a 12–in. minimum overlap, with the upstream strip overlapping the downstream strip.
5. Gravel bedding shall be ODOT No. 67's or 57's unless shown differently on the drawings.
6. Riprap may be placed by equipment but shall be placed in a manner to prevent slippage or damage to the geotextile.
7. Riprap shall be placed by a method that does not cause segregation of sizes. Extensive pushing with a dozer causes segregation and shall be avoided by delivering riprap near its final location within the channel.
8. Construction shall be sequenced so that outlet protection is placed and functional when the storm drain, culvert, or open channel above it becomes operational.
9. All disturbed areas will be vegetated as soon as practical.

Specifications
for
Concrete Washout



STATE OF OHIO
PETER S. BATTAGLIA
E51265
PROFESSIONAL ENGINEER

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NEW BUILDING FOR
CITY OF BEAVERCREEK SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS
2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

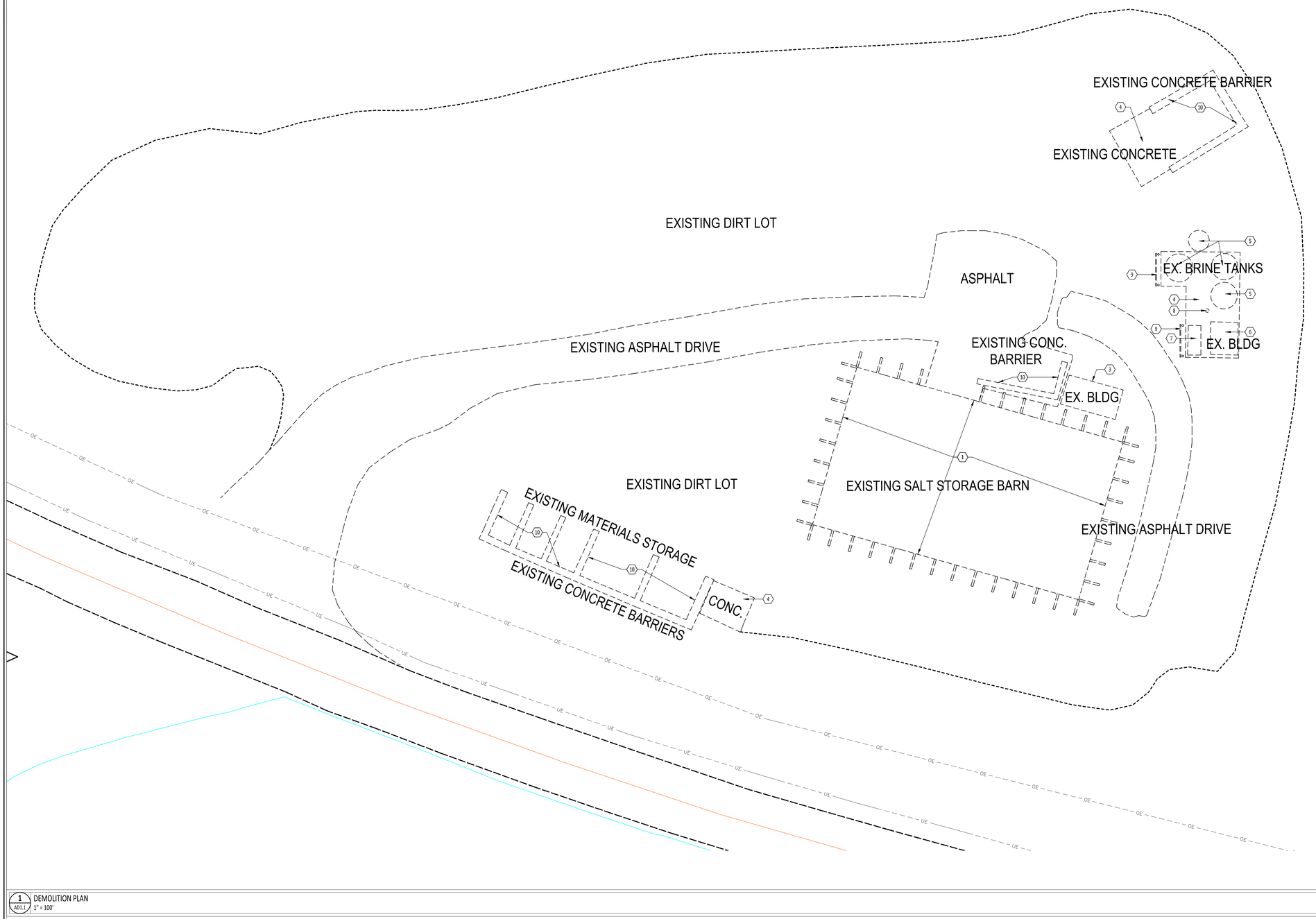
ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00		

SHEET TITLE:
SWPPP DETAILS

SHEET NUMBER:
C701

DWG NAME: Q:\Garmann Miller\0125630A.00 - Beavercreek Salt Storage\Dev\Drawings\0125630A_C600.dwg SAVE DATE: 10/5/2023 10:20 AM SAVED BY: dfrancisco



1 AD1.1 DEMOLITION PLAN
1" = 100'

GENERAL DEMOLITION NOTES

A. THESE NOTES APPLY TO ALL ARCHITECTURAL DEMOLITION DRAWINGS. FOR DEMOLITION NOTES AND SYMBOLS APPLICABLE ONLY TO DRAWINGS OF DISCIPLINES OTHER THAN ARCHITECTURAL, REFER TO SPECIFIC DRAWINGS OF THAT GENERAL DISCIPLINE.

B. FIELD VERIFY CONDITIONS AND COORDINATE DEMOLITION OR REMOVAL WORK WITH CORRESPONDING NEW CONSTRUCTION WORK AND WITH ALL APPROPRIATE TRADES PRIOR TO STARTING DEMOLITION WORK. IF DISCREPANCIES ARE FOUND BETWEEN CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT IMMEDIATELY.

C. REMOVE ITEMS TO BE DEMOLISHED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED. DESCRIPTION OF PRIMARY ITEMS TO BE REMOVED IS GENERAL IN NATURE, AND REMOVAL OF SECONDARY COMPONENTS SUCH AS BLOCKING, SUPPORTS, ANCHORS, TRIM, ADHESIVE, PIPING, WIRING, ETC., RELATED TO PRIMARY ITEMS SHALL BE INCLUDED.

D. PROTECT EXISTING SURFACES THAT ARE TO REMAIN IN AREAS ADJACENT TO DEMOLITION WORK. CONTRACTOR TO REPAIR EXISTING SURFACES DAMAGED DURING CONSTRUCTION AND DEMOLITION.

E. DEMOLISHED MATERIALS ARE THE PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE AND SHALL BE PROMPTLY DISPOSED OFF SITE IN A LEGAL MANNER.

F. REMOVE DEBRIS DAILY.

G. PROVIDE STRUCTURAL SUPPORT FOR WALLS AND CEILINGS DURING DEMOLITION.

KEYNOTE SCHEDULE

#	KEYNOTE DESCRIPTION
1	REMOVE EXISTING SALT STORAGE BUILDING IN IT'S ENTIRETY, INCLUDING CONCRETE FOUNDATIONS, CONCRETE FLOOR, WALL FRAMING, ROOF STRUCTURE, STEEL TRUSSES AND CONCRETE BASE WALL - REFERENCE ELECTRICAL DEMOLITION DRAWINGS
2	REMOVE EXISTING CONCRETE BARRIER IN IT'S ENTIRETY, INCLUDING FOUNDATIONS, FLOOR AND WALLS
3	REMOVE EXISTING STORAGE BUILDING IN IT'S ENTIRETY, INCLUDING CONCRETE FOUNDATIONS, CONCRETE FLOOR, FRAMING, ROOF AND WALLS
4	REMOVE EXISTING CONCRETE SLAB
5	EXISTING BRINE TANKS, BY OWNER - RELOCATE TO NEW LOCATIONS
6	REMOVE EXISTING BRINE BUILDING - REMOVE AND RELOCATE EXISTING BRINE EQUIPMENT FOR REUSE IN NEW BRINE BUILDING - REFERENCE PLUMBING DRAWINGS
7	REMOVE EXISTING BRINE MIX STATION - RELOCATE TO NEW LOCATION
8	DISCONNECT AND REMOVE EXISTING LIGHT POLE
9	REMOVE EXISTING GUARD RAIL
10	EXISTING CONCRETE UNIT MOVABLE WALLS - REFERENCE SITE DEMOLITION PLAN

STATE OF OHIO
CHRISTOPHER MONNIN
E-67075
REGISTERED
PROFESSIONAL ENGINEER
CHRISTOPHER MONNIN
LICENSE #E-67075
EXPIRATION DATE: 12/31/2023

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creatdesgn.com

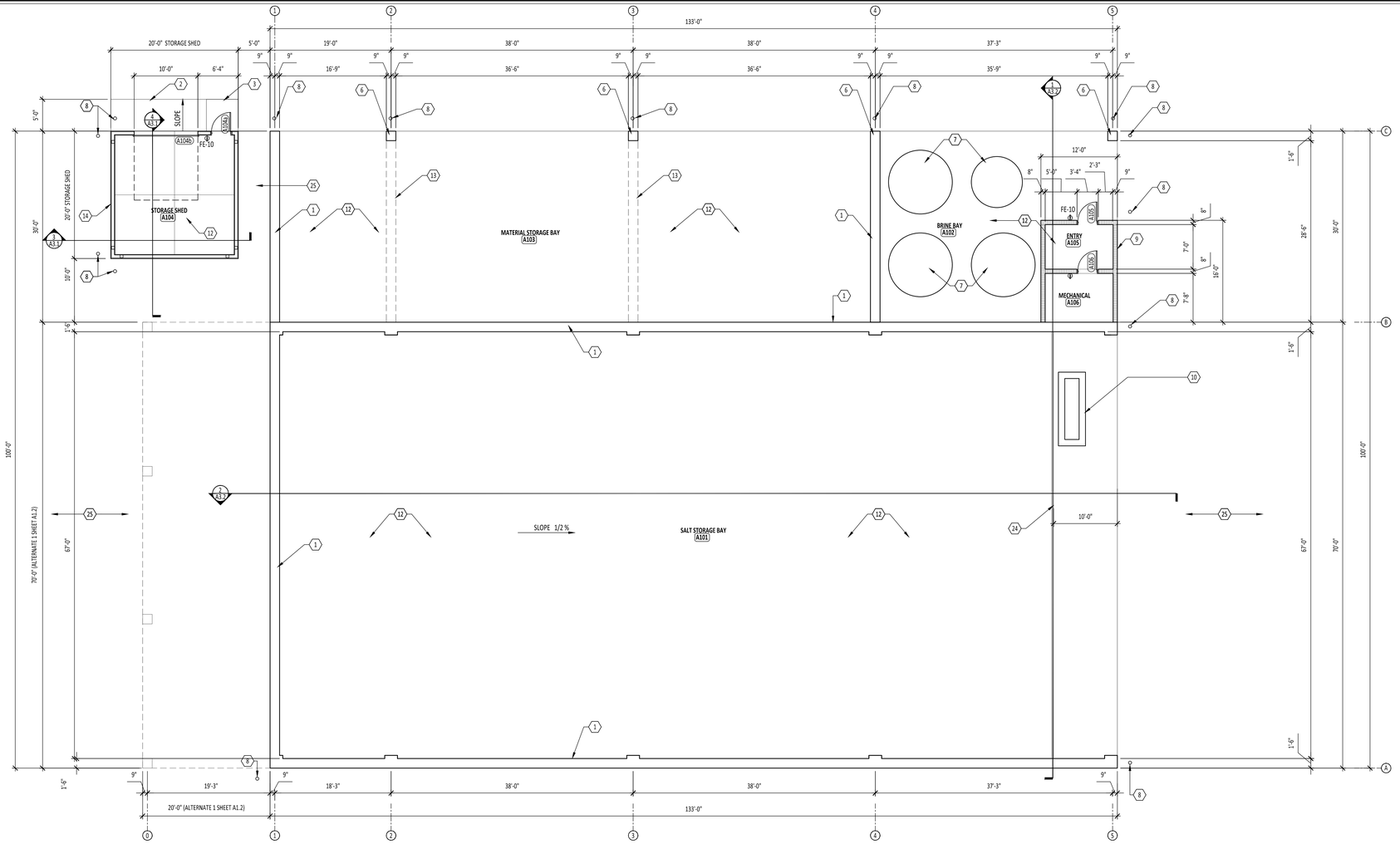
NEW BUILDING FOR
CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS
2360 DAYTON-XENIA ROAD BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	JCR	MCN

SHEET TITLE:
DEMOLITION PLAN SALT STORAGE BARN

SHEET NUMBER:
AD1.1



1 A1.1 FLOOR PLAN
1/8" = 1'-0"

FLOOR PLAN LEGEND

- (1) — STRUCTURAL GRID REFERENCE - REFERENCE STRUCTURAL SHEETS
- LEVEL LINE
- A101 — DOOR DESIGNATION - REFEREENCE DOOR/OPENING SCHEDULE ON SHEET A6.1
- X — KEYNOTE DESIGNATION - REFERENCE PLAN NOTES ON THIS SHEET
- XXX — ROOM DESIGNATION - REFERENCE ROOM INDEX ON THIS SHEET
- FE- — FIRE EXTINGUISHER - REFERENCE SPEC SECTION 10 4400
- X.X — BUILDING SECTION - REFERENCE SECTION ON SHEET INDICATED

ROOM NAME/ NUMBER	
A101	SALT STORAGE BAY
A102	BRINE BAY
A103	MATERIAL STORAGE BAY
A104	STORAGE SHED
A105	ENTRY
A106	MECHANICAL
A107	LEAN TO BAY (ALTERNATE 1)

KEYNOTE SCHEDULE	
#	KEYNOTE DESCRIPTION
1	REINFORCED POURED CONCRETE WALLS - REFERENCE STRUCTURAL DRAWINGS
2	CONCRETE APRON - REFERENCE STRUCTURAL DRAWINGS
3	ANTI - HEAVE CONCRETE STOOP - REFERENCE STRUCTURAL DRAWINGS
6	REINFORCED POURED CONCRETE COLUMN BASE; REFERENCE STRUCTURAL DRAWINGS
7	BRINE TANKS, BY OWNER - RELOCATE FROM EXISTING LOCATIONS
8	6" BOLLARD (TYPICAL). CENTERLINE OF BOLLARD MINIMUM 1'-6" FROM CONCRETE WALL. REFERENCE DETAIL 6/A2.1
9	NEW BRINE BUILDING - REFERENCE SECTIONS AND DETAILS
10	BRINE MIX STATION, BY OWNER - RELOCATE FROM EXISTING LOCATION
12	CONCRETE FLOOR SLAB ON GRADE - REFERENCE STRUCTURAL DRAWINGS
13	PROVIDE LOCK BLOCKS FOR 6' HIGH DIVIDING WALL AS SPECIFIED IN SECTION 03 4813
14	26 GA. PRE-FINISHED METAL SIDING OVER 1/2" PLYWOOD OVER 2 x 6 WOOD STUD FRAMING @ 16" O.C.
24	4" WIDE PAINTED FLOOR LINE
25	EXTERIOR PAVEMENT, SLOPE TO DRAIN - REFERENCE CIVIL DRAWINGS

STATE OF OHIO
CHRISTOPHER MONNIN
E-67075
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NEW BUILDING FOR

CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

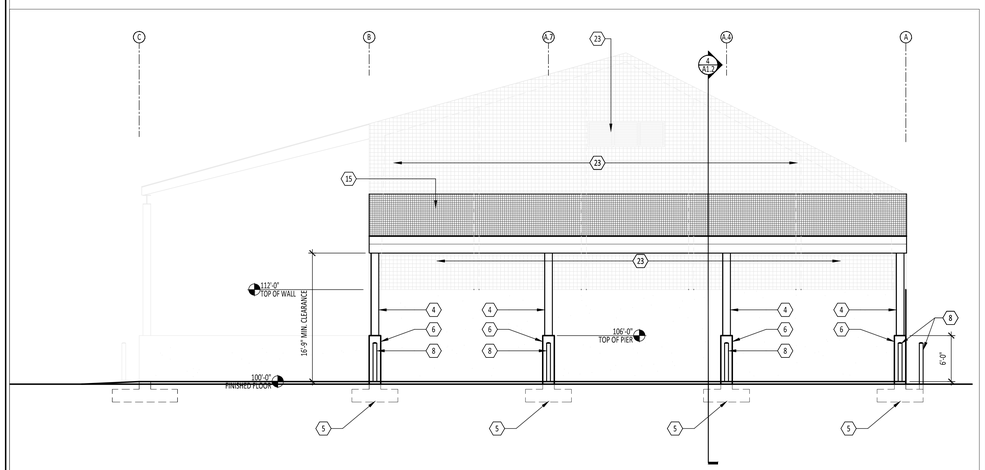
PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	JCR	MCN

SHEET TITLE:

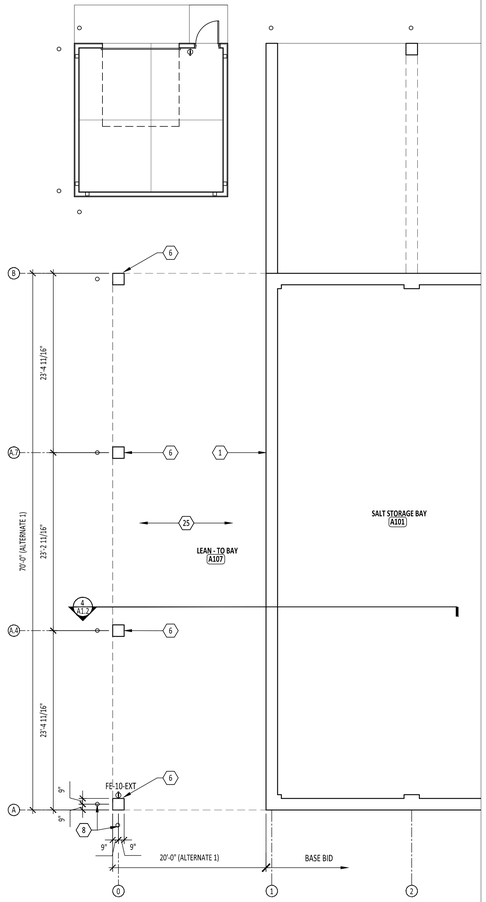
**FLOOR PLAN
SALT STORAGE BARN
BRINE BUILDING
AND
STORAGE SHED**

SHEET NUMBER:

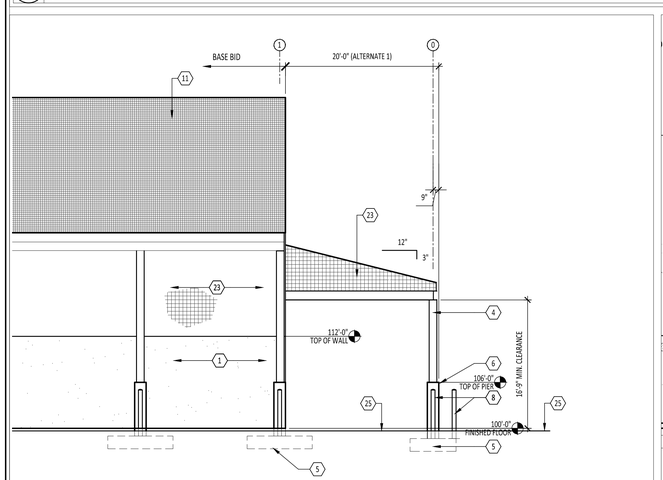
A1.1



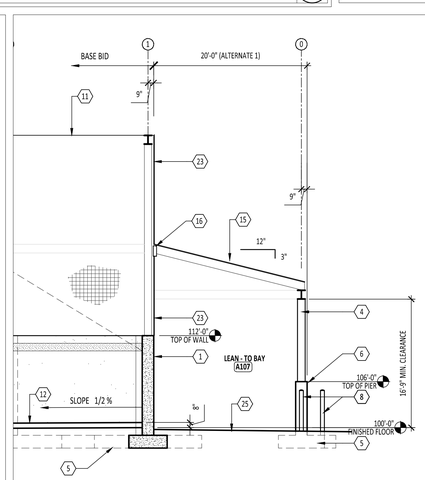
2 A1.2 WEST BUILDING ELEVATION (ALTERNATE 1)
1/8" = 1'-0"



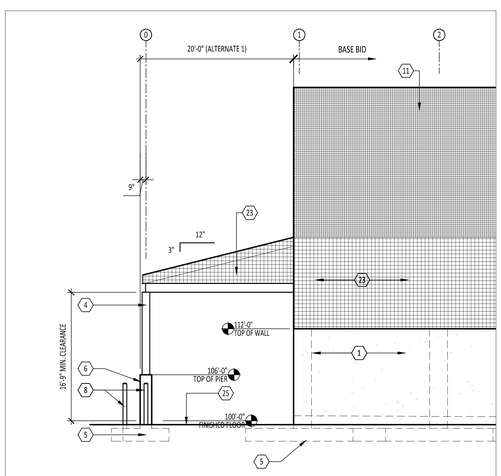
1 A1.2 PARTIAL FLOOR PLAN (ALTERNATE 1)
1/8" = 1'-0"



5 A1.2 NORTH BUILDING ELEVATION (ALTERNATE 1)
1/8" = 1'-0"



4 A1.2 BUILDING SECTION LOOKING SOUTH (ALTERNATE 1)
1/8" = 1'-0"



3 A1.2 SOUTH BUILDING ELEVATION (ALTERNATE 1)
1/8" = 1'-0"

FLOOR PLAN LEGEND

- 1 — STRUCTURAL GRID REFERENCE - REFERENCE STRUCTURAL SHEETS
- LEVEL LINE
- A101 — DOOR DESIGNATION - REFERENCE DOOR/OPENING SCHEDULE ON SHEET A6.1
- X — KEYNOTE DESIGNATION - REFERENCE PLAN NOTES ON THIS SHEET
- XXX — ROOM DESIGNATION - REFERENCE ROOM INDEX ON THIS SHEET
- FE- — FIRE EXTINGUISHER - REFERENCE SPEC SECTION 10 4400
- X.X — BUILDING SECTION - REFERENCE SECTION ON SHEET INDICATED

ROOM NAME/ NUMBER	
A101	SALT STORAGE BAY
A102	BRINE BAY
A103	MATERIAL STORAGE BAY
A104	STORAGE SHED
A105	ENTRY
A106	MECHANICAL
A107	LEAN TO BAY (ALTERNATE 1)

KEYNOTE SCHEDULE	
#	KEYNOTE DESCRIPTION
1	REINFORCED POURED CONCRETE WALLS - REFERENCE STRUCTURAL DRAWINGS
4	PRE-ENGINEERED STRUCTURAL COLUMN
5	LINE OF CONCRETE FOUNDATION (REFERENCE STRUCTURAL DRAWINGS)
6	REINFORCED POURED CONCRETE COLUMN BASE; REFERENCE STRUCTURAL DRAWINGS
8	6" BOLLARD (TYPICAL). CENTERLINE OF BOLLARD MINIMUM 1'-6" FROM CONCRETE WALL. REFERENCE DETAIL 6/A2.1
11	PRE-ENGINEERED CLEAR SPAN STEEL RIGID FRAME WITH FABRIC MEMBRANE ROOF BY FABRIC MEMBRANE ROOF MANUFACTURER
12	CONCRETE FLOOR SLAB ON GRADE - REFERENCE STRUCTURAL DRAWINGS
15	PRE-ENGINEERED LEAN-TO STEEL FRAME WITH FABRIC MEMBRANE ROOF BY FABRIC MEMBRANE ROOF MANUFACTURER
16	CONTINUOUS STEEL FRAMING FOR LEAN - TO ROOF SUPPORT BY FABRIC MEMBRANE ROOF MANUFACTURER
22	PROVIDE AIR PRESSURE/WIND VENTILATION AS REQUIRED BY FABRIC MEMEBRANE ROOF MANUFACTURER
23	ELEVATION SHALL BE CLOSED WITH INFILL FRAMING AND FABRIC MEMBRANE
25	EXTERIOR PAVEMENT, SLOPE TO DRAIN - REFERENCE CIVIL DRAWINGS

STATE OF OHIO
CHRISTOPHER MONNIN
E-67075
Registered
PROFESSIONAL ENGINEER

CHRISTOPHER MONNIN
LICENSE #E-67075
EXPIRATION DATE: 12/31/2023

GARMANN MILLER
MINSTER, OHIO | COLUMBUS, OHIO | INDIANAPOLIS, INDIANA
creatdesgn.com

NEW BUILDING FOR

CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2360 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS

BID DOCUMENTS	10/05/2023

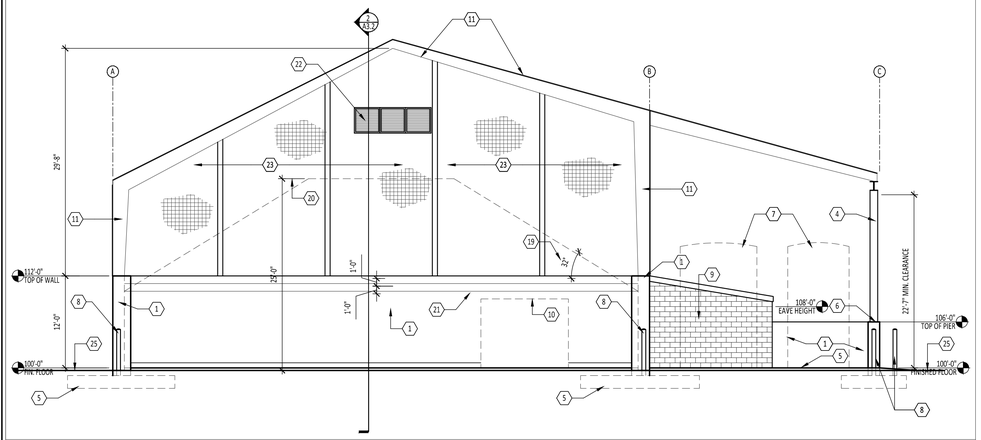
PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	JCR	MCN

SHEET TITLE:

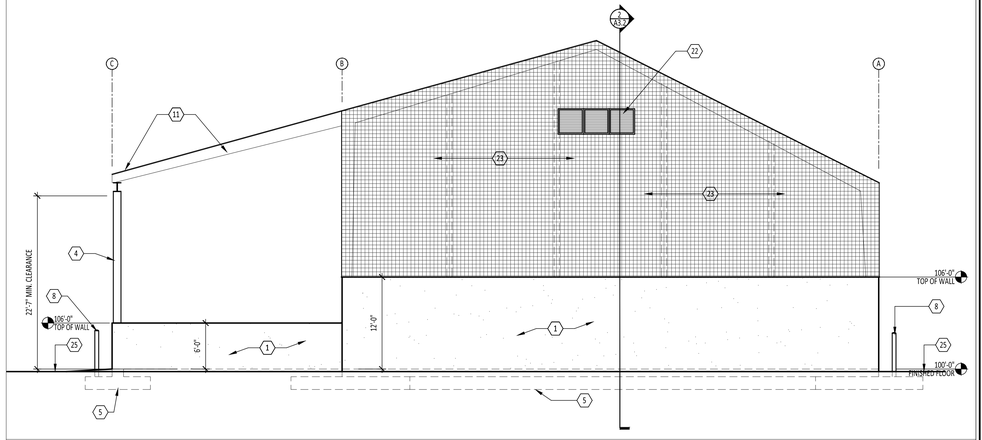
SALT STORAGE BARN
LEAN TO
ALTERNATE 1

SHEET NUMBER:

A1.2



1 A2.1 EAST ELEVATION SALT STORAGE BUILDING (BASE BID)
1/8" = 1'-0"



2 A2.1 WEST ELEVATION SALT STORAGE BUILDING (BASE BID)
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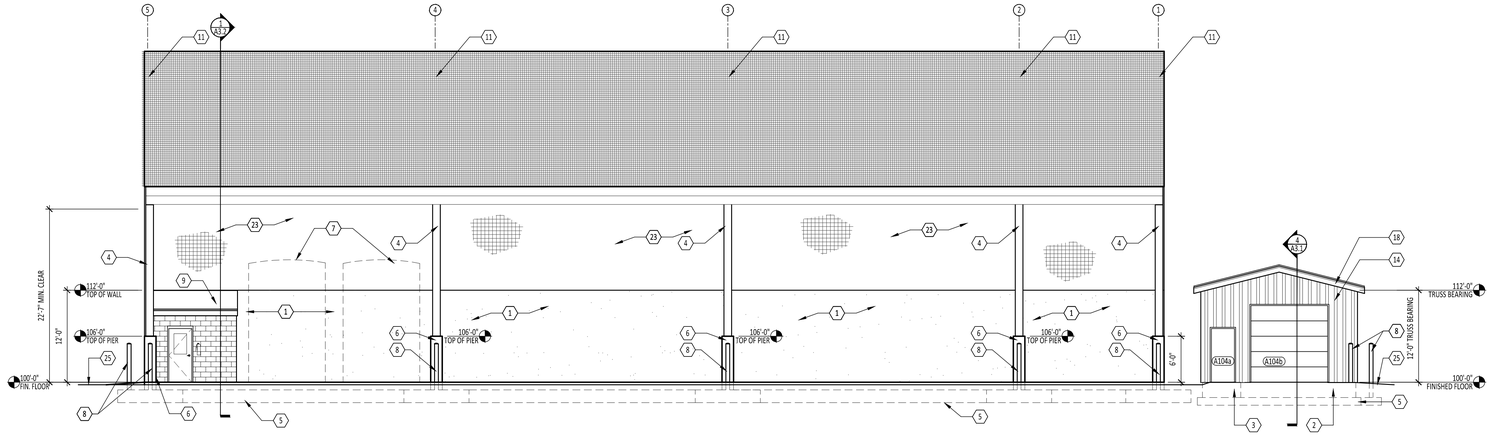
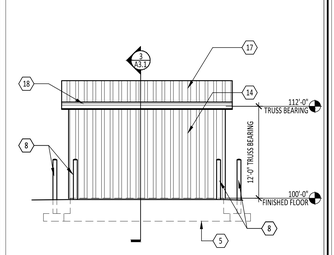
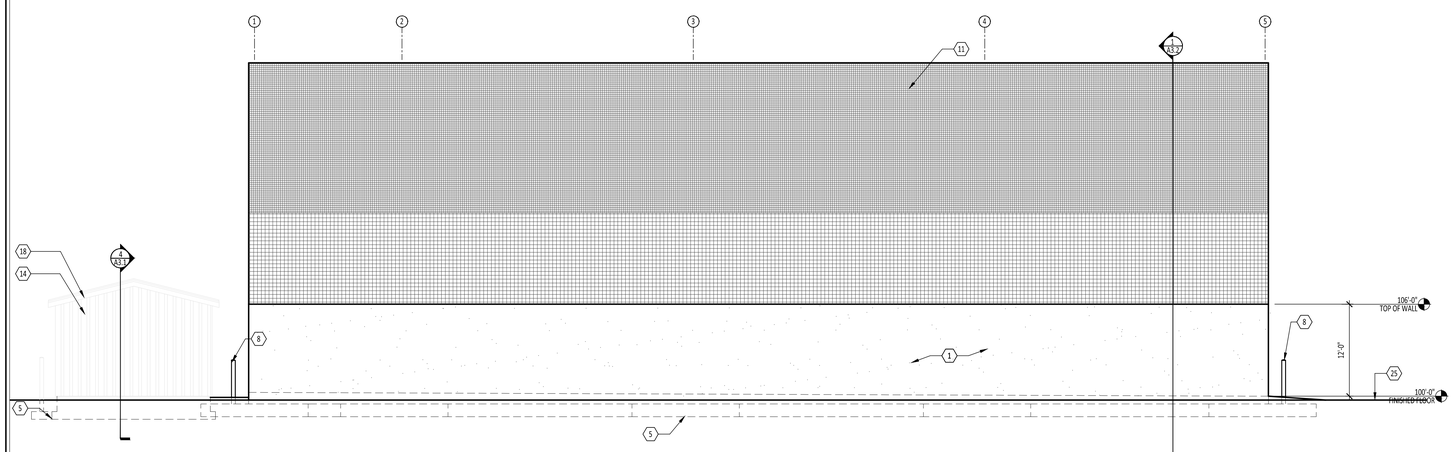


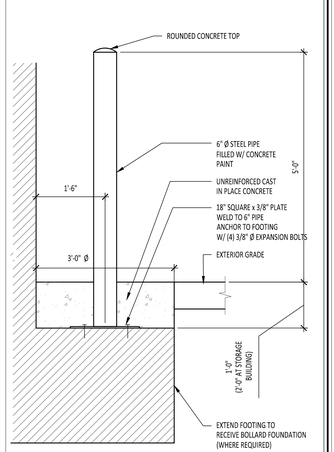
3 A2.1 NORTH ELEVATION (SALT STORAGE BUILDING AND STORAGE SHED)
1/8" = 1'-0"



5 A2.1 WEST ELEVATION (STORAGE BUILDING)
1/8" = 1'-0"



4 A2.1 SOUTH ELEVATION (SALT STORAGE BUILDING (BASE BID) AND STORAGE SHED
1/8" = 1'-0"



6 A2.1 BOLLARD DETAIL
1/8" = 1'-0"

FLOOR PLAN LEGEND

- 1 — STRUCTURAL GRID REFERENCE - REFERENCE STRUCTURAL SHEETS
- LEVEL LINE
- A101 — DOOR DESIGNATION - REFEREENCE DOOR/OPENING SCHEDULE ON SHEET A6.1
- X — KEYNOTE DESIGNATION - REFERENCE PLAN NOTES ON THIS SHEET
- XXX — ROOM DESIGNATION - REFERENCE ROOM INDEX ON THIS SHEET
- FE-_ — FIRE EXTINGUISHER - REFERENCE SPEC SECTION 10 4400
- X / XX.X — BUILDING SECTION - REFERENCE SECTION ON SHEET INDICATED

ROOM NAME/ NUMBER	
A101	SALT STORAGE BAY
A102	BRINE BAY
A103	MATERIAL STORAGE BAY
A104	STORAGE SHED
A105	ENTRY
A106	MECHANICAL
A107	LEAN TO BAY (ALTERNATE 1)

KEYNOTE SCHEDULE	
#	KEYNOTE DESCRIPTION
1	REINFORCED POURED CONCRETE WALLS - REFERENCE STRUCTURAL DRAWINGS
2	CONCRETE APRON - REFERENCE STRUCTURAL DRAWINGS
3	ANTI - HEAVE CONCRETE STOOP - REFERENCE STRUCTURAL DRAWINGS
4	PRE-ENGINEERED STRUCTURAL COLUMN
5	LINE OF CONCRETE FOUNDATION (REFERENCE STRUCTURAL DRAWINGS)
6	REINFORCED POURED CONCRETE COLUMN BASE; REFERENCE STRUCTURAL DRAWINGS
7	BRINE TANKS, BY OWNER - RELOCATE FROM EXISTING LOCATIONS
8	6" BOLLARD (TYPICAL). CENTERLINE OF BOLLARD MINIMUM 1'-6" FROM CONCRETE WALL. REFERENCE DETAIL 6/A2.1
9	NEW BRINE BUILDING - REFERENCE SECTIONS AND DETAILS
10	BRINE MIX STATION, BY OWNER - RELOCATE FROM EXISTING LOCATION
11	PRE-ENGINEERED CLEAR SPAN STEEL RIGID FRAME WITH FABRIC MEMBRANE ROOF BY FABRIC MEMBRANE ROOF MANUFACTURER
12	CONCRETE FLOOR SLAB ON GRADE (SLOPE TO DRAIN); REFERENCE STRUCTURAL DRAWINGS
14	26 GA. PRE-FINISHED METAL SIDING OVER 1/2" PLYWOOD OVER 2 x 6 WOOD STUD FRAMING @ 16" O.C. - REFERENCE STRUCTURAL DRAWINGS
17	26 GA. PRE-FINISHED METAL ROOFING OVER ROOF SHEATHING OVER PRE - ENGINEERED WOOD TRUSSES @ 24" O.C. - REFERENCE STRUCTURAL DRAWINGS
18	METAL CLAD 2 x FASCIA WITH CONTINUOUS DRIP EDGE
19	ANGLE OF REPOSE FOR ROAD SALT
20	MAXIMUM HEIGHT OF SALT PILE
21	"MAX FILL" WARNING PAINT STRIPE, SHALL EXTEND ENTIRE INSIDE PERIMETER OF STRUCTURE
22	PROVIDE AIR PRESSURE/WIND VENTILATION AS REQUIRED BY FABRIC MEMEBRANE ROOF MANUFACTURER
23	SALT STORAGE BAY WALLS SHALL BE CLOSED WITH INFILL FRAMING AND FABRIC MEMBRANE
25	EXTERIOR PAVEMENT, SLOPE TO DRAIN - REFERENCE CIVIL DRAWINGS

STATE OF OHIO
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ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

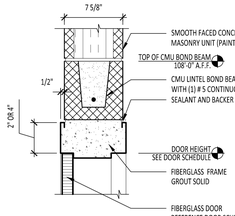
PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	JCR	MCN

SHEET TITLE:

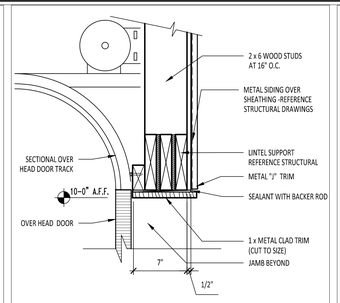
BUILDING ELEVATIONS

SHEET NUMBER:

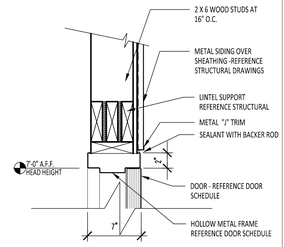
A2.1



14 A3.1 DOOR HEAD DETAIL
1 1/2" = 1'-0"



8 A3.1 OVER HEAD DOOR HEAD DETAIL
1 1/2" = 1'-0"



5 A3.1 EXTERIOR DOOR HEAD DETAIL
1 1/2" = 1'-0"

DOOR SCHEDULE

NUMBER	DOOR SIZE	DOOR MATL	DOOR TYPE	FRAME DEPTH	FRAME MATL	FRAME TYPE	FRAME GLASS	DETAIL NUMBER HEAD	DETAIL NUMBER JAMB	DETAIL NUMBER SILL	HARDWARE SET	FIRE RATING	ROOM KEY SIDE
A104a	3'-0" x 7'-0" x 1 3/4"	HM	F	7"	HM	1	-	5	6	7	1.	-	EXT
A104b	10'-0" x 10'-0"	STL	OHD	-	STL	-	-	8	9	10	-	-	EXT
A105	3'-0" x 7'-0" x 1 3/4"	FG	HG	7"	FG	2	-	14	15	16	1.	-	EXT
A106	3'-0" x 7'-0" x 1 3/4"	FG	F	7"	FG	1	-	14	15	22	2.	-	A105

DOOR/ OPENING ABBREVIATIONS
STL STEEL
F FLUSH
HM HOLLOW METAL
FG FIBER GLASS
OHD OVER HEAD DOOR

HARDWARE SETS:
1. (3) HINGES, (1) - RIM PANIC W/ LEVER HANDLE ON EXTERIOR, (1) CLOSER W/ O.H. STOP, (1) THRESHOLD, (1) WEATHER STRIPPING, (1) DOOR SWEEP
2. (3) HINGES, (1) - STORAGE LOCKSET W/ LEVER HANDLE ON EXTERIOR, (1) CLOSER W/ O.H. STOP

1 A3.1 DOOR SCHEDULE
NO SCALE

FLOOR PLAN LEGEND

- 1 — STRUCTURAL GRID REFERENCE - REFERENCE STRUCTURAL SHEETS
- LEVEL LINE
- A101 — DOOR DESIGNATION - REFERENCE DOOR/OPENING SCHEDULE ON SHEET A6.1
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- X/X.X — BUILDING SECTION - REFERENCE SECTION ON SHEET INDICATED

ROOM NAME/ NUMBER	
A101	SALT STORAGE BAY
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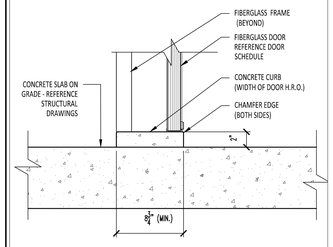
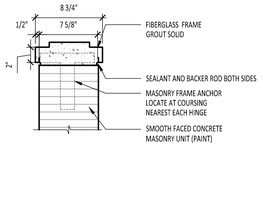
A104	STORAGE SHED
A105	ENTRY
A106	MECHANICAL
A107	LEAN TO BAY (ALTERNATE 1)

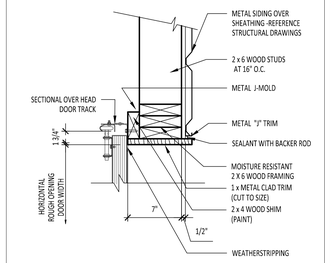
#	KEYNOTE SCHEDULE KEYNOTE DESCRIPTION
2	CONCRETE APRON - REFERENCE STRUCTURAL DRAWINGS
5	LINE OF CONCRETE FOUNDATION - REFERENCE STRUCTURAL DRAWINGS
12	CONCRETE FLOOR SLAB ON GRADE (SLOPE TO DRAIN) - REFERENCE STRUCTURAL DRAWINGS
14	26 GA. PRE-FINISHED METAL SIDING OVER 1/2" PLYWOOD OVER 2 x 6 WOOD STUD FRAMING @ 16" O.C. - REFERENCE STRUCTURAL DRAWINGS
17	26 GA. PRE-FINISHED METAL ROOFING OVER ROOF SHEATHING OVER PRE - ENGINEERED WOOD TRUSSES @ 24" O.C. - REFERENCE STRUCTURAL DRAWINGS
18	METAL CLAD 2 x FASCIA WITH CONTINUOUS DRIP EDGE
25	EXTERIOR PAVEMENT, SLOPE TO DRAIN - REFERENCE CIVIL DRAWINGS
26	STEEL STRAP CROSS BRACING - REFERENCE STRUCTURAL DRAWINGS
27	6 x 6 HOLD DOWN POST - REFERENCE STRUCTURAL DRAWINGS



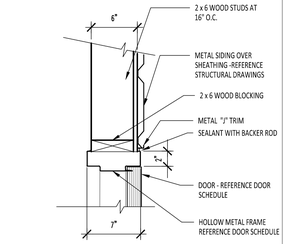
22 A3.1 INTERIOR DOOR SILL DETAIL
1 1/2" = 1'-0"



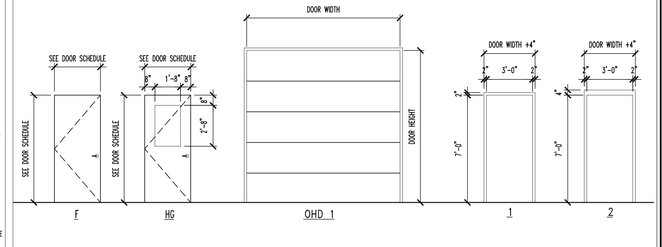
15 A3.1 DOOR JAMB DETAIL
1 1/2" = 1'-0"



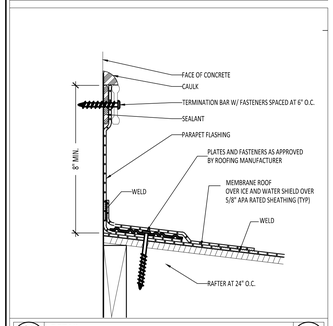
9 A3.1 OVERHEAD DOOR JAMB DETAIL
1 1/2" = 1'-0"



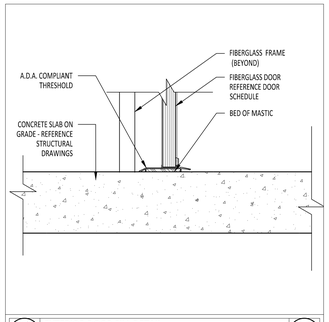
6 A3.1 EXTERIOR DOOR JAMB DETAIL
1 1/2" = 1'-0"



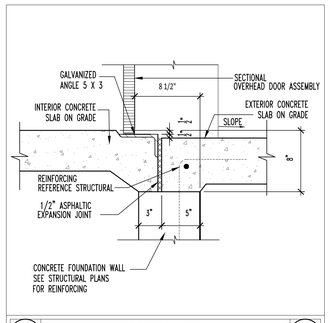
2 A3.1 DOOR AND FRAME TYPES
1/4" = 1'-0"



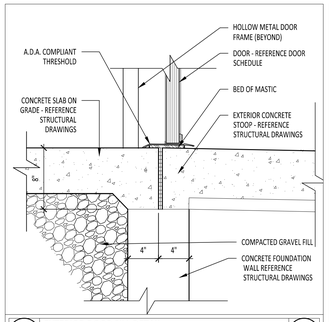
21 A3.1 DETAIL
1" = 1'-0"



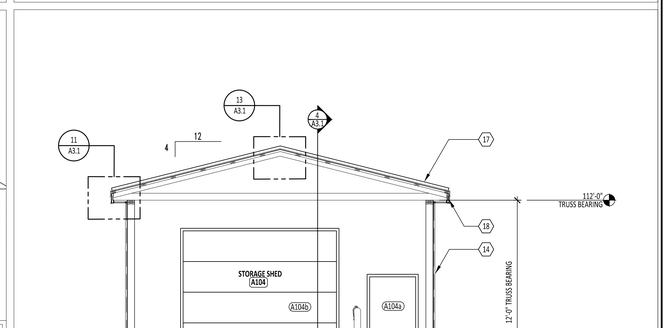
16 A3.1 EXTERIOR DOOR SILL DETAIL
1 1/2" = 1'-0"



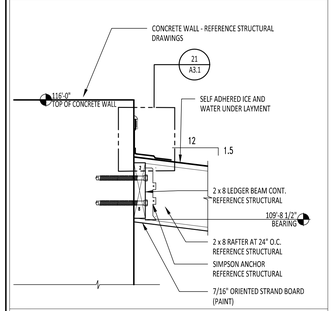
10 A3.1 EXTERIOR OVERHEAD DOOR SILL DETAIL
1 1/2" = 1'-0"



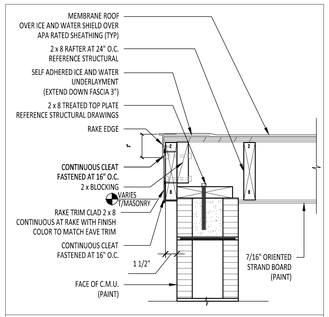
7 A3.1 EXTERIOR DOOR SILL DETAIL
1 1/2" = 1'-0"



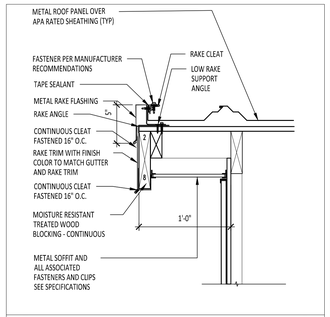
3 A3.1 STORAGE SHED SECTION
1/4" = 1'-0"



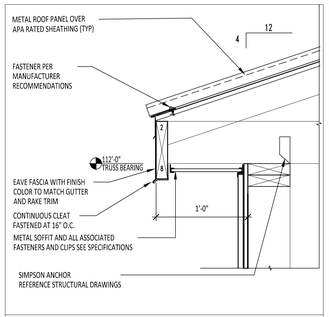
20 A3.1 HIGH SIDE PEAK DETAIL
1 1/2" = 1'-0"



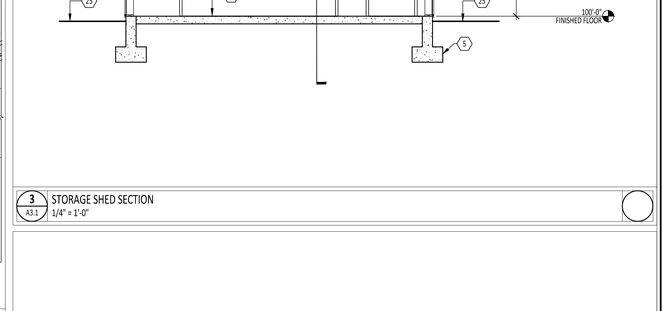
17 A3.1 GABLE DETAIL
1 1/2" = 1'-0"



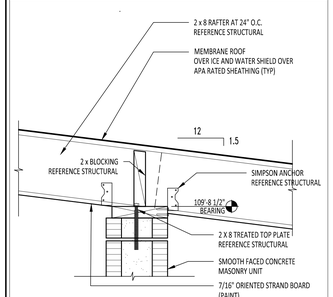
12 A3.1 GABLE DETAIL
1 1/2" = 1'-0"



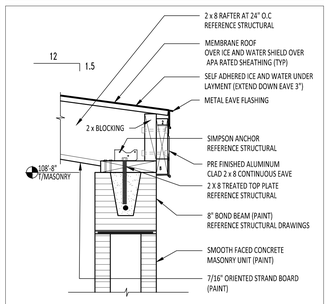
11 A3.1 EAVE DETAIL
1 1/2" = 1'-0"



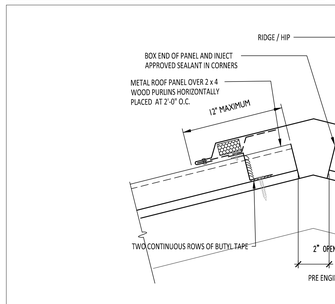
4 A3.1 STORAGE SHED SECTION
1/4" = 1'-0"



19 A3.1 INTERMEDIATE BEARING DETAIL
1 1/2" = 1'-0"



18 A3.1 EAVE BEARING DETAIL
1 1/2" = 1'-0"



13 A3.1 RIDGE CAP DETAIL
1 1/2" = 1'-0"

STATE OF OHIO
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NEW BUILDING FOR

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ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

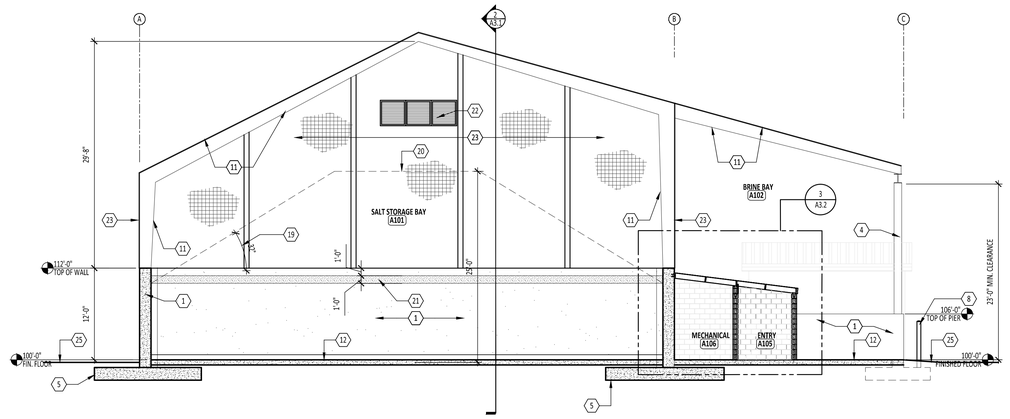
PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	JCR	MCN

SHEET TITLE:

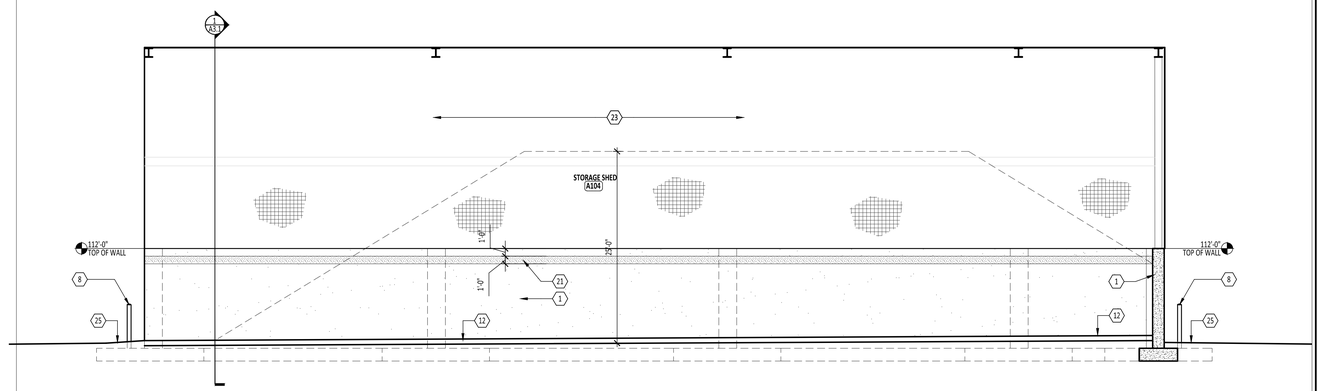
DOOR SCHEDULE
DOOR DETAILS
BUILDING SECTIONS
AND
WALL DETAILS

SHEET NUMBER:

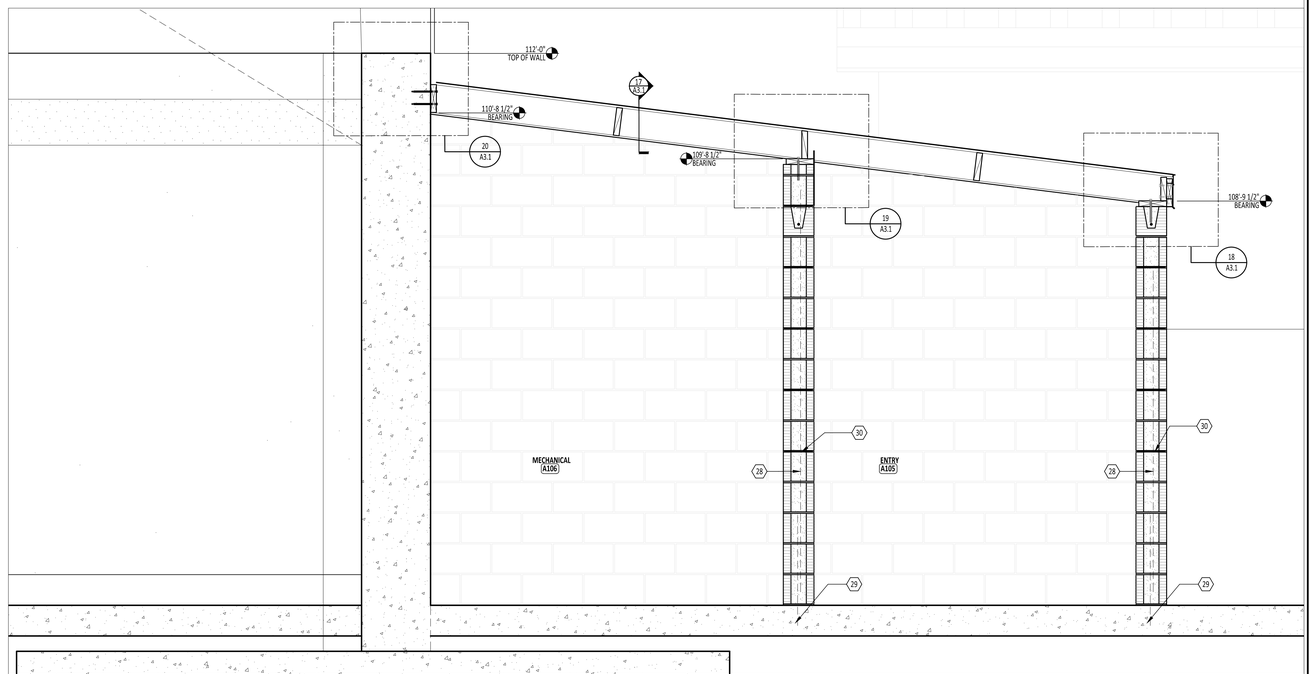
A3.1



1 / A3.2 SALT STORAGE BUILDING (BASE BID) SECTION LOOKING WEST
1/8" = 1'-0"



2 / A3.2 SALT STORAGE BUILDING (BASE BID) LONGITUDINAL SECTION LOOKING SOUTH
1/8" = 1'-0"



3 / A3.2 BRINE BUILDING SECTION
3/4" = 1'-0"

FLOOR PLAN LEGEND

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A107	LEAN TO BAY (ALTERNATE 1)

KEYNOTE SCHEDULE	
#	KEYNOTE DESCRIPTION
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2	CONCRETE APRON - REFERENCE STRUCTURAL DRAWINGS
4	PRE-ENGINEERED STRUCTURAL COLUMN
5	LINE OF CONCRETE FOUNDATION (REFERENCE STRUCTURAL DRAWINGS)
8	6" BOLLARD (TYPICAL). CENTERLINE OF BOLLARD MINIMUM 1'-6" FROM CONCRETE WALL. REFERENCE DETAIL 6/A2.1
11	PRE-ENGINEERED CLEAR SPAN STEEL RIGID FRAME WITH FABRIC MEMBRANE ROOF BY FABRIC MEMBRANE ROOF MANUFACTURER
12	CONCRETE FLOOR SLAB ON GRADE (SLOPE TO DRAIN) - REFERENCE STRUCTURAL DRAWINGS
18	METAL CLAD 2 x FASCIA WITH CONTINUOUS DRIP EDGE
19	ANGLE OF REPOSE FOR ROAD SALT
20	MAXIMUM HEIGHT OF SALT PILE
21	"MAX FILL" WARNING PAINT STRIPE, SHALL EXTEND ENTIRE INSIDE PERIMETER OF STRUCTURE
22	PROVIDE AIR PRESSURE/WIND VENTILATION AS REQUIRED BY FABRIC MEMEBRANE ROOF MANUFACTURER
23	SALT STORAGE BAY WALLS SHALL BE CLOSED WITH INFILL FRAMING AND FABRIC MEMBRANE
25	EXTERIOR PAVEMENT, SLOPE TO DRAIN - REFERENCE CIVIL DRAWINGS
28	8" x 16 CONCRETE MASONRY UNIT WALL - REFERENCE STRUCTURAL DRAWINGS (PAINT ALL EXTERIOR EXPOSED SURFACES)
29	DOWEL - REFERENCE STRUCTURAL DRAWINGS
30	HORIZONTAL REINFORCEMENT AT 16" O.C. - REFERENCE STRUCTURAL DRAWINGS

STATE OF OHIO
CHRISTOPHER MONNIN
E-67075
REGISTERED
PROFESSIONAL ENGINEER
CHRISTOPHER MONNIN
LICENSE #E-67075
EXPIRATION DATE: 12/31/2023

GARMANN MILLER
MINSTER, OHIO | COLUMBUS, OHIO | INDIANAPOLIS, INDIANA
creativegm.com

NEW BUILDING FOR

CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2160 DAYTON-XENIA ROAD

ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	JCR	MCN

SHEET TITLE:

BUILDING SECTIONS AND WALL DETAILS

SHEET NUMBER:

A3.2

CITY OF BEAVERCREEK
SALT BARN & 9 ACRE PROPERTY SITE IMPROVEMENTS
2260 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

GENERAL STRUCTURAL NOTES

GENERAL

1. MEANS, METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. IMPLEMENTATION OF JOB SITE SAFETY INCLUDING ALL OSHA REGULATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. TEMPORARY BRACING, SHEETING, SHORING, ETC. REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY OF THE NEW AND ANY EXISTING STRUCTURES, SIDEWALKS,UTILITIES, ETC. DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. CONTRACTOR'S CONSTRUCTION AND ERECTION SEQUENCES SHALL CONSIDER THE EFFECTS OF THERMAL EXPANSION AND CONTRACTION ON THE STRUCTURE DURING CONSTRUCTION.
5. HOLES AND NOTCHES SHALL NOT BE CUT OR DRILLED INTO ANY STRUCTURAL MEMBER IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER.
6. STRUCTURAL DRAWINGS ARE NOT STAND ALONE DOCUMENTS. CONTRACTOR SHALL COORDINATE STRUCTURAL, ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND OTHER DISCIPLINES AND INCORPORATE ALL REQUIREMENTS INTO SHOP DRAWINGS AND FIELD WORK.
7. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THE STRUCTURAL DRAWINGS AND THE DRAWINGS OR REQUIREMENTS OF ANY OTHER DISCIPLINE.
8. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THE GENERAL STRUCTURAL NOTES, SPECIFICATIONS, AND DRAWINGS. THE ENGINEER WILL DETERMINE WHICH REQUIREMENT WILL GOVERN.
9. CONTRACTOR IS RESPONSIBLE FOR COORDINATING DIMENSIONS AND INSTALLATION DETAILS OF PURCHASED EQUIPMENT WITH THE SUPPORTING STRUCTURE. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THESE ITEMS AND THE STRUCTURE.
10. DETAILS DESIGNATED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE DRAWINGS IN AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE SHOWN IN THE DETAILS. CONTACT ENGINEER FOR INTERPRETATION OF THE APPLICABILITY OF TYPICAL DETAILS.
11. SHOP DRAWINGS AND MATERIAL SUBMITTALS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER.
12. SHOP DRAWINGS AND MATERIAL SUBMITTALS SHALL BE PROVIDED TO AND REVIEWED BY THE ENGINEER PRIOR TO THE START OF FABRICATION OR THE COMMENCEMENT OF WORK.
13. CHANGES OR ADDITIONS MADE TO RESUBMITTED SHOP DRAWINGS SHALL BE CLEARLY INDICATED ON THE DRAWINGS. REVIEW OF RESUBMITTED SHOP DRAWINGS SHALL BE LIMITED TO THE ITEMS NOTED FOR CORRECTION ON THE PRIOR SUBMITTAL.

ELEVATION DATUM

SEE ARCHITECTURAL OR CIVIL DRAWINGS FOR FINISH FLOOR ELEVATION ABOVE SEA LEVEL.
REFERENCE FINISH FLOOR ELEVATION OF 100'-0" IS USED ON THE STRUCTURAL DRAWINGS.

DESIGN SPECIFICATIONS

2017 OHIO BUILDING CODE

EARTHWORK

EARTHWORK OPERATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL GEOTECHNICAL ENGINEER TO ASSURE COMPLIANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY CTL ENGINEERING, INC. DATED MARCH 30, 2022. GEOTECHNICAL ENGINEER SHALL VERIFY THAT SOIL ON WHICH FOUNDATIONS BEAR MEET THE SOIL BEARING CAPACITY LISTED IN THE DESIGN DATA.

FOOTINGS

1. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
2. HORIZONTAL REINFORCING IN FOOTINGS SHALL BE CONTINUOUS AT CORNERS AND INTERSECTIONS. CORNER BARS SHALL BE PROVIDED TO MATCH HORIZONTAL STEEL. REINFORCING STEEL SHALL BE LAPPED AS FOLLOWS WHERE SPLICES ARE REQUIRED:

BAR SIZE	LAP DIMENSION
#4	2'-0"
#5	2'-6"
#6	3'-0"

3. CONCRETE SHALL NOT BE PLACED WHERE WATER OR FROST EXISTS IN THE BOTTOM OF THE FOUNDATION EXCAVATION.
4. WHERE BACKFILL OCCURS ON BOTH SIDES OF A WALL, BACKFILL BOTH SIDES SIMULTANEOUSLY.
5. EQUIPMENT AND/OR MATERIALS WITH WEIGHT GREATER THAN THE DESIGN SURCHARGE SHALL BE KEPT A SAFE HORIZONTAL CLEAR DISTANCE FROM ANY BASEMENT OR RETAINING WALLS. THE SAFE HORIZONTAL CLEAR DISTANCE EQUALS THE HEIGHT FROM THE BASE OF THE RETAINING WALL TO FINISHED GRADE. THE DESIGN SURCHARGE LOAD EQUALS 250 PSF.

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATION FOR HOT WEATHER CONCRETING, ACI 306 SPECIFICATION FOR COLD WEATHER CONCRETING, AND ACI 117 SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR SHALL SUBMIT FOR THE ENGINEER TO REVIEW A CONCRETE MIX DESIGN FOR EACH TYPE OF CONCRETE TO BE USED. CONCRETE MIXES SHALL MEET THE REQUIREMENTS SPECIFIED BELOW.

CONCRETE USE	28-DAY COMPRESSIVE STRENGTH (f'c)	MAX AGGREGATE SIZE	MAX W/C RATIO	AIR ENTRAINMENT	UNIT WEIGHT
FOUNDATIONS	3,000 PSI	1 1/2"	0.55	NONE	145-150 PCF
FLOOR SLABS	4,000 PSI	1 1/2"	0.50	NONE	145-150 PCF
CAST-IN-PLACE WALLS	4,500 PSI	1 1/2"	0.45	4-6%	145-150 PCF

2. CEMENT SHALL CONFORM TO ASTM C150 TYPE I, II, OR III.
3. CONTRACTOR SHALL PROVIDE SPACERS, CHAIRS, STIRRUPS, TIES, ETC. AS NECESSARY TO SECURELY HOLD REINFORCING IN PLACE WHILE PLACING CONCRETE.
4. CHLORIDE-BASED ADMIXTURES ARE PROHIBITED IN ALL REINFORCED CONCRETE.
5. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A706, OR A996, GRADE 60.
6. PLAIN WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A1064 WITH A YIELD STRENGTH OF 65 KSI. DEFORMED WELDED WIRE REINFORCEMENT FOR SLABS SHALL CONFORM TO ASTM A1064 WITH A YIELD STRENGTH OF 70 KSI. DEFORMED WELDED WIRE REINFORCEMENT FOR WALL PANELS SHALL CONFORM TO ASTM A1064 WITH A YIELD STRENGTH OF 80 KSI AT 0.35% STRAIN.
7. NON-SHRINK, NON-METALLIC, FACTORY PACKAGED GROUT SHALL BE USED BENEATH STEEL BASE PLATES. GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 6000 PSI AND SHALL CONFORM TO ASTM C1107.
8. WHERE CONCRETE EXPANSION ANCHORS ARE SPECIFIED ON THE STRUCTURAL DRAWINGS, ACCEPTABLE ANCHORS INCLUDE: HILTI KWIK BOLT 3, HILTI KWIK BOLT TZ, POWERS POWER-STUD+ SD1, POWERS POWER-STUD+ SD2, AND SIMPSON STRONG BOLT 2. WHERE CONCRETE SCREW ANCHORS ARE SPECIFIED ON THE STRUCTURAL DRAWINGS, ACCEPTABLE ANCHORS INCLUDE HILTI KWIK HUS-EZ, POWERS WEDGE BOLT+, AND SIMPSON TITEN HD. BEFORE USING ANY POST INSTALLED CONCRETE ANCHOR NOT LISTED ABOVE, APPROVAL FROM THE ENGINEER IS REQUIRED. IF A SPECIFIC TYPE OF CONCRETE ANCHOR IS SHOWN ON THE STRUCTURAL DRAWINGS, IT MUST BE USED UNLESS AN ALTERNATIVE IS APPROVED BY THE ENGINEER. FOR THE CONCRETE ANCHORS LISTED ABOVE, MINIMUM EMBEDMENT DEPTHS FOR VARIOUS ANCHOR DIAMETERS ARE SHOWN IN THE TABLES BELOW. IF A SPECIFIC EMBEDMENT DEPTH IS SHOWN ON THE STRUCTURAL DRAWINGS, THAT DEPTH MUST BE USED UNLESS AN ALTERNATE IS APPROVED BY THE ENGINEER.
9. SEE MANUFACTURER'S LITERATURE FOR PROPER INSTALLATION OF POST INSTALLED CONCRETE ANCHORS.

EXPANSION ANCHOR MINIMUM EMBEDMENT DEPTHS

	HILTI		DEWALT		SIMPSON
ANCHOR SIZE	KWIK BOLT 3	KWIK BOLT TZ	POWER-STUD+ SD1	POWER-STUD+ SD2	STRONG BOLT 2
3/8" Ø	2 5/16"	1 13/16"	2 3/8"	2 3/8"	1 7/8"
1/2" Ø	2 5/16"	2 3/8"	2 1/2"	2 1/2"	2 3/4"
5/8" Ø	3 7/8"	3 9/16"	3 3/8"	3 7/8"	3 3/8"
3/4" Ø	4 5/16"	3 13/16"	4"	4 1/2"	4 1/8"

SCREW ANCHOR MINIMUM EMBEDMENT DEPTHS

	HILTI	DEWALT	SIMPSON
ANCHOR SIZE	KWIK HUS-EZ	SCREW-BOLT+	TITEN HD
3/8" Ø	1 5/8"	2"	2 1/2"
1/2" Ø	2 1/4"	2 1/2"	3 1/4"
5/8" Ø	3 1/4"	3 1/4"	4"
3/4" Ø	4"	4 1/4"	5 1/2"

PRE-ENGINEERED METAL BUILDINGS

1. THE DESIGN OF THE PRE-ENGINEERED METAL BUILDING SHALL CONFORM TO ALL STRUCTURAL DESIGN CRITERIA AND BUILDING CODE(S) NOTED IN THESE DRAWINGS.
2. THE DESIGN, FABRICATION, AND ERECTION OF THE PRE-ENGINEERED METAL BUILDING SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, THE MBMA METAL BUILDING SYSTEMS MANUAL, AND CURRENT OSHA STANDARDS.
3. ANCHOR RODS, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM F1554 GRADE 36 STEEL WITH COMPOSITIONAL LIMITS OF ASTM A36 STEEL TO ENSURE WELDABILITY.
4. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS IN ACCORDANCE WITH THE CURRENT EDITION OF THE AWS STRUCTURAL WELDING CODE. WELDING ELECTRODES SHALL BE E70XX, EXCEPT FOR THE WELDING OF DEFORMED BAR ANCHORS WHICH SHALL USE E80XX WELDING ELECTRODES.
5. THE PRE-ENGINEERED METAL BUILDING MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL SUPER-STRUCTURE ELEMENTS OF THE BUILDING. THE DESIGN OF THE PRE-ENGINEERED METAL BUILDING SHALL BE COORDINATED WITH ALL OF THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
6. THE FOUNDATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED ON LOAD ASSUMPTIONS. REACTIONS MUST BE PROVIDED TO LJB BY PRE-ENGINEERED METAL BUILDING MANUFACTURER IN ORDER TO VERIFY FOUNDATION DESIGN PRIOR TO FOUNDATION CONSTRUCTION.
7. CONTRACTOR SHALL COORDINATE FINAL APPROVAL DRAWINGS BY THE PRE-ENGINEERED METAL BUILDING MANUFACTURER AND THE STRUCTURAL DRAWINGS BY LJB. THIS COORDINATION SHALL BE DONE PRIOR TO PERFORMING FOUNDATION WORK AND SHALL INCLUDE, BUT IS NOT LIMITED TO, COLUMN LOCATIONS, BASE PLATE SIZES AND ANCHOR ROD LAYOUTS. CONTRACTOR SHALL NOTIFY LJB OF ANY DISCREPANCIES BETWEEN THE PRE-ENGINEERED METAL BUILDING DRAWINGS AND THE STRUCTURAL DRAWINGS.
8. THE PRE-ENGINEERED METAL BUILDING MANUFACTURER SHALL SUBMIT DESIGN CALCULATIONS AND DRAWINGS TO THE ENGINEER OF RECORD. CALCULATIONS AND DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF THE MANUFACTURER'S REGISTERED DESIGN PROFESSIONAL. SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER OF RECORD PRIOR TO FABRICATION. CALCULATIONS NEED NOT BE REVIEWED BY THE ENGINEER PRIOR TO FABRICATION, CALCULATIONS ARE FOR RECORD PURPOSES ONLY.
9. ROOF FRAMING MEMBERS SHALL BE DESIGNED FOR A VERTICAL DEFLECTION LIMIT OF L/240 FOR LIVE LOAD AND L/180 FOR TOTAL LOAD UNLESS NOTED OTHERWISE.
10. FRAMES SHALL BE DESIGNED FOR A LATERAL DRIFT LIMIT FOR WIND LOADS OF H/120 AT THE EAVE HEIGHT USING PRESSURES BASED ON THE 10-YEAR MEAN RECURRENCE INTERVAL WIND SPEED.

WOOD MEMBERS

1. METAL PLATE - CONNECTED WOOD TRUSSES SHALL BE MANUFACTURED AS REQUIRED BY TRUSS PLATE INSTITUTE. EACH MANUFACTURER OF TRUSSES USING METAL PLATE CONNECTORS SHALL RETAIN AN APPROVED AGENCY TO MAKE UNSCHEDULED INSPECTIONS OF TRUSS MANUFACTURING AND DELIVERY OPERATIONS. THE INSPECTION SHALL COVER ALL PHASES OF TRUSS OPERATIONS, INCLUDING LUMBER STORAGE, HANDLING, CUTTING, FIXTURES, PRESSES OR ROLLERS, MANUFACTURING, BUNDLING AND BANDING.
2. TRUSS CONSTRUCTION DOCUMENTS SHALL BE PREPARED BY A REGISTERED DESIGN PROFESSIONAL AND SHALL BE PROVIDED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION. THESE CONSTRUCTION DOCUMENTS SHALL INCLUDE, AT A MINIMUM, THE INFORMATION SPECIFIED BELOW. TRUSS SHOP DRAWINGS SHALL BE PROVIDED WITH THE SHIPMENT OF TRUSSES DELIVERED TO THE JOB SITE. TRUSS LUMBER SHALL BE SPRUCE-FIR-PINE NO. 2 OR BETTER. DEFLECTION LIMIT FOR TRUSSES IS L/180 FOR TOTAL LOAD AND L/240 FOR LIVE LOAD.
    1. SLOPE OR DEPTH, SPAN AND SPACING.
    2. LOCATION OF JOISTS.
    3. REQUIRED BEARING WIDTHS.
    4. DESIGN LOADS AS APPLICABLE.
    5. TOP CHORD LIVE LOAD (INCLUDING SNOW LOADS).
    6. TOP CHORD DEAD LOAD.
    7. BOTTOM CHORD DEAD LOAD.
    8. CONCENTRATED LOADS AND THEIR POINTS OF APPLICATION.
    9. CONTROLLING WIND AND EARTHQUAKE LOADS.
    10. ADJUSTMENT TO LUMBER AND METAL CONNECTOR PLATE DESIGN VALUES FOR CONDITION OF USE.
    11. EACH REACTION FORCE AND DIRECTION.
    12. METAL CONNECTOR PLATE TYPE, SIZE, THICKNESS OR GAGE, AND THE DIMENSIONED LOCATION OF EACH METAL CONNECTOR PLATE EXCEPT WHERE SYMMETRICALLY LOCATED RELATIVE TO THE JOINT INTERFACE.
    13. LUMBER SIZE, SPECIES AND GRADE FOR EACH MEMBER.
    14. CONNECTION REQUIREMENTS FOR TRUSS TO STEEL BEAM.
    15. CALCULATED DEFLECTION RATIO AND / OR MAXIMUM DEFECTION FOR TOTAL AND LIVE LOAD.
    16. MAXIMUM AXIAL COMPRESSION FORCES IN THE TRUSS MEMBERS.
    17. TRUSS HEADERS FOR ROOF OPENINGS.
3. ALL DESIGN AND CONSTRUCTION REQUIRING WOOD PRODUCTS SHALL CONFORM TO THE LATEST EDITIONS OF THE AITC "TIMBER CONSTRUCTION MANUAL" AND NFPA "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION"
4. ALL LUMBER SHALL BE GRADE MARKED TO GRADE AGENCY GRADE SPECIES AND MOISTURE CONTENT. WALL STUDS SHALL BE 2X6 SOUTHERN PINE NO 2 OR BETTER. ALL HEADERS, PLATES, PURLINS, BEAMS AND BLOCKING SHALL BE SOUTHERN YELLOW PINE NO 1 OR BETTER. GLULAM BEAMS SHALL BE SOUTHERN PINE GRADE 22F-V5.
5. NAILS SHALL BE COMMON NAILS AND SHALL CONFORM TO ASTM F1667.
6. REFER TO MANUFACTURER INSTALLATION REQUIREMENTS WHERE SPECIFIC ANCHORAGE HARDWARE (SIMPSON) IS SPECIFIED.
7. WHERE SPECIFIC CONNECTION REQUIREMENTS ARE NOT GIVEN, REFER TO FASTENING SCHEDULE IN TABLE 2304.9.1 IN THE 2017 OHIO BUILDING CODE.
8. LUMBER EXPOSED TO WEATHER OR GROUND, OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-IMPREGNATED BY AN APPROVED PROCESS AND PRESERVATIVE.

PLYWOOD SHEATHING

PLYWOOD SHEATHING SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT APA PLYWOOD DESIGN SPECIFICATION, WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

1. PLYWOOD SHALL CONFORM WITH VOLUNTARY PRODUCT STANDARD PS 1-95 AND BEAR THE TRADEMARK OF APA - THE ENGINEERED WOOD ASSOCIATION.
2. PLYWOOD SHALL BE STRUCTURAL I RATED EXTERIOR SHEATHING WITH THICKNESS AS SHOWN ON THE DRAWINGS.
3. FOR ROOF DIAPHRAGM USE 10d COMMON NAILS AT 6" ON CENTER AT SUPPORTED EDGES AND 12" ON CENTER ALONG INETERMEDIATE FRAMING MEMBERS.
4. FOR WALL SHEATHING USE 15/32" EXTERIOR WOOD STRUCTURAL PANEL SHEATHING WITH 10d COMMON NAILS SPACED AT 6" ON CENTER AT SUPPORTING EDGES AND 12" ON CENTER ALONG INTERMEDIATE FRAMING MEMBERS.

MASONRY

MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT TMS 402/602 BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. HOLLOW MASONRY BLOCK SHALL CONFORM TO ASTM C90 NORMAL WEIGHT.
2. GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI.
3. MORTAR SHALL BE TYPE M OR S CONFORMING TO ASTM C270. AVERAGE COMPRESSIVE STRENGTH SHALL BE 1,800 PSI.
4. MINIMUM 28-DAY COMPRESSIVE STRENGTH OF MASONRY: f'm = 1,500 PSI.
5. WIRE REINFORCING SHALL CONFORM TO ASTM A951, STANDARD LADDER-TYPE REINFORCING, AND SHALL BE PLACED CONTINUOUSLY IN ALTERNATE HORIZONTAL MORTAR JOINTS. PROVIDE LAP AS RECOMMENDED BY THE MANUFACTURER WITH 6" MINIMUM LAP.
6. WIRE REINFORCING SHALL BE HOT DIP GALVANIZED. WIRE REINFORCING SHALL BE 9 GA. MINIMUM.
7. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A706, OR A996, GRADE 60. REINFORCING STEEL SHALL BE LAPPED AS FOLLOWS WHERE SPLICES ARE REQUIRED:

BAR SIZE	LAP DIMENSION
#4	1'-9"
#5	2'-3"
#6	3'-7"

8. VERTICAL CONTROL JOINTS SHALL BE PROVIDED AT SPACINGS NOT TO EXCEED 24 FT. UNLESS SHOWN OTHERWISE ON STRUCTURAL DRAWINGS. COORDINATE LOCATIONS WITH ARCHITECT AND ENGINEER.
9. ALL CONCRETE MASONRY SHALL BE CONSTRUCTED USING A RUNNING BOND PATTERN UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS. FACE SHELL MORTAR BEDDING SHALL BE USED FOR ALL HOLLOW UNITS. IN PARTIALLY GROUTED WALLS, WEBS ADJACENT TO CORES THAT WILL BE GROUTED SHALL ALSO BE MORTARED.
10. SOLID GROUT ALL CMU CELLS THAT ARE BELOW GRADE. HAVE VERTICAL REINFORCING OR ARE BELOW BEAM/JOIST/GIRDER BEARING PLATES. SOLID GROUT ALL CMU LINTELS AND BOND BEAMS.
11. HORIZONTAL REINFORCING SHALL BE DISCONTINUOUS AT VERTICAL CONTROL JOINTS, EXCEPT FOR BOND BEAM REINFORCING, WHICH SHALL BE CONTINUOUS.
12. ALL CMU WALLS HAVE BEEN DESIGNED TO BE STABLE IN THE FINAL CONSTRUCTED CONDITION ONLY. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY BRACING OF CMU WALLS.

SPECIAL INSPECTION

WHERE SPECIAL INSPECTION IS REQUIRED BY THE AUTHORITY HAVING JURISDICTION, IT SHALL BE PERFORMED BY A REGISTERED DEPUTY INSPECTOR, EMPLOYED BY THE OWNER AND APPROVED BY THE GOVERNING JURISDICTION. COPIES OF THE INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND "LJB." A LICENSED ENGINEER OR ARCHITECT SHALL SIGN EACH REPORT. "LJB" SHALL BE NOTIFIED IMMEDIATELY OF ANY TEST WHICH INDICATES NON COMPLIANCE WITH APPLICABLE CODES OR REQUIREMENTS OF THESE PLANS UNLESS NOTED OTHERWISE. UNLESS NOTED OTHERWISE, PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1705 OF THE 2015 INTERNATIONAL BUILDING CODE ON THE FOLLOWING:

A. STEEL CONSTRUCTION PER SECTION 1705.2.
B. CONCRETE CONSTRUCTION PER SECTION 1705.3.
C. MASONRY CONSTRUCTION PER SECTION 1705.4
D. SOILS PER SECTION 1705.6.

DESIGN DATA

ROOF LOAD

LIVE LOAD	20
PEMB SELF WEIGHT (ASSUMED)	8
TOTAL TO BEAMS OR JOIST GIRDERS	28 LBS./FT^2

RISK CATEGORY II

ROOF SNOW LOAD (DRIFTING SNOW IN ADDITION TO UNIFORM LOAD WHERE APPLICABLE)

P_g = 20 LBS./FT^2
P_s = 14 LBS./FT^2
P_m = 20 LBS./FT^2
C_e = 1.0
I_s = 1.0
C_t = 1.0

BASIC DESIGN WIND LOAD

V_{ult} = 115 M.P.H. (3-SECOND GUST)
V_{asd} = 89 M.P.H. (3-SECOND GUST)
EXPOSURE C
INTERNAL PRESSURE COEFFICIENT = ± 0.18

GEOTECHNICAL DATA

ALLOWABLE SOIL BEARING (AFTER SOIL IMPROVEMENT) 4,500 LBS./FT^2
FROST DEPTH 32 INCHES

EARTHQUAKE DESIGN DATA

S_S= 0.149
S_1= 0.071
SITE CLASS D
S_{DS}= 0.159
S_{D1}= 0.113
SEISMIC DESIGN CATEGORY B
BASIC SEISMIC-FORCE-RESISTING SYSTEM = STEEL ORDINARY MOMENT FRAMES
I_E = 1.00
R = 3.5
V = C_SW = 0.0454W
EQUIVALENT LATERAL FORCE PROCEDURE

STRUCTURAL ABBREVIATIONS

ADD'L.	ADDITIONAL	L.W.	LONG WAY
A.F.F.	ABOVE FINISH FLOOR	L.W.C.	LIGHT WEIGHT CONCRETE
ALT.	ALTERNATE	MATL.	MATERIAL
ARCH.	ARCHITECTURAL	MAX.	MAXIMUM
B/	BOTTOM OF	MECH.	MECHANICAL
B.F.F.	BELOW FINISH FLOOR	MEMB.	MEMBRANE
BLDG.	BUILDING	MIN.	MINIMUM
BOT.	BOTTOM	MISC.	MISCELLANEOUS
BMD	BOTTOM OF METAL DECK	MFR.	MANUFACTURER
BRG.	BEARING	M.O.	MASONRY OPENING
C/C	CENTER TO CENTER	MPA	MEGAPASCALS
C.I.P.	CAST IN PLACE	MTL.	METAL
C.J.	CONTROL JOINT	MWFRS	MAIN WIND FORCE RESISTING SYSTEM
C.J.P.	COMPLETE JOINT PENETRATION	N.A.	NOT APPLICABLE
CLR.	CLEAR	N.I.C.	NOT IN CONTRACT
C.M.U.	CONCRETE MASONRY UNIT	NOM.	NOMINAL
COL.	COLUMN	N.S.	NEAR SIDE
CONC.	CONCRETE	N.T.S.	NOT TO SCALE
CONSTR.	CONSTRUCTION	N.W.C.	NORMAL WEIGHT CONCRETE
CONT.	CONTINUOUS	O/O	OUT TO OUT
C.Y.	CUBIC YARD	O.C.	ON CENTER
DET.	DETAIL	O.D.	OUTSIDE DIAMETER
DIA.	DIAMETER	O.F.	OUTSIDE FACE
DIAG.	DIAGONAL	OPN'G	OPENING
DIM.	DIMENSION	OPP.	OPPOSITE
D.L.	DEAD LOAD	P.A.F.	POWER ACTUATED FASTENER
DWG.	DRAWING	P.C.	PRECAST CONCRETE
DWL.	DOWEL	PCF	POUNDS PER CUBIC FOOT
EA.	EACH	PCS.	PIECES
E.F.	EACH FACE	P.I.	POINT OF INTERSECTION
E.J.	EXPANSION JOINT	PL	PLATE
ELEC.	ELECTRICAL	PLF	POUNDS PER LINEAL FOOT
ELEV.	ELEVATION	PLUMB.	PLUMBING
E.L. OR E	EARTHQUAKE (OR SEISMIC) LOAD	PSF	POUNDS PER SQUARE FOOT
EQ.	EQUAL	PSI	POUNDS PER SQUARE INCH
EQUIP.	EQUIPMENT	R. OR RAD.	RADIUS
E.S.	EACH SIDE	R.D.	ROOF DRAIN
E.W.	EACH WAY	REF.	REFERENCE
EXIST.	EXISTING	REINF.	REINFORCING
EXP.	EXPANSION	REQ'D.	REQUIRED
EXT.	EXTERIOR	RET.	RETAINING
F/	FACE OF	R.O.	ROUGH OPENING
F.D.	FLOOR DRAIN	R.T.U.	ROOF TOP UNIT
FIN.	FINISH	SCH.	SCHEDULE
FLR.	FLOOR	SHT.	SHEET
FDN.	FOUNDATION	SHTG.	SHEATHING
F.S.	FAR SIDE	SIM.	SIMILAR
FT.	FEET	S.L.	SNOW LOAD
FTG.	FOOTING	SLRS.	SEISMIC LOAD RESISTING SYSTEM
GA.	GAUGE	S.O.G.	SLAB ON GRADE
GALV.	GALVANIZED	SPA.	SPACES
G.B.	GRADE BEAM	SQ.	SQUARE
G.C.	GENERAL CONTRACTOR	STD.	STANDARD
HORIZ.	HORIZONTAL	STIFF.	STIFFENER
H.P.	HIGH POINT	STL.	STEEL
HT.	HEIGHT	STRUCT.	STRUCTURAL
I.D.	INSIDE DIAMETER	S.W.	SHORT WAY
I.F.	INSIDE FACE	SYM.	SYMMETRICAL
IN.	INCH	T/	TOP OF
INSUL.	INSULATION	T&B	TOP AND BOTTOM
INT.	INTERIOR	T&G	TONGUE AND GROOVE
JST.	JOIST	T.D.	TRENCH DRAIN
JT.	JOINT	THD.	THREADED
K	KIP	THK.	THICK
KLF	KIPS PER LINEAR FOOT	T.L.	TOTAL LOAD
KPA	KILOPASCALS	T.O.S.	TOP OF STEEL
KSI	KIPS PER SQUARE INCH	TRANS.	TRANSVERSE
LB.	POUND	TYP.	TYPICAL
L.F.	LINEAR FEET	U.N.O.	UNLESS NOTED OTHERWISE
L.L.	LIVE LOAD	VERT.	VERTICAL
LLH	LONG LEG HORIZONTAL	V.I.F.	VERIFY IN FIELD
LLV	LONG LEG VERTICAL	W/	WITH
L.P.	LOW POINT	W.L.	WIND LOAD
LSH	LONG SIDE HORIZONTAL	W.P.	WORK POINT
LSV	LONG SIDE VERTICAL	W.W.R.	WELDED WIRE REINFORCEMENT

INDEX OF SHEETS

STATE OF OHIO
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NEW BUILDING FOR
CITY OF BEAVERCREEK
SALT BARN & 9 ACRE PROPERTY SITE IMPROVEMENTS
2260 DAYTON-XENIA ROAD BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS

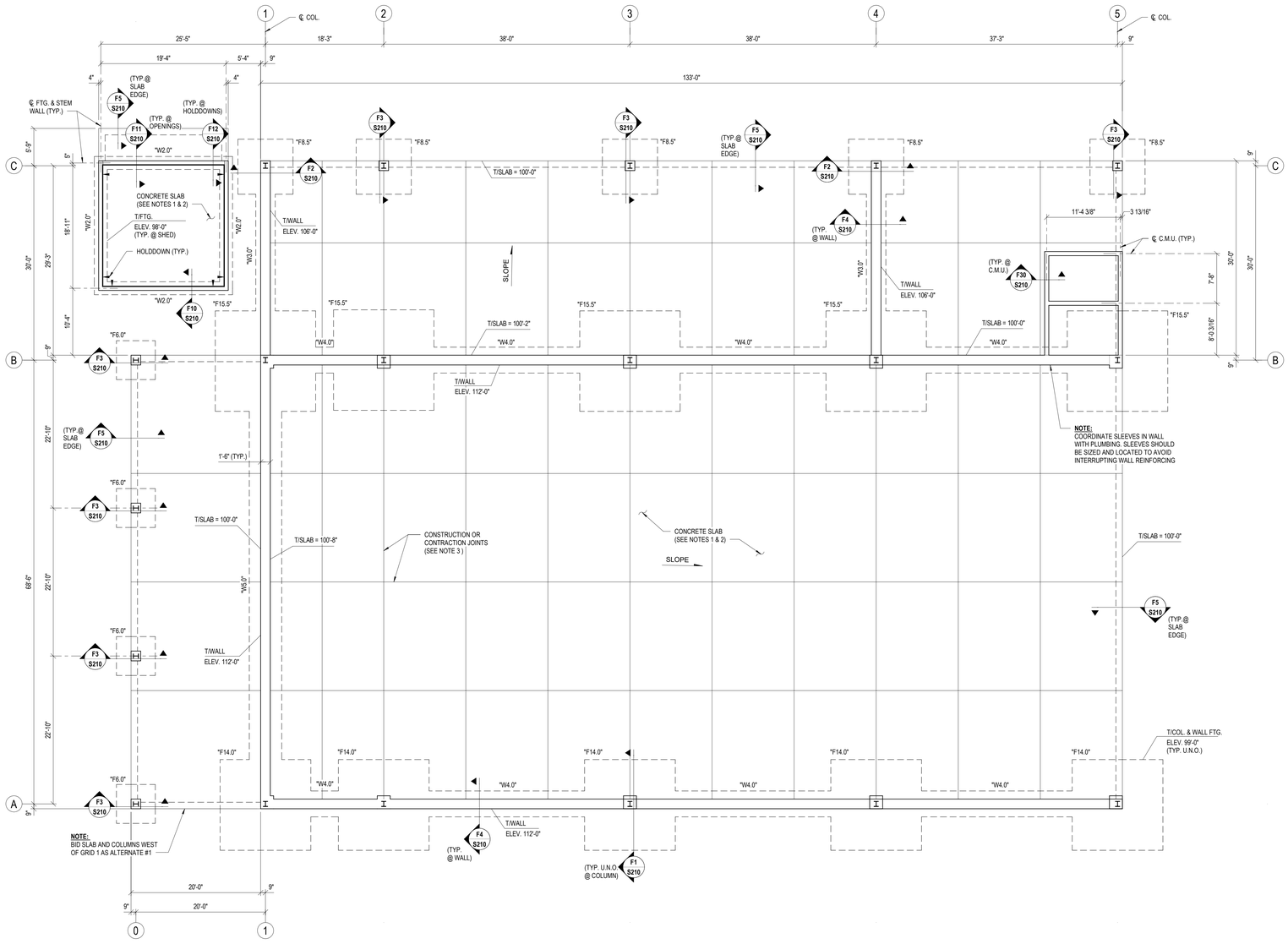
OWNER REVIEW	09/26/2023
BID DOCUMENTS	10/05/2023

LJB PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
0122075A.00	BJF	JEF

SHEET TITLE:
GENERAL STRUCTURAL DATA

SHEET NUMBER:
S100

PRINTED ON: 10/2/2023 8:33:02 AM

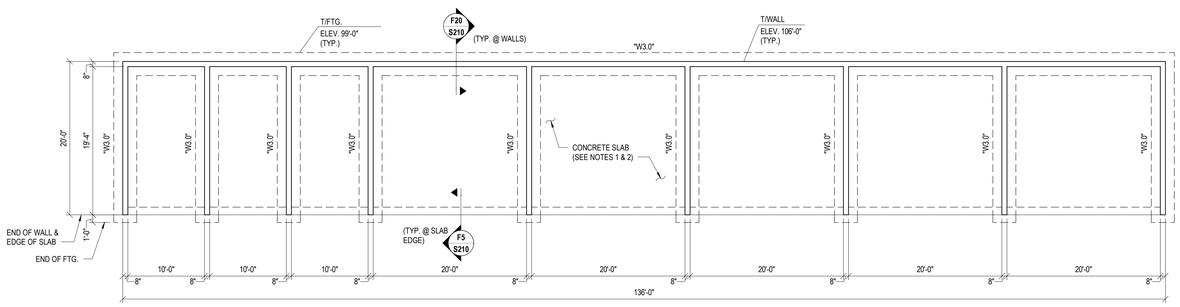


FOUNDATION PLAN - SALT BARN BUILDING

SCALE: NOT TO SCALE

TRUE NORTH

PLAN NORTH



FOUNDATION PLAN - SITE STORAGE BAYS (ALTERNATE #2)

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

NOTE:
REFER TO CIVIL DRAWINGS FOR LOCATION ON SITE.

FOUNDATION PLAN NOTES

1. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS FOR FINISHED FLOOR ELEVATION ABOVE SEA LEVEL. REFERENCE FINISH FLOOR ELEVATION OF 100'-0" IS USED ON THE STRUCTURAL DRAWINGS. ALL ELEVATIONS ARE REFERENCED FROM THIS ELEVATION.
2. 8" UNREINFORCED CONCRETE SLAB-ON-GRADE. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE RECOMMENDATIONS. SLOPE TO DRAINS, REFER TO ARCH. DRAWINGS FOR SLOPE.
3. CONSTRUCTION OR CONTRACTION JOINTS SPACED EQUALLY BETWEEN COLUMNS AT 20'-0" O.C. MAX. REFER TO JOINT DETAILS ON SHEET S220.
4. PROVIDE SLAB REINFORCEMENT AT ALL RE-ENTRANT CORNERS PER DETAIL ON SHEET S220.
5. "_" DENOTES FOOTING MARK. SEE FOOTING SCHEDULE FOR FOOTING SIZE AND REINFORCING.
6. INTERFACE BETWEEN FOUNDATION AND PEMB SHALL BE VERIFIED BY PEMB DESIGN ENGINEER PRIOR TO THE RELEASE OF STRUCTURAL DRAWINGS AND FABRICATION.
7. COORDINATE LOCATIONS AND SIZES OF ALL DEPRESSED SLAB AREAS, FLOOR SLOPES, CURBS, AND DRAINS WITH THE ARCHITECTURAL DRAWINGS.
8. WHEN CONTINUOUS FOOTINGS CHANGE WIDTH, LONGITUDINAL REINFORCING IN THE NARROW FOOTING SHALL EXTEND 2'-6" MINIMUM PAST CHANGE IN WIDTH.

FOOTING SCHEDULE - SALT BARN

MARK	WIDTH (W)	LENGTH (L)	DEPTH (D)	REINFORCING
"F6.0"	6'-0"	6'-0"	1'-8"	4-#5 TOP & BOTTOM EACH WAY
"F8.5"	8'-6"	8'-6"	1'-8"	7-#5 TOP & BOTTOM EACH WAY
"F14.0"	14'-0"	14'-0"	1'-8"	10-#5 TOP & BOTTOM EACH WAY
"F15.5"	15'-6"	15'-6"	1'-8"	11-#5 TOP & BOTTOM EACH WAY
"W2.0"	2'-0"	CONT.	1'-0"	2-#5 CONT.
"W3.0"	3'-0"	CONT.	1'-8"	5-#5 CONT. BOTTOM; #6 @ 1'-0" O.C. TRANSVERSE
"W4.0"	4'-0"	CONT.	1'-8"	6-#5 CONT. BOTTOM; #6 @ 1'-0" O.C. TRANSVERSE
"W5.0"	5'-0"	CONT.	1'-8"	7-#5 CONT. BOTTOM; #6 @ 1'-0" O.C. TRANSVERSE

NOTE:
REINFORCING BARS IN CONTINUOUS FOOTINGS SHALL EXTEND 2'-6" MINIMUM INTO ADJACENT SPREAD FOOTINGS.

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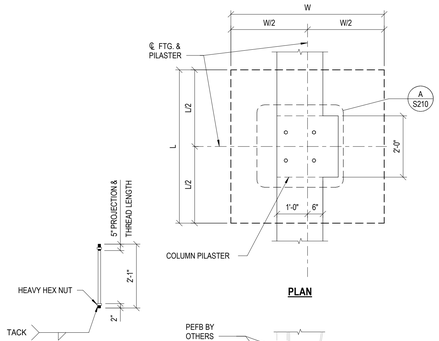
0122075A.00	BJF	JEF

SHEET TITLE:
FOUNDATION PLAN - SALT BARN

SHEET NUMBER:
S200

PRINTED ON: 10/5/2023 8:33:03 AM

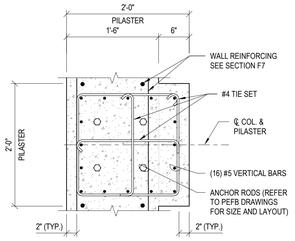


F1 COLUMN FOOTING SECTION

S200 — SCALE: NOT TO SCALE

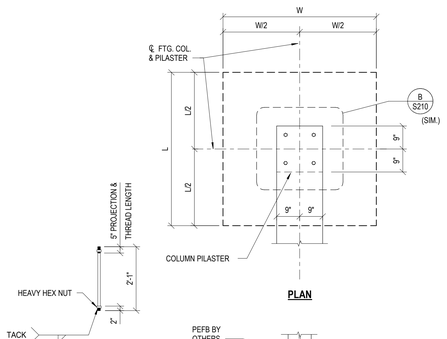
NOTES:

1. SEE FOOTING SCHEDULE FOR L,W,D AND REINFORCING STEEL.
2. INTERFACE BETWEEN FOUNDATION AND PEFB SHALL BE VERIFIED BY PEMB DESIGN ENGINEER PRIOR TO THE RELEASE OF STRUCTURAL SHOP DRAWINGS AND FABRICATION.
3. CONTINUOUS WALL REINFORCING NOT SHOWN FOR CLARITY.



A DETAIL

S210 — SCALE: NOT TO SCALE

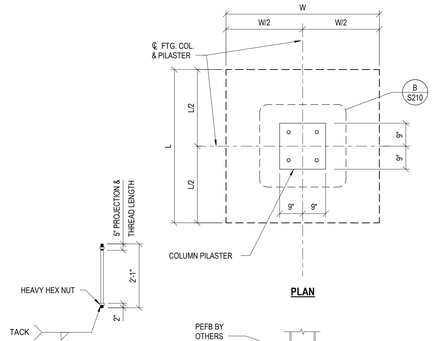


F2 COLUMN FOOTING SECTION

S200 — SCALE: NOT TO SCALE

NOTES:

1. SEE FOOTING SCHEDULE FOR L,W,D AND REINFORCING STEEL.
2. INTERFACE BETWEEN FOUNDATION AND PEFB SHALL BE VERIFIED BY PEMB DESIGN ENGINEER PRIOR TO THE RELEASE OF STRUCTURAL SHOP DRAWINGS AND FABRICATION.
3. CONTINUOUS WALL REINFORCING NOT SHOWN FOR CLARITY.

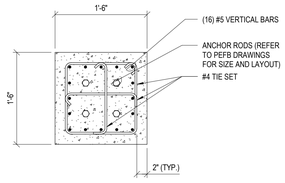


F3 COLUMN FOOTING SECTION

S200 — SCALE: NOT TO SCALE

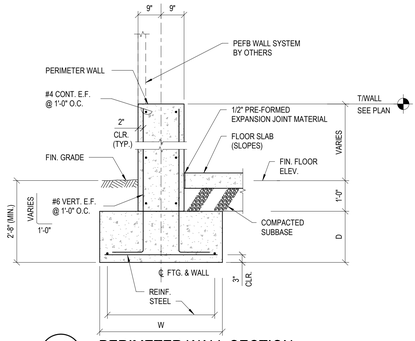
NOTES:

1. SEE FOOTING SCHEDULE FOR L,W,D AND REINFORCING STEEL.
2. INTERFACE BETWEEN FOUNDATION AND PEFB SHALL BE VERIFIED BY PEMB DESIGN ENGINEER PRIOR TO THE RELEASE OF STRUCTURAL SHOP DRAWINGS AND FABRICATION.
3. CONTINUOUS WALL REINFORCING NOT SHOWN FOR CLARITY.



B DETAIL

S210 — SCALE: NOT TO SCALE

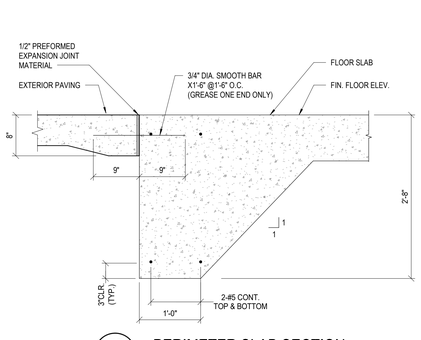


F4 PERIMETER WALL SECTION

S200 — SCALE: NOT TO SCALE

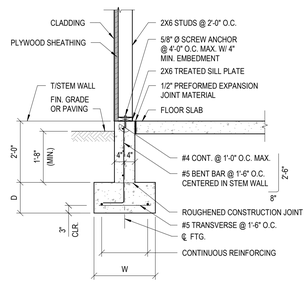
NOTES:

1. SEE FOOTING SCHEDULE FOR L,W,D AND REINFORCING STEEL.
2. INTERFACE BETWEEN FOUNDATION AND PEMB SHALL BE VERIFIED BY PEFB DESIGN ENGINEER PRIOR TO THE RELEASE OF STRUCTURAL SHOP DRAWINGS AND FABRICATION.



F5 PERIMETER SLAB SECTION

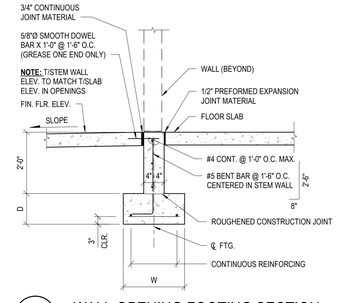
S200 — SCALE: NOT TO SCALE



F10 WALL FOOTING SECTION

S200 — SCALE: NOT TO SCALE

NOTE:
SEE FOOTING SCHEDULE FOR W, D AND REINFORCING STEEL.



F11 WALL OPENING FOOTING SECTION

S200 — SCALE: NOT TO SCALE

NOTE:
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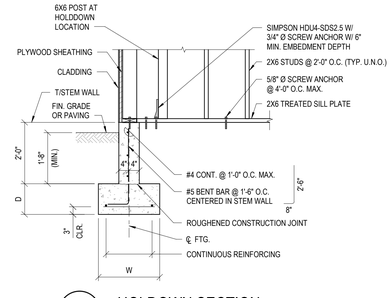

F12 HOLDOWN SECTION

S200 — SCALE: NOT TO SCALE

NOTE:
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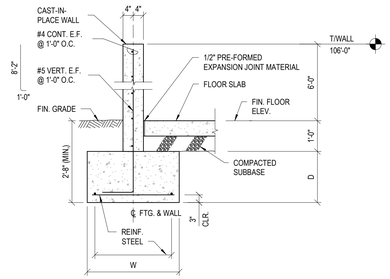
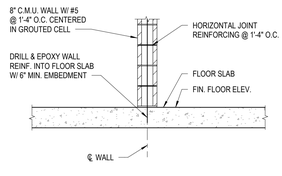


F20 STORAGE BAY WALL SECTION

S200 — SCALE: NOT TO SCALE

NOTE:
SEE FOOTING SCHEDULE FOR L,W,D AND REINFORCING STEEL.



F30 C.M.U. WALL SECTION

S200 — SCALE: NOT TO SCALE

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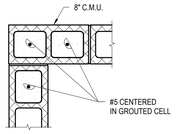
0122075A.00	BJF	JEF

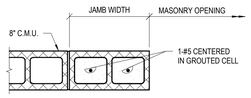
SHEET TITLE:
FOUNDATION DETAILS

SHEET NUMBER:
S210



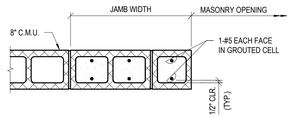
NOTE:
AT BOND BEAMS ADD CORNER BARS TO MAKE HORIZONTAL REINFORCING CONTINUOUS

C.M.U. CORNER DETAIL
SCALE: NOT TO SCALE



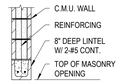
TYPICAL C.M.U. JAMB REINFORCING DETAIL
SCALE: NOT TO SCALE

FOR OPENINGS LESS THAN 8' - 0" WIDE

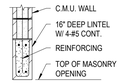


TYPICAL STEEL LINTEL JAMB REINFORCING DETAIL
SCALE: NOT TO SCALE

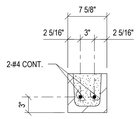
FOR MASONRY OPENINGS
GREATER THAN 8'-0" WIDE



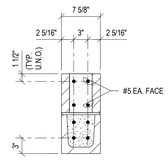
C.M.U. LINTEL
FOR MASONRY OPENINGS
UP TO 4'-0" IN WIDTH



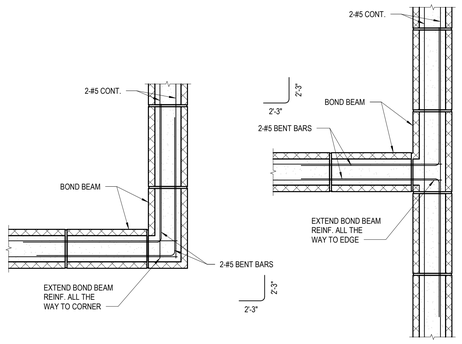
C.M.U. LINTEL
FOR MASONRY OPENINGS
UP TO 8'-0" IN WIDTH



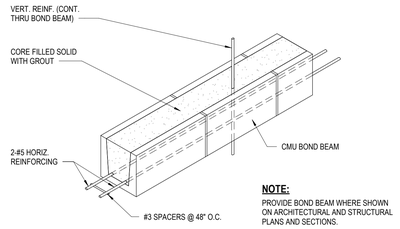
8" DEEP BOND BEAM



16" DEEP BOND BEAM

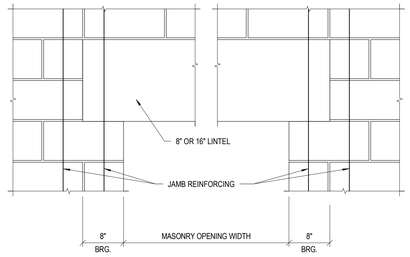


TYP. BOND BEAM CORNER REINFORCING
SCALE: NOT TO SCALE



NOTE:
PROVIDE BOND BEAM WHERE SHOWN ON ARCHITECTURAL AND STRUCTURAL PLANS AND SECTIONS.

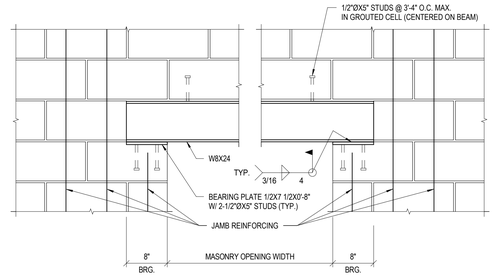
TYPICAL BOND BEAM DETAIL
SCALE: NOT TO SCALE



C.M.U. LINTEL DETAIL
SCALE: NOT TO SCALE

(TYP. @ ALL C.M.U. WALL OPENINGS 8'-0" WIDE OR LESS)

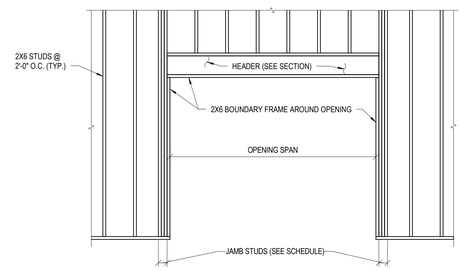
NOTE:
LINTELS SHALL BE PROVIDED FOR ALL OPENINGS AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL DRAWINGS IN ADDITION, LINTELS ARE REQUIRED FOR ANY MECHANICAL, ELECTRICAL, OR PLUMBING OPENING IN A MASONRY WALL WITH A WIDTH EQUAL TO OR GREATER THAN 1'-0".



STEEL LINTEL DETAIL
SCALE: NOT TO SCALE

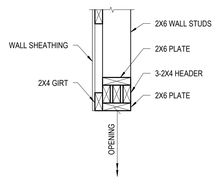
(ALTERNATE FOR C.M.U. WALL OPENINGS UP TO 12'-0" WIDE)

NOTE:
LINTELS SHALL BE PROVIDED FOR ALL OPENINGS AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL DRAWINGS IN ADDITION, LINTELS ARE REQUIRED FOR ANY MECHANICAL, ELECTRICAL, OR PLUMBING OPENING IN A MASONRY WALL WITH A WIDTH EQUAL TO OR GREATER THAN 1'-0".

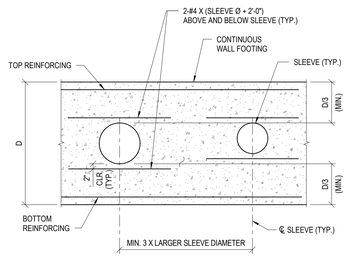


TYPICAL STUD FRAMING AT OPENINGS
SCALE: NOT TO SCALE

JAMB SCHEDULE	
SPAN	JAMB
UP TO 4'-0"	2-2X6
4'-1" TO 10'-0"	3-2X6

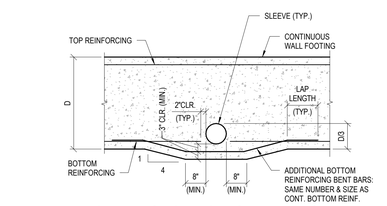


TYPICAL HEADER SECTION
SCALE: NOT TO SCALE



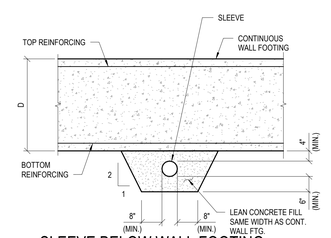
PENETRATION THROUGH MIDDLE THIRD OF WALL FOOTING
SCALE: NOT TO SCALE

NOTES:
1. PIPE/CONDUIT TO CLEAR SLEEVE BY A MINIMUM OF 1/2" ALL THE WAY AROUND.
2. SLEEVE PENETRATION IS NOT ALLOWED IN TOP 1/3 OF FOOTING.
3. WHERE TOP OF SLEEVE IS 2'-6" OR GREATER BELOW BOTTOM OF FOOTING FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR HOW TO FILL TRENCH.
4. CONTRACTOR SHALL COORDINATE ALL PIPE/CONDUIT SLEEVE LOCATIONS BEFORE BEGINNING CONSTRUCTION.
5. WHEN PIPE/CONDUIT IS BELOW WALL FOOTING PLACE LEAN CONCRETE FILL AROUND SLEEVES BEFORE POURING WALL FOOTINGS.



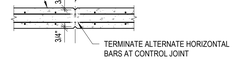
PENETRATION THROUGH BOTTOM THIRD OF WALL FOOTING
SCALE: NOT TO SCALE

NOTES:
1. PIPE/CONDUIT TO CLEAR SLEEVE BY A MINIMUM OF 1/2" ALL THE WAY AROUND.
2. SLEEVE PENETRATION IS NOT ALLOWED IN TOP 1/3 OF FOOTING.
3. WHERE TOP OF SLEEVE IS 2'-6" OR GREATER BELOW BOTTOM OF FOOTING FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR HOW TO FILL TRENCH.
4. CONTRACTOR SHALL COORDINATE ALL PIPE/CONDUIT SLEEVE LOCATIONS BEFORE BEGINNING CONSTRUCTION.
5. WHEN PIPE/CONDUIT IS BELOW WALL FOOTING PLACE LEAN CONCRETE FILL AROUND SLEEVES BEFORE POURING WALL FOOTINGS.



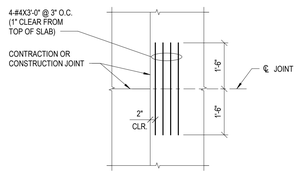
SLEEVE BELOW WALL FOOTING
SCALE: NOT TO SCALE

NOTES:
1. PIPE/CONDUIT TO CLEAR SLEEVE BY A MINIMUM OF 1/2" ALL THE WAY AROUND.
2. SLEEVE PENETRATION IS NOT ALLOWED IN TOP 1/3 OF FOOTING.
3. WHERE TOP OF SLEEVE IS 2'-6" OR GREATER BELOW BOTTOM OF FOOTING FOLLOW GEOTECHNICAL RECOMMENDATIONS FOR HOW TO FILL TRENCH.
4. CONTRACTOR SHALL COORDINATE ALL PIPE/CONDUIT SLEEVE LOCATIONS BEFORE BEGINNING CONSTRUCTION.
5. WHEN PIPE/CONDUIT IS BELOW WALL FOOTING PLACE LEAN CONCRETE FILL AROUND SLEEVES BEFORE POURING WALL FOOTINGS.

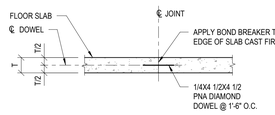


FOUNDATION WALL CONSTRUCTION/CONTRACTION JOINT
SCALE: NOT TO SCALE

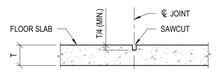
NOTE:
LOCATE CONTROL JOINTS @ 30'-0" MAX.



TYPICAL DEAD END CONTROL JOINT REINFORCING
SCALE: NOT TO SCALE

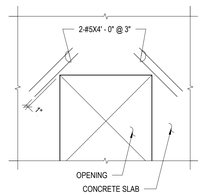


CONSTRUCTION JOINT
SCALE: NOT TO SCALE



CONTRACTION JOINT
SCALE: NOT TO SCALE

NOTE:
DEPTH OF SAWCUT MAY BE REDUCED TO 1 1/4" (± 1/4") IF EARLY-ENTRY SAW IS USED.



CRACK CONTROL REINFORCING

NOTE:
TYPICAL AT ALL REENTRANT CORNERS FOR SLAB-ON-GRADE & STRUCTURAL SLAB. REINFORCING TO BE CENTERED IN SLAB THICKNESS.

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STATE OF OHIO
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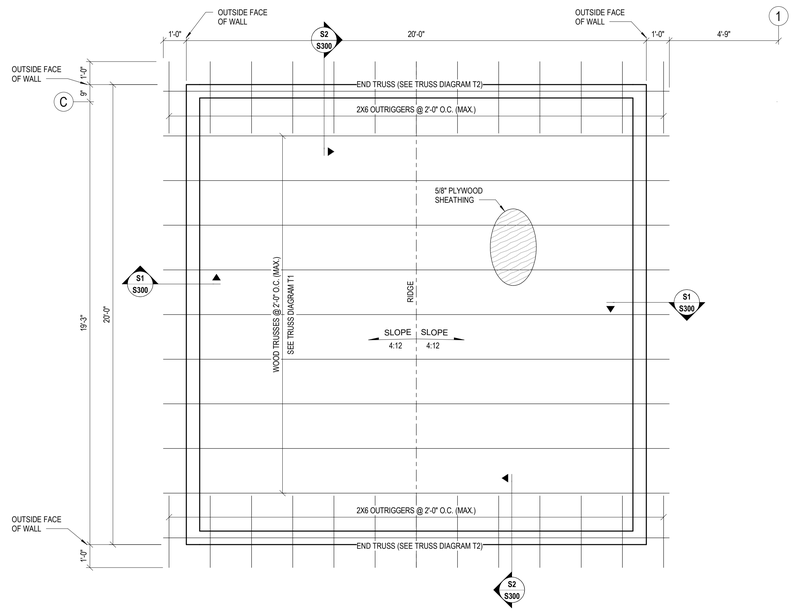
NEW BUILDING FOR
CITY OF BEAVERCREEK
SALT BARN & 9 ACRE PROPERTY SITE IMPROVEMENTS
2360 DAYTON-XENIA ROAD BEAVERCREEK, OHIO 45434

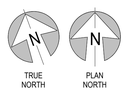
ISSUANCES/REVISIONS	
OWNER REVIEW	09/26/2023
BID DOCUMENTS	10/05/2023

LJB PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
0122075A.00	BJF	JEF

SHEET TITLE:
TYPICAL FOUNDATION DETAILS

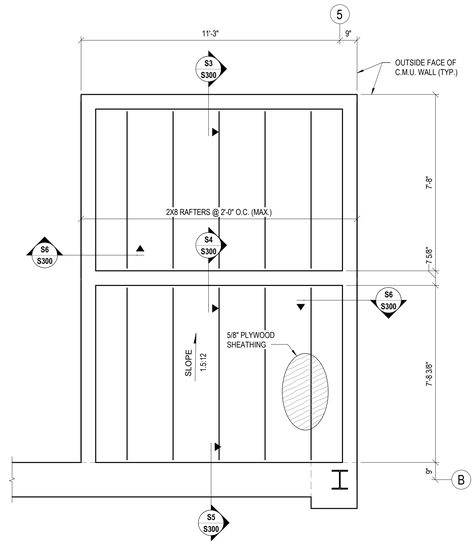
SHEET NUMBER:
S220

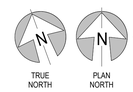




SHED FRAMING PLAN

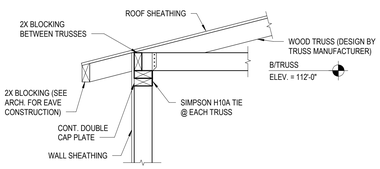
SCALE: 3/8" = 1'-0"





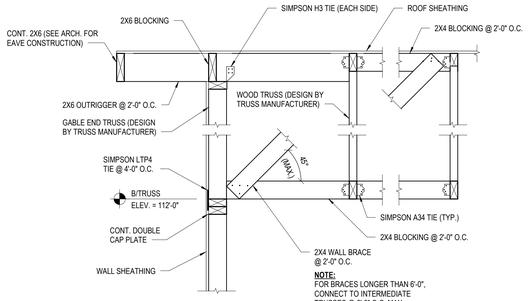
BRINE BUILDING FRAMING PLAN

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



S1 SECTION

S300 — SCALE: NOT TO SCALE



S2 SECTION

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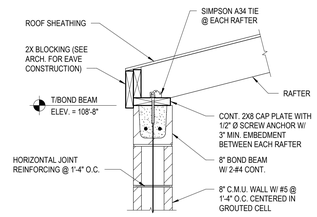

S3 SECTION

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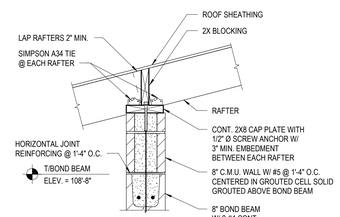
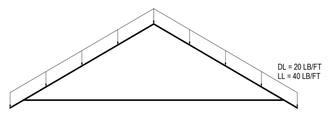


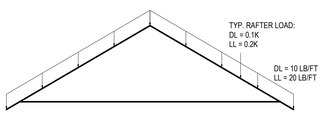
S4 SECTION

S300 — SCALE: NOT TO SCALE



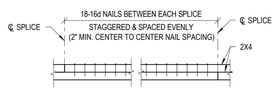
T1 TRUSS LOADING DIAGRAM

S300 — SCALE: NOT TO SCALE



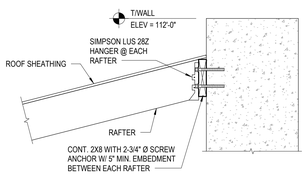
T2 TRUSS LOADING DIAGRAM

S300 — SCALE: NOT TO SCALE



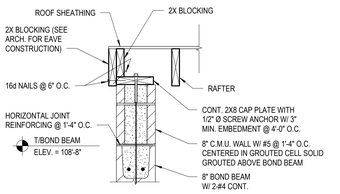
CAP PLATE SPLICE DETAIL

SCALE: NOT TO SCALE



S5 SECTION

S300 — SCALE: NOT TO SCALE



S6 SECTION

S300 — SCALE: NOT TO SCALE

STATE OF OHIO
JEREMY E. FALCONE
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NEW BUILDING FOR
CITY OF BEAVERCREEK
SALT BARN & 9 ACRE PROPERTY SITE IMPROVEMENTS
2300 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

LJB PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
0122075A.00	BJF	JEF

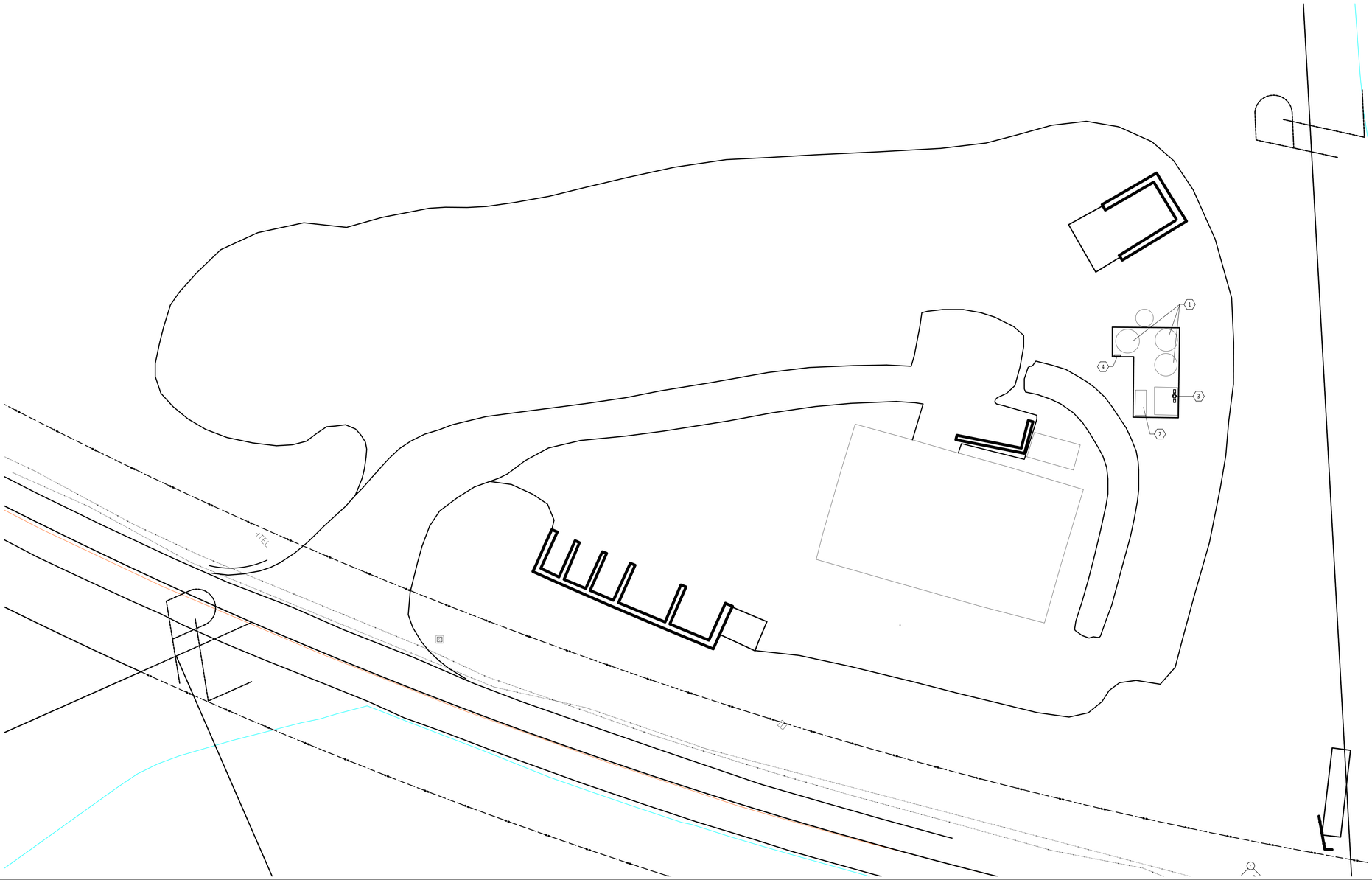
SHEET TITLE:

FRAMING PLANS & DETAILS

SHEET NUMBER:

S300

PRINTED ON: 10/5/2023 8:33:05 AM



1 P1.1 PLUMBING PLAN
1/8" = 1'-0"

PLUMBING GENERAL NOTES

A VERIFY INVERT ELEVATIONS ON UNDERGROUND SANITARY AND STORM PIPING. COORDINATE DEPTHS WITH THE BUILDING CONSTRUCTION AND ALL OTHER TRADES.

B ALL WALL PENETRATIONS SHALL BE SLEEVED WITH PVC PIPE. COORDINATE SIZES AND LOCATIONS ON SITE WITH THE GENERAL CONTRACTOR.

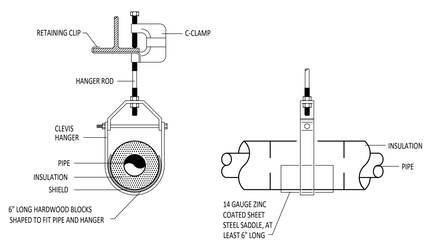
KEYNOTE SCHEDULE

#	KEYNOTE DESCRIPTION
1	REMOVE BRINE TANKS, HOSES, VALVES, HYDRAULIC PUMPS, ACCESSORIES AND STORE ON SITE. PROTECT TANKS DURING CONSTRUCTION FROM DAMAGE AND ANCHOR DOWN TO PREVENT THEM FROM BLOWING AWAY. ANY DAMAGE TO TANKS, VALVES AND CONNECTIONS SHALL BE REPLACED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE OWNER AND GENERAL CONTRACTOR.
2	REMOVE BRINE PRODUCTION SYSTEM AND STORE ON SITE. PROTECT FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE TO UNIT SHALL BE REPAIRED OR REPLACE AT NO COST TO THE OWNER. COORDINATE WORK WITH THE GENERAL CONTRACTOR.
3	REMOVE BRINE PUMP FROM BUILDING AND STORE ON SITE. PROTECT PUMP FROM DAMAGE AND WEATHER ON SITE. ANY DAMAGE TO PUMP SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE GENERAL CONTRACTOR.
4	REMOVE TRUCK CONNECTION MANIFOLD AND STORE ON SITE. PROTECT DURING CONSTRUCTION. ANY DAMAGE TO UNIT SHALL BE REPAIRED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE OWNER AND GENERAL CONTRACTOR.

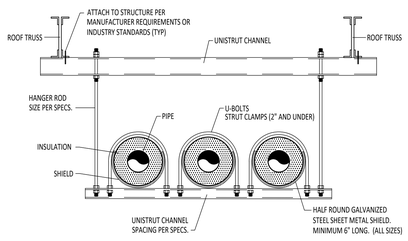
	SHUTOFF VALVE
	CHECK VALVE
	STRAINER
	FLOW METER
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	TEE
	SANITARY LATERAL TEE
	PIPE CAP
	UNION
VS	VENT STACK
VS XX / XX FU	VENT STACK/FIXTURE UNIT SCHEDULE
	SHOCK ABSORBER
HB	HOSE BIBB
WH	WALL HYDRANT
	BACKFLOW PREVENTER WITH SHUTOFF VALVES
WM	WATER METER
CO	CLEANOUT
RH	ROODING HOLE
FD	FLOOR DRAIN
FD	SQUARE FLOOR DRAIN
RD	ROOF DRAIN
	SINGLE LINE BREAK
	FLOW INDICATOR
	CONNECT NEW TO EXISTING
1	KEYNOTE TAG
AHU-1	EQUIPMENT TAG
A	EQUIPMENT NOTES

- SYMBOLS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW

2 P1.1 PLUMBING SYMBOLS
NTS



3 P1.1 CLEVIS PIPE HANGER DETAIL - 6" AND SMALLER
NTS



4 P1.1 CABLE SUSPENSION PLUMBING PIPE HANGER DETAIL
NTS

- SYMBOLS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW

CA	COMPRESSED AIR PIPING
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING - 120°
140°	DOMESTIC HOT WATER PIPING - 140°
DHWR	DOMESTIC HOT WATER RETURN PIPING
T	DOMESTIC TEMPERED WATER PIPING
LPGAS	LIQUID PROPANE PIPING
NGAS	NATURAL GAS PIPING
NP	NON-POTABLE WATER PIPING
	SANITARY PIPING - OVERHEAD
	SANITARY PIPING - BELOW FLOOR
AW	ACID WASTE PIPING - BELOW FLOOR
GI	GREASE WASTE PIPING - BELOW FLOOR
	STORM PIPING - BELOW FLOOR
ST	STORM PIPING - ABOVE FLOOR
1-1/2"V	SANITARY VENT PIPING
AV 1-1/2"V	ACID WASTE VENT PIPING
2"V	SANITARY VENT PIPING - BELOW FLOOR

5 P1.1 PLUMBING PIPING LEGEND
NTS

STATE OF OHIO
CHRISTOPHER MONNIN
E-67075
Registered
PROFESSIONAL ENGINEER

CHRISTOPHER MONNIN
LICENSE #E-67075
EXPIRATION DATE: 12/31/2023

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NEW BUILDING FOR

CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2360 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

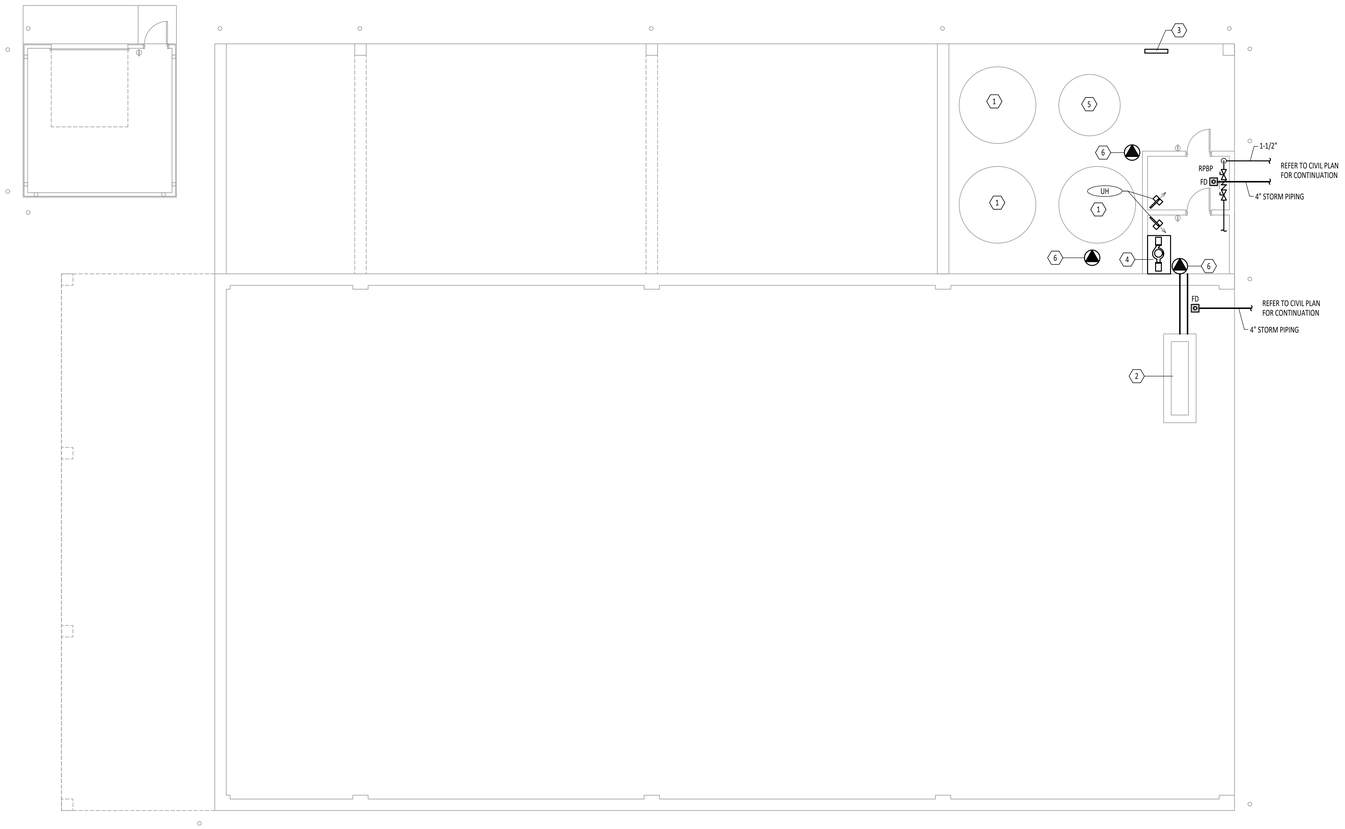
PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	LGW	CSM

SHEET TITLE:

PLUMBING DEMOLITION PLAN

SHEET NUMBER:

P1.1



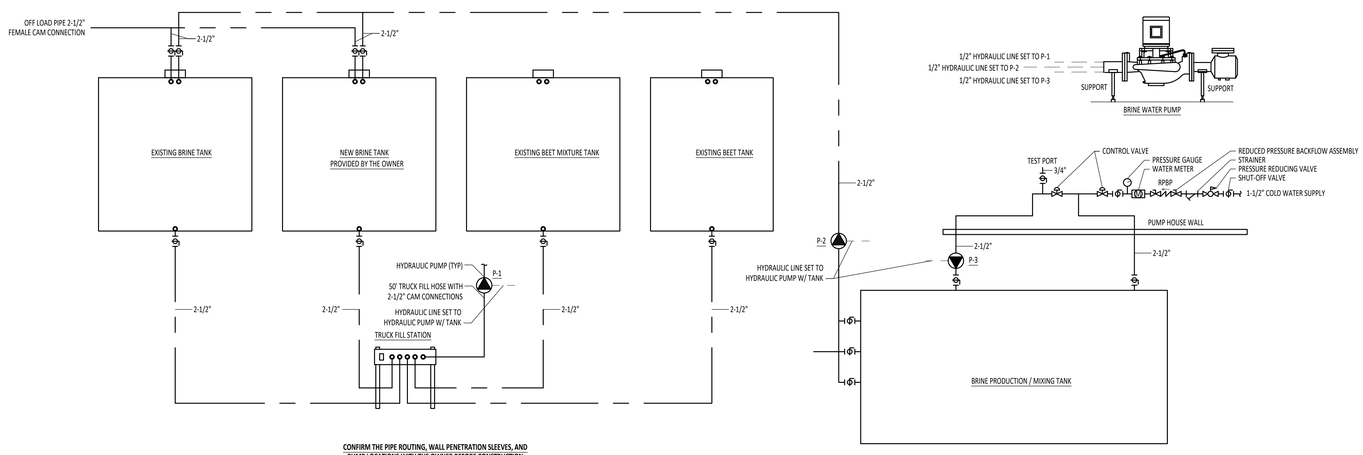
1 PLUMBING PLAN
P2.1 1/8" = 1'-0"

PLUMBING GENERAL NOTES

A VERIFY INVERT ELEVATIONS ON UNDERGROUND SANITARY AND STORM PIPING. COORDINATE DEPTHS WITH THE BUILDING CONSTRUCTION AND ALL OTHER TRADES.

B ALL WALL PENETRATIONS SHALL BE SLEEVED WITH PVC PIPE. COORDINATE SIZES AND LOCATIONS ON SITE WITH THE GENERAL CONTRACTOR.

KEYNOTE SCHEDULE	
#	KEYNOTE DESCRIPTION
1	REINSTALL ALL BRINE TANKS IN THE LOCATIONS SHOWN. VERIFY EXISTING SIZE, TYPE AND LOCATION ON SITE. COORDINATE LOCATIONS WITH THE OWNER AND GENERAL CONTRACTOR.
2	REINSTALL BRINE PRODUCTION SYSTEM IN THE APPROXIMATE LOCATION SHOWN. VERIFY EXISTING SIZE, TYPE AND LOCATION ON SITE. COORDINATE POWER REQUIREMENTS AND LOCATIONS WITH THE ELECTRICAL CONTRACTOR. COORDINATE UNIT LOCATION WITH THE OWNER AND GENERAL CONTRACTOR.
3	REINSTALL TRUCK FILL STATION ON THE BUILDING IN THE APPROXIMATE LOCATION SHOWN. VERIFY EXISTING SIZE, TYPE AND LOCATION ON SITE. COORDINATE EXACT LOCATION WITH THE OWNER AND GENERAL CONTRACTOR.
4	REINSTALL PUMP ON A 3-1/2" CONCRETE PAD. CONCRETE PAD PROVIDED BY THE PLUMBING CONTRACTOR. PUMP SHALL BE INSTALLED IN THE APPROXIMATE LOCATION SHOWN. COORDINATE EXACT LOCATION WITH THE OWNER, ELECTRICAL AND GENERAL CONTRACTOR.
5	NEW TANK PROVIDED BY THE OWNER. COORDINATE TANK CONNECTIONS WITH THE OWNER.
6	LOCATION OF HYDRAULIC PUMP. PROVIDE NEW HYDRAULIC LINE SETS AND COORDINATE EXACT LOCATION OF PUMP WITH THE OWNER AND GENERAL CONTRACTOR.



CONFIRM THE PIPE ROUTING, WALL PENETRATION SLEEVES, AND PUMP LOCATIONS WITH THE OWNER BEFORE CONSTRUCTION

2 BRINE SYSTEM PIPING DIAGRAM
P2.1 NTS

PLUMBING EQUIPMENT SCHEDULE - REDUCED PRESSURE BACKFLOW PREVENTER					
MARK	DESCRIPTION	MFG	MODEL	SIZE	COMMENTS
RPBP	REDUCED-PRESSURE BACKFLOW PREVENTER	ZURN / WILKINS	975XL	1-1/2"	ASSE 1013 CERTIFIED, FULL PORT QUARTER TURN SHUTOFF VALVES. PROVIDE AN AIR GAP WITH RELIEF PIPED TO THE NEAREST FLOOR DRAIN.

PLUMBING FIXTURE SCHEDULE - FLOOR DRAINS									
				MATERIAL DESCRIPTION		CONNECTION		FU	
MARK	DESCRIPTION	MFG	MODEL	BODY	STRAINER	SAN	VENT	WFU	COMMENTS
FD	FLOOR DRAIN	ZURN	Z566-GT	CAST IRON	CAST IRON	3"	1 1/2"	2	12" SQUARE OPEN TOP DRAIN, DURA-COATED CAST IRON BODY, 3" BOTTOM OUTLET, LOOSE SET CAST IRON SECONDARY STRAINER, POLISHED BRONZE TOP GRATE. PROVIDE TRAP SEAL PROTECTION DEVICE PER STATE AND LOCAL CODE REQUIREMENTS.

ELECTRIC UNIT HEATER SCHEDULE														
								ELECTRICAL						
MARK	MFG	MODEL	HEATING CAPACITY (KW)	HEATING CAPACITY (BTUH)	AIRFLOW (CFM)	EAT	LAT	FAN HP	FRPM	VOLTAGE	PHASE	FLA	MOUNTING	COMMENTS
UH	RAYWALL	H1HUH05003	5	17100	400	60	100	0.125	1550	240	1	20.8	HORIZONTAL	UNIT MOUNTED DISCONNECT, UNIT MOUNTED THERMOSTAT

STATE OF OHIO
CHRISTOPHER MONNIN
E-67075
REGISTERED
PROFESSIONAL ENGINEER
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LICENSE #E-67075
EXPIRATION DATE: 12/31/2023

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NEW BUILDING FOR

CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2360 DAYTON-XENIA ROAD
BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS	
BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	LGW	CSM

SHEET TITLE:

PLUMBING PLAN

SHEET NUMBER:

P2.1

- ABBREVIATIONS USED ON THE CONTRACT DOCUMENTS INCLUDE, BUT ARE NOT LIMITED TO THOSE LISTED BELOW

A
AFF - ABOVE FINISHED FLOOR
AFG - ABOVE FINISHED GRADE

C
CP - COVERPLATE

E
EC - ELECTRICAL CONTRACTOR
EX / EXIST - EXISTING

G
GC - GENERAL CONTRACTOR
GFI - PROVIDE DEVICE WITH GFI PROTECTION

H
HORIZ - HORIZONTAL
HP - HORSEPOWER

M
MC - MECHANICAL (HVAC, PLBG, FP, OR TC) CONTRACTOR

N
NF - NONFUSED
NL - NIGHTLIGHT; CIRCUITED AHEAD OF LOCAL SWITCHING

O
OREQ - OR EQUAL

S
SM - SURFACE-MOUNTED

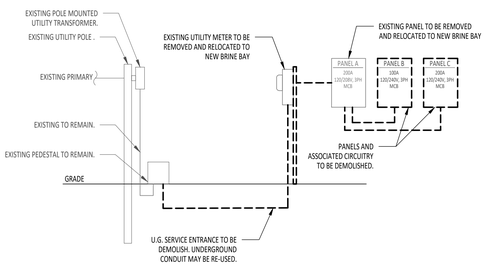
T
TR - TAMPER-RESISTANT
TYP - TYPICAL

U
UNO - UNLESS NOTED OTHERWISE

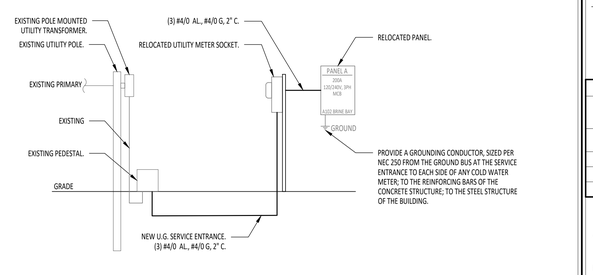
W
WG - WIREGUARD
WP - WEATHERPROOF

ELECTRICAL LEGEND

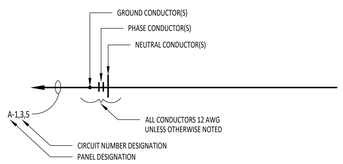
SYMBOL	DESCRIPTION	MOUNTING HEIGHT
A1	4' SURFACE MOUNT STRIP LIGHT, STEEL HOUSING, WHITE FINISH, DIFFUSE ACRYLIC LENSE, SUITABLE FOR COLD TEMPERATURES. SET LUMEN OUTPUT TO 4,000 LUMENS. MANUFACTURER: LITHONIA, CATALOG NUMBER: CSS L48 ALO3 MVOLT 40K 80CRI. EQUALS: METALUX - SNX SERIES | DAY-BRITE - SDS | ILP - VS SERIES	SURFACE
B1	4' WRAPAROUND FIXTURE, LINEAR SIDE PRISMS, PYRAMIDAL BOTTOM PRISMS, CODE GAUGE COLD-ROLLED STEEL END PLATES. MANUFACTURER: LITHONIA, CATALOG NUMBER: SBL4 6000LM 80CRI 40K NODIM MVOLT. EQUALS: METALUX - WSNLED SERIES | DAY-BRITE - OWL SERIES | ILP - SWR SERIES	SURFACE
	WET LISTED LED TYPE INDUSTRIAL 8' LIGHT FIXTURE. WHITE FIBERGLASS HOUSING WITH INTEGRAL PERIMETER CHANNEL AND POURED IN-PLACE CONTINUOUS CELL GASKET. STAINLESS STEEL LATCHES. IMPACTED MODIFIED ACRYLIC FROSTED LENS. HIGH EFFICIENCY LEDS ON METAL CORE CIRCUIT BOARD, 24000 LUMEN SPREAD DISTRIBUTION. U.L.L. LISTED ELECTRONIC DRIVER. MANUFACTURER: LITHONIA, CATALOG NUMBER: FEM L96 24000LM IMAFD WD MVOLT GZ10 40K 80CRI. EQUALS: METALUX - BVT2 SERIES | DAY-BRITE - APX SERIES | ILP - WTZ SERIES	VARIES
W1	ALTERNATE: LED TYPE WALL MOUNTED LIGHT FIXTURE. DIE-CAST ALUMINUM HOUSING WITH INTEGRAL HEAT SINK FINS, BLACK FINISH, SEALED HOUSING FOR WET LISTING. ACRYLIC LENSES, FORWARD THROW DISTRIBUTION, HIGH EFFICIENCY LEDS WITH U.L. LISTED ELECTRONIC DRIVER. MANUFACTURER: LITHONIA, CATALOG NUMBER: DSXW2 LED 10C 350 40K T25 MVOLT DBLXD. EQUALS: LUMARK - XTOR SERIES | GARDCO - GWM SERIES | LSI - XWM SERIES	13'-0" AFF
W2	LED TYPE WALL MOUNTED LIGHT FIXTURE. DIE-CAST ALUMINUM HOUSING WITH INTEGRAL HEAT SINK FINS, BLACK FINISH, SEALED HOUSING FOR WET LISTING. ACRYLIC LENSES, FORWARD THROW DISTRIBUTION, HIGH EFFICIENCY LEDS WITH U.L. LISTED ELECTRONIC DRIVER. MANUFACTURER: LITHONIA, CATALOG NUMBER: DSXW2 LED 30C 1000 40K T2M MVOLT DBLXD. EQUALS: LUMARK - PRV SERIES | GARDCO - GWM SERIES | LSI - XWM SERIES	22'-0" AFF
W3	LED TYPE WALL MOUNTED LIGHT FIXTURE. DIE-CAST ALUMINUM HOUSING WITH INTEGRAL HEAT SINK FINS, BLACK FINISH, SEALED HOUSING FOR WET LISTING. ACRYLIC LENSES, FORWARD THROW DISTRIBUTION, HIGH EFFICIENCY LEDS WITH U.L. LISTED ELECTRONIC DRIVER. MANUFACTURER: LITHONIA, CATALOG NUMBER: DSXW2 LED 30C 1000 40K TFTM MVOLT DBLXD. EQUALS: LUMARK - PRV SERIES | GARDCO - GWM SERIES | LSI - XWM SERIES	35'-0" AFF
X	BATTERY PACK WITH REMOTE HEADS. MANUFACTURER: LITHONIA, CATALOG NUMBER: ELA T SD Q L0309 M12. EQUALS: SURE-LITES - APEL SERIES | CHLORIDE - VLLU SERIES | EMERGI - EF35 SERIES	8'-0" AFF UNO
Z	BATTERY PACK WITH REMOTE HEADS, THERMOPLASTIC HOUSING, SUITABLE FOR COLD TEMPERATURES. MANUFACTURER: LITHONIA, CATALOG NUMBER: INDL SP2200L UVOLT LTP SDRT CW. EQUALS: BEGHELI - XMR SERIES | CHLORIDE - RN SERIES | EMERGI - SV SERIES	20'-0" AFF
LCP	LIGHTING CONTROL PANEL FOR EXTERIOR LIGHTS.	72" AFF TO TOP
PS	PHOTO SENSOR FOR AUTOMATIC LIGHTING CONTROL. CONNECT TO LOCAL LIGHTING MANAGEMENT SYSTEM FOR DAYLIGHT HARVESTING, UNO	22'-0" AFF
CP	BRINE SYSTEM CONTROL PANEL	SEE DRAWINGS
$	LOCAL SWITCH - 1 POLE - 20A, 120V WITH COVERPLATE	44" AFF
$3	LOCAL SWITCH - THREE WAY - 20A, 120V WITH COVERPLATE	44" AFF
$WP	LOCAL SWITCH - 1 POLE - 20A, 120V WITH METAL WEATHER PROOF COVERPLATE	44" AFF
GFI/WP	DUPLEX GFCI WEATHER PROOF RECEPTACLE - 20A-120V-NEMA 5-20R WITH COVERPLATE.	44" AFF UNO
GFI	DUPLEX GFCI RECEPTACLE - 20A-120V-NEMA 5-20R WITH COVERPLATE.	44" AFF UNO
	ELECTRIC PANEL. REFER TO PANEL SCHEDULES AND ONE LINE DIAGRAM	78" AFF TO TOP
	MOTOR CONNECTION.	VARIES
	PUSHBUTTON STATION. REFER TO DRAWINGS.	44" AFF UNO
	CONDUIT CONCEALED IN CEILING, WALL, OR FLOOR OF NEW CONSTRUCTION. CONCEALED WHEREVER POSSIBLE IN AREAS OF OPEN STRUCTURE OR EXISTING CONSTRUCTION.	
	HOMERUN TO PANEL OR LOCATION NOTED.	
	INDICATES CONCEALED CONDUIT UNDERGROUND/UNDERFLOOR - 3/4" MINIMUM.	
	INDICATES LOCAL SWITCHING OR CONTROL FUNCTION.	
	TICK MARKS INDICATING CONDUCTORS, REFER TO DETAIL 3 ON SHEET E1.1.	
	UTILITY POLE	
	ELECTRICAL UTILITY METER.	
X	INDICATES NOTE - SEE TABULATION ON SAME SHEET.	
~	CIRCUIT CONTINUATION. REFER TO THE 'E' DRAWINGS FOR MORE INFORMATION.	



1 E1.1 ONE-LINE DIAGRAM - DEMOLITION
NTS

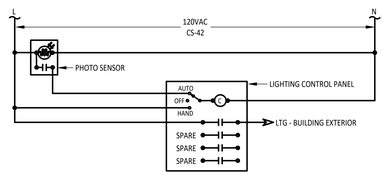


2 E1.1 ONE LINE DIAGRAM
NTS



NOTES:
1. 12 AWG IS MIN. CONDUCTOR SIZE, EXCEPT AS NOTED.
2. PROVIDE DEDICATED NEUTRALS.

3 E1.1 KEY TO ELECTRIC CIRCUIT WIRING
NTS



GENERAL NOTES:
1. PHOTO SENSOR SHALL BE INTERMATIC K4236C, OREQ.
2. PROVIDE AN ELECTRICALLY HELD LIGHTING CONTACTOR WITH 120VAC COIL AND NUMBER OF POLES AS SHOWN, NEMA 1 ENCLOSURE.
3. CONTACTOR SHALL HAVE INTEGRAL H-O-A SELECTOR SWITCH.

4 E1.1 EXTERIOR LIGHTING DIAGRAM
NTS

PANEL A

(EXISTING)

MOUNTING: SURFACE
FED FROM: UTILITY
ENCLOSURE: TYPE 1
LOCATION: A102 BRINE BAY

AIC RATING: EXISTING
VOLTAGE: 208Y/120V 3PH 4W
MAINS RATING: 225 A
MAINS TYPE: MCB
MCB RATING: 200 A

PANEL NOTES:
RELOCATED EXISTING PANEL. PANEL TYPE: EATON PRL1A

NOTE	CIRCUIT DESCRIPTION	POLE	AMP	CKT	A	B	C	CKT	AMP	POLE	CIRCUIT DESCRIPTION	NOTE
1	UH	2	15 A	1	2496 / 600			2	20 A	1	BRINE COMPUTER POWER	
				3		2496 / 2496		4	15 A	2	UH	1
2	HYDRO PUMP	3	70 A	5			2714 / 2496	6				
				7	2714 / 900			8	20 A	1	RECEPTACLES	
				9		2714 / 720		10	20 A	1	RECEPTACLES	
	LIGHTING	1	20 A	11			1503 / 1684	12	20 A	1	LIGHTING	
	LIGHTING	1	20 A	13	1027 / 1656			14	20 A	1	OVERHEAD DOOR	
	SPARE	1	20 A	15		/		16	20 A	1	SPARE	
	SPARE	1	20 A	17			/	18	20 A	1	SPARE	
	SPARE	1	20 A	19	/			20	20 A	1	SPARE	
	SPARE	1	20 A	21		/		22	20 A	1	SPARE	
	SPARE	1	20 A	23			/	24	20 A	1	SPARE	
	SPARE	1	20 A	25	/			26	20 A	1	SPARE	
	SPARE	1	20 A	27		/		28	20 A	1	SPARE	
	SPARE	1	20 A	29			/	30	20 A	1	SPARE	
					VA SUBTOTALS:	9393 VA	8426 VA	8397 VA				
					AMP SUBTOTALS:	78 A	70 A	70 A				

LOAD TYPE		CONNECTED VA	DEMAND FACTOR	DEMAND VA	DEMAND AMPS
L	LIGHTING	4214 VA	100.00%	4214 VA	12 A
R	RECEPTACLES	2220 VA	100.00%	2220 VA	6 A
C	COOLING	0 VA	0.00%	0 VA	0 A
Q	MISC EQUIPMENT	1656 VA	100.00%	1656 VA	5 A
K	KITCHEN	0 VA	65.00%	0 VA	0 A
H	HVAC EQUIPMENT	9984 VA	100.00%	9984 VA	28 A
M	LARGEST MOTOR	8142 VA	125.00%	10178 VA	28 A
P	PANEL FEEDER	0 VA	100.00%	0 VA	0 A

SUBTOTAL	PHASE
9393 VA	A
8426 VA	B
8397 VA	C
PANEL TOTALS	
26216 VA	CONNECTED
26252 VA	DEMAND
73 A	CONNECTED
78 A	DEMAND

CIRCUIT NOTES
(1) PROVIDE NEW CIRCUIT BREAKER. (2) PROVIDE 2 - #8 AWG CU, 1 - #10 AWG CU GND, 1" C

UTILITY COMPANY CONTACT

AES OHIO
DAVID HELMIG

1578 E. HOOP RD. XENIA, OH 45385
SENIOR DESIGN TECHNICIAN
DAVID.HELMIG@AES.COM
(937) 331-3547 (OFFICE)
(937) 475-8639 (MOBILE)

SHEET INDEX

ELECTRICAL GENERAL NOTES

A ALL GENERAL WALL MOUNT WIRING DEVICES TO BE GREY IN COLOR. COVERPLATES TO BE STAINLESS STEEL, NYLON, UNBREAKABLE TYPE. CEILING MOUNTED DEVICES SHALL BE WHITE IN COLOR WITH WHITE COVERPLATES.

B ALL MOUNTING HEIGHTS REFER TO BOTTOM OF BOX OR DEVICE, UNLESS NOTED OTHERWISE.

C ALL CONDUIT TO BE CONCEALED.

D TICK MARKS ON LIGHTING PLAN CIRCUITING INDICATE A CHANGE IN SWITCHING.

E ALL WORK SHALL CONFORM TO 2017 N.E.C. NATIONAL, STATE AND LOCAL CODES WHICH APPLY.

F ALL MATERIAL AND EQUIPMENT SHALL CONFORM TO U.L. AND NEMA STANDARDS WHICH APPLY.

G THIS CONTRACTOR SHALL PAY ALL FEES AND OBTAIN ALL PERMITS REQUIRED FOR THE EXECUTION OF THEIR WORK

H THIS CONTRACTOR SHALL GUARANTEE THEIR ENTIRE ELECTRICAL INSTALLATION AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR.

I MINIMUM WIRE SIZE SHALL BE 12 AWG UNLESS NOTED OTHERWISE.

J CONDUCTORS SHALL BE TYPE 'THHN/THWN' STRANDED COPPER, UNLESS NOTED OTHERWISE. CONDUCTORS 6 AWG, AND LARGER MAY BE COPPER OR ALUMINUM. SEE SPECIFICATIONS.

K EXPOSED EXTERIOR CONDUIT SHALL BE RIGID GALVANIZED STEEL OR INTERMEDIATE GRADE METAL CONDUIT. INTERIOR CONDUIT MAY BE ELECTRICAL METALLIC TUBING. CONDUIT BURIED BELOW GRADE SHALL BE SCHEDULE 40 PVC WITH APPROPRIATE SIZE GREEN GROUND WIRE, UNLESS NOTED OTHERWISE.

L IT IS STRONGLY RECOMMENDED THAT ALL BIDDERS VISIT AND EXAMINE THE SITE. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS UNDER WHICH WORK MUST BE PERFORMED AND CHECK ALL PRESENT ELEVATIONS. THE CONTRACTOR SHALL REPORT ANY MAJOR DISCREPANCIES TO THE ARCHITECT. FAILURE TO DO SO SHALL BE DEEMED AS ACCEPTANCE OF EXISTING CONDITIONS.

STATE OF OHIO
CHRISTOPHER MONNIN
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CHRISTOPHER MONNIN
LICENSE #E-67075
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NEW BUILDING FOR

CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2150 DAYTON-XENIA ROAD

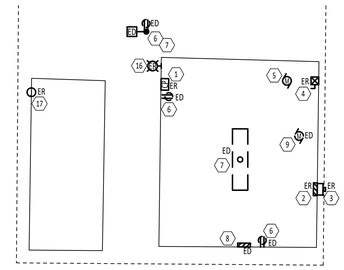
ISSUANCES/REVISIONS

BID DOCUMENTS	10/05/2023

PROJECT NUMBER:	DRAWN BY:	CHECKED BY:
21062.00	DNW	SJH

SHEET TITLE:
GENERAL NOTES, LEGEND, ABBREVIATIONS, DETAILS, PANEL SCHEDULE, & ONE-LINE DIAGRAM

SHEET NUMBER:
E1.1



2 ED1.1 ENLARGED DEMOLITION PLAN
1/4" = 1'-0"

1 ED1.1 ELECTRICAL DEMOLITION PLAN
1/16" = 1'-0"

KEYNOTE SCHEDULE

#	KEYNOTE DESCRIPTION
1	REMOVE BRINE SYSTEM CONTROL PANEL AND ASSOCIATED EQUIPMENT FROM BUILDING AND STORE ON SITE. PROTECT CONTROL PANEL AND ASSOCIATED EQUIPMENT FROM DAMAGE AND WEATHER ON SITE. ANY DAMAGE TO CONTROL PANEL AND ASSOCIATED EQUIPMENT SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE GENERAL CONTRACTOR. REFER TO E3.1 FOR ADDITIONAL INFORMATION.
2	REMOVE PANEL FROM BUILDING AND STORE ON SITE. PROTECT PANEL FROM DAMAGE AND WEATHER ON SITE. ANY DAMAGE TO PANEL SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE GENERAL CONTRACTOR. REFER TO E3.1 FOR ADDITIONAL INFORMATION.
3	REMOVE METER AND SOCKET AND STORE ON SITE. PROTECT METER AND SOCKET FROM DAMAGE AND WEATHER ON SITE. ANY DAMAGE TO METER AND SOCKET SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE GENERAL CONTRACTOR. REFER TO E3.1 FOR ADDITIONAL INFORMATION.
4	REMOVE STARTER AND STORE ON SITE. PROTECT STARTER FROM DAMAGE AND WEATHER ON SITE. ANY DAMAGE TO STARTER SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE GENERAL CONTRACTOR. REFER TO E3.1 FOR ADDITIONAL INFORMATION.
5	DISCONNECT BRINE PUMP. PUMP REMOVED BY M.C. COORDINATE WORK WITH THE MECHANICAL CONTRACTOR. REFER TO E3.1 FOR ADDITIONAL INFORMATION.
6	RECEPTACLE AND ASSOCIATED CIRCUITRY TO BE DEMOLISHED.
7	LUMINAIRE AND ASSOCIATED CIRCUITRY TO BE DEMOLISHED.
8	PANEL TO BE DEMOLISHED.
9	UNIT HEATER TO BE DEMOLISHED.
10	METER TO BE DEMOLISHED.
11	WEATHER PROOF SWITCH TO BE DEMOLISHED.
12	EXISTING UNDERGROUND FEED TO BE DEMOLISHED.
13	EXISTING CONDUIT MAY BE RE-USED. COORDINATE WORK WITH AES.
14	EXISTING UTILITY POLE/PEDESTAL LOCATION.
15	DISCONNECT EXISTING TANK LEVEL SENSOR AND REMOVE CONDUIT AND WIRE BACK TO CONTROL PANEL
16	REMOVE WARNING LIGHT FROM THE SIDE OF THE BUILDING AND STORE ON SITE. PROTECT WARNING LIGHT FROM DAMAGE AND WEATHER ON SITE. ANY DAMAGE TO WARNING LIGHT SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE GENERAL CONTRACTOR. REFER TO E3.1 FOR ADDITIONAL INFORMATION.
17	JUNCTION BOX ON THE SIDE OF THE HOPPER TO REMAIN. PROTECT JUNCTION BOX FROM DAMAGE AND WEATHER ON SITE. ANY DAMAGE TO JUNCTION BOX SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. COORDINATE WORK WITH THE GENERAL CONTRACTOR. REFER TO E3.1 FOR ADDITIONAL INFORMATION.

GENERAL ELECTRICAL DEMOLITION NOTES

A.	FIELD VERIFY ALL DIMENSIONS & CONDITIONS PRIOR TO START OF CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCY OR SITUATION DISCOVERED THAT DOES NOT CONFORM TO CONSTRUCTION DOCUMENTS.
B.	ALL WORK PERFORMED IS SUBJECT TO APPROVAL BY THE ARCHITECT AND OWNER. WORK FOUND TO BE UNSATISFACTORY SHALL BE REMOVED AND PROPERLY REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
C.	ALL ITEMS AND MATERIAL NOTED AS "REMOVE" SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR OFF SITE. COORDINATE REMOVAL OF ITEMS WITH OWNER. OWNER HAS THE OPTION TO CLAIM ANY REMOVED ITEMS.
D.	TEMPORARILY SUPPORT ALL EQUIPMENT, CONDUIT, ETC. AS REQUIRED UNTIL FINAL SUPPORTS ARE IN PLACE.
E.	CLOSELY COORDINATE ALL WORK WITH THE OWNER AND WITH ALL OTHER CONTRACTORS HIRED BY THE OWNER. CLARIFY IN ADVANCE ANY QUESTIONS AS TO SCOPE OF WORK AND AREAS OF RESPONSIBILITY.
F.	CONDUITS, BOXES, AND CIRCUIT BREAKERS MAY BE REUSED WHERE POSSIBLE, IF NOT, MODIFY AS NEEDED FOR NEW WORK.
G.	DIV. 26 SHALL REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DEMOLITION PLANS FOR ELECTRICAL DISCONNECTION OR REMOVAL OF ANY ELECTRICAL EQUIPMENT.
H.	DIV. 26 SHALL PULL ALL WIRE AND CAP CONDUIT TO ALL CIRCUITS DISCONNECTED AND NOT REUSED.
I.	ALL ABANDONED WIRING ABOVE CEILING SHALL BE REMOVED PER THE REQUIREMENTS OF THE NEC.
J.	ALL ELECTRICAL EQUIPMENT SHOWN ON THIS SHEET SHALL BE REMOVED UNLESS OTHERWISE NOTED.

UNDERGROUND UTILITIES

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE **800-362-2764**
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

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NEW BUILDING FOR

CITY OF BEAVERCREEK
SALT BARN & 9-ACRE PROPERTY SITE IMPROVEMENTS

2160 DAYTON-XENIA ROAD BEAVERCREEK, OHIO 45434

ISSUANCES/REVISIONS	
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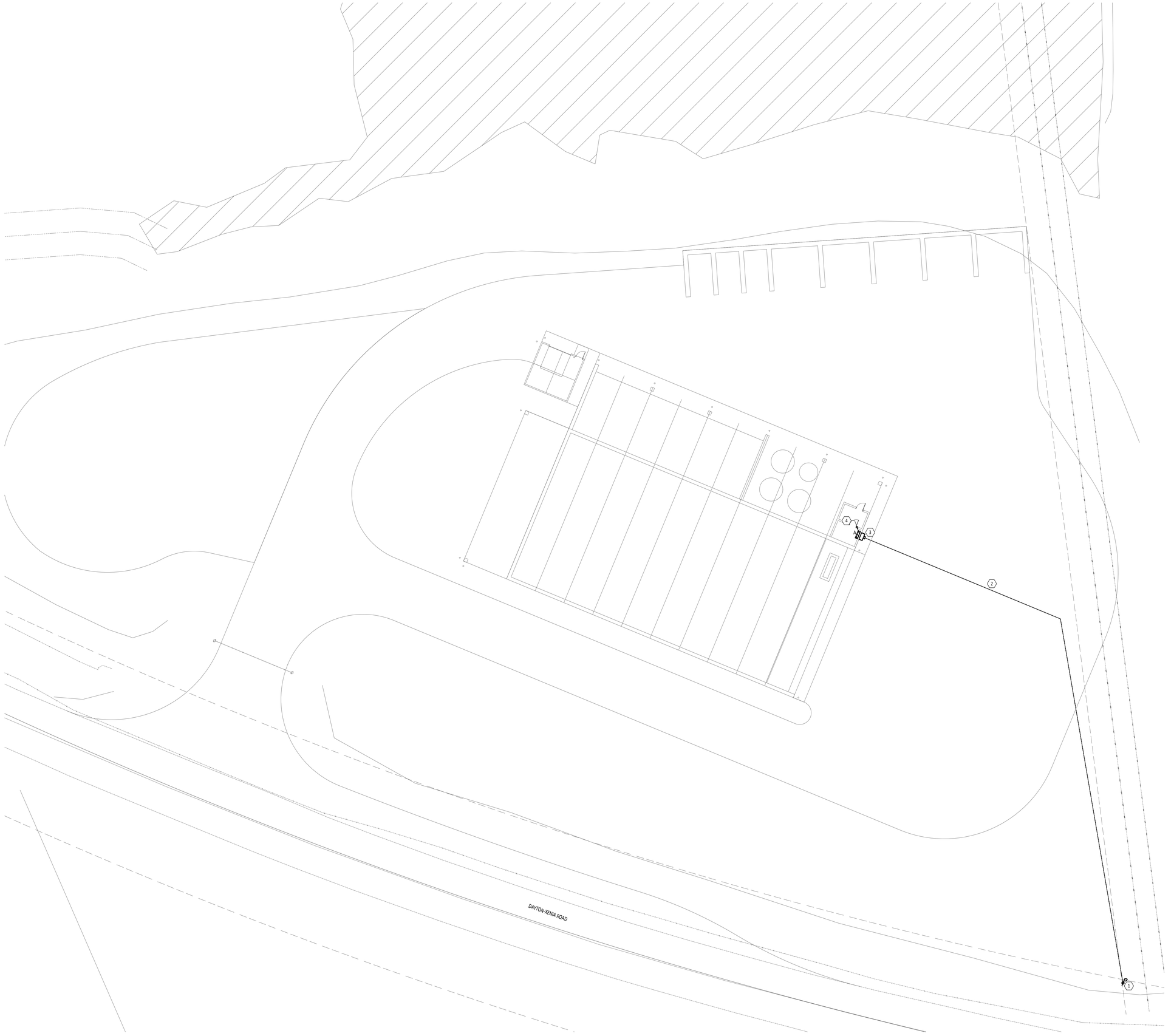
SHEET TITLE:

ELECTRICAL DEMOLITION PLANS

SHEET NUMBER:

ED1.1



1 E2.1 ELECTRICAL SITE PLAN
1/16" = 1'-0"

KEYNOTE SCHEDULE	
#	KEYNOTE DESCRIPTION
1	EXISTING UTILITY POLE/PEDESTAL.
2	NEW ELECTRICAL UNDERGROUND SERVICE. REFER TO ONE-LINE DIAGRAM FOR CONDUIT AND CONDUCTOR SIZE.
3	RELOCATED UTILITY METER AND SOCKET.
4	RELOCATED PANEL 'A'.

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ELECTRICAL SITE PLAN

SHEET NUMBER:

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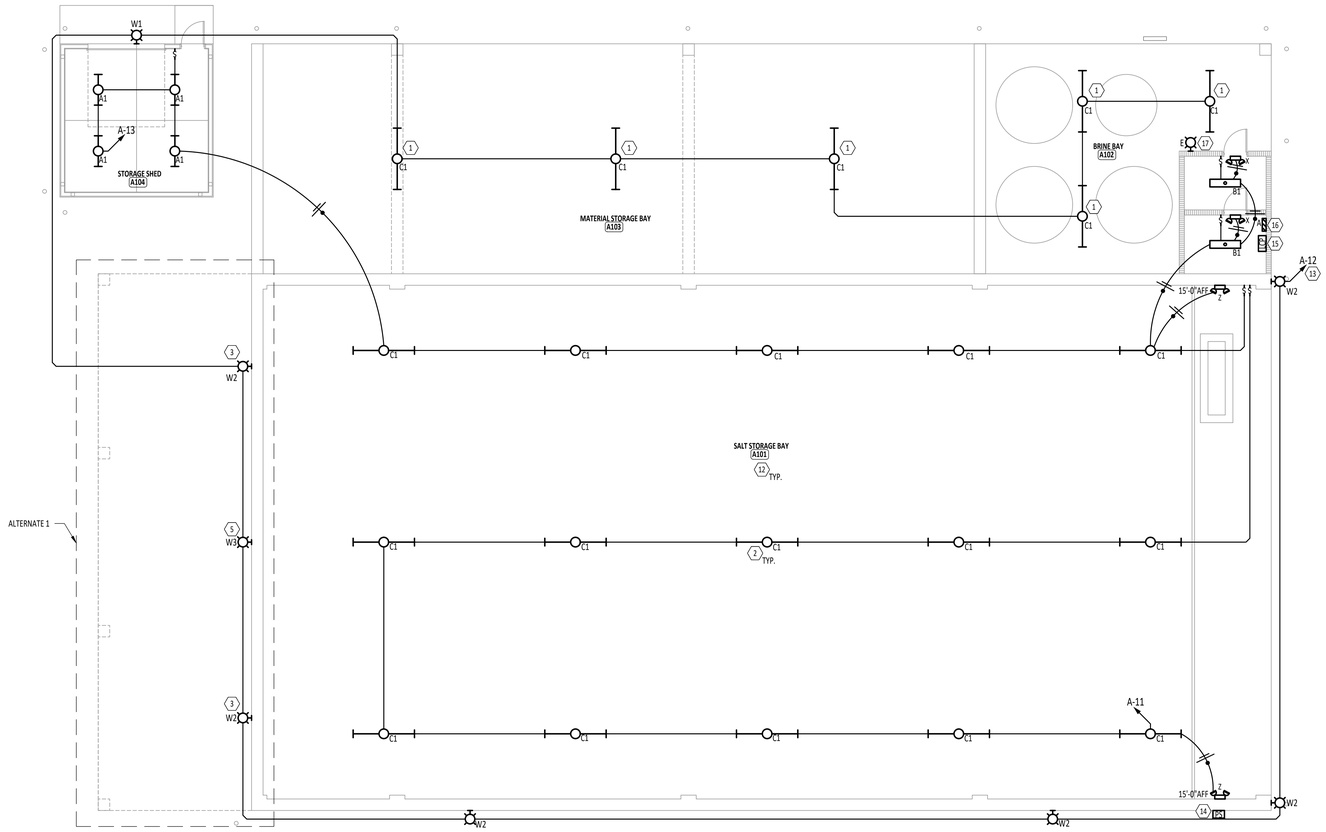
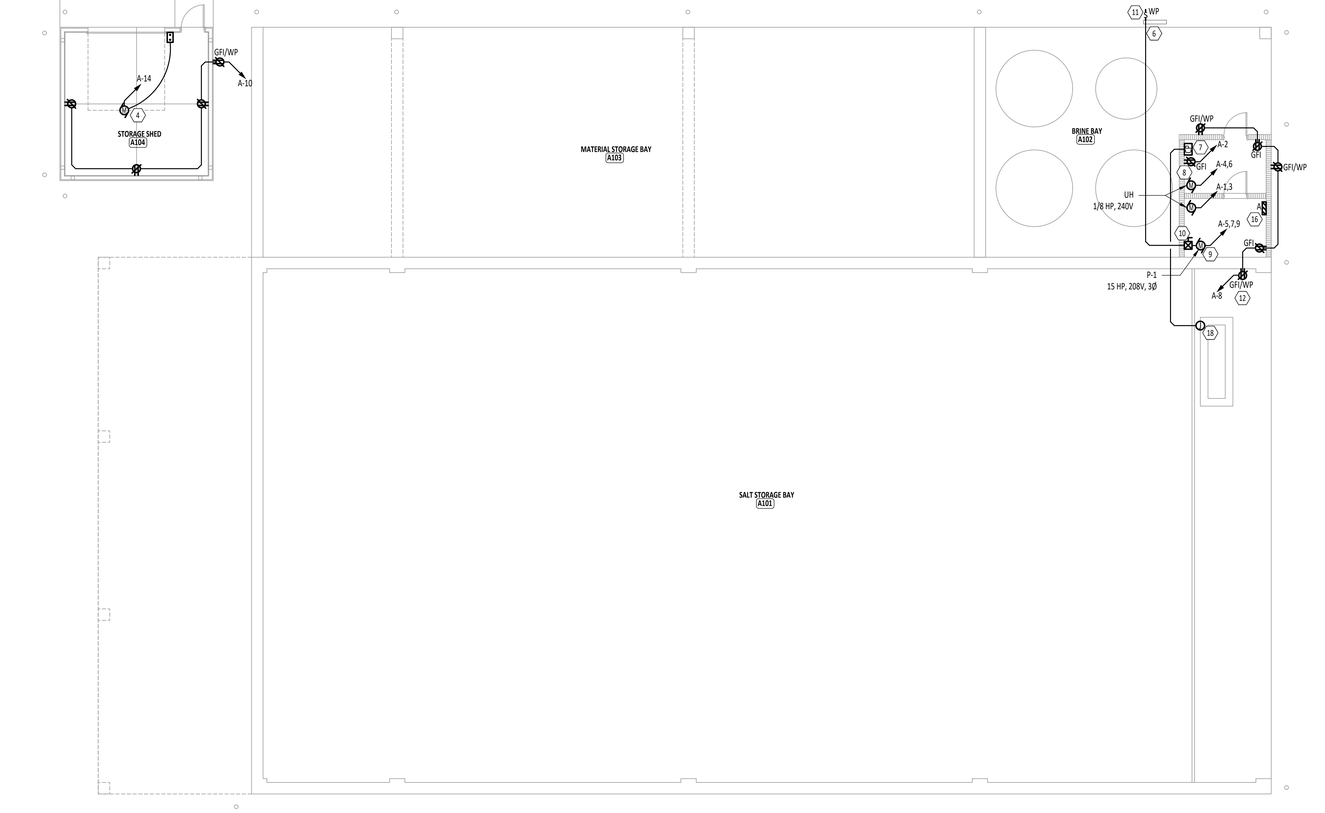


1 E3.1 LIGHTING PLAN
1/8" = 1'-0"



2 E3.1 POWER PLAN
1/8" = 1'-0"

ROOM INDEX

ROOM NUMBER	ROOM NAME
A101	SALT STORAGE BAY
A102	BRINE BAY
A103	MATERIAL STORAGE BAY
A104	STORAGE SHED (ALTERNATE 1)

KEYNOTE SCHEDULE

#	KEYNOTE DESCRIPTION
1	FIXTURE TO BE SURFACE MOUNTED UNDER CANOPY STRUCTURE.
2	FIXTURES TO BE SURFACE MOUNTED UNDER THE STRUCTURE.
3	FIXTURE INCLUDED UNDER ALTERNATE 1.
4	PROVIDE NECESSARY POWER CONNECTIONS TO MOTORIZED DOOR OPERATOR. PROVIDE POWER AND CONTROL RACEWAY AND ROUGH-IN AS REQUIRED. COORDINATE WORK WITH G.C. AND OVERHEAD DOOR INSTALLER.
5	FIXTURE INCLUDED UNDER BASE BID.
6	RELOCATED TRUCK CONNECTION MANIFOLD BY M.C.
7	RELOCATED BRINE SYSTEM CONTROL PANEL AND ASSOCIATED EQUIPMENT. COORDINATE LOCATION, MOUNTING HEIGHT, AND CONTROLLER SET UP WITH PENGWYN.
8	RECEPTACLE TO POWER BRINE SYSTEM CONTROL PANEL.
9	RELOCATED BRINE PUMP.
10	RELOCATED STARTER.
11	WEATHER PROOF SWITCH TO TURN ON/OFF TANK HOSES AT SWITCH STATION. CONFIRM WIRING WITH OWNER.
12	CONDUIT INSIDE THE SALT BARN SHALL BE SCHEDULE 80 PVC.
13	LIGHTING CONTROLLED BY PHOTO SENSOR. REFER TO DETAIL 4/E1.1.
14	PHOTO SENSOR FOR EXTERIOR LIGHTING.
15	LIGHTING CONTROL PANEL. REFER TO DETAIL 4/E1.1.
16	RELOCATED PANEL A.
17	RELOCATED WARNING LIGHT. COORDINATE LOCATION AND WIRING WITH THE OWNER.
18	RELOCATED JUNCTION BOX WITH HOPPER. COORDINATE LOCATION AND WIRING WITH THE OWNER.

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