Development Services

From Concept to Construction

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More Contact Info (http://www.portlandoregon.gov//bds/article/519984)

APPEAL SUMMARY

Status: Decision Rendered - Held over from ID 27898 (7/27/22) for additional information

Appeal ID: 27926	**Project Address:** 12005 N Burgard Rd
Hearing Date: 8/3/22	**Appellant Name:** Joshua W Christiansen
Case No.: B-009	**Appellant Phone:** 5036438595
Appeal Type: Building	**Plans Examiner/Inspector:** Steven Mortensen
Project Type: commercial	**Stories:** 1 **Occupancy:** F-1 **Construction Type:** II-B
Building/Business Name: Shredder Enclosure	**Fire Sprinklers:** No
Appeal Involves: Reconsideration of appeal	**LUR or Permit Application No.:** 22-104962-CO
Plan Submitted Option: pdf [File 1] [File 2]	**Proposed use:** Enclosure of Existing Equipment

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	OSSC Table 2902.1
Requires	Plumbing fixtures shall be provided in the minimum number as shown in Table 2902.1 based on the actual use of the building or space.
Code Modification or Alternate Requested	Requesting an exemption to not provide a bathroom for this equipment enclosure.
Proposed Design	We propose no additional bathrooms.
Reason for alternative	It is currently unsafe to be near the shredder during operation. No occupants are allowed in the shredder enclosure during operation of the shredder. This is a 7,000 horsepower shredder that shreds existing cars, trucks, refrigerators, etc. From time to time pieces of shredded metal can exit the shredder during operation. Operation of the shredder can last for the entirety of a work shift. The shredder is an existing piece of equipment. No additional jobs or work are being created or modified by the addition of the shredder enclosure. The only reason for the addition of the enclosure is to capture air emissions from the shredder. Also note that the shredder enclosure is not described in table 2902.1. 2902.1 states that uses not specifically listed shall be considered by the building official and shall reflect the use of the space being served by the fixtures. The use of this structure is as an emission capture enclosure over an existing piece of equipment. Reconsideration Text I have added attachment 19029F-G08.pdf showing the distances to bathrooms in the vicinity of the new enclosure. The proposed bathroom for the new 3DS building (Permit #21-081428-CO) is within 300' of the new enclosure.

APPEAL DECISION

Omission of plumbing fixtures in proposed equipment enclosure: Granted as proposed.

The Administrative Appeal Board finds that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

Schnitzer

PROJECT:

SHREDDER ENCLOSURE AND AIR CONTROL

PORTLAND, OREGON

STRUCTURAL ENGINEER:

SMG ENGINEERS INC.
8625 SW CASCADE AVENUE, SUITE 600
BEAVERTON, OR 97008
PHONE: (503) 643-8595

ELECTRICAL ENGINEER

DAMATT ENGINEERING INC.
2420 CAMINO RAMON, SUITE 320
SAN RAMON, CA 94583
PHONE: (510) 891-0970

OWNER:

SCHNITZER STEEL INDUSTRIES, INC.
299 SW CLAY ST. SUITE 350
PORTLAND, OREGON, 97201
PHONE: (253) 993-9659

DRAWING LIST	
DRAWING NUMBER	DESCRIPTION
19-029F- G01	COVER SHEET, PROJECT LOCATION, DRAWING LIST
19-029F- G02	GENERAL NOTES
19-029F- G03	GENERAL NOTES
19-029F- G04	PROJECT FLOW CHART
19-029F- G05	EXIT PLAN
19-029F- G06	DEMO PLAN - PLAN VIEW
19-029F- G07	DEMO PLAN - ELEVATIONS
19-029F- C01	SITE PLAN
19-029F- C02	EXISTING FACILITIES
19-029F- C03	MODIFICATION TO FACILITIES
19-029F- C04	NEW GAS LINE METER LOCATION
19-029F- C05	STORMWATER BASINS
19-029F- C06	CONTOUR LINES
19-029F- C07	CUT/FILL CONTOUR PLAN
19-029F- C08	ERSC PLAN
19-029F- C09	LAYDOWN YARDAGE
19-029F- S01	GENERAL ARRANGEMENT - PLAN VIEW
19-029F- S02	GENERAL ARRANGEMENT - WEST ELEVATIONS
19-029F- S03	GENERAL ARRANGEMENT - EAST ELEVATIONS
19-029F- S04	GENERAL ARRANGEMENT - NORTH & SOUTH ELEVATIONS
19-029F- S05	FOUNDATION LAYOUT - PLAN VIEW
19-029F- S06	FOUNDATION DETAILS - SHREDDER ENCLOSURE
19-029F- S07	FOUNDATION DETAILS - DROPOUT BOX/VENTURI SCRUBBER & TANK
19-029F- S08	FOUNDATION DETAILS - RTO STRUCTURE AND PDC BUILDING
19-029F- S09	FOUNDATION DETAILS - AGS STRUCTURE AND COMPRESSOR BUILDING
19-029F- S10	SHREDDER ENCLOSURE - PLAN VIEW
19-029F- S11	SHREDDER ENCLOSURE - ELEVATIONS
19-029F- S12	SHREDDER ENCLOSURE - ELEVATIONS
19-029F- S13	SHREDDER ENCLOSURE - STRUCTURAL PLAN
19-029F- S14	SHREDDER ENCLOSURE - STRUCTURAL ELEVATIONS
19-029F- S15	SHREDDER ENCLOSURE - STRUCTURAL ELEVATIONS
19-029F- S16	SHREDDER ENCLOSURE - STRUCTURAL ELEVATIONS
19-029F- S17	REMOVABLE PANEL DETAILS
19-029F- S18	REMOVABLE PANEL DETAILS
19-029F- S19	REMOVABLE PANEL DETAILS

DRAWING LIST	
DRAWING NUMBER	DESCRIPTION
19-029F- S20	DUCT RUN - SHREDDER TO DROPOUT BOX
19-029F- S21	DUCT SUPPORT DETAIL
19-029F- S22	DROPOUT BOX STRUCTURE - PLAN AND ELEVATIONS
19-029F- S23	DROPOUT BOX STRUCTURE - DETAILS
19-029F- S24	DROPOUT BOX - DETAILS
19-029F- S25	DROPOUT BOX - DETAILS
19-029F- S26	DROPOUT BOX - DETAILS
19-029F- S27	DROPOUT BOX - DETAILS
19-029F- S28	DROPOUT BOX - DETAILS
19-029F- S29	DUCT RUN - DROPOUT BOX TO VENTURI SCRUBBERS
19-029F- S30	VENTURI SCRUBBER - PLAN AND ELEVATIONS
19-029F- S31	VENTURI SCRUBBER - ELEVATIONS
19-029F- S32	VENTURI SCRUBBER - ELEVATIONS
19-029F- S33	VENTURI SCRUBBER - DETAILS
19-029F- S34	VENTURI SCRUBBER - DETAILS
19-029F- S35	DUCT RUN - VENTURI SCRUBBERS TO RTO
19-029F- S40	RTO STRUCTURE - PLAN AND ELEVATIONS
19-029F- S41	RTO STRUCTURE - ELEVATIONS
19-029F- S42	THERMAL DUCT SUPPORT FRAME #1 - DETAILS
19-029F- S43	THERMAL DUCT SUPPORT FRAME #2 - DETAILS
19-029F- S44	AGS STRUCTURE - PLAN AND ELEVATIONS
19-029F- S45	AGS STRUCTURE - PLAN AND ELEVATIONS
19-029F- S46	AGS STRUCTURE - PLAN AND ELEVATIONS
19-029F- S47	COMPRESSOR ROOM STRUCTURE - PLAN AND ELEVATIONS
19-029F- S50	PUSH WALL

DRAWING LIST (CONT.)	
DRAWING NUMBER	DESCRIPTION
19-029F- S60	STANDARD GUARDRAIL DETAILS
19-029F- S61	STANDARD LADDER DETAILS
19-029F- S62	STANDARD STAIR DETAILS
19-029F- S63	STANDARD GRATING DETAILS
19-029F- S64	STANDARD BOLTED CONNECTION DETAILS
19-029F- S65	STANDARD BOLTED CONNECTION DETAILS
19-029F- S66	STANDARD BOLTED CONNECTION DETAILS
19-029F- S69	STANDARD BASE PLATE DETAILS
19-029F- S70	SHREDDER CONNECTION DETAILS
19-029F- S71	SHREDDER CONNECTION DETAILS
19-029F- S72	SHREDDER CONNECTION DETAILS
19-029F- S80	DUCT DETAILS
19-029F- S81	DUCT DETAILS
19-029F- S82	DUCT DETAILS
19-029F- S83	DUCT DETAILS
19-029F- S84	DUCT DETAILS
19-029F- S85	DUCT DETAILS
19-029F- S90	CRANE ACCESS LAYOUT
19-029F- S91	SHREDDER ENCLOSURE MAT LAYOUT
19-029F- S92	SHREDDER ENCLOSURE MAT LAYOUT
19-029F- S93	SHREDDER ENCLOSURE MAT LAYOUT
19-029F- S94	SHREDDER ENCLOSURE MAT LAYOUT

PROJECT INFORMATION:

1. PROPERTY ADDRESS:
   12005 N BURGUARD RD
   PORTLAND, OR 97203
2. TAX ROLL:
   SECTION 35 2N 1W, TL 500 67.77 ACRES UPLAND 7.43 ACRES LOWLAND, LAND & IMPS SEE R646262 (R971350713) FOR MACH & EQUIP
3. ZONE:
   HEAVY INDUSTRIAL

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON JOSHUA WILHELM CHRISTIANSON 2.11.22
EXPIRES: 12.31.23

Smith Monroe Gray
ENGINEERS, INC.

8625 SW Cascade Ave.
Suite 600
Beaverton, Oregon 97008

Phone: 503.643.8595
Fax: 503.643.8610

www.smgengr.com

SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
COVER SHEET, PROJECT LOCATION, DRAWING LIST

DRAWN BY	DATE	CHK'D BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	6/18/21			AS NOTED	19-029F-G00	0

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:			
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	—	X	AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	—	X	—
2. INSPECTION OF HIGH-STRENGTH BOLTING:			
A. SNUG-TIGHT JOINTS	—	X	AISC 360, SECTION M2.5
B. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION	—	X	
C. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION	X	—	
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:			
A. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360	—	X	AISC 360, SECTION M5.5
B. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	—	X	APPLICABLE ASTM MATERIAL STANDARDS
C. MANUFACTURER'S CERTIFIED TEST REPORTS	—	X	
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:			
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	—	X	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQURIED	—	X	—
5. INSPECTION OF WELDING:			
A. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:			
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	X	—	AWS D1.1
2) MULTIPASS FILLET WELDS	X	—	
3) SINGLE-PASS FILLET WELDS > 5/16"	X	—	
4) PLUG AND SLOT WELDS	X	—	
5) SINGLE-PASS FILLET WELDS < OR = 5/16"	—	X	
6) FLOOR AND ROOF DECK WELDS	—	X	AWS D1.3
B. REINFORCING STEEL:			
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706	—	X	AWS D1.4 ACI 318: SECTION 3.5.2
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFOCEMENT	X	—	
3) SHEAR REINFORCEMENT	X	—	
4) OTHER REINFORCING STEEL	—	X	
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:			
A. DETAILS SUCH AS BRACING AND STIFFENING	—	X	—
B. MEMBER LOCATIONS	—	X	
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION	—	X	

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	—	X	ACI 318: 3.5, 7.1-7.7
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B	—	—	AWS D1.4 ACI 318: 3.5.2
3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED	X	—	ACI 318: 8.1.3, 21.2.8
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	—	X	ACI 318: 3.8.6, 8.1.3, 21.2.8
5. VERIFYING USE OF REQUIRED DESIGN MIX	—	X	ACI 318: CH. 4, 5.2-5.4
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	—	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	—	ACI 318: 5.9, 5.10
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	—	X	ACI 318: 5.11-5.13
9. INSPECTION OF PRESTRESSED CONCRETE: A. APPLICATION OF PRESTRESSING FORCES B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM	X X	—	ACI 318: 18.20 ACI 318: 18.18.4
10. ERECTION OF PRECAST CONCRETE MEMBERS	—	X	ACI 318: CH. 16
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	—	X	ACI 318: 6.2
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	—	X	ACI 318: 6.1.1

REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	—	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	—	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	—	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	—
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	—	X

GENERAL NOTES AND SPECIFICATIONS

PROJECT SCOPE:

SCHNITZER STEEL INDUSTRIES INTENDS TO CONSTRUCT A NEW SHREDDER ENCLOSURE AND CORRESPONDING EMISSIONS CONTROL SYSTEM. THE EMISSION CONTROL SYSTEM INCLUDES PARTICLE TREATMENT AND VOC TREATMENT. THE MAIN SYSTEM INCLUDES THE ADDITION OF A DROP OUT BOX, (2) ABORT GATES (2) VENTURI SCRUBBERS, (2) FANS, (2) REGENERATIVE THERMAL OXIDIZERS AND (2) ACID-GAS SCRUBBERS. SMG SCOPE OF WORK INCLUDES STRUCTURAL SUPPORTS, ACCESS AND FOUNDATIONS FOR THE NEW EQUIPMENT.

GEOTECHNICAL:

1. REFER TO THE GEOTECHNICAL REPORT BY GRI.
2. FOR DEMOLITION, EXCAVATION AND SUBGRADE PREPARATION REQUIREMENTS SEE GEOTECHNICAL REPORT.
3. THE DESIGN SAFE BEARING CAPACITY IS ASSUMED TO BE 2,000 PSF WITH SITE CLASS F.

REINFORCED CONCRETE:

1. ALL CAST-IN-PLACE CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRESS OF 4000 PSI AT 28 DAYS. MAXIMUM SLUMP SHALL BE 4 INCHES – UNLESS NOTED OTHERWISE ON THE CONCRETE DRAWINGS.
2. CONCRETE SHALL USE TYPE II CEMENT AND MIX DESIGNED WITH A MAXIMUM WATER TO CEMENT RATIO OF 0.45.
3. READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED TO THE JOB SITE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN "SPECIFICATIONS FOR READY-MIXED CONCRETE" (ASTM C94).
4. ALL CONCRETE SHALL BE CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT, EMBEDDED FIXTURES AND INTO CORNERS OF FORMS.
5. ALL FORMS TO BE CLEAN, WITH NO WATER OR LOOSE MATERIAL PRESENT.
6. DURING HOT WEATHER, PROPER ATTENTION SHALL BE GIVEN TO INGREDIENTS, PRODUCTION METHODS, HANDLING, PLACING, PROTECTION, AND CURING TO PREVENT EXCESSIVE CONCRETE TEMPERATURES OR WATER EVAPORATION THAT MAY IMPAIR REQUIRED STRENGTH OR SERVICEABILITY OF THE MEMBER OR STRUCTURE. REFER TO ACI 305.
7. NO CONCRETE ADMIXTURES SHALL BE USED WITHOUT PRIOR APPROVAL OF THE ENGINEER OR AS SPECIFIED IN THESE SPECIFICATIONS.
8. ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER UNLESS NOTED OTHERWISE.
9. REINFORCING STEEL AND CONCRETE CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND ACI 315.
10. ALL PROPOSED COLD JOINTS TO BE REVIEWED BY THE ENGINEER. ALL COLD JOINTS TO BE ROUGHENED AND CLEANED.
11. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, FOR DEFORMED BARS.
12. BARS IN SLABS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, METAL OR PLASTIC CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315. LAP ALL REINFORCING BARS PER THE TYPICAL LAP SPLICE LENGTH SCHEDULE, EXCEPT AS NOTED.
13. SPLICE LENGTHS SHALL BE AS SHOWN IN THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

BAR SIZE	SPLICE LENGTH	BAR SIZE	SPLICE LENGTH
#4	25 IN.	#10	78 IN.
#5	31 IN.	#11	86 IN.
#6	37 IN.		
#7	54 IN.		
#8	61 IN.		

14. BACKFILL MATERIAL SHALL BE AS RECOMMENDED IN BACKFILL NOTES.
15. ALL BLOCKOUTS, SLEEVES, OPENINGS, CONDUIT AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE POURING. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER. VERIFY ALL BLOCKOUTS WITH MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.
16. CONCRETE COVER REINFORCING STEEL AND OTHER EMBEDDED STEEL SHALL BE AS SHOWN ON DRAWING. IF NOT SHOWN, USE COVERS AS SPECIFIED IN ACI 318, AS NOTED BELOW:

    CONCRETE CAST AGAINST EARTH----------3 INCHES
    CONCRETE EXPOSED TO EARTH OR WEATHER:
    #5 BAR AND SMALLER----------1 1/2 INCHES
    #6 BAR AND LARGER----------2 INCHES

    CONCRETE NOT EXPOSED TO EARTH NOR WEATHER:
    SLABS, WALLS, JOINTS----------3/4 INCH
    BEAMS, COLUMNS----------1 1/2 INCHES

17. ELECTRICAL GROUNDING ELEMENTS SHALL BE IN PLACE PRIOR TO POURING CONCRETE.

GROUTING:

1. ALL BASE PLATES AND GROUT-POCKETS FOR SHEAR KEYS, SHALL BE GROUTED IN ACCORDANCE WITH AISC 303-05.
2. GROUT SHALL BE PRE-APPROVED BY THE ENGINEER AND SHALL BE HIGH STRENGTH, NON-SHRINK, NON-METALLIC, CEMENTITIOUS OR EPOXY-TYPE – UNLESS NOTED OTHERWISE ON THE DRAWINGS.
3. GROUT SHALL BE INSTALLED – AND ALL CONTACT SURFACES SHALL BE CLEANED AND PREPARED BEFOREHAND – IN ACCORDANCE WITH THE GROUT-SUPPLIER'S SPECIFICATIONS.

STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL CONFORM TO:

ASTM A992	WIDE FLANGE AND TEES
ASTM A36	CHANNELS, PLATES AND ANGLES, EXCEPT AS NOTED.
ASTM A500, GRADE B	HOLLOW STRUCTURAL SECTIONS (TUBES)
ASTM A53, GRADE B	PIPES
ASTM A572 GR 50	PLATES WHERE NOTED IN DRAWINGS

1. DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH AISC 360-05 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" WITH "COMMENTARY" AND THE "CODE OF STANDARD PRACTICE", WITH EXCEPTIONS NOTED IN SPECIFICATIONS.
2. BOLTS IN PRIMARY STRUCTURAL CONNECTIONS SHALL CONFORM TO ASTM A325.
3. STANDARD STRUCTURAL WASHERS SHALL CONFORM TO ASTM F436.
4. ANCHOR RODS SHALL CONFORM TO ASTM F1554 GR 36 UNO ON THE CONCRETE DRAWINGS.
5. POST INSTALLED ANCHORS SHALL BE AS SHOWN ON THE DESIGN DRAWINGS BACKED BY REQUIRED ICC TEST REPORTS.
6. WELDING SHALL CONFORM TO AWS D1.1 CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 AND APPROVED BY THE ENGINEER. THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER.
7. ALL CONNECTIONS, UNLESS NOTED OTHERWISE, SHALL BE FULLY WELDED CONNECTIONS. FILLET WELD SIZE TO BE 1/16" LESS THAN THE THINNEST MATERIAL WITH A MINIMUM OF 3/16". BUTT WELDS TO BE COMPLETE JOINT PENETRATION (CJP) BUTT OR BEVEL WELDS IN ACCORDANCE WITH AWS.
8. WELDS SHALL BE MADE USING E70 ELECTRODES. ALL STRUCTURAL WELDING SHALL BE BY AWS CERTIFIED WELDERS.

CONTRACTOR REQUIREMENTS:

1. THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE.
2. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN CALIFORNIA AND SHALL BE SUBMITTED TO THE EOR PRIOR TO CONSTRUCTION.
3. THE GENERAL INSTALLATION CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE SITE. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND BE RESOLVED PRIOR TO PROCEEDING WITH THE WORK.
4. THE CONTRACTOR IS TO PROVIDE BARRICADES, SIGNS, LIGHTS OR OTHER DEVICES AROUND THE WORK SITE AS REQUIRED AND/OR AS DIRECTED BY SAFETY PERSONAL.
5. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT CLEARLY KNOWN; CONTRACTOR TO TAKE CARE WITH EXCAVATIONS AND CONSTRUCTION.
6. ALL MATERIAL AND WORKMANSHIP TO CONFORM TO APPROPRIATE CODES AND STANDARDS.
7. THE CURRENT EDITION OF ALL REFERENCED CODES, STANDARDS AND SPECIFICATIONS SHALL GOVERN.
8. THE CONTRACTOR SHALL COMPLY WITH CALIFORNIA-OSHA GUIDELINES, BE RESPONSIBLE FOR ALL CONSTRUCTION METHODS, TEMPORARY SHORING, BRACING, TECHNIQUES, SEQUENCING AND SAFETY REQUIRED FOR CONSTRUCTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION. THE STRUCTURE SHOWN IN GENERAL ARRANGEMENT DRAWINGS IS STABLE IN THE COMPLETED CONFIGURATION ONLY.

PAINT COATINGS:

1ALL NEW STRUCTURAL STEEL SHALL BE PREPARED AND COATED IN ACCORDANCE WITH THE SSPC AND OWNER'S FINAL APPROVAL OF COLORS AS SPECIFIED. THIRD PARTY PAINT THICKNESS TESTING, MAY BE REQUIRED TO BE DONE PER DISCRETION OF OWNER'S PROJECT REPRESENTATIVE.

GENERAL: ALL NEW STRUCTURAL STEEL SHALL RECEIVE SSPC-SP6 COMMERCIAL SANDBLAST ON ALL EXPOSED SURFACES. MINIMUM ACCEPTABLE SURFACE PREPARATION TO BE:
POWER TOOL CLEANING (SSPC-SP3) WHICH INCLUDES SOLVENT CLEANING (SSPC-SP1).

ALL EXPOSED STEEL SURFACES:
DO NOT PAINT AREAS TO BE FIELD WELDED.
PRIMER: APPLY (1) COAT OF "WASSER MC-ZINC 100" – 4.0MILS [MIN] DRY FILM THICKNESS.
TOP COAT: APPLY (1) COAT OF "WASSER MC-FERROX A" – 4.0MILS [MIN] DRY FILM THICKNESS
COLORS:
– ALL STRUCTURAL AND FABRICATED PLATE COMPONENTS: COLOR TO BE GRAY [TO MATCH EXISTING STEELWORK AND PER OWNER'S PRE-APPROVAL].
– ALL GUARDRAILS, LADDERS, STAIR NOZING AND LIFT LUGS: COLOR TO BE OSHA SAFETY YELLOW

WELD-DISTURBED AREAS: AFTER FIELD WELDING AND FOR FIELD TOUCH-UP OF PAINTED SURFACES:
PREP AFFECTED AREAS WITH SSPC-SP2-3, HAND CLEAN OR POWER TOOL, AND APPLY THE APPLICABLE COATING SYSTEM AS OUTLINED ABOVE.

SUBMITTALS:

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (EOR) AND REVIEWED PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS

1. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE EOR AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE EOR.

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82401 OREGON SEPT. 13, 2019 JOSHUA WILHELM CHRISTMANN 1-7-22
EXPIRES: 12-31-23

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SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
GENERAL NOTES

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	6/18/21			AS NOTED	19-029F-G02	0

1:1 0.5" 1" 1.5" 2"

GENERAL DESIGN CRITERIA

STRUCTURAL DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE 2018 IBC AND 2019 OSSC MODIFICATIONS. IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURAL ELEMENTS, THE FOLLOWING LOADS AND CRITERIA WERE USED:

DESIGN LOADS:

RISK CATEGORY II

DEAD LOAD

ACTUAL WEIGHT OF MATERIALS OF CONSTRUCTION AND PERMANENT EQUIPMENT

LIVE LOAD

ROOF DECK	25 PSF UNIFORM
ACCESS PLATFORM [D.O.B.]	60 PSF UNIFORM 1,000 LB CONCENTRATED
ELEVATED WALKWAY	40 PSF UNIFORM 1,000 LB CONCENTRATED
STAIRS AND LANDINGS	100 PSF UNIFORM 1,000 LB CONCENTRATED
FALL ARREST TIE-OFF POST:	2,250LB

SNOW LOAD

SNOW IMPORTANCE FACTOR,	Is = 1.0
GROUND SNOW LOAD	10 PSF
ROOF SNOW LOAD	25 PSF (INCLUDED 5 PSF RAIN SURCHARGE)

WIND LOAD

BASIC WIND SPEED (3-SECOND GUST),	V=96 MPH
WIND IMPORTANCE FACTOR,	Iw = 1.0
EXPOSURE	C

SEISMIC LOAD

SEISMIC IMPORTANCE FACTOR,	Ie = 1.0
[PER GEOTECHNICAL INVESTIGATION REPORT BY GRI, ISSUED 3/23/2021.]	
SITE CLASS	F
MAPPED SPECTRAL RESPONSE ACCELERATION	
SHORT PERIOD, Ss	0.81g
1 SECOND PERIOD, S1	0.41g
SPECTRAL RESPONSE COEFFICIENTS	
SHORT PERIOD, Sds	0.54
1 SECOND PERIOD, Sd1	1.09
SEISMIC DESIGN CATEGORY	D

SOIL LOAD BEARING

PER GEOTECHNICAL INVESTIGATION REPORT BY GRI, ISSUED 3/23/2021.

ALLOWABLE BEARING PRESSURE	2,000 PSF LONG TERM LOADS 2,666 PSF SHORT TERM LOADS

FLOOD LOAD (FOR EQUIPMENT AND STRUCTURES BELOW EL. 34.5 FT, NAVD88)

	NAVD88	COP
BASE 100 YEAR FLOOD ELEVATION	31.0 FT	28.9 FT
1996 FLOOD INUNDATION ELEVATION	32.5 FT	30.4 FT
FLOOD PROTECTION ELEVATION (2 FT FREEBOARD)	34.5 FT	32.4 FT
BUOYANCY FORCE (DISPLACED VOLUME)	62.4 PCF	
HYDROSTATIC PRESSURE	62.4 PCF	

LOAD COMBINATIONS:

APPLICABLE FACTORS AS LISTED IN ASCE 7-16

EQUIPMENT ENCLOSURES & SUPPORTS: SPECIFIC SEISMIC DESIGN CRITERIA

THE FOLLOWING LATERAL FORCE RESISTING SYSTEMS, RESPONSE MODIFICATION COEFFICIENTS AND LATERAL DESIGN FACTORS ARE APPLICABLE TO THE DESIGN OF EQUIPMENT ENCLOSURES & SUPPORT STRUCTURES, IN ACCORDANCE WITH 2019 OSSC (REF. ASCE7-16 AND SEISMIC DESIGN MANUAL).

SHREDDER ENCLOSURE:

LRFS	OCBF
R	2.5
Cs	0.24

DUCT & WALKWAY SUPPORT BENTS:

LRFS	OCBF [TRUSSED TOWER]
R	3.0
Cs	0.2

DROP OUT BOX [DOB] SUPPORT STRUCTURE:

LRFS	OCBF [TRUSSED TOWER]
R	3.0
Cs	0.24

VENTURI-SCRUBBERS' AND OUTLET DUCT SUPPORT STRUCTURES:

LRFS	OCBF
R	2.5
Cs	0.24

REGENERATIVE THERMAL OXIDIZER [RTO] SUPPORT STRUCTURE:

LRFS	OCBF
R	2.5
Cs	0.24

ACID GAS SCRUBBERS' [AGS] SUPPORT STRUCTURE:

LRFS	OCBF
R	2.5
Cs	0.24

COMPRESSOR ROOM:

LRFS	OCBF[E/W]	OMF [N/S]
R	3.25	2.5
Cs	0.24	0.19

POWER DISTRIBUTION CENTER [PDC] SUPPORT FOOTING:

Rp	6
op	2.5
Cs[EFFECTIVE]	0.31

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82401 OREGON SEPT. 13, 2019 JOSHUA WILHELM CHRISTIANSEN 1-7-22

EXPIRES: 12-31-23

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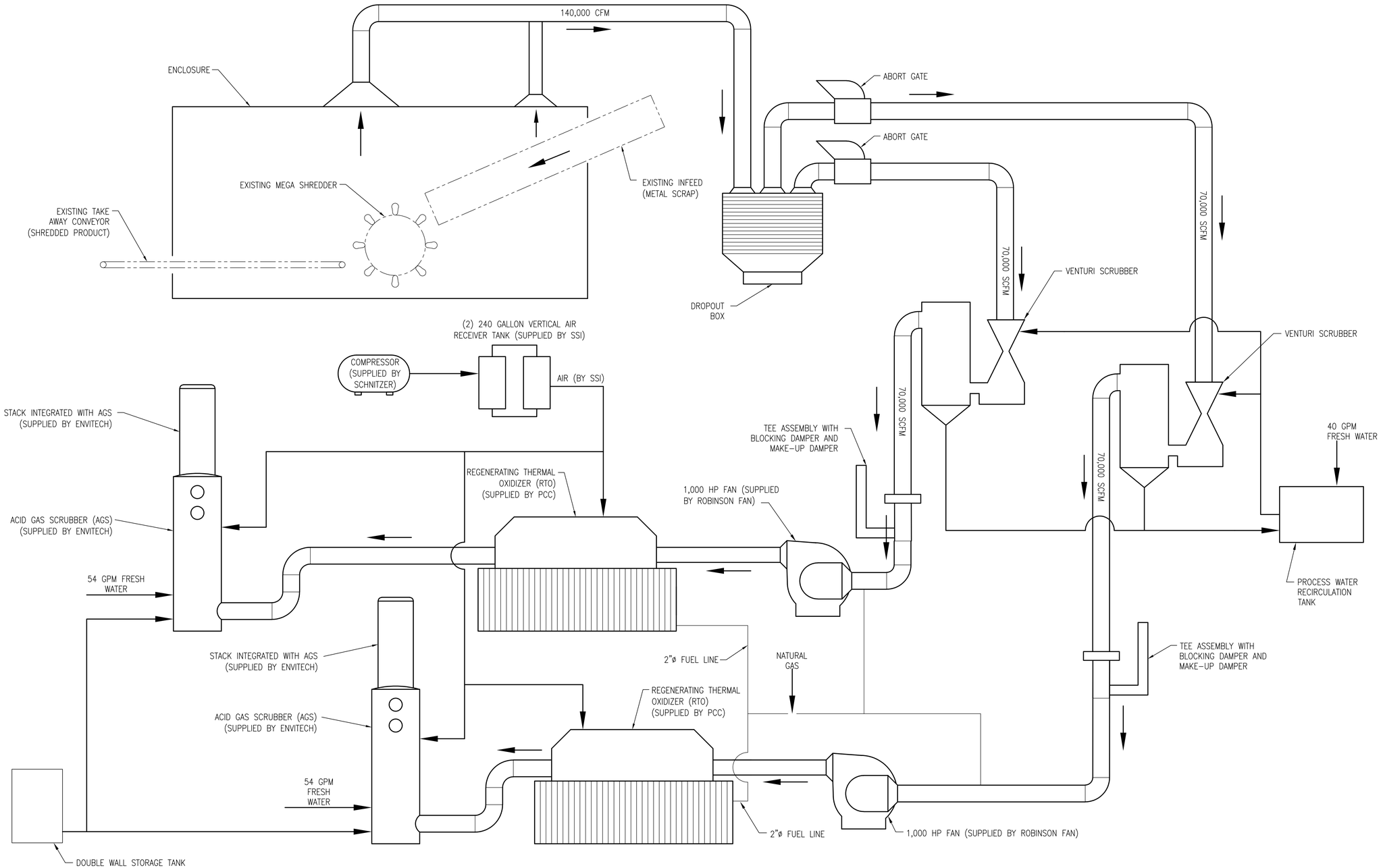
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
GENERAL NOTES

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	6/18/21			AS NOTED	19-029F-G03	0

0.5" 1" 1.5" 2"
1:1



PROCESS FLOW DIAGRAM

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82402 OREGON JOSHUA WILHELM CHRISTIANSEN SEPT. 13, 2019 — 1-7-22
EXPIRES: 12-31-23

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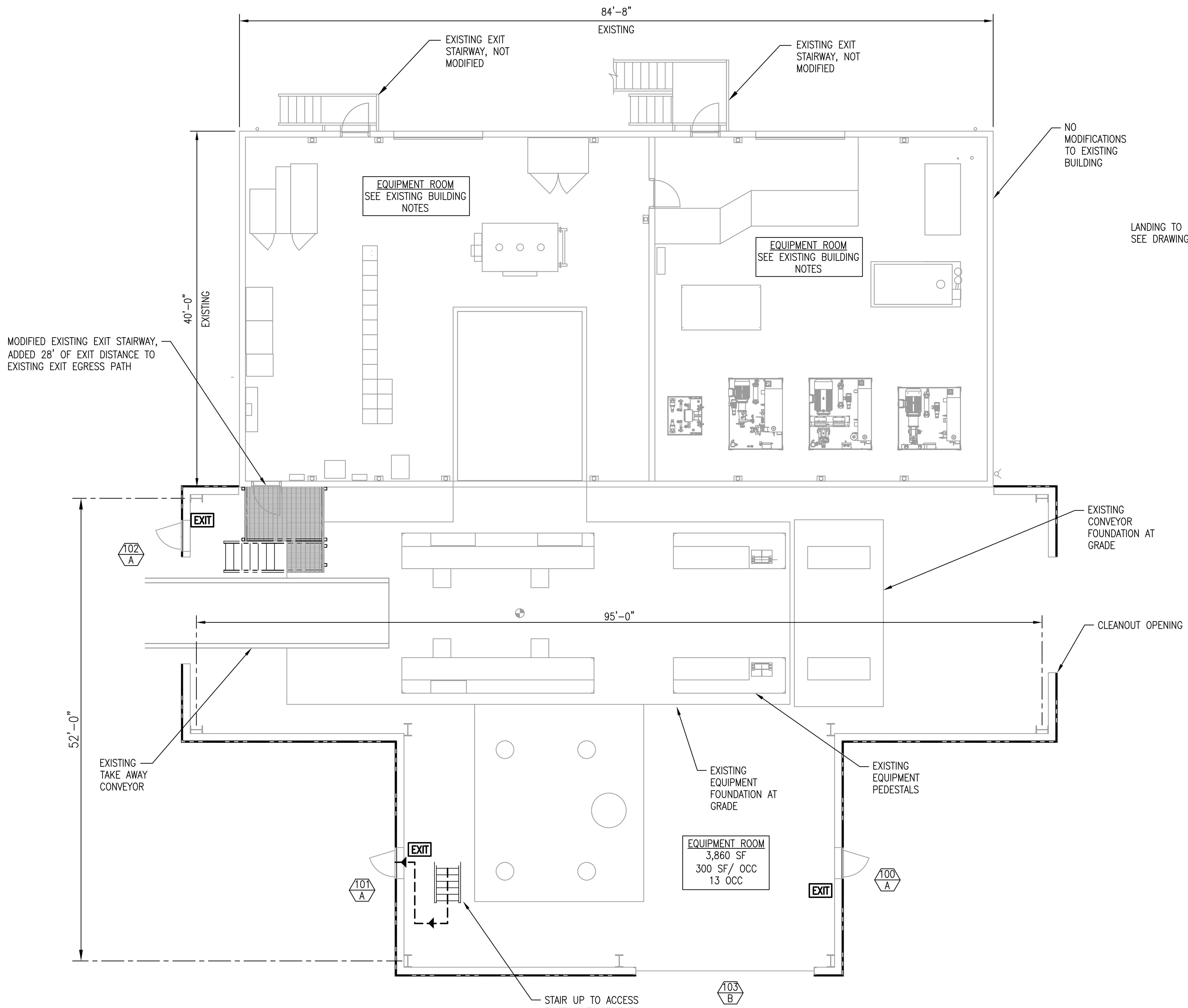
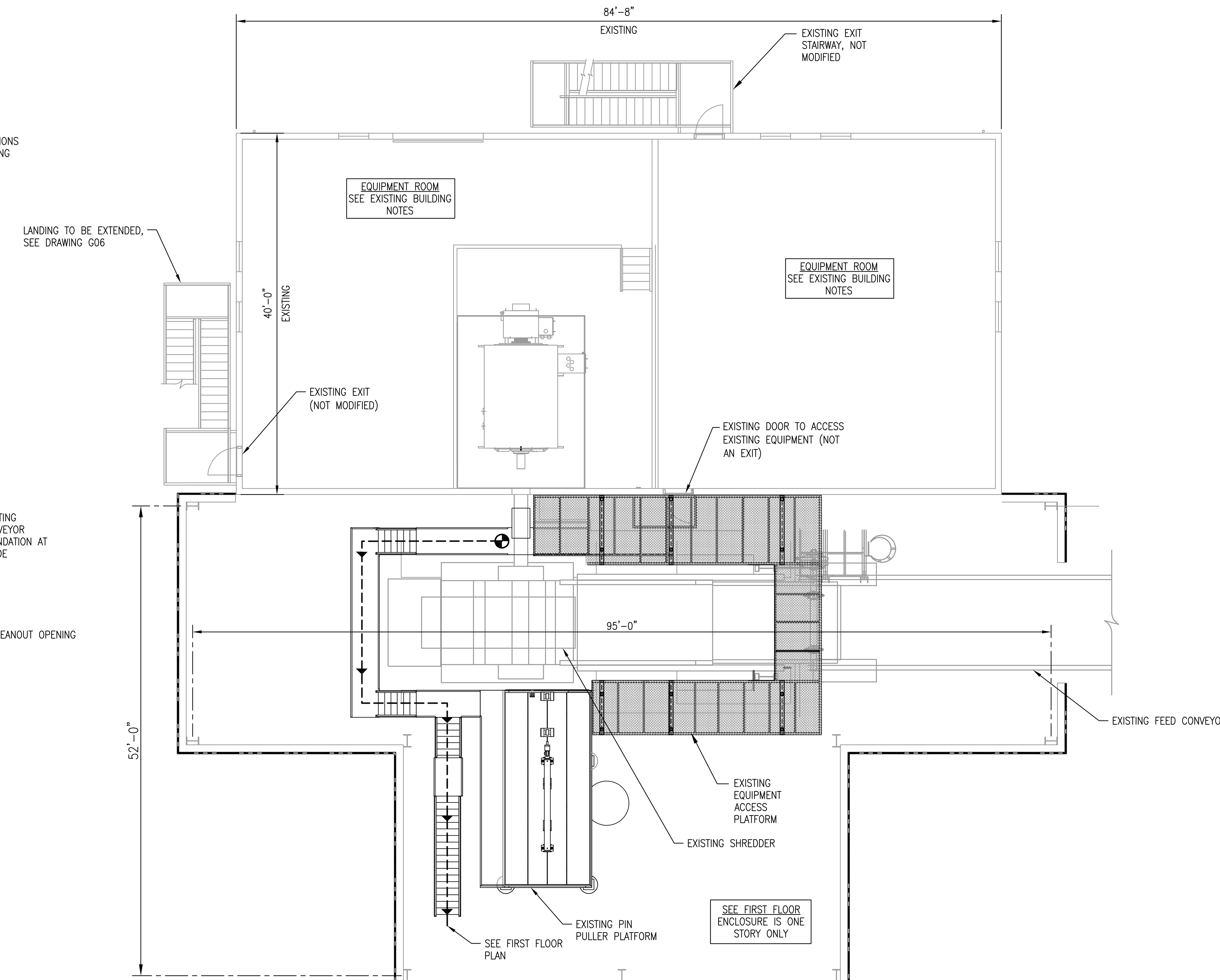
SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
PROCESS FLOW DIAGRAM

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	6/18/21			AS NOTED	19-029F-G04	0



1 G05 PLAN VIEW – FIRST FLOOR
1/8" = 1'-0"



2 G05 PLAN VIEW – SECOND FLOOR
1/8" = 1'-0"

EXISTING BUILDING:

COPIED FROM PREVIOUS DRAWING SET (2006):

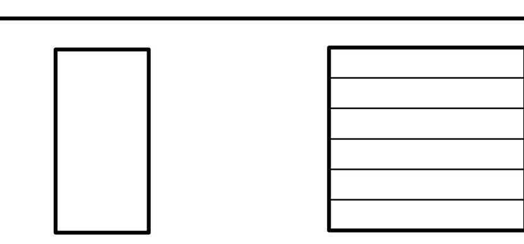
1. OCCUPANCY AND CONSTRUCTION
   - 1.1. OCCUPANCY: GROUP F–2 – INDUSTRIAL
   - 1.2. CONSTRUCTION: TYPE II
2. BUILDING HEIGHT AND AREAS
   - 2.1. SIZE: 40'–0" x 84'–8"
   - 2.2. AREA: 3387 SQ FT PER FLOOR
6774 SQ FT TOTAL < 23000 SQ FT ALLOWABLE
   - 2.3. HEIGHT: 3'–6" TO 1ST FLOOR LEVEL
19'–10" TO 2ND FLOOR LEVEL
36'–0" TO MEAN ROOF LEVEL < 55 FT ALLOWABLE
40'–2" TO TOP OF PARAPET
   - 2.4. NUMBER OF STORIES: TWO < THREE ALLOWABLE
3. FIRE–RESISTANCE–RATED CONSTRUCTION
   - 3.1. DISTANCE BETWEEN BUILDINGS: 54'–6" > 30'–0"
=> NO FIRE–RESISTIVE RATING REQUIRED => NON–RATED => B
   - 3.2. PARAPETS: NOT REQUIRED
PROVIDED THREE SIDES
   - 3.3. AREA OF OPENINGS: UNLIMITED
   - 3.4. OPENING PROTECTION: NOT REQUIRED
=> UNRATED DOORS
4. FIRE PROTECTION
   - 4.1. AUTOMATIC SPRINKLER SYSTEM: NOT REQUIRED
CO2 SYSTEMS PROVIDED FOR EQUIPMENT
   - 4.2. STANDPIPE SYSTEM: NOT REQUIRED OR PROVIDED
   - 4.3. PORTABLE FIRE EXTINGUISHERS: (10) CLASS B/C PROVIDED
   - 4.4. FIRE ALARM SYSTEM: NOT REQUIRED OR PROVIDED
   - 4.5. SMOKE DETECTION SYSTEM: NOT REQUIRED OR PROVIDED
5. BUILDING EGRESS
   - 5.1. OCCUPANT DEMAND: (1) PERSON PER 300 SQ FT
   - 5.2. OCCUPANT LOAD: 3387/300 = 12 PEOPLE PER FLOOR
   - 5.3. 24 PEOPLE TOTAL < 50
   - 5.4. NUMBER OF EXITS: THREE @ 1ST FLOOR > TWO REQUIRED
   - 5.5. TWO @ 2ND FLOOR = TWO REQUIRED
   - 5.6. DISTANCE BETWEEN EXITS: 62 FT > [(40)(40)+(84.67)(84.67)]/2 = 46'–10"
   - 5.7. EGRESS TRAVEL DISTANCE: 65 FT @ 1ST FLOOR < 300 FT ALLOWABLE
105 FT @ 2ND FLOOR < 300 FT ALLOWABLE
   - 5.8. EGRESS WIDTH: 36"
   - 5.9. EXIT SIGNS: PROVIDED – SEE ELECTRICAL

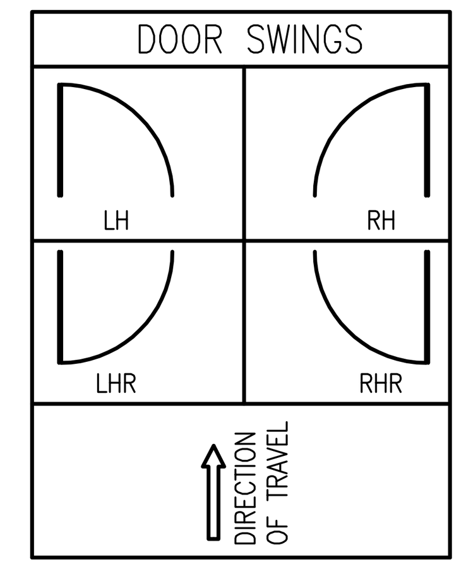
DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	DOOR FRAME MATERIAL	DOOR FRAME FINISH	HARDWARE TYPE	DOOR SWING	COMMENTS
100	3'–0"	7'–0"	A	HM	P	HM	P	1	LH	
101	3'–0"	7'–0"	A	HM	P	HM	P	1	RH	
102	3'–0"	7'–0"	A	HM	P	HM	P	1	RH	
103	20'–0	25'–0"	B	R	–	–	–	–	–	

HM = HOLLOW METAL P = PAINT
R = RUBBER

103 A — DOOR NUMBER / DOOR TYPE





DOOR HARDWARE SCHEDULE:

TYPE 1: (EXTERIOR)
1. (1 1/2) PAIRS BALL BEARING BUTTS (HOT TOLLED PLATE)
2. (1) CLOSER
3. (1) CLASSROOM LOCK
4. (1) SET OF WEATHER STRIPPING

WALL KEY PLAN:

= NEW WALL
= EXISTING WALL

NEW ENCLOSURE NOTES:

1. EQUIPMENT ENCLOSURE IS NOT NORMALLY OCCUPIED. EQUIPMENT ENCLOSURE IS USED FOR MAINTENANCE ACCESS OF EQUIPMENT ONLY WHEN EQUIPMENT IS NOT RUNNING AND IS ENTERED BY TRAINED PERSONNEL ONLY.
2. OCCUPANCY CLASSIFICATION: F–1
3. CONSTRUCTION TYPE: IIB
4. AREA ADDED: 3860 SF
5. TOTAL AREA: 6774 + 3860 = 10,634 SF
6. MAX AREA: 17,500
7. NO SPRINKLERS
8. ACTUAL BUILDING HEIGHT 67 FT (SEE DRAWING S11)
9. ALLOWABLE BUILDING HEIGHT 55 FT – SEE EXEMPTION
   - 9.1. PER OSSC 503.1.1 – SPECIAL INDUSTRIAL OCCUPANCIES, BUILDINGS AND STRUCTURES DESIGNED TO HOUSE SPECIAL INDUSTRIAL PROCESSES THAT REQUIRE... UNUSUAL BUILDING HEIGHT TO ACCOMMODATE... SPECIAL MACHINERY... SHALL BE EXEMPT FROM THE BUILDING HEIGHT SPECIFIED IN 504.
10. NEW BUILDING ADDITION IS 1 STORY
11. MAX ALLOWABLE EXIT ACCESS TRAVEL
DISTANCE = 200'
ACTUAL = 86'
12. NONCONDITIONED SPACE, NO INSOLATION WILL BE PROVIDED.

EXIT = EXIT SIGNAGE

0.5" 1" 1.5" 2"
1:1

SYM.	REVISIONS	BY	DATE	CHK'D
1	UPDATED PER COMMERCIAL COMPLETENESS CHECK	JWC	03/08/22	
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2016 JOSHUA WILHELM CHRISTIANSEN
4-21-22
EXPIRES: 12-31-23

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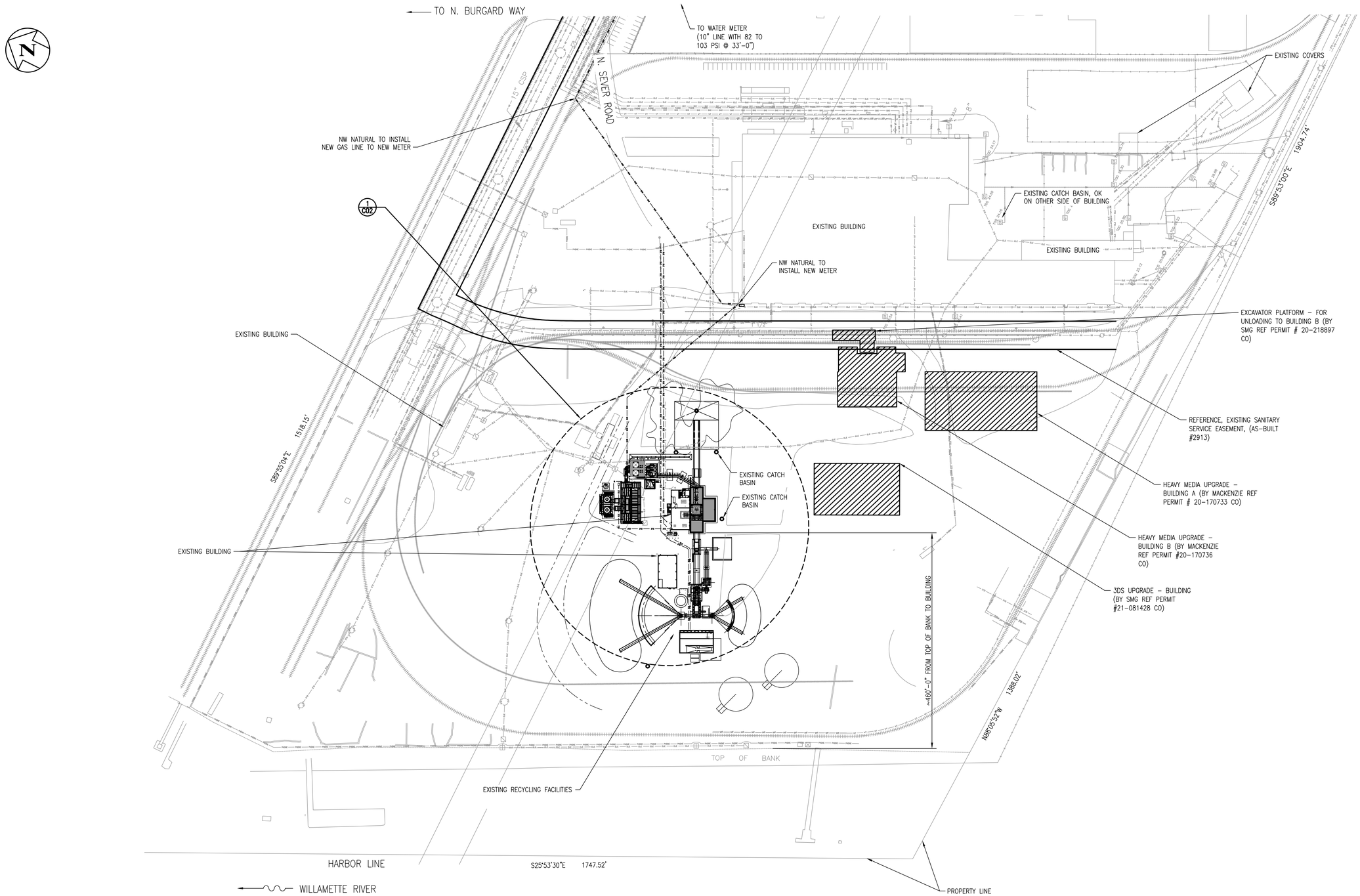
SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL

EGRESS AND CODE SUMMARY

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	12/08/21			AS NOTED	19-029F-G05	1



1 C01 SITE PLAN
1" = 100'-0"

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SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2013 JOSHUA WILHELM CHRISTIANSEN
2-11-22
EXPIRES: 12-31-23

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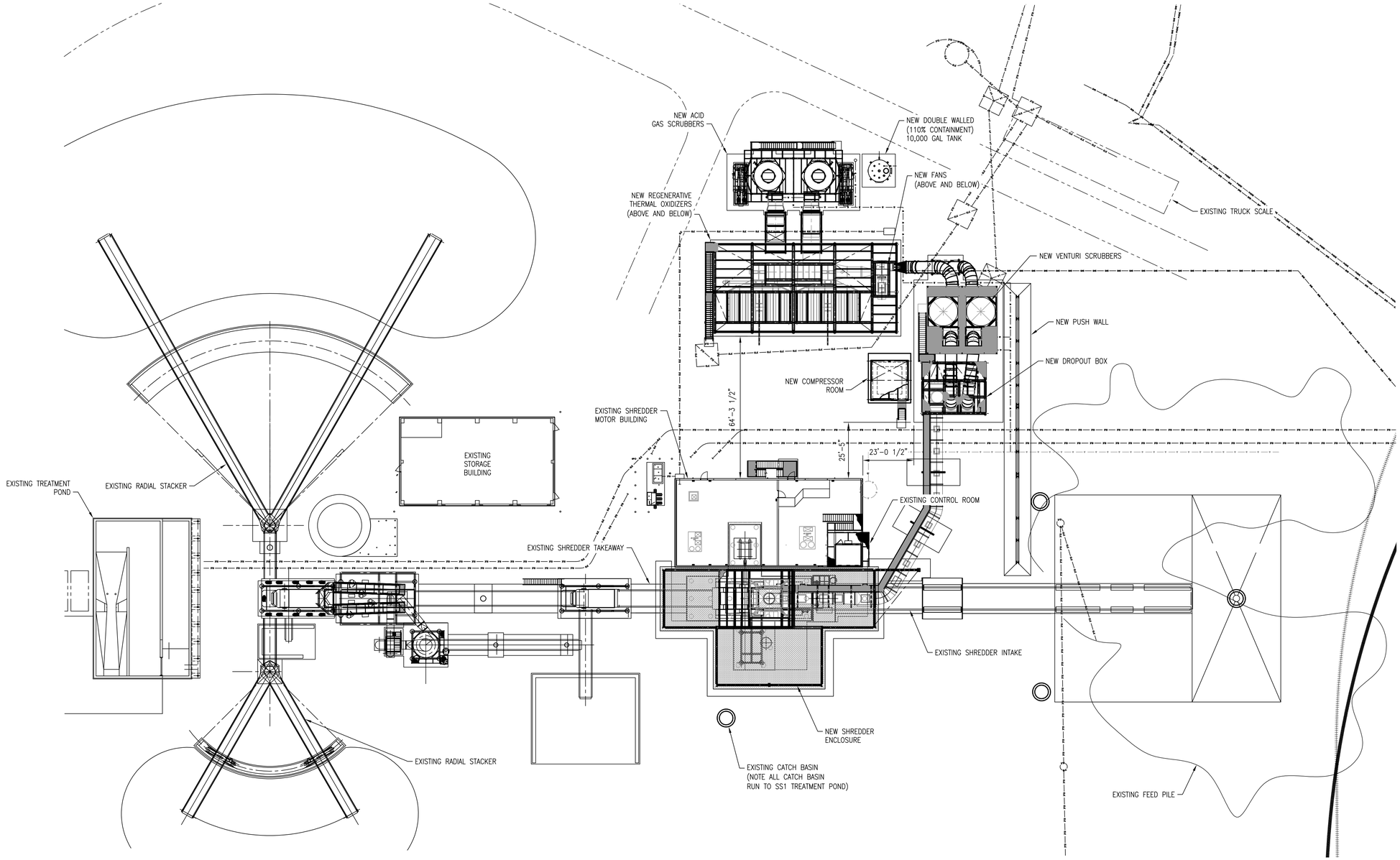
SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
SITE PLAN

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/21/2021			AS NOTED	19-029F-C01	0

1:1 0.5" 1" 1.5" 2"

FILE: Q:\19\19029 SCHNITZER STEEL INDUSTRIES SHREDDER ENCLOSURES AND AIR CONTROL\PHASE F PORTLAND\DWGS\19029F-C01-03.dwg_C01Rev0. PLOT 1=1. 1/14/2022 at 8:48:45 AM. Printed by: jill31



1 C02 PLAN VIEW – LAYOUT
NTS

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	BSS	02/11/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2015 JORDAN WILHELM CHRISTIANSEN 2-11-22
EXPIRES: 12-31-23

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DRAWN BY	DATE	CHK'D BY	DATE
BSS	05/06/2021		

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PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
NEW EQUIPMENT LAYOUT

SCALE	DWG. NO.	REV.
AS NOTED	19-029F-C02	0

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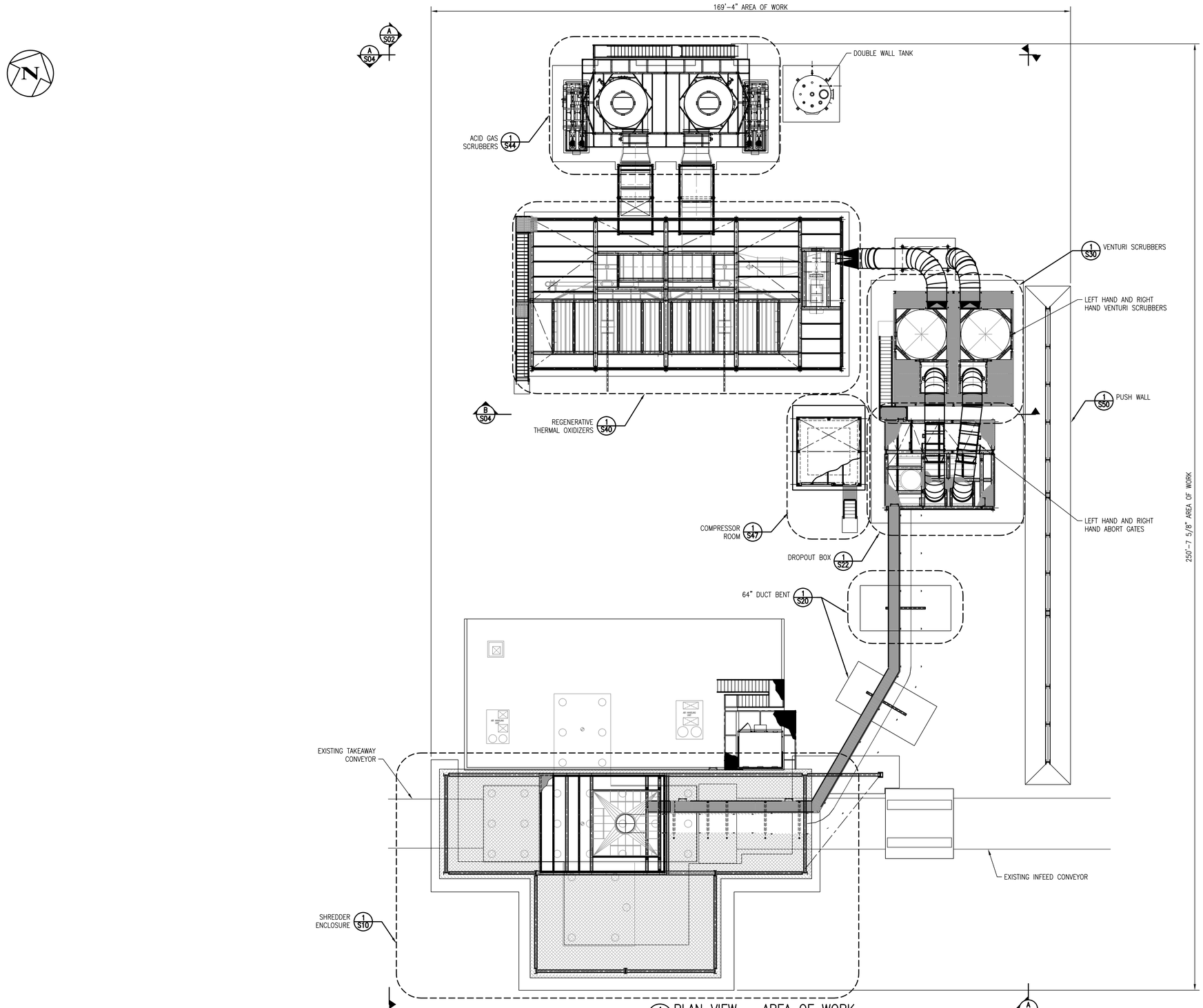

1/S01 PLAN VIEW – AREA OF WORK
NTS

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2015 JOHNNA WILHELM CHRISTIANSEN
2-11-22
EXPIRES: 12-31-23

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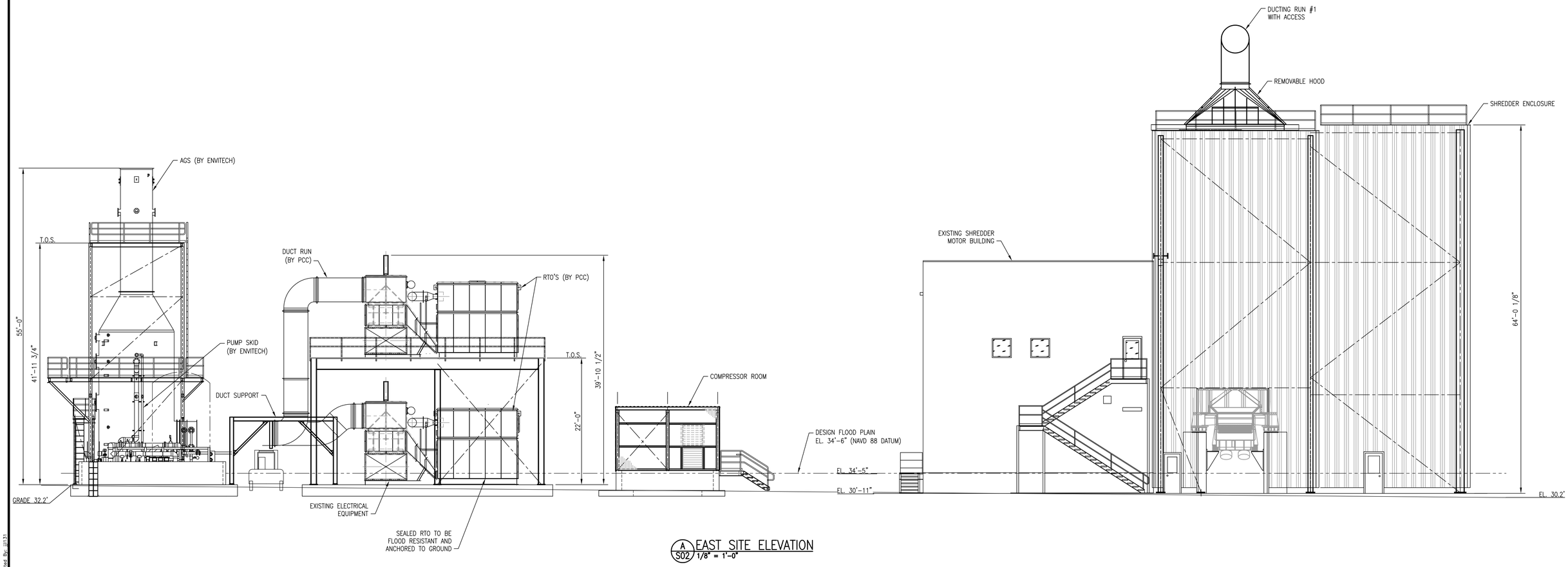
DRAWN BY	DATE	CHKD BY	DATE
J. LUM	07/14/2021		

SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
GENERAL ARRANGEMENT – PLAN VIEW

SCALE	DWG. NO.	REV.
AS NOTED	19-029F-S01	0

FILE: Q:\19\19029 SCHNITZER STEEL INDUSTRIES SHREDDER ENCLOSURES AND AIR CONTROL\PHASE F PORTLAND\DWGS\19029F-S01-04.dwg, S01ReVQ, PLOT 1=1, 1/18/2022 at 6:59:39 AM, Printed by: jjl131



A / S02 EAST SITE ELEVATION
1/8" = 1'-0"

FILE: Q:\19\19029 SCHNITZER STEEL INDUSTRIES SHREDDER ENCLOSURES AND AIR CONTROL\PHASE F PORTLAND\DWGS\19029F-S01-03.dwg, S02RevD. PLOT 1=1, 11/18/21 AT 08:33, Printed By: jjl31

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82402 OREGON SEPT. 13, 2013 JOSHUA WILHELM CHRISTIANSEN
1-7-22
EXPIRES: 12-31-23

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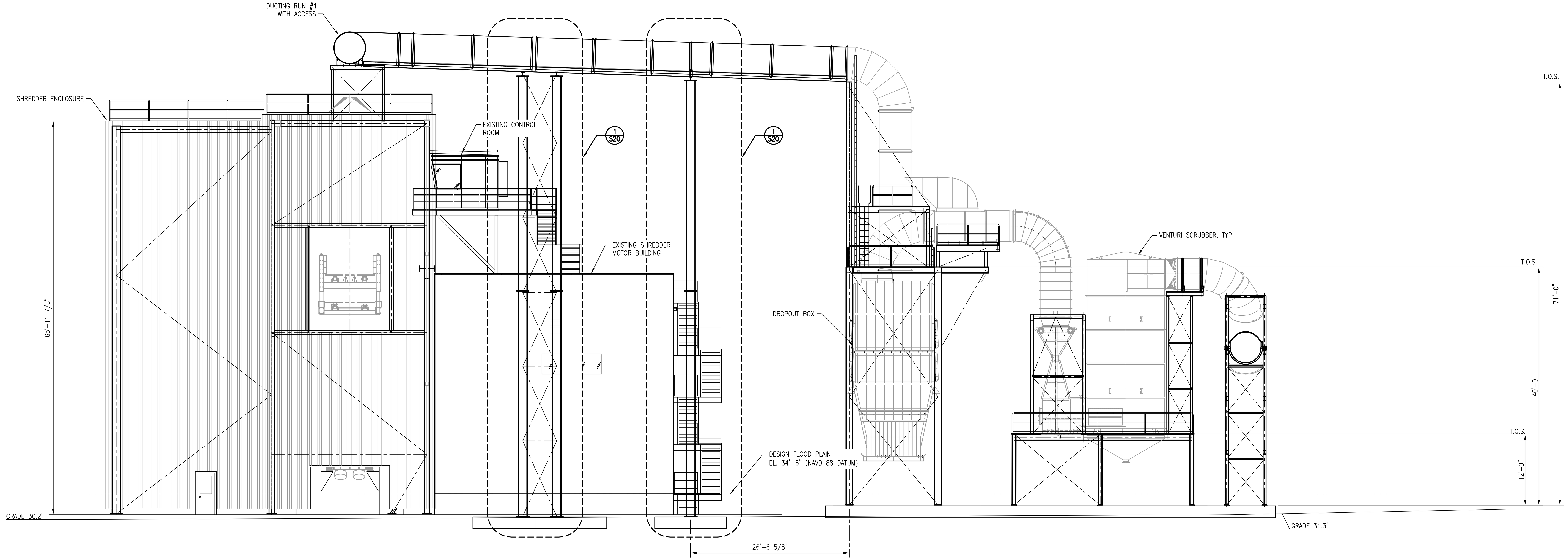
J. LUM	07/14/2021		

SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
GENERAL ARRANGEMENT – EAST ELEVATION

SCALE	DWG. NO.	REV.
AS NOTED	19-029F-S02	0



A
S03
WEST SITE ELEVATION
1/8" = 1'-0"

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2016 JOSHUA WILHELM CHRISTIANSEN 2-11-22
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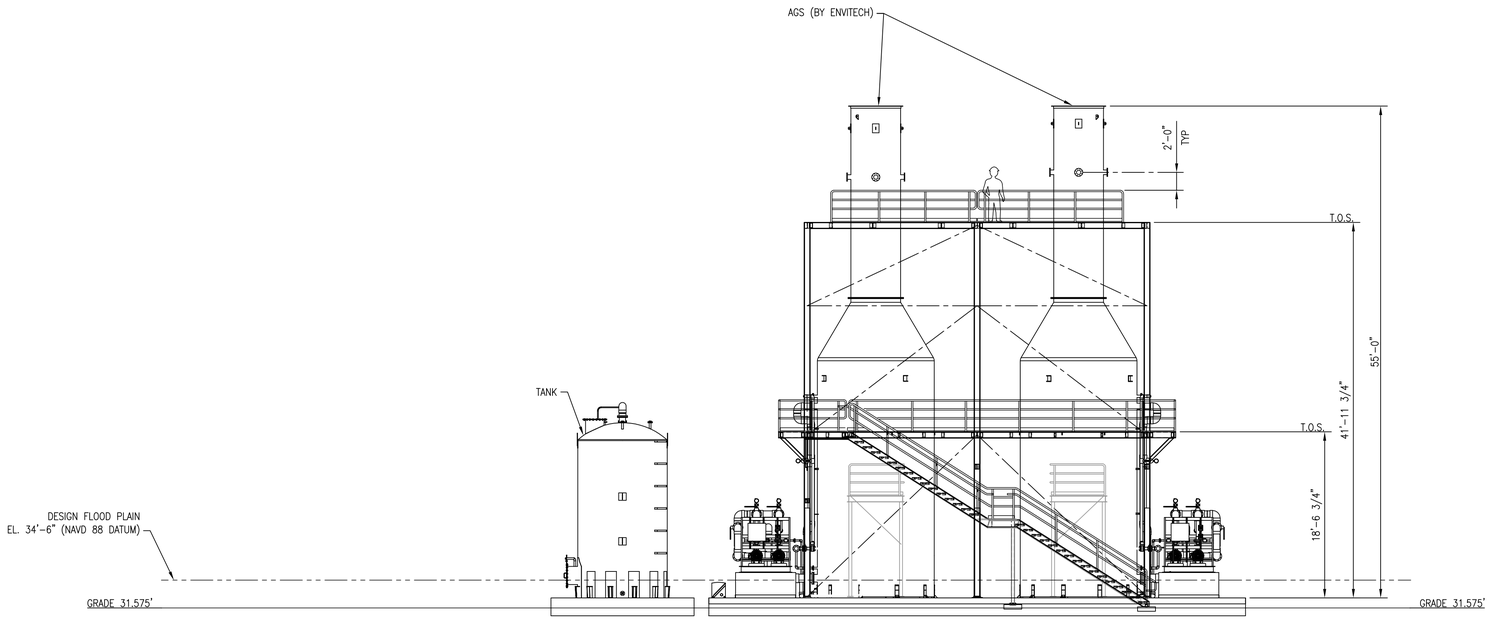
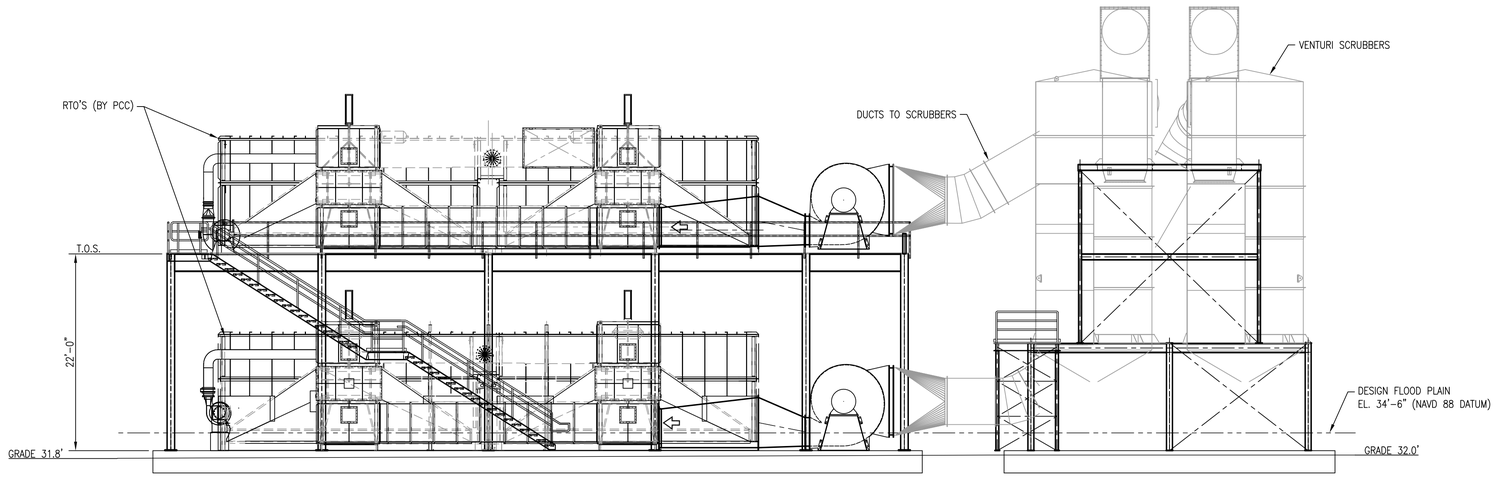
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
GENERAL ARRANGEMENT – ELEVATIONS

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/14/2021			AS NOTED	19-029F-S03	0



A S04 NORTH ELEVATION @ AGS & VENTURI SCRUBBER
1/8" = 1'-0"



B S04 SOUTH ELEVATION @ RTO, COMPRESSOR ROOM & PDC
1/8" = 1'-0"

1:1 0.5" 1" 1.5" 2"

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2016 JORDAN WILHELM CHRISTIANSEN 2-11-22
EXPIRES: 12-31-23

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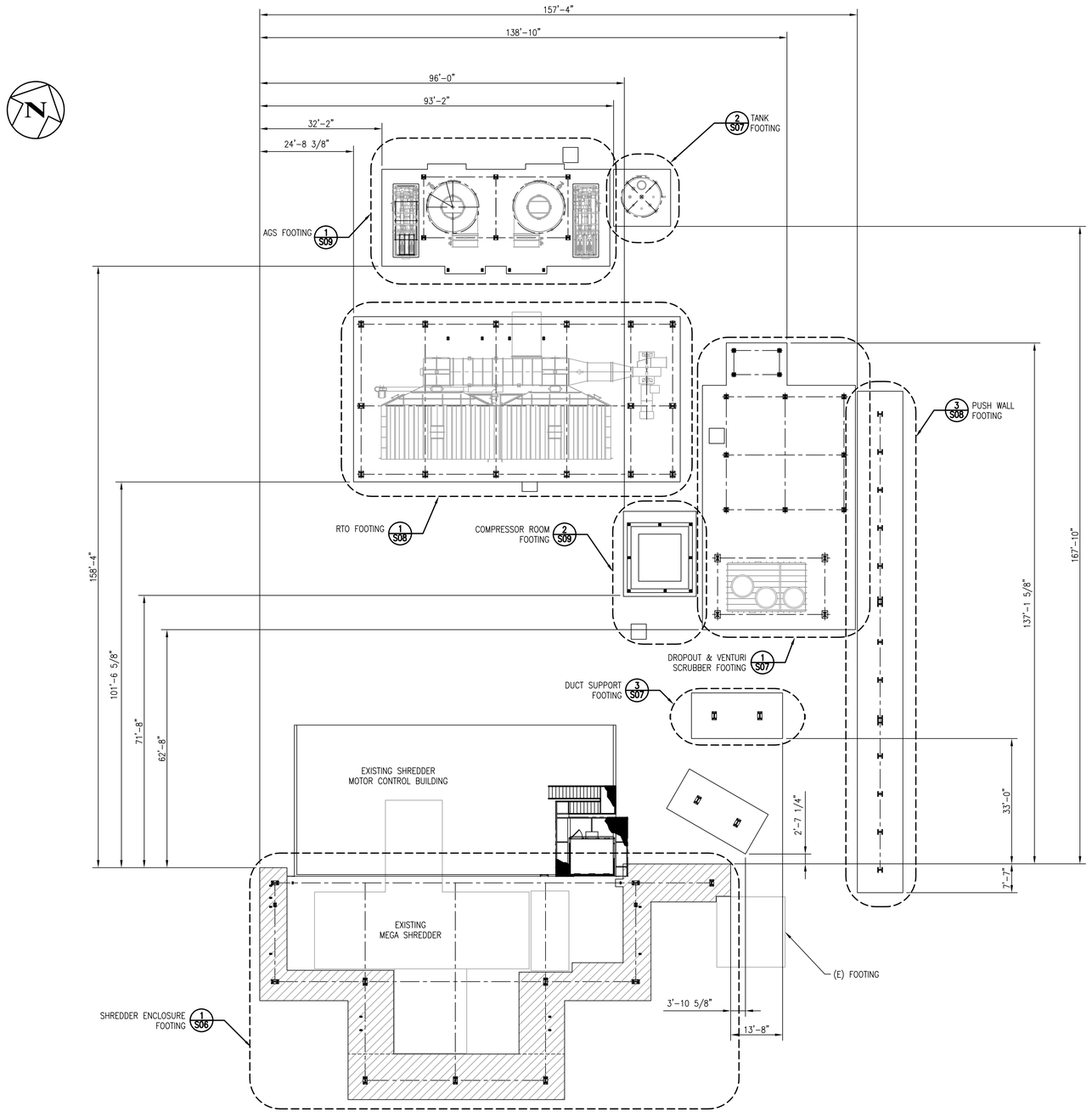
NEW SHREDDER ENCLOSURE AND AIR CONTROL
GENERAL ARRANGEMENT – ELEVATIONS

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/14/2021			AS NOTED	19-029F-S04	0



1 S05 PLAN VIEW – FOUNDATION LAYOUT
1/16" = 1'-0"

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SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2015 JOSHUA WILHELM CHRISTIANSEN 1-11-22
EXPIRES: 12-31-23

Smith Monroe Gray
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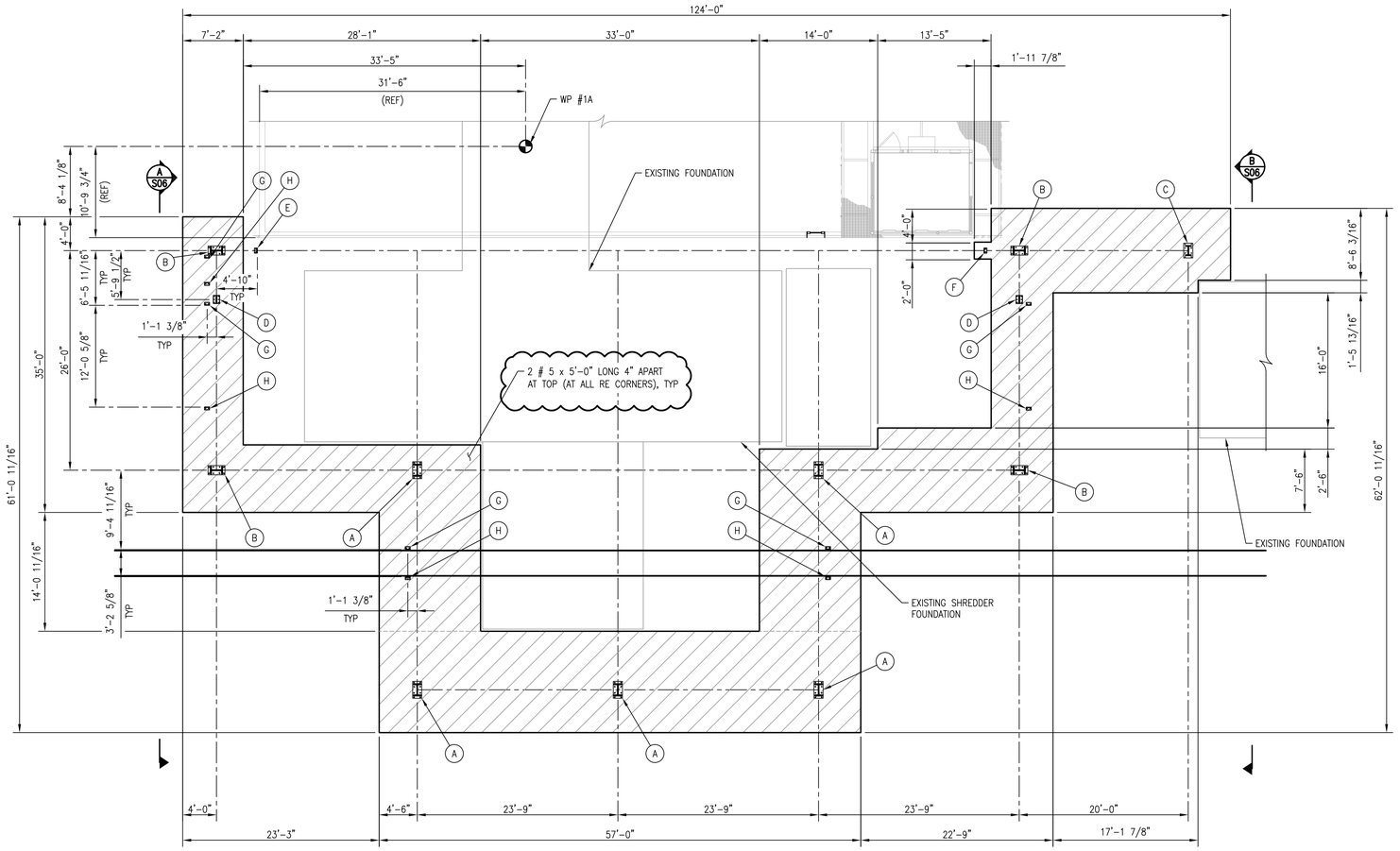
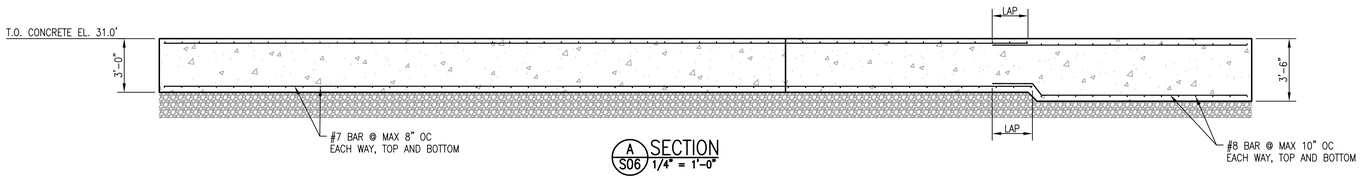
SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
NEW FOUNDATION LAYOUT

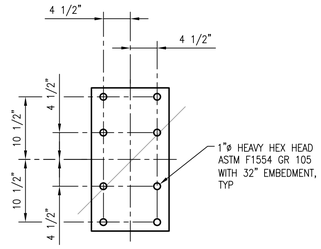
DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/14/2021			AS NOTED	19-029F-S05	0



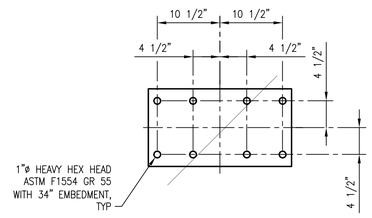
1 S06 PLAN VIEW – SHREDDER ENCLOSURE FOUNDATION
1/8" = 1'-0"



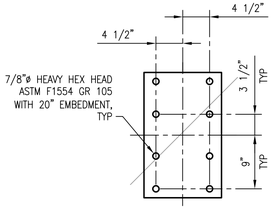
A S06 SECTION
1/4" = 1'-0"



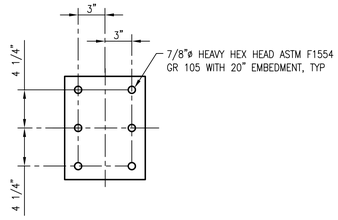
3 S06 ANCHOR PATTERN A
1" = 1'-0"



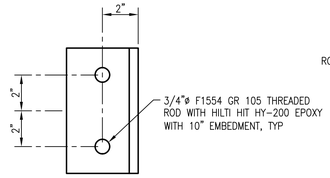
4 S06 ANCHOR PATTERN B
1" = 1'-0"



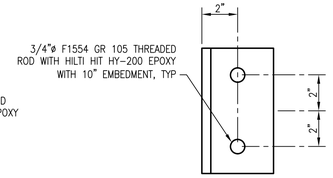
5 S06 ANCHOR PATTERN C
1" = 1'-0"



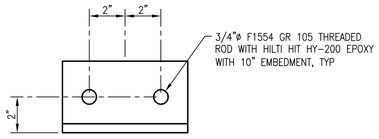
6 S06 ANCHOR PATTERN D
1 1/2" = 1'-0"



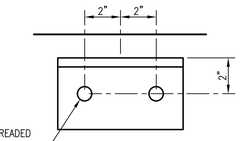
7 S06 ANCHOR PATTERN E
3" = 1'-0"



8 S06 ANCHOR PATTERN F
3" = 1'-0"



9 S06 ANCHOR PATTERN G
3" = 1'-0"



10 S06 ANCHOR PATTERN H
3" = 1'-0"

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82401 OREGON SEPT. 13, 2013 JOSHUA WILHELM CHRISTIANSEN
1-7-22
EXPIRES: 12-31-23

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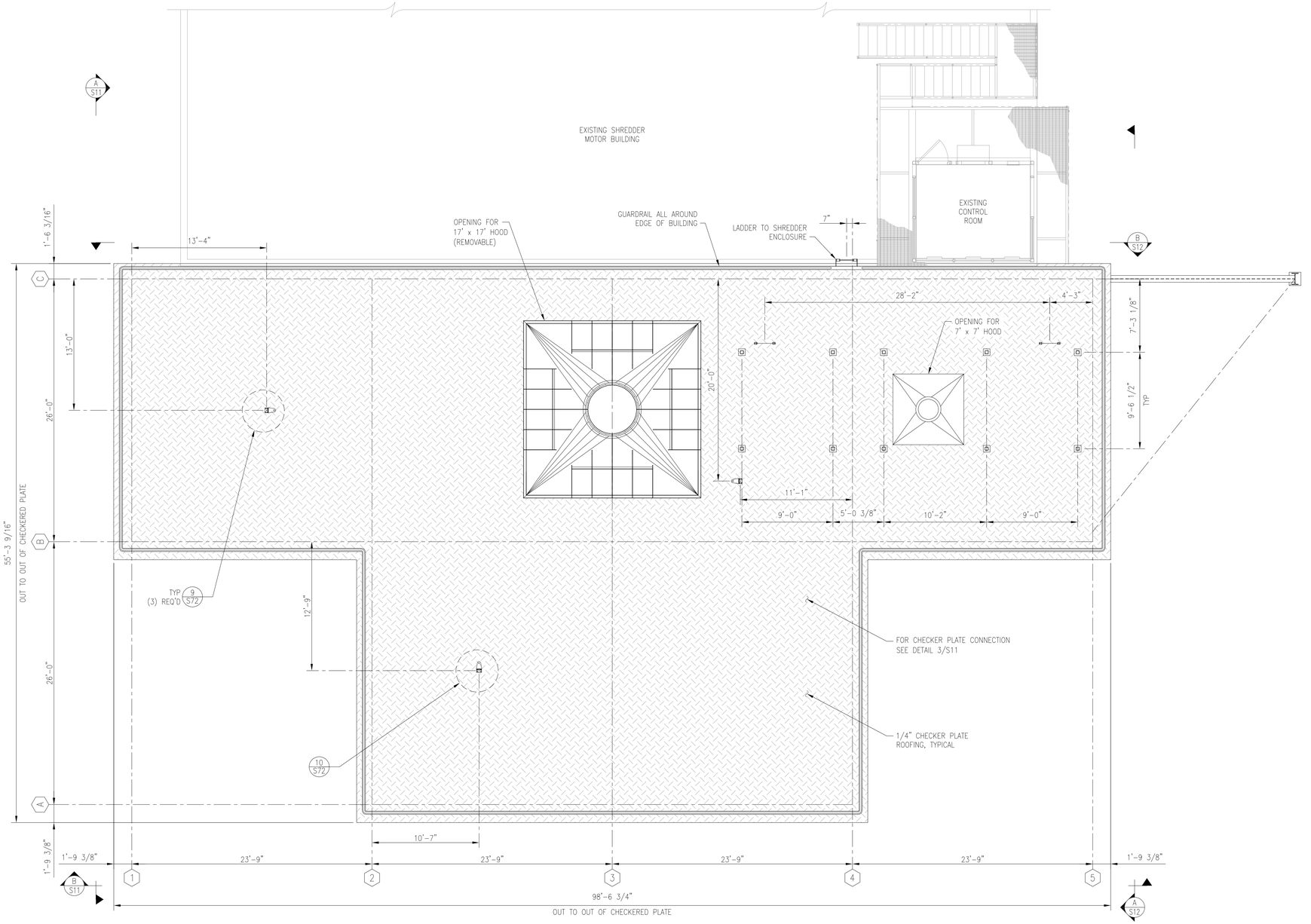
SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
FOUNDATION DETAILS – SHREDDER ENCLOSURE

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/14/2021			AS NOTED	19-029F-S06	0



N

1 S10 PLAN VIEW – SHREDDER ENCLOSURE
3/16" = 1'-0"

NOTE:
DUCTING & WALKWAY NOT SHOWN FOR CLARITY. SEE SHEET S17 FOR PLAN @ SECTION.

NOTES:
1. FOR STANDARD CONNECTIONS DETAILS, SEE DRAWING 19-029F-S60 SERIES.
2. FOR GENERAL NOTES AND SPECIFICATIONS, SEE DRAWING 19-029F-G02.

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

REGISTERED PROFESSIONAL ENGINEER — OREGON — JOSHUA WILHELM CHRISTIANSEN — 82402 — SEPT. 13, 2015 — EXPIRES: 12-31-23

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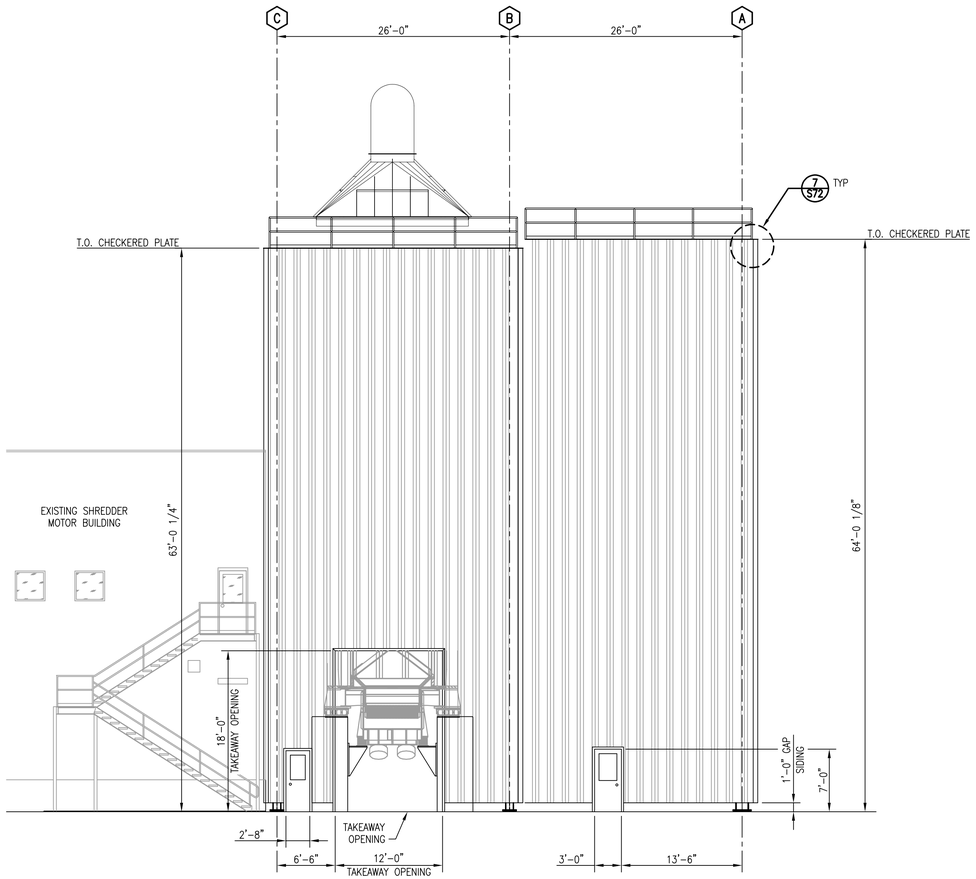
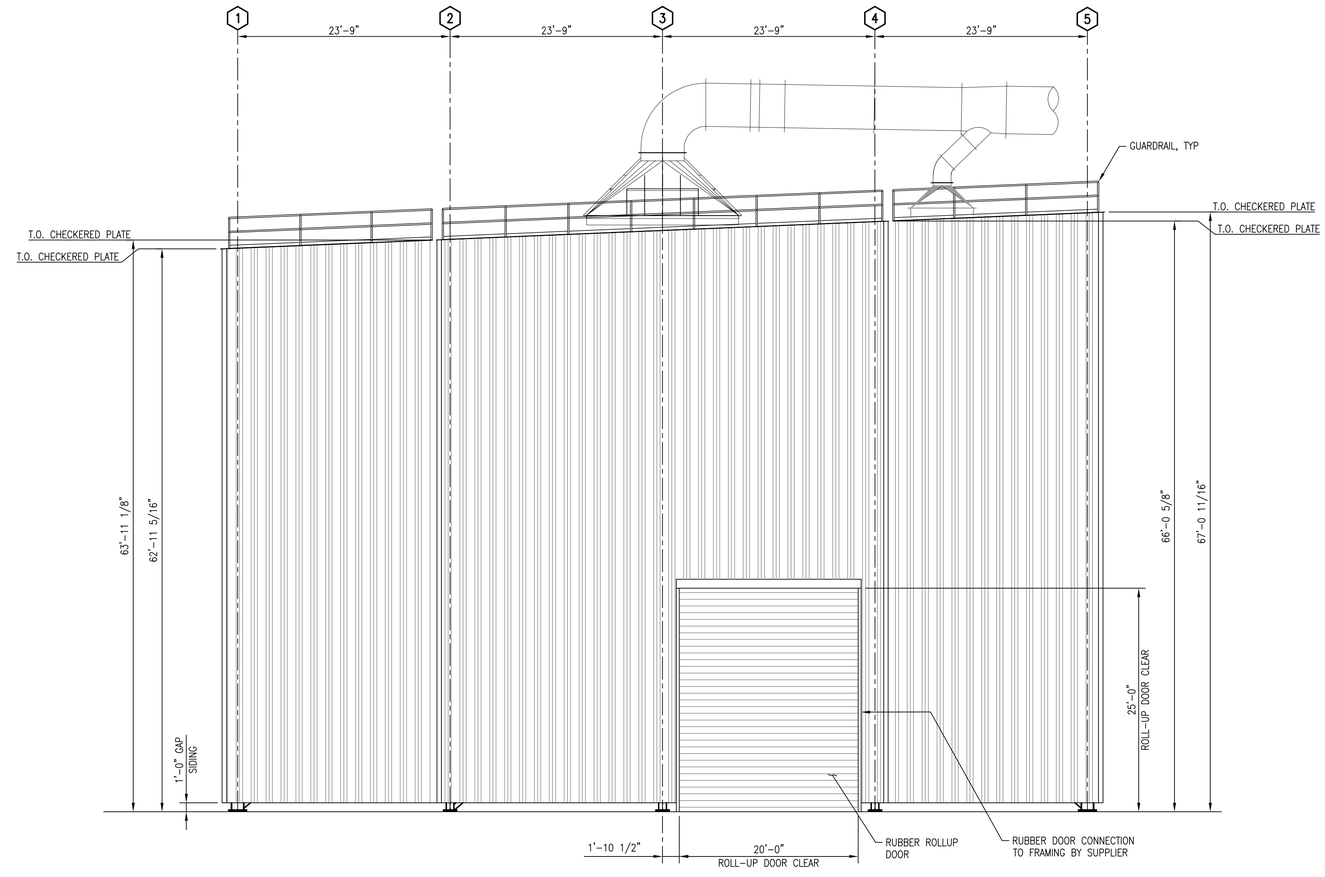
SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
PLAN VIEW – NEW SCHREDDER ENCLOSURE

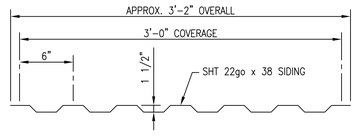
DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	7/27/21			AS NOTED	19-029F-S10	0



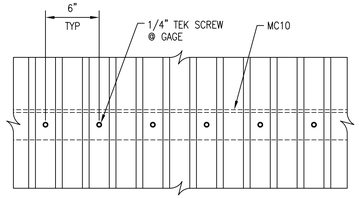
A S11 ELEVATION – WEST END OF BUILDING
1/8" = 1'-0" (LOOKING EAST)



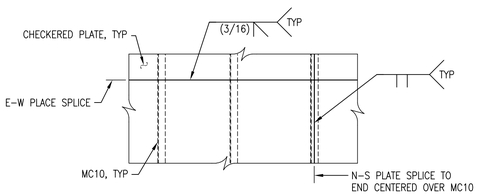
B S11 ELEVATION – SOUTH SIDE OF BUILDING
1/8" = 1'-0" (LOOKING NORTH)



1 S11 TYPICAL SIDING PROFILE
1 1/2" = 1'-0"



2 S11 TYPICAL SIDING FASTENER
1 1/2" = 1'-0"



3 S11 TYPICAL CHECKERED PLATE CONNECTION
3/8" = 1'-0"

NOTES:
1. FOR STANDARD CONNECTIONS DETAILS, SEE DRAWING 19-029F-S60 SERIES.
2. FOR GENERAL NOTES AND SPECIFICATIONS, SEE DRAWING 19-029F-G02.

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

REGISTERED PROFESSIONAL ENGINEER
82408
OREGON
SEPT. 13, 2015
JOSHUA WILHELM CHRISTIANSEN
1-7-22
EXPIRES: 12-31-23

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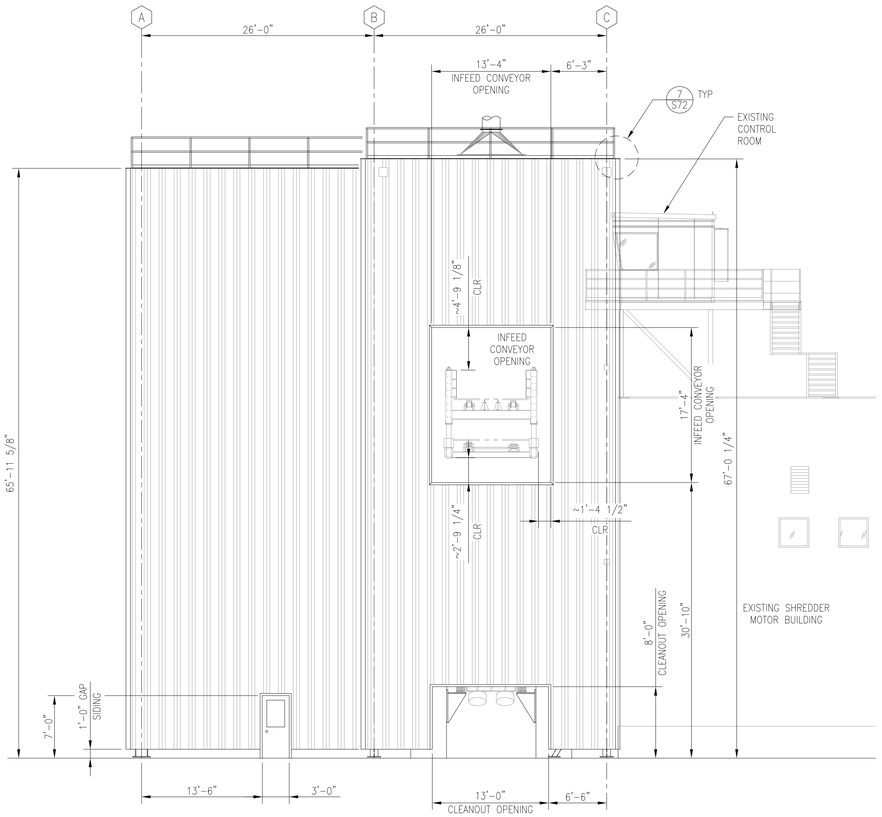
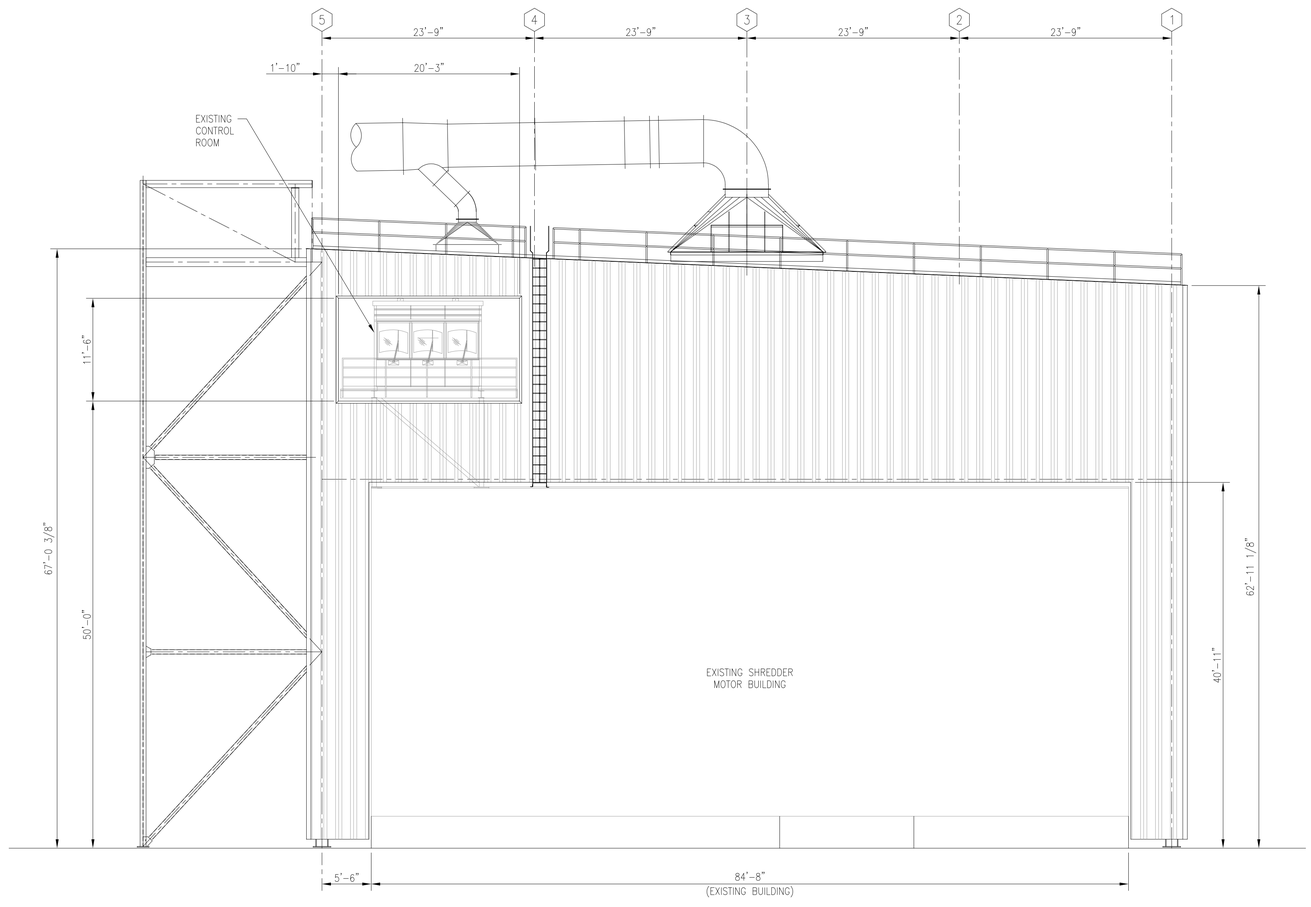
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
ELEVATIONS – NEW SCHREDDER ENCLOSURE

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	7/27/21			AS NOTED	19-029F-S11	0



A S12 ELEVATION – EAST SIDE OF BUILDING
1/8" = 1'-0" (LOOKING WEST)



B S12 ELEVATION – NORTH SIDE OF BUILDING
1/8" = 1'-0" (LOOKING SOUTH)

NOTES:
1. FOR STANDARD CONNECTIONS DETAILS, SEE DRAWING 19-029F-S60 SERIES.
2. FOR GENERAL NOTES AND SPECIFICATIONS, SEE DRAWING 19-029F-G02.

1:1 0.5" 1" 1.5" 2"

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82403 OREGON SEPT. 13, 2013 JOSHUA WILHELM CHRISTIANSEN 1-7-22
EXPIRES: 12-31-23

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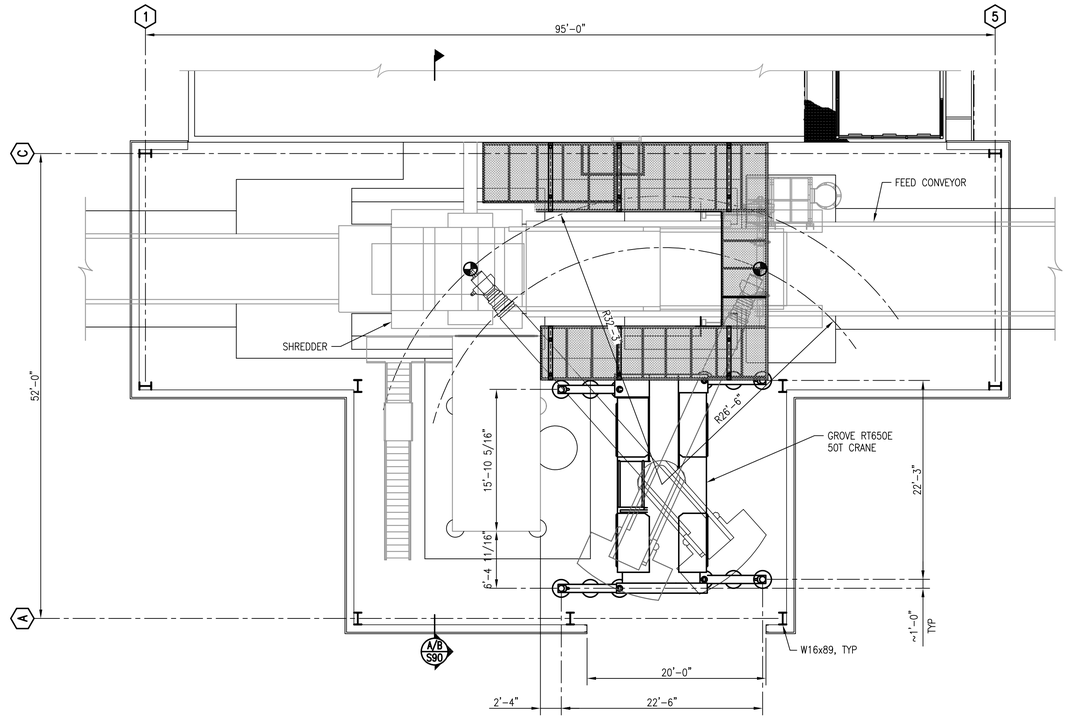
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
ELEVATIONS – NEW SCHREDDER ENCLOSURE

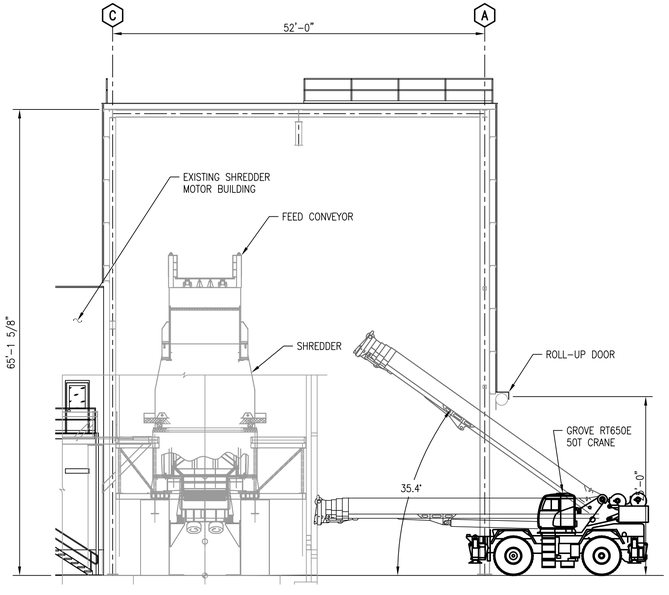
DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	7/27/21			AS NOTED	19-029F-S12	0

FILE: Q:\19\19029 SCHNITZER STEEL INDUSTRIES SHREDDER ENCLOSURES AND AIR CONTROL\PHASE F PORTLAND\DWGS\19029F-S10-01.dwg, S12 Rev0, PLOT 1=1, 12/17/2021 at 8:32:27 AM, Printed by: jill131

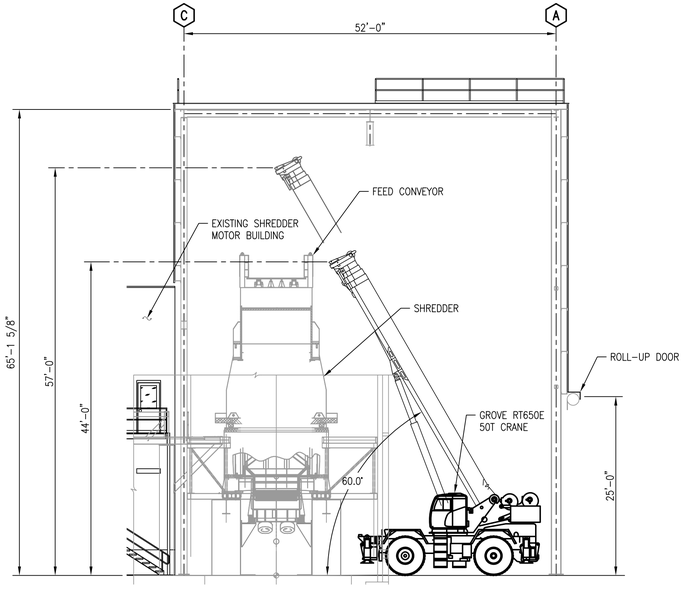


N

1/S90 PLAN VIEW – CRANE ACCESS LAYOUT
1/8" = 1'-0"



A/S90 SECTION – CRANE ACCESS LAYOUT
1" = 10'-0" (LOOKING EAST)



B/S90 SECTION – CRANE ACCESS LAYOUT
1" = 10'-0" (LOOKING EAST)

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR REVIEW	JL	01/17/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82402 OREGON SEPT. 13, 2015 JOSHUA WILHELM CHRISTIANSEN
1-17-22
EXPIRES: 12-31-23

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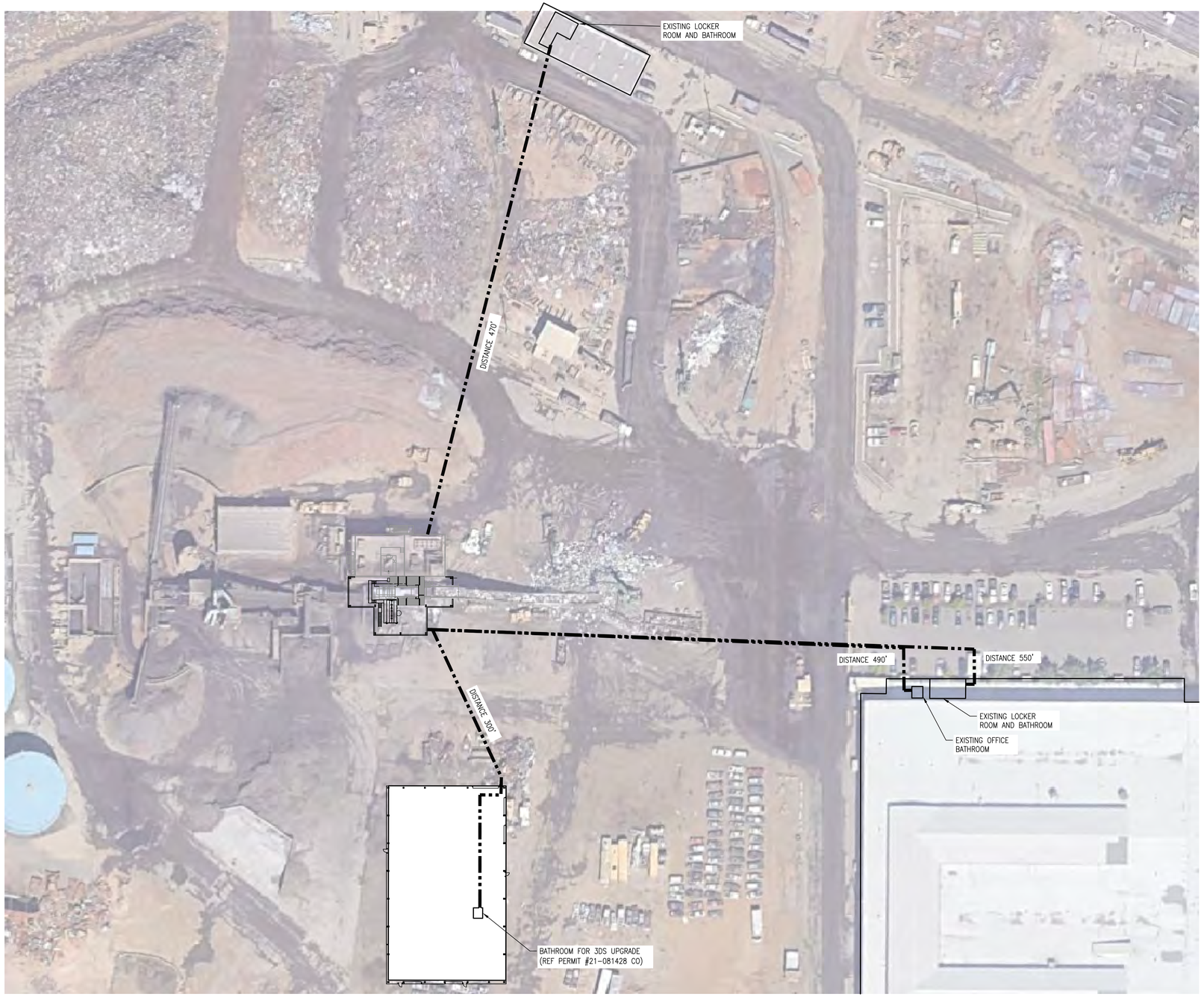
SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
NEW SHREDDER ENCLOSURE
CRANE ACCESS LAYOUTS

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	7/28/21			AS NOTED	19-029F-S90	0

1:1 0.5" 1" 1.5" 2"

FILE: Q:\19\19029 SCHNITZER STEEL INDUSTRIES SHREDDER ENCLOSURES AND AIR CONTROL\PHASE F PORTLAND\DWGS\19029F-S90-01.dwg, S90 RevD, PLOT 1=1, 1/14/2022 at 10:32:18 AM, Printed by: jjl131



1 G08 SITE – BATHROOM DISTANCES
1" = 50'-0"

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JWC	07/29/22	

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SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
BATHROOM DISTANCES

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
JWC	07/29/22			AS NOTED	19-029F-G08	0

Schnitzer

PROJECT:

SHREDDER ENCLOSURE AND AIR CONTROL

PORTLAND, OREGON

STRUCTURAL ENGINEER:

SMG ENGINEERS INC.
8625 SW CASCADE AVENUE, SUITE 600
BEAVERTON, OR 97008
PHONE: (503) 643-8595

ELECTRICAL ENGINEER

DAMATT ENGINEERING INC.
2420 CAMINO RAMON, SUITE 320
SAN RAMON, CA 94583
PHONE: (510) 891-0970

OWNER:

SCHNITZER STEEL INDUSTRIES, INC.
299 SW CLAY ST. SUITE 350
PORTLAND, OREGON, 97201
PHONE: (253) 993-9659

DRAWING LIST	
DRAWING NUMBER	DESCRIPTION
19-029F- G01	COVER SHEET, PROJECT LOCATION, DRAWING LIST
19-029F- G02	GENERAL NOTES
19-029F- G03	GENERAL NOTES
19-029F- G04	PROJECT FLOW CHART
19-029F- G05	EXIT PLAN
19-029F- G06	DEMO PLAN - PLAN VIEW
19-029F- G07	DEMO PLAN - ELEVATIONS
19-029F- C01	SITE PLAN
19-029F- C02	EXISTING FACILITIES
19-029F- C03	MODIFICATION TO FACILITIES
19-029F- C04	NEW GAS LINE METER LOCATION
19-029F- C05	STORMWATER BASINS
19-029F- C06	CONTOUR LINES
19-029F- C07	CUT/FILL CONTOUR PLAN
19-029F- C08	ERSC PLAN
19-029F- C09	LAYDOWN YARDAGE
19-029F- S01	GENERAL ARRANGEMENT - PLAN VIEW
19-029F- S02	GENERAL ARRANGEMENT - WEST ELEVATIONS
19-029F- S03	GENERAL ARRANGEMENT - EAST ELEVATIONS
19-029F- S04	GENERAL ARRANGEMENT - NORTH & SOUTH ELEVATIONS
19-029F- S05	FOUNDATION LAYOUT - PLAN VIEW
19-029F- S06	FOUNDATION DETAILS - SHREDDER ENCLOSURE
19-029F- S07	FOUNDATION DETAILS - DROPOUT BOX/VENTURI SCRUBBER & TANK
19-029F- S08	FOUNDATION DETAILS - RTO STRUCTURE AND PDC BUILDING
19-029F- S09	FOUNDATION DETAILS - AGS STRUCTURE AND COMPRESSOR BUILDING
19-029F- S10	SHREDDER ENCLOSURE - PLAN VIEW
19-029F- S11	SHREDDER ENCLOSURE - ELEVATIONS
19-029F- S12	SHREDDER ENCLOSURE - ELEVATIONS
19-029F- S13	SHREDDER ENCLOSURE - STRUCTURAL PLAN
19-029F- S14	SHREDDER ENCLOSURE - STRUCTURAL ELEVATIONS
19-029F- S15	SHREDDER ENCLOSURE - STRUCTURAL ELEVATIONS
19-029F- S16	SHREDDER ENCLOSURE - STRUCTURAL ELEVATIONS
19-029F- S17	REMOVABLE PANEL DETAILS
19-029F- S18	REMOVABLE PANEL DETAILS
19-029F- S19	REMOVABLE PANEL DETAILS

DRAWING LIST	
DRAWING NUMBER	DESCRIPTION
19-029F- S20	DUCT RUN - SHREDDER TO DROPOUT BOX
19-029F- S21	DUCT SUPPORT DETAIL
19-029F- S22	DROPOUT BOX STRUCTURE - PLAN AND ELEVATIONS
19-029F- S23	DROPOUT BOX STRUCTURE - DETAILS
19-029F- S24	DROPOUT BOX - DETAILS
19-029F- S25	DROPOUT BOX - DETAILS
19-029F- S26	DROPOUT BOX - DETAILS
19-029F- S27	DROPOUT BOX - DETAILS
19-029F- S28	DROPOUT BOX - DETAILS
19-029F- S29	DUCT RUN - DROPOUT BOX TO VENTURI SCRUBBERS
19-029F- S30	VENTURI SCRUBBER - PLAN AND ELEVATIONS
19-029F- S31	VENTURI SCRUBBER - ELEVATIONS
19-029F- S32	VENTURI SCRUBBER - ELEVATIONS
19-029F- S33	VENTURI SCRUBBER - DETAILS
19-029F- S34	VENTURI SCRUBBER - DETAILS
19-029F- S35	DUCT RUN - VENTURI SCRUBBERS TO RTO
19-029F- S40	RTO STRUCTURE - PLAN AND ELEVATIONS
19-029F- S41	RTO STRUCTURE - ELEVATIONS
19-029F- S42	THERMAL DUCT SUPPORT FRAME #1 - DETAILS
19-029F- S43	THERMAL DUCT SUPPORT FRAME #2 - DETAILS
19-029F- S44	AGS STRUCTURE - PLAN AND ELEVATIONS
19-029F- S45	AGS STRUCTURE - PLAN AND ELEVATIONS
19-029F- S46	AGS STRUCTURE - PLAN AND ELEVATIONS
19-029F- S47	COMPRESSOR ROOM STRUCTURE - PLAN AND ELEVATIONS
19-029F- S50	PUSH WALL

DRAWING LIST (CONT.)	
DRAWING NUMBER	DESCRIPTION
19-029F- S60	STANDARD GUARDRAIL DETAILS
19-029F- S61	STANDARD LADDER DETAILS
19-029F- S62	STANDARD STAIR DETAILS
19-029F- S63	STANDARD GRATING DETAILS
19-029F- S64	STANDARD BOLTED CONNECTION DETAILS
19-029F- S65	STANDARD BOLTED CONNECTION DETAILS
19-029F- S66	STANDARD BOLTED CONNECTION DETAILS
19-029F- S69	STANDARD BASE PLATE DETAILS
19-029F- S70	SHREDDER CONNECTION DETAILS
19-029F- S71	SHREDDER CONNECTION DETAILS
19-029F- S72	SHREDDER CONNECTION DETAILS
19-029F- S80	DUCT DETAILS
19-029F- S81	DUCT DETAILS
19-029F- S82	DUCT DETAILS
19-029F- S83	DUCT DETAILS
19-029F- S84	DUCT DETAILS
19-029F- S85	DUCT DETAILS
19-029F- S90	CRANE ACCESS LAYOUT
19-029F- S91	SHREDDER ENCLOSURE MAT LAYOUT
19-029F- S92	SHREDDER ENCLOSURE MAT LAYOUT
19-029F- S93	SHREDDER ENCLOSURE MAT LAYOUT
19-029F- S94	SHREDDER ENCLOSURE MAT LAYOUT

PROJECT INFORMATION:

1. PROPERTY ADDRESS:
   12005 N BURGUARD RD
   PORTLAND, OR 97203
2. TAX ROLL:
   SECTION 35 2N 1W, TL 500 67.77 ACRES UPLAND 7.43 ACRES LOWLAND, LAND & IMPS SEE R646262 (R971350713) FOR MACH & EQUIP
3. ZONE:
   HEAVY INDUSTRIAL

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON JOSHUA WILHELM CHRISTIANSON 2.11.22
EXPIRES: 12.31.23

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ENGINEERS, INC.

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SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
COVER SHEET, PROJECT LOCATION, DRAWING LIST

DRAWN BY	DATE	CHK'D BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	6/18/21			AS NOTED	19-029F-G00	0

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:			
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	—	X	AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	—	X	—
2. INSPECTION OF HIGH-STRENGTH BOLTING:			
A. SNUG-TIGHT JOINTS	—	X	AISC 360, SECTION M2.5
B. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION	—	X	
C. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION	X	—	
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:			
A. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360	—	X	AISC 360, SECTION M5.5
B. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	—	X	APPLICABLE ASTM MATERIAL STANDARDS
C. MANUFACTURER'S CERTIFIED TEST REPORTS	—	X	
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:			
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	—	X	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQURIED	—	X	—
5. INSPECTION OF WELDING:			
A. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:			
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	X	—	AWS D1.1
2) MULTIPASS FILLET WELDS	X	—	
3) SINGLE-PASS FILLET WELDS > 5/16"	X	—	
4) PLUG AND SLOT WELDS	X	—	
5) SINGLE-PASS FILLET WELDS < OR = 5/16"	—	X	
6) FLOOR AND ROOF DECK WELDS	—	X	AWS D1.3
B. REINFORCING STEEL:			
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706	—	X	AWS D1.4 ACI 318: SECTION 3.5.2
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFOCEMENT	X	—	
3) SHEAR REINFORCEMENT	X	—	
4) OTHER REINFORCING STEEL	—	X	
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:			
A. DETAILS SUCH AS BRACING AND STIFFENING	—	X	—
B. MEMBER LOCATIONS	—	X	
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION	—	X	

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	—	X	ACI 318: 3.5, 7.1-7.7
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B	—	—	AWS D1.4 ACI 318: 3.5.2
3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED	X	—	ACI 318: 8.1.3, 21.2.8
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	—	X	ACI 318: 3.8.6, 8.1.3, 21.2.8
5. VERIFYING USE OF REQUIRED DESIGN MIX	—	X	ACI 318: CH. 4, 5.2-5.4
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	—	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	—	ACI 318: 5.9, 5.10
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	—	X	ACI 318: 5.11-5.13
9. INSPECTION OF PRESTRESSED CONCRETE: A. APPLICATION OF PRESTRESSING FORCES B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM	X X	—	ACI 318: 18.20 ACI 318: 18.18.4
10. ERECTION OF PRECAST CONCRETE MEMBERS	—	X	ACI 318: CH. 16
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	—	X	ACI 318: 6.2
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	—	X	ACI 318: 6.1.1

REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	—	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	—	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	—	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	—
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	—	X

GENERAL NOTES AND SPECIFICATIONS

PROJECT SCOPE:

SCHNITZER STEEL INDUSTRIES INTENDS TO CONSTRUCT A NEW SHREDDER ENCLOSURE AND CORRESPONDING EMISSIONS CONTROL SYSTEM. THE EMISSION CONTROL SYSTEM INCLUDES PARTICLE TREATMENT AND VOC TREATMENT. THE MAIN SYSTEM INCLUDES THE ADDITION OF A DROP OUT BOX, (2) ABORT GATES (2) VENTURI SCRUBBERS, (2) FANS, (2) REGENERATIVE THERMAL OXIDIZERS AND (2) ACID-GAS SCRUBBERS. SMG SCOPE OF WORK INCLUDES STRUCTURAL SUPPORTS, ACCESS AND FOUNDATIONS FOR THE NEW EQUIPMENT.

GEOTECHNICAL:

1. REFER TO THE GEOTECHNICAL REPORT BY GRI.
2. FOR DEMOLITION, EXCAVATION AND SUBGRADE PREPARATION REQUIREMENTS SEE GEOTECHNICAL REPORT.
3. THE DESIGN SAFE BEARING CAPACITY IS ASSUMED TO BE 2,000 PSF WITH SITE CLASS F.

REINFORCED CONCRETE:

1. ALL CAST-IN-PLACE CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRESS OF 4000 PSI AT 28 DAYS. MAXIMUM SLUMP SHALL BE 4 INCHES – UNLESS NOTED OTHERWISE ON THE CONCRETE DRAWINGS.
2. CONCRETE SHALL USE TYPE II CEMENT AND MIX DESIGNED WITH A MAXIMUM WATER TO CEMENT RATIO OF 0.45.
3. READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED TO THE JOB SITE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN "SPECIFICATIONS FOR READY-MIXED CONCRETE" (ASTM C94).
4. ALL CONCRETE SHALL BE CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT, EMBEDDED FIXTURES AND INTO CORNERS OF FORMS.
5. ALL FORMS TO BE CLEAN, WITH NO WATER OR LOOSE MATERIAL PRESENT.
6. DURING HOT WEATHER, PROPER ATTENTION SHALL BE GIVEN TO INGREDIENTS, PRODUCTION METHODS, HANDLING, PLACING, PROTECTION, AND CURING TO PREVENT EXCESSIVE CONCRETE TEMPERATURES OR WATER EVAPORATION THAT MAY IMPAIR REQUIRED STRENGTH OR SERVICEABILITY OF THE MEMBER OR STRUCTURE. REFER TO ACI 305.
7. NO CONCRETE ADMIXTURES SHALL BE USED WITHOUT PRIOR APPROVAL OF THE ENGINEER OR AS SPECIFIED IN THESE SPECIFICATIONS.
8. ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER UNLESS NOTED OTHERWISE.
9. REINFORCING STEEL AND CONCRETE CONSTRUCTION SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND ACI 315.
10. ALL PROPOSED COLD JOINTS TO BE REVIEWED BY THE ENGINEER. ALL COLD JOINTS TO BE ROUGHENED AND CLEANED.
11. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, FOR DEFORMED BARS.
12. BARS IN SLABS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, METAL OR PLASTIC CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315. LAP ALL REINFORCING BARS PER THE TYPICAL LAP SPLICE LENGTH SCHEDULE, EXCEPT AS NOTED.
13. SPLICE LENGTHS SHALL BE AS SHOWN IN THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

BAR SIZE	SPLICE LENGTH	BAR SIZE	SPLICE LENGTH
#4	25 IN.	#10	78 IN.
#5	31 IN.	#11	86 IN.
#6	37 IN.		
#7	54 IN.		
#8	61 IN.		

14. BACKFILL MATERIAL SHALL BE AS RECOMMENDED IN BACKFILL NOTES.
15. ALL BLOCKOUTS, SLEEVES, OPENINGS, CONDUIT AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE POURING. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE THIRD OF THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON CENTER. VERIFY ALL BLOCKOUTS WITH MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.
16. CONCRETE COVER REINFORCING STEEL AND OTHER EMBEDDED STEEL SHALL BE AS SHOWN ON DRAWING. IF NOT SHOWN, USE COVERS AS SPECIFIED IN ACI 318, AS NOTED BELOW:

    CONCRETE CAST AGAINST EARTH----------3 INCHES
    CONCRETE EXPOSED TO EARTH OR WEATHER:
    #5 BAR AND SMALLER----------1 1/2 INCHES
    #6 BAR AND LARGER----------2 INCHES

    CONCRETE NOT EXPOSED TO EARTH NOR WEATHER:
    SLABS, WALLS, JOINTS----------3/4 INCH
    BEAMS, COLUMNS----------1 1/2 INCHES

17. ELECTRICAL GROUNDING ELEMENTS SHALL BE IN PLACE PRIOR TO POURING CONCRETE.

GROUTING:

1. ALL BASE PLATES AND GROUT-POCKETS FOR SHEAR KEYS, SHALL BE GROUTED IN ACCORDANCE WITH AISC 303-05.
2. GROUT SHALL BE PRE-APPROVED BY THE ENGINEER AND SHALL BE HIGH STRENGTH, NON-SHRINK, NON-METALLIC, CEMENTITIOUS OR EPOXY-TYPE – UNLESS NOTED OTHERWISE ON THE DRAWINGS.
3. GROUT SHALL BE INSTALLED – AND ALL CONTACT SURFACES SHALL BE CLEANED AND PREPARED BEFOREHAND – IN ACCORDANCE WITH THE GROUT-SUPPLIER'S SPECIFICATIONS.

STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL CONFORM TO:

ASTM A992	WIDE FLANGE AND TEES
ASTM A36	CHANNELS, PLATES AND ANGLES, EXCEPT AS NOTED.
ASTM A500, GRADE B	HOLLOW STRUCTURAL SECTIONS (TUBES)
ASTM A53, GRADE B	PIPES
ASTM A572 GR 50	PLATES WHERE NOTED IN DRAWINGS

1. DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH AISC 360-05 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" WITH "COMMENTARY" AND THE "CODE OF STANDARD PRACTICE", WITH EXCEPTIONS NOTED IN SPECIFICATIONS.
2. BOLTS IN PRIMARY STRUCTURAL CONNECTIONS SHALL CONFORM TO ASTM A325.
3. STANDARD STRUCTURAL WASHERS SHALL CONFORM TO ASTM F436.
4. ANCHOR RODS SHALL CONFORM TO ASTM F1554 GR 36 UNO ON THE CONCRETE DRAWINGS.
5. POST INSTALLED ANCHORS SHALL BE AS SHOWN ON THE DESIGN DRAWINGS BACKED BY REQUIRED ICC TEST REPORTS.
6. WELDING SHALL CONFORM TO AWS D1.1 CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 AND APPROVED BY THE ENGINEER. THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER.
7. ALL CONNECTIONS, UNLESS NOTED OTHERWISE, SHALL BE FULLY WELDED CONNECTIONS. FILLET WELD SIZE TO BE 1/16" LESS THAN THE THINNEST MATERIAL WITH A MINIMUM OF 3/16". BUTT WELDS TO BE COMPLETE JOINT PENETRATION (CJP) BUTT OR BEVEL WELDS IN ACCORDANCE WITH AWS.
8. WELDS SHALL BE MADE USING E70 ELECTRODES. ALL STRUCTURAL WELDING SHALL BE BY AWS CERTIFIED WELDERS.

CONTRACTOR REQUIREMENTS:

1. THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE.
2. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN CALIFORNIA AND SHALL BE SUBMITTED TO THE EOR PRIOR TO CONSTRUCTION.
3. THE GENERAL INSTALLATION CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE SITE. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND BE RESOLVED PRIOR TO PROCEEDING WITH THE WORK.
4. THE CONTRACTOR IS TO PROVIDE BARRICADES, SIGNS, LIGHTS OR OTHER DEVICES AROUND THE WORK SITE AS REQUIRED AND/OR AS DIRECTED BY SAFETY PERSONAL.
5. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT CLEARLY KNOWN; CONTRACTOR TO TAKE CARE WITH EXCAVATIONS AND CONSTRUCTION.
6. ALL MATERIAL AND WORKMANSHIP TO CONFORM TO APPROPRIATE CODES AND STANDARDS.
7. THE CURRENT EDITION OF ALL REFERENCED CODES, STANDARDS AND SPECIFICATIONS SHALL GOVERN.
8. THE CONTRACTOR SHALL COMPLY WITH CALIFORNIA-OSHA GUIDELINES, BE RESPONSIBLE FOR ALL CONSTRUCTION METHODS, TEMPORARY SHORING, BRACING, TECHNIQUES, SEQUENCING AND SAFETY REQUIRED FOR CONSTRUCTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION. THE STRUCTURE SHOWN IN GENERAL ARRANGEMENT DRAWINGS IS STABLE IN THE COMPLETED CONFIGURATION ONLY.

PAINT COATINGS:

1ALL NEW STRUCTURAL STEEL SHALL BE PREPARED AND COATED IN ACCORDANCE WITH THE SSPC AND OWNER'S FINAL APPROVAL OF COLORS AS SPECIFIED. THIRD PARTY PAINT THICKNESS TESTING, MAY BE REQUIRED TO BE DONE PER DISCRETION OF OWNER'S PROJECT REPRESENTATIVE.

GENERAL: ALL NEW STRUCTURAL STEEL SHALL RECEIVE SSPC-SP6 COMMERCIAL SANDBLAST ON ALL EXPOSED SURFACES. MINIMUM ACCEPTABLE SURFACE PREPARATION TO BE:
POWER TOOL CLEANING (SSPC-SP3) WHICH INCLUDES SOLVENT CLEANING (SSPC-SP1).

ALL EXPOSED STEEL SURFACES:
DO NOT PAINT AREAS TO BE FIELD WELDED.
PRIMER: APPLY (1) COAT OF "WASSER MC-ZINC 100" – 4.0MILS [MIN] DRY FILM THICKNESS.
TOP COAT: APPLY (1) COAT OF "WASSER MC-FERROX A" – 4.0MILS [MIN] DRY FILM THICKNESS
COLORS:
– ALL STRUCTURAL AND FABRICATED PLATE COMPONENTS: COLOR TO BE GRAY [TO MATCH EXISTING STEELWORK AND PER OWNER'S PRE-APPROVAL].
– ALL GUARDRAILS, LADDERS, STAIR NOZING AND LIFT LUGS: COLOR TO BE OSHA SAFETY YELLOW

WELD-DISTURBED AREAS: AFTER FIELD WELDING AND FOR FIELD TOUCH-UP OF PAINTED SURFACES:
PREP AFFECTED AREAS WITH SSPC-SP2-3, HAND CLEAN OR POWER TOOL, AND APPLY THE APPLICABLE COATING SYSTEM AS OUTLINED ABOVE.

SUBMITTALS:

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (EOR) AND REVIEWED PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS

1. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE EOR AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE EOR.

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82401 OREGON SEPT. 13, 2019 JOSHUA WILHELM CHRISTMANN 1-7-22
EXPIRES: 12-31-23

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1:1 0.5" 1" 1.5" 2"

GENERAL DESIGN CRITERIA

STRUCTURAL DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE 2018 IBC AND 2019 OSSC MODIFICATIONS. IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURAL ELEMENTS, THE FOLLOWING LOADS AND CRITERIA WERE USED:

DESIGN LOADS:

RISK CATEGORY II

DEAD LOAD

ACTUAL WEIGHT OF MATERIALS OF CONSTRUCTION AND PERMANENT EQUIPMENT

LIVE LOAD

ROOF DECK	25 PSF UNIFORM
ACCESS PLATFORM [D.O.B.]	60 PSF UNIFORM 1,000 LB CONCENTRATED
ELEVATED WALKWAY	40 PSF UNIFORM 1,000 LB CONCENTRATED
STAIRS AND LANDINGS	100 PSF UNIFORM 1,000 LB CONCENTRATED
FALL ARREST TIE-OFF POST:	2,250LB

SNOW LOAD

SNOW IMPORTANCE FACTOR,	Is = 1.0
GROUND SNOW LOAD	10 PSF
ROOF SNOW LOAD	25 PSF (INCLUDED 5 PSF RAIN SURCHARGE)

WIND LOAD

BASIC WIND SPEED (3-SECOND GUST),	V=96 MPH
WIND IMPORTANCE FACTOR,	Iw = 1.0
EXPOSURE	C

SEISMIC LOAD

SEISMIC IMPORTANCE FACTOR,	Ie = 1.0
[PER GEOTECHNICAL INVESTIGATION REPORT BY GRI, ISSUED 3/23/2021.]	
SITE CLASS	F
MAPPED SPECTRAL RESPONSE ACCELERATION	
SHORT PERIOD, Ss	0.81g
1 SECOND PERIOD, S1	0.41g
SPECTRAL RESPONSE COEFFICIENTS	
SHORT PERIOD, Sds	0.54
1 SECOND PERIOD, Sd1	1.09
SEISMIC DESIGN CATEGORY	D

SOIL LOAD BEARING

PER GEOTECHNICAL INVESTIGATION REPORT BY GRI, ISSUED 3/23/2021.

ALLOWABLE BEARING PRESSURE	2,000 PSF LONG TERM LOADS 2,666 PSF SHORT TERM LOADS

FLOOD LOAD (FOR EQUIPMENT AND STRUCTURES BELOW EL. 34.5 FT, NAVD88)

	NAVD88	COP
BASE 100 YEAR FLOOD ELEVATION	31.0 FT	28.9 FT
1996 FLOOD INUNDATION ELEVATION	32.5 FT	30.4 FT
FLOOD PROTECTION ELEVATION (2 FT FREEBOARD)	34.5 FT	32.4 FT
BUOYANCY FORCE (DISPLACED VOLUME)	62.4 PCF	
HYDROSTATIC PRESSURE	62.4 PCF	

LOAD COMBINATIONS:

APPLICABLE FACTORS AS LISTED IN ASCE 7-16

EQUIPMENT ENCLOSURES & SUPPORTS: SPECIFIC SEISMIC DESIGN CRITERIA

THE FOLLOWING LATERAL FORCE RESISTING SYSTEMS, RESPONSE MODIFICATION COEFFICIENTS AND LATERAL DESIGN FACTORS ARE APPLICABLE TO THE DESIGN OF EQUIPMENT ENCLOSURES & SUPPORT STRUCTURES, IN ACCORDANCE WITH 2019 OSSC (REF. ASCE7-16 AND SEISMIC DESIGN MANUAL).

SHREDDER ENCLOSURE:

LRFS	OCBF
R	2.5
Cs	0.24

DUCT & WALKWAY SUPPORT BENTS:

LRFS	OCBF [TRUSSED TOWER]
R	3.0
Cs	0.2

DROP OUT BOX [DOB] SUPPORT STRUCTURE:

LRFS	OCBF [TRUSSED TOWER]
R	3.0
Cs	0.24

VENTURI-SCRUBBERS' AND OUTLET DUCT SUPPORT STRUCTURES:

LRFS	OCBF
R	2.5
Cs	0.24

REGENERATIVE THERMAL OXIDIZER [RTO] SUPPORT STRUCTURE:

LRFS	OCBF
R	2.5
Cs	0.24

ACID GAS SCRUBBERS' [AGS] SUPPORT STRUCTURE:

LRFS	OCBF
R	2.5
Cs	0.24

COMPRESSOR ROOM:

LRFS	OCBF[E/W]	OMF [N/S]
R	3.25	2.5
Cs	0.24	0.19

POWER DISTRIBUTION CENTER [PDC] SUPPORT FOOTING:

Rp	6
op	2.5
Cs[EFFECTIVE]	0.31

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82401 OREGON SEPT. 13, 2019 JOSHUA WILHELM CHRISTIANSEN 1-7-22

EXPIRES: 12-31-23

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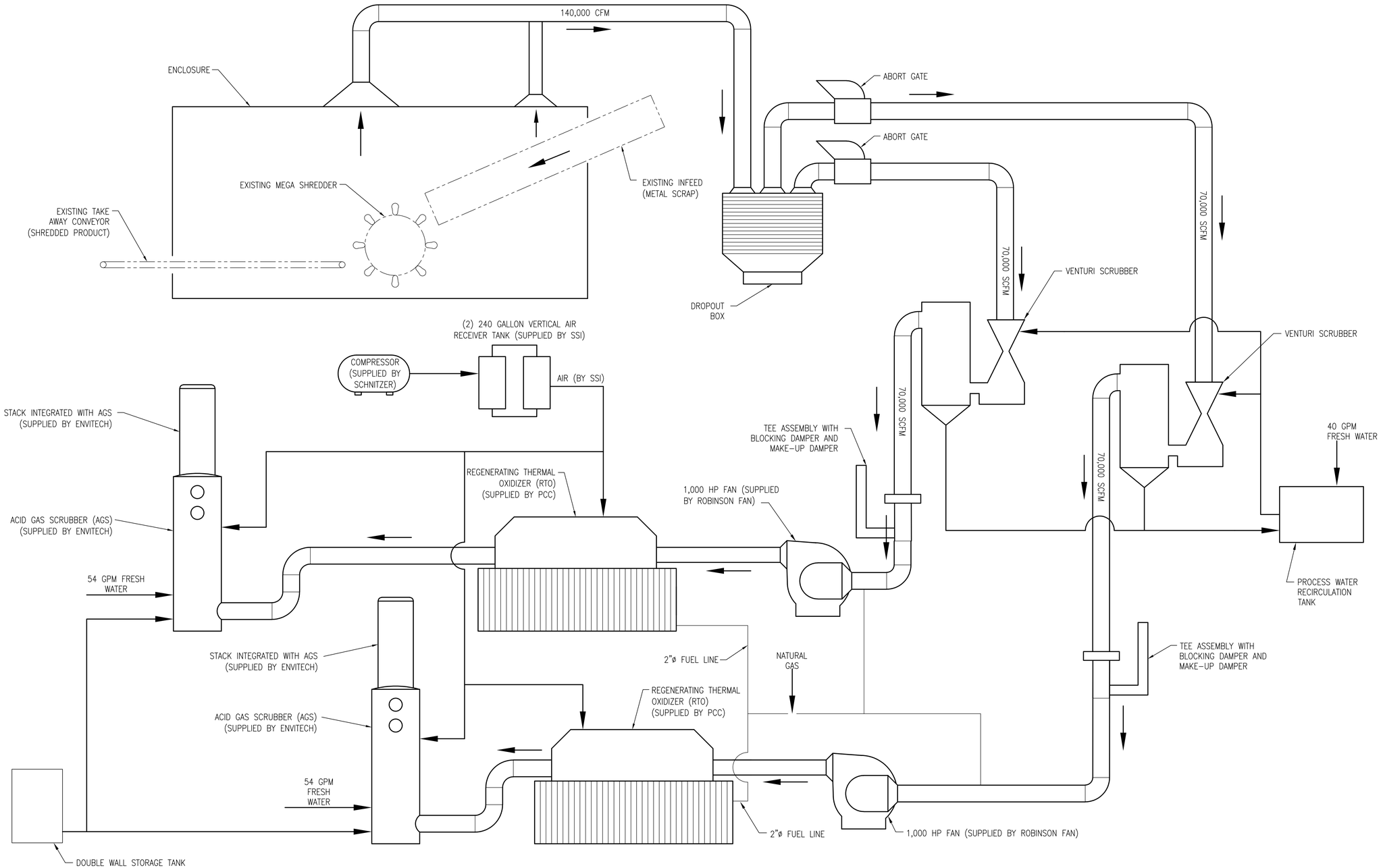
0.5" 1" 1.5" 2"
1:1



PROCESS FLOW DIAGRAM

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82402 OREGON JOSHUA WILHELM CHRISTIANSEN SEPT. 13, 2019 — 1-7-22
EXPIRES: 12-31-23

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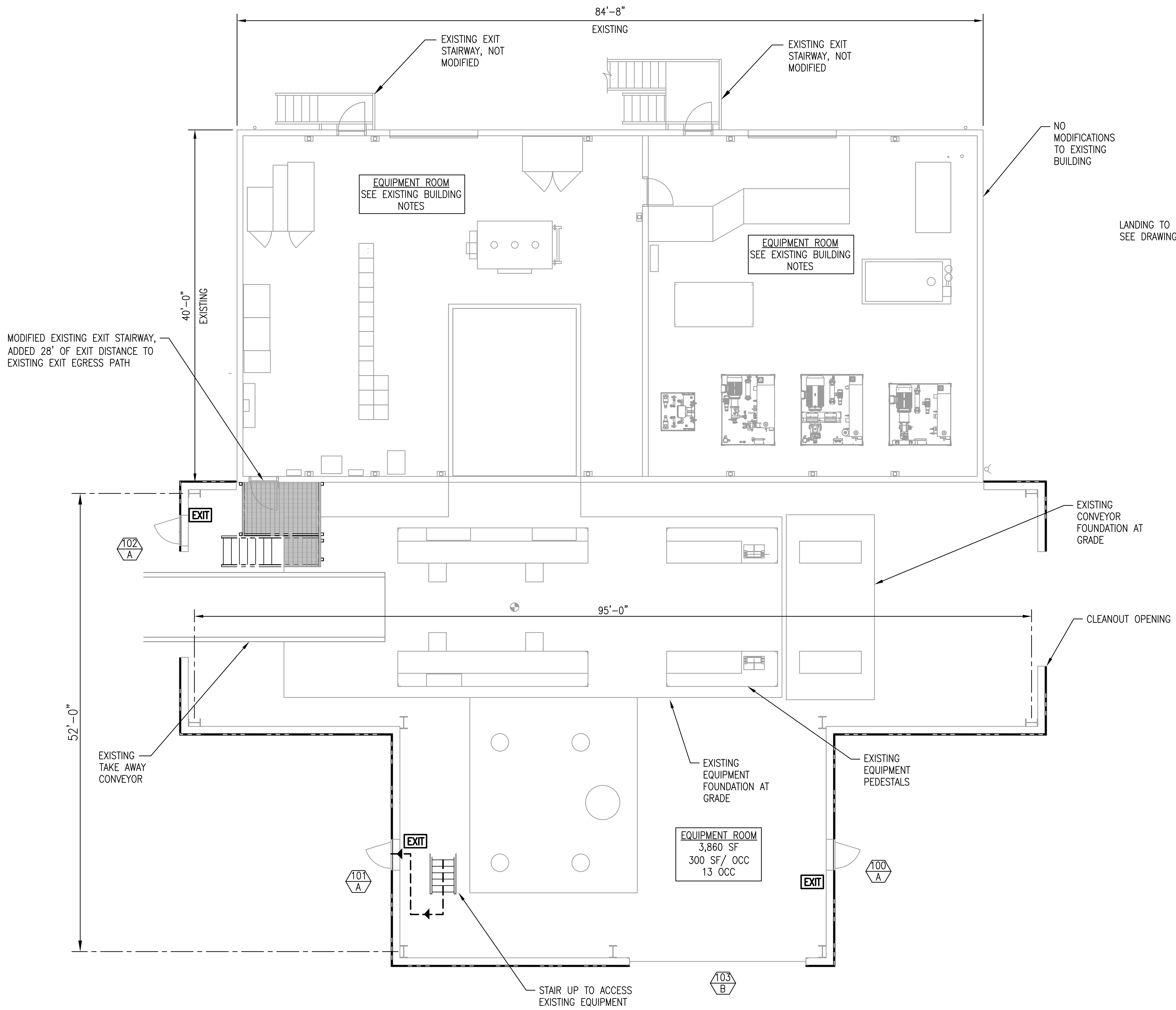
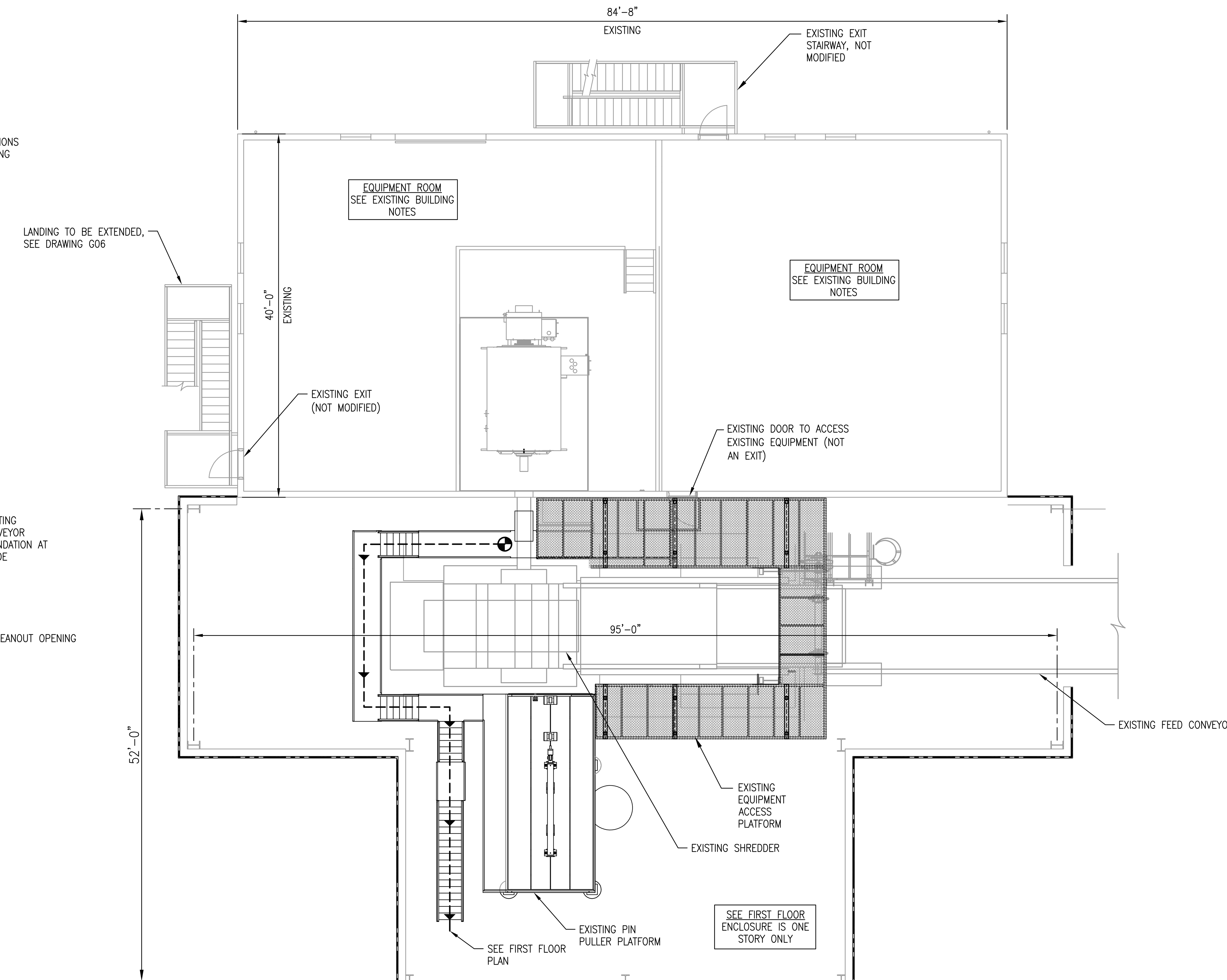
J.D. WALLACE	6/18/21			AS NOTED	19-029F-G04	0



1 G05 PLAN VIEW – FIRST FLOOR
1/8" = 1'-0"



2 G05 PLAN VIEW – SECOND FLOOR
1/8" = 1'-0"

EXISTING BUILDING:

COPIED FROM PREVIOUS DRAWING SET (2006):

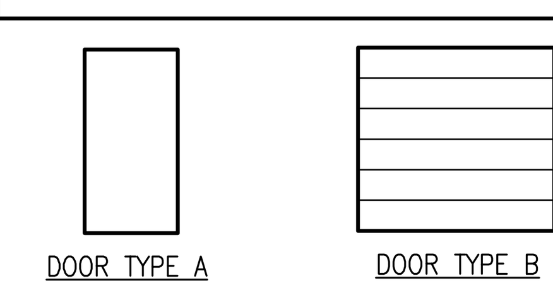
1. OCCUPANCY AND CONSTRUCTION
   - 1.1. OCCUPANCY: GROUP F-2 – INDUSTRIAL
   - 1.2. CONSTRUCTION: TYPE II
2. BUILDING HEIGHT AND AREAS
   - 2.1. SIZE: 40'-0" x 84'-8"
   - 2.2. AREA: 3387 SQ FT PER FLOOR
6774 SQ FT TOTAL < 23000 SQ FT ALLOWABLE
   - 2.3. HEIGHT: 3'-6" TO 1ST FLOOR LEVEL
19'-10" TO 2ND FLOOR LEVEL
36'-0" TO MEAN ROOF LEVEL < 55 FT ALLOWABLE
40'-2" TO TOP OF PARAPET
   - 2.4. NUMBER OF STORIES: TWO < THREE ALLOWABLE
3. FIRE-RESISTANCE-RATED CONSTRUCTION
   - 3.1. DISTANCE BETWEEN BUILDINGS: 54'-6" > 30'-0"
=> NO FIRE-RESISTIVE RATING REQUIRED => NON-RATED => B
   - 3.2. PARAPETS: NOT REQUIRED
PROVIDED THREE SIDES
   - 3.3. AREA OF OPENINGS: UNLIMITED
   - 3.4. OPENING PROTECTION: NOT REQUIRED
=> UNRATED DOORS
4. FIRE PROTECTION
   - 4.1. AUTOMATIC SPRINKLER SYSTEM: NOT REQUIRED
CO2 SYSTEMS PROVIDED FOR EQUIPMENT
   - 4.2. STANDPIPE SYSTEM: NOT REQUIRED OR PROVIDED
   - 4.3. PORTABLE FIRE EXTINGUISHERS: (10) CLASS B/C PROVIDED
   - 4.4. FIRE ALARM SYSTEM: NOT REQUIRED OR PROVIDED
   - 4.5. SMOKE DETECTION SYSTEM: NOT REQUIRED OR PROVIDED
5. BUILDING EGRESS
   - 5.1. OCCUPANT DEMAND: (1) PERSON PER 300 SQ FT
   - 5.2. OCCUPANT LOAD: 3387/300 = 12 PEOPLE PER FLOOR
   - 5.3. 24 PEOPLE TOTAL < 50
   - 5.4. NUMBER OF EXITS: THREE @ 1ST FLOOR > TWO REQUIRED
   - 5.5. TWO @ 2ND FLOOR = TWO REQUIRED
   - 5.6. DISTANCE BETWEEN EXITS: 62 FT > [(40)(40)+(84.67)(84.67)]/2 = 46'-10"
   - 5.7. EGRESS TRAVEL DISTANCE: 65 FT @ 1ST FLOOR < 300 FT ALLOWABLE
105 FT @ 2ND FLOOR < 300 FT ALLOWABLE
   - 5.8. EGRESS WIDTH: 36"
   - 5.9. EXIT SIGNS: PROVIDED – SEE ELECTRICAL

DOOR SCHEDULE

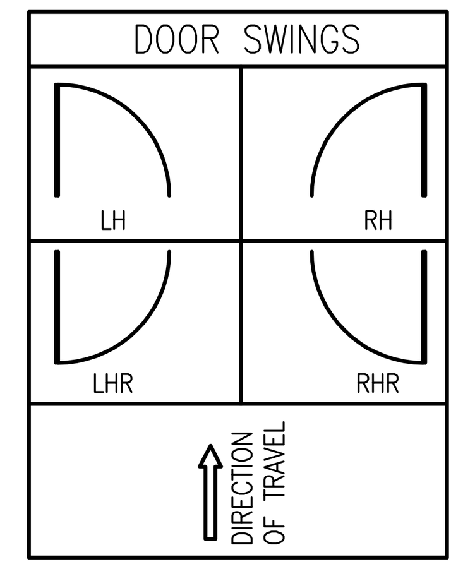
DOOR NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	DOOR FRAME MATERIAL	DOOR FRAME FINISH	HARDWARE TYPE	DOOR SWING	COMMENTS
100	3'-0"	7'-0"	A	HM	P	HM	P	1	LH	
101	3'-0"	7'-0"	A	HM	P	HM	P	1	RH	
102	3'-0"	7'-0"	A	HM	P	HM	P	1	RH	
103	20'-0	25'-0"	B	R	–	–	–	–	–	

HM = HOLLOW METAL P = PAINT
R = RUBBER

103 A – DOOR NUMBER / DOOR TYPE



DOOR SWINGS

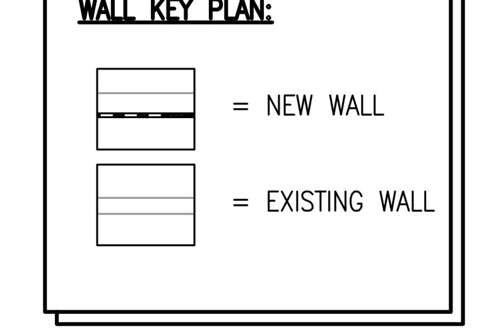


DOOR HARDWARE SCHEDULE:

TYPE 1: (EXTERIOR)

1. (1 1/2) PAIRS BALL BEARING BUTTS (HOT TOLLED PLATE)
2. (1) CLOSER
3. (1) CLASSROOM LOCK
4. (1) SET OF WEATHER STRIPPING

WALL KEY PLAN:



NEW ENCLOSURE NOTES:

1. EQUIPMENT ENCLOSURE IS NOT NORMALLY OCCUPIED. EQUIPMENT ENCLOSURE IS USED FOR MAINTENANCE ACCESS OF EQUIPMENT ONLY WHEN EQUIPMENT IS NOT RUNNING AND IS ENTERED BY TRAINED PERSONNEL ONLY.
2. OCCUPANCY CLASSIFICATION: F-1
3. CONSTRUCTION TYPE: IIB
4. AREA ADDED: 3860 SF
5. TOTAL AREA: 6774 + 3860 = 10,634 SF
6. MAX AREA: 17,500
7. NO SPRINKLERS
8. ACTUAL BUILDING HEIGHT 67 FT (SEE DRAWING S11)
9. ALLOWABLE BUILDING HEIGHT 55 FT – SEE EXEMPTION
   - 9.1. PER OSSC 503.1.1 – SPECIAL INDUSTRIAL OCCUPANCIES, BUILDINGS AND STRUCTURES DESIGNED TO HOUSE SPECIAL INDUSTRIAL PROCESSES THAT REQUIRE... UNUSUAL BUILDING HEIGHT TO ACCOMMODATE... SPECIAL MACHINERY... SHALL BE EXEMPT FROM THE BUILDING HEIGHT SPECIFIED IN 504.
10. NEW BUILDING ADDITION IS 1 STORY
11. MAX ALLOWABLE EXIT ACCESS TRAVEL
DISTANCE = 200'
ACTUAL = 86'
12. NONCONDITIONED SPACE, NO INSOLATION WILL BE PROVIDED.

EXIT = EXIT SIGNAGE

0.5" 1" 1.5" 2"
1:1

SYM.	REVISIONS	BY	DATE	CHK'D
1	UPDATED PER COMMERCIAL COMPLETENESS CHECK	JWC	03/08/22	
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2016 JOSHUA WILHELM CHRISTIANSEN 4-21-22
EXPIRES: 12-31-23

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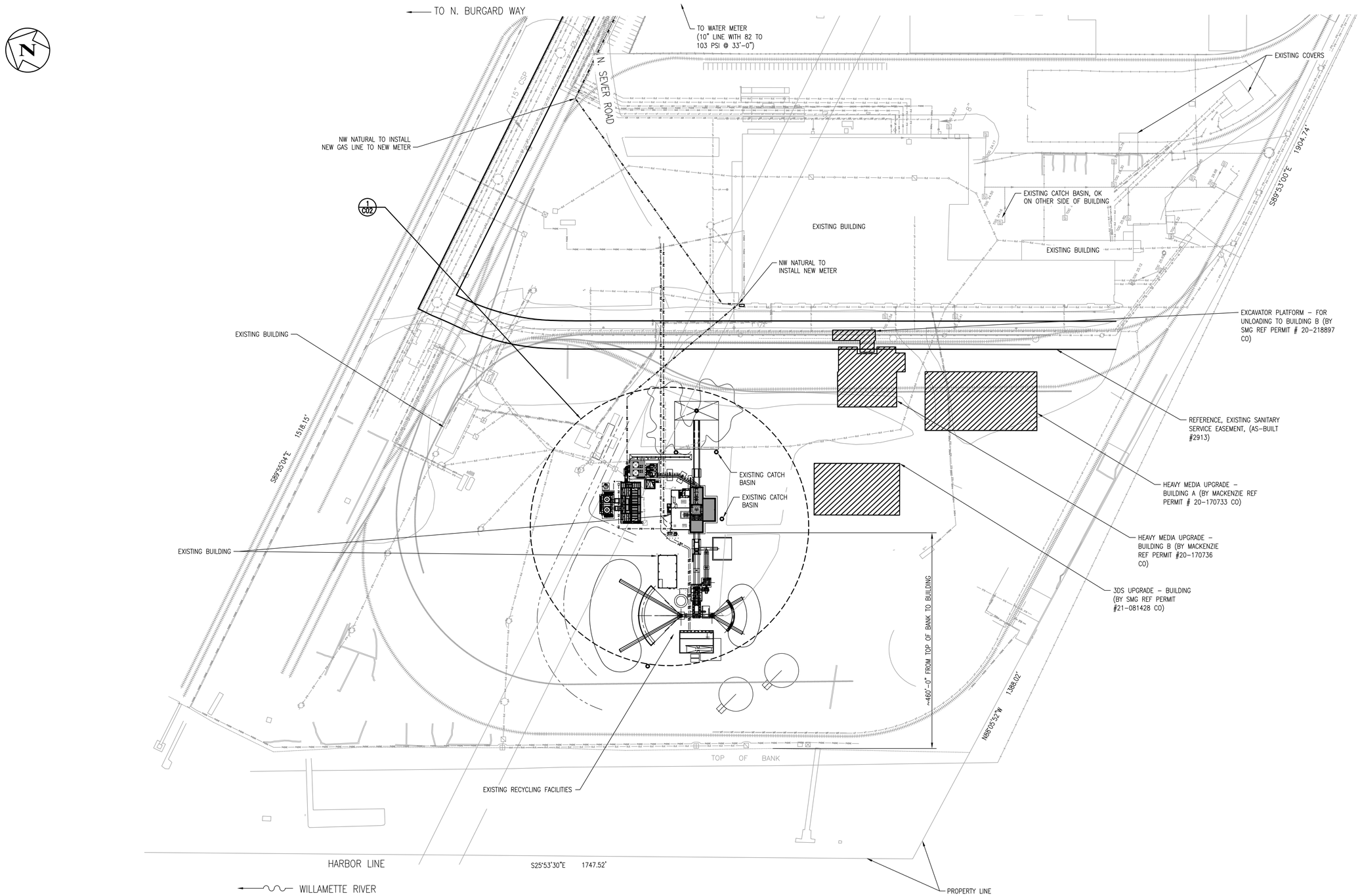
SCHNITZER STEEL INDUSTRIES, INC.
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
EGRESS AND CODE SUMMARY

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	12/08/21			AS NOTED	19-029F-G05	1



1 C01 SITE PLAN
1" = 100'-0"

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SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWC

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2-11-22
EXPIRES: 12-31-23

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SCHNITZER STEEL INDUSTRIES, INC.
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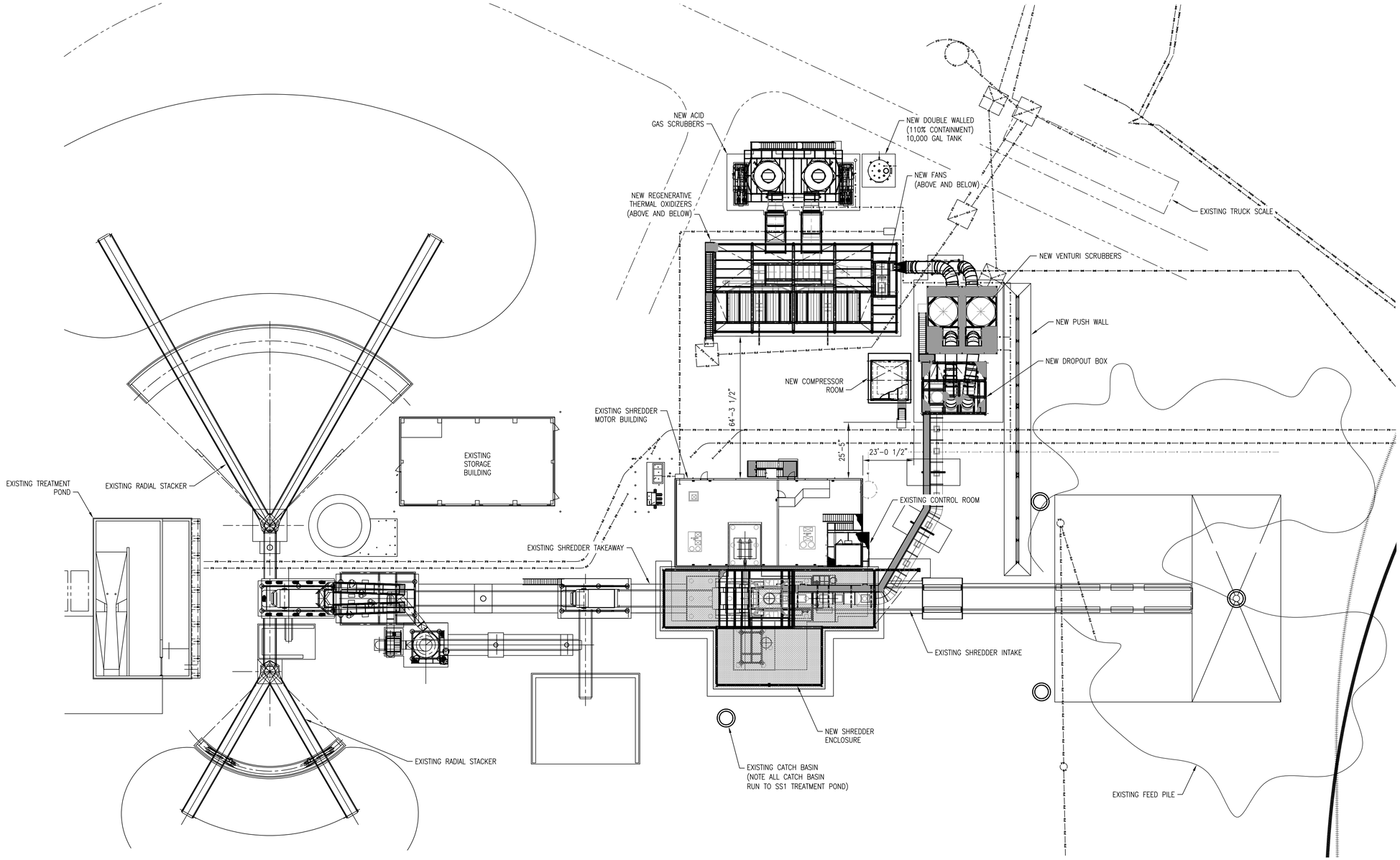
NEW SHREDDER ENCLOSURE AND AIR CONTROL
SITE PLAN

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/21/2021			AS NOTED	19-029F-C01	0

1:1 0.5" 1" 1.5" 2"

FILE: Q:\19\19029 SCHNITZER STEEL INDUSTRIES SHREDDER ENCLOSURES AND AIR CONTROL\PHASE F PORTLAND\DWGS\19029F-C01-03.dwg_C01Rev0. PLOT 1=1. 1/14/2022 at 8:48:45 AM. Printed by: jill31



1 C02 PLAN VIEW – LAYOUT
NTS

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	BSS	02/11/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2015 JORDAN WILHELM CHRISTIANSEN 2-11-22
EXPIRES: 12-31-23

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BSS	05/06/2021		

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NEW SHREDDER ENCLOSURE AND AIR CONTROL
NEW EQUIPMENT LAYOUT

SCALE	DWG. NO.	REV.
AS NOTED	19-029F-C02	0

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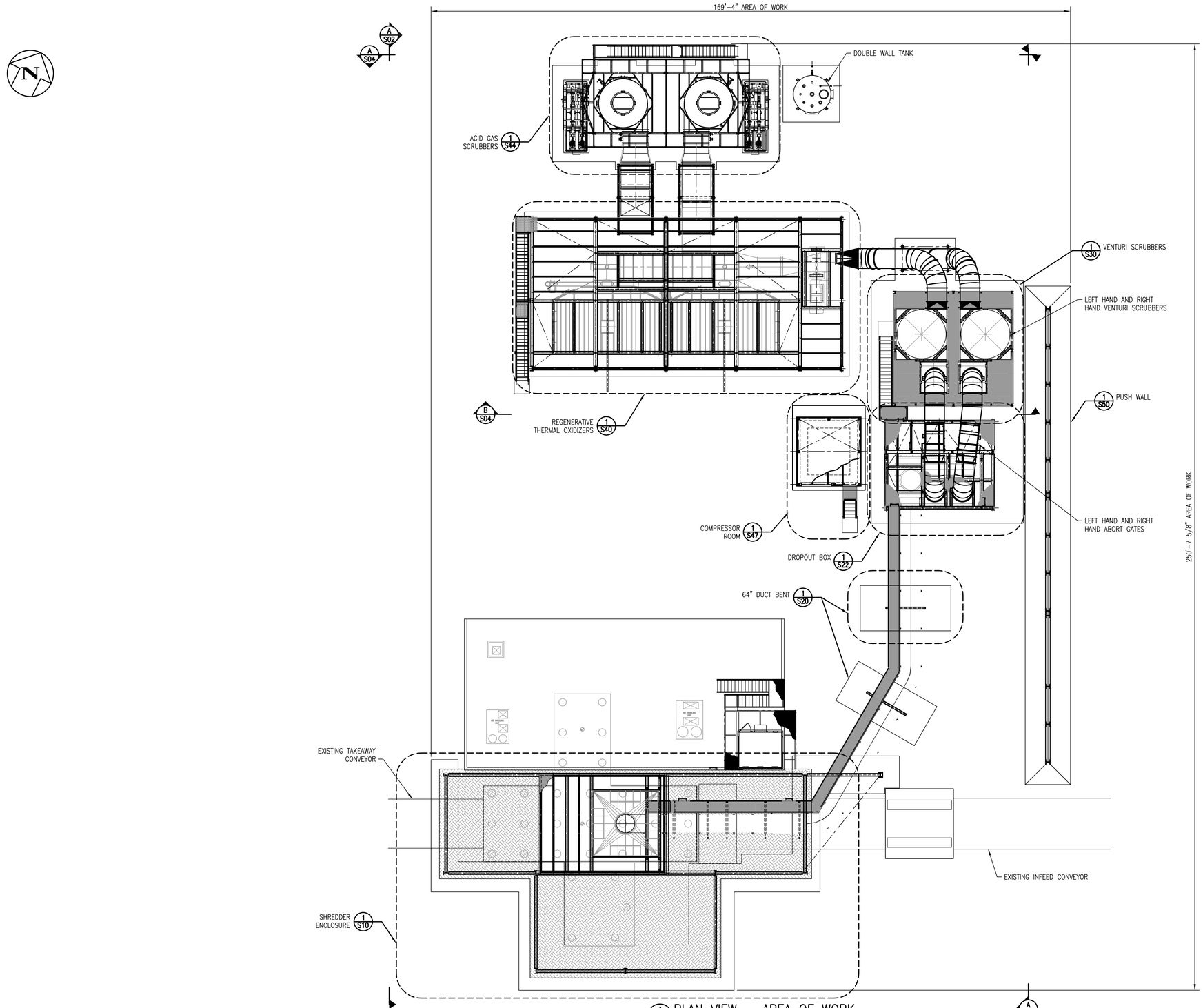

1/S01 PLAN VIEW – AREA OF WORK
NTS

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWG

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DRAWN BY	DATE	CHKD BY	DATE
J. LUM	07/14/2021		

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GENERAL ARRANGEMENT – PLAN VIEW

SCALE	DWG. NO.	REV.
AS NOTED	19-029F-S01	0

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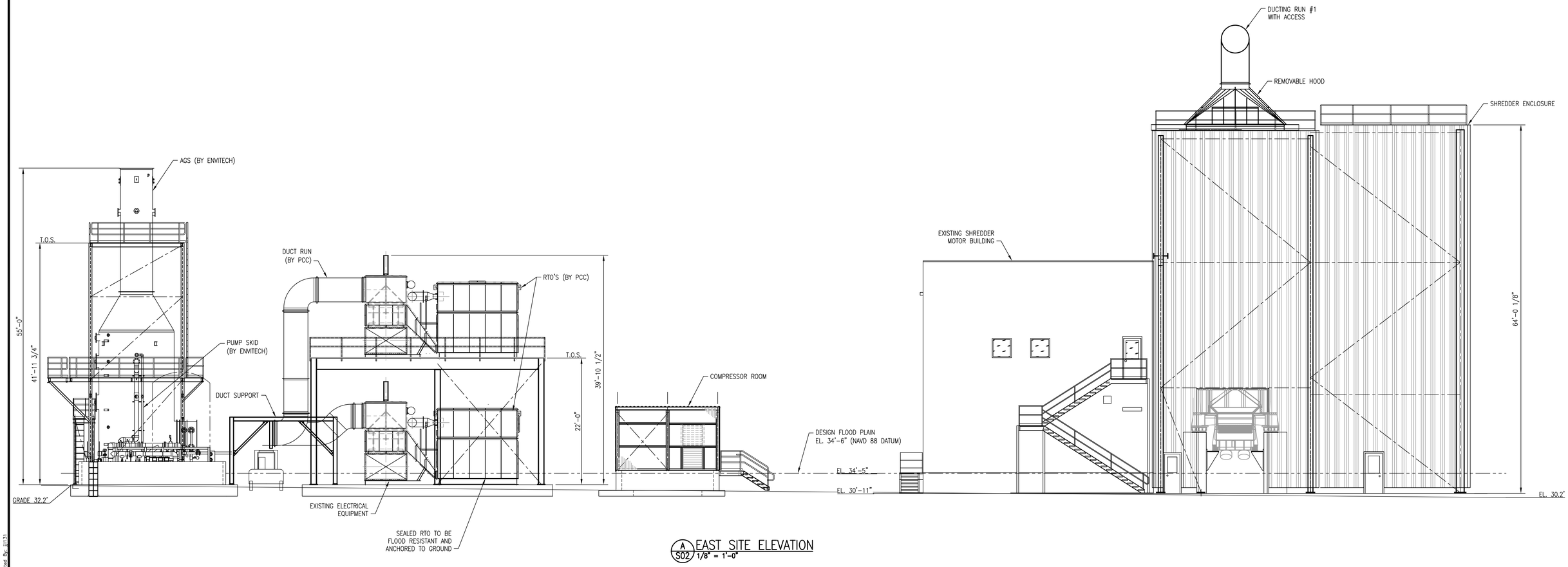

A / S02 EAST SITE ELEVATION
1/8" = 1'-0"

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SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

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1-7-22
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J. LUM	07/14/2021		

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GENERAL ARRANGEMENT – EAST ELEVATION

SCALE	DWG. NO.	REV.
AS NOTED	19-029F-S02	0

A/S03 WEST SITE ELEVATION
1/8" = 1'-0"

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SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWC

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J. LUM	07/14/2021		

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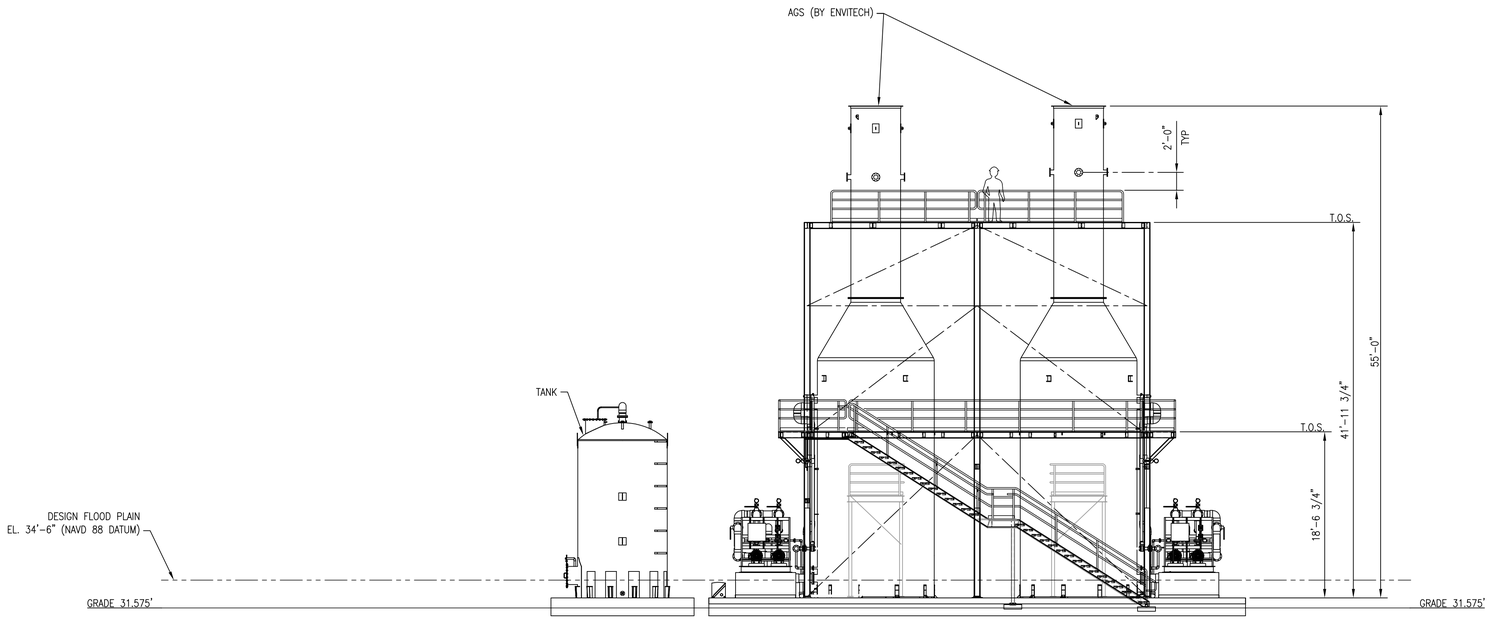
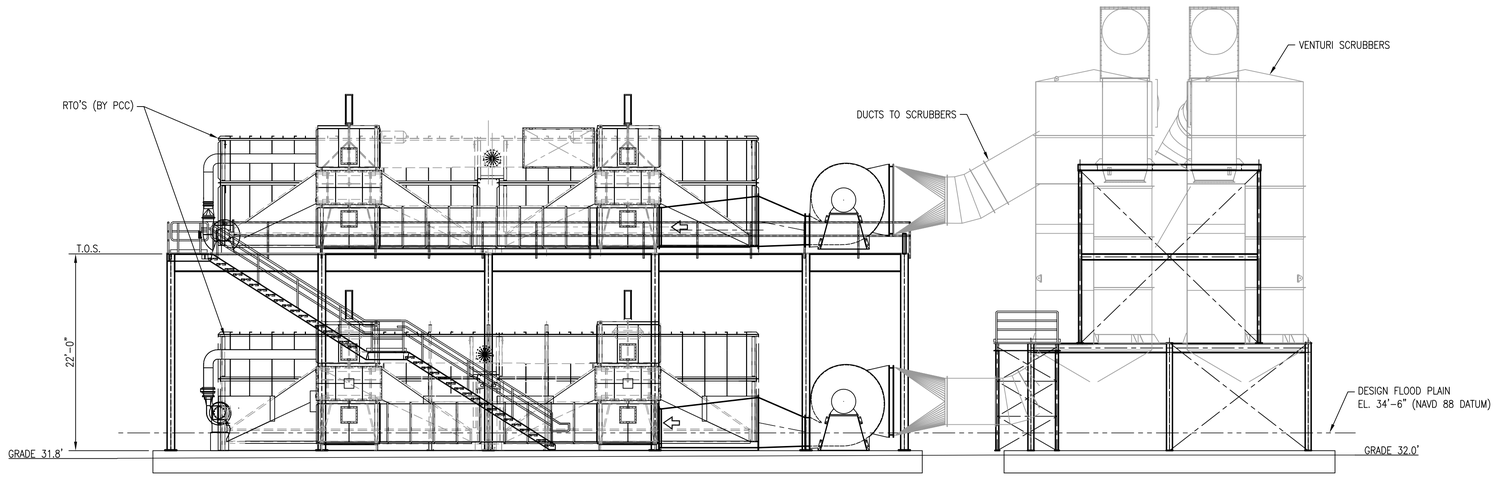
GENERAL ARRANGEMENT – ELEVATIONS

SCALE	DWG. NO.	REV.
AS NOTED	19-029F-S03	0



A S04 NORTH ELEVATION @ AGS & VENTURI SCRUBBER
1/8" = 1'-0"



B S04 SOUTH ELEVATION @ RTO, COMPRESSOR ROOM & PDC
1/8" = 1'-0"

1:1 0.5" 1" 1.5" 2"

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2016 JORDAN WILHELM CHRISTIANSEN 2-11-22
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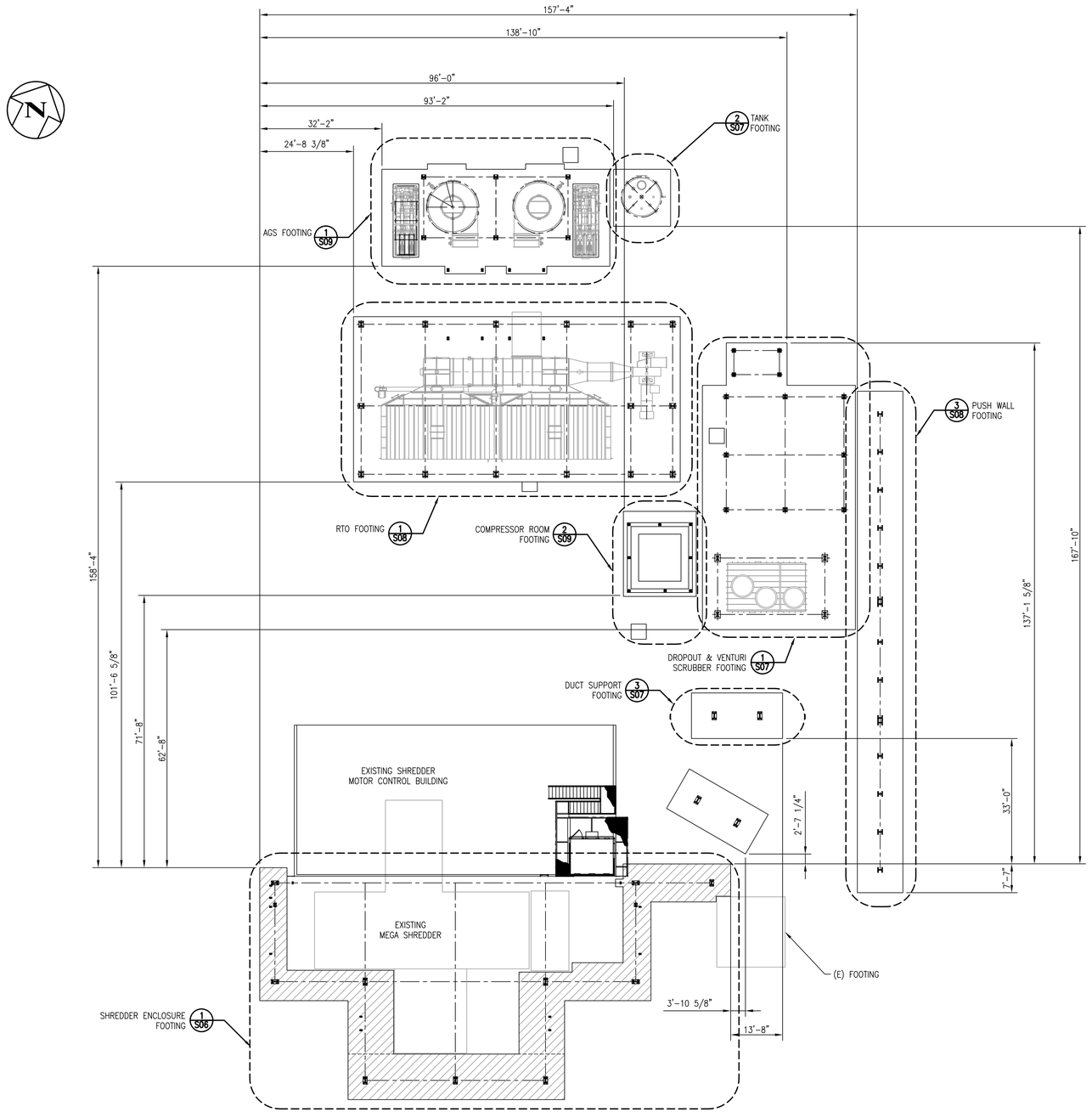
GENERAL ARRANGEMENT – ELEVATIONS

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/14/2021			AS NOTED	19-029F-S04	0



1 S05 PLAN VIEW – FOUNDATION LAYOUT
1/16" = 1'-0"

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SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	02/11/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82405 OREGON SEPT. 13, 2015 JOSHUA WILHELM CHRISTIANSEN 1-11-22
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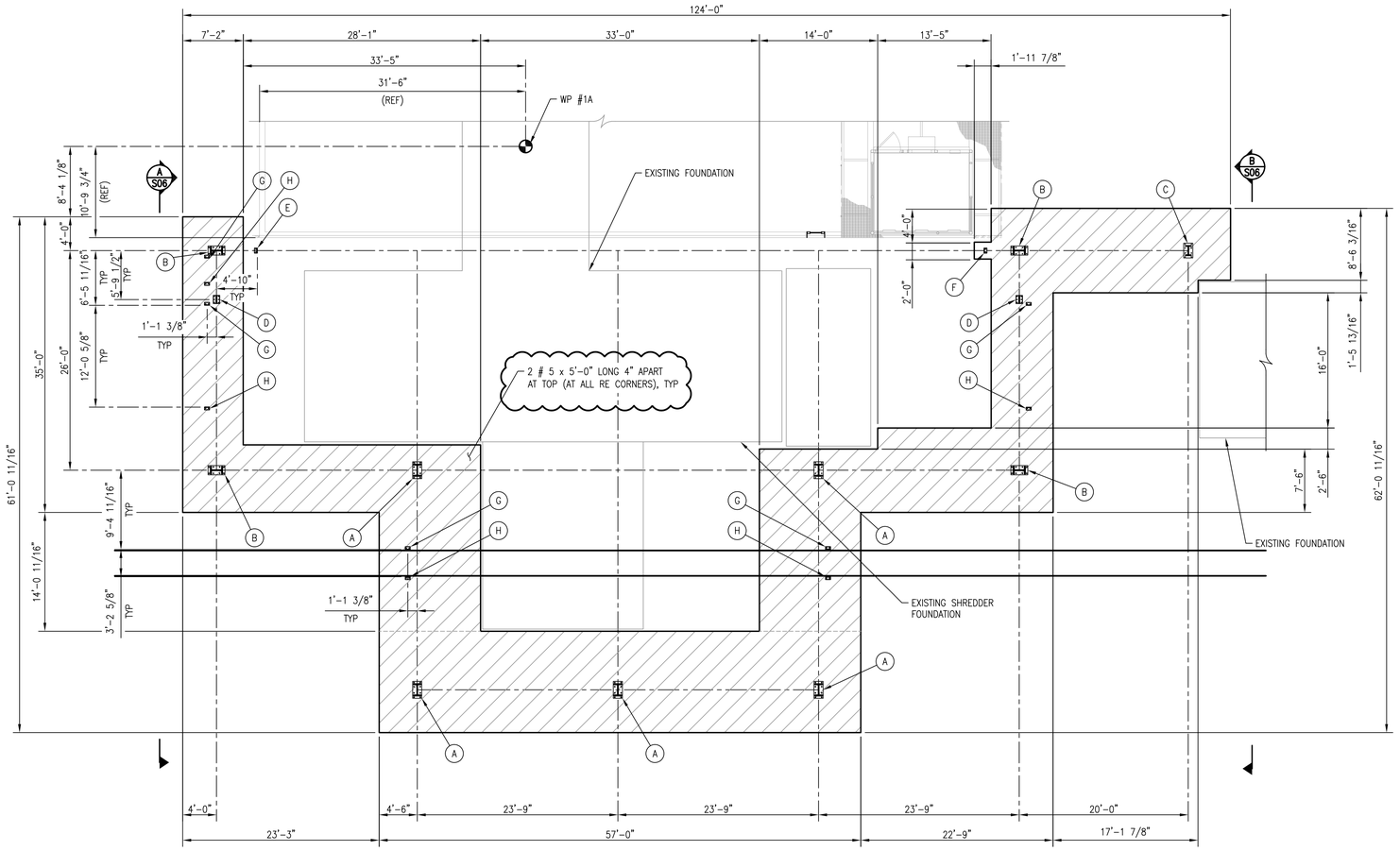
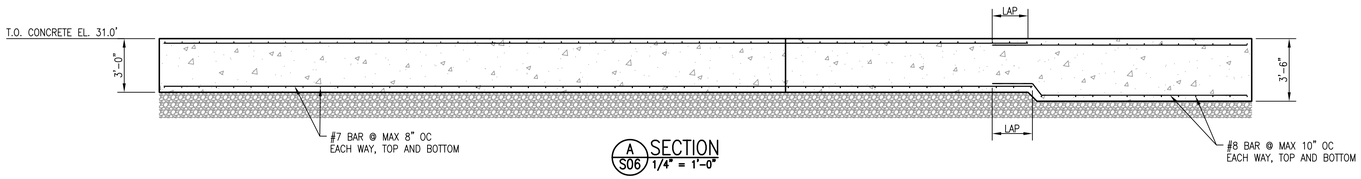
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
NEW FOUNDATION LAYOUT

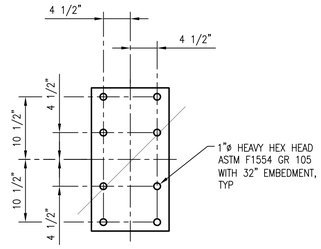
DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/14/2021			AS NOTED	19-029F-S05	0



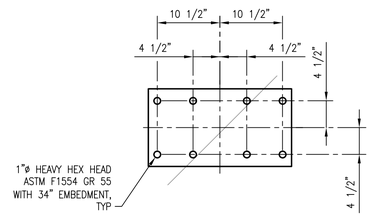
1 S06 PLAN VIEW – SHREDDER ENCLOSURE FOUNDATION
1/8" = 1'-0"



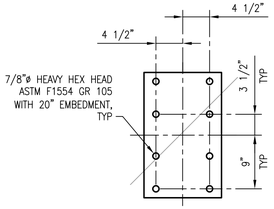
A S06 SECTION
1/4" = 1'-0"



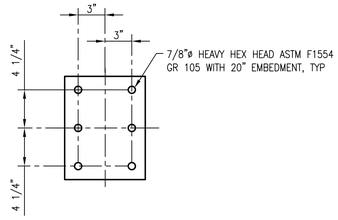
3 S06 ANCHOR PATTERN A
1" = 1'-0"



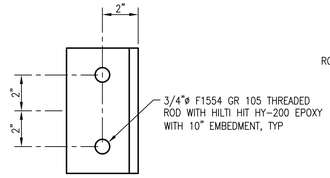
4 S06 ANCHOR PATTERN B
1" = 1'-0"



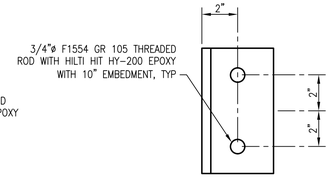
5 S06 ANCHOR PATTERN C
1" = 1'-0"



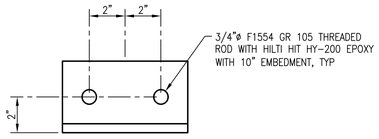
6 S06 ANCHOR PATTERN D
1 1/2" = 1'-0"



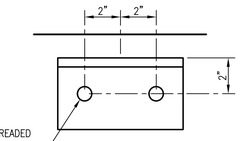
7 S06 ANCHOR PATTERN E
3" = 1'-0"



8 S06 ANCHOR PATTERN F
3" = 1'-0"



9 S06 ANCHOR PATTERN G
3" = 1'-0"



10 S06 ANCHOR PATTERN H
3" = 1'-0"

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82401 OREGON SEPT. 13, 2013 JOSHUA WILHELM CHRISTIANSEN
1-7-22
EXPIRES: 12-31-23

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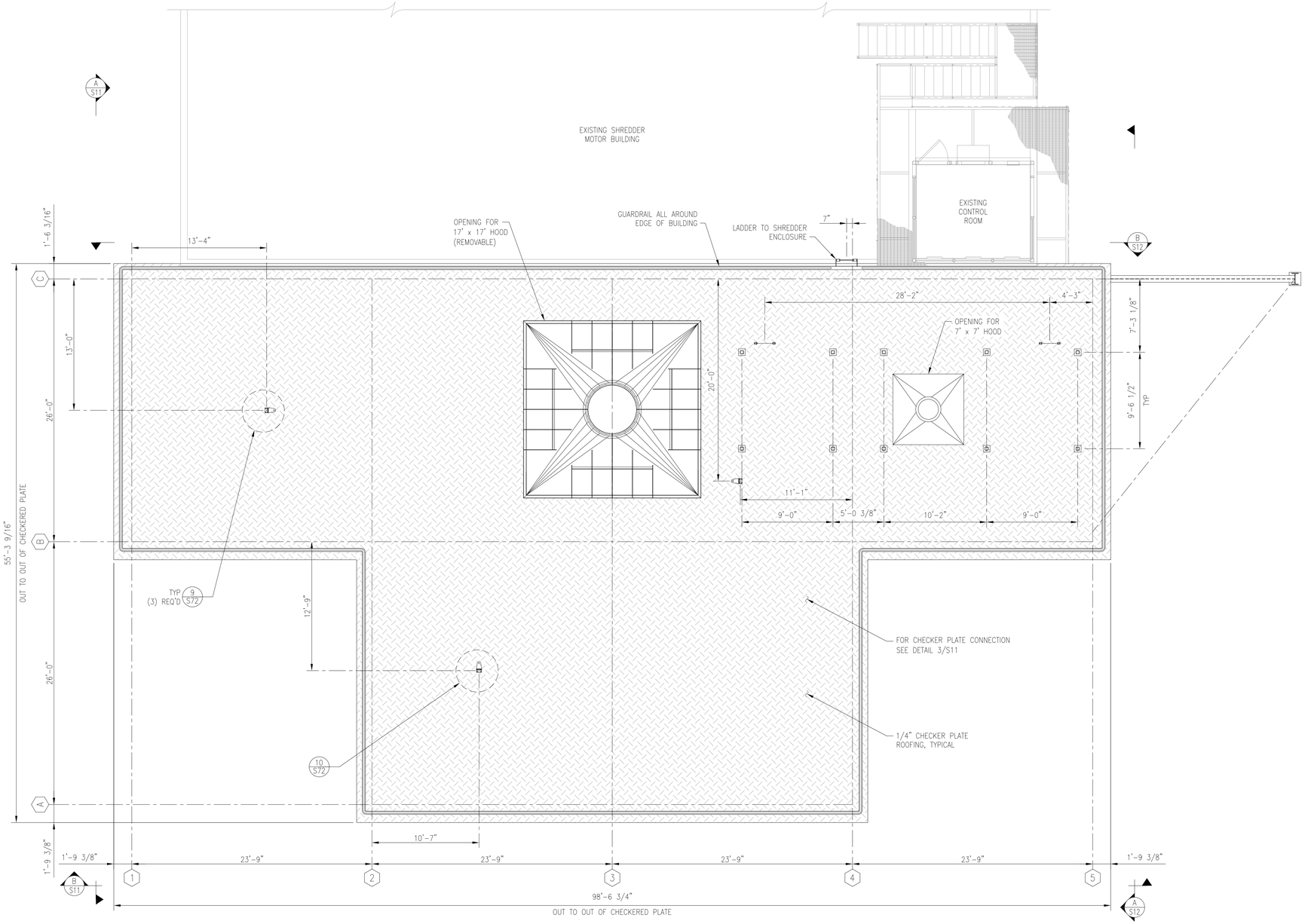
NEW SHREDDER ENCLOSURE AND AIR CONTROL
FOUNDATION DETAILS – SHREDDER ENCLOSURE

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J. LUM	07/14/2021			AS NOTED	19-029F-S06	0



N

1 S10 PLAN VIEW – SHREDDER ENCLOSURE
3/16" = 1'-0"

NOTE:
DUCTING & WALKWAY NOT SHOWN FOR CLARITY. SEE SHEET S17 FOR PLAN @ SECTION.

NOTES:
1. FOR STANDARD CONNECTIONS DETAILS, SEE DRAWING 19-029F-S60 SERIES.
2. FOR GENERAL NOTES AND SPECIFICATIONS, SEE DRAWING 19-029F-G02.

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

REGISTERED PROFESSIONAL ENGINEER — OREGON — JOSHUA WILHELM CHRISTIANSEN — 82402 — SEPT. 13, 2015 — EXPIRES: 12-31-23

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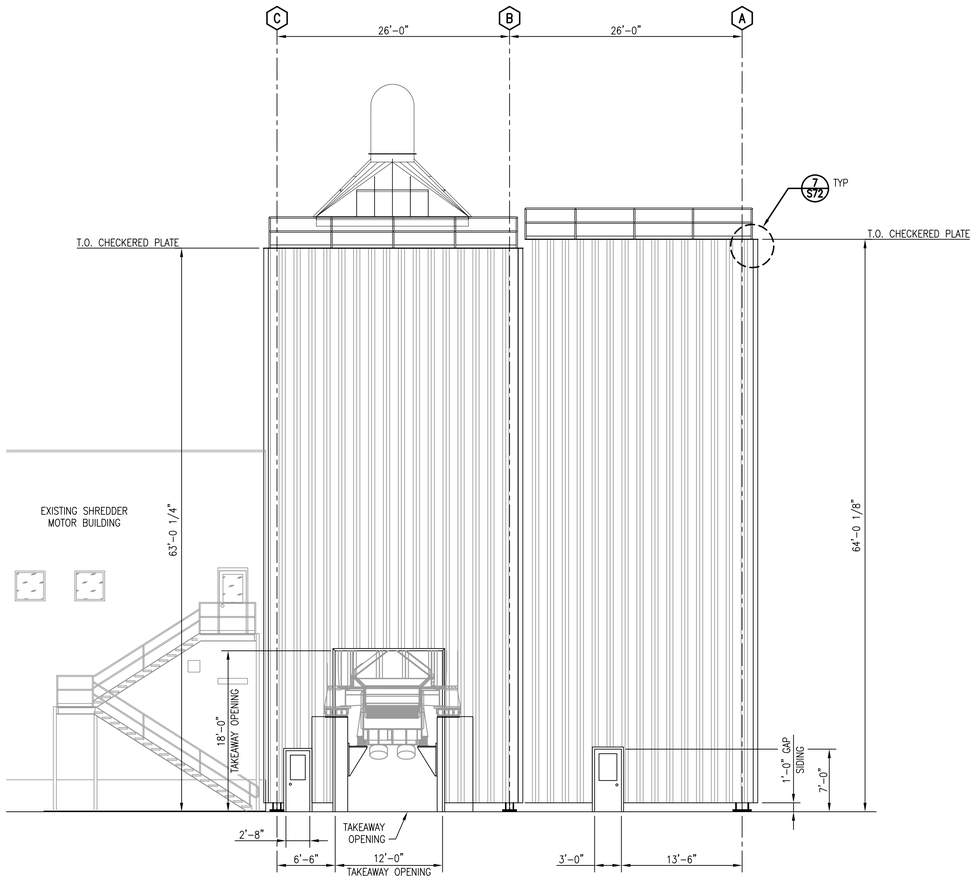
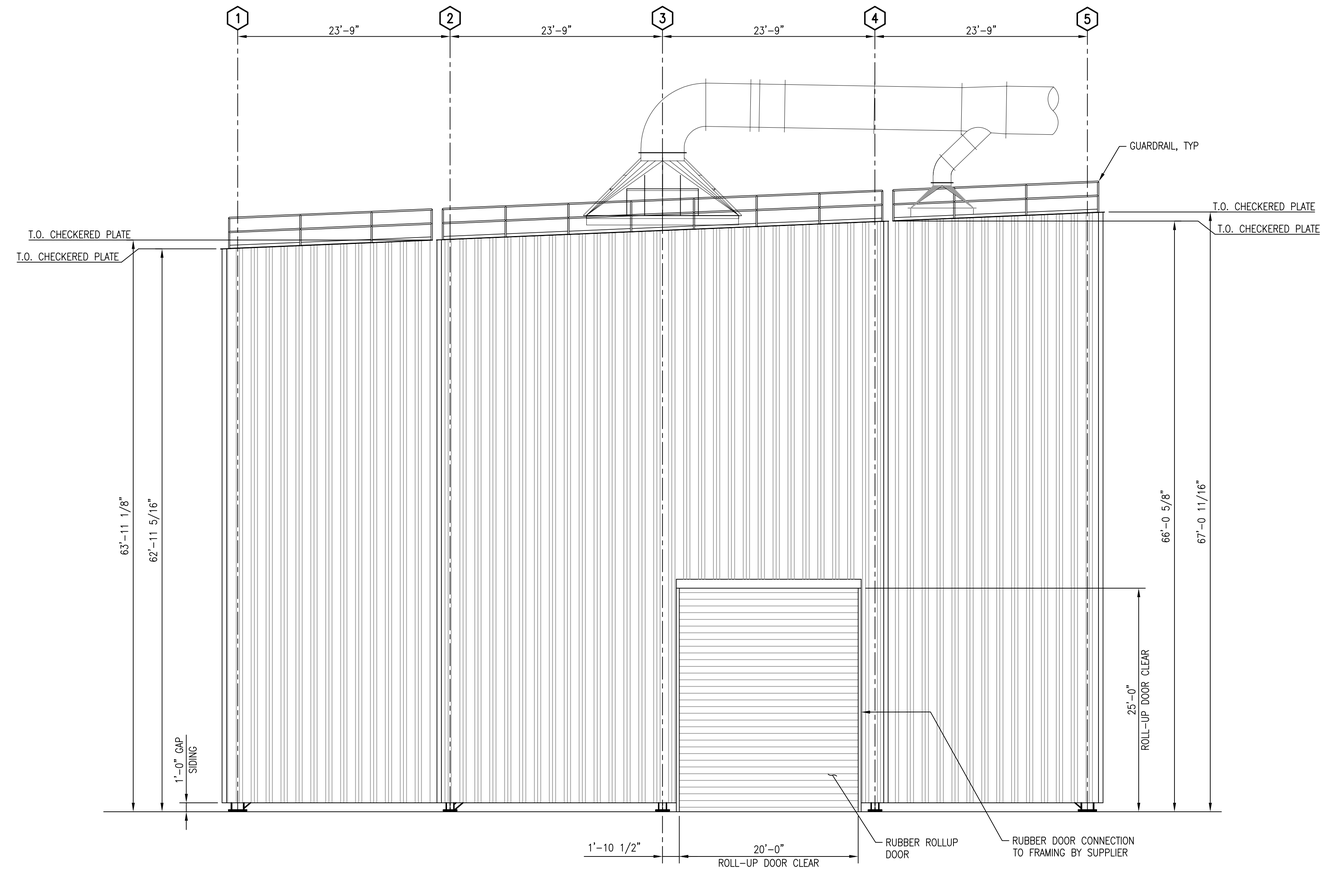
NEW SHREDDER ENCLOSURE AND AIR CONTROL
PLAN VIEW – NEW SCHREDDER ENCLOSURE

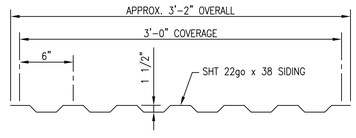
DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	7/27/21			AS NOTED	19-029F-S10	0



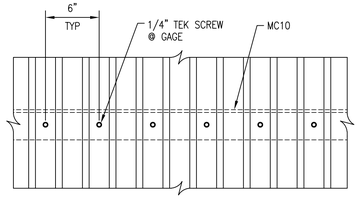
A S11 ELEVATION – WEST END OF BUILDING
1/8" = 1'-0" (LOOKING EAST)



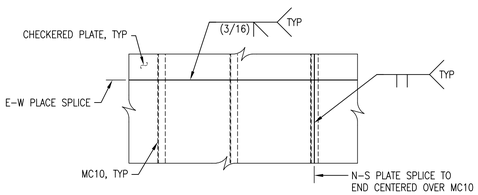
B S11 ELEVATION – SOUTH SIDE OF BUILDING
1/8" = 1'-0" (LOOKING NORTH)



1 S11 TYPICAL SIDING PROFILE
1 1/2" = 1'-0"



2 S11 TYPICAL SIDING FASTENER
1 1/2" = 1'-0"



3 S11 TYPICAL CHECKERED PLATE CONNECTION
3/8" = 1'-0"

NOTES:
1. FOR STANDARD CONNECTIONS DETAILS, SEE DRAWING 19-029F-S60 SERIES.
2. FOR GENERAL NOTES AND SPECIFICATIONS, SEE DRAWING 19-029F-G02.

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWC

REGISTERED PROFESSIONAL ENGINEER
82408
OREGON
SEPT. 13, 2015
JOSHUA WILHELM CHRISTIANSEN
1-7-22
EXPIRES: 12-31-23

Smith Monroe Gray
ENGINEERS, INC.
8625 SW Cascade Ave.
Suite 600
Beaverton, Oregon 97008
Phone: 503.643.8595
Fax: 503.643.8610
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NEW SHREDDER ENCLOSURE AND AIR CONTROL
ELEVATIONS – NEW SCHREDDER ENCLOSURE

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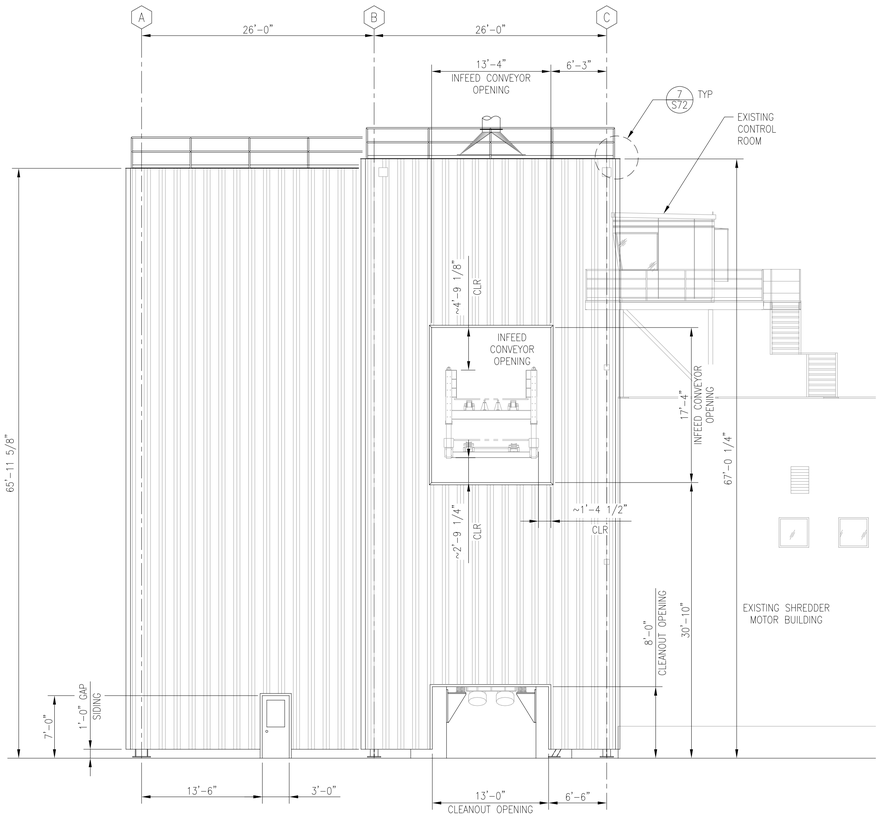
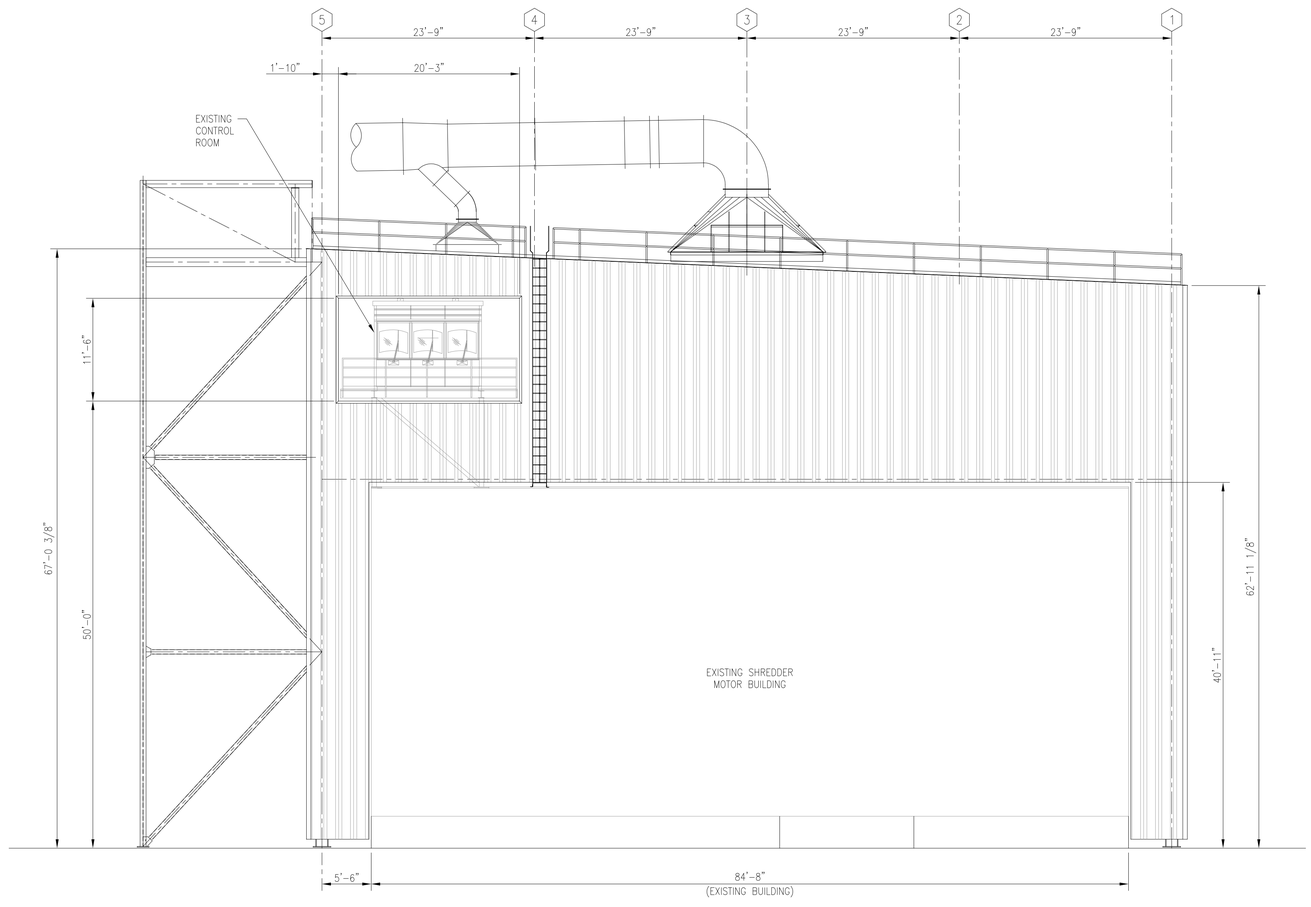
J.D. WALLACE	7/27/21			AS NOTED	19-029F-S11	0



A S12 ELEVATION – EAST SIDE OF BUILDING
1/8" = 1'-0" (LOOKING WEST)



B S12 ELEVATION – NORTH SIDE OF BUILDING
1/8" = 1'-0" (LOOKING SOUTH)

NOTES:
1. FOR STANDARD CONNECTIONS DETAILS, SEE DRAWING 19-029F-S60 SERIES.
2. FOR GENERAL NOTES AND SPECIFICATIONS, SEE DRAWING 19-029F-G02.

1:1 0.5" 1" 1.5" 2"

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR PERMIT	JL	01/17/22	JWG

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82403 OREGON SEPT. 13, 2013 JOSHUA WILHELM CHRISTIANSEN 1-7-22
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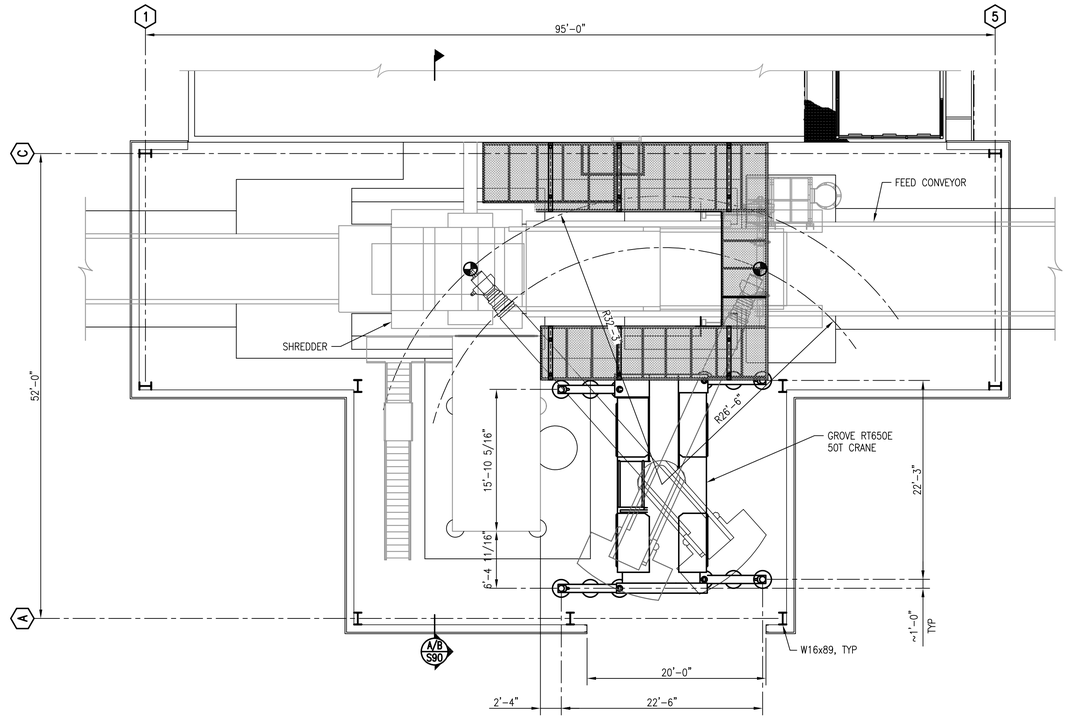
PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
ELEVATIONS – NEW SCHREDDER ENCLOSURE

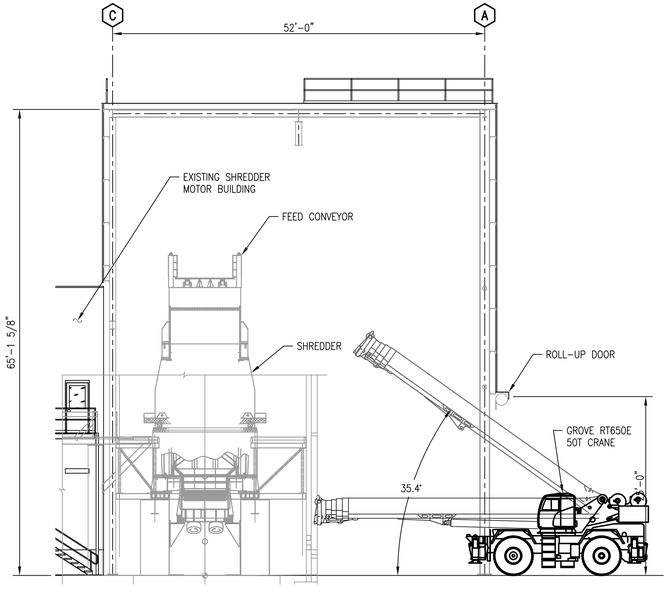
DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	7/27/21			AS NOTED	19-029F-S12	0

FILE: Q:\19\19029 SCHNITZER STEEL INDUSTRIES SHREDDER ENCLOSURES AND AIR CONTROL\PHASE F PORTLAND\DWGS\19029F-S10-01.dwg, S12 Rev0, PLOT 1=1, 12/17/2021 at 8:32:27 AM, Printed by: jill131

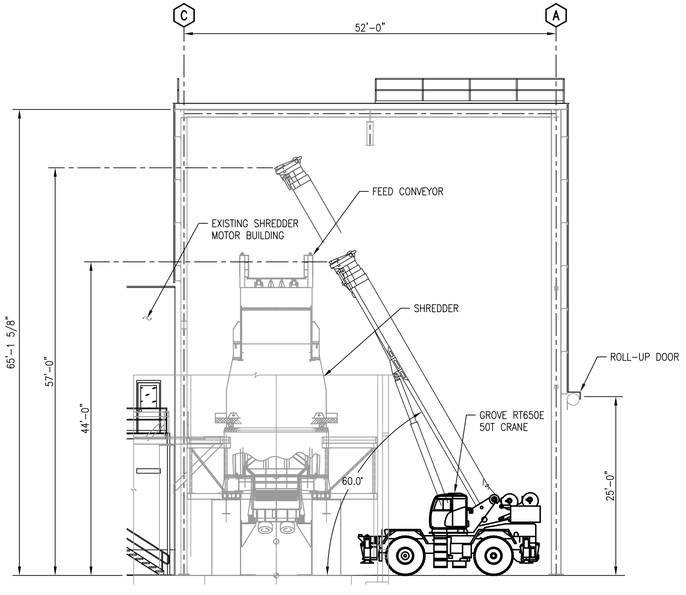


N

1/S90 PLAN VIEW – CRANE ACCESS LAYOUT
1/8" = 1'-0"



A/S90 SECTION – CRANE ACCESS LAYOUT
1" = 10'-0" (LOOKING EAST)



B/S90 SECTION – CRANE ACCESS LAYOUT
1" = 10'-0" (LOOKING EAST)

SYM.	REVISIONS	BY	DATE	CHK'D
0	ISSUED FOR REVIEW	JL	01/17/22	JWC

STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 82402 OREGON SEPT. 13, 2015 JOSHUA WILHELM CHRISTIANSEN
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PORTLAND FACILITY
NEW SHREDDER ENCLOSURE AND AIR CONTROL
NEW SHREDDER ENCLOSURE
CRANE ACCESS LAYOUTS

DRAWN BY	DATE	CHKD BY	DATE	SCALE	DWG. NO.	REV.
J.D. WALLACE	7/28/21			AS NOTED	19-029F-S90	0

1:1 0.5" 1" 1.5" 2"

FILE: Q:\19\19029 SCHNITZER STEEL INDUSTRIES SHREDDER ENCLOSURES AND AIR CONTROL\PHASE F PORTLAND\DWGS\19029F-S90-01.dwg, S90 RevD, PLOT 1=1, 1/14/2022 at 10:32:18 AM, Printed by: jjl131