BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

2024.03.25

EDA NO: 01-01-15187



VICINITY MAP



LOCATION MAP

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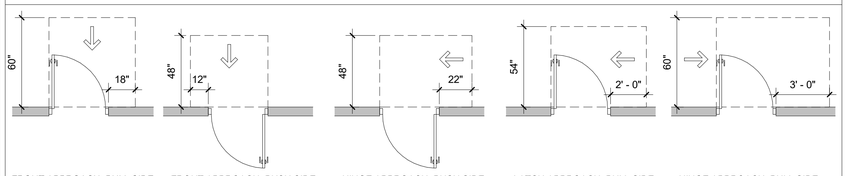
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STANDARD ABBREVIATIONS

@	- AT
ACT	- ACOUSTIC CEILING TILE
ADD'N	- ADDITION
ADD'L	- ADDITIONAL
ADJ	- ADJACENT
AFF	- ABOVE FINISH FLOOR
AL	- ALUMINUM
ALT	- ALTERNATE
APPROX	- APPROXIMATE
AUTO	- AUTOMATIC
BLDG	- BUILDING
BRG	- BEARING
BSMT	- BASEMENT
BTM	- BOTTOM
BTW'N	- BETWEEN
CAB	- CABINET
CB	- CHALK BOARD
CG	- CORNER GUARD
CFS	- CLEAR FLOOR SPACE
CJ	- CONTROL JOINT
CL	- CENTER LINE
CLG	- CEILING
CLR	- CLEAR
CMU	- CONCRETE MASONRY UNIT
CO	- CLEAN OUT
COL	- COLUMN
CONC	- CONCRETE
CONT	- CONTINUOUS
CPT	- CARPET
CT	- CERAMIC TILE
DF	- DRINKING FOUNTAIN
DIA	- DIAMETER
DIM	- DIMENSION
DIR	- DIRECTOR
DN	- DOWN
DR	- DOCTOR
DS	- DOWNSPOUT
DTL	- DETAIL
DWG'S	- DRAWINGS
EA	- EACH
EJ	- EXPANSION JOINT
EL	- ELEVATION
ELEC	- ELECTRIC / ELECTRICAL
ELEV	- ELEVATION
EPDM	- ETHYLENE PROPYLENE DIENE MONOMER
EQ	- EQUAL
EX	- EXISTING
EXIST	- EXISTING
EXP	- EXPANSION
EXT	- EXTERIOR
FD	- FLOOR DRAIN
FE	- FIRE EXTINGUISHER
FEC	- FIRE EXTINGUISHER CABINET
FFD	- FLUSHING FLOOR DRAIN
FFE	- FINISH FLOOR ELEVATION
FIN	- FINISH
FLR	- FLOOR
FTG	- FOOTING
GA	- GAUGE
GALV	- GALVANIZED
GC	- GENERAL CONTRACTOR
GYP BD	- GYPSUM WALL BOARD
HB	- HOSE BIB
HDW	- HARDWARE
HDWRE	- HARDWARE
HGT	- HEIGHT
HM	- HOLLOW METAL
HORIZ	- HORIZONTAL
HVAC	- HEATING / VENTILATING / AIR CONDITIONING
ID	- INSIDE DIAMETER
IN	- INCH
INSUL	- INSULATION OR INSULATING
INT	- INTERIOR
INV	- INVERT
JC	- JANITORS CLOSET
L	- LONG
LAM	- LAMINATE(D)
LAV	- LAVATORY
LVL	- LEVEL
MAX	- MAXIMUM
MECH	- MECHANICAL
MFG	- MANUFACTURER
MIN	- MINIMUM
MISC	- MISCELLANEOUS
MO	- MASONRY OPENING
MTL	- METAL
NIC	- NOT IN CONTRACT
NO	- NUMBER
NOM	- NOMINAL
NTS	- NOT TO SCALE
OC	- ON CENTER
OD	- OUTSIDE DIAMETER
OFC	- OFFICE
OPP	- OPPOSITE
OPP HD	- OPPOSITE HAND
OVHD	- OVERHEAD
OS	- OVERFLOW SCUPPER
PC	- PIECE
PED	- PEDIATRICIAN
PLAM	- PLASTIC LAMINATE
PM	- PROJECTOR MOUNT
PS	- PROJECTOR SCREEN
PT	- PORCELAIN TILE
PVC	- POLYVINYL CHLORIDE
QT	- QUARRY TILE
QTY	- QUANTITY
R OR RAD	- RADIUS
RD	- ROOF DRAIN
REF	- REFERENCE
REINF	- REINFORCING
REQ'D	- REQUIRED
REV	- REVERSED
RFG	- ROOFING
RH	- RIGHT HAND
RLC	- RECESSED LOCKABLE CABINET
RM	- ROOM
RO	- ROUGH OPENING
SCHED	- SCHEDULE
SF	- SQUARE FOOT
SHT	- SHEET
SI	- SQUARE INCH
SIM	- SIMILAR
SPEC	- SPECIFICATION(S)
SQ	- SQUARE
SS	- STAINLESS STEEL
ST	- STORAGE
STD	- STANDARD
STRG	- STORAGE
STRUCT	- STRUCTURAL OR STRUCTURE
SUSP	- SUSPEND(ED)
SYM	- SYMMETRICAL
TB	- TACK BOARD
TS	- TACK STRIP
TYP	- TYPICAL
UNO	- UNLESS NOTED OTHERWISE
VCT	- VINYL COMPOSITION TILE
VERT	- VERTICAL
VTR	- VENT THROUGH ROOF
W	- WIDE OR WIDTH
W/	- WITH
W/O	- WITHOUT
WD	- WOOD
WWF	- WELDED WIRE FABRIC

DOOR MANEUVERING CLEARANCES

ALL DOORS TO COMPLY AS REQUIRED



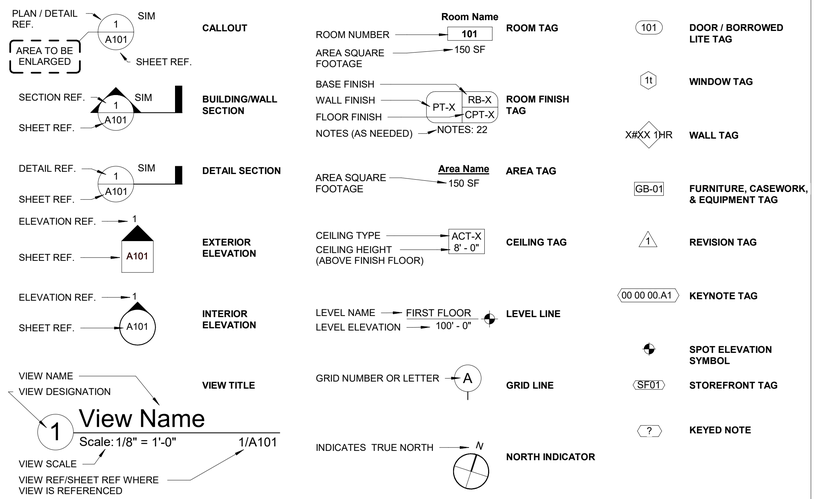
FRONT APPROACH, PULL SIDE

FRONT APPROACH, PUSH SIDE (DOOR PROVIDED WITH CLOSER AND LATCH)

HINGE APPROACH, PUSH SIDE (DOOR PROVIDED WITH CLOSER AND LATCH)

LATCH APPROACH, PULL SIDE (DOOR PROVIDED WITH CLOSER AND LATCH)

HINGE APPROACH, PULL SIDE (DOOR PROVIDED WITH CLOSER AND LATCH)



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GENERAL CONSTRUCTION NOTES

1. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTOR SHALL VISIT THE JOB SITE TO REVIEW THE SCOPE OF WORK AND CONFIRM THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE, UNLESS OTHERWISE NOTED.
3. FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO AFFECT ALL INSTALLATIONS INDICATED ON THE DRAWINGS, INCLUDING DETAILS, AND LABOR NECESSARY FOR SUCCESSFUL INSTALLATION OF THE WORK.
4. INSTALL ALL EQUIPMENT AND MATERIALS IN STRICT ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
5. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS.
6. WORK SHOWN OR REFERRED TO ON ANY DRAWING SHALL BE PROVIDED AS THOUGH SHOWN ON ALL RELATED DRAWINGS.
7. EVERY EFFORT HAS BEEN MADE TO PROVIDE THE COMPLETE SCOPE OF WORK. MINOR OMISSIONS AND DISCREPANCIES IN THE DRAWINGS AND SPECIFICATIONS SHALL NOT DIMINISH THE EXPECTATION OF A COMPLETED FACILITY AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. IN THE EVENT OF DISCREPANCIES, PRICE THE MORE EXPENSIVE OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.
8. GENERAL CONTRACTOR SHALL PROVIDE AT THE JOB SITE A FULL SET OF CONSTRUCTION DOCUMENTS ANNOTATED WITH THE LATEST REVISIONS AND CLARIFICATIONS FOR THE USE BY ALL.

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BRUNSWICK COUNTY IDA

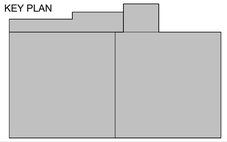
BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN



SCALE

As indicated

No.	Description	Date
1	REVIEW COMMENTS	2022.01.14

REVISIONS

DRAWN BY	WL
APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

TITLE

INDEX

PROJECT NO. 50139338

G-101

SHEET NO.

3/28/2024 3:36:45 PM

General Notes

1. EXISTING SITE FEATURES ARE SHOWN GRAPHICALLY PER "I-95 BUSINESS PARK PHASE II" PLANS DESIGNED BY DEWBERRY & DAVIS, INC. AND DATED DECEMBER 04, 2008. EXISTING TOPOGRAPHY IS SHOWN GRAPHICALLY PER SURVEY CONDUCTED BY JAMES BRADLEY DATED 11/30/2018.

2. FIELD VERIFY VERTICAL AND HORIZONTAL LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. NOTIFY THE UTILITY COMPANIES 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY. CONTACT MISS UTILITY (811) 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

3. NOTIFY THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO ANY CONSTRUCTION ON STREET RIGHT-OF-WAYS (PHONE NO. 804-524-6000).

4. WHEN WORKING ADJACENT TO EXISTING STRUCTURES, POLES, ETC., CONTRACTOR SHALL USE WHATEVER METHODS THAT ARE NECESSARY TO PROTECT STRUCTURES FROM DAMAGE. REPLACEMENT OF DAMAGED STRUCTURES SHALL BE AT THE CONTRACTOR'S EXPENSE.

5. EROSION AND SEDIMENT CONTROL NOTES:
   A. ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL CONFORM TO THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE VDOT ROAD AND BRIDGE STANDARDS MANUAL.
   B. CONTRACTOR SHALL INSTALL SILT BARRIERS, INLET PROTECTION, CONSTRUCTION ENTRANCES AT POINTS OF INGRESS AND EGRESS TO PUBLIC RIGHT-OF-WAY, STABILIZE DISTURBED AREAS, AND PROVIDE OTHER MEASURES REQUIRED AS SHOWN ON THE DRAWINGS AND SPECIFIED.
   C. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT TRACKING ON EXISTING PAVEMENTS.
   D. CONTRACTOR SHALL INSTALL GRAVEL CONSTRUCTION ROAD STABILIZATION OF ADEQUATE AREA TO ACCOMMODATE CONSTRUCTION VEHICLE PARKING, MATERIAL STORAGE, ETC. AT A LOCATION CONVENIENT TO THE INDIVIDUAL CONSTRUCTION AREAS AND CONSISTENT WITH THE CONSTRUCTION SEQUENCES.
   E. THE LOCATIONS OF SEDIMENT AND EROSION CONTROL MEASURES SHOWN ON PLANS ARE APPROXIMATE, THE EXACT LOCATION MUST BE DETERMINED IN THE FIELD.
   F. A ROCK CHECK DAM SHALL BE INSTALLED BELOW THE DISTURBED AREA WITHIN DITCH LINES AND/OR WHERE DITCH LINES OUTLET TO UNDISTURBED AREAS.
   G. SILT FENCE SHALL PROVIDED BELOW DISTURBED AREAS FOR ALL LOCATIONS WHERE DISTURBED AREA DRAINS TOWARD PROPERTY OWNER BY OTHERS AND/OR TOWARD STREAMS.

5. ALL DISTURBED AREAS ARE TO BE MULCHED AND SEEDED PER THE SPECIFICATIONS WITHIN 7 DAYS OF ACHIEVING FINAL GRADES.

6. IF CONSTRUCTION SCHEDULE DOES NOT ALLOW PERMANENT SEEDING IN THE DATES SHOWN IN THE SPECIFICATIONS OR IF CONSTRUCTION IS TEMPORARILY HALTED FOR A PERIOD OF 21 DAYS OR LONGER DUE TO WEATHER, WINTER SHUT DOWN, ETC., CONTRACTOR SHALL INSTALL TEMPORARY SEEDING WITHIN 7 DAYS. WHEN PERMANENT SEEDING DATES CAN BE ACCOMMODATED, THE CONTRACTOR SHALL RESEED WITH PERMANENT SEEDING MIXTURES. ALL SEEDED AREAS, WHICH DO NOT PRODUCE A THICK, HEALTHY, DESIRABLE VEGETATIVE COVER, ARE TO BE RESEEDED AND MULCHED AS NECESSARY UNTIL ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. PRIOR TO RESEEDING WITH PERMANENT VEGETATION, ALL ESTABLISHED TEMPORARY VEGETATION IS TO BE REMOVED.

7. ANY CONSTRUCTION WITHIN THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S RIGHTS-OF-WAY ARE TO BE IN ACCORDANCE WITH THE STATE'S STANDARDS AND SPECIFICATIONS REGARDING MATERIALS, INSTALLATION, AND TESTING, UNLESS NOTED OTHERWISE IN THE CONTRACT DRAWINGS AND TECHNICAL SPECIFICATIONS, EXCEPT THE METHOD OF PAYMENT WHICH WILL BE AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS AND CONTRACT DOCUMENTS. ANY CONSTRUCTION WITHIN THE VDOT RIGHTS-OF-WAYS AND AT ENTRANCE TO VDOT RIGHT-OF-WAYS ARE TO BE SIGNED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL STANDARDS AND GUIDELINE.

8. TOPSOIL IS TO BE STOCKPILED AND RE-SPREAD OVER DISTURBED AREAS TO BE SEEDED PER THE TECHNICAL SPECIFICATIONS. STOCKPILES SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AND SEDIMENT AND EROSION CONTROLS DEVICES/MEASURES SHALL BE INSTALLED AS NECESSARY. THESE STOCKPILES ARE TO BE LOCATED IN AREAS THAT MINIMIZE DISTURBANCE TO CONSTRUCTION OPERATIONS. ANY OFF-SITE LAND DISTURBING ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING DOCUMENTATION OF THE APPROVED EROSION SEDIMENT CONTROL PLAN FOR EACH OF THESE SITES.

9. VERTICAL CONTROL FOR THIS PROJECT IS REFERENCED TO VIRGINIA STATE PLANE GRID COORDINATES (SOUTH ZONE) US SURVEY FEET.
   HORIZONTAL: NAD83 (CORS) BLKV,DOBS,ASUB
   VERTICAL: NAVD88
   AVERAGE COMBINED FACTOR: GROUND TO GRID 0.999987

10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES TO BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM ADMINISTRATOR.

11. ALL DISTURBED PAVEMENT AND GRAVEL DRIVES ARE TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.

12. WHEN CONSTRUCTION DISTURBS EXISTING DITCH LINES, THE RESTORED DITCH LINES SHALL BE STABILIZED WITH EXCELSIOR MAT OR SOD FOR EROSION CONTROL.

13. DRIVEWAYS, FENCES, MAILBOXES, ROAD SIGNS, STEPS, SIDEWALKS, ETC., THAT INTERFERE WITH CONSTRUCTION ARE TO BE RESTORED TO ORIGINAL CONDITION.

14. PAVED DRIVEWAYS, PARKING LOTS, AND PRIVATE ROADS SHALL BE OPEN-CUT UNLESS SHOWN OTHERWISE.

15. CONTRACTOR SHALL NOT DISTURB ANY TREES, SHRUBS, OR LANDSCAPING OUTSIDE THE CONSTRUCTION LIMITS. CONTRACTOR SHALL USE EXTREME CAUTION TO PREVENT DISTURBANCE TO THE TREES, SHRUBS, ETC., WHICH ARE IN THE CONSTRUCTION LIMITS AND NOTED TO REMAIN.

16. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO VERIFY LOCATION OF AND PREVENT DISTURBANCE OF ANY EXISTING UTILITIES IN WORK AREA, AND PROVIDE IMMEDIATE TEMPORARY SERVICE TO ANY DAMAGED UTILITIES AT THE EXPENSE OF THE CONTRACTOR. ANY EXISTING UTILITIES NOT LOCATED PRIOR TO BEGINNING CONSTRUCTION THAT ARE DAMAGED DURING CONSTRUCTION OR WHICH CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE REPAIRED OR RELOCATED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

17. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN, POSTAL & VEHICULAR ACCESS TO & FROM ALL DWELLINGS & BUSINESSES DURING CONSTRUCTION.

VA E&S Minimum Standards

1. SOIL STABILIZATION: PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS, BUT LESS THAN ONE YEAR. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

2. SOIL STOCKPILE STABILIZATION: DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

3. PERMANENT STABILIZATION: A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

4. SEDIMENT BASINS AND TRAPS: SEDIMENT BASINS, SEDIMENT TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION OF EARTHEN STRUCTURES: STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT TRAPS AND SEDIMENT BASINS: SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
   a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
   b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

7. CUT AND FILL SLOPES DESIGN & CONSTRUCTION: CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

8. CONCENTRATED RUNOFF DOWN SLOPES: CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.

9. SLOPE MAINTENANCE: WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

10. STORM SEWER INLET PROTECTION: ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

11. STORMWATER CONVEYANCE PROTECTION: BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

12. WORK IN LIVE WATERCOURSE: WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

13. CROSSING LIVE WATERCOURSE: WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

14. REGULATION OF WATERCOURSE CROSSING: ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

15. STABILIZATION OF WATERCOURSE: THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

16. UNDERGROUND UTILITY LINE INSTALLATION: UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
   a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
   b. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
   c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
   d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
   e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
   f. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.

17. VEHICULAR SEDIMENT TRACKING: WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

18. REMOVAL OF TEMPORARY MEASURES: ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

19. STORMWATER MANAGEMENT: PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:
   a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
   b. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
   i. THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
   ii. (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
   (B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
   (C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
   c. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
   i. IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS; OR
   ii. IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
   iii. DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
   iv. PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
   d. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
   e. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
   f. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
   g. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
   h. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
   i. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.

j. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.

k. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.

l. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO
   i. DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS;
   ii. DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND
   iii. REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62.1-44.15:54 OR 62.1-44.15:65 OF THE ACT.

m. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATIONS.

n. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF SUBDIVISION 19 OF THIS SUBSECTION.

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BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
SHAWN R. HARDEN
Lic. No. 036976
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
APPROVED BY	SRH
CHECKED BY	MAT
DATE	January 14, 2022

TITLE

GENERAL NOTES

PROJECT NO. 50139338

C-001

SHEET NO.

DEMOLITION NOTES:

1. ALL WORK TO BE ACCOMPLISHED IN STRICT ACCORDANCE WITH ALL LOCAL, CITY, OR STATE ORDINANCES.
2. WITHIN THE SUBJECT PROPERTY, THE INTENT IS TO HAVE A CLEAN, CLEAR SITE, FREE OF ALL EXISTING ITEMS NOTED TO BE REMOVED IN ORDER TO PERMIT THE CONSTRUCTION OF THE NEW PROJECT.
3. BACKFILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION WORK TO MEET THE REQUIREMENTS FOR FILL OUTLINED IN THE TECHNICAL SPECIFICATIONS.
4. CONTRACTOR SHALL USE ALL EXISTING GRAVEL SHOWN TO BE REMOVED AND USE AS FILL MATERIAL.
5. UTILITIES NOT SHOWN MAY EXIST. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES AND NOTIFY OWNER AND ENGINEER IMMEDIATELY OF ANY CONFLICTS.

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GRAPHIC SCALE 1"=50'

50 0 25 50 100

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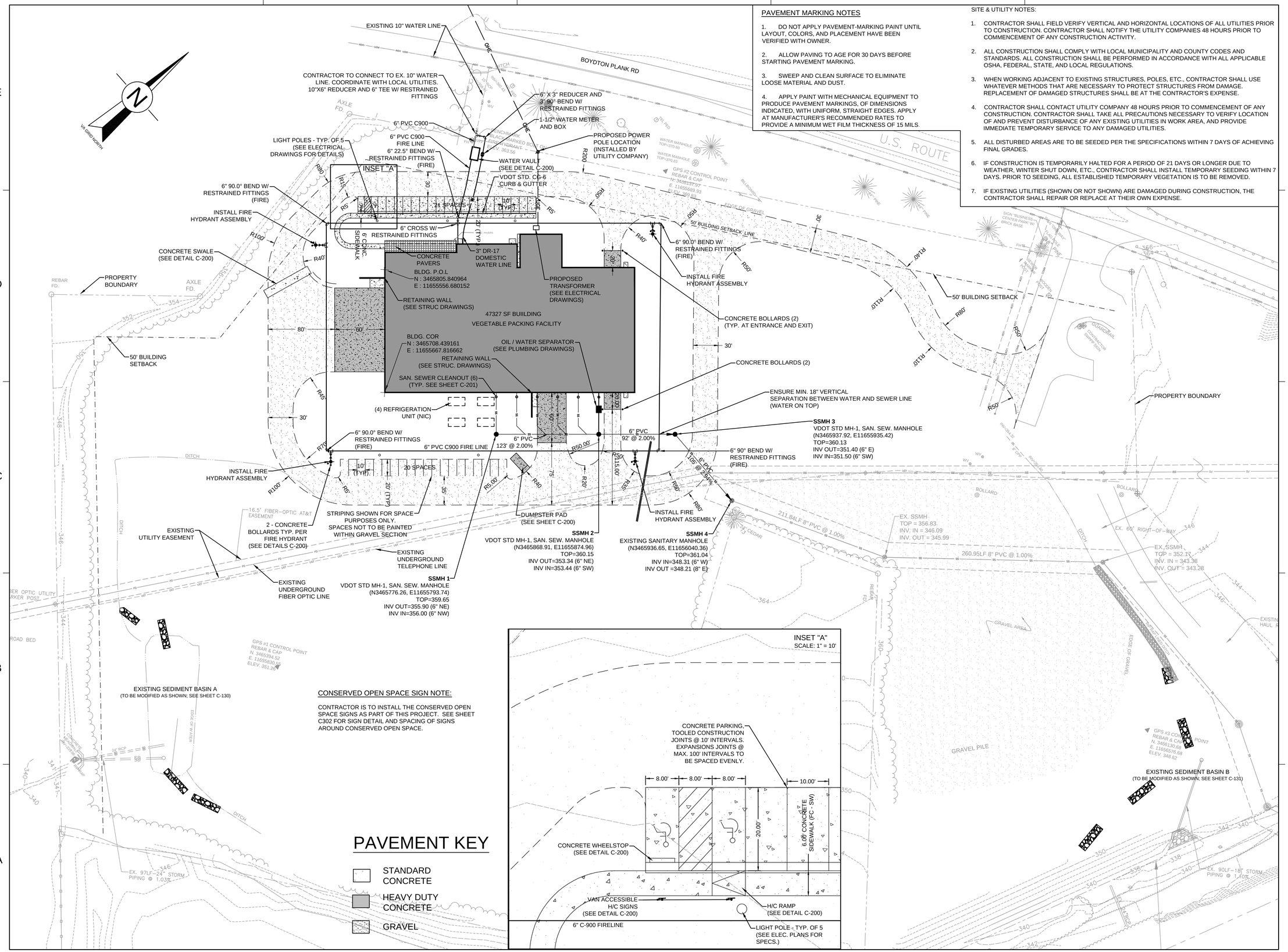
TITLE

EXISTING CONDITIONS & DEMOLITION PLAN

PROJECT NO. 50139338

C-100

SHEET NO.



PAVEMENT MARKING NOTES

1. DO NOT APPLY PAVEMENT-MARKING PAINT UNTIL LAYOUT, COLORS, AND PLACEMENT HAVE BEEN VERIFIED WITH OWNER.
2. ALLOW PAVING TO AGE FOR 30 DAYS BEFORE STARTING PAVEMENT MARKING.
3. SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST.
4. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS, OF DIMENSIONS INDICATED, WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS.

SITE & UTILITY NOTES:

1. CONTRACTOR SHALL FIELD VERIFY VERTICAL AND HORIZONTAL LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY.
2. ALL CONSTRUCTION SHALL COMPLY WITH LOCAL MUNICIPALITY AND COUNTY CODES AND STANDARDS. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS.
3. WHEN WORKING ADJACENT TO EXISTING STRUCTURES, POLES, ETC., CONTRACTOR SHALL USE WHATEVER METHODS THAT ARE NECESSARY TO PROTECT STRUCTURES FROM DAMAGE. REPLACEMENT OF DAMAGED STRUCTURES SHALL BE AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR SHALL CONTACT UTILITY COMPANY 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO VERIFY LOCATION OF AND PREVENT DISTURBANCE OF ANY EXISTING UTILITIES IN WORK AREA, AND PROVIDE IMMEDIATE TEMPORARY SERVICE TO ANY DAMAGED UTILITIES.
5. ALL DISTURBED AREAS ARE TO BE SEEDED PER THE SPECIFICATIONS WITHIN 7 DAYS OF ACHIEVING FINAL GRADES.
6. IF CONSTRUCTION IS TEMPORARILY HALTED FOR A PERIOD OF 21 DAYS OR LONGER DUE TO WEATHER, WINTER SHUT DOWN, ETC., CONTRACTOR SHALL INSTALL TEMPORARY SEEDING WITHIN 7 DAYS. PRIOR TO SEEDING, ALL ESTABLISHED TEMPORARY VEGETATION IS TO BE REMOVED.
7. IF EXISTING UTILITIES (SHOWN OR NOT SHOWN) ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR OR REPLACE AT THEIR OWN EXPENSE.

CONSERVED OPEN SPACE SIGN NOTE:

CONTRACTOR IS TO INSTALL THE CONSERVED OPEN SPACE SIGNS AS PART OF THIS PROJECT. SEE SHEET C302 FOR SIGN DETAIL AND SPACING OF SIGNS AROUND CONSERVED OPEN SPACE.

PAVEMENT KEY

- STANDARD CONCRETE
- HEAVY DUTY CONCRETE
- GRAVEL

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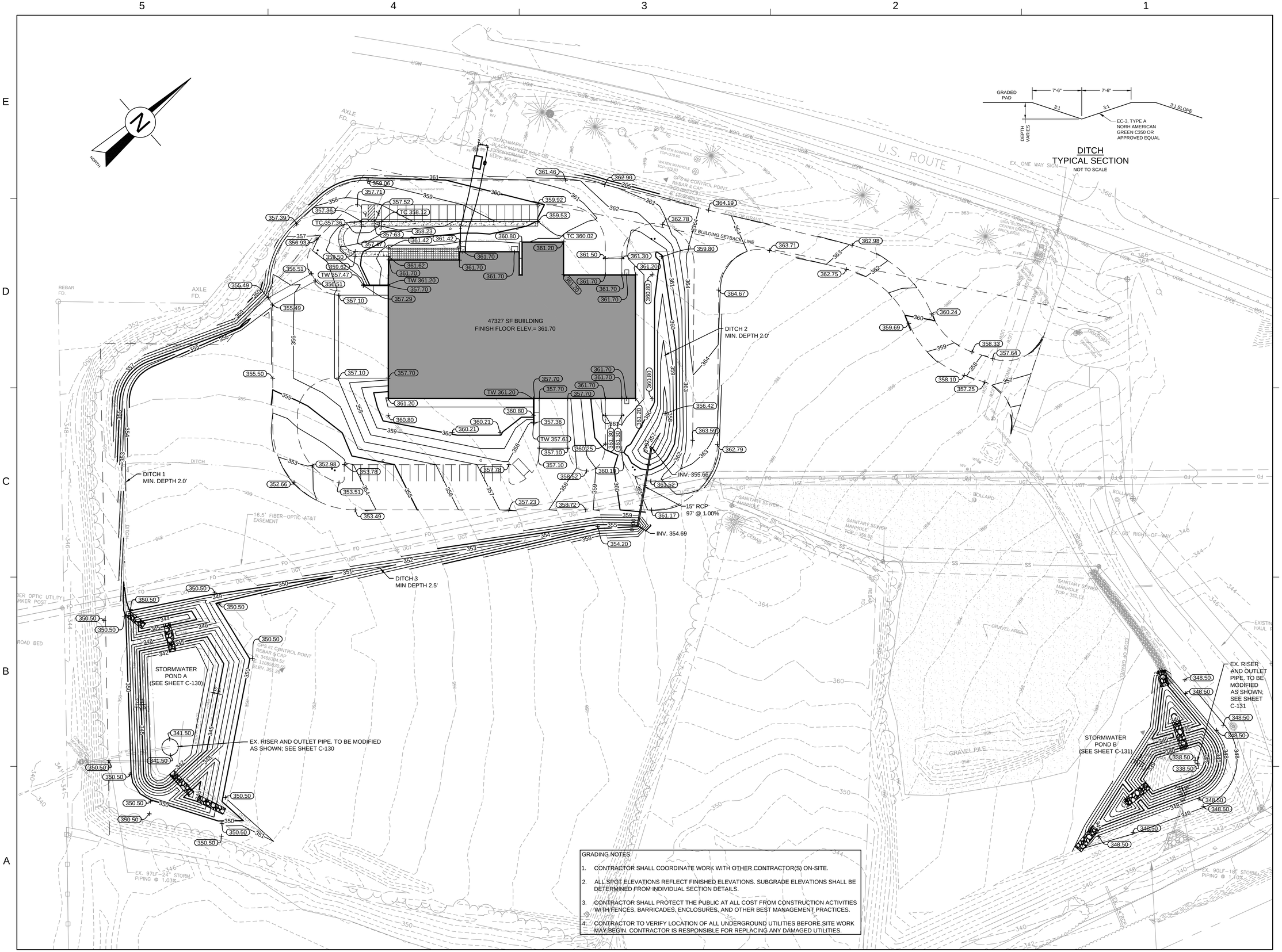
TITLE

SITE AND UTILITY PLAN

PROJECT NO. 50139338

C-110

SHEET NO.



DITCH
TYPICAL SECTION
NOT TO SCALE

GRADING NOTES:

1. CONTRACTOR SHALL COORDINATE WORK WITH OTHER CONTRACTOR(S) ON-SITE.
2. ALL SPOT ELEVATIONS REFLECT FINISHED ELEVATIONS. SUBGRADE ELEVATIONS SHALL BE DETERMINED FROM INDIVIDUAL SECTION DETAILS.
3. CONTRACTOR SHALL PROTECT THE PUBLIC AT ALL COST FROM CONSTRUCTION ACTIVITIES WITH FENCES, BARRICADES, ENCLOSURES, AND OTHER BEST MANAGEMENT PRACTICES.
4. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE SITE WORK MAY BEGIN. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED UTILITIES.

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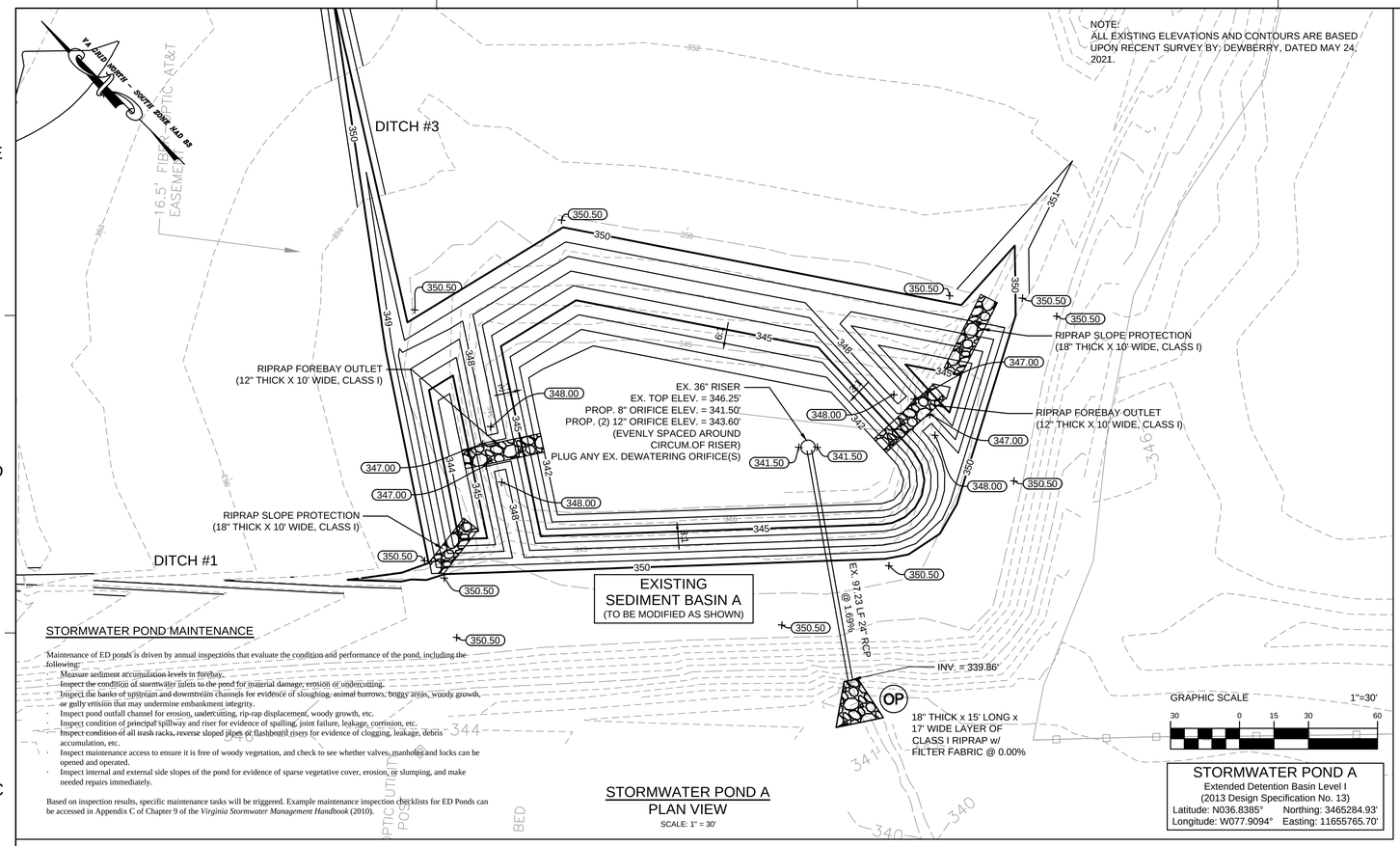
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GRADING AND DRAINAGE PLAN

PROJECT NO. 50139338

C-120

SHEET NO.



STORMWATER POND MAINTENANCE

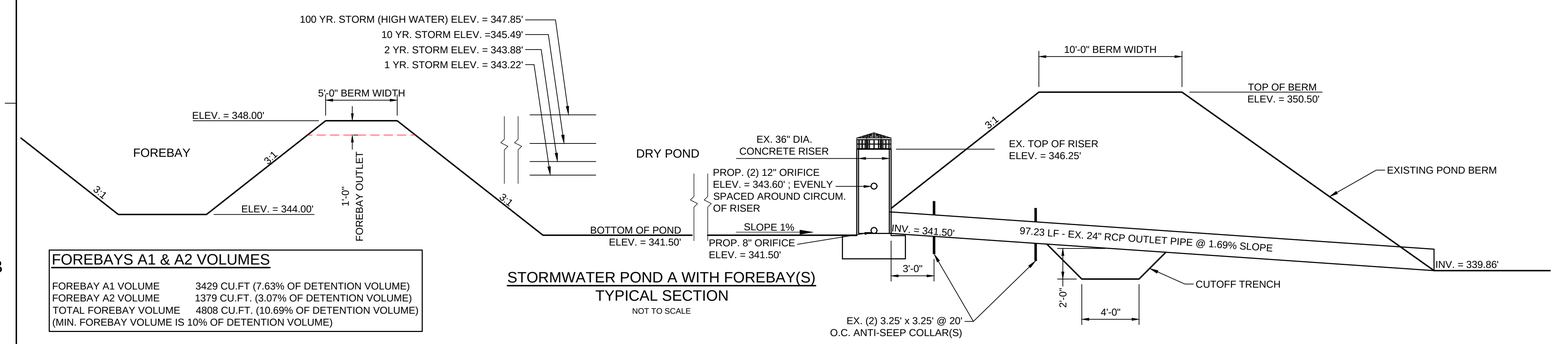
Maintenance of ED ponds is driven by annual inspections that evaluate the condition and performance of the pond, including the following:

- Measure sediment accumulation levels in forebay.
- Inspect the condition of stormwater inlets to the pond for material damage, erosion or undercutting.
- Inspect the banks of upstream and downstream channels for evidence of sloughing, animal burrows, boggy areas, woody growth, or gully erosion that may undermine embankment integrity.
- Inspect pond outfall channel for erosion, undercutting, rip-rap displacement, woody growth, etc.
- Inspect condition of principal spillway and riser for evidence of spalling, joint failure, leakage, corrosion, etc.
- Inspect condition of all trash racks, reverse sloped pipes or flashboard risers for evidence of clogging, leakage, debris accumulation, etc.
- Inspect maintenance access to ensure it is free of woody vegetation, and check to see whether valves, manholes and locks can be opened and operated.
- Inspect internal and external side slopes of the pond for evidence of sparse vegetative cover, erosion, or slumping, and make needed repairs immediately.

Based on inspection results, specific maintenance tasks will be triggered. Example maintenance inspection checklists for ED Ponds can be accessed in Appendix C of Chapter 9 of the *Virginia Stormwater Management Handbook* (2010).

STORMWATER POND A PLAN VIEW

SCALE: 1" = 30'

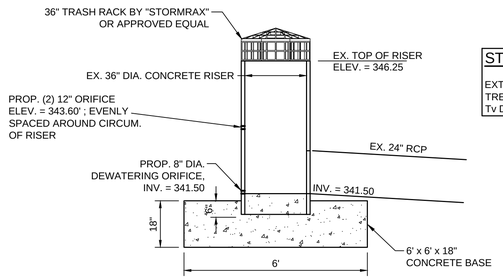


STORMWATER POND A WITH FOREBAY(S) TYPICAL SECTION

NOT TO SCALE

FOREBAYS A1 & A2 VOLUMES

FOREBAY A1 VOLUME	3429 CU.FT (7.63% OF DETENTION VOLUME)
FOREBAY A2 VOLUME	1379 CU.FT. (3.07% OF DETENTION VOLUME)
TOTAL FOREBAY VOLUME	4808 CU.FT. (10.69% OF DETENTION VOLUME)
(MIN. FOREBAY VOLUME IS 10% OF DETENTION VOLUME)	



POND RISER DETAIL

NOT TO SCALE

STORMWATER VOLUMES & CALCULATIONS

EXTENDED DETENTION VOLUME	44,961 CU.FT.	(SEE HYDROGRAPH REPORT PGS. 3 & 11)
TREATMENT VOLUME	18,878 CU.FT.	(SEE DRAINAGE AREA CALCULATIONS PG. 8)
Tv DRAWDOWN TIME	10.92 HOURS	

CONSTRUCTION SEQUENCE FOR CONVERTING SEDIMENT BASIN TO STORMWATER POND

1. ENSURE SITE IS STABILIZED
2. DEWATER SEDIMENT BASIN THROUGH FILTER BAG
3. REMOVE BAFFELS
4. CLEAR SEDIMENT BASIN OF ANY REMAINING SEDIMENT AND DISPOSE OF IN AN APPROVED DISPOSAL SITE.
5. REMOVE PERFORATED POLYETHYLENE TUBING AND PLUG 4.5" DEWATERING ORIFICE
6. CORE NEW HOLE(S) FOR DEWATERING ORFICE(S)
7. REMOVE ANTI-VORTEX DEVICE AND INSTALL TRASH RACK.
8. ENSURE ELEVATIONS OF BOTTOM OF POND ARE CONSISTENT WITH DESIGN ELEVATIONS AFTER REMOVAL OF SEDIMENT

CONVERSION NOTE:
WHEN CONVERTING FROM SEDIMENT BASIN TO STORMWATER POND, REMOVE PERFORATED POLYETHYLENE TUBING AND PLUG DEWATERING ORIFICE. REMOVE ANTI-VORTEX DEVICE AND INSTALL TRASH RACK, CORE NEW HOLE FOR 8" ORIFICE. SEE STORMWATER POND TYPICAL SECTION FOR ELEVATION OF INLET PIPE.

Embankment Construction Specifications and Maintenance

Site Preparation

Areas under the embankment or any structural works related to the basin shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, or other objectionable material. In order to facilitate cleanout and restoration, the area of most frequent inundation (measured from the top of the principal spillway) will be cleared of all brush and trees.

Cutoff Trench

For earth-fill embankments, a cutoff trench shall be excavated along the centerline of the dam. The trench must extend at least 1 foot into a stable, impervious layer of soil and have a minimum depth of 2 feet. The cutoff trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be 4 feet, but also must be wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1.

Compaction requirements shall be the same as those for the embankment. The trench shall be drained during the backfilling/ compacting operations.

Embankment

The fill material shall be taken from approved borrow areas. It shall be clean mineral soil, free of roots, woody vegetation, stumps, sod, oversized stones, rocks, or other perishable or objectionable material. The material selected must have enough strength for the dam to remain stable and be tight enough, when properly compacted, to prevent excessive percolation of water through the dam. Fill containing particles ranging from small gravel or coarse sand to fine sand and clay in desired proportion is appropriate. Any embankment material should contain approximately 20% clay particles by weight. Using the Unified Soil Classification System, SC (clayey sand), GC (clayey gravel) and CL ("low liquid limit" clay) are among the preferred types of embankment soils. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material should contain the proper amount of moisture to ensure that 95% compaction will be achieved. Fill material will be placed in 6-inch continuous layers over the entire length of the fill. Compaction shall be obtained by routing the hauling equipment over the fill so that the entire surface of the fill is transversed by at least one wheel or tread track of the equipment, or by using a compactor. Special care shall be taken in compacting around the anti-seep collars (compact by hand, if necessary) to avoid damage and achieve desired compaction. The embankment shall be constructed to an elevation 10% higher than the design height to allow for settlement if compaction is obtained with hauling equipment. If compactors are used for compaction, the overbuild may be reduced to not less than 5%.

Principal Spillway

The riser of the principal spillway shall be securely attached to the barrel by a watertight connection. The barrel and riser shall be placed on a firmly compacted soil foundation. The base of the riser shall be firmly anchored according to design criteria to prevent its floating. Pervious materials such as sand, gravel, or crushed stone shall not be used as backfill around the barrel or anti-seep collars. Special care shall be taken in compacting around the anti-seep collars (compact by hand, if necessary). Fill material shall be placed around the pipe in 4-inch layers and compacted until 95% compaction is achieved. A minimum of two feet of fill shall be hand-compacted over the barrel before crossing it with construction equipment.

Vegetative Stabilization

The embankment and emergency spillway of the sediment basin shall be stabilized with temporary or permanent vegetation immediately after installation of the basin.

Erosion and Sediment Control

The construction of the sediment basin shall be carried out in a manner such that it does not result in sediment problems downstream.

Maintenance

The basin embankment should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment.

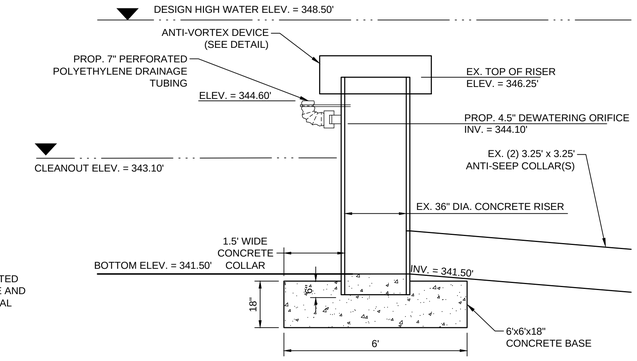
The emergency spillway should be checked regularly to ensure that its lining is well established and erosion-resistant.

The basin should be checked after each runoff-producing rainfall for sediment cleanout. When the sediment reaches the clean-out level, it shall be removed and properly disposed of.

ANTI-VORTEX DEVICE

NOT TO SCALE

NOTE:
PLUG ANY EXISTING ORIFICE(S) AND INSTALL PROPOSED ORIFICE(S) AS SHOWN



SEDIMENT BASIN A RISER DETAIL

NOT TO SCALE

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SCALE AS SHOWN

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CHECKED BY	MAT
DATE	January 14, 2022

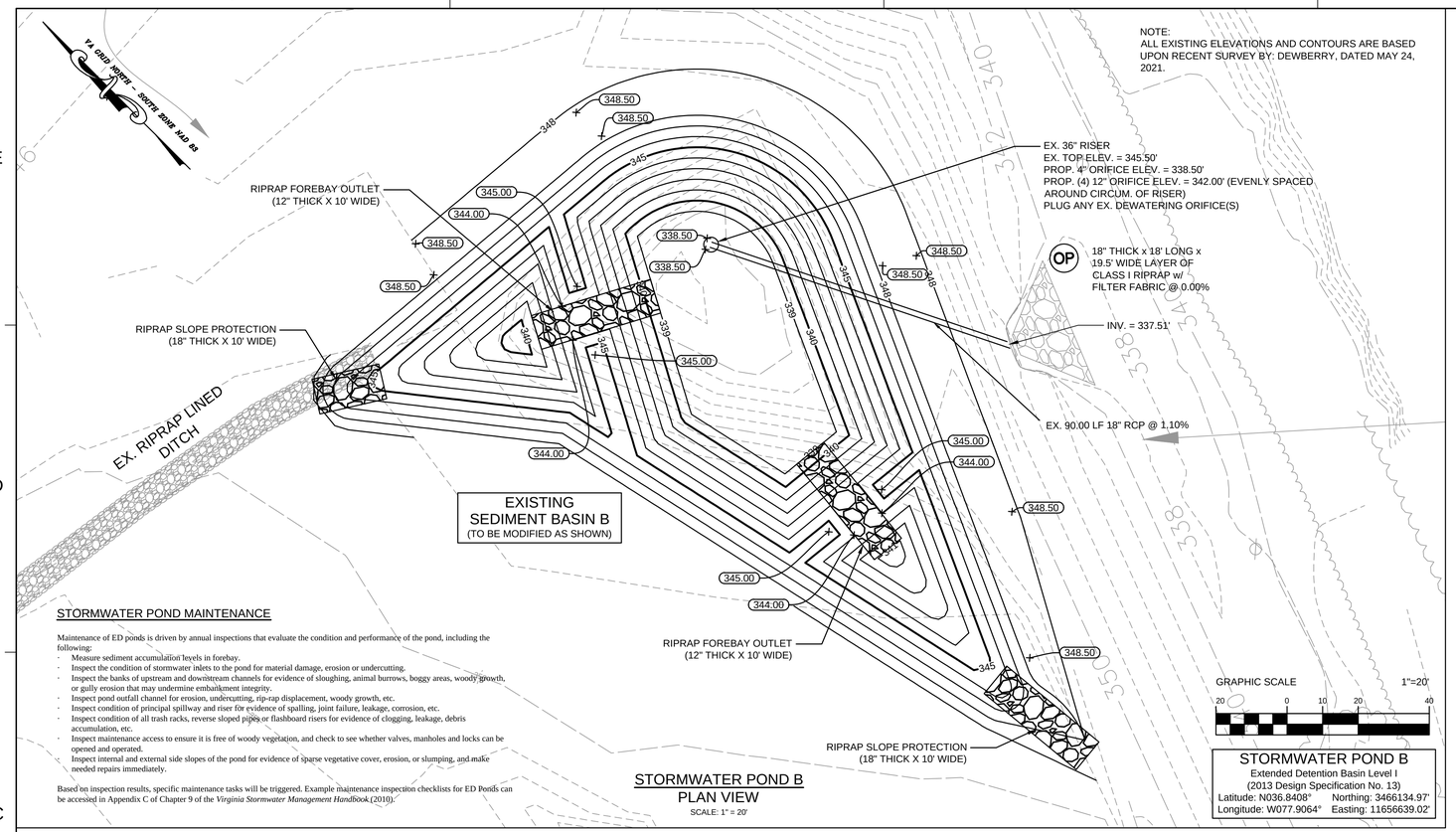
TITLE

STORMWATER MANAGEMENT PLAN POND A

PROJECT NO. 50139338

C-130

SHEET NO.



STORMWATER POND B
PLAN VIEW
SCALE: 1" = 20'

STORMWATER POND MAINTENANCE

Maintenance of ED ponds is driven by annual inspections that evaluate the condition and performance of the pond, including the following:

- Measure sediment accumulation levels in forebay.
- Inspect the condition of stormwater inlets to the pond for material damage, erosion or undercutting.
- Inspect the banks of upstream and downstream channels for evidence of sloughing, animal burrows, boggy areas, woody growth, or gully erosion that may undermine embankment integrity.
- Inspect pond outfall channel for erosion, undercutting, rip-rap displacement, woody growth, etc.
- Inspect condition of principal spillway and riser for evidence of spalling, joint failure, leakage, corrosion, etc.
- Inspect condition of all trash racks, reverse sloped pipes or flashboard risers for evidence of clogging, leakage, debris accumulation, etc.
- Inspect maintenance access to ensure it is free of woody vegetation, and check to see whether valves, manholes and locks can be opened and operated.
- Inspect internal and external side slopes of the pond for evidence of sparse vegetative cover, erosion, or slumping, and make needed repairs immediately.

Based on inspection results, specific maintenance tasks will be triggered. Example maintenance inspection checklists for ED Ponds can be accessed in Appendix C of Chapter 9 of the *Virginia Stormwater Management Handbook* (2010).

Embankment Construction Specifications and Maintenance

Site Preparation

Areas under the embankment or any structural works related to the basin shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, or other objectionable material. In order to facilitate cleanout and restoration, the area of most frequent inundation (measured from the top of the principal spillway) will be cleared of all brush and trees.

Cutoff Trench

For earth-fill embankments, a cutoff trench shall be excavated along the centerline of the dam. The trench must extend at least 1 foot into a stable, impervious layer of soil and have a minimum depth of 2 feet. The cutoff trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be 4 feet, but also must be wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1.

Compaction requirements shall be the same as those for the embankment. The trench shall be drained during the backfilling/ compacting operations.

Embankment

The fill material shall be taken from approved borrow areas. It shall be clean mineral soil, free of roots, woody vegetation, stumps, sod, oversized stones, rocks, or other perishable or objectionable material. The material selected must have enough strength for the dam to remain stable and be tight enough, when properly compacted, to prevent excessive percolation of water through the dam. Fill containing particles ranging from small gravel or coarse sand to fine sand and clay in desired proportion is appropriate. Any embankment material should contain approximately 20% clay particles by weight. Using the Unified Soil Classification System, SC (clayey sand), GC (clayey gravel) and CL ("low liquid limit" clay) are among the preferred types of embankment soils. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material should contain the proper amount of moisture to ensure that 95% compaction will be achieved. Fill material will be placed in 6-inch continuous layers over the entire length of the fill. Compaction shall be obtained by routing the hauling equipment over the fill so that the entire surface of the fill is transversed by at least one wheel or tread track of the equipment, or by using a compactor. Special care shall be taken in compacting around the anti-seep collars (compact by hand, if necessary) to avoid damage and achieve desired compaction. The embankment shall be constructed to an elevation 10% higher than the design height to allow for settlement if compaction is obtained with hauling equipment. If compactors are used for compaction, the overbuild may be reduced to not less than 5%.

Principal Spillway

The riser of the principal spillway shall be securely attached to the barrel by a watertight connection. The barrel and riser shall be placed on a firmly compacted soil foundation. The base of the riser shall be firmly anchored according to design criteria to prevent its floating. Pervious materials such as sand, gravel, or crushed stone shall not be used as backfill around the barrel or anti-seep collars. Special care shall be taken in compacting around the anti-seep collars (compact by hand, if necessary). Fill material shall be placed around the pipe in 4-inch layers and compacted until 95% compaction is achieved. A minimum of two feet of fill shall be hand-compacted over the barrel before crossing it with construction equipment.

Vegetative Stabilization

The embankment and emergency spillway of the sediment basin shall be stabilized with temporary or permanent vegetation immediately after installation of the basin.

Erosion and Sediment Control

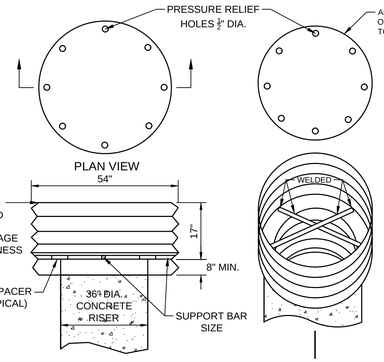
The construction of the sediment basin shall be carried out in a manner such that it does not result in sediment problems downstream.

Maintenance

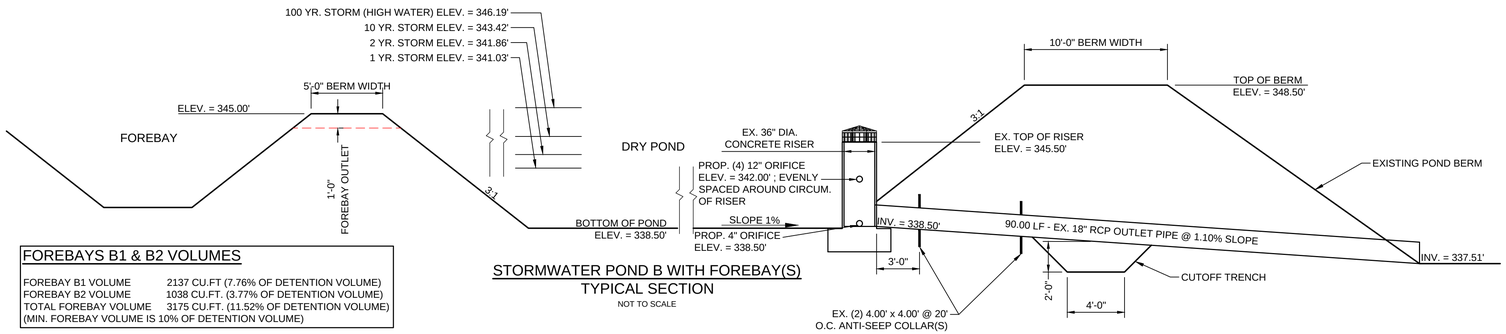
The basin embankment should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment.

The emergency spillway should be checked regularly to ensure that its lining is well established and erosion-resistant.

The basin should be checked after each runoff-producing rainfall for sediment cleanout. When the sediment reaches the clean-out level, it shall be removed and properly disposed of.



ANTI-VORTEX DEVICE
NOT TO SCALE

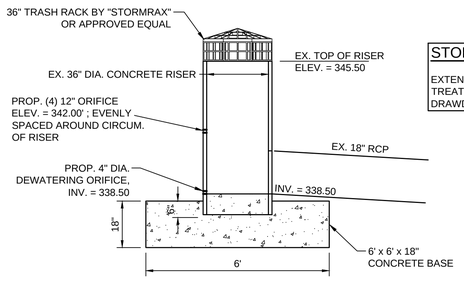


STORMWATER POND B WITH FOREBAY(S)
TYPICAL SECTION
NOT TO SCALE

FOREBAYS B1 & B2 VOLUMES

FOREBAY B1 VOLUME	2137 CU.FT (7.76% OF DETENTION VOLUME)
FOREBAY B2 VOLUME	1038 CU.FT. (3.77% OF DETENTION VOLUME)
TOTAL FOREBAY VOLUME	3175 CU.FT. (11.52% OF DETENTION VOLUME)

(MIN. FOREBAY VOLUME IS 10% OF DETENTION VOLUME)



POND RISER DETAIL
NOT TO SCALE

STORMWATER VOLUMES & CALCULATIONS

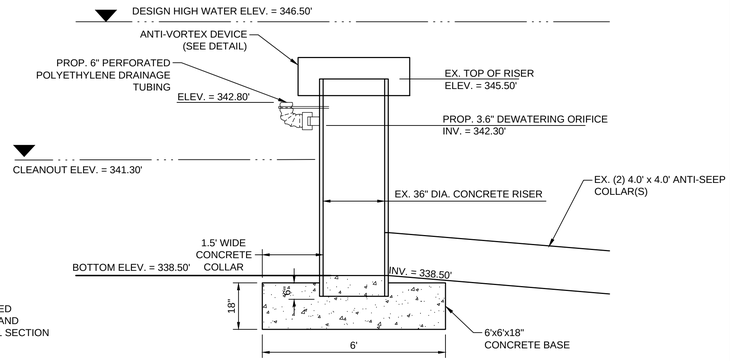
EXTENDED DETENTION VOLUME	27,552 CU.FT.	(SEE HYDROGRAPH REPORT PGS. 3 & 13)
TREATMENT VOLUME	13,126 CU.FT.	(SEE DRAINAGE AREA CALCULATIONS PG. 9)
DRAWDOWN TIME	12.39 HOURS	

CONSTRUCTION SEQUENCE FOR CONVERTING SEDIMENT BASIN TO STORMWATER POND

1. ENSURE SITE IS STABILIZED
2. DEWATER SEDIMENT BASIN THROUGH FILTER BAG
3. REMOVE BAFFELS
4. CLEAR SEDIMENT BASIN OF ANY REMAINING SEDIMENT AND DISPOSE OF IN AN APPROVED DISPOSAL SITE.
5. REMOVE PERFORATED POLYETHYLENE TUBING AND PLUG 3.6" DEWATERING ORIFICE
6. CORE NEW HOLE(S) FOR DEWATERING ORFICE(S)
7. REMOVE ANTI-VORTEX DEVICE AND INSTALL TRASH RACK.
8. ENSURE ELEVATIONS OF BOTTOM OF POND ARE CONSISTENT WITH DESIGN ELEVATIONS AFTER REMOVAL OF SEDIMENT

CONVERSION NOTE:
WHEN CONVERTING FROM SEDIMENT BASIN TO STORMWATER POND, REMOVE PERFORATED POLYETHYLENE TUBING AND PLUG DEWATERING ORIFICE. REMOVE ANTI-VORTEX DEVICE AND INSTALL TRASH RACK, CORE NEW HOLE FOR 4" ORFICE. SEE STORMWATER POND TYPICAL SECTION FOR ELEVATION OF INLET PIPE.

NOTE:
PLUG ANY EXISTING ORIFICE(S) AND INSTALL PROPOSED ORIFICE(S) AS SHOWN



SEDIMENT BASIN B RISER DETAIL
NOT TO SCALE

Dewberry

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Danville, VA 24540
434.797.4497 Phone
434.797.4341 Fax
www.dewberry.com

BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
SHAWN R. HARDEN
Lic. No. 036976
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

SCALE AS SHOWN

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
APPROVED BY	SRH
CHECKED BY	MAT
DATE	January 14, 2022

TITLE

STORMWATER MANAGEMENT PLAN POND B

PROJECT NO. 50139338

C-131

SHEET NO.

E&S LEGEND

- CE — CONSTRUCTION ENTRANCE, VA. E&S STD. 3.02
- SF — SILT FENCE, VA. E&S STD. 3.05
- PB — POROUS BAFFLES, VA. E&S STD. 3.14
- TSB — TEMP SEDIMENT BASIN, VA. E&S STD. 3.14
- OP — OUTLET PROTECTION, VA. E&S STD. 3.18
- TS — TEMPORARY SEEDING, VA. E&S STD. 3.31
- PS — PERMANENT SEEDING, VA. E&S STD. 3.32
- CIP — CULVERT INLET PROTECTION, VA. E&S STD. 3.08
- BM — SOIL STABILIZATION BLANKETS AND MATTING, VA. E&S STD. 3.36
- LOD — LIMITS OF DISTURBANCE
- 1.61% — DRAINAGE FLOW ARROW w/ APPROXIMATE SLOPE

TOTAL LAND DISTURBANCE = 20.20 ACRES

EROSION & SEDIMENT CONTROL NOTES:

THE FOLLOWING SEQUENCE OF CONSTRUCTION SHALL BE ADHERED TO BY THE CONTRACTOR AT ALL TIMES:

1. OBTAIN ALL PERMITS AND POST ALL REQUIRED BONDS.
2. CONTRACTOR SHALL KEEP & MAINTAIN A COPY OF THE VIRGINIA EROSION & SEDIMENT CONTROL HAND-BOOK, LATEST EDITION ON-SITE AT ALL TIMES.
3. INSTALL PERIMETER SILT FENCE AND TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT. TEMPORARY EROSION CONTROL MEASURES MUST BE INSTALLED PRIOR TO ALL LAND DISTURBING ACTIVITIES.
4. CONTRACTOR SHALL SEED AND MULCH ALL DITCHES <2% SLOPE. ALL DITCHES GREATER THAN 2% SLOPE SHALL BE LINED W/ BLANKET MATTING.
5. ALL SPECIFIC LOCATIONS FOR SILT FENCE OR STONE CHECK DAMS ARE NOT SHOWN ON THE APPROVED PLANS. THE NEED FOR ADDITIONAL E&S CONTROL MEASURES IS TO BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER AND THE EROSION CONTROL DIRECTOR.
6. INSTALL BLANKET MATTING AND RIP-RAP IN DITCHES AND ON STEEP SLOPES PER DETAILS.
7. TEMPORARY SEEDING SHALL OCCUR AS CONSTRUCTION PROGRESSES. NO SECTION OF DISTURBANCE LONGER THAN 1000' SHALL BE LEFT UNSEEDED. TEMPORARY SEEDING SHALL COMPLY W/ DEQ.
8. REMOVE EROSION AND SEDIMENT CONTROL MEASURES UPON SITE STABILIZATION.
9. CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE MEASURES UNTIL THE SITE IS STABILIZED.
10. ALL DENUDED AREAS SHALL BE SHAPED TO PROMOTE POSITIVE DRAINAGE.

U.S. ROUTE 1

18" THICK x 8' LONG x 9.25' WIDE LAYER OF CLASS I RIPRAP w/ FILTER FABRIC @ 0.00%

18" THICK x 15' LONG x 17' WIDE LAYER OF CLASS I RIPRAP w/ FILTER FABRIC @ 0.00%

18" THICK x 18' LONG x 19.5' WIDE LAYER OF CLASS I RIPRAP w/ FILTER FABRIC @ 0.00%

(SEE SHEET C-130)

(SEE SHEET C-131)

16.5' FIBER-OPTIC AT&T EASEMENT

60' RIGHT-OF-WAY

GRAVEL AREA

EDGE OF GRAVEL

EXISTING HAUL R

NORTH

Dewberry

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551 Piney Forest Road
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www.dewberry.com

BRUNSWICK COUNTY IDA

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BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
SHAWN R. HARDEN
Lic. No. 036976
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

GRAPHIC SCALE 1"=50'

50 0 25 50 100

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
APPROVED BY	SRH
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DATE	January 14, 2022

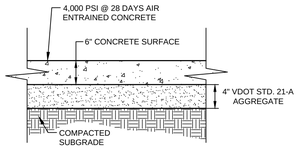
TITLE

EROSION AND SEDIMENT CONTROL PLAN

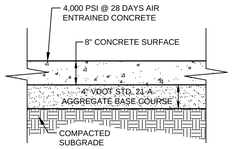
PROJECT NO. 50139338

C-140

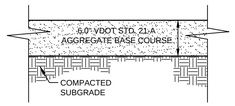
SHEET NO.



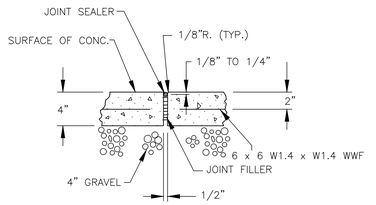
CONCRETE PARKING PAVEMENT



HEAVY DUTY CONCRETE PAVEMENT



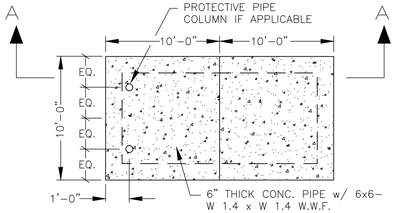
GRAVEL PAVEMENT



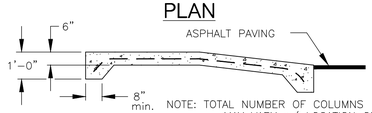
NOTE: A GROOVE JOINT 1" DEEP W/ 1/8" RADIUS SHALL BE REQUIRED IN THE CONC. SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SIDEWALK DETAIL

N.T.S.



PLAN

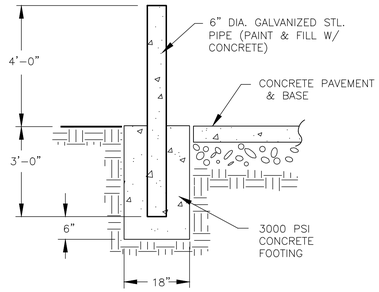


NOTE: TOTAL NUMBER OF COLUMNS MAY VARY w/ LOCATION OF PAD, SEE SITE PLAN

SECTION A-A

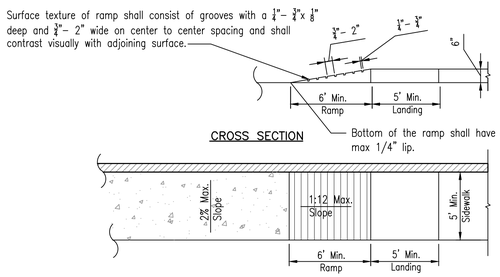
DUMPSTER PAD

N.T.S.



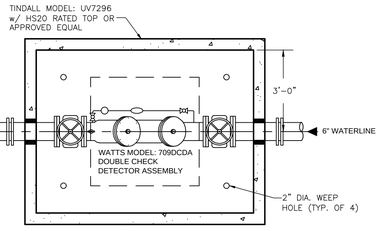
BOLLARD DETAIL

N.T.S.

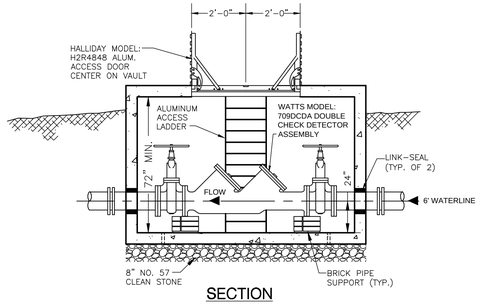


ADA PARKING RAMP

N.T.S.



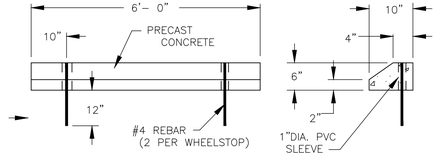
PLAN



SECTION

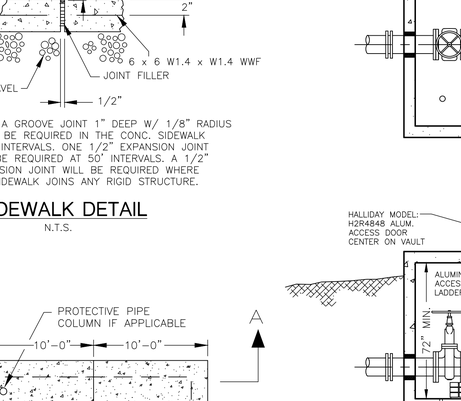
BACKFLOW PREVENTER VAULT DETAIL

SCALE: NTS



CONCRETE WHEELSTOP

N.T.S.



PIPE LAYING CONDITION

DUCTILE IRON GRAVITY SEWER - PRESSURE FORCE MAIN (ASTM D2241) OR PVC C-900, CLASS 150, DR 17

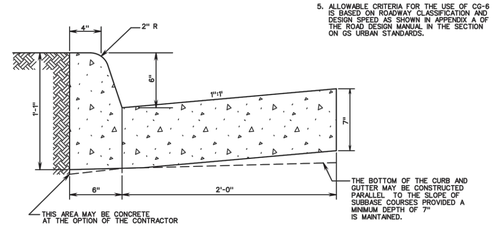
NOT TO SCALE

2016 ROAD & BRIDGE STANDARDS

CG-6

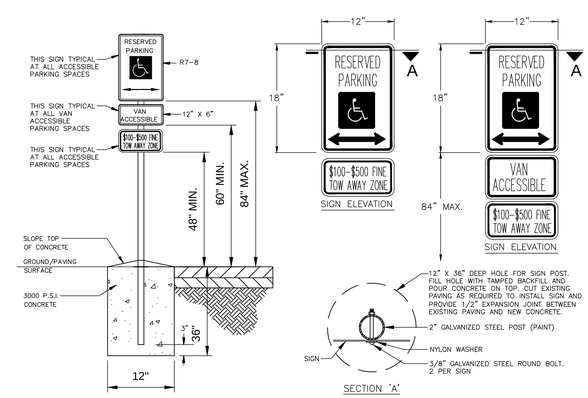
NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.



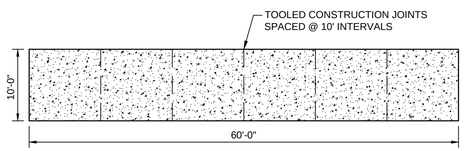
SPECIFICATION REFERENCE	COMBINATION 6" CURB AND GUTTER	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: 201.03 — SHEET 1 OF 1

2016 ROAD & BRIDGE STANDARDS

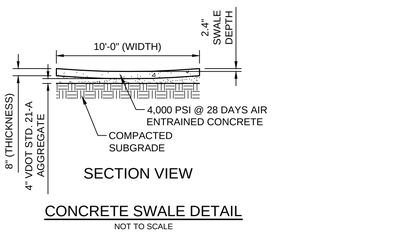


HANDICAPPED PARKING SIGN DETAIL

NOT TO SCALE



PLAN VIEW



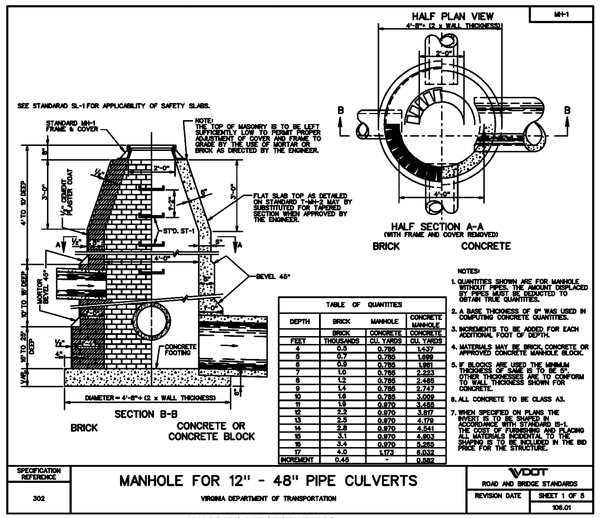
SECTION VIEW

CONCRETE SWALE DETAIL

NOT TO SCALE

2016 ROAD & BRIDGE STANDARDS

MH-1



DEPTH	BRICK MANHOLE		CONCRETE MANHOLE	
	BRICK	CONCRETE	CONCRETE	
FEET	THOUSANDS	CU. YARDS	CU. YARDS	
4	0.5	0.785	1.437	
5	0.7	0.785	1.699	
6	0.9	0.785	1.961	
7	1.0	0.785	2.223	
8	1.2	0.785	2.485	
9	1.4	0.785	2.747	
10	1.6	0.785	3.009	
11	1.9	0.870	3.455	
12	2.2	0.870	3.917	
13	2.5	0.870	4.379	
14	2.8	0.870	4.841	
15	3.1	0.870	5.303	
16	3.4	0.870	5.265	
17	4.0	1.172	6.032	
INCREMENT	0.43	-	0.962	

NOTES:

1. QUANTITIES SHOWN ARE FOR MANHOLE WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
2. A BASE THICKNESS OF 9" WAS USED IN COMPUTING CONCRETE QUANTITIES.
3. INCREMENTS TO BE ADDED FOR EACH ADDITIONAL FOOT OF DEPTH.
4. MATERIALS MAY BE BRICK, CONCRETE OR APPROVED CONCRETE MANHOLE BLOCK.
5. IF BLOCKS ARE USED THE MINIMUM COMPRESSIVE STRENGTH IS TO BE OTHER THAN SPECIFIED, OR TO CONFORM TO THE WALL THICKNESS SHOWN FOR CONCRETE.
6. ALL CONCRETE TO BE CLASS A3.
7. WHEN SPECIFIED ON PLANS THE ADJUSTING OF FRAME AND COVER TO GRADE, AS PER STANDARD EI-1, THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.

SPECIFICATION REFERENCE	MANHOLE FOR 12" - 48" PIPE CULVERTS	VDOT ROAD AND BRIDGE STANDARDS
302	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE — SHEET 1 OF 5 — 106.01

2016 ROAD & BRIDGE STANDARDS

Dewberry

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www.dewberry.com

BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
SHAWN R. HARDEN
Lic. No. 036976
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
APPROVED BY	SRH
CHECKED BY	MAT
DATE	January 14, 2022

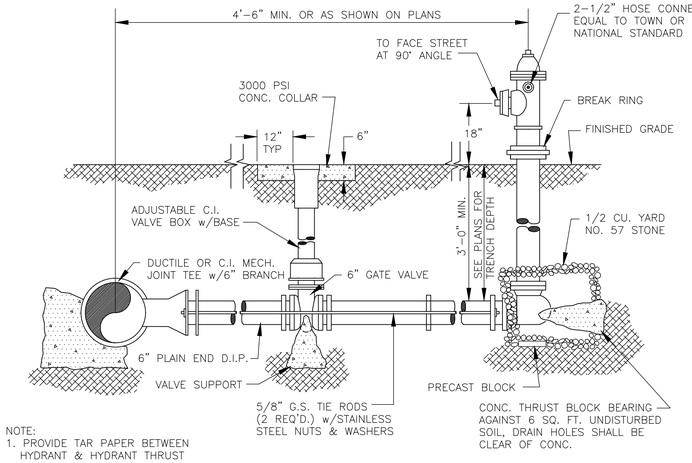
TITLE

SITE AND UTILITY DETAILS

PROJECT NO. 50139338

C-200

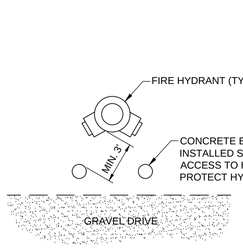
SHEET NO.



NOTE:
1. PROVIDE TAR PAPER BETWEEN HYDRANT & HYDRANT THRUST BLOCK
2. ALL THRUST BLOCKS & SUPPORT-ING CONC. IS 2500 PSI

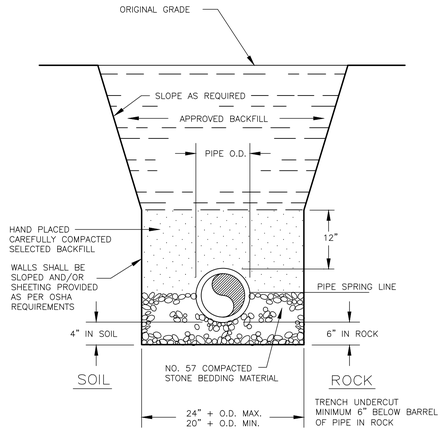
TYPICAL FIRE HYDRANT ASSEMBLY DETAIL

N.T.S.



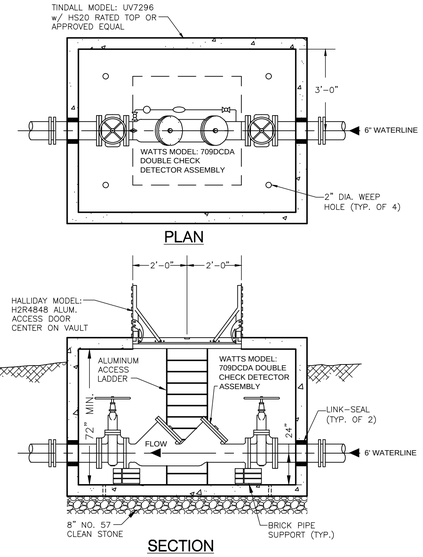
FIRE HYDRANT DETAIL

NOT TO SCALE



PIPE LAYING CONDITION - GRAVITY SEWER SDR - 35 PVC

NOT TO SCALE

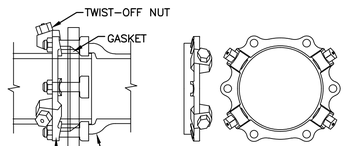


SECTION BACKFLOW PREVENTER VAULT DETAIL

SCALE: NTS

NOTES:
1. THRUST RESTRAINT SHALL BE INSTALLED ON DUCTILE IRON "DIP" AND PVC FORCEMAINS AND WATERLINES IN THE MANNER SHOWN PER THIS DETAIL. SEE STANDARD THRUST BLOCK DETAIL FOR ADDITIONAL RESTRAINT CRITERIA.
2. RESTRAINING DEVICES SHALL CONFORM TO ANSI/AWWA C111/A21.11 AND ANSI/AWWA C153/A21.53 OF LATEST REVISION.
3. COMPACT FITTINGS ARE ACCEPTABLE FOR USE WITH IRON RETAINING GLAND M.J. RESTRAINT.
4. THE MINIMUM LENGTH OF RESTRAINT INDICATED SHALL REQUIRE ALL JOINTS WITHIN THAT DISTANCE BE RESTRAINED.
5. RESTRAINT SYSTEMS SHALL BE INSPECTED AND APPROVED PRIOR TO BACKFILLING.
6. RESTRAINT SYSTEMS MAY VARY BASED UPON THE ENGINEERS DESIGN AS SHOWN ON THE PLAN AND PROFILE SHEETS.
7. MAKE ANY JOINT DEFLECTION NECESSARY BEFORE TORQUING THE T-HEAD BOLTS.
8. TIGHTEN T-HEAD BOLTS, BOTTOM FIRST, THEN TOP, SIDES AND REMAINDER.
9. REPEAT NOTE 1. UNTIL ALL T-BOLTS ARE PROPERLY TOURQED.
10. TIGHTEN TWIST-OFF NUTS SO THAT ALL WEDGES FIRMLY CONTACT PIPE.
11. TIGHTEN TWIST-OFF NUTS IN ALTERNATING MANNER, SHEARING OFF NUTS.
12. MEGALUG, STARGRIP, (OR APPROVED EQUAL) MAY BE RESET OR REUSED BY ASSEMBLY AS DESCRIBED ABOVE AND TORQUE WEDGE BOLTS TO 90 FT LBS.
13. ANY PLACE A RESTRAINED FITTING IS CALLED OUT ON THE DRAWINGS THE ADJOINING PIPE JOINTS SHALL ALSO BE RESTRAINED TO A DISTANCE IN BOTH DIRECTIONS FROM THE DESIGNATED FITTING AS INDICATED IN THIS TABLE.

NOMINAL PIPE SIZE (INCHES)	NUMBER OF TWIST-OFF NUTS	NUMBER OF T-BOLTS	RATED PRESSURE
3	2	4	350 PSI
4	2	4	350 PSI
6	3	6	350 PSI
8	4	6	350 PSI
10	6	8	350 PSI
12	8	8	350 PSI
16	12	12	350 PSI
18	12	12	250 PSI
24	16	16	250 PSI
30	20	20	250 PSI
36	24	24	250 PSI
42	28	28	250 PSI



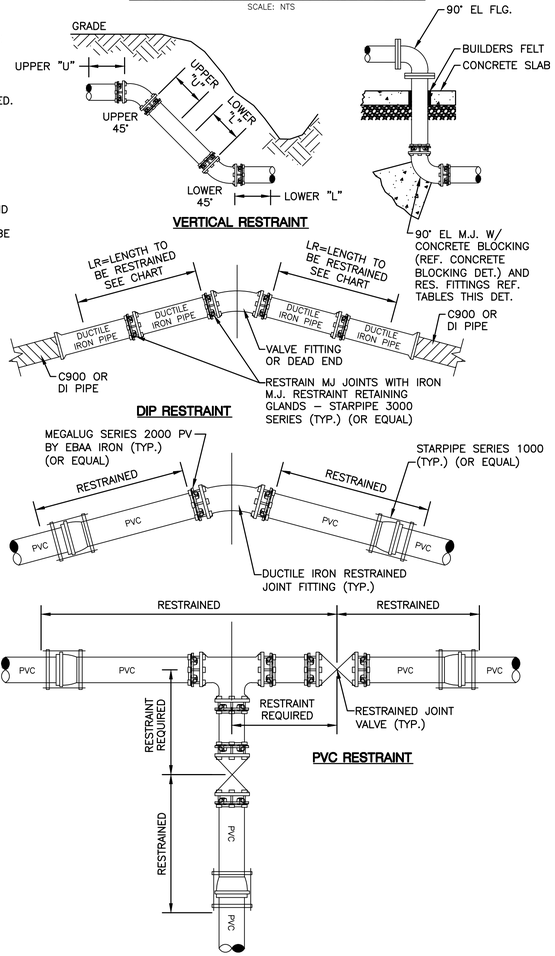
IRON RETAINING GLAND M.J. RESTRAINT

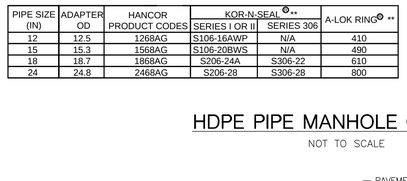
JOINT RESTRAINT TABLE - PVC							
RESTRAIN ALL JOINTS WITHIN THESE LENGTHS. (LF EA. SIDE OF FITTING)							
PIPE SIZE (INCHES)	11 1/4° BEND	22 1/2° BEND	45° BEND	90° BEND	DEAD END/ VALVE	REDUCER	VERT. 45° BEND U/L
6"	4	8	17	41	99	6"x8" 54'	41'/17'
8"	6	11	22	53	129	8"x12" 97'	54'/22'
12"	8	15	31	73	182	12"x16" 99'	76'/31'
16"	10	19	39	93	233	16"x20" 99'	97'/39'
20"	11	22	46	111	282	20"x24" 99'	117'/46'
24"	13	26	53	127	328	-	136'/53'

CALCULATION CONDITIONS:
TRENCH = TYPE 3
SOIL TYPE = ML
DEPTH = 3 FEET
TEST PRESSURE = 150 PSI
SAFETY FACTOR = 2.0

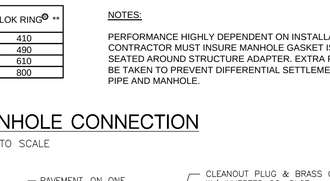
RESTRAINED PIPE DETAIL

NOT TO SCALE





TYPE 3A: A-LOK (PRE-CAST) MANHOLE GASKET W/ PVC MANHOLE ADAPTER



TYPE 3B: KOR-N-SEAL (CORED HOLE OR PRE-CAST) W/ FIELD INSTALLED MANHOLE BOOT W/ PVC MANHOLE ADAPTER

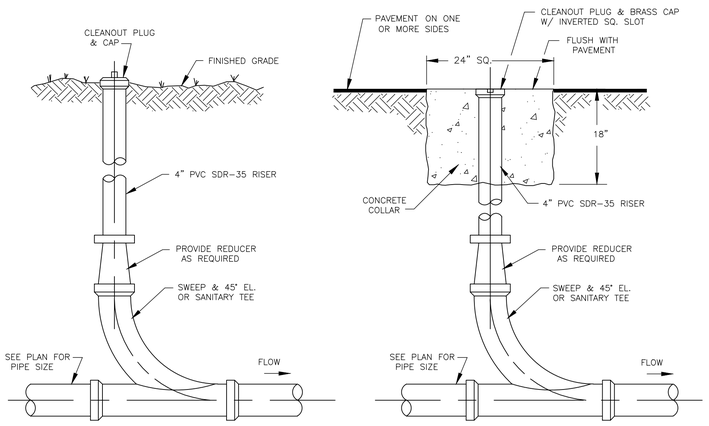
PIPE SIZE (IN)	ADAPTER OD	HANCOR PRODUCT CODES	KOR-N-SEAL® ** SERIES I OR II	KOR-N-SEAL® ** SERIES 306	A-LOK RING® **
12	12.5	1268AG	S106-16AWP	N/A	410
15	15.3	1568AG	S106-20BWS	N/A	490
18	18.7	1868AG	S206-24A	S306-22	610
24	24.8	2468AG	S206-28	S306-28	800

NOTES:

PERFORMANCE HIGHLY DEPENDENT ON INSTALLATION. CONTRACTOR MUST INSURE MANHOLE GASKET IS UNIFORMLY SEATED AROUND STRUCTURE ADAPTER. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE.

HDPE PIPE MANHOLE CONNECTION

NOT TO SCALE



SANITARY/STORM SEWER CLEANOUT DETAIL

NOT TO SCALE

Dewberry

Dewberry Engineers Inc.
551 Piney Forest Road
Danville, VA 24540
434.797.4497 Phone
434.797.4341 Fax
www.dewberry.com

BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
SHAWN R. HARDEN
Lic. No. 036976
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
APPROVED BY	SRH
CHECKED BY	MAT
DATE	January 14, 2022

TITLE

UTILITY DETAILS

PROJECT NO. 50139338

C-201

SHEET NO.

STD & SPEC 3.31

(TS)

TEMPORARY SEEDING

(TS)

PURPOSES

1. TO REDUCE EROSION AND SEDIMENTATION BY STABILIZING DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS.
2. TO REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM OR OFF-SITE AREAS, AND TO PROVIDE PROTECTION TO BARE SOILS EXPOSED DURING CONSTRUCTION UNTIL PERMANENT VEGETATION OR OTHER EROSION CONTROL MEASURES CAN BE ESTABLISHED.

SPECIFICATIONS

PRIOR TO SEEDING, INSTALL NECESSARY EROSION CONTROL PRACTICES SUCH AS DIKES, WATERWAYS, AND BASINS.

PLANT SELECTION

SELECT PLANTS APPROPRIATE TO THE SEASON AND SITE CONDITIONS FROM TABLE 3.31-B AND 3.31-C. NOTE THAT TABLE 3.31-B PRESENTS PLANTS WHICH CAN BE USED WITHOUT EXTENSIVE EVALUATION OF SITE CONDITIONS; TABLE 3.31-C PRESENTS MORE IN-DEPTH INFORMATION ON THE PLANT MATERIALS.

SEEDBED PREPARATION

TO CONTROL EROSION ON BARE SOIL SURFACES, PLANTS MUST BE ABLE TO GERMINATE AND GROW, SEEDBED PREPARATION IS ESSENTIAL.

1. LIMING: AN EVALUTION SHOULD BE CONDUCTED TO DETERMINE IF LIME IS NECESSARY FOR TEMPORARY SEEDING. IN MOST SOILS, IT TAKES UP TO 6 MONTHS FOR pH ADJUSTMENTS TO OCCUR FOLLOWING THE APPLICATION OF LIME. THEREFORE, IT MAY BE DIFFICULT TO JUSTIFY THE COST OF LIMING A TEMPORARY SITE, ESPECIALLY WHEN THE SOIL WILL LATER BE MOVED AND REGRADED. THE FOLLOWING TABLE MAY BE USED TO DETERMINE THE ACTUAL NEED ALONG WITH SUGGESTED APPLICATION RATES.
2. FERTILIZER: SHALL BE APPLIED AS 600 LBS. /ACRE OF 10-20-10 (14 LBS. /1,000 SQ. FT.) OR EQUIVALENT NUTRIENTS. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2 TO 4 INCHES OF THE SOIL IF POSSIBLE.
3. SURFACE ROUGHENING: IF THE AREA HAS BEEN RECENTLY LOOSENED OR DISTURBED, NO FUTHER ROUGHENING IS REQUIRED. WHEN THE AREA IS COMPACTED, CRUSTED, OR HARDENED, THE SOIL SURFACE SHALL BE LOOSENED BY DISCING, RAKING, HARROWING, OR OTHER ACCEPTABLE MEANS (SEE SURFACE ROUGHENING, STD. & SPEC. 3.29).
4. TRACKING: TRACKING WITH BULLDOZER CLEATS IS MOST EFFECTIVE ON SANDY SOILS. THIS PRACTICE OFTEN CAUSES UNDUE COMPACTION OF THE SOIL SURFACE, ESPECIALLY IN CLAYEY SOILS, AND DOES NOT AID PLANT GROWTH AS EFFECTIVELY AS OTHER METHODS OF SURFACE ROUGHENING.

SEEDING

SEED SHALL BE EVENLY APPLIED WITH A BROADCAST SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. SMALL GRAINS SHALL BE PLANTED NO MORE THAN ONE INCH DEEP. GRASSES AND LEGUMES SHALL BE PLANTED WITH NO LESS THAN 1/4" SOIL COVER.

MULCHING

1. SEEDINGS MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED ACCORDING TO MULCHING, STD. & SPEC. 3.35, EXCEPT THAT HYDROMULCHES (FIBER MULCH) WILL NOT BE CONSIDERED ADEQUATE. STRAW MULCH SHOULD BE USED DURING THESE PERIODS.
2. TEMPORARY SEEDINGS MADE UNDER FAVORABLE SOIL AND SITE CONDITIONS DURING OPTIMUM SPRING AND FALL SEEDING DATES MAY NOT REQUIRE MULCH.

RE-SEEDING

AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION WILL BE RESEEDED AS SOON AS SUCH AREAS ARE IDENTIFIED.

TABLE 3.31-B
ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS
"QUICK REFERENCE FOR ALL REGIONS"

PLANTING DATES	SPECIES	RATE (lbs./acre)
SEPT. 1-FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) & CEREAL (WINTER) RYE (SECALE CEREALE)	50 - 100
FEB. 16-APR. 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60 - 100
MAY1-AUG. 31	GERMAN MILLET (SETARIA ITALICA)	50

TABLE 3.31-C
TEMPORARY SEEDING PLANT MATERIALS, SEEDING RATES, AND DATES

SPECIS	SEEDING RATE		NORTH[a]			SOUTH[b]			PLANT CHARACTERISTICS
	ACRE	1000 ft^2	3/1 to 4/30	5/1 to 8/15	8/15 to 11/1	2/15 to 4/30	5/1 to 9/1	9/1 to 11/15	
OATS (AVENA SATIVA)	3 bu (up to 100 lbs., not less than 50 lbs.)	2 lbs	X	-	-	X	-	-	Use spring varities (e.g., Noble)
RYE[d] (SECALE CEREALE)	2 bu (up to 110 lbs., not less than 50 lbs.)	2.5 lbs	X	-	X	X	-	X	Use for late fall seedings, winter cover. Tolerates cold and low moisture.
GERMAN MILLET (SETARIA ITALICA)	50 lbs	approx. 1 lb.	-	X	-	-	X	-	Warm-season annual. Dies at first frost. May be added to summer mixes.
ANNUAL RYEGRASS[c] (LOLIUM MULTI-FLORUM)	60 lbs	1.5 lbs	X	-	X	X	-	X	May be added in mixes. Will mow out of most stands.
WEEPING LOVEGRASS (ERAGROSTIS CURVULA)	15 lbs	5.5 ozs.	-	X	-	-	X	-	Warm-season perennial. May bunch. Tolerates hot, dry slopes and acids, infertile soils. May be added to mixes.
KOREAN LESPEDEZA[c] (LESPEDEZA STIPULACEA)	25 lbs	approx. 1.5 lbs.	X	X	-	X	X	-	Warm season annual legume. Tolerates acid soils. May be added to mixes.

a. NOUTHERN PIEDMONT AND MOUNTAIN REGION. SEE PLATES 3.22-1 AND 3.22-2.
b. SOUTHERN PIEDMONT AND COASTAL PLAIN.
c. MAY BE USED AS A COVER CROP WITH SPRING SEEDING.
d. MAY BE USED AS A COVER CROP FOR FALL SEEDING.
X MAY BE PLANTED BETWEEN THESE DATES.
- MAY NOT BE PLANTED BETWEEN THESE DATES.

1992

(PS)

3.32

STD & SPEC 3.32

PERMANENT SEEDING

DEFINITION

THE ESTABLISHMENT OF PERENNIAL VEGETATIVE COVER ON DISTURBED AREAS BY PLANTING SEED.

PURPOSES

1. TO REDUCE EROSION AND DECREASE SEDIMENT YIELD FROM DISTURBED AREAS.
2. TO PERMANENTLY STABILIZE DISTURBED AREAS IN A MANNER THAT IS ECONOMICAL, ADAPTABLE TO SITE CONDITIONS, AND ALLOWS SELECTION OF THE MOST APPROPRIATE PLANT MATERIALS.
3. TO IMPROVE WILDLIFE HABITAT.
4. TO ENHANCE NATURAL BEAUTY.

CONDITIONS WHERE PRACTICE APPLIES

1. DISTURBED AREAS WHERE PERMANENT, LONG-LIVED VEGETATIVE COVER IS NEEDED TO STABILIZE THE SOIL.
2. ROUGH-GRADED AREAS WHICH WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE.

LAND USE: A PRIME CONSIDERATION IN SELECTING WHICH PLANTS TO ESTABLISH IS THE INTENDED USE OF THE LAND. ALL OF THESE USES – RESIDENTIAL, INDUSTRIAL, COMMERCIAL, RECREATIONAL – CAN BE SEPARATED INTO TWO MAJOR CATEGORIES: HIGH-MAINTENANCE AND LOW MAINTENANCE.

HIGH-MAINTENANCE AREAS WILL BE MOWED FREQUENTLY, LIMED AND FERTILIZED REGULARLY, AND WILL EITHER RECEIVE INTENSE USE (e.g., ATHLETICS) OR REQUIRE MAINTAINING TO AN AESTHETIC STANDARD (HOME LAWNS). GRASSES USED FOR THESE SITUATIONS MUST BE FINE-LEAVED AND ATTRACTIVE IN APPEARANCE, ABLE TO FORM TIGHT SOD, AND BE LONG-LIVED PERENNIALS. THEY MUST BE WELL-ADAPTED TO THE GEOGRAPHIC AREA WHERE THEY ARE PLANTED, BECAUSE CONSTANT MOWING PUTS TURF UNDER GREAT STRESS. SITES WHERE HIGH-MAINTENANCE VEGETATIVE COVER IS DESIRABLE INCLUDE HOMES, INDUSTRIAL PARKS, SCHOOLS, CHURCHES, ATHLETIC PLAYING SURFACES AS WELL AS SOME RECREATIONAL AREAS.

LOW-MAINTENANCE AREAS WILL BE MOWED INFREQUENTLY OR NOT AT ALL; AND FERTILIZER MAY NOT BE APPLIED ON A REGULAR BASIS; THE AREAS WILL NOT BE SUBJECTED TO INTENSE USE, NOR REQUIRED TO HAVE A UNIFORM APPEARANCE. THESE PLANTS MUST BE ABLE TO PERSIST WITH LITTLE MAINTENANCE OVER LONG PERIODS OF TIME. GRASS AND LEGUME MIXTURES ARE FAVORED FOR THESE SITES BECAUSE LEGUMES ARE CAPABLE OF FIXING NITROGEN FROM THE AIR FOR THEIR OWN USE, AND THE USE OF THE PLANTS AROUND THEM. SUCH MIXED STANDS ARE BETTER ABLE TO WITHSTAND ADVERSE CONDITIONS. SITES WHICH WOULD BE SUITABLE FOR LOW-MAINTENANCE VEGETATION INCLUDE STEEP SLOPES, STREAM OR CHANNEL BANKS, SOME COMMERCIAL PROPERTIES, AND "UTILITY TURF" AREAS SUCH AS ROADBANKS.

TABLE 3.32-D
SITE SPECIFIC SEEDING MIXTURES FOR PIEDMONT AREA

MINIMUM CARE LAWN

– COMMERCIAL OR RESIDENTIAL	175-200 LBS./AC.
– KENTUCKY 31 OR TURF-TYPE TALL FESCUE	95-100%
– IMPROVED PERENNIAL RYEGRASS	0-5%
– KENTUCKY BLUEGRASS	0-5%
HIGH-MAINTENANCE LAWN	200-250 LBS./AC.
– KENTUCKY 31 OR TURF-TYPE FESCUE	100%
GENERAL SLOPE (3:1 OR LESS)	
– KENTUCKY 31 FESCUE	128 LBS.
– RED TOP GRASS	2 LBS.
– SEASONAL NURSE CROP *	20 LBS.
	150 LBS./AC.
LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1)	
– KENTUCKY 31 FESCUE	108 LBS.
– RED TOP GRASS	2 LBS.
– SEASONAL NURSE CROP *	20 LBS.
– CROWNVETCH **	20 LBS.
	150 LBS./AC.

* USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:

FEBRUARY 16TH THROUGH APRIL	ANNUAL RYE
MAY 1ST THROUGH AUGUST 15TH	FOXTAIL MILLET
AUGUST 16TH THROUGH OCTOBER	ANNUAL RYE
NOVEMBER THROUGH FEBRUARY 15TH	WINTER RYE

** SUBSTITUTE SERICEA LESPEDEZA FOR CROWNVETCH EAST OF FARMVILLE, VA. (MAY THROUGH SEPTEMBER USE HULLED SERICEA, ALL OTHER PERIODS, USE UNHULLED SERICEA). IF FLATPEA IS USED IN LIEU OF CROWNVETCH, INCREASE RATE TO 30LBS./ACRE. ALL LEGUME SEED MUST BE PROPERLY INOCULATED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW-MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10-20 LBS./ACRE IN MIXES.

LIME AND FERTILIZER

LIME AND FERTILIZER NEEDS SHOULD BE DETERMINED BY SOIL TESTS. SOIL TESTS MAY BE PERFORMED BY THE COOPERERATIVE EXTENSION SERVICE SOIL TESTING LABORATORY AT VPI & SU, OR BY A REPUTABLE COMMERCIAL LABORATORY. INFORMATION CONCERNING THE STATE SOIL TESTING LABORATORY IS AVAILABLE FROM COUNTY EXTENSION AGENTS.

UNDER UNUSUAL CONDITIONS WHERE IT IS NOT POSSIBLE TO OBTAIN A SOIL TEST, THE FOLLOWING SOIL AMENDMENTS WILL BE APPLIED:

LIME

PIEDMONT AND APPALACHIAN REGION: 2 TONS/ACRE PULVERIZED AGRICULTURAL GRADE LIMESTONE (90 LBS./1000 FT.)

NOTE: AN AGRICULTURAL GRADE OF LIMESTONE SHOULD ALWAYS BE USED.

FERTILIZER

MIXED GRASSES & LEGUMES:	100 LBS./ACRE 10-20-10 OR EQUIVALENT NUTRIENTS (23 LBS./1000^{2}FT.).
LEGUME STANDS ONLY:	1000 LBS./ACRE 5-20-10 (23 LBS./1000 FT^2.) IS PREFERRED; HOWEVER, 1000 LBS./ACRE OF 10-20-10 OR EQUIVALENT MAY BE USED.
GRASS STANDS ONLY:	1000 LBS./ACRE 10-20-10 OR EQUIVALENTS, (23 LBS./1000^{2}FT.).

OTHER FERTILIZER FORMULATIONS, INCLUDING SLOW-RELEASE SOURCES OF NITROGEN (PREFERRED FROM A WATER QUALITY STANDPOINT), MAY BE USED PROVIDED THEY CAN SUPPLY THE SAME AMOUNTS AND PROPORTIONS OF PLANT NUTRIENTS.

MAINTENANCE OF NEW SEEDING

IN GENERAL, A STAND OF VEGETATION CANNOT BE DETERMINED TO BE FULLY ESTABLISHED UNTIL IT HAS BEEN MAINTAINED FOR ONE FULL YEAR AFTER PLANTING.

IRRIGATION: NEW SEEDINGS SHOULD BE SUPPLIED WITH ADEQUATE MOISTURE. SUPPLY WATER AS NEEDED, ESPECIALLY LATE IN THE SEASON, IN ABNORMALLY HOT OR DRY WEATHER, OR ON ADVERSE SITES. WATER APPLICATION RATES SHOULD BE CONTROLLED TO PREVENT EXCESSIVE RUNOFF. INADEQUATE AMOUNTS OF WATER MAY BE MORE HARMFUL THAN NO WATER.

RE-SEEDING: INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS AND RE-SEEDINGS WITHIN THE SAME SEASON, IF POSSIBLE.

a. IF VEGETATIVE COVER IS INADEQUATE TO PREVENT RILL EROSION, OVER-SEED AND FERTILIZE IN ACCORDANCE WITH SOIL TEST RESULTS.
b. IF A STAND HAS LESS THAN 40% COVER, RE-EVALUATE CHOICE OF PLANT MATERIALS AND QUANITIES OF LIME AND FERTILIZER. THE SOIL MUST BE TESTED TO DETERMINE IF ACIDITY OR NUTRIENT IMBALANCES ARE RESPONSIBLE. RE-ESTABLISH THE STAND FOLLOWING SEEDBED PREPARATION AND SEEDING RECOMMENDATIONS.

FERTILIZATION: COOL SEASON GRASSES SHOULD BEGIN TO BE FERTILIZED 90 DAYS AFTER PLANTING TO ENSURE PROPER STAND AND DENSITY. WARM SEASON FERTILIZATION SHOULD BEGIN AT 30 DAYS AFTER PLANTING.

APPLY MAINTENANCE LEVELS OF FERTILIZER AS DETERMINED BY SOIL TEST. IN THE ABSENCE OF A SOIL TEST, FERTILIZATION SHOULD BE AS FOLLOWS:

COOL SEASON GRASSES

4 LBS. NITROGEN (N)
1 LB. PHOSPHORUS (P) } PER 1000 FT^2 PER YEAR
2 LBS. POTASH (K)

SEVENTY-FIVE PERCENT OF THE TOTAL REQUIREMENTS SHOULD BE APPLIED BETWEEN SEPTEMBER 1 AND DECEMBER 31st. THE BALANCE SHOULD BE APPLIED DURING THE REMAINDER OF THE YEAR. MORE THAN 1 LB. OF SOLUBLE NITROGEN PER 1000 FT. SHOULD NOT BE APPLIED AT ANY ONE TIME.

WARM SEASON GRASSES

APPLY 4-5 LBS. NITROGEN (N) BETWEEN MAY 1 AND AUGUST 15th PER 1000 FT.^{2} PER YEAR.

PHOSPHORUS (P) AND POTASH (K) SHOULD ONLY BE APPLIED ACCORDING TO SOIL TEST.

NOTE: THE USE OF SLOW-RELEASE FERTILIZER FORMULATIONS FOR MAINTENANCE OF TURF IS ENCOURAGED TO REDUCE THE NUMBER OF APPLICATIONS AND THE IMPACT ON GROUNDWATER.

SEED QUALITY CRITERIA

WHERE CERTIFIED SEED IS NOT AVAILABLE, THE MINIMUM REQUIREMENTS FOR GRASS AND LEGUME SEED USED IN VEGETATIVE SETABLISHMENT ARE AS FOLLOWS:

a. ALL TAGS ON CONTAINERS OF SEED SHALL BE LABELED TO MEET THE REQUIREMENTS OF THE STATE SEED LAW.
b. ALL SEED SHALL BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY THAT EMPLOYS A REGISTERED SEED TECHNOLOGIST OR BY A STATE SEED LAB.
c. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN TWELVE (12) MONTHS.
d. INOCULANT – THE INOCULANT ADDED TO LEGUME SEED IN THE SEED MIXTURES SHALL BE A PURE CULTURE OF NITROGEN-FIXING BACTERIA PREPARED FOR THE SPECIES. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. TWICE THE SUPPLIER'S RECOMMENDED RATE OF INOCULANT WILL BE USED ON DRY SEEDINGS; FIVE TIMES THE RECOMMENDED RATE IF HYDROSEEDED.
e. THE QUALITY OF THE SEED USED SHALL BE SHOWN ON THE BAG TAGS TO CONFORM TO THE GUIDELINES IN TABLE 3.32-E (VA. EROSION AND SEDIMENT CONTROL HANDBOOK)

STD & SPEC 3.18

(DP)

OUTLET PROTECTION

DESIGN CRITERIA

THE DESIGN OF STRUCTURALLY LINED APRONS AT THE OUTLETS OF PIPES AND PAVED CHANNEL SECTIONS APPLIES TO THE IMMEDIATE AREA OR REACH BELOW THE PIPE OR CHANNEL AND DOES NOT APPLY TO CONTINUOUS ROCK LININGS OF CHANNELS OR STREAMS (SEE STORMWATER CONVEYANCE CHANNEL, STD. & SPEC. 3.17). NOTABLY, PIPE OR CHANNEL OUTLETS AT THE TOP OF CUT SLOPES OR ON SLOPES STEEPER THAN 10% SHOULD NOT BE PROTECTED USING JUST OUTLET PROTECTION AS A RESULT OF THE RECONCENTRATION AND LARGE VELOCITY OF FLOW ENCOUNTERED AS THE FLOW LEAVES THE STRUCTURAL APRON. OUTLET PROTECTION SHALL BE DESIGNED ACCORDING TO THE FOLLOWING CRITERIA.

PIPE OUTLETS

(SEE PLATE 3.18-1)

1. TAILWATER DEPTH: THE DEPTH OF TAILWATER IMMEDIATELY BELOW THE PIPE OUTLET MUST BE DETERMINED FOR THE DESIGN CAPACITY OF THE PIPE. MANNING'S EQUATION MAY BE USED TO DETERMINE TAILWATER DEPTH (SEE CHAPTER 5, ENGINEERING CALCULATIONS). IF THE TAILWATER DEPTH IS LESS THAN HALF THE DIAMETER OF THE OUTLET PIPE, IT SHALL BE CLASSIFIED AS A MINIMUM TAILWATER CONDITION. IF THE TAILWATER DEPTH IS GREATER THAN HALF THE PIPE DIAMETER, IT SHALL BE CLASSIFIED AS A MAXIMUM TAILWATER CONDITION. PIPES WHICH OUTLET ONTO FLAT AREAS WITH NO DEFINED CHANNEL MAY BE ASSUMED TO HAVE A MINIMUM TAILWATER CONDITION. NOTABLY, IN MOST CASES WHERE POST-DEVELOPMENT STORMWATER RUNOFF HAS BEEN CONCENTRATED OR INCREASED, MS #19 WILL BE SATISFIED ONLY BY OUTFALL INTO A DEFINED CHANNEL.
2. APRON LENGTH: THE APRON LENGTH SHALL BE DETERMINED FROM THE CURVES ACCORDING TO THE TAILWATER CONDITION:
   MINIMUM TAILWATER - USE PLATE 3.18-3.
   MAXIMUM TAILWATER - USE PLATE 3.18-4.
3. APRON WIDTH: WHEN THE PIPE DISCHARGES DIRECTLY INTO A WELL-DEFINED CHANNEL, THE APRON SHALL EXTEND ACROSS THE CHANNEL BOTTOM AND UP THE CHANNEL BANKS TO AN ELEVATION ONE FOOT ABOVE THE MAXIMUM TAILWATER DEPTH OR THE TOP OF THE BANK (WHICHEVER IS LESS).

   IF THE PIPE DISCHARGES ONTO A FLAT AREA WITH NO DEFINED CHANNEL, THE WIDTH OF THE APRON SHALL BE DETERMINED AS FOLLOWS:

   A. THE UPSTREAM END OF THE APRON, ADJACENT TO THE PIPE, SHALL HAVE A WIDTH THREE TIMES THE DIAMETER OF THE OUTLET PIPE.
   B. FOR A MINIMUM TAILWATER CONDITION, THE DOWNSTREAM END OF THE APRON SHALL HAVE A WIDTH EQUAL TO THE PIPE DIAMETER PLUS THE LENGTH OF THE APRON.
   C. FOR A MAXIMUM TAILWATER CONDITION, THE DOWNSTREAM END SHALL HAVE A WIDTH EQUAL TO THE PIPE DIAMETER PLUS 0.4 TIMES THE LENGTH OF THE APRON
4. BOTTOM GRADE: THE APRON SHALL BE CONSTRUCTED WITH NO SLOPE ALONG ITS LENGTH (0.0% GRADE). THE INVERT ELEVATION OF THE DOWNSTREAM END OF THE APRON SHALL BE EQUAL TO THE ELEVATION OF THE INVERT OF THE RECEIVING CHANNEL. THERE SHALL BE NO OVERFALL AT THE END OF THE APRON.
5. SIDE SLOPES: IF THE PIPE DISCHARGES INTO A WELL DEFINED CHANNEL, THE SIDE SLOPES OF THE CHANNEL SHALL NOT BE STEEPER THAN 2:1 (HORIZONTAL: VERTICAL).
6. ALIGNMENT: THE APRON SHALL BE LOCATED SO THERE ARE NOT BENDS IN THE HORIZONTAL ALIGNMENT.
7. MATERIALS: THE APRON MAY BE LINED WITH RIPRAP, GROUTED RIPRAP, CONCRETE, OR GABION BASKETS. THE MEDIAN SIZED STONE FOR RIPRAP SHALL BE DETERMINED FROM THE CURVES IN APPENDIX 3.18-A (PLATES 3.18-3 AND 3.18-4) ACCORDING TO THE TAILWATER CONDITION. THE GRADATION, QUALITY AND PLACEMENT OF RIPRAP SHALL CONFORM TO STD. & SPEC. 3.19, RIPRAP.
8. FILTER CLOTH: IN ALL CASES, FILTER CLOTH SHALL BE PLACED BETWEEN THE RIPRAP AND THE UNDERLYING SOIL TO PREVENT SOIL MOVEMENT INTO AND THROUGH THE RIPRAP. THE MATERIAL MUST MEET OR EXCEED THE PHYSICAL PROPERTIES FOR FILTER CLOTH FOUND IN STD. & SPEC. 3.19, RIPRAP. SEE PLATE 3.18-1 FOR ORIENTATION DETAILS.

PAVED CHANNEL OUTLETS

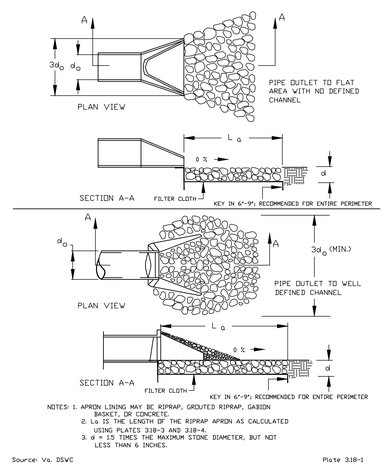
(SEE PLATE 3.18-2)

1. THE FLOW VELOCITY AT THE OUTLET OF PAVED CHANNELS FLOWING AT DESIGN CAPACITY MUST NOT EXCEED THE PERMISSIBLE VELOCITY OF THE RECEIVING CHANNEL (SEE TABLES 3.18-A AND 3.18-B)
2. THE END OF THE PAVED CHANNEL SHALL MERGE SMOOTHLY WITH THE RECEIVING CHNNEL SECTION. THERE SHALL BEND OVERFALL AT THE END OF THE PAVED SECTION. WHERE THE BOTTOM WIDTH OF THE PAVED CHANNEL IS NARROWER THAN THE BOTTOM WIDTH OF THE RECEIVING CHANNEL, A TRANSITION SECTION SHALL BE PROVIDED THE MAXIMUM SIDE DIVERGENCE OF THE TRANSITION SHALL BE 1 IN 3F WHERE;

$$F = \frac{V}{\sqrt{gd}}$$

   WHERE,
   F = FROUDE NUMBER
   V = VELOCITY AT BEGINNING OF TRANSITION (FT./SEC.)
   d = DEPTH OF FLOW AT BEGINNING OF TRANSITION (FT.)
   g = 32.2 FT./SEC.
3. BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT AT THE TRANSITION ARE NOT ALLOWED UNLESS THE FROUDE NUMBER (F) IS 1.0 OR LESS, OR THE SECTION IS SPECIFICALLY DESIGNED FOR TURBULENT FLOW.

PIPE OUTLET CONDITIONS



NOTES: 1. APRON LINING MAY BE RIPRAP, GROUTED RIPRAP, GABION BASKET, OR CONCRETE.
2. Ls IS THE LENGTH OF THE RIPRAP APRON AS CALCULATED USING PLATES 3.18-3 AND 3.18-4.
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.

Source: Va. DSWC Plate 3.18-1

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BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
SHAWN R. HARDEN
Lic. No. 036976
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
APPROVED BY	SRH
CHECKED BY	MAT
DATE	January 14, 2022

TITLE

EROSION & SEDIMENT CONTROL DETAILS

PROJECT NO. 50139338

C-202

SHEET NO.

STD & SPEC 3.02
TEMPORARY STONE
CONSTRUCTION ENTRANCE

CE

CONSTRUCTION SPECIFICATIONS

THE AREA OF THE ENTRANCE MUST BE EXCAVATED A MINIMUM OF 3 INCHES AND MUST BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. THE FILTER FABRIC UNDERLINER WILL THEN BE PLACED THE FULL WIDTH AND LENGTH OF THE ENTRANCE.

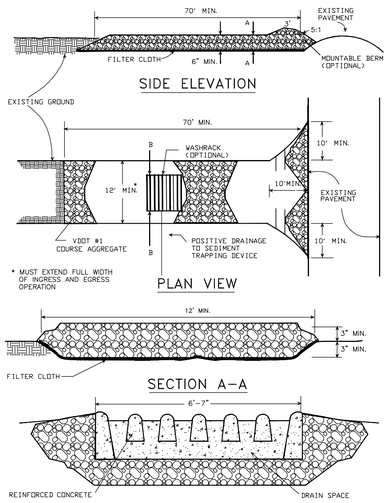
FOLLOWING THE INSTALLATION OF THE FILTER CLOTH, THE STONE SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. IF WASH RACKS ARE USED, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS. CONVEYANCE OF SURFACE WATER UNDER ENTRANCE, THROUGH CULVERTS, SHALL BE PROVIDED AS REQUIRED. IF SUCH CONVEYANCE IS IMPOSSIBLE, THE CONSTRUCTION OF A "MOUNTABLE" BERM WITH 5:1 SLOPES WILL BE PERMITTED.

THE FILTER CLOTH UTILIZED SAHLL BA A WOVEN OR NONWOVEN FABRIC CONSISTING ONLY OF CONTINUOUS CHAIN POLYMERIC FILAMENTS OR YARNS OF POLYESTER. THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS, BE MILDEW AND ROT RESISTANT, AND CONFORM TO THE PHYSICAL PROPERTIES NOTED IN TABLE 3.02-A.

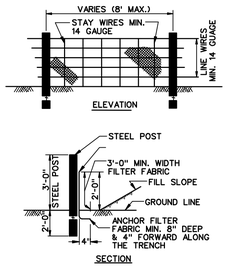
MAINTENANCE

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.

STONE CONSTRUCTION ENTRANCE



SOURCE: MARYLAND WATER RESOURCES ADMINISTRATION VA. DSWC — PLATE. 3.2–1



GENERAL NOTES:

1. SILT FENCE SHALL BE INSTALLED OUTSIDE TOE OF EARTHFILL EMBANKMENTS. MAY ALSO BE INSTALLED AROUND ALL STORM DRAIN INLETS, & MANHOLES AS DIRECTED.
2. WIRE SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL HAVE A MAXIMUM MESH SPACING OF 6".
3. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED SECURELY TO THE WIRE.
4. STEEL POSTS SHALL BE 5'-0" IN HEIGHT AND BE OF SELF-FASTENER ANGLE STEEL TYPE.

NOTE:
THE FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS:
A) EOS IS NOT LARGER THAN U.S. STANDARD SIEVE NO.30
B) GRAB STRENGTH 90-120 LB

MAINTENANCE:

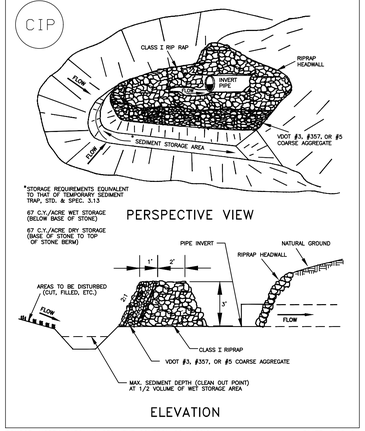
1. INSPECT SILT FENCE ONCE PER WEEK AND AFTER EVERY RAINFALL.
2. PERIODICALLY REMOVE ACCUMULATED SEDIMENT AND REPAIR ANY DAMAGE TO FENCE.

TYPICAL SILT FENCE DETAIL (TEMPORARY)
N.T.S.

SF

CULVERT INLET SEDIMENT TRAP

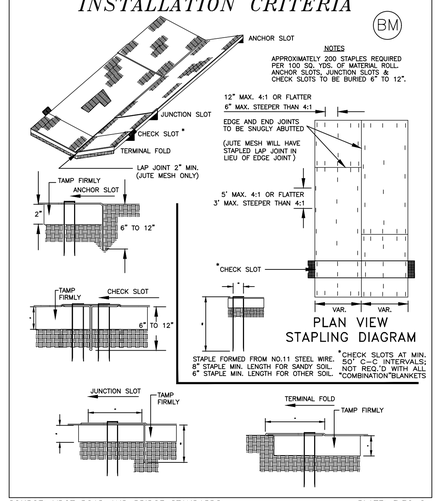
CIP



SOURCE: NORTH CAROLINA SEDIMENT CONTROL COMMISSION — PLATE. 3.08–2

TYPICAL TREATMENT – 1 (SOIL STABILIZATION BLANKET) INSTALLATION CRITERIA

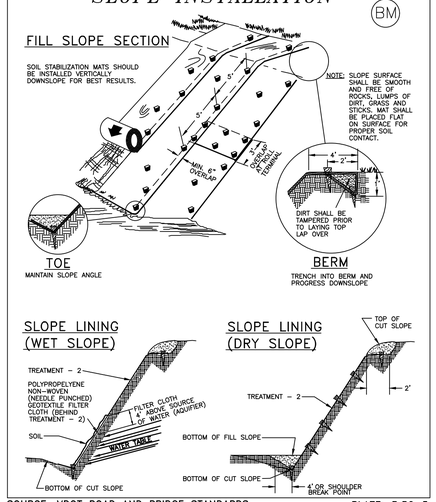
BM



SOURCE: VDOT ROAD AND BRIDGE STANDARDS — PLATE: 3.36–2

TYPICAL TREATMENT – 2 SOIL STABILIZATION MATTING SLOPE INSTALLATION

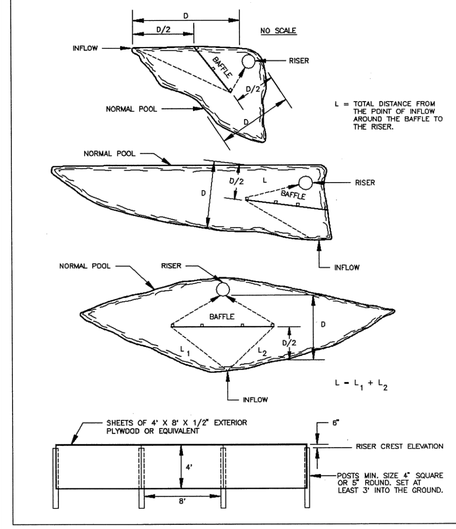
BM



SOURCE: VDOT ROAD AND BRIDGE STANDARDS — PLATE: 3.36–5

1992 — 3.14

EXAMPLE PLAN VIEWS OF BAFFLE LOCATIONS IN SEDIMENT BASINS



Source: USDA-SCS — Plate 3.14-6

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KEY PLAN

SCALE

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
APPROVED BY	SRH
CHECKED BY	MAT
DATE	January 14, 2022

TITLE

SITE AND E&S DETAILS

PROJECT NO.	50139338

C-203

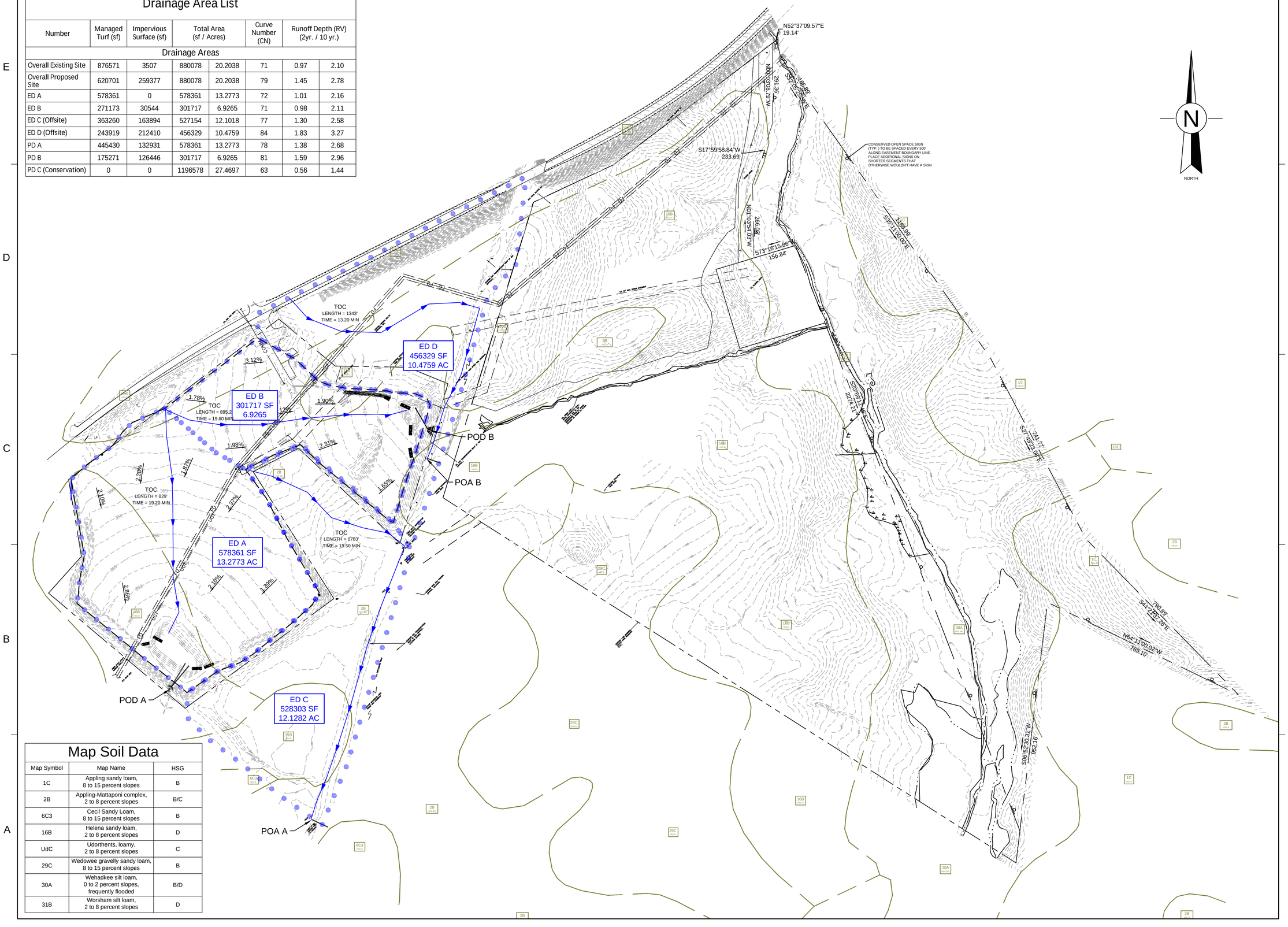
SHEET NO.

Drainage Area List

Number	Managed Turf (sf)	Impervious Surface (sf)	Total Area (sf)	Total Area (Acres)	Curve Number (CN)	Runoff Depth (RV) (2yr.)	Runoff Depth (RV) (10 yr.)
Drainage Areas							
Overall Existing Site	876571	3507	880078	20.2038	71	0.97	2.10
Overall Proposed Site	620701	259377	880078	20.2038	79	1.45	2.78
ED A	578361	0	578361	13.2773	72	1.01	2.16
ED B	271173	30544	301717	6.9265	71	0.98	2.11
ED C (Offsite)	363260	163894	527154	12.1018	77	1.30	2.58
ED D (Offsite)	243919	212410	456329	10.4759	84	1.83	3.27
PD A	445430	132931	578361	13.2773	78	1.38	2.68
PD B	175271	126446	301717	6.9265	81	1.59	2.96
PD C (Conservation)	0	0	1196578	27.4697	63	0.56	1.44

Map Soil Data

Map Symbol	Map Name	HSG
1C	Appling sandy loam, 8 to 15 percent slopes	B
2B	Appling-Mattaponi complex, 2 to 8 percent slopes	B/C
6C3	Cecil Sandy Loam, 8 to 15 percent slopes	B
16B	Helena sandy loam, 2 to 8 percent slopes	D
UdC	Udorthents, loamy, 2 to 8 percent slopes	C
29C	Wedowee gravelly sandy loam, 8 to 15 percent slopes	B
30A	Wehadkee silt loam, 0 to 2 percent slopes, frequently flooded	B/D
31B	Worsham silt loam, 2 to 8 percent slopes	D



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3-25-2024
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KEY PLAN

SCALE

GRAPHIC SCALE 1"=150'

150 0 75 150 300

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
APPROVED BY	SRH
CHECKED BY	MAT
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TITLE

EXISTING DRAINAGE AREAS

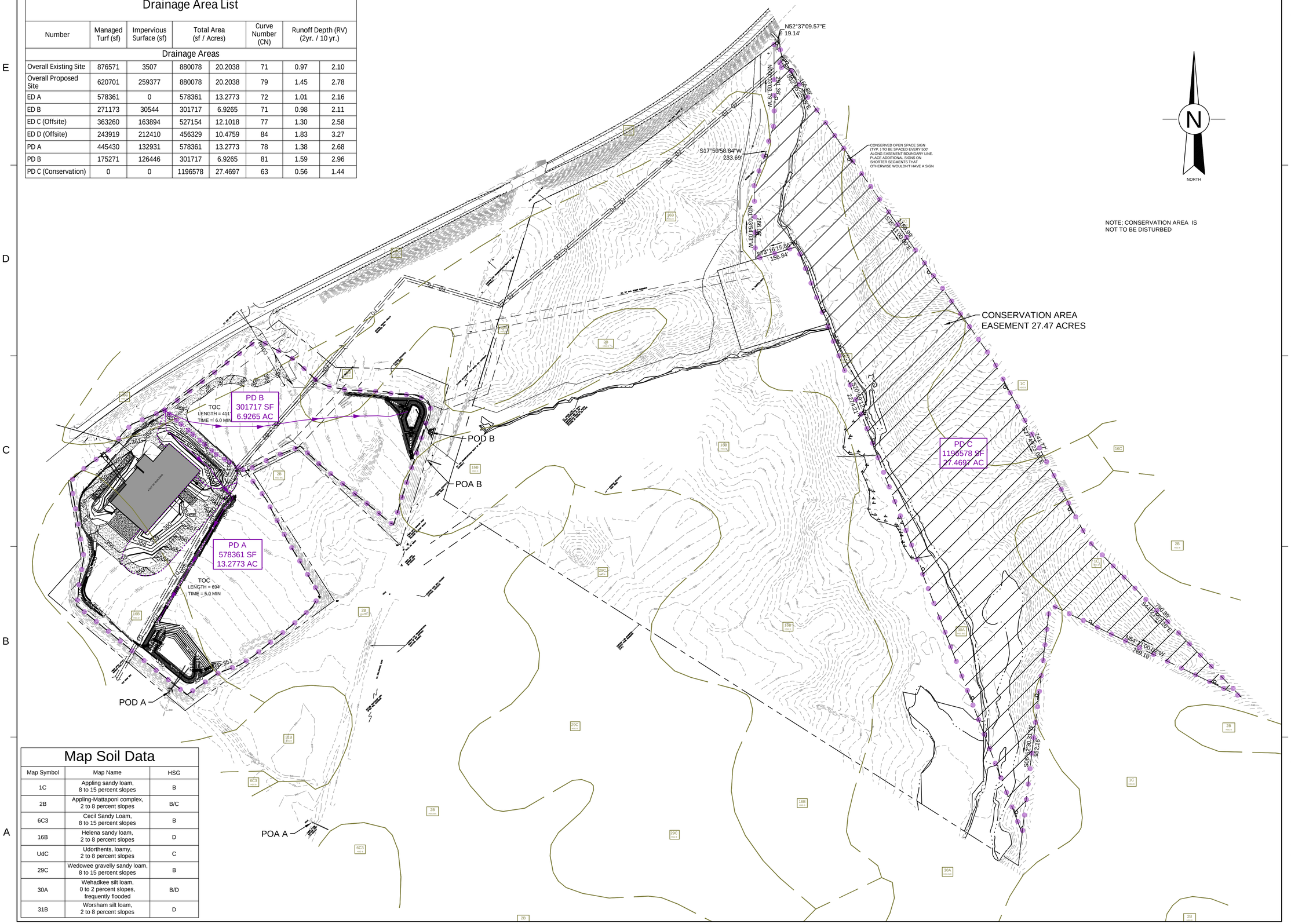
PROJECT NO. 50139338

C-300

SHEET NO.

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KEY PLAN

SCALE

GRAPHIC SCALE 1"=150'

150 0 75 150 300

No.	Description	Date
2	RE-BID SET	3/25/2024
1	BID SET	1/14/2022

REVISIONS

DRAWN BY	NPR / JMM
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TITLE

EXISTING DRAINAGE AREAS

PROJECT NO. 50139338

C-300

SHEET NO.

Drainage Area List

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NORTH

PD B
301717 SF
6.9265 AC

PD A
578361 SF
13.2773 AC

PD C
1196578 SF
27.4697 AC

CONSERVATION AREA
EASEMENT 27.47 ACRES

CONSERVED OPEN SPACE SIGN (TYP.) TO BE SPACED EVERY 500' ALONG EASEMENT BOUNDARY LINE. PLACE ADDITIONAL SIGNS ON SHORTER SEGMENTS THAT OTHERWISE WOULDN'T HAVE A SIGN

N52°37'09.57"E
19.14'

N00°08'08.79"W
291.39'

S55°05'55.95"E
169.89'

S17°59'58.84"W
233.69'

N43°15'45.70"W
199.98'

S73°16'15.86"W
156.84'

S35°11'00.00"E
1364.89'

S20°59'12.48"E
2247.21'

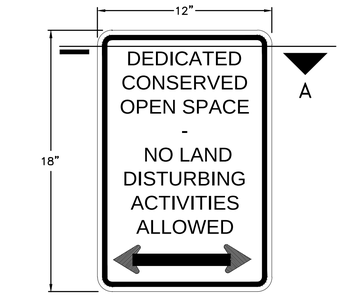
S17°49'12.09"E
2147.17'

S06°52'30.31"W
952.16'

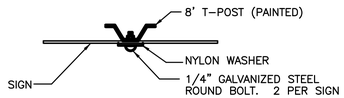
S44°29'31.25"E
780.89'

N64°11'00.02"W
769.10'

NOTE; CONSERVATION AREA IS NOT TO BE DISTURBED IN ANY WAY AND IS ONLY ALLOWED TO BE MOWED FOUR (4) TIMES PER YEAR.



SIGN ELEVATION



SECTION 'A'

POST TO BE INSTALLED 18" BELOW GROUND, SIGN TO BE INSTALLED ON POST 5 FEET FROM EXISTING GRADE TO BOTTOM OF SIGN.

OPEN SPACE
SIGN DETAIL

NOT TO SCALE

Map Soil Data

Map Symbol	Map Name	HSG
1C	Appling sandy loam, 8 to 15 percent slopes	B
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31B	Worsham silt loam, 2 to 8 percent slopes	D

AREA KEY

IMPERVIOUS	
MANAGED TURF	
FORESTED / OPEN SPACE	

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KEY PLAN

SCALE

GRAPHIC SCALE 1"=150'

150 0 75 150 300

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REVISIONS

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APPROVED BY	SRH
CHECKED BY	MAT
DATE	January 14, 2022

TITLE

PROPOSED OPEN SPACE PLAN

PROJECT NO. 50139338

C-302

SHEET NO.

STRUCTURAL ABBREVIATION LIST

A.F.F.	ABOVE FINISHED FLOOR	KSI	KIPS PER SQUARE INCH
ARCH.	ARCHITECTURAL	LLH	LONG LEG HORIZONTAL
B.L.	BUILDING LINE	LLV	LONG LEG VERTICAL
B.S.	BOTH SIDES	MAX.	MAXIMUM
BOT.	BOTTOM	MECH.	MECHANICAL
C=	CAMBER	MIN.	MINIMUM
CF	CUBIC FOOT	MPH	MILES PER HOUR
CLR.	CLEAR	N.T.S.	NOT TO SCALE
COL.	COLUMN	NO.	NUMBER
CONC.	CONCRETE	#	NUMBER
CONT.	CONTINUOUS	O.C.	ON CENTER
DET.	DETAIL	PSI	POUNDS PER SQUARE INCH
DIA.	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DIM.	DIMENSION	R	RADIUS
EA.	EACH	REINF.	REINFORCING
ELEV.	ELEVATION	REQ'D	REQUIRED
EQ.	EQUAL	RTU	ROOF TOP UNIT
EQUIP.	EQUIPMENT	SIM	SIMILAR
EXTG.	EXISTING	S.S.	STAINLESS STEEL
EXP.	EXPANSION	STD.	STANDARD
EXT.	EXTERIOR	STRU.	STRUCTURAL
FIN.	FINISH	T.O.S.	TOP OF STEEL
FTG.	FOOTING	TYP.	TYPICAL
GALV.	GALVANIZED	U.N.O.	UNLESS NOTED OTHERWISE
GA.	GAUGE	V.I.F.	VERIFY IN FIELD
HSS	HOLLOW STRUCTURAL SECTION	VERT.	VERTICAL
HORIZ.	HORIZONTAL	W.W.F.	WELDED WIRE FABRIC
INT.	INTERIOR	W.P.	WORK POINT

REBAR SPLICE AND HOOK SCHEDULE

REBAR SPLICE AND HOOK DIMENSIONS IN REINF. CONCRETE
F'c = 3,000 PSI

ASTM BAR SIZE	LD	CLASS B LAP	TOP BAR LAP	LDH
3	12"	13"	17"	9"
4	14"	18"	23"	11"
5	17"	22"	29"	14"
6	20"	26"	34"	17"
7	32"	41"	53"	20"
8	42"	54"	70"	22"

REBAR SPLICE AND HOOK DIMENSIONS IN REINF. CONCRETE
F'c = 4,500 PSI

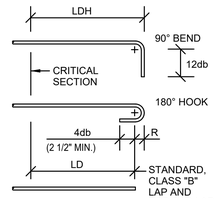
ASTM BAR SIZE	LD	CLASS B LAP	TOP BAR LAP	LDH
3	12"	12"	16"	7"
4	12"	14"	18"	9"
5	14"	18"	23"	12"
6	17"	21"	27"	14"
7	26"	34"	44"	16"
8	34"	44"	57"	18"

NOTES:

TOP BAR - DEFINED AS A BAR LOCATED SUCH THAT 12 IN. OR MORE OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.

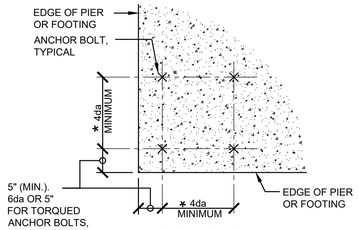
MINIMUM OUTSIDE RADIUS OF BEND, R, SHALL BE 4db.

LD - STANDARD DEVELOPMENT LENGTH OF BAR
LDH - STANDARD DEVELOPMENT LENGTH OF HOOK
F'c - SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE
db - BAR DIAMETER PER ASTM

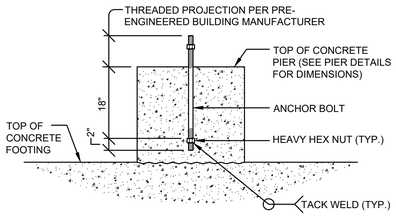


* 6da FOR TORQUED ANCHOR BOLTS. BUILDING MANUFACTURER SHALL INDICATE TORQUED ANCHOR BOLTS ON SHOP DRAWINGS SUBMITTAL.

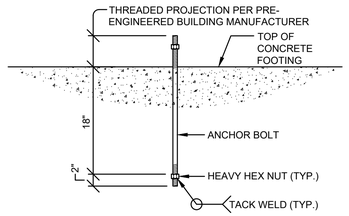
NOTE:
CONTRACTOR SHALL VERIFY EXACT ANCHOR BOLT SIZE, NUMBER, LOCATION, AND PROJECTION WITH PRE-ENGINEERED METAL BUILDING MANUFACTURER PRIOR TO SETTING OF ANCHOR BOLTS.



ANCHOR BOLT SPACING PLAN
da = ANCHOR BOLT DIAMETER



ANCHOR BOLTS IN PIERS



ANCHOR BOLTS IN FOOTINGS

BASE PLATE AND ANCHOR BOLT NOTES:

PRE-ENGINEERED METAL BUILDING COLUMN ANCHOR BOLTS AND BASE PLATES SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER WORKING FOR THE PRE-ENGINEERED METAL BUILDING MANUFACTURER. FOUNDATION DESIGN IS BASED ON THE CRITERIA ENUMERATED BELOW. ANCHOR BOLT AND BASE PLATE DESIGN SHALL MEET THE CRITERIA BELOW UNLESS WRITTEN APPROVAL TO DEVIATE FROM THESE REQUIREMENTS IS PROVIDED BY THE FOUNDATION ENGINEER OF RECORD.

1. ALL ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36.
2. ALL ANCHOR BOLTS SHALL HAVE A MINIMUM DIAMETER OF 1/2" AND A MAXIMUM DIAMETER OF 1-1/4". SKIP ONE SIZE BETWEEN DIAMETERS.
3. ANCHOR BOLT LAYOUTS SHALL EMPLOY AN EVEN NUMBER OF BOLTS AND SHALL BE SYMMETRICAL ABOUT THE WEB OF THE BUILDING COLUMNS.
4. ALL ANCHOR BOLT LAYOUTS SHALL CONFORM TO THE MINIMUM SPACING AND EDGE DISTANCE REQUIREMENTS DETAILED ABOVE.
5. ALL ANCHOR BOLTS CAST IN PIERS SHALL BE LOCATED SUCH THAT THEY ARE ENCLOSED BY THE PIER STIRRUPS AND DO NOT INTERFERE WITH THE VERTICAL PIER REINFORCING. VERTICAL PIER REINFORCING NOT LOCATED IN PIER CORNERS ARE PERMITTED TO BE ADJUSTED SLIGHTLY TO ACCOMMODATE ANCHOR BOLT LOCATIONS.

1 COLUMN ANCHOR BOLT DETAIL
SCALE: NOT TO SCALE

GENERAL STRUCTURAL NOTES

DESIGN:

1. THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS EXIST BETWEEN THE DRAWINGS, SPECIFICATIONS, AND GENERAL STRUCTURAL NOTES, THE STRICTEST PROVISION SHALL GOVERN.
2. STRUCTURAL DESIGN OF PRE-ENGINEERED BUILDING FOUNDATION CONFORMS TO THE REQUIREMENTS OF THE 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (ASCE 7-16 WITH VIRGINIA AMENDMENTS).
3. DESIGN LOADS AND DESIGN DATA FOR NEW CONSTRUCTION SHALL BE AS FOLLOWS:

   A. FLOOR LIVE LOADS:

SLAB-ON-GRADE	200 PSF

   B. ROOF LOADS:

MINIMUM ROOF LIVE LOAD:	20 PSF

   C. ROOF SNOW LOAD:

GROUND SNOW LOAD (Pg)	20 PSF
SNOW EXPOSURE FACTOR (Ce)	0.9
SNOW LOAD IMPORTANCE FACTOR (Is)	1.0
THERMAL FACTOR (Ct)	1.3
FLAT ROOF SNOW LOAD (Pf)	18.2 PSF

   D. WIND LOAD:

RISK CATEGORY	II
ULTIMATE WIND SPEED (3 SECOND GUST)	112 MPH
WIND EXPOSURE CATEGORY	C

   E. SEISMIC DESIGN DATA:

RISK CATEGORY	II
SEISMIC IMPORTANCE FACTOR (Ie)	1.0
SPECTRAL RESPONSE ACCELERATION S_S	0.141
SPECTRAL RESPONSE ACCELERATION S_1	0.05
SPECTRAL RESPONSE COEFF. S_{DS}	0.15
SPECTRAL RESPONSE COEFF. S_{D1}	0.08
SITE CLASS (PER GEOTECH REPORT)	D
SEISMIC DESIGN CATEGORY	B
SEISMIC-FORCE-RESISTING SYSTEM	PER PRE-ENG. BLDG MANUF.
ANALYSIS PROCEDURE	PER PRE-ENG. BLDG MANUF.

COORDINATION:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF COLUMNS, WALLS, AND OPENINGS WITH THE ARCH. DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
2. COORDINATE THE EXACT SIZE AND LOCATION OF ALL SLEEVES AND OPENINGS THROUGH CONCRETE SLABS AND CONCRETE WALLS WITH MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS. SLEEVES SHALL BE ASTM A 53 SCH. 40 STEEL WITH A DIAMETER NOT GREATER THAN 12 INCHES AND SHALL BE GALVANIZED AFTER CUTTING. THE SLEEVE SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR REQUIRING THE SLEEVE.

FOUNDATIONS:

1. FOUNDATION DESIGN IS BASED ON A REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT BY FROEHLING & ROBERTSON, INC. DATED JULY 23, 2021 (F&R PROJECT NO. 60Z-0220).
2. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD CONTRARY TO THOSE ASSUMED FOR DESIGN.
3. FOUNDATION BEARING PRESSURE USED IN DESIGN (POUNDS PER SQUARE FOOT)

COLUMN FOOTINGS	2,000 PSF

4. ALL COMPACTED FILL, EXCAVATIONS, SUBGRADES, AND BEARING SURFACES SHALL BE OBSERVED AND TESTED BY A GEOTECHNICAL ENGINEER REGISTERED IN THE COMMONWEALTH OF VIRGINIA (OR A QUALIFIED GEOTECHNICAL TECHNICIAN WORKING UNDER THE DIRECT SUPERVISION OF A REGISTERED ENGINEER) TO VERIFY SPECIFIED GEOTECHNICAL CONFORMANCE REQUIREMENTS.
5. COMPACTED STRUCTURAL FILL SHALL BE AS FOLLOWS:

   A. INSPECTED AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
   B. NON-ORGANIC ON-SITE SOILS OR OFF-SITE BORROWS APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER HAVING A CLASSIFICATION OF CL, ML, SC, SM OR BETTER AS DEFINED BY THE UNIFIED SOIL CLASSIFICATION SYSTEM.
   C. PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS.
   D. COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY PER ASTM D698 (STANDARD PROCTOR).
   E. MOISTURE CONTENT WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT. MAXIMUM LIQUID LIMIT OF 45 AND PLASTICITY INDEX LESS THAN 20.
   F. FREE OF BOULDERS, ORGANICS, TRASH, PARTICLES OF 3 INCHES OR MORE IN DIAMETER, AND OTHER DELETERIOUS MATERIALS.

6. LOOSE OR SOFT SOILS SHALL BE CLEANED FROM FOUNDATION EXCAVATION BOTTOMS PRIOR TO PLACING OF CONCRETE. SUBGRADES NEEDING UNDERCUTTING SHALL BE BACKFILLED TO THE ORIGINAL SUBGRADE ELEVATION WITH SUITABLE FILL (LEAN CONCRETE OR A GRADED WASHED STONE SUCH AS No. 57 OR No. 67 AGGREGATE) UNLESS DIRECTED OTHERWISE BY THE GEOTECHNICAL ENGINEER.
7. FOUNDATION CONCRETE SHOULD BE PLACED ON THE SAME DAY THAT EXCAVATIONS ARE MADE. IF THE BEARING SOILS ARE SOFTENED BY SURFACE WATER INTRUSION OR EXPOSURE, THEN THE SOFTENED SOILS MUST BE REMOVED FROM THE FOUNDATION EXCAVATION BOTTOM IMMEDIATELY PRIOR TO PLACING OF CONCRETE. IF THE EXCAVATION MUST REMAIN OPEN OVERNIGHT, OR IF RAINFALL IS IMMINENT WHILE THE BEARING SOILS ARE EXPOSED, THEN A 1 TO 3 INCH THICK LAYER OF LEAN CONCRETE (150 PSI MINIMUM STRENGTH) SHALL BE PLACED ON THE BEARING SOILS BEFORE THE PLACEMENT OF REINFORCING STEEL.

REINFORCED CONCRETE:

1. U.N.O., ALL CONCRETE WORK, DETAILING, FABRICATION, AND PLACING OF REINFORCING AND CONCRETE SHALL BE GOVERNED BY THE LATEST REVISIONS OF:
   A. ACI 301, ACI 315, AND ACI 318.
   B. CRSI RECOMMENDED PRACTICE OF PLACING REINFORCING BARS.
   C. ACI 306 AND ACI 305 FOR COLD AND HOT WEATHER CONCRETING RESPECTIVELY.
2. ALL POURED IN PLACE CONCRETE SHALL BE NORMAL WEIGHT WITH A MAXIMUM UNIT WEIGHT OF 150 POUNDS PER CUBIC FOOT AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS SPECIFIED BELOW, FOR THE RESPECTIVE AREAS.

FOOTINGS	3,000 PSI
SLAB-ON-GRADE, PIERS, AND WALLS	4,500 PSI

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615 AND SHALL BE GRADE 60.
4. REINFORCING BAR LAP SPLICES AND HOOK DIMENSIONS SHALL BE AS REQUIRED PER THE SCHEDULE ON SHEET S-001 UNLESS NOTED OTHERWISE.
5. WELDED WIRE FABRIC SHALL BE NEW BILLET STEEL, COLD DRAWN CONFORMING TO ASTM SPECIFICATIONS A 185 AND A 82 AND SHALL BE PROVIDED IN FLAT SHEETS.

STRUCTURAL STEEL:

1. UNLESS NOTED OTHERWISE, DESIGN, DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AISC 303-10 AND 360-10.
2. ALL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A-992 (FY=50 KSI MIN.). ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36, U.N.O.
3. STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B.
4. ALL WELDING SHALL BE DONE BY WELDERS CURRENTLY CERTIFIED BY THE AMERICAN WELDING SOCIETY (AWS) AS HAVING PASSED AWS QUALIFICATION TESTS FOR THE TYPE OF WELDING THEY ARE TO PERFORM. ALL WELDERS SHALL USE E70XX ELECTRODES AND SHALL CONFORM TO AWS STANDARDS.
5. ALL COPES, BLOCKS, CUTS, CUT-OUTS, AND OTHER CUTTING OF STRUCTURAL MEMBERS SHALL HAVE ALL RE-ENTRANT CORNERS SHAPED, NOTCH-FREE, TO A RADIUS OF AT LEAST 1/2" INCH.
6. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ENGINEER AS TO LOCATION AND TYPE OF SPLICE TO BE MADE. ANY MEMBER HAVING A SPLICE NOT SHOWN AND DETAILED ON SHOP DRAWINGS WILL BE REJECTED.

PRE-ENGINEERED METAL BUILDING SYSTEM:

1. PRE-ENGINEERED METAL BUILDING SYSTEM MANUFACTURER SHALL DESIGN PRIMARY AND SECONDARY STRUCTURAL FRAMING MEMBERS AND EXTERIOR COVER MATERIALS IN ACCORDANCE WITH THE CURRENT METAL BUILDING MANUFACTURERS ASSOCIATION (MBMA) "DESIGN PRACTICES MANUAL" AND IN ACCORDANCE WITH THE 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
2. PRE-ENGINEERED METAL BUILDING SYSTEM CALCULATIONS AND SHOP DRAWINGS, USING THE LOADS STATED IN THE "DESIGN" SECTION OF THE GENERAL NOTES ALONG WITH A COLLATERAL ROOF LOAD OF 10 PSF, SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW, PRIOR TO THE FABRICATION OF THE METAL BUILDING AND PRIOR TO THE PLACING OF COLUMN FOOTINGS. PRE-ENGINEERED METAL BUILDING CALCULATIONS AND SHOP DRAWINGS SHALL BEAR THE SEAL OF A STRUCTURAL ENGINEER LICENSED TO PRACTICE IN THE COMMONWEALTH OF VIRGINIA. DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL INCLUDE COLUMN BASE REACTIONS FOR ALL APPLICABLE LOAD CASES. SHOP DRAWINGS SHALL INCLUDE ANCHOR BOLT DIAMETER AND LAYOUT. DESIGN LOADS SHALL BE COMBINED IN ACCORDANCE WITH REQUIREMENTS OF THE 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
3. THE MAXIMUM DEFLECTION DUE TO LIVE LOADS FOR ROOF RAFTERS, PURLINS, AND JOISTS SHALL NOT EXCEED 1/180th OF THEIR RESPECTIVE SPANS. THE MAXIMUM DEFLECTION DUE TO TOTAL GRAVITY LOADS FOR ROOF RAFTERS, PURLINS, AND JOISTS SHALL NOT EXCEED 1/120th OF THEIR RESPECTIVE SPANS.
4. THE MAXIMUM BUILDING FRAME SIDESWAY (DRIFT) DUE TO WIND, SEISMIC, AND GRAVITY LOADS SHALL NOT EXCEED 1/180th OF THE BUILDING HEIGHT.
5. PRE-ENGINEERED METAL BUILDING MANUFACTURER SHALL PROVIDE ALL NECESSARY FRAMING REQUIRED AT ALL WALL AND ROOF OPENINGS AND AT ALL ROOF MOUNTED OR HUNG EQUIPMENT.
6. ALL WELDING SHALL BE DONE BY WELDERS CURRENTLY CERTIFIED BY THE AMERICAN WELDING SOCIETY (AWS) AS HAVING PASSED AWS QUALIFICATION TESTS FOR THE TYPE OF WELDING THEY ARE TO PERFORM. ALL WELDERS SHALL USE E70XX ELECTRODES AND SHALL CONFORM TO AWS STANDARDS.
7. ANCHOR BOLTS FOR PRE-ENGINEERED METAL BUILDING COLUMNS SHALL CONFORM TO ASTM F1554 (GRADE 36) OR STRONGER MATERIAL GRADE.
8. ERECTOR SHALL PROVIDE ADEQUATE AND SAFE TEMPORARY BRACING, SHORING, AND GUYING OF PRE-ENGINEERED METAL BUILDING STEEL FRAMING AGAINST WIND LOADS, CONSTRUCTION LOADS, AND OTHER TEMPORARY FORCES UNTIL SUCH PROTECTION IS NO LONGER REQUIRED FOR THE SAFE SUPPORT OF THE FRAME.

GRATING:

1. STEEL GRATING SHALL HAVE THE FOLLOWING PROPERTIES:

   1-1/4" DEPTH RECTANGULAR BAR GRATING ("MCNICHOLS GW-125" OR APPROVED EQUAL):

   A. BAR HEIGHT: 1-1/4"
   B. BEARING BAR SIZE: 1-1/4" X 3/16"
   C. BEARING BAR SPACING: 1-3/16" CENTER TO CENTER
   D. CROSS BAR SPACING: 4" CENTER TO CENTER
   E. SURFACE: SERRATED

   1-1/4" DEPTH STAIR TREAD GRATING ("MCNICHOLS GW-125 STAIR TREAD" OR APPROVED EQUAL):

   A. 1-1/4" HEIGHT BY 12" WIDTH
   B. BEARING BAR SIZE: 1-1/4" X 3/16"
   C. BEARING BAR SPACING: 1-3/16" CENTER TO CENTER
   D. CROSS BAR SPACING: 4" CENTER TO CENTER
   E. SURFACE: SERRATED
   F. CHECKER PLATE NOSING

2. ATTACH GRATING TO SUPPORTS WITH "SADDLE CLIPS" (MINIMUM 2 PER SIDE PER GRATING PANEL) OR BY OTHER APPROVED ANCHORING SYSTEM THAT ALLOWS REMOVAL AND REATTACHMENT OF GRATING.
3. SUBMIT SHOP DRAWINGS OF GRATING TO ENGINEER FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL INCLUDE PLANS, SECTIONS, DETAILS, PRODUCT DATA, AND ATTACHMENT DETAILS TO SUPPORTING STRUCTURE.

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BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
ADAM C. HAYES
Lic. No. 0402062756
03/25/24
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

AS NOTED

No.	Description	Date

REVISIONS

DRAWN BY	AVCS/ACH
APPROVED BY	ACH
CHECKED BY	JAW
DATE	MARCH 2024

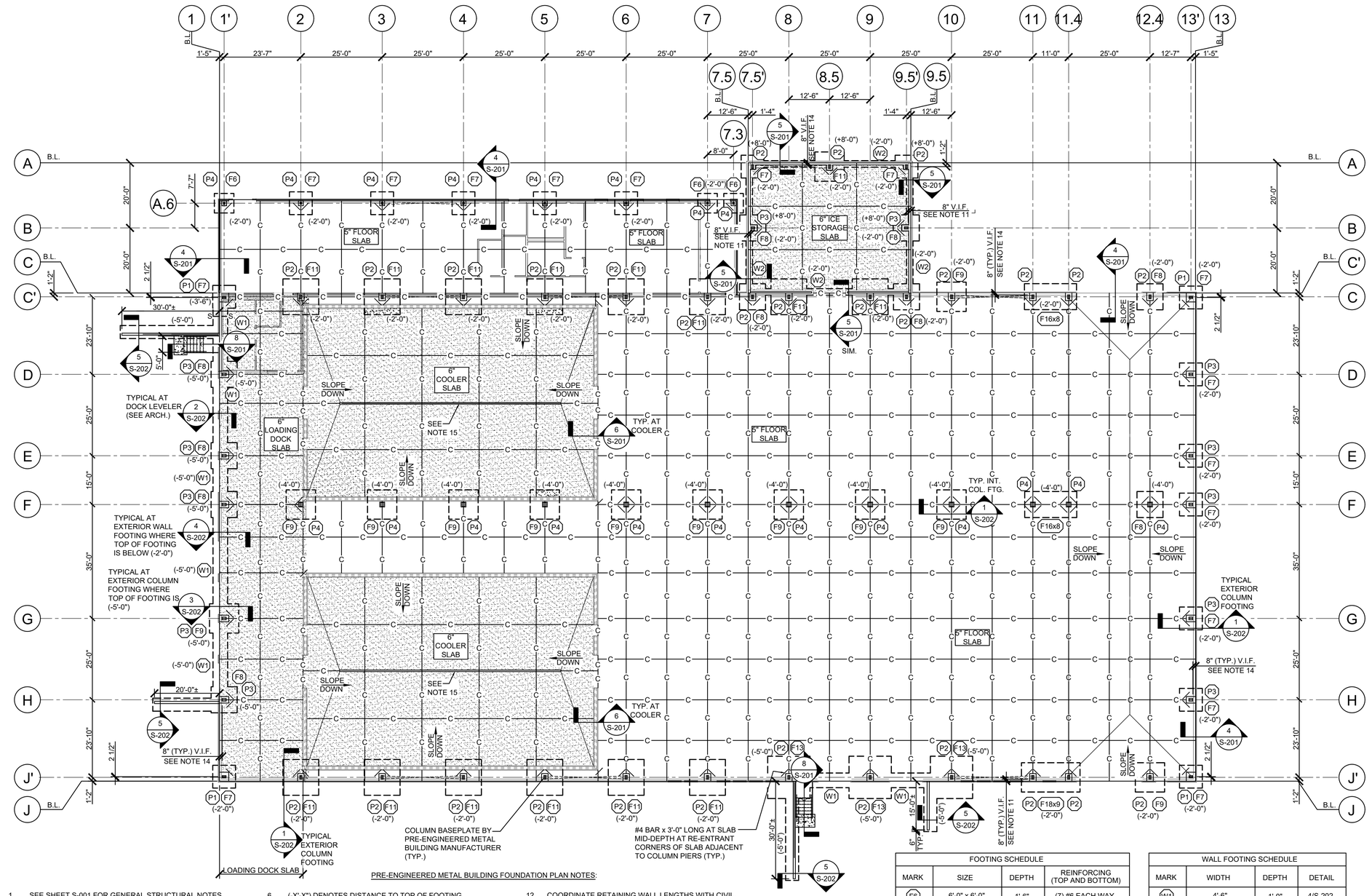
TITLE

GENERAL STRUCTURAL NOTES AND DETAILS

PROJECT NO. 50139338

S-001

SHEET NO.



PRE-ENGINEERED METAL BUILDING FOUNDATION PLAN NOTES:

1. SEE SHEET S-001 FOR GENERAL STRUCTURAL NOTES.
2. U.N.O. TYPICAL FLOOR SLAB CONSTRUCTION SHALL BE 5" CONCRETE SLAB-ON-GRADE WITH 6x6 W2.9xW2.9 WWF OVER 15 MIL VAPOR BARRIER AND 4" VDOT (AASHTO) NO. 57 CRUSHED STONE.
3. Hatched area: DENOTES ICE STORAGE, COOLER, AND LOADING DOCK SLAB. ICE STORAGE, COOLER, AND LOADING DOCK SLAB CONSTRUCTION SHALL BE 6" CONCRETE SLAB-ON-GRADE WITH 6x6 W4.0x4.0 WWF OVER 15 MIL VAPOR BARRIER, INSULATION (SEE ARCH.), 6" COMPACTED SAND OVER 4" VDOT (AASHTO) NO. 57 CRUSHED STONE. SEE ARCHITECTURAL FOR ICE STORAGE, COOLER, AND LOADING DOCK SLAB LOCATIONS.
4. SEE CIVIL DRAWINGS FOR FINISHED GRADE ELEVATION. STRUCTURAL CONSIDERS HIGH POINT FINISHED GRADE AT (+0'-0") U.N.O.
5. (FX) DENOTES COLUMN FOOTING SIZE. SEE SCHEDULE ON THIS SHEET FOR FOOTING DIMENSIONS AND REINFORCING, SEE DETAIL 1/S-202.
6. (-X'-X") DENOTES DISTANCE TO TOP OF FOOTING REFERENCED TO FINISHED GRADE ELEVATION.
7. ⊣C⊢ DENOTES CONTROL JOINT OR CONSTRUCTION JOINT LOCATION IN SLAB-ON-GRADE. SEE DETAILS 1/S-201 AND 2/S-201.
8. ⊣ S ⊢ DENOTES FOOTING STEP. SEE DETAIL 3/S-201.
9. SEE ARCH. DRAWINGS FOR WALL DIMENSIONS AND WALL OPENING DIMENSIONS.
10. (PX) DENOTES COLUMN PIER SIZE. TOP OF COLUMN PIERS SHALL BE AT (0'-0") UNLESS NOTED. SEE SCHEDULE ON THIS SHEET FOR COLUMN PIER DIMENSIONS.
11. SEE 1/S-001 FOR PRE-ENGINEERED METAL BUILDING COLUMN ANCHOR BOLT DETAIL. VERIFY EXACT ANCHOR BOLT SIZE, NUMBER, LOCATION, AND PROJECTION WITH PRE-ENGINEERED METAL BUILDING MANUFACTURER PRIOR TO SETTING OF ANCHOR BOLTS.
12. COORDINATE RETAINING WALL LENGTHS WITH CIVIL. SEE DETAIL 5/S-202. SEE DETAIL 6/S-202 FOR CONCRETE WALL CORNER REINFORCING DETAIL.
13. CONCRETE COLUMN FOOTINGS SHALL NOT BE BE PLACED UNTIL FINAL PRE-ENGINEERED SHOP DRAWINGS AND COLUMN REACTIONS HAVE BEEN SUBMITTED, REVIEWED, AND APPROVED. COLUMN LINES AND DIMENSIONS BASED ON PRELIMINARY DRAWINGS DATED AUGUST 10, 2023 BY BUTLER MANUFACTURING. VERIFY ALL DIMENSIONS WITH PRE-ENGINEERED METAL BUILDING MANUFACTURER.
14. DIMENSION IS FROM B.L. TO OUTER EDGE OF BASE PLATE. CONFIRM DIMENSION WITH PRE-ENGINEERED METAL BUILDING MANUFACTURER PRIOR TO SETTING OF ANCHOR BOLTS.
15. SEE ARCHITECTURAL AND PLUMBING FOR FLOOR SLAB SLOPES AND TRAFFIC RATED TRENCH DRAINS.
16. SEE CIVIL AND ARCH. DRAWINGS FOR EXTERIOR PAVING AND SIDEWALK LOCATIONS AND DETAILS.

FOOTING SCHEDULE			
MARK	SIZE	DEPTH	REINFORCING (TOP AND BOTTOM)
F6	6'-0" x 6'-0"	1'-6"	(7) #6 EACH WAY
F7	7'-0" x 7'-0"	1'-6"	(8) #6 EACH WAY
F8	8'-0" x 8'-0"	1'-6"	(9) #6 EACH WAY
F9	9'-0" x 9'-0"	1'-6"	(10) #6 EACH WAY
F11	11'-0" x 11'-0"	1'-6"	(12) #6 EACH WAY
F13	13'-0" x 13'-0"	1'-6"	(14) #6 EACH WAY
F16x8	16'-0" x 8'-0"	1'-6"	#6 AT 12" EACH WAY
F18x9	18'-0" x 9'-0"	1'-6"	#6 AT 12" EACH WAY

WALL FOOTING SCHEDULE			
MARK	WIDTH	DEPTH	DETAIL
W1	4'-6"	1'-0"	4/S-202
W2	2'-0"	1'-0"	5/S-201

PIER SCHEDULE		
MARK	SIZE	DETAIL
P1	2'-10" x 2'-9"	1/S-202
P2	2'-4" x 2'-0"	1/S-202
P3	2'-10" x 2'-0"	1/S-202
P4	1'-6" x 1'-6"	1/S-202

NOTES:

1. CONTRACTOR TO COORDINATE PIER LOCATION WITH RESPECT TO COLUMNS AND ANCHOR BOLTS WITH PRE-ENGINEERED METAL BUILDING MANUFACTURER.
2. CONTRACTOR SHALL BE PERMITTED TO OVERPOUR PIERS AT BUILDING CORNERS TO FILL VOIDS AT EXTERIOR WALLS.

1 FOUNDATION PLAN

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

Dewberry

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BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
ADAM C. HAYES
Lic. No. 0402062756
03/25/24
PROFESSIONAL ENGINEER

KEY PLAN

SCALE
0' 8' 16' 32' 48'
1/16" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	AVCS/ACH
APPROVED BY	JAW
CHECKED BY	WJH
DATE	MARCH 2024

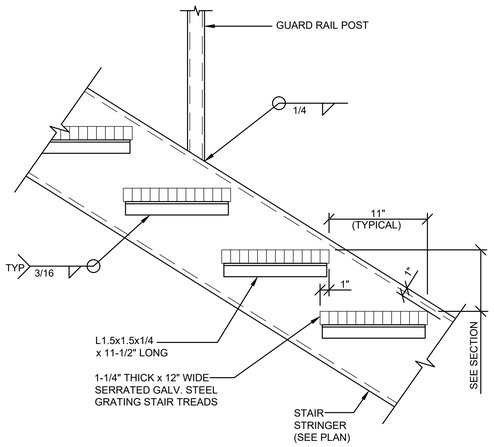
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FOUNDATION PLAN

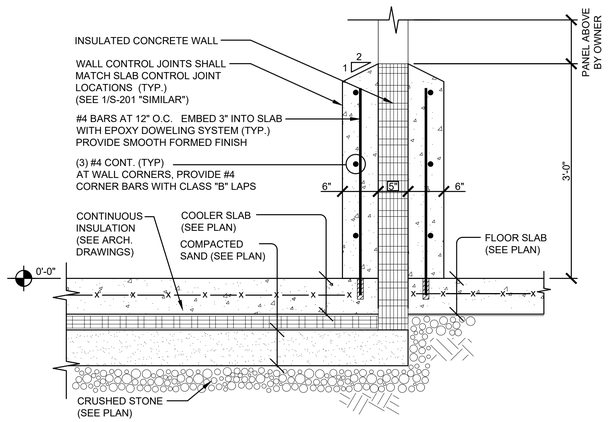
PROJECT NO. 50139338

S-101

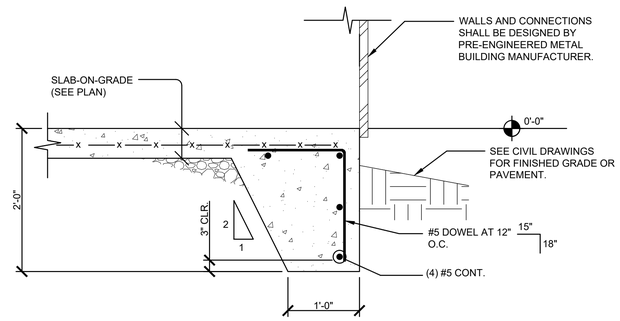
SHEET NO.



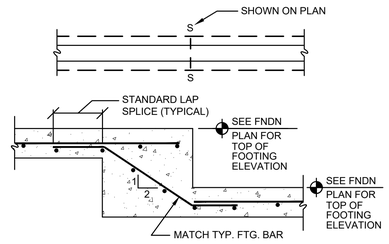
9 STEEL STAIR DETAIL
SCALE: 1-1/2"=1'-0"



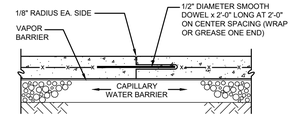
6 COOLER STORAGE SLAB
SCALE: 1"=1'-0"



4 TURN DOWN SLAB
SCALE: 1"=1'-0"

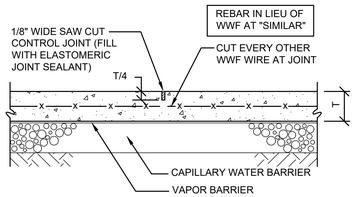


3 FOOTING STEP
SCALE: NOT TO SCALE



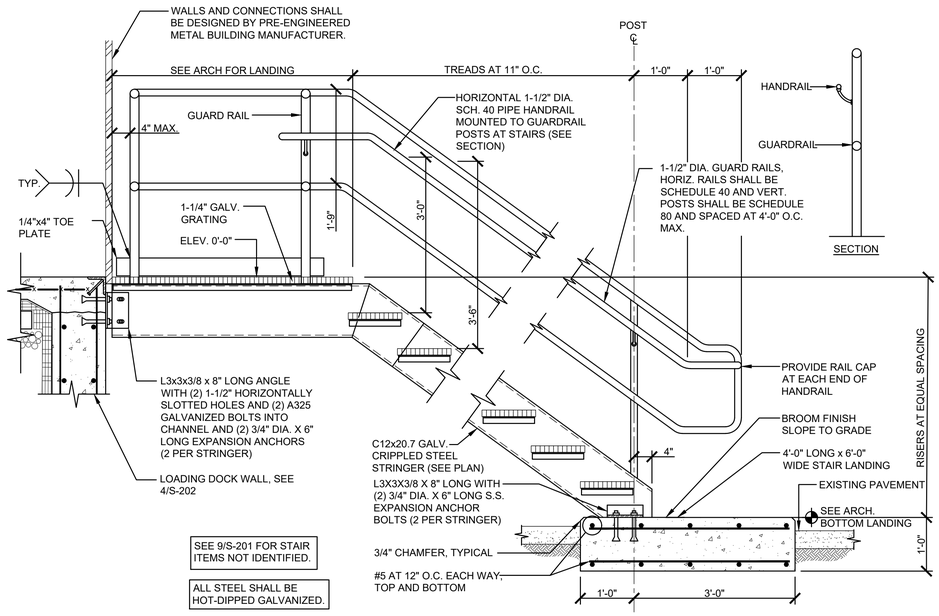
NOTES:
1. SEE FOUNDATION PLAN FOR SLAB THICKNESS, CAPILLARY WATER BARRIER, AND WELDED WIRE FABRIC SIZE.
2. THIS DETAIL APPLIES ONLY AT THE INTERSECTION OF TWO SEPARATE FLOOR SLAB POURS (COLD JOINT).
3. DISCONTINUE WELDED WIRE FABRIC REINFORCING AT JOINT.

2 CONSTRUCTION JOINT
SCALE: NOT TO SCALE



NOTES: SEE FOUNDATION PLAN FOR SLAB THICKNESS, CAPILLARY WATER BARRIER, AND WELDED WIRE FABRIC SIZE.

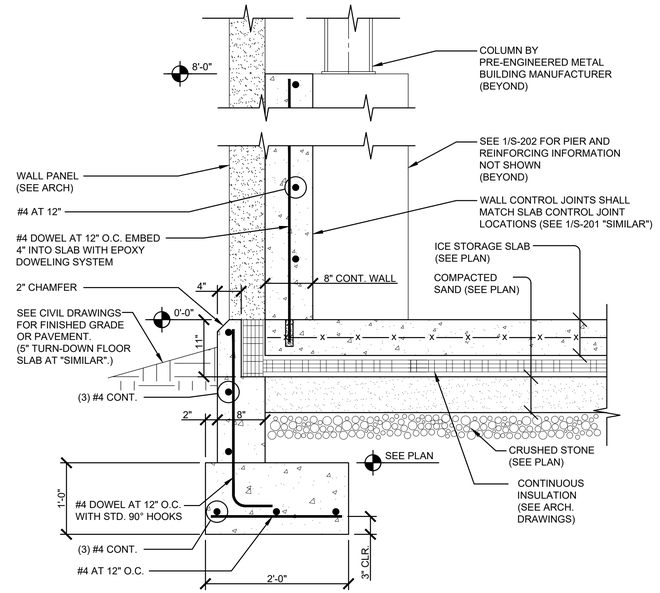
1 CONTROL JOINT
SCALE: NOT TO SCALE



SEE 9/S-201 FOR STAIR ITEMS NOT IDENTIFIED.

ALL STEEL SHALL BE HOT-DIPPED GALVANIZED.

8 STEEL STAIR SECTION
SCALE: 3/4"=1'-0"



5 ICE STORAGE WALL DETAIL
SCALE: 1"=1'-0"

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BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
ADAM C. HAYES
Lic. No. 040206756
03/25/24
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

AS NOTED

No.	Description	Date

REVISIONS

DRAWN BY	AVCS/ACH
APPROVED BY	JAW
CHECKED BY	WJH
DATE	MARCH 2024

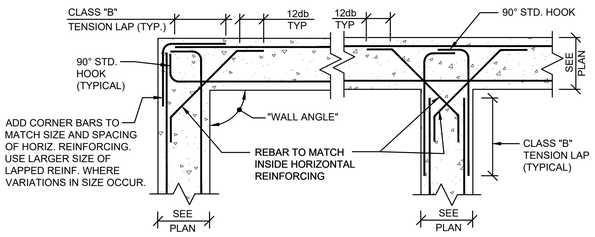
TITLE

FOUNDATION DETAILS

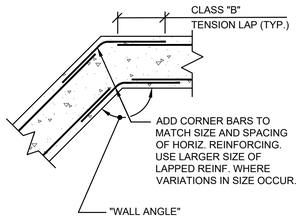
PROJECT NO. 50139338

S-201

SHEET NO.



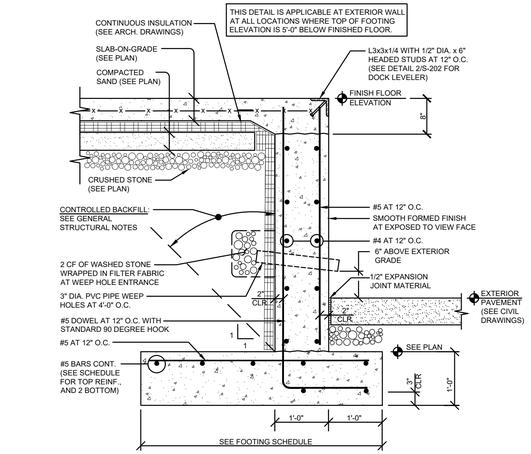
FOR WALL CORNERS WHERE "WALL ANGLE" IS GREATER THAN 60° BUT LESS THAN 120°



FOR WALL CORNERS WHERE "WALL ANGLE" IS GREATER THAN 120° BUT LESS THAN 180°

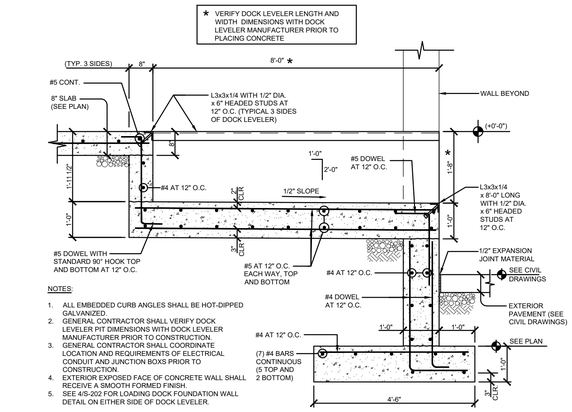
6 CONCRETE WALL CORNER REINFORCING DETAIL

SCALE:NOT TO SCALE



4 WALL FOOTING DETAIL AT LOADING DOCK

SCALE: 3/4" = 1'-0"

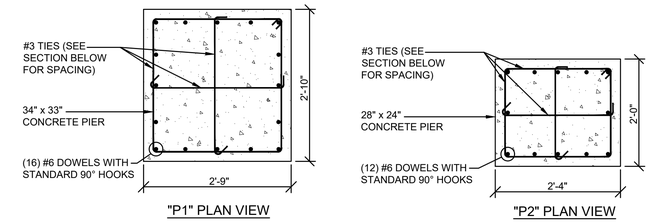


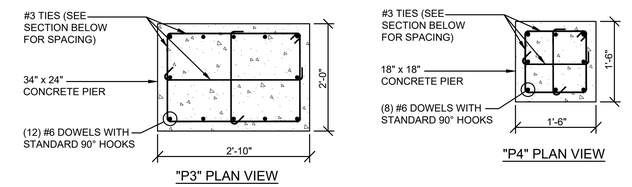
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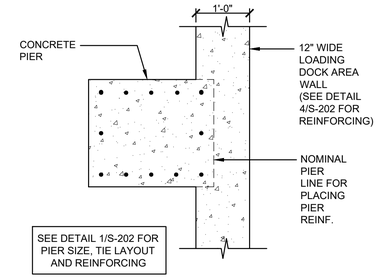
1. ALL EMBEDDED CURB ANGLES SHALL BE HOT-DIPPED GALVANIZED.
2. GENERAL CONTRACTOR SHALL VERIFY DOCK LEVELER PIT DIMENSIONS WITH DOCK LEVELER MANUFACTURER PRIOR TO CONSTRUCTION.
3. GENERAL CONTRACTOR SHALL COORDINATE LOCATION AND REQUIREMENTS OF ELECTRICAL CONDUIT AND JUNCTION BOXS PRIOR TO CONSTRUCTION.
4. EXTERIOR EXPOSED FACE OF CONCRETE WALL SHALL RECEIVE A SMOOTH FORMED FINISH.
5. SEE 4/S-202 FOR LOADING DOCK FOUNDATION WALL DETAIL ON EITHER SIDE OF DOCK LEVELER.

2 WALL FOOTING AT LOADING DOCK LEVELER

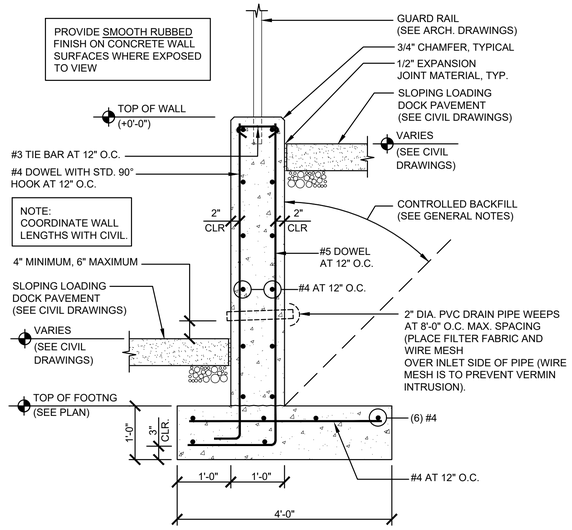
SCALE: 1/2"= 1'-0"





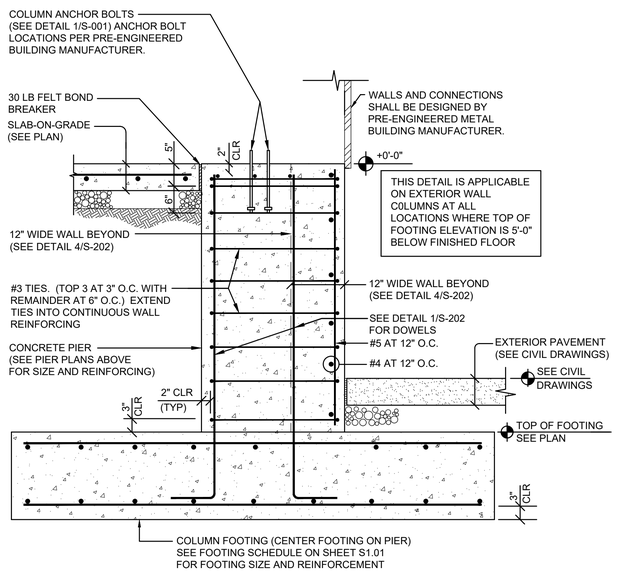


PIER PLAN



5 RETAINING WALL DETAIL

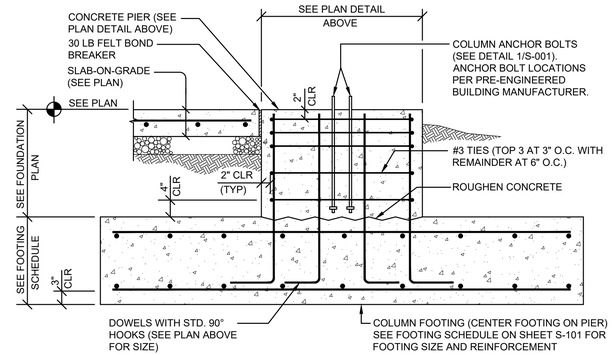
SCALE: 3/4" = 1'-0"



3 COLUMN FOOTING DETAIL AT LOADING DOCK

SCALE: 3/4" = 1'-0"

SEE FOUNDATION PLAN FOR
PIER ORIENTATIONS



1 COLUMN FOOTING DETAIL

SCALE: 3/4" = 1'-0"

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ADAM C. HAYES
Lic. No. 040206756
03/25/24
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

AS NOTED

No.	Description	Date

REVISIONS

DRAWN BY	AVCS/ACH
APPROVED BY	JAW
CHECKED BY	WJH
DATE	MARCH 2024

TITLE

FOUNDATION DETAILS

PROJECT NO. 50139338

S-202

SHEET NO.

A. PROJECT DATA

NAME	: BRUNSWICK COUNTY VEGETABLE PACKAGING FACILITY
ADDRESS	: BOYDTON PLANK ROAD ALBERTA, VA 23821
OWNER	: BRUNSWICK COUNTY IDA
CODE ENFORCEMENT/ JURISDICTION	: COUNTY

B. FIRE SAFETY LEGEND

- F1 — FIRE EXTINGUISHER & BRACKET - 3A-40B-C
- F2 — FIRE EXTINGUISHER & CABINET - 2A-10B-C
- 720 / 353 A — CAPACITY OF EGRESS COMPONENT ACTUAL EGRESS
- EXIT SIGN
- 4 — CALCULATED OCCUPANCY

C. BUILDING DATA

TYPE OF WORK	: NEW CONSTRUCTION
CONSTRUCTION TYPE	: F-1 FACTORY, B BUSINESS ACCESSORY OCCUPANCY
FIRE ALARM	: NO
SPRINKLERS	: YES
STANDPIPES	: NO
FIRE DISTRICT	: ALBERTA
FLOOD HAZARD AREA	: NO
RISK CATEGORY	: II
SEISMIC DESIGN CATEGORY	: ?
BUILDING HEIGHT	: 33'-0" (55'-0" ALLOWABLE)
GROSS NEW BUILDING AREA	: 51,039 SF
FACTORY AREA	: 47,194 SF
BUSINESS AREA	: 3,845 SF

D. LIFE SAFETY SYSTEMS

FIRE AND/OR SMOKE RATED WALLS	: NONE
CALCULATED OCCUPANCY LOAD	: 470 (343 FACTORY / 127 BUSINESS)
EXIT ACCESS TRAVEL DISTANCE	: 400' ALLOWABLE
COMMON PATH OF EGRESS TRAVEL	: 100' ALLOWABLE
CLEAR EXIT WIDTH	: 216"
DOOR EGRESS CAPACITY	: 1,440

E. EXIT REQUIREMENTS

MAIN LEVEL : 2 EXITS REQUIRED/ 5 PROVIDED

: 334' TRAVEL DISTANCE/ 400' ALLOWED

F. ENERGY SUMMARY

CLIMATE ZONE : 4

IECC REQUIREMENTS:

TABLE C402.1.3

THERMAL ENVELOPE	REQUIRED	/ (PERFORMANCE COMPLIANCE)
ROOF (METAL BUILDINGS W/ THERMAL BLOCKS)	R-19ci+R-11 LS	/ R-16, BRIDGE, R-19
WALLS ABOVE GRADE (METAL BUILDING)	R-13+R-13ci	/ R-25, THERMAL BLOCKS
SLAB ON GRADE FLOOR	R-10	/ R-10
SLAB ON GRADE FLOOR	R-10	/ R-30 INSULATED SLAB
REFRIGERATED FLOOR AREA		
OPAQUE SWINGING DOORS	U-0.61	/ U-0.61
OPAQUE NON-SWINGING DOORS	R-4.75	/ BASIS OF DESIGN R-7.7

TABLE C402.4

FENESTRATION MAXIMUM U-FACTOR REQUIREMENTS

FIXED FENESTRATION	0.38
OPERABLE FENESTRATION	0.45
ENTRANCE DOORS	0.77

G. BUILDING CODE SUPPORTING DATA

APPLICABLE CODE :**2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE AMERICANS WITH DISABILITIES ACT GUIDELINES, NEC 2014, NFPA 13 (SPRINKLERS), NFPA 20 (FIRE PUMPS), NFPA 70 (ELECTRICAL),**

602.1 TYPE OF CONSTRUCTION :2B PROTECTED

506.2 ALLOWABLE BUILDING AREA TABLE 506.2
AREA INCREASE NOT REQUESTED

CONSTRUCTION TYPE: IIB GROUP: F-1
ALLOWABLE AREA =62,000 SF
ACTUAL AREA 47,128 SF F-1, 3,821 SF B =50,949 SF TOTAL

504.3 ALLOWABLE BUILDING HEIGHT (TABLE 504.3)

CONSTRUCTION TYPE: IIB GROUP: F-1
ALLOWABLE HEIGHT 3 FLOORS/ 75'-0"
ACTUAL HEIGHT 1 FLOOR/ 35-0" EAVE HEIGHT

507.4 SPRINKLERED ONE STORY GROUP F WITH NO MORE THAN ONE STORY ABOVE GRADE SHALL NOT BE LIMITED WHEN PROVIDED WITH AN AUTOMATIC SPRINKLER

508.2 ACCESSORY OCCUPANCIES ARE THOSE OCCUPANCIES THAT ARE ANCILLARY TO THE MAIN OCCUPANCY OF THE BUILDING OR PORTION THEREOF.

602.1 FIRE RESISTANT RATING (TABLE 601)

EXTERIOR WALLS	
LOAD BEARING	0 HR
INTERIOR WALLS	
INTERIOR BEARING	0 HR
INTERIOR NON-BEARING	0 HR
FLOORS	0 HR
BEAMS	0 HR
COLUMNS	0 HR
ROOF/ CEILING	0 HR

903.2.4 AN AUTOMATIC SPRINKLER SHALL BE PROVIDED WHEN AN F-1 FIRE AREA EXCEEDS 12,000 SF

906.3 ORDINARY HAZARD OCCUPANCY MINIMUM 2A
EXTINGUISHERS
MAXIMUM FLOOR AREA PER A 1,500 SF (B) 3,000 SF (F)
MAXIMUM FIRE EXTINGUISHER TRAVEL DISTANCE 75'

1004.1 BUILDING OCCUPANCY LOAD FACTORS

ASSEMBLY- TABLES & CHAIRS	1 PERSON/ 15 SF NET
STORAGE AND MECH. ROOMS	1 PERSON/ 300 SF GROSS
BUSINESS/ADMINISTRATION	1 PERSON/ 150 SF GROSS
BREAK ROOM	1 PERSON/ 15 SF NET
INDUSTRIAL AREAS	1 PERSON/ 100 SF GROSS

1003.2 MINIMUM CEILING HEIGHT FOR MEANS OF EGRESS IS 7'-6"

1005.3.1 CAPACITY OF EGRESS COMPONENT
STAIRWAYS WITH SPRINKLER = 0.2/OCCUPANT

1005.3.2 CAPACITY OF EGRESS COMPONENT
DOORS, RAMPS, CORRIDOR WITH SPRINKLER = 0.15/OCCUPANT

1005.7.1 DOOR SWING MUST NOT REDUCE MINIMUM EGRESS WIDTH BY MORE THAN 7".

1006.3.2 NUMBER OF EXITS
2 EXITS REQUIRED FOR 1-500 OCCUPANTS

1010.1.2.1 DOORS MUST SWING IN THE DIRECTION OF TRAVEL WHEN SERVING AN OCCUPANT LOAD OF 50 OR MORE

1010.1.8 SPACE BETWEEN DOORS. DOORS IN SERIES MUST BE A MINIMUM 48" PLUS THE WIDTH OF THE DOOR SWING

1006.2.1 TWO EXITS FROM A SPACE REQUIRED WHEN OCCUPANT LOAD EXCEEDS:
50 IN OCCUPANCY B,F

TABLE 1006.3.2 STORIES WITH ONE EXIT - OCCUPANCY AND COMMON TRAVEL DISTANCE
OCCUPANT LOAD B,F: 50
COMMON PATH OF EGRESS TRAVEL (OCCUPANT LOAD >30): B,F: 100'

1015.6 PROVIDE GUARDS WHERE ROOFTOP EQUIPMENT IS WITHIN 10'-0" OF A ROOF EDGE OR OPEN SIDE. GUARDS SHALL EXTEND A MINIMUM OF 30" PAST THE EDGE OF THE EQUIPMENT

1017.2 MAXIMUM LENGTH OF EXIT ACCESS TRAVEL
PROTECTED F-1 400 FEET

1020.1 CORRIDOR FIRE RESISTANCE RATINGS
OCCUPANT LOAD > 30 FOR B,F 0 WITH SPRINKLER

1020.2 MINIMUM CORRIDOR WIDTH NOT TO BE LESS THAN 44". MINIMUM CORRIDOR WIDTH 36" IF SERVING LESS THAN 50 OCCUPANTS

1020.4 MAXIMUM DEAD END CORRIDOR LENGTH
PROTECTED 50 FEET

H. PLUMBING FIXTURES

2902.1 MINIMUM NUMBER OF FIXTURES

OCCUPANCY	WATER CLOSETS	LAVATORIES	DRINKING FOUNTAIN	SERVICE SINK
FACTORY	1 / 100	1 / 100	1 / 400	
REQUIRED:	3.43	3.43	0.86	1
BUSINESS	1 /50 1/25 FOR FIRST 50	1 / 80 1/40 FOR FIRST 80	1 /100	
REQUIRED:	3.54	2.59	1.27	1
TOTAL:	6.97	6.02	2.13	
PROVIDED:	7	7	3	1

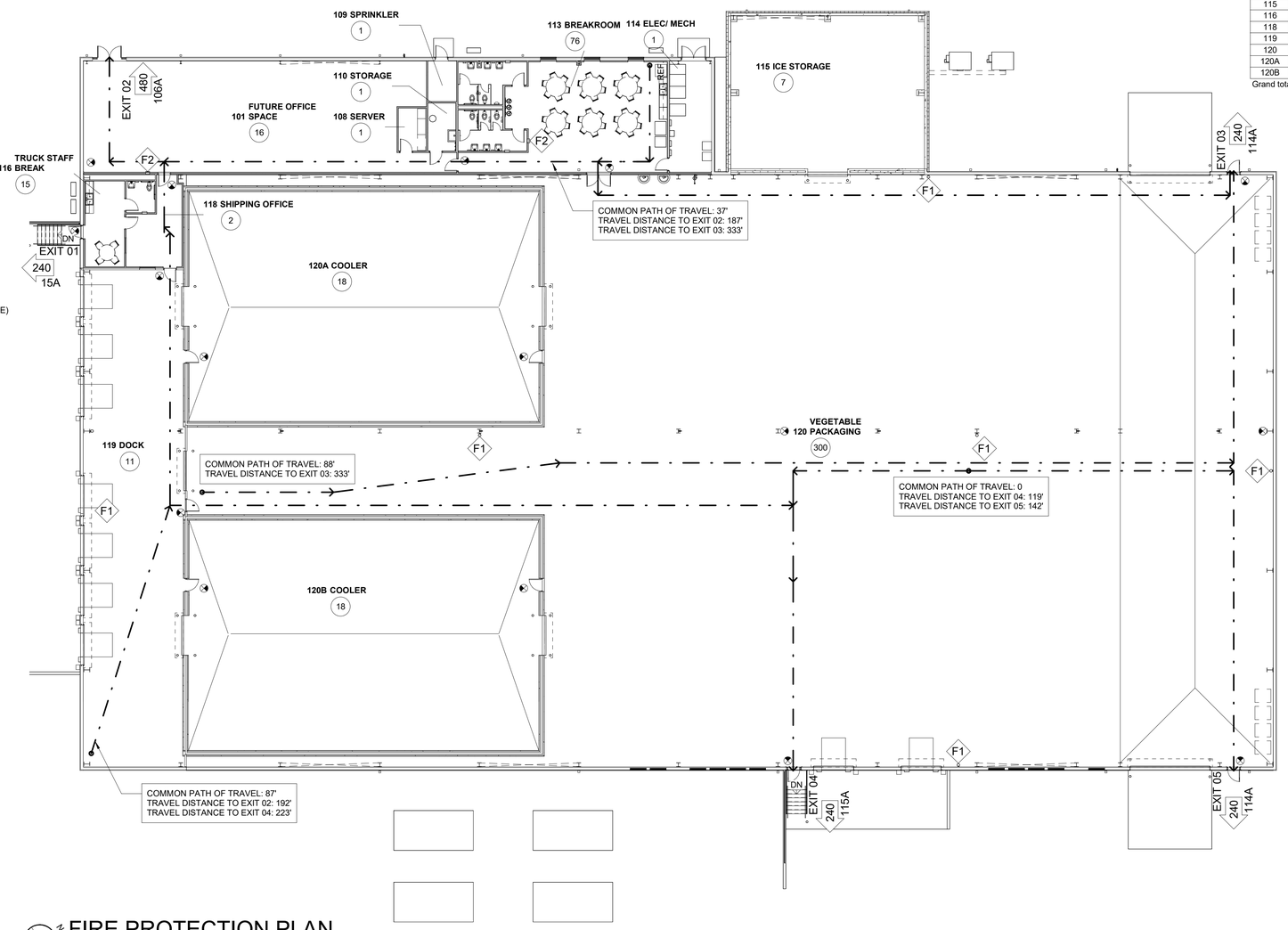
2902.1.1 TO DETERMINE THE OCCUPANT LOAD OF EACH SEX, THE TOTAL OCCUPANT LOAD SHALL BE DIVIDED IN HALF

2902.3.2 TOILET FACILITY LOCATION
PATH OF TRAVEL SHALL NOT EXCEED 500'

IPC 419.2 URINALS SHALL NOT BE SUBSTITUTED FOR MORE THAN 67 PERCENT OF THE REQUIRED WATER CLOSETS IN ASSEMBLY AND EDUCATIONAL OCCUPANCIES. URINALS SHALL NOT BE SUBSTITUTED FOR MORE THAN 50 PERCENT OF THE REQUIRED WATER CLOSETS IN ALL OTHER OCCUPANCIES

OCCUPANCY LOAD FACTOR

ROOM NUMBER	DESCRIPTION	OCCUPANCY TYPE	AREA	SF PER OCCUPANT	OCCUPANT LOAD
101	FUTURE OFFICE SPACE	OFFICE	2386 SF	150 SF	16
108	SERVER	STORAGE	75 SF	300 SF	1
109	SPRINKLER	STORAGE	74 SF	300 SF	1
110	STORAGE	STORAGE	84 SF	300 SF	1
111	MENS	OFFICE	153 SF	150 SF	2
112	WOMENS	OFFICE	146 SF	150 SF	1
113	BREAKROOM	BREAK	1127 SF	15 SF	76
114	ELEC/ MECH	STORAGE	297 SF	300 SF	1
115	ICE STORAGE	STORAGE	1872 SF	300 SF	7
116	TRUCK STAFF BREAK	BREAK	212 SF	15 SF	15
118	SHIPPING OFFICE	OFFICE	246 SF	150 SF	2
119	DOCK	SHIPPING	3206 SF	300 SF	11
120	VEGETABLE PACKAGING	INDUSTRIAL	29984 SF	100 SF	300
120A	COOLER	STORAGE	5219 SF	300 SF	18
120B	COOLER	STORAGE	5226 SF	300 SF	18
Grand total: 15					470



FIRE PROTECTION PLAN

1/16" = 1'-0"

Dewberry

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BRUNSWICK COUNTY IDA

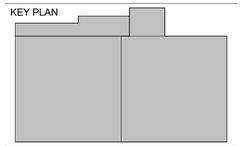
BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN



SCALE

1/16" = 1'-0"

16' 8' 0 16'

No.	Description	Date

REVISIONS

DRAWN BY	WL
APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

TITLE

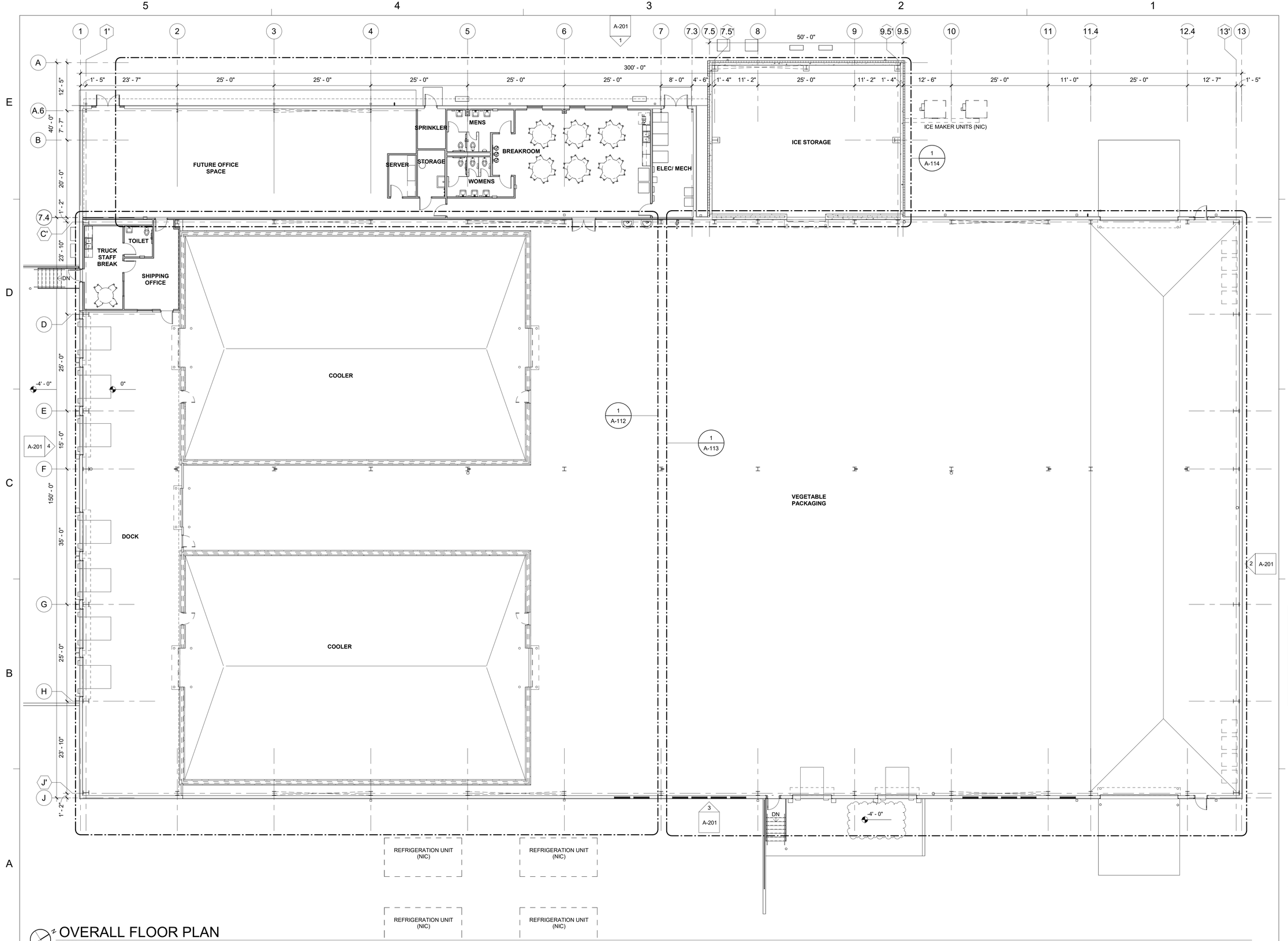
CODE INFORMATION AND LIFE SAFETY PLAN

PROJECT NO. 50139338

A-101

SHEET NO.

3/28/2024 3:36:46 PM



OVERALL FLOOR PLAN

3/32" = 1'-0"

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BRUNSWICK COUNTY IDA

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BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN

SCALE

3/32" = 1'-0"

10'-8" 5'-4" 0 10'-8"

No.	Description	Date
1	REVIEW COMMENTS	2022.01.14

REVISIONS

DRAWN BY	WL
APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

TITLE

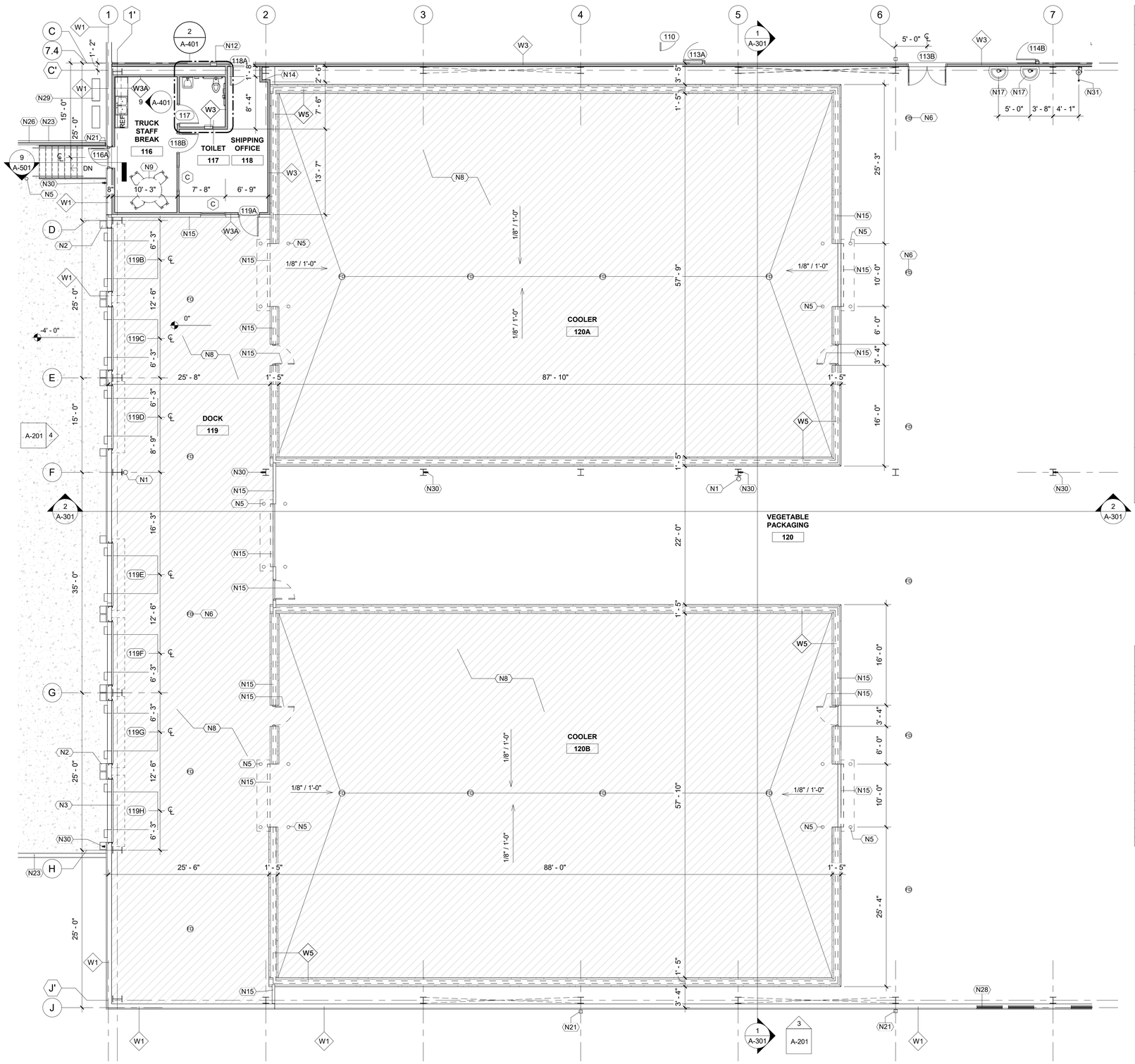
OVERALL FLOOR PLAN

PROJECT NO. 50139338

A-111

SHEET NO.

3/28/2024 3:36:47 PM



FLOOR PLAN PART A

1/8" = 1'-0"

WALL LEGEND

	WALL SYMBOL	WALL DESCRIPTION	WALL DETAIL
W1		EXTERIOR WALL • PRE-ENGINEERED METAL WALL PANELS W/THERMAL • BLOCKS ON 8" GIRTS W/ BLANKET INSULATION	8" GIRT MIN. R-25 BLANKET INSULATION THERMAL BLOCKS METAL PANELS
W2		EXTERIOR WALL • 6" INSULATED METAL WALL PANELS ON 8" GIRTS	8" GIRT 6" INSULATED METAL WALL PANELS
W3		INTERIOR PARTITION •3½" METAL STUDS AT 16" OC •PROVIDE ⅝" GPDW ON EACH SIDE •SOUND ATTENUATION BATTS IN BETWEEN •WALLS TO EXTEND TO 1'-0" ABOVE FINISH CEILING W3A - GPDW ON ROOM SIDE ONLY W3B - EXTEND WALL AND GPDW TO METAL BUILDING FRAME	3¾" METAL STUDS AT 16" OC ⅝" GPDW (PAINT) 3½" SOUND ATTENUATION BATTS ⅝" GPDW (PAINT)
W4		INTERIOR PARTITION •6" METAL STUDS AT 16" OC •⅝" GPDW ON EACH SIDE •SOUND ATTENUATION BATTS IN BETWEEN •WALLS TO EXTEND TO DECK	6" METAL STUDS AT 16" OC ⅝" GPDW (PAINT) 5½" SOUND ATTENUATION BATTS ⅝" GPDW (PAINT)
W5		INTERIOR WALL •36" TALL, 6" CONCRETE W/ REINFORCING •5" RIGID INSULATION •6" CONCRETE W/ REINFORCING •SLOPE CONCRETE TOP 45° EACH SIDE W5A - 96" TALL, 6" CONCRETE	6" CONCRETE 5" RIGID INSULATION 6" CONCRETE
W6		INTERIOR WALL •36" TALL, 6" CONCRETE W/ REINFORCING W6A - 96" TALL, 8" CONCRETE	6" CONCRETE

•FLOOR PLAN DIMENSIONS TO COLUMN LINE OR FACE OF STUD/MASONRY UNO
•PROVIDE MR GPDW ON ALL WET WALLS
•PROVIDE IMPACT RESISTANT GPDW AT CORRIDOR 101, BREAK 113, TRUCK STAFF BREAK 116

NEW WORK KEYED NOTES

NOTE	DESCRIPTION
N1	FIRE EXTINGUISHER & BRACKET
N2	DOCK SEAL, TYPICAL
N3	DOCK BUMPER AND RECESSED DOCK LEVELER, TYPICAL
N5	6" STEEL BOLLARD, TYPICAL (PAINT) SEE DETAIL
N6	FLOOR DRAIN, TYPICAL (SEE PLUMBING)SEE DETAIL
N8	HATCHED AREA INDICATES EXTENT OF INSULATED SLAB
N9	TABLE AND CHAIRS (NIC)
N12	FIRE EXTINGUISHER AND RECESSED CABINET
N14	BOX OUT TIGHT TO COLUMN, ACCOUNT FOR COLUMN TAPER TO MAINTAIN PLUMB WALL
N15	INTERIOR INSULATED METAL PANELS AND DOORS (NIC)
N17	WASH SINK (COORDINATE WITH PLUMBING)
N21	DOWNSPOUT WITH CONCRETE SPLASH BLOCK, TYPICAL
N23	RETAINING WALL (SEE CIVIL AND STRUCTURAL)
N26	42" TALL GUARD RAIL, 23'-0" LONG (FIELD VERIFY) SEE DETAIL
N28	LOUVER, TYPICAL (SEE MECHANICAL)
N29	HEAT PUMP AND CONCRETE PAD, TYPICAL (SEE MECHANICAL)
N30	HOSE BIBB, TYPICAL (SEE PLUMBING)
N31	EMERGENCY SHOWER/EYE WASH STATION (SEE PLUMBING)

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BRUNSWICK COUNTY IDA

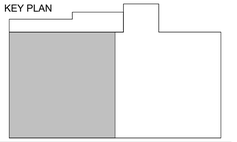
BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN



SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

REVISIONS

DRAWN BY	WL
APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

TITLE

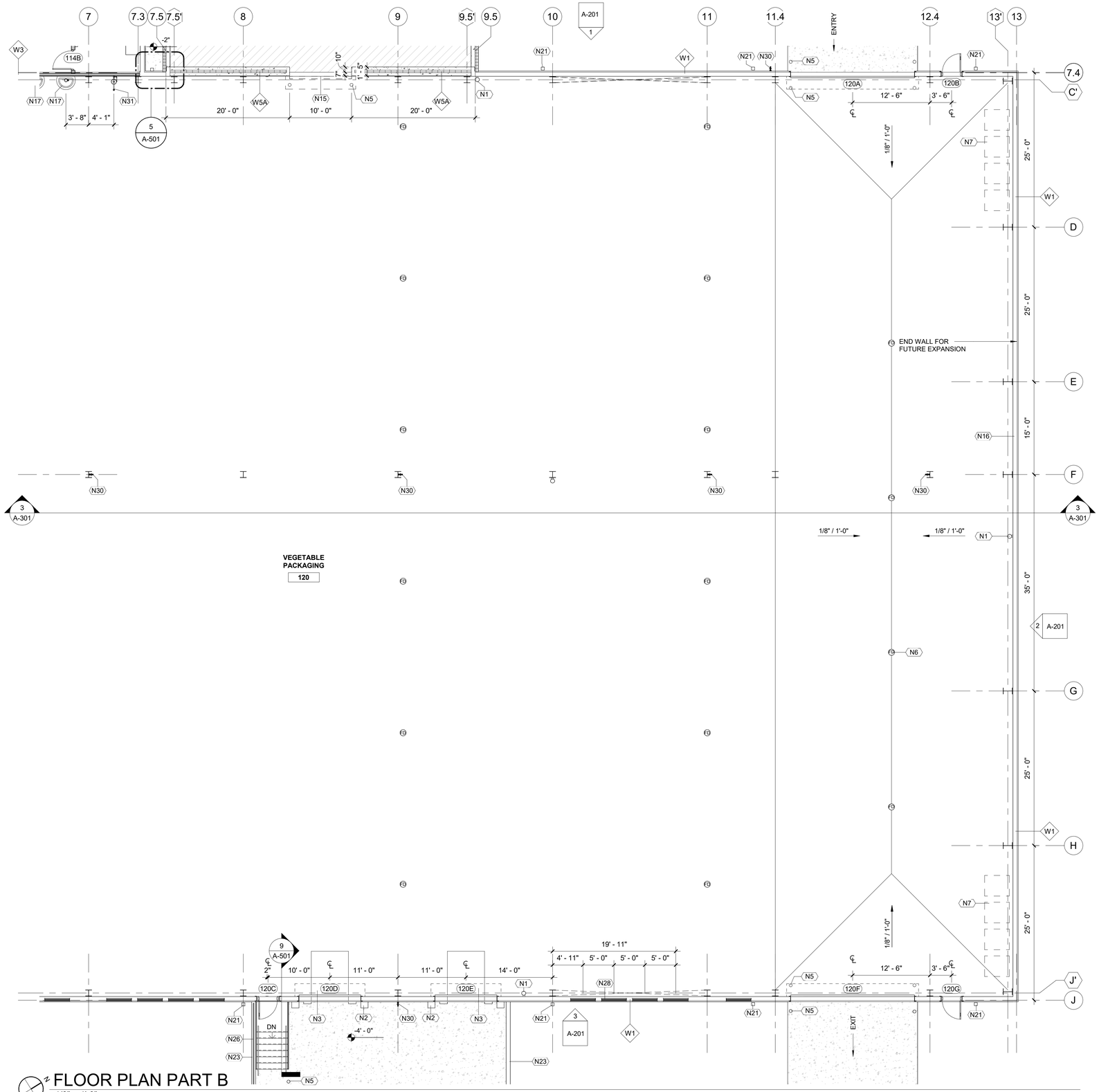
FLOOR PLAN PART A

PROJECT NO. 50139338

A-112

SHEET NO.

3/28/2024 3:36:48 PM



FLOOR PLAN PART B

1/8" = 1'-0"

WALL LEGEND

	WALL SYMBOL	WALL DESCRIPTION	WALL DETAIL
W1		EXTERIOR WALL • PRE-ENGINEERED METAL WALL PANELS W/THERMAL • BLOCKS ON 8" GIRTS W/ BLANKET INSULATION	12" 8" GIRT MIN. R-25 BLANKET INSULATION THERMAL BLOCKS METAL PANELS
W2		EXTERIOR WALL • 6" INSULATED METAL WALL PANELS ON 8" GIRTS	14" 8" GIRT 6" INSULATED METAL WALL PANELS
W3		INTERIOR PARTITION •3¾" METAL STUDS AT 16" OC •PROVIDE ⅝" GPDW ON EACH SIDE •SOUND ATTENUATION BATTS IN BETWEEN •WALLS TO EXTEND TO 1'-0" ABOVE FINISH CEILING W3A - GPDW ON ROOM SIDE ONLY W3B - EXTEND WALL AND GPDW TO METAL BUILDING FRAME	4⅛" 3⅝" METAL STUDS AT 16" OC ⅝" GPDW (PAINT) 3½" SOUND ATTENUATION BATTS ⅝" GPDW (PAINT)
W4		INTERIOR PARTITION •6" METAL STUDS AT 16" OC •⅝" GPDW ON EACH SIDE •SOUND ATTENUATION BATTS IN BETWEEN •WALLS TO EXTEND TO DECK	7¼" 6" METAL STUDS AT 16" OC ⅝" GPDW (PAINT) 5½" SOUND ATTENUATION BATTS ⅝" GPDW (PAINT)
W5		INTERIOR WALL •36" TALL, 6" CONCRETE W/ REINFORCING •5" RIGID INSULATION •6" CONCRETE W/ REINFORCING •SLOPE CONCRETE TOP 45° EACH SIDE W5A - 96" TALL, 6" CONCRETE	17" 6" CONCRETE 5" RIGID INSULATION 6" CONCRETE
W6		INTERIOR WALL •36" TALL, 6" CONCRETE W/ REINFORCING W6A - 96" TALL, 8" CONCRETE	6" 6" CONCRETE

•FLOOR PLAN DIMENSIONS TO COLUMN LINE OR FACE OF STUD/MASONRY UNO
•PROVIDE MR GPDW ON ALL WET WALLS
•PROVIDE IMPACT RESISTANT GPDW AT CORRIDOR 101, BREAK 113, TRUCK STAFF BREAK 116

NEW WORK KEYED NOTES

NOTE	DESCRIPTION
N1	FIRE EXTINGUISHER & BRACKET
N2	DOCK SEAL, TYPICAL
N3	DOCK BUMPER AND RECESSED DOCK LEVELER, TYPICAL
N5	6" STEEL BOLLARD, TYPICAL (PAINT) SEE DETAIL
N6	FLOOR DRAIN, TYPICAL (SEE PLUMBING)SEE DETAIL
N7	PALLET STORAGE AREA
N15	INTERIOR INSULATED METAL PANELS AND DOORS (NIC)
N16	EXPANSION WALL- THIS WALL TO BE REMOVED WITH FUTURE EXPANSION.
N17	WASH SINK (COORDINATE WITH PLUMBING)
N21	DOWNSPOUT WITH CONCRETE SPLASH BLOCK, TYPICAL
N23	RETAINING WALL (SEE CIVIL AND STRUCTURAL)
N26	42" TALL GUARD RAIL, 23'-0" LONG (FIELD VERIFY) SEE DETAIL
N28	LOUVER, TYPICAL (SEE MECHANICAL)
N30	HOSE BIBB, TYPICAL (SEE PLUMBING)
N31	EMERGENCY SHOWER/EYE WASH STATION (SEE PLUMBING)

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BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN

SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

REVISIONS

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APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

TITLE

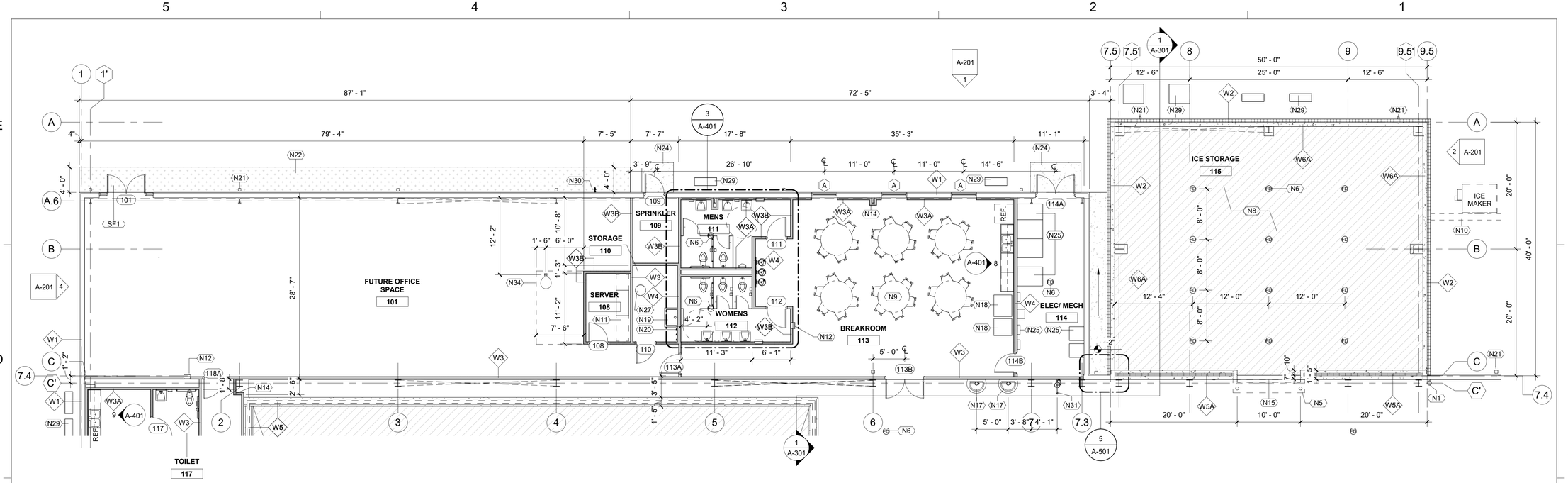
FLOOR PLAN
PART B

PROJECT NO. 50139338

A-113

SHEET NO.

3/28/2024 3:36:49 PM



FLOOR PLAN PART C

1/8" = 1'-0"

NEW WORK KEYED NOTES

NOTE	DESCRIPTION
N1	FIRE EXTINGUISHER & BRACKET
N5	6" STEEL BOLLARD, TYPICAL (PAINT) SEE DETAIL
N6	FLOOR DRAIN, TYPICAL (SEE PLUMBING)SEE DETAIL
N8	HATCHED AREA INDICATES EXTENT OF INSULATED SLAB
N9	TABLE AND CHAIRS (NIC)
N10	AUGER (NIC)
N11	SERVER AND CLEARANCE AREAS (NIC)
N12	FIRE EXTINGUISHER AND RECESSED CABINET
N14	BOX OUT TIGHT TO COLUMN, ACCOUNT FOR COLUMN TAPER TO MAINTAIN PLUMB WALL
N15	INTERIOR INSULATED METAL PANELS AND DOORS (NIC)
N17	WASH SINK (COORDINATE WITH PLUMBING)
N18	VENDING MACHINES, NIC (COORDINATE WITH ELECTRICAL)
N19	MOP SINK (COORDINATE WITH PLUMBING)
N20	MOP RACK
N21	DOWNSPOUT WITH CONCRETE SPLASH BLOCK, TYPICAL
N22	CONRETE PAVERS, 4x8 (BOXED BASKETWEAVE PATTERN) WITH 1" SAND BED ON 4" STONE. PROVIDE PLASTIC EDGING WITH SPIKES (COORDINATE WITH CIVIL)
N24	CONCRETE PAD, 5'x5' OR 8'x5'
N25	ELECTRICAL EQUIPMENT, TYPICAL (SEE ELECTRICAL)
N27	WATER HEATER (SEE PLUMBING)
N29	HEAT PUMP AND CONCRETE PAD, TYPICAL (SEE MECHANICAL)
N30	HOSE BIBB, TYPICAL (SEE PLUMBING)
N31	EMERGENCY SHOWER/EYE WASH STATION (SEE PLUMBING)
N34	LIMITS OF RESTROOM TO BE INSTALLED AT LATER TIME. ROUGH IN LOCATION SHOWN FOR TOILET. REFER TO PLUMBING DRAWINGS.

WALL LEGEND

	WALL SYMBOL	WALL DESCRIPTION	WALL DETAIL
W1		EXTERIOR WALL • PRE-ENGINEERED METAL WALL PANELS W/THERMAL • BLOCKS ON 8" GIRTS W/ BLANKET INSULATION	12" 8" GIRT MIN. R-25 BLANKET INSULATION THERMAL BLOCKS METAL PANELS
W2		EXTERIOR WALL • 6" INSULATED METAL WALL PANELS ON 8" GIRTS	14" 8" GIRT 6" INSULATED METAL WALL PANELS
W3		INTERIOR PARTITION •3½" METAL STUDS AT 16" OC •PROVIDE ⅝" GPDW ON EACH SIDE •SOUND ATTENUATION BATTS IN BETWEEN •WALLS TO EXTEND TO 1'-0" ABOVE FINISH CEILING W3A - GPDW ON ROOM SIDE ONLY W3B - EXTEND WALL AND GPDW TO METAL BUILDING FRAME	4⅛" 3⅝" METAL STUDS AT 16" OC ⅝" GPDW (PAINT) 3½" SOUND ATTENUATION BATTS ⅝" GPDW (PAINT)
W4		INTERIOR PARTITION •6" METAL STUDS AT 16" OC •⅝" GPDW ON EACH SIDE •SOUND ATTENUATION BATTS IN BETWEEN •WALLS TO EXTEND TO DECK	7¼" 6" METAL STUDS AT 16" OC ⅝" GPDW (PAINT) 5½" SOUND ATTENUATION BATTS ⅝" GPDW (PAINT)
W5		INTERIOR WALL •36" TALL, 6" CONCRETE W/ REINFORCING •5" RIGID INSULATION •6" CONCRETE W/ REINFORCING •SLOPE CONCRETE TOP 45° EACH SIDE W5A - 96" TALL, 6" CONCRETE	17" 6" CONCRETE 5" RIGID INSULATION 6" CONCRETE
W6		INTERIOR WALL •36" TALL, 6" CONCRETE W/ REINFORCING W6A - 96" TALL, 8" CONCRETE	6" 6" CONCRETE

•FLOOR PLAN DIMENSIONS TO COLUMN LINE OR FACE OF STUD/MASONRY UNO
•PROVIDE MR GPDW ON ALL WET WALLS
•PROVIDE IMPACT RESISTANT GPDW AT CORRIDOR 101, BREAK 113, TRUCK STAFF BREAK 116

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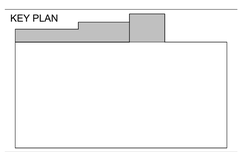
BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN



SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

REVISIONS

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APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

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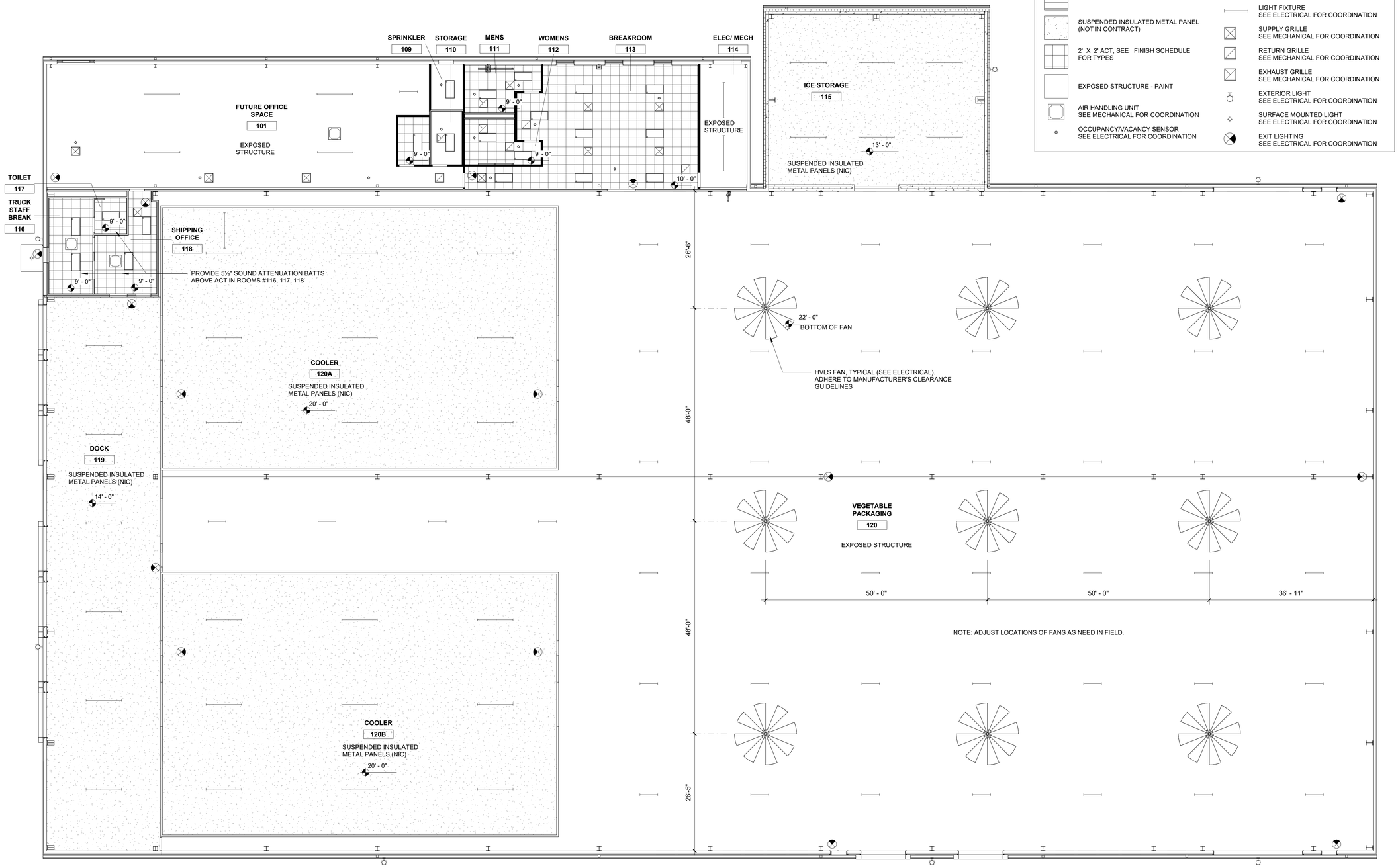
FLOOR PLAN PART C

PROJECT NO. 50139338

A-114

SHEET NO.

3/28/2024 3:36:50 PM



REFLECTED CEILING PLAN

3/32" = 1'-0"

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BID DOCUMENTS

SEAL

KEY PLAN

SCALE

3/32" = 1'-0"

10'-8" 5'-4" 0 10'-8"

No.	Description	Date

REVISIONS

DRAWN BY	WL
APPROVED BY	LWH
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DATE	2024.03.25

TITLE

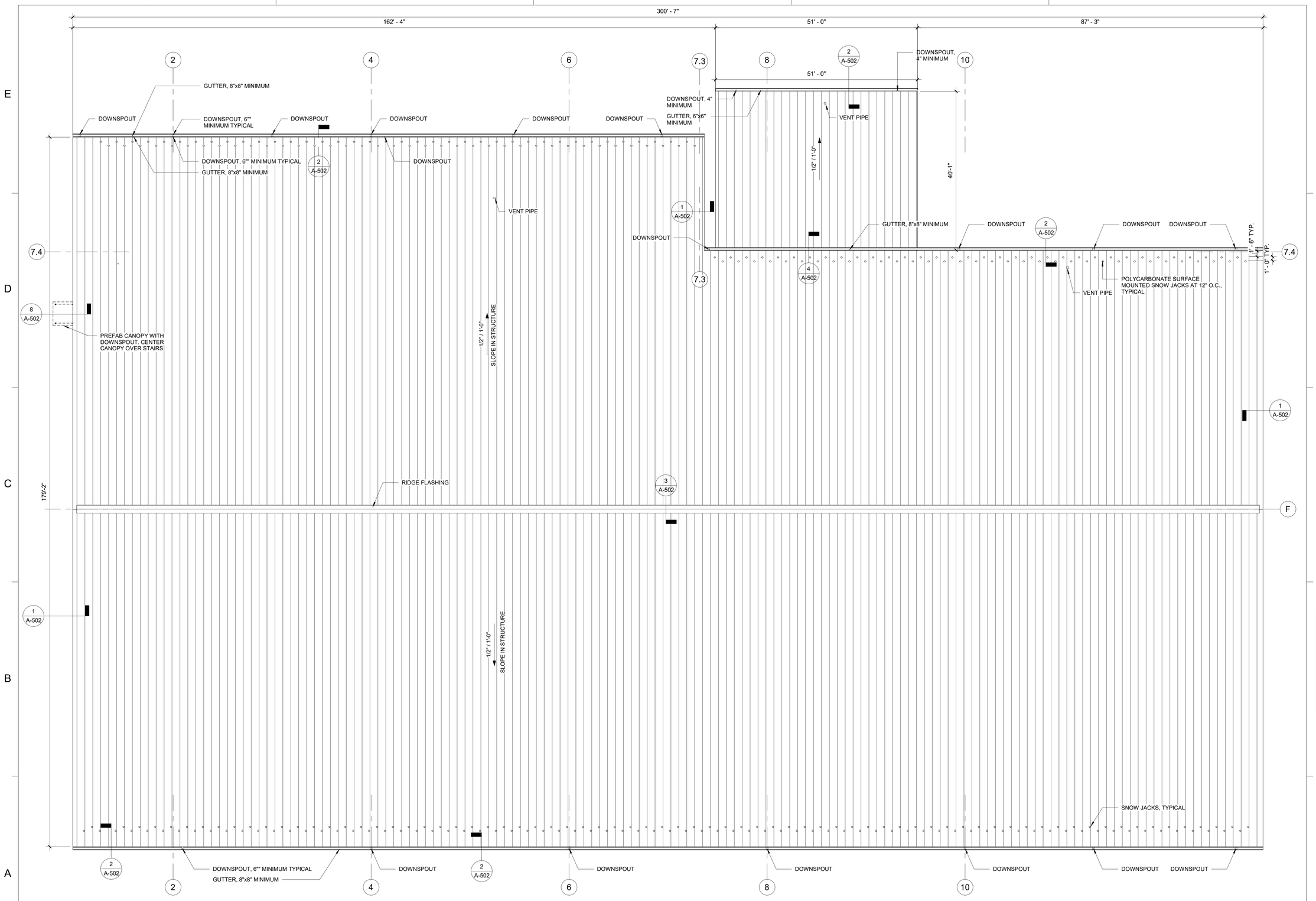
REFLECTED CEILING PLAN

PROJECT NO. 50139338

A-115

SHEET NO.

3/28/2024 3:36:51 PM



ROOF PLAN
3/32" = 1'-0"

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BID DOCUMENTS

SEAL

KEY PLAN

SCALE

3/32" = 1'-0"

10'-8" 5'-4" 0 10'-8"

No.	Description	Date

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TITLE

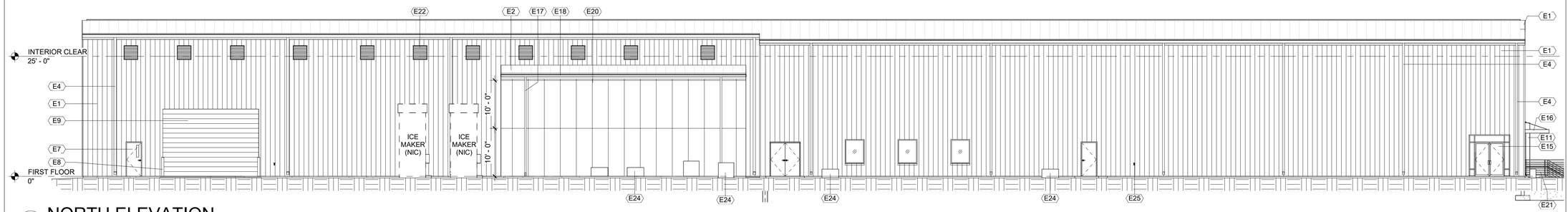
ROOF PLAN

PROJECT NO. 50139338

A-121

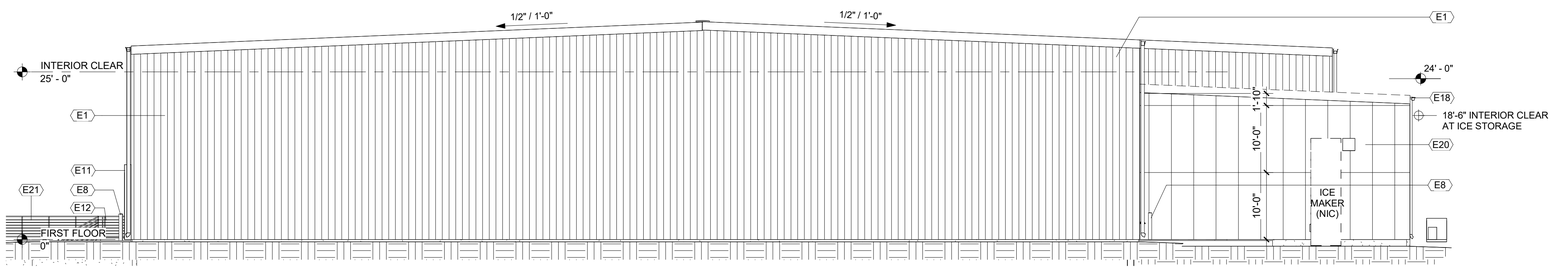
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1 NORTH ELEVATION

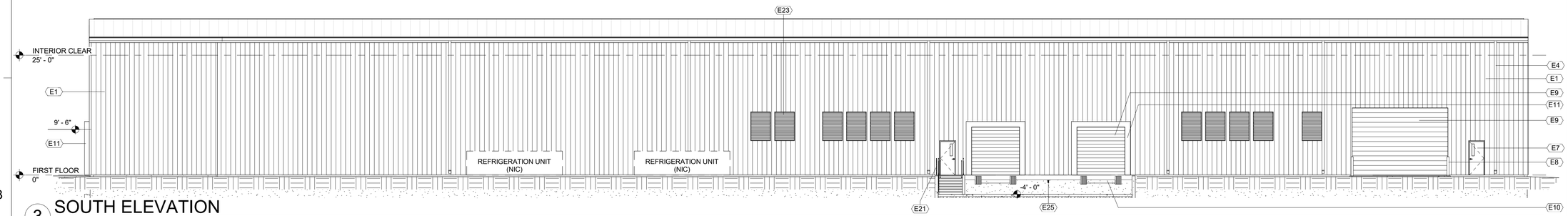
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2 EAST ELEVATION

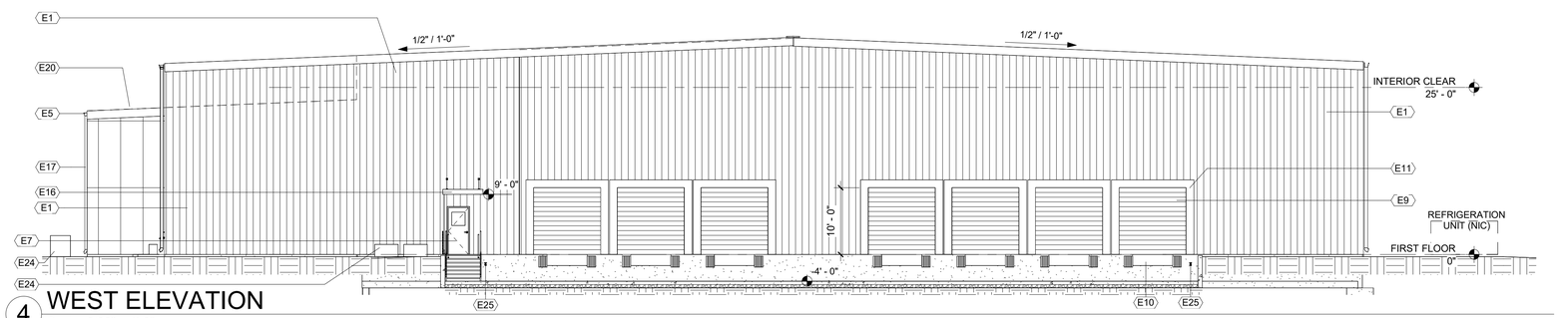
Scale: 3/32" = 1'-0"

ELEVATION KEYED NOTES	
NOTE	DESCRIPTION
E1	METAL WALL PANELS COLOR 1
E2	METAL ROOF PANELS
E4	DOWNSPOUT, 6" ROUND MINIMUM
E5	GUTTER, 8"x8" MINIMUM
E7	HOLLOW METAL DOOR & FRAME
E8	6" STEEL BOLLARD
E9	OVERHEAD COILING DOOR
E10	DOCK BUMPER AND RECESSED DOCK LEVELER
E11	DOCK SEAL
E12	GALVANIZED STAIRS & RAILING
E15	ALUMINUM STOREFRONT
E16	PRE-FABRICATED METAL CANOPY, 6'x5'
E17	DOWNSPOUT, 4" ROUND MINIMUM
E18	GUTTER, 6"x6" MINIMUM
E20	INSULATED METAL PANELS, 40"x120"
E21	42" TALL GUARD RAIL, 23'-0" LONG (FIELD VERIFY)
E22	LOUVER, TYPICAL (SEE MECHANICAL)
E23	EXHAUST FAN, TYPICAL (SEE MECHANICAL)
E24	HEAT PUMP AND CONCRETE PAD, TYPICAL (SEE MECHANICAL)
E25	HOSE BIBB, TYPICAL (SEE PLUMBING)



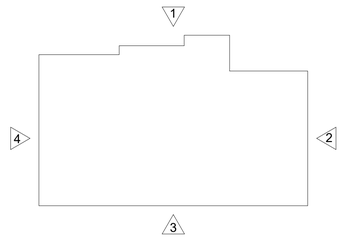
3 SOUTH ELEVATION

Scale: 3/32" = 1'-0"



4 WEST ELEVATION

Scale: 3/32" = 1'-0"



3/28/2024 3:36:53 PM

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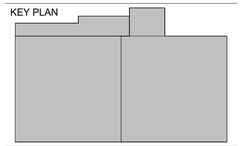
BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN



SCALE

3/32" = 1'-0"

10'-8" 5'-4" 0 10'-8"

No.	Description	Date

REVISIONS

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APPROVED BY	LWH
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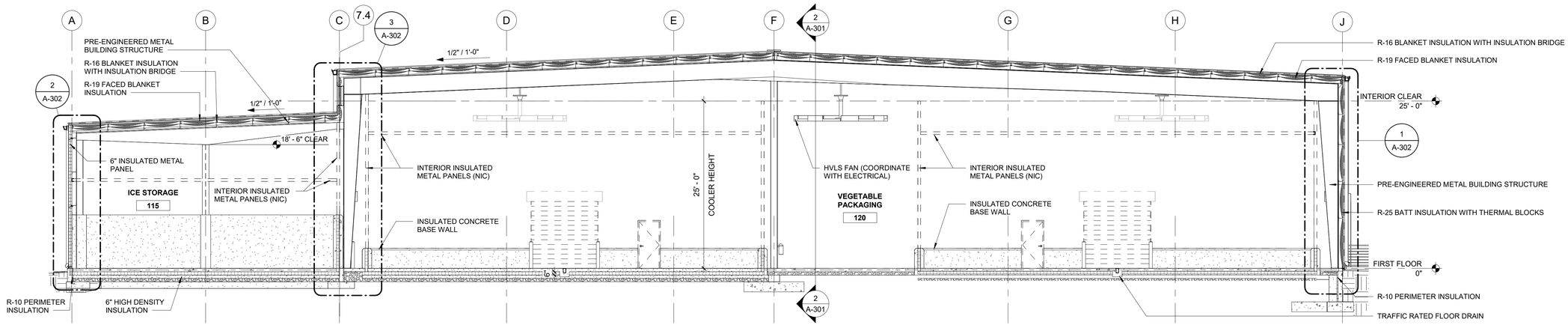
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EXTERIOR ELEVATIONS

PROJECT NO. 50139338

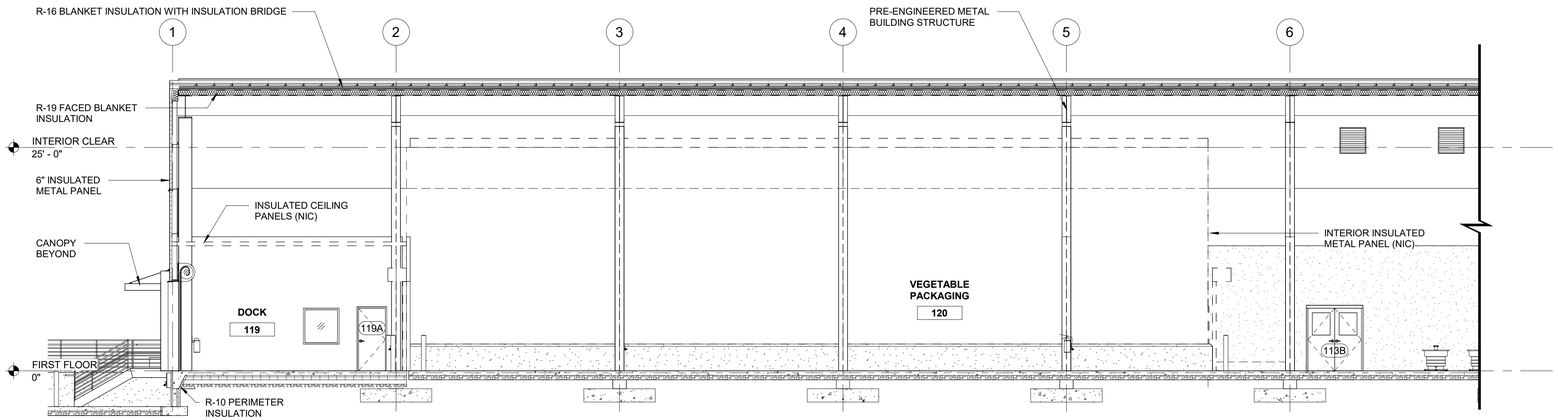
A-201

SHEET NO.



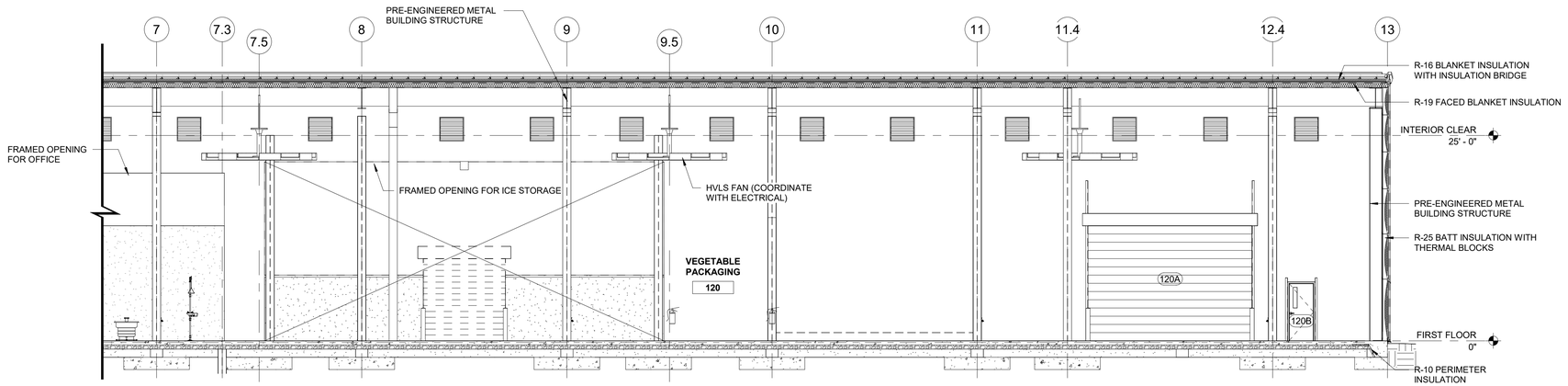
1 TRANSVERSE SECTION

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



2 LONGITUDINAL BUILDING SECTION PART A

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



3 LONGITUDINAL BUILDING SECTION PART B

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

3/28/2024 3:36:54 PM

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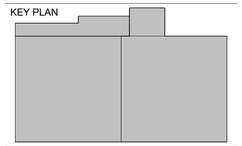
BRUNSWICK VEGETABLE PACKAGING FACILITY

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SCALE

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8' 4' 0 8'

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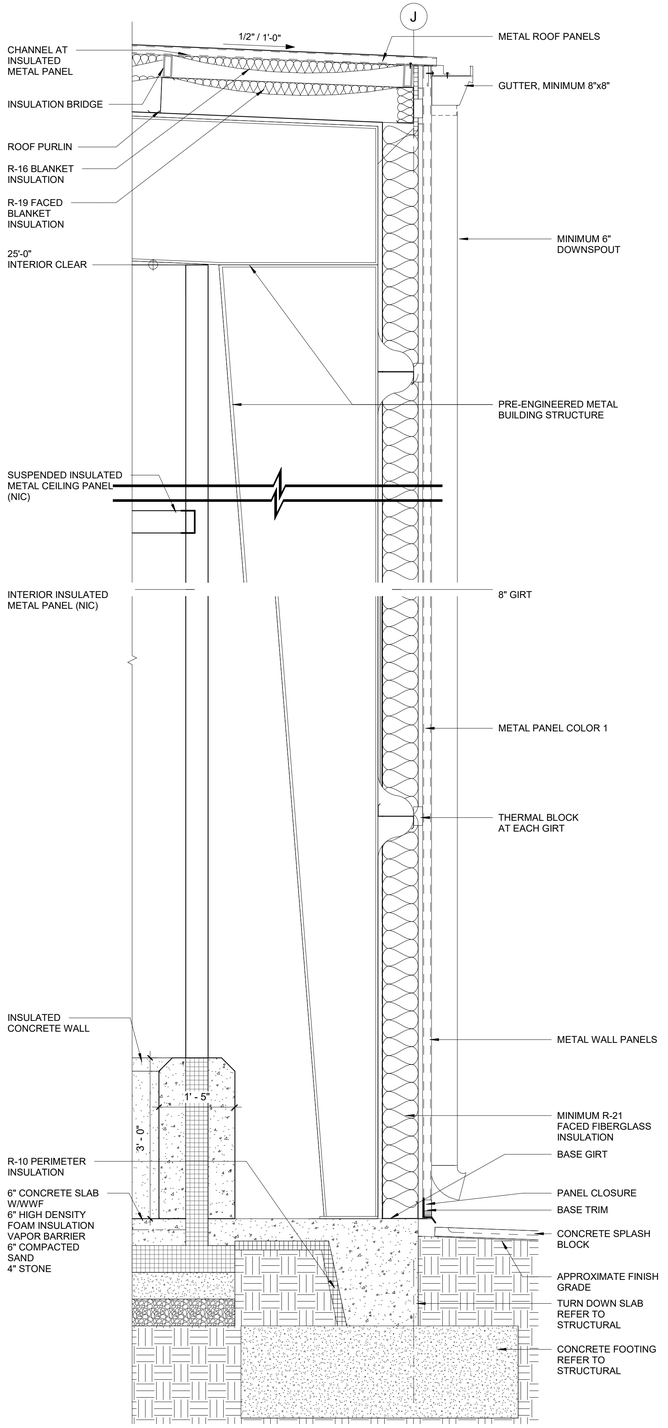
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BUILDING SECTIONS

PROJECT NO. 50139338

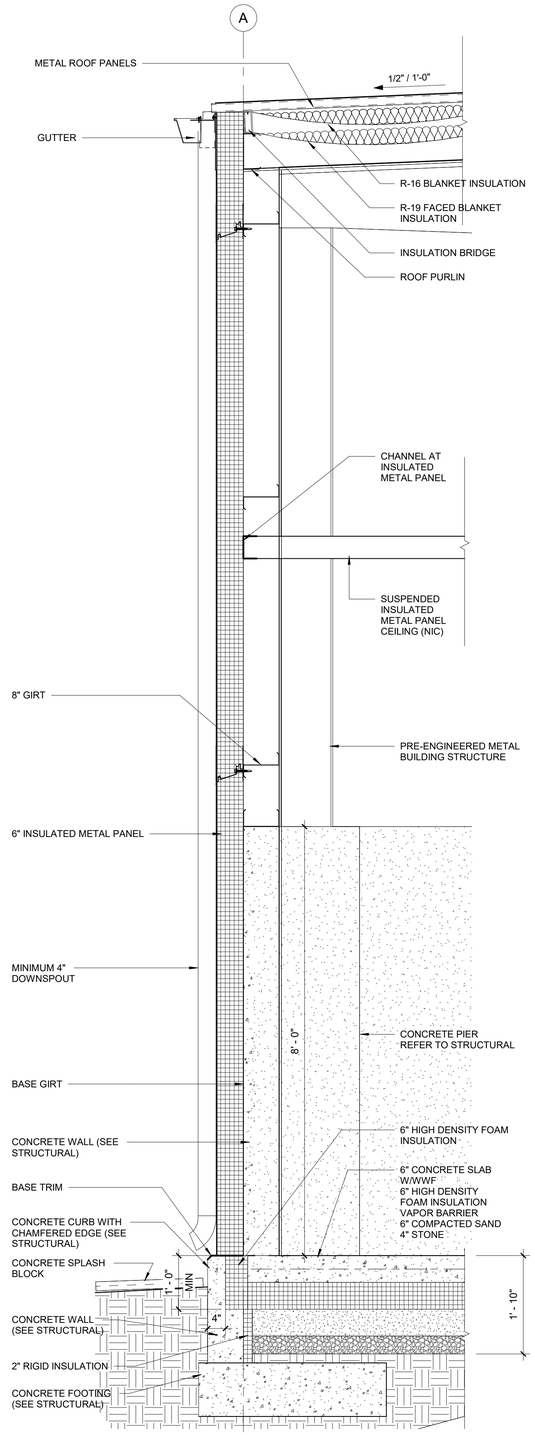
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SHEET NO.



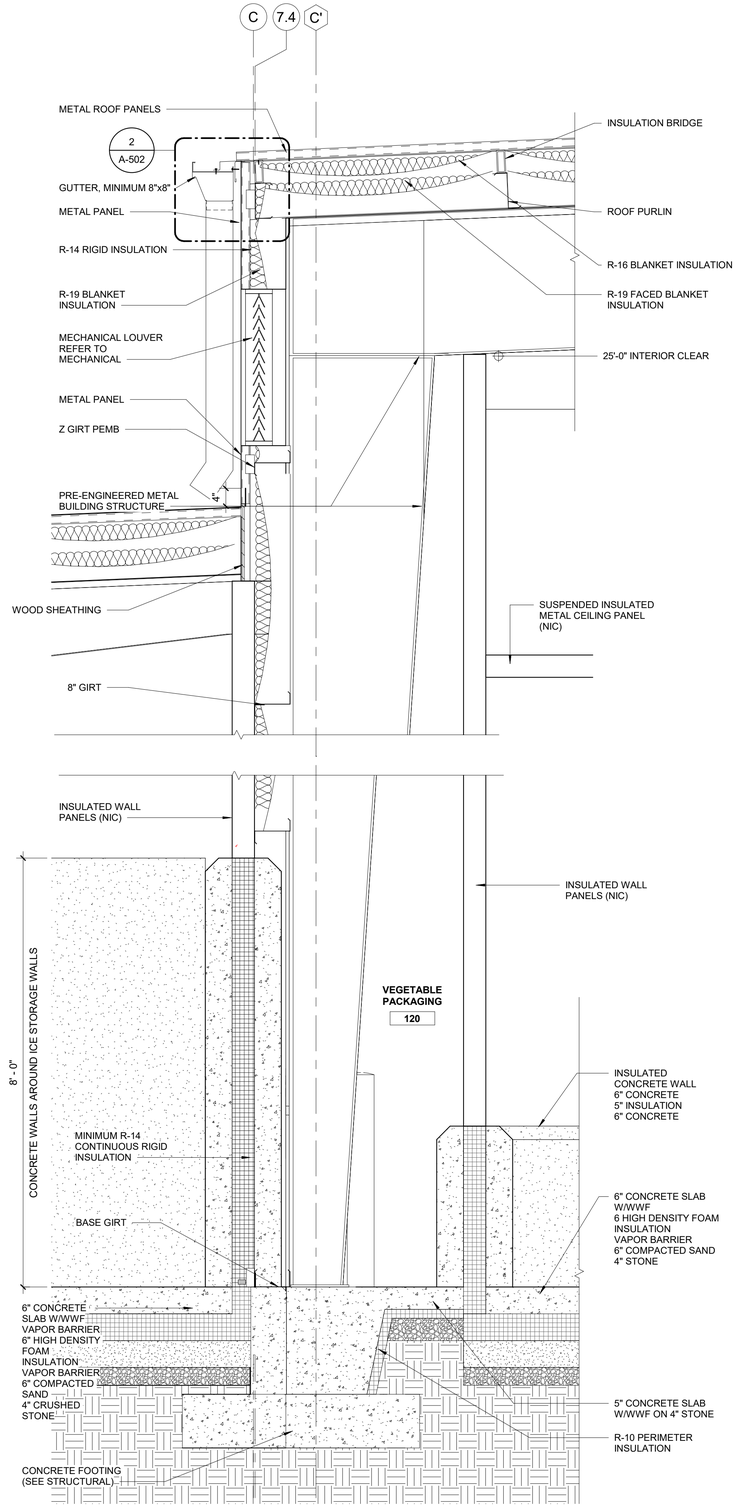
1 TYPICAL WALL SECTION

Scale: 3/4" = 1'-0"



2 ICE STORAGE WALL SECTION

Scale: 3/4" = 1'-0"



3 WALL SECTION @ ICE STORAGE

Scale: 3/4" = 1'-0"

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BRUNSWICK COUNTY IDA

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BID DOCUMENTS

SEAL

KEY PLAN

SCALE

3/4" = 1'-0"

1'-4" 8" 0 1'-4"

No.	Description	Date

REVISIONS

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APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

TITLE

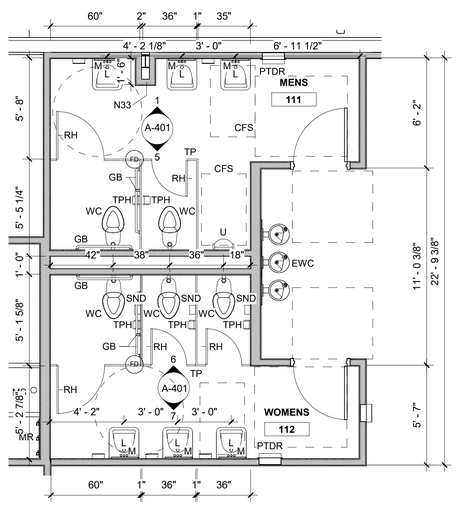
WALL SECTIONS

PROJECT NO. 50139338

A-302

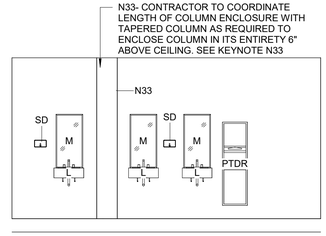
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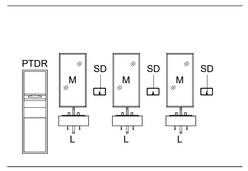
3 MENS 111/ WOMENS 112 ENLARGED PLAN

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



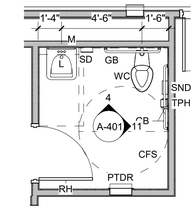
1 MEN 11 ELEV NORTH

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



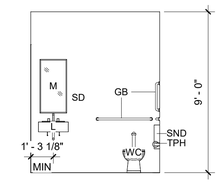
7 WOMENS 112 ELEV SOUTH

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



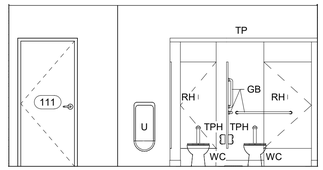
2 TOILET 117

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



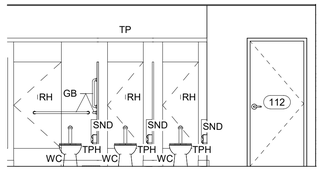
4 TOILET 117 NORTH ELEV

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



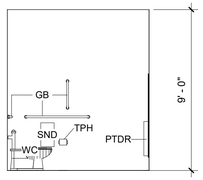
5 MENS 111 ELEV SOUTH

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



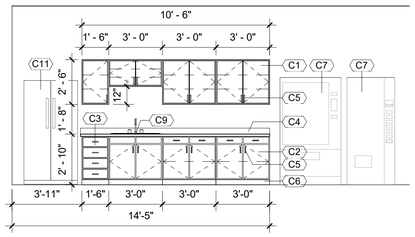
6 WOMENS 112 ELEV.

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



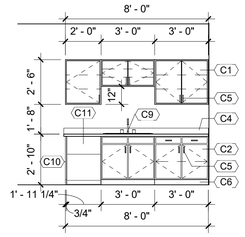
11 TOILET 117 EAST ELEV

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



8 113 CASEWORK ELEV.

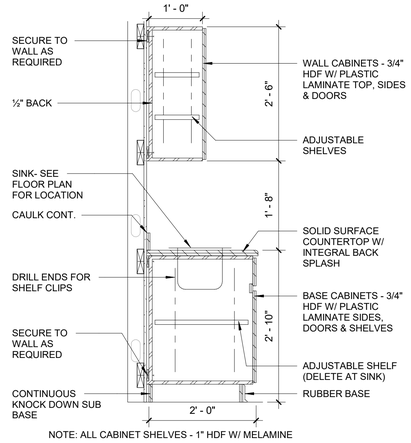
Scale: 1/4" = 1'-0"



9 116 CASEWORK ELEV.

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

CASEWORK KEYED NOTES	
NOTE	DESCRIPTION
C1	WALL CABINET 12" DEEP, LAMINATED WITH ADJUSTABLE SHELVES
C2	BASE CABINET 24" DEEP, LAMINATED, WITH ADJUSTABLE SHELF
C3	BASE CABINET 24" DEEP, LAMINATED, DRAWERS
C4	SOLID SURFACE COUNTERTOP, 24" DEPTH W/ BACKSPLASH
C5	PULL TYP. SEE SPECIFICATION
C6	4" TOE KICK
C7	VENDING MACHINE (NIC)
C9	STAINLESS STEEL SINK
C10	END PANEL, LAMINATE BOTH SIDES
C11	REFERGERATOR (NIC)

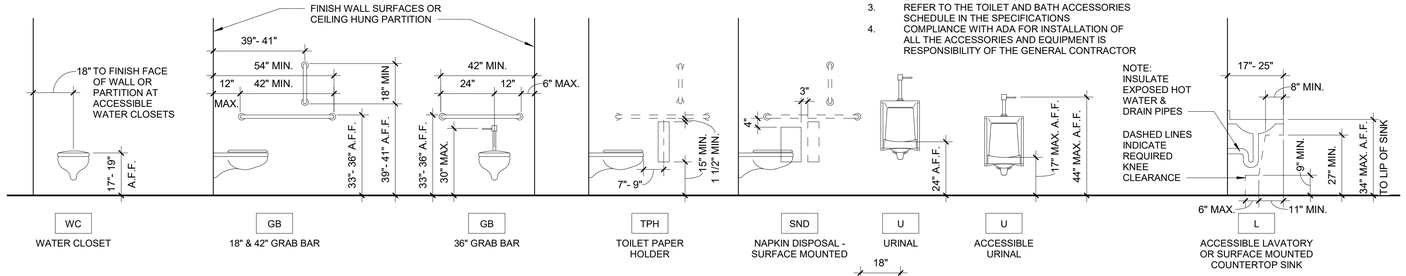


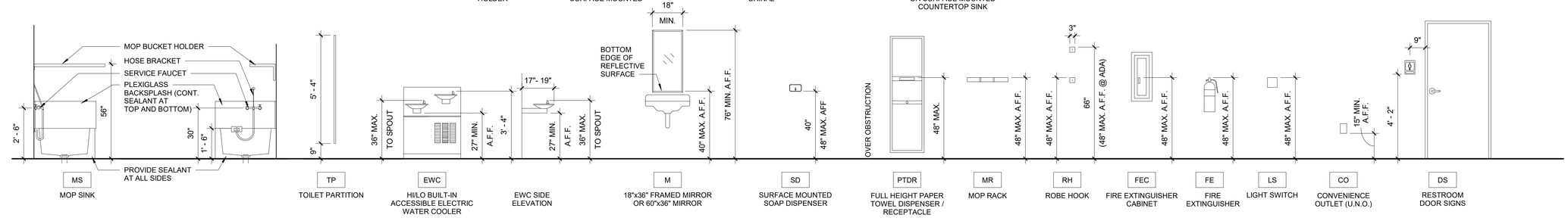
10 CASEWORK SECTION

Scale: 3/4" = 1'-0"

NOTES:

1. PROVIDE BLOCKING AS REQUIRED FOR MOUNTING ACCESSORIES
2. MOUNT EQUIPMENT AT HEIGHTS INDICATED UNLESS OTHERWISE NOTED
3. REFER TO THE TOILET AND BATH ACCESSORIES SCHEDULE IN THE SPECIFICATIONS
4. COMPLIANCE WITH ADA FOR INSTALLATION OF ALL THE ACCESSORIES AND EQUIPMENT IS RESPONSIBILITY OF THE GENERAL CONTRACTOR





FIXTURE MOUNTING HEIGHTS

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

3/28/2024 3:36:57 PM

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BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD. ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN

SCALE

1/4" = 1'-0"

4' 2' 0 4'

No.	Description	Date

REVISIONS

DRAWN BY	WL
APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

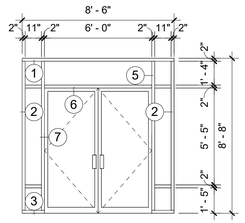
TITLE

TOILET PLANS & ELEVATIONS AND CASEWORK ELEVATIONS

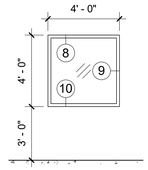
PROJECT NO. 50139338

A-401

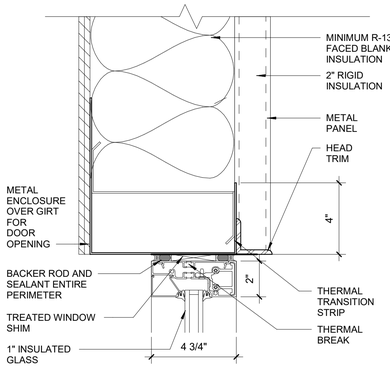
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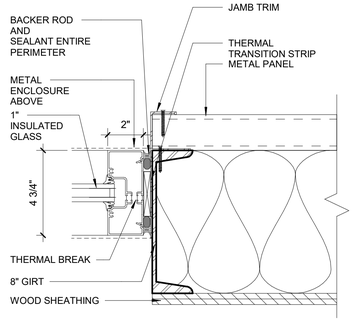
1 SF01
Scale: 1/4" = 1'-0"



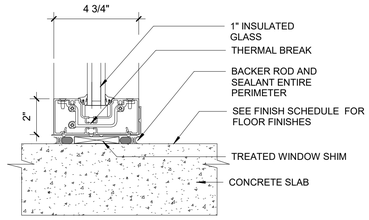
C WINDOW ELEV.
Scale: 1/4" = 1'-0"



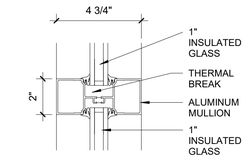
1 HEAD



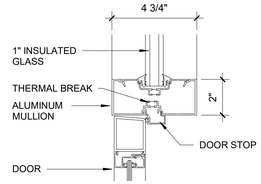
2 JAMB



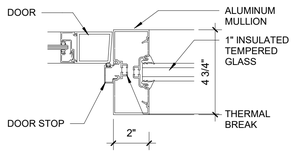
3 SILL



5 INTERMEDIATE MULLION



6 DOOR HEAD

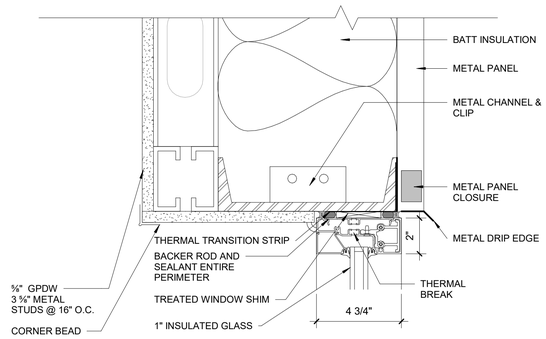


7 DOOR JAMB

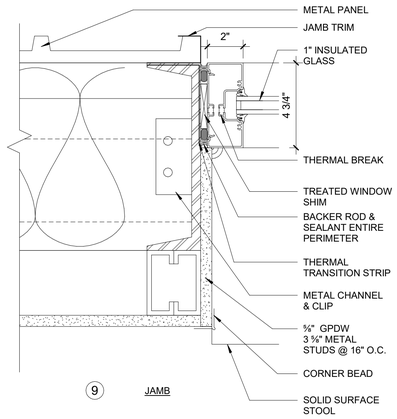
FLASH OPENINGS PRIOR TO WINDOW INSTALLATION WITH FLASHING TAPE AND STRETCH TAPE AT CORNERS

PROVIDE TEMPERED GLASS AS REQUIRED BY CODE, INCLUDING BUT NOT LIMITED TO WITHIN 18" OR LESS OF FINISH FLOOR, WITHIN 24" EITHER SIDE OF A DOOR, AND IN ALL DOORS

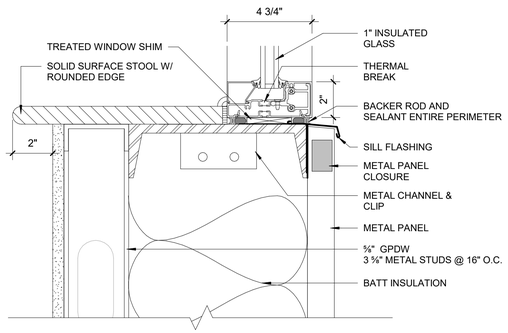
2 EXTERIOR STOREFRONT DETAILS
Scale: 3" = 1'-0"



8 HEAD



9 JAMB



10 SILL

3 WINDOW DETAILS
Scale: 3" = 1'-0"

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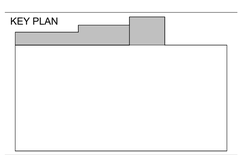
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BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN



SCALE

1/4" = 1'-0"

4' 2' 0 4'

No.	Description	Date

REVISIONS

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APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

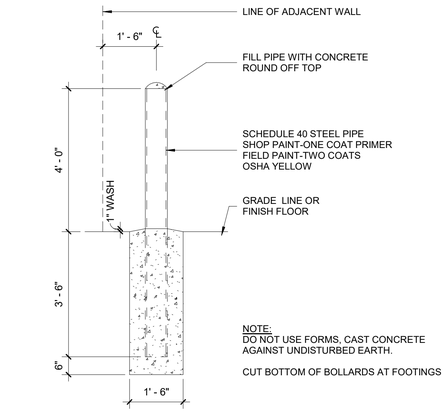
TITLE

WINDOW & STOREFRONT ELEVATIONS & DETAILS

PROJECT NO. 50139338

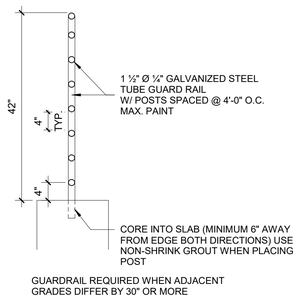
A-402

SHEET NO.



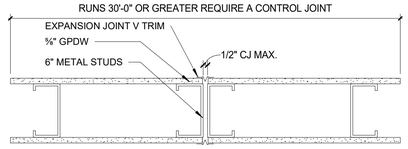
1 6" BOLLARD SECTION

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



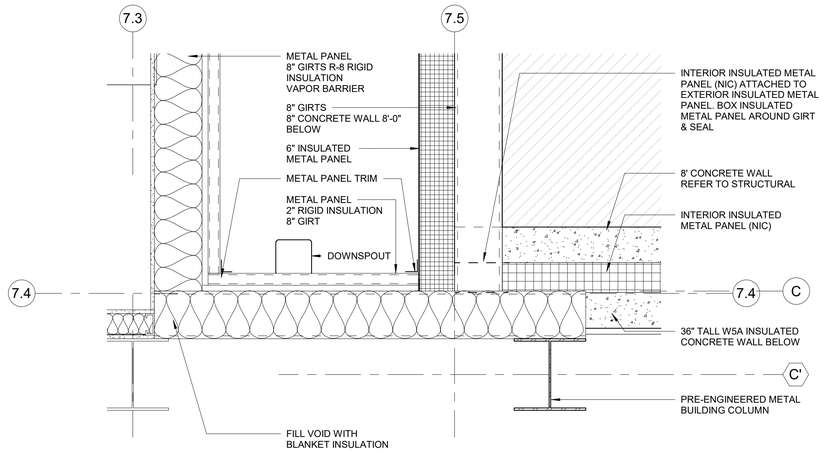
2 GUARDRAIL DETAIL

Scale: 3/4" = 1'-0"



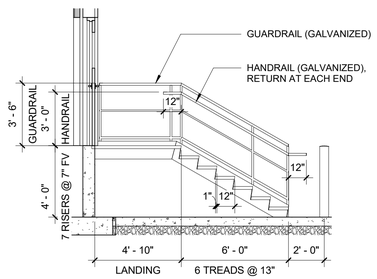
3 CONTROL JOINT DETAIL

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



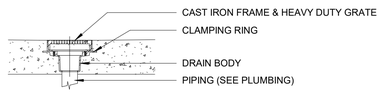
5 ICE STORAGE WALL DETAIL

Scale: 1" = 1'-0"



9 DOCK STAIR SECTION

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



10 HEAVY DUTY FLOOR DRAIN DETAIL

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

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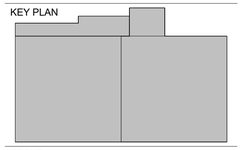
BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

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KEY PLAN



SCALE

As indicated

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CHECKED BY	WL
DATE	2024.03.25

TITLE

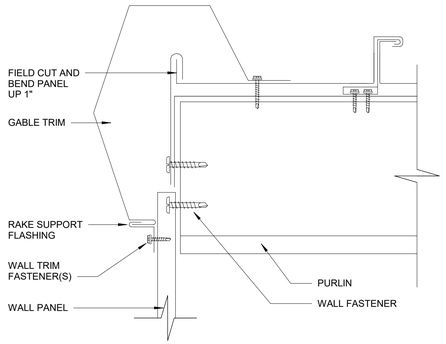
DETAILS

PROJECT NO. 50139338

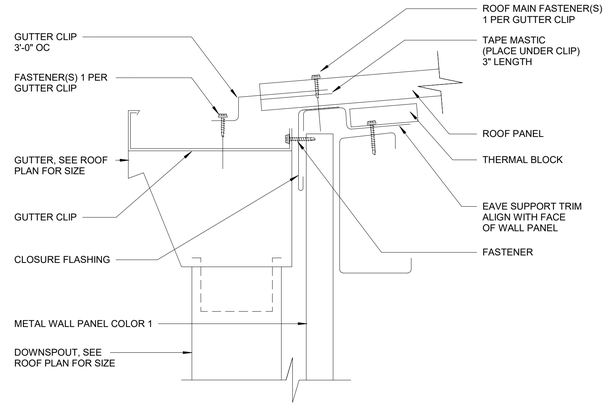
A-501

SHEET NO.

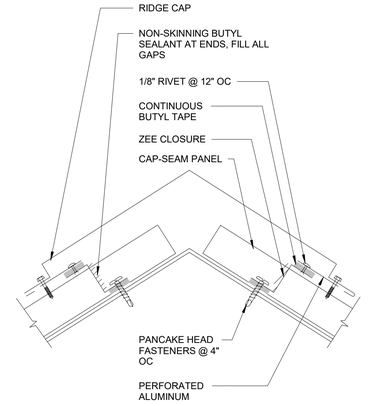
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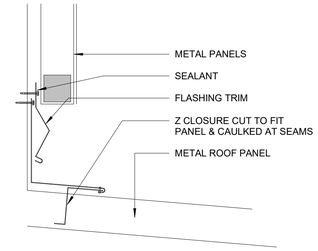
1 GABLE DETAIL
Scale: 3" = 1'-0"



2 GUTTER DETAIL
Scale: 3" = 1'-0"



3 RIDGE DETAIL
Scale: 3" = 1'-0"



4 END WALL DETAIL
Scale: 3" = 1'-0"

VENT PIPE DETAIL

5 VENT PIPE DETAIL
Scale: 3" = 1'-0"

8 PREFABRICATED CANOPY DETAIL
Scale: 1" = 1'-0"

3/28/2024 3:36:58 PM

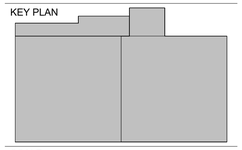
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KEY PLAN



SCALE

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No.	Description	Date

REVISIONS

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APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

TITLE

ROOF DETAILS

PROJECT NO. 50139338

A-502

SHEET NO.

FINISH SCHEDULE

ROOM NUMBER	DESCRIPTION	FLOOR		BASE	WALL		CEILING		REMARKS
		MATERIAL	FINISH	MATERIAL	MATERIAL	FINISH	MATERIAL	HEIGHT	
101	FUTURE OFFICE SPACE	VCT	WAX	RUBBER	GPDW	PAINT	EXPOSED	9' - 0"	
108	SERVER	VCT	WAX	RUBBER	GPDW	PAINT	ACT	8' - 0"	
109	SPRINKLER	CONCRETE	SEALER	RUBBER	GPDW	PAINT	EXPOSED	13' - 2"	1
110	STORAGE	VCT	WAX	RUBBER	GPDW	PAINT	ACT	9' - 0"	3
111	MENS	PORCELAIN TILE	SEAL	PORCELAIN TILE	GPDW	PAINT	ACT	9' - 0"	3
112	WOMENS	PORCELAIN TILE	SEAL	PORCELAIN TILE	GPDW	PAINT	ACT	9' - 0"	3
113	BREAKROOM	LVT	CLEAN	RUBBER	GPDW	PAINT	ACT	10' - 0"	3
114	ELEC/ MECH	CONCRETE	SEALER	RUBBER	GPDW	PAINT	EXPOSED	13' - 2"	1
115	ICE STORAGE	CONCRETE	SEALER	-	INSULATED PANELS	-	INSULATED PANELS	13' - 0"	2, 4
116	TRUCK STAFF BREAK	VCT	WAX	RUBBER	GPDW	PAINT	ACT	9' - 0"	3
117	TOILET	PORCELAIN TILE	SEAL	PORCELAIN TILE	GPDW	PAINT	ACT	9' - 0"	3
118	SHIPPING OFFICE	VCT	WAX	RUBBER	GPDW	PAINT	ACT	9' - 0"	
119	DOCK	CONCRETE	SEALER	-	INSULATED PANELS	-	INSULATED PANELS	14' - 0"	2, 4
120	VEGETABLE PACKAGING	CONCRETE	SEALER	-	-	-	EXPOSED	25' - 0"	1
120A	COOLER	CONCRETE	SEALER	-	INSULATED PANELS	-	INSULATED PANELS	20' - 0"	2, 4
120B	COOLER	CONCRETE	SEALER	-	INSULATED PANELS	-	INSULATED PANELS	20' - 0"	2, 4

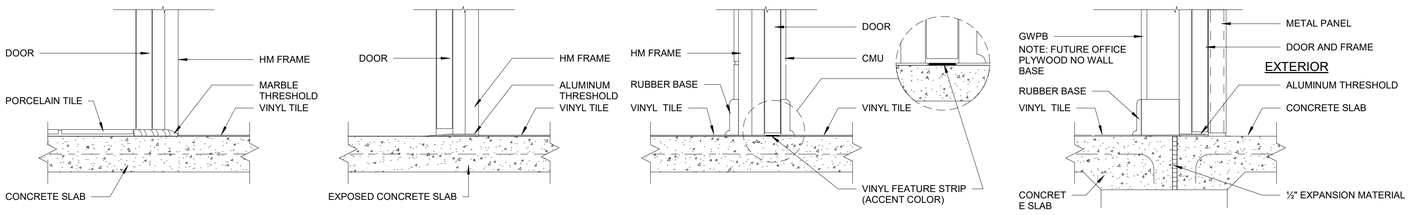
FINISH SCHEDULE REMARK LEGEND	
REMARK #	NOTE
1	EXPOSED CEILING, HEIGHT VARIES. PAINT DECK, STRUCTURE, DUCTS, PIPING, CONDUIT, ETC.
2	INTERIOR INSULATED METAL PANELS AND SUSPENDED INSULATED METAL CEILING PANELS (NIC)
3	PROVIDE MR GPDW ON WET WALLS.
4	INSULATED CONCRETE SLAB.
5	SEE PLAN FOR FLOOR DRAIN LOCATIONS.

DOOR SCHEDULE

No.	DOOR								FRAME			DETAIL		FIRE LABEL	REMARKS
	LEAF QTY	WIDTH	HEIGHT	MATERIAL	FINISH	DES.	HDW.	GLAZING	MATERIAL	FINISH	ELEV.	HEAD	JAMB		
101	2	6' - 0"	7' - 0"	ALUM	PREF.	FG	01	1" INSUL, TEMP	ALUM	PREF.	2	H1	J1		
108	1	3' - 0"	7' - 0"	WOOD	PREF.	L	09	-	HM	PAINT	1	H1	J1		2
109	1	3' - 0"	7' - 0"	WOOD	PREF.	L	03	-	HM	PAINT	1	H1	J1		
110	1	3' - 0"	7' - 0"	WOOD	PREF.	F	08	-	HM	PAINT	1	H3	J3		
111	1	3' - 0"	7' - 0"	WOOD	PREF.	F	15	-	HM	PAINT	1	H3	J3		
112	1	3' - 0"	7' - 0"	WOOD	PREF.	F	15	-	HM	PAINT	1	H3	J3		
113A	1	3' - 0"	7' - 0"	WOOD	PREF.	F	14	-	HM	PAINT	1	H3	J3		
113B	2	6' - 0"	7' - 0"	HM	PAINT	HG	06	1" INSUL, TEMP	HM	PAINT	2	H3	J3		
114A	1	6' - 0"	7' - 0"			F	02	-							
114B	1	3' - 0"	7' - 0"	WOOD	PREF.	F	07	-	HM	PAINT	1	H3	J3		
116A	1	3' - 0"	7' - 0"	HM	PAINT	HG	04	1" INSUL, TEMP	HM	PAINT	1	H4	J4		
117	1	3' - 0"	7' - 0"	WOOD	PREF.	F	16	-	HM	PAINT	1	H3	J3		
118A	1	3' - 0"	7' - 0"	WOOD	PREF.	F	11	-	HM	PAINT	1	H3	J3		
118B	1	3' - 0"	7' - 0"	WOOD	PREF.	HG	11	1/4" TEMP	HM	PAINT	1	H3	J3		
119A	1	3' - 0"	7' - 0"	FRP	PREF.	F	12	-	HM	PAINT	1	H3	J3		1
119B	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H5	J5		
119C	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H5	J5		
119D	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H5	J5		
119E	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H5	J5		
119F	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H5	J5		
119G	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H5	J5		
119H	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H5	J5		
120A	1	20' - 0"	14' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H2	J2		
120B	1	3' - 0"	7' - 0"	HM	PREF.	N	05	1" INSUL, TEMP	HM	PAINT	1	H1	J1		
120C	1	3' - 0"	7' - 0"	HM	PREF.	N	05	1" INSUL, TEMP	HM	PAINT	1	H1	J1		
120D	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H2	J2		
120E	1	10' - 0"	10' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H2	J2		
120F	1	20' - 0"	14' - 0"	STEEL	PAINT	OC	17	-	STEEL	PAINT		H2	J2		
120G	1	3' - 0"	7' - 0"	HM	PREF.	N	05	1" INSUL, TEMP	HM	PAINT	1	H1	J1		

DOOR SCHEDULE REMARK LEGEND	
REMARK #	NOTE
1	PROVIDE INSULATED FIBERGLASS DOOR WITH JAMB AND SILL SEALS
2	16"x14" TRANSFER GRILLE (BASIS OF DESIGN PRICE INDUSTRIES STG1)

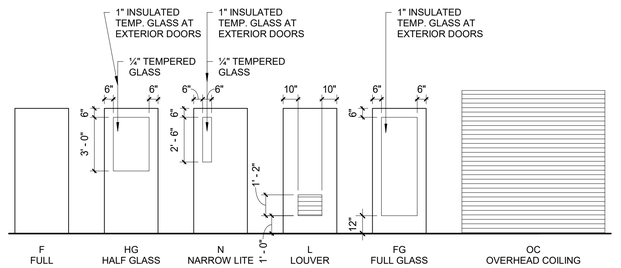
NOTE: HARDWARE IS LISTED WITHIN DOOR SPECIFICATION 087100



PORCELAIN TILE TO VCT | VCT TO CONCRETE | VCT TO VCT | VCT TO EXTERIOR CONCRETE

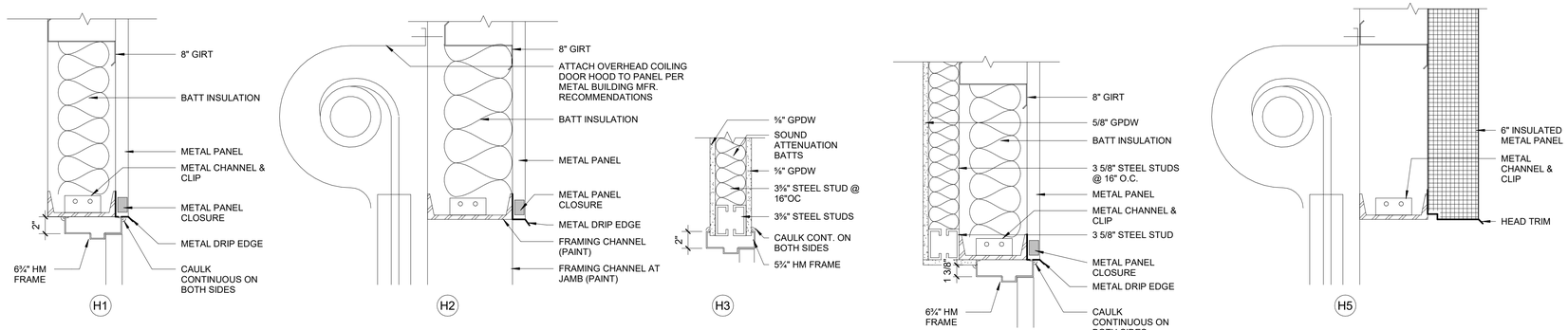
THRESHOLD DETAILS

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



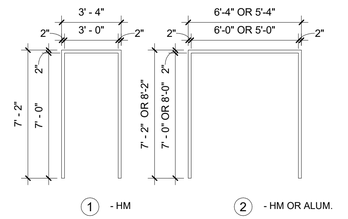
DOOR DESIGNS

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



HEAD & JAMB DETAILS

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



FRAME TYPES

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

Dewberry

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551 Piney Forest Road
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434.797.4497 Phone
434.797.4341 Fax
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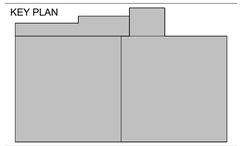
BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

KEY PLAN



SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	WL
APPROVED BY	LWH
CHECKED BY	WL
DATE	2024.03.25

TITLE

FINISH & DOOR SCHEDULES AND DOOR & FRAME DETAILS

PROJECT NO. 50139338

A-601

SHEET NO.

3/28/2024 3:36:59 PM



FIRE PROTECTION PLAN

1/16" = 1'-0"

SPRINKLER SYSTEM NOTES

SCOPE: DRY PIPE SPRINKLER SYSTEM SERVING THE COOLERS AND WET PIPE SPRINKLER SYSTEM SERVING ALL OTHER AREAS AND SPACES WITHIN THE BUILDING.

AUTHORITY HAVING JURISDICTION: BUILDING INSPECTORS OFFICE AND THE INSURANCE AUTHORITIES HAVING JURISDICTION.

HAZARD: ORDINARY HAZARD GROUP 2 AREAS

WATER DEMAND: SPRINKLER SYSTEM - 0.2 GPM x 1500 SQ.FT. = 300 GPM

ALLOWANCE FOR INSIDE AND OUTSIDE HOSE STREAMS = 250 GPM

TOTAL WATER DEMAND = 550 GPM

AVAILABLE WATER SUPPLY: THE FOLLOWING FLOW TEST DATA WAS OBTAINED FROM A HYDRANT LOCATED WITHIN THE INDUSTRIAL PARK ON A DATE AND ELEVATION UNKNOWN. THE INFORMATION PROVIDED MAY BE USED FOR BIDDING PURPOSES UNLESS THE BIDDER IS UNWILLING TO ACCEPT THIS INFORMATION, IN WHICH CASE THEY SHALL CONDUCT THEIR OWN TEST PRIOR TO BIDDING.

FINAL TESTING THAT IDENTIFIES THE FINAL AVAILABLE WATER SUPPLY DATE SHALL BE CONDUCTED BY THE CONTRACTOR THAT INCLUDES CURRENT DATA AND ON A DATE NOT MORE THAN ONE YEAR PRIOR TO THE DATE OF CONSTRUCTION AS REQUIRED BY N.F.P.A.

APPROXIMATE GRADE
ELEVATION AT TEST- UNKNOWN

STATIC - 78 PSI

RESIDUAL - 42 PSI

FLOW - 1690 GPM

DESIGN: SPRINKLER SYSTEM SHALL BE CONNECTED TO EXISTING FIRE SPRINKLER SYSTEM PIPING AND SHALL BE HYDRAULICALLY DESIGNED IN ACCORDANCE WITH N.F.P.A. PAMPHLET NO. 13 TO GIVE REQUIRED PRESSURES, DENSITIES AND/OR GPM FLOW. HYDRAULIC CALCULATIONS SHALL INCLUDE 5 PSI FOR ADDITIONAL FRICTION TO ALLOW FOR FUTURE ALTERATIONS AND PIPING CHANGES.

LEGEND

LIGHT HAZARD
WET PIPE

ORDINARY HAZARD GROUP 1
WET PIPE

ORDINARY HAZARD GROUP 2
DRY PIPE

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BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER L. SNYDER
Lic. No. 046584
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	RDC
APPROVED BY	CLS
CHECKED BY	CLS
DATE	2024.03.25

TITLE

FIRE PROTECTION PLAN

PROJECT NO. 50139338

FP-111

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

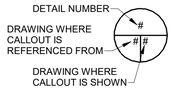
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ABBREVIATIONS

ABV	ABOVE
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
ASJ	ALL SERVICE JACKET
CLG	CEILING
CLG.CAB	CEILING CABINET (FAN TYPE)
CO	CLEANOUT
CS	CIRCUIT SETTER
CV	CHECK VALVE
CW	DOMESTIC COLD WATER
DEG. F	DEGREES FAHRENHEIT
DN	DOWN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FD	FLOOR DRAIN
FR	FROM
FSK	FOIL SCRIM KRAFT
GA	GAUGE
GND	GROUND
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HP	HORSEPOWER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
LVG	LEAVING
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OPG	OPENING
PDI	PLUMBING & DRAINAGE INSTITUTE
SAN	SANITARY SEWER
VTR	VENT THROUGH ROOF
W/	WITH
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WRT	WROUGHT

LEGEND

- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RETURN
- SANITARY SEWER
- VENT
- PIPE DOWN
- PIPE UP
- BALL VALVE
- CHECK VALVE
- UNION OR FLANGE
- STRAINER
- PLUMBING PLAN NOTE



CALLOUT HEAD

GENERAL NOTES

A. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE UNIFORM STATEWIDE BUILDING CODE, INCLUDING REFERENCED CODES AND STANDARDS AND IN ACCORDANCE WITH MANDATES OF THE LOCAL BUILDING OFFICIALS.

B. THE GENERAL ARRANGEMENT AND LOCATIONS OF PIPING, FIXTURES, ETC. ARE INDICATED BY THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE THEREWITH, WITH THE EXCEPTION OF SUCH CHANGES AS MAY BE REQUIRED ON ACCOUNT OF OTHER TRADES. CONTRACTOR SHALL COORDINATE WORK WITH INSTALLATION OF OTHER SUBCONTRACTORS.

C. PLUMBING WORK SHALL BE COORDINATED WITH THE CONTRACTOR AS TO SCHEDULING, DIMENSIONING AND LOCATION OF EQUIPMENT.

D. MAJOR ITEMS ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.

E. SUBSTITUTION FOR SPECIFIED ITEMS SHALL BE BORNE BY THE CONTRACTOR.

F. ALL REQUIRED WALL OR FLOOR OPENINGS SHALL BE COORDINATED WITH THE CONTRACTOR.

G. ALL PIPING SHALL BE ABOVE CEILING UNLESS INDICATED OTHERWISE.

H. ALL EQUIPMENT SHALL BE WIPED CLEAN, REMOVING ALL TRACES OF OIL, DIRT, OR PAINT SPOTS.

I. PROVIDE SUPPORTS TO RIGIDLY ATTACH ALL EQUIPMENT, APPURTENANCES AND PIPE AS REQUIRED FOR SUPPORT. PRIOR TO INSTALLATION OF HANGERS AND INSERTS, THE CONTRACTOR SHALL COORDINATE LOCATIONS AND EQUIPMENT TO MINIMIZE CONFLICTS WITH OTHER BUILDING SYSTEMS.

J. CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL EQUIPMENT INDICATED TO BE FURNISHED BY OTHERS.

K. ALL PIPE OF THE SAME SIZE SHALL BE OF THE SAME MATERIAL.

L. SLOPE ALL DRAIN LINES 1/4 INCH PER FOOT MINIMUM FOR SIZES LESS THAN 4 INCHES, SLOPE 1/8 INCH PER FOOT SIZES 4 INCHES AND LARGER UNLESS INDICATED OTHERWISE BY INVERTS ON DWGS.

M. SOIL, WASTE AND VENT PIPING LOCATED BELOW GRADE SHALL BE MINIMUM 2 INCHES.

N. VENTS SHALL EXTEND 12 INCHES ABOVE ROOF. ROOF FLASHING SHALL BE COORDINATED BY THE CONTRACTOR.

O. DOMESTIC HOT AND COLD WATER PIPING SHALL BE 1/2 INCH SIZE UNLESS INDICATED OTHERWISE.

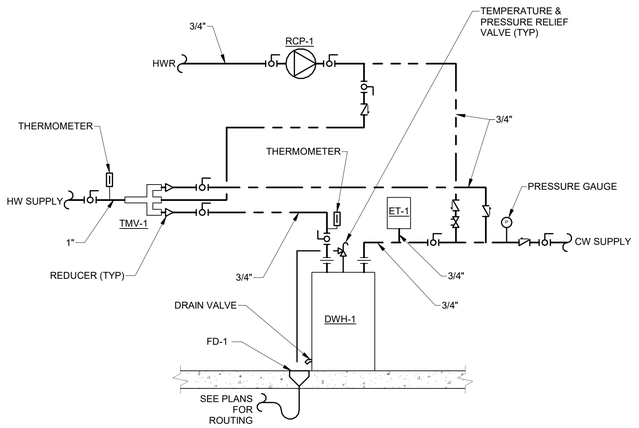
P. BALL VALVES MAY BE USED IN LIEU OF GATE VALVES 2 INCHES OR SMALLER.

Q. ALL EXPOSED FIXTURE SUPPLIES AND WASTE LINES SHALL BE CHROME PLATED.

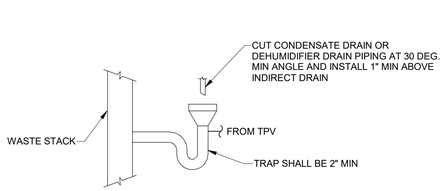
R. WATER CLOSET AND SEAT FOR WATER CLOSET SHALL BE FROM SAME MANUFACTURER.

S. INSTALL ALL FIXTURES AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.

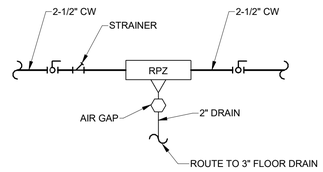
T. INSTALL P-TRAP AT ALL FIXTURE/EQUIPMENT OUTLETS UNLESS NOTED OTHERWISE OR TRAP IS INTEGRAL TO THE FIXTURE/EQUIPMENT.



DOMESTIC WATER HEATER DETAIL
NOT TO SCALE



INDIRECT DRAIN DETAIL
NOT TO SCALE



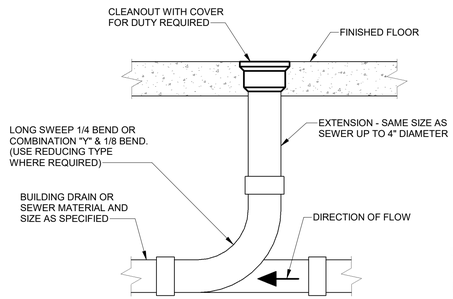
RPZ DETAIL
NOT TO SCALE

PLUMBING FIXTURE SCHEDULE

DESIGNATION	FIXTURE	MANUFACTURER & MODEL	SIZE	SUPPLY FITTINGS AND STOPS	TRAP	CARRIER	REMARKS & ACCESSORIES	CONNECTION SIZES		
								WASTE	HOT	COLD
P-1	WATER CLOSET	AMERICAN STANDARD 3451.001	-	-	INTEGRAL	FLOOR MOUNTED	FLUSH VALVE: SLOAN ROYAL MODEL 111-1.28 SEAT: AMERICAN STANDARD 5901.100	4"	-	1"
P-1A	WATER CLOSET	AMERICAN STANDARD 3461.001	ADA	-	INTEGRAL	FLOOR MOUNTED	FLUSH VALVE: SLOAN ROYAL MODEL 111-1.28 SEAT: AMERICAN STANDARD 5901.100 ADA COMPLIANT FIXTURE	4"	-	1"
P-2	LAVATORY	AMERICAN STANDARD 355012.020	18" X 21"	3/8" ANGLE STOPS	1 1/2" 17 GA P-TRAP	WALL MOUNTED	FAUCET: ZURN MODEL Z812B4-XL WITH GRID STRAINER. TRAP AND SUPPLY INSULATION KIT: TRUEBRO MODEL 102 E-Z ADA COMPLIANT FIXTURE	1 1/2"	1/2"	1/2"
P-3	LAVATORY	AMERICAN STANDARD 9141.011	20" X 27"	3/8" ANGLE STOPS	1 1/2" 17 GA P-TRAP	WALL MOUNTED	FAUCET: ZURN MODEL Z812B4-XL WITH GRID STRAINER. TRAP AND SUPPLY INSULATION KIT: TRUEBRO MODEL 102 E-Z ADA COMPLIANT FIXTURE	1 1/2"	1/2"	1/2"
P-4	URINAL	AMERICAN STANDARD 6590.001	ADA	-	INTEGRAL	WALL MOUNTED	FLUSH VALVE: SLOAN ROYAL MODEL 186-1.0 ADA COMPLIANT FIXTURE	2"	-	3/4"
P-5	KITCHEN SINK	ELKAY LRAD332165	33" X 22"	3/8" ANGLE STOPS	1 1/2" 17 GA P-TRAP	COUNTER MOUNTED	FAUCET: ZURN Z780C-XL DRAINS AND STRAINERS: ELKAY LK99	1 1/2"	1/2"	1/2"
P-6	JANITOR SINK	FIAT TSB3003	36" X 24"	-	3" P-TRAP	FLOOR MOUNTED	WITH FIAT 830AA WITH MODEL 832AA HOSE & HOSE BRACKET, STAINLESS STEEL MOP HANGER & MODEL MSG2424 WALL GUARDS.	3"	1/2"	1/2"
P-7	ELECTRIC WATER COOLER	ELKAY LZSTL8WSLK	BI-LEVEL	3/8" ANGLE STOPS	1 1/2" 17 GA P-TRAP	WALL MOUNTED	WITH BOTTLE FILLING STATION ADA COMPLIANT FIXTURE	1 1/2"	-	1/2"
P-8	LAVATORY	BRADLEY WF2703	-	3/8" ANGLE STOPS	1 1/2" 17 GA P-TRAP	FLOOR MOUNTED	FAUCET: FOOT ACTIVATION, INTEGRAL SPRAYHEAD. PROVIDE WITH THERMOSTATIC MIXING VALVE.	1 1/2"	1"	1"
P-9	EMERGENCY SHOWER/EYE WASH STATION	GUARDIAN GBF1909	-	-	-	FLOOR MOUNTED	TEMPERED WATER FROM DWH-4. PROVIDE WITH THERMOSTATIC MIXING VALVE. ADA COMPLIANT FIXTURE.	-	-	1 1/4"
P-10	ELECTRIC WATER COOLER	ELKAY LZS8L	-	3/8" ANGLE STOPS	1 1/2" 17 GA P-TRAP	WALL MOUNTED	ADA COMPLIANT FIXTURE.	1 1/4"	-	3/8"

MISCELLANEOUS EQUIPMENT SCHEDULE

MARK	DESCRIPTION
DWH-1	DOMESTIC WATER HEATER - A.O. SMITH DEN-66 WITH 66 GALLON TANK, 6/6 KW SIMULTANEOUS INPUT (12 KW TOTAL), 49 GPH RECOVERY AT 100 DEG.F RISE, 480V/1PH/60HZ
DWH-2	INSTANTANEOUS ELECTRIC DOMESTIC WATER HEATER - CHRONOMITE MODEL SR-20L/277 WITH 5540 WATT INPUT AND 0.35 GPM ACTIVATION. 277V/1PH/60HZ. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
DWH-3	INSTANTANEOUS ELECTRIC DOMESTIC WATER HEATER - CHRONOMITE MODEL SR-30L/277 WITH 8310 WATT INPUT AND 0.65 GPM ACTIVATION. 277V/1PH/60HZ. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
DWH-4	INSTANTANEOUS ELECTRIC DOMESTIC WATER HEATER - EEMAX MODEL AP108480 WITH 108 KW INPUT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
ET-1	THERMAL EXPANSION TANK - AMTROL MODEL ST-12-C WITH 3.2 GALLONS ACCEPTANCE VOLUME.
FCO	FLOOR CLEANOUT - JOSAM 55000 SERIES. LINE SIZED.
FD-1	3" FLOOR DRAIN - JOSAM 30000-A SERIES CAST IRON FLOOR DRAIN WITH TRAP SEAL INSERT.
FD-2	3" FLOOR DRAIN - JOSAM 30000-A SERIES CAST IRON FLOOR DRAIN WITH HEAVY-DUTY NIKALOY GRATE AND TRAP SEAL INSERT. GRATE WITH 1/4" SLOT WIDTH.
HB	HOSE BIBB - WOODFORD MODEL 24
IMB	ICE MAKER CONNECTION BOX - OATEY MODEL I2K LOW LEAD WITH PLASTIC FACEPLATE AND QUARTER-TURN BRASS BALL VALVE.
OWS-1	OIL/WATER SEPARATOR - STRIEM MODEL OS-35 WITH 4" DIAMETER INLET AND OUTLET. MAX FLOWRATE = 35 GPM. PROVIDE RISER AND COVER SUITABLE FOR INSTALLATION LOCATION. PROVIDE BACKFILL AND 4" CONCRETE SLAB. PROVIDE TWO-WAY CLEANOUTS AT INLET AND OUTLET. PROVIDE VENT TO ATMOSPHERE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
PRV-1	PRESSURE REDUCING VALVE - WATTS MODEL LF223S WITH STRAINER. 2-1/2".
RCP-1	RECIRCULATION PUMP - LEAD-FREE BRONZE BODIED SYSTEM LUBRICATED CIRCULATOR. BELL AND GOSSETT MODEL NBF-10S/LW, 12.5 FT. HEAD, 2.0 GPM, 52 WATTS, SINGLE-PHASE, 115V, 2800 RPM
RPZ-1	2 1/2" REDUCED PRESSURE ZONE ASSEMBLY - WATTS MODEL LF009. PROVIDE WITH AIR GAP, QUARTER-TURN BALL VALVES, AND STRAINER.
TD-1	TRENCH DRAIN - JOSAM 100C SERIES SLOPED CHANNELS WITH DUCTILE IRON RAIL, BOTTOM OUTLET, AND 4" INTERNAL WIDTH. PROVIDE REBATE INSERT BETWEEN CHANNEL SECTIONS. WITH JOSAM SERIES 76700 HEAVY-DUTY CAST IRON GRATE. COORDINATE TRENCH DRAIN LENGTH AND INSTALLATION WITH SLOPING OF SLAB.
TMV-1	THERMOSTATIC MIXING VALVE - LEONARD MODEL TM-520B-LF-DT WITH 3/4" INLETS AND 1" OUTLET.
TPV	TRAP PRIMER VALVE - PRECISION PLUMBING PRODUCTS PR-500 WITH 1/2" COPPER LINE. PROVIDE DISTRIBUTION UNIT TO SERVE TWO FLOOR DRAINS WHERE NECESSARY. PROVIDE ACCESS DOOR WHERE TPV IS CONCEALED.
WCO	WALL CLEANOUT - JOSAM 58600-CO SERIES.
WH	FREEZELESS WALL HYDRANT - WOODFORD MODEL B65.
WHA-"X"	SHOCK ABSORBER, JOSAM SERIES 75000-S. MODEL NUMBER 75000-S 75001-S 75002-S 75003-S 75004-S P.D.I. AA A B C D FIXTURE UNITS 1 1-11 12-32 33-60 61-113



CLEANOUT DETAIL
NOT TO SCALE

MASTER ENGINEERS & DESIGNERS
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BRUNSWICK COUNTY IDA
BRUNSWICK VEGETABLE PACKAGING FACILITY
BOYDTON PLANK RD, ALBERTA, VA 23821
BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER L. SNYDER
Lic. No. 046584
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	WJC
APPROVED BY	CLS
CHECKED BY	CLS
DATE	2024.03.25

TITLE

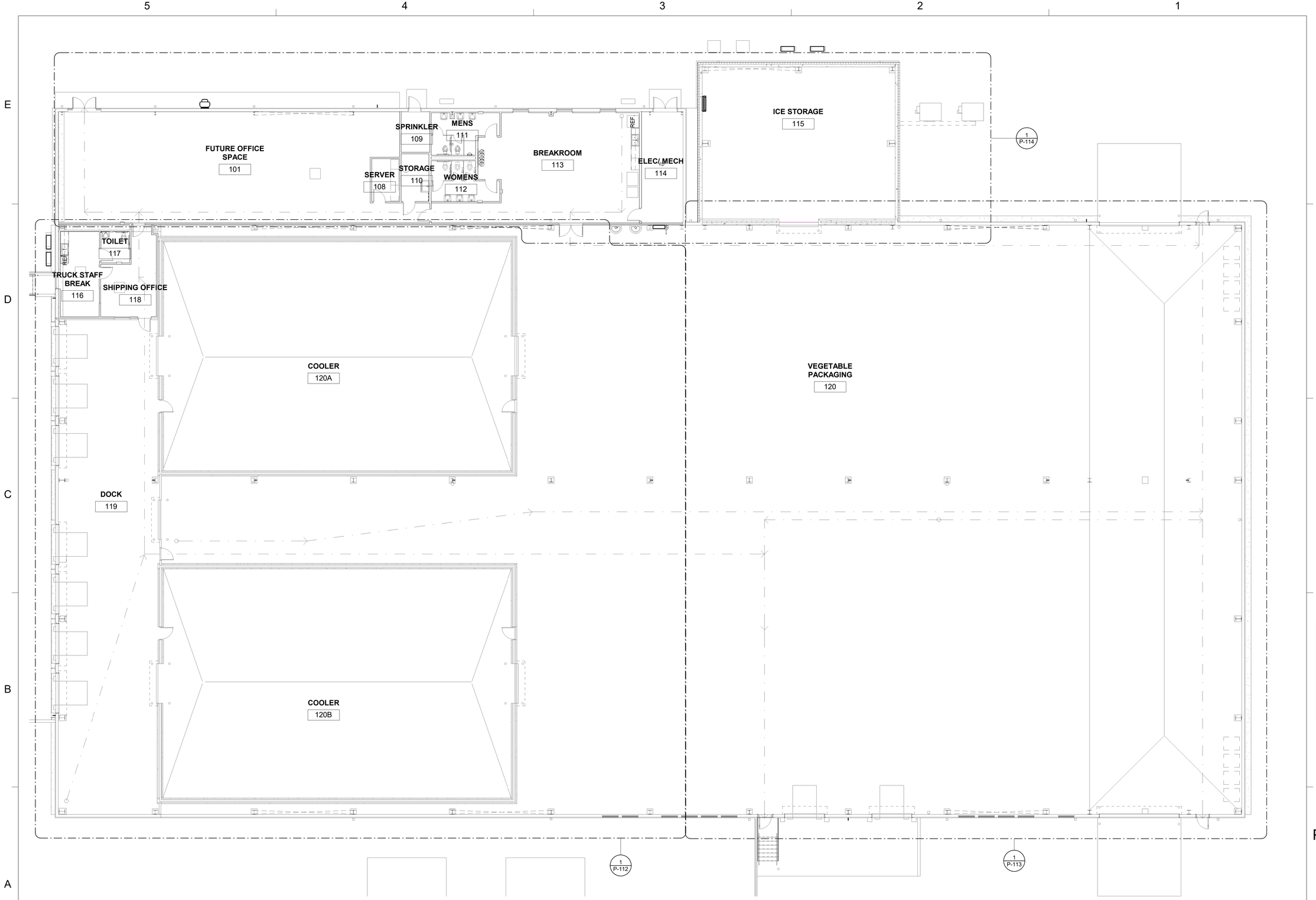
PLUMBING LEGEND, SCHEDULES, NOTES, AND ABBREVIATIONS

PROJECT NO. 50139338

P-101

SHEET NO.

3/22/2024 3:57:29 PM



PLUMBING HOT AND COLD WATER OVERALL PLAN

3/32" = 1'-0"

3/22/2024 3:57:32 PM

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Danville, VA 24540
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BRUNSWICK VEGETABLE PACKAGING FACILITY

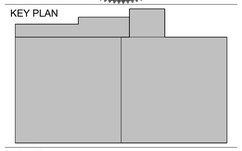
BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER L. SNYDER
Lic. No. 046584
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	WJC
APPROVED BY	CLS
CHECKED BY	CLS
DATE	2024.03.25

TITLE

PLUMBING HOT AND COLD WATER OVERALL PLAN

PROJECT NO. 50139338

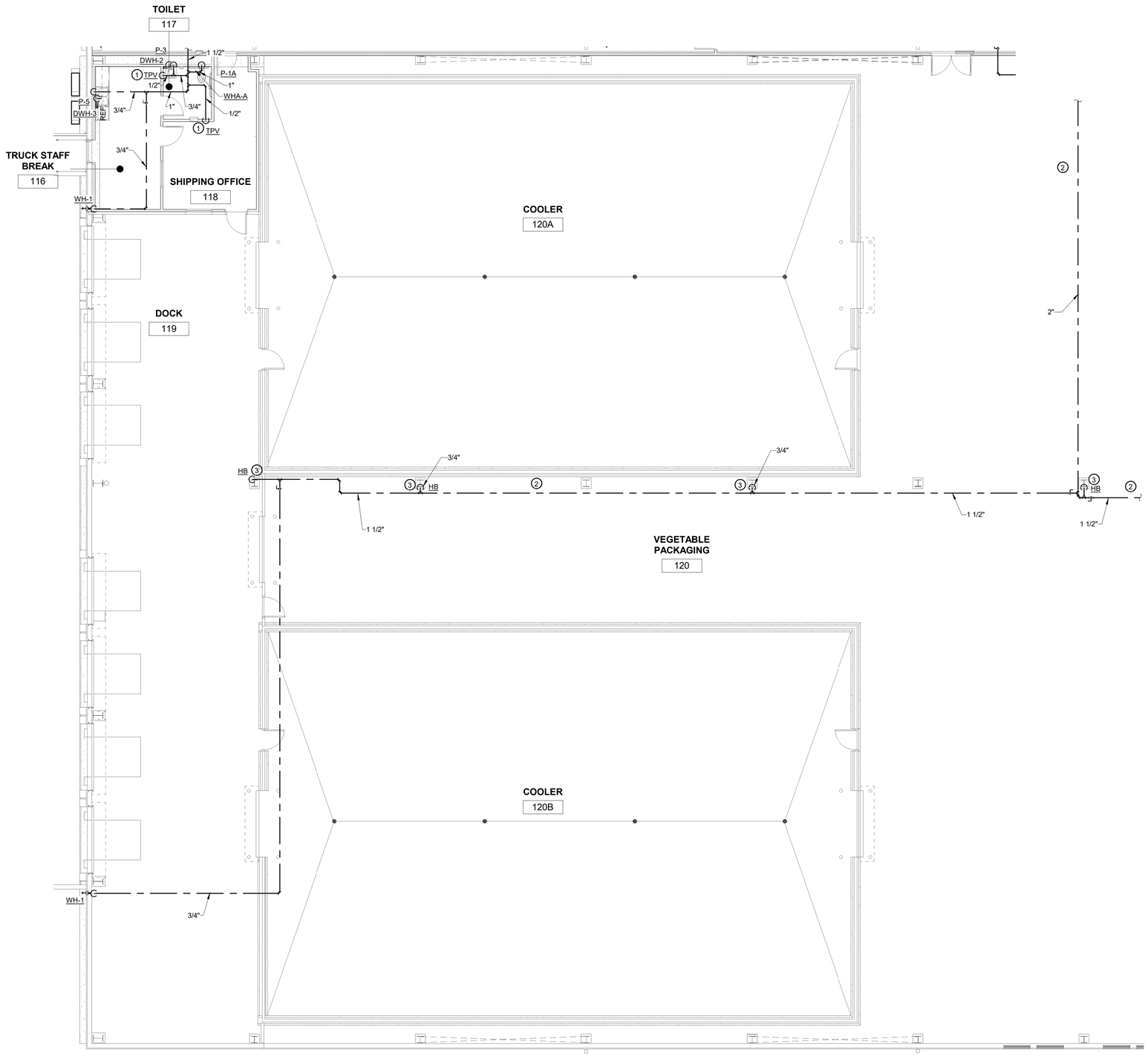
P-111

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PLAN NOTES

1. CONNECT TPV TO INDIRECT DRAIN. SEE SANITARY AND VENT PLANS.
2. ROUTE PIPING AS HIGH AS POSSIBLE.
3. INSTALL SHUTOFF BALL VALVE AT BRANCH.



1 PLUMBING HOT AND COLD WATER PLAN PART A

P-112 1/8" = 1'-0"

3/22/2024 3:57:41 PM

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COMMONWEALTH OF VIRGINIA
CHRISTOPHER L. SNYDER
Lic. No. 046584
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

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APPROVED BY	CLS
CHECKED BY	CLS
DATE	2024.03.25

TITLE

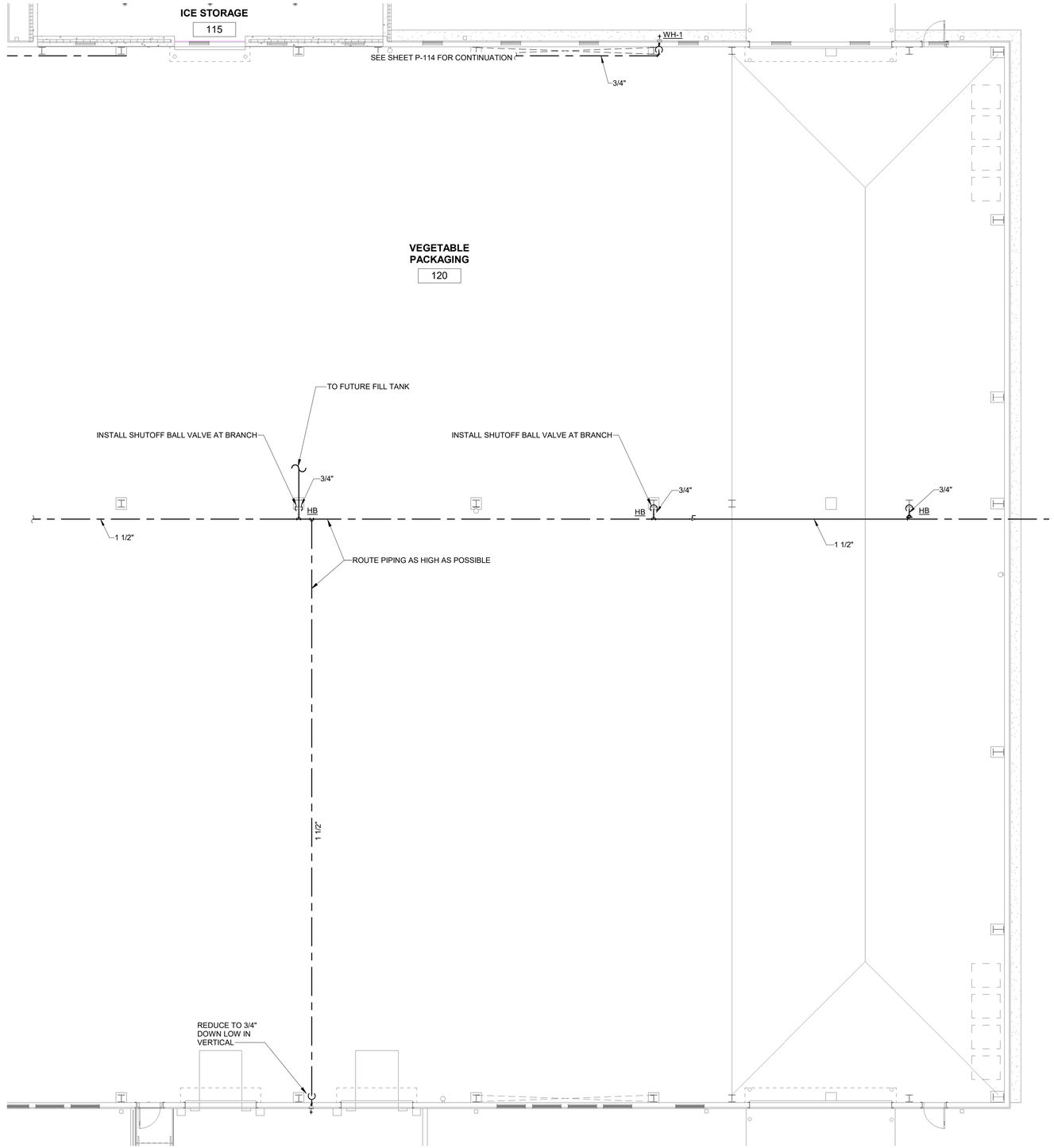
PLUMBING HOT AND COLD WATER PLAN PART A

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1 P-113 PLUMBING HOT AND COLD WATER PLAN PART B
1/8" = 1'-0"

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1/8" = 1'-0"

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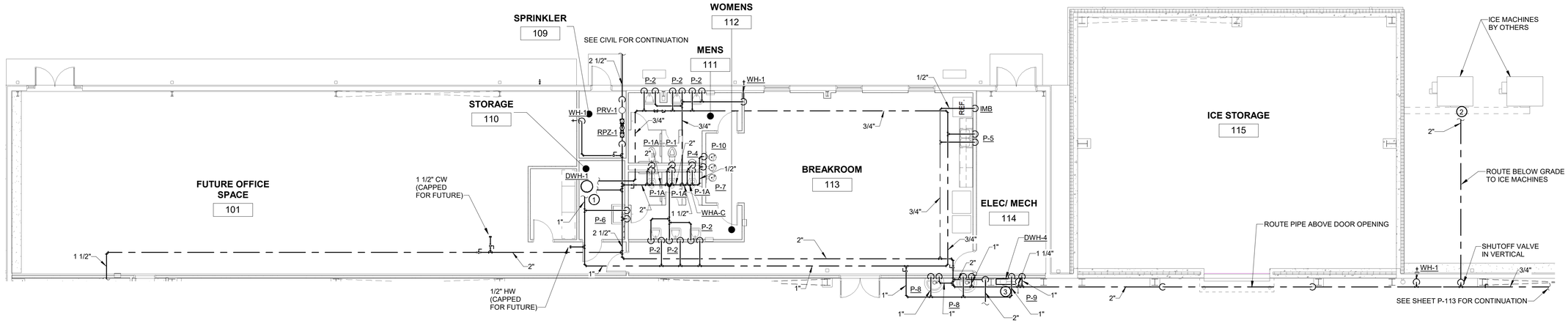
PLUMBING HOT AND COLD WATER PLAN PART B

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1 PLUMBING HOT AND COLD WATER PLAN PART C

P-114 1/8" = 1'-0"

PLAN NOTES

1. SEE DOMESTIC WATER HEATER DETAIL FOR CONTINUATION.
2. CONNECT TO OWNER-FURNISHED ICE MACHINES PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE HEAT TRACE ON ALL PIPING LOCATED ABOVE FROST DEPTH. HEAT TRACE SHALL BE EQUAL TO CHROMALOX MODEL SRF SELF REGULATING FREEZE PROTECTION. SINGLE PHASE, 277V WITH 8 MAX WATTS PER FOOT. PROVIDE WITH FREEZE PROTECTION ON/OFF, LINE VOLTAGE, STRAP-ON THERMOSTAT SET TO ACTIVATE ONLY WHEN TEMPERATURES ARE AT OR BELOW FREEZING.
3. MOUNT DWH-4 ON WALL ABOVE EMERGENCY SHOWER/EYEWASH (P-9). COORDINATE FINAL LOCATION WITH OWNER.

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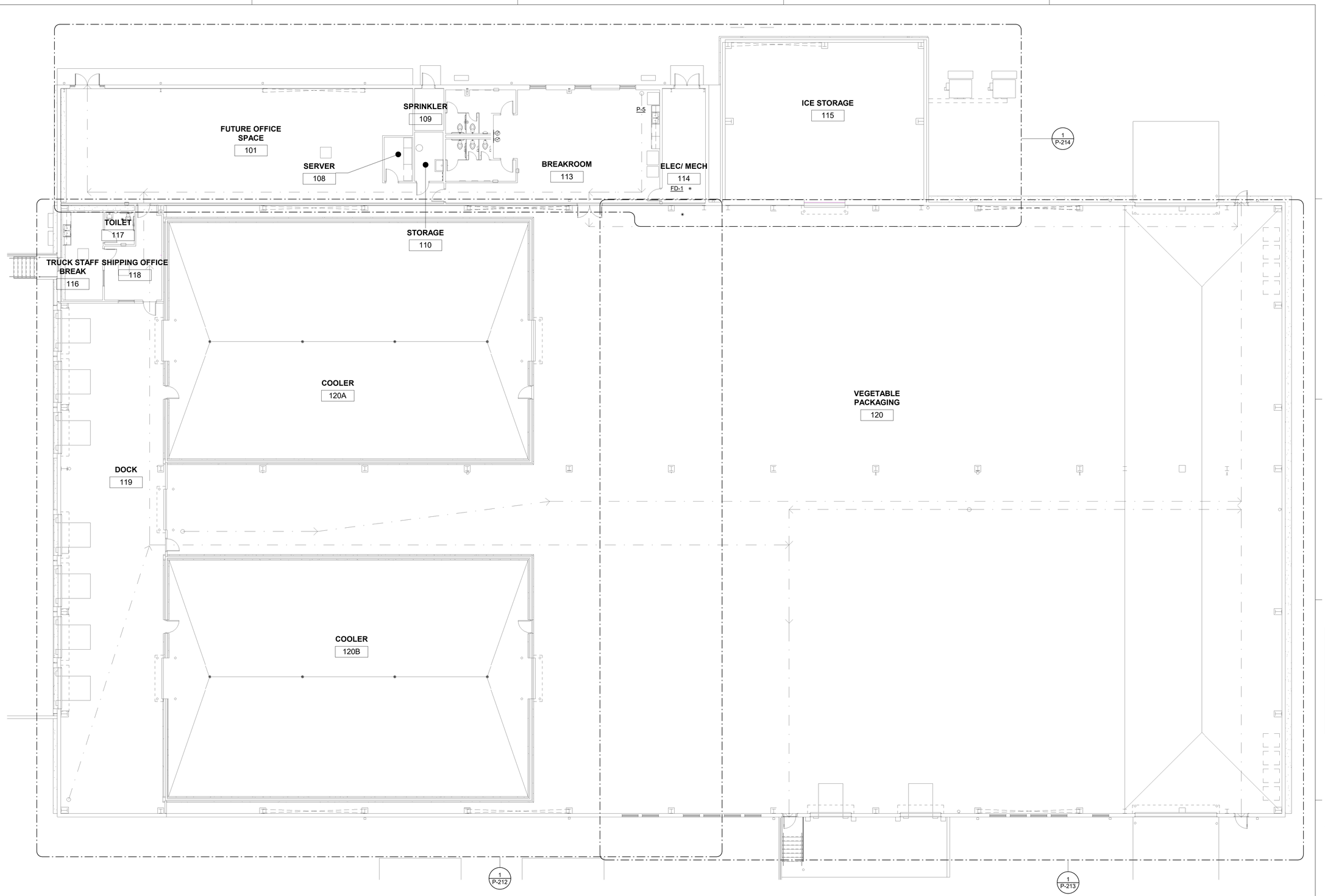
PLUMBING HOT AND COLD WATER PLAN PART C

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PLUMBING SANITARY AND VENT OVERALL PLAN

3/32" = 1'-0"

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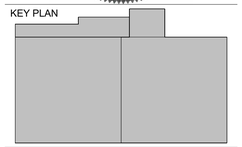
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SCALE

3/32" = 1'-0"

No.	Description	Date

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TITLE

PLUMBING SANITARY AND VENT OVERALL PLAN

PROJECT NO. 50139338

P-211

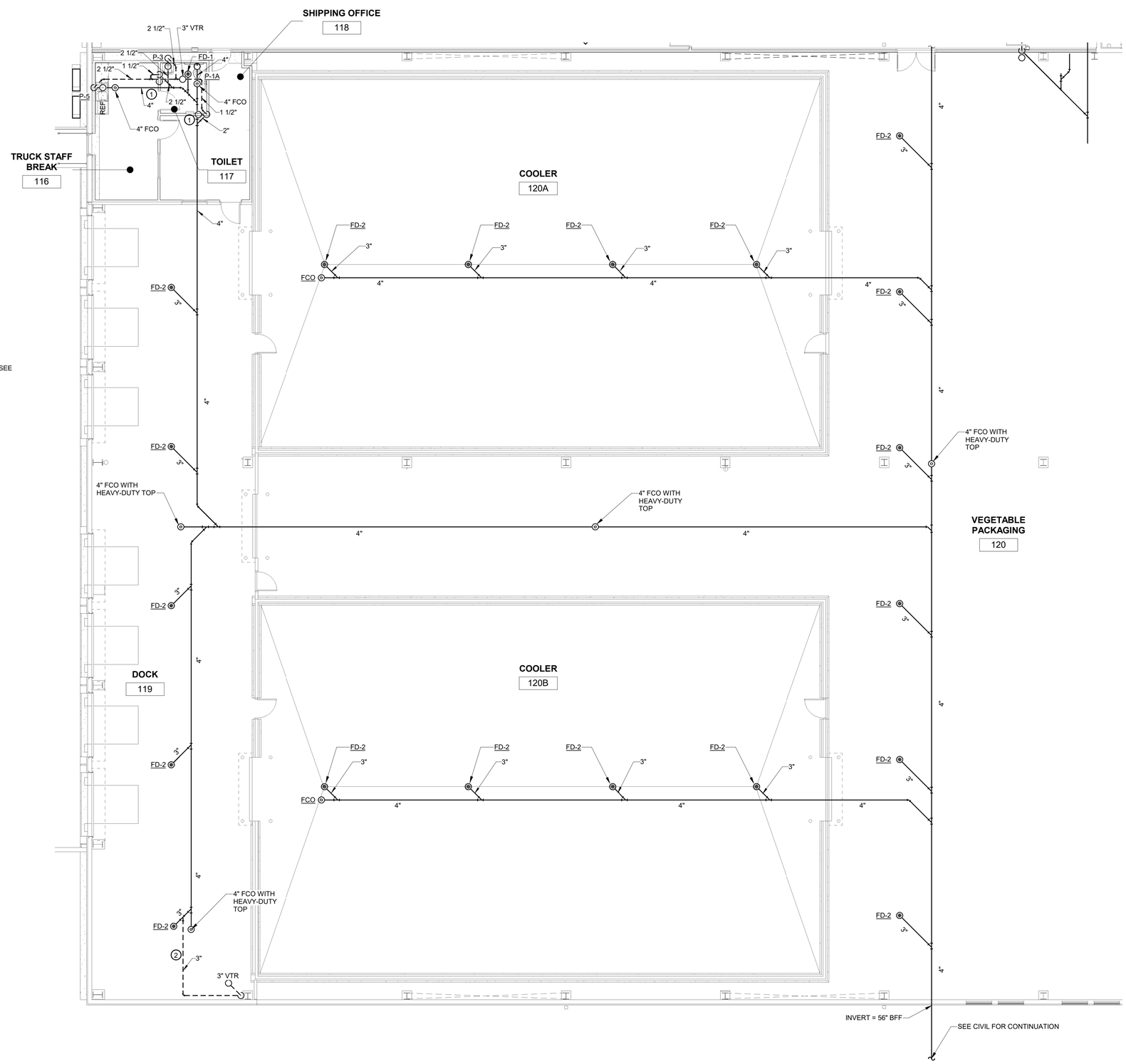
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3/22/2024 3:57:53 PM

PLAN NOTES

1. PROVIDE INDIRECT DRAIN AT DEHUMIDIFIER. SEE MECHANICAL DRAWINGS. SEE INDIRECT DRAIN DETAIL. COORDINATE LOCATION WITH MECHANICAL.
2. ROUTE VENT PIPE BELOW SLAB. SLOPE TOWARDS SANITARY PIPE.



1 P-212 PLUMBING SANITARY AND VENT PLAN PART A
1/8" = 1'-0"

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SCALE

As indicated

No.	Description	Date

REVISIONS

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DATE	2024.03.25

TITLE

PLUMBING SANITARY AND VENT PLAN PART A

PROJECT NO. 50139338

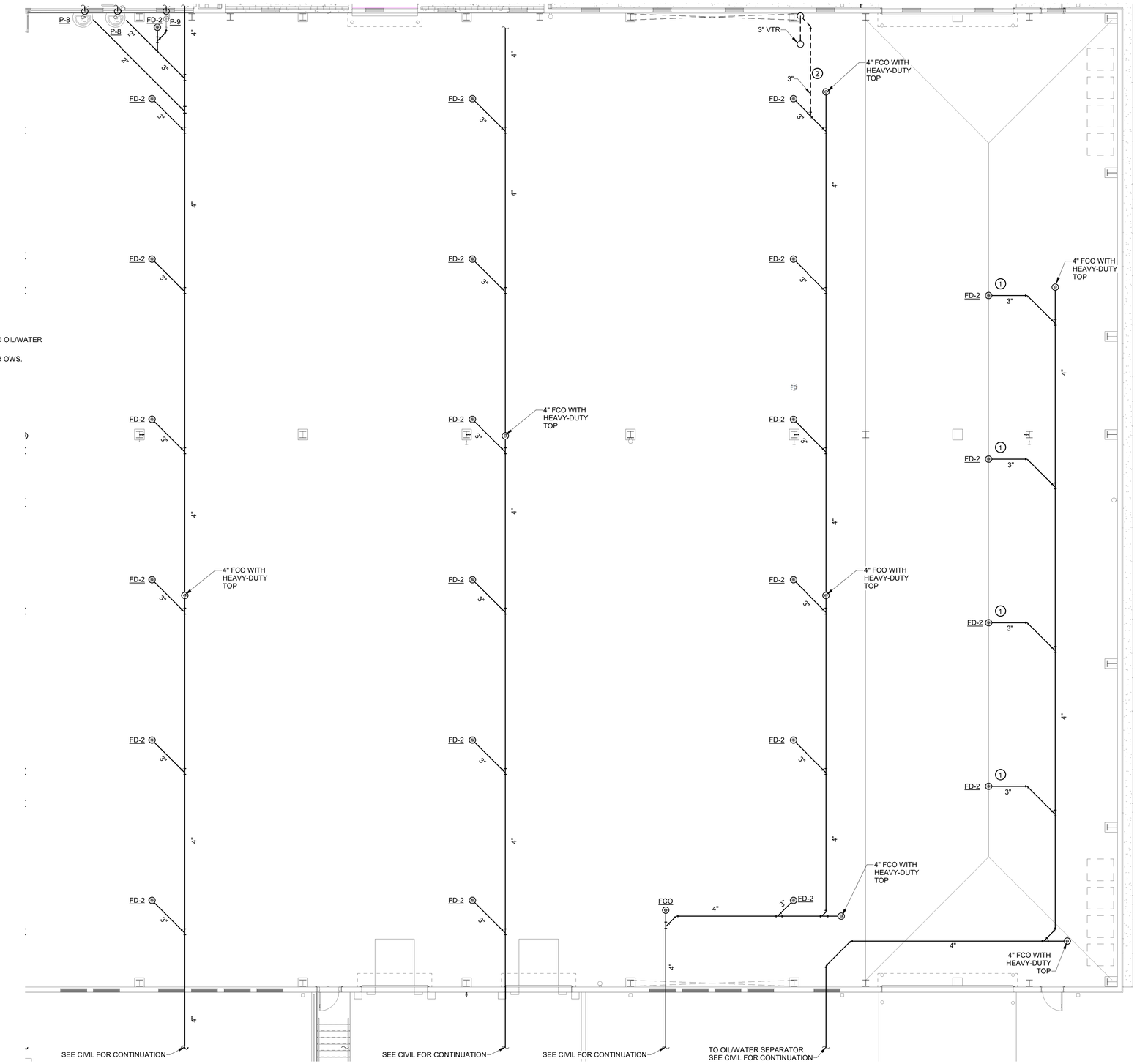
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PLAN NOTES

1. DO NOT INSTALL TRAP AT THIS FLOOR DRAIN. FLOOR DRAIN PIPED TO OIL/WATER SEPARATOR.
2. ROUTE VENT PIPE BELOW SLAB. SLOPE TOWARDS SANITARY PIPE OR OWS.



1 P-213 PLUMBING SANITARY AND VENT PLAN PART B

1/8" = 1'-0"

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PLUMBING SANITARY AND VENT PLAN PART B

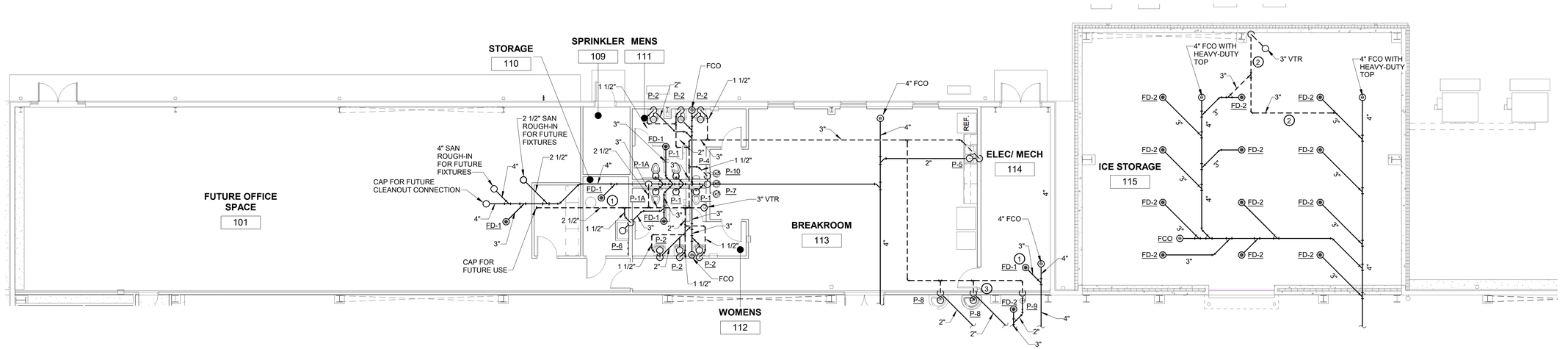
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1 P-214 PLUMBING SANITARY AND VENT PLAN PART C

1/8" = 1'-0"

PLAN NOTES

1. COORDINATE LOCATION OF FLOOR DRAIN WITH FINAL LOCATION OF AIR HANDLING UNIT. SEE MECHANICAL.
2. ROUTE VENT PIPE BELOW SLAB. SLOPE TOWARDS SANITARY PIPE.
3. CONNECT SANITARY PIPING TO OUTLET OF P-9. PROVIDE P-TRAP. ALSO PROVIDE FLOOR DRAIN BENEATH FIXTURE AS INDICATED. COORDINATE FINAL LOCATION OF P-9 WITH OWNER.

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SCALE

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PLUMBING SANITARY AND VENT PLAN PART C

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HVAC SYMBOLS

MECHANICAL EQUIPMENT TAG

EQUIPMENT DESIGNATION (SEE ABBREVIATIONS)

NUMBER DESIGNATION

AIR DISTRIBUTION DEVICE TAG

DEVICE TYPE (SEE ABBREVIATIONS)

AIR QUANTITY (CFM)

(#) NEW WORK PLAN NOTE

(T) THERMOSTAT

(H) HUMIDISTAT

FORCED AIRFLOW

INDUCED AIRFLOW

LEGEND

SUPPLY DUCT UP

SUPPLY DUCT DOWN

RETURN DUCT UP

RETURN DUCT DOWN

INCLINED RISE, AIRFLOW LEFT TO RIGHT

INCLINED DROP, AIRFLOW LEFT TO RIGHT

ROUND DUCT INCLINED RISE, AIRFLOW LEFT TO RIGHT

ROUND DUCT INCLINED DROP, AIRFLOW LEFT TO RIGHT

LINED DUCT

RECTANGULAR ELBOW WITH TURNING VANES

ROUND TAKEOFF WITH BALANCING DAMPER

RECTANGULAR DUCT WITH BALANCING DAMPER

FLEXIBLE DUCT

SUPPLY-AIR DIFFUSER

RETURN-AIR GRILLE

EXHAUST-AIR GRILLE

ABBREVIATIONS

ABV	ABOVE
ACR	AIR CONDITIONING AND REFRIGERATION
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BD	BACKDRAFT DAMPER
BOD	BOTTOM OF DUCT
BOT	BOTTOM
BTUH	BRITISH THERMAL UNIT PER HOUR
CAV	CONSTANT AIR VOLUME
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CLR	CLEAR
CU	CONDENSING UNIT
DB	DRY BULB TEMPERATURE (DEG.F)
DEG	DEGREES
DEG.F	DEGREES FAHRENHEIT
DH	DEHUMIDIFIER
DN	DOWN
DX	DIRECT EXPANSION
(E)	EXISTING
EAT	ENTERING AIR TEMPERATURE (DEG.F)
EG	EXHAUST GRILLE
ERV	ENERGY RECOVERY VENTILATOR
EXT	EXTERNAL
FC	FORWARD CURVED
FD	FIRE DAMPER
FF	FINISHED FLOOR
FPM	FEET PER MINUTE
HP	HEAT PUMP
HP	HORSEPOWER
HZ	HERTS
IN. W.G.	INCHES OF WATER GAUGE
LAT	LEAVING AIR TEMPERATURE (DEG.F)
LB	POUND
LVG	LEAVING
MAL	MALLEABLE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MFR	MANUFACTURER
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
MVD	MANUAL VOLUME DAMPER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OED	OPEN-END DUCT
OPG	OPENING
PD	PRESSURE DROP
Ph	PHASE
PSIG	POUNDS PER SQUARE INCH GAUGE
R	RADIUS
RA	RETURN AIR
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SCH	SCHEDULE
SD	SMOKE DAMPER
SEN	SENSIBLE
SG	SUPPLY GRILLE
SP	STATIC PRESSURE (INCHES OF WATER)
SV	SOFFIT VENT
TG	TRANSFER GRILLE
TYP	TYPICAL
V	VOLTS
VEL	VELOCITY
VD	VOLUME DAMPER
W	WIDTH
WB	WET BULB TEMPERATURE (DEG.F)
WL	WALL LOUVER
WMS	WIRE MESH SCREEN
WPD	WATER RESSURE DROP
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE

GENERAL NOTES

1. WHERE DUCTWORK, PIPING, OR ANY OTHER MECHANICAL EQUIPMENT IS INSTALLED ABOVE THE CEILING STRUCTURE, SUFFICIENT CLEARANCE SHALL BE PROVIDED BELOW ALL LOW POINTS OF THIS EQUIPMENT FOR THE INSTALLATION OF THE FINISHED CEILING AND ITS STRUCTURE AND ALL CEILING-MOUNTED EQUIPMENT INCLUDING CEILING-MOUNTED MECHANICAL EQUIPMENT, LIGHT FIXTURES, PLUMBING LINES, SPRINKLER HEADS, ETC. CLEARANCES REQUIRED FOR THE INSTALLATION OF THIS CEILING-MOUNTED EQUIPMENT SHALL BE VERIFIED AND COORDINATED WITH THE GENERAL CONTRACTOR AND ALL INVOLVED SUBCONTRACTORS BEFORE INSTALLING THE MECHANICAL EQUIPMENT.
2. WHERE SPACE IS LIMITED, SUCH AS IN THE FURRED CEILING SPACES AND CHASES, ROUTES AND CLEARANCES AND INSTALLATION PROCEDURES FOR DUCTWORK, PIPING, VALVES, AND OTHER MECHANICAL EQUIPMENT SHALL BE VERIFIED AND COORDINATED WITH OTHER WORK BEFORE EQUIPMENT IS INSTALLED.
3. ALL STRUCTURAL STEEL AND OTHER MATERIALS REQUIRED FOR OVERHEAD-SUSPENDED MECHANICAL EQUIPMENT SHALL BE PROVIDED BY MECHANICAL CONTRACTOR UNLESS DETAILED ON STRUCTURAL DRAWINGS. ALL NECESSARY REINFORCING IN BUILDING STRUCTURE SHALL BE PROVIDED BY GENERAL CONTRACTOR.
4. GRILLE AND OTHER EQUIPMENT MOUNTING HEIGHTS WHERE SHOWN ON DRAWINGS ARE MEASURED FROM FINISHED FLOOR TO BOTTOM EDGE OF OPENING UNLESS OTHERWISE INDICATED.
5. MOUNT WALL SENSORS WITH SETPOINT ADJUSTMENT 5'-0" ABOVE FINISHED FLOOR.
6. IF ANY EQUIPMENT OTHER THAN THAT SHOWN OR SPECIFIED IS FURNISHED, THE CONTRACTOR SHALL VERIFY THAT THE EQUIPMENT CAN BE INSTALLED IN THE SPACE AVAILABLE, INCLUDING PASSAGE THROUGH DOORS AND ACCESS DOORS AND ACCESS TO THOSE PARTS OF THE EQUIPMENT REQUIRING SERVICE.
7. ALL DUCTWORK AND PIPING SHALL BE LOCATED ABOVE NEW CEILING UNLESS NOTED OTHERWISE.
8. RUN CONDENSATE LINE FROM DRAINS ON AIR HANDLING UNITS TO NEARBY FLOOR DRAINS UNLESS OTHERWISE SHOWN. DRAINS SHALL BE SAME SIZE AS TAPPING ON UNIT EXCEPT NOT SMALLER THAN 1"Ø.
9. WHERE EXTERNAL INSULATION IS SHOWN ON DUCTS CONTAINING INTERNAL INSULATION, THE THICKNESS OF THE EXTERNAL INSULATION MAY BE REDUCED BY THE THICKNESS OF THE INTERNAL INSULATION.
10. ALL INTERNAL INSULATION IN DUCTWORK SHALL BE PROTECTED AT UPSTREAM AND DOWNSTREAM EDGES BY MITERED OFFSETS IN DUCT. OFFSETS SHALL BE SAME AS THICKNESS OF INSULATION.
11. SEE SPECIFICATIONS FOR DESCRIPTION OF DUCTWORK INSULATION.
12. ALL AIR INTAKE AND DISCHARGE LOUVERS TO EXTERIOR WALLS OF THE BUILDING SHALL BE FURNISHED BY MECHANICAL CONTRACTOR.
13. ALL DUCTWORK SHOWN LINED SHALL HAVE 1/2" INTERNAL INSULATION. SEE SPECIFICATIONS.
14. OFFSET DUCTS AND PIPING WHERE NECESSARY TO CLEAR OTHER WORK SUCH AS BEAMS, PIPES, ELECTRICAL EQUIPMENT, ETC., COORDINATE DUCTWORK INSTALLATION WITH OTHER TRADES TO AVOID SPACE CONFLICTS.
15. ALL CEILING-MOUNTED DIFFUSERS AND GRILLES IN FURRED CEILING SHALL BE SYMMETRICALLY LOCATED WITH RESPECT TO LIGHTING FIXTURES. DO NOT SCALE DRAWINGS FOR LOCATIONS. COORDINATE EXACT LOCATIONS WITH ELECTRICAL CONTRACTOR AND REFER TO REFLECTED CEILING PLAN.
16. DUCT SIZES SHOWN ON PLANS INDICATE CLEAR INSIDE DIMENSIONS OF DUCTS, NOT INCLUDING ALLOWANCE FOR INTERNAL INSULATION.
17. WHERE ANY PART OF BUILDING IS CUT OR OTHERWISE DISFIGURED TO PERMIT INSTALLATION OF NEW EQUIPMENT, THIS PART OF BUILDING SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING.
18. PROVIDE AND INSTALL ACCESS DOORS IN DRYWALL TO MATCH ADJACENT SURFACE CONDITIONS FOR ACCESS TO ALL BALANCING DAMPERS AND NEW EQUIPMENT.
19. AIR-BALANCE REPORT SHALL ACCOMPANY A SET OF AS-BUILT PLANS INDICATING EXACT TO-SCALE LOCATIONS AND FINAL BALANCE AIR RATES. MAINTAIN A MINIMUM OF ONE INTACT SET OF PROJECT PLANS AND SPECIFICATIONS AT JOB SITE MARKED TO SHOW ALL DEVIATIONS PERMITTED DURING CONSTRUCTION AS THE WORK IS INSTALLED. ALL MARKS SHALL BE RED IN COLOR, COMPLETE, CLEAR AND LEGIBLE.

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CHRISTOPHER L. SNYDER
Lic. No. 046584
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KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	ETO
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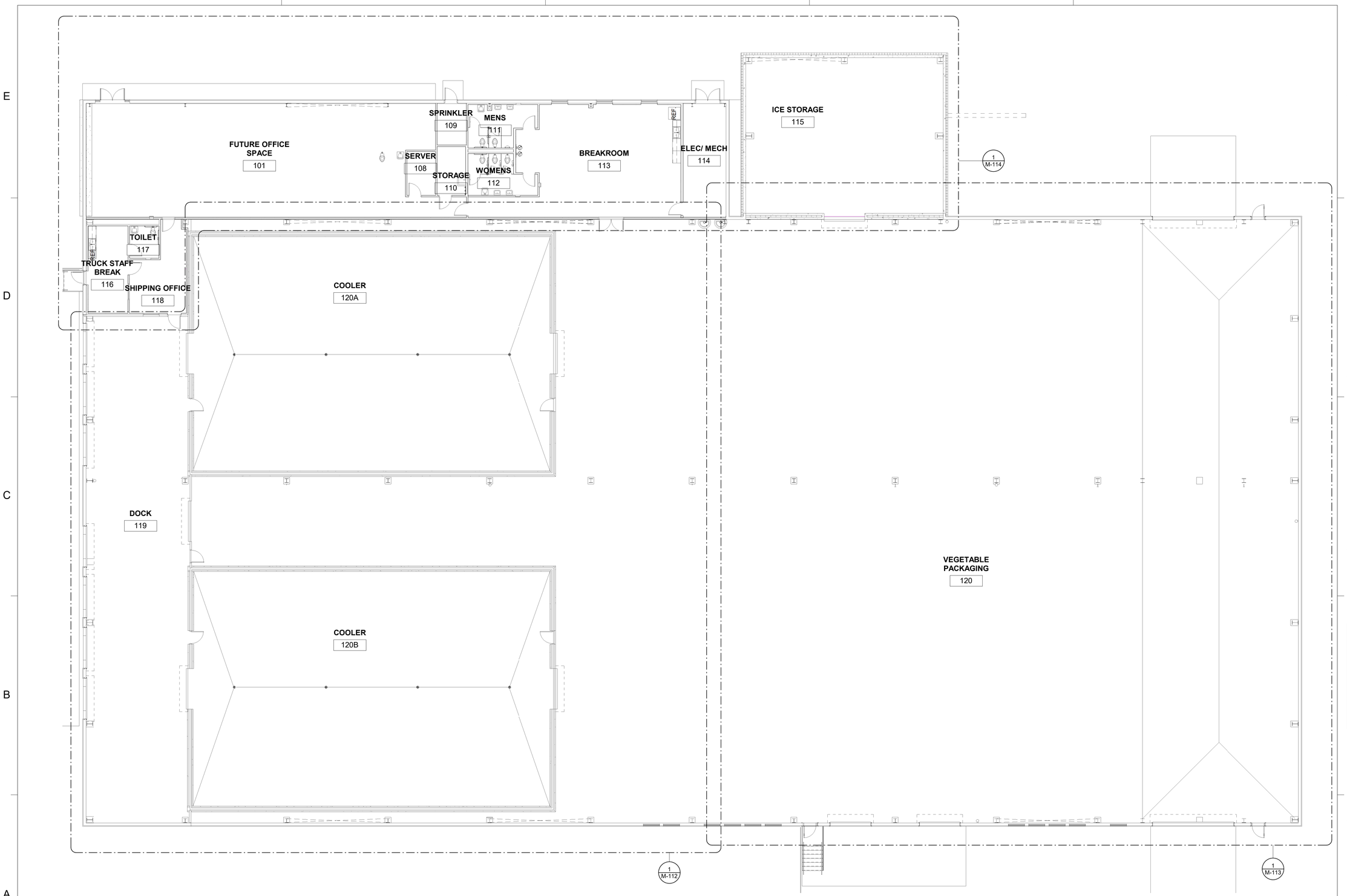
HVAC LEGEND, NOTES, AND ABBREVIATIONS

PROJECT NO. 50139338

M-101

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HVAC OVERALL FLOOR PLAN

3/32" = 1'-0"

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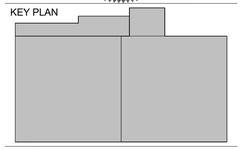
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SCALE

3/32" = 1'-0"

10'-8" 5'-4" 0 10'-8"

No.	Description	Date

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HVAC OVERALL FLOOR PLAN

PROJECT NO. 50139338

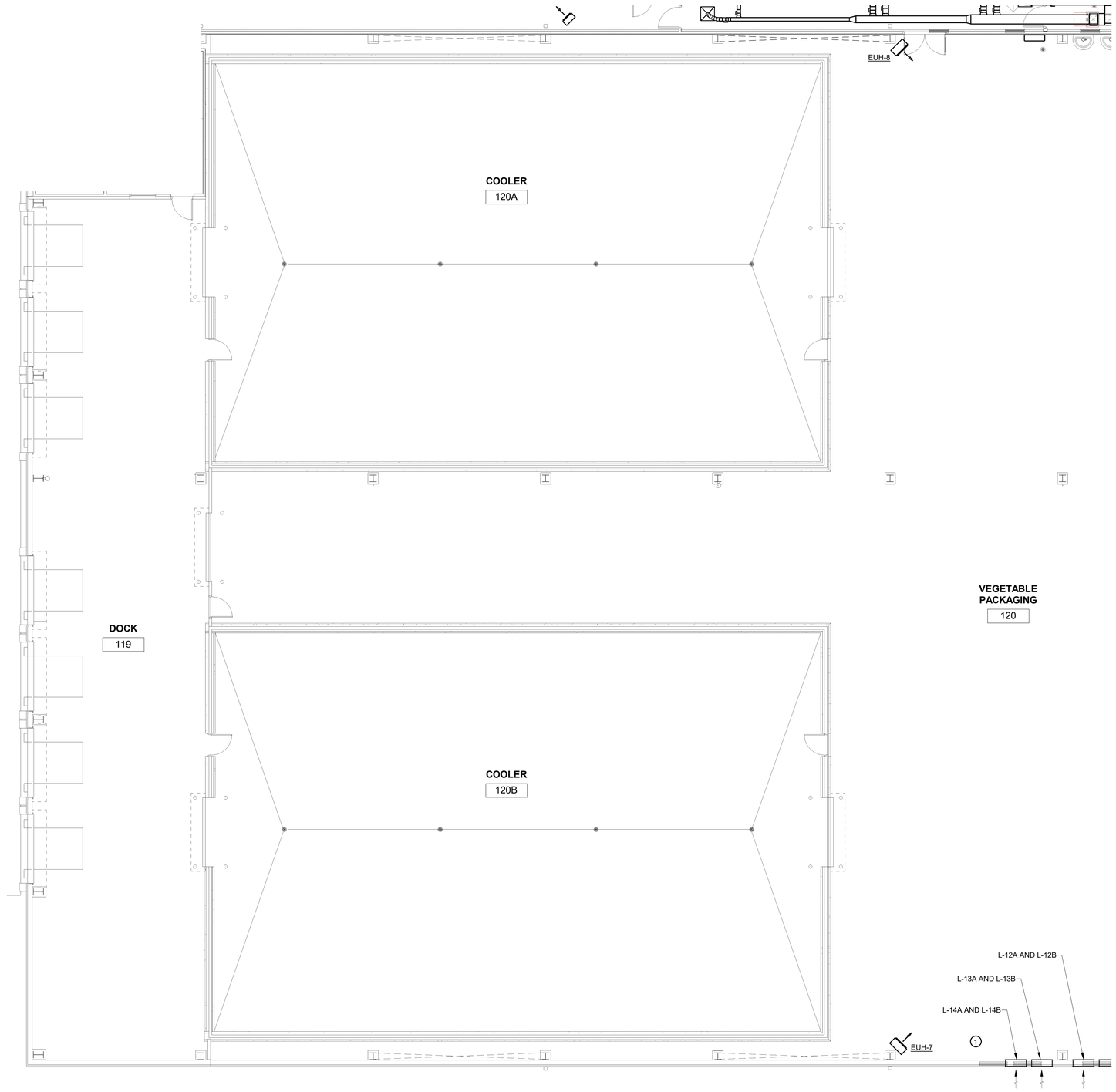
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PLAN NOTES

① MOUNT LOUVER "A" AT 8" AFF. MOUNT LOUVER "B" APPROXIMATELY ONE FOOT ABOVE TOP OF LOUVER "A". COORDINATE FINAL LOCATIONS WITH BUILDING STRUCTURE. TYP FOR L-1A THROUGH L-14B.



1 M-112 HVAC FLOOR PLAN PART A
1/8" = 1'-0"

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KEY PLAN

SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

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HVAC FLOOR PLAN PART A

PROJECT NO. 50139338

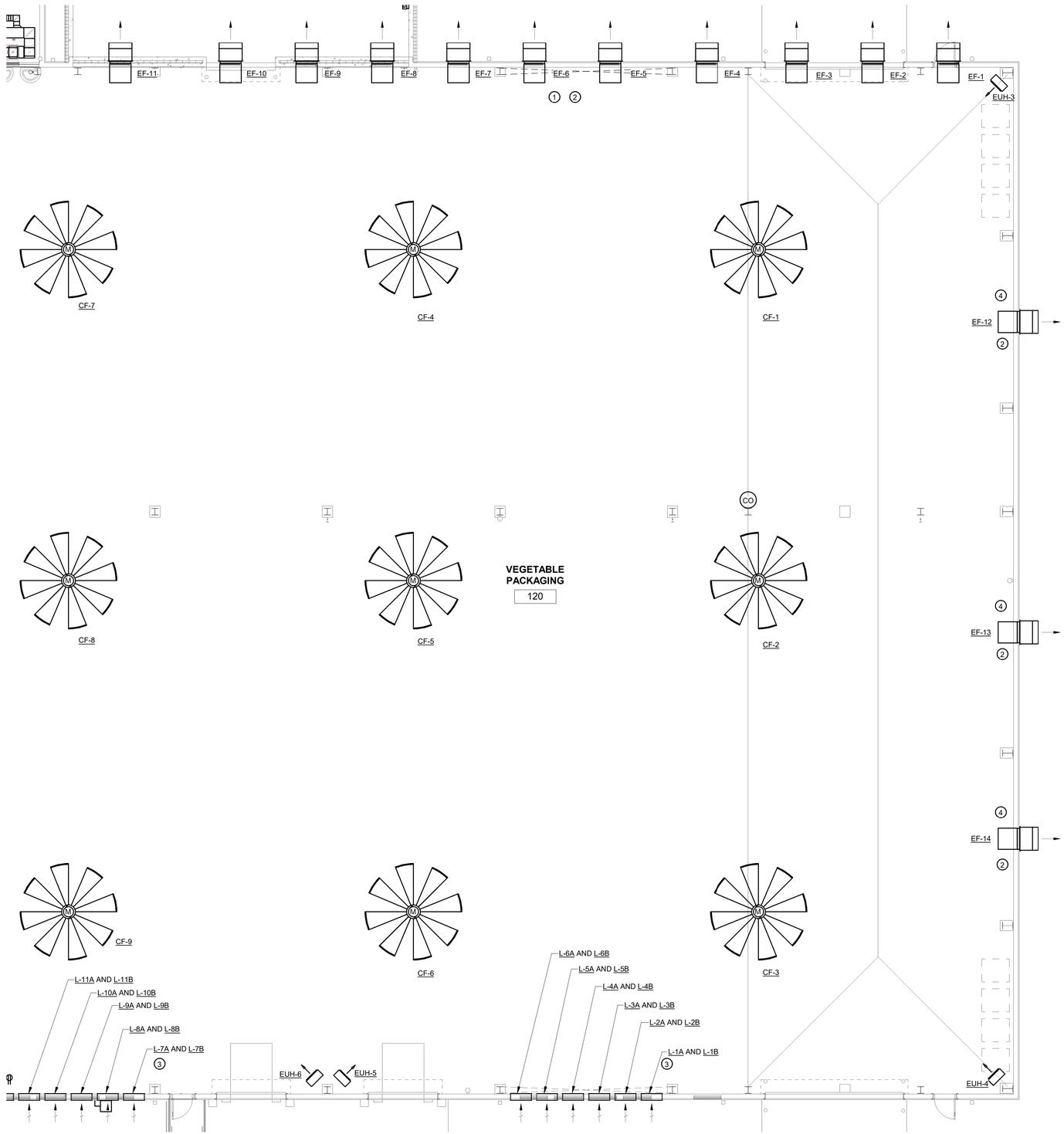
M-112

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

PLAN NOTES

1. INSTALL EXHAUST FANS EF-1 THRU EF-11 IN WALL AS HIGH AS POSSIBLE. COORDINATE FINAL LOCATION AND ELEVATION WITH STRUCTURAL.
2. INTERLOCK EXHAUST FAN WITH LOUVER OF SAME NUMERICAL DESIGNATION. (I.E. EF-4 WITH L-4A AND L-4B). FANS SHALL BE MANUALLY ENABLED/DISABLED. EF-12, 13, AND 14 SHALL ALSO BE ENABLED AND DISABLED BASED ON CARBON MONOXIDE LEVELS IN VEGETABLE PACKING 120. FANS SHALL BE ENABLED AND ASSOCIATED LOUVERS OPENED WHEN CARBON MOXIDE LEVELS ARE 20 PPM (ADJ) OR GREATER. THE REVERSE ACTION SHALL OCCUR WHEN CARBON MONOXIDE LEVELS FALL BELOW 10 PPM (ADJ).
3. MOUNT LOUVER "A" AT 8" AFF. MOUNT LOUVER "B" APPROXIMATELY ONE FOOT ABOVE TOP OF LOUVER "A". COORDINATE FINAL LOCATIONS WITH BUILDING STRUCTURE. TYP FOR L-1A THROUGH L-14B.
4. INSTALL EXHAUST FANS EF-12 THRU EF-14 IN WALL APPROXIMATELY 10' AFF. COORDINATE FINAL LOCATION AND ELEVATION WITH STRUCTURAL.



VEGETABLE PACKAGING
120

1 HVAC FLOOR PLAN PART B
M-113
1/8" = 1'-0"

Dewberry

Dewberry Engineers Inc.
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BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
CHRISTOPHER L. SNYDER
Lic. No. 046584
3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

REVISIONS

DRAWN BY	ETO
APPROVED BY	TSL
CHECKED BY	CLS
DATE	2024.03.25

TITLE

HVAC FLOOR PLAN PART B

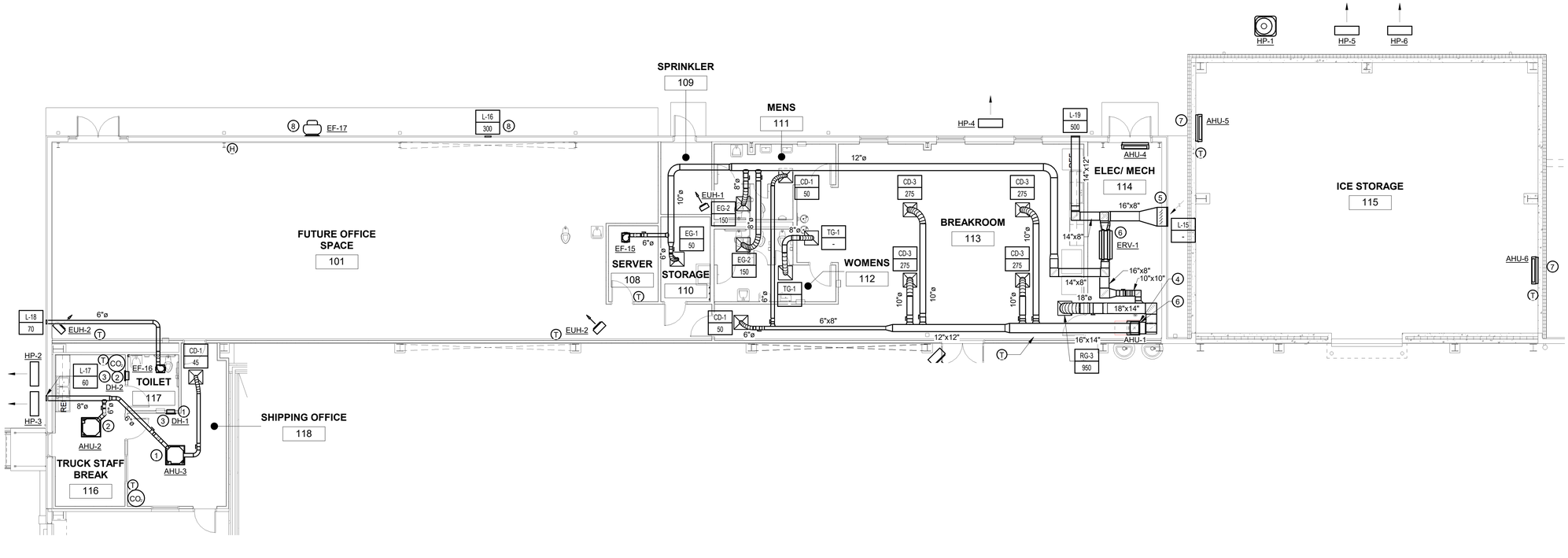
PROJECT NO. 50139338

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1 HVAC FLOOR PLAN PART C

M-114

1/8" = 1'-0"

PLAN NOTES

1. ROUTE CONDENSATE DRAIN FROM AHU-3 AND DRAIN PIPING FROM DH-1 TO INDIRECT DRAIN IN WALL NEAR DH-1. SEE PLUMBING DRAWINGS.
2. ROUTE CONDENSATE DRAIN FROM AHU-2 AND DRAIN PIPING FROM DH-2 TO INDIRECT DRAIN IN WALL NEAR DH-2. SEE PLUMBING DRAWINGS.
3. MOUNT DH-1 AND DH-2 AT HEIGHT SUITABLE TO ACCOMODATE INDIRECT DRAIN PROVIDED BY PLUMBING. COORDINATE FINAL LOCATION OF DH-1 AND DH-2 WITH PLUMBING.
4. ROUTE CONDENSATE DRAIN PIPE TO FLOOR DRAIN IN ROOM. SEE PLUMBING.
5. PROVIDE MOTOR OPERATED DAMPER AT L-15. INTERLOCK WITH ERV-1. DAMPER SHALL OPEN WHEN ERV-1 IS ENABLED AND CLOSE WHEN ERV-1 IS DISABLED.
6. ERV-1 AND AHU-1 SHALL OPERATE SIMULTANEOUSLY. ENABLING ONE SYSTEM SHALL ENABLE BOTH SYSTEMS.
7. ROUTE CONDENSATE FROM AHU TO SPLASHBLOCK IN THIS LOCATION.
8. EF-17 AND L-16 SHALL OPERATE SIMULTANEOUSLY. ENABLING ONE SYSTEM SHALL ENABLE BOTH SYSTEMS.

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3-25-2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

REVISIONS

DRAWN BY	ETO
APPROVED BY	TSL
CHECKED BY	CLS
DATE	2024.03.25

TITLE

HVAC FLOOR PLAN PART C

PROJECT NO. 50139338

M-114

SHEET NO.

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CEILING FAN SCHEDULE

MARK	MODEL NUMBER	DIAMETER	HP	RPM	V/Ph/HZ	REMARKS
CF-1 THRU CF-9	PFX3-14	14 FT	1.5	118	480/3/60	1

REMARKS:
1. MODEL NUMBER BASED ON BIG ASS FAN COMPANY.

LOUVER SCHEDULE

MARK	MODEL NUMBER	DUTY	SIZE	REMARKS
L-1A THRU L-14B	EAC-401	OUTSIDE AIR TO VEGETABLE PACKING	36"x72"	1,2,3,4,5
L-15	EAC-401	OUTSIDE AIR TO ERV-1	32"x24"	1,2,3,4,5
L-16	EAC-401	OUTSIDE AIR TO FUTURE OFFICE SPACE	10"x10"	1,2,3,4,5
L-17	EAC-401	OUTSIDE AIR TO AHU-2 AND AHU-3	8"x8"	1,2,4,5
L-18	EAC-401	EXHAUST AIR TO EF-16	6"x6"	1,2,4
L-19	EAC-401	EXHAUST AIR TO ERV-1	14"x12"	1,2,4

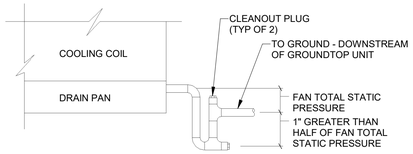
REMARKS:
1. MODEL NUMBER BASED ON GREENHECK.
2. PROVIDE WITH INSECT SCREEN.
3. PROVIDE WITH 120 VOLT ACTUATOR WITH END SWITCH FOR CORRESPONDING FAN ACTIVATION.
4. PROVIDE WITH 2 COATS OF KYNAR FINISH. COLOR TO BE SELECTED BY ARCHITECT.
5. PROVIDE WITH SPRING RETURN.

ELECTRIC HEATER SCHEDULE

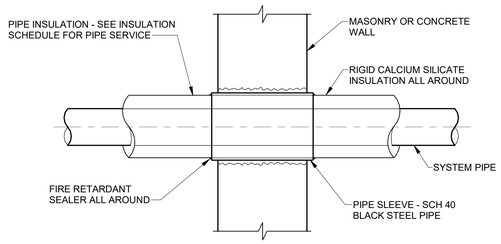
MARK	MODEL	CFM	WATTS	V/Ph/Hz	REMARKS
EUH-1	P3P5103CA1N	400	3300 W	480/3/60	1,2,3
EUH-2	P3P5107CA1N	700	7500 W	480/3/60	1,2,3,4
EUH-3	P3P5115CA1N	1100	15000 W	480/3/60	1,2,3,4
EUH-4	P3P5115CA1N	1100	15000 W	480/3/60	1,2,3,4
EUH-5	P3P5115CA1N	1100	15000 W	480/3/60	1,2,3,4
EUH-6	P3P5115CA1N	1100	15000 W	480/3/60	1,2,3,4
EUH-7	P3P5115CA1N	1100	15000 W	480/3/60	1,2,3,4
EUH-8	P3P5115CA1N	1100	15000 W	480/3/60	1,2,3,4

REMARKS:
1. MODEL NUMBER BASED ON MARKEL.
2. PROVIDE WITH HANGER BRACKET.
3. PROVIDE WITH WALL-MOUNTED THERMOSTAT.
4. MOUNT AT 11' AFF.

CONDENSATE DRIP SIZING	
PIPE SIZE	CONNECTED LOAD
1"	UP TO 5
1-1/4"	UP TO 30
1-1/2"	UP TO 50
2"	UP TO 175
3"	UP TO 300
4"	UP TO 400



CONDENSATE TRAP DETAIL
NOT TO SCALE



NOTE: FOR ALL PIPE PENETRATIONS THRU MASONRY OR CONCRETE WALL AND ALL SMOKE & FIRE WALLS

PIPE PENETRATION DETAIL
NOT TO SCALE

ENERGY RECOVERY VENTILATOR SCHEDULE

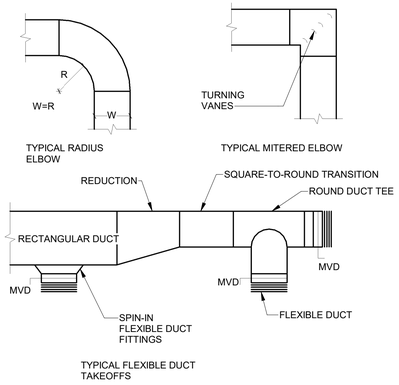
MARK	MODEL NUMBER	SYSTEM SERVED	OA AND EA FAN HP	OA CFM	SUMMER OA EAT - LAT DB/WB (DEG.F)	SUMMER EA EAT DB/WB (DEG.F)	WINTER OA EAT - LAT DB/WB (DEG.F)	WINTER EA EAT DB/WB (DEG.F)	V/Ph/Hz	REMARKS
ERV-1	ERV-500	AHU-1	1/2	375	92.6/75.4 - 77.4/64.7	75.0/62.4	18.0/14.8 - 64.7/51.2	72.0/55.7	208/1/60	1,2

REMARKS:
1. MODEL NUMBER BASED ON LOREN COOK.
2. PROVIDE SUPPLY AND EXHAUST FANS WITH FACTORY-MOUNTED SPEED CONTROLLER.

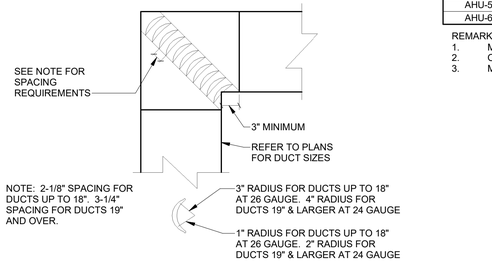
AIR HANDLING UNIT SCHEDULE

MARK	AREA SERVED	MODEL NUMBER	FAN CFM	OA CFM	FAN EXT S.P. IN. W.G.	FAN HP/W	V/Ph/Hz	NOM COOLING TONS	COOLING NET SEN MBH	COOLING EAT db/wb	COOLING LAT db/wb	REVERSE CYCLE MBH	AUX HEAT KW	AUX HEAT V/Ph/Hz	HEATING EAT db	REMARKS
AHU-1	BREAKROOM	TAM9A0C42V41	1200	375	0.5	1/2 HP	208/1/60	3.5	29.1	77.3/64.5	54.6/54.0	20.9	10.8	208/3/60	66.3	1,2
AHU-2	TRUCK STAFF BREAK 116	PLA-A12EA7	530	30	0	50 W	208/1/60	1.0	12.0	80.0/67.0	55.0/55.0	14.0	0	-	70.0	3
AHU-3	SHIPPING OFFICE 118	PLA-A12EA7	530	30	0.1	50 W	208/1/60	1.0	12.0	80.0/67.0	55.0/55.0	14.0	0	-	70.0	3
AHU-4	ELEC/MECH 114	PKA-A36KA7	920	0	0	56 W	208/1/60	3.0	36.0	80.0/67.0	55.0/55.0	38.0	0	-	70.0	3
AHU-5	ICE STORAGE	PKA-A36KA7	920	0	0	56 W	208/1/60	3.0	36.0	80.0/67.0	55.0/55.0	38.0	0	-	70.0	3
AHU-6	ICE STORAGE	PKA-A36KA7	920	0	0	56 W	208/1/60	3.0	36.0	80.0/67.0	55.0/55.0	38.0	0	-	70.0	3

REMARKS:
1. MODEL NUMBER BASED ON TRANE.
2. OUTSIDE AIR FROM ERV-1.
3. MODEL NUMBER BASED ON MITSUBISHI.



DUCT CONNECTION DETAILS
NOT TO SCALE



SQUARE ELBOW TURNING VANES DETAIL
NOT TO SCALE

HEAT PUMP SCHEDULE

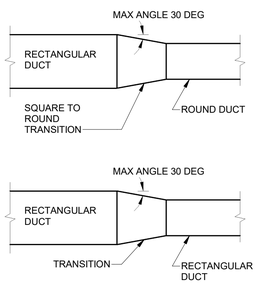
MARK	MODEL NUMBER	NOM COOLING TONS	SYSTEM SERVED	V/Ph/Hz	REMARKS
HP-1	4TWA7036	3.0	AHU-1	460/3/60	1,2,6
HP-2	PUZ-A12NKA7	1.0	AHU-2	208/1/60	3,4,5,6
HP-3	PUZ-A12NKA7	1.0	AHU-3	208/1/60	3,4,5,6
HP-4	PUZ-A36NKA7	3.0	AHU-4	208/1/60	3,4,5,6
HP-5	PUZ-A36NKA7	3.0	AHU-5	208/1/60	3,4,5,6
HP-6	PUZ-A36NKA7	3.0	AHU-6	208/1/60	3,4,5,6

REMARKS:
1. MODEL NUMBER BASED ON TRANE.
2. WITH TWO COMPRESSOR STAGES.
3. MODEL NUMBER BASED ON MITSUBISHI.
4. PROVIDE HAIL GUARD.
5. PROVIDE LOW AMBIENT KIT FOR OPERATION AT 0 DEG.F.
6. PROVIDE 4" CONCRETE PAD FOR UNIT.

AIR DISTRIBUTION SCHEDULE

MARK	MODEL	NECK SIZE	MOUNTING	MATERIAL	COLOR	MAX NC	REMARKS
CD-1	SCD	6"ø	LAY-IN	STEEL	WHITE	25	1,2
CD-3	SCD	10"ø	LAY-IN	STEEL	WHITE	25	1,2
EG-1	PDDR	6"ø	LAY-IN	STEEL	WHITE	25	1,2
EG-2	PDDR	8"ø	LAY-IN	STEEL	WHITE	25	1,2
RG-3	PDDR	18"ø	LAY-IN	STEEL	WHITE	25	1,2
TG-1	PDDR	8"ø	LAY-IN	STEEL	WHITE	25	1,2

REMARKS:
1. MODEL NUMBER BASED ON PRICE INDUSTRIES.
2. 24"x24" GRILLE OR DIFFUSER.

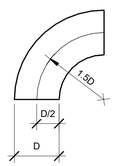


DUCT TRANSITION DETAILS
NOT TO SCALE

DEHUMIDIFIER SCHEDULE

MARK	MODEL NUMBER	WATER REMOVAL	CFM	V/Ph/HZ	REMARKS
DH-1 & DH-2	4035900	4.125 GALLONS	155	115/1/60	1,2,3,4

REMARKS:
1. MODEL NUMBER BASED ON SANTA-FE DEHUMIDIFIERS.
2. WITH INTERNALLY MOUNTED DIGITAL DEHUMIDISTAT.
3. PROVIDE WASHABLE FILTERS.
4. PROVIDE 2X4 WALL MOUNT KIT AND REAR PANEL KIT.



RADIUS ELBOW DETAIL
NOT TO SCALE

FAN SCHEDULE

MARK	MODEL NUMBER	CFM	SP in Wg	WATTS/HP	SONES	DRIVE	RPM	V/Ph/Hz	REMARKS
EF-1	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-2	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-3	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-4	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-5	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-6	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-7	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-8	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-9	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-10	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-11	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-12	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-13	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-14	30A8B	7150	0.25	1.5 HP	38	BELT	860	460/3/60	1,2,3,8
EF-15	GC-186	150	0.375	69 W	3	DIRECT	874	115/1/60	1,2,3,4,5,7
EF-16	GC-148	70	0.5	36 W	2	DIRECT	904	115/1/60	1,2,3,4,5,6
EF-17	120WOR70	300	0.5	0.25 HP	12.9	BELT	1543	115/1/60	1,2,3,4,5,9

REMARKS:
1. MODEL NUMBER BASED ON LOREN COOK.
2. PROVIDE FACTORY-MOUNTED AND WIRED DISCONNECT.
3. FURNISH FAN WITH MOTOR WITH INTEGRAL OVERLOAD PROTECTION.
4. FURNISH AND INSTALL BACKDRAFT DAMPER.
5. FURNISH FAN WITH FACTORY-MOUNTED SPEED CONTROLLER.
6. FURNISH FAN WITH WITH OCCUPANCY SENSOR WITH TIME DELAY.
7. FURNISH FAN WITH COOLING-ONLY THERMOSTAT.
8. PROVIDE WALL COLLAR, 45-DEGREE WEATHERHOOD, BIRDSCREEN, AND GRAVITY SHUTTER.
9. INTERLOCK FAN WITH L-16. CONTROL FAN BASED ON RELATIVE HUMIDITY AS REQUIRED BY CODE.

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BID DOCUMENTS

SEAL



KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	ETO
APPROVED BY	TSL
CHECKED BY	CLS
DATE	2024.03.25

TITLE

HVAC SCHEDULES

PROJECT NO. 50139338

M-201

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

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RACEWAY

- CONDUIT RUN EXPOSED
- CONDUIT RUN CONCEALED ABOVE CEILINGS OR IN WALLS
- CONDUIT RUN CONCEALED BENEATH FLOORS, IN WALLS OR, IF OUTDOORS, BELOW GRADE
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- HOMERUN
- (J) JUNCTION BOX

OVERCURRENT DEVICES

- F SAFETY SWITCH, FUSIBLE, NON-FUSIBLE
- M STARTER, MANUAL

MOTOR STARTERS

- STARTER, COMBINATION MAGNETIC, FUSIBLE
- M STARTER, MANUAL

WIRING DEVICES

- RECEPTACLE, SINGLE, NEMA 5-20R
- RECEPTACLE, DUPLEX, NEMA 5-20R
- RECEPTACLE, DUPLEX, NEMA 5-20R, GFI
- RECEPTACLE, SPECIAL
- $ SWITCH
- $3 SWITCH, 3/W
- $4 SWITCH, 4W
- OS OCCUPANCY SENSOR, WALL-MOUNTED (NOTE 1)
- OS OCCUPANCY SENSOR, CEILING-MOUNTED (NOTE 1)

LIGHTING

- A a FIXTURE, SUSPENDED OR RECESSED LAY-IN "A" INDICATES FIXTURE TYPE, "a" INDICATES CONTROLLING SWITCH
- FIXTURE, BRACKET MOUNTED
- A a FIXTURE, RECESSED CAN OR PENDANT "A" INDICATES FIXTURE TYPE, "a" INDICATES CONTROLLING SWITCH
- FIXTURE, WALL MOUNTED
- EXIT SIGN, UNSWITCHED, SINGLE-FACED, DOUBLE-FACED. ARROWS AS INDICATED ON DRAWING. (NOTE 3)

GROUNDING

- GROUND ROD, 3/4" DIA X 10'-0" COPPER-CLAD STEEL
- B BOND TO INDICATED OBJECT
- G G GROUNDING ELECTRODE CONDUCTOR

FIRE DETECTION AND ALARM

- F MANUAL PULL STATION, 48" AFF
- FS SMOKE DETECTOR, CEILING
- FH HEAT DETECTOR
- F SPRINKLER FLOW SWITCH
- FV SPRINKLER VALVE SUPERVISORY SWITCH
- F EVACUATION NOTIFICATION DEVICE, COMBINATION AUDIBLE / VISUAL
- F EVACUATION NOTIFICATION DEVICE, VISUAL ONLY
- FACM ADDRESSABLE CONTROL MODULE
- FACP FIRE ALARM CONTROL PANEL
- FAA FIRE ALARM ANNUNCIATOR

MISCELLANEOUS

- (M) MOTOR
- HP PHOTOCELL, BUTTON-TYPE, WALL MOUNT AT 10' AFF. TO BE INTERFACED WITH LIGHTING CONTROLLER
- TELEPHONE / DATA (NOTE 2)
- (H) GENERATOR BLOCK HEATER
- (BC) GENERATOR BATTERY CHARGER
- GRMP GENERATOR REMOTE MONITORING PANEL

ABBREVIATIONS

A	AMPERE
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CURRENT
AMPS	AMPERES
AT	AMPERE TRIP
BC	GENERATOR BATTERY CHARGER
BCSD	BARE COPPER SOFT DRAWN
C	CONDUIT
CF	CEILING FAN
CH	COUNTER HEIGHT + ENOUGH TO CLEAR BACKSPLASH
CONN	CONNECTED
CU	CONDENSING UNIT
DWH	DOMESTIC WATER HEATER
EF	EXHAUST FAN
EGC	EQUIPMENT GROUNDING CONDUCTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC THINWALL
ETR	EXISTING TO REMAIN
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WALL HEATER
EXT	EXTERIOR
FACP	FIRE ALARM CONTROL PANEL
FDAS	FIRE DETECTION AND ALARM SYSTEM
FHP	FRACTIONAL HORSEPOWER
FPEM	FUSE PER EQUIPMENT MANUFACTURER
GEC	GROUNDING ELECTRODE CONDUCTOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
H	GENERATOR BLOCK HEATER
HP	HORSEPOWER OR HEAT PUMP
KCMIL	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT-AMPS
KW	KILOWATTS
LTG	LIGHTING
MC	METAL CLAD CABLE
MFG	MANUFACTURER
MH	MOUNTING HEIGHT
MIN	MINIMUM
MISC	MISCELLANEOUS
N, NEUT	NEUTRAL
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
OHD	OVERHEAD DOOR
P	POLE
PNL	PANEL
PVC	POLYVINYL CHLORIDE CONDUIT
REC	RECEPTACLE
RMS	ROOT MEAN SQUARE
SPD	SURGE PROTECTIVE DEVICE
SS	SAFETY SWITCH / DISCONNECT
SYM	SYMMETRICAL
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VOLTS
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER

NOTES (PLAN LEGEND)

1. INDICATES LIGHTS IN SPACE ARE TO BE CONTROLLED BY AN OCCUPANCY OR VACANCY SENSOR. PROVIDE TYPE (TECHNOLOGY) AND QUANTITY OF SENSORS REQUIRED FOR PROPER OPERATION CONSIDERING LOCATION OF FURNITURE. IF AN OCCUPANCY SENSOR IN A STAIR TOWER IS ACTIVATED, ALL LIGHT FIXTURES WITHIN THE STAIR TOWER SHALL BE ENERGIZED. PROVIDE POWER PACKS AS REQUIRED. REFER TO LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR DETAILS AND OPERATION OF A COMPLETE LIGHTING CONTROL SYSTEM FOR EACH SPACE.
2. INSTALL SINGLE-GANG OUTLET BOX. FROM DEVICE OUTLET BOX, RUN EMPTY 3/4" EMT UP IN WALL, TURN OUT IN CEILING PLENUM AND TERMINATE WITH BUSHING. INSTALL PULL STRING.
3. EXIT SIGNS SHALL BE UNSWITCHED.

GENERAL NOTES (PLAN LEGEND)

GN1. COORDINATION WITH OTHER TRADES: EXECUTE THE WORK IN FULL COOPERATION WITH OTHER CONSTRUCTION TRADES. PRIOR TO STARTING WORK, EXAMINE A COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR ALL TRADES TO VERIFY COORDINATION, CHECK FOR INTERFERENCES, AND DETERMINE POINTS OF CONNECTIONS FOR EQUIPMENT. DUE TO STRUCTURAL CONDITIONS, MECHANICAL DUCT OR PIPING INTERFERENCE, OR OTHER REASONS, THE CONTRACTOR MAY DESIRE TO INSTALL THE WORK IN AN ALTERNATE MANNER FROM THAT SHOWN. SUCH CHANGES SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING.

GN2. LOCATIONS WHERE CONDUITS PENETRATE FIRE-RATED WALLS, FLOORS, OR CEILINGS SHALL BE FIREPROOFED USING A UL-LISTED METHOD TO MAINTAIN THE EXISTING RATING.

GN3. COORDINATE THE MOUNTING HEIGHT AND LOCATIONS OF THE ELECTRICAL DEVICES WITH ARCHITECTURAL ELEVATIONS AND GENERAL TRADES CONTRACTOR PRIOR TO ROUGH-IN. RECEPTACLES LOCATED WITHIN SIX (6) FEET OF SINK SHALL BE GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE RECEPTACLES. RECEPTACLES NOT READILY ACCESSIBLE THAT REQUIRE GFCI PROTECTION SHALL BE SO AT THE CIRCUIT BREAKER.

GN4. COORDINATE THE FINAL LOCATION OF THE MECHANICAL EQUIPMENT. COORDINATE FINAL WIRING REQUIREMENTS WITH MECHANICAL CONTRACTOR. ANY ADJUSTMENTS IN WIRE OR BREAKER SIZE DUE TO SUBSTITUTION OF HVAC EQUIPMENT SHALL BE MADE AT NO COST TO OWNER.

GN5. BECAUSE EQUIPMENT SUPPLIED MAY HAVE CONNECTION POINTS DIFFERENT THAN SHOWN ON THE DRAWINGS, LOCATE CONDUIT RUNS AND LOCATIONS OF DISCONNECTS, CONTROL STATIONS AND THE LIKE BASED UPON SHOP DRAWINGS OF THE ASSOCIATED EQUIPMENT.

GN6. COORDINATE LOCATION OF CONDUITS, OUTLETS AND JUNCTION BOXES WITH MECHANICAL EQUIPMENT SO THAT OUTLETS AND JUNCTION BOXES ARE ACCESSIBLE FOR SERVICING AND HVAC DUCTWORK CAN BE CONNECTED DIRECTLY TO DIFFUSERS.

GN7. PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).

GN8. FOR RECORD DRAWING REQUIREMENTS, REFER TO THE GENERAL CONDITIONS. MAINTAIN A DEDICATED SET OF DRAWINGS ON THE JOBSITE AND MARK ALL VARIATIONS TAKEN TO THE CONTRACT DRAWINGS.

GN9. DUE TO THE SMALL SCALE OF THE DRAWINGS, AND TO UNFORESEEN JOB CONDITIONS, ALL REQUIRED OFFSETS AND FITTINGS MAY NOT BE SHOWN BUT SHALL BE PROVIDED AT NO CHANGE IN CONTRACT PRICE.

GN10. IT IS THE INTENT OF THESE SPECIFICATIONS TO ESTABLISH QUALITY STANDARDS FOR ALL MATERIAL AND EQUIPMENT INCORPORATED IN THE WORK OF THIS DIVISION. ALL MATERIALS AND EQUIPMENT INSTALLED HEREUNDER SHALL BE NEW UNLESS INDICATED TO BE EXISTING, OR EXISTING AND RELOCATED.

GN11. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED SUCH THAT PROPER ELECTRICAL WORKING CLEARANCES ARE MAINTAINED. WHERE THIS IS NOT POSSIBLE, CONSULT ENGINEER.

DRAWING LIST

E-001	LEGENDS, NOTES & ABBREVIATIONS
E-100	OVERALL LIGHTING PLAN
E-200	OVERALL POWER PLAN
E-300	OVERALL SPECIAL SYSTEMS PLAN
E-201	POWER PLAN PART A
E-202	POWER PLAN PART B
E-203	POWER PLAN PART C
E-102	LIGHTING PLAN PART B
E-101	LIGHTING PLAN PART A
E-103	LIGHTING PLAN PART C
E-301	SPECIALS SYSTEMS PLAN PART A
E-302	SPECIALS SYSTEMS PLAN PART B
E-303	SPECIALS SYSTEMS PLAN PART C
E-400	ONE LINE DIAGRAM AND PANEL SCHEDULES
E-401	PANEL SCHEDULES
E-402	PANEL SCHEDULES

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BOYDTON PLANK RD, ALBERTA, VA 23821
BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

NOT TO SCALE

No.	Description	Date

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

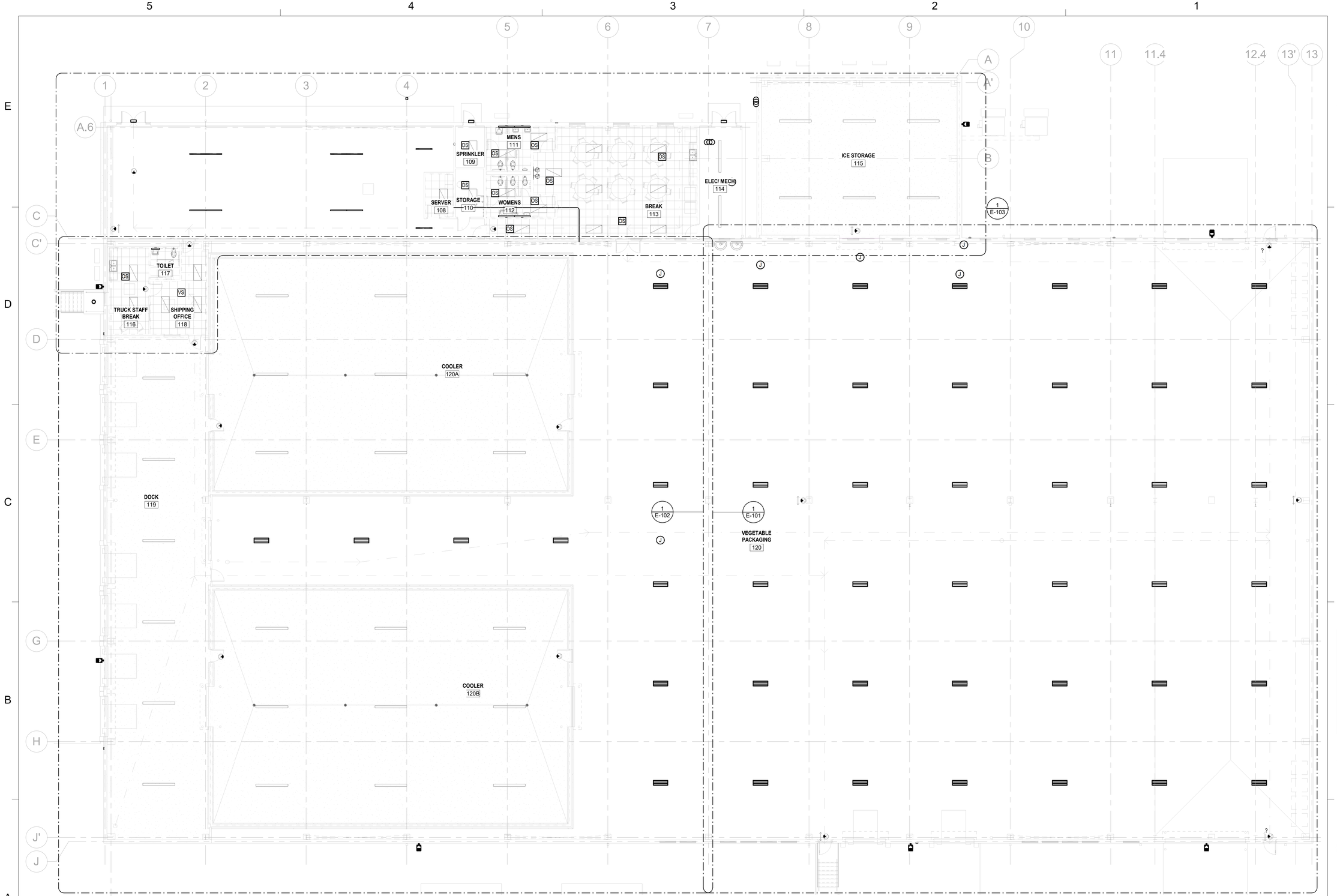
LEGENDS, NOTES & ABBREVIATIONS

PROJECT NO. 50139338

E-001

SHEET NO.

3/21/2024 3:15:02 PM



OVERALL LIGHTING PLAN

3/32" = 1'-0"

NOTES (SHEET E-100)

1. PROVIDE POWER TO POLE MOUNTED FIXTURES SHOWN ON CIVIL DRAWINGS. FIXTURES ARE TYPE "H". INSTALL POLE BASE FOR EACH FIXTURE PER DETAIL ON SHEET E-103. WIRE WITH CIRCUIT INDICATES ON PANEL "PL". INSTALL CONDUIT WITH MINIMUM OF 24" OF COVER. COORDINATE WITH CIVIL DRAWING TO AVOID UTILITY INTERFERENCE. SEE SPECIFICATIONS FOR CONTROL REQUIREMENTS FOR EXTERIOR FIXTURES.

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KEY PLAN

SCALE

3/32" = 1'-0"

10'-8" 5'-4" 0 10'-8"

No.	Description	Date

REVISIONS

DRAWN BY	JHR/EHF
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

OVERALL LIGHTING PLAN

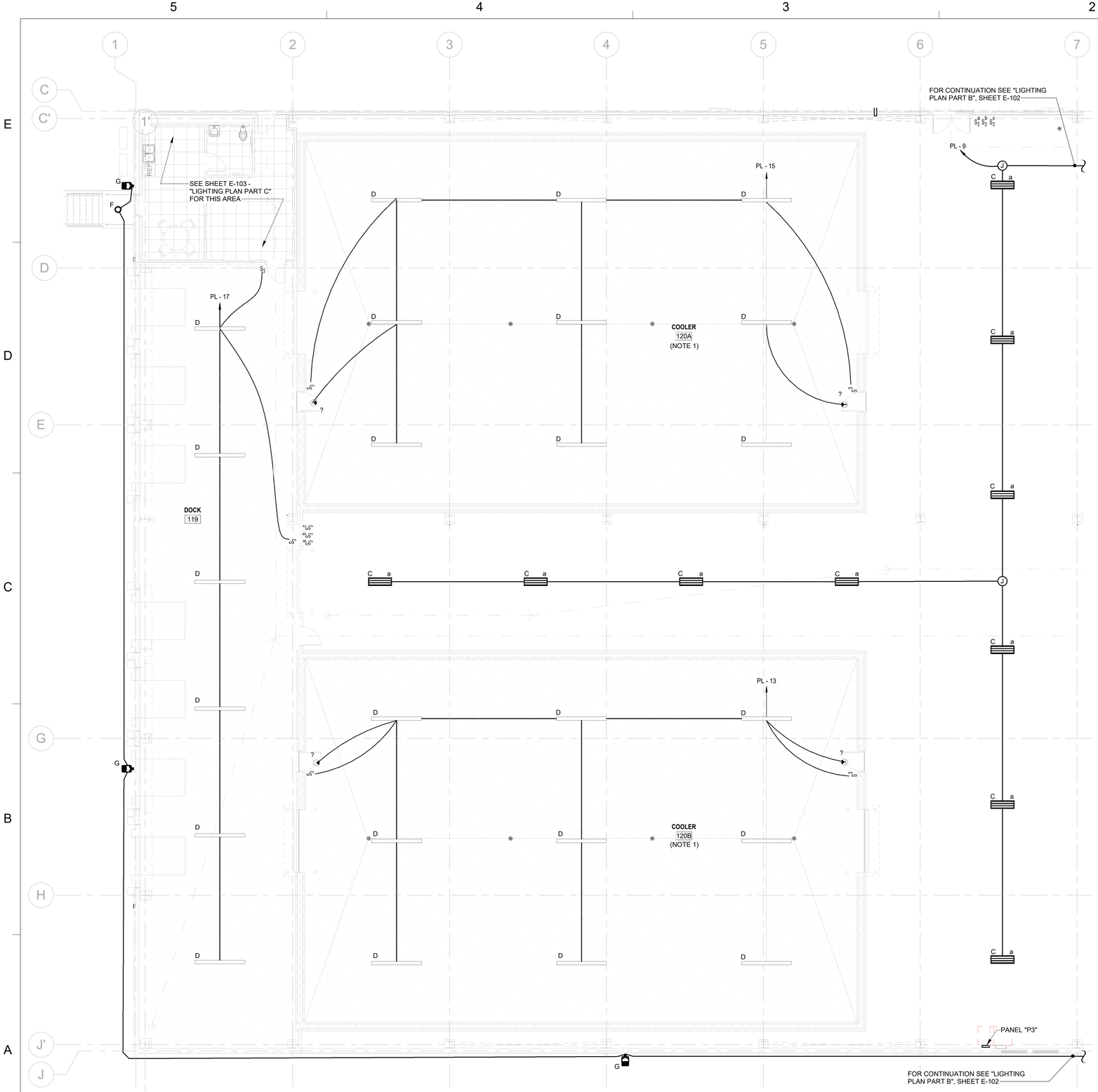
PROJECT NO. 50139338

E-100

SHEET NO.

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655-021

3/21/2024 3:15:06 PM



1 LIGHTING PLAN PART A
E-101 1/8" = 1'-0"

NOTES (SHEET E-101)

1. FIXTURES TO BE SUSPENDED WITHIN COOLER. COORDINATE WITH VENDOR.
2. SWITCHES WITHIN COOLERS 120 A/B, VEGETABLE PACKING 120, AND ICE STORAGE 115 SHALL BE WET LOCATION RATED.

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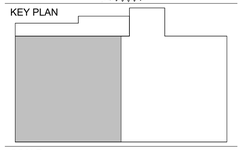
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3/25/2024
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KEY PLAN



SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date
1	REVIEW COMMENTS	2022.1.14

REVISIONS

DRAWN BY	JHR
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CHECKED BY	MGB
DATE	2024.03.25

TITLE

LIGHTING PLAN PART A

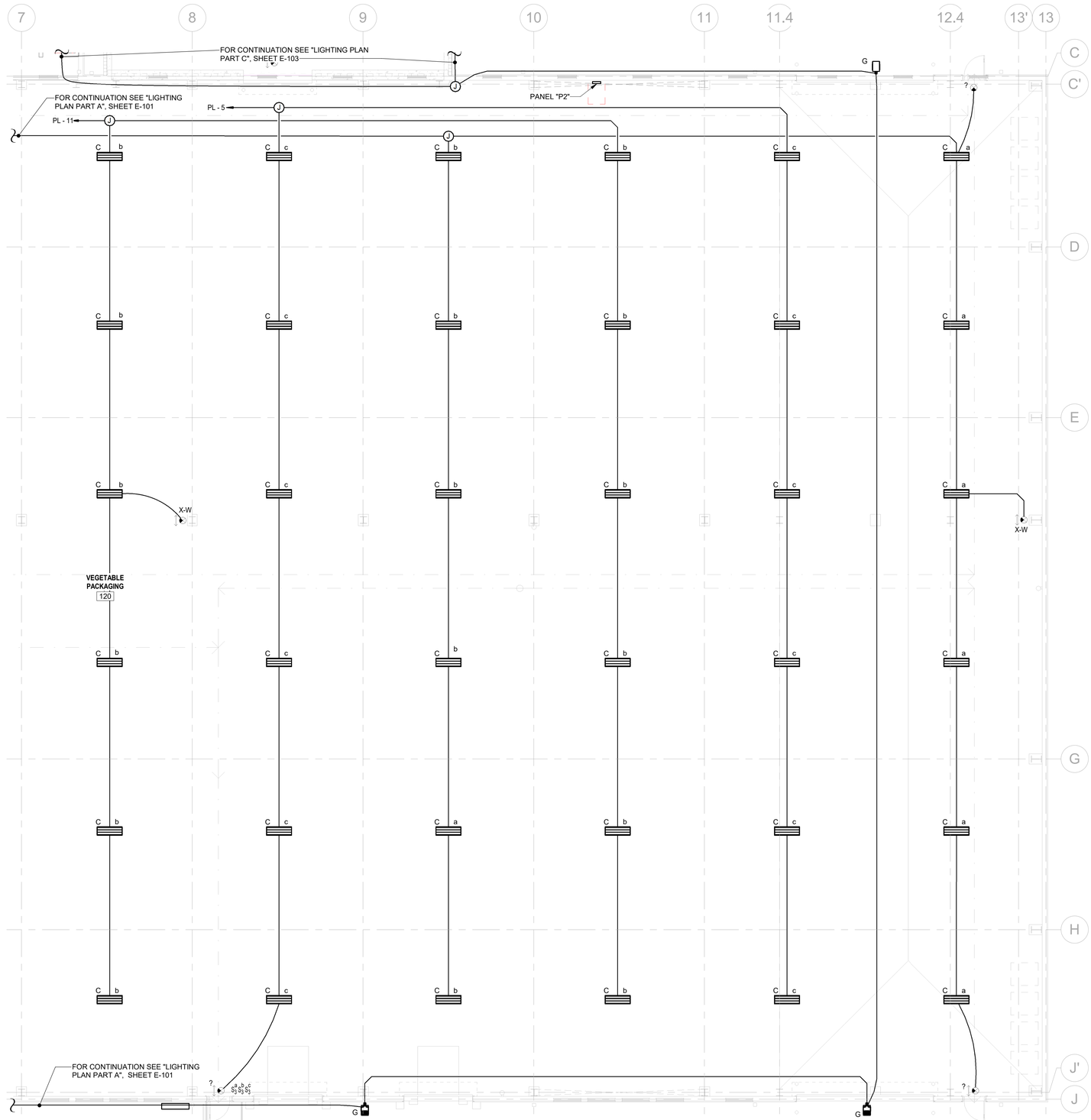
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E-101

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1 LIGHTING PLAN PART B
E-102
1/8" = 1'-0"

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KEY PLAN



SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date
1	REVIEW COMMENTS	2022.1.14

REVISIONS

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DATE	2024.03.25

TITLE

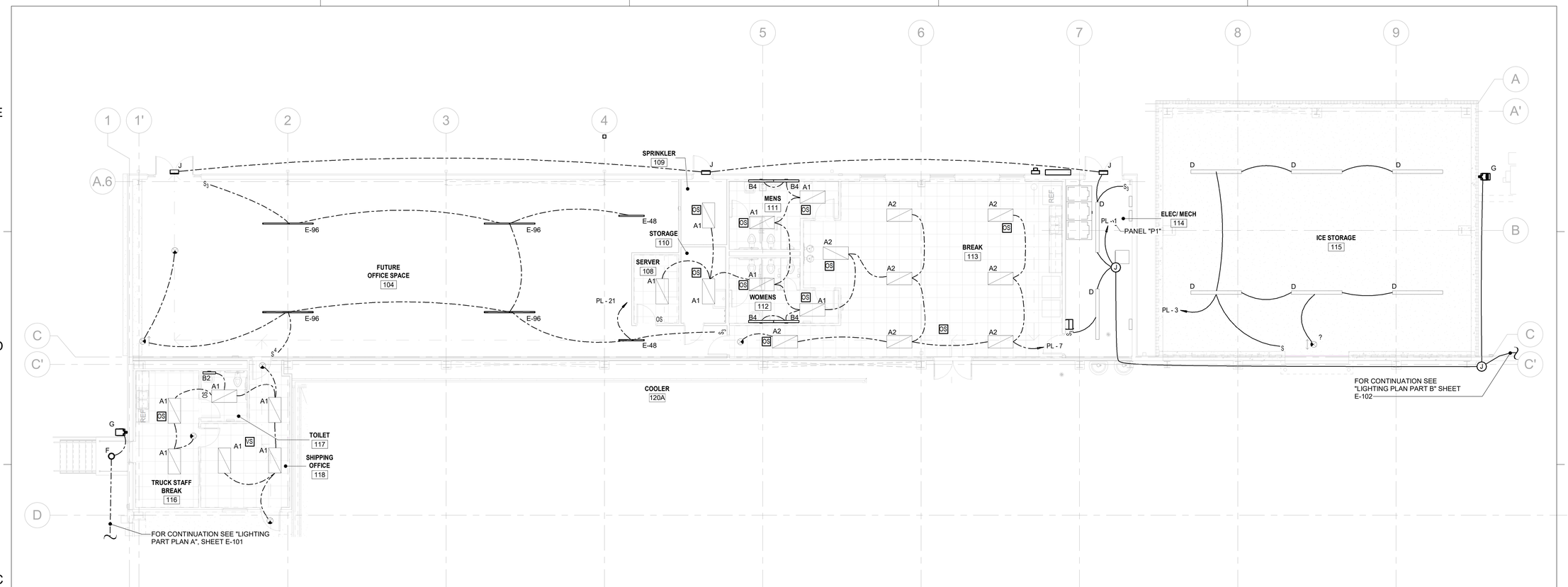
LIGHTING PLAN PART B

PROJECT NO. 50139338

E-102

SHEET NO.

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1 LIGHTING PLAN PART C
E-103 1/8" = 1'-0"

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG #	VOLTAGE	VOLT-AMPERS (MAXIMUM)	LUMENS	LAMP	DRIVER	DESCRIPTION
A1	LITHONIA	2BLT4 30L ADPT MVOLT GZ1 LP840	277	23	3000	LED	0-10V DIMMING	LED 2' X 4' VOLUMETRIC RECESSSED TROFFER
A2	LITHONIA	2BLT4 60L ADPT MVOLT GZ1 LP840	277	46	6000	LED	0-10V DIMMING	LED 2' X 4' VOLUMETRIC RECESSSED TROFFER
B2	LITHONIA	FMVTSL 24IN MVOLT 40K 80CRI BN M4	277	18	1200	LED	0-10V DIMMING	LED 24" SURFACE WALL MOUNTED VANITY LUMINAIRE
B4	LITHONIA	FMVTSL 48IN MVOLT 40K 80CRI BN M4	277	33	2600	LED	0-10V DIMMING	LED 48" SURFACE WALL MOUNTED VANITY LUMINAIRE
C	LITHONIA	IBE L48 18000LM SD080 MD MVOLT GZ10 40K 80CRI	277	128	18000	LED	0-10V DIMMING	LED HIGH BAY LUMINAIRE
D	LITHONIA	FEM L96 24000LM LPPCL MD 80CRI 40K	277	150	20364	LED	0-10V DIMMING	LED SEALED AND GASKETED, 96" SURFACE OR SUSPENDED MOUNT
E-48	LITHONIA	L48 5000LM FST MVOLT 40K 80 CRI	277	41	8164	LED	0-10V DIMMING	LED STRIPLIGHT 48" SURFACE OR SUSPENDED MOUNT
E-96	LITHONIA	L96 10000LM FST MVOLT 40K 80 CRI	277	81	5497	LED	0-10V DIMMING	LED STRIPLIGHT 96" SURFACE OR SUSPENDED MOUNT
F	LITHONIA	OLCFM 15 DDB	277	17	1099	LED	0-10V DIMMING	LED SURFACE MOUNTED CANOPY LUMINAIRE
G	LITHONIA	RSX1 LED P1 40K R3 MVOLT WBA DDBXD	277	51	7096	LED	0-10V DIMMING	LED WALL MOUNTED AREA LUMINAIRE (MOUNTING HEIGHT 20'-0" AFF LEVEL)
H	LITHONIA	ESX1 LED P2 40K R3 MVOLT UPABLS DDBXD M2	277	98	14000	LED	0-10V DIMMING	LED POLE MOUNTED AREA LUMINAIRE
H - POLE	LITHONIA	RSS 20' 4B		0		LED	N/A	20' TALL, 4" ROUND STRAIGHT LIGHTING POLE
J	LITHONIA	P2 40K VF MVOLT	277	25	3000	LED	0-10V DIMMING	LED WALL MOUNTED WALLPACK (MOUNTING HEIGHT 10'-0" AFF LEVEL)
X-W	LITHONIA	WLTE W 1 R	277	1		LED	N/A	SIMILAR TO TYPE "X", EXCEPT WET-LISTED.


TYPE "A"


TYPE "B"


TYPE "C"


TYPE "D"


TYPE "E"


TYPE "F"


TYPE "G"

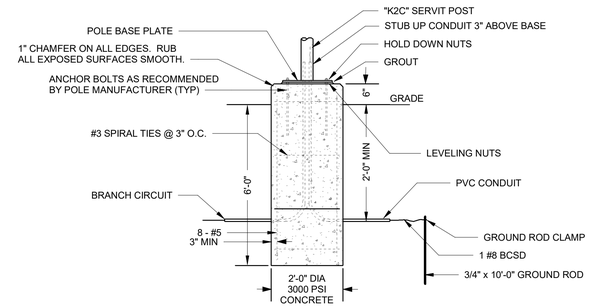

TYPE "H"


TYPE "J"



TYPE "X"

(IMAGES NOT TO SCALE)



POLE BASE DETAIL
Scale: 1/2" = 1'-0"

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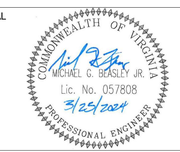
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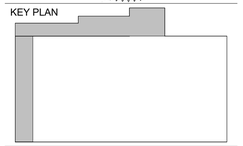
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BID DOCUMENTS

SEAL



KEY PLAN



SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date
1	REVIEW COMMENTS	2022.1.14

REVISIONS

DRAWN BY	JHR/EHF
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

LIGHTING PLAN PART C

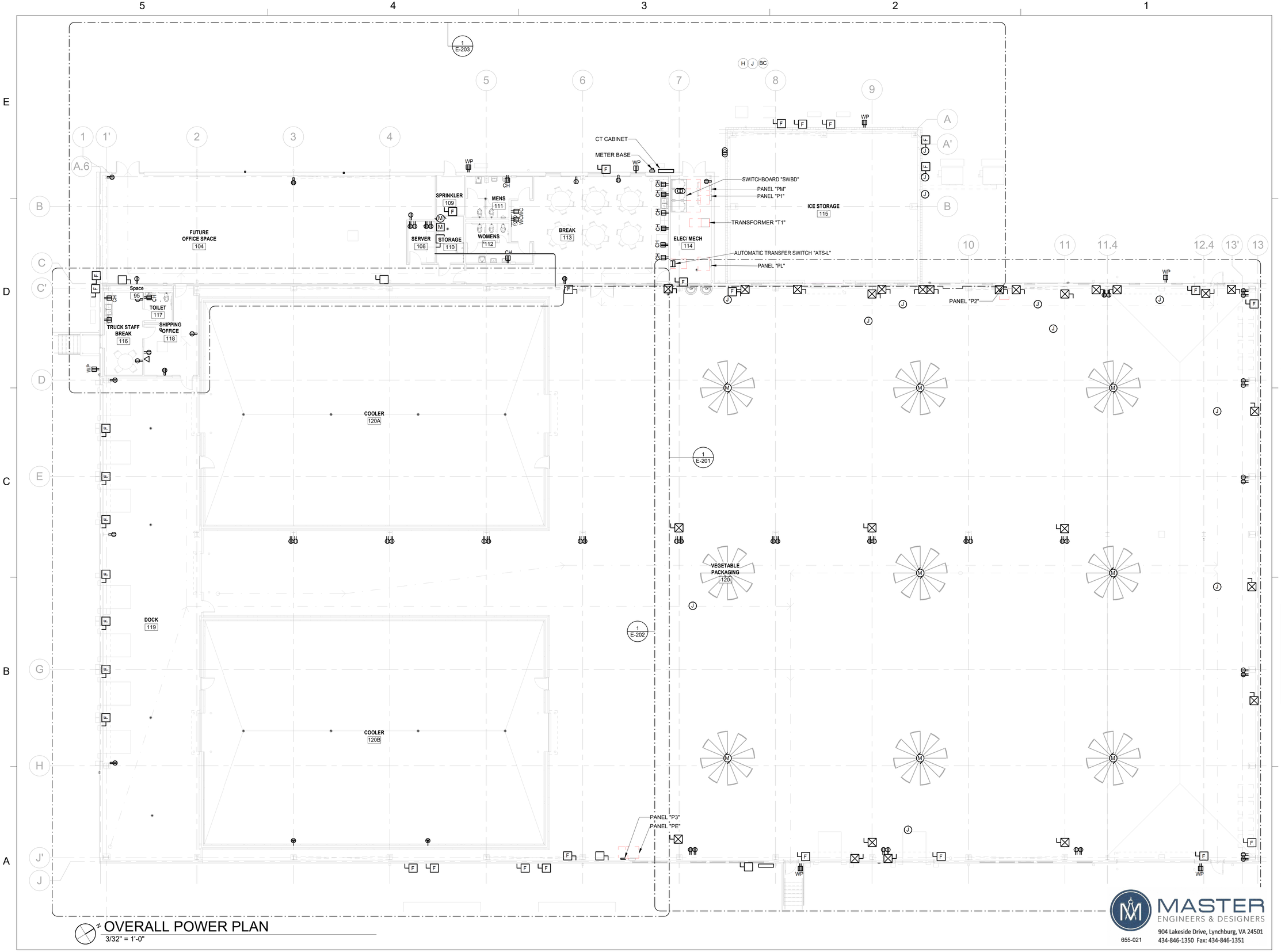
PROJECT NO. 50139338

E-103

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OVERALL POWER PLAN

3/32" = 1'-0"

3/21/2024 3:16:00 PM

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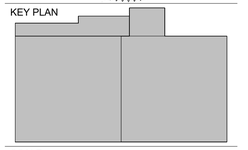
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BID DOCUMENTS

SEAL

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MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

3/32" = 1'-0"

10'-8" 5'-4" 0 10'-8"

No.	Description	Date

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

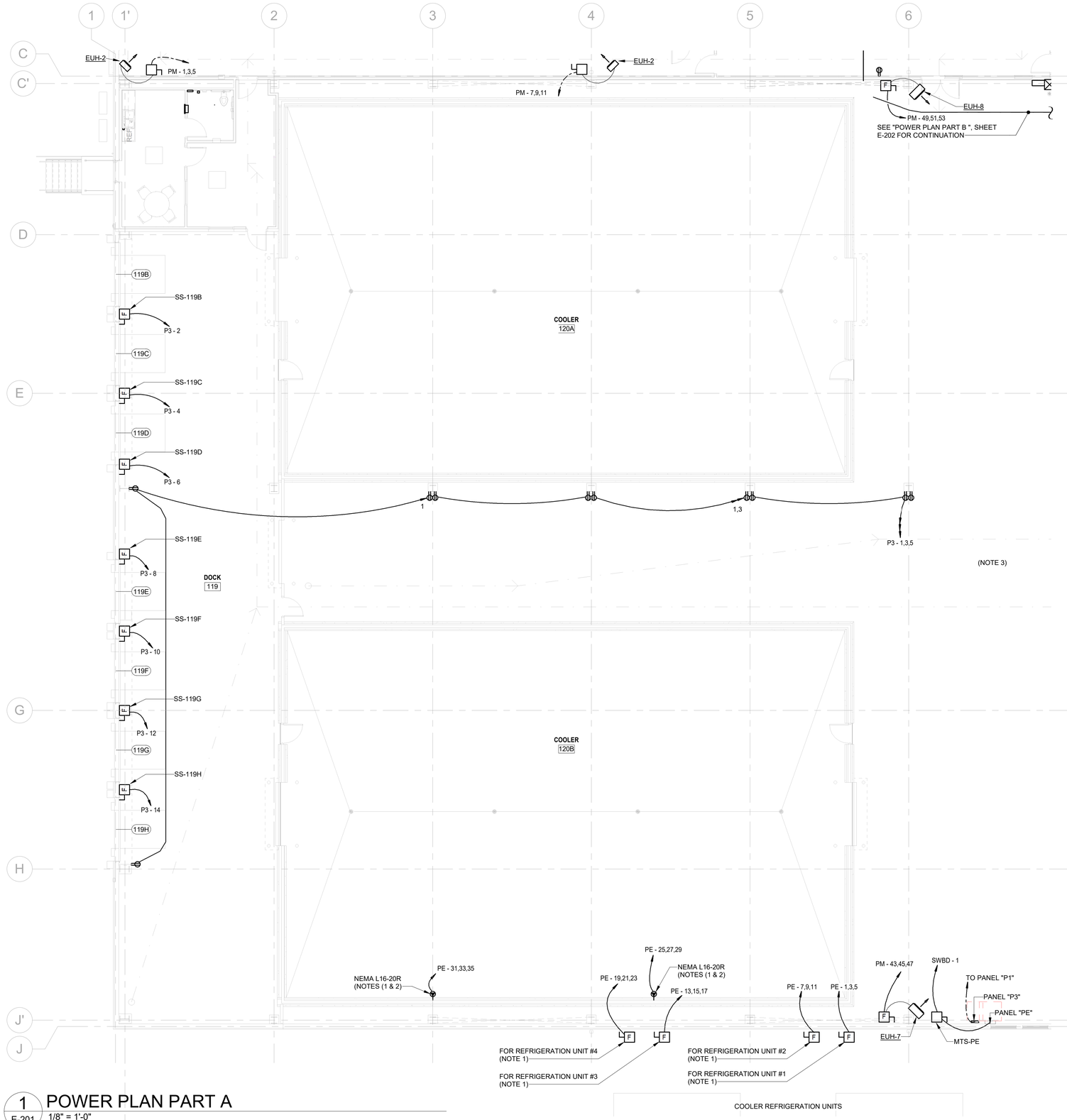
OVERALL POWER PLAN

PROJECT NO. 50139338

E-200

SHEET NO.

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1 E-201 POWER PLAN PART A
1/8" = 1'-0"

NOTES (SHEET E-201)

1. COORDINATE FINAL EQUIPMENT LOCATION AND TERMINATION WITH OWNER.
2. COORDINATE FINAL RECEPTACLE TYPE WITH OWNER. INSTALL WEATHERPROOF COVER ON RECEPTACLE.
3. ALL RECEPTACLES IN VEGETABLE PACKAGING - 120 SHALL BE WEATHERPROOF AND HAVE METALLIC WHILE IN USE COVERS. MOUNT AT 48" AFF.

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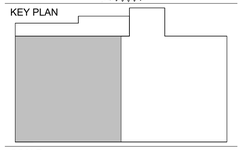
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BID DOCUMENTS

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3/25/2024
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KEY PLAN



SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

POWER PLAN PART A

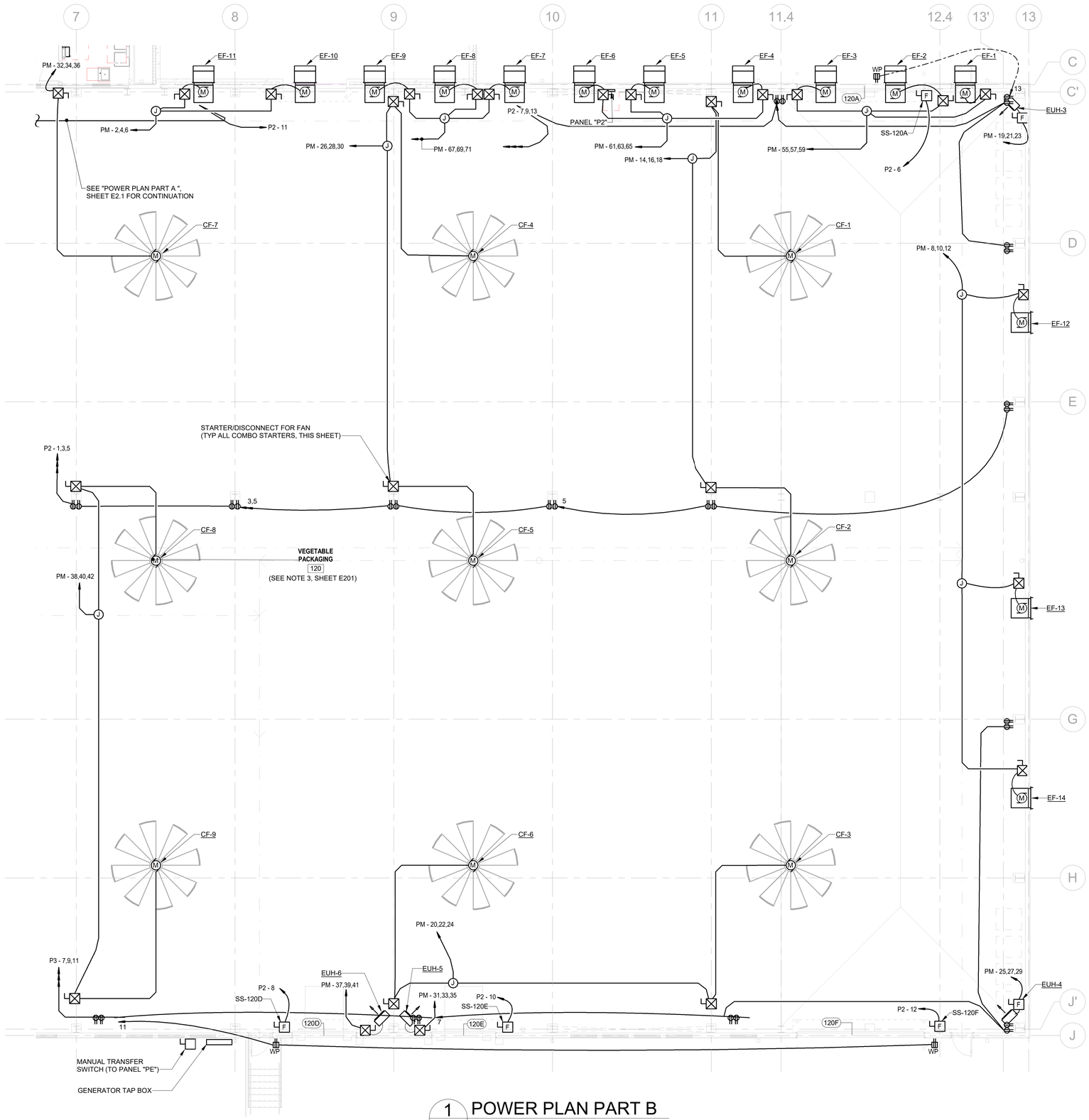
PROJECT NO. 50139338

E-201

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1 E-202 POWER PLAN PART B
1/8" = 1'-0"

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BID DOCUMENTS

SEAL

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MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

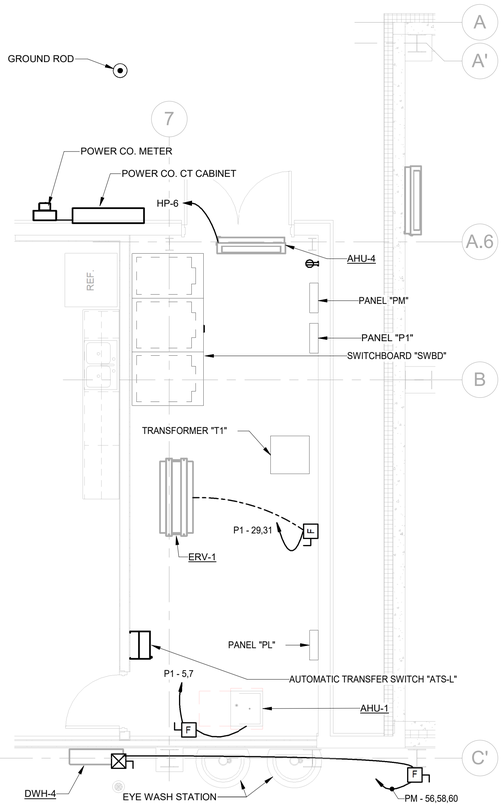
POWER PLAN PART B

PROJECT NO. 50139338

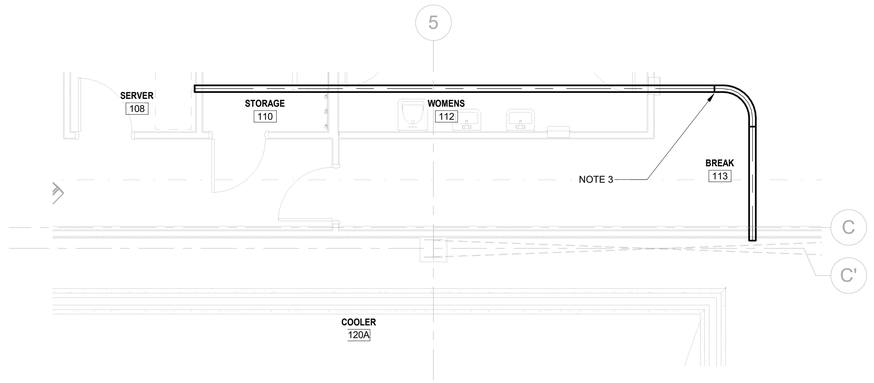
E-202

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2 E-203 ELEC/MECH 114 ENLARGED PLAN
1/4" = 1'-0"



3 E-203 PROCESS CONTROL WIRE CONDUIT
1/4" = 1'-0"

NOTES (SHEET E-203)

1. COORDINATE FINAL EQUIPMENT LOCATION AND TERMINATIONS WITH OWNER.
2. COORDINATE DH RECEPTACLE LOCATION WITH DH INSTALLATION.
3. PROVIDE AND INSTALL 4" EMPTY CONDUIT FOR PROCESS CONTROL WIRING FROM SERVER ROOM 109 TO VEGETABLE PACKAGING 120. INSTALL ABOVE CEILING, APPROX. 10' - 6" AFF. COORDINATE FINAL LOCATION AND ELEVATION WITH OWNER AND OTHER TRADES.
4. PROVIDE PAD, PER SPECIFICATIONS
5. COORDINATE WITH MECHANICAL CONTRACTOR SUCH THAT ALL EQUIPMENT SPEC'D IS ELECTRICALLY COMPATIBLE FOR INTERFACING. PROVIDE STARTERS, IF REQUIRED.

1 E-203 POWER PLAN PART C
1/8" = 1'-0"

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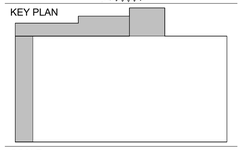
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3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"
8' 4' 0 8'

No.	Description	Date

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

POWER PLAN
PART C

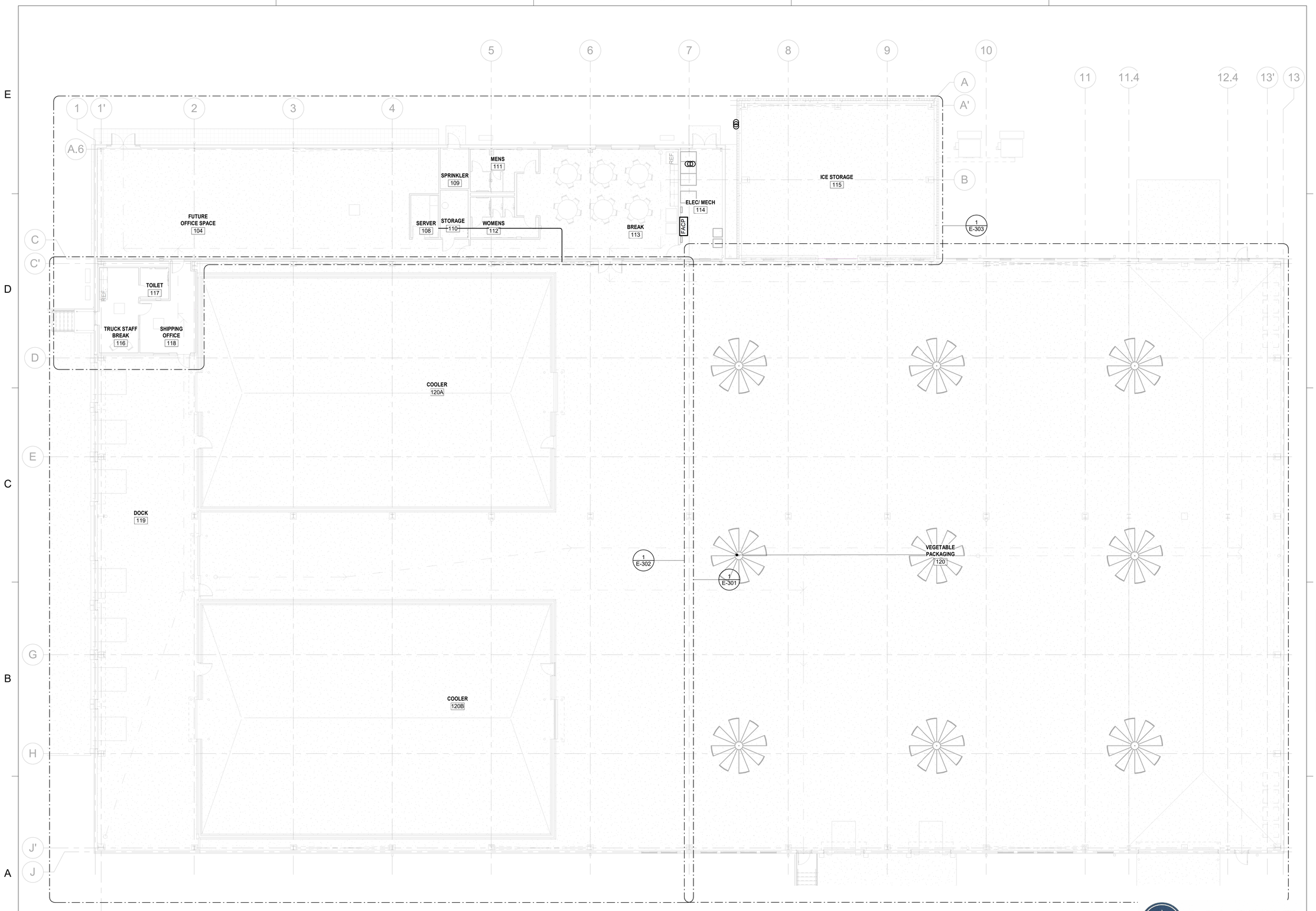
PROJECT NO. 50139338

E-203

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

3/21/2024 3:17:04 PM



Dewberry

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Danville, VA 24540
434.797.4497 Phone
434.797.4341 Fax
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BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

3/32" = 1'-0"

10'-8" 5'-4" 0 10'-8"

No.	Description	Date

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

OVERALL SPECIAL SYSTEMS PLAN

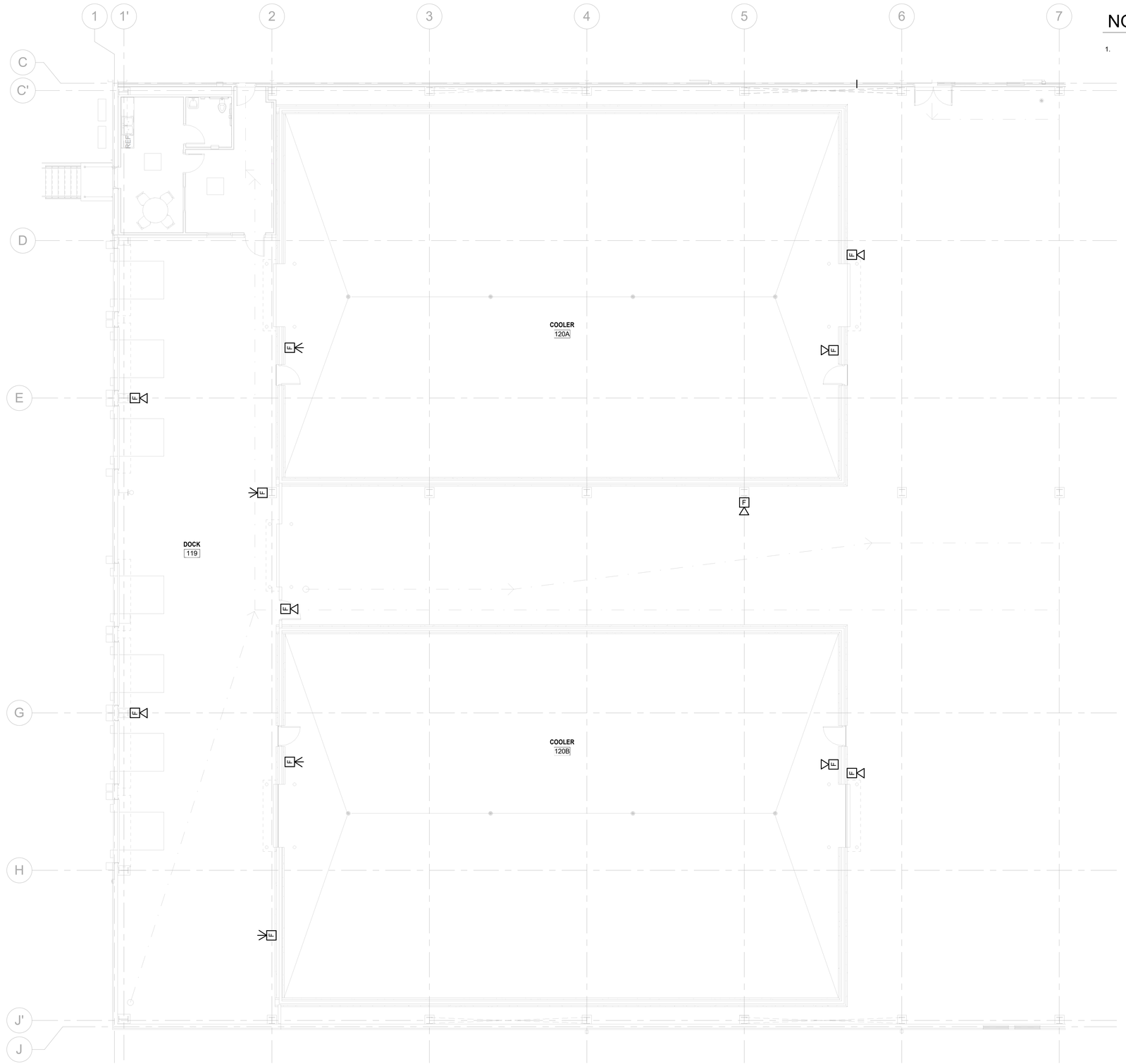
PROJECT NO. 50139338

E-300

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

3/21/2024 3:17:12 PM



NOTES (SHEET E-301)

1. ALL DEVICES IN 120 - VEGETABLE PACKAGING, 120A/B - COOLERS, AND 115 - ICE STORAGE SHALL BE NEMA 4 OR LISTED FOR USED IN WET LOCATION.

1 E-301 SPECIAL SYSTEMS PLAN PART A
1/8" = 1'-0"

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MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date
1	REVIEW COMMENTS	2022.1.14

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

SPECIALS SYSTEMS PLAN PART A

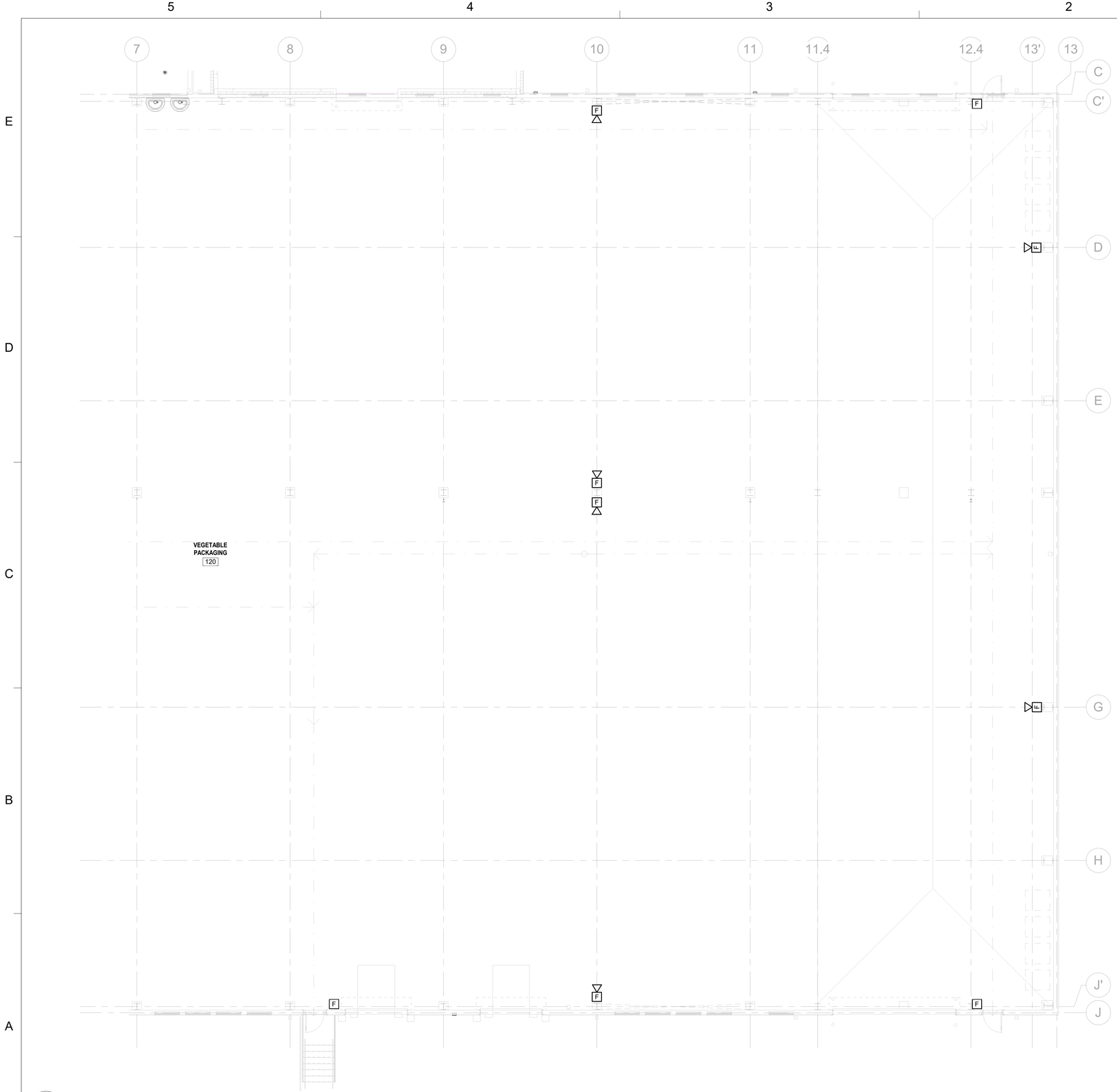
PROJECT NO. 50139338

E-301

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

3/21/2024 3:17:18 PM



1 SPECIAL SYSTEMS PLAN PART B
E-302
1/8" = 1'-0"

3/21/2024 3:17:23 PM

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BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

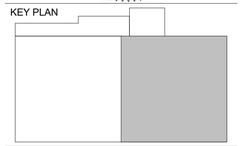
BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

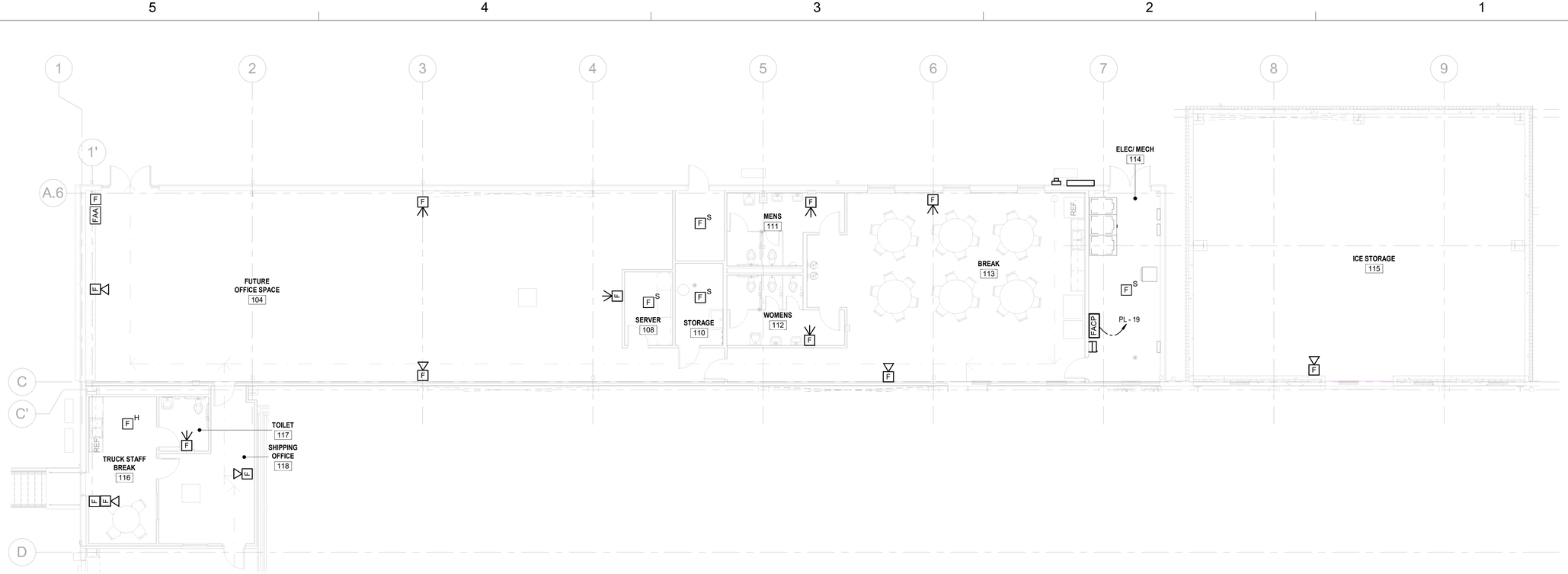
SPECIALS SYSTEMS PLAN PART B

PROJECT NO. 50139338

E-302

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021



1 SPECIAL SYSTEMS PLAN PART C

1 / E-303

1/8" = 1'-0"

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551 Piney Forest Road
Danville, VA 24540
434.797.4497 Phone
434.797.4341 Fax
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BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

8' 4' 0 8'

No.	Description	Date
1	REVIEW COMMENTS	2022.1.14

REVISIONS

DRAWN BY	JHR
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

SPECIALS SYSTEMS PLAN PART C

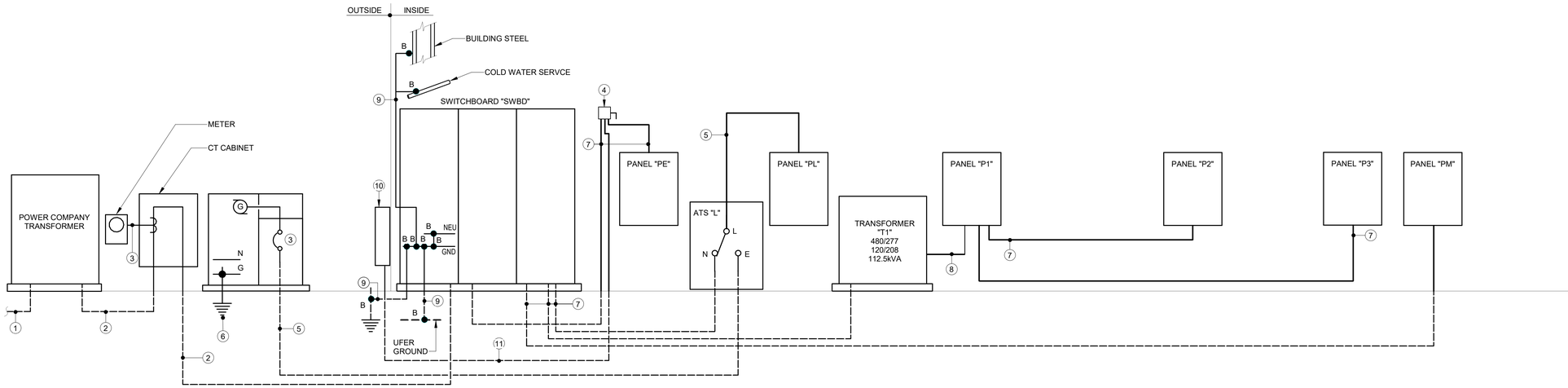
PROJECT NO. 50139338

E-303

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

3/21/2024 3:17:56 PM



ONE LINE DIAGRAM

NOT TO SCALE

ONE LINE DIAGRAM KEY

1. (2) EMPTY 5" CONDUITS WITH PULL STRINGS TO POWER COMPANY POLE LOCATION. COORDINATE WITH POWER COMPANY
2. 5(4 #600 KCMIL & 1 #500 EGC - 4"C) & 7 SPARE 4"CONDUITS
3. 3P, 100AF, 60AT, LSI BREAKER
4. MTS "PE" DOUBLE THROW, NON-FUSED SAFETY SWITCH, 800 AMPS.
5. 4 #6 & 1 #10 EGC - 1 1/2"C PROVIDE ADDITIONAL 1" CONDUIT CONTAINING GENERATOR START SIGNAL WIRING
6. INSTALL MINIMUM OF TWO GROUND RODS AT GENERATOR LOCATION CONNECT WITH MINIMUM #6 BCSD GEC.
7. SEE ASSOCIATED SCHEDULE FOR CONDUIT SIZE, TYPE AND FILL
8. 2 (4 #4/0 & 1 #3 EGC - 2 1/2"C)
9. #4/0 BCSD GEC - 1"C
10. GENERATOR TAP BOX WITH CAM LOCK CONNECTORS FOR MINIMUM 500 KW PORTABLE GENERATOR.
11. 4 (4 #4/0 & 1 #1/0 EGC - 3"C)

SWBD SCHEDULE: SWBD

Location: ELEC/ MECH 114

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 85,000
Mains Type: MCB
Mains Rating: 4000
MCB Rating: 4000 AF, 2000 AT TYPE 1 SPD

Notes:
*=> SET PER COORDINATION STUDY

CKT	LOAD NAME	CONN KVA	A	B	C	P	AF	AT	LT SET	LT DELAY	INST SET	INST SET	INST SET	GND FAULT SET	GND FAULT DELAY	WIRE & CONDUIT
1	PANEL "PE" VIA MTS "PE"	558.60	672.2	672.2	672.2	3	800	800	*	*	*	*	*	N/A	N/A	4 (4 #4/0 & 1 #1/0 EGC - 3"C)
2	PROCESS, ICE MAKER	266.04	320.1	320.1	320.1	3	600	600	*	*	*	*	*	N/A	N/A	2(4 #350 KCMIL & 1 #1/0 EGC – 3"C)
3	PROCESS , ICE MAKER	266.04	320.1	320.1	320.1	3	600	600	*	*	*	*	*	N/A	N/A	2(4 #350 KCMIL & 1 #1/0 EGC – 3"C)
4	PANEL "PM" ROOM 114	220.94	290.7	289.9	232.4	3	400	300	*	*	*	*	*	N/A	N/A	4 #350 & 1 #4 EGC - 4"C
5	PANEL "P1" VIA TRANSFORMER "T1" ROOM 114	91.09	123.7	98.6	109.5	3	100	150	*	*	N/A	N/A	N/A	N/A	N/A	3 #1/0 & 1 #6 EGC - 2"C
6	PANEL "PL" VIA ATS "L" ROOM 114	19.53	27.2	31.1	15.4	3	400	60	*	*	N/A	N/A	N/A	N/A	N/A	4 #6 & 1 #10 EGC - 1 1/2"C
7	SPARE	--	0.0	0.0	0.0	3	800	800			--	--	--			--
8	SPARE	--	0.0	0.0	0.0	3	600	600			--	--	--			--
9	SPARE	--	0.0	0.0	0.0	3	400	400			--	--	--			--
10	SPARE	--	0.0	0.0	0.0	3	200	200			--	--	--			--
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
	TOTAL KVA:		1422.24													
	TOTAL AMPS:		1751.8	1731.2	1668.3											

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	55.3 kVA	100.00%	55.3 kVA		
Lighting	0.5 kVA	100.00%	0.5 kVA	**Total Conn. Load:**	1422.2 kVA
Power	3 kVA	100.00%	3 kVA	**Total Est. Demand:**	1394.3 kVA
PROCESS	1067 kVA	100.00%	1067 kVA	**Total Conn.:**	1711
REC	66.8 kVA	57.49%	38.4 kVA	**Total Est. Demand:**	1677
WATER HEATER	133.9 kVA	100.00%	133.9 kVA		
VENTILATION	60.9 kVA	100.00%	60.9 kVA		
LIGHTS	16.7 kVA	100.00%	16.7 kVA		
OHD MOTOR	18.3 kVA	102.27%	18.7 kVA		

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BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

NOT TO SCALE

No.	Description	Date

REVISIONS

DRAWN BY	JHR/EHF
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

ONE LINE DIAGRAM AND PANEL SCHEDULES

PROJECT NO. 50139338

E-400

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

BRANCH PANEL: P1

VOLTS: 120/208
PHASES: 3
WIRES: 4
FED FROM: SWBD

A.I.C. RATING: 10,000
MAINS TYPE: MCB
MAINS RATING: 400
TYPE 2 SPD

NOTES:

CKT	LOAD NAME	P	AF	AT	LINE	NEUT	EGC	COND SIZE	CONN KVA	A	B	C	A	B	C	CONN KVA	COND SIZE	EGC	NEUT	LINE	AT	AF	P	LOAD NAME	CKT
1	GENERATOR BLOCK HEATER	2	100	20	#12	#12	#12	3/4"	1.20	5.8			13.3			1.60	3/4"	#12	#12	#12	20	100	1	REC CORRIDOR 101	2
3											5.8			10.0		1.20	3/4"	#12	#12	#12	20	100	1	REC TRUCK STAFF BREAK 116	4
5	AHU-1 ELEC/ MECH 114	2	100	45	#8	#8	#10	3/4"	8.53			41.0			10.0	1.20	3/4"	#12	#12	#12	20	100	1	REC TRUCK STAFF BREAK 116	6
7										41.0			10.0			1.20	3/4"	#12	#12	#12	20	100	1	REC ROOM 117, 116	8
9	AHU-2 / HP-2 TRUCK STAFF BREAK 116	2	100	30	#12	#12	#12	3/4"	2.28		11.0			10.0		1.20	3/4"	#12	#12	#12	20	100	1	REC SHIPPING OFFICE 118	10
11												11.0			10.0	1.20	3/4"	#12	#12	#12	20	100	1	REC DOCK 119	12
13	AHU-3 / HP-3 SHIPPING OFFICE 118	2	100	30	#12	#12	#12	3/4"	2.28	11.0			10.0			1.20	3/4"	#12	#12	#12	20	100	1	REC BREAK 113	14
15											11.0			10.0		1.20	3/4"	#12	#12	#12	20	100	1	REC BREAK 113	16
17	AHU-4/ HP-4 MECH/ELEC 114	2	100	20	#12	#12	#12	3/4"	5.20			25.0			10.0	1.20	3/4"	#12	#12	#12	20	100	1	REC BREAK 113	18
19										25.0			10.0			1.20	3/4"	#12	#12	#12	20	100	1	REC BREAK 113	20
21	AHU-5 / HP-5 ICE STORAGE 115	2	10	30	#10	#10	#10	3/4"	5.20		25.0			20.0		2.40	3/4"	#12	#12	#12	20	100	1	REC BREAK 113	22
23												25.0			10.0	1.20	3/4"	#12	#12	#12	20	100	1	REC BREAK 113 WC	24
25	AHU-6 / HP-6 ICE STORAGE 115	2	100	30	#10	#10	#10	3/4"	5.20	25.0			10.0			1.20	3/4"	#12	#12	#12	20	100	1	REC BREAK 113 WC	26
27											25.0			10.0		1.20	3/4"	#12	#12	#12	20	100	1	REC NORTH EXTERIOR	28
29	ERV ELEC/ MECH 114	2	100	20	#12	#12	#12	3/4"	2.79			13.4			10.0	1.20	3/4"	#12	#12	#12	20	100	1	REC ELEC/ MECH 114	30
31										13.4			6.7			0.80	3/4"	#12	#12	#12	20	100	1	REC ROOM 112, 111, 107	32
33	SPARE	1	--	--	--	--	--	--	--		0.0			0.4		0.05	3/4"	#12	#12	#12	20	100	1	RCP-1 STORAGE 110	34
35	SPARE	1	--	--	--	--	--	--	--			0.0			1.5	0.18	3/4"	#12	#12	#12	20	100	1	REC SERVER 108	36
37	SPARE	1	--	--	--	--	--	--	--	0.0			1.5			0.18	3/4"	#12	#12	#12	20	100	1	REC SERVER 108	38
39	SPARE	1	--	--	--	--	--	--	--		0.0			0.4		0.05	3/4"	#12	#12	#12	20	100	1	EF-15 SERVER 108	40
41	SPARE	1	--	--	--	--	--	--	--			0.0			3.2	0.38	3/4"	#12	#12	#12	20	100	1	EF-17 OFFICE SPACE 104	42
43	SPARE	1	--	--	--	--	--	--	--	0.0			0.4			0.05	3/4'	#12	#12	#12	20	100	1	EF-16 TOILET 117	44
45	SPARE	1	--	--	--	--	--	--	--		0.0			2.8		0.34	3/4"	#12	#12	#12	20	100	1	DH-1 SHIPPING OFFICE 118	46
47	SPARE	1	--	--	--	--	--	--	--			0.0			2.8	0.34	3/4"	#12	#12	#12	20	100	1	DH-2 TRUCK STAFF BREAK 116	48
49										54.6			61.5												50
51	PANEL P2	3	100	100	#2	#2	#8	1"	17.62		49.6			47.7		18.82	1"	#8	#2	#2	100	100	3	PANEL P3	52
53												44.2			47.7										54
55	SPARE	1	--	--	--	--	--	--	--	0.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	56
57	SPARE	1	--	--	--	--	--	--	--		0.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	58
59	SPARE	1	--	--	--	--	--	--	--			0.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	60
61	SPARE	1	--	--	--	--	--	--	--	0.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	62
63	SPARE	1	--	--	--	--	--	--	--		0.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	64
65	SPARE	1	--	--	--	--	--	--	--			0.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	66
67	SPARE	1	--	--	--	--	--	--	--	0.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	68
69	SPARE	1	--	--	--	--	--	--	--		0.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	70
71	SPARE	1	--	--	--	--	--	--	--			0.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	72
73	SPARE	1	--	--	--	--	--	--	--	0.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	74
75	SPARE	1	--	--	--	--	--	--	--		0.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	76
77	SPARE	1	--	--	--	--	--	--	--			0.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	78
79	SPARE	1	--	--	--	--	--	--	--	0.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	80
81	SPARE	1	--	--	--	--	--	--	--		0.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	82
83	SPARE	1	--	--	--	--	--	--	--			0.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	84

		A	B	C
TOTAL KVA:	91.1...			
TOTAL...		286	228	253

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	32.2 kVA	100.00%	32.2 kVA		
REC	37.8 kVA	63.23%	23.9 kVA	TOTAL CONN. LOAD:	91.1 kVA
PROCESS	2.4 kVA	100.00%	2.4 kVA	TOTAL EST. DEMAND:	77.6 kVA
VENTILATION	0.5 kVA	100.00%	0.5 kVA	TOTAL CONN.:	253
OHD MOTOR	18.3 kVA	102.27%	18.7 kVA	TOTAL EST. DEMAND:	215

NOTES:

BRANCH PANEL: P2

VOLTS: 120/208
PHASES: 3
WIRES: 4
FED FROM: SWBD VIA TRANSFORMER T2

A.I.C. RATING: 10,000
MAINS TYPE: MLO
MAINS RATING: 100 AMPERES

NOTES:
ALL RECEPTACLE CIRCUITS THIS PANEL SHALL HAVE GFCI BREAKERS

CKT	LOAD NAME	P	AF	AT	LINE	NEUT	EGC	COND SIZE	CONN KVA	AMPS A	AMPS B	AMPS C	AMPS A	AMPS B	AMPS C	CONN KVA	COND SIZE	EGC	NEUT	LINE	AT	AF	P	LOAD NAME	CKT
1	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20	10.0			10.0			1.20	3/4"	#12	#12	#12	20	100	1	PROCESS ICE MAKER CONTROLS	2
3	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20		10.0			10.0		1.20	3/4"	#12	#12	#12	20	100	1	PROCESS ICE MAKER CONTROLS	4
5	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20			10.0			13.8	1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-120A	6
7	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20	10.0			13.8			1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-120D	8
9	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20		10.0			13.8		1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-120E	10
11	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20			6.5			13.8	1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-120F	12
13	REC EXT COL C-12	1	100	20	#12	#12	#12	3/4"	1.20	10.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	14
15	REC EXT COL A-9	1	100	20	#12	#12	#12	3/4"	0.60		5.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	16
17	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	18
19	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	20
21	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	22
23	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	24
25	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	26
27	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	28
29	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	30
31	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	32
33	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	34
35	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	36
37	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	38
39	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	40
41	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	42

		A	B	C
TOTAL KVA:	17.6			
TOTAL...		54.6	49.6	44.2

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
REC	8.6 kVA	100.00%	8.6 kVA		
PROCESS	2.4 kVA	100.00%	2.4 kVA	TOTAL CONN. LOAD:	17.6 kVA
OHD MOTOR	6.6 kVA	106.25%	7.1 kVA	TOTAL EST. DEMAND:	18 kVA
				TOTAL CONN.:	49
				TOTAL EST. DEMAND:	50

NOTES:

BRANCH PANEL: P3

VOLTS: 120/208
PHASES: 3
WIRES: 4
FED FROM: SWBD VIA TRANSFORMER T3

A.I.C. RATING: 10,000
MAINS TYPE: MLO
MAINS RATING: 100 AMPERES

NOTES:
ALL RECEPTACLE CIRCUITS THIS PANEL SHALL HAVE GFCI BREAKERS

CKT	LOAD NAME	P	AF	AT	LINE	NEUT	EGC	COND SIZE	CONN KVA	AMPS A	AMPS B	AMPS C	AMPS A	AMPS B	AMPS C	CONN KVA	COND SIZE	EGC	NEUT	LINE	AT	AF	P	LOAD NAME	CKT
1	REC DOCK 119	1	100	20	#12	#12	#12	3/4"	1.20	10.0			13.8			1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-119B	2
3	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20		10.0			13.8		1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-119C	4
5	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20			10.0			13.8	1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-119D	6
7	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20	10.0			13.8			1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-119E	8
9	REC VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.20		10.0			13.8		1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-119F	10
11	REC EXT SOUTH COL J	1	100	20	#12	#12	#12	3/4"	1.20			10.0			13.8	1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-119G	12
13	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			13.8			1.66	3/4"	#12	#12	#12	20	100	1	OHD MOTOR SS-119H	14
15	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	16
17	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	18
19	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	20
21	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	22
23	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	24
25	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	26
27	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	28
29	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	30
31	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	32
33	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	34
35	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	36
37	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	38
39	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	40
41	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	42

		A	B	C
TOTAL KVA:	18.8			
TOTAL...		61.5	47.7	47.7

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
REC	7.2 kVA	100.00%	7.2 kVA		
OHD MOTOR	11.6 kVA	103.57%	12 kVA	TOTAL CONN. LOAD:	18.8 kVA
				TOTAL EST. DEMAND:	19.2 kVA
				TOTAL CONN.:	52
				TOTAL EST. DEMAND:	53

NOTES:

Dewberry

Dewberry Engineers Inc.
551 Piney Forest Road
Danville, VA 24540
434.797.4497 Phone
434.797.4341 Fax
www.dewberry.com

BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	JHR/EHF
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

PANEL SCHEDULES

PROJECT NO. 50139338

E-401

SHEET NO.

MASTER ENGINEERS & DESIGNERS
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351
655-021

3/21/2024 3:18:07 PM

BRANCH PANEL: PM

VOLTS: 480/277
PHASES: 3
WIRES: 4
FED FROM: SWBD

A.I.C. RATING: 65,000
MAINS TYPE: MLO
MAINS RATING: 400 AMPERES

NOTES:
* PROVIDE GFPE BREAKER FOR ICE MAKER HEAT TRACE CIRCUIT.

CKT	LOAD NAME	P	AF	AT	LINE	NEUT	EGC	COND SIZE	CONN KVA	A	B	C	A	B	C	CONN KVA	COND SIZE	EGC	NEUT	LINE	AT	AF	P	LOAD NAME	CKT
1										5.4			6.0												2
3	EUH-2 OFFICE 103	3	100	30	#12	---	#12	3/4	1.50		0.0			6.0		5.00	3/4"	#12	---	#12	20	100	3	EF-10, EF-11 EF-12 VEG. PACKAGING 120	4
5												0.0			6.0										6
7										5.4			9.0												8
9	EUH-2 OFFICE 103	3	100	30	#12	---	#12	3/4	1.50		0.0			9.0		7.50	3/4"	#12	---	#12	20	100	3	EF-13, EF-14 VEG. PACKAGING 120	10
11												0.0			9.0										12
13										9.0			6.8												14
15	EUH-1 SPRINKLER 109	3	100	20	#12	---	#12	3/4"	7.50		9.0			6.8		5.66	3/4"	#12	---	#12	20	100	3	CF-1, CF-2 VEG. PACKAGING 120	16
17												9.0			6.8										18
19										1.8			6.8												20
21	EUH-2 VEGETABLE PACKAGING 120	3	100	30	#12	---	#12	3/4"	1.50		1.8			6.8		5.66	3/4"	#12	---	#12	20	100	3	CF-3, CF-6 VEG. PACKAGING 120	22
23												1.8			6.8										24
25										1.8			6.8												26
27	EUH-3 VEGETABLE PACKAGING 120	3	100	30	#12	---	#12	3/4"	1.50		1.8			6.8		5.66	3/4"	#12	---	#12	20	100	3	CF-4, CF-5 VEG. PACKAGING 120	28
29												1.8			6.8										30
31										1.8			3.4												32
33	EUH-4 VEGETABLE PACKAGING 120	3	100	20	#12	---	#12	3/4"	1.50		1.8			3.4		2.83	3/4"	#12	---	#12	20	100	3	CF-7 VEGETABLE PACKAGING 120	34
35												1.8			3.4										36
37										1.8			6.8												38
39	EUH-5 VEGETABLE PACKAGING 120	3	100	20	#12	---	#12	3/4"	1.50		1.8			6.8		5.63	3/4"	#12	---	#12	20	100	3	CF-8, CF-9 VEG. PACKAGING 120	40
41												1.8			6.8										42
43										1.8			25.0												44
45	EUH-6 VEGETABLE PACKAGING 120	3	100	30	#12	---	#12	3/4"	1.50		1.8			25.0		12.00	3/4"	#10	#10	#10	30	100	2	DWH-1 STORAGE 110	46
47												1.8			8.0										48
49										1.8			8.0			6.65	3/4"	#12	---	#12	20	100	3	HP-1 MEC/ ELEC 114	50
51	EUH-7 VEGETABLE PACKAGING 120	3	100	30	#12	---	#12	3/4"	1.50		1.8			8.0											52
53												1.8			1.8	0.50	3/4"	#12	#12	#12	20*	100	1	HEAT TRACE FOR ICE MAKER	54
55										9.0			130.0												56
57	EF-1, EF-2, EF-3 VEG. PACKAGING 120	3	100	20	#12	---	#12	3/4"	7.50		9.0			130.0		108.00	1 1/2"	#1	---	#1	225	175	3	DWH-4 VEGETABLE PACKAGING 120	58
59												9.0			130.0										60
61										9.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	62
63	EF-4, EF-5, EF-6 VEG. PACKAGING 120	3	100	20	#12	---	#12	3/4"	7.50		9.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	64
65												9.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	66
67										9.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	68
69	EF-7, EF-8, EF-9 VEG. PACKAGING 120	3	100	20	#12	---	#12	3/4"	7.50		9.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	70
71												9.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	72
73	TANKLESS WATER HEATER 117	1	100	25	#12	#10	#10	3/4"	5.54	20.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	74
75	TANKLESS WATER HEATER 116	1	100	40	#10	#10	#10	3/4"	8.31		30.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	76
77	SPARE	1	--	--	--	--	--	--	--			0.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	78
79	SPARE	1	--	--	--	--	--	--	--	0.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	80
81	SPARE	1	--	--	--	--	--	--	--		0.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	82
83	SPARE	1	--	--	--	--	--	--	--			0.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	84
								TOTAL KVA:	220.9	**A**	**B**	**C**												
								TOTAL...		290.7	289.9	232.4													

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	23.2 kVA	100.00%	23.2 kVA		
Power	3 kVA	100.00%	3 kVA	**TOTAL CONN. LOAD:**	220.9 kVA
WATER HEATER	133.9 kVA	100.00%	133.9 kVA	**TOTAL EST. DEMAND:**	220.9 kVA
PROCESS	0.5 kVA	100.00%	0.5 kVA	**TOTAL CONN.:**	266
VENTILATION	60.4 kVA	100.00%	60.4 kVA	**TOTAL EST. DEMAND:**	266

NOTES:

BRANCH PANEL: PE

VOLTS: 480/277
PHASES: 3
WIRES: 4
FED FROM: SWBD

A.I.C. RATING: 65,000
MAINS TYPE: MLO
MAINS RATING: 800 AMPERES

NOTES:

CKT	LOAD NAME	P	AF	AT	LINE	NEUT	EGC	COND SIZE	CONN KVA	AMPS A	AMPS B	AMPS C	AMPS A	AMPS B	AMPS C	CONN KVA	COND SIZE	EGC	NEUT	LINE	AT	AF	P	LOAD NAME	CKT
1										160.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	2
3	PROCESS REFRIGERATION UNIT #1	3	200	200	#4/0	---	#6	2 1/2"	133.00		160.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	4
5												160.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	6
7										160.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	8
9	PROCESS REFRIGERATION UNIT #2	3	200	200	#4/0	---	#6	2 1/2"	133.00		160.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	10
11												160.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	12
13										160.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	14
15	PROCESS REFRIGERATION UNIT #3	3	200	200	#4/0	---	#6	2 1/2"	133.00		160.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	16
17												160.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	18
19										160.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	20
21	PROCESS REFRIGERATION UNIT #4	3	200	200	#4/0	---	#6	2 1/2"	133.00		160.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	22
23												160.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	24
25										16.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	26
27	REC NEMA L16-20R COOLER 120B	3	100	20	#12	#12	#12	3/4"	13.30		16.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	28
29												16.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	30
31										16.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	32
33	REC NEMA L16-20R COOLER 120B	3	100	20	#12	#12	#12	3/4"	13.30		16.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	34
35												16.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	36
37	SPARE	1	--	--	--	--	--	--	--	0.0			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	38
39	SPARE	1	--	--	--	--	--	--	--		0.0			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	40
41	SPARE	1	--	--	--	--	--	--	--			0.0			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	42
								TOTAL KVA:	558.6	**A**	**B**	**C**												
								TOTAL...		672.2	672.2	672.2													

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
REC	26.6 kVA	68.80%	18.3 kVA		
PROCESS	532 kVA	100.00%	532 kVA	**TOTAL CONN. LOAD:**	558.6 kVA
				TOTAL EST. DEMAND:	550.3 kVA
				TOTAL CONN.:	672
				TOTAL EST. DEMAND:	662

NOTES:

BRANCH PANEL: PL

VOLTS: 480/277
PHASES: 3
WIRES: 4
FED FROM: SWBD / GENERATOR

A.I.C. RATING: 42,000
MAINS TYPE: MCB
MAINS RATING: 60 AMPERES, LSI TYPE 2 SPD

NOTES:
PROVIDE BREAKER 19 WITH A HANDLE-LOCKING DEVICE

CKT	LOAD NAME	P	AF	AT	LINE	NEUT	EGC	COND SIZE	CONN KVA	AMPS A	AMPS B	AMPS C	AMPS A	AMPS B	AMPS C	CONN KVA	COND SIZE	EGC	NEUT	LINE	AT	AF	P	LOAD NAME	CKT
1	LIGHTS VEGETABLE PACKAGING...	1	100	20	#12	#12	#12	3/4"	0.72	2.6			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	2
3	LIGHTS VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	0.90		3.2			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	4
5	LIGHTS VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.54			5.6		--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	6
7	LIGHTS 111, 112, 119, 117	1	100	20	#12	#12	#12	3/4"	2.63	9.5			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	8
9	LIGHTS VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	2.82		10.2			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	10
11	LIGHTS VEGETABLE PACKAGING 120	1	100	20	#12	#12	#12	3/4"	1.54			5.6		--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	12
13	LIGHTS COOLER 120B	1	100	20	#12	#12	#12	3/4"	2.35	8.5			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	14
15	LIGHTS COOLER 120A	1	100	20	#12	#12	#12	3/4"	2.35		8.5			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	16
17	LIGHTS DOCK 119	1	100	20	#12	#12	#12	3/4"	0.90			3.2		--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	18
19	FACP	1	100	20*	#12	#12	#12	3/4"	1.20	4.3			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	20
21	Lighting OFFICE 103	1	100	20	#12	#12	#12	3/4"	0.91		3.3			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	22
23	LIGHTS FRONT POLES	1	100	20	#12	#12	#12	3/4"	0.29			1.1			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	24
25	LIGHTS REAR POLES	1	100	20	#12	#12	#12	3/4"	0.20	0.7			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	26
27	GENERATOR BATTERY CHARGER	1	100	20	#12	#12	#12	3/4"	1.20		4.3			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	28
29	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	30
31	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	32
33	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	34
35	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	36
37	SPACE & BUS ONLY	1	--	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	1	SPACE & BUS ONLY	38
39	SPACE & BUS ONLY	1	--	--	--	--	--	--	--		--			--		--	--	--	--	--	--	--	1	SPACE & BUS ONLY	40
41	SPACE & BUS ONLY	1	--	--	--	--	--	--	--			--			--	--	--	--	--	--	--	--	1	SPACE & BUS ONLY	42
								TOTAL KVA:	19.5	**A**	**B**	**C**												
								TOTAL...		27.2	31.1	15.4													

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Lighting	0.5 kVA	100.00%	0.5 kVA		
REC	2.4 kVA	100.00%	2.4 kVA	**TOTAL CONN. LOAD:**	19.5 kVA
LIGHTS	16.7 kVA	100.00%	16.7 kVA	**TOTAL EST. DEMAND:**	19.5 kVA
				TOTAL CONN.:	23
				TOTAL EST. DEMAND:	23

NOTES:

Dewberry

Dewberry Engineers Inc.
551 Piney Forest Road
Danville, VA 24540
434.797.4497 Phone
434.797.4341 Fax
www.dewberry.com

BRUNSWICK COUNTY IDA

BRUNSWICK VEGETABLE PACKAGING FACILITY

BOYDTON PLANK RD, ALBERTA, VA 23821

BID DOCUMENTS

SEAL

COMMONWEALTH OF VIRGINIA
MICHAEL G. BEASLEY JR.
Lic. No. 057808
3/25/2024
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	JHR/EHF
APPROVED BY	MGB
CHECKED BY	MGB
DATE	2024.03.25

TITLE

PANEL SCHEDULES

PROJECT NO. 50139338

E-402

SHEET NO.

MASTER ENGINEERS & DESIGNERS
655-021
904 Lakeside Drive, Lynchburg, VA 24501
434-846-1350 Fax: 434-846-1351

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