WASHINGTON COUNTY
PUBLIC SAFETY TRAINING CENTER

DECEMBER 18, 2019
WASHINGTON COUNTY PROJECT NO. 28-276
CRA PROJECT No. 3089

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ARCHITECTURAL ABBREVIATIONS

THIS ABBREVIATION LIST IS A STANDARD AND NOT ALL ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT

ABV	ABOVE
AC	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
AED	AUTOMATED EXTERNAL DEFIBRILLATOR
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
ALT	ALTERNATE
AP	ACCESS PANEL
ARCH	ARCHITECT(URAL)
BD	BOARD
BIT	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK(ING)
BM	BENCH MARK
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
CLR	CLEAR
CL	CENTERLINE
CJ	CONTROL JOINT
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CONTR	CONTRACTOR
COORD	COORDINATE
CT	CERAMIC TILE
DEMO	DEMOLITION
DET	DETAIL
DF	DRINKING FOUNTAIN
DIM	DIMENSION
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENT	ENTRANCE
EQ	EQUAL
EQUIP	EQUIPMENT
EX	EXISTING
EXP	EXPOSED
EXT	EXTERIOR
EW	EACH WAY
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER (CABINET)
FFE	FINISHED FLOOR ELEVATION
FIN	FINISH(ED)
FL	FLOOR
FRP	FIBERGLASS REINFORCED PANEL
FRT	FIRE RETARDANT
FT	FOOT or FEET
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
GL	GLASS
GCMU	GLAZED CONCRETE MASONRY UNIT
GWB	GYPSUM WALL BOARD
GWBAR	GYPSUM WALL BOARD ABUSE RESISTANT
GWBMR	GYPSUM WALL BOARD MOISTURE RESISTANT
GWBFR	GYPSUM WALL BOARD FIRE RATED
HC	HANDICAPPED
HDW	HARDWARE
HGT	HEIGHT
HP	HIGH POINT
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HVAC	HEATING, VENTILATION & AIR CONDITIONING
ID	INSIDE DIAMETER
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
JST	JOIST
JT	JOINT
KIT	KITCHEN(ETTE)
LAM	LAMINATE
LAV	LAVATORY
LB	POUND
LF	LINEAL FEET
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
MFR	MANUFACTURER
MAT	MATERIAL
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED or MOUNTING
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
PTN	PARTITION
PC	PLUMBING CONTRACTOR
PL	PLATE
PLAM	PLASTIC LAMINATE
PLWD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTD	PAINTED
QT	QUARRY TILE
R	RISER or RADIUS
RD	ROOF DRAIN
REC	RECESSED
RECT	RECTANGLE
REINF	REINFORCED or REINFORCING
REQD	REQUIRED
RM	ROOM
RO	ROUGH OPENING
RWC	RAIN WATER CONDUCTOR
SCH	SCHEDULE
SECT	SECTION
SF	SQUARE FEET
SFCMU	SPLIT FACE CONCRETE MASONRY UNIT
SFRM	SPRAY-APPLIED FIRE RESISTIVE MATERIAL
SH	SHEATHING
SIM	SIMILAR
SJ	SCORE JOINT
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STR	STRUCTURAL
SYN	SYNTHETIC
T	TREAD
TG	TEMPERED GLASS
THK	THICK(NESS)
TOM	TOP OF MASONRY
TOP	TOP OF PLANK
TOS	TOP OF STEEL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
WP	WATERPROOFING
W/	WITH
WD	WOOD
WG	WIRE GLASS

ABBREVIATION SYMBOLS

@	AT
C	CENTER LINE
Ø	DIAMETER
+/-	PLUS OR MINUS

DRAWING LIST

Sheet Number	Sheet Name
GENERAL	
CS.1	COVER SHEET
CS.2	GENERAL INFORMATION
CIVIL	
C-0.00	TITLE SHEET
C-1.00	OVERALL SITE PLAN
C-1.01	DETAILED SITE PLAN
C-1.02	DETAILED SITE PLAN
C-1.03	DETAILED SITE PLAN
C-1.04	DETAILED SITE PLAN
C-1.07	UTILITY PLAN
C-1.08	WATER PROFILES
C-1.09	SEWER PROFILES
C-1.11	CONSTRUCTION DETAILS
C-1.12	CONSTRUCTION DETAILS
C-1.13	CONSTRUCTION DETAILS
C-1.14	LANDSCAPING PLAN
C-1.15	LANDSCAPE DETAILS AND NOTES
C-2.00	STORMWATER MANAGEMENT PLAN
C-3.00	OVERALL EROSION AND SEDIMENT CONTROL PLAN
C-3.01	FINAL GRADING, EROSION AND SEDIMENT CONTROL PLAN
C-3.02	FINAL GRADING, EROSION AND SEDIMENT CONTROL PLAN
C-3.03	FINAL GRADING, EROSION AND SEDIMENT CONTROL PLAN
C-3.04	FINAL GRADING, EROSION AND SEDIMENT CONTROL NOTES & DETAILS
C-3.05	FINAL GRADING, EROSION AND SEDIMENT CONTROL NOTES & DETAILS
C-3.06	FINAL GRADING, EROSION AND SEDIMENT CONTROL NOTES & DETAILS
C-3.07	SOIL BORING LOGS
C-3.08	SOIL BORING LOGS
ARCHITECTURAL CODE COMPLIANCE	
CC.1	CODE COMPLIANCE FIRST FLOOR PLAN - BASE BID
CC.1A	CODE COMPLIANCE FIRST FLOOR PLAN - ALTERNATE GC-1
ARCHITECTURAL	
A1.1	OVERALL FIRST FLOOR PLAN - BASE BID
A1.2	OVERALL FIRST FLOOR PLAN - ALT GC-1
A1.3	FIRST FLOOR PLAN UNIT "A"
A1.4	FIRST FLOOR PLAN UNIT "B"
A1.5	FIRST FLOOR PLAN UNIT "C" & ATRIUM CLERESTORY PLAN
A1.6	OVERALL ROOF PLAN
A1.7	OVERALL ROOF PLAN - ALTERNATE GC-1
A1.8	FIRST FLOOR REFLECTED CEILING PLAN - UNIT A - BASE BID
A1.9	FIRST FLOOR REFLECTED CEILING PLAN - UNIT B & C - BASE BID
A1.10	FIRST FLOOR REFLECTED CEILING PLAN - UNIT B - ALTERNATE GC-1
A2.1	OVERALL EXTERIOR ELEVATIONS
A2.2	EXTERIOR ELEVATIONS
A2.3	EXTERIOR ELEVATIONS
A2.4	EXTERIOR ELEVATIONS
A2.5	EXTERIOR ELEVATIONS - ALTERNATE GC-1
A2.6	EXTERIOR ELEVATIONS - ALTERNATE GC-3
A2.7	INTERIOR ELEVATIONS
A2.8	INTERIOR ELEVATIONS
A3.1	BUILDING SECTIONS

DRAWING LIST

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A3.3	WALL SECTIONS
A3.4	WALL SECTIONS
A3.5	WALL SECTIONS
A3.6	WALL SECTIONS
A3.7	WALL SECTIONS
A3.8	WALL SECTIONS
A3.9	WALL SECTIONS
A3.10	WALL SECTIONS
A3.11	WALL SECTIONS
A3.12	WALL SECTIONS
A3.13	WALL SECTIONS
A3.14	WALL SECTIONS
A4.1	ACCESSIBILITY STANDARDS
A4.2	LARGE SCALE FLOOR PLANS
A4.3	LARGE SCALE FLOOR PLANS
A4.4	LARGE SCALE FLOOR PLAN , SECTION AND DETAILS
A4.5	GUARDRAIL PLAN, ELEVATION & DETAILS
A5.1	DETAILS
A5.2	DETAILS
A5.3	DETAILS
A5.4	DETAILS
A5.5	DETAILS
A6.1	ROOM FINISH SCHEDULE
A6.2	SIGNAGE SCHEDULE
A6.3	DOOR SCHEDULE
A6.4	DOOR SCHEDULE - ALTERNATE GC-1
A6.5	HOLLOW METAL FRAME ELEVATIONS & DETAILS
A6.6	ALUMINUM STOREFRONT ELEVATIONS
A6.7	ALUMINUM CURTAIN WALL ELEVATIONS
A6.8	ALUMINUM STOREFRONT DETAILS
A6.9	ALUMINUM CURTAIN WALL DETAILS
A6.10	ALUMINUM CURTAIN WALL DETAILS
INTERIORS	
I4.1	LARGE SCALE LAYOUTS SMALL CLASSROOMS
I4.2	LARGE SCALE LAYOUTS SMALL CLASSROOM
I4.3	LARGE SCALE LAYOUT LARGE CLASSROOMS & COLLABORATIVE LEARNING
I4.4	LARGE SCALE LAYOUTS CLASSROOMS- ALTERNATE
I4.5	LARGE SCALE LAYOUTS MULIT PURPOSE ROOM
I4.5S	MULTI- PURPOSE INTERIOR ELEVATIONS
I4.5SS	WEIGHT ROOM INTERIOR ELEVATIONS
I4.6	LARGE SCALE LAYOUTS ADMINISTRATION
I7.1	FIRST FLOOR - FLOOR PATTERN PLAN
I7.2	FIRST FLOOR- FINISH PLAN
I7.3	FIRST FLOOR- FLOOR PATTERN AND FINISH PLAN- ALTERNATE
Structural	
S0.01	STRUCTURAL NOTES
S0.02	STRUCTURAL NOTES
S0.03	SCHEDULES AND COLUMN DETAILS
S0.04	FUTURE 2ND FLOOR LOADING DIAGRAM
S0.05	FUTURE ROOF PLAN
S1.01	OVERALL FOUNDATION PLAN
S1.02	OVERALL FOUNDATION PLAN - ALTERNATE
S1.03	FOUNDATION PLAN - AREA A

DRAWING LIST

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S1.05	FOUNDATION PLAN - AREA C
S1.11	OVERALL FUT. 2ND FLOOR / ROOF FRAMING PLAN
S1.12	OVERALL FUT. 2ND FLOOR / ROOF FRAMING PLAN - ALTERNATE
S1.13	FUT. 2ND FLOOR / ROOF FRAMING PLAN - AREA A
S1.14	FUT. 2ND FLOOR / ROOF FRAMING PLAN - AREA B
S1.15	ROOF FRAMING PLANS - AREA A AND C
S2.01	WALL SECTIONS
S3.01	TYPICAL FOUNDATION DETAILS
S3.02	FOUNDATION SECTIONS
S3.11	TYPICAL SLAB ON GRADE DETAILS
S4.01	TYPICAL FRAMING DETAILS
S4.02	FRAMING DETAILS
S4.03	FRAMING DETAILS
S4.10	TRUSS PROFILES
S5.01	TYPICAL MASONRY WALL DETAILS
S5.02	TYPICAL MASONRY WALL DETAILS
S5.03	TYPICAL MASONRY WALL DETAILS
Mechanical Drawings	
M0.0	MECHANICAL INFORMATION SHEET
M1.0	FIRST FLOOR PLAN - UNIT A - MECHANICAL DUCTWORK
M1.1	FIRST FLOOR PLAN - UNIT B - MECHANICAL DUCTWORK
M1.2	FIRST FLOOR PLAN - UNIT C - MECHANICAL DUCTWORK
M2.0	FIRST FLOOR PLAN - UNIT A - MECHANICAL PIPING
M2.1	FIRST FLOOR PLAN - UNIT B - MECHANICAL PIPING
M2.2	FIRST FLOOR PLAN - UNIT C - MECHANICAL PIPING
M3.0	ROOF PLAN - MECHANICAL
M4.0	MECHANICAL DETAILS
M5.0	MECHANICAL SCHEDULES
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P0.0	PLUMBING INFORMATION SHEET
P1.0	FIRST FLOOR PLAN - UNIT A - DOMESTIC WATER
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P2.0	FIRST FLOOR PLAN - UNIT A - SANITARY
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P4.1	PLUMBING ISOMETRICS - SANITARY
P5.0	PLUMBING SCHEDULES
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E0.0	ELECTRICAL INFORMATION SHEET
E0.5	SITE PLAN - ELECTRICAL
E0.6	SITE ELECTRICAL DETAILS
E0.7	SITE ELECTRICAL DETAILS
E1.0	FIRST FLOOR PLAN - UNIT A - POWER
E1.1	FIRST FLOOR PLAN - UNIT B - POWER
E1.2	FIRST FLOOR PLAN - UNIT C - POWER
E2.0	FIRST FLOOR PLAN - UNIT A - LIGHTING
E2.1	FIRST FLOOR PLAN - UNIT B - LIGHTING
E2.2	FIRST FLOOR PLAN - UNIT C - LIGHTING
E3.0	ROOF PLAN - POWER
E4.0	ELECTRICAL DETAILS
E4.1	ELECTRICAL DETAILS
E5.0	ELECTRICAL RISER & SCHEDULES
E5.1	ELECTRICAL SCHEDULES

DRAWING LIST

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E5.3	ELECTRICAL SCHEDULES
Fire Protection Drawings	
FP0.0	FIRE PROTECTION INFORMATION SHEET
FP1.0	FIRST FLOOR PLAN - UNIT A - FIRE PROTECTION
FP1.1	FIRST FLOOR PLAN - UNIT B - FIRE PROTECTION
FP1.2	FIRST FLOOR PLAN - UNIT C - FIRE PROTECTION
Technology Drawings	
T0.1	SYMBOLS, LEGENDS AND ABBREVIATIONS - TELECOM
T0.2	SITE PLAN - TELECOM
T1.1	PARTIAL FIRST FLOOR PLAN - AREA A - TELECOM
T1.2	PARTIAL FIRST FLOOR PLAN - AREA B - TELECOM
T1.3	PARTIAL FIRST FLOOR PLAN - AREA C - TELECOM
T2.1	PARTIAL FIRST FLOOR PLAN - AREA A - SECURITY
T2.2	PARTIAL FIRST FLOOR PLAN - AREA B - SECURITY
T2.3	PARTIAL FIRST FLOOR PLAN - AREA C - SECURITY
T3.1	RISERS - TELECOM
T4.1	DETAILS - TELECOM
T4.2	DETAILS - TELECOM
T4.3	DETAILS - TELECOM
T4.4	DETAILS - TELECOM
T4.5	DETAILS - TELECOM
Audio Visual Drawings	
TA1.0	TECHNOLOGY LEGEND
TA1.1	AUDIOVISUAL PLAN - UNIT A
TA1.2	AUDIOVISUAL PLAN - UNIT B
TA1.3	AUDIOVISUAL PLAN - UNIT C
TA1.4	AUDIOVISUAL PLAN - UNIT B - DIVISIBLE ROOM
TA2.1	AUDIOVISUAL RCP - UNIT A
TA2.2	AUDIOVISUAL RCP - UNIT B
TA2.3	AUDIOVISUAL RCP - UNIT C
TA5.1	AUDIOVISUAL MOUNTING DETAILS
TA5.2	AUDIOVISUAL MOUNTING DETAILS
TA5.3	AUDIOVISUAL MOUNTING DETAILS
TA5.4	AUDIOVISUAL MOUNTING DETAILS
TA5.5	AUDIOVISUAL MOUNTING DETAILS
TA5.6	AUDIOVISUAL MOUNTING DETAILS
TA5.7	AUDIOVISUAL MOUNTING DETAILS
TA5.8	AUDIOVISUAL MOUNTING DETAILS
TA6.1	RACK ELEVATION
TA7.1	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.2	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.3	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.4	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.5	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.6	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.7	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.8	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.9	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.10	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.11	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.12	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.13	AUDIOVISUAL LOGICAL DIAGRAMS

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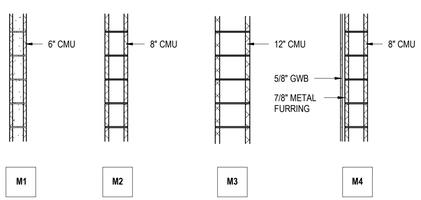
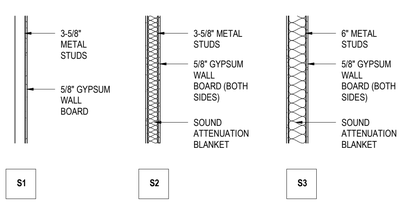
REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

INTERIOR MASONRY WALL TYPES



INTERIOR STUD WALL TYPES



GYPSUM WALL BOARD LOCATION SCHEDULE

GYPSUM WALL BOARD	• ALL OFFICES • ALL APPLICATIONS ABOVE 8'-0" FINISH FLOOR • ALL MULTIPLE LAYER WALLS, EXCEPT THE EXPOSED LAYER
MOLD & MOISTURE RESISTANT GYPSUM BOARD	• PAINTED WALLS & CEILINGS IN TOILET ROOMS, LOCKER ROOMS & SHOWERS
CEMENTITIOUS BACKER UNIT	• AT WALLS SURROUNDING SHOWERS AND TUBS SCHEDULED TO RECEIVE CERAMIC TILE

GENERAL NOTES: WALL TYPES

1. ALL INTERIOR WALLS WHICH ARE NOT TAGGED OR OTHERWISE DETAILED SHALL BE TYPE M1.

2. ALL CMU WALLS SHALL EXTEND TO WITHIN 2" OF UNDERSIDE OF FLOOR, ROOF OR ROOF STRUCTURE.
AT ALL NON-RATED WALLS, INSTALL COMPRESSIBLE FILLER IN JOINT BETWEEN TOP OF PARTITION
AND UNDERSIDE OF STRUCTURE ABOVE. AT ALL FIRE-RATED WALLS, INSTALL FIRESTOPPING IN JOINT BETWEEN TOP OF PARTITION AND UNDERSIDE OF STRUCTURE ABOVE.

3. PROVIDE THROUGH-PENETRATION FIRE STOP SYSTEMS FOR ALL BUILDING UTILITIES PENETRATING FIRE-RESISTANCE RATED WALL ASSEMBLIES. RATED AT THE SAME FIRE-RESISTANCE RATING AS THE ASSEMBLIES IN WHICH IT IS PENETRATING. OPENINGS IN FIRE-RATED ASSEMBLIES SHALL BE LIMITED TO MINIMUM SIZES TO ACCOMMODATE PENETRATIONS TO ENSURE MAXIMUM INTEGRITY OF THE ASSEMBLIES FIRE-RATING.

4. AT STUD WALLS WITH GYPSUM WALL BOARD, PANELS TO EXTEND TO UNDERSIDE OF DECK ABOVE UNLESS NOTED OTHERWISE.

5. REFER TO CODE ANALYSIS DRAWINGS FOR LOCATION AND EXTENT OF FIRE-RESISTANCE-RATED
ASSEMBLIES.

6. SEE SECTIONS, STRUCTURAL DRAWINGS AND ELEVATIONS FOR FURTHER DETAIL OF WALL CONSTRUCTION.

LEGEND

MATERIALS

UNDISTURBED EARTH
CONTROLLED FILL
CONCRETE
GRANULAR FILL
CONC MASONRY UNIT
FACE MASONRY UNITS
WOOD BLOCKING
RIGID INSULATION
BATT INSULATION

SYMBOLS

SECTION — A / A3.5 — SECTION OR DETAIL NO. / SHEET NO.
BUILDING SECTION — A / A3.5 — SECTION INDICATOR / BUILDING SECTION SHEET NO.
DETAIL — A / A5.1 — DETAIL NO. / DETAIL SHEET NO.
INTERIOR ELEVATION — C / I4.6 — ELEVATION NO. / ELEVATION SHEET NO.
DOOR TAG — A101 — DOOR NUMBER
WINDOW TAG — W1 — WINDOW ELEVATION
WALL TYPE TAG — W1 — WALL IDENTIFICATION
MILLWORK SECTION — A / A3.5 — SECTION OR DETAIL NO. / DETAIL SHEET NO.
ROOM TAG — OFFICE / A101 — ROOM NAME / BLDG. & ROOM NO.
NORTH ARROW

ARCHITECTURAL DRAWING NO. DESIGNATIONS _____

A1.1 — INDICATES FLOOR PLANS / INDICATES SHEET NUMBER
A2.1 — INDICATES ELEVATIONS / INDICATES SHEET NUMBER
A3.1 — INDICATES SECTIONS / INDICATES SHEET NUMBER
A4.1 — INDICATES LARGE SCALE PLANS / INDICATES SHEET NUMBER
A5.1 — INDICATES GENERAL DETAILS / INDICATES SHEET NUMBER
A6.1 — INDICATES SCHEDULES AND FRAME ELEVATIONS / INDICATES SHEET NUMBER
I4.1 — INDICATES INTERIOR LARGE SCALE LAYOUTS / INDICATES SHEET NUMBER
I7.1 — INDICATES FLOOR PATTERN LAYOUTS / INDICATES SHEET NUMBER

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PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

GENERAL INFORMATION
PLOT SCALE: 1/2" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

CS.2

WASHINGTON COUNTY SAFETY TRAINING CENTER

WASHINGTON COUNTY MARYLAND

18350 PUBLIC SAFETY PLACE, HAGERSTOWN MARYLAND 21740

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PHONE: (410) 792–8086
CONTACT: TIMOTHY H. MILLER

SITE DATA:
ADDRESS: 9238 SHARPSBURG PIKE
HAGERSTOWN, MD 21740
TAX IDENTIFICATION NO.: 018579
TAX MAP/GRID: 0062/0010
PARCEL: 0059
LIBER/FOLIO: 05374/00077
ELECTION DISTRICT: 10
SEWER COUNTY
WATER CITY

VICINITY MAP
SCALE: 1"=2000'
ADC MAP: 26 GRID: C–6

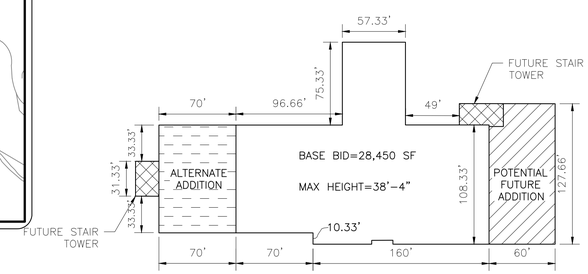
POINT	NORTHING	EASTING	ELEVATION
KCI#11	693147.85	1106438.79	492.68
KCI#12	693777.99	1104456.26	491.79
KCI#5	692636.73	1105640.07	482.60

GENERAL NOTES

1. ALL GRADING FOR THIS PROJECT SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR.
2. THERE IS A 10⌀ WIDE DRAINAGE AND UTILITIES EASEMENT ALONG ALL FRONT LOT LINES AND AN 8⌀ WIDE DRAINAGE AND UTILITIES EASEMENT ALONG ALL SIDE AND REAR LOT LINES HEREBY RESERVED UNLESS OTHERWISE SHOWN HEREON.
3. A PUBLIC WORKS AGREEMENT AND PERFORMANCE SECURITY WILL BE REQUIRED FOR ALL IMPROVEMENTS WITHIN THE COUNTY RIGHT–OF–WAY THAT ARE NOT OTHERWISE REGULATED UNDER A UTILITY PERMIT OR ENTRANCE PERMIT.
4. A UTILITY PERMIT WILL BE REQUIRED FOR ANY PROPOSED UTILITY WORK LOCATED WITHIN THE COUNTY RIGHT–OF–WAY.
5. A COMPLETE SET OF APPROVED PLANS AND A COPY OF THE GRADING PERMIT MUST BE ON SITE AND AVAILABLE FOR USE BY THE INSPECTOR, OR OTHER REPRESENTATIVE OF WASHINGTON COUNTY DIVISION OF ENGINEERING & CONSTRUCTION.
6. PLEASE BE ADVISED THAT ANY PROJECT WHICH CREATES A DISTURBANCE OF ONE (1) ACRE OR MORE WILL REQUIRE A NOTICE OF INTENT TO COMPLY WITH THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY⌀ (NOI). THE NOI IS REQUIRED UNDER THE CLEAN WATER ACT AS STATED IN 40 CFR 122.26 AND CODE OF MARYLAND REGULATIONS COMAR 26.08.04.09A AND IS REGULATED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE). THE NOI IS TO BE SUBMITTED WITH THE APPROPRIATE FEES DIRECTLY TO THE MDE PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. NO LAND DISTURBING ACTIVITY THAT REQUIRES A GRADING PERMIT FROM WASHINGTON COUNTY SHOULD PROCEED UNTIL THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (MDR10) HAS BEEN ISSUED BY MDE.
7. NO PERMANENT STRUCTURES (FENCES, SHEDS, PLAY EQUIPMENT, RETAINING WALLS, ETC.) SHALL BE PERMITTED WITHIN ANY STORM DRAINAGE EASEMENT EITHER SHOWN OR DESCRIBED ON THE FINAL PLAT OF SUBDIVISION.
8. DEVELOPER/CONTRACTOR MUST CONTACT THE CERTIFYING ENGINEER AND THE COUNTY AT LEAST 5 DAYS PRIOR TO THE START OF CONSTRUCTION OF THE STORM WATER MANAGEMENT SYSTEM TO SCHEDULE AND COORDINATE INSPECTION TIME TABLES.
9. IN CONFORMANCE WITH THE STORM WATER MANAGEMENT ORDINANCE OF WASHINGTON COUNTY, A PERFORMANCE SECURITY AND EXECUTED MAINTENANCE AND ACCESS AGREEMENT SHALL BE REQUIRED FROM THE DEVELOPER PRIOR TO ISSUANCE OF ANY BUILDING OR GRADING PERMIT FOR CONSTRUCTION PER THESE PLANS.
10. CONTRACTOR IS RESPONSIBLE FOR CONTACTING "MISS UTILITY" AT 1–800–257–7777, 48 HOURS PRIOR TO ANY EXCAVATION WORK.
11. MAXIMUM SLOPES SHALL BE NOT GREATER THAN THREE (3) FEET HORIZONTAL TO ONE (1) FOOT VERTICAL OUT SIDE THE ROAD RIGHT–OF–WAY. SLOPES WITHIN THE ROAD RIGHT–OF–WAY SHALL BE NOT GREATER THAN TWO (2) FEET HORIZONTAL TO ONE (1) FOOT VERTICAL, OR UNLESS SPECIFIED ON THE PLANS.
12. CERTIFIED COMPACTION TESTS ARE REQUIRED FOR ALL TRENCH/FILL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE SPECIFICATIONS MANUAL AND GRADING ORDINANCE. FINAL REPORTS AND CERTIFICATIONS SHALL BE PROVIDED PRIOR TO PRE–FINAL INSPECTIONS.
13. CERTIFIED COMPACTION TESTS AND GEOTECHNICAL REPORTS SHALL BE SUBMITTED ON A REGULAR BASIS THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED BY THE SPECIFICATIONS MANUAL.
14. AS–BUILT PLANS SHALL BE SUBMITTED PRIOR TO PRE–FINAL INSPECTIONS FOR ALL DISCIPLINES.
15. WITH APPROVAL FROM THE WCSCD, ALL EROSION AND SEDIMENT CONTROL STRUCTURES MUST BE REMOVED PRIOR TO THE RELEASE OF BONDS.
16. MHT FOUND THAT THERE ARE NO KNOWN HISTORIC SITES LOCATED WITHIN THIS SITE.
17. OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR MUST VERIFY ALL SUCH INFORMATION TO HIS OWN SATISFACTION. IN THE EVENT THAT INFORMATION IS IN CONFLICT WITH INFORMATION OUTLINED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT PRIOR TO STARTING ANY WORK.
18. ADJUST TOP OF CURB GRADES TO SMOOTH TRANSITION.
19. STRIP AND RESURFACE EXISTING PAVING AS NEEDED TO PROVIDE SMOOTH TRANSITION TO EXISTING SURFACE.
20. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLETE SUCH WORK.
21. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY WCSCD AND WASHINGTON COUNTY OF ANY DEVIATION FROM THIS PLAN PRIOR TO ANY CHANGE BEING MADE. ANY DEVIATION FROM THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE COUNTY WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
22. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
23. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL TIE–IN ELEVATIONS.
24. FILL IN STRUCTURAL AND PAVEMENT AREAS SHALL BE PLACED IN HORIZONTAL, EIGHT–INCH MAXIMUM LOOSE LIFTS AND COMPACTED TO AT LEAST 95 PERCENT OF THE MODIFIED PROCTOR. MAXIMUM DRY DENSITY PER ASTM D–1557. IN AREAS TO SUPPORT FLOOR SLABS AND PAVEMENTS THE UPPERMOST ONE FOOT (AFTER COMPACTION) SHALL BE COMPACTED TO 98 PERCENT OF THE MAXIMUM DRY DENSITY. THE MOISTURE CONTENT OF THE FILL SHALL BE PROPERLY CONTROLLED DURING PLACEMENT. IN BUILDING AREAS FILL SHALL EXTEND A MINIMUM OF 10 FEET BEYOND THE BUILDING LIMITS AND FILL SLOPES NO STEEPER THAN 2:1 SHALL BE USED. SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
25. CONTRACTOR WILL ADJUST ALL FRAMES, GRATES AND COVERS OF ALL EXISTING UTILITIES WITHIN THE LIMITS OF THE CONTRACT TO THE PROPOSED GRADES, AS REQUIRED.
26. THE CONTRACTOR WILL MAINTAIN POSITIVE DRAINAGE TO SWALES AND/OR STORM DRAIN SYSTEMS AT ALL TIMES.
27. ALL EXCESS SOILS ARE TO BE DISPOSED OF ON SITE.
28. BOUNDARY INFORMATION SHOWN HEREON IS BASED ON AVAILABLE RECORD PLATS AND A FIELD RUN SURVEY PERFORMED BY KCI TECHNOLOGIES INC. DATED AUGUST 2017.
29. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS PREPARED BY KCI TECHNOLOGIES DATED AUGUST 2017.
30. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES SHOWN HEREON BEFORE STARTING ANY WORK ON THESE PLANS. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR THE COST OF ANY AND ALL DAMAGES WHICH OCCUR AS A RESULT OF A FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES TO REMAIN.
31. WATER IS PUBLIC (CITY OF HAGERSTOWN). EXISTING USAGE=200G/D(TO BE ABANDONED). PROPOSED=UP TO 1,500GPM
32. SEWER IS PUBLIC (WASHINGTON COUNTY).
33. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLETE SUCH WORK.
34. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
35. ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
36. THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
37. TRENCH BACKFILL IN GRASS AREAS SHALL BE COMPACTED TO A MINIMUM 90% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH A.A.S.H.T.O. VERIFY DESIGNATION T–180, METHOD C. TRENCH BACKFILL IN STRUCTURAL AND PAVEMENT AREAS SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D–1557). IN PAVED AREAS, FILL BELOW THE TOP 12 INCHES SHOULD BE COMPACTED TO 97%.
38. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING STRUCTURES AT ALL TIMES.
39. CONTRACTOR SHALL COORDINATE ALL DISCONNECTIONS AND REMOVAL OF EXISTING GAS, ELECTRIC AND TELEPHONE SERVICES AND EQUIPMENT WITH POTOMAC EDISON AND VERIZON.
40. CONTRACTOR SHALL INSTALL SEDIMENT CONTROLS PRIOR TO BEGINNING ANY WORK AND MAINTAIN SEDIMENT CONTROLS THROUGHOUT THE ENTIRE DURATION OF DEMOLITION AND CONSTRUCTION ACTIVITIES.
41. ALL EXCAVATION SHALL BE BACKFILLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A PORTION OF A UTILITY IS TO BE REMOVED THE CONTRACTOR SHALL TERMINATE AND CAP TO THE LIMITS INDICATED IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS.
42. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
43. STORMWATER MANAGEMENT QUANTITY AND QUALITY HAS BEEN PROVIDED IN ACCORDANCE WITH THE 2010 MARYLAND STORMWATER MANAGEMENT ORDINANCE AND REVISED 2010 STORMWATER MANAGEMENT DESIGN MANUAL. ALL PRACTICES WILL BE PRIVATELY OWNED AND MAINTAINED IN THEIR ENTIRETY.
44. EXISTING UTILITIES ARE BASED ON AVAILABLE EXISTING PLANS AND FIELD RUN TOPOGRAPHY PERFORMED BY KCI TECHNOLOGIES ON OR ABOUT AUGUST 2017.
45. A GEOTECHNICAL REPORT, PREPARED BY ECS MID–ATLANTIC, LLC, IS INCLUDED IN THE PLAN SUBMITTAL.
46. A WATERWAY AND WETLAND DELINEATION WAS COMPLETED BY KCI TECHNOLOGIES, INC. IN AUGUST 2017. NO WATERWAYS OR WETLANDS WERE IDENTIFIED.
47. MDE PREFORMED A SITE REVIEW ON AUGUST 14, 2017 AND CONCURRED THAT NO JURISDICTIONAL WETLAND OR WATERWAY RESOURCES EXIST ONSITE. THEREFORE NO AUTHORIZATION IS NEEDED FROM MDE'S WATERWAY CONSTRUCTION DIVISION FOR ANY WORK AT THE SITE.
48. THE 100–YR FLOODPLAIN IS SOUTH OF LAPPANS ROAD, WHICH IS APPROXIMATELY 4,200' SOUTH OF THE SITE. FEMA PANEL NUMBER 240070 0155 A.
49. FOREST STANDS WERE DELINEATED BY KCI TECHNOLOGIES, INC. DURING AUGUST 2017. 5 FOREST STANDS WERE FOUND WITHIN THE STUDY AREA FOR COUNTY FILE FS–18–027.
50. THE SITE IS LOCATED WITHIN AN AREA OF KARST LIMESTONE GEOLOGY WITH MAPPED SINKHOLES AND CLOSED DEPRESSIONS BEING MAPPED IN THE VICINITY OF THE SITE. REPAIR OF KARST FEATURES DURING CONSTRUCTION SHOULD BE EXPECTED AND BUDGETED FOR.
51. STORMWATER MANAGEMENT REQUIREMENTS (QUALITY AND QUANTITY) WILL BE ADDRESSED THROUGH MULTIPLE PRACTICES WHICH INCLUDE BIORETENTION, SWALES, AND NON–ROOFTOP DISCONNECTION.
52. GROUNDWATER WAS ENCOUNTERED 15–20 FEET BELOW FINISHED GRADE SO GROUNDWATER SHOULD NOT BE EXPECTED DURING CONSTRUCTION.
53. THE ONSITE LOW PLASTICITY CLAY, SILT, AND SAND SOILS MAY BE SUITABLE FOR REUSE AS ENGINEERED FILL DEPENDING ON MOISTURE CONDITIONING. THE HIGHER PLASTICITY CLAY SOILS (CH, CL/CH) MAY BE SUITABLE FOR REUSE IN NON–STRUCTURAL AREAS. NO SOILS ARE TO BE HAULED OFF SITE. SEE GEOTECH REPORT FOR MORE DETAILS.
54. HIGH PLASTIC CLAY (CL/CH, CH) SOILS ARE EXPECTED TO BE ENCOUNTERED AT FOOTING SUBGRADE ELEVATIONS IN SOME AREAS. WHEN ENCOUNTERED, SUBGRADE WILL REQUIRE UNDERCUTTING TO COMPETENT MATERIAL OR UNDERCUT AND RESTORED TO FOUNDATION ELEVATIONS WITH LEAN CONCRETE.
55. ALL LIGHTING SHALL BE DIRECTED SO AS TO AVOID GLARE AND LIGHT TRESPASS ON ADJACENT PROPERTIES AND ROADS. APPROVED FOREST CLEARING ON THE SITE CURRENTLY FALLS BELOW FOREST CLEARING PERMITTED W/O MITIGATION. ADDITIONAL FOREST CLEARING BEYOND PERMITTED LINES DURING THIS PHASE OF THE PROJECT MAY NECESSITATE MITIGATION UNDER THE WASHINGTON COUNTY FOREST CONSERVATION ORDINANCE. FUTURE PHASES OF SITE DEVELOPMENT SHALL BASE FOREST MITIGATION ON THE CUMULATIVE AMOUNT OF FOREST CLEARING WHICH HAS OCCURRED AND UTILIZE THE ORIGINAL TRACT AREA TO DETERMINE MITIGATION REQUIREMENTS. A PERMANENT FOREST EASEMENT MUST BE ESTABLISHED WHEN CUMULATIVE PERMITTED FOREST CLEARING EXCEEDS THE CUMULATIVE PERMITTED FOREST CLEARING WITHOUT MITIGATION.
56. A VARIANCE WAS GRANTED BY THE WASHINGTON COUNTY PLANNING COMMISSION AT THEIR MARCH 4TH, 2019 MEETING FOR THE REMOVAL OF 2 SPECIMEN TREES (#1 AND 2 IN THE TABLE), DESCRIBED AS A 35" WHITE MULBERRY AND A 34" BLACK CHERRY.

SHEET INDEX

SHEET NUMBER		SHEET DESCRIPTION
1	C-0.00	TITLE SHEET
~~2~~	~~C-0.01~~	~~EXISTING CONDITIONS / DEMOLITION PLAN~~
3	C-1.00	OVERALL SITE PLAN
4	C-1.01	DETAILED SITE PLAN
5	C-1.02	DETAILED SITE PLAN
6	C-1.03	DETAILED SITE PLAN
7	C-1.04	DETAILED SITE PLAN
~~8~~	~~C-1.05~~	~~ROAD PROFILES AND DETAILS~~
~~9~~	~~C-1.06~~	~~ROAD PROFILES AND DETAILS~~
10	C-1.07	UTILITY PLAN
11	C-1.08	WATER PROFILES
12	C-1.09	SEWER PROFILES
~~13~~	~~C-1.10~~	~~STORM DRAIN PROFILES~~
14	C-1.11	CONSTRUCTION DETAILS
15	C-1.12	CONSTRUCTION DETAILS
16	C-1.13	CONSTRUCTION DETAILS
17	C-1.14	LANDSCAPE PLAN
18	C-1.15	LANDSCAPE DETAILS AND NOTES
~~19~~	~~C-1.16~~	~~PHOTOMETRIC PLAN~~
20	C-2.00	STORMWATER MANAGEMENT PLAN
~~21~~	~~C-2.01~~	~~OVERALL EXISTING DRAINAGE AREA MAP~~
~~22~~	~~C-2.02~~	~~OVERALL PROPOSED DRAINAGE AREA MAP~~
~~23~~	~~C-2.03~~	~~STORMWATER MANAGEMENT FACILITY PLAN~~
~~24~~	~~C-2.04~~	~~STORMWATER MANAGEMENT FACILITY PLAN~~
~~25~~	~~C-2.05~~	~~STORMWATER MANAGEMENT FACILITY PLAN~~
~~26~~	~~C-2.06~~	~~STORMWATER MANAGEMENT FACILITY PLAN~~
~~27~~	~~C-2.07~~	~~STORMWATER MANAGEMENT FACILITY PLAN~~
~~28~~	~~C-2.08~~	~~STORMWATER MANAGEMENT FACILITY PLAN~~
~~29~~	~~C-2.09~~	~~STORMWATER MANAGEMENT DETAILS & NOTES~~
~~30~~	~~C-2.10~~	~~STORMWATER MANAGEMENT DETAILS & NOTES~~
31	C-3.00	OVERALL EROSION AND SEDIMENT CONTROL PLAN
32	C-3.01	FINAL GRADING, EROSION AND SEDIMENT CONTROL PLAN
33	C-3.02	FINAL GRADING, EROSION AND SEDIMENT CONTROL PLAN
34	C-3.03	FINAL GRADING, EROSION AND SEDIMENT CONTROL PLAN
35	C-3.04	FINAL GRADING, EROSION AND SEDIMENT CONTROL NOTES & DETAILS
36	C-3.05	FINAL GRADING, EROSION AND SEDIMENT CONTROL NOTES & DETAILS
37	C-3.06	FINAL GRADING, EROSION AND SEDIMENT CONTROL NOTES & DETAILS
38	C-3.07	SOIL BORING LOGS
39	C-3.08	SOIL BORING LOGS



BUILDING FLOOR PLAN
N.T.S

PARKING TABULATION

PARKING SPACE REQUIREMENT RATIONALE:
1. TOTAL SEATS SHOWN IN BUILDING DESIGN = 507 COLLEGE AND CONFERENCE CENTERS ARE PARKED AT 1 PARKING SPACE PER 3 SEATS RESULTING IN 169 SPACES
2. BASED ON THE ORGANIZATIONAL CHARTS FOR THE WASHINGTON COUNTY SHERIFFS OFFICE, JUDICIAL SYSTEM AND DETENTION CENTER, THERE ARE CURRENTLY 258 EMPLOYEES. IF $\frac{1}{3}$ OF THE EMPLOYEES ARE ON THE JOB AT ONE TIME AND A COMBINED CLASS IS HELD FOR THE REST, THEN THIS EQUATES TO 170 IN ATTENDANCE RESULTING IN 170 PARKING SPACES REQUIRED.

PARKING SPACES PROVIDED:
TOTAL = 176 SPACES
HANDICAP = 6 SPACES
NORMAL SPOTS= 170 SPACES
BIKE SPACES= BIKE RACK FOR 7

SITE ANALYSIS DATA CHART

A. TOTAL SITE AREA: 49.29 AC. OR 2,147,072 SQ.FT
B. AREA OF PLAN SUBMISSION: 49.29 AC. OR 2,147,072 SQ.FT
C. LIMIT OF DISTURBED AREA: 10.81 AC OR 470,978 SQ.FT
D. EXISTING IMPERVIOUS AREA: 0.00 AC
E. PROPOSED IMPERVIOUS AREA: 4.30 AC OR 187,310 SQ.FT
F. PRESENT ZONING DESIGNATION: R–T
G. PROPOSED USES FOR SITE AND STRUCTURES: TRAINING CENTER
H. OPEN SPACE ON SITE: 5.05 ACRES AND 54% OF DISTURBED AREA.
I. BASE BID BUILDING AREA: 28,450 SF
J. POTENTIAL BUILDING AREA: 44,165 SF
K. HOURS OF OPERATION: 7AM TO 10PM M–F, 830M TO 330PM SAT/SUN.
L. BUILDING ADDRESS: 18350 PUBLIC SAFETY PLACE

SWM SUMMARY TABLE

AREA OF DISTURBANCE (Ac.)	EX. IMP. AREA (Ac.)	PROP. IMP. AREA (Ac.)	ESD VOLUME (CF)	
			REQUIRED	PROVIDED
10.81	0.00	4.30	28,504	28,904

SHA NOTE
THE FOLLOWING SHA STANDARDS ARE REQUIRED FOR THIS PROJECT:
MD–104.02–01 – SHOULDER WORK/ 2–LANE, 2–WAY GREATER THAN 40
MD–104.02–03 – LANE SHIFT GREATER THAN 40 MPH
MD–104.02–09 – FLAGGING OPERATION 2–LANE,2 WAY GREATER THAN 40 MPH
MD–387.11 – LONGITUDINAL UNDERDRAIN LOCATED AT SHOULDER
FOR ALL STANDARDS REFERRED TO ON THE PLANS THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.

OWNER/DEVELOPER CERTIFICATION – EROSION CONTROL

"I/WE CERTIFY ALL/ANY PARTIES RESPONSIBLE FOR CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL; BE DONE PURSUANT TO THIS PLAN AND RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVAL TRAINING PROGRAM FOR THE CONTROL OF SOIL EROSION AND SEDIMENT"

PRINTED NAME OF DEVELOPER DATE

SIGNATURE

ENGINEER AS–BUILT STORM WATER MANAGEMENT CERTIFICATION

I VERIFY AND AFFIRM THAT THE CONSTRUCTION FOR THE STORM WATER MANAGEMENT FACILITIES AS PERFORMED EITHER MEETS OR EXCEEDS THE REQUIREMENTS AND DESIGN INTENT OF THIS PLAN, INCLUDING ALL THE SPECIFICATIONS AND REFERENCED STANDARDS, AND HAS BEEN COMPLETED IN ACCORDANCE WITH GOOD CONSTRUCTION INSPECTION DOCUMENTATION AND THE AS–BUILT INFORMATION; THAT IT HAS BEEN DONE IN ACCORDANCE WITH WASHINGTON COUNTY REQUIREMENTS AND AT A LEVEL DISCREPANCIES BETWEEN THE AS–BUILT INFORMATION AND APPROVED PLANS HAVE BEEN NOTED AND ARE CONSIDERED ACCEPTABLE TO THE CONSULTANT.

DATE PRINTED NAME SIGNATURE

APPROVED

WASHINGTON COUNTY DIVISION OF PLAN REVIEW & PERMITTING

SIGNATURE DATE

ENGINEER CERTIFICATION – EROSION CONTROL

I HEREBY CERTIFY THAT THIS PLAN FOR SOIL EROSION AND SEDIMENT CONTROL AND POND CONSTRUCTION HAS BEEN DESIGNED IN ACCORDANCE WITH LOCAL ORDINANCES, COMAR 26.17.01.07, MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION AND SEDIMENT CONTROL

DATE REG. NO. SIGNATURE

OWNER/DEVELOPER CERTIFICATION–WASHINGTON COUNTY

I/WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND IN ACCORDANCE WITH THE STORM WATER MANAGEMENT ORDINANCE OF WASHINGTON COUNTY AND THE POLICY ON CONSTRUCTION OF SUBDIVISION INFRASTRUCTURE FOR ACCEPTANCE AND OWNERSHIP BY WASHINGTON COUNTY (S–3)

DATE PRINTED NAME SIGNATURE

WASHINGTON COUNTY SOIL CONSERVATION DISTRICT SOIL EROSION AND SEDIMENT CONTROL PLAN APPROVAL

BY: _____

DATE: _____

(PLAN IS VALID FOR TWO YEARS FROM DATE OF APPROVAL)

DISTURBED AREA QUANTITIES

THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 10.81 ACRES AND THE TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO BE APPROXIMATELY 27,050 C.Y. OF EXCAVATION AND 42,350 C.Y. OF FILL

MISS UTILITY

CALL "MISS UTILITY" AT 1–800–257–7777, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

1/15/20

100% PLAN SET

ALL REPORTS, PLANS SPECIFICATIONS AND COMPUTER FILES RELATING TO THIS PROJECT ARE THE PROPERTY OF CRABTREE, ROHRBAUGH & ASSOCIATES. CRABTREE ROHRBAUGH & ASSOCIATES RETAINS ALL COMMON LAW, STATUTE AND OTHER RESERVED RIGHTS INCLUDING THE COPYRIGHT THERETO. REPRODUCTION OF THE MATERIAL HERIN OR SUBSTANTIAL USE WITHOUT WRITTEN PERMISSION OF CRABTREE, ROHRBAUGH & ASSOCIATES VIOLATES THE COPYRIGHT LAWS OF THE UNITED STATES AND WILL BE SUBJECT TO LEGAL PROSECUTION.
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REVISIONS

MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

PLOT SCALE:

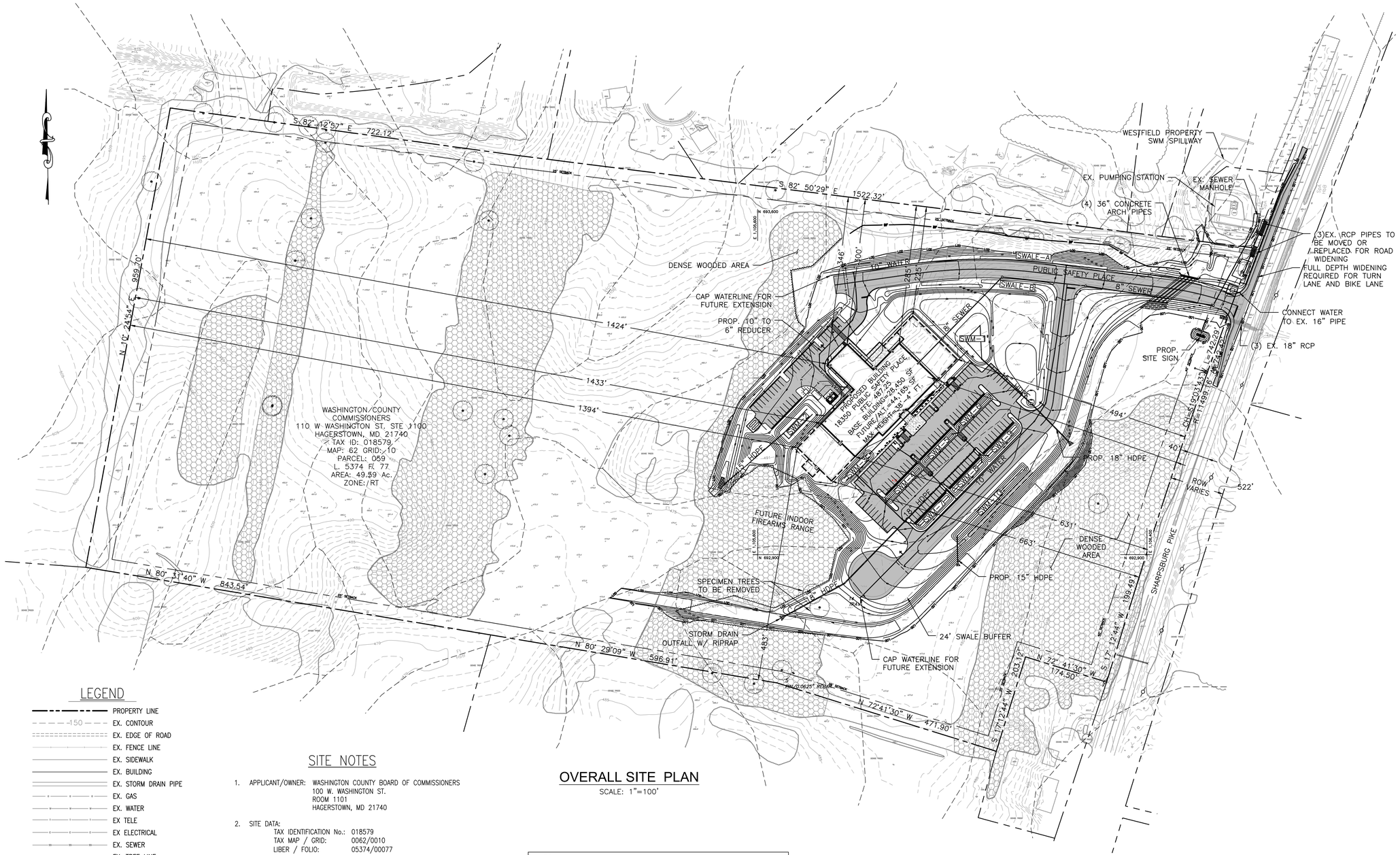
FILENAME: KCI# 271703606

DATE: 12/18/19

PROJECT
3089

C-0.00

SP-18-044



OVERALL SITE PLAN

SCALE: 1"=100'

LEGEND

- PROPERTY LINE
- 150 EX. CONTOUR
- EX. EDGE OF ROAD
- EX. FENCE LINE
- EX. SIDEWALK
- EX. BUILDING
- EX. STORM DRAIN PIPE
- EX. GAS
- EX. WATER
- EX TELE
- EX ELECTRICAL
- EX. SEWER
- EX. TREE LINE
- EX. SEWER MANHOLE
- EX. ELECTRIC MANHOLE
- EX. FIRE HYDRANT
- LIMIT OF DISTURBANCE
- PROP. EDGE OF ROAD
- PROP. BUILDING
- 150 PROP. CONTOUR
- PROP. FENCE
- PROP. GAS
- PROP. STORM DRAIN PIPE
- PROP. SEWER PIPE
- MnB MnE SOILS LINE
- SPECIMEN TREE
- FORESTED AREAS NOT TO BE CLEARED

SITE NOTES

1. APPLICANT/OWNER: WASHINGTON COUNTY BOARD OF COMMISSIONERS
   100 W. WASHINGTON ST.
   ROOM 1101
   HAGERSTOWN, MD 21740
2. SITE DATA:
   - TAX IDENTIFICATION No.: 018579
   - TAX MAP / GRID: 0062/0010
   - LIBER / FOLIO: 05374/00077
   - PLAT M683
   - ELECTION DISTRICT: 10
   - HOURS OF OPERATION: 7AM–10PM M–F, 830AM–330PM SAT–SUN
   - SITE ADDRESS: 18350 PUBLIC SAFETY PLACE HAGERSTOWN, MD 21740
3. EXISTING USE: VACANT/FARM
4. PROPOSED USE: PUBLIC SAFETY TRAINING CENTER
5. ZONING OF SITE IS RT (RESIDENTIAL TRANSITION)
6. LIMIT OF DISTURBANCE = 470,978 sq.ft or 10.81 Ac.
7. EXISTING IMPERVIOUS AREA = 0.00 sq.ft or 0.00 Ac.
8. PROPOSED IMPERVIOUS AREA = 4.30 Ac.
9. TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL FLOWN TOPOGRAPHY DATED AUGUST 2017.
10. NOTIFY "MISS UTILITY" AT 1–800–257–7777 48 HOURS PRIOR TO DOING ANY EXCAVATION IN THIS AREA. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATED AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
11. PROPOSED WATER USAGE: 1000 GPM OR 5 EDU'S. POTENTIAL 1500 GPM WITH FUTURE EXPANSION.

NOTE:

SEE SHEETS C1.01 AND C1.02 FOR DETAILED SITE PLANS

SEE SHEETS C1.03 AND C1.04 FOR DETAILED GRADING PLANS

SEE SHEETS C1.05 AND C1.06 FOR ROAD PLANS AND PROFILES

SEE SHEETS C1.07 THRU C1.10 FOR UTILITY PLAN AND PROFILES

SEE SHEETS C2.00 THRU C2.10 FOR STORMWATER MANAGEMENT PLANS AND DETAILS

GRAPHIC SCALE

100 50 0 100 200

SCALE: 1"=100'

12/18/20

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

100% PLAN SET

CRABTREE ROHRBAUGH & ASSOCIATES
ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

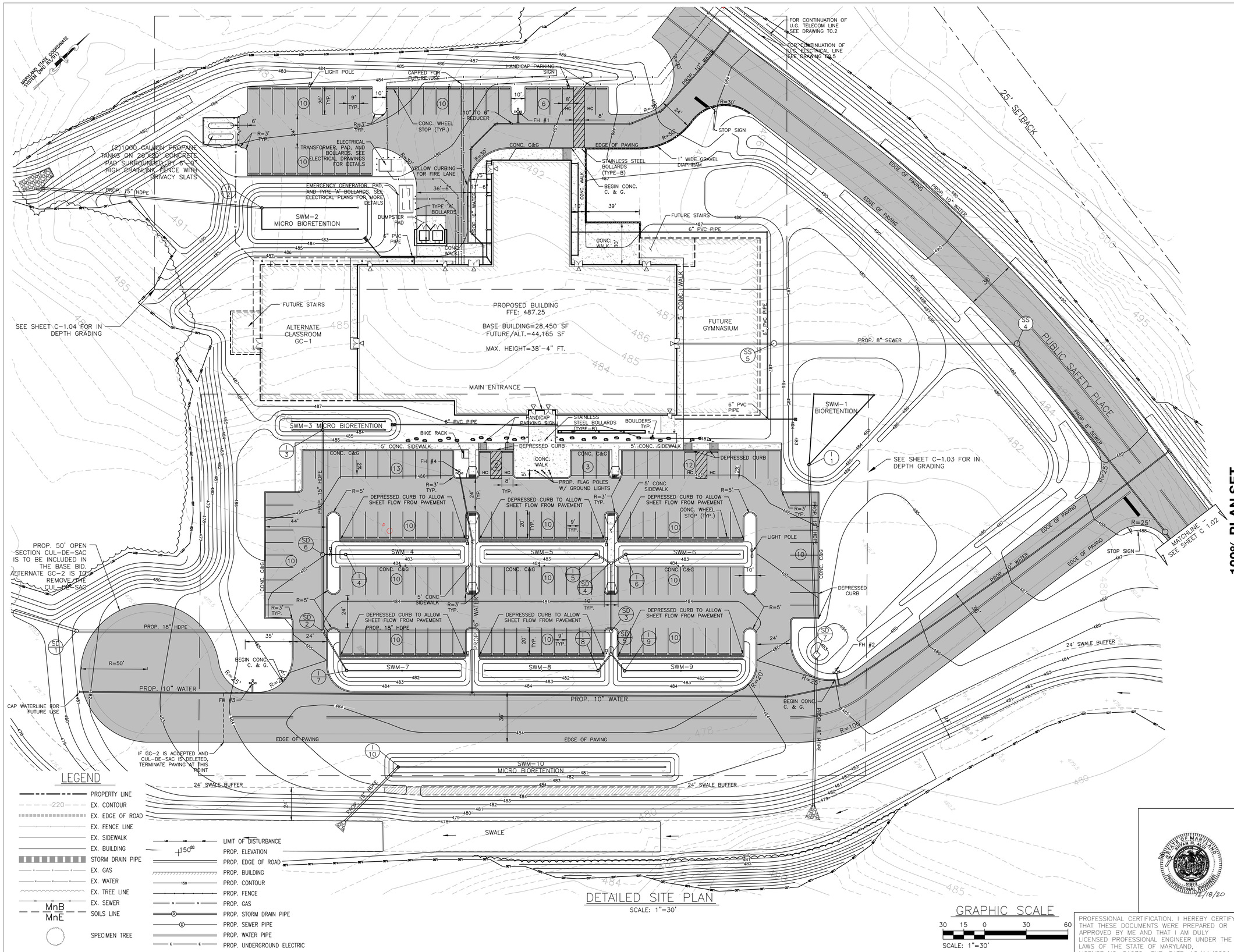
OVERALL SITE PLAN

PLOT SCALE: 1:100
FILENAME: KCI# 271703606
DATE: 12/18/20

PROJECT 3089

C-1.00

SP-18-044



DETAILED SITE PLAN

SCALE: 1"=30'

GRAPHIC SCALE

30 15 0 30 60

SCALE: 1"=30'

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410-792-7419 (F)

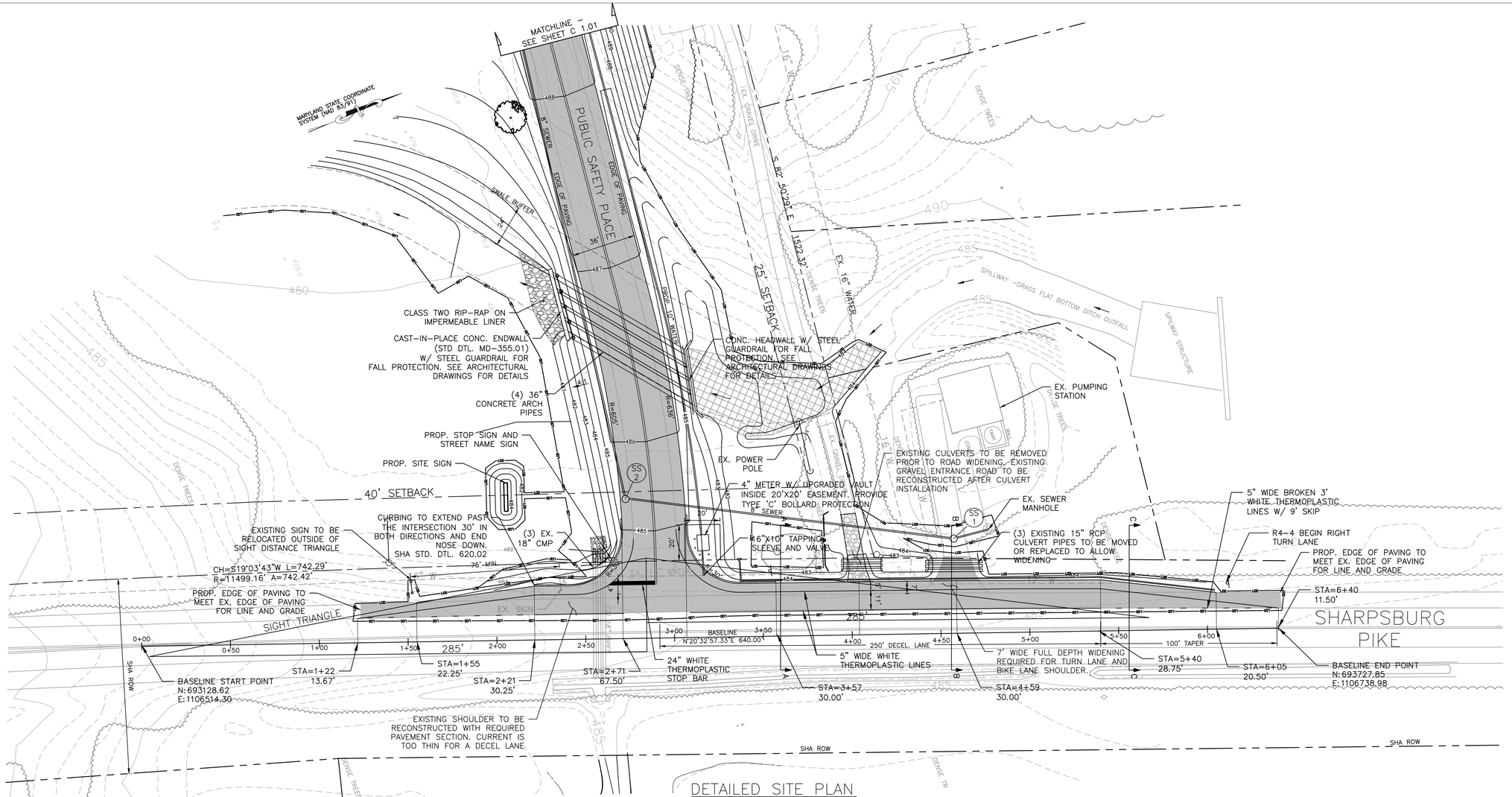
DETAILED SITE PLAN

PLOT SCALE: 1:30
FILENAME: KCI# 271703606
DATE: 12/18/20

PROJECT
3089

C-1.01

SP-18-044



DETAILED SITE PLAN

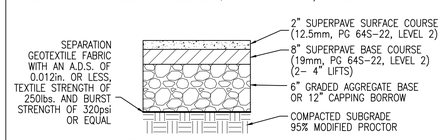
SCALE: 1"=30'

LEGEND

- PROPERTY LINE
- EX. CONTOUR
- EX. EDGE OF ROAD
- EX. FENCE LINE
- EX. SIDEWALK
- EX. BUILDING
- STORM DRAIN PIPE
- EX. GAS
- EX. WATER
- EX. TREE LINE
- EX. SEWER
- MnB / MnE — SOILS LINE
- SPECIMEN TREE
- LIMIT OF DISTURBANCE
- PROP. ELEVATION
- PROP. EDGE OF ROAD
- PROP. BUILDING
- PROP. CONTOUR
- PROP. FENCE
- PROP. GAS
- PROP. STORM DRAIN PIPE
- PROP. SEWER PIPE
- PROP. WATER PIPE

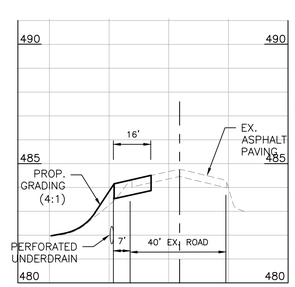
GENERAL PAVING NOTES

1. ALL ROADWAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GENERAL SPECIFICATIONS FOR HIGHWAY AND STREET CONSTRUCTION, THE SHA.
2. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES TO WATER AND SEWER LINES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, CONTACT THE DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL ELEVATIONS SHOWN ON THESE PLANS ARE REFERRED TO NAVD 88.
4. ALL AREAS DISTURBED WITHIN THE SITE SHALL BE REPAIRED IN KIND.
5. ALL CONCRETE TO BE SHA MIX #3 AIR ENTRAINED CONCRETE.
6. TOPSOIL OR OTHER ORGANIC MATERIALS, FROZEN, SOFT OR LOOSE SOILS, AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED BEFORE THE PLACEMENT OF FILL OR AGGREGATE BASE.
7. AT THE CURB FILLETS, NOTE THAT THE WIDENING OF A SUPERPAVE ASPHALT MIX PAVEMENT SECTION MUST BE A MINIMUM OF 4-FEET WIDE TO ACHIEVE PROPER COMPACTION PER SPECIFICATIONS. IF NARROWER, A CONCRETE PAVEMENT MAY BE USED
8. DUE TO POOR SOILS ON SITE, CLASS 1-A EXCAVATION AND BACKFILL IS REQUIRED FOR ROAD CONSTRUCTION. PROPOSED WORK REQUIRES 9,000CF OF EXCAVATION/BACKFILL.



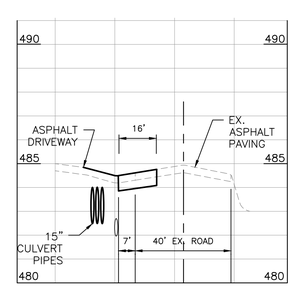
ASPHALT PAVING SECTION

(1) PAVEMENT SECTION FOR WORK WITHIN SHA RIGHT-OF-WAY



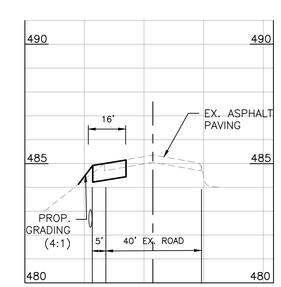
CROSS SECTION A-A

SCALE: 1"= 30'(HORIZ)
1"= 3'(VERT)



CROSS SECTION B-B

SCALE: 1"= 30'(HORIZ)
1"= 3'(VERT)



CROSS SECTION C-C

SCALE: 1"= 30'(HORIZ)
1"= 3'(VERT)

NOTE: CURRENT ROW PAVEMENT SECTION IS AROUND 8.25 INCHES THICK. ASPHALT IS BETWEEN 3.25 TO 4.5 INCHES AND GAB IS BETWEEN 3.75 AND 5.0 INCHES THICK.

GRAPHIC SCALE

30 15 0 30 60

SCALE: 1"=30'

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12/18/20

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REVISIONS

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100% PLAN SET

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240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

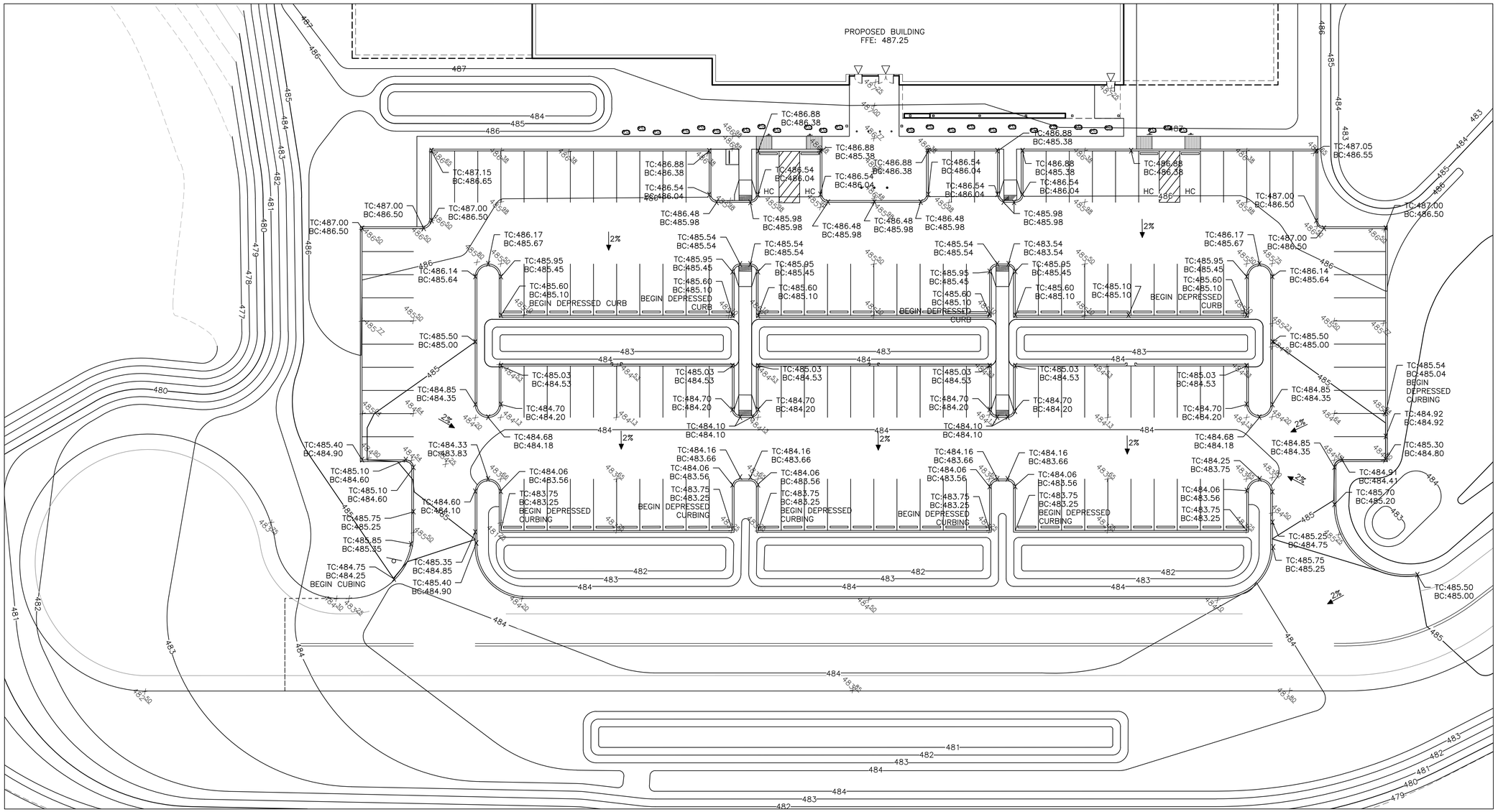
DETAILED SITE PLAN

PLOT SCALE: 1:30
FILENAME: KCI# 271703606
DATE: 12/18/20

PROJECT 3089

C-1.02

SP-18-044



DETAILED GRADING PLAN

SCALE: 1"=20'

LEGEND

- PROPERTY LINE
- EX. CONTOUR
- EX. EDGE OF ROAD
- EX. FENCE LINE
- EX. SIDEWALK
- EX. BUILDING
- STORM DRAIN PIPE
- EX. GAS
- EX. WATER
- EX. TREE LINE
- EX. SEWER
- SOILS LINE
- SPECIMEN TREE
- LIMIT OF DISTURBANCE
- PROP. ELEVATION
- PROP. EDGE OF ROAD
- PROP. BUILDING
- PROP. CONTOUR
- PROP. FENCE
- PROP. GAS
- PROP. STORM DRAIN PIPE
- PROP. SEWER PIPE
- PROP. WATER PIPE

GRAPHIC SCALE

30 15 0 30 60

SCALE: 1"=30'

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STATE OF MARYLAND
BRIAN R. ALDRICH
51972
PROFESSIONAL ENGINEER

1/15/20

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11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

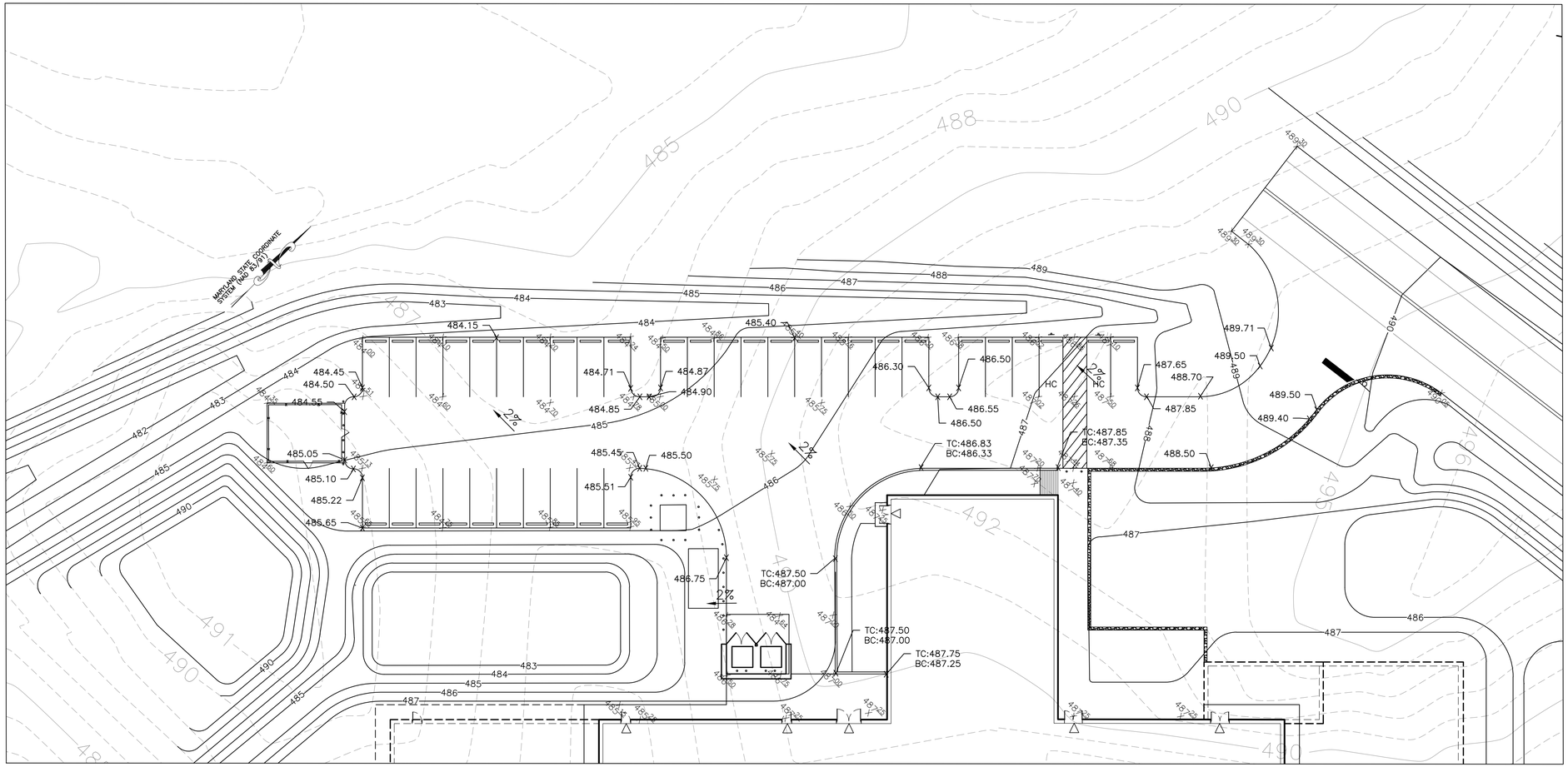
DETAILED SITE PLAN

PLOT SCALE: 1:30
FILENAME: KCI# 271703606
DATE: 12/18/19

PROJECT
3089

C-1.03

SP-18-044



DETAILED GRADING PLAN

SCALE: 1"=20'

LEGEND

- PROPERTY LINE
- EX. CONTOUR (220)
- PROP. ELEVATION (150.00)
- PROP. EDGE OF ROAD
- PROP. BUILDING
- PROP. CONTOUR (150)

GRAPHIC SCALE

20 10 0 20 20

SCALE: 1"=20'

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410-792-7419 (F)

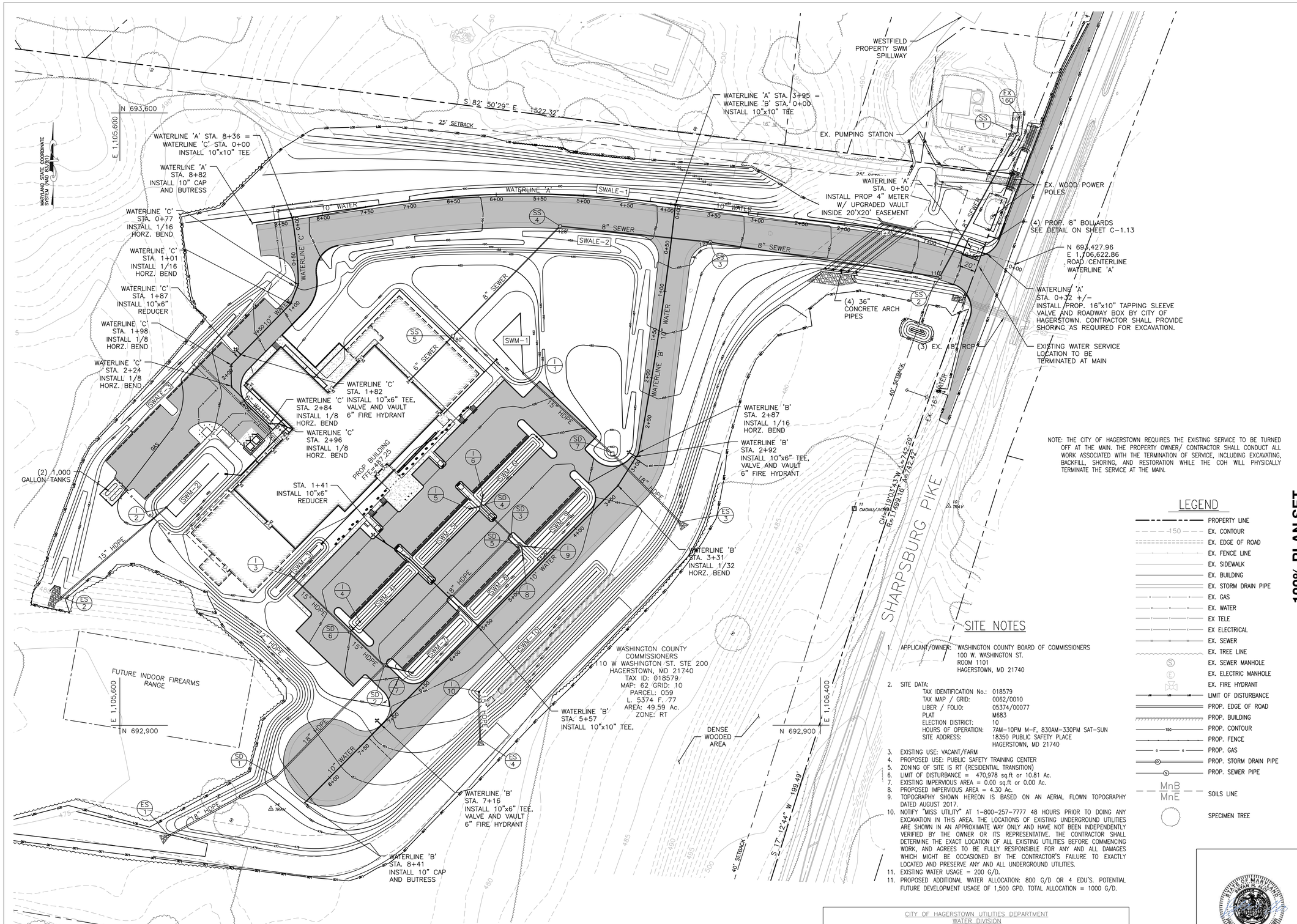
DETAILED SITE PLAN

PLOT SCALE: 1:20
FILENAME: KCI# 271703606
DATE: 12/18/20

PROJECT
3089

C-1.04

SP-18-044



UTILITY PLAN

SCALE: 1"=50'

GRAPHIC SCALE

50 25 0 50 100

SCALE: 1"=50'

NOTE:

SEE SHEETS C1.08 THRU C1.10 FOR UTILITY PROFILES

NOTE: THE CITY OF HAGERSTOWN REQUIRES THE EXISTING SERVICE TO BE TURNED OFF AT THE MAIN. THE PROPERTY OWNER/ CONTRACTOR SHALL CONDUCT ALL WORK ASSOCIATED WITH THE TERMINATION OF SERVICE, INCLUDING EXCAVATING, BACKFILL, SHORING, AND RESTORATION WHILE THE COH WILL PHYSICALLY TERMINATE THE SERVICE AT THE MAIN.

LEGEND

- PROPERTY LINE
- EX. CONTOUR
- EX. EDGE OF ROAD
- EX. FENCE LINE
- EX. SIDEWALK
- EX. BUILDING
- EX. STORM DRAIN PIPE
- EX. GAS
- EX. WATER
- EX TELE
- EX ELECTRICAL
- EX. SEWER
- EX. TREE LINE
- EX. SEWER MANHOLE
- EX. ELECTRIC MANHOLE
- EX. FIRE HYDRANT
- LIMIT OF DISTURBANCE
- PROP. EDGE OF ROAD
- PROP. BUILDING
- PROP. CONTOUR
- PROP. FENCE
- PROP. GAS
- PROP. STORM DRAIN PIPE
- PROP. SEWER PIPE
- MnB / MnE SOILS LINE
- SPECIMEN TREE

SITE NOTES

1. APPLICANT/OWNER: WASHINGTON COUNTY BOARD OF COMMISSIONERS
   100 W. WASHINGTON ST.
   ROOM 1101
   HAGERSTOWN, MD 21740
2. SITE DATA:
   - TAX IDENTIFICATION No.: 018579
   - TAX MAP / GRID: 0062/0010
   - LIBER / FOLIO: 05374/00077
   - PLAT M683
   - ELECTION DISTRICT: 10
   - HOURS OF OPERATION: 7AM-10PM M-F, 830AM-330PM SAT-SUN
   - SITE ADDRESS: 18350 PUBLIC SAFETY PLACE HAGERSTOWN, MD 21740
3. EXISTING USE: VACANT/FARM
4. PROPOSED USE: PUBLIC SAFETY TRAINING CENTER
5. ZONING OF SITE IS RT (RESIDENTIAL TRANSITION)
6. LIMIT OF DISTURBANCE = 470,978 sq.ft or 10.81 Ac.
7. EXISTING IMPERVIOUS AREA = 0.00 sq.ft or 0.00 Ac.
8. PROPOSED IMPERVIOUS AREA = 4.30 Ac.
9. TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL FLOWN TOPOGRAPHY DATED AUGUST 2017.
10. NOTIFY "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO DOING ANY EXCAVATION IN THIS AREA. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATED AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
11. EXISTING WATER USAGE = 200 G/D.
11. PROPOSED ADDITIONAL WATER ALLOCATION: 800 G/D OR 4 EDU'S. POTENTIAL FUTURE DEVELOPMENT USAGE OF 1,500 GPD. TOTAL ALLOCATION = 1000 G/D.

CITY OF HAGERSTOWN UTILITIES DEPARTMENT
WATER DIVISION

THIS APPROVAL IS FOR THE DESIGN AND LAYOUT OF THE PROPOSED WATER SYSTEM IMPROVEMENTS. ALL WATER SYSTEM IMPROVEMENTS SHALL BE CONSTRUCTED TO THE STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION. THIS APPROVAL DOES NOT GUARANTEE AVAILABILITY OF WATER SERVICE. WATER SERVICE IS AVAILABLE SUBJECT TO CONFORMANCE WITH ALL POLICIES AND STANDARDS IN EFFECT AT THE TIME OF APPLICATION FOR SERVICE, PAYMENT OF FEES AND APPROVAL OF THE WATER SERVICE APPLICATION. THE WATER DIVISION DOES NOT GUARANTEE A SPECIFIC WATER PRESSURE OR FLOW AT ANY METER OR FIRE HYDRANT. THIS APPROVAL IS VALID FOR A PERIOD OF ONE YEAR

SIGNATURE DATE

STATE OF MARYLAND
BRIAN K. RUPP
No. 51972
PROFESSIONAL ENGINEER
12/18/19

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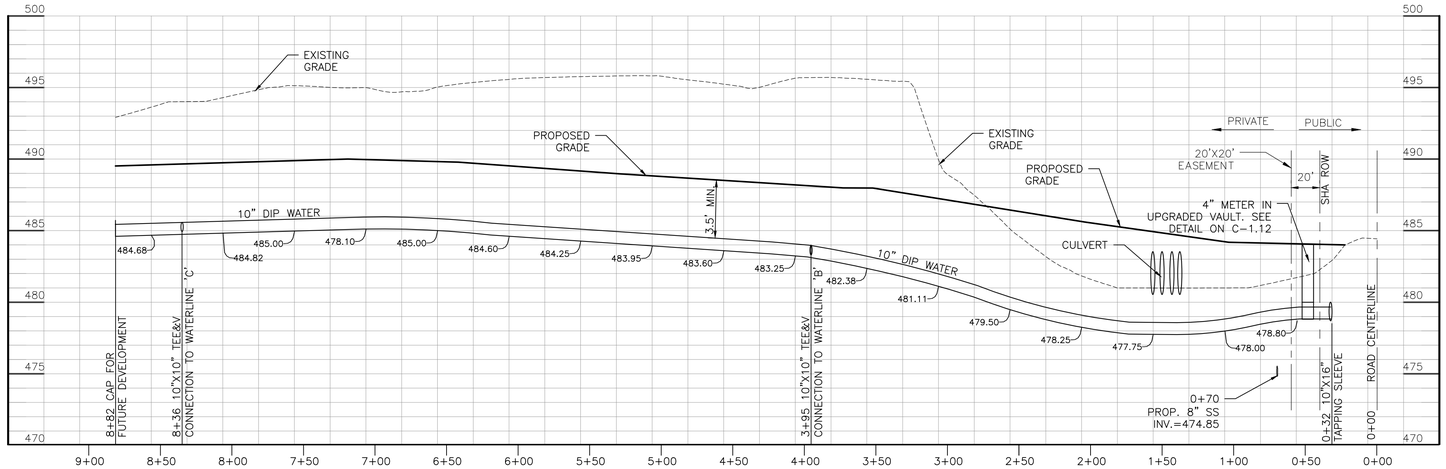
UTILITY PLAN

PLOT SCALE: 1:50
FILENAME: KCI# 271703606
DATE: 12/18/19

PROJECT
3089

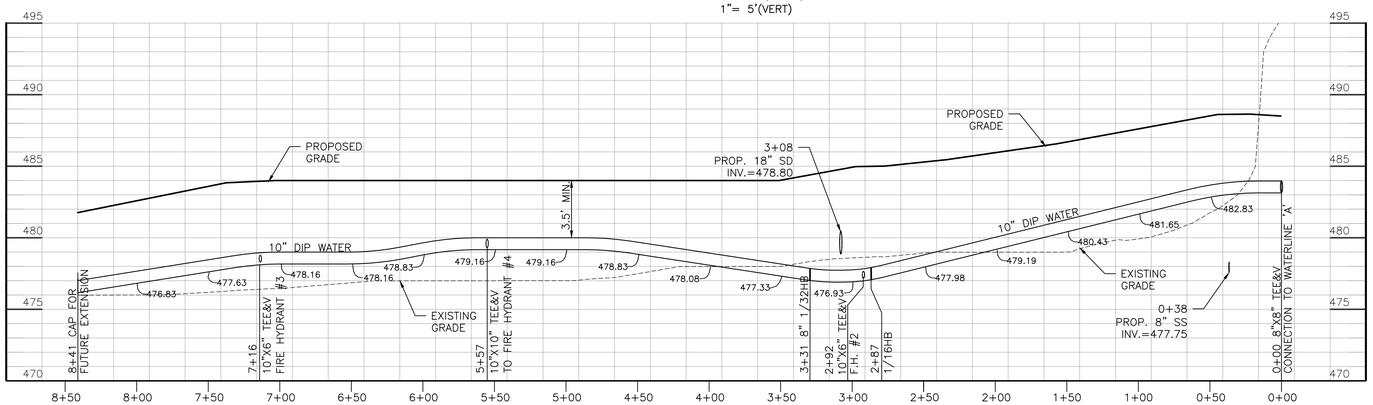
C-1.07

SP-18-044



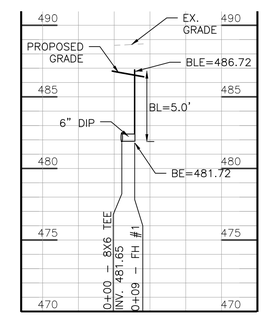
WATERLINE 'A' PROFILE

SCALE: 1"= 50'(HORIZ)
1"= 5'(VERT)



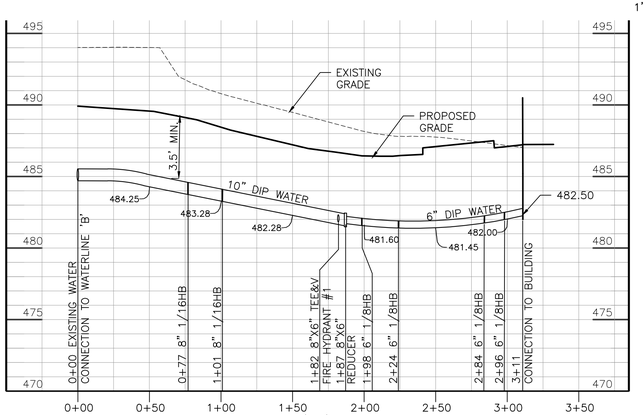
WATERLINE 'B' PROFILE

SCALE: 1"= 50'(HORIZ)
1"= 5'(VERT)



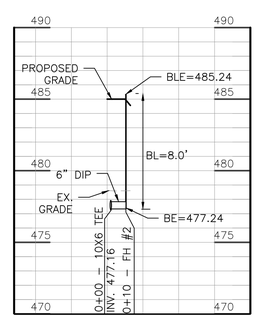
FIRE HYDRANT 1 PROFILE

SCALE: HOR: 1"=50'
VERT: 1"=5'



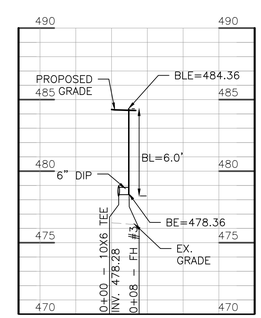
WATERLINE 'C' PROFILE

SCALE: 1"= 50'(HORIZ)
1"= 5'(VERT)



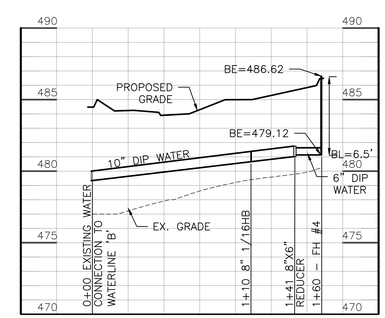
FIRE HYDRANT 2 PROFILE

SCALE: HOR: 1"=50'
VERT: 1"=5'



FIRE HYDRANT 3 PROFILE

SCALE: HOR: 1"=50'
VERT: 1"=5'



FIRE HYDRANT 4 PROFILE

SCALE: HOR: 1"=50'
VERT: 1"=5'

FITTINGS CHART

FITTING TYPE	STATION	NORTHING	EASTING
10X16" TS & V	0+32 (A)	693438.30	1106591.04
4" METER & VAULT	0+48 (A)	693443.27	1106575.38
10"X10" TEE&V	3+95 (A)	693495.41	1106234.53
10"X10" TEE&V	8+36 (A)	693480.79	1105796.96
10" CAP	8+82 (A)	693474.30	1105751.00
10" 1/16 H.B.	2+87 (B)	693211.37	1106192.38
10"X6" TEE&V	2+92 (B)	693207.32	1106189.16
8" 1/32 H.B.	3+31 (B)	693174.22	1106168.97
10"X10" TEE&V	5+57 (B)	693013.02	1106009.95
10"X6" TEE&V	7+16 (B)	692900.40	1105898.76
10" CAP	8+41 (B)	692811.90	1105810.59
10" 1/16 H.B.	0+77 (C)	693403.80	1105803.90
10" 1/16 H.B.	1+01 (C)	693381.98	1105795.10
10"X6" TEE&V	1+82 (C)	693323.76	1105738.35
10" TO 6" REDUCER	1+87 (C)	693320.43	1105735.11
6" 1/8 H.B.	1+98 (C)	693312.22	1105727.07
6" 1/8 H.B.	2+24 (C)	693286.96	1105727.47
6" 1/8 H.B.	2+84 (C)	693244.75	1105770.83
6" 1/8 H.B.	2+96 (C)	693244.83	1105783.11
8" 1/16 H.B.	1+10 (FH4)	693090.10	1105931.07
10" TO 6" REDUCER	1+41 (FH4)	693106.61	1105905.63

NOTE: PIPE SHALL BE DUCTILE IRON CLASS 52 (CL 52), CENTRIFUGALLY CAST IN 18 OR 20 FOOT NOMINAL LENGTHS, CONFORMING TO ASA A21.5I-1965 (AWWA C151) AND SHALL BE GRIFFIN, ATLANTIC STATES OR APPROVED EQUAL.

CITY OF HAGERSTOWN UTILITIES DEPARTMENT
WATER DIVISION

THIS APPROVAL IS FOR THE DESIGN AND LAYOUT OF THE PROPOSED WATER SYSTEM IMPROVEMENTS. ALL WATER SYSTEM IMPROVEMENTS SHALL BE CONSTRUCTED TO THE STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION. THIS APPROVAL DOES NOT GUARANTEE AVAILABILITY OF WATER SERVICE. WATER SERVICE IS AVAILABLE SUBJECT TO CONFORMANCE WITH ALL POLICIES AND STANDARDS IN EFFECT AT THE TIME OF APPLICATION FOR SERVICE, PAYMENT OF FEES AND APPROVAL OF THE WATER SERVICE APPLICATION. THE WATER DIVISION DOES NOT GUARANTEE A SPECIFIC WATER PRESSURE OR FLOW AT ANY METER OR FIRE HYDRANT. THIS APPROVAL IS VALID FOR A PERIOD OF ONE YEAR

SIGNATURE DATE

12/18/19

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

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CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

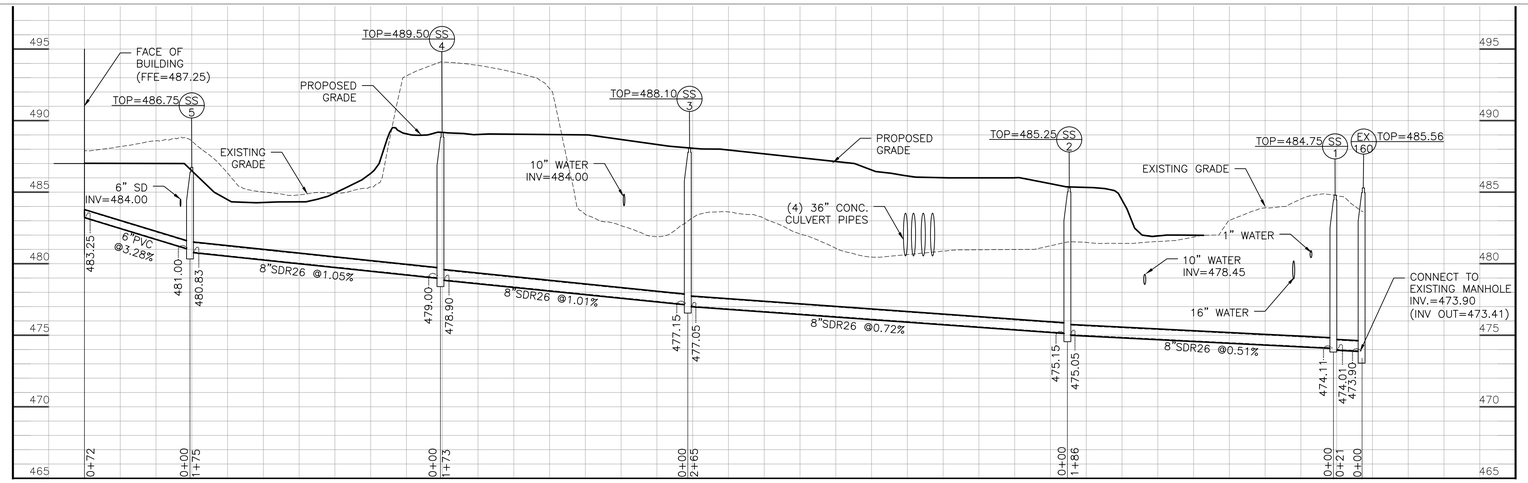
WATER PROFILES

PLOT SCALE: 1:50
FILENAME: KCI# 271703606
DATE: 12/18/19

PROJECT 3089

C-1.08

SP-18-044

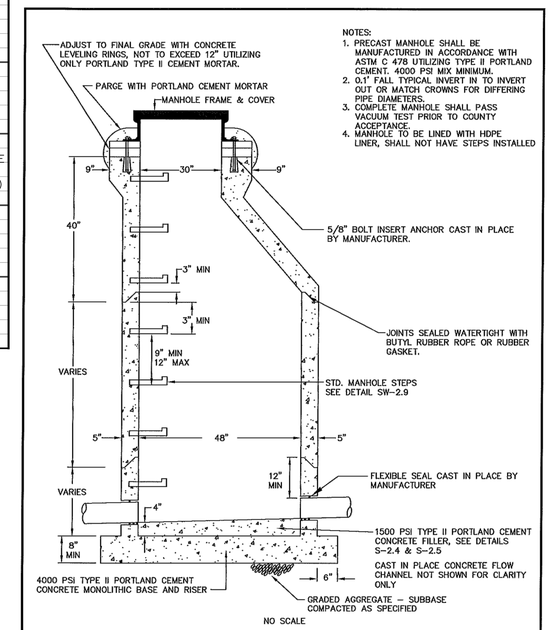


SEWER LINE PROFILE

SCALE: 1"= 50'(HORIZ)
1"= 5'(VERT)

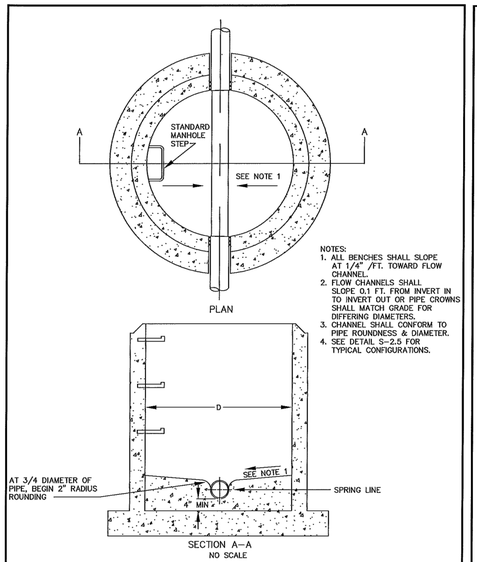
SEWER STRUCTURE TABLE

STRUCTURE NAME	TOP ELEVATION	INVERT IN	INVERT OUT	NORTHING	EASTING	DESCRIPTION
EX-160	485.56	473.90	–	693597.31	1106627.88	EX. MANHOLE AT PUMP STATION
SS-1	484.75	474.11	474.01	693576.02	1106625.00	48" STD. MANHOLE (S-2.1)
SS-2	485.25	475.15	475.05	693412.37	1106536.85	48" STD. MANHOLE (S-2.1)
SS-3	488.10	477.15	477.05	693452.42	1106274.45	48" STD. MANHOLE (S-2.1)
SS-4	489.50	479.00	478.90	693470.63	1106102.52	48" STD. MANHOLE (S-2.1)
SS-5	486.75	481.00	480.83	693345.24	1105980.36	48" STD. MANHOLE (S-2.1)



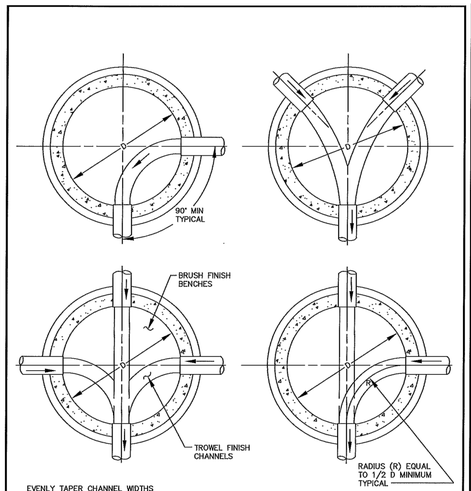
NOTES:
1. PRECAST MANHOLE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C 478 UTILIZING TYPE II PORTLAND CEMENT. 4000 PSI MIX MINIMUM.
2. 0.1' FALL TYPICAL INVERT IN TO INVERT OUT OR MATCH CROWNS FOR DIFFERING PIPE DIAMETERS.
3. COMPLETE MANHOLE SHALL PASS VACUUM TEST PRIOR TO COUNTY ACCEPTANCE.
4. MANHOLE TO BE LINED WITH HDPE LINER, SHALL NOT HAVE STEPS INSTALLED

REVISED	Washington County, MD Div.of Environmental Management	Standard Through Manhole Precast Base	Detail S-2.1
REVISED	Approved: Julie A. Pepper		
APPROVED	Director of Environmental Management		



NOTES:
1. ALL BENCHES SHALL SLOPE AT 1/4" /FT. TOWARD FLOW CHANNEL.
2. FLOW CHANNELS SHALL SLOPE 0.1 FT. FROM INVERT IN TO INVERT OUT OR PIPE CROWNS SHALL MATCH GRADE FOR DIFFERING DIAMETERS.
3. CHANNEL SHALL CONFORM TO PIPE ROUNDNESS & DIAMETER.
4. SEE DETAIL S-2.5 FOR TYPICAL CONFIGURATIONS.

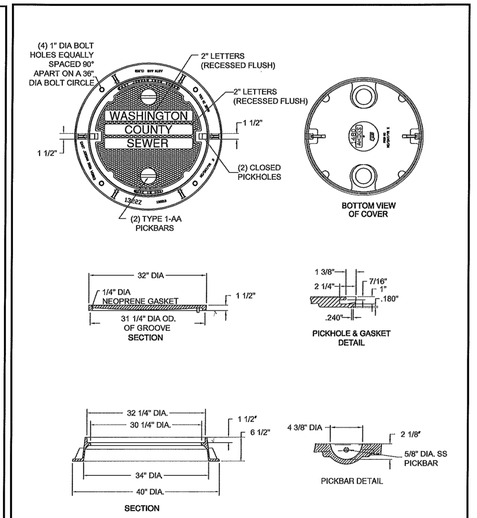
REVISED	Washington County, MD Div.of Environmental Management	Typical Bench and Flow Channel Section Precast Base	Detail S-2.4
REVISED	Approved: Julie A. Pepper		
APPROVED	Director of Environmental Management		



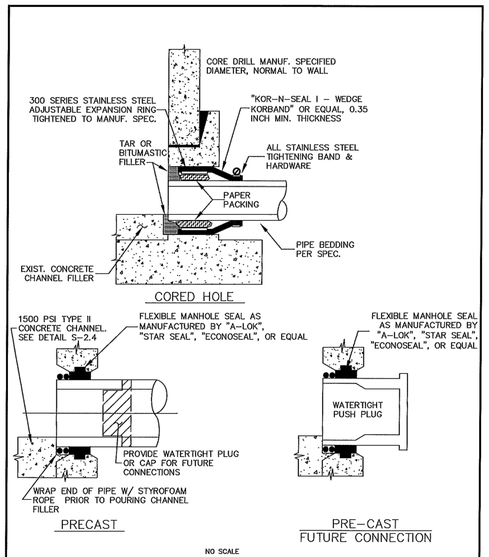
EVENLY TAPER CHANNEL WIDTHS FROM INVERT IN TO INVERT OUT FOR DIFFERING PIPE DIAMETERS.

NO SCALE

REVISED	Washington County, MD Div.of Environmental Management	Plans of Flow Channels (Typical)	Detail S-2.5
REVISED	Approved: Julie A. Pepper		
APPROVED	Director of Environmental Management		



REVISED	Washington County, MD Div.of Environmental Management	Standard Manhole Frame & Cover	Detail SW-2.6
REVISED	Approved: Julie A. Pepper		
APPROVED	Director of Environmental Management		



REVISED	Washington County, MD Div.of Environmental Management	Manhole Pipe Connections	Detail SW-2.10
REVISED	Approved: Julie A. Pepper		
APPROVED	Director of Environmental Management		

100% PLAN SET

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

12/18/19

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

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401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
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11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

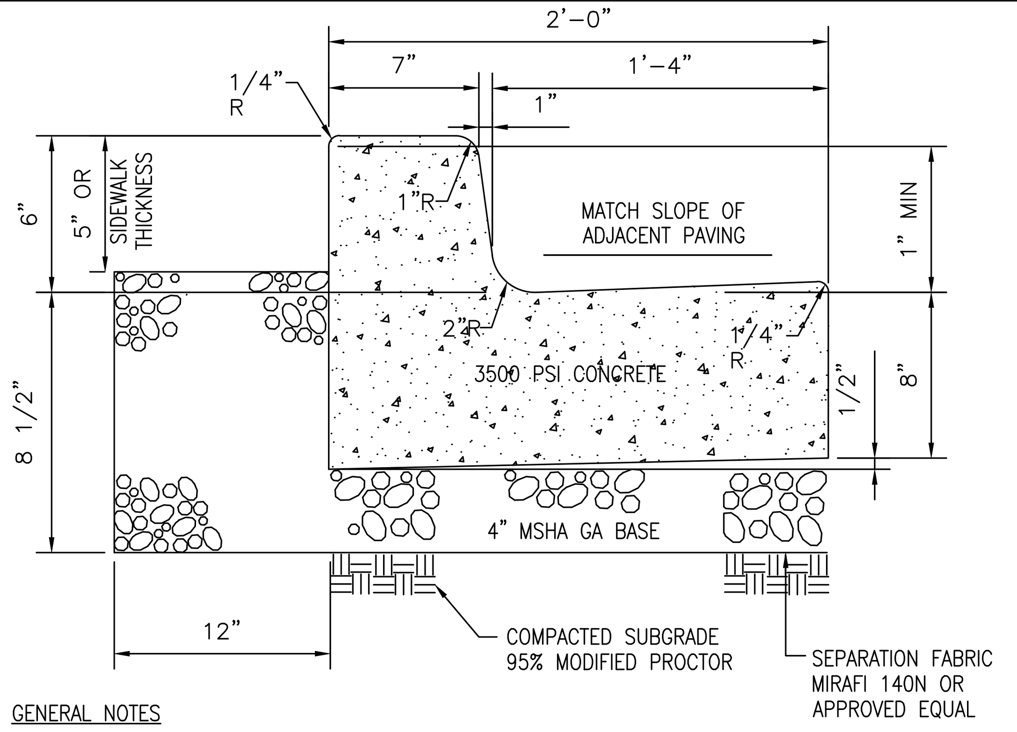
SEWER PROFILE

PLOT SCALE: 1:50
FILENAME: KCI# 271703606
DATE: 12/18/19

PROJECT 3089

C-1.09

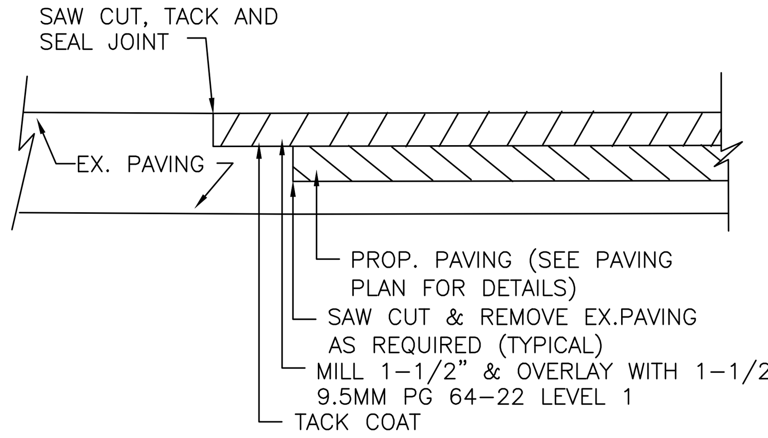
SP-18-044



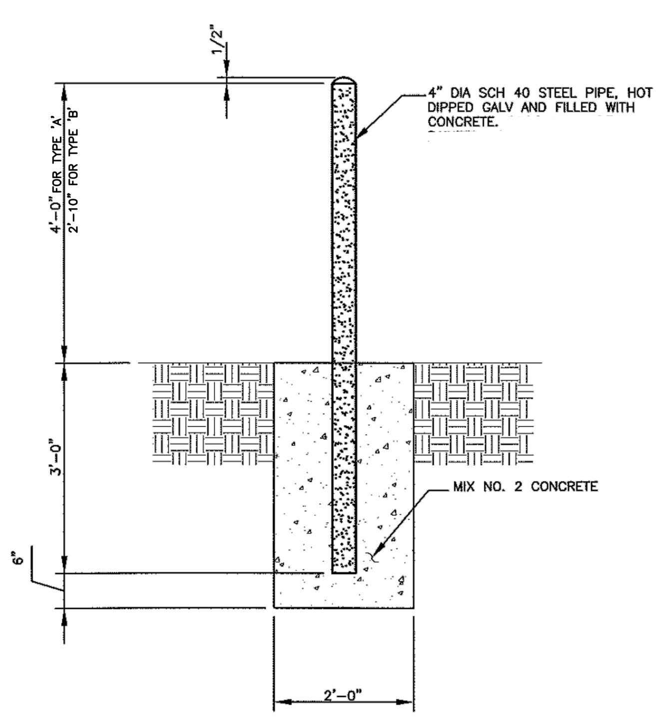
GENERAL NOTES

1. PROVIDE EXPANSION JOINTS EVERY 40' MAX.
2. PROVIDE CONTROL JOINTS EVERY 10'. JOINTS ARE TO ALIGN WITH THE PROPOSED SIDEWALK JOINTS.

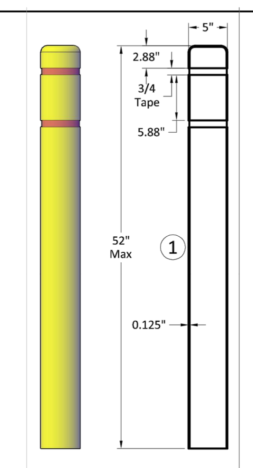
(1) CONCRETE CURB AND GUTTER DETAIL — NOT TO SCALE



(2) PAVEMENT TIE–IN DETAIL — NOTE TO SCALE



(3) TYPICAL BOLLARD DETAIL



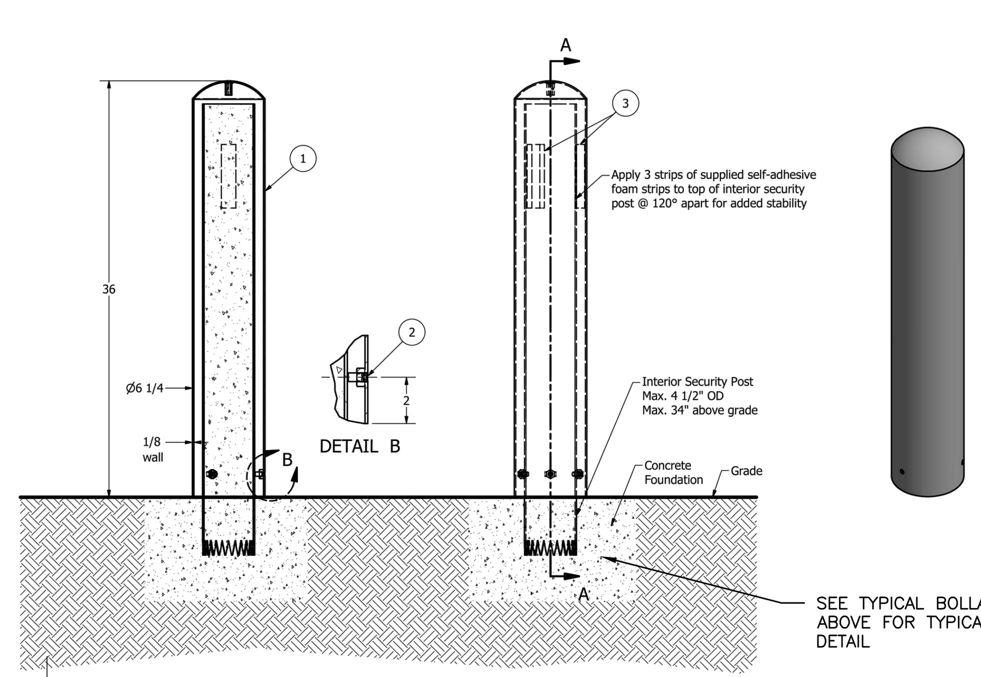
Bollard Cover					
Item	Part Number	Description	Material	Max Interior Security Post Size	Weight
1	R-7100	Bollard Post Cover	Plastic	4.5"Dia x 51"H	4.0 lbs

RELIANCE FOUNDRY

Unit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canada
1-888-735-5680 info@reliance-foundry.com
http://www.reliance-foundry.com

Plastic Bollards Cover, Model R-71XX Series

TYPE 'A' BOLLARD COVER



General Description:

R-7301 Stainless Steel Bollard Covers offer the most versatile protection for posts under 4-1/2 inches in diameter. This is a shorter model in comparison to the R-7301-EX with a height of 36 inches and features a dome top. Increase visibility and aesthetics of steel pipe security posts, while ensuring protection from wear and corrosion. 4 installation types available: Spray foam adhesive, set screws, top hanger, or J hanger. Covers are made from corrosion-resistant 316 stainless steel. Optional powder coating is available in 1 of 6 custom colors.

Specifications:

Height: 36"
Base Diameter: 6 1/4"
Weight: 25 lbs (Bollard Only)
Material: Stainless Steel 316
Max. Interior Security Post Size:
4 1/2" x 34" (Diameter x Height)

Notes:
1) Bollard cover is provided as shown. Concrete, foundation SHOWN ABOVE IN TYPICAL BOLLARD DETAIL
2) Minimum foundation sizes SHOWN ABOVE IN TYPICAL BOLLARD DETAIL
3) Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.
4) Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	WEIGHT
1	1	R-7301	R7301 Stainless Steel Bollard Cover	Stainless Steel 316	25 lbs
2	3	Hexagon Socket Set Screw 3/8" x 7/8"	Hexagon Socket Set Screw 3/8" x 7/8" - requires 3/16" hex key	Stainless Steel	
3	3	Foam Strip	Self-adhesive Neoprene Foam Strip	Synthetic Rubber	

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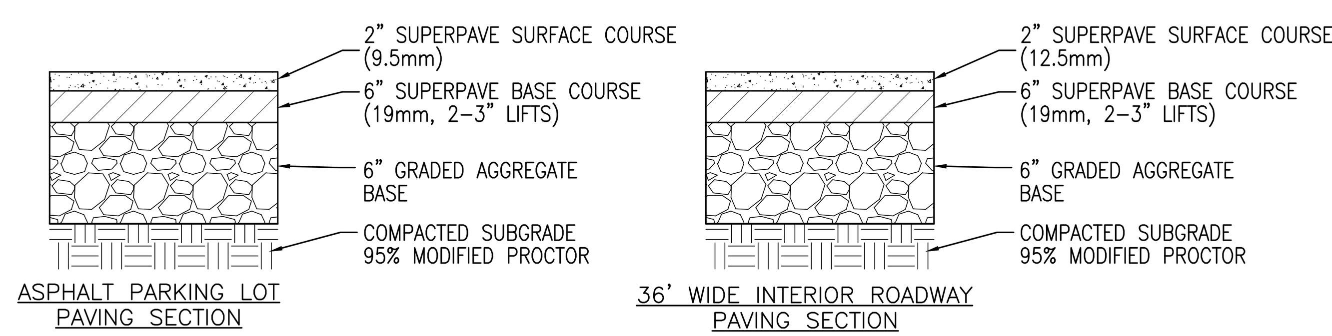
RELIANCE FOUNDRY — SINCE 1925
Unit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canada
1-877-789-3245 info@reliance-foundry.com
www.reliance-foundry.com

TITLE: Bollard Cover R-7301
SIZE: C — DWG NO: R7301 — REV: C2
NOT TO SCALE — SHEET 2 OF 5

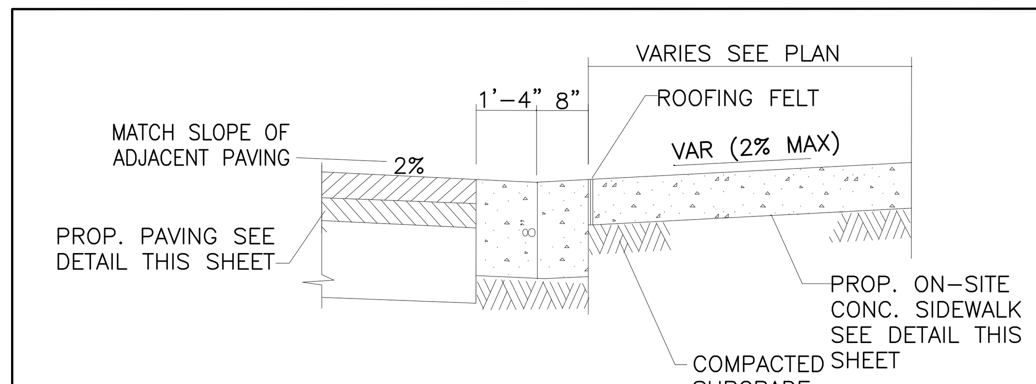
(4) TYPE 'B' – STAINLESS STEEL BOLLARD COVER — NOT TO SCALE

GENERAL PAVING NOTES

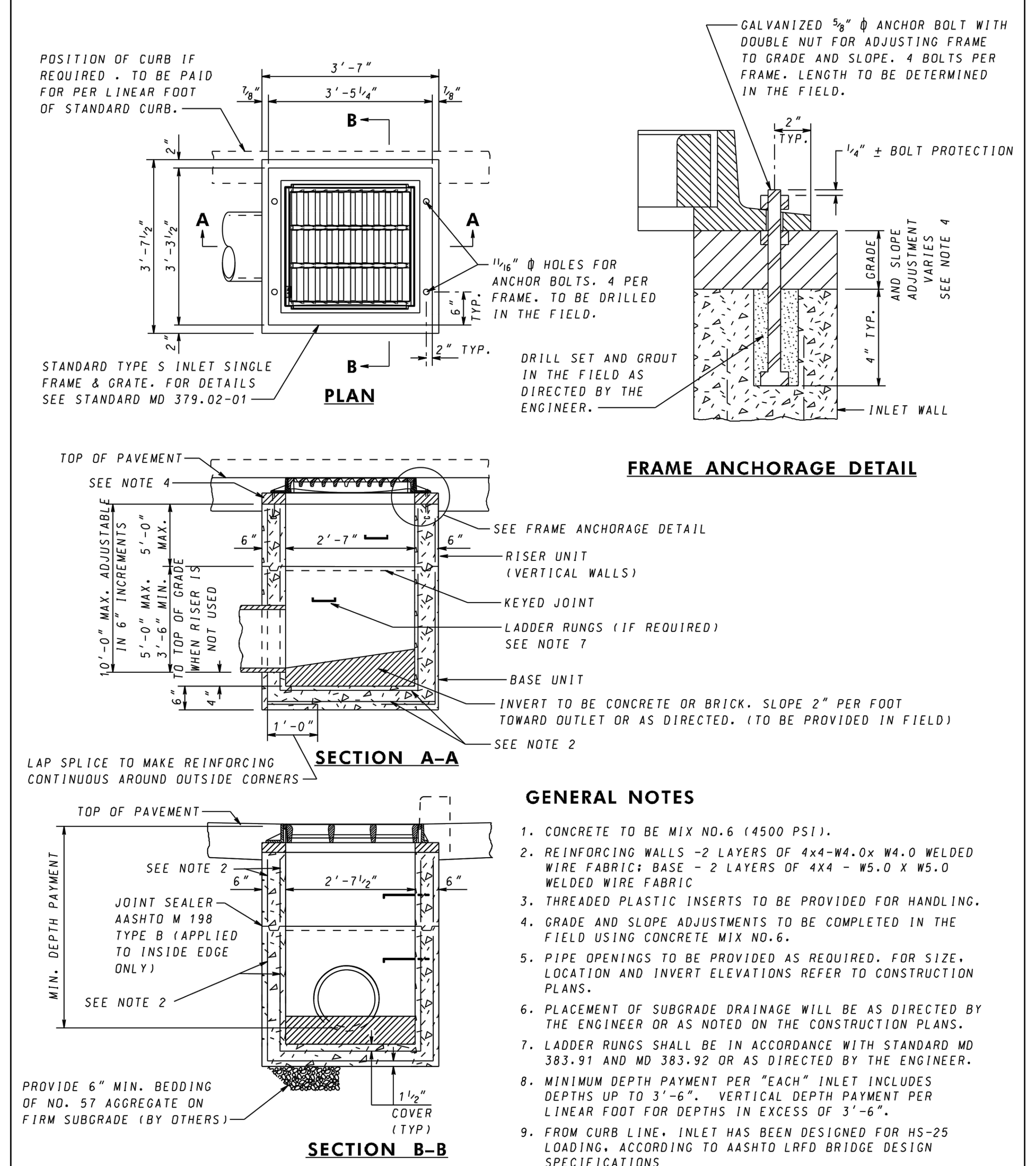
1. ALL ROADWAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GENERAL SPECIFICATIONS FOR HIGHWAY AND STREET CONSTRUCTION, THE SHA.
2. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES TO WATER AND SEWER LINES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, CONTACT THE DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL ELEVATIONS SHOWN ON THESE PLANS ARE REFERRED TO NAVD 88.
4. ALL AREAS DISTURBED WITHIN THE SITE SHALL BE REPAIRED IN KIND.
5. ALL CONCRETE TO BE SHA MIX #3 AIR ENTRAINED CONCRETE.
6. TOPSOIL OR OTHER ORGANIC MATERIALS, FROZEN, SOFT OR LOOSE SOILS, AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED BEFORE THE PLACEMENT OF FILL OR AGGREGATE BASE.



(6) PAVEMENT SECTION FOR ON–SITE PAVING — NOT TO SCALE



(7) DEPRESSED CURB & GUTTER AT PEDESTRIAN RAMP (SECTION A–A TYPE 2) — NOT TO SCALE



GENERAL NOTES

1. CONCRETE TO BE MIX NO.6 (4500 PSI).
2. REINFORCING WALLS –2 LAYERS OF 4x4-W4.0x W4.0 WELDED WIRE FABRIC; BASE – 2 LAYERS OF 4X4 – W5.0 X W5.0 WELDED WIRE FABRIC
3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
4. GRADE AND SLOPE ADJUSTMENTS TO BE COMPLETED IN THE FIELD USING CONCRETE MIX NO.6.
5. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.
6. PLACEMENT OF SUBGRADE DRAINAGE WILL BE AS DIRECTED BY THE ENGINEER OR AS NOTED ON THE CONSTRUCTION PLANS.
7. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STANDARD MD 383.91 AND MD 383.92 OR AS DIRECTED BY THE ENGINEER.
8. MINIMUM DEPTH PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'–6". VERTICAL DEPTH PAYMENT PER LINEAR FOOT FOR DEPTHS IN EXCESS OF 3'–6".
9. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

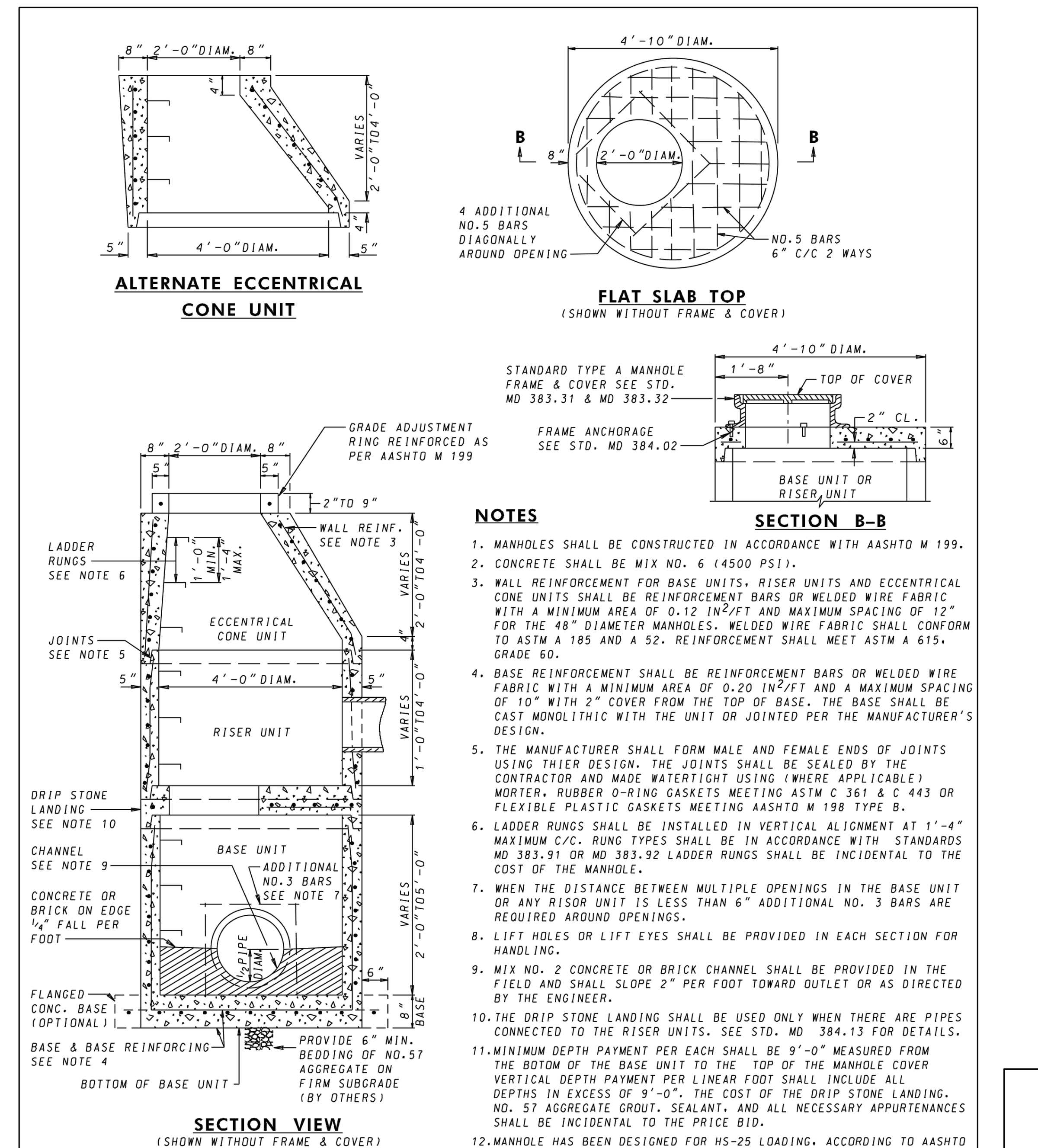
SPECIFICATION 305 — CATEGORY CODE ITEMS
APPROVED — DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	4-15-87	APPROVAL	6-23-87
REVISED	8-3-10	REVISED	7-26-10
REVISED	10-7-14	REVISED	9-29-14
REVISED	–	REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST STANDARD
TYPE S INLET SINGLE GRATE

STANDARD NO. MD 374.73



NOTES

1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO M 199.
2. CONCRETE SHALL BE MIX NO. 6 (4500 PSI).
3. WALL REINFORCEMENT FOR BASE UNITS, RISER UNITS AND ECCENTRICAL CONE UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.12 IN^2/FT AND MAXIMUM SPACING OF 12" FOR THE 48" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 52. REINFORCEMENT SHALL MEET ASTM A 615, GRADE 60.
4. BASE REINFORCEMENT SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.20 IN^2/FT AND A MAXIMUM SPACING OF 10" WITH 2" COVER FROM THE TOP OF BASE. THE BASE SHALL BE CAST MONOLITHIC WITH THE UNIT OR JOINTED PER THE MANUFACTURER'S DESIGN.
5. THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THIER DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING (WHERE APPLICABLE) MORTER, RUBBER O-RING GASKETS MEETING ASTM C 361 & C 443 OR FLEXIBLE PLASTIC GASKETS MEETING AASHTO M 198 TYPE B.
6. LADDER RUNGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'–4" MAXIMUM C/C. RUNG TYPES SHALL BE IN ACCORDANCE WITH STANDARDS MD 383.91 OR MD 383.92 LADDER RUNGS SHALL BE INCIDENTAL TO THE COST OF THE MANHOLE.
7. WHEN THE DISTANCE BETWEEN MULTIPLE OPENINGS IN THE BASE UNIT OR ANY RISOR UNIT IS LESS THAN 6" ADDITIONAL NO. 3 BARS ARE REQUIRED AROUND OPENINGS.
8. LIFT HOLES OR LIFT EYES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING.
9. MIX NO. 2 CONCRETE OR BRICK CHANNEL SHALL BE PROVIDED IN THE FIELD AND SHALL SLOPE 2" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
10. THE DRIP STONE LANDING SHALL BE USED ONLY WHEN THERE ARE PIPES CONNECTED TO THE RISER UNITS. SEE STD. MD 384.13 FOR DETAILS.
11. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 9'–0" MEASURED FROM THE BOTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 9'–0". THE COST OF THE DRIP STONE LANDING, NO. 57 AGGREGATE GROUT, SEALANT, AND ALL NECESSARY APPURTENANCES SHALL BE INCIDENTAL TO THE PRICE BID.
12. MANHOLE HAS BEEN DESIGNED FOR HS-25 LOADING, ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

SPECIFICATION 305 — CATEGORY CODE ITEMS
APPROVED — DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-22-91	APPROVAL	1-2-91
REVISED	10-7-14	REVISED	9-29-14
REVISED	–	REVISED	
REVISED		REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

48" DIAMETER PRECAST MANHOLE
FOR 12" TO 24" PIPES

STANDARD NO. MD 384.01

12/18/19

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

100% PLAN SET

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REVISIONS

01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

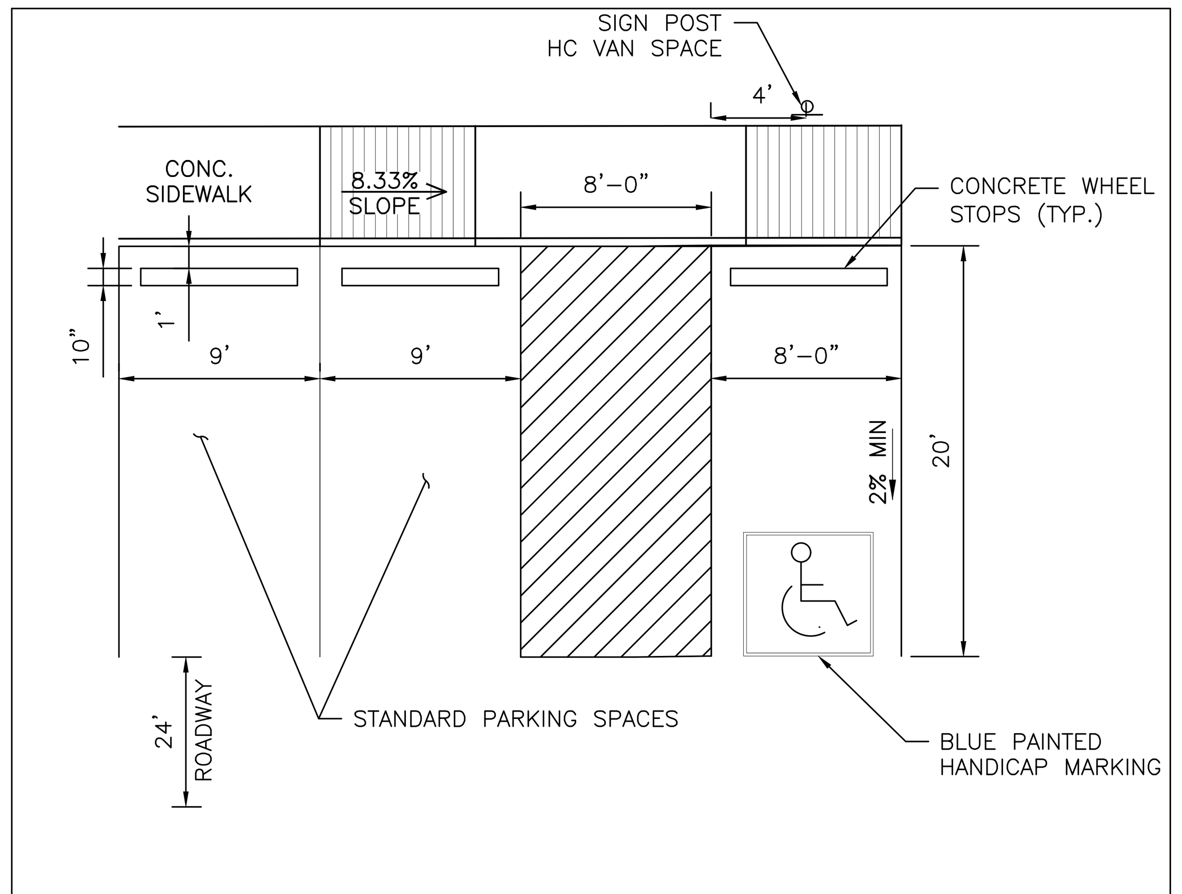
CONSTRUCTION DETAILS

PLOT SCALE:
FILENAME: KCI# 271703606
DATE: 12/18/19

PROJECT 3089

C-1.11

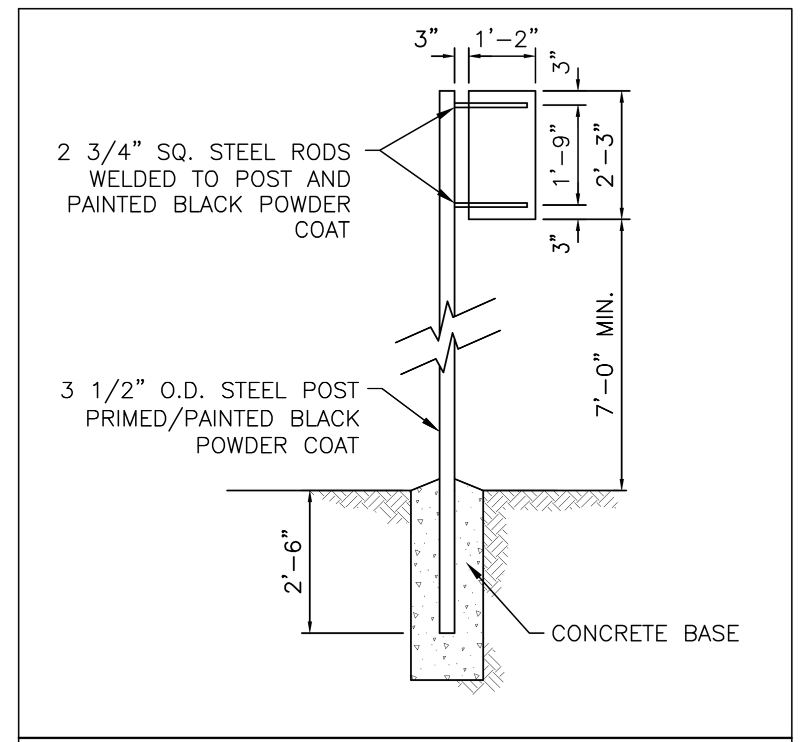
SP-18-044



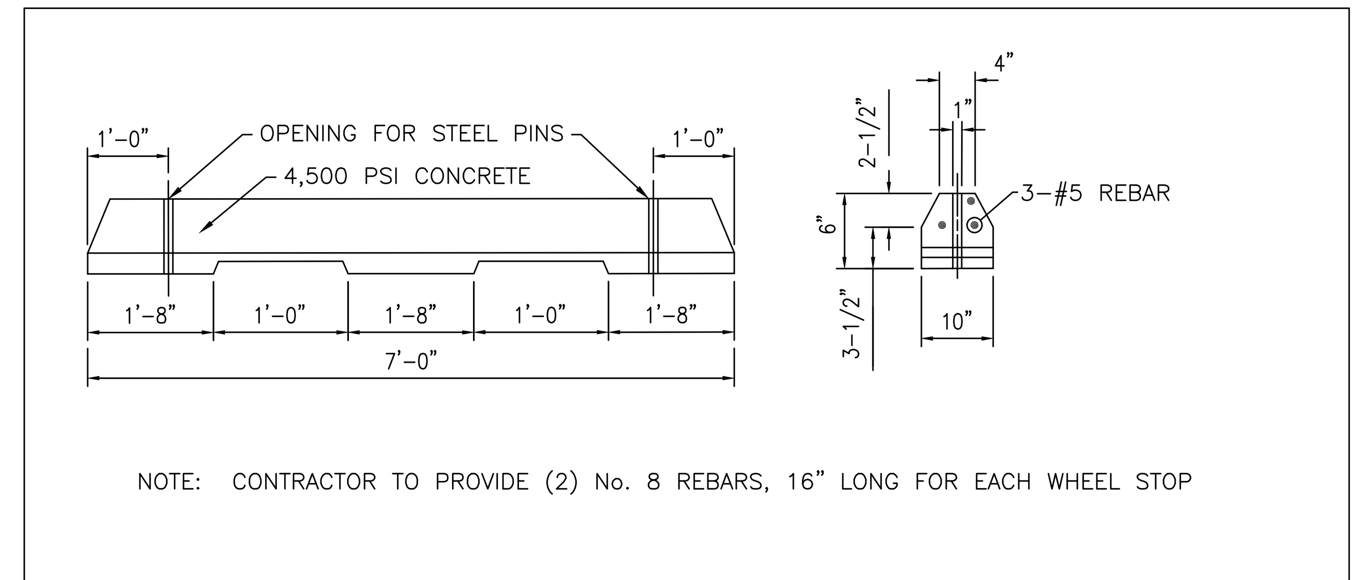
(1) TYPICAL HANDICAP&REGULAR PARKING — NOT TO SCALE

Sign	Description	Code	Qty
RESERVED PARKING ($500 FINE)	HANDICAP WITH FINE	R7–8(3)	4
RESERVED PARKING VAN ACCESSIBLE ($500 FINE)	VAN ACCESSIBLE WITH FINE	R7–8A	2
STOP	STOP SIGN	R1–1	4
NO PARKING IN ACCESS AISLE	NO PARKING IN ACCESS AISLE		3
PUBLIC SAFETY PL	STREET SIGN		1
RIGHT LANE MUST TURN RIGHT	RIGHT LANE MUST TURN RIGHT	R3–7R	1
BEGIN RIGHT TURN LANE YIELD TO BIKES	BEGIN RIGHT TURN LANE– YIELD TO BIKES	R4–4	1

(2) SIGN SCHEDULE — NOT TO SCALE



(3) SIGN POST DETAIL — NOT TO SCALE



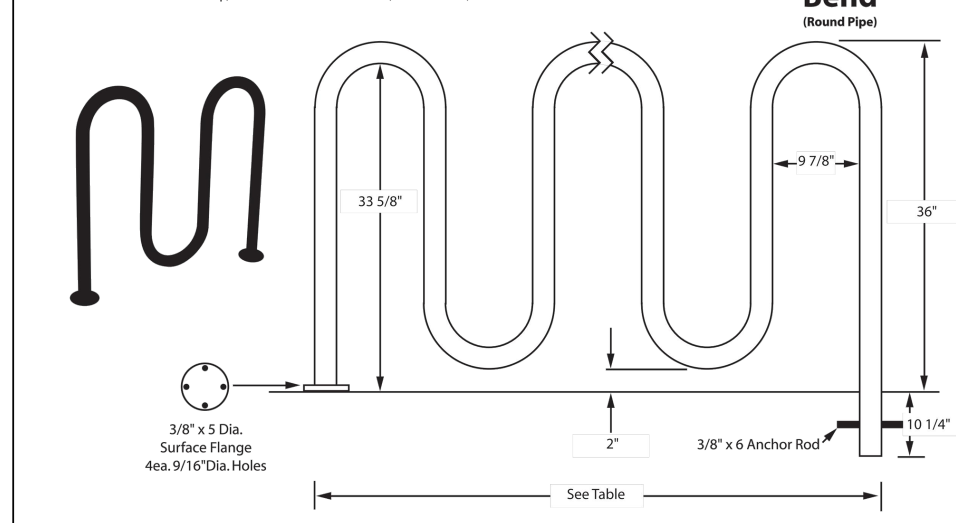
NOTE: CONTRACTOR TO PROVIDE (2) No. 8 REBARS, 16" LONG FOR EACH WHEEL STOP

(4) CONCRETE WHEEL STOP — NOT TO SCALE

BIKEPARKING.COM™

Tel: 415.333.6428 Tel: 888.764.2453 Fax: 415.333.2032
Palmer Group, LLC : 1072 Folsom Street #328, San Francisco, CA 94103

[Welle™ Multiple Bend] (Round Pipe)



WELLE™ MULTI BEND ROUND PIPE RACKS

Item		# of Bends	Bike Capacity	Rack Length Common	Rack Length Wide loop	Model
H3605	Mount	3	5	38"	59"	
H3607	-SF (Surface Flange) -IG (Inground)	5	7	62"	97"	
H3609		7	9	86"	135"	
H3611	Finish	9	11	110"	173"	
H3613	-G (Galvanized)	11	13	134"	211"	
H3615	-P (Powder Coated) -SS (Stainless Steel)	13	15	158"	249"	
H3617		15	17	182"	287"	

MATERIAL
2 3/8" O.D. Pipe
Schedule 40 Pipe
.154" Wall Thickness
Mandrel - Bent

OPTIONAL
1 5/8" O.D. Pipe Available
Stainless 304 Alloy Available

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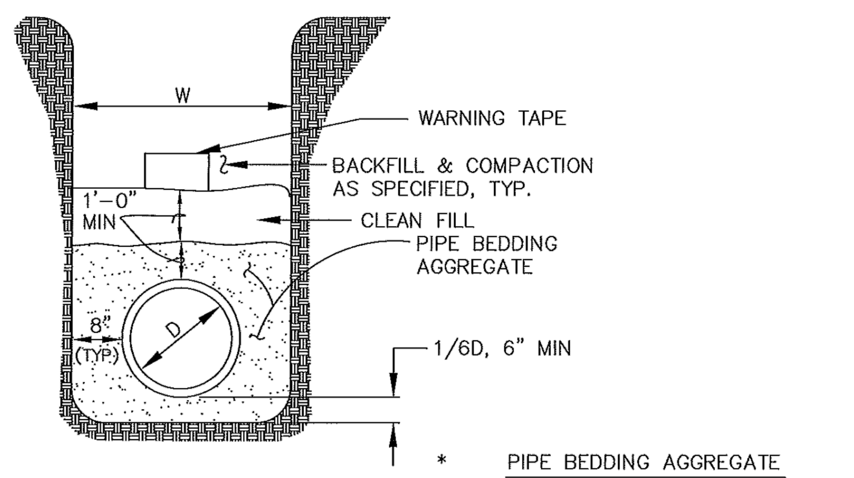


GRANULAR BEDDING & BACKFILL

* PIPE BEDDING AGGREGATE

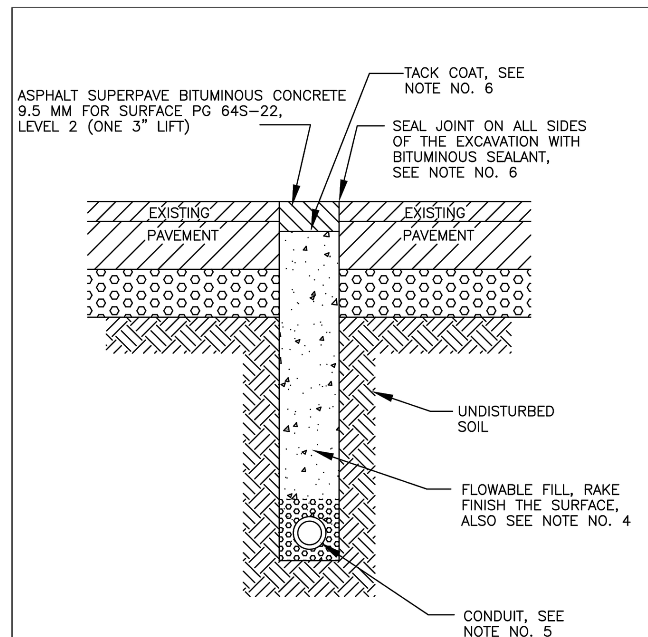
D = 4" AND LARGER – SHA GRADED CRUSHER RUN CR–6

D = 1–1/2" THROUGH <4" – SHA GRADED B–10

D = LESS THAN 1–1/2" – STONE DUST

* = NOMINAL PIPE DIAMETER (INCHES)

	Washington County, MD Div.of Environmental Management	STANDARD TRENCH WIDTH & STONE BEDDING	Detail SW-1.1
REVISED / REVISED / APPROVED	Approved: Director of Environmental Management		



NOTES

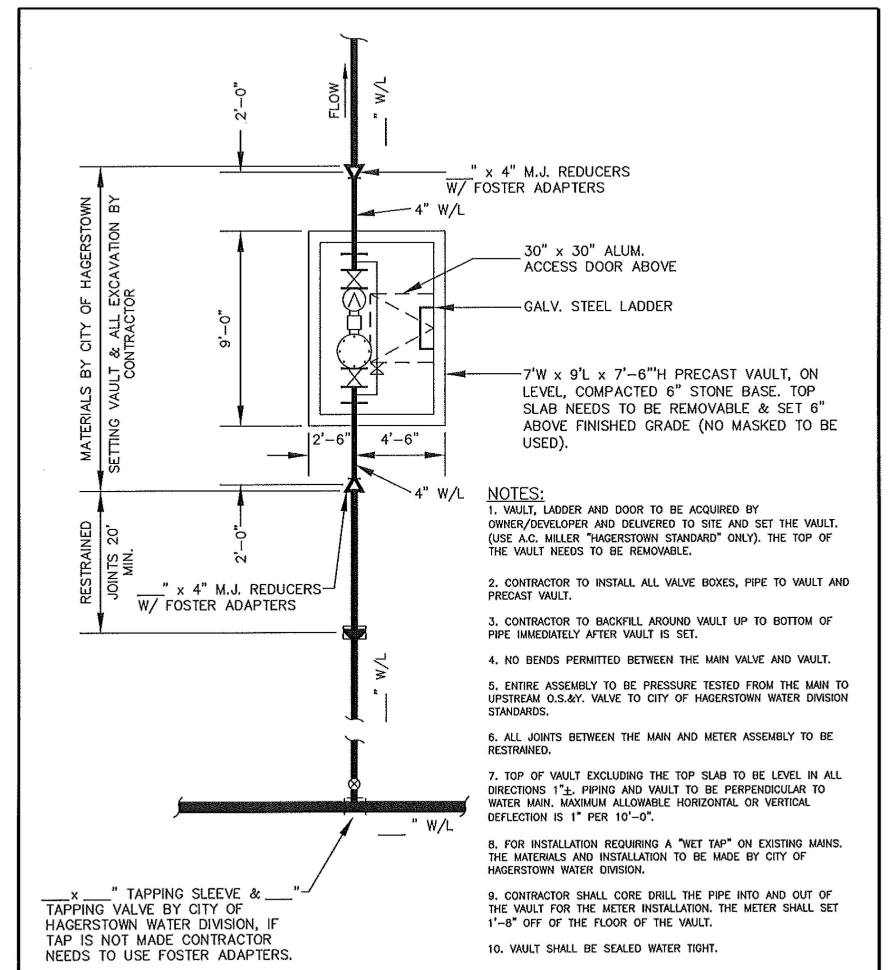
1. ALL EXCAVATION, TRENCHING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH CATEGORY 200 OF THE MD DEPT. OF TRANS. S.H.A. "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS."
2. REFER TO PLATES T–085 & T–086 FOR FINAL PERMANENT REPAIR SHAPE & AREA REQUIREMENTS. ALL EXCAVATION EDGES SHALL BE NEAT AND STRAIGHT OR SHALL REQUIRE SAW CUTTING BEFORE FINAL PERMANENT PATCHING.
3. ALL EXCAVATIONS SHALL BE TEMPORARILY RESTORED WITH BITUMINOUS MATERIAL (HOT OR COLD) UNTIL FINAL PATCHING.
4. FLOWABLE FILL SHALL BE IN ACCORDANCE WITH MD DEPT. OF TRANS. S.H.A. "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" SECTION 314 AND SHALL HAVE A MINIMUM OF 50 LBS OF PORTLAND CEMENT PER CUBIC YARD AND A COMPRESSIVE STRENGTH OF 100 P.S.I. MIN. TO 200 P.S.I. MAX.
5. THE DEPTH OF CONDUITS, BEDDING & COVER MATERIALS, ETC. SHALL BE DETERMINED BY THE APPLICABLE UTILITY.
6. THE BITUMINOUS SEALANT SHALL BE IN ACCORDANCE WITH MD DEPT. OF TRANS. S.H.A. "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS", LATEST EDITION, SECTION 510 AND TACK COAT IN ACCORDANCE WITH SECTION 504.
7. NOTIFY THE CITY ENGINEER BEFORE THE REPAIR IS INSTALLED IF SUBSURFACE WATER OR POOR SOILS ARE ENCOUNTERED.
8. A CITY OF HAGERSTOWN "PERMIT FOR STREET OPENING" IS REQUIRED FOR ALL STREET EXCAVATIONS AND REPAIRS.

CITY OF HAGERSTOWN, MARYLAND – ENGINEERING DIVISION

TRANSPORTATION STANDARD DETAIL
STREET REPAIR METHOD "A"
SLOT TRENCH

ISSUE DATE: 03–01–2018 — REVISIONS — Plate T-080

© CITY OF HAGERSTOWN, MD, 2018



NOTES:

1. VAULT, LADDER AND DOOR TO BE ACQUIRED BY OWNER/DEVELOPER AND DELIVERED TO SITE AND SET THE VAULT. (USE A.C. MILLER "HAGERSTOWN STANDARD" ONLY). THE TOP OF THE VAULT NEEDS TO BE REMOVABLE.
2. CONTRACTOR TO INSTALL ALL VALVE BOXES, PIPE TO VAULT AND PRECAST VAULT.
3. CONTRACTOR TO BACKFILL AROUND VAULT UP TO BOTTOM OF PIPE IMMEDIATELY AFTER VAULT IS SET.
4. NO BENDS PERMITTED BETWEEN THE MAIN VALVE AND VAULT.
5. ENTIRE ASSEMBLY TO BE PRESSURE TESTED FROM THE MAIN TO UPSTREAM O.S.&Y. VALVE TO CITY OF HAGERSTOWN WATER DIVISION STANDARDS.
6. ALL JOINTS BETWEEN THE MAIN AND METER ASSEMBLY TO BE RESTRAINED.
7. TOP OF VAULT EXCLUDING THE TOP SLAB TO BE LEVEL IN ALL DIRECTIONS 1"±. PIPING AND VAULT TO BE PERPENDICULAR TO WATER MAIN. MAXIMUM ALLOWABLE HORIZONTAL OR VERTICAL DEFLECTION IS 1" PER 10'–0".
8. FOR INSTALLATION REQUIRING A "WET TAP" ON EXISTING MAINS. THE MATERIALS AND INSTALLATION TO BE MADE BY CITY OF HAGERSTOWN WATER DIVISION.
9. CONTRACTOR SHALL CORE DRILL THE PIPE INTO AND OUT OF THE VAULT FOR THE METER INSTALLATION. THE METER SHALL SET 1'–8" OFF OF THE FLOOR OF THE VAULT.
10. VAULT SHALL BE SEALED WATER TIGHT.

4" UL/FM METER FOR FUTURE VAULT UPGRADE

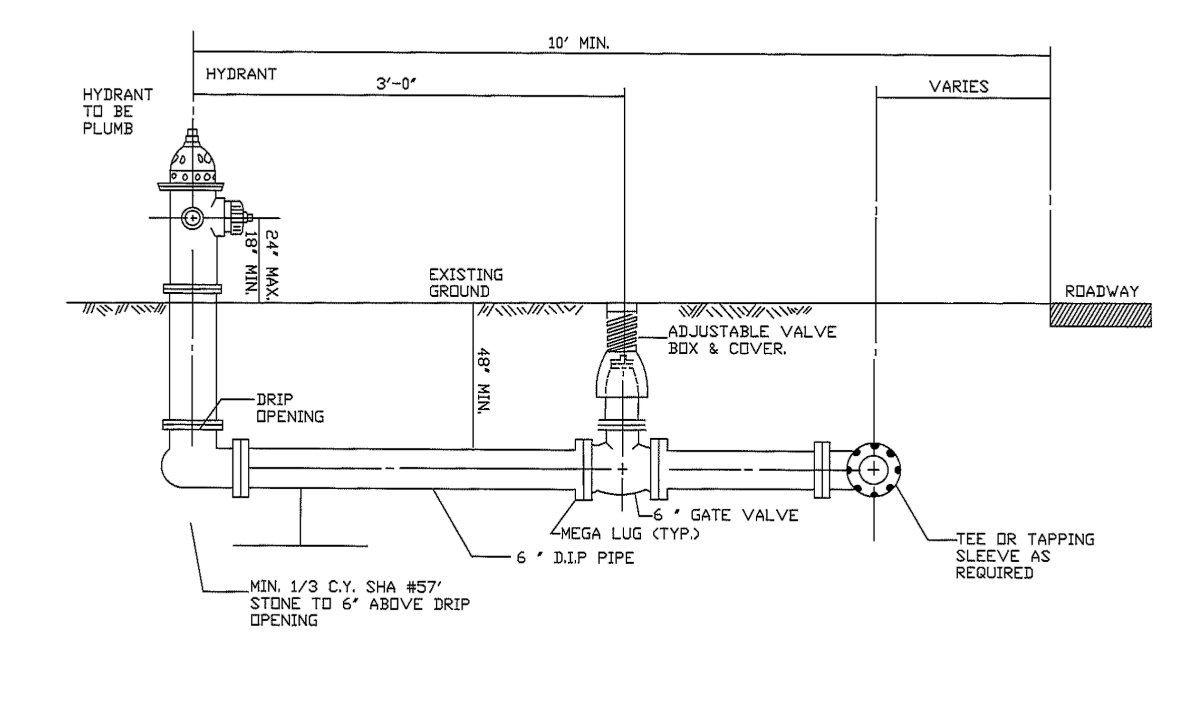
CITY OF HAGERSTOWN UTILITIES DEPARTMENT
WATER DIVISION

SCALE: NONE
DATE: MARCH 2009

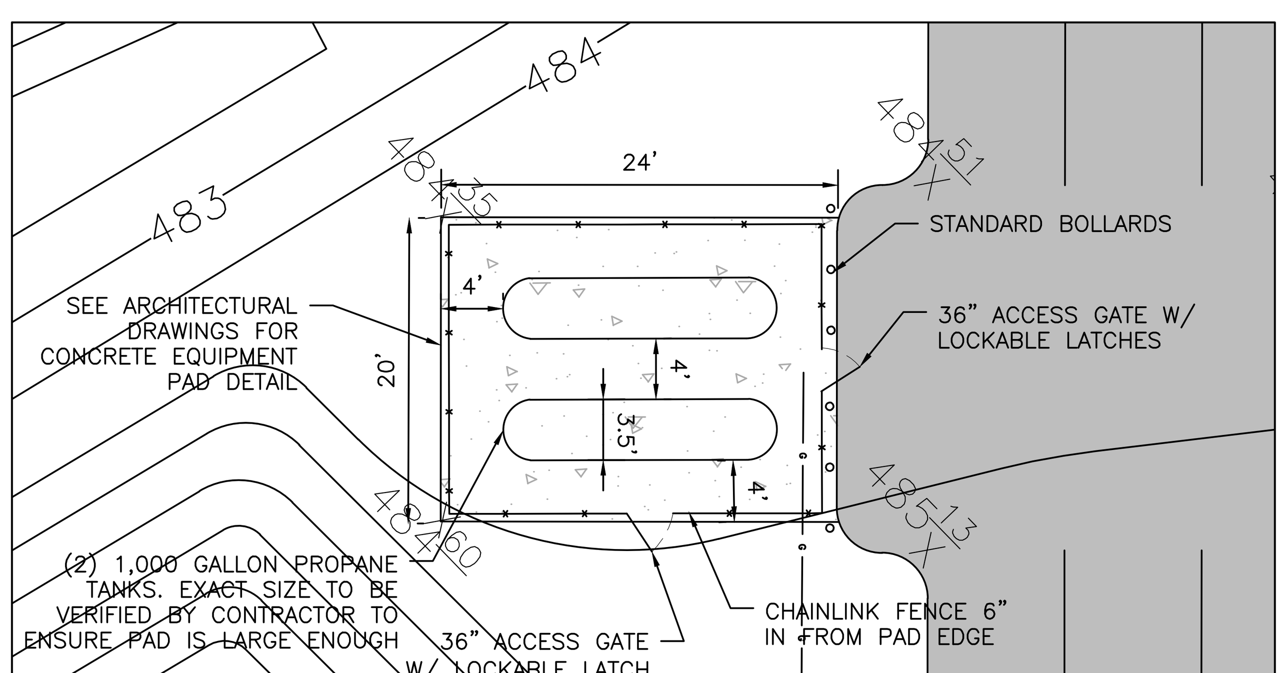
CITY OF HAGERSTOWN UTILITIES DEPARTMENT
WATER DIVISION

THIS APPROVAL IS FOR THE DESIGN AND LAYOUT OF THE PROPOSED WATER SYSTEM IMPROVEMENTS. ALL WATER SYSTEM IMPROVEMENTS SHALL BE CONSTRUCTED TO THE STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION. THIS APPROVAL DOES NOT GUARANTEE AVAILABILITY OF WATER SERVICE. WATER SERVICE IS AVAILABLE SUBJECT TO CONFORMANCE WITH ALL POLICIES AND STANDARDS IN EFFECT AT THE TIME OF APPLICATION FOR SERVICE, PAYMENT OF FEES AND APPROVAL OF THE WATER SERVICE APPLICATION. THE WATER DIVISION DOES NOT GUARANTEE A SPECIFIC WATER PRESSURE OR FLOW AT ANY METER OR FIRE HYDRANT. THIS APPROVAL IS VALID FOR A PERIOD OF ONE YEAR

SIGNATURE ____________ DATE ____________



	Washington County, MD Div.of Environmental Management	TYPICAL HYDRANT SETTING	Detail W-10.6
REVISED / REVISED / APPROVED	Approved: Director of Environmental Management		



(5) GAS TANK ENCLOSURE — SCALE: 1"=10'

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REVISIONS

01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

100% PLAN SET

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
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CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
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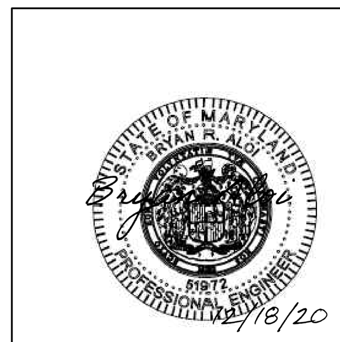
410-792-7419 (F)



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

CONSTRUCTION DETAILS

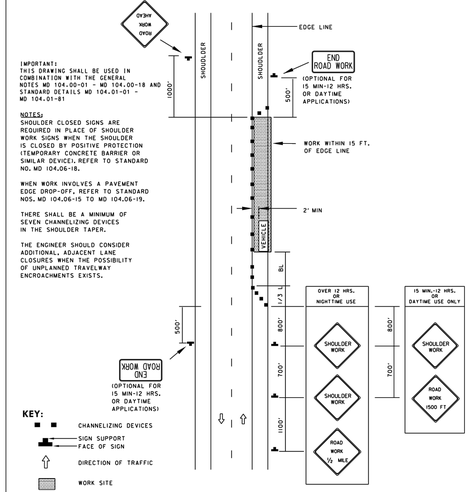
PLOT SCALE: 1:30
FILENAME:
DATE: 07/20/2018

PROJECT 3089

C-1.12

SP-18-044

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 - MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 - MD 104.01-81

NOTES:
SHOULDER CLOSED SIGNS ARE REQUIRED IN PLACE OF SHOULDER WORK SIGNS WHEN THE SHOULDER IS CLOSED BY POSITIVE PROTECTION (TEMPORARY CONCRETE BARRIER OR SIMILAR DEVICE). REFER TO STANDARD NO. MD 104.06-18.

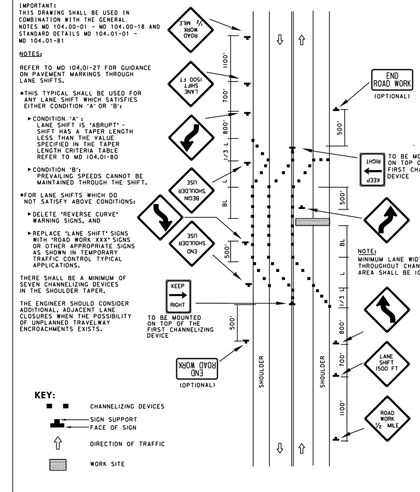
WHEN WORK INVOLVES A PAVEMENT EDGE DROP-OFF, REFER TO STANDARD NOS. MD 104.06-15 TO MD 104.06-19.

THERE SHALL BE A MINIMUM OF SEVEN CHANNELIZING DEVICES IN THE SHOULDER TAPER.

THE ENGINEER SHOULD CONSIDER ADDITIONAL, ADJACENT LANE CLOSURES WHEN THE POSSIBILITY OF UNPLANNED TRAVELWAY ENCROACHMENTS EXISTS.

SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES SHOULDER WORK /2-LANE, 2-WAY GREATER THAN 40 MPH	
104			
APPROVED	DIRECTOR – OFFICE OF TRAFFIC AND SAFETY		
	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
	APPROVAL 8-20-03	APPROVAL 9-23-03	
	REVISED 8-11-10	REVISED 10-5-10	
	REVISED	REVISED	
	STANDARD NO.	MD 104.02-01	

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 - MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 - MD 104.01-81

NOTES:
REFER TO MD 104.01-27 FOR GUIDANCE ON PAVEMENT MARKINGS THROUGH LANE SHIFTS.

►THIS TYPICAL SHALL BE USED FOR ANY LANE SHIFT WHICH SATISFIES EITHER CONDITION 'A' OR 'B':

►CONDITION 'A':
LANE SHIFT IS 'ABRUPT' - LESS THAN A TAPER LENGTH VALUE SPECIFIED IN THE TAPER LENGTH CRITERIA TABLE. REFER TO MD 104.01-80

►CONDITION 'B':
PREVAILING SPEEDS CANNOT BE MAINTAINED THROUGH THE SHIFT.

►FOR LANE SHIFTS WHICH DO NOT SATISFY ABOVE CONDITIONS:

►DELETE "REVERSE CURVE" WARNING SIGNS, AND

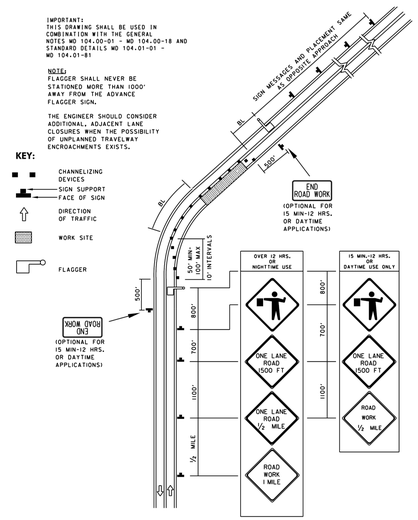
►REPLACE "LANE SHIFT" SIGNS WITH "ROAD WORK XXX' SIGNS OR OTHER APPROPRIATE SIGNS AS SHOWN IN TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATIONS.

THERE SHALL BE A MINIMUM OF SEVEN CHANNELIZING DEVICES IN THE SHOULDER TAPER.

THE ENGINEER SHOULD CONSIDER ADDITIONAL, ADJACENT LANE CLOSURES WHEN THE POSSIBILITY OF UNPLANNED TRAVELWAY ENCROACHMENTS EXISTS.

SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES LANE SHIFT RIGHT OR LEFT SIDE/ 2-LANE, 2-WAY GREATER THAN 40 MPH/15 MIN – 12 HRS. OR DAYTIME ONLY	
104			
APPROVED	DIRECTOR – OFFICE OF TRAFFIC AND SAFETY		
	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
	APPROVAL 8-20-03	APPROVAL 9-23-03	
	REVISED	REVISED 10-5-10	
	REVISED	REVISED	
	STANDARD NO.	MD 104.02-03	

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

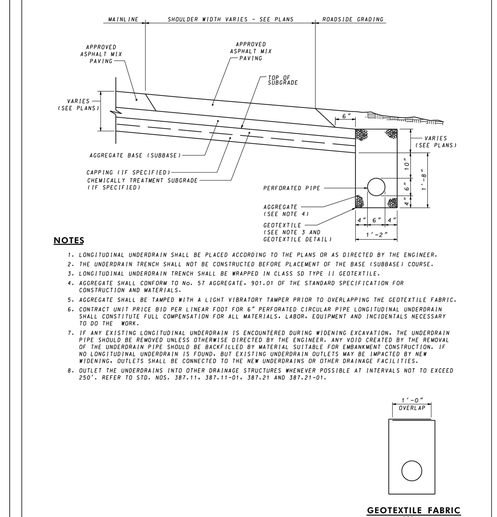


IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 - MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 - MD 104.01-81

NOTE:
FLAGGER SHALL NEVER BE STATIONED MORE THAN 1000' AWAY FROM THE ADVANCE FLAGGER SIGN.

THE ENGINEER SHOULD CONSIDER ADDITIONAL, ADJACENT LANE CLOSURES WHEN THE POSSIBILITY OF UNPLANNED TRAVELWAY ENCROACHMENTS EXISTS.

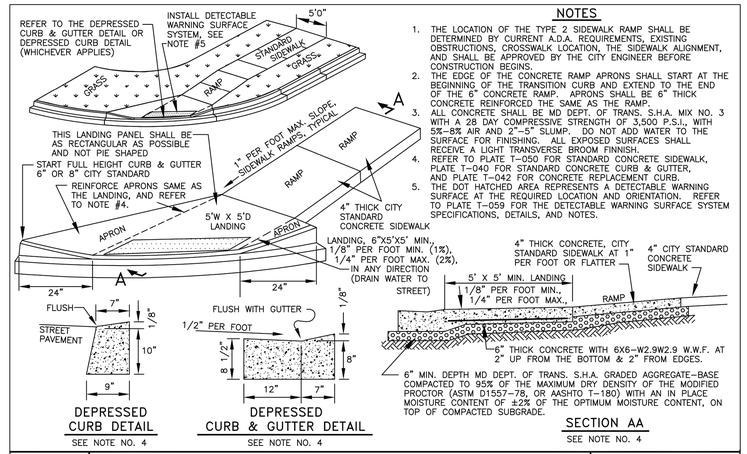
SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES FLAGGING OPERATION / 2-LANE,2-WAY GREATER THAN 40 MPH	
104			
APPROVED	DIRECTOR – OFFICE OF TRAFFIC AND SAFETY		
	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
	APPROVAL 8-20-03	APPROVAL 9-23-03	
	REVISED 8-11-10	REVISED 7-29-10	
	REVISED	REVISED	
	STANDARD NO.	MD 104.02-09	



NOTES

1. LONGITUDINAL UNDERDRAIN SHALL BE PLACED ACCORDING TO THE PLANS OR AS DIRECTED BY THE ENGINEER.
2. THE UNDERDRAIN TRENCH SHALL NOT BE CONSTRUCTED BEFORE PLACEMENT OF THE BASE (SUBBASE) COURSE.
3. LONGITUDINAL UNDERDRAIN TRENCH SHALL BE WRAPPED IN CLASS SD TYPE II GEOTEXTILE.
4. AGGREGATE SHALL CONFORM TO No. 57 AGGREGATE, 901.01 OF THE STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS.
5. AGGREGATE SHALL BE TAMPED WITH A LIGHT VIBRATORY TAMPER PRIOR TO OVERLAPPING THE GEOTEXTILE FABRIC.
6. CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR 6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN SHALL CONSTITUTE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO DO THE WORK.
7. IF ANY EXISTING LONGITUDINAL UNDERDRAIN IS ENCOUNTERED DURING WIDENING EXCAVATION, THE UNDERDRAIN PIPE SHOULD BE REMOVED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY VOID CREATED BY THE REMOVAL OF THE UNDERDRAIN PIPE SHOULD BE BACKFILLED BY MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION. IF NO LONGITUDINAL UNDERDRAIN IS FOUND, BUT EXISTING UNDERDRAIN OUTLETS MAY BE IMPACTED BY NEW WIDENING, OUTLETS SHALL BE CONNECTED TO THE NEW UNDERDRAINS OR OTHER DRAINAGE FACILITIES.
8. OUTLET THE UNDERDRAINS INTO OTHER DRAINAGE STRUCTURES WHENEVER POSSIBLE AT INTERVALS NOT TO EXCEED 250'. REFER TO STD. NOS. 387.11- 387.13-01- 387.21 AND 387.21-01.

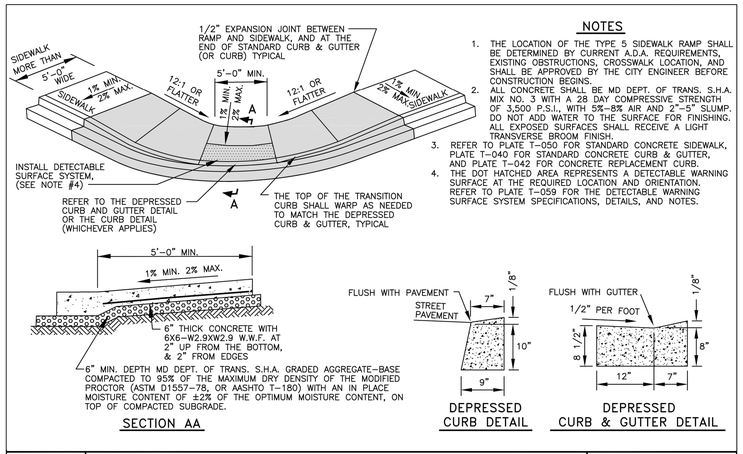
SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES LONGITUDINAL UNDERDRAIN LOCATED AT SHOULDER EDGE FOR FLEXIBLE PAVEMENT	
306			
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT		
	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
	APPROVAL 3-6-86	APPROVAL 4-14-86	
	REVISED 10-1-01	REVISED 3-21-88	
	REVISED 7.29-11	REVISED 8-11-11	
	REVISED 6-20-16	REVISED 6-28-16	
	STANDARD NO.	MD 387.11	



NOTES

1. THE LOCATION OF THE TYPE 2 SIDEWALK RAMP SHALL BE DETERMINED BY CURRENT A.D.A. REQUIREMENTS, EXISTING OBSTRUCTIONS, CROSSWALK LOCATION, THE SIDEWALK ALIGNMENT, AND SHALL BE APPROVED BY THE CITY ENGINEER BEFORE CONSTRUCTION BEGINS.
2. THE EDGE OF THE CONCRETE RAMP APRONS SHALL START AT THE BEGINNING OF THE TRANSITION CURB AND EXTEND TO THE END OF THE 6" CONCRETE RAMP. APRONS SHALL BE 6" THICK CONCRETE REINFORCED THE SAME AS THE RAMP.
3. ALL CONCRETE SHALL BE MD DEPT. OF TRANS. S.H.A. MIX NO. 3 WITH A 28 DAY COMPRESSIVE STRENGTH OF 3,500 P.S.I., WITH 5%-8% AIR AND 2"-5" SLUMP. DO NOT ADD WATER TO THE SURFACE FOR FINISHING. ALL EXPOSED SURFACES SHALL RECEIVE A LIGHT TRANSVERSE BROOM FINNISH.
4. REFER TO PLATE T-050 FOR STANDARD CONCRETE SIDEWALK, PLATE T-040 FOR STANDARD CONCRETE CURB & GUTTER, AND PLATE T-042 FOR CONCRETE REPLACEMENT CURB.
5. THE DOT HATCHED AREA REPRESENTS A DETECTABLE WARNING SURFACE AT THE REQUIRED LOCATION AND ORIENTATION. REFER TO PLATE T-059 FOR THE DETECTABLE WARNING SURFACE SYSTEM SPECIFICATIONS, DETAILS, AND NOTES.

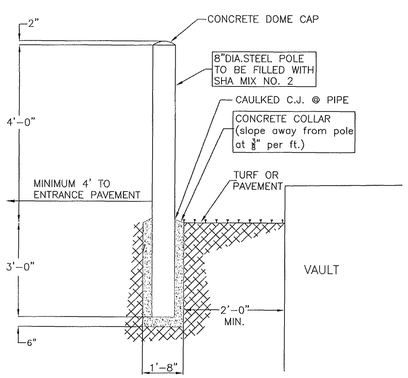
STANDARD SIDEWALK RAMP DETAIL



NOTES

1. THE LOCATION OF THE TYPE 5 SIDEWALK RAMP SHALL BE DETERMINED BY CURRENT A.D.A. REQUIREMENTS, EXISTING OBSTRUCTIONS, CROSSWALK LOCATION, AND SHALL BE APPROVED BY THE CITY ENGINEER BEFORE CONSTRUCTION BEGINS.
2. ALL CONCRETE SHALL BE MD DEPT. OF TRANS. S.H.A. MIX NO. 3 WITH A 28 DAY COMPRESSIVE STRENGTH OF 3,500 P.S.I., WITH 5%-8% AIR AND 2"-5" SLUMP. DO NOT ADD WATER TO THE SURFACE FOR FINISHING. ALL EXPOSED SURFACES SHALL RECEIVE A LIGHT TRANSVERSE BROOM FINISH.
3. REFER TO PLATE T-050 FOR STANDARD CONCRETE SIDEWALK, PLATE T-040 FOR STANDARD CONCRETE CURB & GUTTER, AND PLATE T-042 FOR CONCRETE REPLACEMENT CURB.
4. THE DOT HATCHED AREA REPRESENTS A DETECTABLE WARNING SURFACE AT THE REQUIRED LOCATION AND ORIENTATION. REFER TO PLATE T-059 FOR THE DETECTABLE WARNING SURFACE SYSTEM SPECIFICATIONS, DETAILS, AND NOTES.

STANDARD SIDEWALK RAMP DETAIL



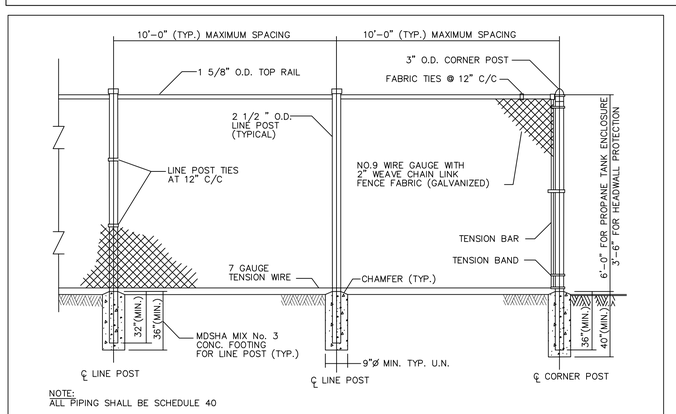
SECTION

NOTES:
1.) CONTRACTOR TO PAINT BOLLARDS ACCORDING TO THE OWNER/ARCHITECT SPEC.

8" CONCRETE FILLED BOLLARD

NOT TO SCALE

CITY OF HAGERSTOWN UTILITIES DEPARTMENT–WATER DIVISION	ISSUE DATE: MAY 2019	
(TYPE 'C') BOLLARD DETAIL FOR WATER METER VAULT PROTECTION	REVISIONS	
	Plate	W-021



NOTE:
ALL PIPING SHALL BE SCHEDULE 40

1 6' HIGH CHAIN LINK FENCE DETAIL — NOT TO SCALE

CITY OF HAGERSTOWN UTILITIES DEPARTMENT
WATER DIVISION

THIS APPROVAL IS FOR THE DESIGN AND LAYOUT OF THE PROPOSED WATER SYSTEM IMPROVEMENTS. ALL WATER SYSTEM IMPROVEMENTS SHALL BE CONSTRUCTED TO THE STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION. THIS APPROVAL DOES NOT GUARANTEE AVAILABILITY OF WATER SERVICE. WATER SERVICE IS AVAILABLE SUBJECT TO CONFORMANCE WITH ALL POLICIES AND STANDARDS IN EFFECT AT THE TIME OF APPLICATION FOR SERVICE, PAYMENT OF FEES AND APPROVAL OF THE WATER SERVICE APPLICATION. THE WATER DIVISION DOES NOT GUARANTEE A SPECIFIC WATER PRESSURE OR FLOW AT ANY METER OR FIRE HYDRANT. THIS APPROVAL IS VALID FOR A PERIOD OF ONE YEAR

SIGNATURE DATE

12/18/19

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

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REVISIONS

	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

100% PLAN SET

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

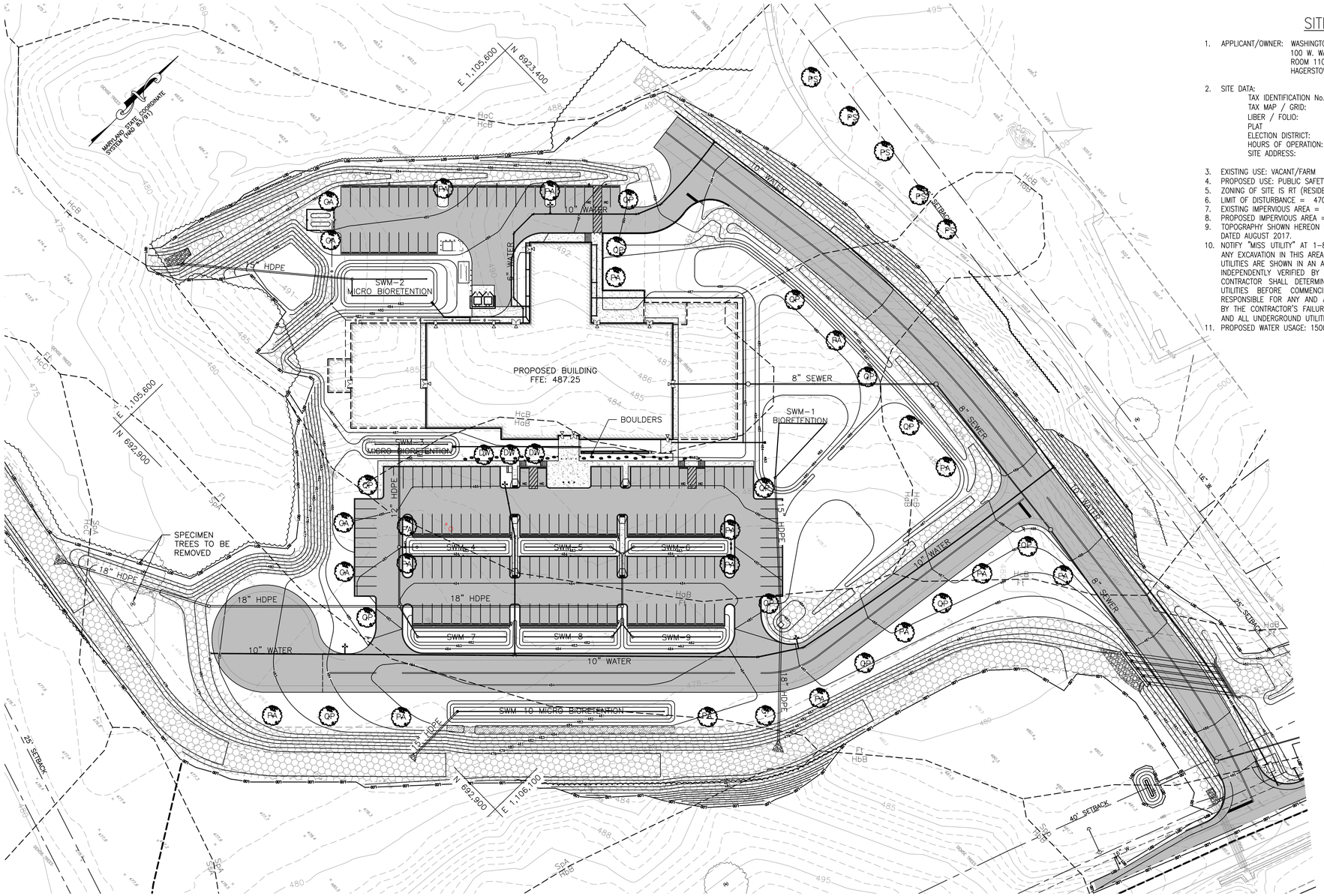
CONSTRUCTION DETAILS

PLOT SCALE: 1:30
FILENAME:
DATE: 07/20/2018

PROJECT 3089

C-1.13

SP-18-044



LANDSCAPING PLAN

SCALE: 1"=50'

SITE NOTES

1. APPLICANT/OWNER: WASHINGTON COUNTY BOARD OF COMMISSIONERS
   100 W. WASHINGTON ST.
   ROOM 1101
   HAGERSTOWN, MD 21740
2. SITE DATA:
   - TAX IDENTIFICATION No.: 018579
   - TAX MAP / GRID: 0062/0010
   - LIBER / FOLIO: 05374/00077
   - PLAT M683
   - ELECTION DISTRICT: 10
   - HOURS OF OPERATION: 7AM–10PM M–F, 830AM–330PM SAT–SUN
   - SITE ADDRESS: 18350 PUBLIC SAFETY PLACE
     HAGERSTOWN, MD 21740
3. EXISTING USE: VACANT/FARM
4. PROPOSED USE: PUBLIC SAFETY TRAINING CENTER
5. ZONING OF SITE IS RT (RESIDENTIAL TRANSITION)
6. LIMIT OF DISTURBANCE = 470,978 sq.ft or 10.81 Ac.
7. EXISTING IMPERVIOUS AREA = 0.00 sq.ft or 0.00 Ac.
8. PROPOSED IMPERVIOUS AREA = 4.30 Ac.
9. TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL FLOWN TOPOGRAPHY DATED AUGUST 2017.
10. NOTIFY "MISS UTILITY" AT 1–800–257–7777 48 HOURS PRIOR TO DOING ANY EXCAVATION IN THIS AREA. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATED AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
11. PROPOSED WATER USAGE: 1500 GPD OR 7.5 EDU'S

LEGEND

- PROPERTY LINE
- 220 EX. CONTOUR
- EX. EDGE OF ROAD
- EX. FENCE LINE
- EX. SIDEWALK
- EX. BUILDING
- STORM DRAIN PIPE
- EX. GAS
- EX. WATER
- EX. TREE LINE
- EX. SEWER
- MnB MnE SOILS LINE
- PROPOSED TREE
- EX. SPECIMEN TREE
- PERMANENT SOIL STABILIZATION MATTING
- TEMP. SOIL STABILIZATION MATTING

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME / COMMON NAME	SIZE	COND.	COMMENTS
TREES					
PA	16	PLATANUS X ACERIFOLIA 'COLUMBIA' / COLUMBIA PLANETREE	2" CAL.	B&B	FULL CROWN
QP	14	QUERCUS PHELLOS / WILLOW OAK	2" CAL.	B&B	FULL CROWN
GA	4	THUJA STANDISHII x PLICATA / GREEN GIANT ARBORVITAE	6' HGT.	B&B	SHEAR TO GROUND
PS	5	PINUS STROBUS/ EASTERN WHITE PINE	6' HGT.	B&B	SHEAR TO GROUND
DW	3	CORNUS FLORIDA/ DOGWOOD	6' HGT.	B&B	SHEAR TO GROUND

NOTE: SEE SHEET C-2.03 TO 2.08 FOR PLANTINGS WITHIN STORMWATER FACILITIES

SOILS TABLE

SOIL SYMBOL	SOIL DESCRIPTION	PERCENT SLOPE (%)	Kf VALUE	HYDRAULIC SOILS GROUP	HYDRIC (Y/N)
Ft	FUNKSTOWN SILT LOAM	–	0.37	C	NO
HaB	HAGERSTOWN SILT LOAM	3–8	0.37	B	NO
HaC	HAGERSTOWN SILT LOAM	8–15	0.37	B	NO
HbB	HAGERSTOWN SILTY CLAY LOAM	3–8	0.32	B	NO
HbC	HAGERSTOWN SILTY CLAY LOAM	8–15	0.32	B	NO
HcB	HAGERSTOWN–ROCK OUTCROP COMPLEX	3–8	0.32	B	NO
HcC	HAGERSTOWN–ROCK OUTCROP COMPLEX	8–15	0.32	B	NO
SpA	SWANPOND SILT LOAM	0–3	0.43	D	NO
SsA	SWANPOND–FUNKSTOWN SILT LOAMS	0–3	0.43	D	NO

GRAPHIC SCALE

50 25 0 50 100

SCALE: 1"=50'

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

STATE OF MARYLAND
FRANK R. FLORA
No. 51972
PROFESSIONAL ENGINEER
12/18/20

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410-792-7419 (F)

LANDSCAPING PLAN

PLOT SCALE: 1:50

FILENAME: KCI# 271703606

DATE: 12/18/20

PROJECT 3089

C-1.14

SP-18-044

PLANTING NOTES

1. PLANT MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED, INCLUDING ALL LABOR, MATERIALS, PLANTS, EQUIPMENT, INCIDENTALS, AND CLEAN-UP.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT. LAYOUT TO BE APPROVED BY OWNERS' REPRESENTATIVE PRIOR TO INSTALLATION.

3. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED DENSELY FOLIATED BRANCHES, AND VIGOROUS ROOT SYSTEMS; AND BE FREE FROM DEFECTS AND INJURIES.

4. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO GROWTH OF PLANT MATERIAL.

5. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN VIGOROUS GROWING CONDITION. PROVISION
SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE FOR TREES AND SHRUBS. REPLACEMENTS SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE.

6. PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY IF/WHEN PRACTICAL. IN THE EVENT THAT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE-DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD SHALL BE REJECTED, UNLESS OWNER AND CONTRACTOR PROVIDE OTHERWISE BY WRITTEN AGREEMENT.

7. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF ROOTBALL SHALL BE IN ACCORDANCE WITH THE MOST
RECENT VERSION OF ANSI Z60 "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.

8. ALL PLANTS SHALL BE PLANTED IN AMENDED TOP SOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACK-FILLING PROGRESSES. PLANTING MIX TO BE AS SHOWN ON PLANTING DETAILS. LARGE PLANTING AREAS TO INCORPORATE FERTILIZER AND SOIL CONDITIONERS AS STATED IN PLANTING SPECIFICATIONS.

9. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
PLANTS SHALL BE HANDLED FORM THE BOTTOM OF THE BALL ONLY.

10. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOP SOIL THAT IS IN A MUDDY OR FROZEN CONDITION. ALL PLANT MATERIAL SHALL BE SPRAYED WITH "WILT-PRUF" OR EQUAL AS PER MANUFACTURERS INSTRUCTIONS.

11. NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE PLANTED LESS THAN TWO FEET FROM EXISTING STRUCTURES AND SIDEWALKS.

12. SET ALL PLANTS PLUMB AND STRAIGHT. SET AT SUCH LEVEL THAT A NORMAL OR NATURAL RELATIONSHIP TO THE GROUND IF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE THE PLANT IN THE CENTER OF THE PIT.

13. ALL INJURED ROOTS SHALL BE PRUNED TO MAKE CLEAN ENDS BEFORE PLANTING UTILIZING CLEAN, SHARP TOOLS. IT IS ADVISABLE TO PRUNE APPROXIMATELY 1/3 OF THE GROWTH OF LARGE TREES (2" CALIPER AND GREATER) BY THE REMOVAL OF SUPERFLUOUS BRANCHES, THOSE WHICH CROSS, THOSE WHICH RUN PARALLEL, ETC. MAIN LEADER OF TREES SHALL NOT BE CUT BACK. LONG SIDES BRANCHES SHALL BE SHORTENED.

14. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE THE NATURAL CHARACTER OF PLANT. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.

15. TREES SHALL BE SUPPORTED IMMEDIATELY AFTER PLANTING. ALL TREES 6" AND GREATER IN CALIPER SHALL BE GUYED. SMALLER TREES SHALL BE STAKED. GUYING WIRES AND STAKES SHALL BE INSTALLED AS INDICATED. THE LANDSCAPE CONTRACTOR SHALL REMOVE STAKING, GUYING AND TREE WRAP AT THE END OF ONE YEAR MAINTENANCE AND GUARANTEE PERIOD.

16. ALL PLANTING BEDS SHALL BE MULCHED WITH 3" LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH.

17. NEW PLANTING AREAS AND SOD SHALL BE ADEQUATELY IRRIGATED OR WATERED TO ESTABLISH THE PROPOSED PLANTS AND LAWN.

18. ALL PLANTS SHOWN ON THE APPROVED LANDSCAPE PLAN SHALL BE INSTALLED, INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE. THE LANDSCAPE ARCHITECT SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD. TREES, SHRUBS, VINES AND GROUNDCOVER AS REQUIRED BY OR ASSOCIATED WITH A SUBDIVISION OR SITE PLAN APPROVED BY THE PLANNING AUTHORITIES SHALL BE INSTALLED DURING THE FOLLOWING PLANTING SEASONS:

TYPE	DATES
PLANTS	03/15 TO 12/15
LAWNS	03/15 TO 06/15
	09/15 TO 12/01

THE FOLLOWING TREE VARIETIES SHALL NOT BE PLANTED DURING THE FALL PLANTING SEASON DUE TO THE HAZARDS
ASSOCIATED WITH PLANTING THESE TREES IN THIS SEASON:

ACER RUBRUM	POPULUS SPP.
BETULA SPP.	PRUNUS SPP.
CARPINUS SPP.	PYRUS SPP.
CRATECUS SPP.	QUERCUS SPP.
KOELREUTERIA PANICULATA	SALIX SPP.
LIQUIDAMBAR STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA
PLATANUS ACERIFOLIA	

ANY PLANTING INSTALLED IN CONFLICT WITH THIS REQUIREMENT MUST RECEIVE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO PLANTING. FAILURE TO COMPLY WITH THESE REQUIREMENTS WILL REQUIRE THE REMOVAL OF THE PLANTING IN QUESTION. THIS REQUIREMENT DOES NOT APPLY TO SEEDING OR SODDING OR PLANTINGS SPECIFICALLY FOR SOIL STABILIZATION PURPOSES. PLANTINGS ASSOCIATED WITH ANY LOT GIVEN A CERTIFICATE OF OCCUPANCY OUTSIDE THESE PERIODS SHALL BE PROVIDED DURING THE PREVIOUS OR NEXT APPROPRIATE SEASON.

19. ALL DISTURBED AREAS SHALL BE TREATED WITH 4" TOP SOIL AND SEEDED IN ACCORDANCE WITH PERMANENT STABILIZATION METHODS INDICATED ON SOIL EROSION AND SEDIMENT CONTROL SHEET.

LANDSCAPE MAINTENANCE

I. GENERAL

A. ALL PLANTING AREAS, INCLUDING LAWNS, BUFFERS, AND PARKING LOTS, SHALL BE PERIODICALLY INSPECTED A MINIMUM OF ONCE PER MONTH, EVERY TWO (2) WEEKS DURING THE GROWING SEASON, OR AFTER EACH MOWING SESSION. A FALL CLEAN-UP SHALL BE PERFORMED EACH YEAR.
B. REMOVE ALL LITTER, DEBRIS AND WEEDS.
C. MAINTAIN A MINIMUM OF A 2-INCH DEPTH OF ORGANIC HARDWOOD MULCH OR EQUAL IN ALL PLANTING BEDS.

II. IRRIGATION (IF APPLICABLE)

A. AUTOMATIC SPRINKLERS SHALL BE CLEANED OUT AND TURNED OFF IN THE FALL PRIOR TO THE FIRST FROST, AND TESTED WHEN TURNED ON IN THE SPRING.
B. EVALUATE SUCCESS OF IRRIGATION SYSTEM AND MODIFY AS NECESSARY.
WATER REQUIREMENTS:

NEW TURF: KEEP MOIST UNTIL ALL SEED GERMINATES AND BECOMES AN ESTABLISHED STAND OF TURF.
EXISTING TURF: DURING DRY PERIODS, WATER TWICE A WEEK FOR 20 MINUTES AT A TIME, OR SET IRRIGATION FOR COVERAGE OF 1-2 INCHES OF WATER PER WEEK.

III. SEASONAL FLOWERS

A. ANNUAL FLOWER BEDS SHALL BE PERIODICALLY MULCHED AND THE SOIL AMENDED ANNUALLY. NEW PLANTINGS SHALL BE PROVIDED IN MAY OF EACH YEAR. DURING THE GROWING SEASON, ALL BEDS SHALL RECEIVE PERIODIC INSPECTIONS PER NOTE I, IRRIGATION AND WEEDING TO MAINTAIN A NEAT APPEARANCE.

IV. TURF

A. LAWN AREAS SHALL NOT EXCEED A HEIGHT OF 4 INCHES. APPROXIMATELY 12-15 MOWINGS PER YEAR WILL BE REQUIRED.
B. FERTILIZER AND SOIL AMENDMENTS SHOULD BE ADDED A NECESSARY AND/OR ON A SEASONAL BASIS. FERTILIZER IS OPTIMALLY APPLIED TO LAWN AND TURF AREAS THREE TUNES PER SEASON. TIMING, FREQUENCY AND RATE OF APPLICATION SHALL BE ADJUSTED ACCORDING TO WEATHER AND TO HORTICULTURAL AND SOIL TEST CONDITIONS FOR EACH SPECIFIC SITE. FERTILIZER SHALL BE APPLIED BY ACCEPTED METHODS ONLY. SAFETY SHALL BE OF PRIME CONSIDERATION. CARE SHALL BE TAKEN NOT TO APPLY FERTILIZER WHEN THE GROUND IS WET.
B. SOIL AMENDMENTS SUCH AS LIME, GYPSUM OR PEAT MOSS MAY BE TO BE ADDED TO THE SOILS OF LAWNS, TURF OR PLANITNG AREAS PERIODICALLY. THE NEED FOR SUCH SOIL AMENDMENTS SHALL BE ANALYZED DURING THE PERIODIC INSPECTIONS AND IN CONJUNCTION WITH SOIL TESTS.
C. SOIL AMENDMENTS SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS OR BASED UPON SOIL TEST RESULTS.

APPLY A 3-1-2 (21-7-14, 10-4-6, OR 24-4-B) 50% ORGANIC FERTILIZER TWICE A YEAR BETWEEN MARCH 15 TO APRIL 15
AND SEPTEMBER 1 TO OCTOBER 1. IF NECESSARY, TWO ADDITIONAL APPLICATIONS MAY BE MADE IN MAY AND NOVEMBER. DO NOT APPLY FERTILIZER OR SOIL AMENDMENTS WHILE TURF IS EITHER WET OR UNDER EXTREME STRESS, IN
WINDY CONDITIONS, OR WHEN CHILDREN ARE PRESENT.

V. PRUNING

A. REMOVAL OF DEAD, DISEASED, INSECT INFESTED OR WEAK WOOD SHALL TAKE PLACE IN THE DORMANT SEASON OR AFTER FLOWERING. EXCESSIVE SHOOTS AND SUCKERS SHALL BE REMOVED.
B. SHRUB MATERIAL USED AS A SCREEN SHALL BE PRUNED AS A MASS TO ENHANCE THEIR NATURAL FORM. HEDGES
C. ROOT PRUNING OF TREES ADJACENT TO CURBS OR SIDEWALKS SHALL OCCUR DURING PERIODIC INSPECTIONS WITH KNOWLEDGE OF MOST RECENT PRUNING. NO MORE THAN 1/3 OF ROOT SYSTEM SHALL BE PRUNED DURING A YEAR.

VI. INSECT AND DISEASE CONTROL

A. THE CONTROL OF INSECTS AND DISEASE ASSOCIATED WITH ALL PLANTING AREAS SHALL ALWAYS BE A MAINTENANCE PRIORITY. ALL PLANTINGS, INCLUDING EXISTING MATURE TREES, SHALL BE PERIODICALLY INSPECTED FOR INSECT OR DISEASE INFESTATION. METHODS UTILIZED TO CONTROL INSECTS OR DISEASE MAY RANGE FROM SPRAYING AND PRUNING TO PLANT REMOVAL. WHATEVER METHOD IS UTILIZED, SAFETY AND CONTROL SHALL BE OF PRIME CONCERN. TRAINED AND CERTIFIED PERSONNEL SHALL PERFORM THESE TASKS.

VII. RENOVATION

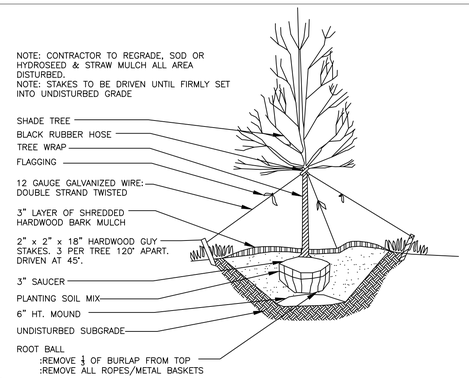
A. RENOVATION INCLUDES THE RESEEDING OR REPLANTING OF LANDSCAPE AREAS DAMAGED, DESTROYED OR FAILING DUE TO INSECTS, DISEASE, WEATHER OR PHYSICAL DAMAGE.
B. LAWN -- ALL AREAS WHERE SOIL HAS BEEN EXPOSED SHALL BE RENOVATED DURING THE NEXT PLANNING SEASON. PROPER HORTICULTURAL AND SOIL EROSION PREVENTION METHODS SHALL BE UTILIZED. IF SOIL EROSION HAS
OCCURRED, THE AREA SHALL BE REPAIRED WITH A SEED MIXTURE COMPATIBLE TO EXISTING PLANTINGS SHALL BE UTILIZED.
C. PLANTINGS -- ALL PLANTINGS WHICH ARE DAMAGED OR DESTROYED SHALL BE REPLACED DURING THE NEXT GROWING SEASON. A FAILING, DAMAGED OR DESTROYED LANDSCAPE SCREEN OR BUFFER MUST BE RENOVATED OR REPLACED WITHIN A REASONABLE PERIOD OF TIME, BUT NOT TO EXCEED THE SUBSEQUENT GROWING SEASON.

VIII. SITE AMENITIES

A. BENCHES, PATHS, BICYCLE RACKS, TRASH RECEPTACLES AND SIGNS SHALL BE INSPECTED AT LEAST TWICE A YEAR, ONCE IN MARCH AND ONCE IN AUGUST, TO DETERMINE THEIR CONDITION. ANY DAMAGED, WORN OR UNSAFE CONDITIONS SHALL BE RECTIFIED IMMEDIATELY.

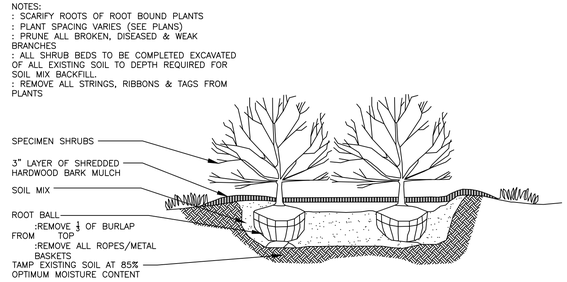
IX. PAVED SURFACES

A. ALL PAVED SURFACES, CONCRETE SIDEWALKS, ASPHALT PAVEMENT AND DECORATIVE PAVEMENT SHALL BE INSPECTED ON A REGULAR BASIS. ALL SUCH SURFACES SHALL BE INSPECTED AT LEAST ONCE PER MONTH.
B. TRASH, STAINS AND/OR OBSTRUCTIONS SHALL BE REMOVED IMMEDIATELY. PAVEMENT SHALL BE INSPECTED FOR DAMAGE,
CRACKS, AND/OR POT HOLES, AND RETURNED TO THEIR ORIGINAL CONDITIONS.
C. SNOW SHALL BE REMOVED DURING AND FOLLOWING EVERY STORM. SIDEWALKS AND PARKING AREAS SHALL BE KEPT CLEAR OF
ICE AND SNOW DURING BUSINESS HOURS.



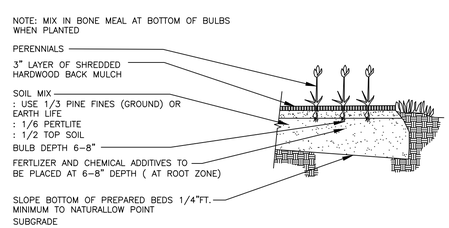
1/1.9 TREE GUYING PLANTING DETAIL

SCALE: N.T.S.



2/1.9 SHRUB PLANTING DETAIL

SCALE: N.T.S.

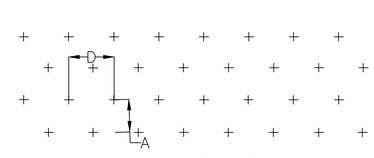


3/1.9 ANNUALS AND PERENNIALS PLANTING DETAIL

SCALE: N.T.S.

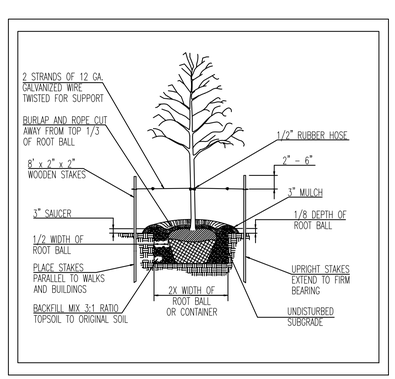
PLANT SPACING CHART

SPACING "D"	ROW "A"	#OF PLANTS PER SQUARE FOOT
6" o.c.	5.20"	4.61
8" o.c.	6.93"	2.60
10" o.c.	8.66"	1.66
12" o.c.	10.40"	1.15
15" o.c.	13.00"	0.73
18" o.c.	15.60"	0.51
24" o.c.	20.80"	0.29



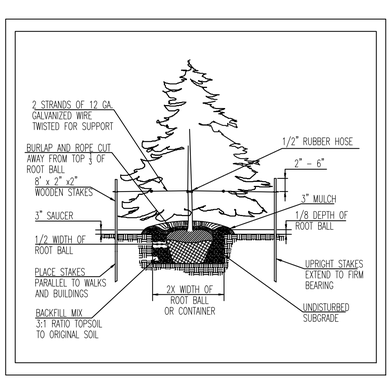
1/1.9 TRIANGULAR SPACING FOR SHRUBS, GROUND COVERS, BULBS AND PERENNIALS

SCALE: N.T.S.



DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

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REVISIONS

	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

100% PLAN SET

CRABTREE ROHRBAUGH & ASSOCIATES -
ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

12/18/19

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

LANDSCAPING DETAILS

PLOT SCALE: 1:50

FILENAME: KCI# 271703606

DATE: 12/18/19

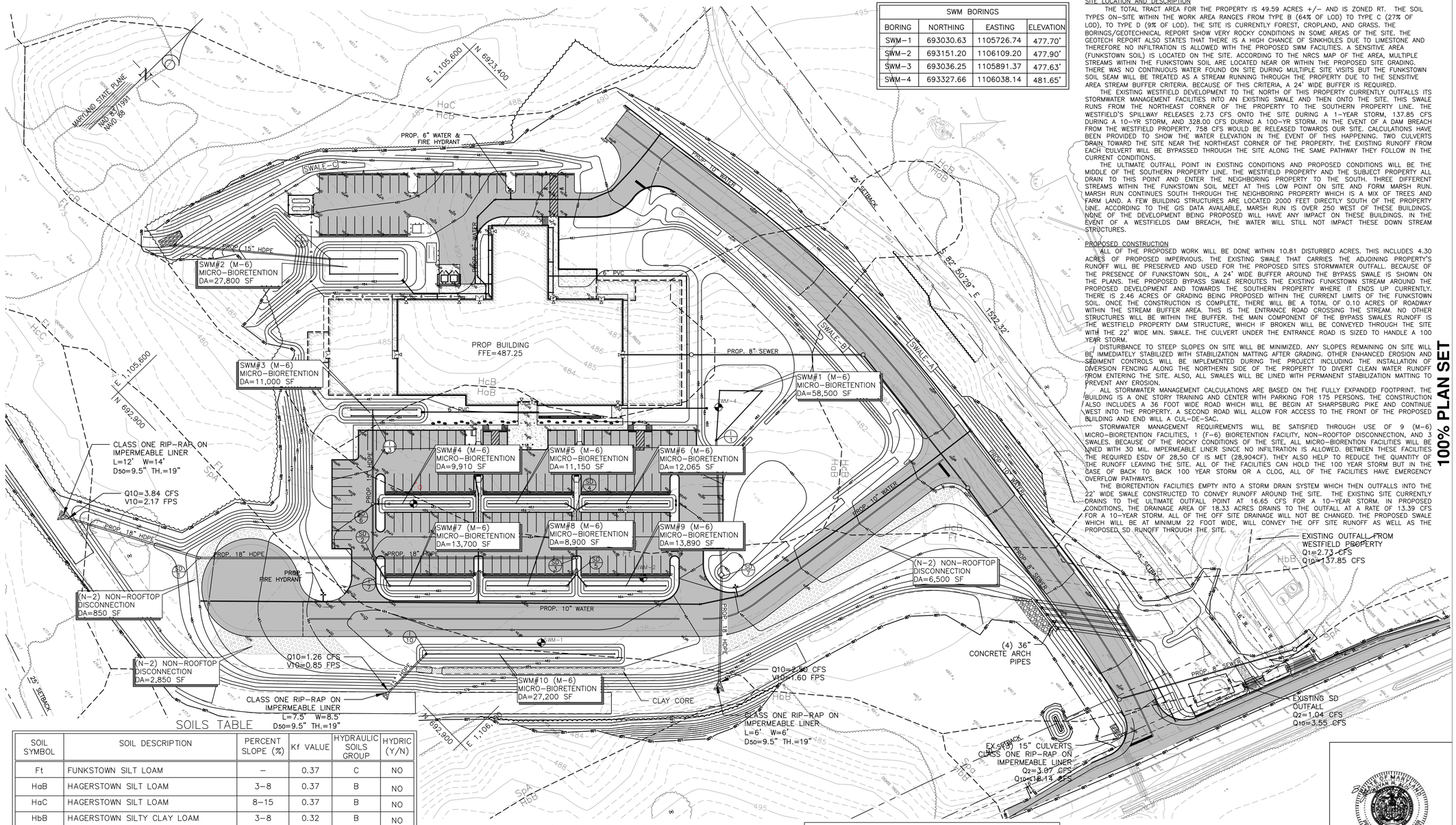
PROJECT 3089

C-1.15

SP-18-044

BMP ID/ID RANGE											DESCRIPTION
STRU_NAME	(SWM-1)	(SWM-2)	(SWM-3)	(SWM-4)	(SWM-5)	(SWM-6)	(SWM-7)	(SWM-8)	(SWM-9)	(SWM-10)	STRUCTURE NAME
ADDRESS	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	9238 SHARPSBURG PIKE	STRUCTURE ADDRESS
CITY/ZIP	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	HAGERSTOWN, MD 21740	STRUCTURE ADDRESS
MD_NORTH	693,303	693,149	693,069	693,018	693,147	693,163	692,964	693,095	693,107	692,948	MARYLAND COORDINATE (NAD83 METERS) NORTHING
MD_EAST	1,106,061	1,105,653	1,105,798	1,105,874	1,106,000	1,106,014	1,105,930	1,106,056	1,106,070	1,106,003	MARYLAND COORDINATE (NAD83 METERS) NORTHING
WATERSHED_CODE	02140503	02140503	02140503	02140503	02140503	02140503	02140503	02140503	02140503	02140503	MARYLAND 8 OR 12-DIGIT HYDROLOGIC UNIT CODE
STRU_TYPE	BIORETENTION	MICRO-BIORETENTION	MICRO-BIORETENTION	MICRO-BIORETENTION	MICRO-BIORETENTION	MICRO-BIORETENTION	MICRO-BIORETENTION	MICRO-BIORETENTION	MICRO-BIORETENTION	MICRO-BIORETENTION	IDENTIFY STRUCTURE OR BMP TYPE
LAND_USE	16-INSTITUTIONAL	16-INSTITUTIONAL	16-INSTITUTIONAL	16-INSTITUTIONAL	16-INSTITUTIONAL	16-INSTITUTIONAL	16-INSTITUTIONAL	16-INSTITUTIONAL	16-INSTITUTIONAL	16-INSTITUTIONAL	PREDOMINANT LAND USE
CON_PURPOSE	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT	NEW DEVELOPMENT, REDEVELOPMENT, OR RESTORATION
DRAIN_AREA	58,500 sqft. (1.35 ACRES)	27,800 sqft. (0.64 ACRES)	11,000 sqft. (0.25 ACRES)	9,910 sqft. (0.23 ACRES)	11,150 sqft. (0.26 ACRES)	12,065 sqft. (0.28 ACRES)	13,700 sqft. (0.31 ACRES)	8,900 sqft. (0.20 ACRES)	13,890 sqft. (0.32 ACRES)	27,200 sqft. (0.62 ACRES)	STRUCTURE DRAINAGE AREA
IMP_ACRES	26,000 sqft. (0.60 ACRES)	19,400 sqft. (0.45 ACRES)	6,450 sqft. (0.15 ACRES)	7,800 sqft. (0.18 ACRES)	7,200 sqft. (0.20 ACRES)	7,900 sqft. (0.19 ACRES)	10,050 sqft. (0.42 ACRES)	6,050 sqft. (0.15 ACRES)	10,500 sqft. (0.24 ACRES)	18,000 sqft. (0.41 ACRES)	STRUCTURE IMPERVIOUS AREA
TOT_DRAIN	18.33 ACRES	18.33 ACRES	18.33 ACRES	18.33 ACRES	18.33 ACRES	18.33 ACRES	18.33 ACRES	18.33 ACRES	18.33 ACRES	18.33 ACRES	TOTAL SITE AREA (ACRES)
ESD_VOLUME	5,850 CUBIC FEET	4,365 CUBIC FEET	1,451 CUBIC FEET	1,469 CUBIC FEET	1,469 CUBIC FEET	1,638 CUBIC FEET	2,125 CUBIC FEET	1,361 CUBIC FEET	1,757 CUBIC FEET	3,520 CUBIC FEET	ESD VOLUME PROVIDED
RCN	77	87	83	91	85	85	92	90	91	91	RUNOFF CURVE NUMBER (WEIGHTED)
ON_OFF_SITE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON-SITE STRUCTURE	ON OR OFFSITE STRUCTURE

SWM BORINGS			
BORING	NORTHING	EASTING	ELEVATION
SWM-1	693030.63	1105726.74	477.70'
SWM-2	693151.20	1106109.20	477.90'
SWM-3	693036.25	1105891.37	477.63'
SWM-4	693327.66	1106038.14	481.65'



STORMWATER MANAGEMENT PLAN

SCALE: 1"=50'

SOILS TABLE

SOIL SYMBOL	SOIL DESCRIPTION	PERCENT SLOPE (%)	Kf VALUE	HYDRAULIC SOILS GROUP	HYDRIC (Y/N)
Ft	FUNKSTOWN SILT LOAM	–	0.37	C	NO
HaB	HAGERSTOWN SILT LOAM	3–8	0.37	B	NO
HaC	HAGERSTOWN SILT LOAM	8–15	0.37	B	NO
HbB	HAGERSTOWN SILTY CLAY LOAM	3–8	0.32	B	NO
HbC	HAGERSTOWN SILTY CLAY LOAM	8–15	0.32	B	NO
HcB	HAGERSTOWN–ROCK OUTCROP COMPLEX	3–8	0.32	B	NO
HcC	HAGERSTOWN–ROCK OUTCROP COMPLEX	8–15	0.32	B	NO
SpA	SWANPOND SILT LOAM	0–3	0.43	D	NO
SsA	SWANPOND–FUNKSTOWN SILT LOAMS	0–3	0.43	D	NO

NOTE: SEE SHEETS C-2.03 TO C-2.08 FOR MICRO-BIORETENTION FACILITY DETAILS AND PLANTINGS.

SWM SUMMARY TABLE

AREA OF DISTURBANCE (Ac.)	EX. IMP. AREA (Ac.)	PROP. IMP. AREA (Ac.)	ESD VOLUME (CF)	
			REQUIRED	PROVIDED
10.81	0.00	4.30	28,504	28,904

STORMWATER NARRATIVE

SITE LOCATION AND DESCRIPTION

THE TOTAL TRACT AREA FOR THE PROPERTY IS 49.59 ACRES +/– AND IS ZONED RT. THE SOIL TYPES ON-SITE WITHIN THE WORK AREA RANGES FROM TYPE B (64% OF LOD) TO TYPE C (27% OF LOD), TO TYPE D (9% OF LOD). THE SITE IS CURRENTLY FOREST, CROPLAND, AND GRASS. THE BORINGS/GEOTECHNICAL REPORT SHOW VERY ROCKY CONDITIONS IN SOME AREAS OF THE SITE. THE GEOTECH REPORT ALSO STATES THAT THERE IS A HIGH CHANCE OF SINKHOLES DUE TO LIMESTONE AND THEREFORE NO INFILTRATION IS ALLOWED WITH THE PROPOSED SWM FACILITIES. A SENSITIVE AREA (FUNKSTOWN SOIL) IS LOCATED ON THE SITE. ACCORDING TO THE NRCS MAP OF THE AREA, MULTIPLE STREAMS WITHIN THE FUNKSTOWN SOIL ARE LOCATED NEAR OR WITHIN THE PROPOSED SITE GRADING. THERE WAS NO CONTINUOUS WATER FOUND ON SITE DURING MULTIPLE SITE VISITS BUT THE FUNKSTOWN SOIL SEAM WILL BE TREATED AS A STREAM RUNNING THROUGH THE PROPERTY DUE TO THE SENSITIVE AREA STREAM BUFFER CRITERIA. BECAUSE OF THIS CRITERIA, A 24' WIDE BUFFER IS REQUIRED.

THE EXISTING WESTFIELD DEVELOPMENT TO THE NORTH OF THIS PROPERTY CURRENTLY OUTFALLS ITS STORMWATER MANAGEMENT FACILITIES INTO AN EXISTING SWALE AND THEN ONTO THE SITE. THIS SWALE RUNS FROM THE NORTHEAST CORNER OF THE PROPERTY TO THE SOUTHERN PROPERTY LINE. THE WESTFIELD'S SPILLWAY RELEASES 2.73 CFS ONTO THE SITE DURING A 1-YEAR STORM, 137.85 CFS DURING A 10-YR STORM, AND 328.00 CFS DURING A 100-YR STORM. IN THE EVENT OF A DAM BREACH FROM THE WESTFIELD PROPERTY, 758 CFS WOULD BE RELEASED TOWARDS OUR SITE. CALCULATIONS HAVE BEEN PROVIDED TO SHOW THE WATER ELEVATION IN THE EVENT OF THIS HAPPENING. TWO CULVERTS DRAIN TOWARD THE SITE NEAR THE NORTHEAST CORNER OF THE PROPERTY. THE EXISTING RUNOFF FROM EACH CULVERT WILL BE BYPASSED THROUGH THE SITE ALONG THE SAME PATHWAY THEY FOLLOW IN THE CURRENT CONDITIONS.

THE ULTIMATE OUTFALL POINT IN EXISTING CONDITIONS AND PROPOSED CONDITIONS WILL BE THE MIDDLE OF THE SOUTHERN PROPERTY LINE. THE WESTFIELD PROPERTY AND THE SUBJECT PROPERTY ALL DRAIN TO THIS POINT AND ENTER THE NEIGHBORING PROPERTY TO THE SOUTH. THREE DIFFERENT STREAMS WITHIN THE FUNKSTOWN SOIL MEET AT THIS LOW POINT ON SITE AND FORM MARSH RUN. MARSH RUN CONTINUES SOUTH THROUGH THE NEIGHBORING PROPERTY WHICH IS A MIX OF TREES AND FARM LAND. A FEW BUILDING STRUCTURES ARE LOCATED 2000 FEET DIRECTLY SOUTH OF THE PROPERTY LINE. ACCORDING TO THE GIS DATA AVAILABLE, MARSH RUN IS OVER 250 WEST OF THESE BUILDINGS. NONE OF THE DEVELOPMENT BEING PROPOSED WILL HAVE ANY IMPACT ON THESE BUILDINGS. IN THE EVENT OF A WESTFIELDS DAM BREACH, THE WATER WILL STILL NOT IMPACT THESE DOWN STREAM STRUCTURES.

PROPOSED CONSTRUCTION

ALL OF THE PROPOSED WORK WILL BE DONE WITHIN 10.81 DISTURBED ACRES. THIS INCLUDES 4.30 ACRES OF PROPOSED IMPERVIOUS. THE EXISTING SWALE THAT CARRIES THE ADJOINING PROPERTY'S RUNOFF WILL BE PRESERVED AND USED FOR THE PROPOSED SITES STORMWATER OUTFALL. BECAUSE OF THE PRESENCE OF FUNKSTOWN SOIL, A 24' WIDE BUFFER AROUND THE BYPASS SWALE IS SHOWN ON THE PLANS. THE PROPOSED BYPASS SWALE REROUTES THE EXISTING FUNKSTOWN STREAM AROUND THE PROPOSED DEVELOPMENT AND TOWARDS THE SOUTHERN PROPERTY WHERE IT ENDS UP CURRENTLY. THERE IS 2.46 ACRES OF GRADING BEING PROPOSED WITHIN THE CURRENT LIMITS OF THE FUNKSTOWN SOIL. ONCE THE CONSTRUCTION IS COMPLETE, THERE WILL BE A TOTAL OF 0.10 ACRES OF ROADWAY WITHIN THE STREAM BUFFER AREA. THIS IS THE ENTRANCE ROAD CROSSING THE STREAM. NO OTHER STRUCTURES WILL BE WITHIN THE BUFFER. THE MAIN COMPONENT OF THE BYPASS SWALES RUNOFF IS THE WESTFIELD PROPERTY DAM STRUCTURE, WHICH IF BROKEN WILL BE CONVEYED THROUGH THE SITE WITH THE 22' WIDE MIN. SWALE. THE CULVERT UNDER THE ENTRANCE ROAD IS SIZED TO HANDLE A 100 YEAR STORM.

DISTURBANCE TO STEEP SLOPES ON SITE WILL BE MINIMIZED. ANY SLOPES REMAINING ON SITE WILL BE IMMEDIATELY STABILIZED WITH STABILIZATION MATTING AFTER GRADING. OTHER ENHANCED EROSION AND SEDIMENT CONTROLS WILL BE IMPLEMENTED DURING THE PROJECT INCLUDING THE INSTALLATION OF DIVERSION FENCING ALONG THE NORTHERN SIDE OF THE PROPERTY TO DIVERT CLEAN WATER RUNOFF FROM ENTERING THE SITE. ALSO, ALL SWALES WILL BE LINED WITH PERMANENT STABILIZATION MATTING TO PREVENT ANY EROSION.

ALL STORMWATER MANAGEMENT CALCULATIONS ARE BASED ON THE FULLY EXPANDED FOOTPRINT. THE BUILDING IS A ONE STORY TRAINING AND CENTER WITH PARKING FOR 175 PERSONS. THE CONSTRUCTION ALSO INCLUDES A 36 FOOT WIDE ROAD WHICH WILL BE BEGIN AT SHARPSBURG PIKE AND CONTINUE WEST INTO THE PROPERTY. A SECOND ROAD WILL ALLOW FOR ACCESS TO THE FRONT OF THE PROPOSED BUILDING AND END WILL A CUL-DE-SAC.

STORMWATER MANAGEMENT REQUIREMENTS WILL BE SATISFIED THROUGH USE OF 9 (M-6) MICRO-BIORETENTION FACILITIES, 1 (F-6) BIORETENTION FACILITY, NON-ROOFTOP DISCONNECTION, AND 3 SWALES. BECAUSE OF THE ROCKY CONDITIONS OF THE SITE, ALL MICRO-BIORENTION FACILITIES WILL BE LINED WITH 30 MIL. IMPERMEABLE LINER SINCE NO INFILTRATION IS ALLOWED. BETWEEN THESE FACILITIES THE REQUIRED ESDV OF 28,50 CF IS MET (28,904CF). THEY ALSO HELP TO REDUCE THE QUANTITY OF THE RUNOFF LEAVING THE SITE. ALL OF THE FACILITIES CAN HOLD THE 100 YEAR STORM BUT IN THE CASE OF BACK TO BACK 100 YEAR STORM OR A CLOG, ALL OF THE FACILITIES HAVE EMERGENCY OVERFLOW PATHWAYS.

THE BIORETENTION FACILITIES EMPTY INTO A STORM DRAIN SYSTEM WHICH THEN OUTFALLS INTO THE 22' WIDE SWALE CONSTRUCTED TO CONVEY RUNOFF AROUND THE SITE. THE EXISTING SITE CURRENTLY DRAINS TO THE ULTIMATE OUTFALL POINT AT 16.65 CFS FOR A 10-YEAR STORM. IN PROPOSED CONDITIONS, THE DRAINAGE AREA OF 18.33 ACRES DRAINS TO THE OUTFALL AT A RATE OF 13.39 CFS FOR A 10-YEAR STORM. ALL OF THE OFF SITE DRAINAGE WILL NOT BE CHANGED. THE PROPOSED SWALE WHICH WILL BE AT MINIMUM 22 FOOT WIDE, WILL CONVEY THE OFF SITE RUNOFF AS WELL AS THE PROPOSED SD RUNOFF THROUGH THE SITE.

GRAPHIC SCALE

50 25 0 50 100

SCALE: 1"=50'

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 51972 EXP. DATE: 12/11/2021

12/18/20

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

100% PLAN SET

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11830 W. MARKET PLACE, SUITE F
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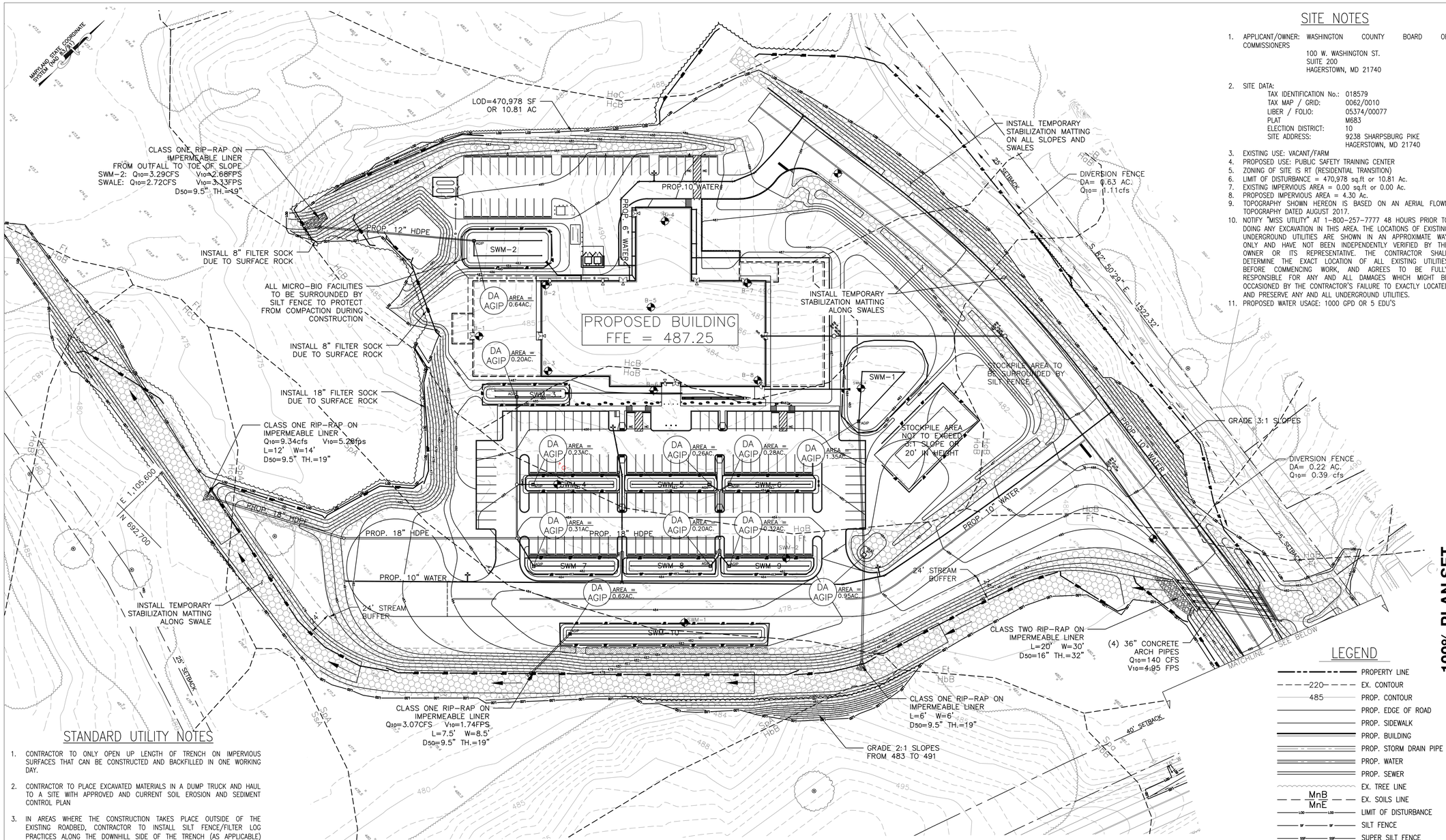
SWM PLAN

PLOT SCALE: 1:50
FILENAME: KCI# 271703606
DATE: 12/18/20

PROJECT 3089

C-2.00

SP-18-044



SITE NOTES

1. APPLICANT/OWNER: WASHINGTON COUNTY BOARD OF COMMISSIONERS
   100 W. WASHINGTON ST.
   SUITE 200
   HAGERSTOWN, MD 21740
2. SITE DATA:
   TAX IDENTIFICATION No.: 018579
   TAX MAP / GRID: 0062/0010
   LIBER / FOLIO: 05374/00077
   PLAT M683
   ELECTION DISTRICT: 10
   SITE ADDRESS: 9238 SHARPSBURG PIKE
   HAGERSTOWN, MD 21740
3. EXISTING USE: VACANT/FARM
4. PROPOSED USE: PUBLIC SAFETY TRAINING CENTER
5. ZONING OF SITE IS RT (RESIDENTIAL TRANSITION)
6. LIMIT OF DISTURBANCE = 470,978 sq.ft or 10.81 Ac.
7. EXISTING IMPERVIOUS AREA = 0.00 sq.ft or 0.00 Ac.
8. PROPOSED IMPERVIOUS AREA = 4.30 Ac.
9. TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL FLOWN TOPOGRAPHY DATED AUGUST 2017.
10. NOTIFY "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO DOING ANY EXCAVATION IN THIS AREA. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATED AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
11. PROPOSED WATER USAGE: 1000 GPD OR 5 EDU'S

STANDARD UTILITY NOTES

1. CONTRACTOR TO ONLY OPEN UP LENGTH OF TRENCH ON IMPERVIOUS SURFACES THAT CAN BE CONSTRUCTED AND BACKFILLED IN ONE WORKING DAY.
2. CONTRACTOR TO PLACE EXCAVATED MATERIALS IN A DUMP TRUCK AND HAUL TO A SITE WITH APPROVED AND CURRENT SOIL EROSION AND SEDIMENT CONTROL PLAN
3. IN AREAS WHERE THE CONSTRUCTION TAKES PLACE OUTSIDE OF THE EXISTING ROADBED, CONTRACTOR TO INSTALL SILT FENCE/FILTER LOG PRACTICES ALONG THE DOWNHILL SIDE OF THE TRENCH (AS APPLICABLE) BEFORE BEGINNING CONSTRUCTION AND PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE.
4. IF DEWATERING OF THE TRENCH IS REQUIRED, CONTRACTOR TO PUMP WATER TO A FILTER BAG TO DEWATER.
5. CONTRACTOR TO SWEEP STREETS OF ANY DEBRIS OR SEDIMENTS CAUSED BY CONSTRUCTION OPERATIONS AND DISPOSE OF AT AN APPROVED LOCATION.
6. CONTRACTOR TO STABILIZE ALL DISTURBED AREAS WITH SEED & MULCH OR APPROPRIATE STREET REPAIR.

SEDIMENT AND EROSION CONTROL PLAN

SCALE: 1"=50'

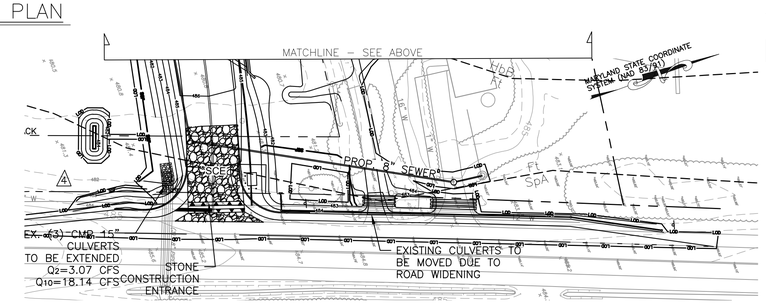
SOILS TABLE

SOIL SYMBOL	SOIL DESCRIPTION	PERCENT SLOPE (%)	Kf VALUE	HYDRAULIC SOILS GROUP	HYDRIC (Y/N)
Ft	FUNKSTOWN SILT LOAM	–	0.37	C	NO
HaB	HAGERSTOWN SILT LOAM	3–8	0.37	B	NO
HaC	HAGERSTOWN SILT LOAM	8–15	0.37	B	NO
HbB	HAGERSTOWN SILTY CLAY LOAM	3–8	0.32	B	NO
HbC	HAGERSTOWN SILTY CLAY LOAM	8–15	0.32	B	NO
HcB	HAGERSTOWN-ROCK OUTCROP COMPLEX	3–8	0.32	B	NO
HcC	HAGERSTOWN-ROCK OUTCROP COMPLEX	8–15	0.32	B	NO
SpA	SWANPOND SILT LOAM	0–3	0.43	D	NO
SsA	SWANPOND-FUNKSTOWN SILT LOAMS	0–3	0.43	D	NO

BUILDING BORINGS			
BORING	NORTHING	EASTING	ELEVATION
B-1	693084.72	1105726.74	485.25'
B-2	693170.06	1105736.79	486.00'
B-3	693110.51	1105801.61	485.18'
B-4	693303.35	1105775.16	488.42'
B-5	693232.02	1105828.38	486.94'
B-6	693173.90	1105891.42	482.42'
B-7	693319.64	1105879.74	488.93'
B-8	693257.53	1105958.30	486.78'

SWM BORINGS			
BORING	NORTHING	EASTING	ELEVATION
SWM-1	693030.63	1105726.74	477.70'
SWM-2	693151.20	1106109.20	477.90'
SWM-3	693036.25	1105891.37	477.63'
SWM-4	693327.66	1106038.14	481.65'

PAVEMENT BORINGS			
BORING	NORTHING	EASTING	ELEVATION
P-1	693464.56	1105863.78	494.30'
P-2	693434.23	1106357.57	481.50'
P-3	693226.88	1105656.07	486.50'



SEDIMENT AND EROSION CONTROL PLAN

SCALE: 1"=50'

GRAPHIC SCALE

50 25 0 50 100

SCALE: 1"=50'

LEGEND

- PROPERTY LINE
- 220 EX. CONTOUR
- 485 PROP. CONTOUR
- PROP. EDGE OF ROAD
- PROP. SIDEWALK
- PROP. BUILDING
- PROP. STORM DRAIN PIPE
- PROP. WATER
- PROP. SEWER
- EX. TREE LINE
- MnB / MnE EX. SOILS LINE
- LOD LIMIT OF DISTURBANCE
- SF SILT FENCE
- SSF SUPER SILT FENCE
- DF DIVERSION FENCE
- TEMP. STABILIZATION MATTING
- SPECIMEN TREE
- B-5 SOIL BORINGS

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STATE OF MARYLAND JONATHAN R. KOLB No. 51972 PROFESSIONAL ENGINEER
12/18/20

100% PLAN SET

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES
1	11/26/19	KCI	STABILIZATION MATTING CHANGED TO TEMP.
2	02/20/20	KCI	REGRADING AND LOD CHANGES
3	05/06/20	KCI	ENTRANCE GRADING AND CULVERT CHANGES

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WASHINGTON COUNTY BOARD OF COMMISSIONERS
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CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

OVERALL SEDIMENT & EROSION CONTROL PLAN
PLOT SCALE: 1:50
FILENAME: KCI# 271703606
DATE: 12/18/20

PROJECT
3089

C-3.00

SP-18-044

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SOIL SYMBOL	SOIL DESCRIPTION	PERCENT SLOPE (%)	Kf VALUE	HYDRAULIC SOILS GROUP	HYDRIC (Y/N)
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BUILDING BORINGS			
BORING	NORTHING	EASTING	ELEVATION
B-1	693084.72	1105726.74	485.25'
B-2	693170.06	1105736.79	486.00'
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PROP. ROADWAY WITHIN EX. FUNKSTOWN SOIL	44,365sf OR 1.02ac.
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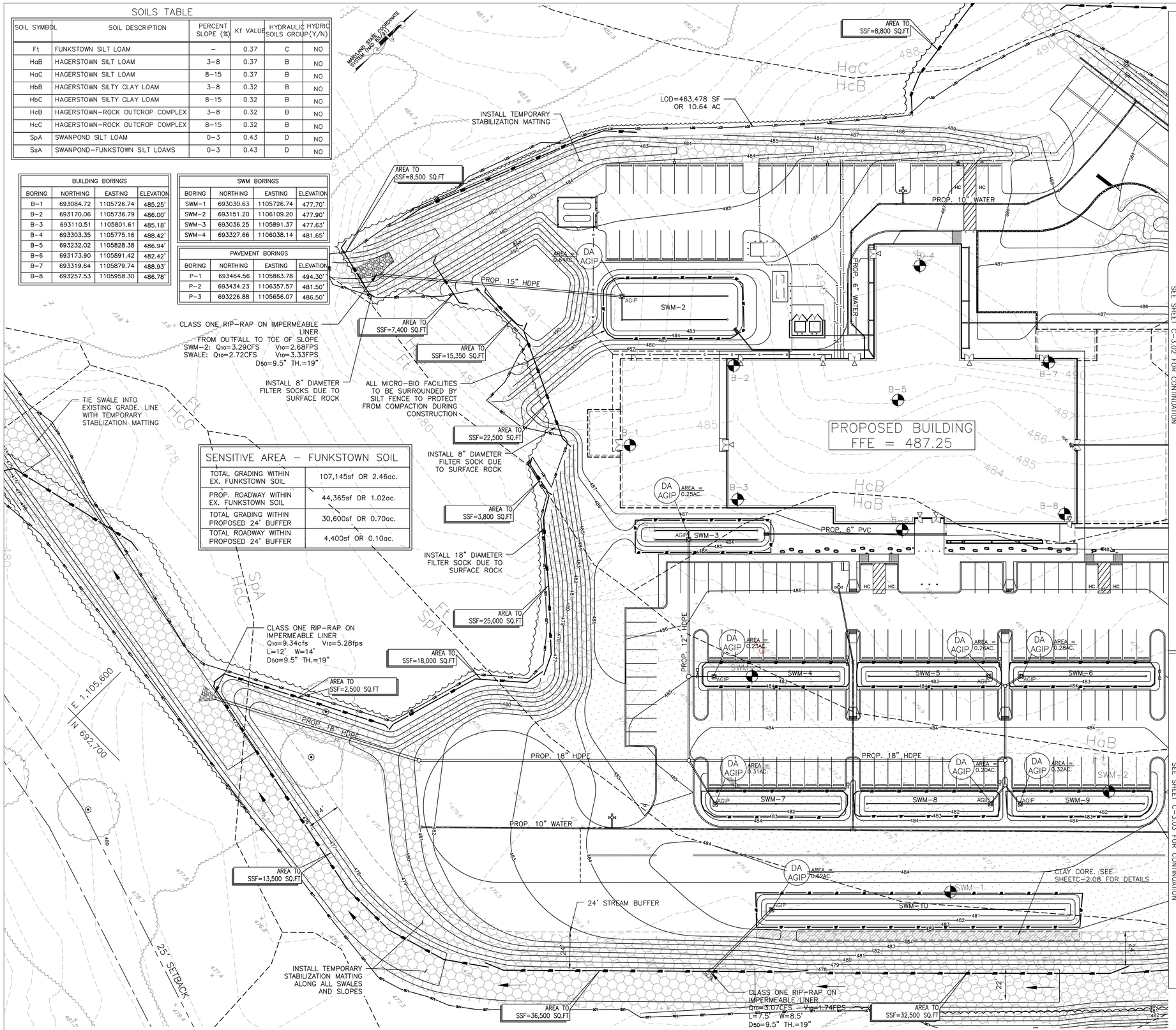

SEDIMENT AND EROSION CONTROL PLAN

SCALE: 1"=30'

SITE NOTES

1. APPLICANT/OWNER: WASHINGTON COUNTY BOARD OF COMMISSIONERS
   100 W. WASHINGTON ST.
   SUITE 200
   HAGERSTOWN, MD 21740
2. SITE DATA:
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   TAX MAP / GRID: 0062/0010
   LIBER / FOLIO: 05374/00077
   PLAT M683
   ELECTION DISTRICT: 10
   SITE ADDRESS: 18350 PUBLIC SAFETY PL HAGERSTOWN, MD 21740
3. EXISTING USE: VACANT/FARM
4. PROPOSED USE: PUBLIC SAFETY TRAINING CENTER
5. ZONING OF SITE IS RT (RESIDENTIAL TRANSITION)
6. LIMIT OF DISTURBANCE = 470,978 sq.ft or 10.81 Ac.
7. EXISTING IMPERVIOUS AREA = 0.00 sq.ft or 0.00 Ac.
8. PROPOSED IMPERVIOUS AREA = 4.30 Ac.
9. TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL FLOWN TOPOGRAPHY DATED AUGUST 2017.
10. NOTIFY "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO DOING ANY EXCAVATION IN THIS AREA. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATED AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
11. PROPOSED WATER USAGE: 1000 GPD OR 5 EDU'S

LEGEND

- PROPERTY LINE
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- 485 PROP. CONTOUR
- PROP. EDGE OF ROAD
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GRAPHIC SCALE

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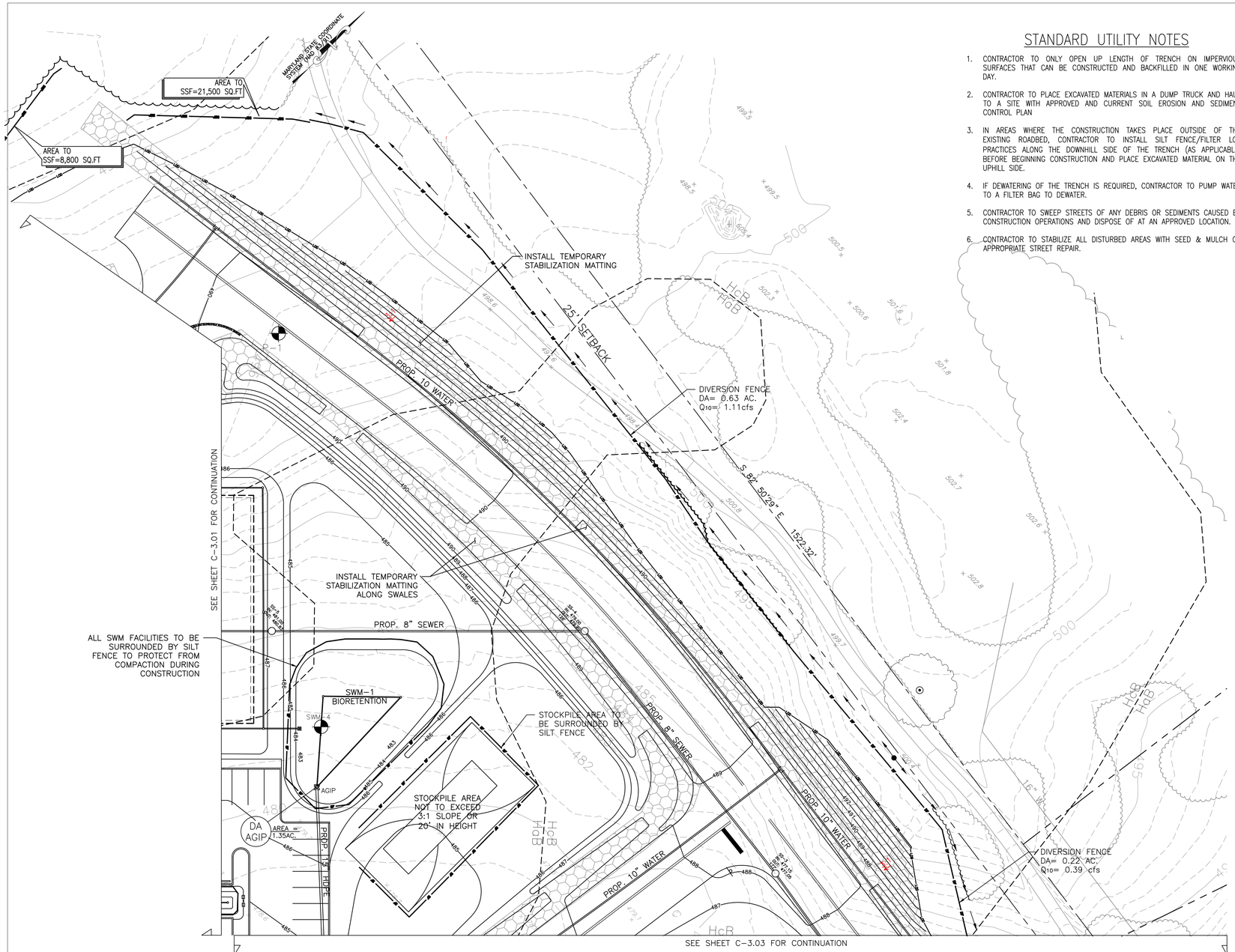

SEDIMENT AND EROSION CONTROL PLAN

SCALE: 1"=30'

STANDARD UTILITY NOTES

1. CONTRACTOR TO ONLY OPEN UP LENGTH OF TRENCH ON IMPERVIOUS SURFACES THAT CAN BE CONSTRUCTED AND BACKFILLED IN ONE WORKING DAY.
2. CONTRACTOR TO PLACE EXCAVATED MATERIALS IN A DUMP TRUCK AND HAUL TO A SITE WITH APPROVED AND CURRENT SOIL EROSION AND SEDIMENT CONTROL PLAN
3. IN AREAS WHERE THE CONSTRUCTION TAKES PLACE OUTSIDE OF THE EXISTING ROADBED, CONTRACTOR TO INSTALL SILT FENCE/FILTER LOG PRACTICES ALONG THE DOWNHILL SIDE OF THE TRENCH (AS APPLICABLE) BEFORE BEGINNING CONSTRUCTION AND PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE.
4. IF DEWATERING OF THE TRENCH IS REQUIRED, CONTRACTOR TO PUMP WATER TO A FILTER BAG TO DEWATER.
5. CONTRACTOR TO SWEEP STREETS OF ANY DEBRIS OR SEDIMENTS CAUSED BY CONSTRUCTION OPERATIONS AND DISPOSE OF AT AN APPROVED LOCATION.
6. CONTRACTOR TO STABILIZE ALL DISTURBED AREAS WITH SEED & MULCH OR APPROPRIATE STREET REPAIR.

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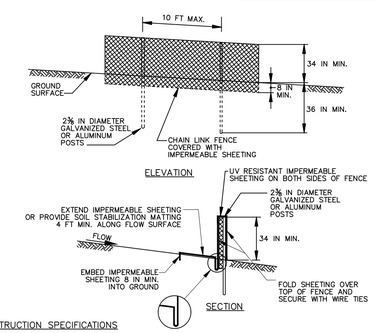
DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL — DF —

MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

LEGEND

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SEDIMENT & EROSION CONTROL PLAN

PLOT SCALE: 1:30

FILENAME: KCI# 271703606

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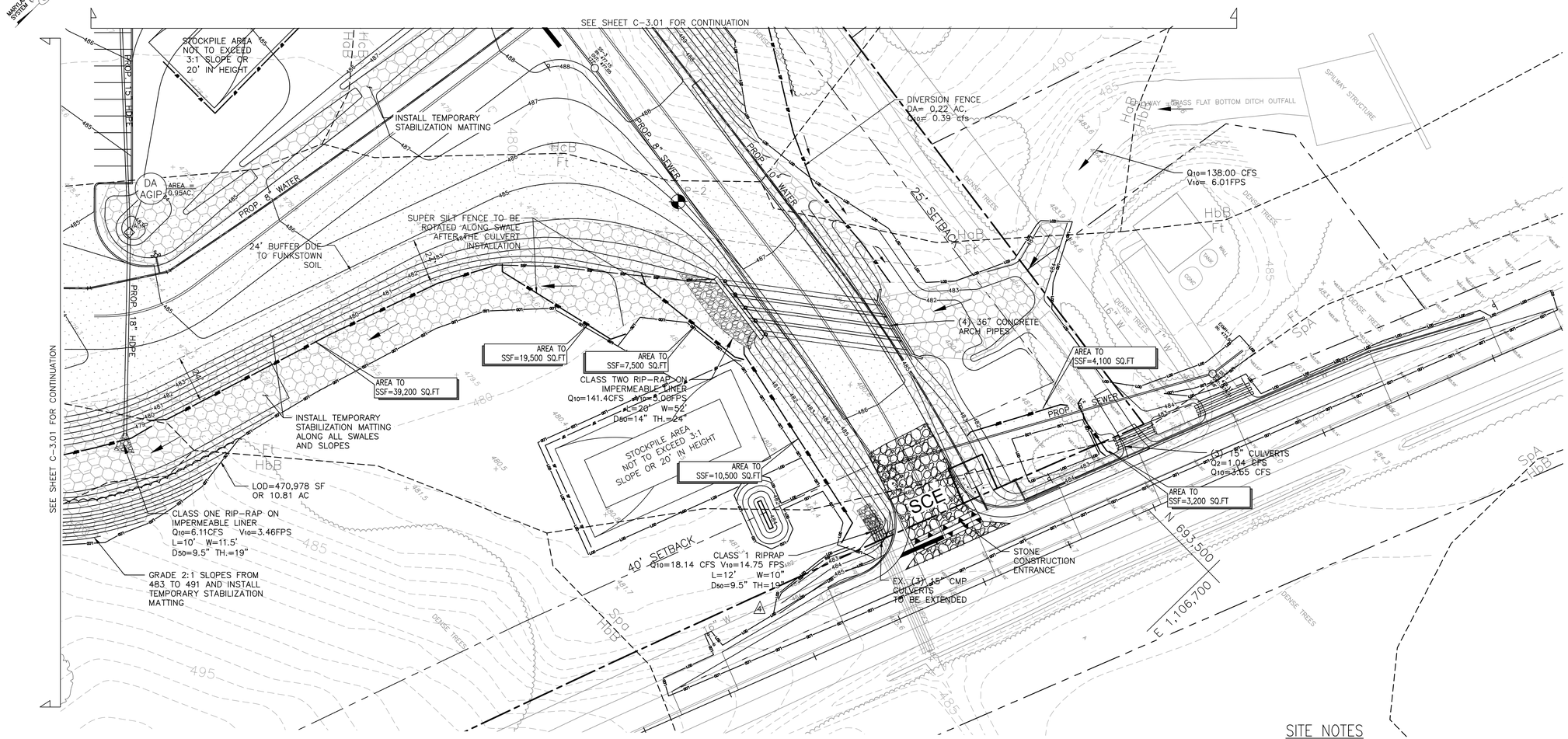

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PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 51972 EXP. DATE: 12/11/2021

12/18/20

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES
1	11/04/19	KCI	SOIL STOCKPILE ADDITION
2	11/26/19	KCI	STABILIZATION MATTING CHANGED TO TEMP.
3	02/20/20	KCI	REGRADING AND LOD CHANGES
4	05/06/20	KCI	ENTRANCE GRADING AND CULVERT CHANGES

100% PLAN SET

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SEDIMENT & EROSION CONTROL PLAN

PLOT SCALE: 1:30
FILENAME: KCI# 271703606
DATE: 11/4/19

PROJECT 3089

C-3.03

SP-18-044

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

1. SEEDING
   A. SPECIFICATIONS
      a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE–TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
      b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
      c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
      d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO–TOXIC MATERIALS.
   B. APPLICATION
      a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
         i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE–SPECIFIC SEEDING SUMMARIES.
         ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
      b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
         i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
         ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
      c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
         i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
         ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
         iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
         iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.
2. MULCHING
   A. MULCH MATERIALS (IN ORDER OF PREFERENCE)
      a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
      b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
         i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
         ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
         iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER–LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
         iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO–TOXIC.
         v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
   B. APPLICATION
      a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
      b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
      c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
   C. ANCHORING
      a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
         i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
         ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
         iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO–TACK), DCA–70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
         iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B–4–3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING TABLE

HARDINESS ZONE (FROM FIGURE B.3): 7A					FERTILIZER RATE (10–20–20)	LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS		
1	BARLEY	96	2/15–4/30 8/15–11/30	1.0"	436 LB/AC (10LB/1000SF)	2 TONS/AC (90LB/1000SF)
2	CEREAL RYE	112	2/15–4/30 8/15–12/15	1.0"		
3	FOXTAIL MILLET	30	5/1–8/14	0.5"		

STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

PURPOSE

TO USE LONG–LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

1. SEED MIXTURES
   A. GENERAL USE
      a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
      b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA–NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 – CRITICAL AREA PLANTING.
      c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
      d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46–0–0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
   B. TURFGRASS MIXTURES
      a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
      b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
         i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
         ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
         iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
         iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.

         NOTES:
         SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE
      c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES
         WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
         CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
         SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)
      d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
      e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (½ TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING TABLE

HARDINESS ZONE (FROM FIGURE B.3): 7A					FERTILIZER RATE (10–20–20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P_2O_5	K_2O	
4	DEERTONGUE CREEPING RED FESCUE VIRGINIA WILD RYE	15 20 5	3/1–5/15 8/15–10/15	0.5"	45LB/AC (1LB/1000SF)	90LB/AC (2LB/1000SF)	90LB/AC (2LB/1000SF)	2 TONS/AC (90LB/1000SF)
6	TALL FESCUE PERENNIAL RYEGRASS WHITE CLOVER	40 25 5	3/1–5/15 8/15–10/15	0.5"				
9	TALL FESCUE KENTUCKY BLUEGRASS	60 40	3/1–5/15 8/15–10/15	0.5"				

2. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
   A. GENERAL SPECIFICATIONS
      a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
      b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF ¾ INCH, PLUS OR MINUS ¼ INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
      c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
      d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
      e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
   B. SOD INSTALLATION
      a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
      b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
      c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
      d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
   C. SOD MAINTENANCE
      a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
      b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
      c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN ⅓ OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

TABLE H.1 – GEOTEXTILE FABRICS

		WOVEN SILT FILM GEOTEXTILE		WOVEN MONOFILAMENT GEOTEXTILE		NONWOVEN GEOTEXTILE	
		MINIMUM AVERAGE ROLL VALUE[1]					
PROPERTY	TEST METHOD	MD	CD	MD	CD	MD	CD
GRAB TENSILE STRENGTH	ASTM D–4632	200 LB	200 LB	370 LB	250 LB	200 LB	200 LB
GRAB TENSILE ELONGATION	ASTM D–4632	15%	10%	15%	15%	50%	50%
TRAPEZOIDAL TEAR STRENGTH	ASTM D–4533	75 LB	75 LB	100 LB	60 LB	80 LB	80 LB
PUNCTURE STRENGTH	ASTM D–6241	450 LB		900 LB		450 LB	
APPARENT OPENING SIZE[2]	ASTM D–4751	U.S. SIEVE 30 (0.59 mm)		U.S. SIEVE 70 (0.21 mm)		U.S. SIEVE 70 (0.21 mm)	
PERMITTIVITY	ASTM D–4491	0.05 SEC[1]		0.28 SEC[1]		1.1 SEC[1]	
ULTRAVIOLET RESISTEANCE RETAINED AT 500 HOURS	ASTM D–4355	70% STRENGTH		70% STRENGTH		70% STRENGTH	

[1]ALL NUMERIC VALUES EXCEPT APPARENT OPENING SIZE (AOS) REPRESENT MINIMUM AVERAGE ROLL VALUES (MARV). MARV IS CALCULATED AS THE TYPICAL MINUS TWO STANDARD DEVIATIONS. MD IS MACHINE DIRECTION; CD IS CROSS DIRECTION.

[2]VALUES FOR AOS REPRESENT THE AVERAGE MAXIMUM OPENING.

GEOTEXTILES MUST BE EVALUATED BY THE NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM (NTPEP) AND CONFORM TO THE VALUES IN TABLE H.1.

THE GEOTEXTILE MUST BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS AND MUST BE ROT AND MILDEW RESISTANT. THE GEOTEXTILE MUST BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS AND COMPOSED OF A MINIMUM OF 95 PERCENT BY WEIGHT OF POLYOLEFINS OR POLYESTERS, AND FORMED INTO A STABLE NETWORK SO THE FILAMENTS OR YARNS RETAIN THEIR DIMENSIONAL STABILITY RELATIVE TO EACH OTHER, INCLUDING SELVAGES.

WHEN MORE THAN ONE SECTION OF GEOTEXTILE IS NECESSARY, OVERLAP THE SECTIONS BY AT LEAST ONE FOOT. THE GEOTEXTILE MUST BE PULLED TAUT OVER THE APPLIED SURFACE. EQUIPMENT MUST NOT RUN OVER EXPOSED FABRIC. WHEN PLACING RIPRAP ON GEOTEXTILE, DO NOT EXCEED A ONE FOOT DROP HEIGHT.

TABLE H.2: STONE SIZE

TYPE	SIZE RANGE	D_{50}	D_{100}	AASHTO	MIDSIZE WEIGHT[3]
NUMBER 57[1]	3/8 TO 1–1/2 INCH	1/2 IN	1–1/2 IN	M–43	N/A
NUMBER 1	2 TO 3 INCH	2–1/2 IN	3 IN	M–43	N/A
RIPRAP[2] (CLASS 0)	4 TO 7 INCH	5–1/2 IN	7 IN	N/A	N/A
CLASS I	N/A	9–1/2 IN	15 IN	N/A	40 LB
CLASS II	N/A	16 IN	24 IN	N/A	200 LB
CLASS III	N/A	23 IN	34 IN	N/A	600 LB

1 THIS CLASSIFICATION IS TO BE USED ON THE UPSTREAM FACE OF STONE OUTLETS AND CHECK DAMS.

2 THIS CLASSIFICATION IS TO BE USED FOR GABIONS.

3 OPTIMUM GRADATION IS 50 PERCENT OF THE STONE BEING ABOVE AND 50 PERCENT BELOW THE MIDSIZE.

STONE MUST BE COMPOSED OF A WELL GRADED MIXTURE OF STONE SIZED SO THAT FIFTY (50) PERCENT OF THE PIECES BY WEIGHT ARE LARGER THAN THE SIZE DETERMINED BY USING THE CHARTS. A WELL GRADED MIXTURE, AS USED HEREIN, IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF LARGER STONE SIZES BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE IN SUCH A MIXTURE MUST NOT EXCEED THE RESPECTIVE D_{100} SELECTED FROM TABLE H.2. THE D50 REFERS TO THE MEDIAN DIAMETER OF THE STONE. THIS IS THE SIZE FOR WHICH 50 PERCENT, BY WEIGHT, WILL BE SMALLER AND 50 PERCENT WILL BE LARGER.

NOTE: RECYCLED CONCRETE EQUIVALENT MAY BE SUBSTITUTED FOR ALL STONE CLASSIFICATIONS FOR TEMPORARY CONTROL MEASURES ONLY. CONCRETE BROKEN INTO THE SIZES MEETING THE APPROPRIATE CLASSIFICATION, CONTAINING NO STEEL REINFORCEMENT, AND HAVING A MINIMUM DENSITY OF 150 POUNDS PER CUBIC FOOT MAY BE USED AS AN EQUIVALENT.

TABLE H.3 – COMPOST

PARAMETERS	ACCEPTABLE RANGE
pH	5.0 – 8.5
MOISTURE CONTENT	30% – 60%, WET WEIGHT BASIS
ORGANIC MATTER CONTENT	25% – 65%, DRY WEIGHT BASIS
PARTICLE SIZE	% PASSING A SELECTED MESH SIZE, DRY WEIGHT BASIS 3 IN (75MM), 100% PASSING 1 IN (25MM), 90 – 100% PASSING 0.75 IN (19MM), 70 – 100% PASSING 0.25 IN (6.4MM), 30 – 60% PASSING 0.04 IN (1MM), 30% MIN. PASSING
PHYSICAL CONTAMINANTS (MANMADE INERTS)	<1% DRY WEIGHT BASIS

ADAPTED FROM AASHTO STANDARDS SPECS FOR COMPOST FILTER SOCKS AND EPA EXAMPLE COMPOST FILTER PARAMETERS.

[1]RECOMMENDED TEST METHODOLOGIES ARE PROVIDED IN TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST (TMEC, THE U.S. COMPOSTING COUNCIL)

WASHINGTON COUNTY SOIL EROSION, SEDIMENT CONTROL, & SEEDING NOTES

1. ALL SOIL EROSION/SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND THE PROVISIONS OF THE APPROVED PLAN.
2. ALL GRADING AND STABILIZATION SHALL COMPLY WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", "SECTION B – GRADING AND STABILIZATION" AND THE PROVISIONS OF THE APPROVED PLAN.
3. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES (BMP'S) ARE TO BE CONSTRUCTED AND/OR INSTALLED PRIOR TO OR AT THE INITIATION OF GRADING IN ACCORDANCE WITH "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND THE APPROVED PLAN.
4. A GRADING UNIT IS THE MAXIMUM CONTIGUOUS AREA ALLOWED TO BE GRADED AT A GIVEN TIME AND IS LIMITED TO 20 ACRES. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY AND/OR THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT (APPROVAL AUTHORITY). UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
5. FOR INITIAL SOIL DISTURBANCE OR RE–DISTURBANCE, TEMPORARY OR PERMANENT STABILIZATION MUST BE COMPLETED WITHIN:
   a) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
   b) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
6. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITHIN THE 7 DAY STABILIZATION REQUIREMENT, AS WELL AS, STANDARD B–4–1 INCREMENTAL STABILIZATION AND STANDARD B–4–4 TEMPORARY STABILIZATION (AS APPLICABLE).
7. ALL CONSTRUCTED CHANNELS AND SWALES SHALL HAVE SPECIFIED TREATMENT INSTALLED TO THE DESIGN FLOW DEPTH COMPLETED DOWNSTREAM TO UPSTREAM AS CONSTRUCTION PROGRESSES. AN INSTALLATION DETAIL SHALL BE SHOWN ON THE PLANS.
8. ALL STORM DRAIN AND SANITARY SEWER LINES NOT IN PAVED AREAS ARE TO BE MULCHED AND SEEDED WITHIN 3 DAYS OF INITIAL BACKFILL UNLESS OTHERWISE SPECIFIED ON PLANS.
9. ELECTRIC POWER, TELEPHONE, AND GAS LINES ARE TO BE COMPACTED, SEEDED, AND MULCHED WITHIN 3 DAYS AFTER INITIAL BACKFILL UNLESS OTHERWISE SPECIFIED ON PLANS.
10. NO SLOPE SHALL BE GREATER THAN 2:1.
11. AS REQUIRED BY SECTION B, OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, "ADEQUATE VEGETATIVE STABILIZATION", IS DEFINED AS 95 PERCENT GROUND COVER. THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT REQUIRES THE PROJECT ADHERE TO THIS FOR SCHEDULING OF THE FINAL SITE CLOSEOUT REVIEW, AND/OR RELEASE OF THE SITE FOR SOIL EROSION AND SEDIMENT CONTROL.
    FOR SITES 1.0 ACRE OR MORE, THE FOLLOWING ARE REQUIRED:
12. MARYLAND DEPARTMENT OF THE ENVIRONMENT, GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH A CONSTRUCTION ACTIVITY, NPDES PERMIT NUMBER MDRC, STATE DISCHARGE PERMIT NUMBER 14GP, OR AN INDIVIDUAL PERMIT.
13. THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (GENERAL/INDIVIDUAL PERMIT – NOTICE OF INTENT– NOI) APPLICATION AND PERMIT SHALL BE POSTED AND/OR AVAILABLE ON–SITE AT ALL TIMES.
14. DURING CONSTRUCTION, ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES (BMP'S) SHALL BE INSPECTED AND RECORDED ON THE "STANDARD INSPECTION FORM", "GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY" PER THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (GENERAL/INDIVIDUAL PERMIT – NOTICE OF INTENT – NOI).
15. FOLLOWING CONSTRUCTION AND RELEASE OF THE SITE FOR SOIL EROSION AND SEDIMENT CONTROL BY THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT, I.E., ALL PORTIONS OF A SITE HAVE BEEN PERMANENTLY STABILIZED, AND ALL STORMWATER DISCHARGES FROM CONSTRUCTION SITES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED, THE AUTHORIZED PERMITTEE SHALL SUBMIT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, GENERAL/INDIVIDUAL PERMIT – NOTICE OF TERMINATION–NOT.

12/18/19

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

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REVISIONS

01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

100% PLAN SET

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WASHINGTON COUNTY PROJECT NO. 28-266
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HAGERSTOWN, MD 21740

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SEC NOTES AND DETAILS

PLOT SCALE:

FILENAME: KCI# 271703606

DATE: 12/18/19

PROJECT 3089

C-3.04

SP-18-044

STANDARDS AND SPECIFICATIONS FOR LAND GRADING

DESIGN CRITERIA

THE GRADING PLAN SHOULD BE BASED ON THE INCORPORATION OF BUILDING DESIGNS AND STREET LAYOUTS THAT FIT AND UTILIZE EXISTING TOPOGRAPHY AND DESIRABLE NATURAL SURROUNDINGS TO AVOID EXTREME GRADE MODIFICATIONS. INFORMATION SUBMITTED MUST PROVIDE SUFFICIENT TOPOGRAPHIC SURVEYS AND SOIL INVESTIGATIONS TO DETERMINE LIMITATIONS THAT MUST BE IMPOSED ON THE GRADING OPERATION RELATED TO SLOPE STABILITY, ADJACENT PROPERTIES, DRAINAGE PATTERNS, MEASURES FOR WATER REMOVAL, AND VEGETATIVE TREATMENT, ETC.

MANY JURISDICTIONS HAVE REGULATIONS AND DESIGN PROCEDURES ALREADY ESTABLISHED FOR LAND GRADING THAT MUST BE FOLLOWED. THE PLAN MUST SHOW EXISTING AND PROPOSED CONTOURS FOR THE AREA(S) TO BE GRADED INCLUDING PRACTICES FOR EROSION CONTROL, SLOPE STABILIZATION, AND SAFE CONVEYANCE OF RUNOFF (E.G., WATERWAYS, LINED CHANNELS, REVERSE BENCHES, GRADE STABILIZATION STRUCTURES). THE GRADING/CONSTRUCTION PLANS ARE TO INCLUDE THE PHASING OF THESE PRACTICES AND CONSIDERATION OF THE FOLLOWING:

1. PROVISIONS TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS.

2. CUT AND FILL SLOPES, STABILIZED WITH GRASSES, NO STEEPER THAN 2:L. (WHERE THE SLOPE IS TO BE MOWED, THE SLOPE SHOULD BE NO STEEPER THAN 3:L, BUT 4:L IS PREFERRED BECAUSE OF SAFETY FACTORS RELATED TO MOWING STEEP SLOPES.) SLOPES STEEPER THAN 2:L REQUIRE SPECIAL DESIGN AND STABILIZATION CONSIDERATIONS TO BE SHOWN ON THE PLANS.

3. BENCHING PER DETAIL B-3-1 WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:L SLOPE EXCEEDS 20 FEET; FOR 3:L SLOPES, WHEN IT EXCEEDS 30 FEET; AND FOR 4:L SLOPES, WHEN IT EXCEEDS 40 FEET. LOCATE BENCHES TO DIVIDE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND TO CONVEY THE WATER TO A STABLE OUTLET. SOILS, SEEPS, ROCK OUTCROPS, ETC. ARE TO BE TAKEN INTO CONSIDERATION WHEN DESIGNING BENCHES.
   - A. PROVIDE BENCHES WITH A MINIMUM WIDTH OF SIX FEET FOR EASE OF MAINTENANCE.
   - B. DESIGN BENCHES WITH A REVERSE SLOPE OF 6:L OR FLATTER TO THE TOE OF THE UPPER SLOPE AND WITH A MINIMUM OF ONE FOOT IN DEPTH. GRADE THE LONGITUDINAL SLOPE OF THE BENCH BETWEEN 2 PERCENT AND 3 PERCENT, UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.
   - C. THE MAXIMUM ALLOWABLE FLOW LENGTH WITHIN A BENCH IS 800 FEET UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.

4. DIVERSION OF SURFACE WATER FROM THE FACE OF ALL CUT AND FILL SLOPES USING EARTH DIKES OR SWALES. CONVEY SURFACE WATER DOWN SLOPE USING A DESIGNED STRUCTURE, AND:
   - A. PROTECT THE FACE OF ALL GRADED SLOPES FROM SURFACE RUNOFF UNTIL THEY ARE STABILIZED.
   - B. DO NOT SUBJECT THE SLOPE'S FACE TO ANY CONCENTRATED FLOW OF SURFACE WATER SUCH AS FROM NATURAL DRAINAGE WAYS, GRADED SWALES, DOWNSPOUTS, ETC.
   - C. PROTECT THE FACE OF THE SLOPE BY SPECIAL EROSION CONTROL MATERIALS TO INCLUDE, BUT NOT BE LIMITED TO, APPROVED VEGETATIVE STABILIZATION PRACTICES, RIPRAP OR OTHER APPROVED STABILIZATION METHODS.

5. SERRATED SLOPE AS SHOWN IN DETAIL B-3-2. THE STEEPEST ALLOWABLE SLOPE FOR RIPABLE ROCK IS 1.5:1. FOR NON ROCK SURFACES, THE SLOPES ARE TO BE 2:1 OR FLATTER. THESE STEPS WILL WEATHER AND ACT TO HOLD MOISTURE, LIME, FERTILIZER AND SEED THUS PRODUCING A MUCH QUICKER AND LONGER LIVED VEGETATIVE COVER AND BETTER SLOPE STABILIZATION.

6. SUBSURFACE DRAINAGE PROVISIONS. PROVIDE SUBSURFACE DRAINAGE WHERE NECESSARY TO INTERCEPT SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE CONDITIONS.

7. PROXIMITY TO ADJACENT PROPERTY. SLOPES MUST NOT BE CREATED CLOSE TO PROPERTY LINES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE, OR OTHER RELATED DAMAGES.

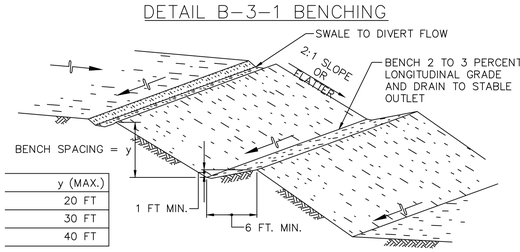
8. QUALITY OF FILL MATERIAL. FILL MATERIAL MUST BE FREE OF BRUSH, RUBBISH, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIAL. DO NOT PLACE FROZEN MATERIALS IN THE FILL NOR PLACE THE FILL MATERIAL ON A FROZEN FOUNDATION.

9. STABILIZATION. STABILIZE ALL DISTURBED AREAS STRUCTURALLY OR VEGETATIVELY IN COMPLIANCE WITH SECTION B-4 STANDARDS AND SPECIFICATIONS FOR STABILIZATION PRACTICES.

MAINTENANCE

THE LINE, GRADE, AND CROSS SECTION OF BENCHING AND SERRATED SLOPES MUST BE MAINTAINED. BENCHES AND SERRATED SLOPES MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

DETAIL B-3-1 BENCHING



y (MAX.)
20 FT
30 FT
40 FT

CONSTRUCTION SPECIFICATIONS

1. USE FILL MATERIAL FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.

2. DO NOT INCORPORATE FROZEN, SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS INTO FILL SLOPES OR STRUCTURAL FILLS. DO NOT PLACE FILL ON A FROZEN FOUNDATION.

3. PLACE ALL FILL IN LOOSE LIFTS NOT TO EXCEED 8 INCHES AND THEN COMPACT.

4. COMPACT ALL FILLS AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, OR OTHER RELATED PROBLEMS. COMPACT FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, CONDUITS, ETC., IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

5. HANDLE SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION IN ACCORDANCE WITH SECTION H-2 SUBSURFACE DRAINS OR OTHER APPROVED MEII-IODS.

6. MAINTAIN LINE, GRADE, AND CROSS SECTION OF BENCHING. STABILIZE IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION CRITERIA OR AS SPECIFIED ON II-IE APPROVED EROSION AND SEDIMENT CONTROL PLAN. INSTALLATION OF EROSION CONTROL MATTING MAY BE NECESSARY IN BENCH/SWALE INVERTS. CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

7. KEEP ALL BENCHES FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.

   - a. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

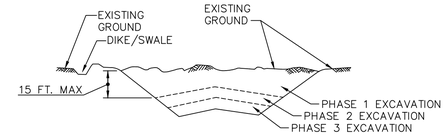


FIGURE B.1: INCREMENTAL STABILIZATION – CUT

1. INCREMENTAL STABILIZATION – FILL SLOPES
   - A. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE WORK PROGRESSES.
   - B. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
   - C. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
   - D. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2):
     - a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
     - b. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
     - c. PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
     - d. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE.
     - e. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

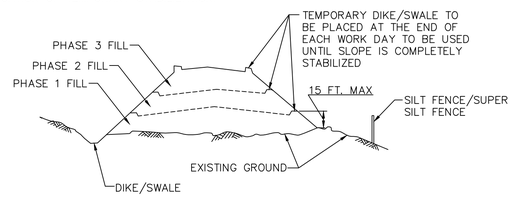


FIGURE B.2: INCREMENTAL STABILIZATION – FILL

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

1. SOIL PREPARATION
   - A. TEMPORARY STABILIZATION
     - a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
     - b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
     - c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION
   - A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
     - a. SOIL PH BETWEEN 6.0 AND 7.0.
     - b. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
     - c. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
     - d. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
     - e. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
   - B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
   - C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
   - D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
   - E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

2. TOPSOILING
   - A. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
   - B. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
   - C. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
     - a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
     - e. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
     - f. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
     - g. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
   - D. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
   - E. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
     - a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
     - b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
     - c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
   - F. TOPSOIL APPLICATION
     - a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
     - b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
     - c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADINGAND SEEDBED PREPARATION.

3. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
   - A. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
   - B. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
   - C. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
   - D. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY MIXING OR OTHER SUITABLE MEANS.
   - E. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE
   - F. RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

SEQUENCE OF CONSTRUCTION

1. NOTIFY WCSCD AT 301-797-6821 (EXT. 3) AT LEAST (5) DAYS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRCUTION MEETING. NOTIFY THE WASHINGTON COUNTY ENGINEERING DEPARTMENT (240-313-2460) AT LEAST (5) DAYS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE CONSTRUCTION MEETING.

2. NOTIFY NOTIFY MISS UTILITY (1-800-257-7777) AT LEAST 48 HOURS PRIOR TO STARTING WORK AT THE SITE.

3. INSTALL STABILIZED CONSTRUCTION ENTRANCE (SCE).

8. PRIOR TO ANY CLEARING AND GRUBBING, THE LIMITS OF CLEARING MUST BE CLEARLY MARKED IN THE FIELD.

9. INSTALL ALL PERIMETER SUPER SILT FENCE, SILT FENCE, AND DIVERSION FENCING.

10. TEMPORARY SEED AND MULCH ALL TOPSOIL STOCKPILES IN ACCORDANCE WITH THE SOIL EROSION, SEDIMENT CONTROL, & SEEDING NOTES AND SUMMARIES.

11. UPON THE INSTALLATION OF THE SEDIMENT CONTROL MEASURES, BEGIN GRADING FOR ENTRANCE ROAD AND INSTALL CULVERT PIPES. ONCE CULVERT PIPES ARE INSTALLED, GRADE BYPASS SWALE SO THAT RUNOFF IS DIRECTED AROUND THE SITE. DURING THE GRADING OF THE BYPASS SWALE, INSTALL CLAY CORE ALONG THE LOCATION OF SWM-10 SINCE THE FACILITY IS IN A FILL CONDITION.GRADING DONE WITHIN THE SWALE CHANNEL IS TO BE LINED WITH PERMANENT STABILIZATION MATTING.

12. ONCE THE BYPASS SWALE IS STABILIZED, GRADING FOR THE NEW BUILDING, PARKING AND ENTRANCE ROADS IS TO BE COMPLETED. ALL SLOPES GREATER THAN 4:1 ARE TO BE STABILIZED WITH TEMPORARY STABILIZATION MATTING. ALL GRADING DONE WITHIN A SWALE NEEDS PERMANENT STABILIZATION MATTING. STORMWATER FACILITIES ARE TO BE SURROUNDED BY SILT FENCE AND PROTECTED FROM COMPACTION DURING CONSTRUCTION.

13. CONSTRUCT PROPOSED UTILITIES FROM MD-65 ONTO THE SITE, EXCAVATING ONLY WHAT IS REQUIRED FOR INSTALLATION EACH DAY. BACKFILL TRENCH ONCE PIPE HAS BEEN INSTALLED AND INSPECTED. USE STEEL PLATES AS NECESSARY WITH PROPER TRAFFIC CONTROLS. NO STOCKPILING ALLOWED WITHIN RIGHT-OF-WAY.

14. PERFORM PERMANENT SEEDING AND MULCHING IN ACCORDANCE WITH THE SOIL EROSION, SEDIMENT CONTROL, & SEEDING NOTES AND SUMMARIES.

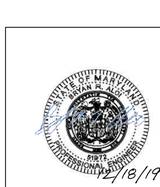
15. NOTIFY THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT AT 301-797-6821, EXT 3 AND THE WASHINGTON COUNTY ENGINEERING DEPARTMENT AT 240-313-2460 AT LEAST (5) DAYS PRIOR TO THE CONSTRUCTION OF WATER QUALITY PRACTICES TO SCHEDULE AN INTERIM INSPECTION.

16. ONCE ALL DISTURBED AREAS ARE STABILIZED, CONSTRUCT THE 9 MICRO-BIORETENTION FACILITES AND THE ONE BIORETENTION FACILITY.

17. NOTIFY THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT AT 301-797-6821, EXT 3 AND THE WASHINGTON COUNTY ENGINEERING DEPARTMENT AT 240-313-2460 AT LEAST (5) DAYS PRIOR TO THE REMOVAL OF ANY SOIL EROSION AND SEDIMENT CONTROL FEATURES TO SCHEDULE A FINAL SITE CLOSEOUT REVIEW MEETING. VEGETATION MUST MEET THE 95% OVERALL STABILIZATION REQUIREMENT PER THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL PRIOR TO SCHEDULING MEETING.

18. APPLY FINAL SURFACE PAVING TO ALL PAVED AREAS. INSTALL ALL FEATURES PER THE SITE PLAN.

STABILIZE AREAS OF SOIL EROSION AND SEDIMENT CONTROL REMOVAL.



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

100% PLAN SET

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

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REVISIONS

MM-DD-YR	NAME	DESCRIPTION OF CHANGES

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

SEC NOTES AND DETAILS

PLOT SCALE:

FILENAME: KCI# 271703606

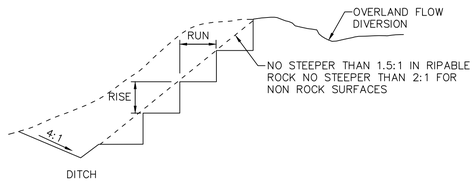
DATE: 12/18/19

PROJECT
3089

C-3.05

SP-18-044

DETAIL B-3-2 SERRATED SLOPES



TYPICAL SECTION

CONSTRUCTION SPECIFICATIONS

1. DIVERT OVERLAND FLOW FROM THE TOP OF ALL SERRATED CUT SLOPES AND CARRY TO A SUITABLE OUTLET.
2. MAKE SERRATIONS AS THE EXCAVATION PROGRESSES.
3. CONSTRUCT EACH STEP OR SERRATION ON THE CONTOUR. RISE & RUN DIMENSIONS WILL VARY DEPENDING ON THE FINAL SLOPE RATIO. FOR RIPABLE ROCK SURFACES, MAKE TWO FOOT VERTICAL (RISE) AND THREE FOOT HORIZONTAL (RUN) SERRATIONS AT A SLOPE RATIO NO STEEPER THAN 1.5:1. FOR NON ROCK SURFACES, MAKE TWO FOOT VERTICAL (RISE) AND FOUR FOOT HORIZONTAL (RUNS) SERRATIONS AT A SLOPE RAIIO NO STEEPER THAN 2:1.
4. KEEP ALL BENCHES FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.
5. HANDLE SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION IN ACCORDANCE WITH SECTION H-2 SUBSURFACE DRAINS OR OTHER APPROVED METHODS.
6. MAINTAIN LINE, GRADE, AND CROSS SECTION OF SERRATED SLOPES. TEMPORARILY OR PERMANENTLY STABILIZE ALL GRADED, NON ROCK SURFACES IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENTS OR AS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN. CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE NATURAL.

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

PURPOSE

TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

CONDITIONS WHERE PRACTICE APPLIES

ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

EFFECTS ON WATER QUALITY AND QUANTITY

STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS. PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH. VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE. SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT

INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUNDCOVER.
2. IF AN AREA HAS LESS THAN 40 PERCENT GROUNDCOVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUNDCOVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

PURPOSE

TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

CONDITIONS WHERE PRACTICE APPLIES

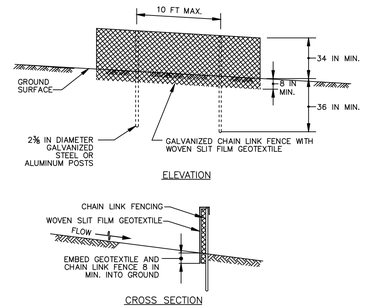
ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES.

CRITERIA

1. INCREMENTAL STABILIZATION – CUT SLOPES
   A. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.
   B. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):
      a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
      b. PERFORM PHASE 1 EXCAVATION, PREPARE SEEDBED, AND STABILIZE.
      c. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL —SSF—



CONSTRUCTION SPECIFICATIONS

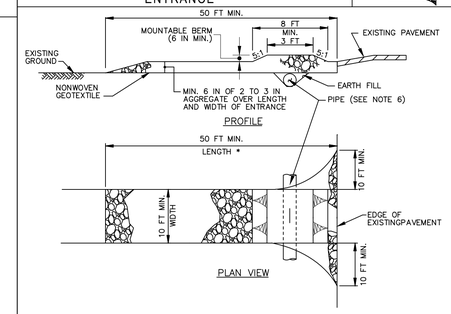
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL —SCE—



CONSTRUCTION SPECIFICATIONS

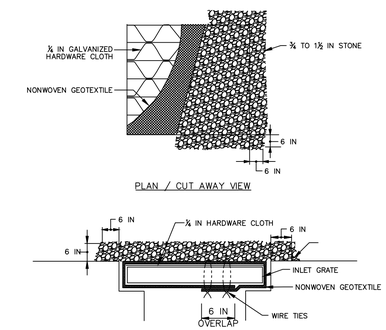
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

MAXIMUM DRAINAGE AREA = 1 ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

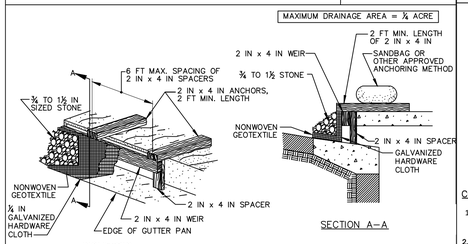
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL —CIP—

MAXIMUM DRAINAGE AREA = ¼ ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

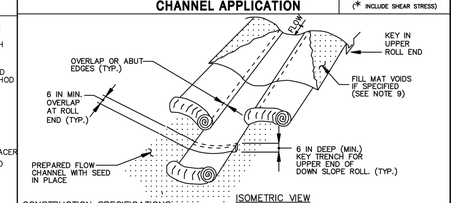
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B.40

DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL PSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

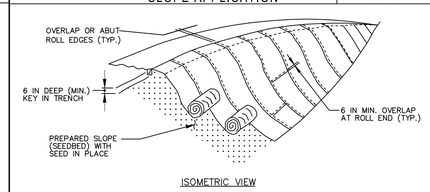
1. LANDLOK 435 TURF REINFORCEMENT MAT OR APPROVED EQUAL (8 LB/FT^2 SHEER STRENGTH, 12 FT/SEC VELOCITY, 225X175 LBS/FT TENSILE STRENGTH, 50% ELONGATION, 80% RESILIENCY)
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL TSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

12/18/19

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

100% PLAN SET

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
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PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

SEC NOTES AND DETAILS

PLOT SCALE:

FILENAME: KCI# 271703606

DATE: 12/18/19

PROJECT 3089

C-3.06

SP-18-044

Boring Log B-1

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-1 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center | ARCHITECT-ENGINEER
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
NORTHING | EASTING | STATION
DESCRIPTION OF MATERIAL — ENGLISH UNITS — BOTTOM OF CASING — LOSS OF CIRCULATION
SURFACE ELEVATION 485
CALIBRATED PENETROMETER TONS/FT² — ROCK QUALITY DESIGNATION & RECOVERY RQD% REC% — PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% — STANDARD PENETRATION BLOWS/FT

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	14	Topsoil Depth [2.00"] (CL) LEAN CLAY, brownish orange, moist, firm	1 3 3	6
S-2	SS	18	16	(CL/CH) LEAN TO FAT CLAY, brownish red, moist, stiff	4 4 7	11
S-3	SS	18	16		3 4 5	9
S-4	SS	18	17	(CL) LEAN CLAY, brownish orange, moist, stiff to firm	4 4 7	11
S-5	SS	18	18		2 2 3	5
S-6	SS	18	18		3 3 2	5
				AUGER REFUSAL @ 22.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 12.6'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log B-2

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-2 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 486

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [1.00"] (ML/CL) CLAYEY SILT, contains significant roots, brown, moist, firm	1 2 4	6
S-2	SS	18	18	(CL) LEAN CLAY, brownish orange to brownish red, moist, stiff	4 5 7	12
S-3	SS	18	18		3 5 7	12
				AUGER REFUSAL @ 6.70'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 4.8'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log B-3

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-3 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 485

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [2.00"] (CL) LEAN CLAY, orangish brown, moist, firm	1 2 4	6
S-2	SS	7	6	(WR) WEATHERED ROCK SAMPLED AS GRAVEL, gray, moist, very dense [Weathered ROCK]	3 50/1	50/1
				AUGER REFUSAL @ 3.4'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 1.3'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log B-4

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-4 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 485.5

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [3.00"] (CL/ML) SILTY CLAY, orangish brown, moist, soft	1 2 2	4
S-2	SS	18	18	(CL) LEAN CLAY, contains slight roots, orange to brownish orange, moist, firm to stiff	3 3 4	7
S-3	SS	18	18		2 3 6	9
S-4	SS	18	18		3 4 6	10
S-5	SS	18	18	(SP-SM) SAND WITH SILT, orange, moist, loose	2 4 6	10
				END OF BORING @ 15.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 8.7'
WL(SHW) | WL(ACR) | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log B-5

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-5 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 487

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	8	Topsoil Depth [2.00"] (ML) GRAVELLY SILT, trace sand, contains slight roots, dark brown, moist, loose	3 2 3	5
S-2	SS	18	10	(GC/CH) CLAYEY GRAVEL/ GRAVELLY FAT CLAY, brown and gray, moist, medium dense	8 6 7	13
S-3	SS	18	14	(CL) LEAN CLAY WITH SAND, brownish orange, moist, stiff	3 4 5	9
				AUGER REFUSAL @ 7.10'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 4.0'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log B-6 (1 OF 2)

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-6 | SHEET: 1 OF 2
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 482

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [6.00"] (CL) LEAN CLAY, orangish brown, moist, soft	2 2 1	3
S-2	SS	18	18	(CL) LEAN CLAY, brownish orange to brownish red, moist, stiff to firm	2 4 5	9
S-3	SS	18	18		2 2 4	6
S-4	SS	18	18		1 2 3	5
S-5	SS	18	18	(CL/ML) SILTY CLAY, orangish brown, moist, soft	1 1 2	3
S-6	SS	18	18	(CL) SANDY LEAN CLAY, brownish orange, moist, very soft	1 1 1	2
S-7	SS	18	18	(CL) LEAN CLAY, brownish orange to orangish brown, moist to wet, very soft	woh woh 1	1
S-8	SS	18	18		woh woh woh	0

CONTINUED ON NEXT PAGE.

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 28.0 | WS | WD | BORING STARTED 07/26/18 | CAVE IN DEPTH @ 4.2'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/26/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log B-6 (2 OF 2)

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-6 | SHEET: 2 OF 2
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 482

(CL) LEAN CLAY, brownish orange to orangish brown, moist to wet, very soft
AUGER REFUSAL @ 31.50'

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 28.0 | WS | WD | BORING STARTED 07/26/18 | CAVE IN DEPTH @ 4.2'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/26/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log B-7

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-7 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 489

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [3.00"] (CL) LEAN CLAY, orange to brownish orange, moist, stiff	2 4 5	9
S-2	SS	18	18		2 4 5	9
S-3	SS	18	18		3 3 7	10
S-4	SS	18	18	(CL) LEAN CLAY, brownish orange, moist, soft	2 1 2	3
				AUGER REFUSAL @ 10.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 5.7'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log B-8

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: B-8 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 487

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	14	Topsoil Depth [2.00"] (CL) LEAN CLAY, brownish orange, moist, firm	2 2 3	5
S-2	SS	18	10	(CH) FAT CLAY, orange, moist, firm; (WR) WEATHERED ROCK SAMPLED AS GRAVEL, gray, moist, very dense [Weathered ROCK]	3 5 50/6	55/12
				AUGER REFUSAL @ 4.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 1.4'
WL(SHW) | WL(ACR) | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log P-1

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: P-1 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 494

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [2.00"] (ML/CL) CLAYEY SILT, contains slight roots, brown, moist, very soft	1 1 1	2
S-2	SS	18	18	(CL/ML) SILTY CLAY, brownish orange, moist, firm	2 3 4	7
S-3	SS	18	18	(CL) LEAN CLAY, orange, moist, stiff	3 5 7	12
S-4	SS	18	18	(CL) LEAN CLAY, orangish brown, moist, soft	2 2 3	5
S-5	SS	18	18		2 2 1	3
S-6	SS	18	18		2 1 2	3
				END OF BORING @ 20.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 10.1'
WL(SHW) | WL(ACR) | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log P-2

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: P-2 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 480

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [8.00"] (ML/CL) CLAYEY SILT, brown, moist, soft	1 2 1	3
S-2	SS	18	18	(CL) LEAN CLAY WITH SAND, brown, moist, firm	1 2 3	5
S-3	SS	18	18	(CL) LEAN CLAY, orange to brown, moist, stiff to firm	5 5 5	10
S-4	SS	18	18		2 3 3	6
				END OF BORING @ 10.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/26/18 | CAVE IN DEPTH @ 5.4'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/26/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log P-3

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: P-3 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 481

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	13	Topsoil Depth [5.00"] (CL/ML) SILTY CLAY, orange to brown, moist, firm	2 2 3	5
S-2	SS	18	17	(CL) LEAN CLAY, orange, moist, stiff	2 4 5	9
S-3	SS	9	7	(WR) WEATHERED ROCK SAMPLED AS GRAVEL, gray, moist, very dense [Weathered ROCK]	2 50/3	50/3
				AUGER REFUSAL @ 6.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry | WS | WD | BORING STARTED 07/27/18 | CAVE IN DEPTH @ 3.1'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/27/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

Boring Log SWM-1

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: SWM-1 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 482

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [8.00"] (ML) SILT WITH SAND, trace clay, brown to light brown, moist, very loose	2 1 2	3
S-2	SS	18	18	(CL/ML) SILTY CLAY WITH SAND, light brown, moist, firm	2 3 5	8
S-3	SS	18	18	(SC) CLAYEY SAND WITH GRAVEL, brown, moist, loose	2 4 5	9
S-4	SS	18	18	(CL/ML) SILTY CLAY, trace sand, orange, moist, very soft	woh 1 1	2
S-5	SS	18	16	(SC-SM) SILTY CLAYEY SAND, brown, moist, very loose	2 1 woh	1
S-6	SS	18	18	(CL) LEAN CLAY, orangish brown, moist, very soft	1 1 1	2
S-7	SS	6	0	(WR) WEATHERED ROCK SAMPLED AS GRAVEL, gray, moist, very dense [Weathered ROCK]	50/6	50/6
				AUGER REFUSAL @ 24.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 23.0 | WS | WD | BORING STARTED 07/26/18 | CAVE IN DEPTH @ 17.7'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/26/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA

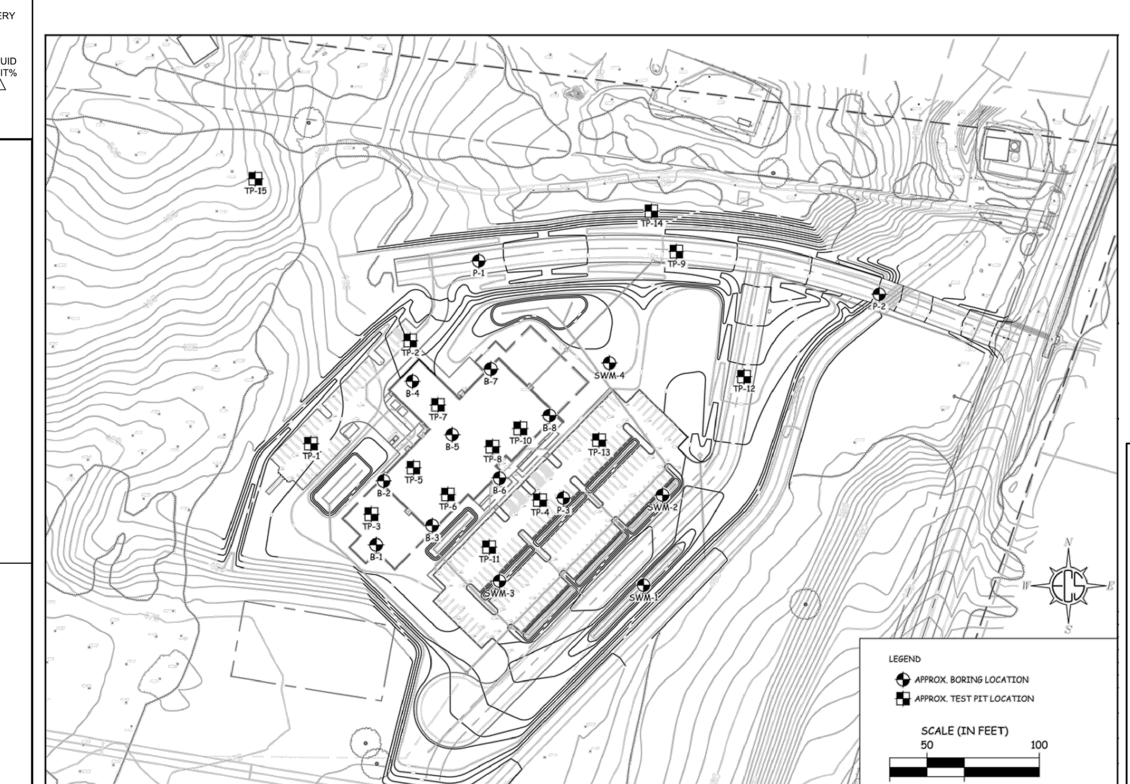
Boring Log SWM-2

CLIENT: Crabtree, Rohrbaugh & Associates Architects | Job #: 13:8269 | BORING #: SWM-2 | SHEET: 1 OF 1
PROJECT NAME: Washington County Public Safety Training Center
SITE LOCATION: 9238 Sharpsburg Pike, Hagerstown, Washington County, MD
SURFACE ELEVATION 478

SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	BLOWS/6"	SPT N
S-1	SS	18	18	Topsoil Depth [11.00"] (ML/CL) CLAYEY SILT WITH SAND, brown, moist, soft	1 1 2	3
S-2	SS	18	18	(SC) CLAYEY SAND, orangish brown, moist, medium dense	3 5 6	11
S-3	SS	18	18	(CL) LEAN CLAY, brown, moist, stiff	10 6 3	9
S-4	SS	18	13	(ML/CL) CLAYEY SILT, trace sand, brown, moist, very soft	1 1 1	2
S-5	SS	18	18	(ML/CL) SANDY CLAYEY SILT, orangish brown, moist, very soft	1 1 1	2
S-6	SS	18	18	(ML) SILT WITH SAND, trace gravel, trace clay, brown to gray, moist, medium dense	18 12 5	17
				END OF BORING @ 20.00'		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 18.5 | WS | WD | BORING STARTED 07/26/18 | CAVE IN DEPTH @ 6.6'
WL(SHW) | WL(ACR) Dry | BORING COMPLETED 07/26/18 | HAMMER TYPE Auto
WL | RIG Track | FOREMAN Roberts | DRILLING METHOD HSA



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REVISIONS

01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

100% PLAN SET

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401 EAST WINDING HILL ROAD
717-458-0272 FAX 717-458-0047
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PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OWNER
WASHINGTON COUNTY BOARD OF COMMISSIONERS
100 W. WASHINGTON ST
HAGERSTOWN, MD 21740
240-313-220

CIVIL
KCI TECHNOLOGIES, INC.
11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

STATE OF MARYLAND — BRYAN R. ALOI — 51972 — PROFESSIONAL ENGINEER
12/18/19

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 51972 EXP. DATE: 12/11/2021

SEC BORING LOGS
PLOT SCALE:
FILENAME: KCI# 271703606
DATE: 12/18/19

PROJECT 3089

C-3.07

SP-18-044

PROJECT NAME: Washington County PSTC - Change Order #1
CLIENT: Crabtree, Rohrbaugh & Associates Architects
JOB #: 13.8269-A
LOCATION: 9238 Sharpsburg Pike, Hagerstown; Washington County, MD
ARCHENG:

TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-1	483.5	0		Topsoil Thickness [10.00"]					
			482	(ML/CL) CLAYEY SILT, trace sand, brown, moist					
		2			E				
			480	(CL) LEAN CLAY WITH SAND, brownish orange, moist				TP-1 3-5	20.0
		4							
			478	(CH) FAT CLAY, orange, moist					
		6			M				
			476	END OF TEST PIT @ 7'					
		8							
			474						
		10							
			472						
		12							
			470						
		14							

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

GROUND WATER ENCOUNTERED: PRIOR TO BACKFILL ▼ EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT
CONTRACTOR: Client Provided OPERATOR: Washington County MAKE/MODEL: John Deere/310 SL REACH: 12
ECS REP.: NB DATE: 10/19/18 UNITS: Feet Cave-in Depth: Groundwater Encountered: Groundwater Prior to Backfill:

PROJECT NAME: Washington County PSTC - Change Order #1
CLIENT: Crabtree, Rohrbaugh & Associates Architects
JOB #: 13.8269-A
LOCATION: 9238 Sharpsburg Pike, Hagerstown; Washington County, MD
ARCHENG:

TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-2	486	0		Topsoil Thickness [9.50"]					
			484	(CH) FAT CLAY, brownish red, moist					
		2			E			TP-2 2-4	
		4	482	BUCKET REFUSAL @ 5'					
		6	480						
		8	478						
		10	476						
		12	474						
		14	472						

REMARKS:

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GROUND WATER ENCOUNTERED: PRIOR TO BACKFILL ▼ EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT
CONTRACTOR: Client Provided OPERATOR: Washington County MAKE/MODEL: John Deere/310 SL REACH: 12
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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-3	485.5	0		Topsoil Thickness [9.00"]					
			484	(CL/ML) SILTY CLAY, brown, moist					
		2							
			482	(CL) LEAN CLAY, orange, moist					
		4			E				
			480						
		6		END OF TEST PIT @ 6'					
		8							
			478						
		10							
			476						
		12							
			474						
		14	472						

REMARKS:

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GROUND WATER ENCOUNTERED: PRIOR TO BACKFILL ▼ EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT
CONTRACTOR: Client Provided OPERATOR: Washington County MAKE/MODEL: John Deere/310 SL REACH: 12
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LOCATION: 9238 Sharpsburg Pike, Hagerstown; Washington County, MD
ARCHENG:

TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-4	483.3	0		Topsoil Thickness [10.00"]					
			482	(CL) LEAN CLAY, brown, moist					
		2			E				
			480	(CH) FAT CLAY, orange, moist					
		4			M				
			478	END OF TEST PIT @ 4.5'					
		6							
			476						
		8							
			474						
		10							
			472						
		12							
			470						
		14							

REMARKS:

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GROUND WATER ENCOUNTERED: PRIOR TO BACKFILL ▼ EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT
CONTRACTOR: Client Provided OPERATOR: Washington County MAKE/MODEL: John Deere/310 SL REACH: 12
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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-5	486.5	0		Topsoil Thickness [9.00"]					
			486	(CL/CH) LEAN TO FAT CLAY, orange, moist					
		2			E				
		4	484	BUCKET REFUSAL @ 3.5'					
		6	482						
		8	480						
		10	478						
		12	476						
		14	474						

REMARKS:

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CONTRACTOR: Client Provided OPERATOR: Washington County MAKE/MODEL: John Deere/310 SL REACH: 12
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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-6	485	0		Topsoil Thickness [8.00"]					
			484	(CH) FAT CLAY, contains slight roots, orange, moist					
		2							
			482						
		4		(CL) LEAN CLAY, contains slight roots, orange, moist	E				
		6	480						
			478	END OF TEST PIT @ 8'					
		8							
			476						
		10							
			474						
		12							
			472						
		14							

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GROUND WATER ENCOUNTERED: PRIOR TO BACKFILL ▼ EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT
CONTRACTOR: Client Provided OPERATOR: Washington County MAKE/MODEL: John Deere/310 SL REACH: 12
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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-7	486.8	0		Topsoil Thickness [14.00"]					
			486	(CL) LEAN CLAY, orange, moist					
		2			D				
			484	BUCKET REFUSAL @ 3'					
		4	482						
		6	480						
		8	478						
		10	476						
		12	474						
		14							

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CONTRACTOR: Client Provided OPERATOR: Washington County MAKE/MODEL: John Deere/310 SL REACH: 12
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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-8	486.5	0		Topsoil Thickness [14.00"]					
			486	(CL/ML) SILTY CLAY, contains slight roots, orange, moist					
		2							
			484						
		4		(CL) LEAN CLAY, orange, moist	E				
		6	482						
		8		END OF TEST PIT @ 6'					
			480						
		10	478						
		12	476						
		14	474						

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CONTRACTOR: Client Provided OPERATOR: Washington County MAKE/MODEL: John Deere/310 SL REACH: 12
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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-9	489	0		Topsoil Thickness [5.00"]					
			488	(CL) LEAN CLAY WITH SAND, contains slight roots, brown, moist					
		2			E			TP-9 2-4	
		4	486						
			484	(CL) LEAN CLAY, orange, moist				TP-9 5-7	20.2
		6			M				
			482	END OF TEST PIT @ 7.5'					
		8							
			480						
		10							
			478						
		12							
			476						
		14							

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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-10	487	0		Topsoil Thickness [12.00"]					
			486	(CL/ML) SILTY CLAY; contains slight roots, orange, moist					
		2							
			484						
		4		(CH) FAT CLAY, orange, moist					
			482		E				
		6		(ML/MH) SILT/ELASTIC SILT, orange / yellowish, moist					
			480						
		8							
			478	END OF TEST PIT @ 10'					
		10							
			476						
		12							
			474						
		14							

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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-11	479	0		Topsoil Thickness [10.00"]					
			478	(CH) FAT CLAY, orange, moist					
		2			E				
			476						
		4			M				
			474						
		6		BUCKET REFUSAL @ 6'					
			472						
		8							
			470						
		10							
			468						
		12							
			466						
		14							

REMARKS:

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TP-12	478.6	0		Topsoil Thickness [12.00"]					
			478	(CL) LEAN CLAY WITH SAND, brown; moist					
		2			E				
			476	(CL) GRAVELLY LEAN CLAY, trace sand, brown, moist					
		4							
			474	(SP) SAND WITH GRAVEL, brown, moist	M				
		6		END OF TEST PIT @ 6'					
			472						
		8							
			470						
		10							
			468						
		12							
			466						
		14							

REMARKS:

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TP-13	483	0		Topsoil Thickness [10.00"]					
			482	(CL) LEAN CLAY, orange, moist					
		2							
			480		E				
		4							
			478	END OF TEST PIT @ 6'					
		6							
			476						
		8							
			474						
		10							
			472						
		12							
			470						
		14							

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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-14	492	0		Topsoil Thickness [6.00"]					
			492	(ML) SILT, trace clay, trace gravel, brown, moist					
		2	490						
		4		(CL) LEAN CLAY, orange, moist	E				
			488						
		6	486					TP-14 5-7	
				END OF TEST PIT @ 7.5'					
		8	484						
		10	482						
		12	480						
		14	478						

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TEST PIT #	SURFACE ELEVATION (FT)	DEPTH (FT)	ELEV. (FT)	DESCRIPTION OF MATERIAL	EXCAV. EFFORT	DCP	SP. (TSF)	SAMPLE NO.	MOIST. CONT. (%)
TP-15	496	0		Topsoil Thickness [10.00"]					
			496	(CH) FAT CLAY, orange, moist				TP-15 1-3	
		2	494						
		4	492		E				
				(CL/ML) SILTY CLAY, orangish brown, moist					
		6	490						
				(CL) LEAN CLAY, contains slight rock fragments, orange, moist					
		8	488		M				
				BUCKET REFUSAL @ 8'					
		10	486						
		12	484						
		14	482						

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11830 W. MARKET PLACE, SUITE F
FULTON, MD 20759
410-792-8086 (P)
410-792-7419 (F)

SEC BORING LOGS

PLOT SCALE:

FILENAME: KCI# 271703606

DATE: 12/18/19

PROJECT 3089

C-3.08

SP-18-044

Washington County Public Safety Training Center
Washington County, Maryland

Building Code Information:

Applicable Building Code(s):

- Maryland Building Performance Standards / January 2015
- International Building Code / 2015
- National Electrical Code / 2014
- International Fuel Gas Code / 2015
- International Mechanical Code / 2015
- International Plumbing Code / 2015
- NFPA Fire Code / 2015
- International Energy Conservation Code / 2015
- International Green Construction Code / 2012
- Maryland Fire Prevention Code, COMAR 29.06.01
- NFPA 101 Life Safety Code / 2015
- Maryland Accessibility Code, COMAR 05.02.02
- 2010 ADA Standards (ADA)

Proposed Building:

Building Construction Classification(s):	
IBC:	Type II B
NFPA:	Type II (000)
Occupancy Classification(s):	
IBC:	Group(s) A-3 & B – Separated Mixed Uses
NFPA:	New Assembly & Business Occupancies - Separated
Design Occupant Load:	892
Egress Design Occupant Loads:	964
IBC Table-506.2:	
Group A-3:	38,000 square feet – 1 Story
Group B:	92,000 square feet – 1 Story
Area Increases:	
Open Space:	100%
Frontage Increase:	75%
Proposed Building Area:	28,445 square feet
Proposed Fire Area without Automatic Sprinklers:	0 square feet
Proposed Building Height:	1 Story
Number of Exits:	Required: 3 / Provided: 9 Plus 1 Horizontal Exit

Proposed Egress Widths:	**Door(s):**	**534 inches**
Exit Capacity:	**Exit Door(s):**	**2,670 Persons**
Accessible Means of Egress:	**Required:** 2	**Provided:** 9

Typical Building Construction – Type II B / Type II (000):

Exterior Walls:	
Fire Separation > 10 Feet:	0-Hour Rated
Interior Walls:	0-Hour Rated
Floor / Ceilings:	0-Hour Rated Construction
Roof / Ceiling:	0-Hour Rated Construction
Other Typical Construction:	
2-Hour Rated Fire Barriers:	Horizontal Exits
1-Hour Rated Fire Barriers:	Separation Between Assembly and Business Uses Laundry
1-Hour Rated Fire Partitions:	N/A
NFPA Smoke Barriers:	Boiler Room General Storage Rooms
1-Hour Rated Exterior Walls:	Intersection of 2-Hour Rated Horizontal Exit Wall

Fire Protection Systems:

Automatic Sprinklers:	Throughout - Per NFPA-13
Standpipe System(s):	N/A
Emergency Ventilation:	N/A
Fire Alarm System:	Throughout - Per NFPA-72 – Manual Alarm
Fire Extinguishers:	Throughout - Per International Fire Code & NFPA-10
Maximum Travel Distances To Extinguishers:	
	Class 'A' Hazards: 75 Feet
	Class 'B' Hazards: 30 or 50 Feet
	Type 'K': 30 Feet To Cooking Equipment

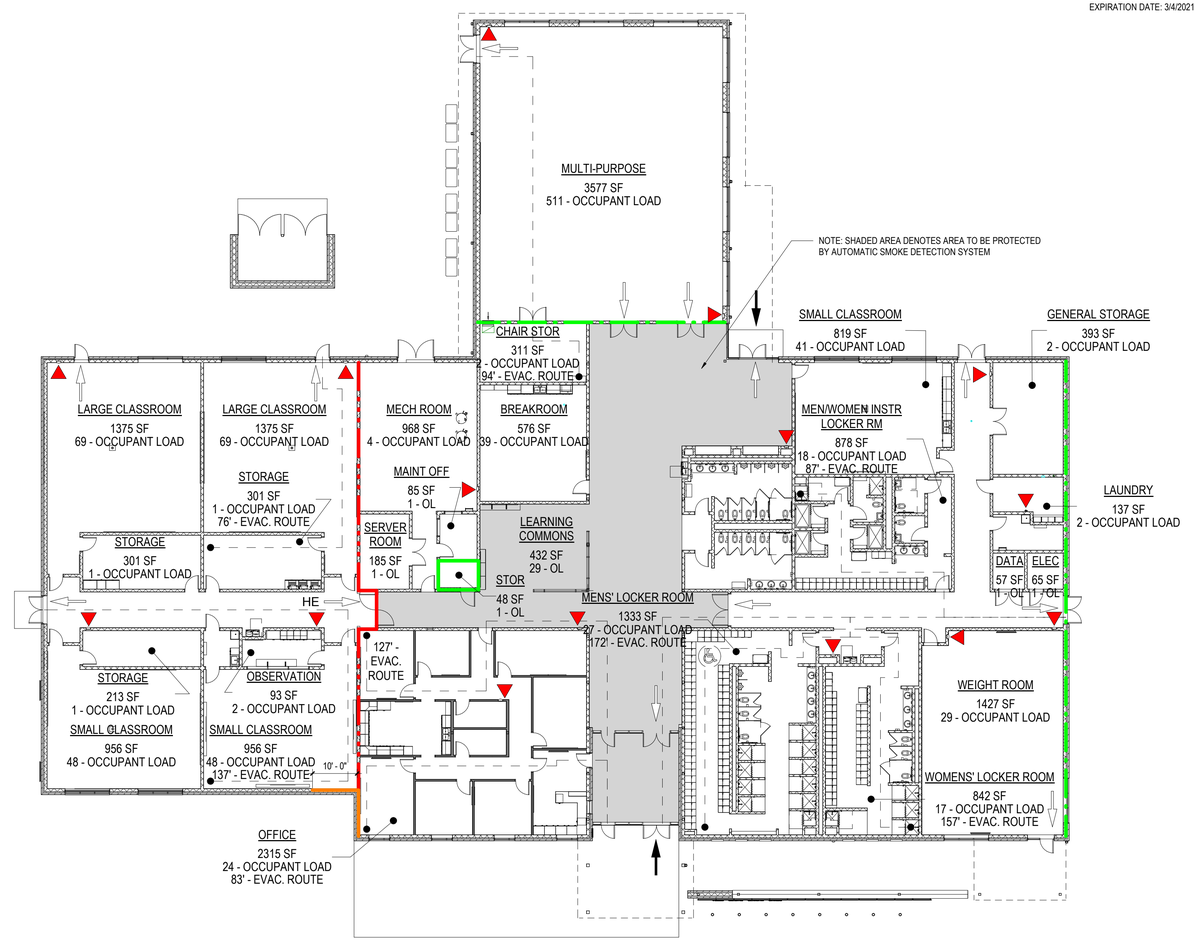
NOTE: BUILDING IS DESIGNED TO HAVE FUTURE SECOND FLOOR

Washing County Public Safety Training Center — CRA #3089 — 9/20/2018

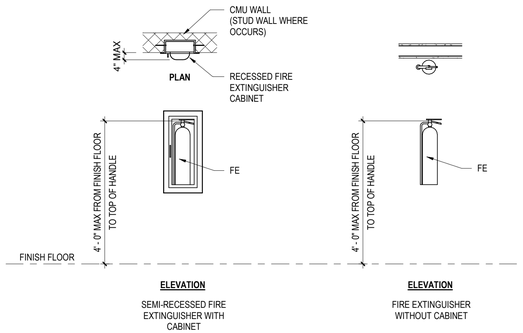
Per IBC 2015 Occupant Load Table 1004.1.2 and 2009 IBC Min. Plumbing Fixture Table-2902.1

Room name		Area (SF)	Casework	SF Per Occupant	Occupant Load		Water Closets Male	Water Closets Female	Lavatory Male	Lavatory Female	Drinking Foun.
FIRST FLOOR:											
Classroom	(Net)	956		20	47.80	47.80					
Classroom	(Net)	956		20	47.80	47.80					
Classroom	(Net)	955		20	47.75	47.75					
Classroom	(Net)	956		20	47.80	47.80					
Classroom	(Net)	1375		20	68.75	68.75					
Classroom	(Net)	1375		20	68.75	68.75					
Classroom	(Net)	1399		20	69.95	69.95					
Classroom	(Net)	1399		20	69.95	69.95					
Office / Business Areas	(Gross)	2509		100	25.09	25.09					
Maintenance Office	(Gross)	86		100	0.86	0.86					
Breakroom		620		15	0.00	41.33					
Learning Res. / Comm.		465		15	0.00	31.00					
Classroom	(Net)	856		20	42.80	42.80					
Locker Room	(Men / Women Instructor)	431		50	8.62	8.62					
Laundry		137		100	1.37	1.37					
Weight Room		1427		50	28.54	28.54					
Locker Room	(Women)	775		50	15.50	15.50					
Locker Room	(Men)	1231		50	24.62	24.62					
					T-2902.1	T-1004.1.1					
				Occupant Load:	615.95	688.28					
Required Egress Door Widths at 0.20 inches per person =		137.66		inches							
				1st 50 Men	Water Closets	50.00	2.00				
				1st 50 Women	Water Closets	50.00		2.00			
					Water Closets	515.95	5.16	5.16			
					Total	615.95					
				1st 80 Men	Lavatories	80.00			2.00		
				1st 80 Women	Lavatories	80.00				2.00	
					Lavatories	455.95			2.85	2.85	
					Total	615.95					
					Dinking Fountains	615.95					6.16
ASSEMBLY:											
Multi-Purpose Room	(Net - Chairs)	3577	7		511.00	511.00	2.04	3.93	1.28	1.28	1.02
					1126.95	1199.28					
					Total Occupancy						
					Plumbing	Egress					
					1127	1200					
							9.20	11.09	6.13	6.13	7.18
							Water Closets Male	Water Closets Female	Lavatory Male	Lavatory Female	Drinking Fountains
Required Plumbing Fixtures: Normal Daily Use:		Totals:					10	12	7	7	8

		Water Closets Male	Water Closets Female	Lavatory Male	Lavatory Female	Drinking Foun.
FIRST FLOOR:						
CORRIDOR						2
CORRIDOR						2
LOCKER ROOM	MEN	5		4		
LOCKER ROOM	WOMEN		3		3	
	MEN	9		3		
	WOMEN		5		3	
INSTRUCTOR	MEN / WOMEN	0.0862	0.0862	0.0862	0.0862	
		Water Closets Male	Water Closets Female	Lavatory Male	Lavatory Female	Drinking Fountains
	Provided:	14	8	7	5	4
	Required:	10	12	7	7	8
		4.09	(3.91)	0.09	(0.91)	(4)



1 CC.1 CODE COMPLIANCE PLAN - FIRST FLOOR - BASE BID
1/16" = 1'-0"



2 CC.1 FIRE EXTINGUISHER DETAILS
1/2" = 1'-0"

CODE COMPLIANCE LEGEND

- CONSTRUCTION RESISTING PASSAGE OF SMOKE
- 1 HOUR RATED FIRE BARRIER
- 2 HOUR RATED FIRE BARRIER
- 1 HOUR RATED FIRE WALL
- ACCESSIBLE ENTRANCE
- ACCESSIBLE MEANS OF EGRESS
- HE — HORIZONTAL EXIT
- FIRE EXTINGUISHER LOCATIONS
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ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

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PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

CODE COMPLIANCE FIRST FLOOR PLAN - BASE BID

PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

CC.1

Washington County Public Safety Training Center
Washington County, Maryland

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Proposed Egress Widths:	Door(s):	534 inches
Exit Capacity:	Exit Door(s):	2,670 Persons
Accessible Means of Egress:	Required:	Provided:
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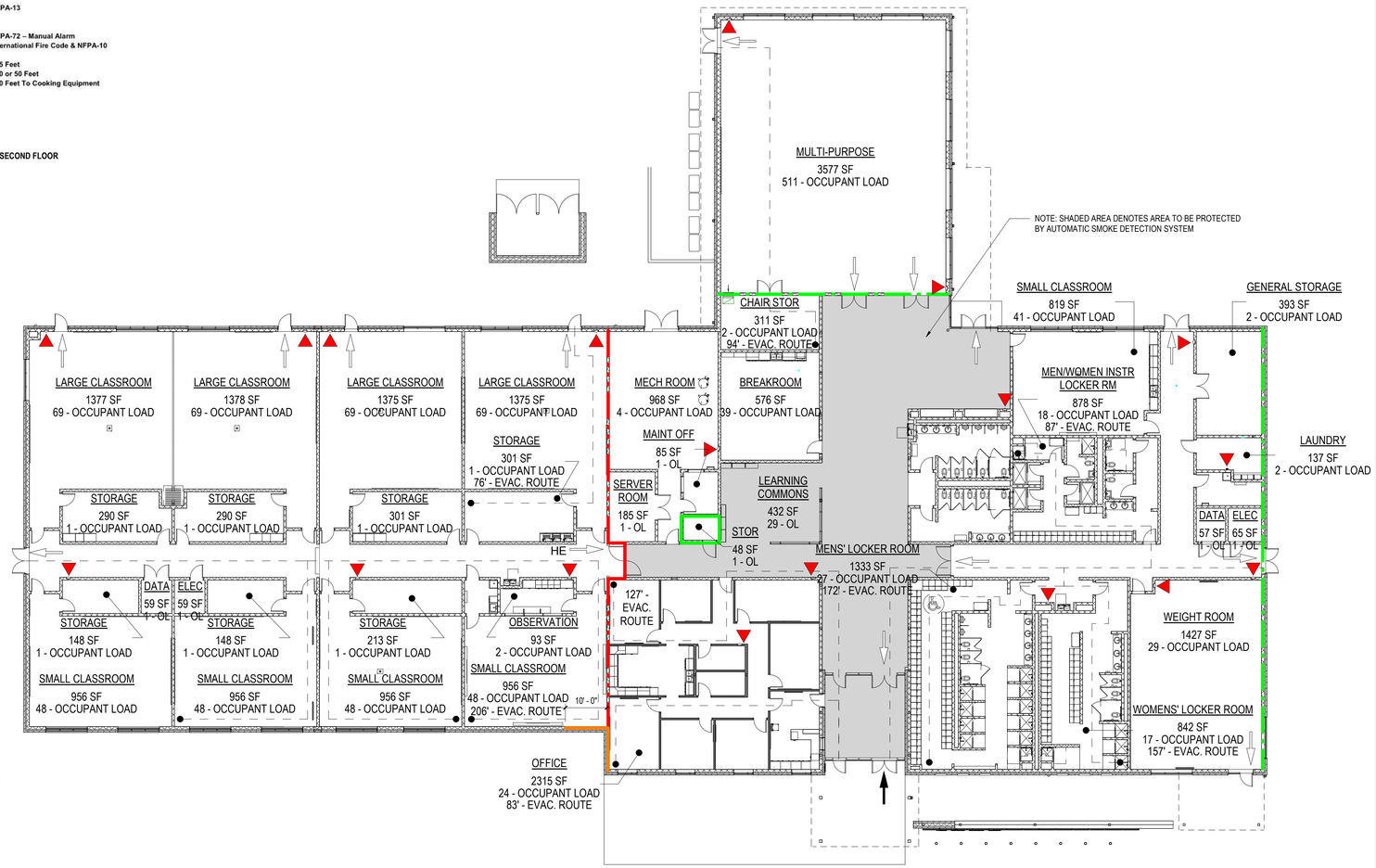

1 / CC.1A CODE COMPLIANCE PLAN - FIRST FLOOR - ALTERNATE GC-1
1/16" = 1'-0"

CODE COMPLIANCE LEGEND
- CONSTRUCTION RESISTING PASSAGE OF SMOKE
- 1 HOUR RATED FIRE BARRIER
- 2 HOUR RATED FIRE BARRIER
- 1 HOUR RATED FIRE WALL
- ACCESSIBLE ENTRANCE
- ACCESSIBLE MEANS OF EGRESS
- HE HORIZONTAL EXIT
- FIRE EXTINGUISHER LOCATIONS
- EXIT ACCESS TRAVEL DISTANCE

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WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

CODE COMPLIANCE FIRST FLOOR PLAN - ALT GC-1

PLOT SCALE: 1/16" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

CC.1A

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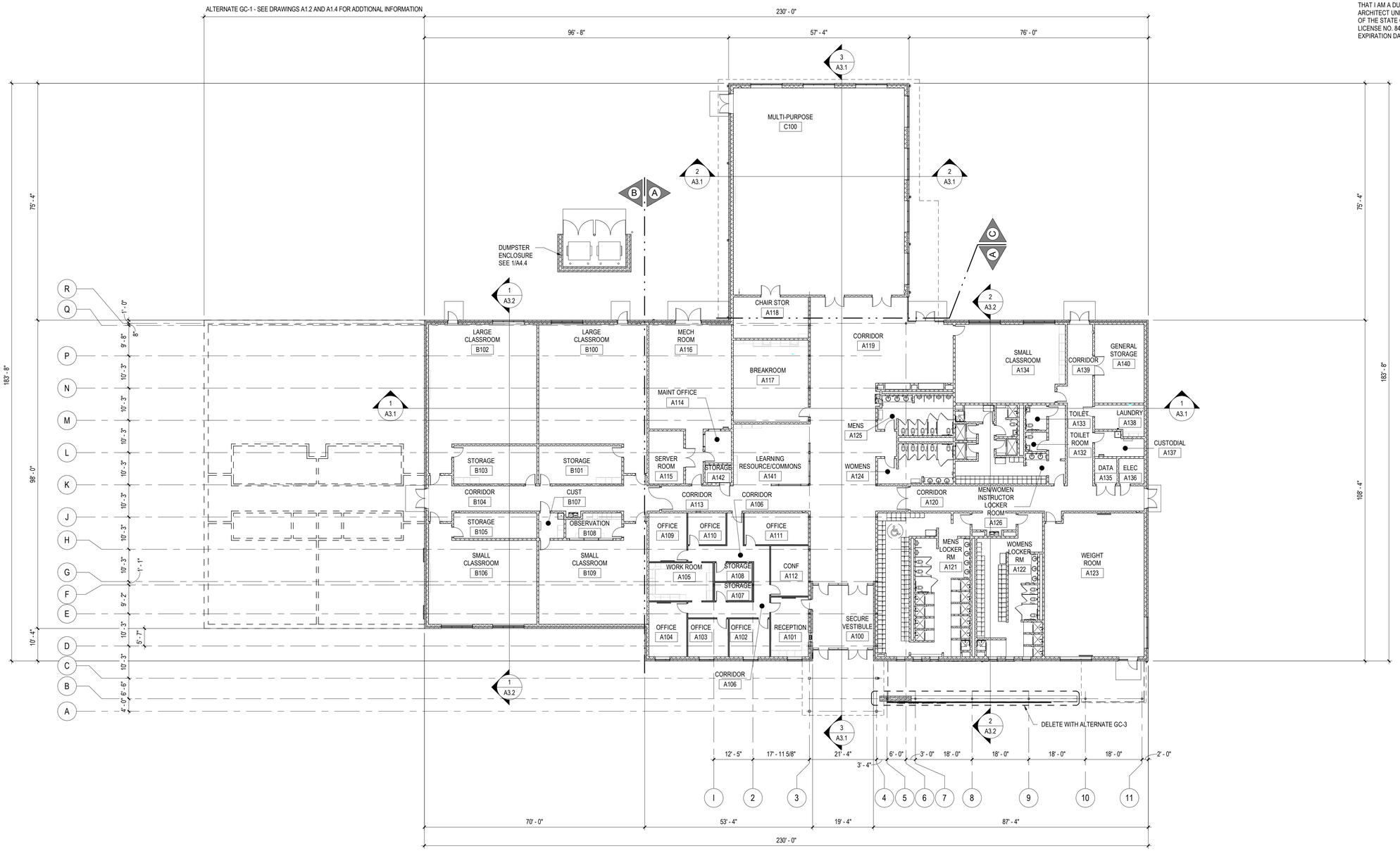
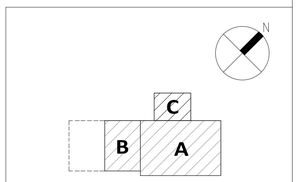


1 / A1.1 OVERALL FIRST FLOOR PLAN - BASE BID
1/16" = 1'-0"

GENERAL NOTES:

1. ALL DOOR JAMBS SHALL BE LOCATED 4" FROM INSIDE CORNER OF WALL ON HINGE SIDE UNLESS OTHERWISE INDICATED.
2. COORDINATE LOCATION OF MEP EQUIPMENT, DEVICES, OUTLET BOXES, ETC. WITH OTHER EQUIPMENT AND FINISH SCHEDULE PRIOR TO INSTALLATION.
3. ALL EXTERIOR ENTRANCE PADS SHALL BE SLOPED 2% MAX AWAY FROM THE BUILDING TO EDGE OF PAD. REFER TO STRUCTURAL DRAWINGS.
4. UNLESS NOTED OTHERWISE, ALL FLOOR DRAINS SHALL BE SET 1/4" MAX. BELOW FIN FLOOR. DISH FIN. FLOOR MIN. OF 24" RADIUS TO TOP OF FLOOR DRAIN. REFER TO PLUMBING DRAWINGS.
5. UNLESS NOTED OTHERWISE, WHERE DIFFERENT FLOOR ELEVATIONS OCCUR ON OPPOSITE SIDES OF INTERIOR MASONRY WALLS, PROVIDE COLD FLUID APPLIED WATERPROOFING (CFAWP) ON THE BACKFILLED FACE OF WALL APPLY CFAWP FROM UNDERSIDE OF CONC. SLAB TO TOP OF FOOTING BELOW. CFAWP NOT TO INTERFERE WITH INSTALLATION OF CONC. SLAB VAPOR BARRIER.
6. GC TO PROVIDE ALL LOUVERS COORDINATE WITH MEP DRAWINGS.
7. ALL WALL LAYOUT DIMENSIONS ARE FROM FACE OF STUD & FACE OF CMU UNLESS OTHERWISE NOTED.



KEY PLAN

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OVERALL FIRST FLOOR PLAN - BASE BID

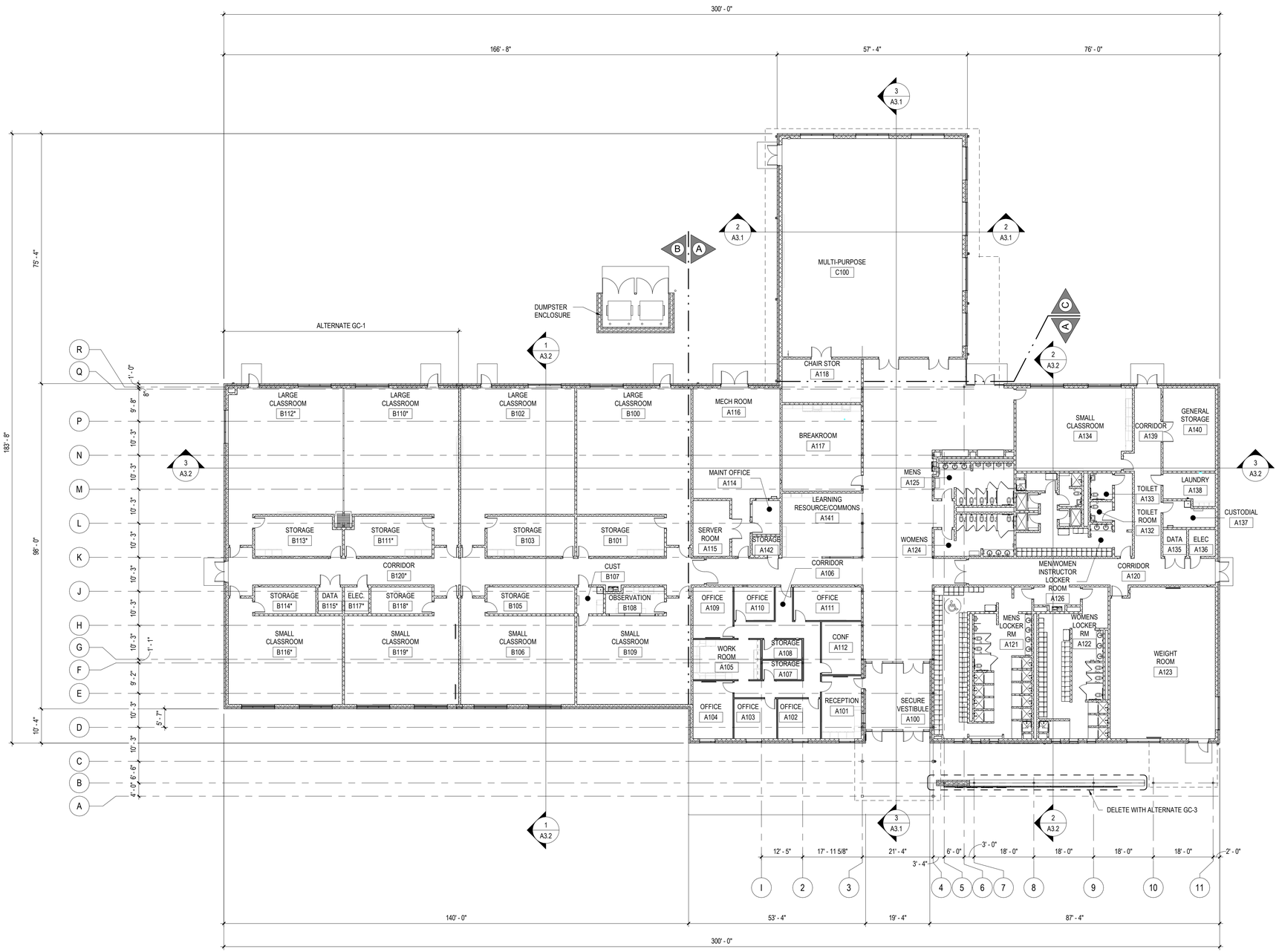
PLOT SCALE: 1/16" = 1'-0"

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
3089

A1.1



1 / A1.2 OVERALL FIRST FLOOR PLAN - ALTERNATE GC-1
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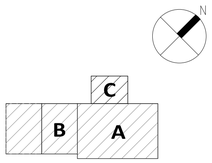

KEY PLAN

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OVERALL FIRST FLOOR PLAN - ALTERNATE GC-1

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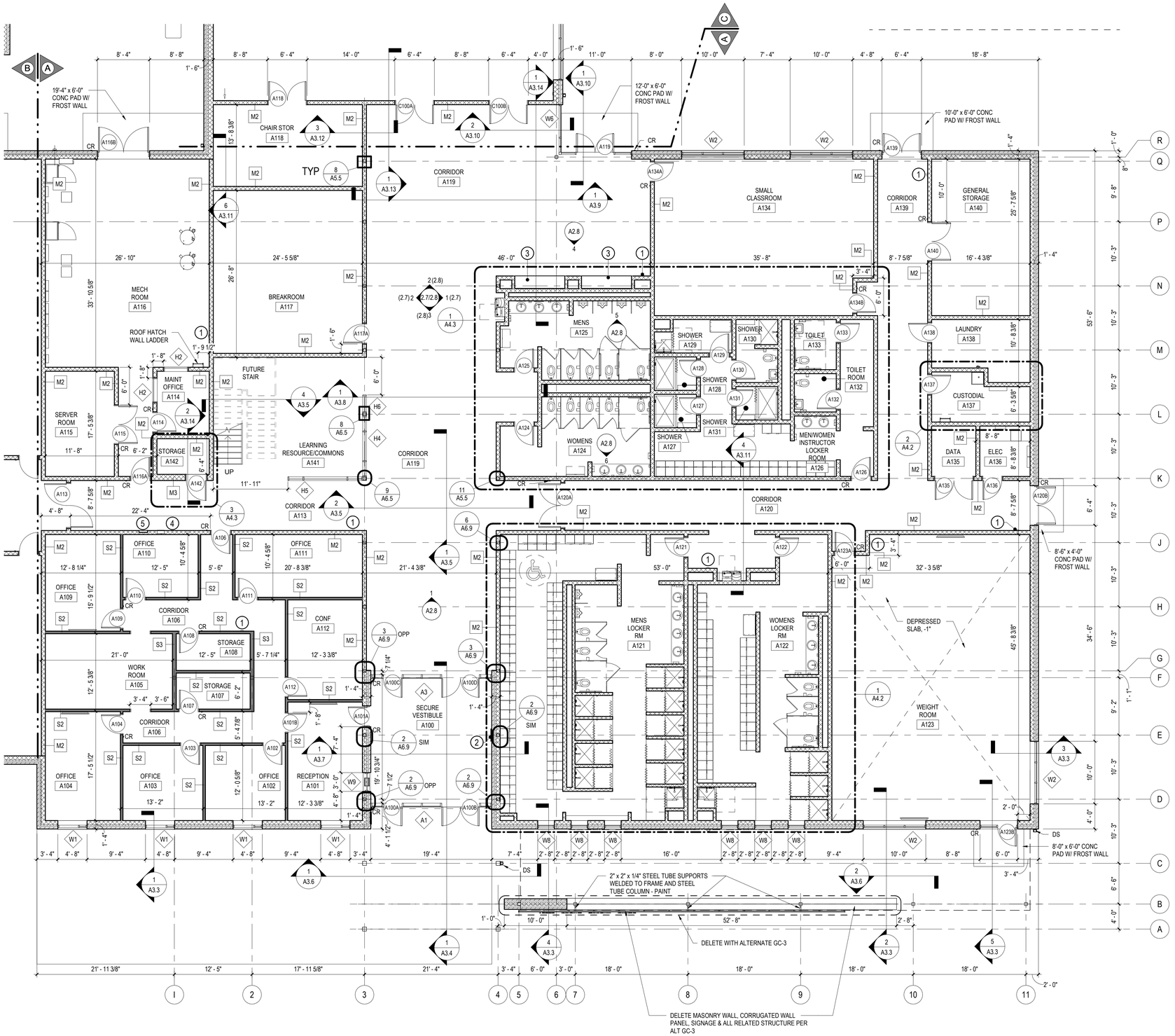
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A1.2



1 A1.3 FIRST FLOOR PLAN - UNIT A - BASE BID
1/8" = 1'-0"

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 8490
EXPIRATION DATE: 3/4/2021

ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

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REVISIONS

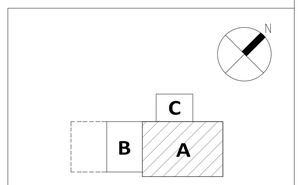
#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

ACCESSORY SCHEDULE

TAG	ACCESSORY NOTE	REMARKS
1	FIRE EXTINGUISHER AND SEMI-RECESSED CABINET	SEE DETAIL 2/CC.1 & SPECIFICATIONS
2	BUILDING PLAQUE	SEE SPECIFICATIONS, SEE DETAIL 7/A5.5, VERIFY LOCATION WITH OWNER
3	RECESSED DISPLAY CASE - 8'-0"W x 4'-8" H x 2'-0"D	REFER TO SECTIONS & SPECIFICATIONS
4	BLEED KIT & WALL CABINET	SEE SPECIFICATIONS FOR CABINET, BLEED KIT PROVIDED BY OWNER
5	AED RECESSED WALL CABINET AND DEFIBRILLATOR	SEE SPECIFICATIONS FOR CABINET, DEFIBRILLATOR PROVIDED BY OWNER

GENERAL NOTES:

1. ALL DOOR JAMBS SHALL BE LOCATED 4" FROM INSIDE CORNER OF WALL ON HINGE SIDE UNLESS OTHERWISE INDICATED.
2. COORDINATE LOCATION OF MEP EQUIPMENT, DEVICES, OUTLET BOXES, ETC. WITH OTHER EQUIPMENT AND FINISH SCHEDULE PRIOR TO INSTALLATION.
3. ALL EXTERIOR ENTRANCE PADS SHALL BE SLOPED 2% MAX AWAY FROM THE BUILDING TO EDGE OF PAD. REFER TO STRUCTURAL DRAWINGS.
4. UNLESS NOTED OTHERWISE, ALL FLOOR DRAINS SHALL BE SET 1/4" MAX. BELOW FIN FLOOR. DISH FIN. FLOOR MIN. OF 24" RADIUS TO TOP OF FLOOR DRAIN. REFER TO PLUMBING DRAWINGS.
5. UNLESS NOTED OTHERWISE, WHERE DIFFERENT FLOOR ELEVATIONS OCCUR ON OPPOSITE SIDES OF INTERIOR MASONRY WALLS, PROVIDE COLD FLUID APPLIED WATERPROOFING (CFAWP) ON THE BACKFILLED FACE OF WALL. APPLY CFAWP FROM UNDERSIDE OF CONC. SLAB TO TOP OF FOOTING BELOW. CFAWP NOT TO INTERFERE WITH INSTALLATION OF CONC. SLAB VAPOR BARRIER.
6. GC TO PROVIDE ALL LOUVERS COORDINATE WITH MEP DRAWINGS.
7. ALL WALL LAYOUT DIMENSIONS ARE FROM FACE OF STUD & FACE OF CMU UNLESS OTHERWISE NOTED.



KEY PLAN

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA
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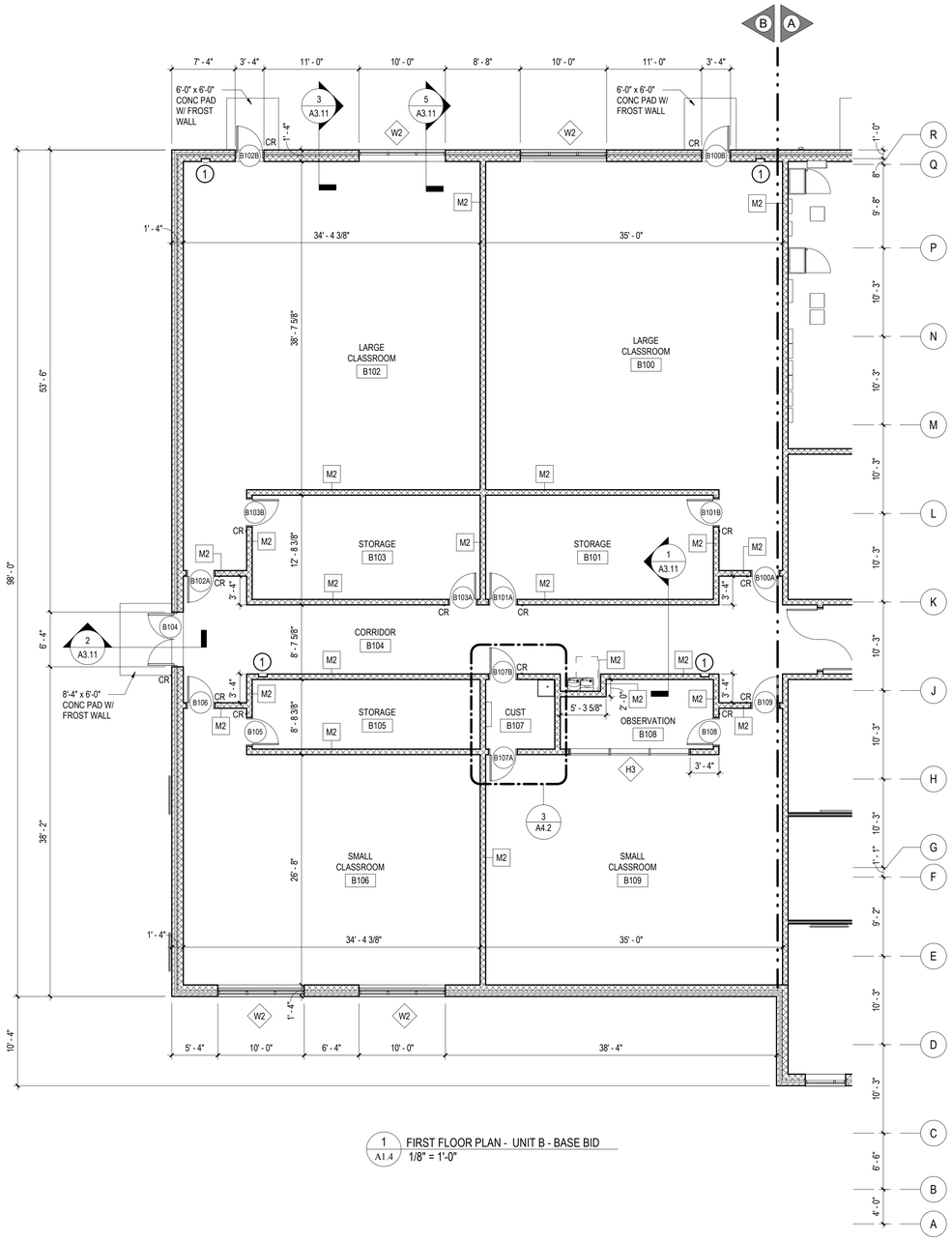
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

FIRST FLOOR PLAN UNIT "A"

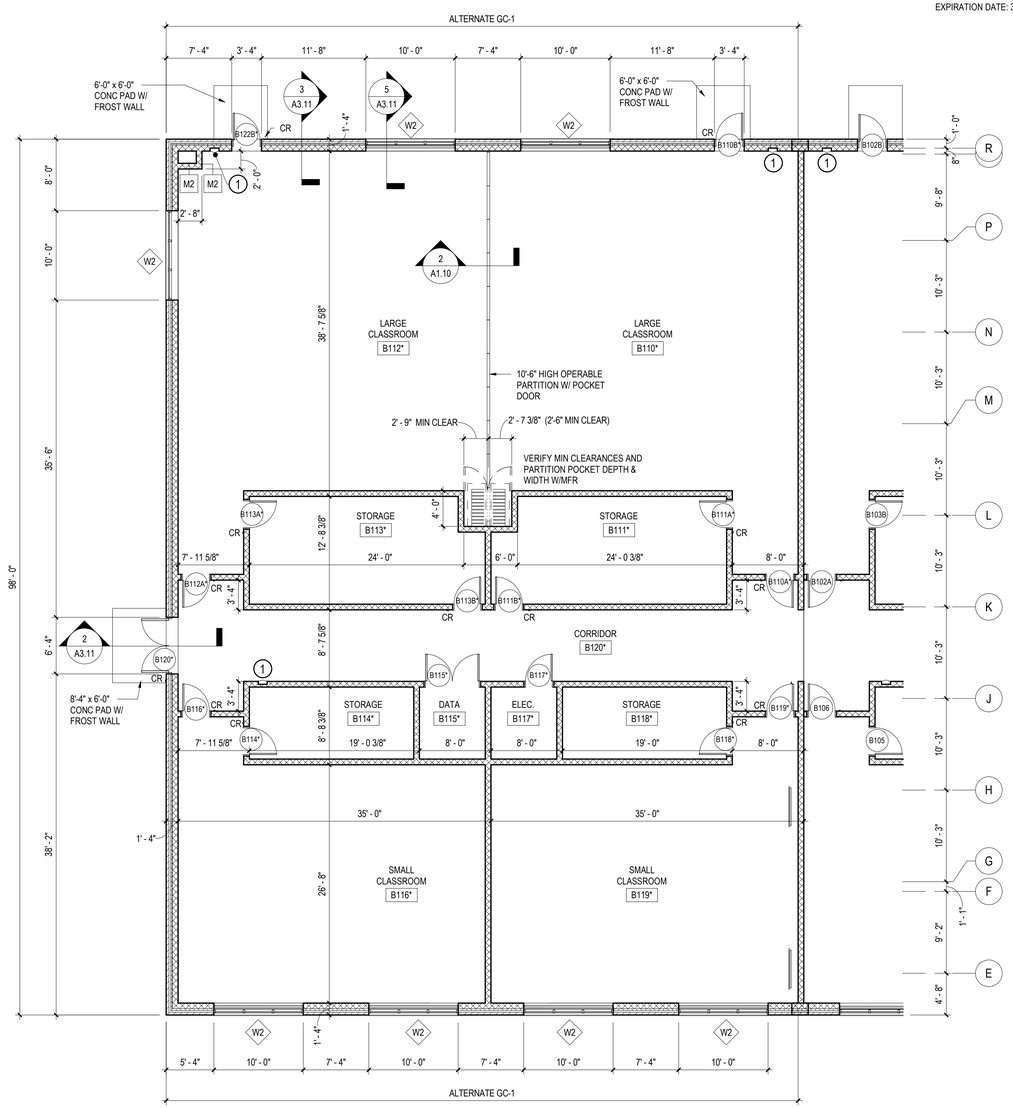
PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A1.3



1 A1.4 FIRST FLOOR PLAN - UNIT B - BASE BID
1/8" = 1'-0"



2 A1.4 FIRST FLOOR PLAN - UNIT B - ALTERNATE GC-1
1/8" = 1'-0"

ACCESSORY SCHEDULE		
TAG	ACCESSORY NOTE	REMARKS
1	FIRE EXTINGUISHER AND SEMI-RECESSED CABINET	SEE DETAIL 2/CC.1 & SPECIFICATIONS
2	BUILDING PLAQUE	SEE SPECIFICATIONS, SEE DETAIL 7/A5.5, VERIFY LOCATION WITH OWNER
3	RECESSED DISPLAY CASE - 8'-0"W x 4'-8" H x 2'-0"D	REFER TO SECTIONS & SPECIFICATIONS
4	BLEED KIT & WALL CABINET	SEE SPECIFICATIONS FOR CABINET, BLEED KIT PROVIDED BY OWNER
5	AED RECESSED WALL CABINET AND DEFIBRILLATOR	SEE SPECIFICATIONS FOR CABINET, DEFIBRILLATOR PROVIDED BY OWNER

GENERAL NOTES:

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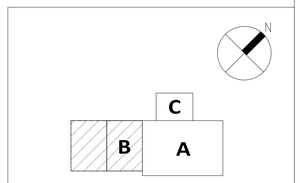

KEY PLAN

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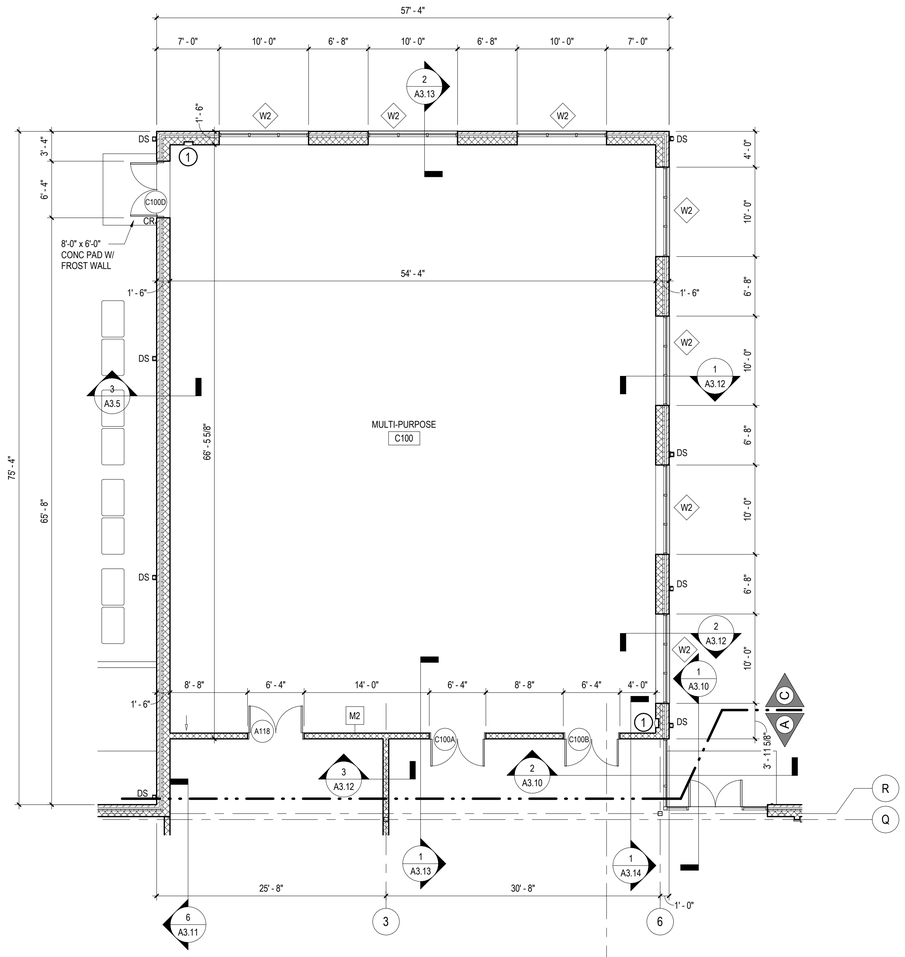
FIRST FLOOR PLAN UNIT "B"

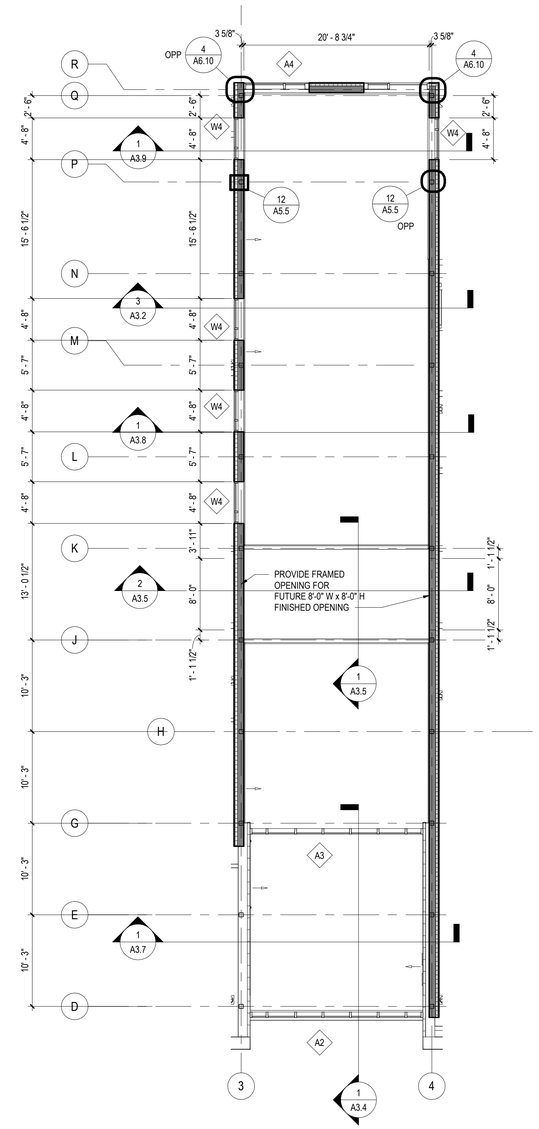
PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A1.4



1 / A1.5 FIRST FLOOR PLAN - UNIT C
1/8" = 1'-0"



2 / A1.5 ATRIUM CLERESTORY PLAN
1/8" = 1'-0"

ACCESSORY SCHEDULE		
TAG	ACCESSORY NOTE	REMARKS
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3	RECESSED DISPLAY CASE - 8'-0"W x 4'-8" H x 2'-0"D	REFER TO SECTIONS & SPECIFICATIONS
4	BLEED KIT & WALL CABINET	SEE SPECIFICATIONS FOR CABINET, BLEED KIT PROVIDED BY OWNER
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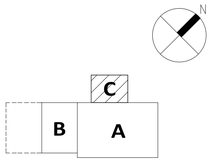

KEY PLAN

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HAGERSTOWN, MD 21740

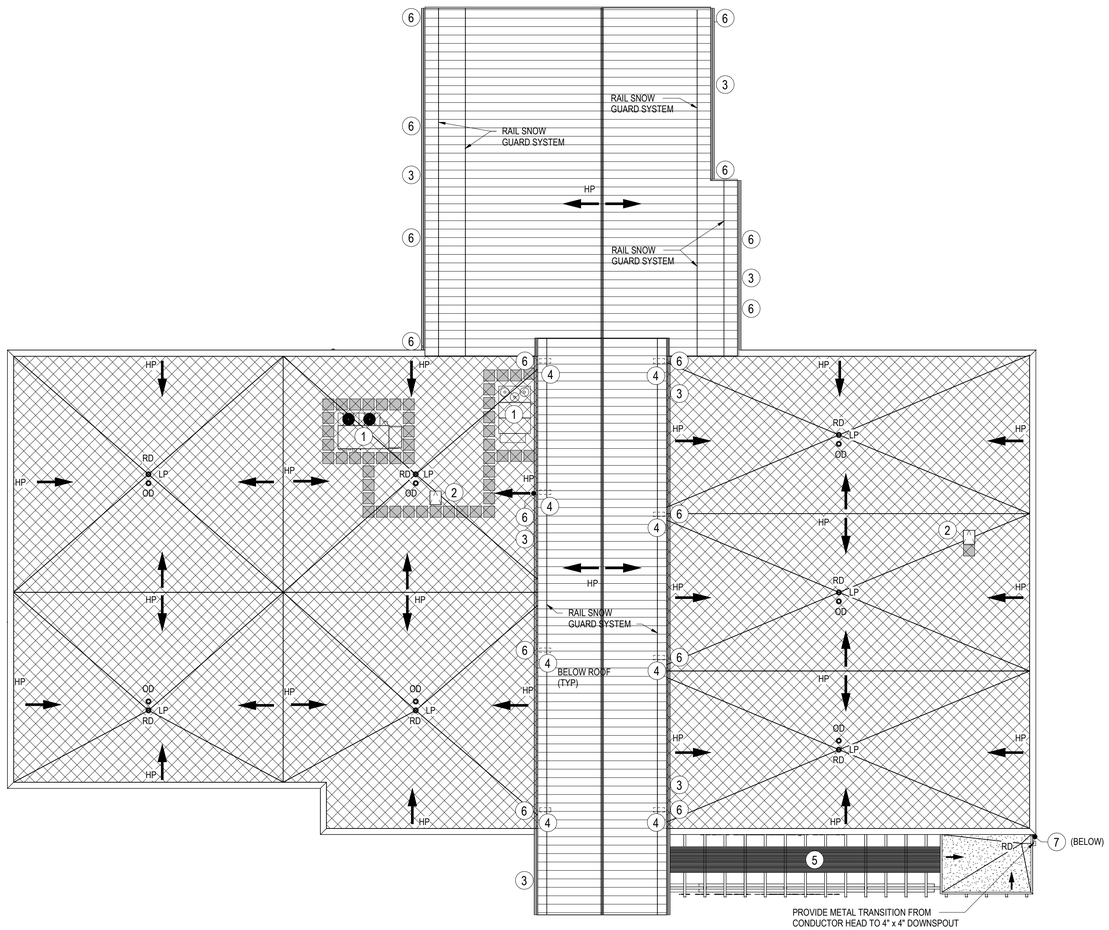
CR

FIRST FLOOR PLAN UNIT "C" & ATRIUM CLERESTORY PLAN

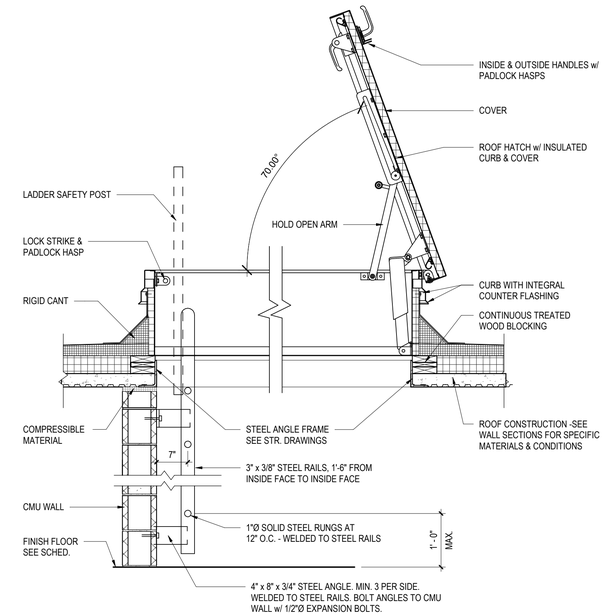
PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A1.5

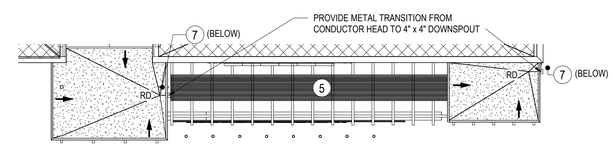


1 A1.6 OVERALL ROOF PALN - BASE BID
1/16" = 1'-0"



NOTES:
1. CONTRACTOR SHALL VERIFY HEIGHT FROM FLOOR LINE TO ROOF WHERE LADDER OCCURS TO DETERMINE QUANTITY OF RUNGS.
2. SEE WALL SECTIONS FOR SPECIFIC MATERIALS AND CONDITIONS.

3 A1.6 TYPICAL ROOF HATCH DETAIL
3/4" = 1'-0"



2 A1.6 LOW ROOF PLAN - BASE BID
1/16" = 1'-0"

LEGEND

1. ROOF TOP MECHANICAL UNIT
2. ROOF HATCH
3. METAL GUTTER
4. PRECAST CONCRETE SPLASHBLOCK WITH ISOLATION PAD
5. PERFORATED METAL PANEL
6. 3" X 4" METAL DOWNSPOUT
7. 4" X 4" METAL DOWNSPOUT - PROVIDE METAL TRANSITION FROM CONDUCTOR HEAD TO DOWNSPOUT

LP	LOW POINT
HP	HIGH POINT
RD	ROOF DRAIN
OD	OVERFLOW DRAIN

FLOW DIRECTION

WALKWAY PAD

INDICATES PVC ROOF SYSTEM WITH 1/4" PER FOOT TAPERED INSULATION

INDICATES STANDING SEAM METAL ROOF SYSTEM

INDICATES PVC ROOF SYSTEM WITH 1/4" PER FOOT TAPERED INSULATION

ROOF PLAN NOTES:

1. COORDINATE ROOF-MOUNTED EQUIPMENT & PENETRATIONS. REFER TO MEP DRAWINGS.

2. PROVIDE ROOFING MANUFACTURERS' STANDARD DETAILS FOR ALL PENETRATIONS & FLASHING AS PER ROOFING MANUFACTURERS' WARRANTY.

3. CRICKETS AND SADDLES SHALL HAVE A MINIMUM OF TWO TIMES THE SLOPE OF THE PRIMARY TAPERED SYSTEM OR STRUCTURAL SLOPE.

4. ROOF MOUNTED EQUIPMENT CURBS AND SUPPORTS SHALL BE FURNISHED AND INSTALLED BY THE EQUIPMENT SUPPLIER.

5. PROVIDE RAIL SNOW GUARD SYSTEM ATTACH / CLAMPED TO STANDING SEAMS PER MANUFACTURERS STANDARD RECCOMONDATIONS - COLOR TO MATCH ROOF.

6. INSTALL ROOF WALKWAY PADS AROUND ALL ROOF HATCHES AND AROUND ALL ROOF TOP MECHANICAL UNITS.

7. PROVIDE PRECAST CONCRETE SPLASHBLOCKS AT EACH DOWNSPOUT FROM HIGH ATRIUM ROOF.

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ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

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WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

OVERALL ROOF PLAN

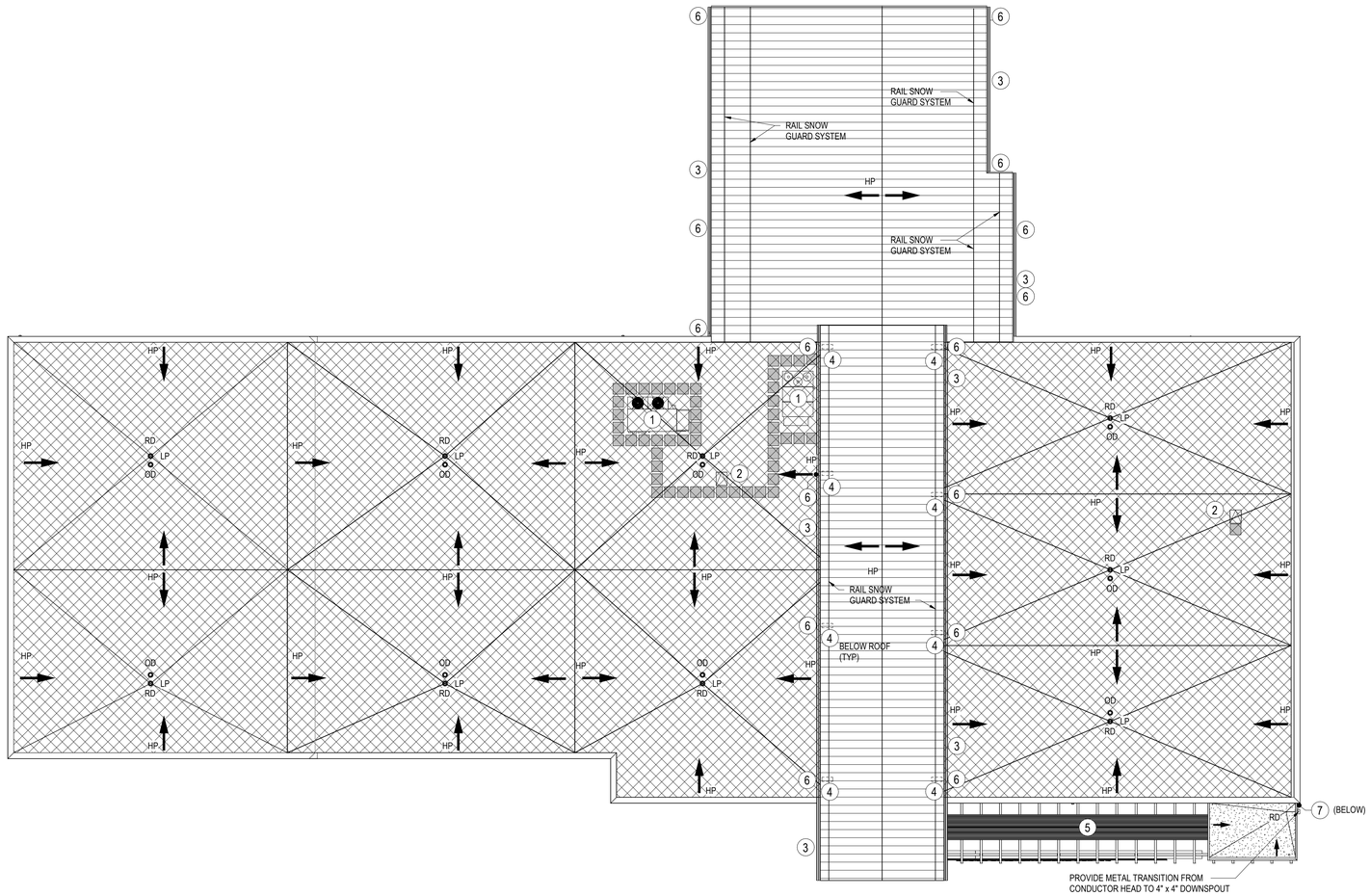
PLOT SCALE: As indicated

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
3089

A1.6



1 / A1.7 OVERALL ROOF PLAN - ALTERNATE GC-1
1/16" = 1'-0"

LEGEND

1. ROOF TOP MECHANICAL UNIT
2. ROOF HATCH
3. METAL GUTTER
4. PRECAST CONCRETE SPLASHBLOCK WITH ISOLATION PAD
5. PERFORATED METAL PANEL
6. 3" X 4" METAL DOWNSPOUT
7. 4" X 4" METAL DOWNSPOUT - PROVIDE METAL TRANSITION FROM CONDUCTOR HEAD TO DOWNSPOUT

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HP	HIGH POINT
RD	ROOF DRAIN
OD	OVERFLOW DRAIN

FLOW DIRECTION

WALKWAY PAD

INDICATES PVC ROOF SYSTEM WITH 1/4" PER FOOT TAPERED INSULATION

INDICATES STANDING SEAM METAL ROOF SYSTEM

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5. PROVIDE RAIL SNOW GUARD SYSTEM ATTACH / CLAMPED TO STANDING SEAMS PER MANUFACTURERS STANDARD RECCOMONDATIONS - COLOR TO MATCH ROOF.
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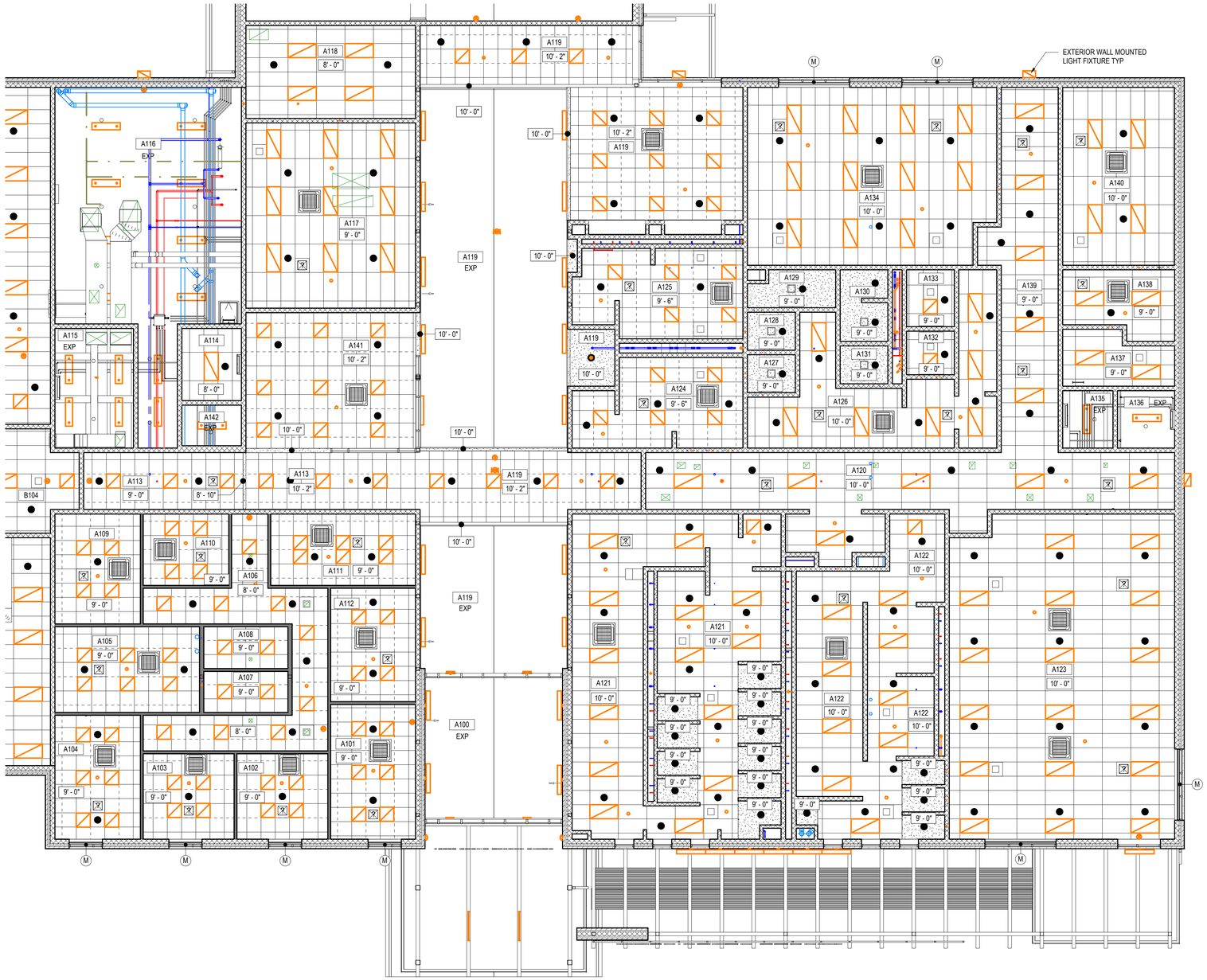
OVERALL ROOF PLAN - ALTERNATE GC-1

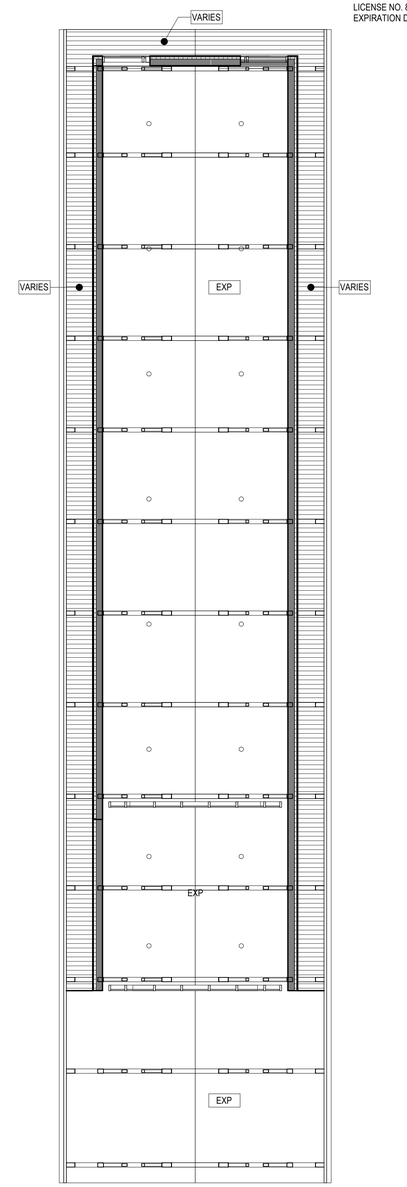
PLOT SCALE: 1/16" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

A1.7



1 A1.8 FIRST FLOOR REFLECTED CEILING PLAN - UNIT A - BASE BID
1/8" = 1'-0"



2 A1.8 FIRST FLOOR REFLECTED CEILING PLAN - UNIT A SOFFIT - BASE BID
1/8" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, GYPSUM BULKHEADS TO BE 3 5/8" METAL STUDS AT 16" O/C WITH 5/8" GWB EACH SIDE, EXTENDING MIN. 1" BELOW ADJACENT CEILING.

2. CEILING GRID SHALL BE COORDINATED WITH MEP EQUIPMENT AND DEVICES.

3. UNLESS NOTED OTHERWISE, ALL VISIBLE STRUCTURAL STEEL, ROOF/ FLOOR DECK, DUCTWORK, PIPING, CONDUIT, HANGER WIRES, ETC. AT EXPOSED LOCATIONS OR ABOVE CEILING CLOUDS SHALL BE PAINTED.

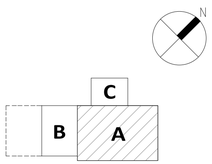
4. REFER TO ROOM FINISH SCHEDULE FOR CEILING TYPES.

5. ALL VISIBLE HANGER WIRES, STRUCTURE AND BRACING AT EXPOSED CEILING GRID OR CEILING CLOUD LOCATIONS SHALL BE INSTALLED PLUMB AND LEVEL.

6. FOR WINDOWS THAT REQUIRE TWO OR MORE ROLLER SHADES, EACH ROLLER SHADE SHALL TERMINATE AT THE CENTER OF THE WINDOW MULLION. REFER TO HOLLOW METAL AND ALUMINUM FRAME ELEVATIONS FOR FOR DIMENSIONS AND WINDOW MULLION DESIGN AND ROLLER SHADE BRAKES.

LEGEND

- 2' X 4' SUSPENDED CEILING SYSTEM
- GYPSUM WALLBOARD
- 2' X 4' SECOND LOOK SUSPENDED CEILING SYSTEM
- METAL SOFFIT
- 2' X 4' LIGHT FIXTURE
- 1' X 4' LIGHT FIXTURE
- 1' X 8' LIGHT FIXTURE
- 2' X 2' LIGHT FIXTURE
- SEE MEP DRAWINGS
- SEE MEP DRAWINGS
- RECESSED DOWN LIGHT
- PENDANT LIGHT FIXTURES
- M ROLLER SHADE - MANUAL
- E ROLLER SHADE - MOTORIZED
- CASSETTE



KEY PLAN

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WASHINGTON COUNTY PROJECT NO. 28-276
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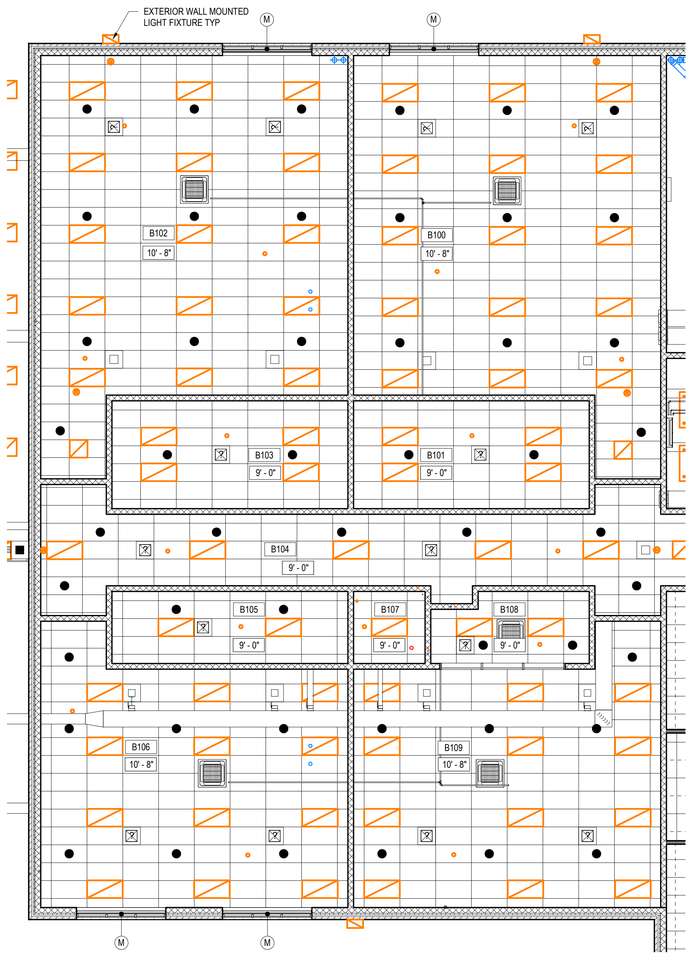
HAGERSTOWN, MD 21740

FIRST FLOOR REFLECTED CEILING PLAN - UNIT A - BASE BID

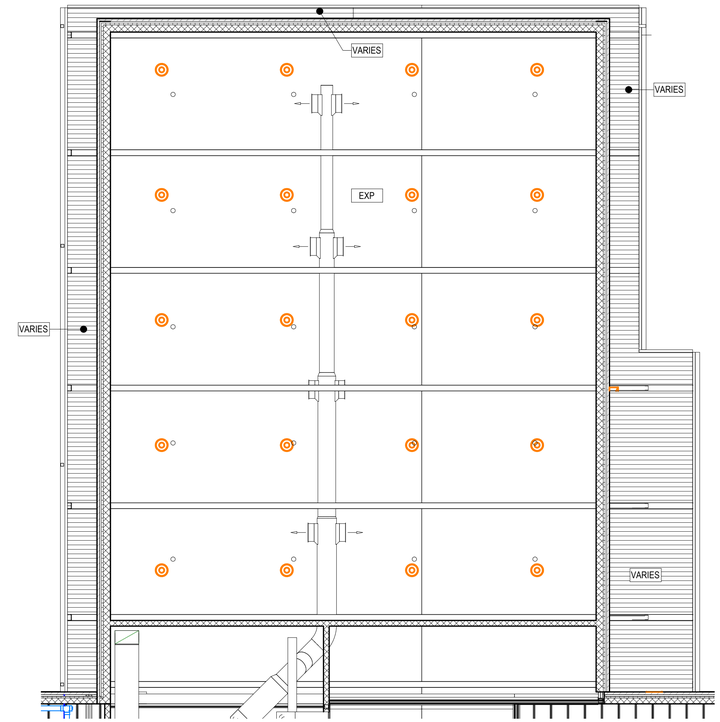
PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

A1.8



1 A1.9 FIRST FLOOR REFLECTED CEILING PLAN - UNIT B - BASE BID
1/8" = 1'-0"



3 A1.9 FIRST FLOOR REFLECTED CEILING PLAN - UNIT C SOFFIT - BASE BID
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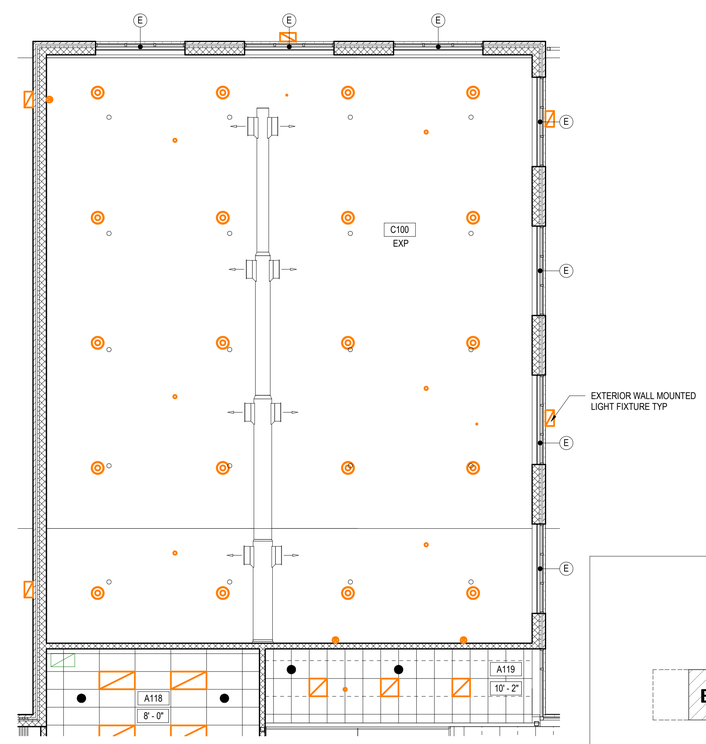

2 A1.9 FIRST FLOOR REFLECTED CEILING PLAN - UNIT C - BASE BID
1/8" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, GYPSUM BULKHEADS TO BE 3 5/8" METAL STUDS AT 16" O/C WITH 5/8" GWB EACH SIDE, EXTENDING MIN. 1" BELOW ADJACENT CEILING.

2. CEILING GRID SHALL BE COORDINATED WITH MEP EQUIPMENT AND DEVICES.

3. UNLESS NOTED OTHERWISE, ALL VISIBLE STRUCTURAL STEEL, ROOF/ FLOOR DECK, DUCTWORK, PIPING, CONDUIT, HANGER WIRES, ETC. AT EXPOSED LOCATIONS OR ABOVE CEILING CLOUDS SHALL BE PAINTED.

4. REFER TO ROOM FINISH SCHEDULE FOR CEILING TYPES.

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STATE OF MARYLAND

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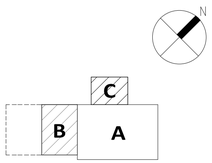


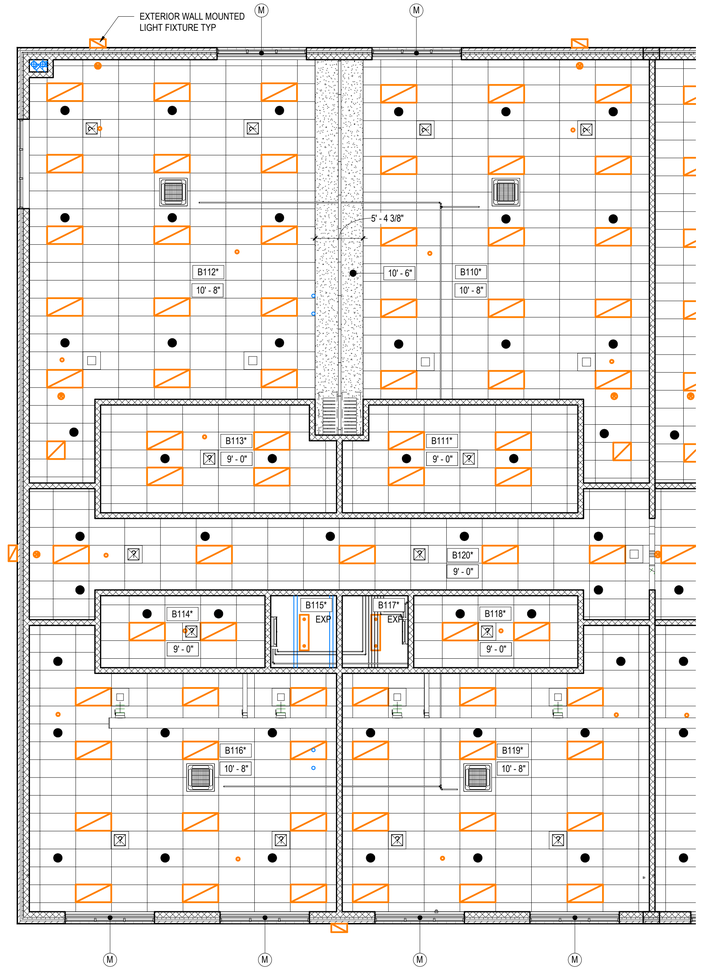
KEY PLAN

FIRST FLOOR REFLECTED CEILING PLAN - UNIT B & C - BASE BID

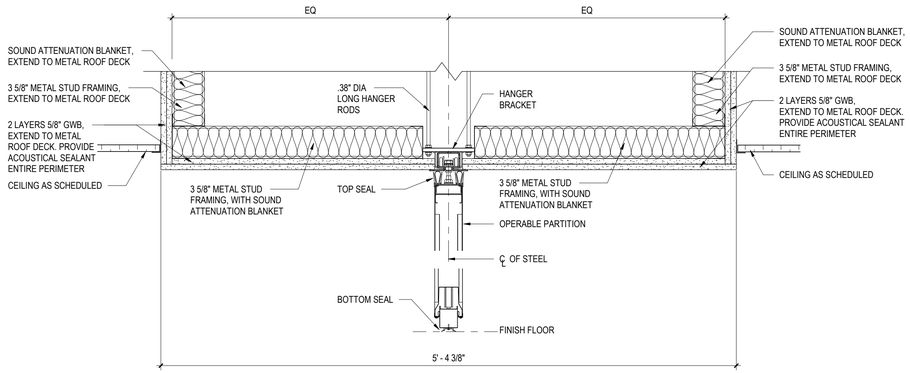
PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

A1.9



1 A1.10 FIRST FLOOR REFLECTED CEILING PLAN - UNIT B - ALTERNATE GC-1
1/8" = 1'-0"



2 A1.10 OPERABLE PARTITION BULKHEAD DETAIL
1 1/2" = 1'-0"

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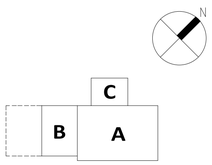

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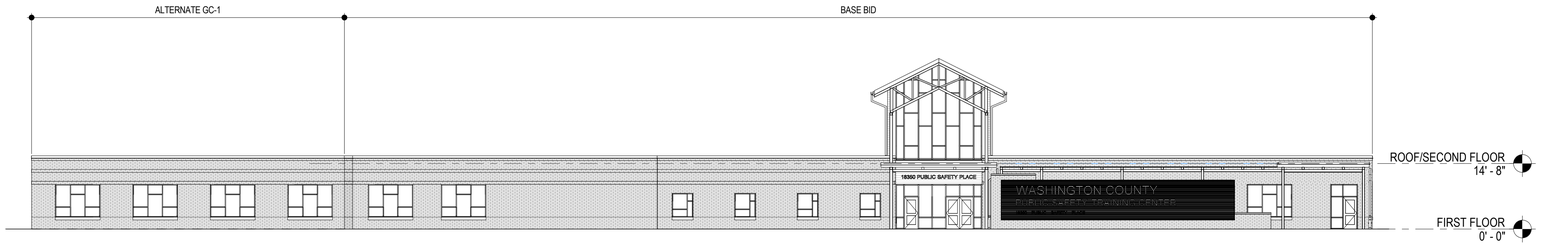
FIRST FLOOR REFLECTED CEILING PLAN - UNIT B - ALTERNATE GC-1

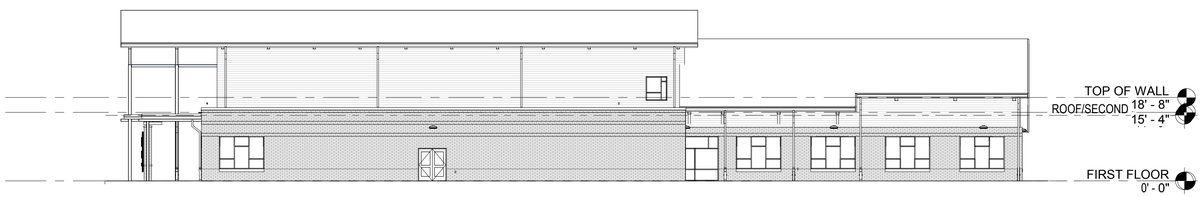
PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A1.10



1 A2.1 OVERALL EXTERIOR ELEVATION
1/16" = 1'-0"



2 A2.1 OVERALL EXTERIOR ELEVATION
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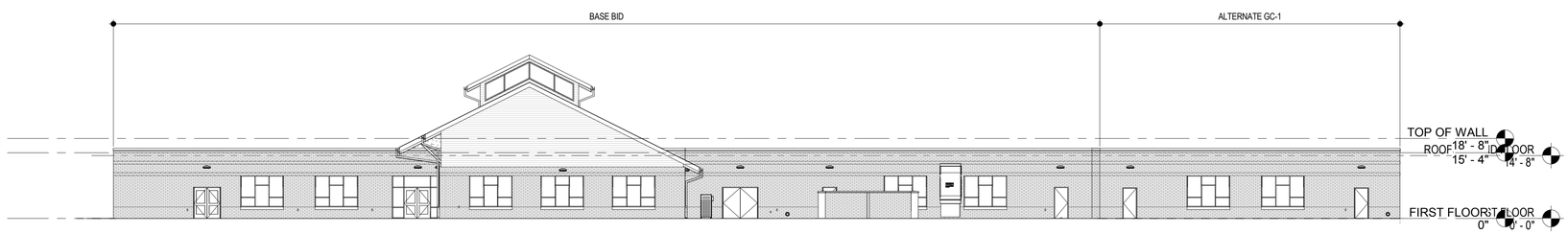

3 A2.1 OVERALL EXTERIOR ELEVATION
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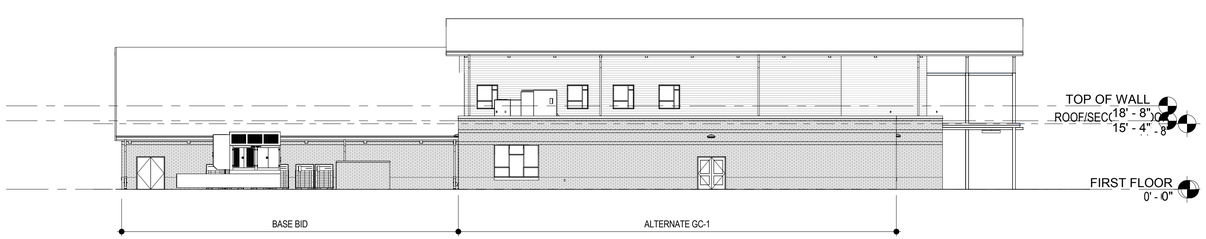
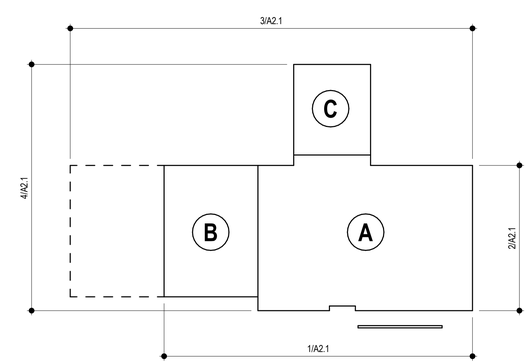
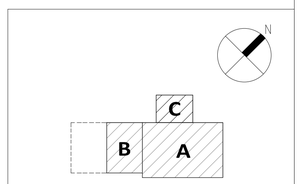


4 A2.1 OVERALL EXTERIOR ELEVATION
1/16" = 1'-0"



EXTERIOR ELEVATION KEYPLAN



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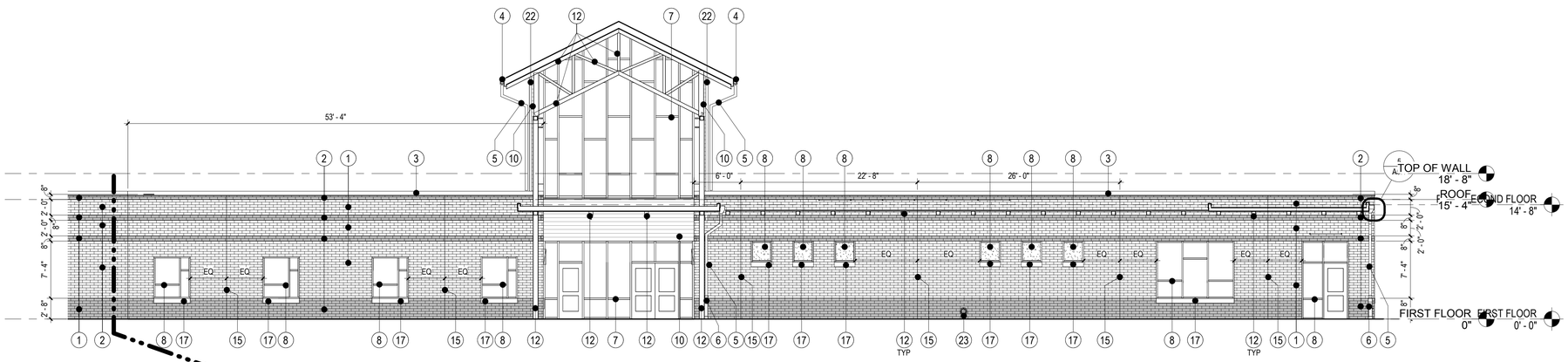
OVERALL EXTERIOR ELEVATIONS

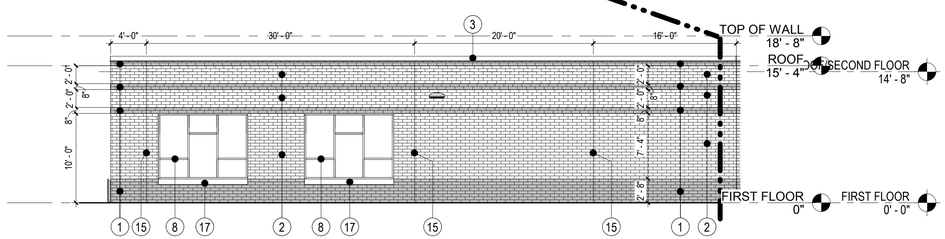
PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A2.1



1 A2.2 EXTERIOR ELEVATION
1/8" = 1'-0"



2 A2.2 EXTERIOR ELEVATION
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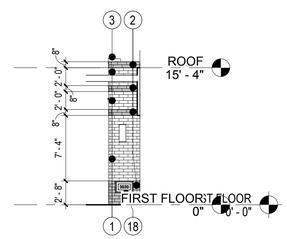

3 A2.2 EXTERIOR ELEVATION
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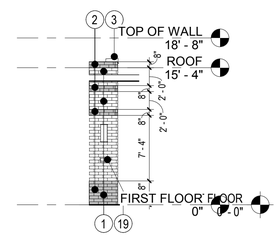

4 A2.2 EXTERIOR ELEVATION
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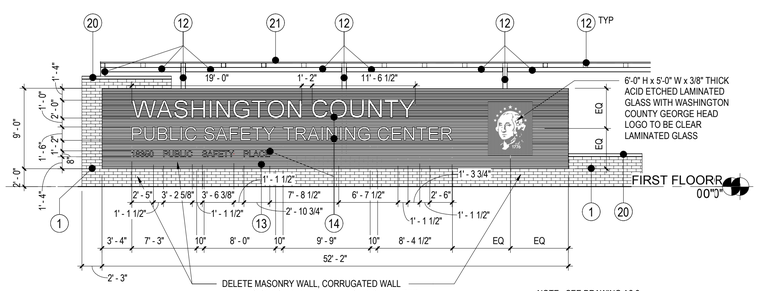

5 A2.2 EXTERIOR ELEVATION
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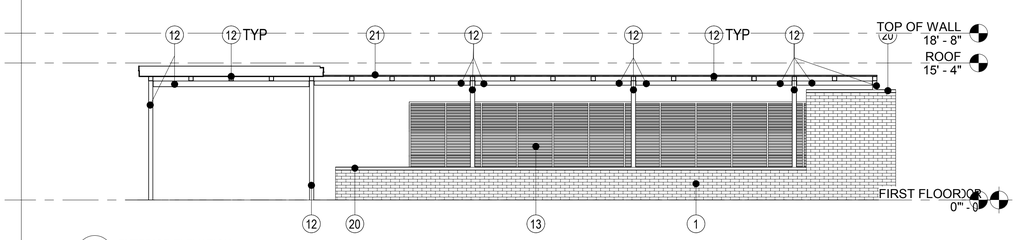
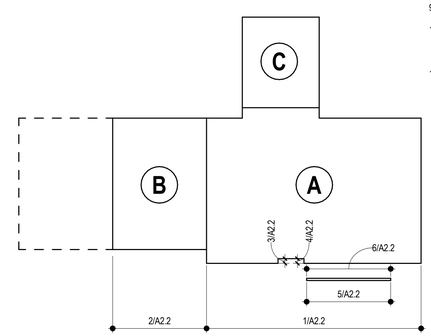


6 A2.2 EXTERIOR ELEVATION
1/8" = 1'-0"

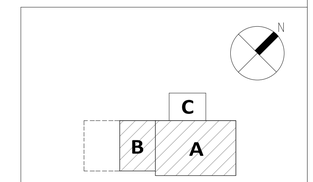
ELEVATION LEGEND	
1	TYPE 'A' UTILITY BRICK
2	TYPE 'B' UTILITY BRICK
3	PREFINISHED METAL FASCIA
4	PREFINISHED METAL GUTTER
5	PREFINISHED METAL DOWNSPOUT
6	CAST DOWNSPOUT IRON SHOE, WITH POWDER COATING
7	ALUMINUM CURTAIN WALL SYSTEM w/ 1" INSULATING GLASS
8	ALUMINUM STOREFRONT SYSTEM w/ 1" INSULATING GLASS
9	HOLLOW METAL DOOR AND FRAME
10	CEMENT BOARD SIDING
11	STANDING SEAM METAL ROOF SYSTEM
12	STEEL STRUCTURE - PAINTED
13	PERFORATED METAL WALL PANEL
14	CAST ALUMINUM LETTERS AND NUMBERS
15	CONTROL JOINT
16	STEEL OUTRIGGERS - PAINTED
17	CAST STONE SILL
18	DATE STONE
19	KNOX BOX - SEE DETAIL ON A5.5
20	CAST STONE CAP
21	METAL CORRUGATED METAL PANEL
22	COMPOSITE TRIM
23	OVERFLOW DRAIN OUTLET



EXTERIOR ELEVATION KEYPLAN

GENERAL EXTERIOR ELEVATION NOTES:

1. FIRST FLOOR ELEVATION 0'-0" = 487.25' INDICATED ON CIVIL DRAWINGS.
2. SEE STRUCTURAL DRAWINGS FOR TYPICAL FOOTING AND STEPPED FOOTING ELEVATIONS AND DETAILS.
3. PROVIDE WATERPROOFING AT EXTERIOR WALLS WHERE FINISH GRADE EXCEEDS THE FINISH FLOOR ELEVATION.
4. PROVIDE SEALANT JOINT FOR ENTIRE PERIMETER OF ALL EXTERIOR WALL PENETRATIONS. PENETRATIONS TO INCLUDE BUT NOT LIMITED TO WINDOWS, DOORS, LOUVRES, PIPES, CONDUITS, EXHAUST HOODS, ETC.
5. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR COORDINATION OF LOCATION AND SIZES OF ALL LOUVERS, CONDUITS, PIPING, ETC.
6. REFER TO DRAWING A5.1 FOR TYPICAL EXTERIOR MASONRY CONTROL JOINT DETAIL.
7. EXTERIOR WALL LIGHT FIXTURES OR DOWNSPOUTS SHALL **NOT** BE MOUNTED OVER CONTROL AND/ OR EXPANSION JOINT LOCATIONS.
8. ALL EXPOSED STEEL FRAMING (COLUMNS, BEAMS, ETC.) SHALL BE GALVANIZEDAND PAINTED WITH A HIGH PERFORMANCE COATING.
9. ALL HOLLOW METAL DOORS AND FRAMES TO BE PAINTED.
10. ALL EXPOSED STEEL PLATES AND LINTELS AT OPENINGS TO BE PAINTED WITH HIGH PERFORMANCE COATING COLOR TO MATCH THE MASONRY OR MATERIAL THAT IT SUPPORTS.
11. SEE FLOOR PLANS AND RELATED DRAWINGS FOR ALL WINDOW AND DOOR TYPES.



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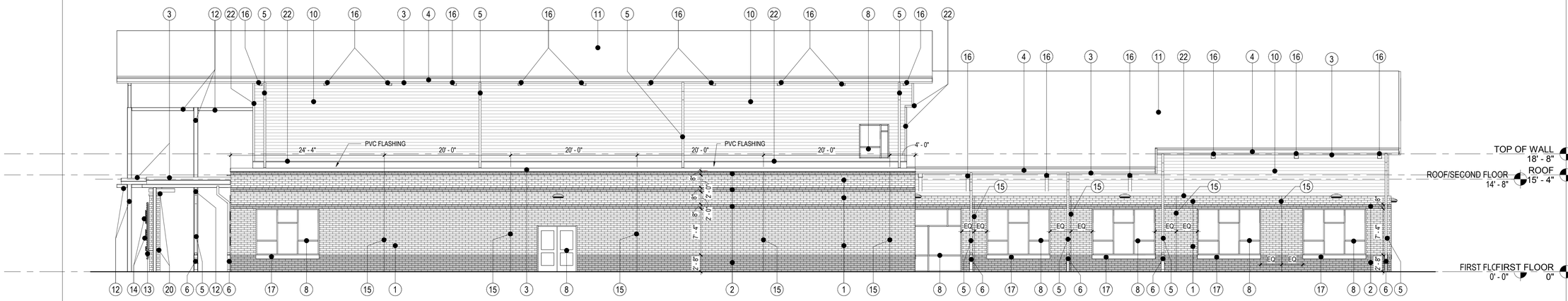
PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

EXTERIOR ELEVATIONS

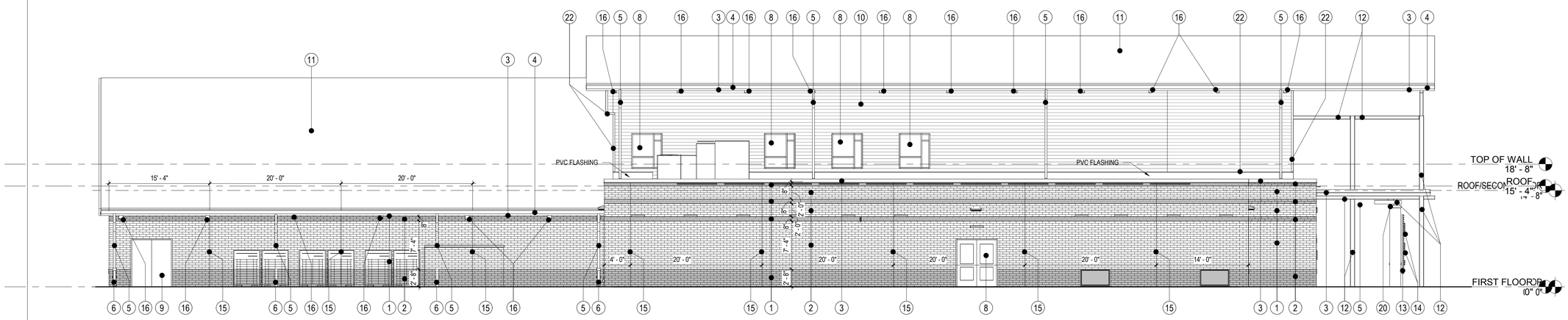
PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A2.2



1 / A2.3 EXTERIOR ELEVATION
1/8" = 1'-0"



2 / A2.3 EXTERIOR ELEVATION
1/8" = 1'-0"

GENERAL EXTERIOR ELEVATION NOTES:

1. FIRST FLOOR ELEVATION 0'-0" = 487.25' INDICATED ON CIVIL DRAWINGS.
2. SEE STRUCTURAL DRAWINGS FOR TYPICAL FOOTING AND STEPPED FOOTING ELEVATIONS AND DETAILS.
3. PROVIDE WATERPROOFING AT EXTERIOR WALLS WHERE FINISH GRADE EXCEEDS THE FINISH FLOOR ELEVATION.
4. PROVIDE SEALANT JOINT FOR ENTIRE PERIMETER OF ALL EXTERIOR WALL PENETRATIONS. PENETRATIONS TO INCLUDE BUT NOT LIMITED TO WINDOWS, DOORS, LOUVRES, PIPES, CONDUITS, EXHAUST HOODS, ETC.
5. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR COORDINATION OF LOCATION AND SIZES OF ALL LOUVERS, CONDUITS, PIPING, ETC.
6. REFER TO DRAWING A5.1 FOR TYPICAL EXTERIOR MASONRY CONTROL JOINT DETAIL.
7. EXTERIOR WALL LIGHT FIXTURES OR DOWNSPOUTS SHALL **NOT** BE MOUNTED OVER CONTROL AND/ OR EXPANSION JOINT LOCATIONS.
8. ALL EXPOSED STEEL FRAMING (COLUMNS, BEAMS, ETC.) SHALL BE GALVANIZEDAND PAINTED WITH A HIGH PERFORMANCE COATING.
9. ALL HOLLOW METAL DOORS AND FRAMES TO BE PAINTED.
10. ALL EXPOSED STEEL PLATES AND LINTELS AT OPENINGS TO BE PAINTED WITH HIGH PERFORMANCE COATING COLOR TO MATCH THE MASONRY OR MATERIAL THAT IT SUPPORTS.
11. SEE FLOOR PLANS AND RELATED DRAWINGS FOR ALL WINDOW AND DOOR TYPES.

ELEVATION LEGEND	
1	TYPE 'A' UTILITY BRICK
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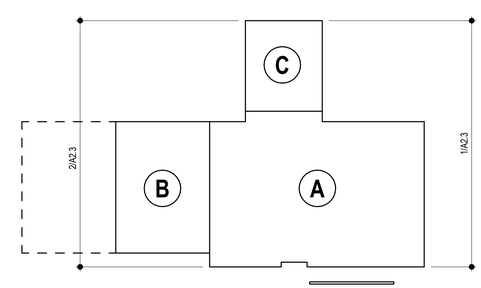
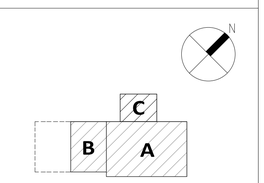
3	PREFINISHED METAL FASCIA
4	PREFINISHED METAL GUTTER
5	PREFINISHED METAL DOWNSPOUT
6	CAST DOWNSPOUT IRON SHOE, WITH POWDER COATING
7	ALUMINUM CURTAIN WALL SYSTEM w/ 1" INSULATING GLASS
8	ALUMINUM STOREFRONT SYSTEM w/ 1" INSULATING GLASS
9	HOLLOW METAL DOOR AND FRAME
10	CEMENT BOARD SIDING
11	STANDING SEAM METAL ROOF SYSTEM
12	STEEL STRUCTURE - PAINTED
13	PERFORATED METAL WALL PANEL
14	CAST ALUMINUM LETTERS AND NUMBERS
15	CONTROL JOINT
16	STEEL OUTRIGGERS - PAINTED
17	CAST STONE SILL
18	DATE STONE
19	KNOX BOX - SEE DETAIL ON A5.5
20	CAST STONE CAP
21	METAL CORRUGATED METAL PANEL
22	COMPOSITE TRIM
23	OVERFLOW DRAIN OUTLET



EXTERIOR ELEVATION KEYPLAN



KEY PLAN

PROFESSIONAL CERTIFICATION:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 8490
EXPIRATION DATE: 3/4/2021

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EXTERIOR ELEVATIONS

PLOT SCALE: As indicated
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PROJECT
3089

A2.3

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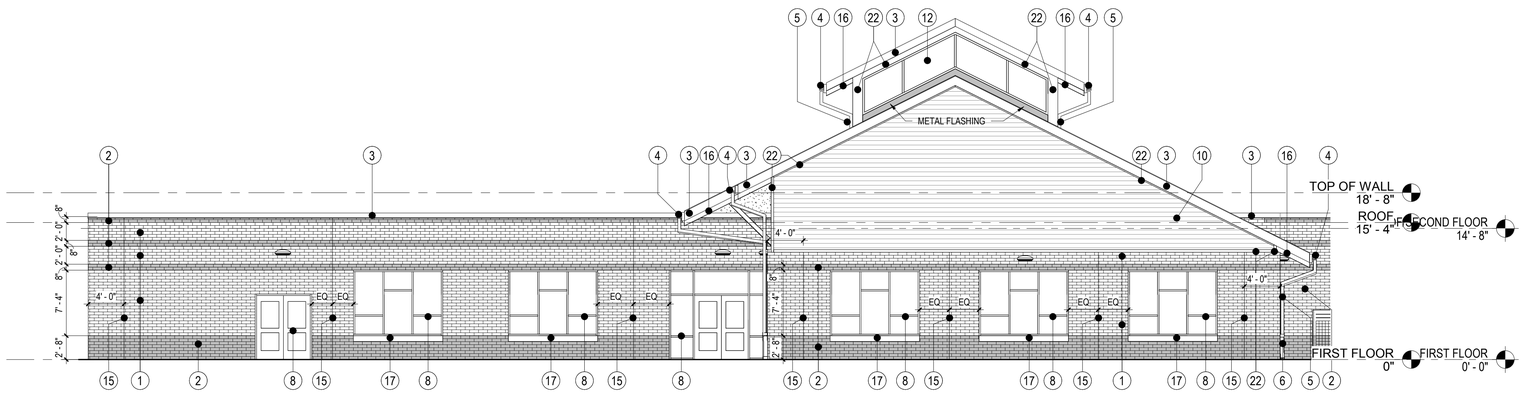
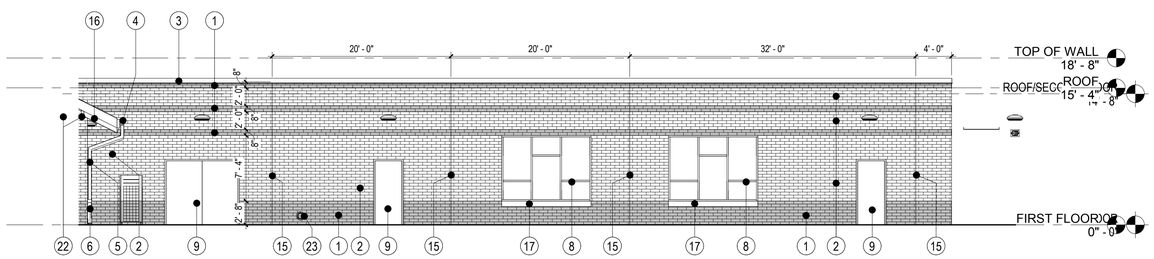


1 / A2.4 EXTERIOR ELEVATION
1/8" = 1'-0"



2 / A2.4 EXTERIOR ELEVATION
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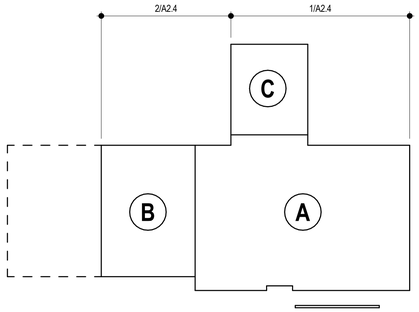

EXTERIOR ELEVATION KEYPLAN

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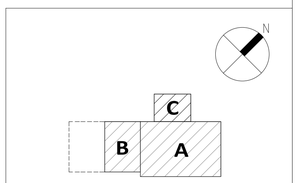

KEY PLAN

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EXTERIOR ELEVATIONS

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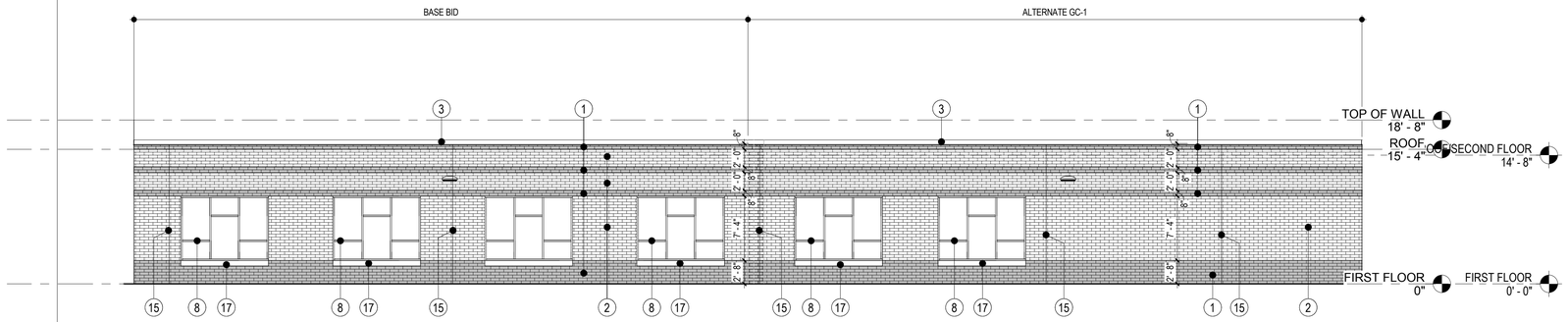
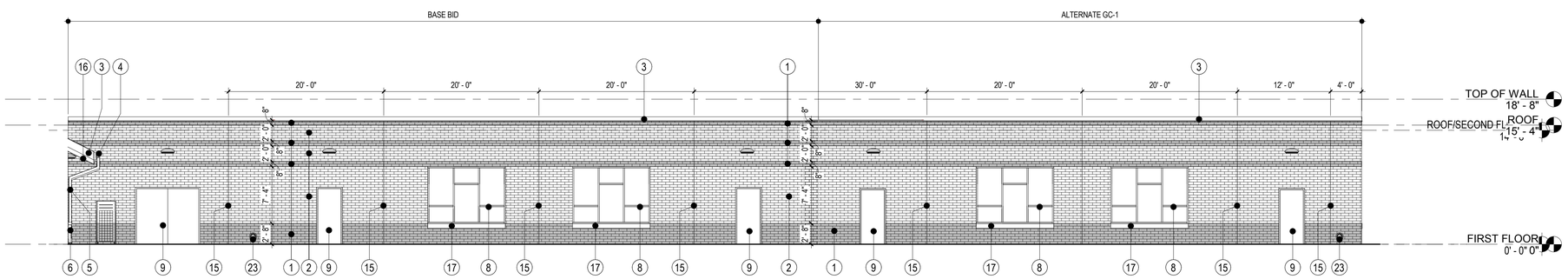
PROJECT
3089

A2.4



1 A2.5 EXTERIOR ELEVATION
1/8" = 1'-0"



2 A2.5 EXTERIOR ELEVATION
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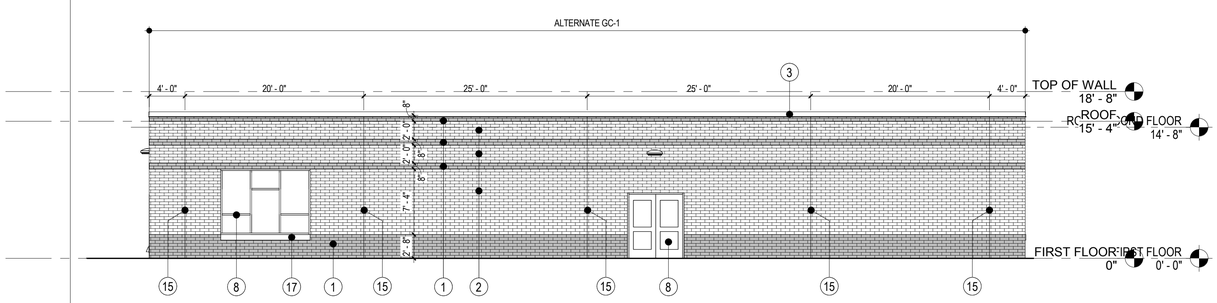

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LICENSE NO. 8490
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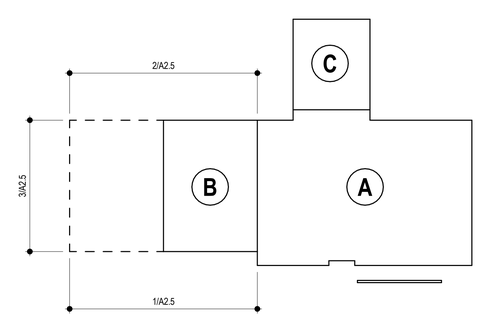
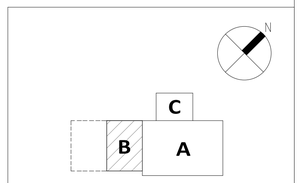


EXTERIOR ELEVATION KEYPLAN



KEY PLAN

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PROPOSED NEW
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WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

EXTERIOR ELEVATIONS - ALTERNATE GC-1

PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

A2.5

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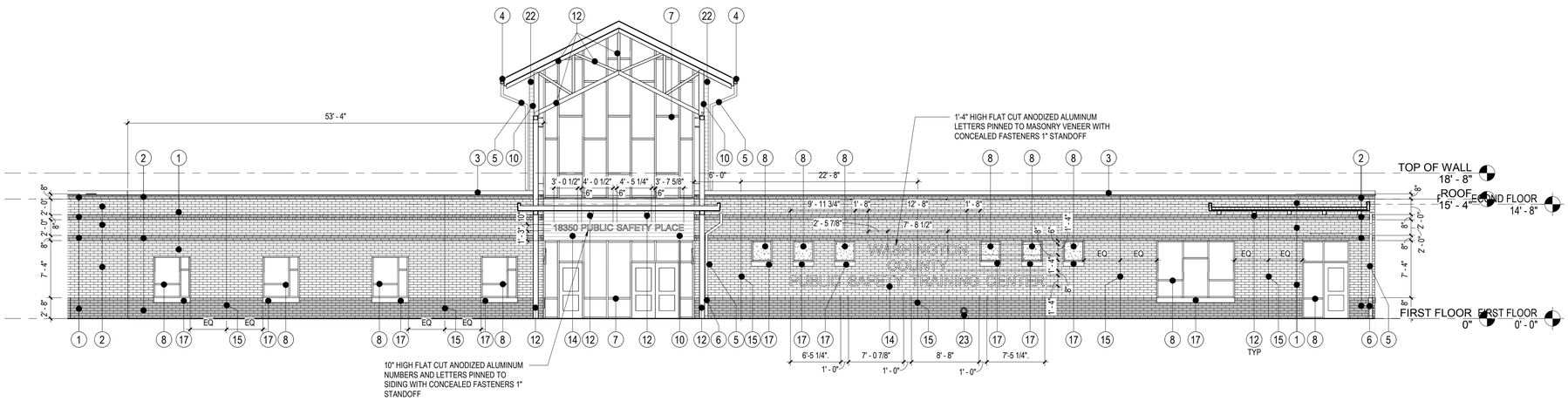

1 / A2.6 EXTERIOR ELEVATION - ALTERNATE - GC-3
1/8" = 1'-0"

ELEVATION LEGEND	
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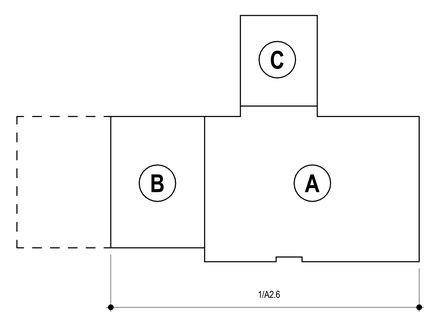

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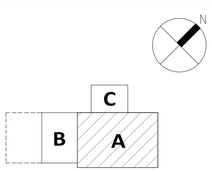

KEY PLAN

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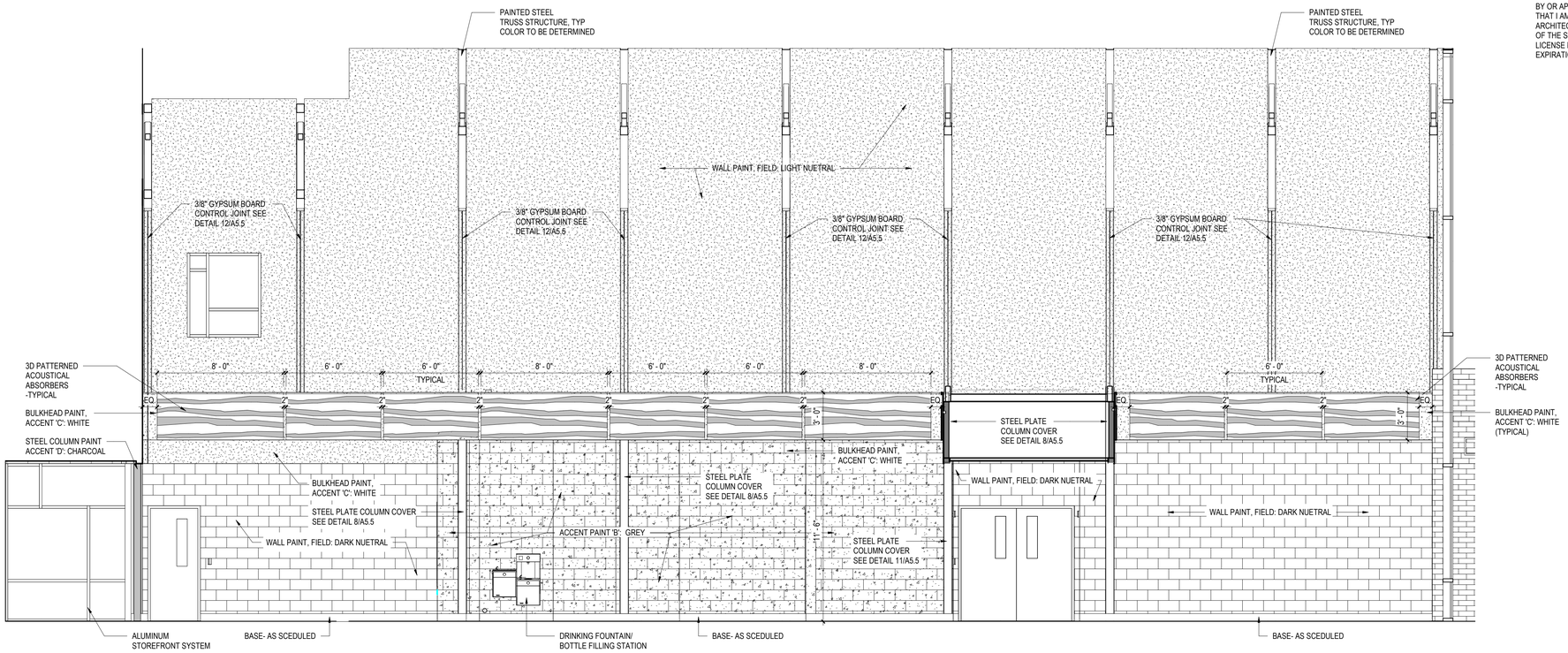
A2.6



1 A2.7 INTERIOR ELEVATION
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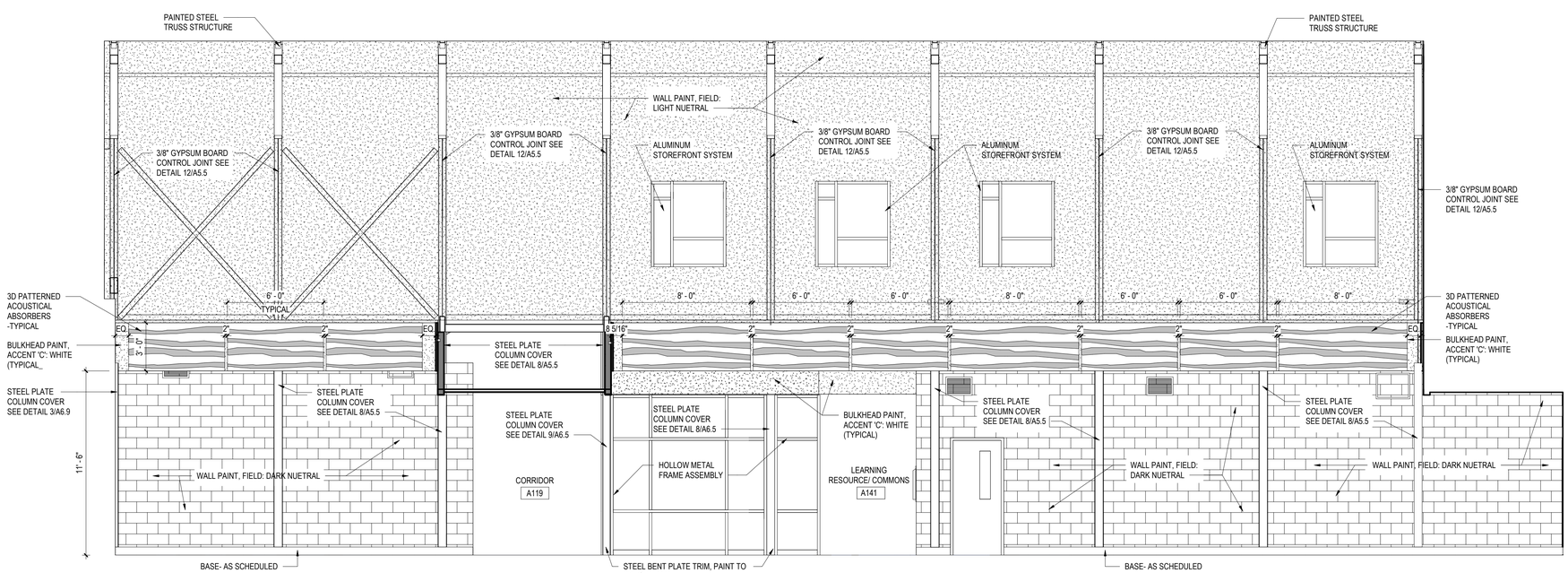

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EXPIRATION DATE: 3/4/2021

ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

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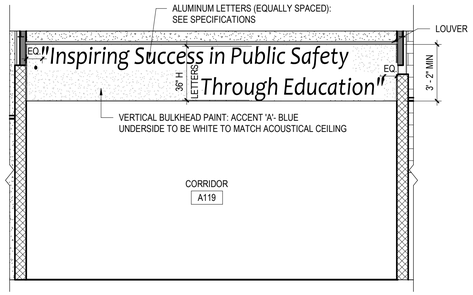
PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

INTERIOR ELEVATIONS

PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

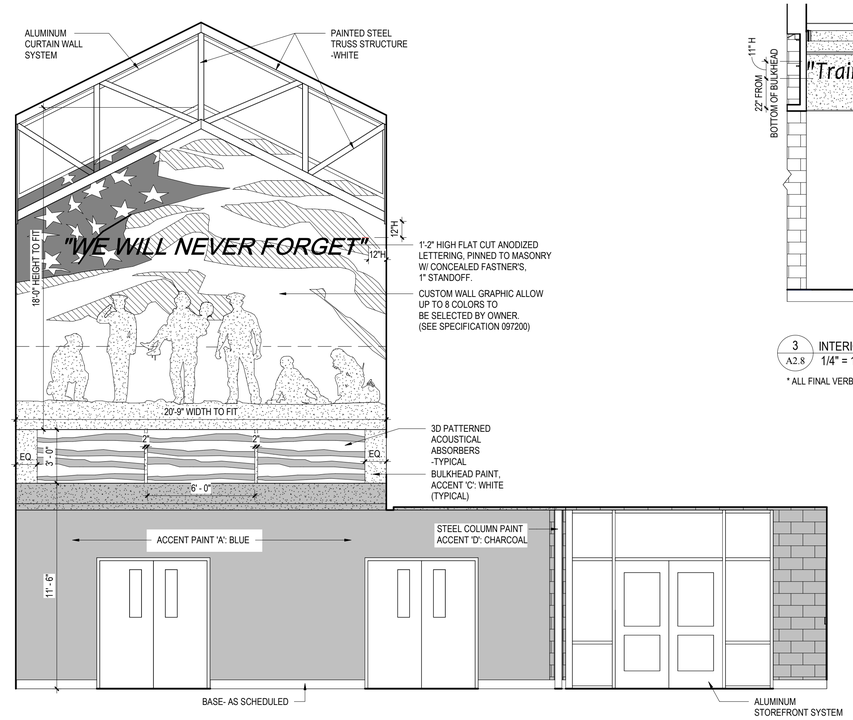
PROJECT
3089

A2.7

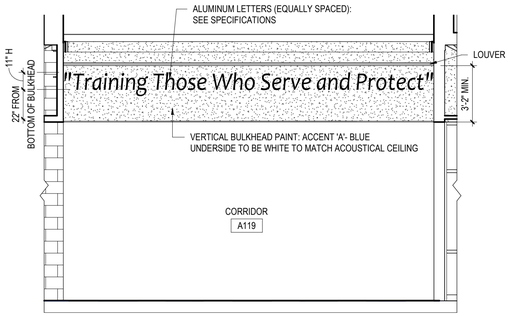


1 / A2.8 INTERIOR ELEVATION- CORRIDOR A119
1/4" = 1'-0"

* ALL FINAL VERBIAGE, TEXT HEIGHT AND FONT SHALL BE VERIFIED W/ OWNER.

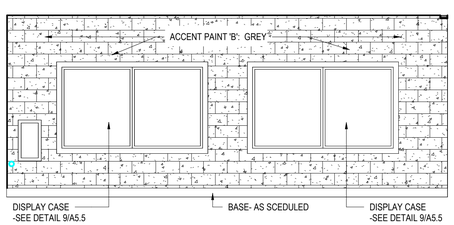


2 / A2.8 INTERIOR ELEVATION- CORRIDOR A119
1/4" = 1'-0"

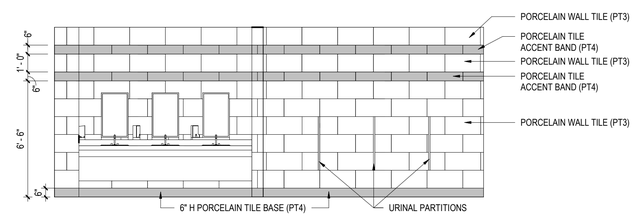


3 / A2.8 INTERIOR ELEVATION- CORRIDOR A119
1/4" = 1'-0"

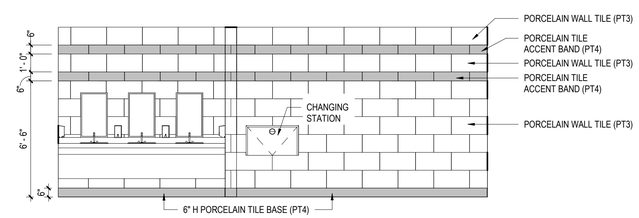
* ALL FINAL VERBIAGE, TEXT HEIGHT AND FONT SHALL BE VERIFIED W/ OWNER.



4 / A2.8 INTERIOR ELEVATION- CORRIDOR A119
1/4" = 1'-0"



5 / A2.8 INTERIOR ELEVATION- RESTROOM A125
1/4" = 1'-0"



6 / A2.8 INTERIOR ELEVATION- RESTROOM A124
1/4" = 1'-0"

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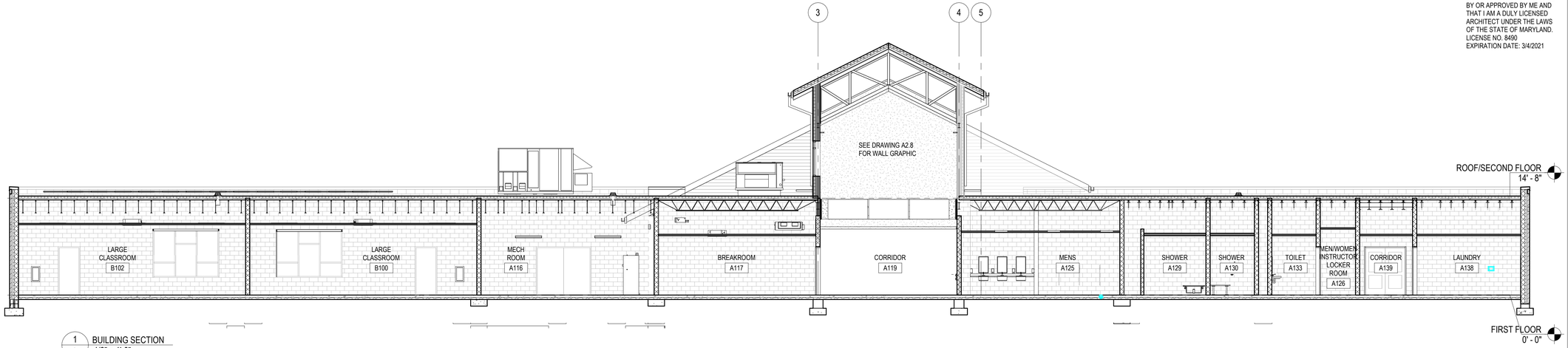
INTERIOR ELEVATIONS

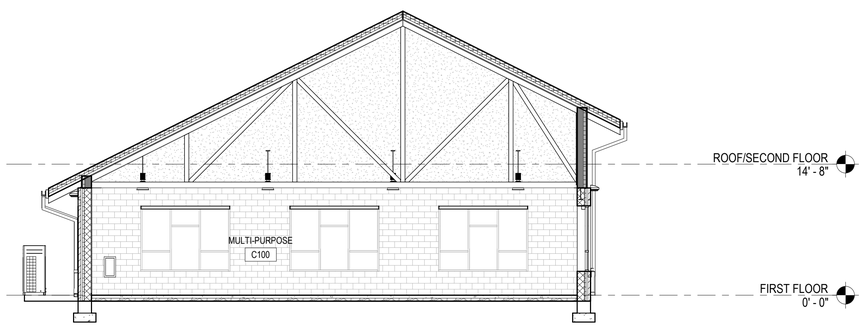
PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

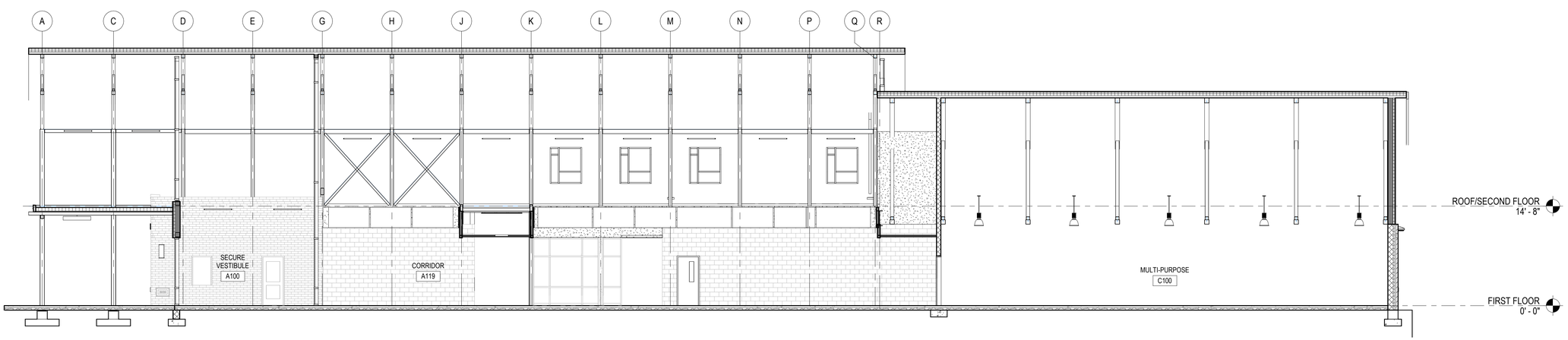
A2.8



1 A3.1 BUILDING SECTION
1/8" = 1'-0"



2 A3.1 BUILDING SECTION
1/8" = 1'-0"



3 A3.1 BUILDING SECTION
1/8" = 1'-0"

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BUILDING SECTIONS

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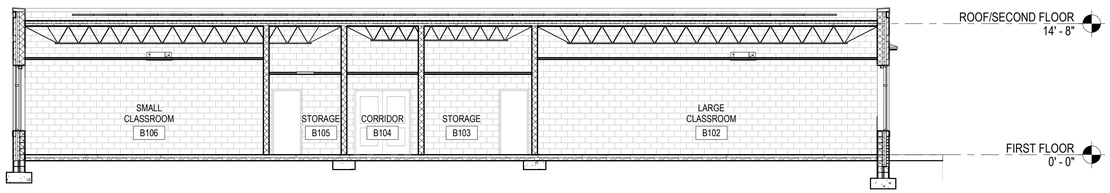
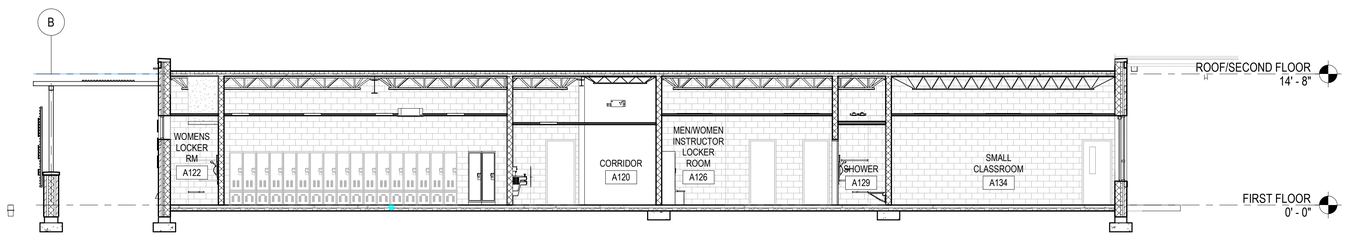
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

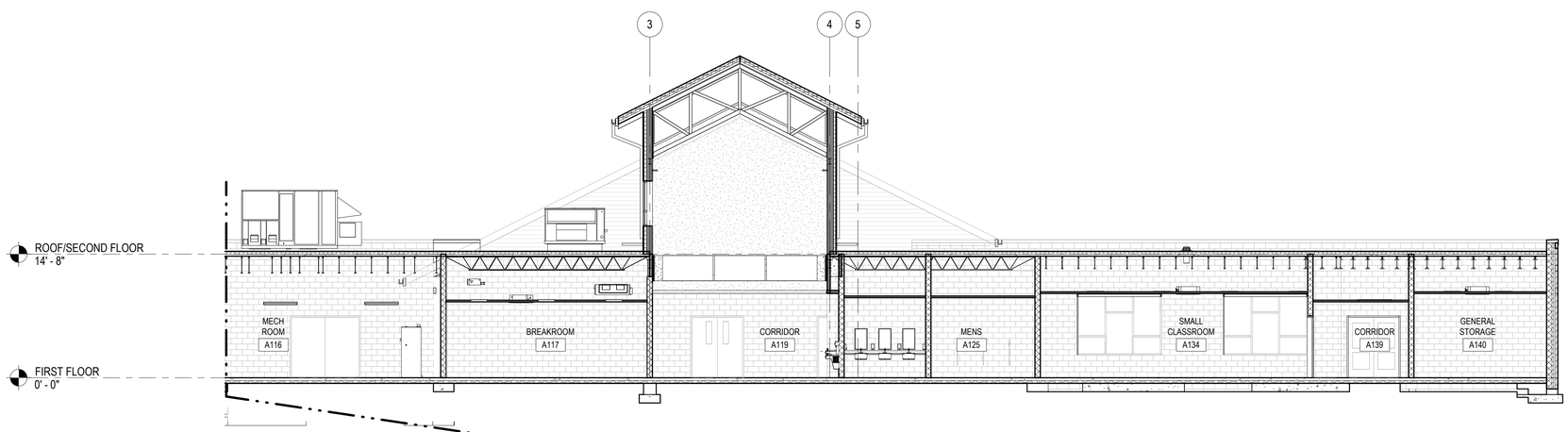
A3.1



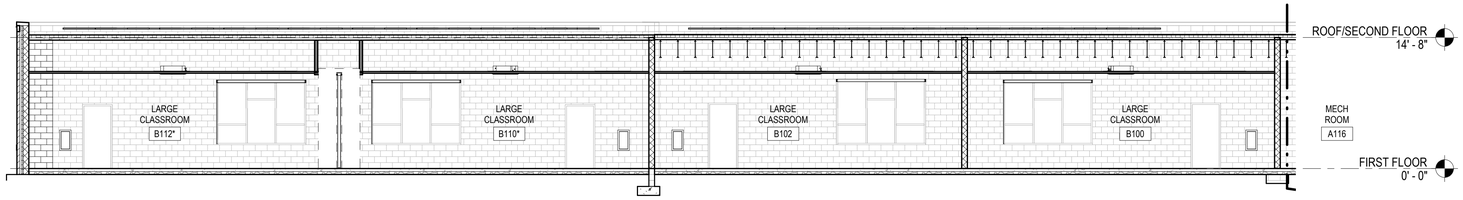
1 A3.2 BUILDING SECTION
1/8" = 1'-0"



2 A3.2 BUILDING SECTION
1/8" = 1'-0"



3 A3.2 BUILDING SECTION ALTERNATE GC-1
1/8" = 1'-0"



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A3.2

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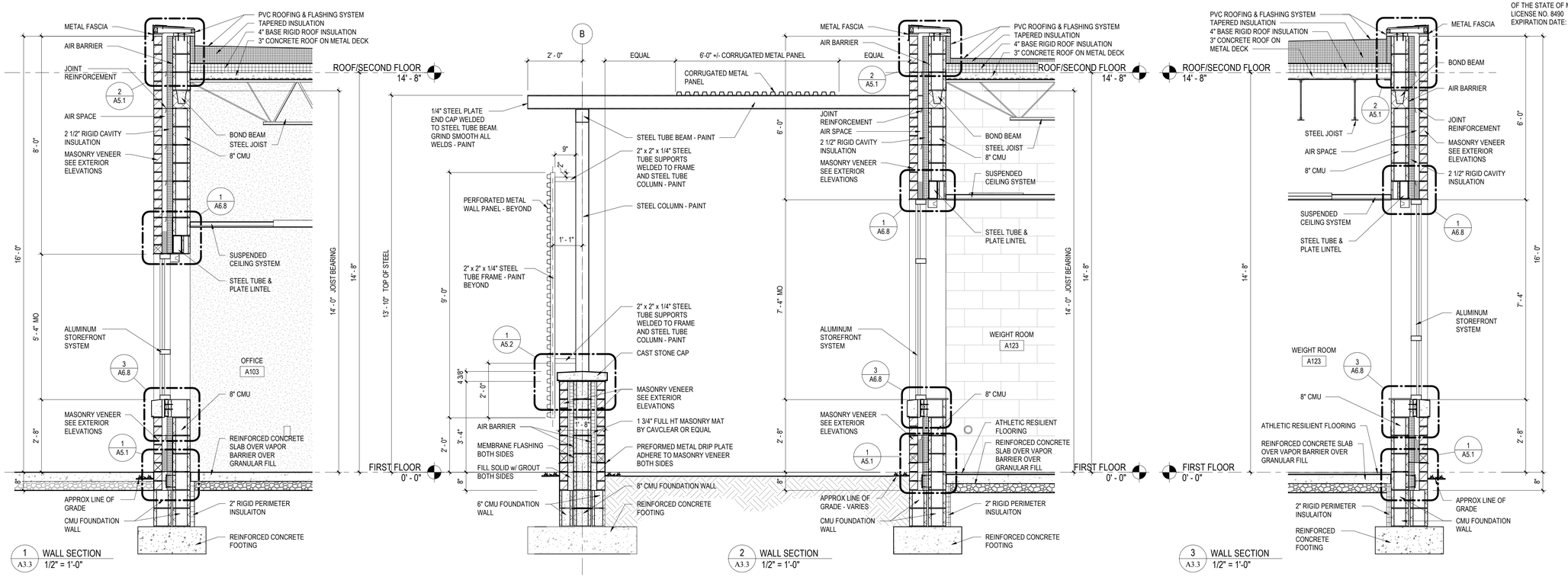
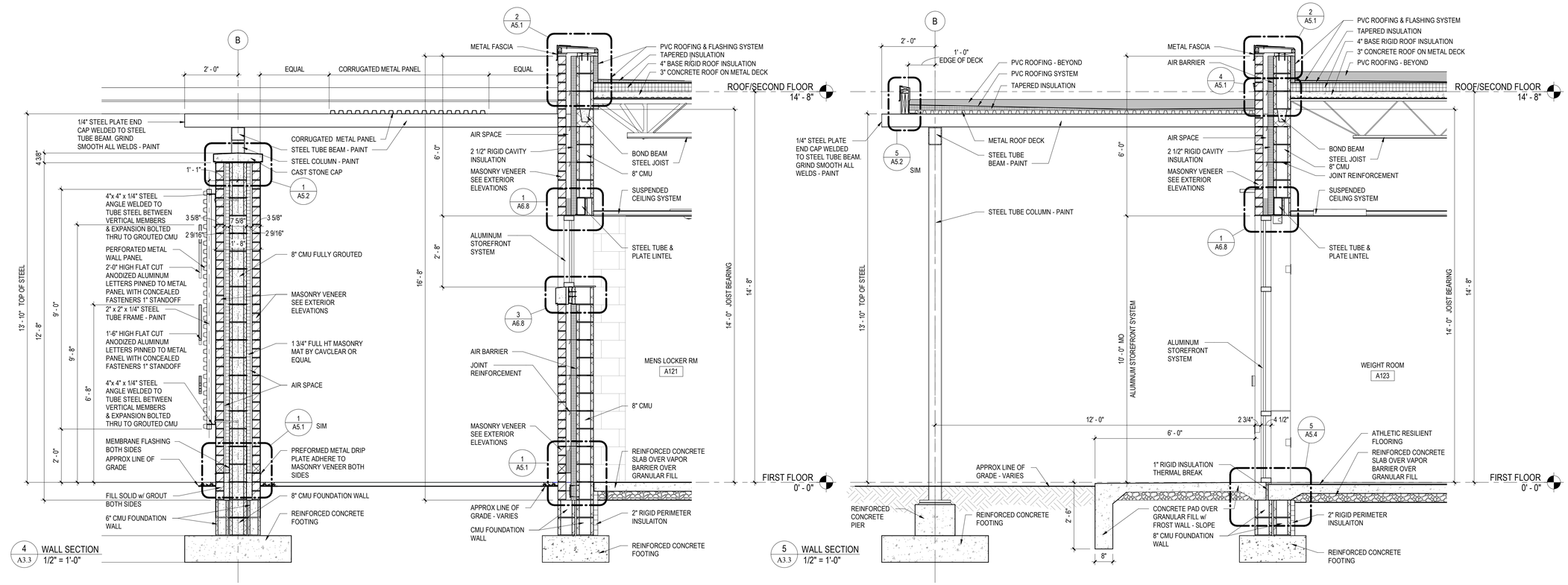


1 A3.3 WALL SECTION 1/2" = 1'-0"

2 A3.3 WALL SECTION 1/2" = 1'-0"

3 A3.3 WALL SECTION 1/2" = 1'-0"



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

5 A3.3 WALL SECTION 1/2" = 1'-0"

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WALL SECTIONS

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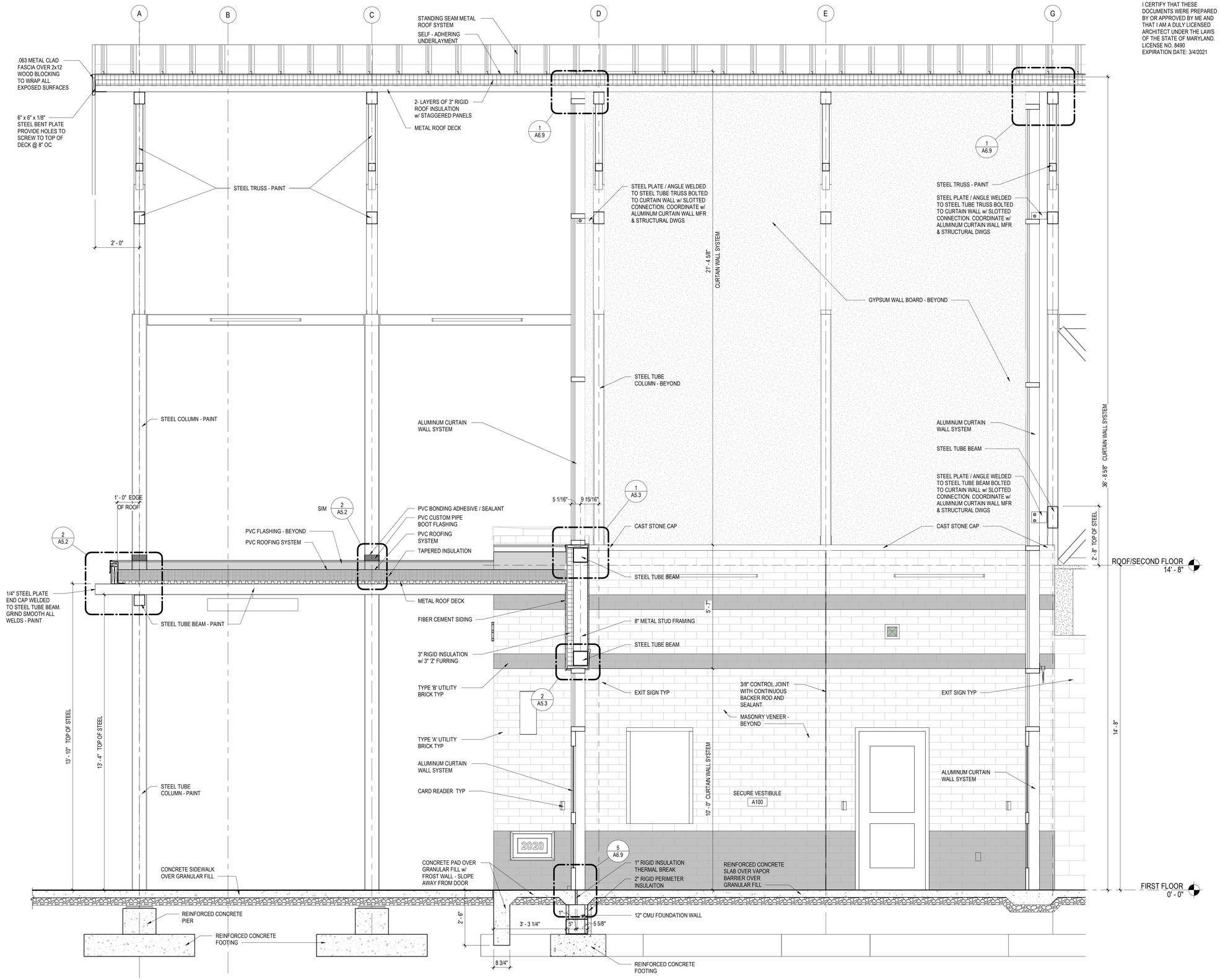
DATE: DECEMBER 18, 2019

PROJECT
3089

A3.3



1 A3.4 WALL SECTION
1/2" = 1'-0"

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WALL SECTIONS

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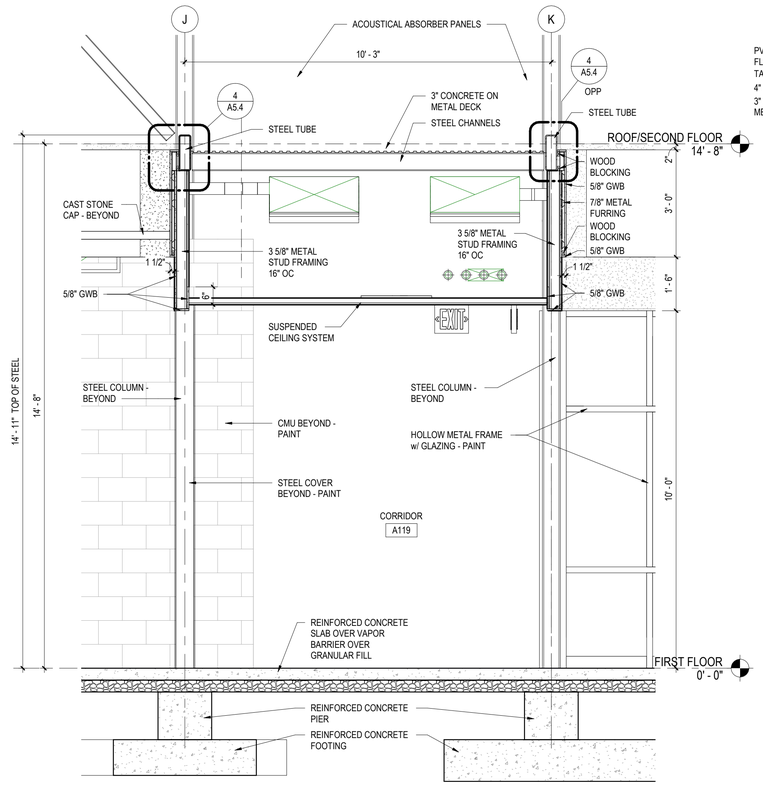
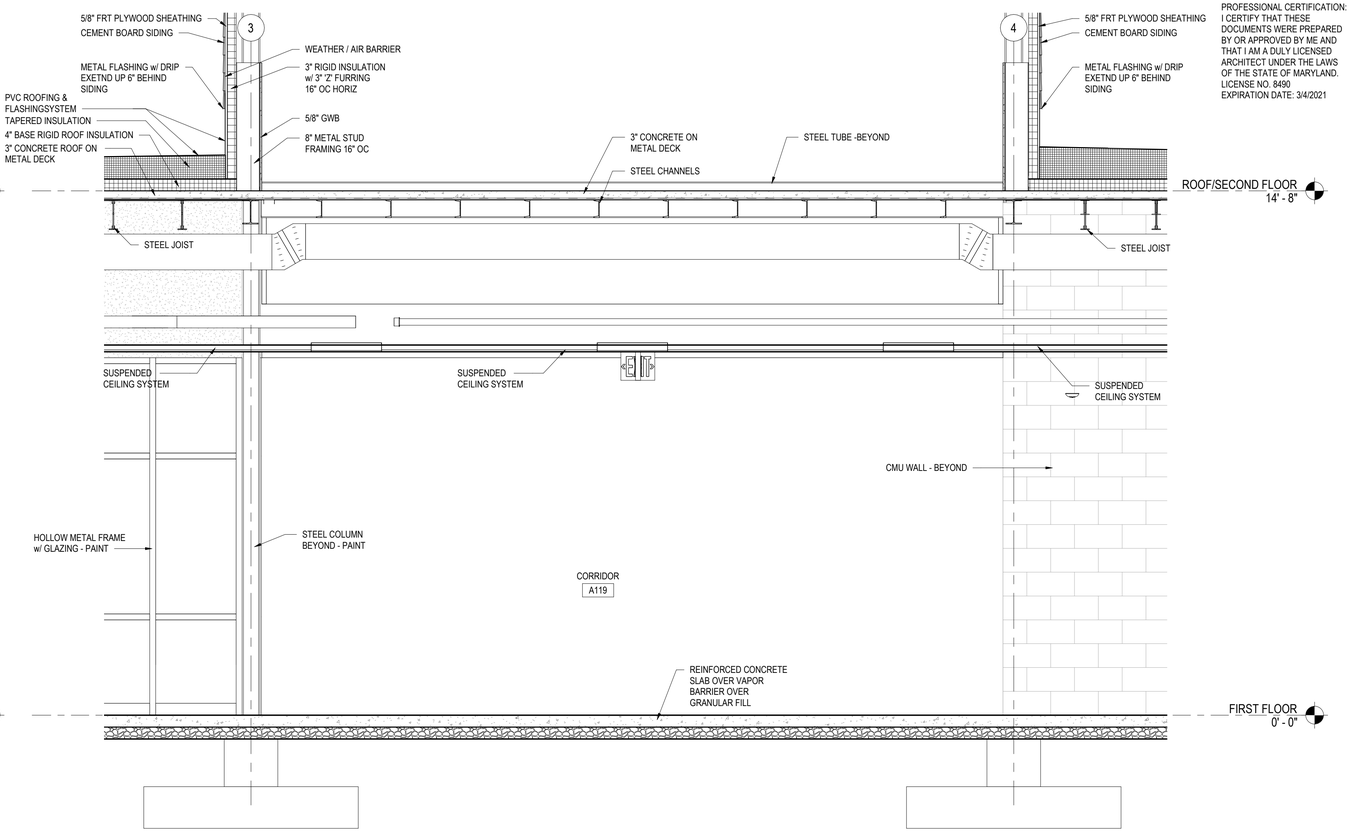
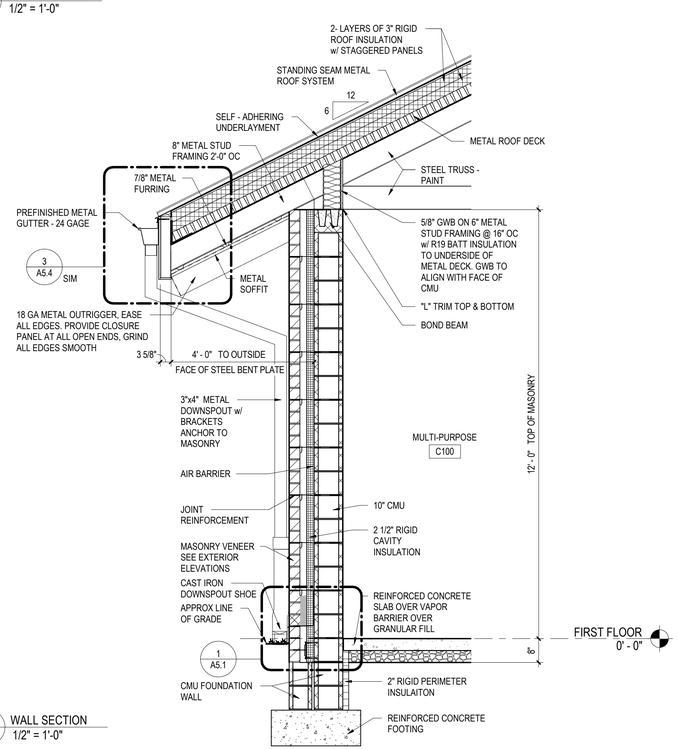
A3.4



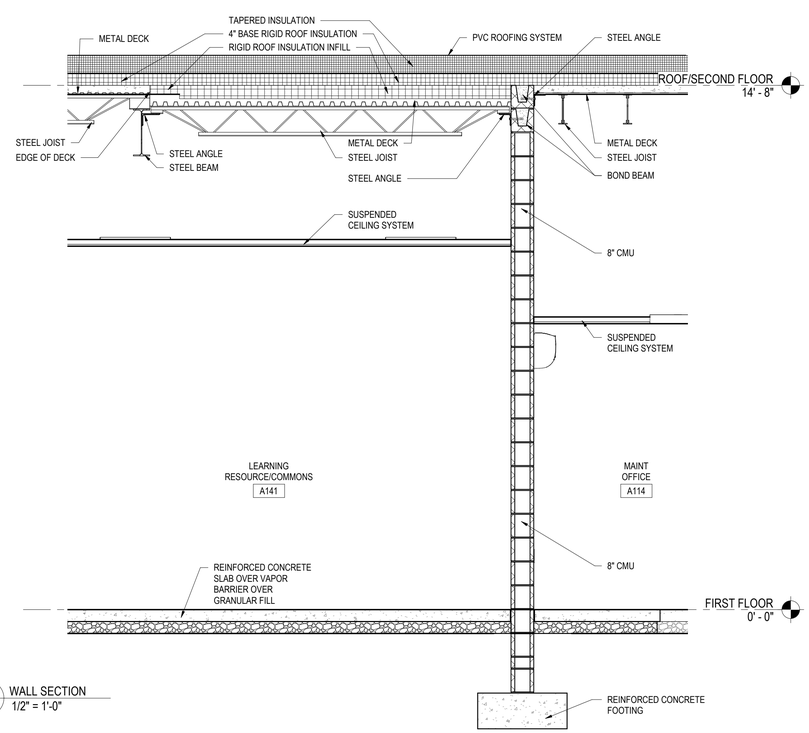
1 A3.5 WALL SECTION
1/2" = 1'-0"



2 A3.5 WALL SECTION
1/2" = 1'-0"



3 A3.5 WALL SECTION
1/2" = 1'-0"



4 A3.5 WALL SECTION
1/2" = 1'-0"

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WALL SECTIONS

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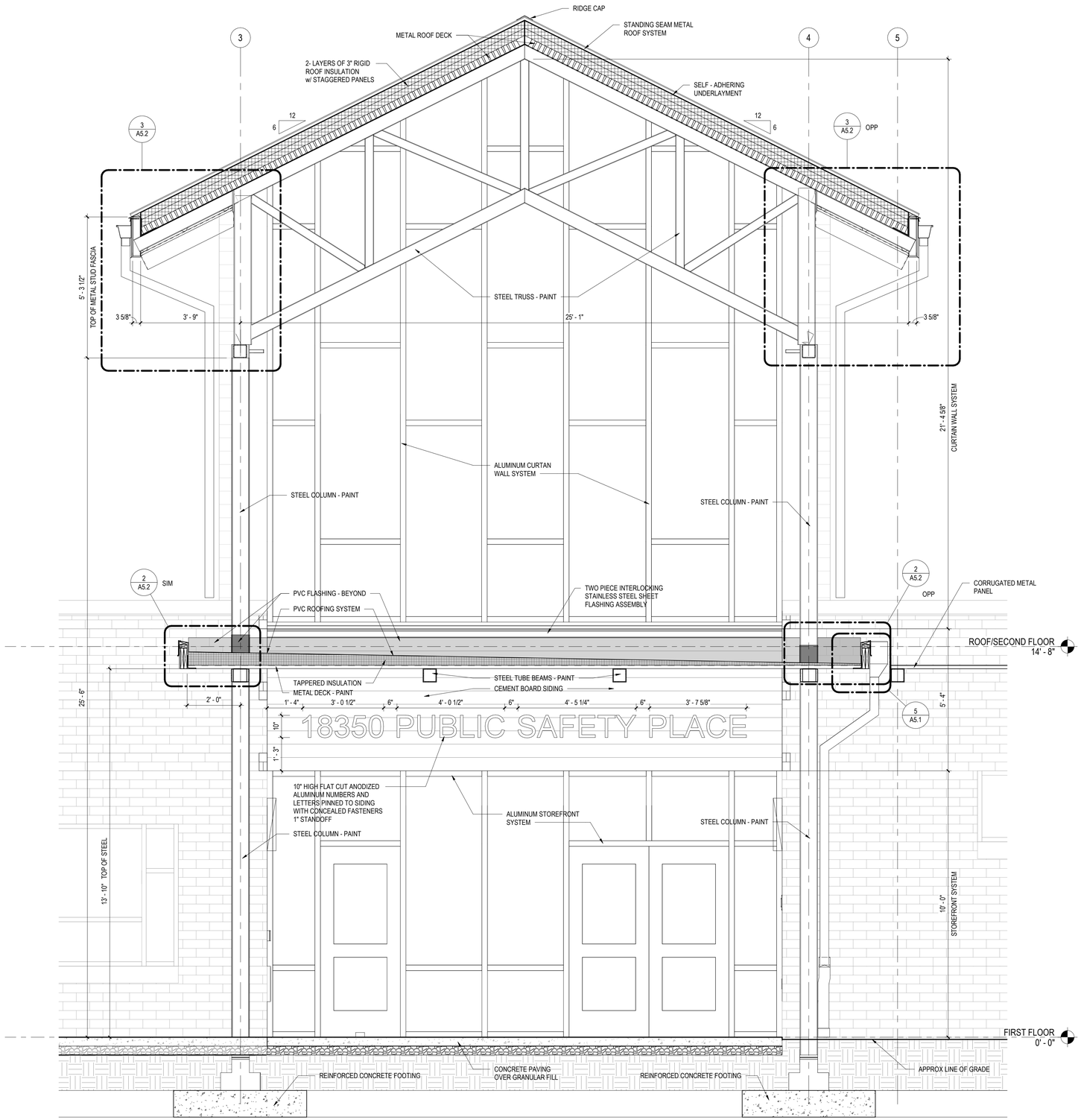
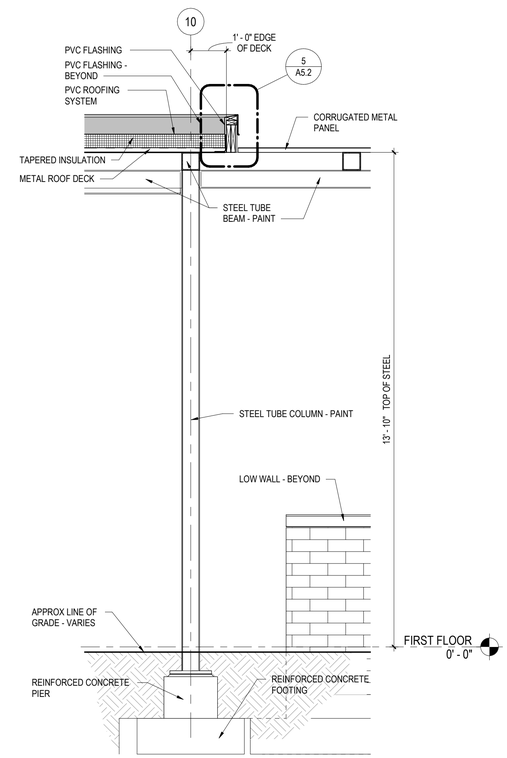
A3.5



1 A3.6 WALL SECTION
1/2" = 1'-0"



2 A3.6 WALL SECTION
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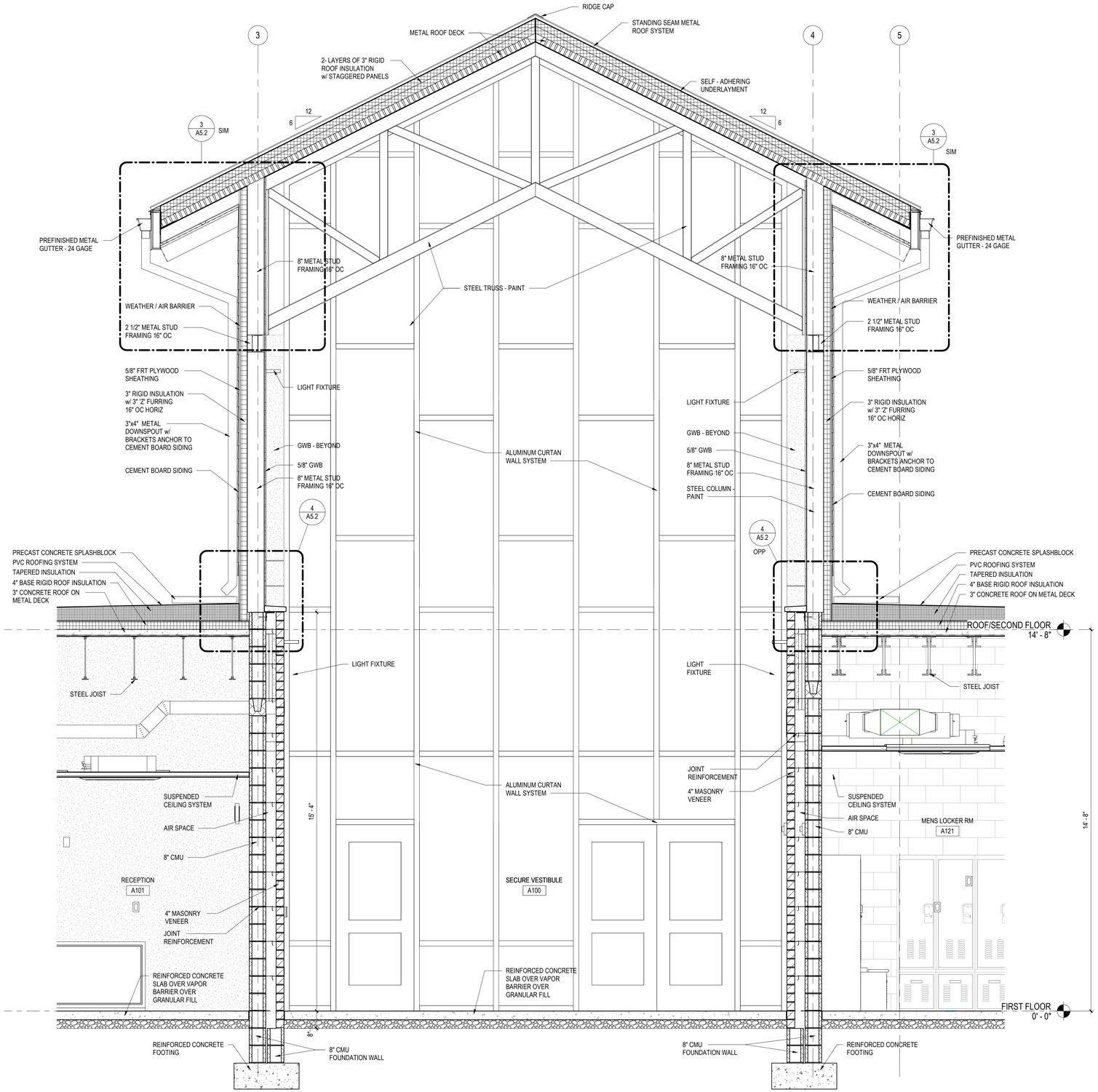
A3.6



1 A3.7 WALL SECTION
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www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

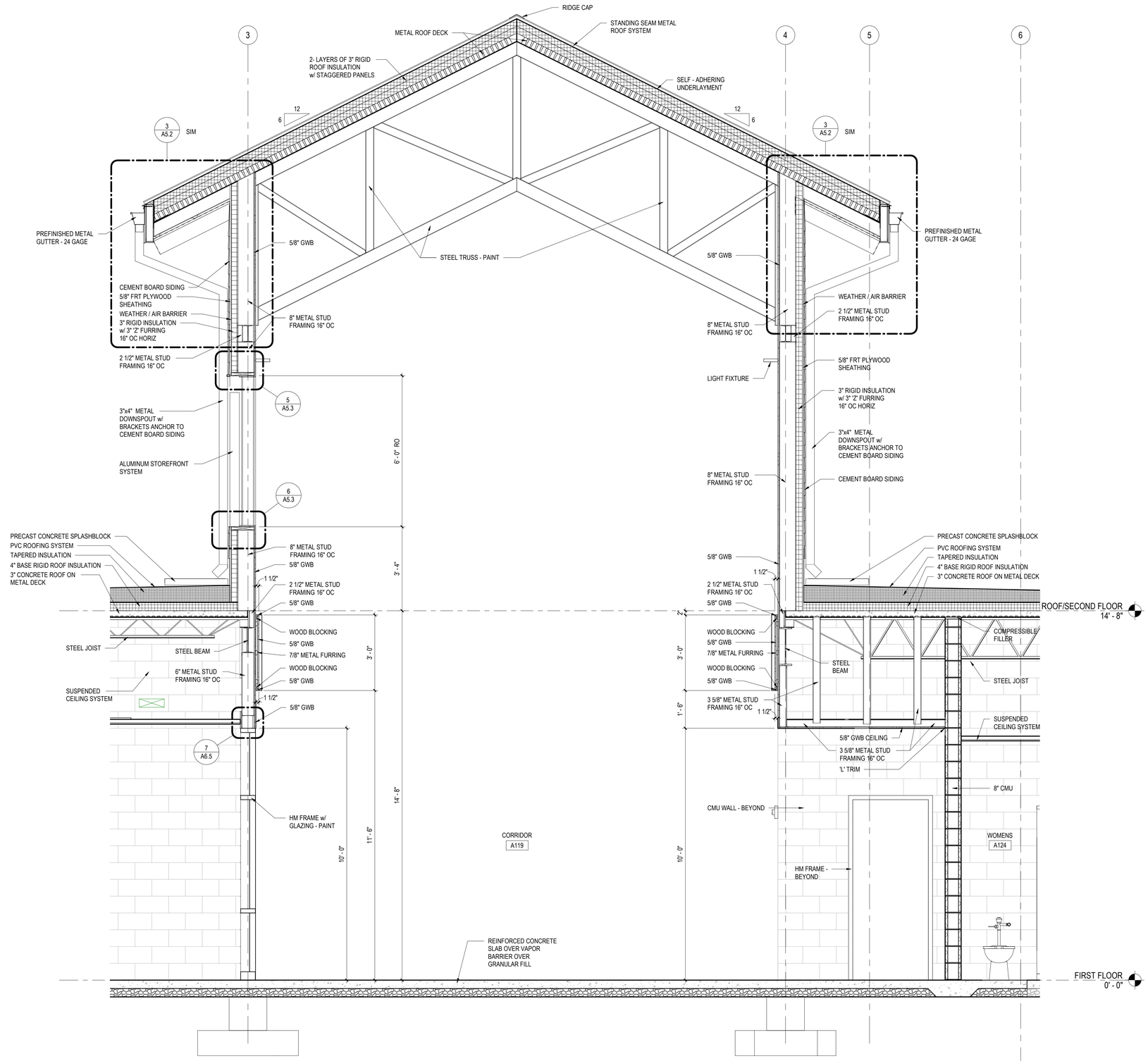
PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

WALL SECTIONS

PLOT SCALE: 1/2" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

A3.7



1 A3.8 WALL SECTION
1/2" = 1'-0"

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LICENSE NO. 8490
EXPIRATION DATE: 3/4/2021

ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

est. 1776

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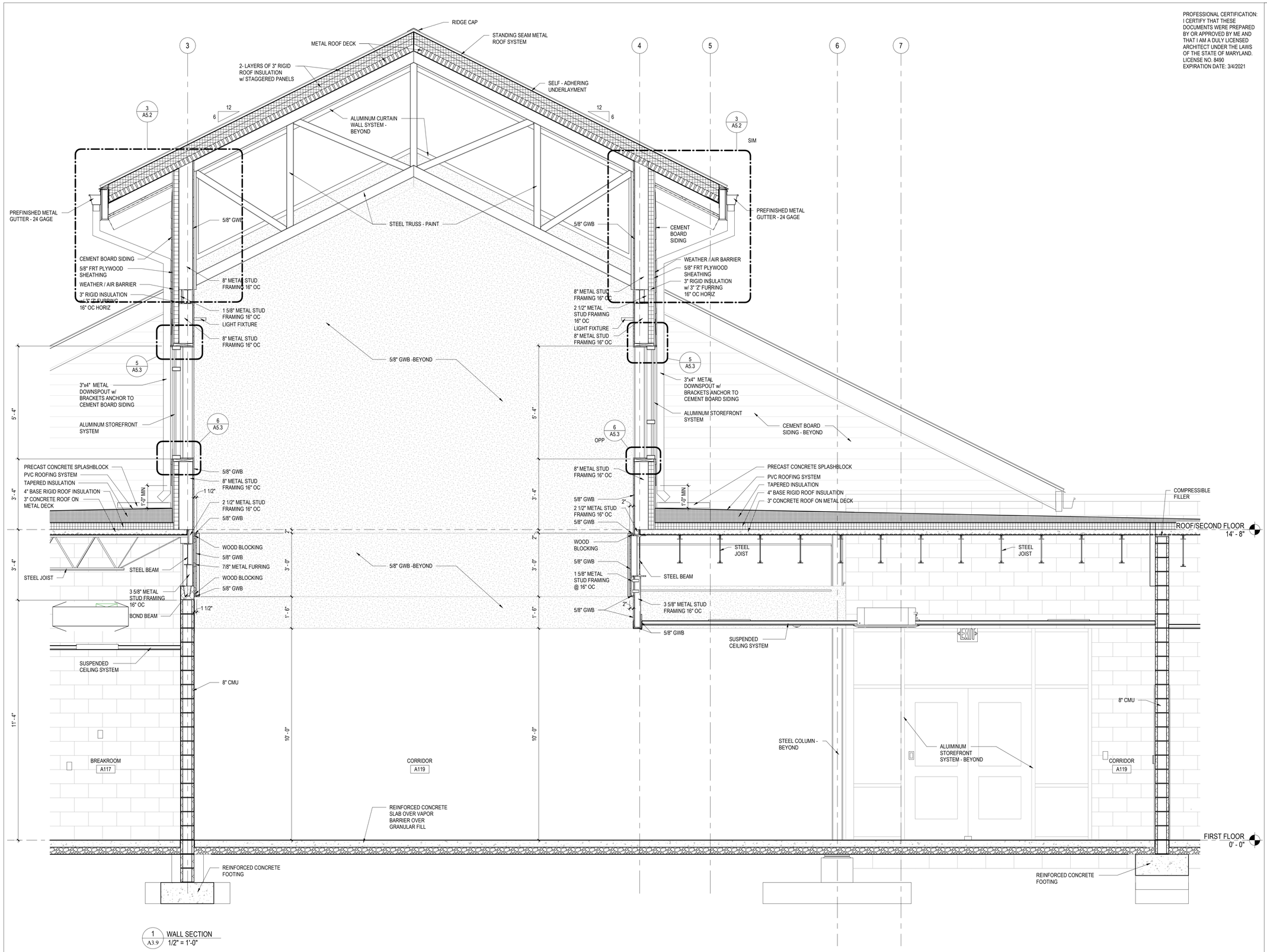
A3.8



1 A3.9 WALL SECTION
1/2" = 1'-0"

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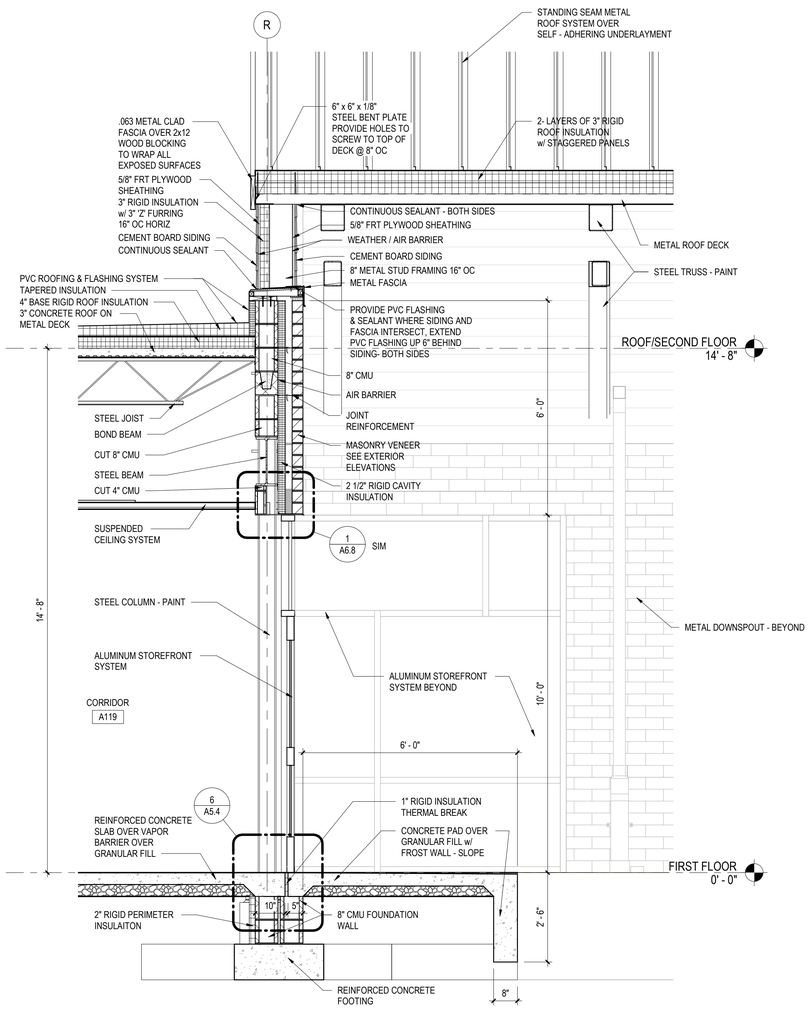

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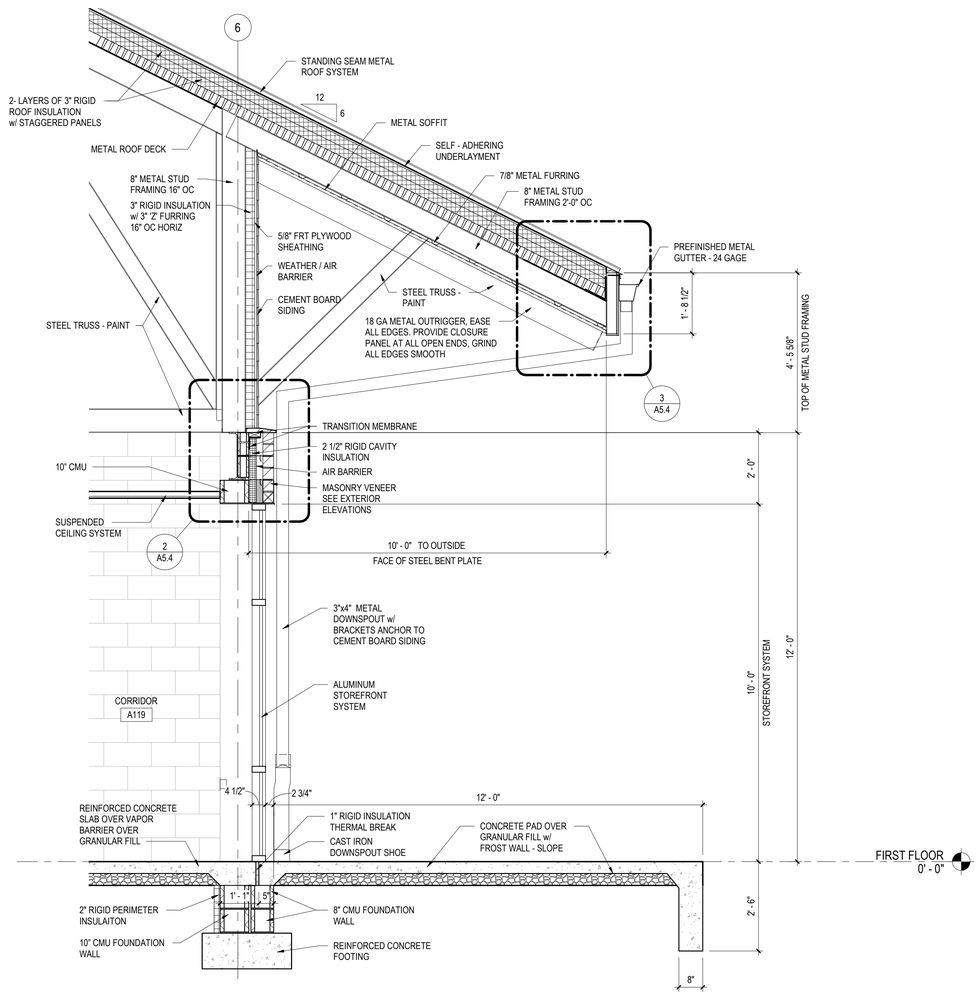

2 A3.10 WALL SECTION
1/2" = 1'-0"

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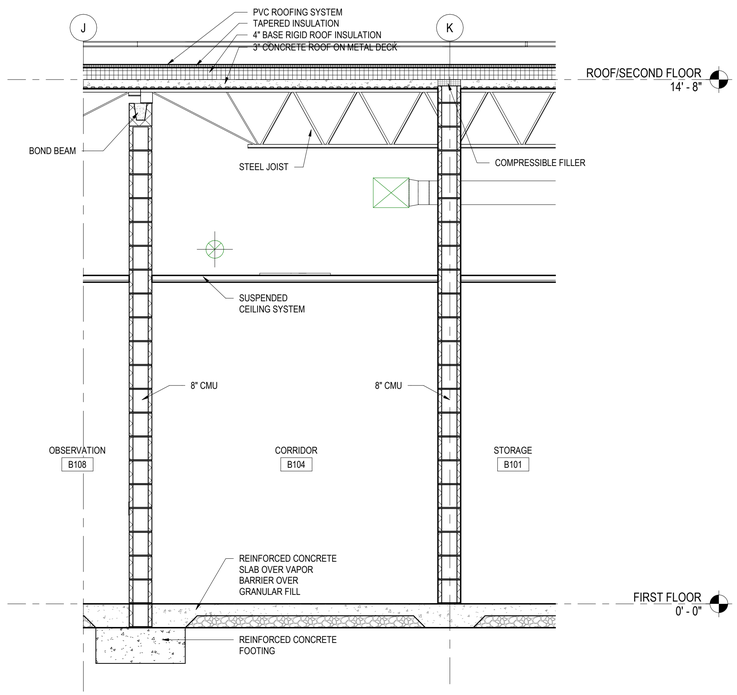

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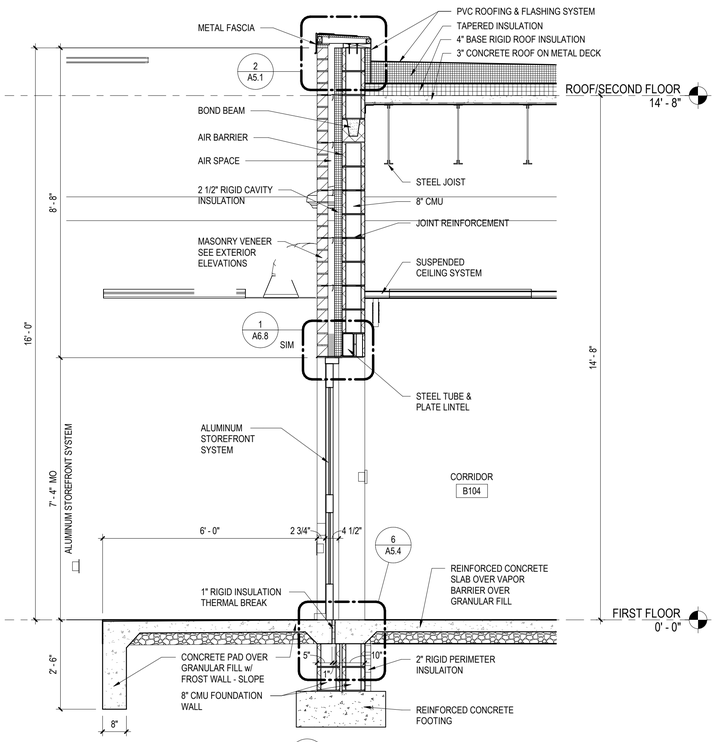

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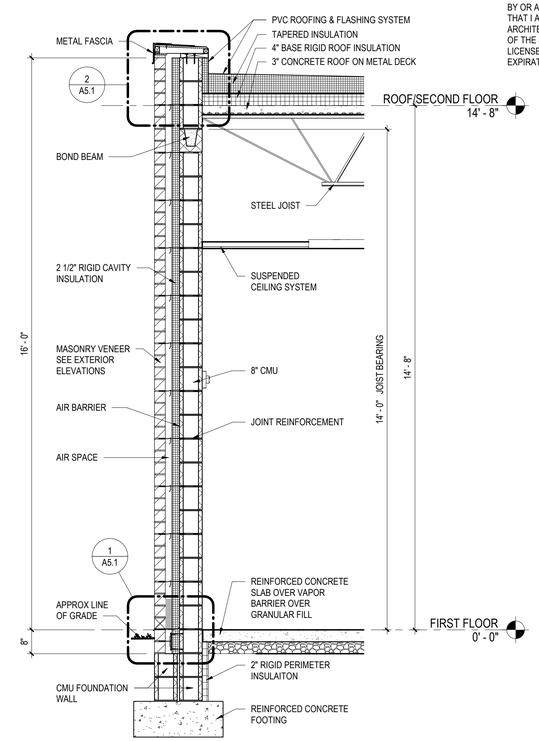

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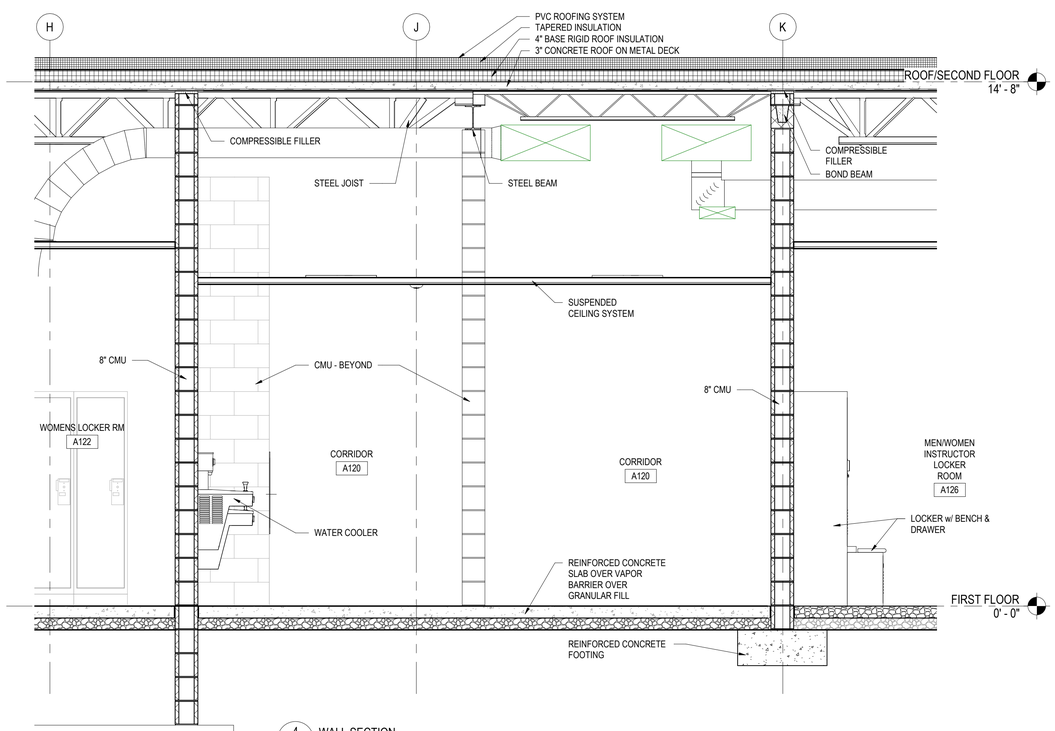

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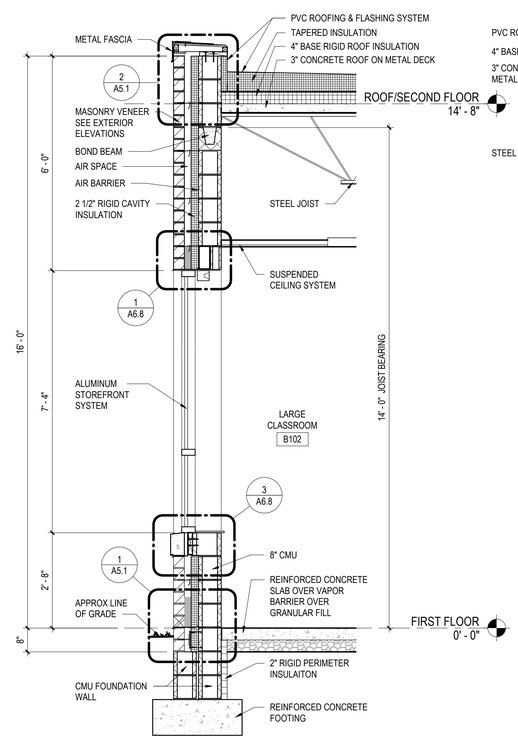

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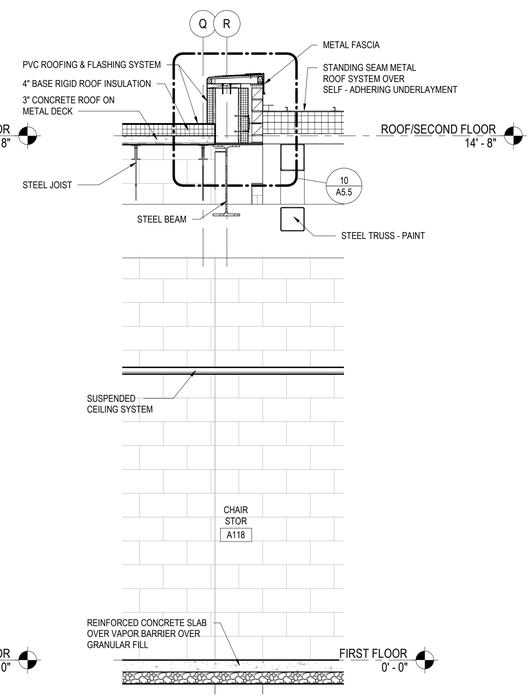

6 A3.11 WALL SECTION
1/2" = 1'-0"

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A3.11

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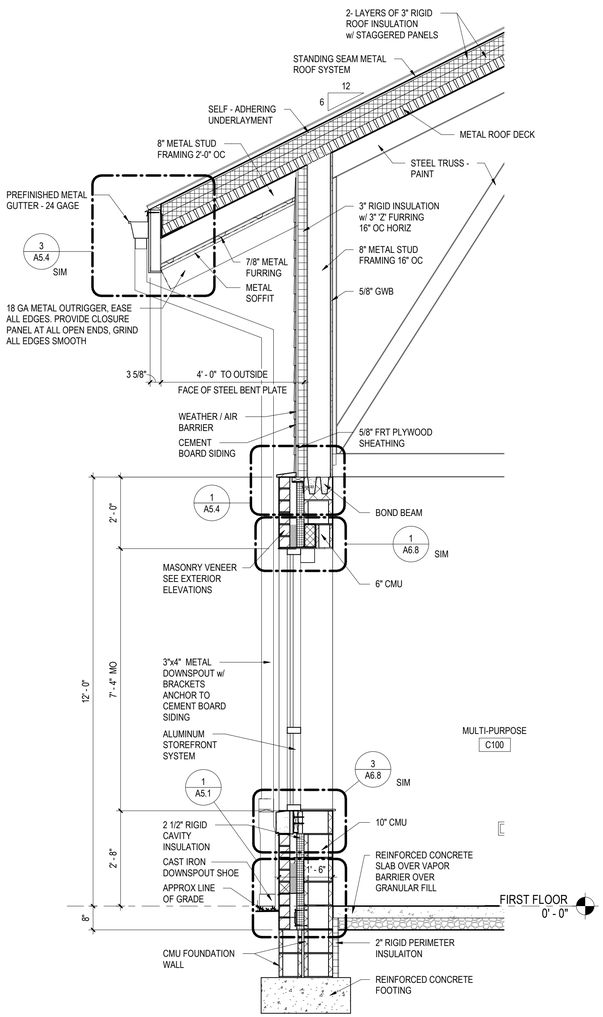

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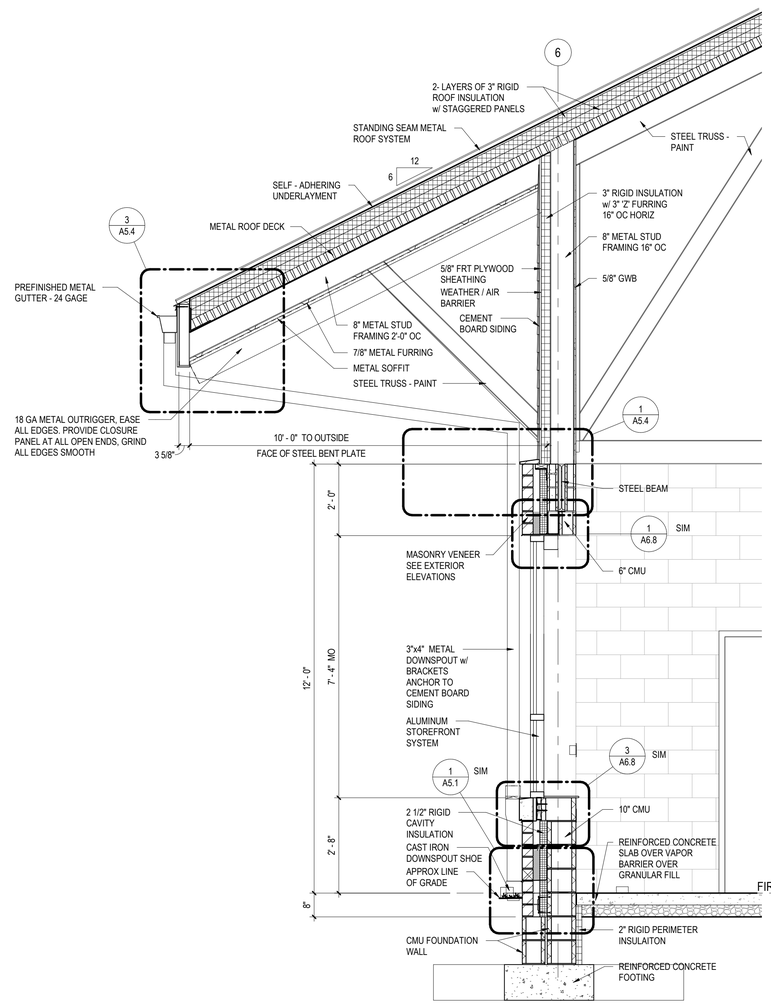
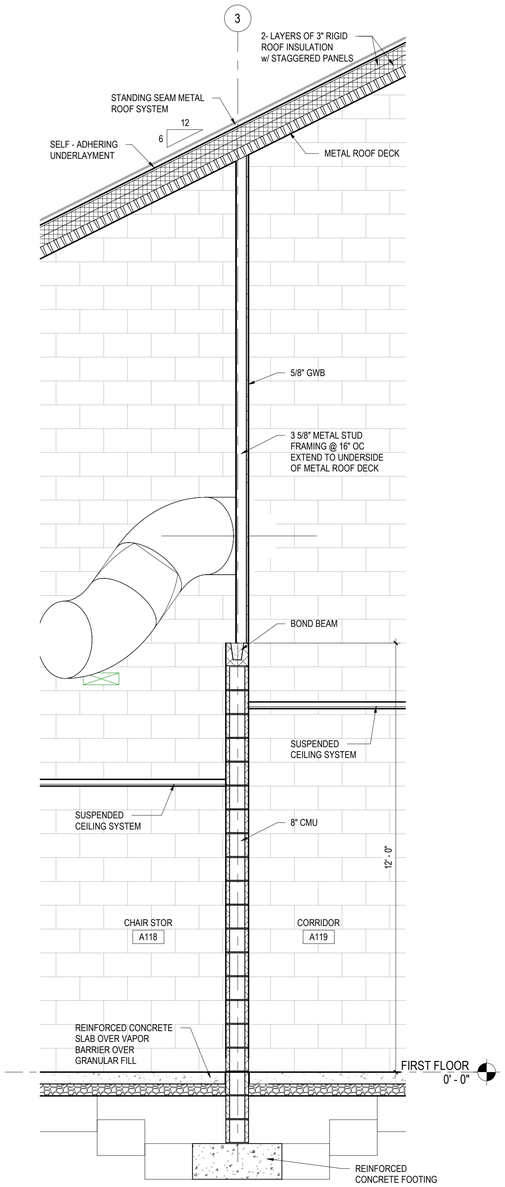


2 A3.12 WALL SECTION
1/2" = 1'-0"



3 A3.12 WALL SECTION
1/2" = 1'-0"

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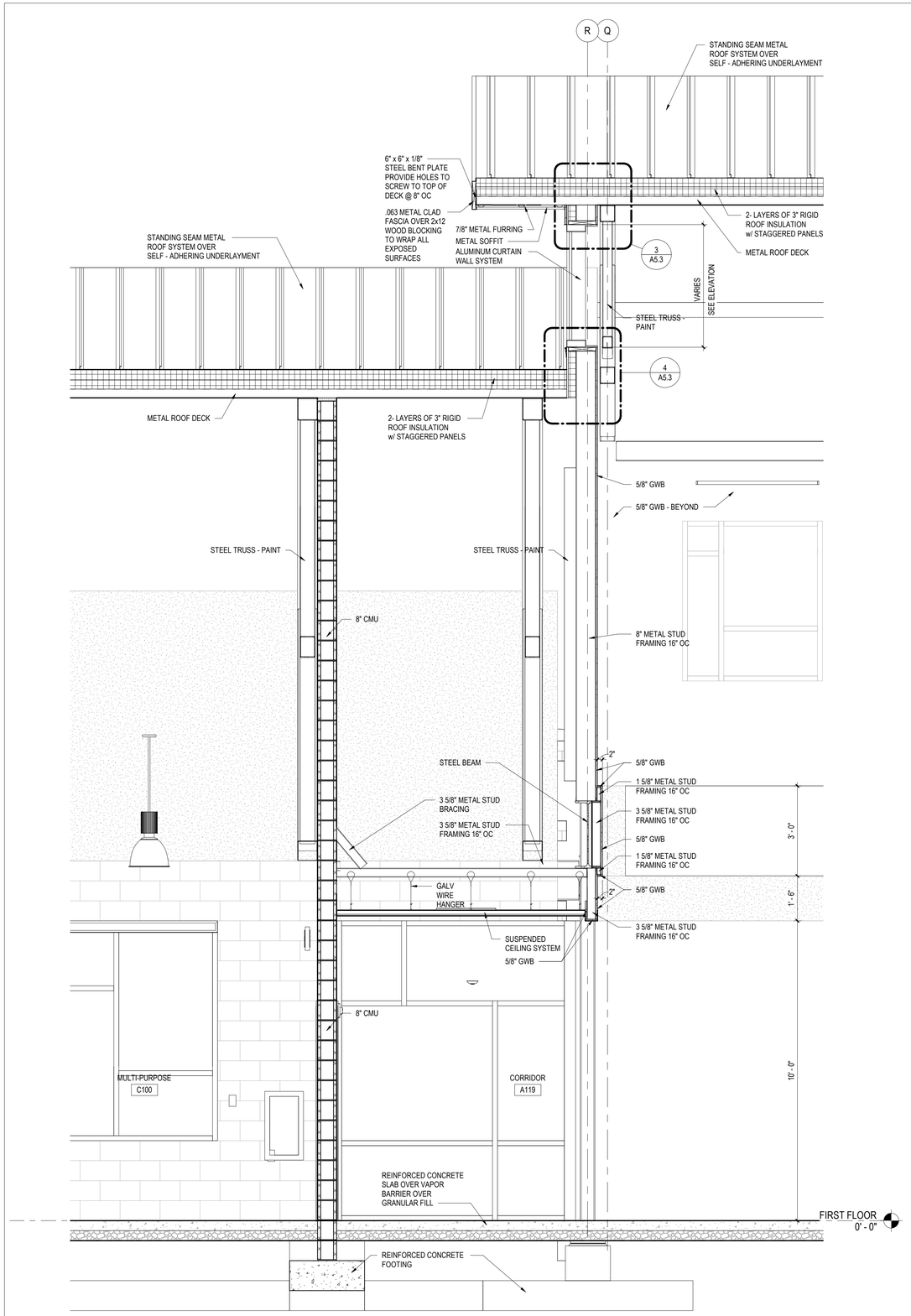
A3.12



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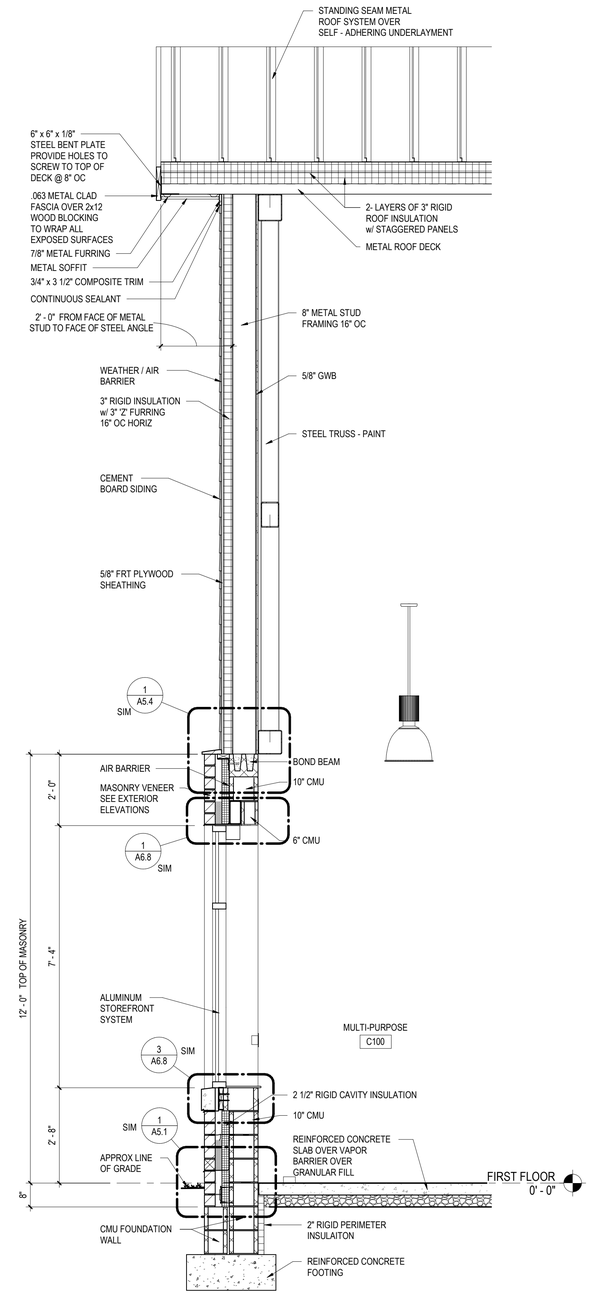

2 A3.13 WALL SECTION
1/2" = 1'-0"

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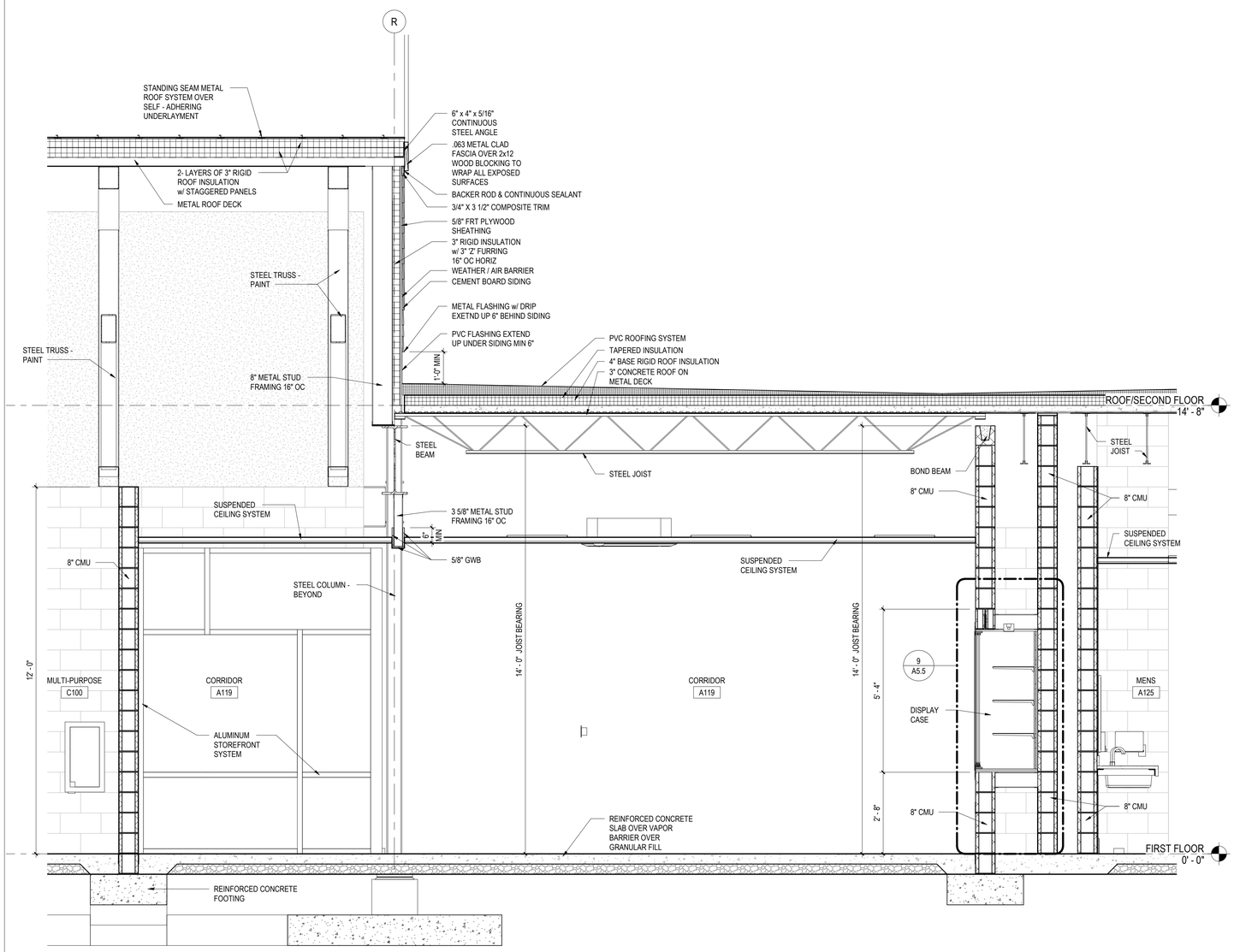

1 / A3.14 WALL SECTION
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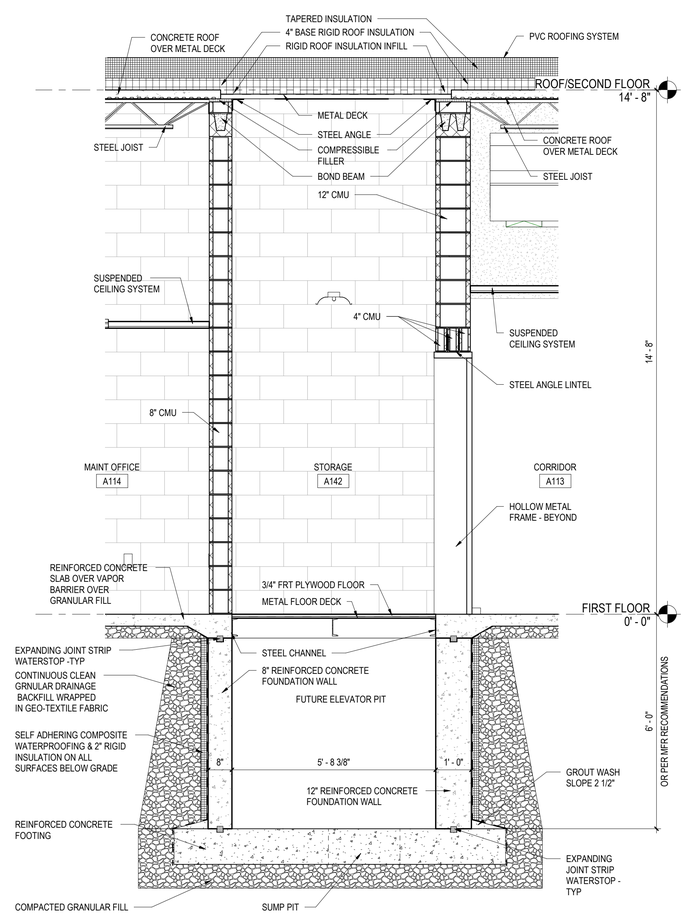

2 / A3.14 WALL SECTION
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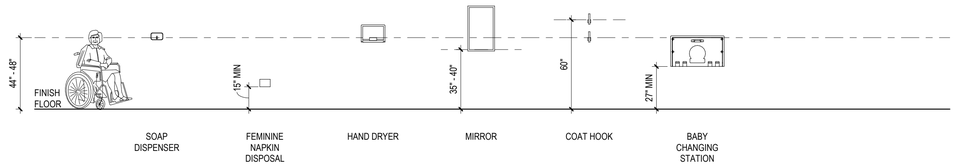
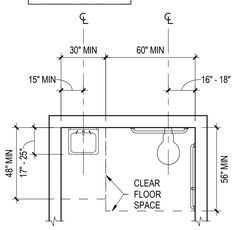
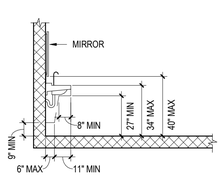


NOTE: OTHER FIXTURES NOT ALLOWED WITHIN CLEAR FLOOR SPACE.

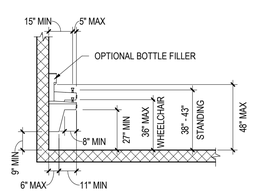
NOTE: THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES OR SINKS. DASHED LINE INDICATED DIMENSIONAL CLEARANCE OF OPTIONAL UNDER FIXTURE ENCLOSURE.



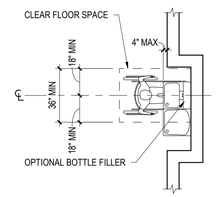
CLEAR FLOOR AT WALL HUNG WATER CLOSET AND LAVATORY



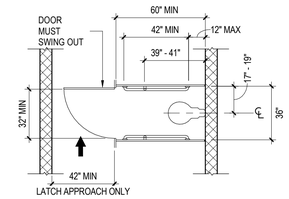
LAVATORY HEIGHT AND LEG CLEARANCE



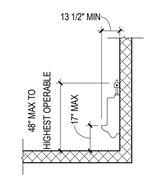
DRINKING FOUNTAIN HEIGHT AND LEG CLEARANCE



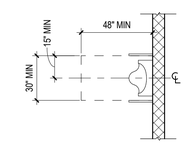
CLEAR FLOOR AT DRINKING FOUNTAIN



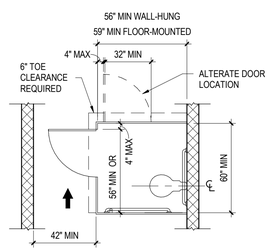
PLAN FOR AMBULATORY ACCESSIBLE TOILET COMPARTMENT



WALL HUNG URINAL CLEARANCES

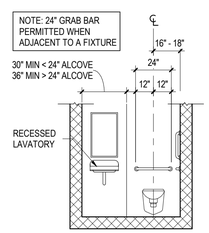


WALL HUNG URIAL CLEARANCES

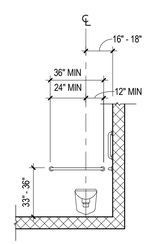


PLAN FOR WATER CLOSET

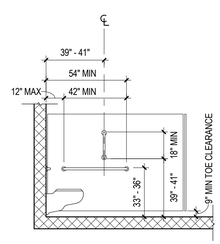
NOTE: 24" GRAB BAR PERMITTED WHEN ADJACENT TO A FIXTURE



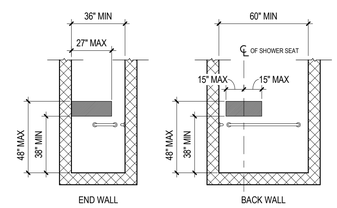
REAR WALL FOR WATER CLOSET ADJACENT TO RECESSED LAVATORY



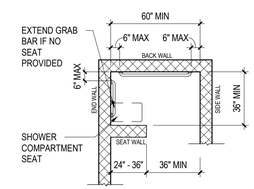
REAR WALL FOR WATER CLOSET



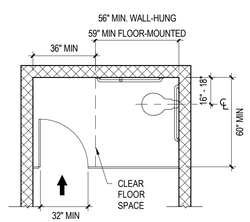
SIDE WALL FOR WATER CLOSET



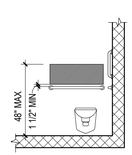
ALTERNATE ROLL-IN SHOWER SIDE & BACK WALL



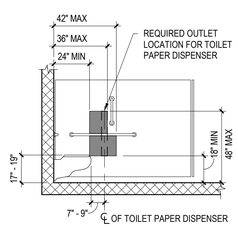
PLAN FOR ALTERNATE ROLL-IN SHOWER



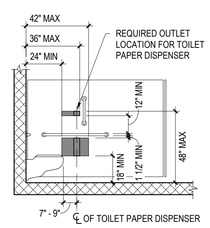
ALTERNATE PLAN FOR WATER CLOSET



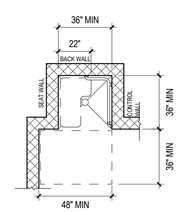
REAR WALL RECESSED DISPENSERS



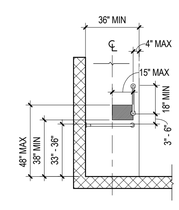
SIDE WALL RECESSED DISPENSERS



SIDE WALL PROTRUDING DISPENSERS

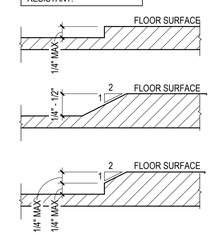


PLAN FOR TRANSFER-TYPE SHOWER



CONTROL WALL FOR TRANSFER-TYPE SHOWER

NOTE: ALL FLOOR SURFACES SHALL BE STABLE, FIRM, AND SLIP RESISTANT.



CHANGES IN FLOOR LEVEL

ACCESSIBILITY STANDARDS

NOT TO SCALE

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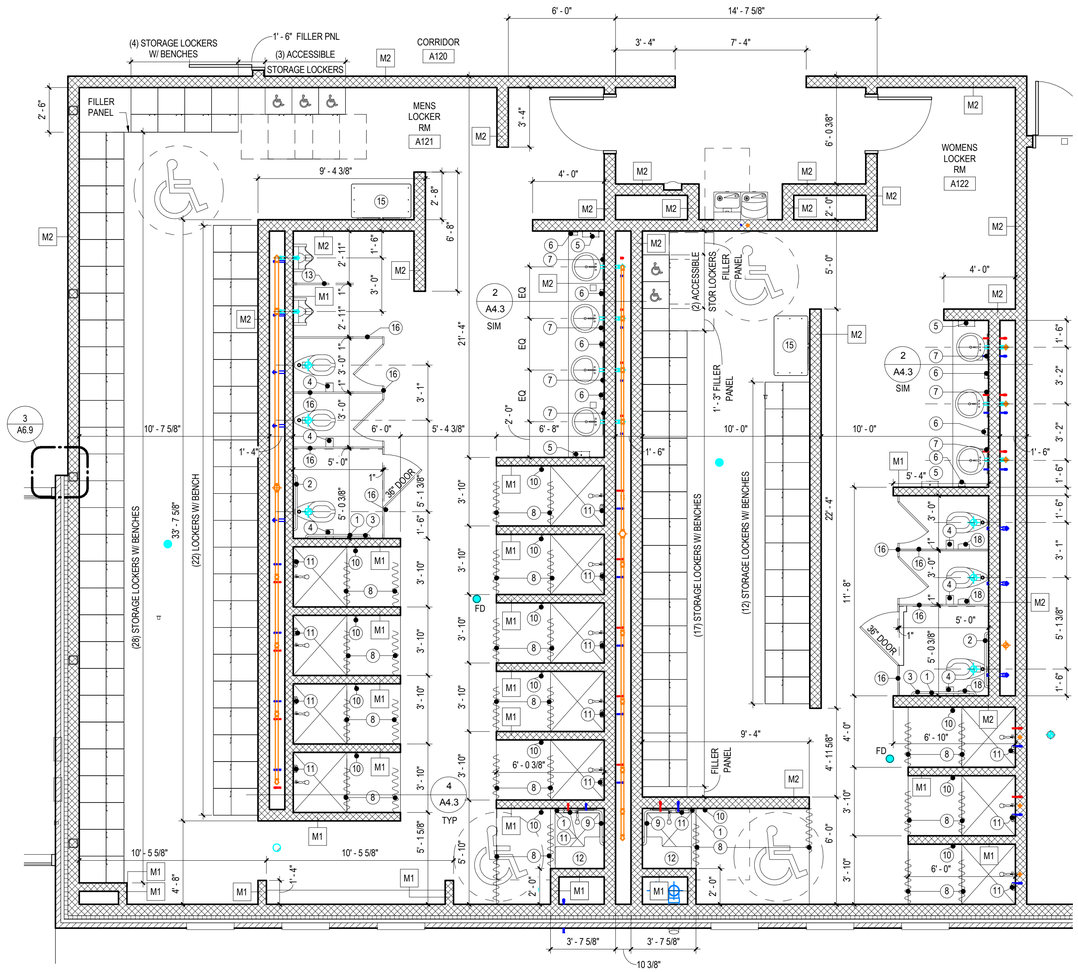
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

ACCESSIBILITY STANDARDS

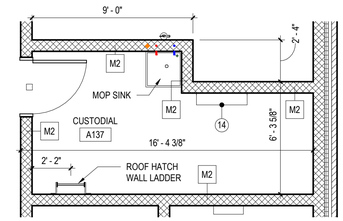
PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

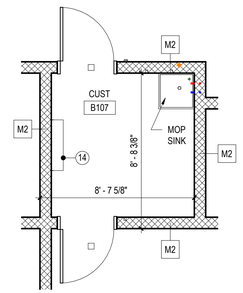
A4.1



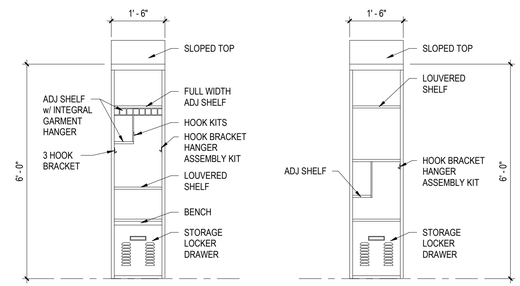
1 A4.2 LARGE SCALE MEN AND WOMEN LOCKER ROOMS
1/4" = 1'-0"



2 A4.2 LARGE SCALE CUSTODIAL
1/4" = 1'-0"



3 A4.2 LARGE SCALE CUSTODIAL
1/4" = 1'-0"



NOTE: ELEVATION SHOWN WITHOUT UPPER HINGED DOOR FOR CLARITY ON ACCESSORIES

TYPICAL LOCKER WITH BENCH
18" x 18" x 72"

NOTE: ELEVATION SHOWN WITHOUT UPPER HINGED DOOR FOR CLARITY ON ACCESSORIES

ACCESSIBLE LOCKER WITHOUT BENCH
18"x 18" x 72"

4 A4.2 LOCKER ELEVATIONS
1/2" = 1'-0"

TOILET ACCESSORY SCHEDULE

No.	DESCRIPTION	MOUNTING	MANUFACTURER	MODEL
1	18" GRAB BAR (VERICAL)	39" MIN - 41" MAX AFF TO BOTTOM OF GRAB BAR	BOBRICK	B-5806 - 18
2	36" GRAB BAR (HORIZONTAL)	36" AFF TO TOP OF GRIPPING SURFACE	BOBRICK	B-5806 - 36
3	42" GRAB BAR (HORIZONTAL)	36" AFF TO TOP OF GRIPPING SURFACE	BOBRICK	B-5806 - 42
4	MULT I- ROLL TOILET TISSUE DISPENSER (SURFACE MOUNTED)	TISSUE ACCESS AT 19" MIN AFF	BOBRICK	B-4288
5	ROLL PAPER TOWEL DISPENSER (SURFACE MOUNTED)	48" MAX TO OUTLET OF DISPENSER	OWNER PROVIDED, CONTRACTOR INSTALLED	--
6	SOAP DISPENSER	44" MAX AFF TO PUSH BUTTON	OWNER PROVIDED, CONTRACTOR INSTALLED	--
7	MIRROR 18" x 30" w/ SS FRAME	40" AFF TO BOTTOM EDGE OF REFLECTING SURFACE	BOBRICK	B-290 1830
8	STAINLESS STEEL SHOWER ROD, VINYL SHOWER CURTAIN, & STAINLESS STEEL SHOWER CURTAIN HOOKS	COORDINATE WITH SHOWER UNIT	BOBRICK	B-6047, 204-1, 204-2
9	TWO-WALL GRAB BAR FOR 36" x 36" ACCESSIBLE SHOWER STALL	36" AFF TO TOP OF GRIPPING SURFACE	BOBRICK	B-6861
10	STAINLESS STEEL TOWEL PIN (SURFACE MOUNTED)	48" AFF TO TOP OF TOWEL PIN	BOBRICK	B-76717
11	SOAP DISH (HEAVY DUTY)	40" AFF TO DISH	BRADLEY CORP	9014
12	FOLDING SHOWER SEAT w/ PADDED CUSHION	17" MIN - 19" MAX AFF TO TOP OF SEAT SURFACE	BOBRICK	B-517, B-518
13	URINAL SCREEN	AS SPECIFIED	AS SPECIFIED	AS SPECIFIED
14	UTILITY SHELF W/ MOP & BROOM HOLDER & RAG HOOKS	72" AFF TO TOP SHELF	BOBRICK	B-239 x 34
15	40"L X 24"W ADA COMPLIANT WALL MOUNTED TEAK FOLDING BENCH W/ DROP DOWN LEGS	18" AFF TO TOP OF BENCH	AS SPECIFIED	AS SPECIFIED
16	TOILET PARTITION	AS SPECIFIED	AS SPECIFIED	AS SPECIFIED
17	BABY CHANGING STATION (SURFACE MOUNTED)	48" AFF TO TOP OF UNIT	BOBRICK	KB200-00
18	SANITARY NAPKIN DISPOSAL (SURFACE MOUNTED)	15" MIN AFF TO BASE	BOBRICK	B-270
19	9 1/2" X 36" WOOD BENCH W/ RADIUS EDGES AND SUPPORTING WALL BRACKETS	18" AFF TO TOP OF BENCH	AS SPECIFIED	AS SPECIFIED

GENERAL NOTES:

1. ACCESSIBLE FIXTURES ARE INDICATED WITH THE REQUIRED CLEAR FLOOR SPACE CLEARANCES FOR ALL ACCESSIBLE ROUTES & MANEUVERING CLEARANCES.
2. PLUMBING FIXTURE ROUGH-IN DIMENSIONS & TOILET PARTITION LAYOUT DIMENSIONS ARE FROM THE WALL FINISH MATERIAL.
3. PROVIDE WOOD BLOCKING IN STUD WALLS FOR ALL TOILET ACCESSORIES.
4. TOILET PARTITION DIMENSIONS ARE TO THE PANEL CENTERLINE UNLESS NOTED OTHERWISE. MINIMUM CLEAR DIMENSIONS MUST BE PROVIDED WHERE NOTED.
5. COORDINATE ALL WALL FINISHES WITH THE ROOM FINISH SCHEDULE.
6. CONTRACTOR TO CONFIRM WITH THE OWNER'S REPRESENTATIVE THE LOCATION OF ALL SURFACE-MOUNTED TOILET ROOM ACCESSORIES PRIOR TO INSTALLATION.
7. URINAL PARTITIONS SHALL BEGIN AT A HEIGHT NO MORE THAN 12" FROM AND EXTEND NOT LESS THAN 60" ABOVE THE FINISHED FLOOR SURFACE. URINAL PARTITIONS SHALL EXTEND FROM THE WALL SURFACE AT EACH SIDE OF THE URINAL A MINIMUM OF 18".
8. ACCESSIBLE LOCKERS ARE INDICATED AS "(8)". AT DOUBLE TIER LOCKERS, ONLY THE BOTTOM TIER IS REQUIRED TO BE ACCESSIBLE. FOR FOUR TIER LOCKERS, ONLY THE BOTTOM TWO TIERS ARE REQUIRED TO BE ACCESSIBLE.

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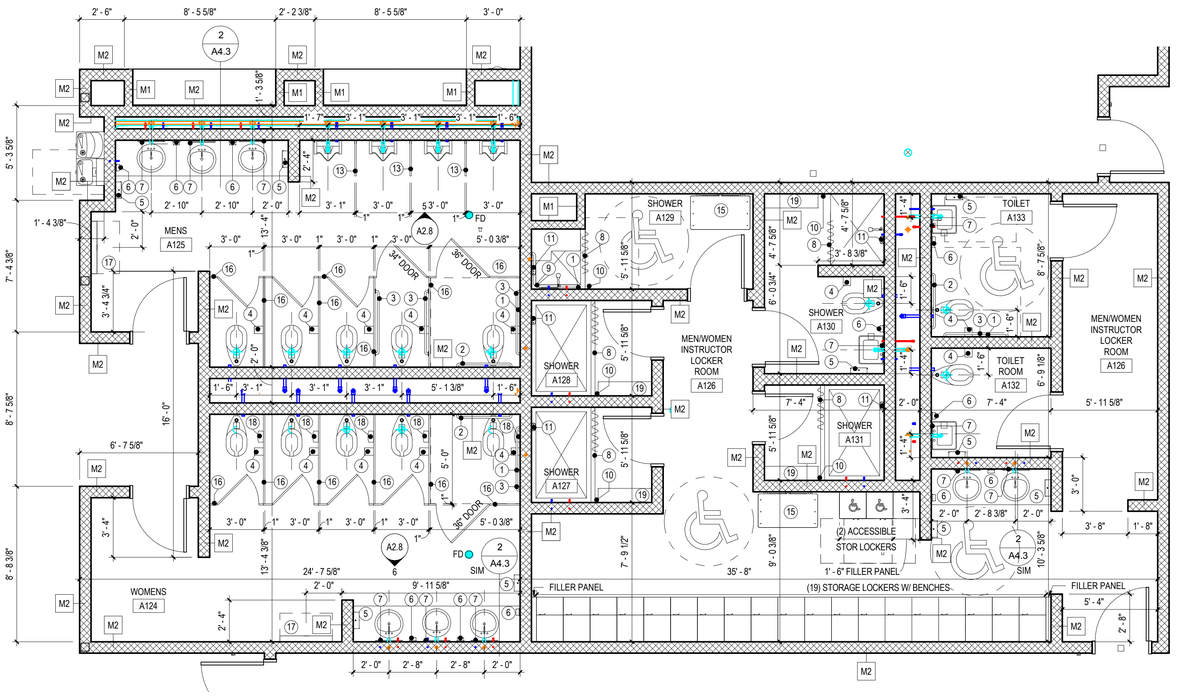
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

LARGE SCALE FLOOR PLANS

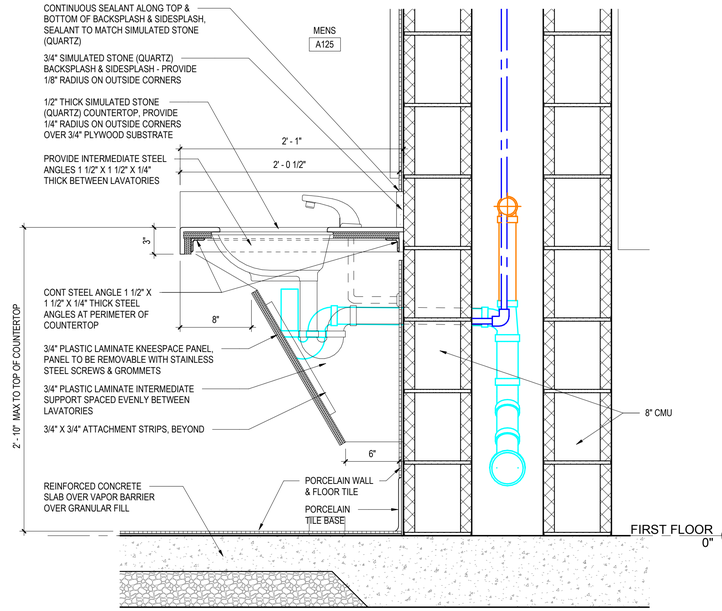
PLOT SCALE: As Indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

A4.2



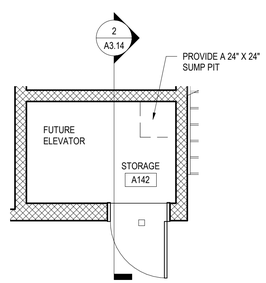
1 / A4.3 LARGE SCALE MEN AND WOMEN TOILET ROOMS AND INSTRUCTOR LOCKER ROOMS
1/4" = 1'-0"



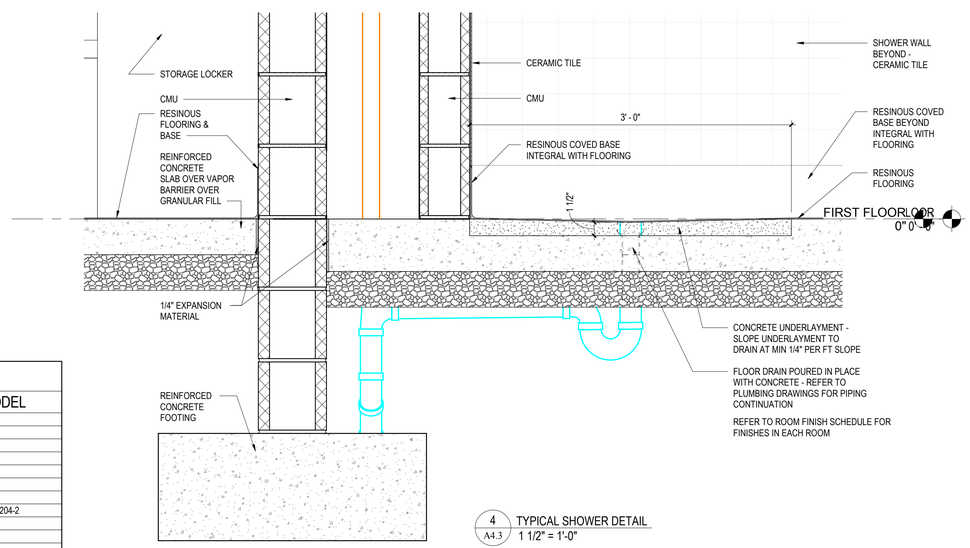
NOTE: WHERE DETAIL IS NOTED AS 'SIM' REFER TO ROOM FINISH SCHEDULE FOR FINISHES

NOTE: THIS DETAIL WITH KNEESPACE PANEL REFERS TO WOMENS A124 & MENS A125 TOILET ROOMS ONLY. COUNTERTOP IS TYPICAL AT MENS LOCKER ROOM A121, WOMENS LOCKER ROOM A122 & MEN / WOMEN INSTRUCTOR LOCKER ROOM A126

2 / A4.3 TYPICAL COUNTERTOP DETAIL
1 1/2" = 1'-0"



3 / A4.3 LARGE SCALE PLAN - FUTURE ELEVATOR
1/4" = 1'-0"



4 / A4.3 TYPICAL SHOWER DETAIL
1 1/2" = 1'-0"

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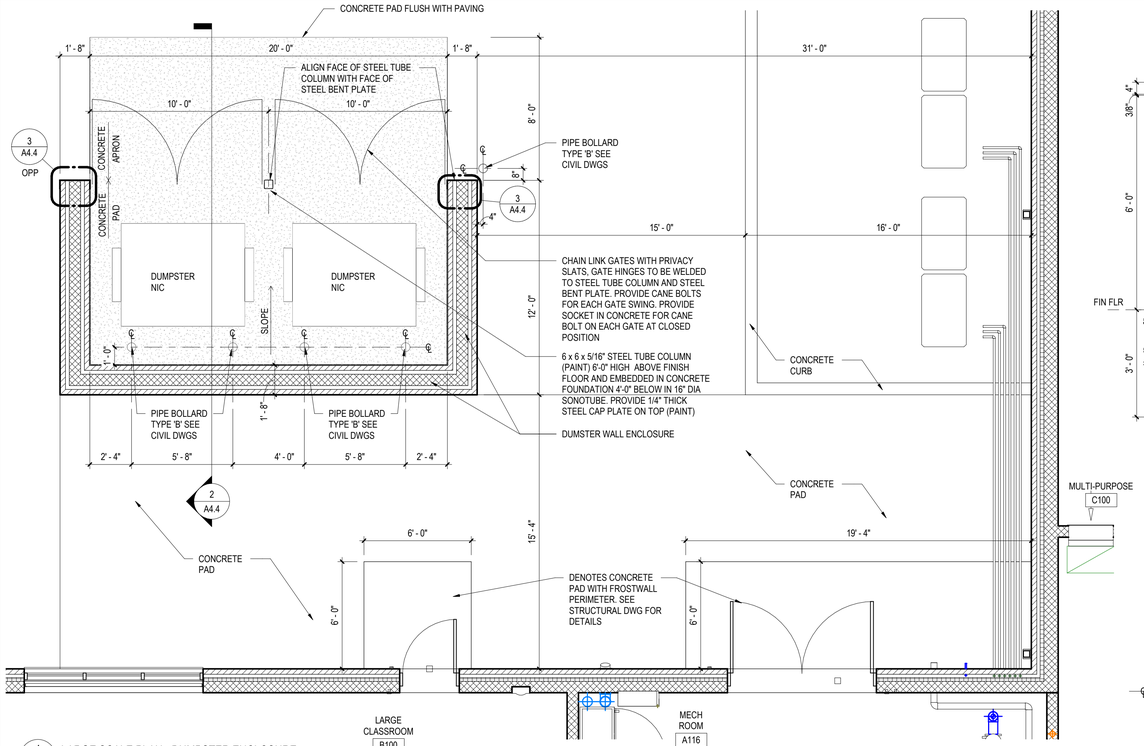
LARGE SCALE FLOOR PLANS

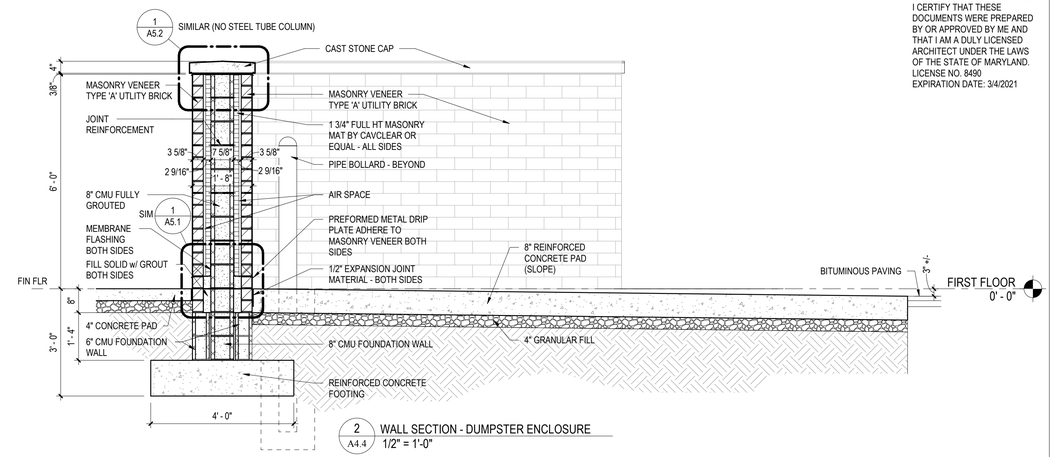
PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

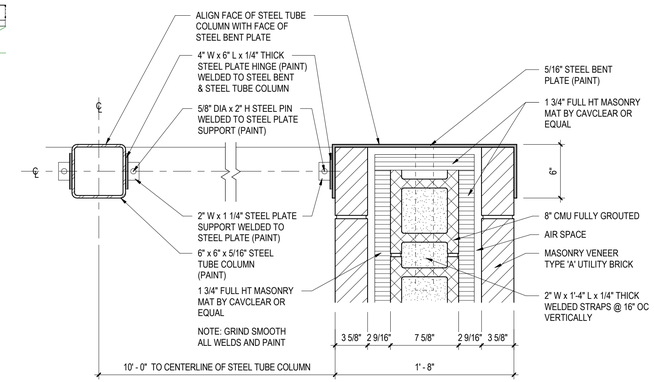
A4.3



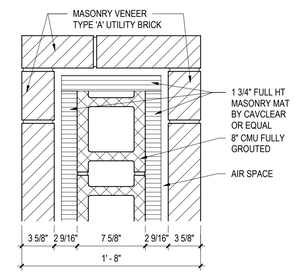
1 A4.4 LARGE SCALE PLAN - DUMPSTER ENCLOSURE
1/4" = 1'-0"



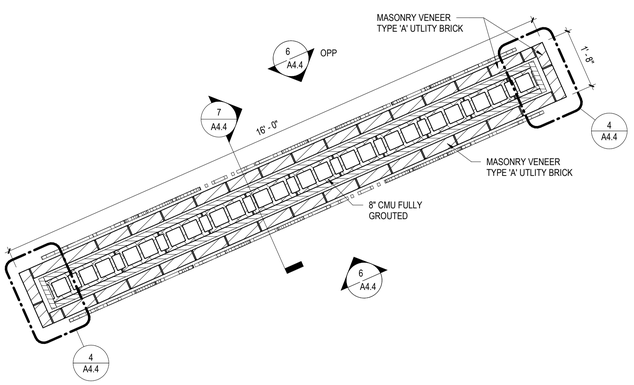
2 A4.4 WALL SECTION - DUMPSTER ENCLOSURE
1/2" = 1'-0"



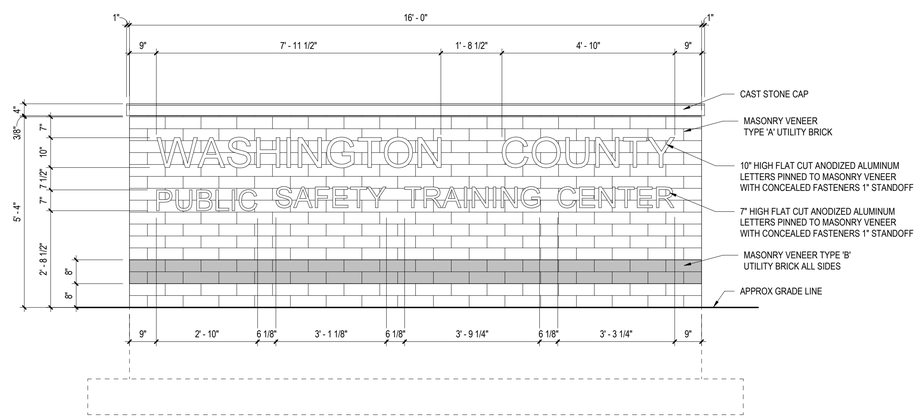
3 A4.4 DETAIL
1 1/2" = 1'-0"



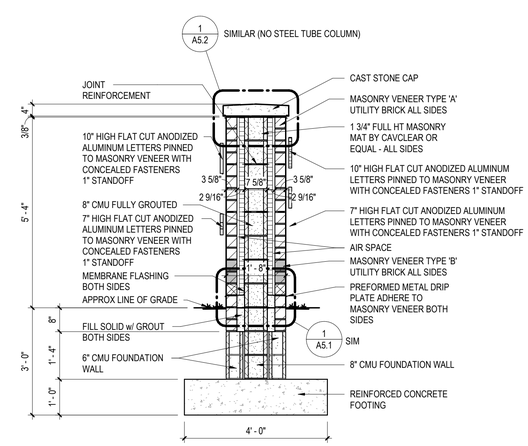
4 A4.4 DETAIL
1 1/2" = 1'-0"



5 A4.4 LARGE SCALE PLAN - SITE ENTRANCE SIGN
1/2" = 1'-0"



6 A4.4 ELEVATION - SITE ENTRANCE SIGN
1/2" = 1'-0"



7 A4.4 WALL SECTION - ENTRANCE SITE SIGN
1/2" = 1'-0"

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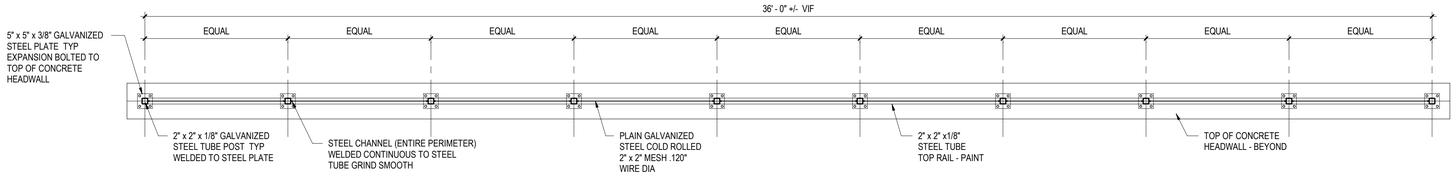
LARGE SCALE FLOOR PLAN , SECTION AND DETAILS

PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

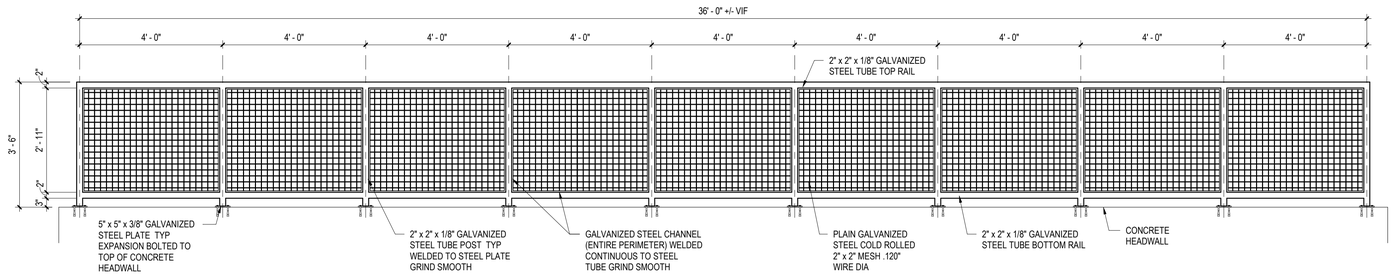
PROJECT
3089

A4.4



NOTE : ALL EXPANSION BOLTS TO BE GALVANIZED CLEAN FIELD WELDS, BOLTED CONNECTIONS AND ABRADED AREAS AND REPAIR GALVANIZING WITH GALVANIZING REPAIR PAINT IN ORDER TO COMPLY WITH ASTM A780 / A780M

1 / A4.5 GUARDRAIL PLAN
1/2" = 1'-0"



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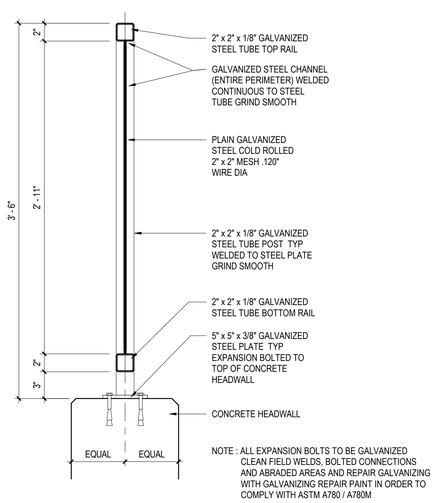
2 / A4.5 GUARDRAIL ELEVATION
1/2" = 1'-0"



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3 / A4.5 GUARDRAIL SECTION
1 1/2" = 1'-0"

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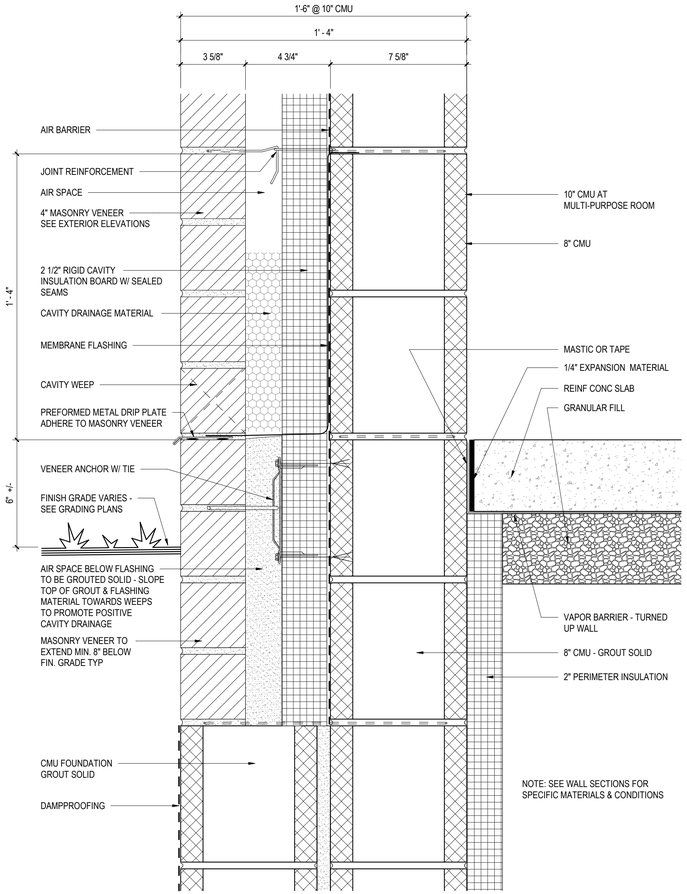
GUARDRAIL PLAN, ELEVATION & DETAILS

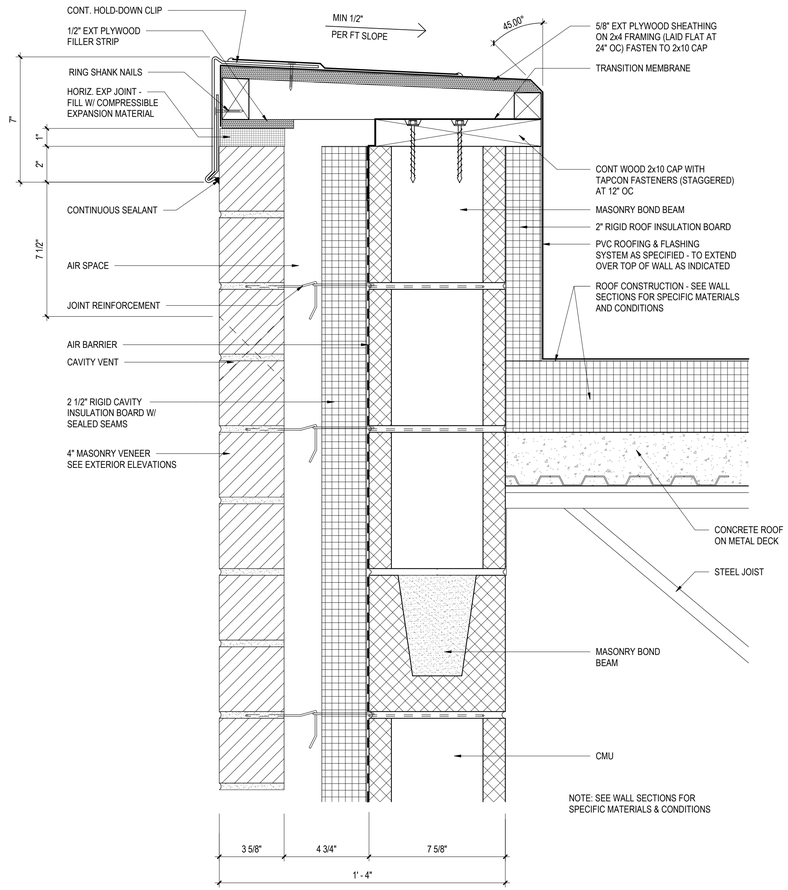
PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

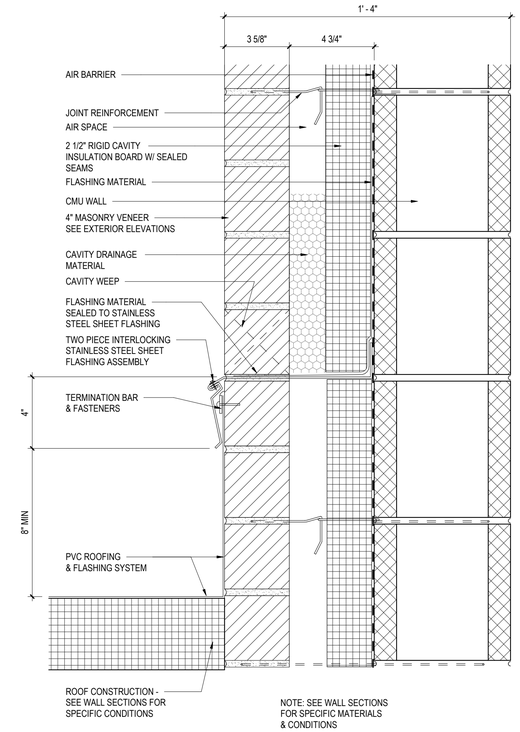
A4.5



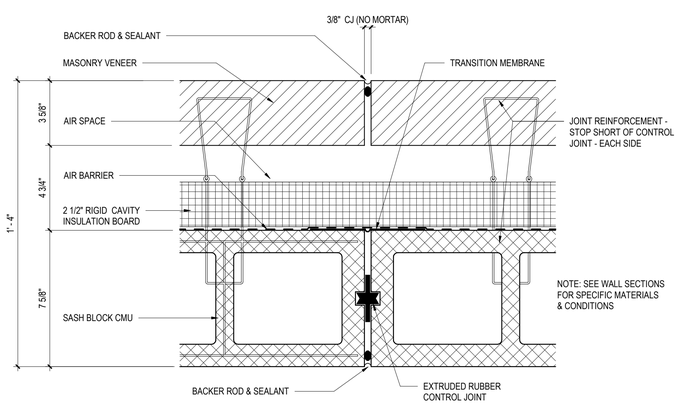
1 / A5.1 TYPICAL BASE FLASHING DETAIL - MASONRY
3" = 1'-0"



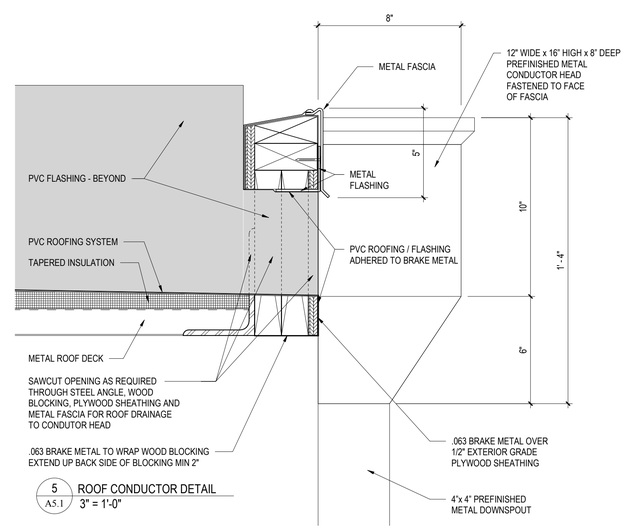
2 / A5.1 TYPICAL ROOF PARAPET - FASCIA DETAIL - MASONRY
3" = 1'-0"



4 / A5.1 TYPICAL ROOF TO WALL FLASHING DETAIL
3" = 1'-0"



3 / A5.1 TYPICAL EXTERIOR WALL CONTROL JOINT DETAIL - MASONRY
3" = 1'-0"



5 / A5.1 ROOF CONDUCTOR DETAIL
3" = 1'-0"

NOTE:
DETAILS WITHIN THIS DRAWING, TITLED AS "TYPICAL", INDICATE COMMON NON-SPECIFIC CONDITIONS OCCURRING THROUGHOUT BUILDING. THE LARGE SCALE ALLOWS A MORE COMPREHENSIVE LEVEL OF DETAIL TO BE SHOWN. SPECIFIC CONSTRUCTION CONDITIONS WILL VARY ACCORDING TO MATERIAL AND DIMENSIONS, MORE ACCURATELY SHOWN AS PART OF INDIVIDUAL SECTIONS AND DETAILS THROUGHOUT THE CONSTRUCTION DOCUMENTS.

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DETAILS

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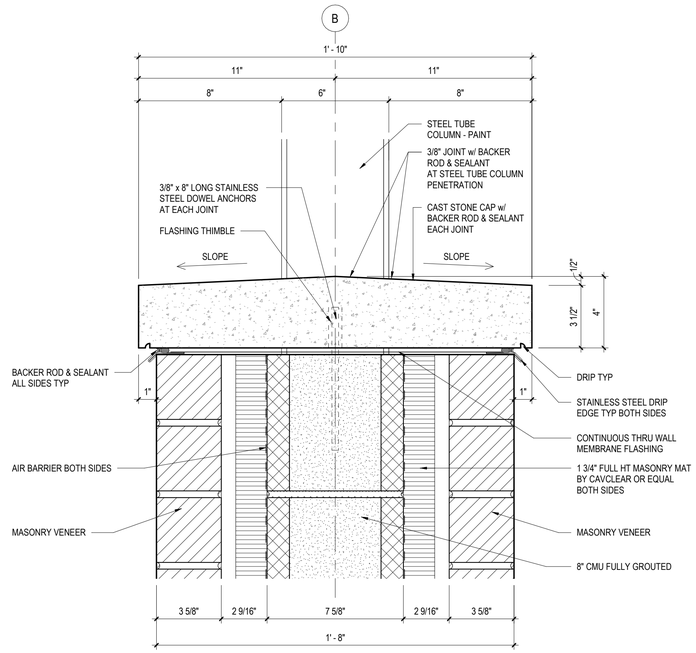
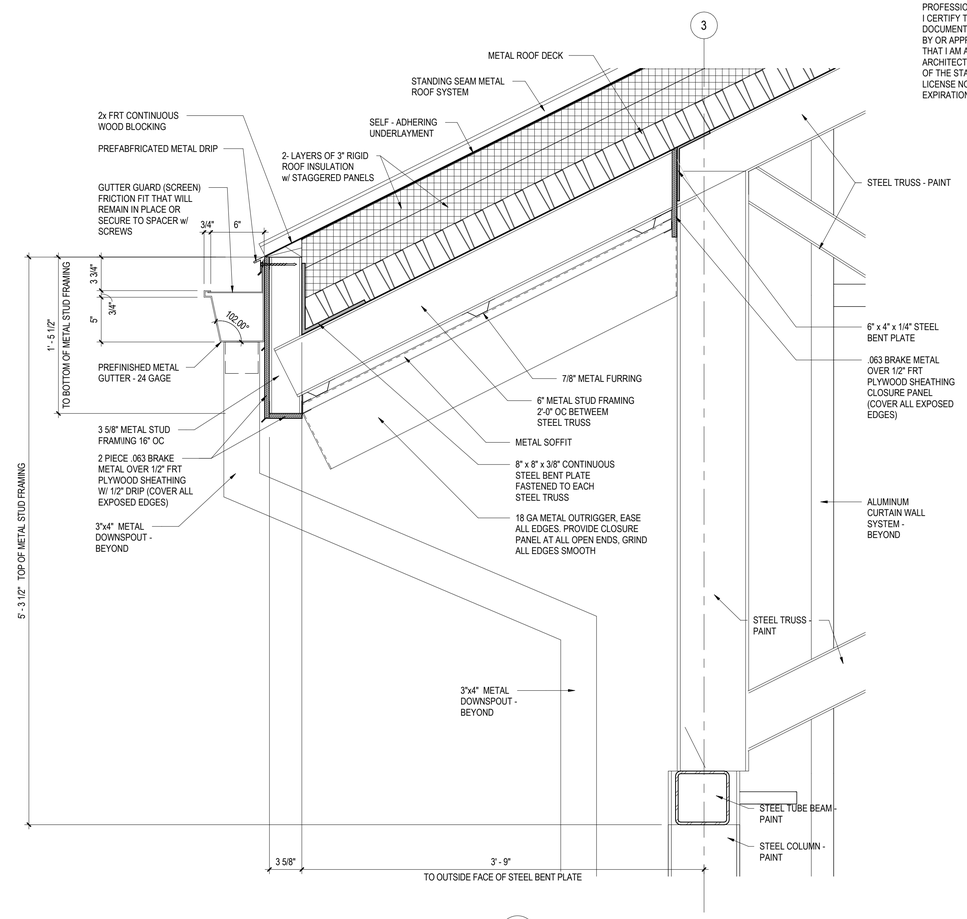
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

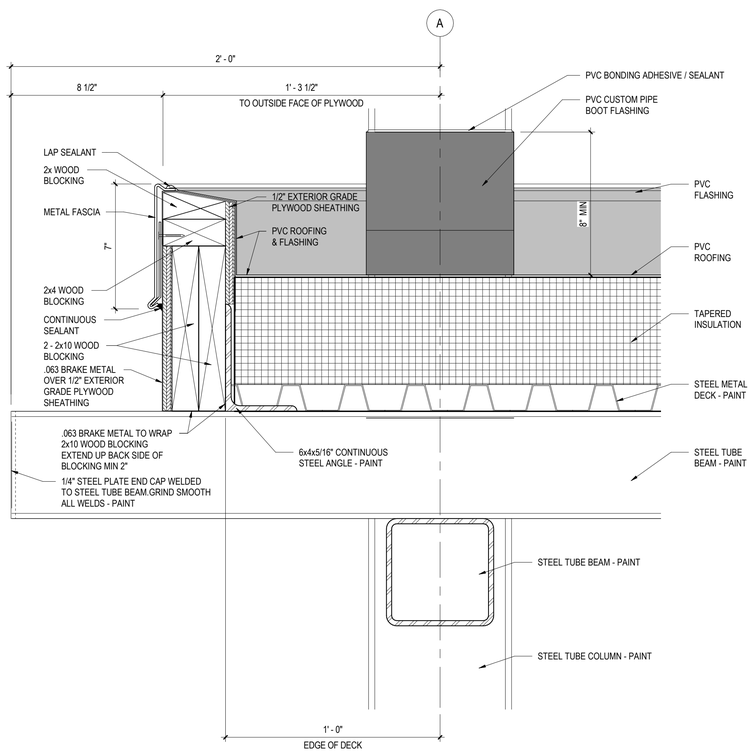
A5.1



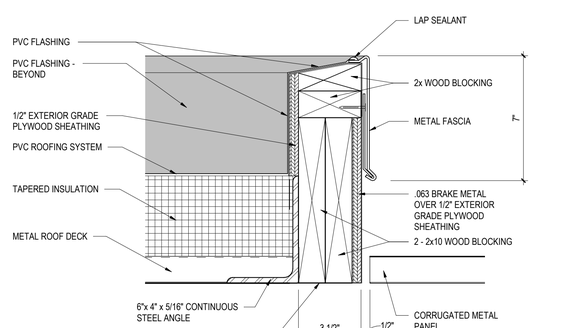
1 / A5.2 DETAIL
3" = 1'-0"



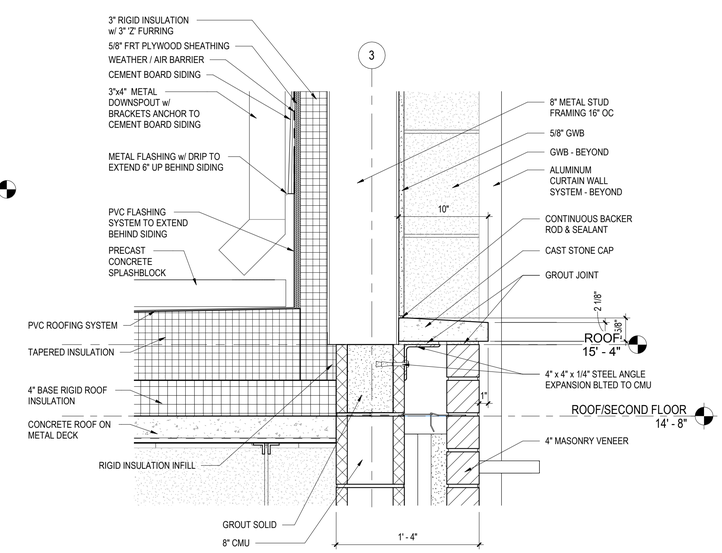
3 / A5.2 OVERHANG DETAIL
1 1/2" = 1'-0"



2 / A5.2 DETAIL
3" = 1'-0"



5 / A5.2 DETAIL
3" = 1'-0"



4 / A5.2 DETAIL
1 1/2" = 1'-0"

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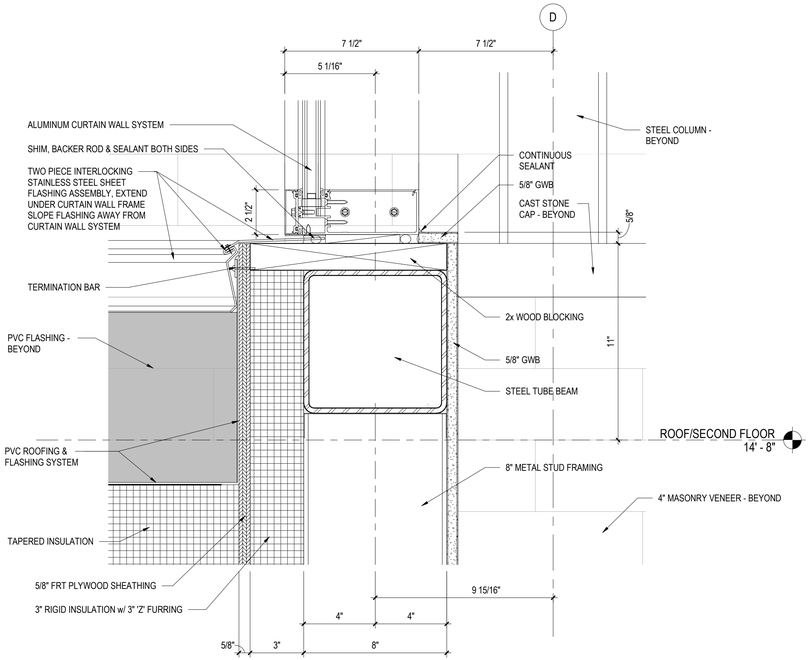
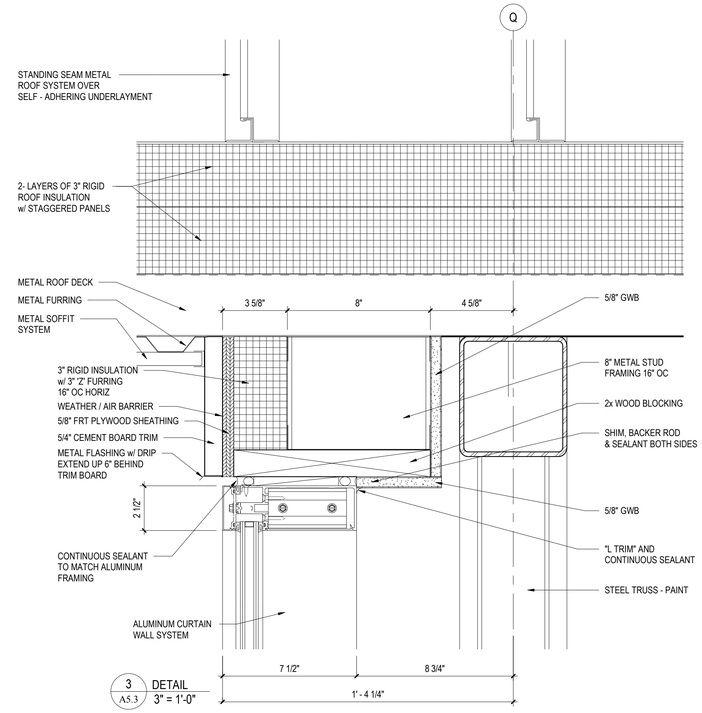
PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

A5.2



1 A5.3 DETAIL
3" = 1'-0"



3 A5.3 DETAIL
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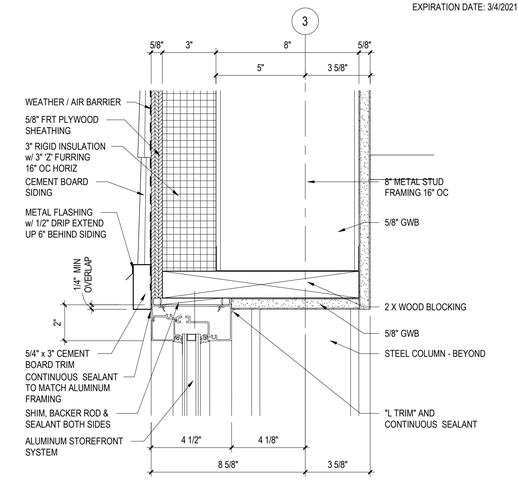

5 A5.3 DETAIL
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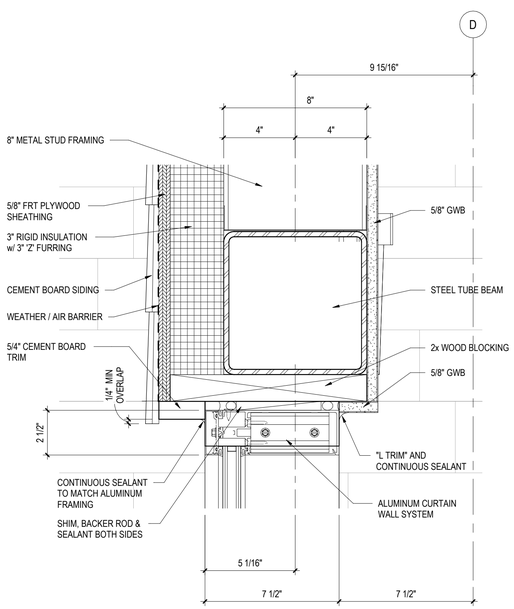
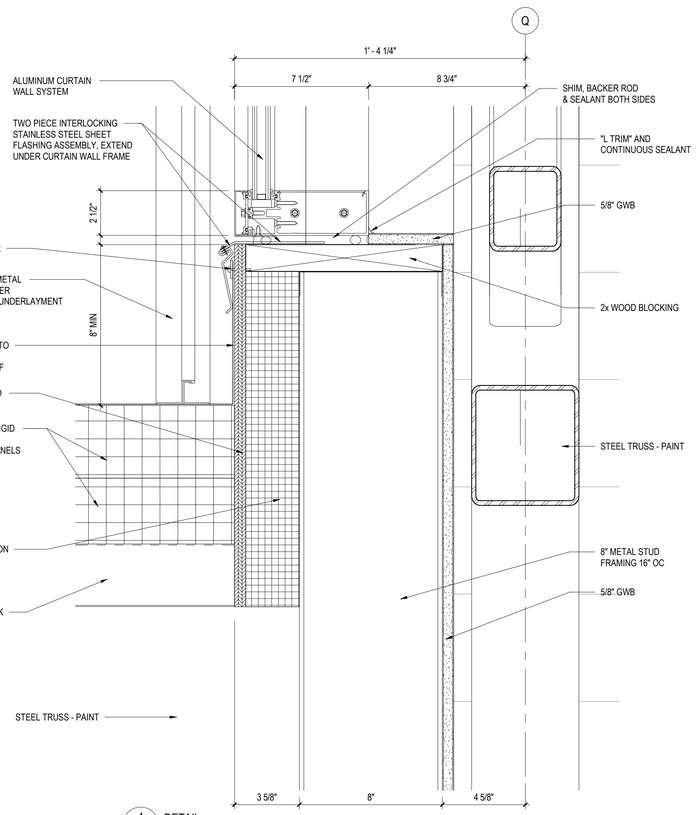
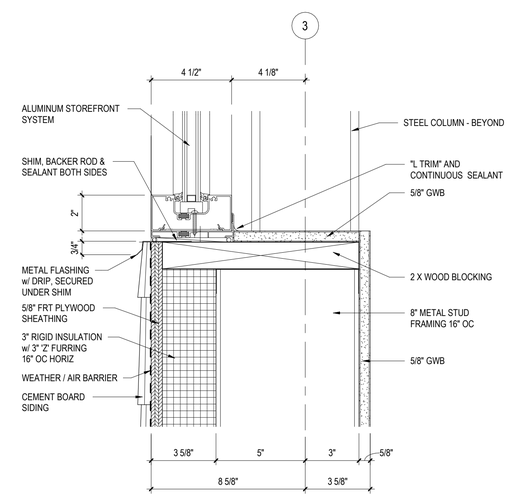


2 A5.3 DETAIL
3" = 1'-0"



4 A5.3 DETAIL
3" = 1'-0"



6 A5.3 DETAIL
3" = 1'-0"

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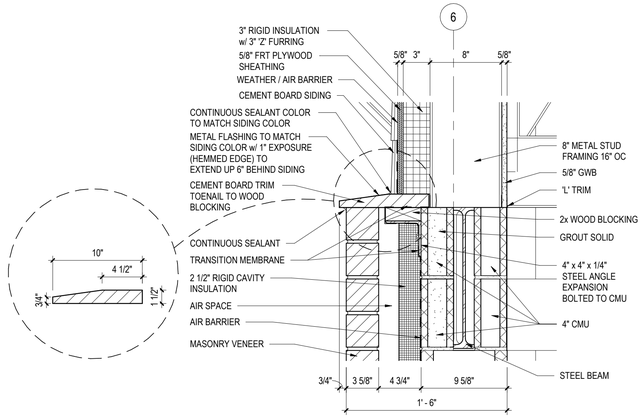
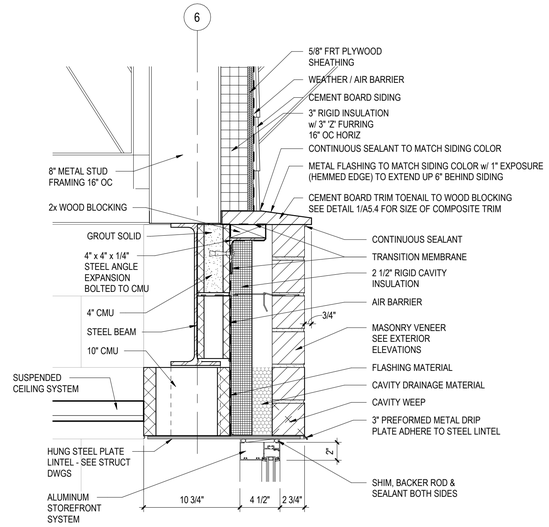
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

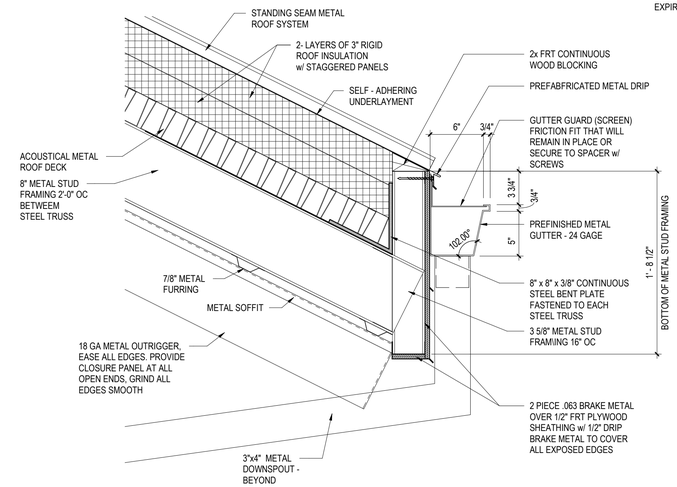
A5.3



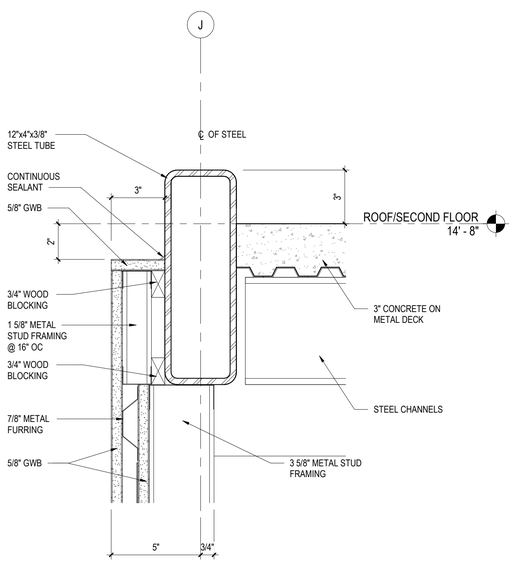
1 / A5.4 DETAIL
1 1/2" = 1'-0"



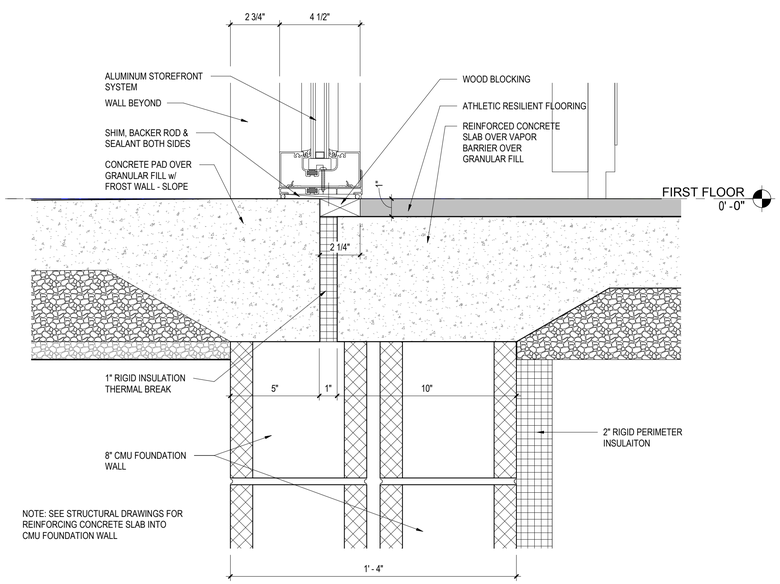
2 / A5.4 DETAIL
1 1/2" = 1'-0"



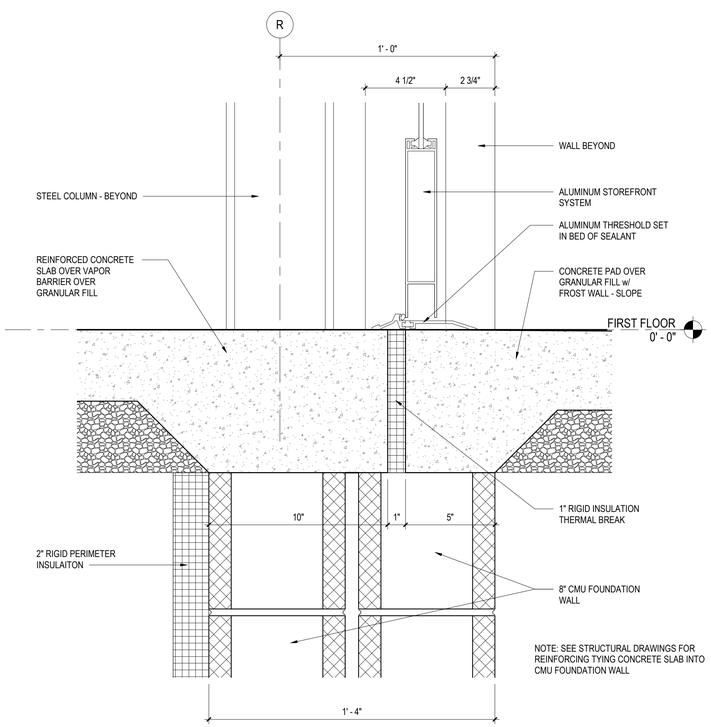
3 / A5.4 DETAIL
1 1/2" = 1'-0"



4 / A5.4 DETAIL
3" = 1'-0"



5 / A5.4 DETAIL
3" = 1'-0"



6 / A5.4 DETAIL
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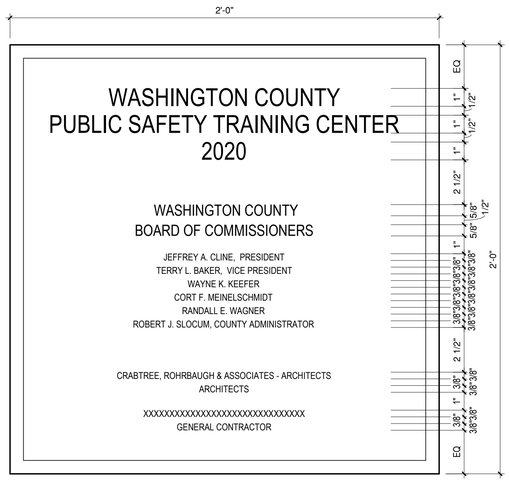
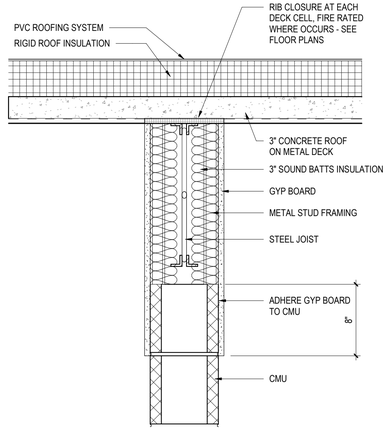
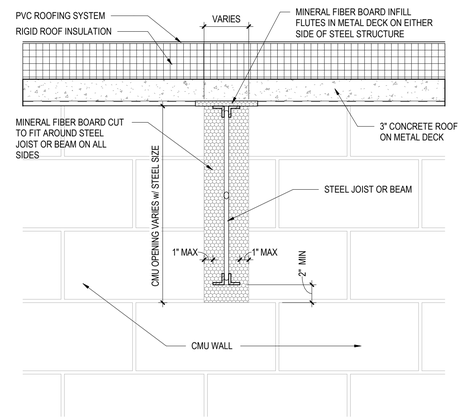


1 A5.5 BUILDING PLAQUE DETAIL
3" = 1'-0"

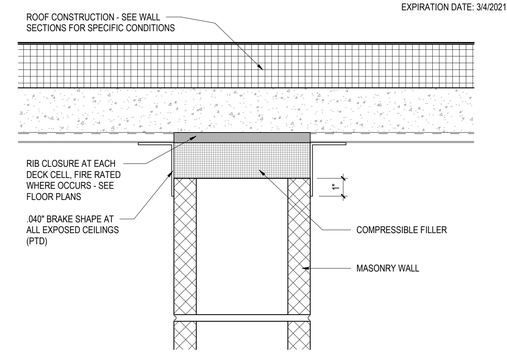
NOTES:
1. ARCHITECT RESERVES THE RIGHT TO CHANGE NOMENCLATURE PRIOR TO FABRICATION.
2. ALL LETTERING TO BE HELVETICA MEDIUM- SPACING TO BE INDICATED.
3. ARCHITECT SHALL FURNISH DATES PRIOR TO FABRICATION.
4. REFER TO SPECS FOR MATERIAL AND COLOR.
5. PLAQUE MANUFACTURER SHALL SUBMIT FULL SIZE SHOP DRAWINGS TO ARCHITECT FOR APPROVAL PRIOR TO FABRICATION.
6. THIRD LINE OF TEXT "2020" TO BE VERIFIED BY OWNER, FOR DEDICATION DATE APPROVAL PRIOR TO FABRICATION.



2 A5.5 TYPICAL WALL CLOSURE DETAIL AT JOIST
1 1/2" = 1'-0"



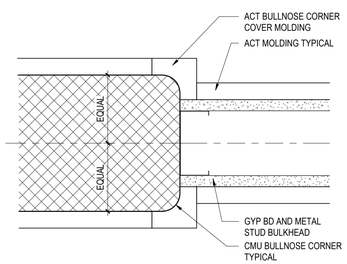
3 A5.5 TYPICAL WALL CLOSURE DETAIL AT JOIST PENETRATING WALL
1 1/2" = 1'-0"



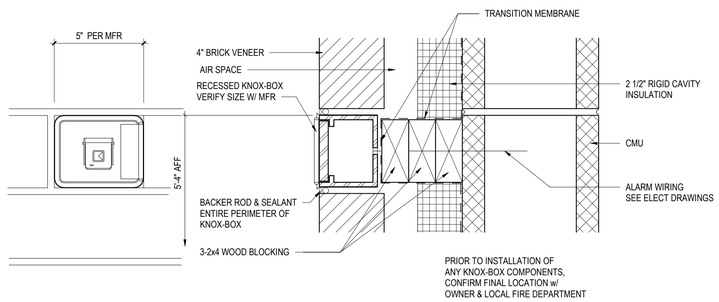
4 A5.5 TYPICAL WALL TO EXPOSED ROOF DECK DETAIL
3" = 1'-0"

PROFESSIONAL CERTIFICATION:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 8490
EXPIRATION DATE: 3/4/2021

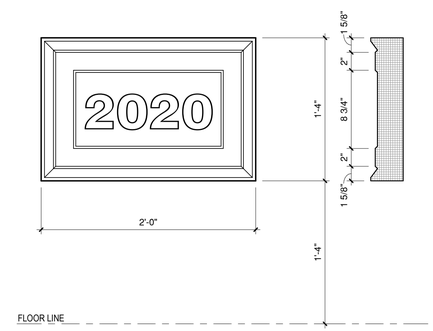
NOTE:
DETAILS WITHIN THIS DRAWING, TITLED AS "TYPICAL", INDICATE COMMON NON-SPECIFIC CONDITIONS OCCURRING THROUGHOUT BUILDING. THE LARGE SCALE ALLOWS A MORE COMPREHENSIVE LEVEL OF DETAIL TO BE SHOWN. SPECIFIC CONSTRUCTION CONDITIONS WILL VARY ACCORDING TO MATERIAL AND DIMENSIONS, MORE ACCURATELY SHOWN AS PART OF INDIVIDUAL SECTIONS AND DETAILS THROUGHOUT THE CONSTRUCTION DOCUMENTS.



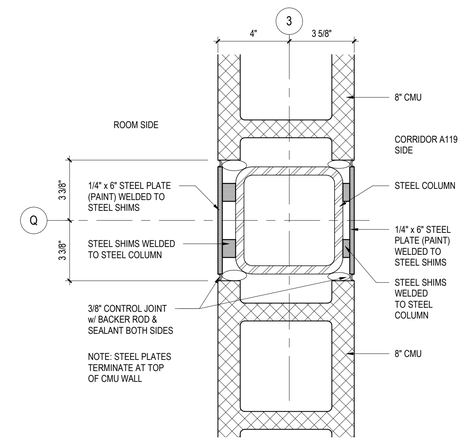
5 A5.5 TYPICAL BULKHEAD DETAIL AT CMU
3" = 1'-0"



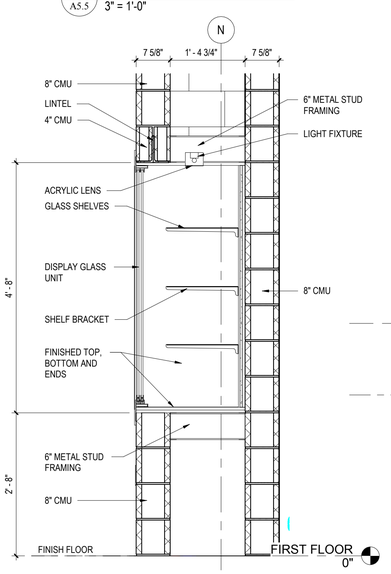
6 A5.5 KNOX BOX ELEVATION AND SECTION
3" = 1'-0"



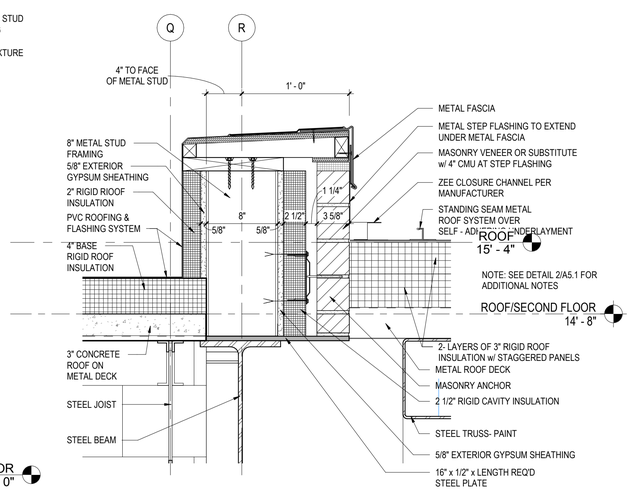
7 A5.5 DATE STONE DETAIL
1 1/2" = 1'-0"



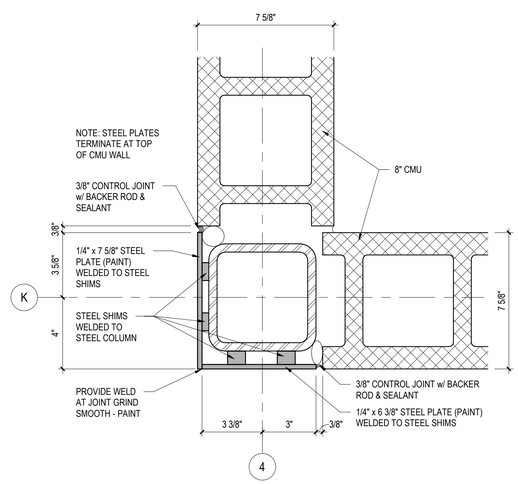
8 A5.5 PLAN DETAIL
3" = 1'-0"



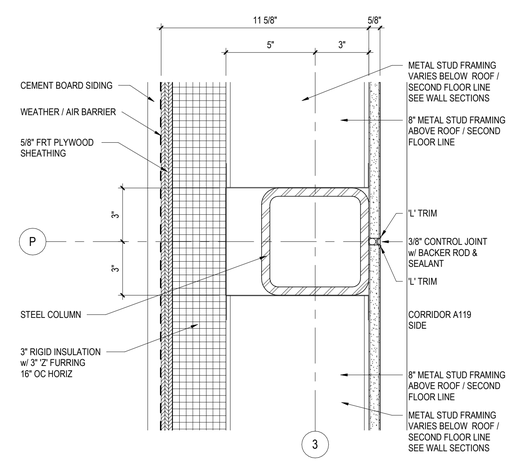
9 A5.5 TYPICAL DISPLAY CASE DETAIL
3/4" = 1'-0"



10 A5.5 DETAIL
1 1/2" = 1'-0"



11 A5.5 PLAN DETAIL
3" = 1'-0"



12 A5.5 TYPICAL GYPSUM BOARD CONTROL JOINT DETAIL
3" = 1'-0"

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

DETAILS

PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A5.5

ROOM FINISH SCHEDULE

NUMBER	NAME	COLOR SCHEME	FLOOR	BASE	WALLS: WALL FINISH	WALLS: WAINSCOT FINISH	WALLS: WAINSCOT HEIGHT	CEILING FINISH	REMARKS
A100	SECURE VESTIBULE		EM	RB/BRICK	PNT/BRICK			PSTR	SEE GENERAL NOTES
A101	RECEPTION		CPT1	RB	PNT			ACT2	R51
A102	OFFICE		CPT1	RB	PNT			ACT2	R51
A103	OFFICE		CPT1	RB	PNT			ACT2	R51
A104	OFFICE		CPT1	RB	PNT			ACT2	R51
A105	WORK ROOM		SV1	RB	PNT			ACT2	
A106	CORRIDOR		CPT1	RB	PNT			ACT2	R51
A107	STORAGE		SV1	RB	PNT			ACT2	
A108	STORAGE		SV1	RB	PNT			ACT2	
A109	OFFICE		CPT1	RB	PNT			ACT2	R51
A110	OFFICE		CPT1	RB	PNT			ACT2	R51
A111	OFFICE		CPT1	RB	PNT			ACT2	R51
A112	CONF		CPT1	RB	PNT			ACT2	R51
A113	CORRIDOR		PT1/PT2	PT1	PNT			ACT2/PNT	R51, R76
A114	MAINT OFFICE		SCONC	RB	PNT			ACT1	
A115	SERVER ROOM		SDT	RB	PNT			PSTR	
A116	MECH ROOM		SCONC	--	PNT			PSTR	
A117	BREAKROOM		SV1	RB	PNT			ACT1	
A118	CHAIR STOR		SV1	RB	PNT			ACT1	
A119	CORRIDOR		PT1/PT2	PT1	PNT/VWC			ACT2/PSTR/PNT	R2, R51, R56, R76, R77
A120	CORRIDOR		SV1	RB	PNT			ACT1	R51
A121	MENS LOCKER RM		RES	RES	EPX2			ACT3EPX2	R1, R26, R53, R76, R78
A122	WOMENS LOCKER RM		RES	RES	EPX2			ACT3EPX2	R1, R26, R53, R76, R78
A123	WEIGHT ROOM		ARF	RB	PNT	PNT	7'-0"	ACT1	R51, R54
A124	WOMENS		PT1	PT1	PT3/PT4			ACT1	R57
A125	MENS		PT1	PT1	PT3/PT4			ACT1	R57
A126	MEN/WOMEN INSTRUCTOR LOCKER ROOM		RES	RES	EPX2/CT1			ACT3	R58
A127	SHOWER		RES	RES	CT1			EPX2	R1, R26, R53, R58, R78
A128	SHOWER		RES	RES	CT1			EPX2	R1, R26, R53, R58, R78
A129	SHOWER		RES	RES	CT1			EPX2	R1, R26, R53, R58, R78
A130	SHOWER		RES	RES	CT1			EPX2	R1, R26, R53, R58, R78
A131	SHOWER		RES	RES	CT1			EPX2	R1, R26, R53, R58, R78
A132	TOILET ROOM		RES	RES	CT1			ACT1	
A133	TOILET		RES	RES	CT1			ACT1	
A134	SMALL CLASSROOM		SV1	RB	PNT			ACT1	R51
A135	DATA		SDT	RB	PNT			PSTR	
A136	ELEC		SDT	RB	PNT			PSTR	
A137	CUSTODIAL		SV1	RB	EPX1			ACT1	
A138	LAUNDRY		SV1	RB	EPX1			ACT1	
A139	CORRIDOR		SV1	RB	PNT			ACT1	R51
A140	GENERAL STORAGE		SV1	RB	PNT			ACT1	
A141	LEARNING RESOURCE/COMMONS		CPT2	RB	PNT			ACT2/PNT	R51, R76, R77
A142	STORAGE		SV1	RB	PNT			PSTR	
B100	LARGE CLASSROOM		CPT2	RB	PNT			ACT1	R51
B101	STORAGE		SV1	RB	PNT			ACT1	
B102	LARGE CLASSROOM		CPT2	RB	PNT			ACT1	R51
B103	STORAGE		SV1	RB	PNT			ACT1	
B104	CORRIDOR		SV1	RB	PNT			ACT1	R51
B105	STORAGE		SV1	RB	PNT			ACT1	
B106	SMALL CLASSROOM		CPT2	RB	PNT			ACT1	R51
B107	CUST		SV1	RB	EPX1			ACT1	
B108	OBSERVATION		SV1	RB	PNT			ACT1	R55
B109	SMALL CLASSROOM		SV1	RB	PNT			ACT1	R51
C100	MULTI-PURPOSE		SV1	RB	PNT	PNT	12'-0"	PSTR	R52

ROOM FINISH SCHEDULE- ALTERNATE

NUMBER	NAME	COLOR SCHEME	FLOOR	BASE	WALLS: WALL FINISH	WALLS: WAINSCOT FINISH	WALLS: WAINSCOT HEIGHT	CEILING FINISH	REMARKS
B110*	LARGE CLASSROOM		CPT2	RB	PNT			ACT1/PNT	R51, R76
B111*	STORAGE		SV1	RB	PNT			ACT1	
B112*	LARGE CLASSROOM		CPT2	RB	PNT			ACT1/PNT	R51, R76
B113*	STORAGE		SV1	RB	PNT			ACT1	
B114*	STORAGE		SV1	RB	PNT			ACT1	
B115*	DATA		SDT	RB	PNT			PSTR	
B116*	SMALL CLASSROOM		CPT2	RB	PNT			ACT1	R51
B117*	ELEC.		SDT	RB	PNT			PSTR	
B118*	STORAGE		SV1	RB	PNT			ACT1	
B119*	SMALL CLASSROOM		CPT2	RB	PNT			ACT1	R51
B120*	CORRIDOR		SV1	RB	PNT			ACT1/PNT	R5, R76

ROOM FINISH SCHEDULE LEGEND

FLOOR FINISH

ARF	ATHLETIC RESILIENT FLOORING
CPT	CARPET
CT	CERAMIC TILE
EM	ENTRANCE MAT
PT	PORCELAIN TILE
RES	RESINOUS FLOORING
SCONC	CONCRETE WITH SEALER
SDT	STATIC DISSAPATIVE TILE
SV	SHEET VINYL

FLOOR REMARKS

R1: PROVIDE RESINOUS FLOORS AT SHOWER.
R2: SEE I7.1 FOR VARYING FLOOR MATERIALS.
R3-R25: NOT USED

BASE FINISH

CT	CERAMIC TILE
PT	PORCELAIN TILE
RES	RESINOUS
RB	RUBBER

BASE REMARKS

R26: PROVIDE RESINOUS BASE AT SHOWER.
R27-R50: NOT USED

WALL FINISH

CT	CERAMIC TILE
EPX	EPOXY PAINT
PNT	PAINT
VWC	VINYL WALL COVERING

WALL REMARKS

R51: PROVIDE ACCENT WALL.
R52: PROVIDE (2) 8"H STRIPE ABOVE WAINSCOT & ACOUSTICAL WALL PANELS.
R53: PROVIDE CERAMIC TILE WALLS AT SHOWER.
R54: PROVIDE 16"H & 8"H STRIPE ABOVE WAINSCOT.
R55: PROVIDE MARKER BOARD PAINT ON ENTIRE WALL. SEE I7 SERIES DRAWING FOR LOCATION.
R56: PROVIDE WALL GRAPHIC, SEE INTERIOR ELEVATIONS AND I7 SERIES DRAWING FOR LOCATION.
R57: PROVIDE (2) 6" H PORCELAIN TILE ACCENT STRIPE. SEE ELEVATIONS 2.8.
R58: SEE I7.2 FOR EXTENTS OF CERMAIC TILE.
R59-R75: NOT USED

CEILING FINISH

ACT	ACOUSTICAL CEILING TILE
EPX	EPOXY PAINT
EXP	EXPOSED
PNT	PAINTED GYPSUM WALLBOARD
PSTR	PAINTED STRUCTURE

CEILING REMARKS

R76: SEE REFLECTED CEILING PLANS FOR VARYING CEILING MATERIALS AND HEIGHTS.
R77: PROVIDE ACCENT PAINT AT BULKHEADS.
R78: PROVIDE EPOXY (EPX2) PAINT AT SHOWER.
R79-R100: NOT USED

GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR DETAILED DESCRIPTION OF FINISH SYSTEM/TYPES.
2. REFER TO WALL TYPES FOR MASONRY LOCATIONS AND DETAILS.
3. GYPSUM WALLBOARD BULKHEADS AND SOFFITS SHALL BE PAINTED.
4. ALL HOLLOW METAL DOOR AND FRAMES, INTERIOR AND EXTERIOR, SHALL BE PAINTED.
5. ALL INTERIOR AND EXTERIOR FERROUS METAL SHALL BE PAINTED INCLUDING LINTELS, RAILINGS, GRILLES AND LOUVERS. (DOES NOT INCLUDE FACTORY OR PRE-FINISHED ITEMS)
6. T=TREAD, R=RISER, L=LANDING, S=STRINGER
7. SEE I7 DRAWINGS FOR BASE TRANSITIONS, MATERIAL TRANSITIONS & FLOOR PATTERN PLANS.
8. ETR = EXISTING TO REMAIN
9. EXIST = EXISTING
10. DO NOT PAINT BRICK, U.N.O.

PROFESSIONAL CERTIFICATION:
I CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 8490
EXPIRATION DATE: 3/4/2021

ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

est. 1776

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

CR

ROOM FINISH SCHEDULE
PLOT SCALE:
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

A6.1

SIGNAGE SCHEDULE

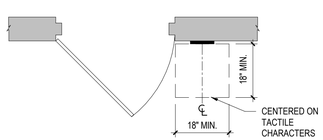
ORIGINAL		SIGN TO READ		SIGNAGE TYPE				
ROOM#	ARCHITECTURAL ROOM NAME	ROOM#	SIGN TO READ	TYPE	ADA	FEMALE	MALE	QTY
FIRST FLOOR								
A100	SECURE VESTIBULE	--	--	--				0
A101	RECEPTION	TBD	RECEPTION	1A				2
A102	OFFICE	TBD	OFFICE	1B				1
A103	OFFICE	TBD	OFFICE	1B				1
A104	OFFICE	TBD	OFFICE	1B				1
A105	WORK ROOM	TBD	WORK ROOM	1A				1
A106	CORRIDOR	--	--	--				0
A107	STORAGE	TBD	STORAGE	1A				1
A108	STORAGE	TBD	STORAGE	1A				1
A109	OFFICE	TBD	OFFICE	1B				1
A110	OFFICE	TBD	OFFICE	1B				1
A111	OFFICE	TBD	OFFICE	1B				1
A112	CONF	TBD	CONFERENCE ROOM	1C				1
A113	CORRIDOR	--	--	--				0
A114	MAINT OFFICE	TBD	OFFICE	1B				1
A115	SERVER ROOM	TBD	SERVER	1A				1
A116	MECH ROOM	TBD	MECHANICAL	1A				1
A117	BREAKROOM	TBD	KITCHEN	1A				1
A118	CHAIR STOR	TBD	STORAGE	1A				1
A119	CORRIDOR	--	--	--				0
A120	CORRIDOR	--	--	--				0
A121	MENS LOCKER RM	--	MEN LOCKER ROOM	2B	●		●	1
A122	WOMENS LOCKER RM	--	WOMEN LOCKER ROOM	2C	●	●		1
A123	WEIGHT ROOM	TBD	WEIGHT ROOM	1A				2
A124	WOMENS	--	WOMEN	2C	●	●		1
A125	MENS	--	MEN	2B	●		●	1
A126	MEN/WOMEN INSTRUCTOR LOCKER ROOM	--	INSTRUCTOR LOCKER ROOM	2A	●	●	●	1
A127	SHOWER	--	SHOWER	2A	●	●	●	1
A128	SHOWER	--	SHOWER	2A	●	●	●	1
A129	SHOWER	--	SHOWER	2A	●	●	●	1
A130	SHOWER	--	SHOWER	2A	●	●	●	1
A131	SHOWER	--	SHOWER	2A	●	●	●	1
A132	TOILET ROOM	--	RESTROOM	2A	●	●	●	1
A133	TOILET	--	RESTROOM	2A	●	●	●	1
A134	SMALL CLASSROOM	TBD	CLASSROOM	1B				1
A135	DATA	TBD	DATA	1A				1
A136	ELEC	TBD	ELECTRIC	1A				1
A137	CUSTODIAL	TBD	CUSTODIAL	1A				1
A138	LAUNDRY	TBD	LAUNDRY	1A				1
A139	CORRIDOR	--	--	--				0
A140	GENERAL STORAGE	TBD	STORAGE	1A				1
A141	LEARNING RESOURCE/COMMONS	--	LEARNING/ COMMUNITY SPACE	1A				2
A142	STORAGE	TBD	STORAGE	1A				1
B100	LARGE CLASSROOM	TBD	CLASSROOM	1B				1
B101	STORAGE	TBD	STORAGE	1A				1
B102	LARGE CLASSROOM	TBD	CLASSROOM	1B				1
B103	STORAGE	TBD	STORAGE	1A				1
B104	CORRIDOR	--	--	--				0
B105	STORAGE	TBD	STORAGE	1A				1
B106	SMALL CLASSROOM	TBD	CLASSROOM	1B				1
B107	CUST	--	CUSTODIAL	1A				1
B108	OBSERVATION	TBD	OBVERSATION	1A				1
B109	SMALL CLASSROOM	TBD	CLASSROOM	1B				1
C100	MULTI-PURPOSE	TBD	MULTI-PURPOSE	1A				1

SIGNAGE SCHEDULE ALTERANATE

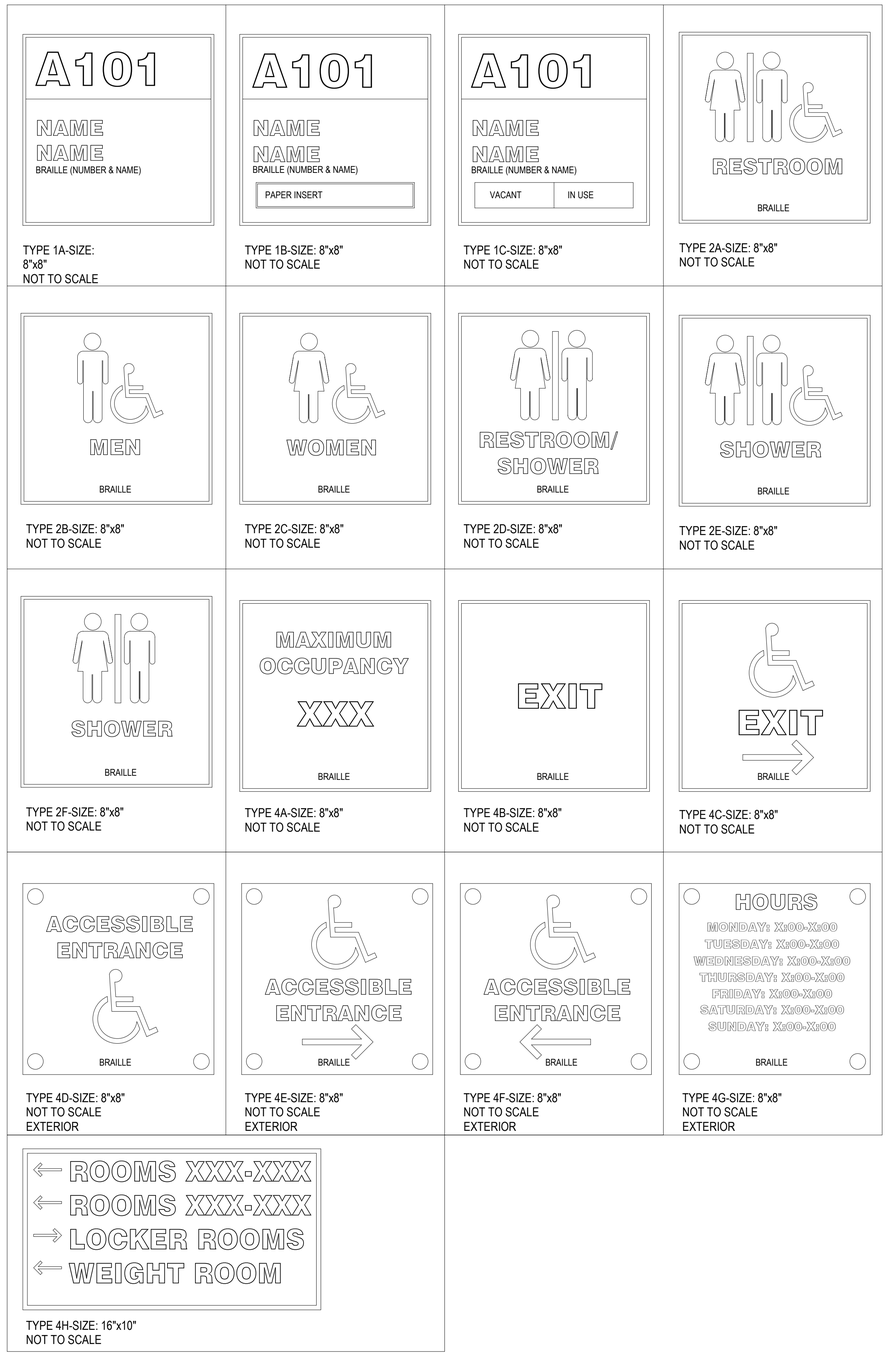
ORIGINAL		SIGN TO READ		SIGNAGE TYPE				
ROOM#	ARCHITECTURAL ROOM NAME	ROOM#	SIGN TO READ	TYPE	ADA	FEMALE	MALE	QTY
FIRST FLOOR								
B110*	LARGE CLASSROOM	TBD	CLASSROOM	1B				1
B111*	STORAGE	TBD	STORAGE	1A				1
B112*	LARGE CLASSROOM	TBD	CLASSROOM	1B				1
B113*	STORAGE	TBD	STORAGE	1A				1
B114*	STORAGE	TBD	STORAGE	1A				1
B115*	DATA	--	DATA	1A				1
B116*	SMALL CLASSROOM	TBD	CLASSROOM	1B				1
B117*	ELEC.	--	ELECTRIC	1A				1
B118*	STORAGE	TBD	STORAGE	1A				1

IN ADDITION TO SIGNAGE SCHEDULE, PROVIDE THE FOLLOWING TYPES

DOOR NUMBER	SIGN TYPE	QTY	DOOR NUMBER	SIGN TYPE	QTY
A100	4D	1	A139	4B	1
A100A	4B	1	B100B	4B	1
A100C	4B	1	B102B	4B	1
A113	4B	1	B104	4B	1
A116	4C	1	B104	4E	1
A119	4B	1	B110B (ALT.)	4B	1
A119	4D	1	B112B (ALT.)	4B	1
A120	4F	1	B120	4B	1
A120A	4B	1	B120 (ALT.)	4B	1
A120B	4B	1	B120	4E	1
A123	4G	1	C100	4B	1
A123 (29 OCC.)	4A	1	C100 (511 OCC.)	4A	1
A123B	4B	1	VARIES- TBD	4H	5



1 / A6.2 PANEL SIGNAGE MOUNTING DETAIL
1/2" = 1'-0"



GENERAL NOTE IN REFERENCE TO A6.2 DRAWINGS

1. INSTALL SIGNS LEVEL, PLUMB, AND AT THE HEIGHT INDICATED, WITH SIGN SURFACES FREE FROM DISTORTION OR OTHER DEFECTS IN APPEARANCE.
2. TACTILE CHARACTERS SHALL BE 48 INCHES MINIMUM ABOVE THE FLOOR, MEASURED TO THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 INCHES MAXIMUM ABOVE THE FLOOR, MEASURED TO THE BASELINE OF THE HIGHEST TACTILE CHARACTER.
3. WHERE A TACTILE SIGN IS PROVIDED AT A DOOR, THE SIGN SHALL BE ALONGSIDE THE DOOR AT THE LATCH SIDE. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAVES, THE SIGN SHALL BE TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE OF A SINGLE DOOR, OR TO THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE ON THE NEAREST ADJACENT WALL.
3. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR AREA 18 INCHES MINIMUM BY 18 INCHES MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.
   a. **EXCEPTION:** SIGNS WITH TACTILE CHARACTERS SHALL BE PERMITTED ON THE PUSH SIDE OF DOORS WITH CLOSERS AND WITHOUT HOLD OPEN DEVICES.
5. GENERAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR REGARDING NUMBERING FOR ELECTRICAL PANELS.
6. SIGNS FOR ELECTRICAL ROOMS/CLOSETS SHALL BE INSTALLED CENTERED ON DOOR.

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LICENSE NO. 8490
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ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272 www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

SIGNAGE SCHEDULE
PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A6.2

DOOR SCHEDULE

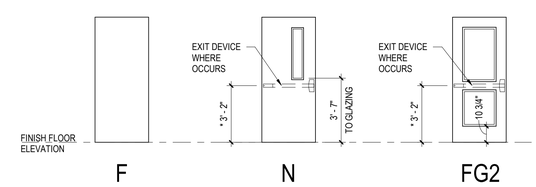
OPENING NUMBER	DOOR & FRAME U.L. RATING	DOOR TYPE	DOOR MATERIAL	DOOR DIMENSIONS WIDTH LEAF 1	DOOR DIMENSIONS WIDTH LEAF 2	DOOR DIMENSIONS HEIGHT	DOOR DIMENSIONS Thickness	FRAME TYPE	FRAME MATERIAL	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	HARDWARE SET	REMARKS
A100A		FG2	ALUM	3' - 0"		7' - 2"	2 3/8"	A1	ALUM	2/A5.3	2/A6.9	4/A6.9 & 6/A6.9	01	SEE FRAME ELEVATION FOR DETAILS; CARD READER; DOOR TIED INTO CONSOLE AT RECEP DESK IN A101 WITH RELEASE BUTTON TO TEMP UNLOCK DOOR; CALL BUTTON TO RECEP DESK IN A101, A104 & A109 WITH RELEASE BUTTON TO TEMP UNLOCK DOOR
A100B		FG2	ALUM	3' - 0"	3' - 0"	7' - 2"	2 3/8"	A1	ALUM	2/A5.3	2/A6.9	4/A6.9 & 6/A6.9	02	SEE FRAME ELEVATION FOR DETAILS
A100C		FG2	ALUM	3' - 0"		7' - 2"	1 3/4"	A3	ALUM	5/A6.9	3/A6.9 & 3A/6.10	-	03	SEE FRAME ELEVATION FOR DETAILS; CARD READER; DOOR TIED INTO CONSOLE AT RECEP DESK IN A101 WITH RELEASE BUTTON TO TEMP UNLOCK DOOR
A100D		FG2	ALUM	3' - 0"	3' - 0"	7' - 2"	1 3/4"	A3	ALUM	5/A6.9	3/A6.9 & 3A/6.10	-	04	SEE FRAME ELEVATION FOR DETAILS
A101A		FG2	ALUM	3' - 0"		7' - 2"	1 3/4"	H1	ALUM	4/A6.8	5/A6.8	-	05	CARD READER; DOOR TIED INTO CONSOLE AT RECEP DESK IN A101 WITH RELEASE BUTTON TO TEMP UNLOCK DOOR
A101B		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	26	
A102		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	10	
A103		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	10	
A104		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	11	CARD READER
A106		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	13	CARD READER
A107		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	13	CARD READER
A108		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	13	CARD READER
A109		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	11	CARD READER
A110		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	10	
A111		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	10	
A112		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	4/A6.5	5/A6.5	-	27	
A113	90 MIN	F	WD	3' - 6"	3' - 6"	7' - 2"	1 3/4"	H1	HM	13/A6.5	12/A6.5	-	25	ELECTRONIC HOLD OPEN; TIE INTO AUTOMATIC FIRE ALARM SYSTEM
A114		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	11	CARD READER
A115		F	WD	3' - 0"	3' - 0"	7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	15	CARD READER
A116A		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	13	CARD READER
A116B		F	HM	4' - 0"	4' - 0"	7' - 2"	1 3/4"	H1	HM	10/A6.5	11/A6.5	-	09	CARD READER; CALL BUTTON TO RECEP DESK IN A101, A104 & A109 WITH RELEASE BUTTON TO TEMP UNLOCK DOOR
A117A		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	28	
A118	45 MIN	F	WD	3' - 0"	3' - 0"	7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	24	
A119		FG2	ALUM	3' - 0"	3' - 0"	7' - 2"	2 3/8"	W5	ALUM	1/A6.8	2/A6.8 & 6/A6.8	5/A6.4 & 6/A6.4	06	SEE FRAME ELEVATION FOR DETAILS; CARD READER; CALL BUTTON TO RECEP DESK IN A101, A104 & A109 WITH RELEASE BUTTON TO TEMP UNLOCK DOOR
A120A		N	WD	3' - 6"	3' - 6"	7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	07	ELECTRONIC HOLD OPEN; CARD READER; TIE INTO AUTOMATIC FIRE ALARM SYSTEM
A120B		FG2	ALUM	3' - 0"	3' - 0"	7' - 2"	2 3/8"	W7	ALUM	1/A6.8 SIM	2/A6.8 SIM	6/A5.4 SIM	06	CARD READER
A121		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	21	
A122		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	21	
A123A		FG2	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	14	CARD READER
A123B		FG2	ALUM	3' - 0"		7' - 2"	2 3/8"	W3	ALUM	1/A6.8	2/A6.8	5/A6.4 & 6/A6.4	01	SEE FRAME ELEVATION FOR DETAILS; CARD READER
A124		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	21	
A125		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	21	
A126		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.8	2/A6.5	-	13	CARD READER
A127		F	WD	2' - 8"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	20	
A128		F	WD	2' - 8"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	20	
A129		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	20	
A130		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	20	
A131		F	WD	2' - 8"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	20	
A132		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	20	
A133		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.8	2/A6.5	-	20	
A134A		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	11	CARD READER
A134B		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	12	CARD READER
A135		F	WD	3' - 0"	3' - 0"	7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.8	-	16	
A136		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	17	
A137		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	18	
A138		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	17	
A139		FG2	ALUM	3' - 0"	3' - 0"	7' - 2"	2 3/8"	W7	ALUM	1/A6.8	2/A6.8	6/A5.4 SIM	06	CARD READER
A140		F	WD	3' - 0"	3' - 0"	7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	19	CARD READER
A142		F	WD	3' - 2"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	30	
B100A		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	12	CARD READER
B100B		F	HM	3' - 0"		7' - 2"	1 3/4"	H1	HM	10/A6.5	11/A6.5	-	08	CARD READER
B101A		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	13	CARD READER
B101B		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	11	CARD READER
B102A		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	12	CARD READER
B102B		F	HM	3' - 0"		7' - 2"	1 3/4"	H1	HM	10/A6.5	11/A6.5	-	08	CARD READER
B103A		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	13	CARD READER
B103B		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	11	CARD READER
B104		FG2	ALUM	3' - 0"	3' - 0"	7' - 2"	2 3/8"	W7	ALUM	1/A6.8	2/A6.8	6/A5.4 SIM	06	CARD READER
B105		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	11	CARD READER
B106		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	12	CARD READER
B107A		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	22	
B107B		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	12	CARD READER
B108		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	11	CARD READER
B109		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	12	CARD READER
C100A	45 MIN	N	WD	3' - 0"	3' - 0"	7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	23	
C100B	45 MIN	N	WD	3' - 0"	3' - 0"	7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-	23	
C100D		F	HM	3' - 0"	3' - 0"	7' - 2"	1 3/4"	H1	HM	10/A6.5	11/A6.5	-	09	CARD READER

GENERAL NOTES

PROVIDE 1" CONDUIT TO ALL DOOR FRAMES NOT SCHEDULED TO RECEIVE ELECTRONIC HARDWARE FOR FUTURE CARD READER. CONDUITS TO RUN FROM INSIDE HM FRAME TO ABOVE FINISH CEILING FOR EASY FUTURE ACCESS. BLOCK OUT AREAS IN GROUT FILLED FRAMES WITH STYROFOAM FOR FUTURE INSTALLATION OF ELECTRIC STRIKES.

DOOR TYPES

* - RECOMMENDED MOUNTING HEIGHT FROM FINISHED FLOOR TO CENTER LINE OF FIRE EXIT DEVICE
** - COORDINATE WITH DOOR MANUFACTURE REQUIREMENTS



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PROPOSED NEW
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WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

DOOR SCHEDULE
PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A6.3

DOOR SCHEDULE - ALTERNATE GC-1

OPENING NUMBER	DOOR & FRAME U.L. RATING	DOOR						FRAME					GLAZING TYPE	HARDWARE SET	SPECIAL DETAIL	REMARKS
		DOOR TYPE	DOOR MATERIAL	DIMENSIONS				FRAME TYPE	FRAME MATERIAL	DETAILS						
				WIDTH		HEIGHT	Thickness			HEAD	JAMB	SILL				
				LEAF 1	LEAF 2											
B110A*		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		31		CARD READER
B110B*		F	HM	3' - 0"		7' - 0"	1 3/4"	H1	HM	10/A6.5	11/A6.5	-		35		CARD READER
B111A*		F	WD	3' - 0"		7' - 0"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		33		CARD READER
B111B*		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		32		CARD READER
B112A*		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		31		CARD READER
B113A*		F	WD	3' - 0"		7' - 0"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		33		CARD READER
B113B*		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		32		CARD READER
B114*		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		33		CARD READER
B115*		F	WD	3' - 0"	3' - 0"	7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		37		
B116*		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		31		CARD READER
B117*		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		36		
B118*		F	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		33		CARD READER
B119*		N	WD	3' - 0"		7' - 2"	1 3/4"	H1	HM	1/A6.5	2/A6.5	-		31		CARD READER
B120*		FG2	ALUM	3' - 0"	3' - 0"	7' - 2"	2 3/8"	W7	ALUM	1/A6.8	2/A6.8	6/A5.4 SIM		34		CARD READER
B122B*		F	HM	3' - 0"		7' - 0"	1 3/4"	H1	HM	10/A6.5	11/A6.5	-		35		CARD READER

GENERAL NOTES

PROVIDE 1" CONDUIT TO ALL DOOR FRAMES NOT SCHEDULED TO RECEIVE ELECTRONIC HARDWARE FOR FUTURE CARD READER. CONDUITS TO RUN FROM INSIDE HM FRAME TO ABOVE FINISH CEILING FOR EASY FUTURE ACCESS. BLOCK OUT AREAS IN GROUT FILLED FRAMES WITH STYROFOAM FOR FUTURE INSTALLATION OF ELECTRIC STRIKES.

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PROPOSED NEW
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HAGERSTOWN, MD 21740

DOOR SCHEDULE - ALTERNATE GC-1

PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

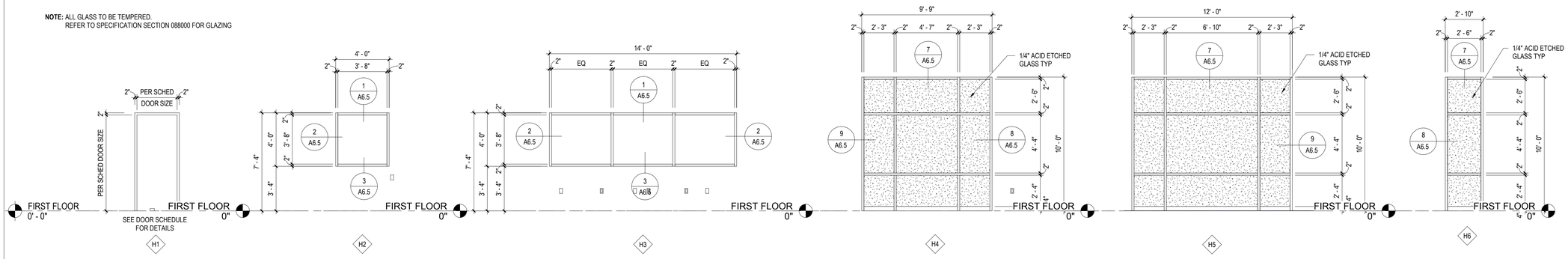
PROJECT 3089

A6.4

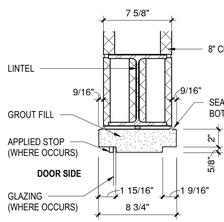
HOLLOW METAL FRAME ELEVATIONS

1/4" = 1'-0"

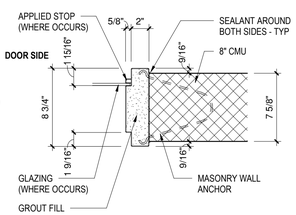
NOTE: ALL GLASS TO BE TEMPERED.
REFER TO SPECIFICATION SECTION 088000 FOR GLAZING



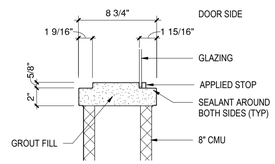
HOLLOW METAL FRAME & DOOR DETAILS



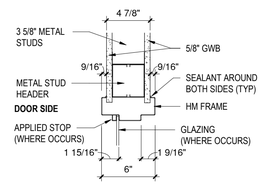
1 A6.5 HM INTERIOR HEAD - 8" CMU
1 1/2" = 1'-0"



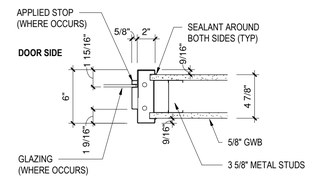
2 A6.5 HM INTERIOR JAMB - 8" CMU
1 1/2" = 1'-0"



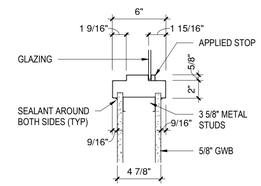
3 A6.5 HM INTERIOR SILL - 8" CMU
1 1/2" = 1'-0"



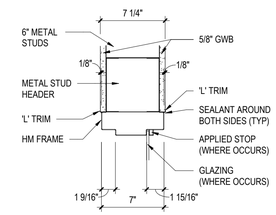
4 A6.5 HM INTERIOR HEAD - 3 5/8" STUD
1 1/2" = 1'-0"



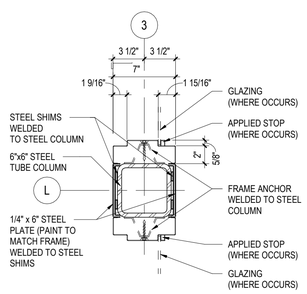
5 A6.5 HM INTERIOR JAMB - 3 5/8" STUD
1 1/2" = 1'-0"



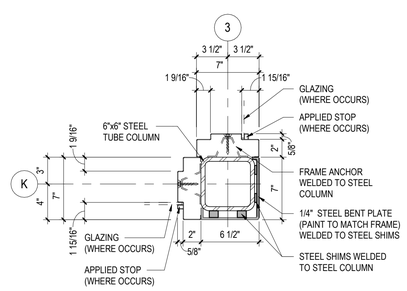
6 A6.5 HM INTERIOR SILL - 3 5/8" STUD
1 1/2" = 1'-0"



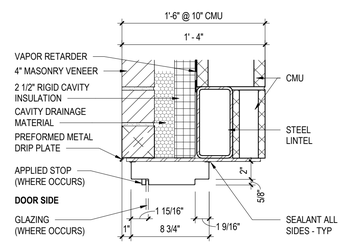
7 A6.5 HM INTERIOR HEAD - 3 5/8" STUD
1 1/2" = 1'-0"



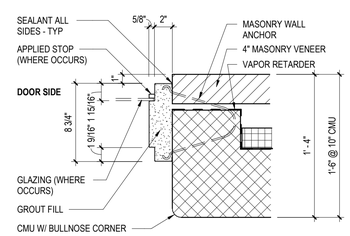
8 A6.5 HM INTERIOR JAMB AT COLUMN
1 1/2" = 1'-0"



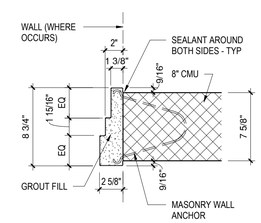
9 A6.5 HM INTERIOR JAMB AT COLUMN
1 1/2" = 1'-0"



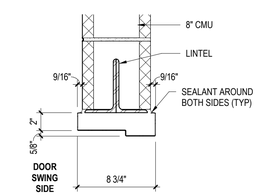
10 A6.5 HM EXTERIOR HEAD
1 1/2" = 1'-0"



11 A6.5 HM EXTERIOR JAMB
1 1/2" = 1'-0"

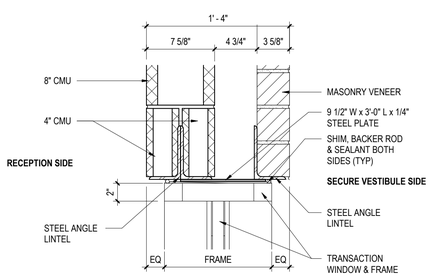


12 A6.5 HM INTERIOR JAMB - DOUBLE EGRESS
1 1/2" = 1'-0"

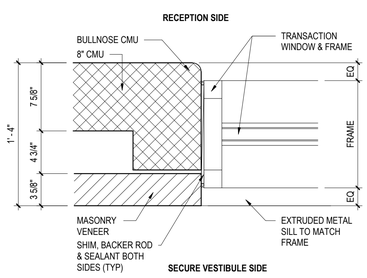


13 A6.5 HM INTERIOR HEAD - DOUBLE EGRESS
1 1/2" = 1'-0"

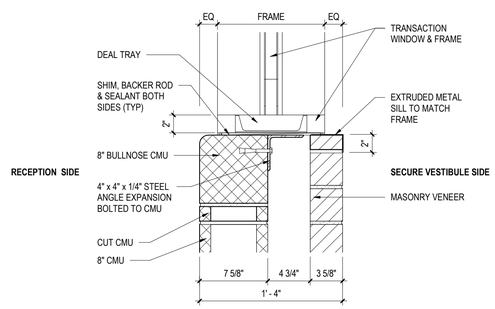
TRANSACTION WINDOW DETAILS



14 A6.5 TRANSACTION WINDOW HEAD DETAIL
1 1/2" = 1'-0"



15 A6.5 TRANSACTION WINDOW JAMB DETAIL
1 1/2" = 1'-0"



16 A6.5 TRANSACTION WINDOW SILL DETAIL
1 1/2" = 1'-0"

GLAZING LEGEND

ACID ETCHED GLAZING - SEE SPECIFICATIONS

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www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

HOLLOW METAL FRAME ELEVATIONS & DETAILS

PLOT SCALE: As indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

A6.5

ALUMINUM STOREFRONT ELEVATIONS

1/4" = 1'-0"

NOTE: 1. ALL GLASS TO BE TEMPERED ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24 INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSTION.
2. GLASS LITES GRTEATER THAN 9 SF WHERE THE BOTTOM EDGE IS WITHIN 18" OF THE FINISHED FLOOR AND THE TOP EDGE EXTENDS ABOVE 36" AFF SHALL BE TEMPERED.
3. GLASS WHERE THE FINISHED FLOOR OR GRADE ON THE OPPOSING SIDE OF GLASS IS GREATEER THAN 30" SHALL BE TEMPERED TO A HEIGHT OF 42" AFF.
4. ANY PORTION OF GLASS WITHIN CONSTRAINTS OF ABOVE REQUIREMENTS, ENTIRE PANEL SHALL BE TEMPERED.
5. REFER TO SPECIFICATION SECTION 088000 FOR GLAZING

GLAZING LEGEND

ACID ETCHED GLAZING - SEE SPECIFICATIONS

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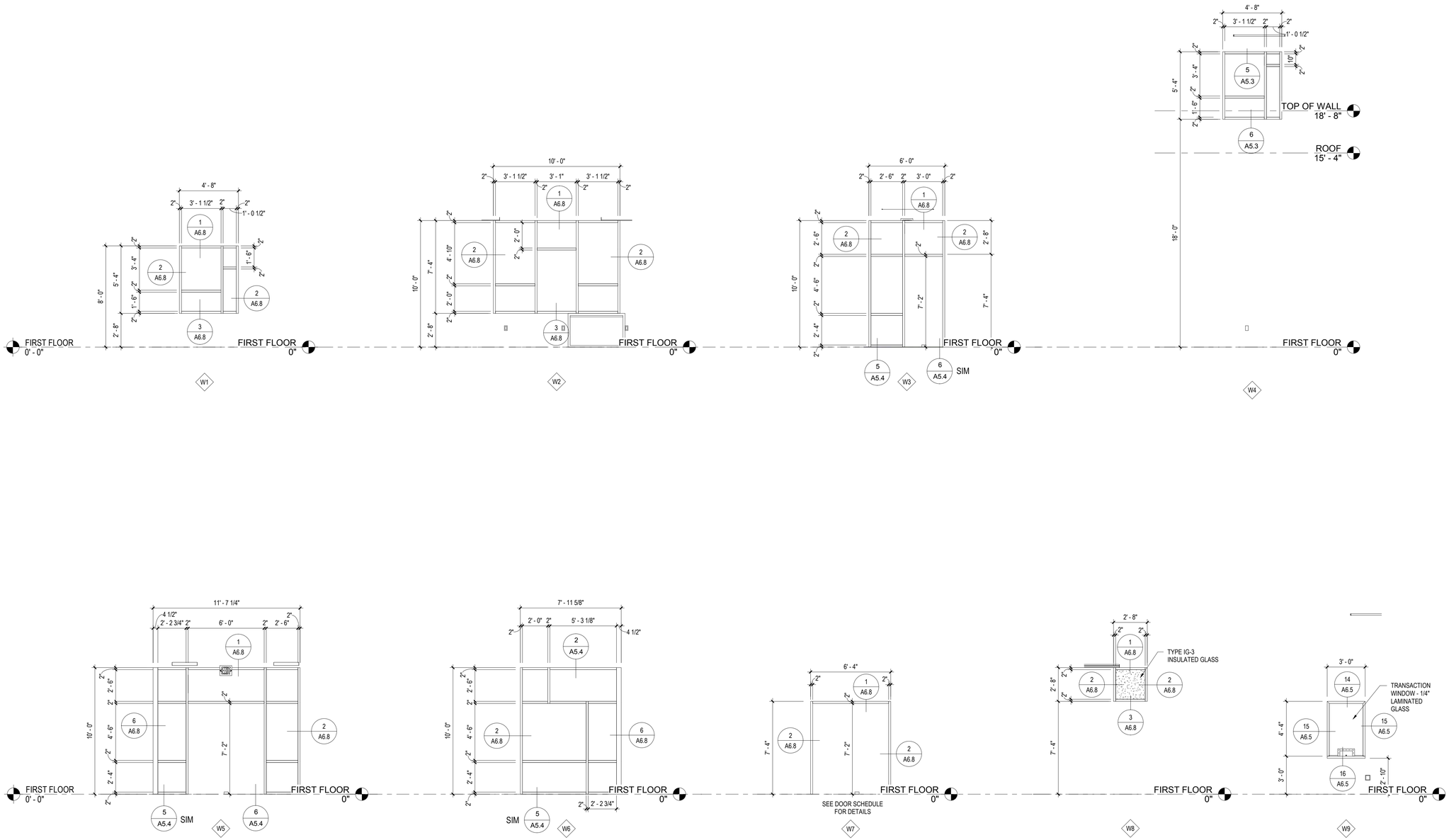

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HAGERSTOWN, MD 21740

ALUMINUM STOREFRONT ELEVATIONS

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

FILENAME:

DATE: DECEMBER 18, 2019

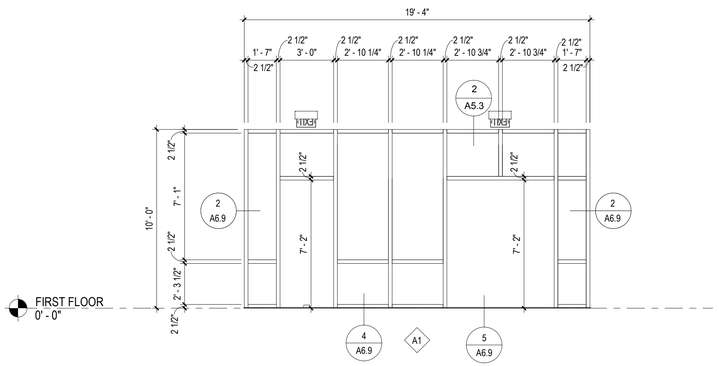
PROJECT 3089

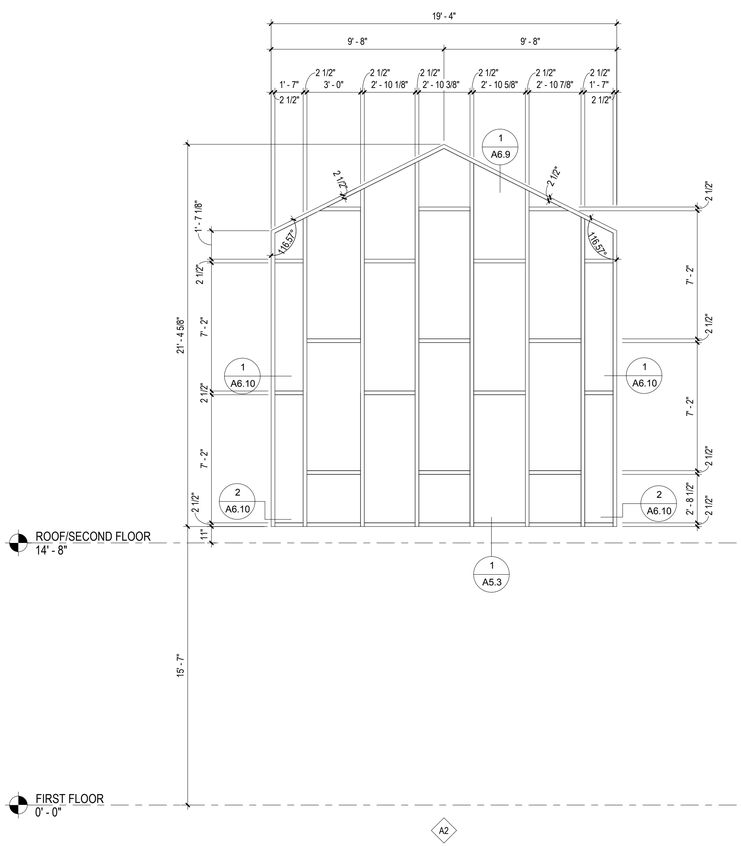
A6.6

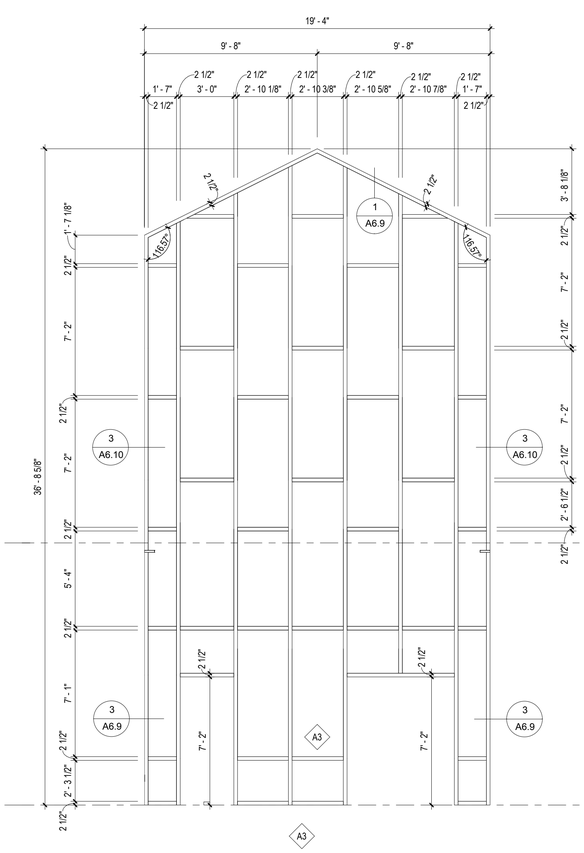
ALUMINUM CURTAIN WALL ELEVATIONS

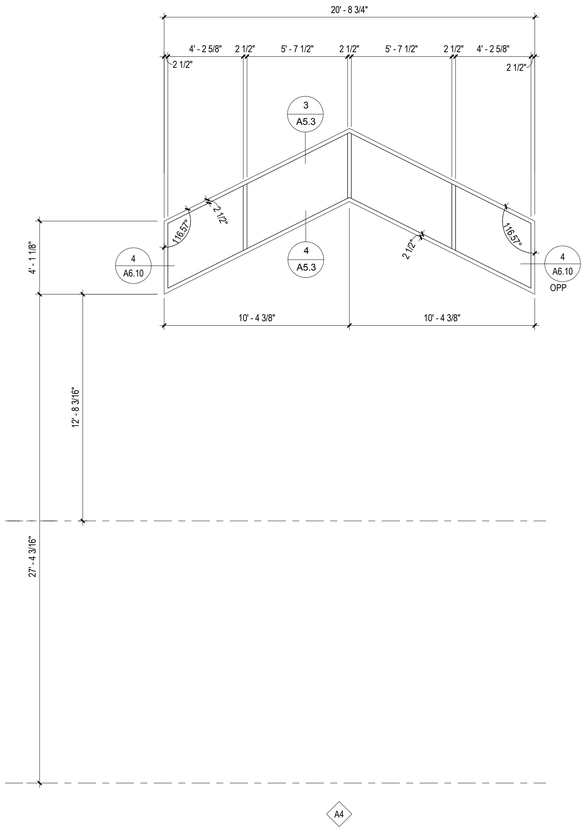
1/4" = 1'-0"

NOTE: 1. ALL GLASS TO BE TEMPERED ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24 INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSTION.
2. GLASS LITES GRTEATER THAN 9 SF WHERE THE BOTTOM EDGE IS WITHIN 18" OF THE FINISHED FLOOR AND THE TOP EDGE EXTENDS ABOVE 36" AFF SHALL BE TEMPERED.
3. GLASS WHERE THE FINISHED FLOOR OR GRADE ON THE OPPOSING SIDE OF GLASS IS GREATEER THAN 30" SHALL BE TEMPERED TO A HEIGHT OF 42" AFF.
4. ANY PORTION OF GLASS WITHIN CONSTRAINTS OF ABOVE REQUIREMENTS, ENTIRE PANEL SHALL BE TEMPERED.
5. REFER TO SPECIFICATION SECTION 088000 FOR GLAZING









GLAZING LEGEND

ACID ETCHED GLAZING
- SEE SPECIFICATIONS

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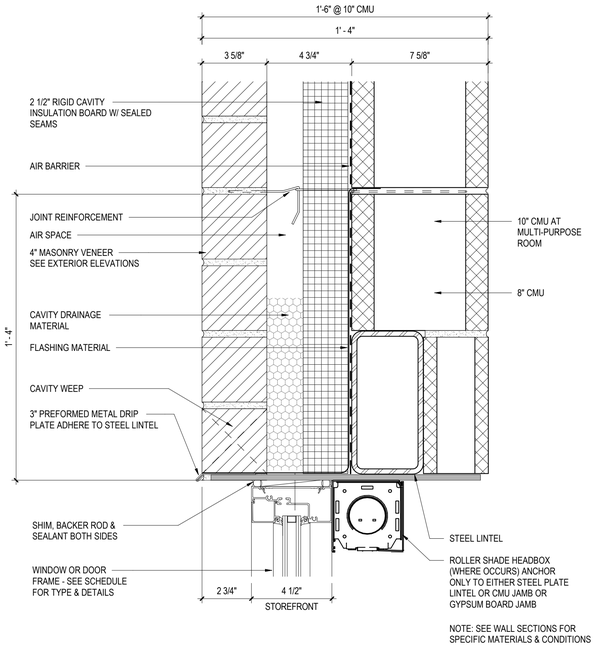
ALUMINUM CURTAIN WALL ELEVATIONS

PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

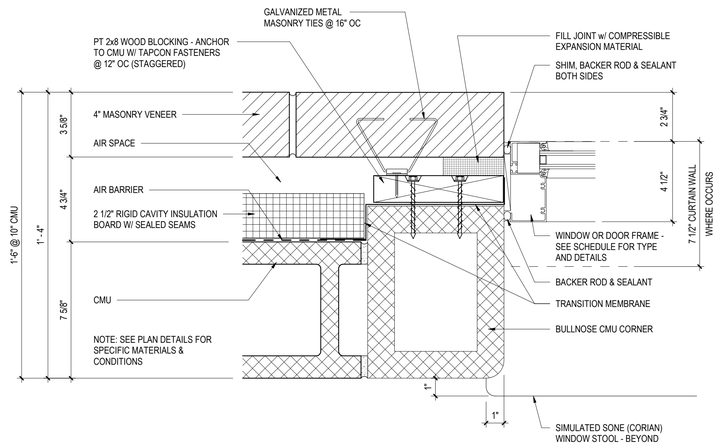
PROJECT 3089

A6.7

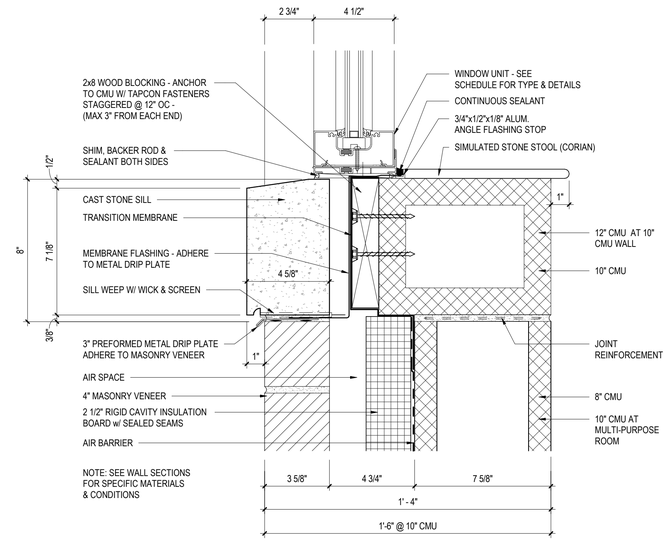
ALUMINUM STOREFRONT DETAILS



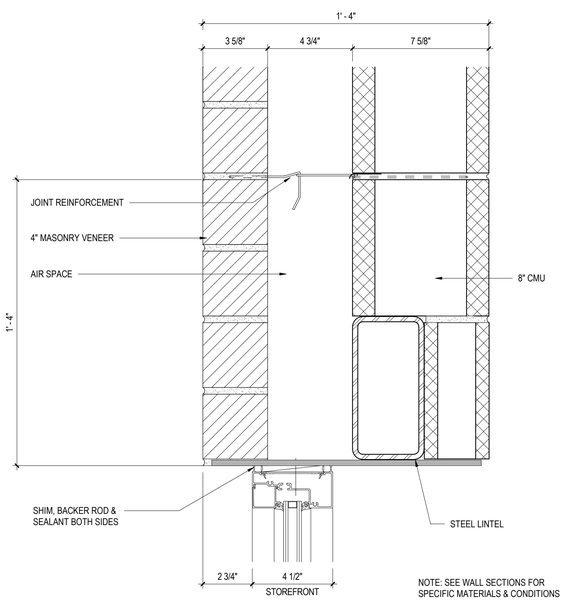
1 / A6.8 ALUMINUM EXTERIOR HEAD DETAIL
3" = 1'-0"



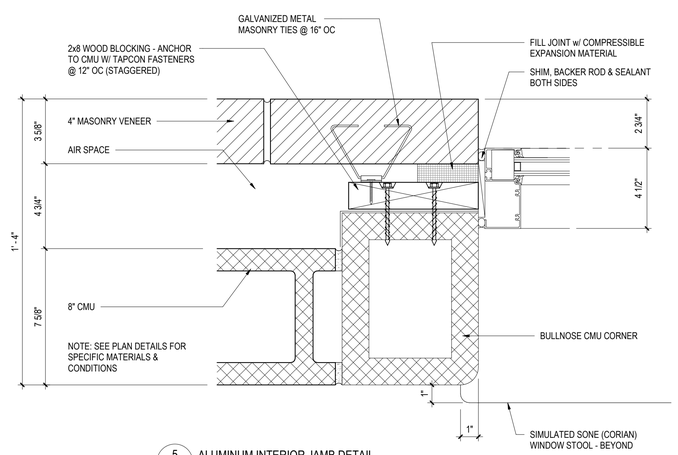
2 / A6.8 ALUMINUM EXTERIOR JAMB DETAIL
3" = 1'-0"



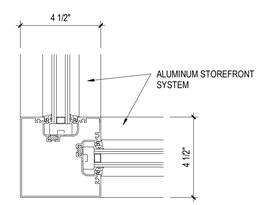
3 / A6.8 ALUMINUM EXTERIOR SILL DETAIL
3" = 1'-0"



4 / A6.8 ALUMINUM INTERIOR HEAD DETAIL
3" = 1'-0"



5 / A6.8 ALUMINUM INTERIOR JAMB DETAIL
3" = 1'-0"



6 / A6.8 JAMB DETAIL - OUTSIDE 90° CORNER
3" = 1'-0"

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CR

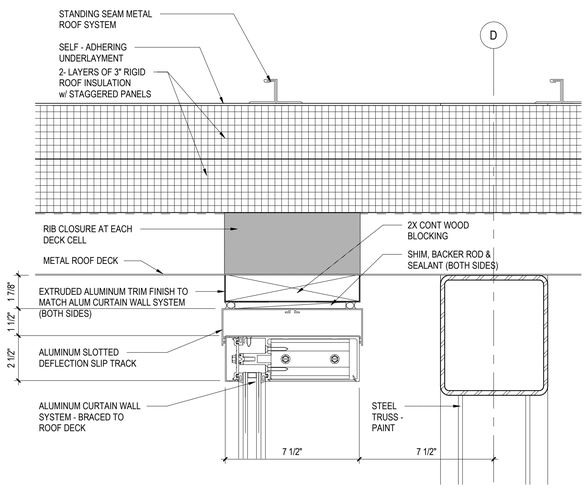
ALUMINUM STOREFRONT DETAILS

PLOT SCALE: 3" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

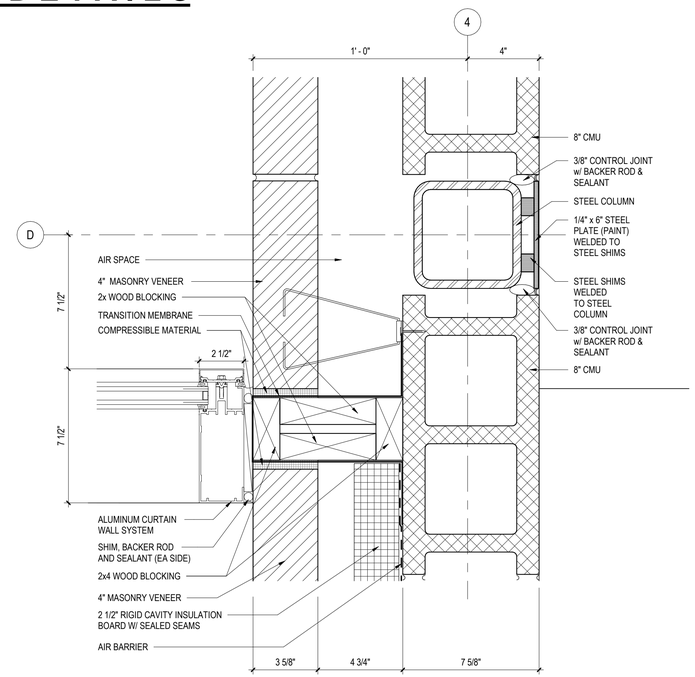
PROJECT
3089

A6.8

ALUMINUM CURTAIN WALL DETAILS



1 A6.9 ALUMINUM EXTERIOR HEAD DETAIL
3" = 1'-0"



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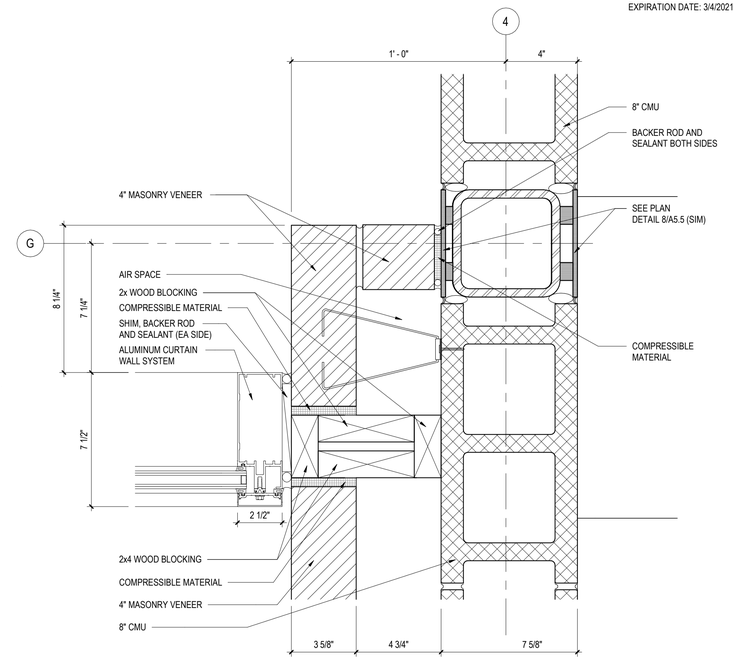

3 A6.9 ALUMINUM INTERIOR JAMB DETAIL
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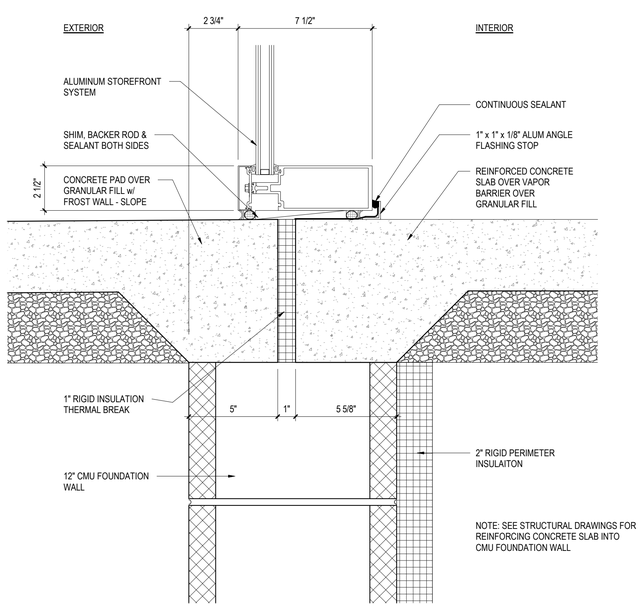
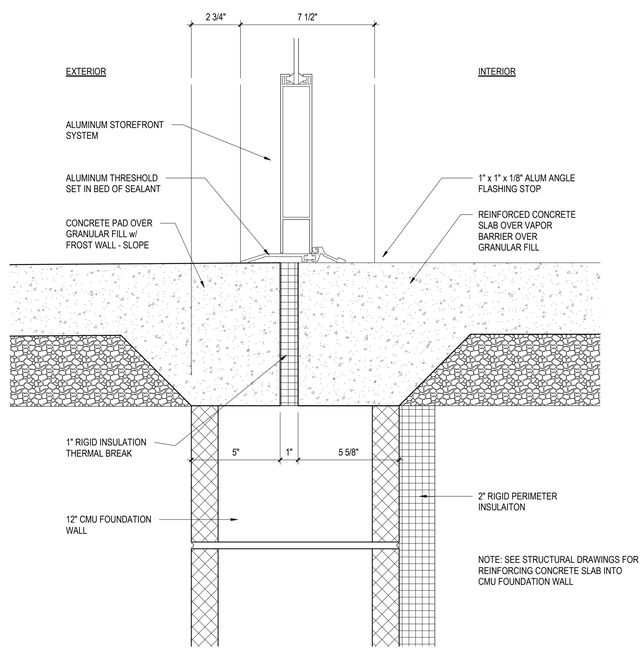
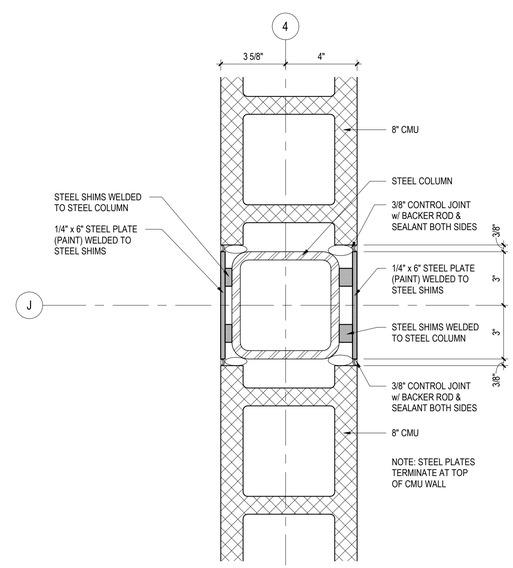


4 A6.9 ALUMINUM EXTERIOR SILL DETAIL
3" = 1'-0"



5 A6.9 ALUMINUM EXTERIOR THRESHOLD DETAIL
3" = 1'-0"



6 A6.9 DETAIL
3" = 1'-0"

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LICENSE NO. 8490
EXPIRATION DATE: 3/4/2021

ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-276
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

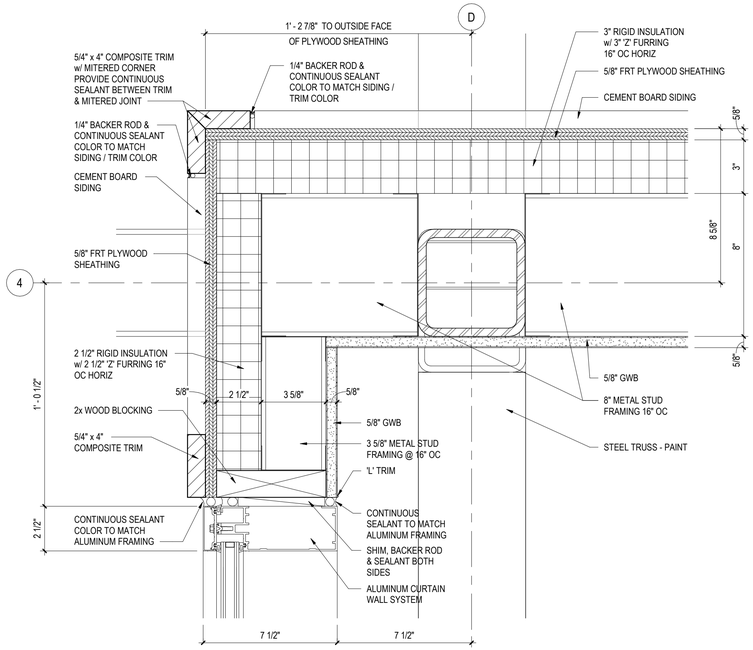
ALUMINUM CURTAIN WALL DETAILS

PLOT SCALE: 3" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

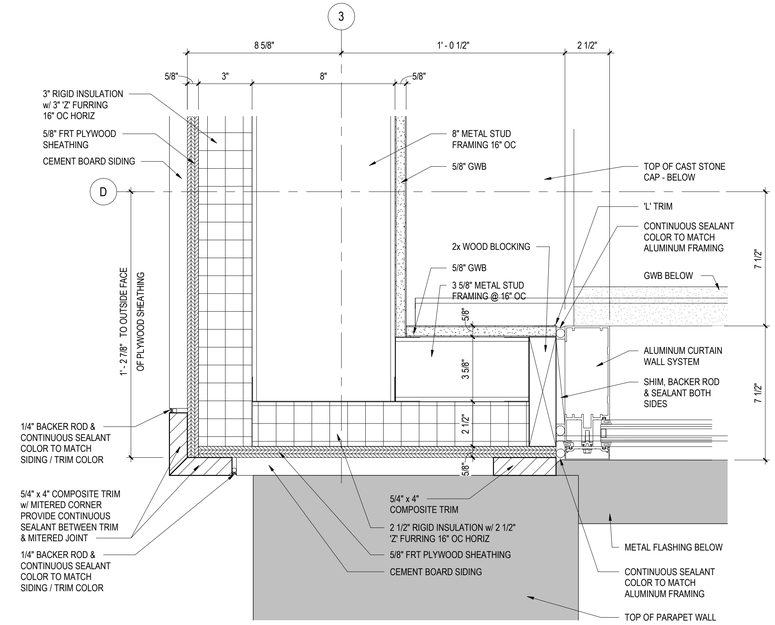
PROJECT
3089

A6.9

ALUMINUM CURTAIN WALL DETAILS



1 A6.10 ALUMINUM EXTERIOR JAMB DETAIL
3" = 1'-0"



2 A6.10 ALUMINUM EXTERIOR JAMB DETAIL
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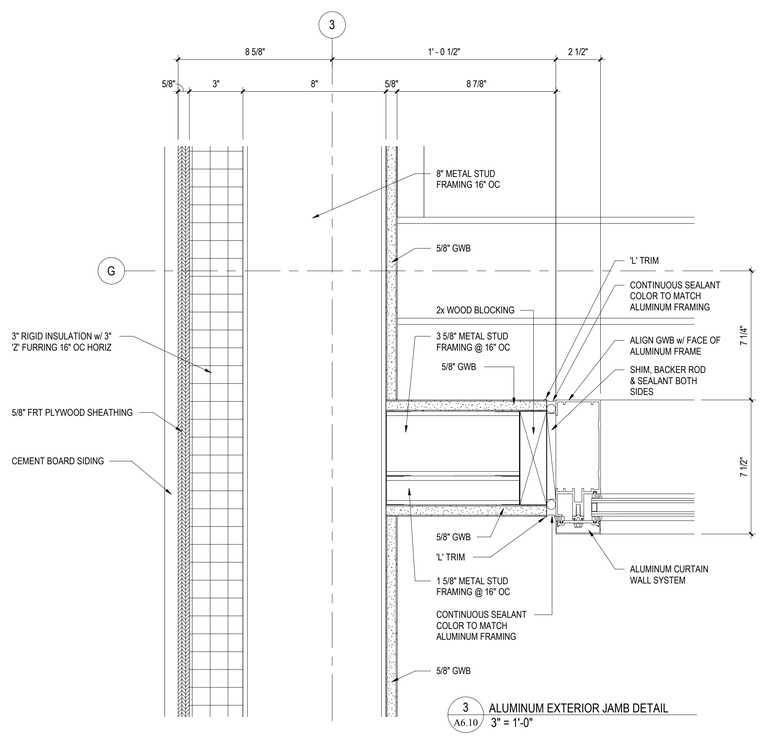
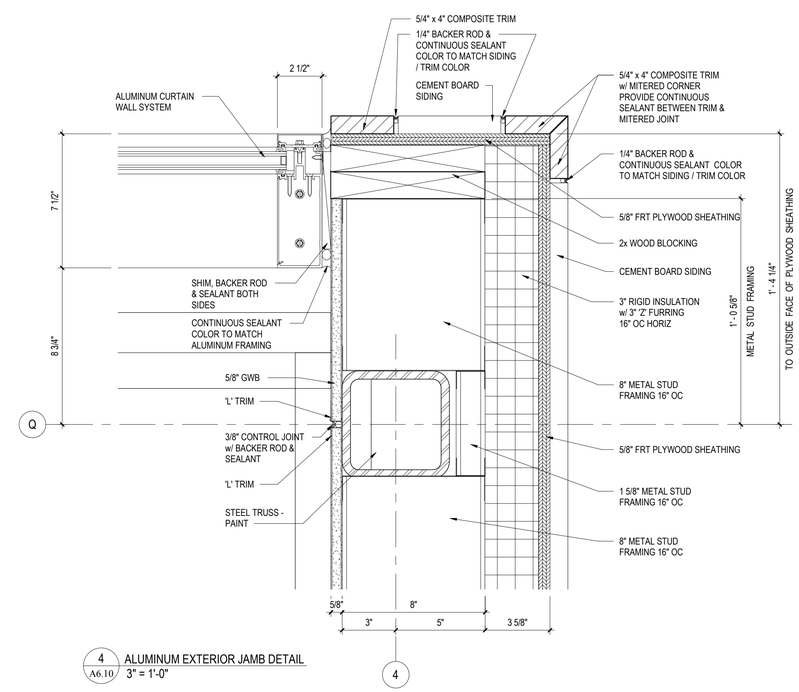


3 A6.10 ALUMINUM EXTERIOR JAMB DETAIL
3" = 1'-0"



4 A6.10 ALUMINUM EXTERIOR JAMB DETAIL
3" = 1'-0"

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ALUMINUM CURTAIN WALL DETAILS

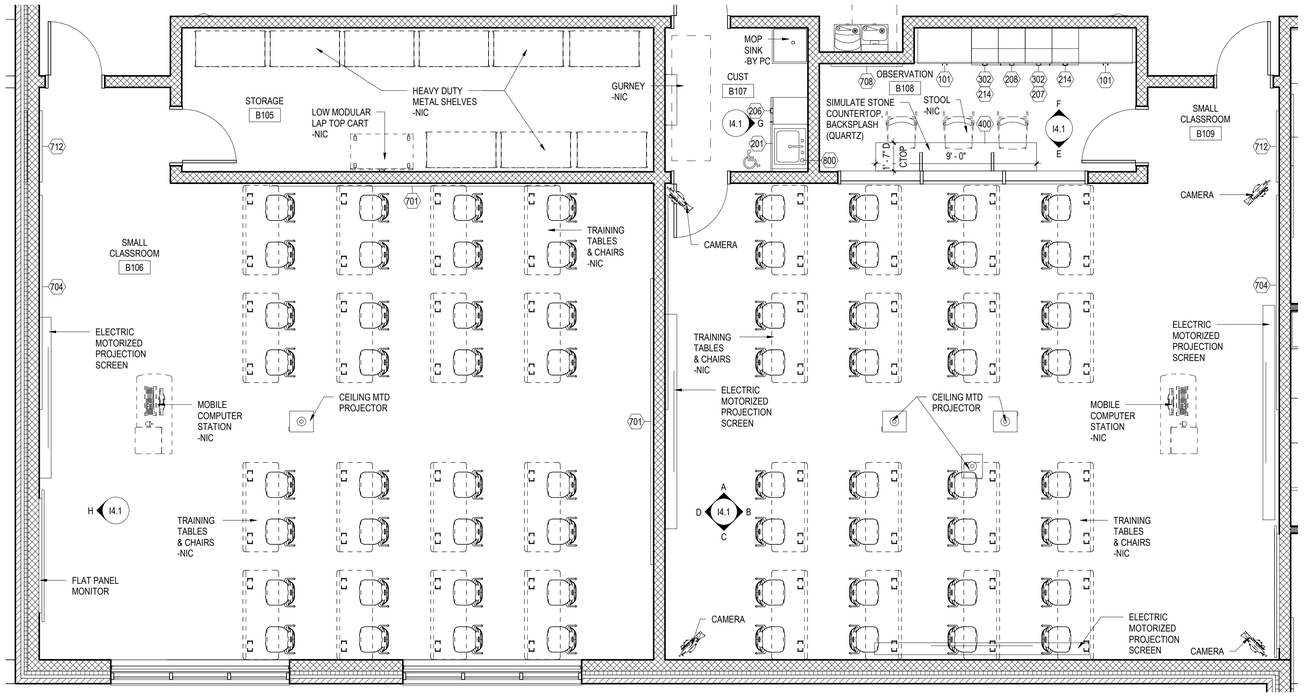
PLOT SCALE: 3" = 1'-0"

FILENAME:

DATE: DECEMBER 18, 2019

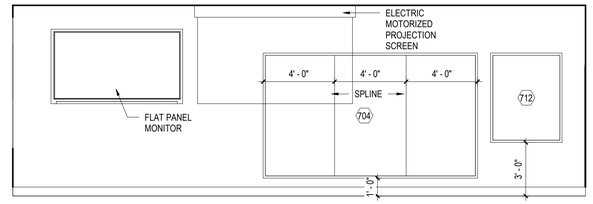
PROJECT
3089

A6.10

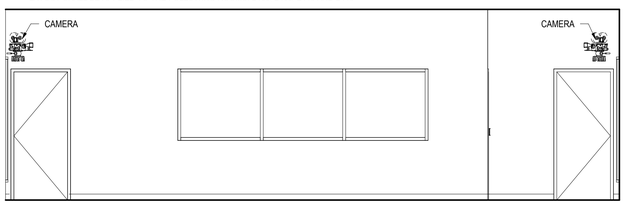


1 / I4.1 B106 & B109 SMALL CLASSROOMS
1/4" = 1'-0"

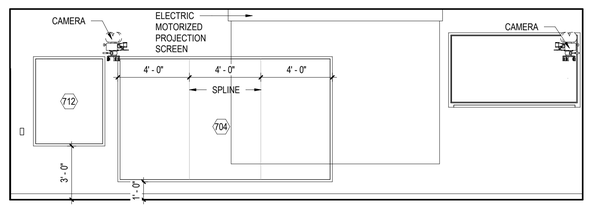
* LAYOUT SHALL BE APPLIED TO THE FOLLOWING ROOMS: B106, B109, B118 AND B119



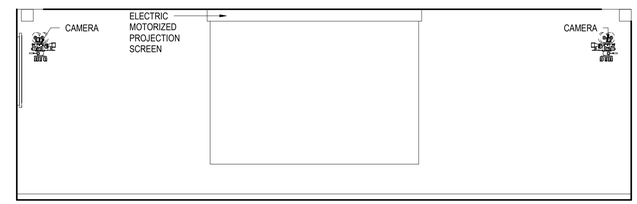
H / I4.1 INTERIOR ELEVATION H
1/4" = 1'-0"



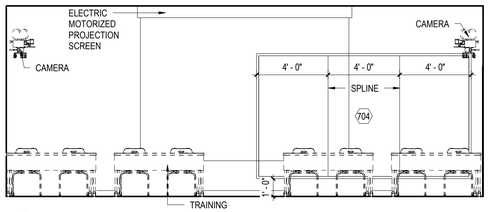
A / I4.1 INTERIOR ELEVATION A
1/4" = 1'-0"



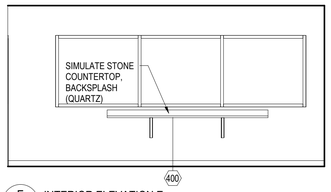
B / I4.1 INTERIOR ELEVATION B
1/4" = 1'-0"



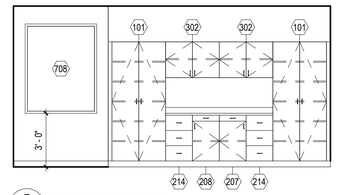
C / I4.1 INTERIOR ELEVATION C
1/4" = 1'-0"



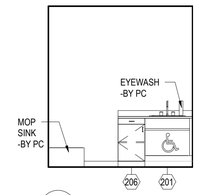
D / I4.1 INTERIOR ELEVATION D
1/4" = 1'-0"



E / I4.1 INTERIOR ELEVATION E
1/4" = 1'-0"



F / I4.1 INTERIOR ELEVATION F
1/4" = 1'-0"



G / I4.1 INTERIOR ELEVATION G
1/4" = 1'-0"

GENERAL NOTES TO APPLY TO ALL I4 DRAWINGS

1. MOUNTING HEIGHT SCHEDULE IS APPLICABLE TO MOST ROOMS. IN INSTANCE WHERE NOTE/DETAILS ON DRAWINGS DO NOT COINCIDE WITH THE SCHEDULE. THE DRAWINGS TAKE PRECEDENCE.
2. ALL BASE CABINETS SHALL RECEIVE A CONTINUOUS 1-1/4" THICK LAMINATE COUNTERTOP WITH A 4"H BACKSPLASH UNLESS NOTED OTHERWISE. THE DEPTH OF THE COUNTERTOP SHALL EXTEND 3/4" PAST THE DEPTH OF THE BASE CABINET.
3. COUNTERTOPS THAT RETURN INTO A WALL(S) SHALL RECEIVE BACKSPLASH THAT WRAPS CORNER ALONG WALL(S).
4. PROVIDE CHAMFERED EDGE CORNER FOR ALL COUNTERTOPS ADJACENT TO ALL TALL STORAGE UNITS.
5. WHERE COLUMNS, WINDOWS OR OTHER BUILDING COMPONENTS CONFLICT WITH CASEWORK DIMENSIONAL REQUIREMENTS. FIELD VERIFY DIMENSIONS AND PROVIDE CUSTOM UNIT TO ALLOW PROPER FITTING.
6. ALL EXPOSED ENDS OF CASEWORK SHALL RECEIVE FINISHED END PANELS.
7. LAMINATE COLOR FOR INTERIOR OF OPEN CABINETS SHALL MATCH EXTERIOR LAMINATE COLOR.
8. STAINLESS STEEL SINKS, FAUCETS, AND BUBBLERS SHALL BE PROVIDED AND INSTALLED BY PLUMBING CONTRACTOR.
9. ALL VISUAL DISPLAY AREAS (MARKER BOARDS AND/OR TACK BOARDS) 10'-0"W OR LONGER SHALL RECEIVE 2"H MAP RAIL THAT SPANS FROM VERTICAL EDGE TO VERTICAL EDGE.
10. PROVIDE WOOD BLOCKING IN METAL STUD WALLS, PER MANUFACTURER'S RECOMMENDATIONS, TO RECEIVE THE TELEVISION WALL BRACKET.
11. IN ROOMS RECEIVING RESILIENT BASE, ADHERE TO ALL WALLS, BASE CABINET TOE KICKS, AND EXPOSED END PANELS. REFER TO SPECIFICATIONS FOR LOCATION OF 4" AND 6" BASE.
12. SEE REFLECTED CEILING PLANS FOR LOCATION OF WINDOW TREATMENTS.
13. TELEPHONE UNITS AND SYSTEMS ARE NOT IN CONTRACT.
14. COORDINATE ALL LARGE SCALE PLANS WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
15. NIC = NOT IN CONTRACT
16. WHEN DESCRIPTION AND MODEL NUMBER IN CASEWORK AND EQUIPMENT SCHEDULE CONFLICT, THE DESCRIPTION TAKES PRECEDENCE.
17. OPP = OPPOSITE HAND.

GENERAL NOTE IN REFERENCE TO I4.1

1. COORDINATE WITH AUDIO/ VIDEO (TA SERIES) CONSTRUCTION DOCUMENTS FOR ALL MOUNTING HEIGHTS, EQUIPMENT SIZES AND APPROVED LOCATIONS.

MOUNTING HEIGHT SCHEDULE

MARKER BOARD	3'-0" AFF TO BOTTOM EDGE
TACK BOARD	3'-0" AFF TO BOTTOM EDGE
BASE CABINETS	3'-0" AFF TO TOP OF CABINET
WALL CABINETS	7'-0" AFF TO TOP OF CABINET
PROJECTION SCREEN	MOUNTED DIRECTLY BELOW CEILING
SHORT THROW-WALL MTD	CENTERED ON MARKER BOARD
LCD TV-WALL MTD	VERIFY MOUNTING HEIGHT W/ OWNER
CAMERA	VERIFY MOUNTING HEIGHT W/ OWNER

I4.1 - GENERAL CASEWORK AND EQUIPMENT SCHEDULE

NO	DESCRIPTION	MANUFACTURER	MODEL	DIMENSIONS
101	2-DOOR TALL STORAGE	CASE SYSTEMS	T0100	36"W x 24"D x 84"H
201	ADA VANITY SINK BASE CABINET	CASE SYSTEMS	D1000M	30"W x 24"D x 34"H
206	1-DOOR/1-DRAWER BASE CABINET - LEFT HINGED	CASE SYSTEMS	B3110	18"W x 24"D x 34"H
207	1-DOOR/1-DRAWER BASE CABINET - LEFT HINGED	CASE SYSTEMS	B3110	18"W x 24"D x 36"H
208	1-DOOR/1-DRAWER BASE CABINET - RIGHT HINGED	CASE SYSTEMS	B3120	18"W x 24"D x 36"H
214	3-EQUAL DRAWER BASE CABINET	CASE SYSTEMS	B4030	18"W x 24"D x 36"H
302	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	36"W x 14"D x 24"H
701	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	16'-0"W x 5'-0"H
704	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	12'-0"W x 7'-0"H
708	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	4'-0"W x 5'-0"H
712	TACK BOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	4'-0"W x 5'-0"H
800	SINK MOUNTED EYE WASH STATION	SEE SPECIFICATIONS	SEE SPECIFICATIONS	SEE MANUFACTURER

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BALTIMORE, MARYLAND CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266

LARGE SCALE LAYOUTS
SMALL CLASSROOMS

PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

I4.1

PROFESSIONAL CERTIFICATION:
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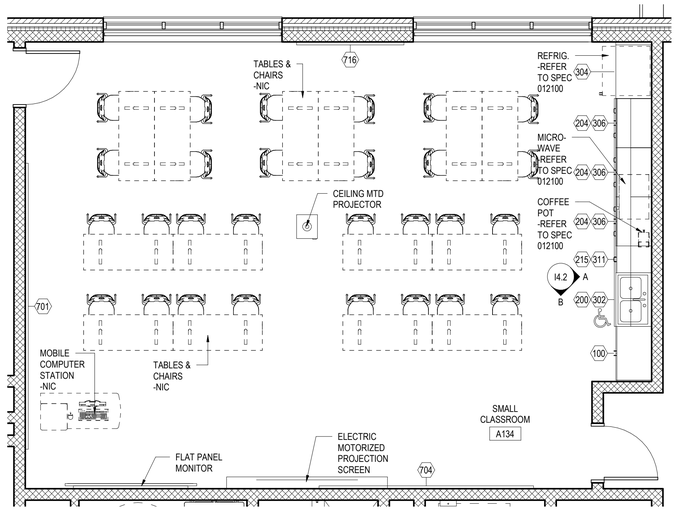
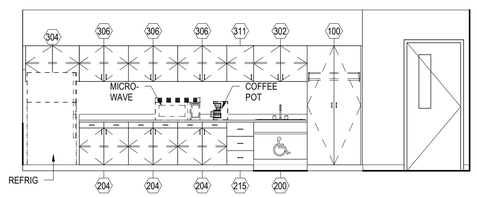
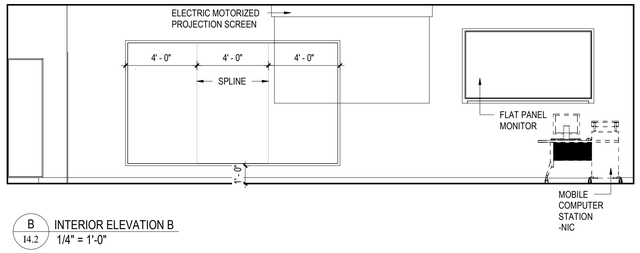
LICENSE NO. 8490
EXPIRATION DATE: 3/4/2021



1 / I4.2 A134 SMALL CLASSROOM
1/4" = 1'-0"



A / I4.2 INTERIOR ELEVATION A
1/4" = 1'-0"



B / I4.2 INTERIOR ELEVATION B
1/4" = 1'-0"

GENERAL NOTE IN REFERENCE TO I4.2

1. COORDINATE WITH AUDIO/ VIDEO (TA SERIES) CONSTRUCTION DOCUMENTS FOR ALL MOUNTING HEIGHTS, EQUIPMENT SIZES AND APPROVED LOCATIONS.

MOUNTING HEIGHT SCHEDULE

MARKER BOARD	3'-0" AFF TO BOTTOM EDGE
TACK BOARD	3'-0" AFF TO BOTTOM EDGE
BASE CABINETS	3'-0" AFF TO TOP OF CABINET
WALL CABINETS	7'-0" AFF TO TOP OF CABINET
PROJECTION SCREEN	MOUNTED DIRECTLY BELOW CEILING
SHORT THROW-WALL MTD	CENTERED ON MARKER BOARD
LCD TV-WALL MTD	VERIFY MOUNTING HEIGHT W/ OWNER
CAMERA	VERIFY MOUNTING HEIGHT W/ OWNER

I4.2 - GENERAL CASEWORK AND EQUIPMENT SCHEDULE

NO	DESCRIPTION	MANUFACTURER	MODEL	DIMENSIONS
100	2-DOOR TALL WARDROBE	CASE SYSTEMS	T2300	36"W x 24"D x 84"H
200	ADA VANITY SINK BASE CABINET	CASE SYSTEMS	D1000	36"W x 24"D x 34"H
204	2-DOOR/2-DRAWER BASE CABINET	CASE SYSTEMS	B3100	33"W x 24"D x 34"H
215	3-EQUAL DRAWER BASE CABINET	CASE SYSTEMS	B4030	18"W x 24"D x 34"H
302	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	36"W x 14"D x 24"H
304	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	36"W x 24"D x 16"H
306	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	33"W x 14"D x 24"H
311	1-DOOR WALL CABINET - LEFT HINGED	CASE SYSTEMS	W0110	18"W x 14"D x 24"H
701	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	16'-0"W x 5'-0"H
716	TACK BOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	6'-0"W x 5'-0"H

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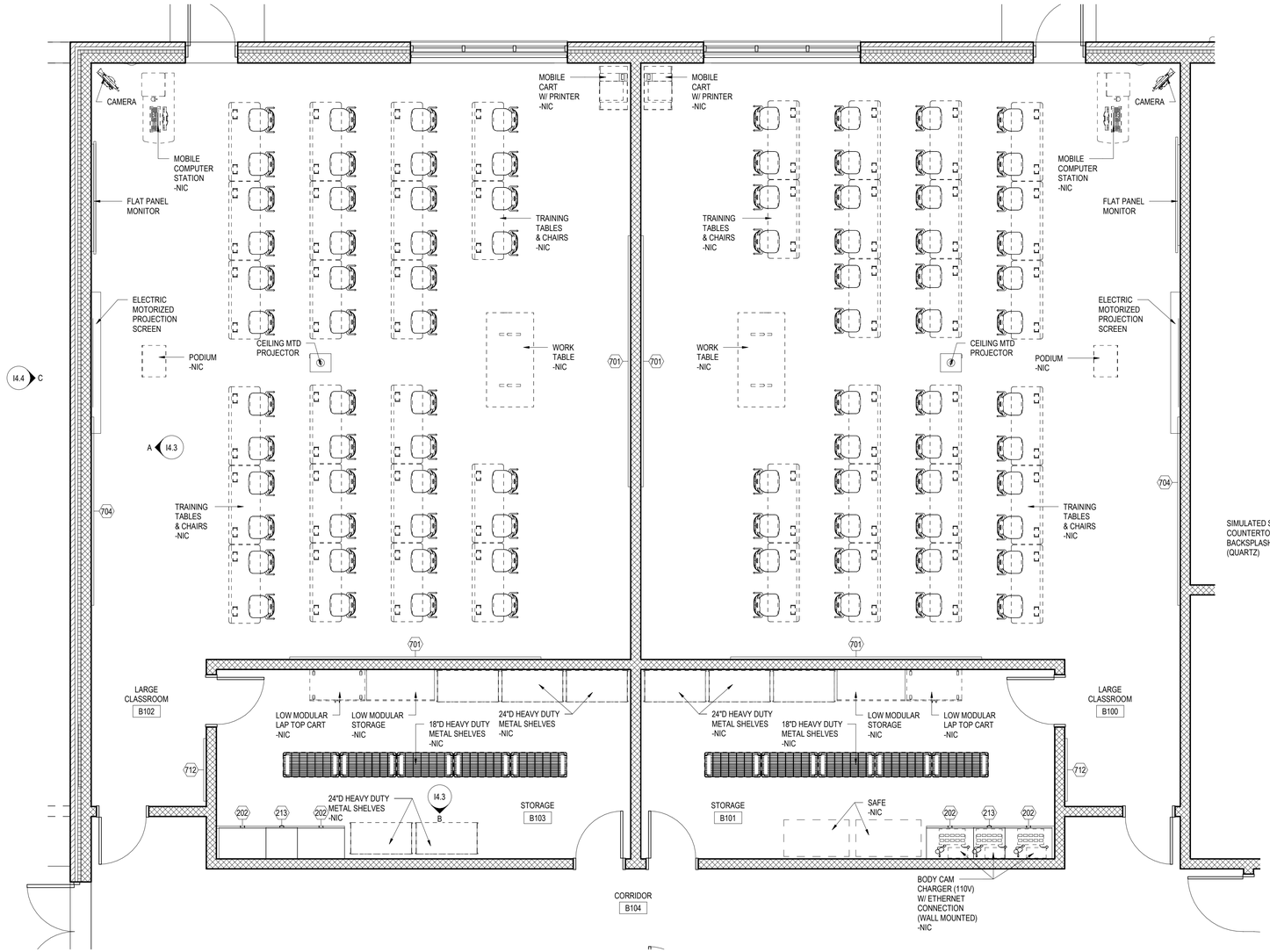
LARGE SCALE LAYOUTS
SMALL CLASSROOM

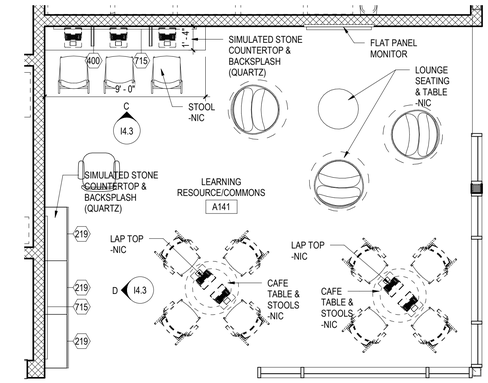
PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

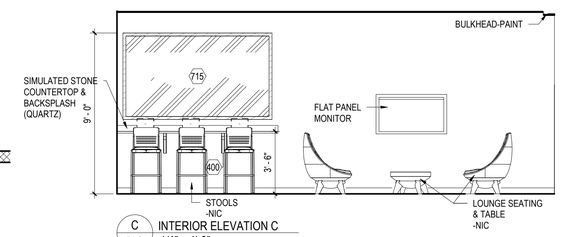
I4.2



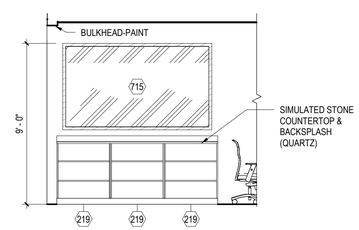
1 I4.3 B100 & B102 LARGE CLASSROOM
1/4" = 1'-0"



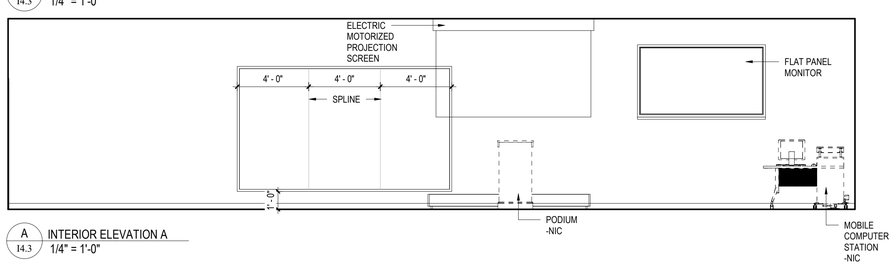
2 I4.3 A114 LEARNING RESOURCE/ COMMUNITY
1/4" = 1'-0"



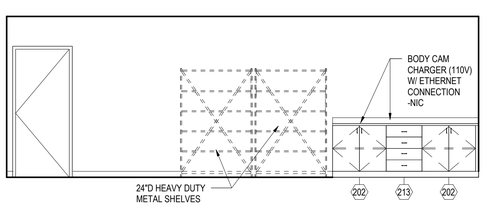
C I4.3 INTERIOR ELEVATION C
1/4" = 1'-0"



D I4.3 INTERIOR ELEVATION D
1/4" = 1'-0"



A I4.3 INTERIOR ELEVATION A
1/4" = 1'-0"



B I4.3 INTERIOR ELEVATION B
1/4" = 1'-0"

GENERAL NOTE IN REFERENCE TO I4.3

1. COORDINATE WITH AUDIO/ VIDEO (TA SERIES) CONSTRUCTION DOCUMENTS FOR ALL MOUNTING HEIGHTS, EQUIPMENT SIZES AND APPROVED LOCATIONS.

MOUNTING HEIGHT SCHEDULE

MARKER BOARD	3'-0" AFF TO BOTTOM EDGE
TACK BOARD	3'-0" AFF TO BOTTOM EDGE
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LCD TV-WALL MTD	VERIFY MOUNTING HEIGHT W/ OWNER
CAMERA	VERIFY MOUNTING HEIGHT W/ OWNER

I4.3 - GENERAL CASEWORK AND EQUIPMENT SCHEDULE

NO	DESCRIPTION	MANUFACTURER	MODEL	DIMENSIONS
219	OPEN SHELVING	CASE SYSTEMS	B0000	36"W x 16"D x 42"H
400	BUILT-IN SIMULATED STONE (QUARTZ) COUTERTOP & WORK SURFACE TO INCLUDE PEDESTAL SUPPORT BRACKETS AS REQUIRED BY MANUFACTURER'S RECOMMENDATIONS. PROVIDE (5) 2" GROMMETS.	CASE SYSTEMS	X0650	SEE DRAWINGS x42"H
202	2-DOOR BASE CABINET	CASE SYSTEMS	B0100	36"W x 24"D x 36"H
213	4-EQUAL DRAWER BASE CABINET	CASE SYSTEMS	B4040	24"W x 24"D x 36"H
701	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	16'-0"W x 5'-0"H
704	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	12'-0"W x 7'-0"H
712	TACK BOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	4'-0"W x 5'-0"H
715	MAPLE WOOD FRAME TACK BOARD W/XOREL FABRIC	SEE SPECIFICATIONS	SEE SPECIFICATIONS	8'-0"W x 4'-6"H

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 8490
EXPIRATION DATE: 3/4/2021

ARCHITECTURAL REGISTRATION BOARD 8490 THOMAS C. CRABTREE STATE OF MARYLAND

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PROPOSED NEW
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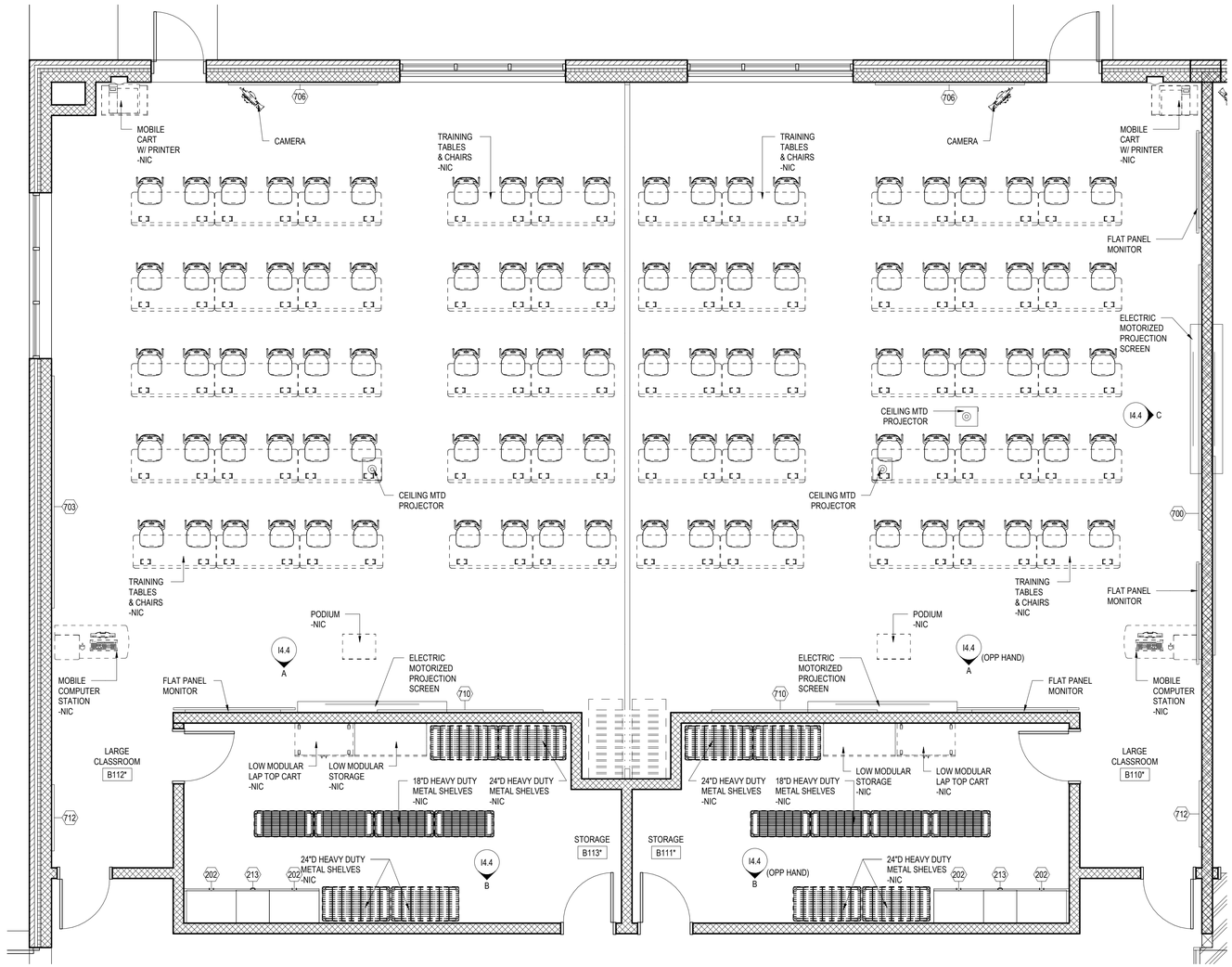
WASHINGTON COUNTY PROJECT NO. 28-266

LARGE SCALE LAYOUT LARGE CLASSROOMS & COLLABORATIVE LEARNING

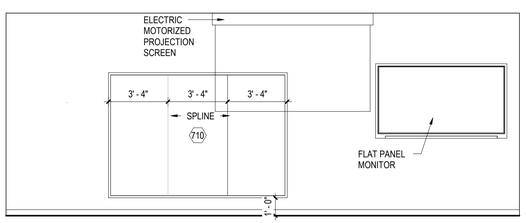
PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

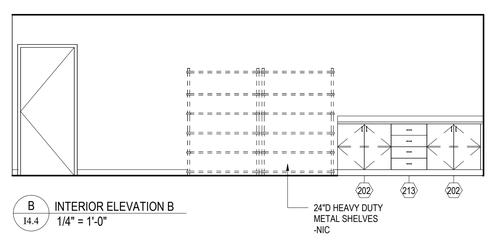
I4.3



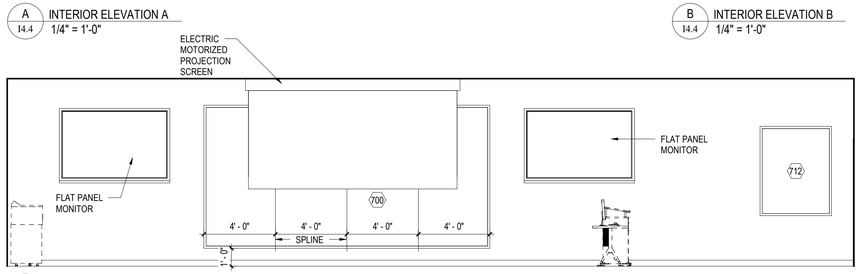
1 I4.4 LARGE CLASSROOM- ALTERNATE
1/4" = 1'-0"



A I4.4 INTERIOR ELEVATION A
1/4" = 1'-0"



B I4.4 INTERIOR ELEVATION B
1/4" = 1'-0"



C I4.4 INTERIOR ELEVATION C
1/4" = 1'-0"

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WASHINGTON COUNTY PROJECT NO. 28-266

GENERAL NOTE IN REFERENCE TO I4.4

1. COORDINATE WITH AUDIO/ VIDEO (TA SERIES) CONSTRUCTION DOCUMENTS FOR ALL MOUNTING HEIGHTS, EQUIPMENT SIZES AND APPROVED LOCATIONS.

MOUNTING HEIGHT SCHEDULE

MARKER BOARD	3'-0" AFF TO BOTTOM EDGE
TACK BOARD	3'-0" AFF TO BOTTOM EDGE
BASE CABINETS	3'-0" AFF TO TOP OF CABINET
WALL CABINETS	7'-0" AFF TO TOP OF CABINET
PROJECTION SCREEN	MOUNTED DIRECTLY BELOW CEILING
SHORT THROW-WALL MTD	CENTERED ON MARKER BOARD
LCD TV-WALL MTD	VERIFY MOUNTING HEIGHT W/ OWNER
CAMERA	VERIFY MOUNTING HEIGHT W/ OWNER

I4.4 - GENERAL CASEWORK AND EQUIPMENT SCHEDULE

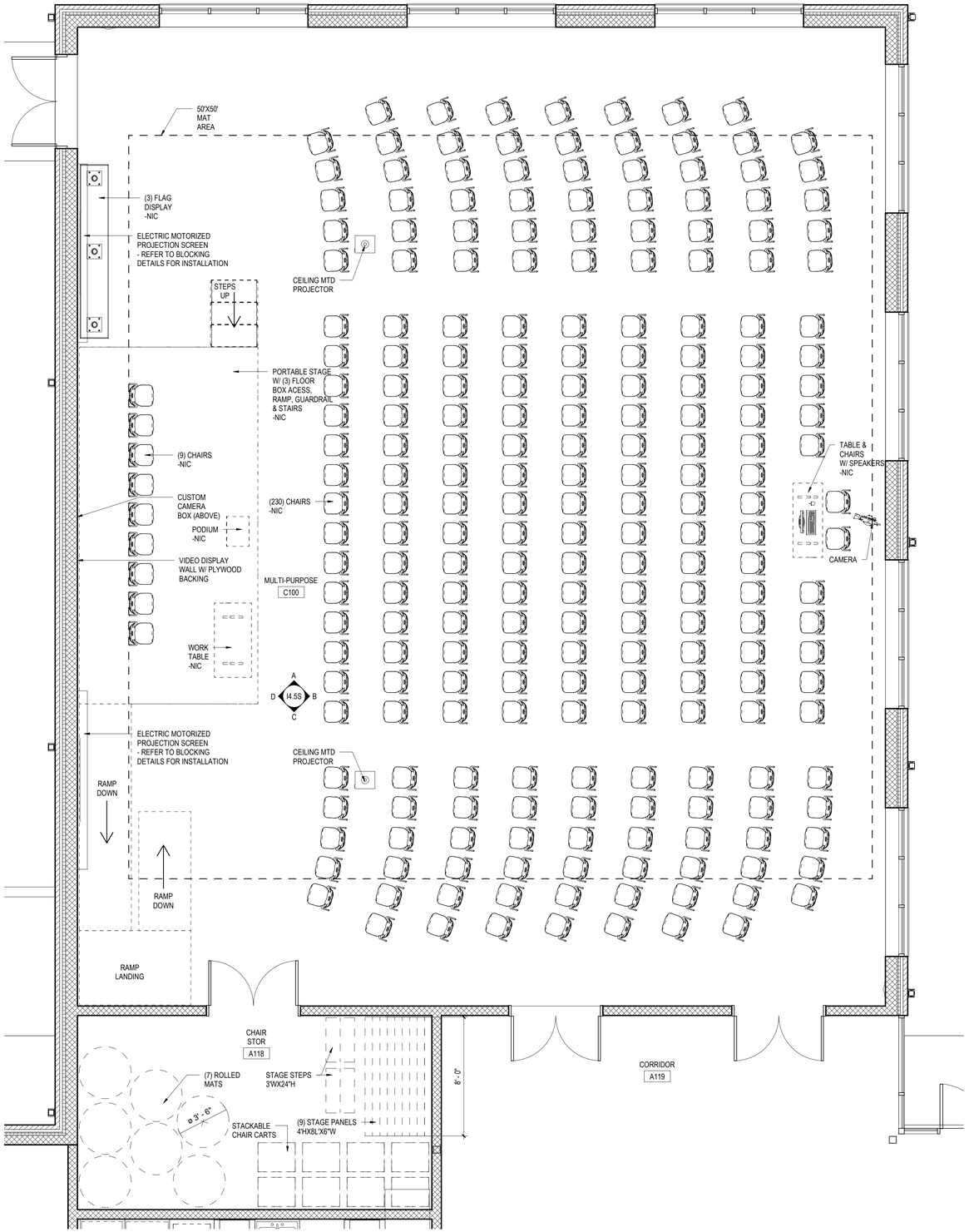
NO	DESCRIPTION	MANUFACTURER	MODEL	DIMENSIONS
202	2-DOOR BASE CABINET	CASE SYSTEMS	B0100	36"W x 24"D x 36"H
213	4-EQUAL DRAWER BASE CABINET	CASE SYSTEMS	B4040	24"W x 24"D x 36"H
702	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	16'-0"W x 4'-0"H
703	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	14'-0"W x 5'-0"H
705	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	12'-0"W x 5'-0"H
706	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	9'-0"W x 5'-0"H
710	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	10'-0"W x 7'-0"H
713	TACK BOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	4'-0"W x 4'-0"H

LARGE SCALE LAYOUTS CLASSROOMS- ALTERNATE

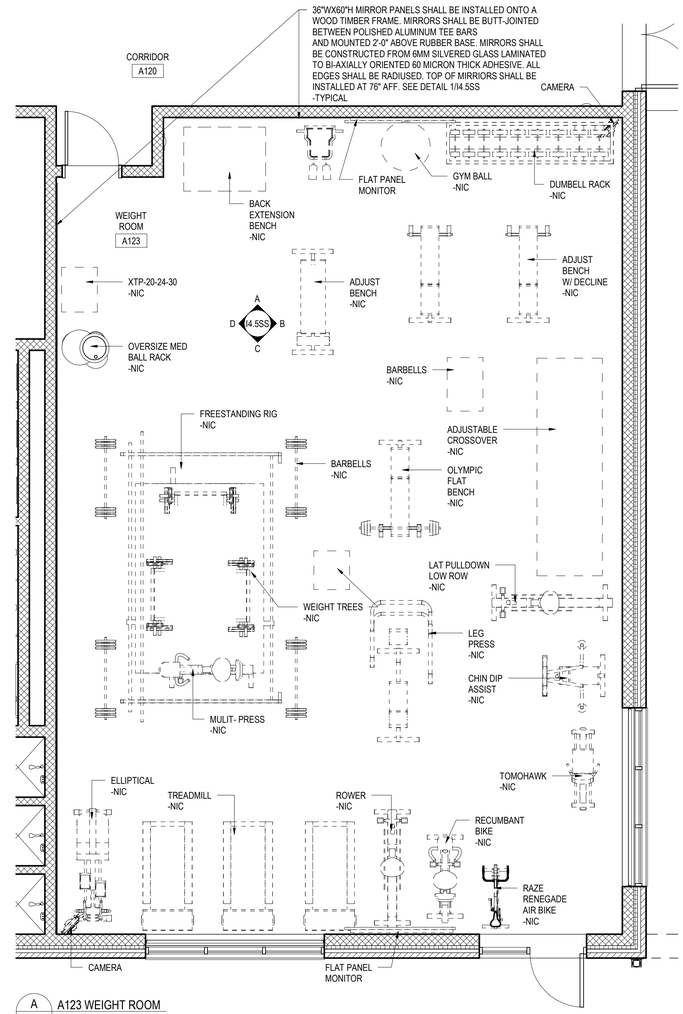
PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

I4.4



1 / I4.5 C100 MULTI- PURPOSE ROOM
1/4" = 1'-0"



A / I4.5 A123 WEIGHT ROOM
1/4" = 1'-0"

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#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

GENERAL NOTE IN REFERENCE TO I4.5

1. COORDINATE WITH AUDIO/ VIDEO (TA SERIES) CONSTRUCTION DOCUMENTS FOR ALL MOUNTING HEIGHTS, EQUIPMENT SIZES AND APPROVED LOCATIONS.

MOUNTING HEIGHT SCHEDULE

MARKER BOARD	3'-0" AFF TO BOTTOM EDGE
TACK BOARD	3'-0" AFF TO BOTTOM EDGE
BASE CABINETS	3'-0" AFF TO TOP OF CABINET
WALL CABINETS	7'-0" AFF TO TOP OF CABINET
PROJECTION SCREEN	MOUNTED DIRECTLY BELOW CEILING
SHORT THROW-WALL MTD	CENTERED ON MARKER BOARD
LCD TV-WALL MTD	VERIFY MOUNTING HEIGHT W/ OWNER
CAMERA	VERIFY MOUNTING HEIGHT W/ OWNER

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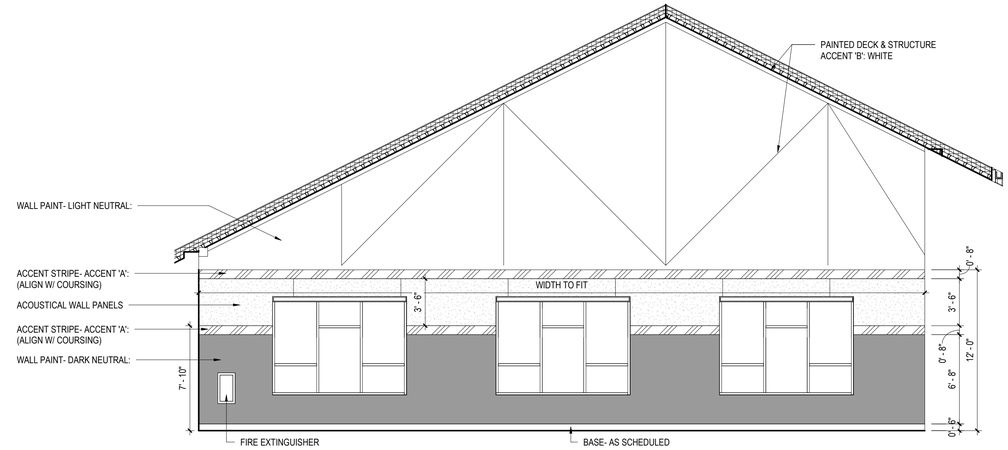
WASHINGTON COUNTY PROJECT NO. 28-266

LARGE SCALE LAYOUTS
MULIT PURPOSE ROOM

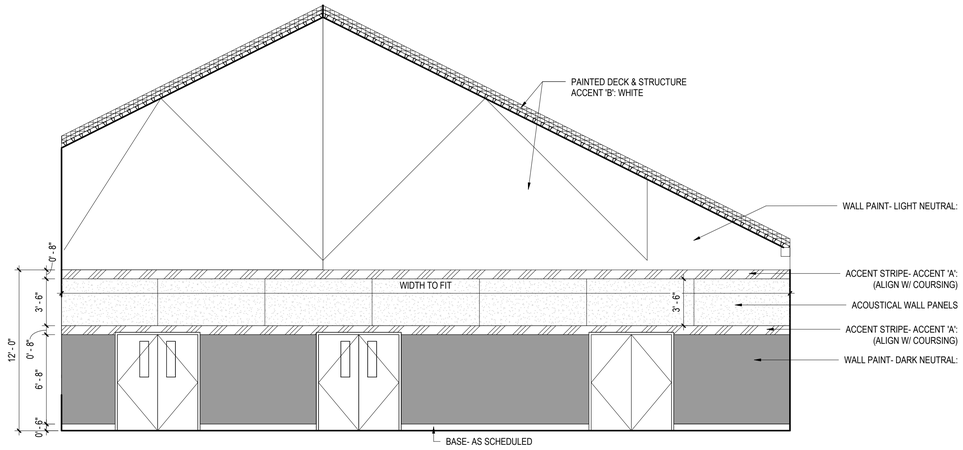
PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

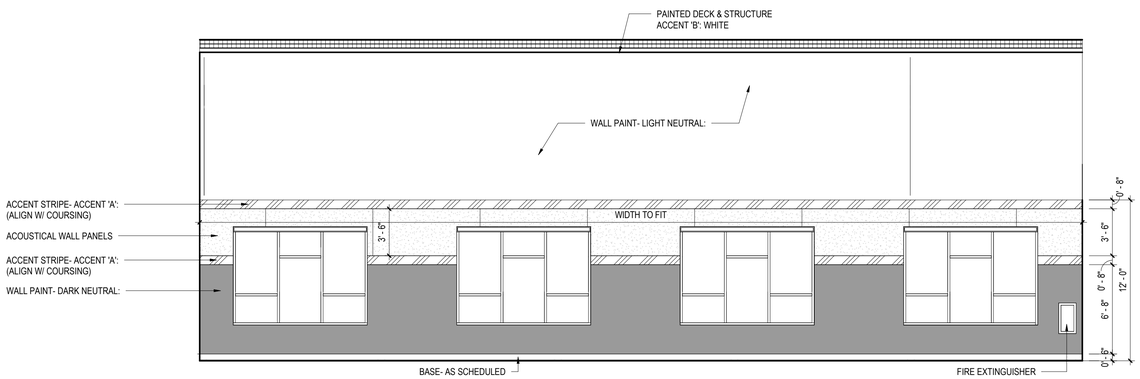
I4.5



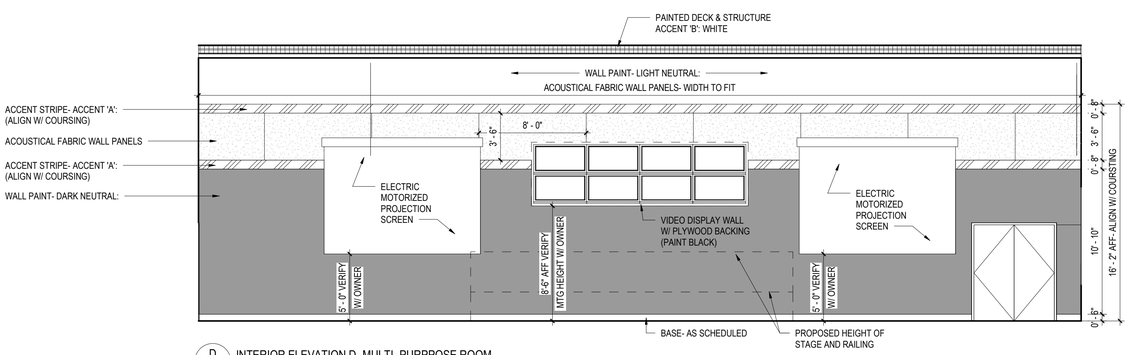
A
I4.5S
INTERIOR ELEVATION A- MULTI-PURPOSE ROOM
3/16" = 1'-0"



C
I4.5S
INTERIOR ELEVATION C- MULTI- PURPOSE ROOM
3/16" = 1'-0"



B
I4.5S
INTERIOR ELEVATION B- MULTI- PURPOSE ROOM
3/16" = 1'-0"



D
I4.5S
INTERIOR ELEVATION D- MULTI- PURPPOSE ROOM
3/16" = 1'-0"

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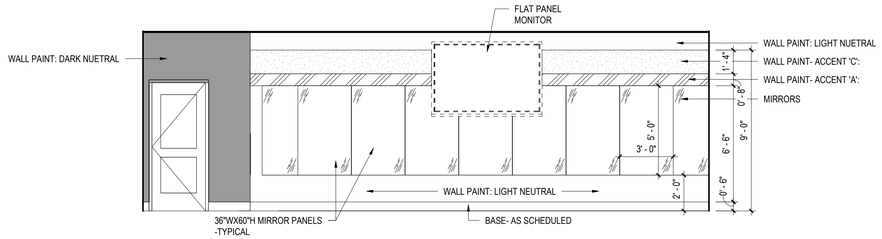
WASHINGTON COUNTY PROJECT NO. 28-266

MULTI- PURPOSE INTERIOR ELEVATIONS

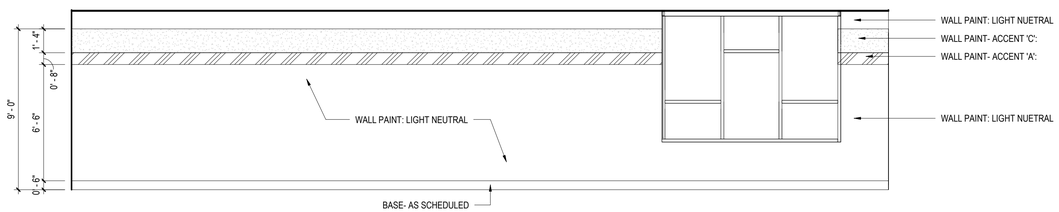
PLOT SCALE: 3/16" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

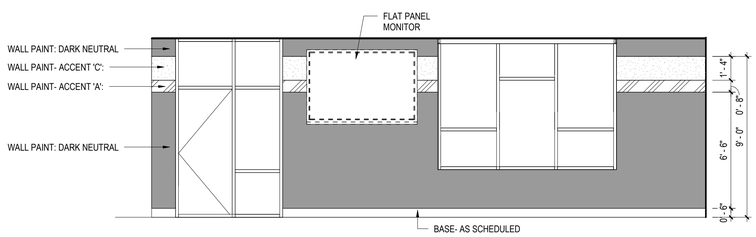
I4.5S



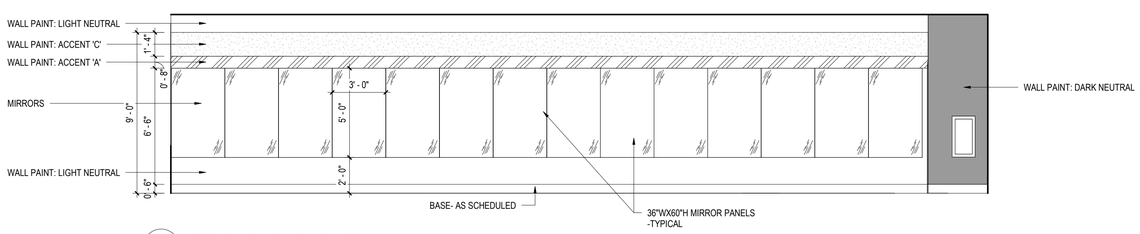
A / I4.5SS INTERIOR ELEVATION A- WEIGHT ROOM
1/4" = 1'-0"



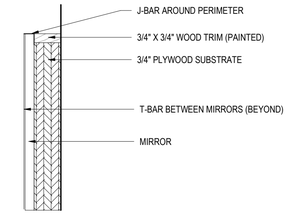
B / I4.5SS INTERIOR ELEVATION B- WEIGHT ROOM
1/4" = 1'-0"



C / I4.5SS INTERIOR ELEVATION C- WEIGHT ROOM
1/4" = 1'-0"



D / I4.5SS INTERIOR ELEVATION D- WEIGHT ROOM
1/4" = 1'-0"



1 / I4.5SS MIRROR DETAIL
6" = 1'-0"

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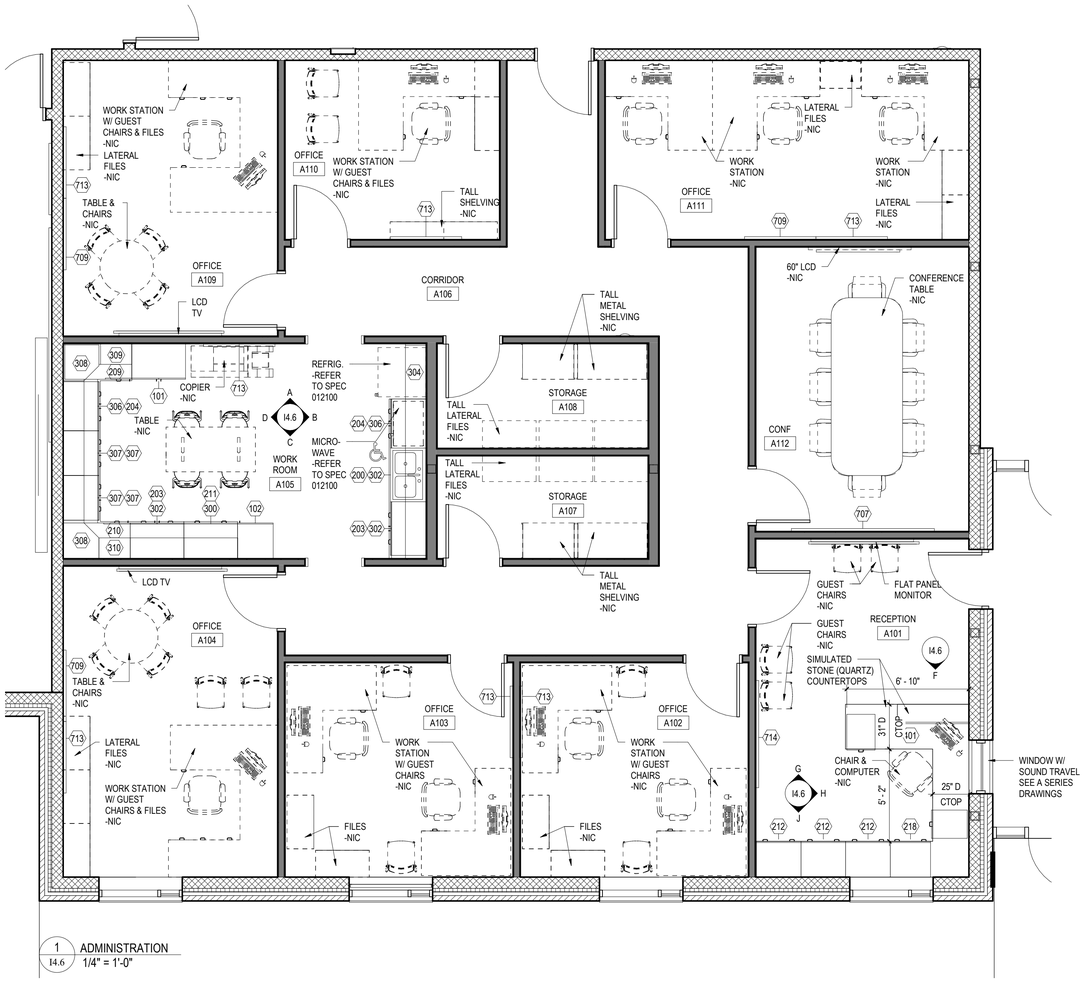
WEIGHT ROOM INTERIOR ELEVATIONS

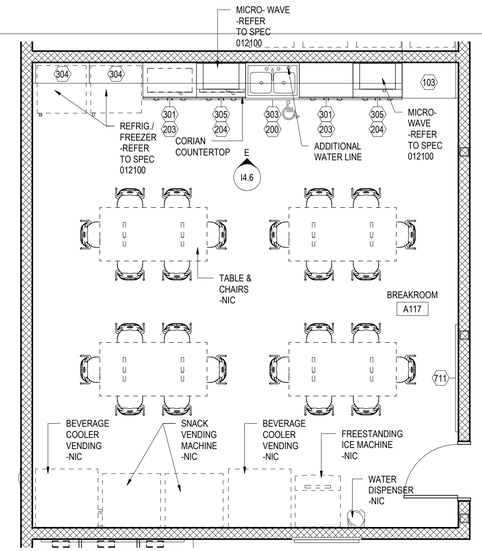
PLOT SCALE: As Indicated
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

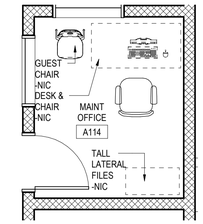
I4.5SS



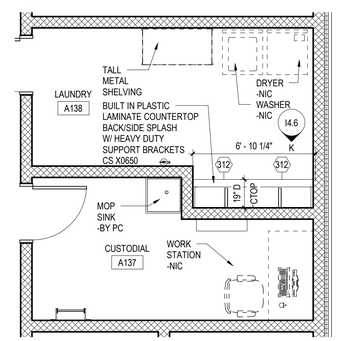
1 I4.6 ADMINISTRATION
1/4" = 1'-0"



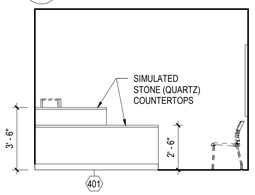
2 I4.6 A117 KITCHEN
1/4" = 1'-0"



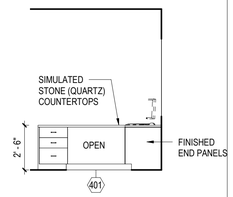
3 I4.6 A114 MAINTENANCE OFFICE
1/4" = 1'-0"



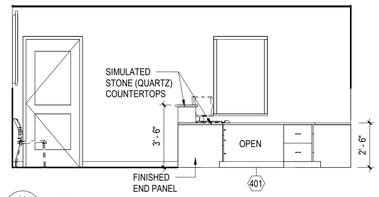
4 I4.6 A137 CUSTODIAL & A138 LAUNDRY ROOM
1/4" = 1'-0"



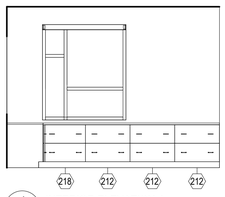
F I4.6 INTERIOR ELEVATION F
1/4" = 1'-0"



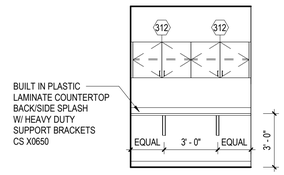
G I4.6 INTERIOR ELEVATION G
1/4" = 1'-0"



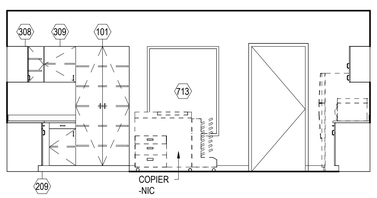
H I4.6 INTERIOR ELEVATION H
1/4" = 1'-0"



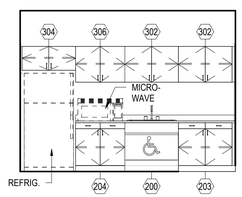
J I4.6 INTERIOR ELEVATION J
1/4" = 1'-0"



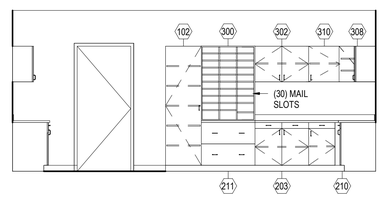
K I4.6 INTERIOR ELEVATION K
1/4" = 1'-0"



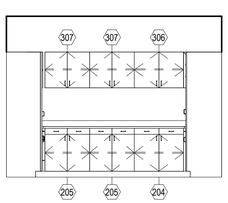
A I4.6 INTERIOR ELEVATION A
1/4" = 1'-0"



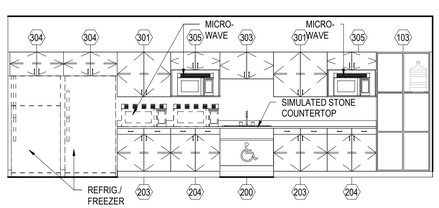
B I4.6 INTERIOR ELEVATION B
1/4" = 1'-0"



C I4.6 INTERIOR ELEVATION C
1/4" = 1'-0"



D I4.6 INTERIOR ELEVATION D
1/4" = 1'-0"



E I4.6 INTERIOR ELEVATION E
1/4" = 1'-0"

GENERAL NOTE IN REFERENCE TO I4.6

1. ALL CASEWORK IN ADMINISTRATION AREA SHALL RECEIVE LOCKS.

MOUNTING HEIGHT SCHEDULE

MARKER BOARD	3'-0" AFF TO BOTTOM EDGE
TACK BOARD	3'-0" AFF TO BOTTOM EDGE
BASE CABINETS	3'-0" AFF TO TOP OF CABINET
WALL CABINETS	7'-0" AFF TO TOP OF CABINET
PROJECTION SCREEN	MOUNTED DIRECTLY BELOW CEILING
SHORT THROW-WALL MTD	CENTERED ON MARKER BOARD
LCD TV-WALL MTD	VERIFY MOUNTING HEIGHT W/ OWNER
CAMERA	VERIFY MOUNTING HEIGHT W/ OWNER

I4.6 - GENERAL CASEWORK AND EQUIPMENT SCHEDULE

NO	DESCRIPTION	MANUFACTURER	MODEL	DIMENSIONS
401	BUILT-IN SIMULATED STONE (QUARTZ) TRANSACTION LEDGE & WORK SURFACE TO INCLUDE (1) BOX/BOX/FILE, (1) FILE/FILE AND KEYBOARD TRAY. PROVIDE (5) 2" GROMMETS.	CASE SYSTEMS	B4500, B4540	SEE DRAWINGS x30"H/42"H
101	2-DOOR TALL STORAGE	CASE SYSTEMS	T0100	36"W x 24"D x 84"H
102	1-DOOR TALL STORAGE - LEFT HINGED	CASE SYSTEMS	T0110	24"W x 24"D x 84"H
103	OPEN TALL STORAGE UNIT W/VERT. DIV. AND (2) ADJUSTABLE SHELVES	CASE SYSTEMS	T1000M	36"W x 24"D x 84"H
200	ADA VANITY SINK BASE CABINET	CASE SYSTEMS	D1000	36"W x 24"D x 34"H
203	2-DOOR/2-DRAWER BASE CABINE	CASE SYSTEMS	B3100	36"W x 24"D x 34"H
204	2-DOOR/2-DRAWER BASE CABINET	CASE SYSTEMS	B3100	33"W x 24"D x 34"H
205	2-DOOR/2-DRAWER BASE CABINE	CASE SYSTEMS	B3100	30"W x 24"D x 34"H
209	1-DOOR/1-DRAWER BLIND BASE CABINET - RIGHT SIDE EXPOSED	CASE SYSTEMS	B3210	45"W x 24"D x 34"H
210	1-DOOR/1-DRAWER BLIND BASE CABINET - LEFT SIDE EXPOSED	CASE SYSTEMS	B3220	45"W x 24"D x 34"H
211	2-DRAWER LATERAL FILE CABINET	CASE SYSTEMS	B7500	36"W x 24"D x 34"H
212	2-DRAWER LATERAL FILE CABINET	CASE SYSTEMS	B7500	30"W x 24"D x 30"H
218	2-DRAWER LATERAL FILE CABINET	CASE SYSTEMS	B7500	27"W x 24"D x 30"H
300	MAILBOX UNIT W/ 30 MAIL SLOTS AND LABELS	CASE SYSTEMS	W2700M	48"W x 14"D x 54"H
301	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	36"W x 14"D x 30"H
302	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	36"W x 14"D x 24"H
303	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	36"W x 14"D x 18"H
304	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	36"W x 24"D x 16"H
305	MICROWAVE CABINET (SEE ELEVATION)	CASE SYSTEMS	B4040M	33"W x 14"D x 30"H
306	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	33"W x 14"D x 24"H
307	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	30"W x 14"D x24"H
308	1-DOOR CORNER WALL CABINET - LEFT HINGED	CASE SYSTEMS	W1210	24"W x 24"D x 24"H
309	1-DOOR WALL CABINET - LEFT HINGED	CASE SYSTEMS	W0110	21"W x 14"D x 24"H
310	1-DOOR WALL CABINET - RIGHT HINGED	CASE SYSTEMS	W0120	21"W x 14"D x 24"H
312	2-DOOR WALL CABINET	CASE SYSTEMS	W0100	39"W x 14"D x 24"H
707	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	8'-0"W x 4'-0"H
709	MARKERBOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	4'-0"W x 4'-0"H
711	TACK BOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	6'-0"W x 4'-0"H
713	TACK BOARD	SEE SPECIFICATIONS	SEE SPECIFICATIONS	4'-0"W x 4'-0"H
714	TACK BOARD W/MAPLE FRAME	SEE SPECIFICATIONS	SEE SPECIFICATIONS	6'-0"W x 4'-0"H

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EXPIRATION DATE: 3/4/2021

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PROPOSED NEW
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WASHINGTON COUNTY PROJECT NO. 28-266

LARGE SCALE LAYOUTS ADMINISTRATION

PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

I4.6

FLOOR PATTERN AND FINISH LEGEND

- = FIELD A: SHEET VINYL CHARCOAL
- = FIELD A: PORCELAIN TILE
- = ACCENT A: SHEET VINYL BLUE
- = ACCENT C: PORCELAIN TILE BLACK
- = FIELD B: SHEET VINYL LT GRAY
- = ENTRANCE MAT NAVY
- = ACCENT B: SHEET VINYL BLACK

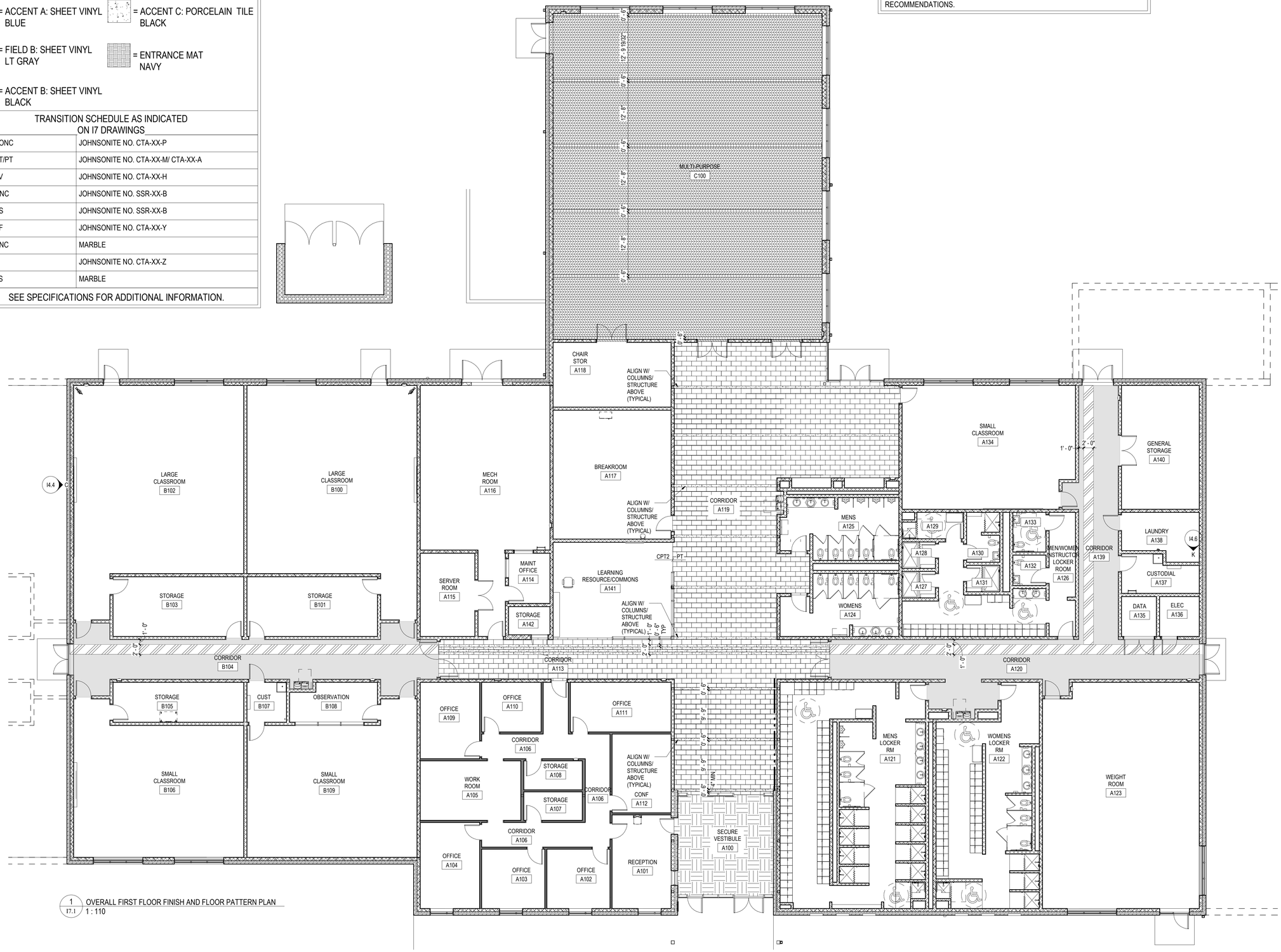
TRANSITION SCHEDULE AS INDICATED ON I7 DRAWINGS

CPT TO CONC	JOHNSONITE NO. CTA-XX-P
CPT TO CT/PT	JOHNSONITE NO. CTA-XX-M/ CTA-XX-A
CPT TO SV	JOHNSONITE NO. CTA-XX-H
SV TO CONC	JOHNSONITE NO. SSR-XX-B
SV TO RES	JOHNSONITE NO. SSR-XX-B
SV TO ARF	JOHNSONITE NO. CTA-XX-Y
PT TO CONC	MARBLE
PT TO SV	JOHNSONITE NO. CTA-XX-Z
PT TO RES	MARBLE

SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

GENERAL NOTE IN REFERENCE TO ALL I7 DRAWINGS

1. DRAWING IS FOR FLOOR PATTERN USE ONLY. REFER TO ARCHITECTURAL/ INTERIOR DRAWINGS AND SPECIFICATIONS FOR ALL OTHER FINISHES, DIMENSIONS, DETAILS, ETC.
2. INSTALL EXPANSION JOINT STRIPS DIRECTLY ABOVE SUBSTRATE EXPANSION JOINTS AND ACCORDING TO NTMA'S WRITTEN RECOMMENDATIONS.



1 / I7.1 OVERALL FIRST FLOOR FINISH AND FLOOR PATTERN PLAN
1 : 110

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WASHINGTON COUNTY PROJECT NO. 28-266

FIRST FLOOR - FLOOR PATTERN PLAN

PLOT SCALE: 1 : 110
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

I7.1

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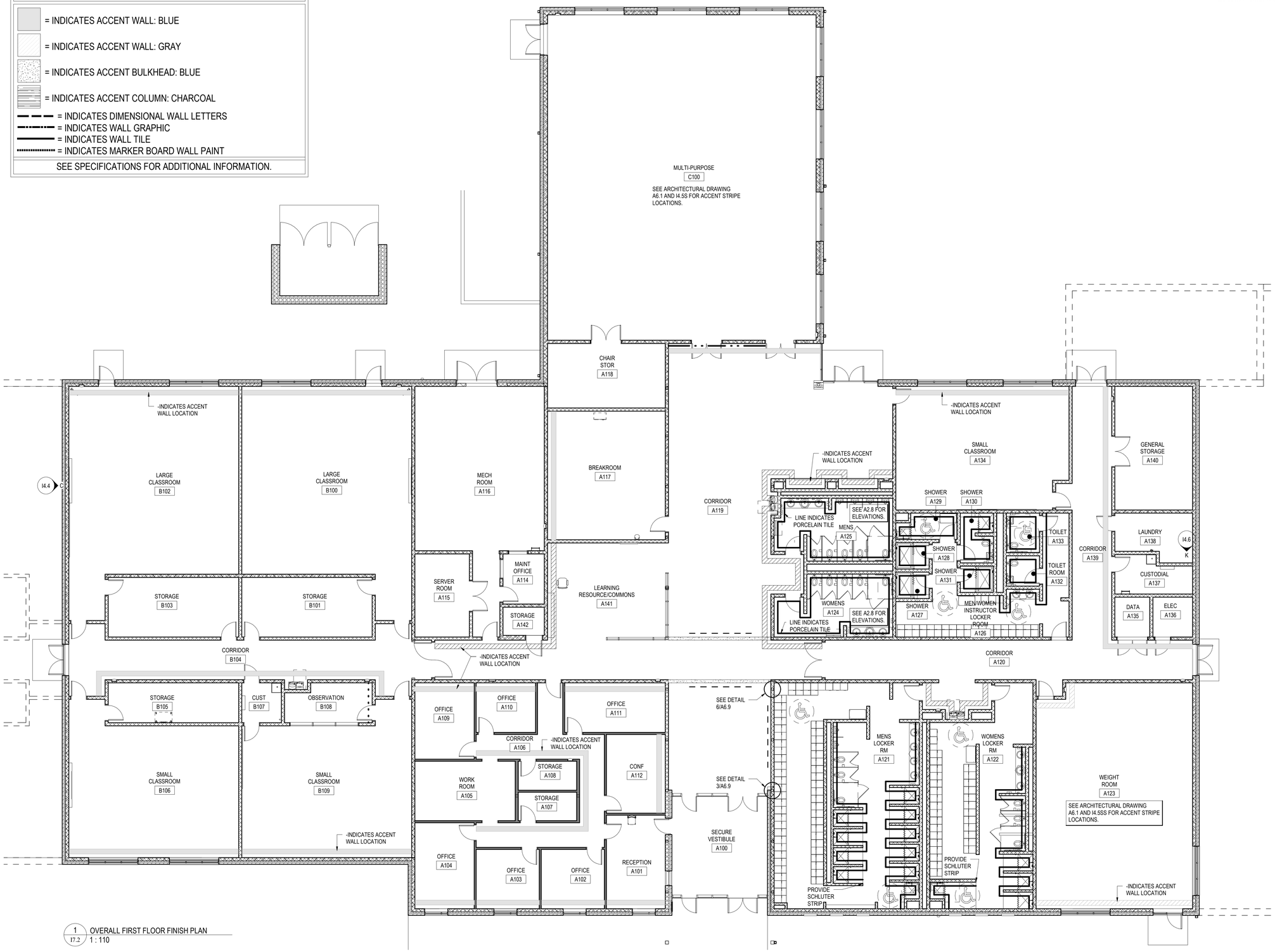
FLOOR PATTERN AND FINISH LEGEND

- = INDICATES ACCENT WALL: BLUE
- = INDICATES ACCENT WALL: GRAY
- = INDICATES ACCENT BULKHEAD: BLUE
- = INDICATES ACCENT COLUMN: CHARCOAL
- = INDICATES DIMENSIONAL WALL LETTERS
- = INDICATES WALL GRAPHIC
- = INDICATES WALL TILE
- = INDICATES MARKER BOARD WALL PAINT

SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



1 / I7.2 OVERALL FIRST FLOOR FINISH PLAN
1 : 110

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FIRST FLOOR- FINISH PLAN

PLOT SCALE: 1 : 110
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

I7.2

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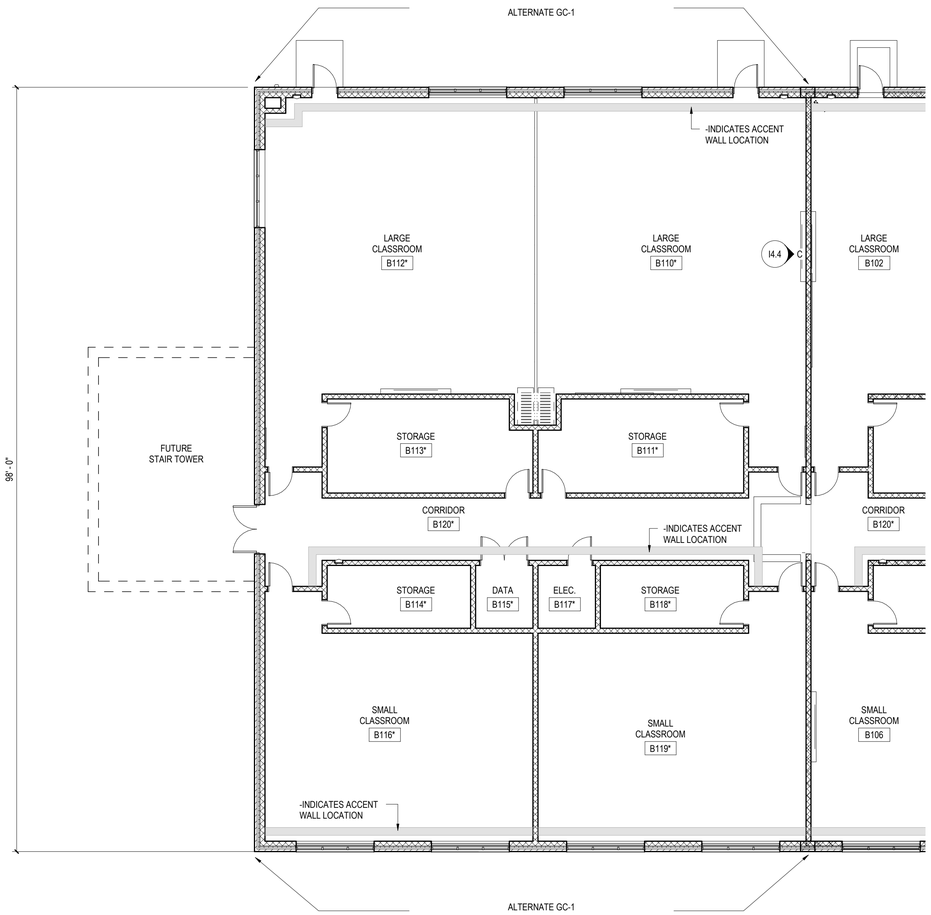
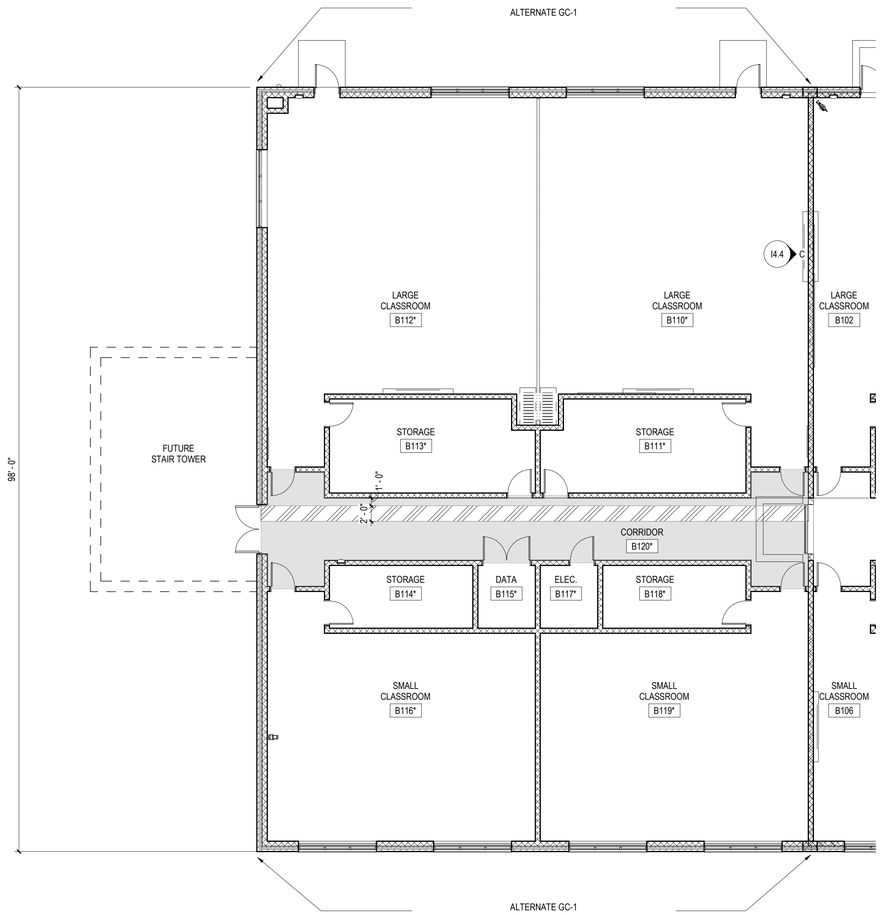


1 / I7.3 OVERALL FIRST FLOOR FINISH PLAN- ALTERNATE
1 : 110



2 / I7.3 OVERALL FIRST FLOOR PATTERN PLAN- ALTERNATE
1 : 110

DRAWING NOTE IN REFERENCE TO I7.3

1. REFER TO DRAWING I7.1 AND I7.2 FOR FLOOR PATTERN AND FINISH LEGENDS.

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FIRST FLOOR- FLOOR PATTERN AND FINISH PLAN- ALTERNATE

PLOT SCALE: 1 : 110
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

I7.3

STRUCTURAL NOTES

BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE AND ASCE 7-10

ANY REFERENCES TO VARIOUS TRADE CODES THROUGHOUT THESE NOTES ARE TO THE YEAR OF THE CODE CITED IN THE ABOVE REFERENCE BUILDING CODE.

DESIGN LIVE LOADS

ROOF STRUCTURAL ELEMENTS SHALL BE DESIGNED FOR THE MORE CRITICAL OF THE FOLLOWING LOAD CASES
- CASE 1 — 30 PSF MINIMUM (NOT REDUCIBLE)
- CASE 2 — SNOW LOAD BASED ON 40 PSF GROUND SNOW LOAD WITH APPLICABLE DRIFT AND SLIDING LOADS

ROOF SNOW LOAD DESIGN DATA:
- RISK CATEGORY – III
- SNOW EXPOSURE FACTOR (Ce) – 1.0
- THERMAL FACTOR (Ct) – 1.0
- SNOW LOAD IMPORTANTANCE FACTOR (Is) – 1.1
- FLAT ROOF SNOW LOAD (Pf) – 30.8 PSF

FLOORS: THE FLOOR AREAS HAVE BEEN DESIGNED FOR THE FOLLOWING MINIMUM LIVE LOADS. LIVE LOAD REDUCTION HAS BEEN CONSIDERED IN FLOOR AND COLUMN DESIGN.

SLAB ON GRADE — 150 PSF
EQUIPMENT SUPPORTS — DESIGNED FOR ACTUAL LOADS INDICATED ON THE DRAWINGS

FUTURE STAIRS — 100 PSF / 300 LB. POINT LOAD
FUTURE ELEVATORS — DESIGNED FOR THE ACTUAL LOADS IMPOSED BY ELEVATORS INCREASED BY 100% FOR IMPACT
FUTURE SECOND FLOOR — SEE LOAD DIAGRAM PLAN ON S0.04

DESIGN DEAD LOADS

FLOOR — 85 PSF (TOTAL)
- CONC. SLAB — 45 PSF
- METAL DECK — 2 PSF
- STEEL FRAMING — 5 PSF
- PONDING CONC. — 8 PSF
- M / E / P — 5 PSF
- CEILING/LIGHTS — 5 PSF
- MISCELLANEOUS — 5 PSF
- ROOF/INSULATION — 10 PSF (REPLACED WITH FUTURE FLOORING)

ROOF
- CLERESTORY — 20 PSF
- MULTIPURPOSE — 25 PSF
- CANOPIES — 15 PSF

FUTURE ROOF TRUSSES — 25 PSF (TOTAL INCLUDING SELF WEIGHT)
- TOP CHORD — 15 PSF
- BOTTOM CHORD — 10 PSF

LATERAL LOADS

WIND LOAD ANALYSIS

RISK CATEGORY	III
ULTIMATE WIND SPEED (Vult)	120 MPH
NOMINAL WIND SPEED (Vasd)	93 MPH
WIND EXPOSURE	C
INTERNAL PRESSURE COEFFICIENT	+/- 0.18

NET WIND UPLIFT ON ROOF WITH RESPECT TO METAL DECK AND STEEL FRAMING TO BE PER THE LOADS IN THE COMPONENTS AND CLADDING WIND CHART ON THIS SHEET.

SEISMIC LOAD ANALYSIS

RISK CATEGORY	III
SEISMIC IMPORTANCE FACTOR (Ie)	1.25
MCE SPECTRAL RESPONSE ACCELERATION PARAMETER - SHORT (Ss)	0.128
MCE SPECTRAL RESPONSE ACCELERATION PARAMETER - 1 second (S1)	0.052
SITE CLASS	D
SOIL SITE COEFFICIENT (Fa / Fv)	1.6 / 2.4
DESIGN EQ SPECTRAL RESPONSE ACCEL. PARAMETER - SHORT (Sds)	0.136
DESIGN EQ SPECTRAL RESPONSE ACCEL. PARAMETER - 1 second (Sd1)	0.083
SEISMIC DESIGN CATEGORY	B
BASIC SEISMIC FORCE RESISTING SYSTEM	A9 per TABLE 12.2-1 ASCE7-10
RESPONSE MODIFICATION COEFFICIENT (R)	2.0
SYSTEM OVERSTRENGTH FACTOR (Ωo)	2.5
DEFLECTION AMPLIFICATION FACTOR (Cd)	1.75
SEISMIC RESPONSE COEFFICIENT (Cs)	0.085
BASE SHEAR (Fx)	MASS x Cs
ANALYSIS PROCEDURE UTILIZED	EQUIVALENT LATERAL FORCE

GENERAL NOTES

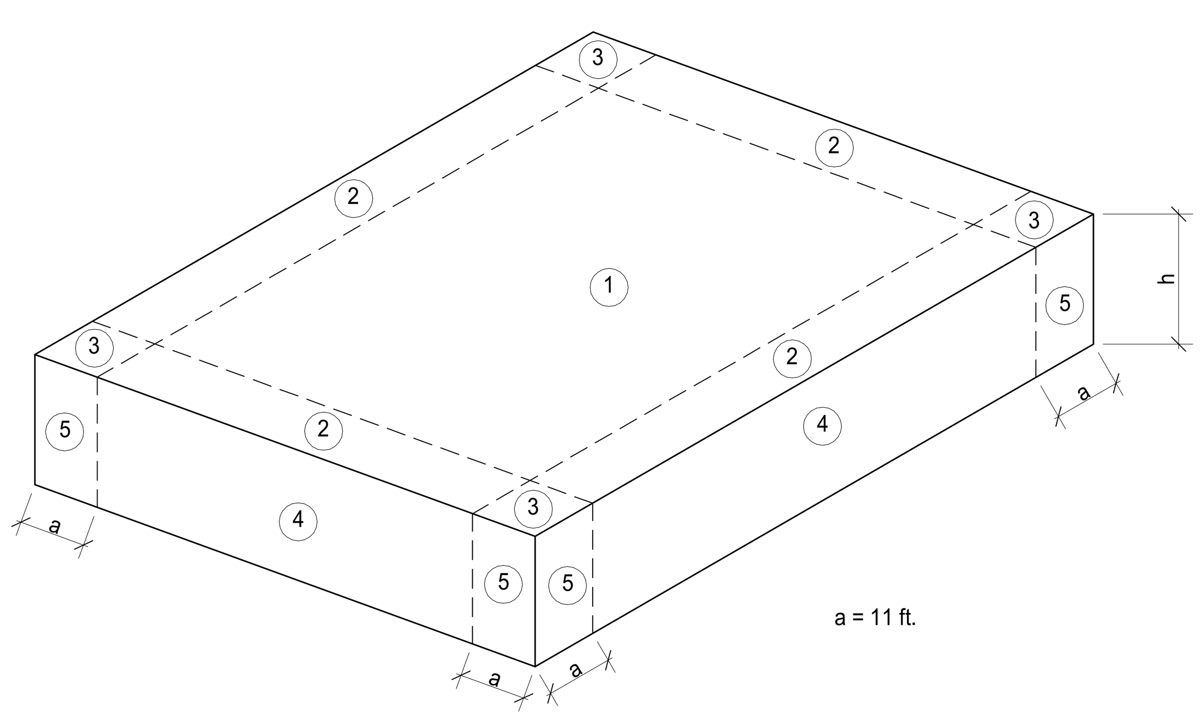
REFER TO THE ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL SLEEVES, ANCHORS, VENT OPENINGS, ETC. NOT SHOWN ON THE STRUCTURAL PLANS.

ALL MATERIALS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE ASTM SPECIFICATIONS NOTED IN THE STRUCTURAL NOTES AND PROJECT SPECIFICATIONS BASED ON THE FINAL DATE NOTED ON THE CONSTRUCTION DOCUMENTS.

THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS OF THE MATERIALS INDICATED ON THE DRAWINGS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN DATA ON THIS SHEET. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADDITIONAL SHORING AND BRACING FOR THE STRUCTURE IF ACTUAL CONSTRUCTION LOADS EXCEED THE DESIGN LOADS.

ALL DIMENSIONS AND NOTES SHALL SUPERSEDE ALL SCALE REFERENCES ON THE DRAWINGS.

ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE BUILDING CODE AND ALL LOCAL ORDINANCES. THE CONTRACTOR SHALL HIRE AN EXPERIENCED, QUALIFIED SPECIAL INSPECTOR TO PERFORM ALL THE REQUIRED INSPECTION WORK. ADTEK ENGINEERS WILL NOT PERFORM THE CONTINUOUS DAILY SPECIAL INSPECTIONS DURING CONSTRUCTION. ADTEK ENGINEERS MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS AND SUCH VISITS ARE NOT TO BE CONSTRUED AS MEETING THE DAILY SPECIAL INSPECTION REQUIREMENTS UNLESS THE ENGINEER SPECIFICALLY SO STATES IN WRITING.



a = 11 ft.

CONTRACTOR RESPONSIBILITIES

THE FOLLOWING LIST IS NOT INTENDED TO BE ALL INCLUSIVE, BUT MERELY TO PLACE EMPHASIS ON PARTICULAR ITEMS OF JOB SCHEDULING AND SAFETY.

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW, ALLOWING A MINIMUM OF TWO WEEKS FOR REVIEW BY THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REDESIGN OF THE STRUCTURAL SUPPORTS OF EQUIPMENT WHEN THE OPERATING WEIGHT OF THE EQUIPMENT PROVIDED (INCLUDING CURBS AND ACCESSORIES) EXCEEDS THE MAXIMUM DESIGN WEIGHTS NOTED ON THE STRUCTURAL DRAWINGS. SUBMIT STRUCTURAL CALCULATIONS AND DETAILS FOR THE REVISED EQUIPMENT SUPPORT TO THE PROJECT ARCHITECT FOR REVIEW. THE SUBMITTAL SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
3. THE CONTRACTOR SHALL NOTIFY THE PROJECT SPECIAL INSPECTOR IN ADVANCE OF WORK REQUIRING INSPECTIONS OR ON-SITE PERSONNEL. COORDINATE ADVANCE NOTIFICATION REQUIREMENTS WITH THE SPECIAL INSPECTOR.
4. IF THE CONTRACTOR ANTICIPATES A PROBLEM THAT WILL REQUIRE ASSISTANCE FROM THE PROJECT STRUCTURAL ENGINEER, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE THE ENGINEER WITH MINIMUM 24 HOURS NOTICE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION IS ACCORDING TO THE SIGNED AND SEALED CONSTRUCTION DOCUMENTS AND THE REVIEWED SHOP DRAWINGS.
6. THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND TO DESIGN AND DETAIL THE SUBMITTAL ITEMS NOTED IN THE STRUCTURAL NOTES (I.E. SHORING, FORMWORK, LIGHT GAGE STEEL, WOOD TRUSSES, JOISTS, PRE-ENGINEERED COMPONENTS, ETC.). THE ENGINEER MUST HAVE A MINIMUM OF THREE YEARS EXPERIENCE IN THE DESIGN OF THE TYPE OF STRUCTURAL COMPONENT REQUIRED FOR THE SUBMITTAL. THE ENGINEER SHALL PERFORM PERIODIC FIELD OBSERVATIONS AND ISSUE A FINAL CERTIFICATION FOR THE FINAL CONSTRUCTION OF THE STRUCTURE INCLUDED IN THEIR SUBMITTAL.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING BETWEEN THE STRUCTURAL AND ARCHITECTURAL DRAWINGS. IT IS NOT INTENDED THAT THE STRUCTURAL DRAWINGS BE USED INDEPENDENTLY OF THE ARCHITECTURAL DRAWINGS. ANY DISCREPANCIES, INCLUDING DIMENSIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
8. THE CONTRACTOR IS RESPONSIBLE FOR METHODS TO ENSURE CONSTRUCTION SAFETY AT THE SITE THROUGHOUT THE COURSE OF THE PROJECT CONSTRUCTION. SEE O.S.H.A. & M.O.S.H. REGULATIONS FOR CONSTRUCTION.
9. UPON STRUCTURAL COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE SPECIAL INSPECTOR SUBMIT A LETTER OF CERTIFICATION INDICATING THAT THE STRUCTURE IS IN COMPLIANCE WITH THE PLANS, SPECIFICATIONS, CONCRETE TEST REPORTS AND CODE REQUIREMENTS. THIS LETTER MUST BE REVIEWED BY THE ARCHITECT AND ENGINEER OF RECORD BEFORE SUBMITTAL.

SUBMITTALS NOTES

1. SUBMIT THE SHOP DRAWINGS NOTED BELOW TO THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW.
2. SUBMITTALS (DRAWINGS AND CALCULATIONS) NOTED WITH * BELOW SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. SEE "CONTRACTOR RESPONSIBILITIES" ABOVE FOR ADDITIONAL REQUIREMENTS.
3. REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONSTRUCTION DOCUMENTS FOR USE AS SHOP DRAWINGS IS PROHIBITED.
4. IF REQUIRED BY THE AUTHORITY HAVING JURISDICTION, PROVIDE THE REVIEWED SHOP DRAWINGS OF THE DEFERRED SUBMITTALS FOR THEIR REVIEW.

SUBMITTALS
- A. CONCRETE MIX DESIGN BY EITHER TRIAL BATCH OR FIELD EXPERIENCE METHODS. (EACH SUBMITTED MIX MUST IDENTIFY ITS INTENDED USE)
- B. CONCRETE REINFORCING
- C. MASONRY REINFORCING
- D. STRUCTURAL STEEL
- E. STEEL JOISTS
- F. METAL DECK (INCLUDING SECTION PROPERTIES OF DECK)
- G. CMU PARTITION SUPPORT

DEFERRED SUBMITTALS
- A. * BRACING OF MASONRY WALLS OVER 8'-0" PER OSHA (DRAWINGS AND CALCULATIONS-CALCULATIONS TO INCLUDE VERIFICATION OF CONCRETE SLAB ON GRADE TO SUPPORT SHORING LOADS, WHERE APPLICABLE)
- B. * STRUCTURAL STEEL CONNECTIONS WITH CALCULATIONS
- C. * COLD FORMED METAL FRAMING

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS ARE REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE. THE TERM SPECIAL INSPECTOR REFERS TO THE SPECIAL INSPECTING ENGINEER OF RECORD HIRED BY THE CONTRACTOR IN COMPLIANCE WITH THE INTERNATIONAL BUILDING CODE. INSPECTIONS OF FOUNDATION SUBGRADES MUST BE CONDUCTED BY A LICENSED GEOTECHNICAL ENGINEER, REFERRED TO HEREIN AS THE GEOTECHNICAL INSPECTOR. SPECIAL INSPECTIONS SHALL BE PERFORMED FOR, BUT NOT LIMITED TO, THE FOLLOWING STRUCTURAL ITEMS:

1. FOUNDATION SUBGRADES
2. FOUNDATION REINFORCING
3. CONCRETE FORMWORK AND REINFORCING
4. CONCRETE MIX AND PLACEMENT
5. MASONRY REINFORCING
6. MASONRY GROUT
7. STRUCTURAL STEEL ERECTION
8. STEEL JOISTS
9. METAL DECKING
10. COLD FORMED METAL FRAMING

WIND COMPONENT & CLADDING LOAD SCHEDULE

AREA (SQ. FT.)	POSITIVE PRESSURE ZONE 4 (PSF)	POSITIVE PRESSURE ZONE 5 (PSF)	NEGATIVE PRESSURE ZONE 1 (PSF)	NEGATIVE PRESSURE ZONE 2 (PSF)	NEGATIVE PRESSURE ZONE 3 (PSF)	NEGATIVE PRESSURE ZONE 4 (PSF)	NEGATIVE PRESSURE ZONE 5 (PSF)
10	36.3	36.3	-36.3	-60.9	-91.6	-39.3	-48.6
20	34.6	34.6	-35.3	-54.3	-75.9	-37.7	-45.4
50	32.5	32.5	-34.2	-45.8	-55.0	-35.6	-41.0
100	30.8	30.8	-33.2	-39.3	-39.3	-33.9	-37.7

NOTES:
1. POSITIVE AND NEGATIVE SIGNS ON VALUES IN SCHEDULE INDICATE PRESSURES ACTING TOWARD AND AWAY FROM THE SURFACE, RESPECTIVELY.
2. ZONES 1, 2, AND 3 ARE FOR ROOFS. ZONES 4 AND 5 ARE FOR WALLS. SEE DIAGRAM ON THIS SHEET FOR THE GENERAL WIND PRESSURE ZONE DIAGRAM IDENTIFYING EXTENTS OF WIND PRESSURE ZONES.
3. VALUES GIVEN ARE FOR 700 YEAR MRI (MEAN RECURRANCE INTERVAL) AS REQUIRED FOR STRENGTH CALCULATIONS. ALTERNATE DESIGN VALUES MAY BE USED PROVIDED SUPPORTING CALCULATIONS, SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION, ARE SUBMITTED FOR REVIEW.

FOUNDATION

ASSUMED SOIL BEARING VALUE

3,000 POUNDS PER SQUARE FOOT FOR COLUMN AND WALL FOOTINGS.

SUBSURFACE INVESTIGATION

SUBSURFACE INVESTIGATION AND REPORT BY ECS MID-ATLANTIC, LLC
REPORT NO.: 13:8269 AND ADDENDUM #1 (13:8269-A)
REPORT DATE: SEPTEMBER 19, 2018 AND NOVEMBER 16, 2018 (ADDENDUM #1)

ALL FOUNDATION WORK AND SOIL COMPACTION SHALL BE IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THE PROJECT.

ALL SPREAD FOOTINGS SHALL EXTEND MINIMUM 1'-0" INTO UNDISTURBED SOIL OR SHALL BEAR ON COMPACTED STRUCTURAL FILL. PLACE THE FILL REQUIRED TO BRING THE SUBGRADE TO THE PROPER ELEVATION PRIOR TO INSTALLING THE FOUNDATION.

THE MINIMUM FOOTING EMBEDMEND DEPTH (BELOW SLAB OR FINISHED GRADE) SHALL BE:
- 1'-6" INTERIOR WALLS
- 2'-6" EXTERIOR WALLS
- 2'-6" ALL COLUMNS

THE ELEVATION AT THE TOP OF FOOTINGS SHALL NOT BE HIGHER THAN INDICATED ON THE FOUNDATION PLAN, NOTES AND SECTIONS. THE FOOTING ELEVATIONS SHOWN ON THE DRAWINGS ARE FOR ESTIMATION PURPOSES ONLY. LOWER THE FOOTING ELEVATIONS, IF REQUIRED, TO ACHIEVE THE REQUIRED DESIGN BEARING CAPACITY OR FOR COORDINATION WITH UTILITIES.

THE FINAL SOIL BEARING CAPACITY AND FOUNDATION SUBGRADES SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL INSPECTOR PRIOR TO THE CONCRETE FOOTING INSTALLATION. THE CONTRACTOR SHOULD TAKE NOTE OF ANY WATER CONDITIONS AT THE SITE. FOUNDATION SUBGRADES SHALL REMAIN DRY DURING CONSTRUCTION.

BACKFILL OF BELOW GRADE FOUNDATION WALLS

THE CONTRACTOR SHALL NOT OVERLOAD THE WALL WITH HEAVY EQUIPMENT DURING PLACEMENT OF BACKFILL ADJACENT TO THE WALL.

FOR BELOW GRADE WALLS, STAGGER BACK FILL FROM SIDE TO SIDE OF THE WALL SO THAT NO MORE THAN 2'-0" OF OFFSETTING GRADE IS PRESENT. ONLY LIGHTWEIGHT (A MAXIMUM OF THREE TON TOTAL WEIGHT) EQUIPMENT SHALL BE PERMITTED WITHIN THE CRITICAL ZONE DEFINED AS BEGINNING AT THE BASE OF THE WALL AND WIDENING UPWARD FROM THE BASE AT A 1:1 SLOPE.

STRUCTURAL COMPACTED FILL

STRUCTURAL COMPACTED FILL FOR FOUNDATIONS AND SLAB ON GRADE SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER AND COMPACTED PER THE GEOTECHNICAL REPORT.

STRUCTURAL CONCRETE

REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. ALL WELDED WIRE REINFORCING SHALL CONFORM TO ASTM A185. DETAILING SHALL BE IN ACCORDANCE WITH ACI MANUAL 315 AND STANDARD 318.

CONCRETE SHALL BE NORMAL WEIGHT. CONCRETE MIX DESIGN TABLE ON THIS SHEET INDICATES DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, WATER/CEMENT RATIOS, AND ENTRAINED AIR CONTENT REQUIRED.

MAXIMUM AGGREGATE SIZE FOR CONCRETE SHALL BE IN ACCORDANCE WITH THE MAXIMUM AGGREGATE SIZES IN ACI 318 AND AS FOLLOWS:

FOOTINGS	1-1/2"
CONCRETE PIERS, WALLS, SLABS	3/4"
CONCRETE SLABS ON GRADE	3/4"
ELEVATED SLABS ON METAL DECK	3/4"

ALL EXTERIOR CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED.

CONCRETE SLUMP: 3" +/- 1"
8" AFTER ADDITION OF HRWR AT THE SITE

THE USE OF ADDITIVES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER OR NOTED IN THE PROJECT SPECIFICATIONS. THE USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE PERMITTED.

PROVIDE A HIGH RANGE WATER REDUCER (HRWR OR SUPERPLASTICIZER) FOR PUMPED CONCRETE AND AS REQUIRED FOR WORKABILITY.

ALL REINFORCING STEEL MARKED "CONTINUOUS" SHALL BE LAPPED AS REQUIRED WITH CLASS B TENSION SPLICES PER ACI 315. PROVIDE CLASS B TENSION SPLICES AT WALL CORNERS AND INTERSECTIONS WITH STANDARD 90 DEGREE BENT CORNER BARS, INCLUDING CORNERS OF WALL FOOTINGS AND BOND BEAMS. LAP WELDED WIRE MESH ONE FULL MESH AT SIDE AND END LAPS. PROVIDE CORNER LAP BARS AT ALL LONGITUDINAL FOOTING REINFORCING AS WELL AS AT ALL HORIZONTAL WALL REINFORCING.

ALL TENSION SPLICES IN THE REINFORCING STEEL, UNLESS NOTED OTHERWISE, SHALL HAVE A MINIMUM LAP DISTANCE AS SHOWN IN THE TENSION LAP SPLICE CHART IN THE GENERAL NOTES.

PROVIDE CONCRETE PROTECTION FOR REINFORCING AS FOLLOWS (UNLESS NOTED OTHERWISE):

FOOTINGS: 3"
INTERIOR SLABS: 3/4" — PIERS: 1-1/2" TO THE TIES
EXTERIOR SLABS: 1-1/2" — WALLS: OUTSIDE FACE - 2"; INSIDE FACE - 1"

CONCRETE MIX DESIGN TABLE

MEMBER	LOCATION	f'c	W/C	EXPOSURE CATEGORY F	EXPOSURE CATEGORY S	EXPOSURE CATEGORY P	EXPOSURE CATEGORY C	ENTRAINED AIR CONTENT 3/4" AGGREGATE	ENTRAINED AIR CONTENT 1" AGGREGATE
FOOTINGS	INTERIOR	3000 PSI	0.55	F0	S0	P0	C0	N/A	N/A
	EXTERIOR	4500 PSI	0.45	F2	S0	P0	C1	6 +/-1.5%	6 +/- 1.5%
FOUNDATION WALLS	INTERIOR	4500 PSI	0.45	F0	S0	P0	C0	N/A	N/A
PIERS	INTERIOR	4000 PSI	0.50	F0	S0	P0	C0	N/A	N/A
	EXTERIOR	4500 PSI	0.45	F1	S0	P0	C1	5 +/-1.5%	4.5 +/- 1.5%
SLABS-ON-GRADE	INTERIOR	4000 PSI	0.48	F0	S0	P0	C0	N/A	N/A
	EXTERIOR	4500 PSI	0.45	F2	S0	P0	C1	5 +/-1.5%	4.5 +/- 1.5%
NORMAL WEIGHT (145 PCF MAX.) ON STEEL DECKING	INTERIOR	3500 PSI	0.55	F0	S0	P0	C0	N/A	N/A

NOTES:
1. PROVIDE CONCRETE MIXES IN ACCORDANCE WITH ACI 301 FOR THE EXPOSURE CATEGORIES IDENTIFIED IN THE ABOVE TABLE.
2. "EXTERIOR" MEMBERS ARE THOSE FULLY OR PARTIALLY OUTSIDE A CONDITIONED BUILDING ENVELOPE AND FULLY OR PARTIALLY ABOVE THE FROST DEPTH. ALL OTHER MEMBERS SHALL BE CONSIDERED "INTERIOR".
3. SEE SHEAR WALL ELEVATIONS AND COLUMN SCHEDULES FOR DESIGN 28-DAY CONCRETE COMPRESSIVE STRENGTHS. ALL OTHER CONCRETE STRENGTHS SHALL CONFORM TO THE TABLE ABOVE (MINIMUM).
4. MAXIMUM WATER-CEMENT (W/C) RATIOS INDICATED IN THE TABLE SHALL INCLUDE WATER FROM ADMIXTURES IN W/C CALCULATIONS.
5. DO NOT AIR-ENTRAIN NORMAL WEIGHT CONCRETE DESIGNATED TO RECEIVE STEEL TROWEL FINISH.

STATE OF MARYLAND — ROSE A. RODRIGUEZ — 47042 — PROFESSIONAL ENGINEER — 7/1/2020

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 47042 Expiration Date: 07/13/21

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REVISIONS

01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272 www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

ADTEK ENGINEERS, INC.
150 South East Street
Suite 201
Frederick, Maryland 21701
301-662-4408
Fax: 301-662-7484

ADTEK PROJECT #: 1713.0001

STRUCTURAL NOTES

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

FILENAME:

DATE: December 18, 2019

PROJECT 3089

S0.01

STRUCTURAL CONCRETE (cont.)

ALL CONCRETE WORK, REINFORCING PLACEMENT FORMWORK AND SHORING SHALL BE INSPECTED UNDER THE SUPERVISION OF THE WASHINGTON COUNTY INSPECTOR AND THE SPECIAL INSPECTOR. CONCRETE QUALITY CONTROL, INSPECTION AND TESTING SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS, ACI 301 AND THE LOCAL BUILDING CODE REQUIREMENTS.

CONSTRUCTION PRACTICES:

WET STICKING OF DOWELS INTO THE FOOTING WILL NOT BE ACCEPTED. DOWELS SHOULD BE PROPERLY PLACED AND TIED TO LONGITUDINAL FOOTING REINFORCING IN ACCORDANCE WITH CRSI.

THE SPECIAL INSPECTOR SHALL PERFORM CONCRETE TESTS PER SECTION 3.15 OF SPECIFICATION SECTION 03 30 00. THE SPECIAL INSPECTOR SHALL SUBMIT WRITTEN TEST REPORTS TO THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER. THE ARCHITECT AND STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ALL TESTS THAT DO NOT MEET THE PROJECT SPECIFICATIONS WITHIN 24 HOURS.

SLAB ON GRADE

PROVIDE A MINIMUM THICKNESS REINFORCED CONCRETE SLAB AS NOTED ON THE PLANS ON A CONTINUOUS VAPOR RETARDER/BARRIER OVER DRAINAGE FILL. THE WELDED WIRE REINFORCING SHALL BE PLACED AT 1/3 THE SLAB THICKNESS BELOW THE TOP SURFACE OF THE SLAB. THE DRAINAGE FILL SHALL BE ASTM C33, SIZE 57.

CONTRACTOR'S OPTION - PROVIDE SYNTHETIC POLYPROPYLENE REINFORCING FIBERS IN PLACE OF WELDED WIRE MESH IN THE SLAB ON GRADE. FIBERS SHALL BE ADDED AT THE CONCRETE PLANT PER THE FIBER MANUFACTURER'S RECOMMENDATIONS. CONCRETE WITH FIBER REINFORCING SHALL HAVE HIGH RANGE WATER REDUCER PER ASTM C494, TYPE F OR G.

STRUCTURAL MASONRY

ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH FOLLOWING STANDARDS:

BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES - ACI 530/ASCE 5
SPECIFICATIONS FOR MASONRY STRUCTURES ACI 530.1/ASCE 6
SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF LOAD BEARING CONCRETE MASONRY PUBLISHED BY NATIONAL CONCRETE MASONRY ASSOCIATION.

ALL LOAD BEARING MASONRY WALLS SHALL BE INSPECTED IN ACCORDANCE WITH THE WASHINGTON COUNTY REQUIREMENTS.

THE MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY (F'm) SHALL BE 1500 PSI PER ACI 530.

THE MINIMUM NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS SHALL BE 1900 PSI PER ACI 530.

HOLLOW AND SOLID LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND ASTM C145.

MORTAR SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM TENTATIVE SPECIFICATIONS FOR MORTAR FOR UNIT MASONRY, ASTM C270, TYPE S MORTAR. HOLLOW UNITS SHALL BE LAID WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. SOLID UNITS SHALL BE LAID WITH FULL HEAD AND BED JOINTS. FIELD TESTED MORTAR IS REQUIRED TO ACHIEVE SPECIFIED DESIGN STRENGTHS.

MASONRY GROUT SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI, COMPLYING WITH ASTM C476.

REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. ALL VERTICAL MASONRY REINFORCING SHALL BE INSTALLED IN FULLY GROUTED CELLS AS SHOWN ON THE DRAWINGS. PROVIDE BAR SPLICES PER THE CMU BAR SPLICE CHART IN THE GENERAL NOTES.

PROVIDE JOINT REINFORCING, DUR-O-WALL OR EQUAL, EVERY BLOCK COURSE BELOW GRADE AND EVERY OTHER BLOCK COURSE ABOVE GRADE UNLESS OTHERWISE SHOWN ON ARCHITECTURAL WALL SECTIONS. JOINT REINFORCING SHALL BE CONTINUOUS AND SHALL BE PROVIDED IN ALL WALLS WITHOUT EXCEPTION. MASONRY JOINT REINFORCING SHALL BE LADDER TYPE COLD-DRAWN STEEL WIRE CONFORMING TO ASTM A82 AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 AFTER FABRICATION. WHERE WALLS ABUT EACH OTHER, AND AT OUTSIDE CORNERS, PROVIDE PREFABRICATED TEE-TYPE AND CORNER TRUSS TIES. PROVIDE MINIMUM 6" LAP BETWEEN ADJACENT PIECES OF JOINT REINFORCING.

CONTROL JOINTS SHALL BE SPACED WITHIN **4'-0"** MAXIMUM OF THE VENEER JOINTS SHOWN ON THE ARCHITECTURAL DRAWINGS AND AT A **MAXIMUM SPACING OF 25' - 0" ON CENTER**. JOINTS MUST BE 24" FROM WALL OPENINGS TYPICAL.

DISCONTINUE JOINT REINFORCING AT CONTROL JOINTS.

PROVIDE TIES FOR MASONRY VENEER WALLS AS DETAILED ON ARCHITECTURAL DRAWINGS. SHEET METAL TIES FOR VENEER ARE NOT ACCEPTABLE. WIRE TIES MUST BE USED.

PROVIDE FLEXIBLE TIES ON STEEL BEAMS AND COLUMNS AT MASONRY WALLS TO PREVENT LATERAL MOVEMENT OF THE WALLS. THE TIES SHALL BE SPACED AT 16" ON CENTER.

ALL MASONRY WALLS SHALL BE TEMPORARILY BRACED IN AN APPROVED MANNER DURING CONSTRUCTION UNTIL MORTAR HAS ATTAINED THE DESIGN STRENGTH, AND UNTIL FLOOR AND ROOF MEMBERS HAVE BEEN PLACED AND ANCHORED THERETO. SUBMIT BRACING DRAWINGS IN ACCORDANCE WITH OSHA REQUIREMENTS; DRAWINGS AND CALCULATIONS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER IN ACCORDANCE WITH SUBMITTALS NOTES.

CONSTRUCTION PRACTICES:

1. WET STICKING OF VERTICAL REINFORCING INTO GROUTED CELLS FOR LAPS IS UNACCEPTABLE. LAP AND TIE BARS PER ACI.
2. ALL BELOW GRADE WALLS ARE TO BE GROUTED SOLID.
3. GROUT TOP COURSE SOLID AT ALL TRANSITIONS IN WALL CONSTRUCTION FROM LARGER SIZE BLOCK TO SMALLER SIZE BLOCK. PROVIDE GROUT SCREEN AS REQUIRED.
4. USE VIBRATORS TO CONSOLIDATE GROUT IN MASONRY WALLS. RODDING WILL NOT BE PERMITTED.

BEARING ON MASONRY

UNLESS OTHERWISE NOTED, PROVIDE TWO COURSES OF SOLID GROUTED BLOCK EIGHT INCHES WIDE BY ONE FOOT FOUR INCHES MINIMUM LENGTH AT ALL BEAM BEARING POINTS. PROVIDE A BEARING PLATE 3/4"x6"x8" UNDER ALL STEEL BEAMS BEARING ON MASONRY UNLESS OTHERWISE SHOWN.

MASONRY WALL LINTELS

PROVIDE LINTELS FOR ALL OPENINGS IN LOAD-BEARING MASONRY WALLS AS SHOWN ON THE STRUCTURAL DRAWINGS ON SHEET **S5.01**

ALL OPENINGS EXCEEDING 1'-0" IN WIDTH IN NON-LOAD-BEARING MASONRY PARTITIONS MUST HAVE EITHER A PRECAST CONCRETE LINTEL OR A MASONRY BOND BEAM. NON-BEARING MASONRY PARTITIONS ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR OPENING SIZE, OPENING LOCATION, AND LINTEL TYPE. REFER TO THE CMU LINTEL SCHEDULE IN THE DETAILS FOR LINTEL SIZE AND REINFORCING.

MECHANICAL OPENINGS HAVE NOT BEEN SHOWN ON THE STRUCTURAL DRAWINGS. PROVIDE LINTELS FOR ALL MECHANICAL OPENINGS PER THE LINTEL SCHEDULE. DUCT OPENINGS THROUGH BEARING WALLS ARE TO BE LOCATED BETWEEN THE BEAMS/JOISTS, PROVIDING 1'-0" MINIMUM CLEAR FROM EDGE OF MASONRY OPENING TO STEEL BEARING. DUCTS ARE NOT TO BE LOCATED DIRECTLY UNDER STEEL BEARING.

NOTES:

1. PROVIDE HORIZONTAL JOINT REINFORCING AT 8" O.C. FOR TWO COURSES ABOVE ALL LINTELS. EXTEND THE JOINT REINFORCING 12" BEYOND THE LINTELS AT EACH END OF THE LINTELS.
2. BOND BEAM LINTEL REINFORCING TO EXTEND MINIMUM 16" BEYOND END OF OPENING. GROUT BOND BEAM SOLID
3. PROVIDE BEARING AT EACH END OF MASONRY LINTELS AS SHOWN IN THE DETAILS OS S5.02.

STRUCTURAL STEEL

ALL STEEL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 360-10, BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

ALL STEEL W SHAPES SHALL BE ASTM A992, GRADE 50. ALL ANGLES, CHANNELS, BENT PLATES, FLAT STOCK AND OTHER MISC. METAL SHAPES SHALL BE ASTM A36 UNLESS NOTED OTHERWISE. ALL CONNECTIONS SHALL BE WELDED OR BOLTED.

STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A501 OR ASTM A53, TYPE E OR S.

HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A500, GRADE B.

ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36

SHOP AND FIELD FASTENERS SHALL BE ASTM A325 HIGH STRENGTH BOLTS IN BEARING TYPE CONNECTIONS, UNLESS NOTED OTHERWISE.

NATURAL CAMBER OF STEEL BEAMS TO BE FABRICATED WITH CAMBER "UP". ANY ADDITIONAL CAMBER TO BE FABRICATED WITH CAMBER "UP". ERECTION OF ALL BEAMS TO BE CAMBER "UP".

PROVIDE ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) AT THE STEEL EXPOSED TO PUBLIC VIEW, INCLUDING STEEL ROOF TRUSSES, CANOPY FRAMING, AND COLUMNS WHERE VISIBLE. SEE S4.10 FOR ADDITIONAL REQUIREMENTS.

HOLES SHALL NOT BE CUT THROUGH BEAMS AND COLUMNS UNLESS INDICATED OR APPROVED BY THE STRUCTURAL ENGINEER.

WELDING SHALL BE DONE ONLY BY AWS CERTIFIED WELDERS. WELD IN ACCORDANCE WITH THE AWS "STANDARD CODE" FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. USE E70XX ELECTRODES.

STRUCTURAL STEEL SURFACES CAST INTO CONCRETE AND MASONRY AND STEEL TO RECEIVE FIREPROOFING SHALL BE UNPAINTED.

PROVIDE ADEQUATE BRACING AND GUY-WIRING FOR STEEL MEMBERS DURING STEEL ERECTION PRIOR TO FLOOR AND ROOF CONSTRUCTION. THE STEEL FRAME SHALL BE PLUMB WITHIN THE TOLERANCES IN THE AISC AND PROJECT SPECIFICATIONS. STEEL COLUMNS HAVE BEEN NOT BEEN DESIGNED AS SELF SUPPORTING, AND MUST BE ADEQUATELY BRACED DURING ERECTION.

MASONRY SUPPORTED BY STEEL MEMBERS SHALL NOT BE PLACED UNTIL PERMANENT ANCHORAGE AND BRACING SYSTEMS HAVE BEEN INSTALLED AND UNTIL THE CONCRETE ON THE FLOOR DECKS HAS ATTAINED ITS DESIGN STRENGTH.

THE FABRICATOR IS RESPONSIBLE FOR THE SELECTION, DESIGN AND DETAILING OF ALL CONNECTIONS NOT FULLY DETAILED ON THE CONTRACT DOCUMENTS. TYPICAL CONNECTION DETAILS ARE INDICATED ON THE DRAWINGS FOR DESIGN INTENT ONLY. THE FABRICATOR SHALL HAVE A REGISTERED PROFESSIONAL ENGINEER PREPARE THE CONNECTION DESIGNS, AND THE DESIGNS SHALL BE SUBMITTED FOR REVIEW WITH THE SHOP DRAWINGS.

G.C. OPTION AT COLUMN BASE PLATES-LEVELLING NUTS MAY BE USED IN LIEU OF LEVELLING PLATES SHOWN. USE 1" GROUT WITH LEVELING NUTS.

SEE THE "CONTRACTOR RESPONSIBILITES" AND "SUBMITTAL" NOTES FOR ADDITIONAL STEEL SHOP DRAWING REQUIREMENTS.

STRUCTURAL STEEL EXPOSED TO WEATHER

ALL EXPOSED STEEL SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AFTER FABRICATION. APPLY ZINC PRIMER TO BOLTED AND WELDED CONNECTIONS IN THE FIELD.

STEEL JOISTS

OPEN WEB STEEL JOISTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE. ALL JOISTS SHALL BE ANCHORED TO STEEL BEAMS AND BEARING PLATES WITH A MINIMUM 1/8" FILLET WELD 2" LONG ON EACH SIDE OF THE JOIST.

ROOF JOISTS TO BE DESIGNED FOR A NET UPLIFT LOAD AS CALCULATED FROM THE COMPONENTS AND CLADDING CHARTS.

HORIZONTAL OR DIAGONAL BRIDGING SHALL BE USED IN COMPLIANCE WITH REQUIREMENTS OF THE STEEL JOIST INSTITUTE. BRIDGING ANGLE SIZES SHALL BE AS RECOMMENDED BY SJI, FOR THE SPACINGS INDICATED. THE CONTRACTOR SHALL COORDINATE BRIDGING LOCATIONS WITH MECHANICAL DUCTWORK AND MECHANICAL UNIT LOCATIONS. ANCHOR BRIDGING TO MASONRY WALLS AS SHOWN ON THE DRAWINGS AND PER THE STEEL JOIST MANUFACTURER. COORDINATE BRIDGING ATTACHMENT WITH INSTALLATION OF DECK SUPPORT ANGLES.

STRUCTURAL DRAWINGS ARE NOT INTENDED TO STAND ALONE, BUT WORK IN CONJUCTION WITH THE ARCHITECTURAL DRAWINGS. JOIST MANUFACTURER TO COORDINATE WITH BOTH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DIMENSIONS, DETAILING, EDGE OF JOIST LOCATIONS, TOP CHORD EXTENSIONS, ETC. JOIST LOCATIONS ARE TO BE COORDINATED BY THE G.C. WITH DUCTWORK, CURTAIN WALL LOCATIONS, EXHAUST FANS AND OTHER ROOF PENETRATIONS, ROOF TOP UNITS, ETC. ADJUST JOIST LOCATIONS AS REQUIRED WITHIN THE MAXIMUM SPACING LIMITS PROVIDED. JOISTS ARE NOT TO BEAR ACROSS WALL CONTROL JOINTS. ADJUST JOIST LOCATIONS AS REQUIRED SO AS NOT TO STRADDLE THE JOINT WITH THE JOIST BEARING PLATE. THE CENTERLINE OF JOIST IS TO BE A MINIMUM OF 6" FROM THE CENTERLINE OF THE CONTROL JOINT. PROVIDE ADDITIONAL JOISTS AS REQUIRED TO COORDINATE WITH OTHER TRADES WHILE MAINTAINING MAXIMUM SPACINGS NOTED ON PLANS.

JOISTS INDICATED ON PLANS TO BE DESIGNED BY THE JOIST MANUFACTURER ARE TO BE SUBMITTED WITH CALCULATIONS, STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. JOIST MANUFACTURER IS RESPONSIBLE FOR COORDINATING SNOW BUILD UP LOADS, BASKETBALL BACKSTOP LOADS, MECHANICAL EQUIPMENT LOADS, AND ANY OTHER CONCENTRATED LOADS IDENTIFIED IN THE CONSTRUCTION DOCUMENTS. G.C. IS TO COORDINATE MAGNITUDE OF LOADS AND LOCATIONS WITH RESPECTIVE SUBCONTRACTORS AND MANUFACTURERS AND PROVIDE TO THE JOIST MANUFACTURER FOR USE IN DESIGN.

INDIVIDUAL PIPE HANGERS FOR PIPING SUPPORT ARE PERMITTED ON NEW OR EXISTING JOISTS AS FOLLOWS:

1. NO MORE THAN 300 POUNDS TO BE SUPPORTED ON ANY INDIVIDUAL JOIST. MULTIPLE HANGERS MAY BE LOCATED ON ONE JOIST AS LONG AS THE COMBINED SUPPORTED WEIGHT OF THOSE HANGERS DOES NOT EXCEED 300 POUNDS.
2. ADDITIONAL JOIST REINFORCING IS TO BE USED IF HANGER LOCATION IS FURTHER THAN 3" FROM THE JOIST PANEL POINT.

STEEL ROOF DECK

THE ROOF DECK SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND CODE OF RECOMMENDED STANDARD PRACTICE OF THE STEEL DECK INSTITUTE. SUBMIT SHOP DRAWINGS INDICATING THE ROOF DECK SECTION PROPERTIES MEET OR EXCEED THE FOLLOWING MINIMUM SPECIFICATIONS:

3-1/2" DEEP ACOUSTIC, 20 GAGE, Sp = 0.66 IN**3/FT.
Ip = 1.75 IN**4/FT., YIELD STRENGTH = 40,000 PSI (GALVANIZED) - DOVETAIL

CONNECT THE STEEL ROOF DECK TO THE SUPPORTS WITH MINIMUM 3/4" DIAMETER PUDDLE WELDS AT 36/4 PATTERN. SIDELAPS SHALL BE FASTENED WITH #12 SELF DRILLING SCREWS OR 1.5" FILLET WELDS AT 36" O.C

1-1/2" DEEP, 20 GAGE Sp = 0.227 IN**3/FT.
Ip = 0.205 IN**4/FT., YIELD STRENGTH = 33,000 PSI (GALVANIZED) - WIDE RIB B DECK

CONNECT THE STEEL ROOF DECK TO THE SUPPORTS WITH MINIMUM 3/4" DIAMETER PUDDLE WELDS AT 24/3 PATTERN. SIDELAPS SHALL BE FASTENED WITH #12 SELF DRILLING SCREWS OR 1.5" FILLET WELDS AT 36" O.C.

REFER TO THE ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR SIZES AND LOCATIONS OF ALL ROOF OPENINGS.

STRUCTURAL DRAWINGS ARE NOT INTENDED TO STAND ALONE, BUT WORK IN CONJUCTION WITH THE ARCHITECTURAL DRAWINGS. DECK MANUFACTURER TO COORDINATE WITH BOTH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DIMENSIONS, DETAILING, EDGE OF DECK LOCATIONS, ETC.

NO PIPING, CONDUIT, LIGHT FIXTURES, OR MECHANICAL DUCTWORK IS TO BE SUPPORTED FROM THE METAL ROOF DECK.

CONCRETE SLABS ON PERMANENT STEEL FORM

THE FLOOR SLABS ON PERMANENT STEEL FORM SHALL BE 5" IN OVERALL DEPTH AND REINFORCED WITH 6X6-W2.1XW2.1 WELDED WIRE REINFORCING. SUBMIT SHOP DRAWINGS INDICATING THE FORM DECK SECTION PROPERTIES MEET OR EXCEED THE FOLLOWING MINIMUM SPECIFICATIONS:

9/16" DEEP, 26 GAGE, Sp = 0.043 IN**3/FT.
Ip = 0.015 IN**4/FT., YIELD STRENGTH = 60,000 PSI. (GALVANIZED)

CONNECT THE STEEL FLOOR DECK TO THE SUPPORTS AS NOTED IN PROJECT SPECIFICATIONS.

REFER TO THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZES AND LOCATIONS OF ALL FLOOR SLAB OPENINGS. NO PIPING, CONDUIT, LIGHT FIXTURES, OR MECHANICAL DUCTWORK IS TO BE SUPPORTED FROM THE METAL FLOOR DECK.

GROUPS OF FLOOR PENETRATIONS IN THE SLAB, CREATED BY CORE DRILLING FOR UTILITIES, MUST BE CONSIDERED A FLOOR OPENING AND REINFORCED WITH ANGLE FRAMES PER THE TYPICAL DETAILS. THE FOLLOWING GUIDELINES SHOULD BE USED IN DETERMINING IF A GROUPING OF CORE DRILLED PENETRATIONS CONSTITUTES A FLOOR OPENING.

1. IF THERE IS LESS THAN 4" BETWEEN ADJACENT PENETRATIONS, AND THERE ARE FOUR OR MORE PENETRATIONS.
2. IF ANY GROUPING OF PENETRATIONS ENCOMPASSES AN AREA GREATER THAN 12" SQUARE, IN ANY DIRECTION, AND THERE IS NOT AT LEAST FOUR INCHES BETWEEN ADJACENT PENETRATIONS.

COLD FORMED METAL FRAMING (CFMF)

THE SUGGESTED COLD FORMED METAL FRAMING SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS IS TO BE USED AS A GUIDELINE ONLY BY THE CFMF CONTRACTOR. BEFORE PROCEEDING WITH WORK, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS, STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER, IN ACCORDANCE WITH THE "CONTRACTOR RESPONSIBILITIES" AND "SUBMITTAL" NOTES ABOVE AND THE REQUIREMENTS NOTED BELOW. SHOP DRAWINGS ARE TO INCLUDE ERECTION PLANS AND DETAILS, INCLUDING MEMBER SIZES, SPACING, BRIDGING, CONNECTION DETAILS, FASTENER REQUIREMENTS, AND ALL OTHER INFORMATION RELEVANT TO THE CONSTRUCTION OF THE COLD FORMED METAL FRAMING.

THE DESIGN, FABRICATION AND ERECTION OF ALL COLD FORMED METAL FRAMING SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING STANDARD SPECIFICATIONS:

THE AMERICAN IRON AND STEEL INSTITUTE: "LIGHT GAGE COLD-FORMED STEEL DESIGN MANUAL".

ALL COLD FORMED METAL FRAMING SHALL CONFORM TO ASTM C955.

ALL COLD FORMED METAL FRAMING SUBJECT TO WIND LOADING (INCLUDING ROOF RAFTER OR ROOF TRUSS MEMBERS) SHALL BE DESIGNED IN COMPLIANCE WITH THE COMPONENTS AND CLADDING SECTION OF THE BUILDING CODE.

ALL COLD FORMED MEMBERS SHALL BE GALVANIZED PER ASTM A1003 WITH A MINIMUM G60 COATING.

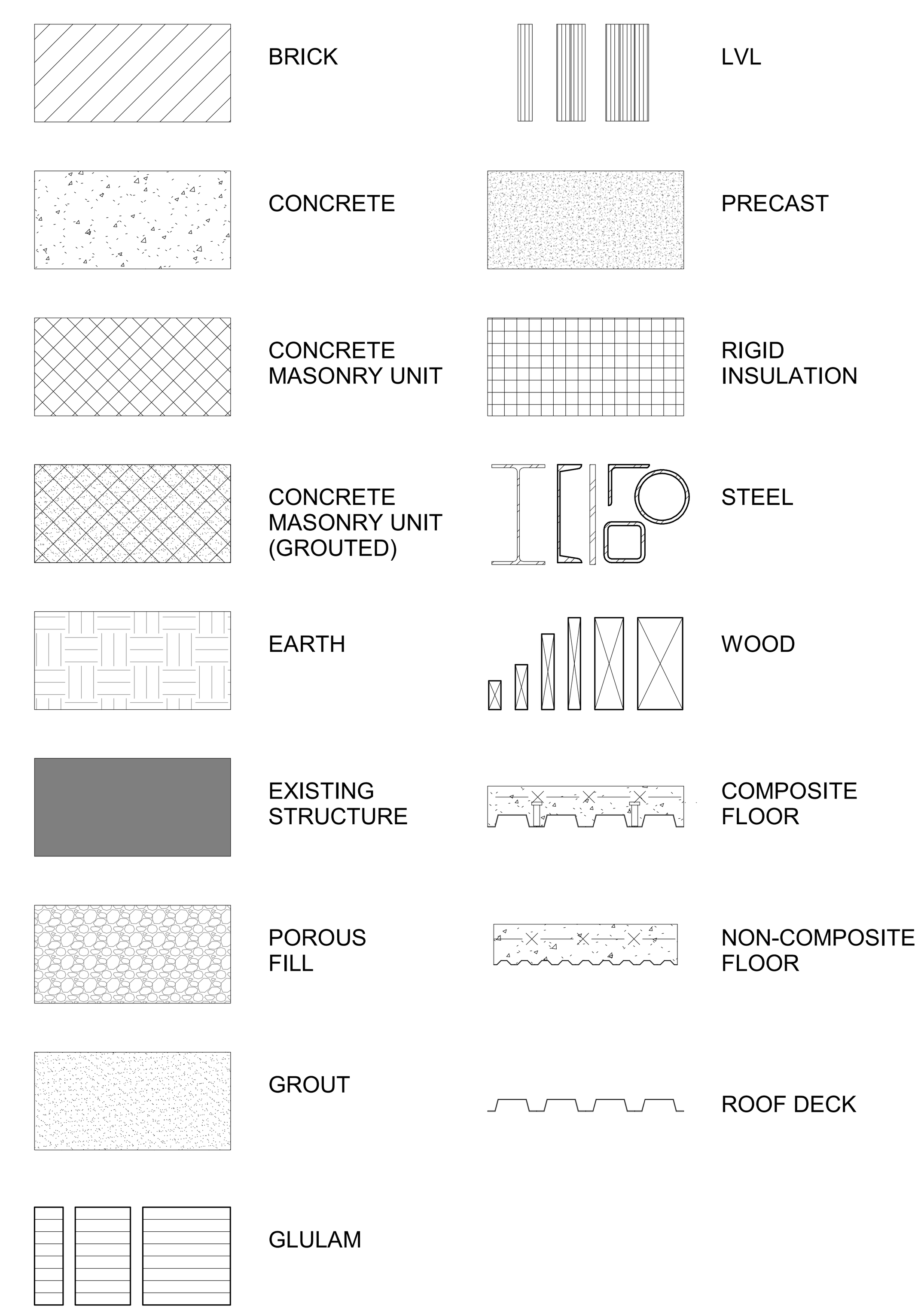
THE MAXIMUM COLD FORMED MEMBER SPAN/DEFLECTION RATIO SHALL BE AS FOLLOWS:

WIND LOADS	BRICK VENEER	L/600
	CEMENT BOARD	L/360

WALL FRAMING IS TO BE MINIMUM 20 GAGE (33 MILS) AT A MAXIMUM SPACING OF 24" ON CENTER. WALL FRAMING AT BRICK VENEER IS TO BE MINIMUM 18 GAGE (43 MILS). MAXIMUM STUD SPACING AT BRICK VENEER IS TO BE 16" ON CENTER. WHERE HIGHER MINIMUM GAGES ARE SPECIFIED ON THE DRAWINGS, REDUCTION IN GAGE WILL NOT BE CONSIDERED.

THE COLD FORMED METAL FRAMING FABRICATOR SHALL FURNISH ALL COLD FORMED METAL FRAMING, BRIDGING, BRACING, ANCHORS, CONNECTORS, SHIMS, WELDING AND ATTACHMENTS.

SYMBOL LEGEND



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ADTEK PROJECT #: 1713.0001

STRUCTURAL NOTES

PLOT SCALE: As indicated
FILENAME:
DATE: December 18, 2019

PROJECT
3089

S0.02

CONCRETE TENSION LAP SPLICE LENGTH SCHEDULE

BAR SIZE	f'c=3,000 PSI				f'c=3,500 PSI				f'c=4,000 PSI				f'c=4,500 PSI			
	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	1'-5"	1'-11"	1'-4"	1'-6"	1'-4"	1'-10"	1'-4"	1'-5"	1'-4"	1'-8"	1'-4"	1'-4"	1'-4"	1'-7"	1'-4"	1'-4"
#4	1'-11"	3'-2"	1'-6"	2'-5"	1'-9"	2'-11"	1'-4"	2'-3"	1'-8"	2'-9"	1'-4"	2'-1"	1'-7"	2'-7"	1'-4"	2'-0"
#5	2'-4"	4'-6"	1'-10"	3'-6'	2'-2"	4'-2"	1'-8"	3'-3"	2'-1"	3'-11"	1'-7"	3'-0"	1'-11"	3'-8"	1'-6"	2'-10"
#6	2'-10"	6'-0"	2'-2"	4'-7"	2'-7"	5'-7"	2'-0"	4'-3"	2'-5"	5'-2"	1'-11"	4'-0"	2'-4"	4'-11"	1'-9"	3'-9"

NOTES:
1. LAP SPLICE INFORMATION APPLIES TO BEAM, COLUMN, SLAB AND WALL REINFORCING BARS.
2. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
3. CASE 1&2, DEPENDS ON THE CONCRETE COVER, AND CLEAR SPACING OF BARS AS DEFINED BELOW:
   CASE 1 : COVER AT LEAST 1 1/2" AND CLEAR SPACING AT LEAST 3".
   CASE 2 : ALL OTHER CASES.
4. FOR LIGHTWEIGHT AGGREGATE, MULTIPLY ABOVE VALUES BY 1.3.
5. FOR EPOXY BARS, MULTIPLY ABOVE VALUES BY: 1.5 FOR OTHER BARS, 1.31 FOR "TOP BARS".
6. THIS SCHEDULE APPLIES TO 60ksi REINFORCING BARS. FOR 75ksi REINFORCING BARS, MULTIPLY ABOVE VALUES BY 1.25.
7. FOR BAR DEVELOPMENT LENGTHS, DIVIDE ABOVE VALUE BY 1.3.

CMU WALL LAP SPLICE SCHEDULE

LONGITUDINAL BAR SIZE	MINIMUM LAP SPLICE LENGTH, in. FOR:			
	6-in. CMU	8-in. CMU	10-in. CMU	12-in. CMU
NO. 3	12	12	12	12
NO. 4	20	15	12	12
NO. 5	32	23	18	15
NO. 6	-	43	34	28

NOTES:
1. VALUES ARE BASED ON GRADE 60 REINFORCEMENT.

COLUMN SCHEDULE

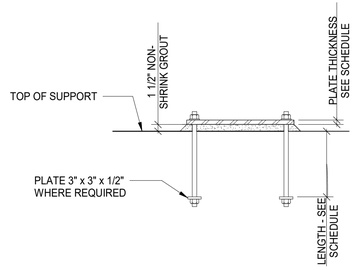
MARK	COLUMN SIZE	BASE PLATE SIZE	ANCHOR RODS
C1	HSS8x8x3/8	18"x18"x1-1/2"	(4) 1" DIA.
C2	HSS6x6x3/16	14"x14"x1"	(4) 1" DIA.
C3	HSS6x6x1/2	14"x14"x1"	(4) 1" DIA.
C4	HSS6x6x1/4	14"x14"x1"	(4) 1" DIA.

FOOTING SCHEDULE

MARK	FOOTING SIZE			BOTTOM REINF.	REMARKS
	WIDTH	LENGTH	DEPTH	E.W. - U.N.O.	
F3.0	3'-0"	3'-0"	12"	(4) #4	
F4.0	4'-0"	4'-0"	12"	(5) #4	
F5.0	5'-0"	5'-0"	12"	(7) #4	
F6.0	6'-0"	6'-0"	14"	(7) #5	
F7.0	7'-0"	7'-0"	18"	(6) #6	

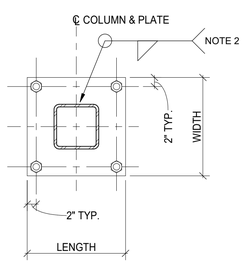
PIER SCHEDULE

MARK	PIER SIZE		VERT. REINF.	TIES	T.O. PIER ELEV. (U.N.O.)	REMARKS
	WIDTH	LENGTH				
P1	22"	22"	(12) #6	#3 @10" O.C.	-0'-8"	



NOTES:
1) SEE SCHEDULE FOR PLATE DIMENSIONS AND ANCHOR ROD SIZE.
2) LEVELING PLATE MAY BE USED AT CONTRACTORS OPTION WITH ENGINEERS APPROVAL.
3) HEAVY WASHERS OR PLATES REQUIRED AT ALL OVERSIZED HOLES. AT TYPE 'B' BASE PLATES, WELD WASHERS TO BASE PLATES AS REQUIRED TO DEVELOP ANCHOR RODS IN SHEAR.

1 / S0.03 BASE PLATE SETTING DETAIL
SCALE: NTS



NOTES:
1) SEE SCHEDULE FOR PLATE DIMENSIONS AND ANCHOR ROD SIZES.
2) PROVIDE MINIMUM FILLET WELD SIZE PER AISC SPECIFICATION.

2 / S0.03 GRAVITY COLUMN BASE PLATE DETAILS
SCALE: NTS

STATE OF MARYLAND
JAMES R. RODRIGUES
47042
PROFESSIONAL ENGINEER
7/1/2020

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SCHEDULES AND COLUMN DETAILS

PLOT SCALE: As indicated
FILENAME:
DATE: December 18, 2019

PROJECT 3089

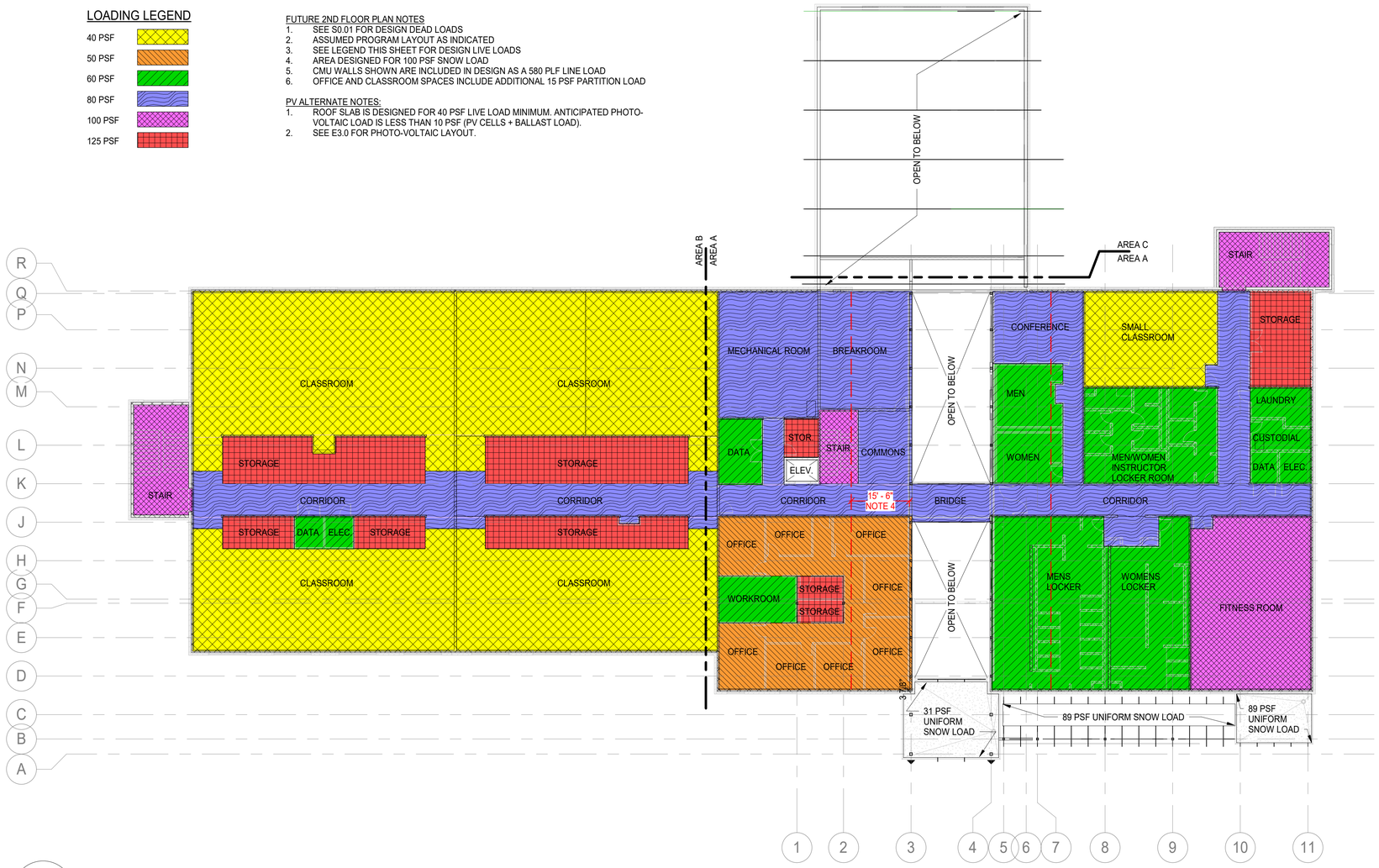
S0.03

LOADING LEGEND

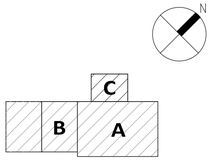
- 40 PSF
- 50 PSF
- 60 PSF
- 80 PSF
- 100 PSF
- 125 PSF

FUTURE 2ND FLOOR PLAN NOTES
1. SEE S0.01 FOR DESIGN DEAD LOADS
2. ASSUMED PROGRAM LAYOUT AS INDICATED
3. SEE LEGEND THIS SHEET FOR DESIGN LIVE LOADS
4. AREA DESIGNED FOR 100 PSF SNOW LOAD
5. CMU WALLS SHOWN ARE INCLUDED IN DESIGN AS A 580 PLF LINE LOAD
6. OFFICE AND CLASSROOM SPACES INCLUDE ADDITIONAL 15 PSF PARTITION LOAD

PV ALTERNATE NOTES:
1. ROOF SLAB IS DESIGNED FOR 40 PSF LIVE LOAD MINIMUM. ANTICIPATED PHOTO-VOLTAIC LOAD IS LESS THAN 10 PSF (PV CELLS + BALLAST LOAD).
2. SEE E3.0 FOR PHOTO-VOLTAIC LAYOUT.



1 / S0.04 FUTURE 2ND FLOOR LOADING DIAGRAM
SCALE: 1/16" = 1'-0"



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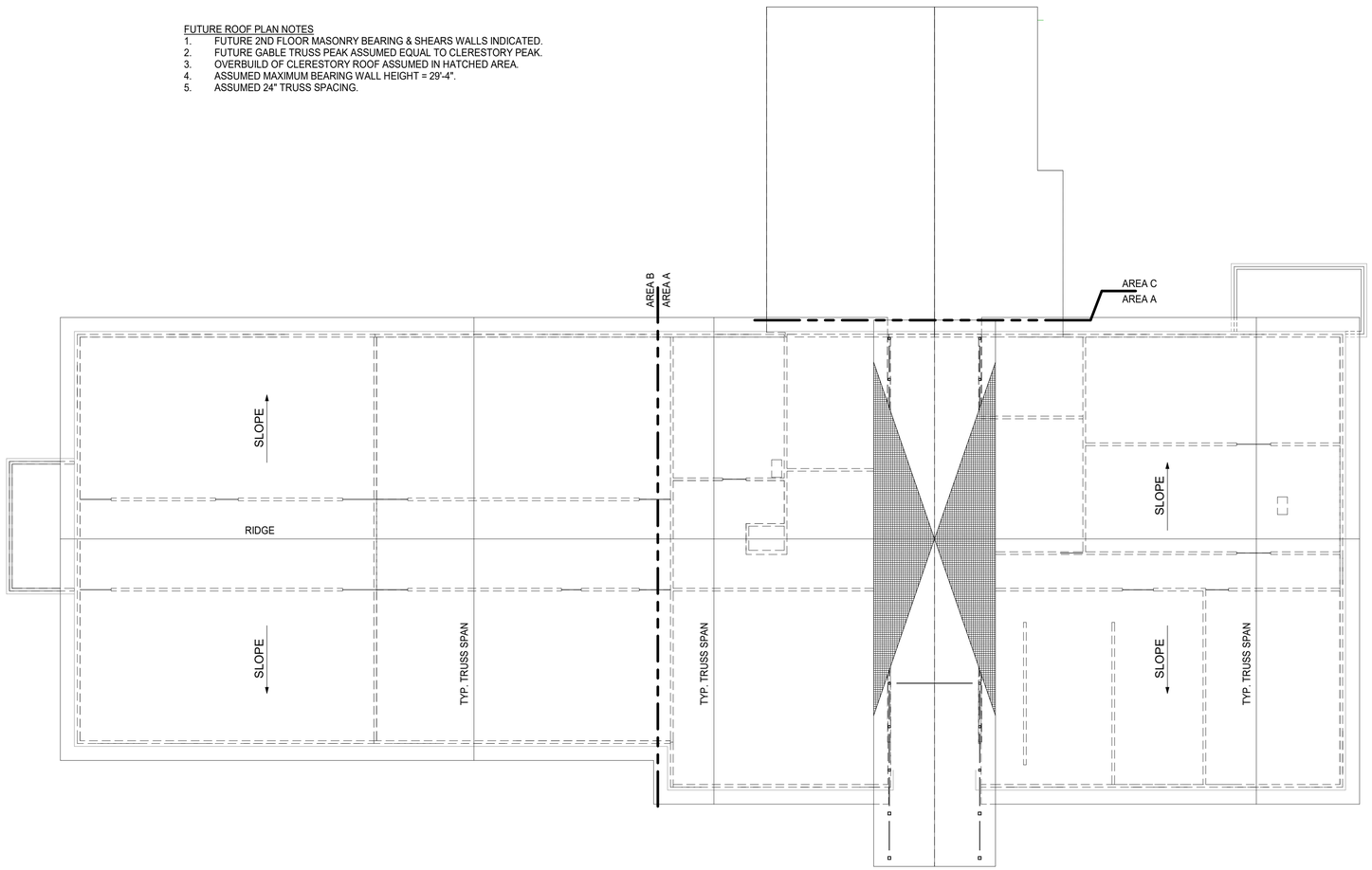
FUTURE 2ND FLOOR LOADING DIAGRAM

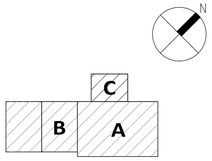
PLOT SCALE: 1/16" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT
3089
S0.04

FUTURE ROOF PLAN NOTES
1. FUTURE 2ND FLOOR MASONRY BEARING & SHEARS WALLS INDICATED.
2. FUTURE GABLE TRUSS PEAK ASSUMED EQUAL TO CLERESTORY PEAK.
3. OVERBUILD OF CLERESTORY ROOF ASSUMED IN HATCHED AREA.
4. ASSUMED MAXIMUM BEARING WALL HEIGHT = 29'-4".
5. ASSUMED 24" TRUSS SPACING.



1 S0.05 FUTURE ROOF PLAN
SCALE: 1/16" = 1'-0"



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FUTURE ROOF PLAN

PLOT SCALE: 1/16" = 1'-0"
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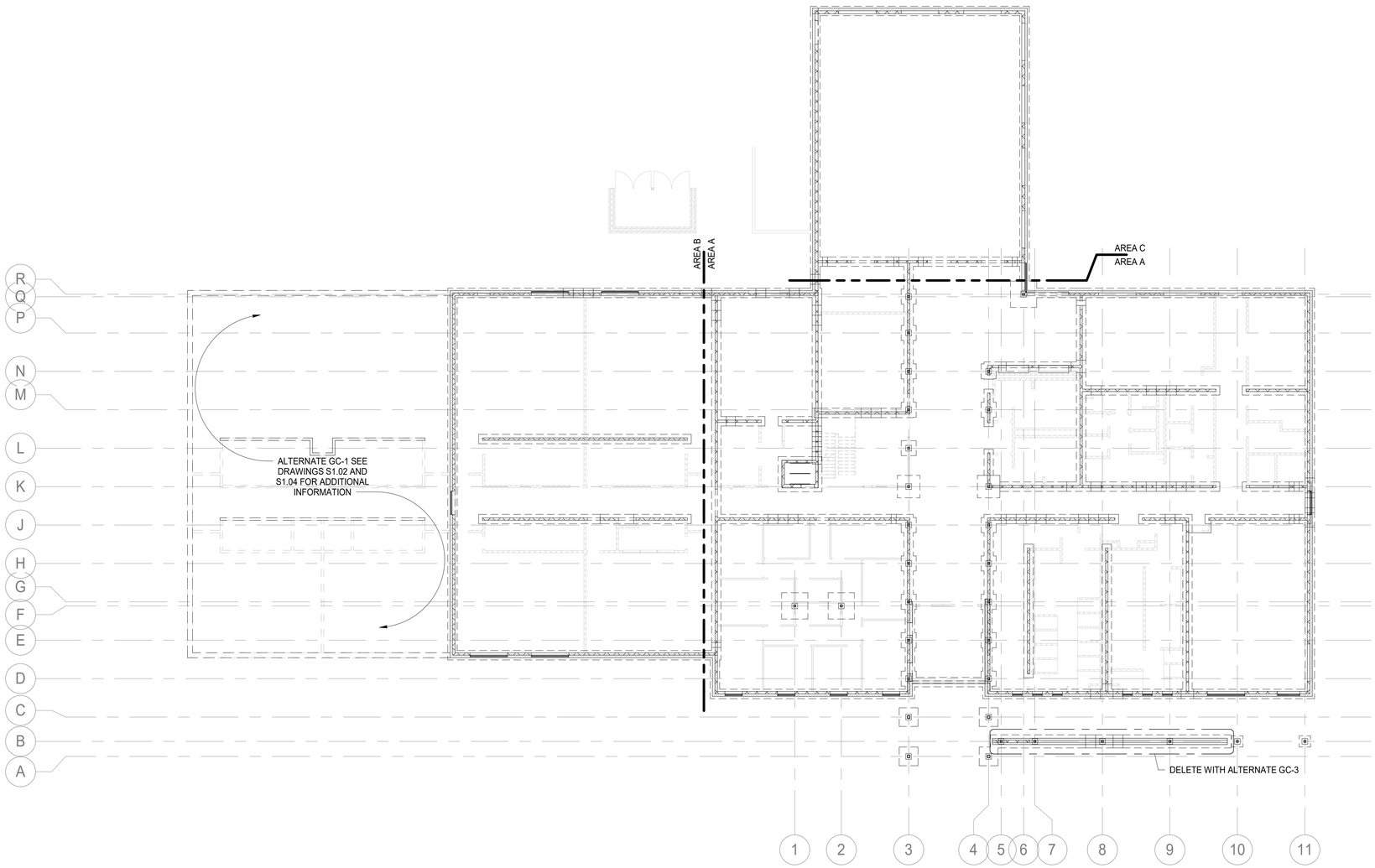
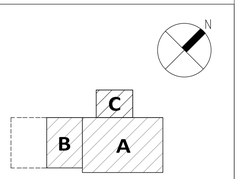
S0.05



1 / S1.01 OVERALL FOUNDATION PLAN
SCALE: 1/16" = 1'-0"



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OVERALL FOUNDATION PLAN

PLOT SCALE: 1/16" = 1'-0"
FILENAME:
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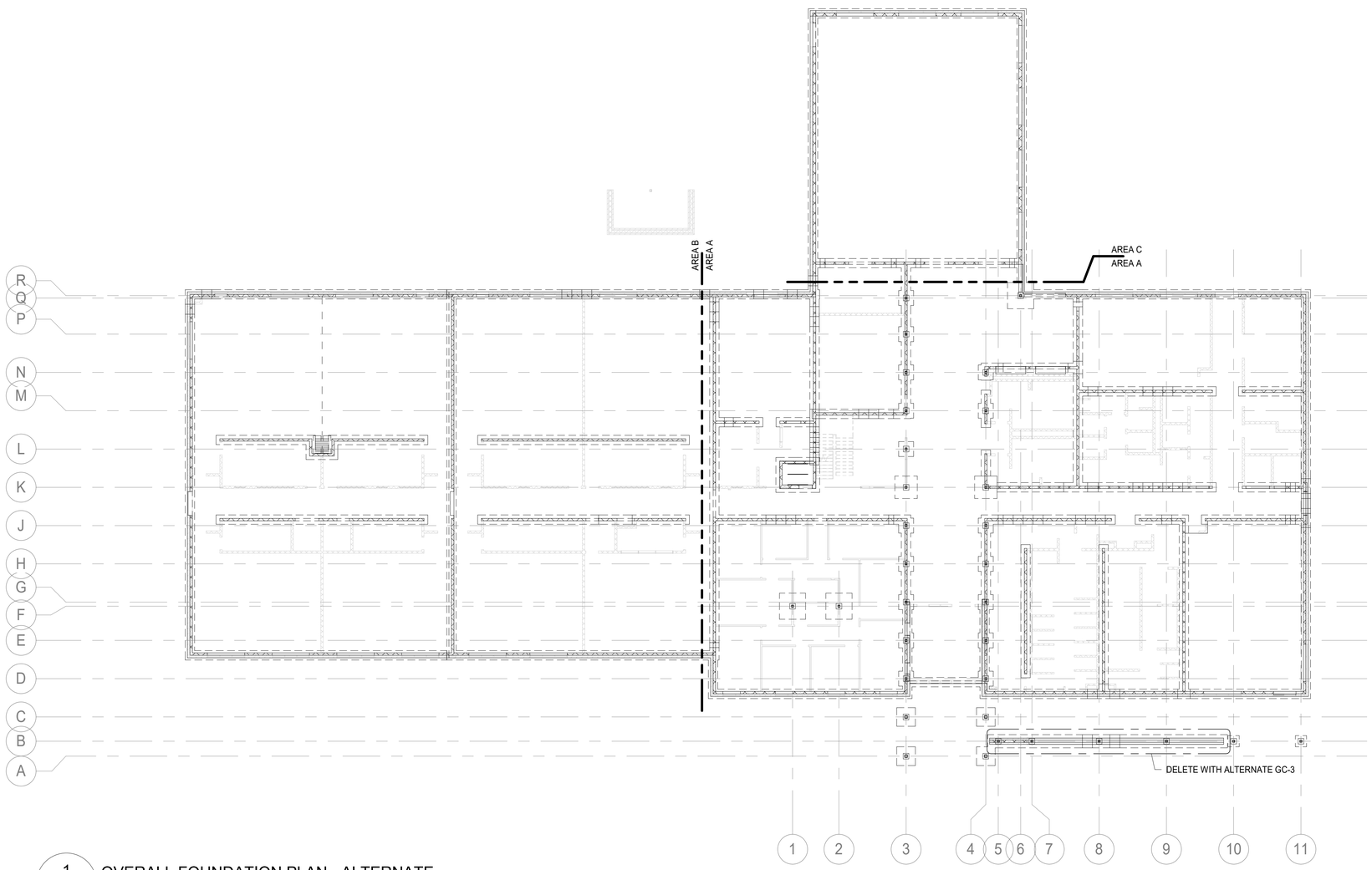
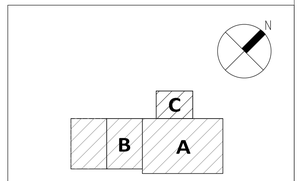
S1.01



1 / S1.02 OVERALL FOUNDATION PLAN - ALTERNATE
SCALE: 1/16" = 1'-0"



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STATE OF MARYLAND
ROBERT A. RODRIGUEZ
47042
PROFESSIONAL ENGINEER
7/1/2020

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OVERALL FOUNDATION PLAN - ALTERNATE

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

FILENAME:

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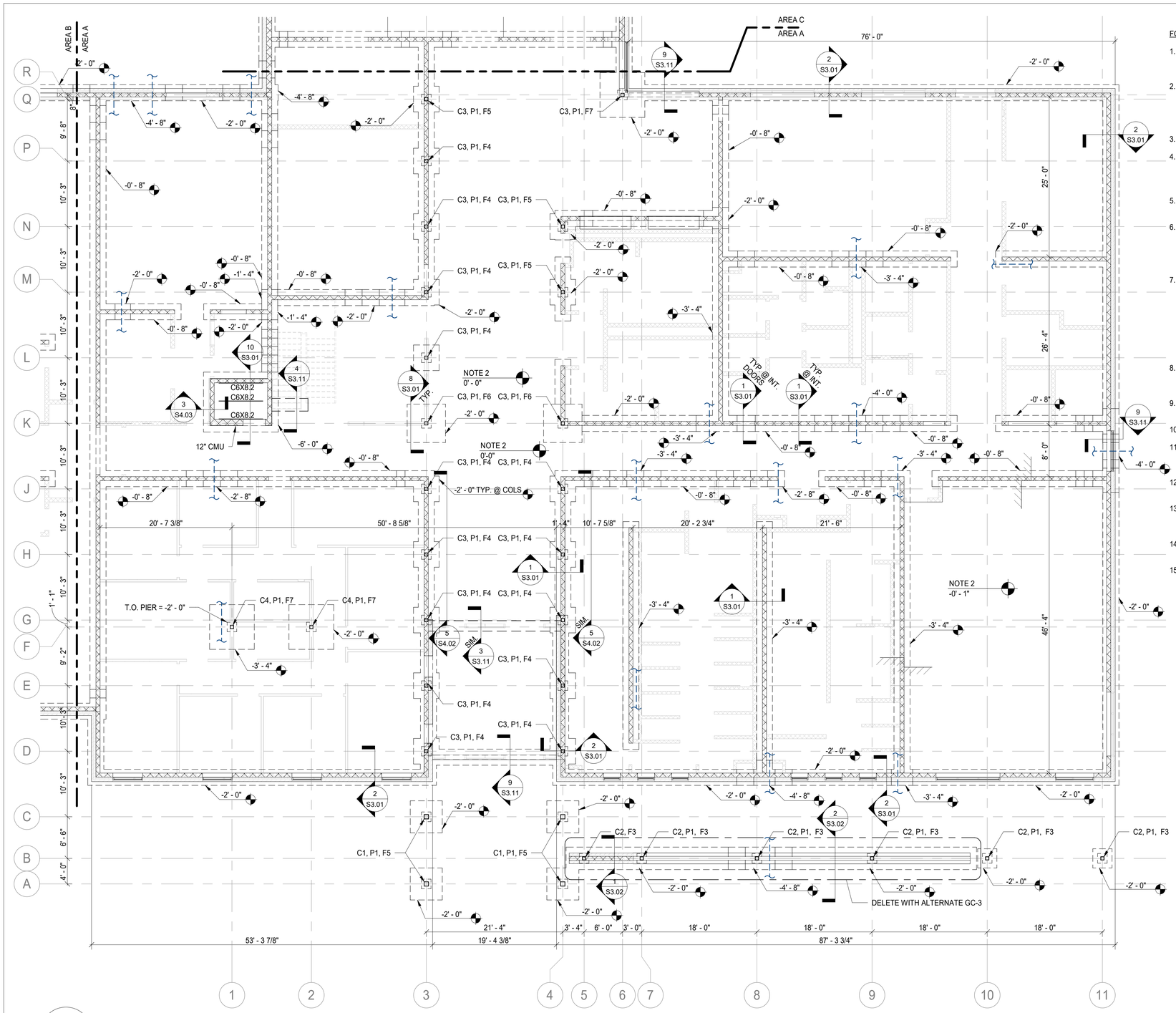
PROJECT
3089

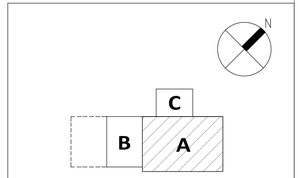
S1.02



1 / S1.03 AREA A - PARTIAL FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN NOTES

1. SEE SHEETS S0.01 THRU S0.02 FOR STRUCTURAL NOTES AND SHEETS S3.01 THRU S3.11 FOR TYPICAL DETAILS. THE TYPICAL DETAILS APPLY WHEREVER THE CONDITION EXISTS UNLESS DETAILED OTHERWISE.
2. PROVIDE A 4" CONCRETE SLAB ON GRADE WITH 6x6-W2.0xW2.0 WWR ON CONTINUOUS VAPOR RETARDER OVER 4" OF DRAINAGE FILL. SEE THE PLAN FOR THE TOP OF SLAB ELEVATION. THE TOP OF SLAB ELEVATION IS INDICATED ON THE PLAN THUS: -X'-X". ELEVATION 0'-0" CORRESPONDS TO AN APPROXIMATE ELEVATION OF 487.25'. COORDINATE FINAL ELEVATION WITH SITE/CIVIL DRAWINGS.
3. C.J. INDICATES A CONTROL JOINT IN THE GRADE SLAB. SEE DETAILS 1, 2/S3.11.
4. SEE THE PLAN FOR TOP OF WALL FOOTING AND COLUMN FOOTING ELEVATIONS. THE TOP OF FOOTING ELEVATIONS ARE INDICATED ON PLAN THUS: ◐ _X' - X" / REFERENCED FROM ELEVATION 0'-0". FOOTING ELEVATIONS ARE FOR BIDDING ◐ PURPOSES ONLY AND MAY HAVE TO BE ADJUSTED BASED ON FIELD CONDITIONS ENCOUNTERED DURING EXCAVATION.
5. TOP OF INTERIOR FOOTINGS SHALL BE 8" BELOW FINISHED FLOOR ELEVATION UNLESS NOTED OTHERWISE.
6. TOP OF EXTERIOR FOOTINGS SHALL BE 2'-0" BELOW FINISHED FLOOR ELEVATION UNLESS NOTED OTHERWISE. BOTTOM OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-6" BELOW FINISHED EXTERIOR GRADE. COORDINATE ELEVATIONS WITH THE APPROVED SITE PLAN. USE TOP OF FOOTING VALUE SHOWN OR 2'-6" TO BOTTOM OF FOOTING FROM EXTERIOR GRADE, WHICHEVER IS DEEPER.
7. SEE THE TYPICAL WALL FOOTING AT UTILITIES DETAILS 3-7 ON SHEET S3.01. STEP ALL WALL FOOTINGS AS INDICATED OR REQUIRED BELOW UNDERGROUND UTILITIES. THE CONTRACTOR SHALL VERIFY THE INVERT ELEVATIONS OF ALL UTILITIES WITH THE TOP OF FOOTING ELEVATIONS SHOWN. COORDINATE ALL UTILITY LOCATIONS WITH SITE, PLUMBING, ELECTRICAL, AND MECHANICAL DRAWINGS. THE SYMBOL S- - - - - - - - - S INDICATES A UTILITY CROSSING A FOUNDATION ON THE PLAN. UTILITIES ARE SHOWN AS AN EFFORT TO AID IN THE COORDINATION OF TRADES; IT IS NOT INTENDED TO BE A COMPLETE REPRESENTATION OF ALL UTILITIES. G.C. TO COORDINATE FOOTING STEPS WITH UTILITY CONTRACTOR AND CONCRETE CONTRACTOR PRIOR TO FOOTING POUR.
8. THE TOP OF PIER ELEVATION SHALL BE A MINIMUM OF 8" BELOW THE TOP OF FLOOR SLAB UNLESS NOTED OTHERWISE. PIERS SHALL NOT PROJECT BEYOND THE OUTSIDE FACE OF THE EXTERIOR WALL.
9. THE SYMBOLS C1, P1, AND F4.0 ON THE FOOTING REFER TO DESIGNATIONS IN THE COLUMN, PIER AND FOOTING SCHEDULES LOCATED ON SHEET S0.03.
10. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
11. SEE THE ARCHITECTURAL DRAWINGS FOR THE SIZE AND LOCATION OF ALL NON-BEARING PARTITIONS. PROVIDE A THICKENED SLAB AT THE MASONRY PARTITIONS PER DETAIL 3/S3.11.
12. CONTRACTOR TO COORDINATE FINAL SLAB ELEVATION WITH ARCHITECTURAL FLOOR AND FINISH REQUIREMENTS. SEE DETAIL 12/S3.11 FOR DEPRESSION REQUIREMENTS.
13. ALL CMU WALLS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE 8" U.N.O. AND REINFORCED W/ #6 @ 24" O.C. PROVIDE DOWELS TO FOOTING TO MATCH. REBAR SHALL BE CENTERED IN CELL U.N.O. GROUT REINFORCED CELLS SOLID.
14. PROVIDE JAMB REINFORCING PER 8/S5.01 AT ALL MASONRY OPENINGS. JAMB REINFORCING TO BE FULL HEIGHT OF WALL WITH MATCHING DOWELS TO FOOTING.
15. SMP INDICATES A SOLID MASONRY PIER. SEE DETAIL 3/S5.01.



KEY PLAN

STATE OF MARYLAND
ROSS E. RODRIGUES
No. 47042
PROFESSIONAL ENGINEER
7/1/2020

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301-662-4408
Fax: 301-662-7484
ADTEK PROJECT #: 1713.0001

FOUNDATION PLAN - AREA A

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

FILENAME:

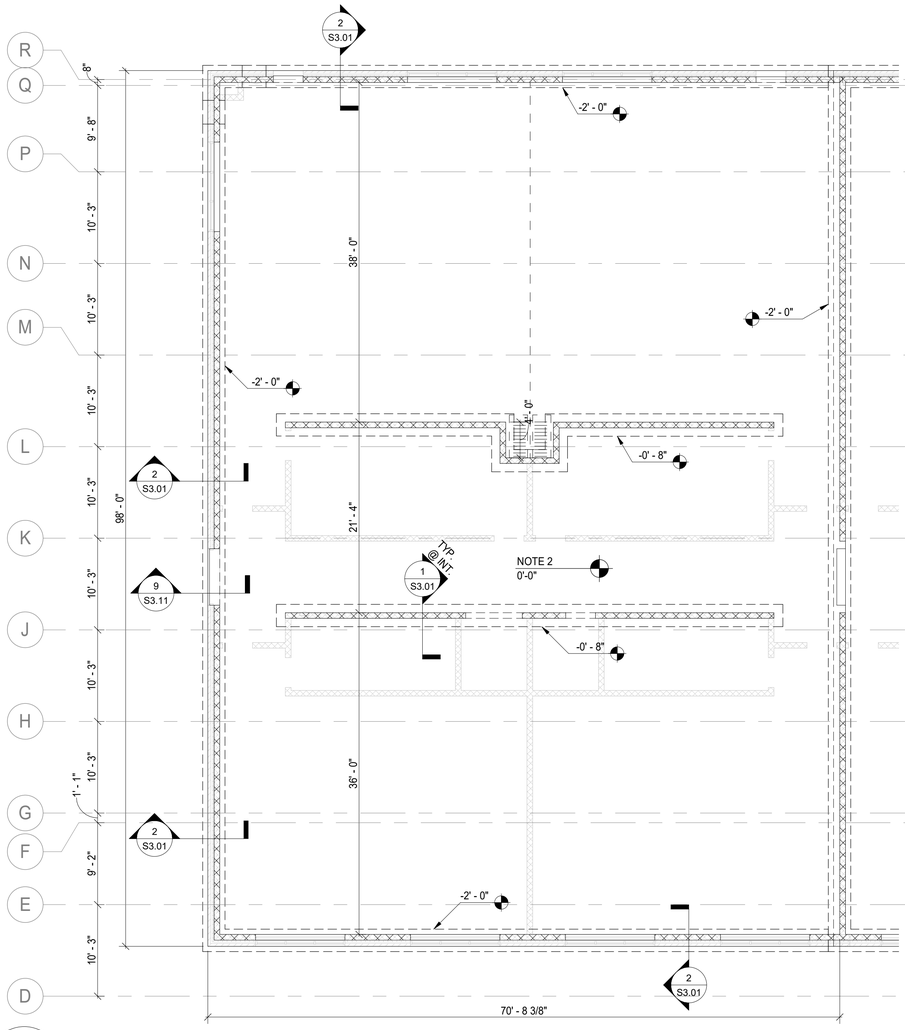
DATE: December 18, 2019

PROJECT 3089

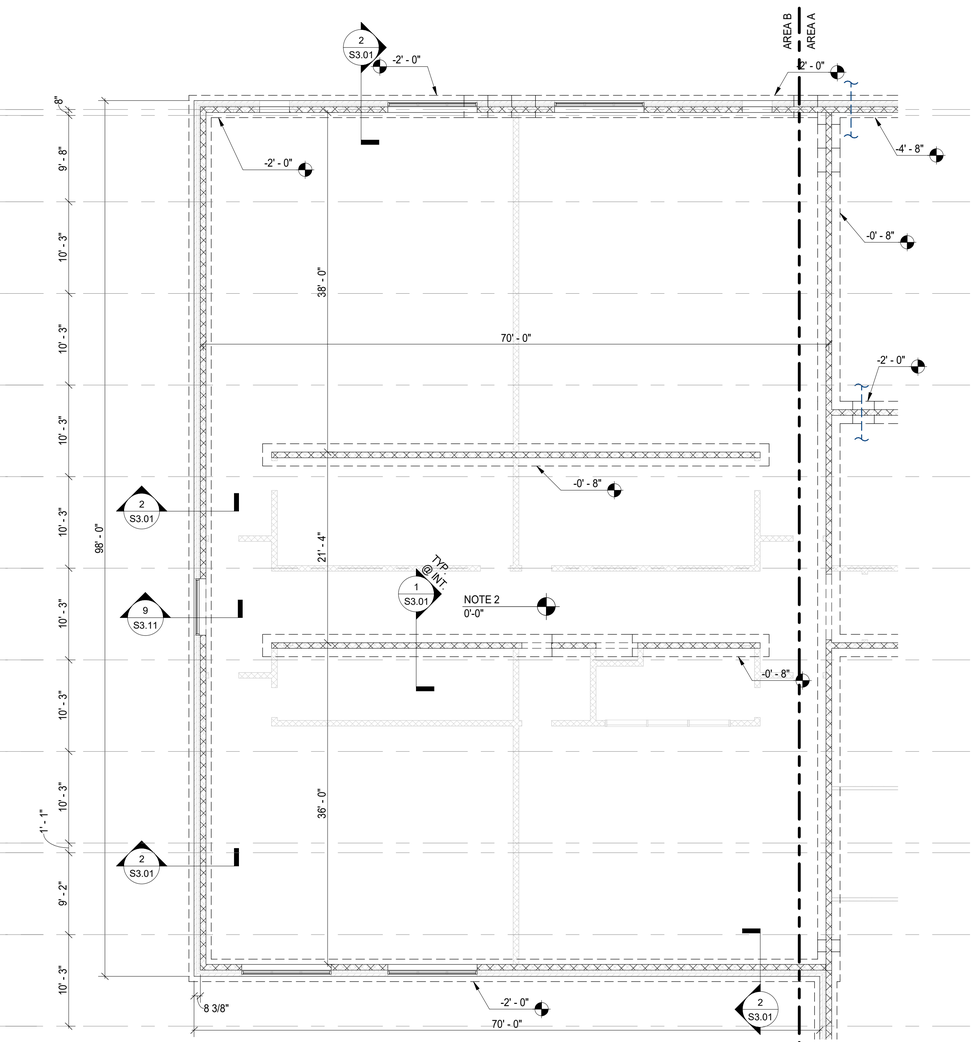
S1.03

FOUNDATION PLAN NOTES:

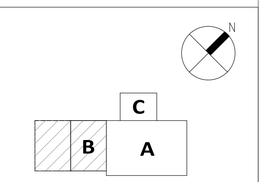
REFER TO SHEET S1.03.



2 S1.04 AREA B - PARTIAL FOUNDATION PLAN - ALTERNATE
SCALE: 1/8" = 1'-0"



1 S1.04 AREA B - PARTIAL FOUNDATION PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN

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301-662-4408
Fax: 301-662-7484
ADTEK PROJECT #: 1713.0001

FOUNDATION PLAN - AREA B

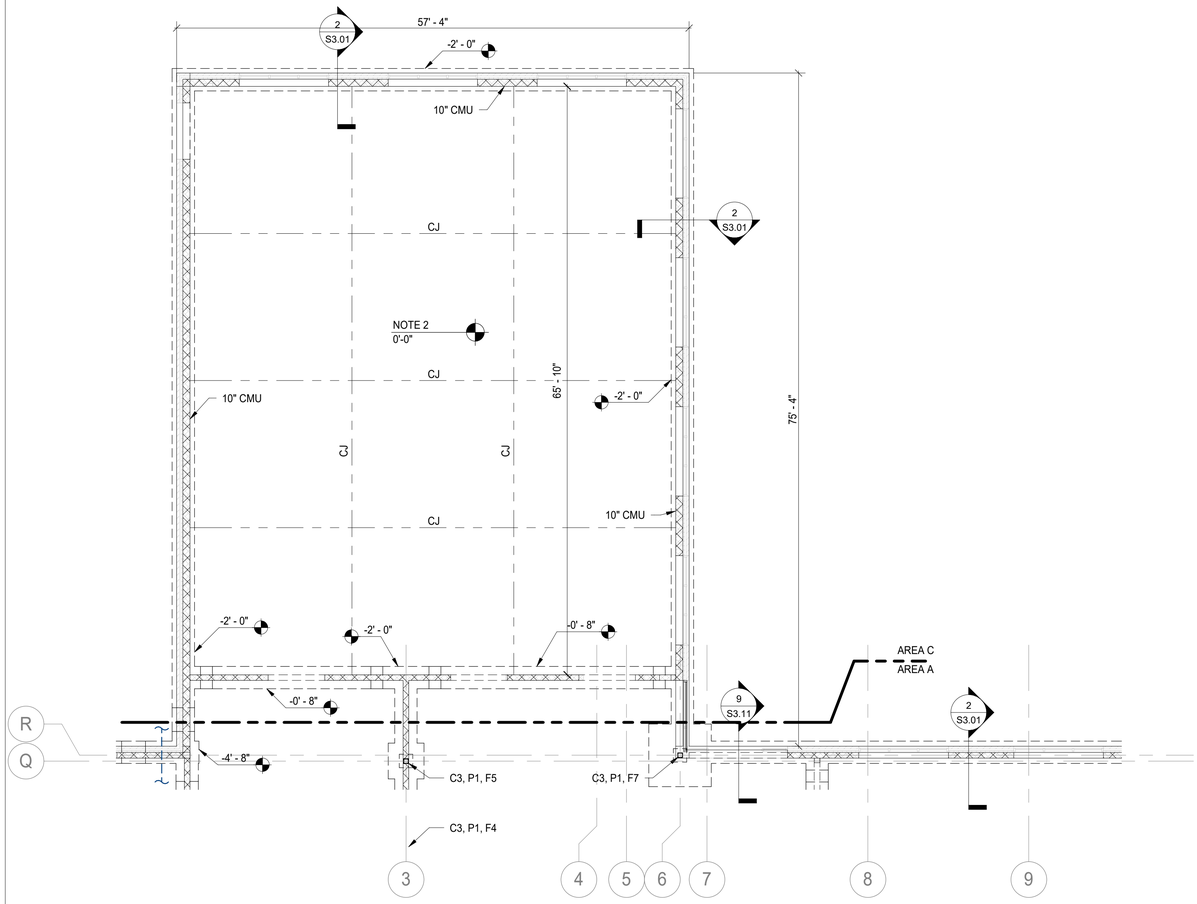
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: December 18, 2019

PROJECT
3089

S1.04



1
S1.05

AREA C - PARTIAL FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN NOTES

1. SEE SHEETS S0.01 THRU S0.02 FOR STRUCTURAL NOTES AND SHEETS S3.01 THRU S3.11 FOR TYPICAL DETAILS. THE TYPICAL DETAILS APPLY WHEREVER THE CONDITION EXISTS UNLESS DETAILED OTHERWISE.

2. PROVIDE A 4" CONCRETE SLAB ON GRADE WITH 6x6-W2.0xW2.0 WWR ON CONTINUOUS VAPOR RETARDER OVER 4" OF DRAINAGE FILL. SEE THE PLAN FOR THE TOP OF SLAB ELEVATION. THE TOP OF SLAB ELEVATION IS INDICATED ON THE PLAN THUS: -X'-X". ELEVATION 0'-0" CORRESPONDS TO AN APPROXIMATE ELEVATION OF 487.25'. COORDINATE FINAL ELEVATION WITH SITE/CIVIL DRAWINGS.

3. C.J. INDICATES A CONTROL JOINT IN THE GRADE SLAB. SEE DETAILS 1, 2/S3.11.

4. SEE THE PLAN FOR TOP OF WALL FOOTING AND COLUMN FOOTING ELEVATIONS. THE TOP OF FOOTING ELEVATIONS ARE INDICATED ON PLAN THUS: ◢ X' - X" / REFERENCED FROM ELEVATION 0'-0". FOOTING ELEVATIONS ARE FOR BIDDING ◥ PURPOSES ONLY AND MAY HAVE TO BE ADJUSTED BASED ON FIELD CONDITIONS ENCOUNTERED DURING EXCAVATION.

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6. TOP OF EXTERIOR FOOTINGS SHALL BE 2'-0" BELOW FINISHED FLOOR ELEVATION UNLESS NOTED OTHERWISE. BOTTOM OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-6" BELOW FINISHED EXTERIOR GRADE. COORDINATE ELEVATIONS WITH THE APPROVED SITE PLAN. USE TOP OF FOOTING VALUE SHOWN OR 2'-6" TO BOTTOM OF FOOTING FROM EXTERIOR GRADE, WHICHEVER IS DEEPER.

7. SEE THE TYPICAL WALL FOOTING AT UTILITIES DETAILS 3-7 ON SHEET S3.01. STEP ALL WALL FOOTINGS AS INDICATED OR REQUIRED BELOW UNDERGROUND UTILITIES. THE CONTRACTOR SHALL VERIFY THE INVERT ELEVATIONS OF ALL UTILITIES WITH THE TOP OF FOOTING ELEVATIONS SHOWN. COORDINATE ALL UTILITY LOCATIONS WITH SITE, PLUMBING, ELECTRICAL, AND MECHANICAL DRAWINGS. THE SYMBOL S- - - - - - - - - - S INDICATES A UTILITY CROSSING A FOUNDATION ON THE PLAN. UTILITIES ARE SHOWN AS AN EFFORT TO AID IN THE COORDINATION OF TRADES; IT IS NOT INTENDED TO BE A COMPLETE REPRESENTATION OF ALL UTILITIES. G.C. TO COORDINATE FOOTING STEPS WITH UTILITY CONTRACTOR AND CONCRETE CONTRACTOR PRIOR TO FOOTING POUR.

8. THE TOP OF PIER ELEVATION SHALL BE A MINIMUM OF 8" BELOW THE TOP OF FLOOR SLAB UNLESS NOTED OTHERWISE. PIERS SHALL NOT PROJECT BEYOND THE OUTSIDE FACE OF THE EXTERIOR WALL.

9. THE SYMBOLS C1, P1, AND F4.0 ON THE FOOTING REFER TO DESIGNATIONS IN THE COLUMN, PIER AND FOOTING SCHEDULES LOCATED ON SHEET S0.03.

10. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

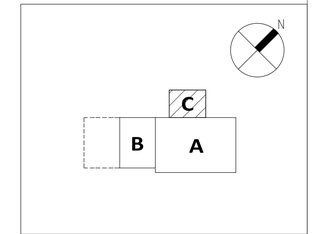
11. SEE THE ARCHITECTURAL DRAWINGS FOR THE SIZE AND LOCATION OF ALL NON-BEARING PARTITIONS. PROVIDE A THICKENED SLAB AT THE MASONRY PARTITIONS PER DETAIL 3/S3.11.

12. CONTRACTOR TO COORDINATE FINAL SLAB ELEVATION WITH ARCHITECTURAL FLOOR AND FINISH REQUIREMENTS. SEE DETAIL 12/S3.11 FOR DEPRESSION REQUIREMENTS.

13. ALL CMU WALLS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE 8" U.N.O. AND REINFORCED W/ #6 @ 24" O.C. PROVIDE DOWELS TO FOOTING TO MATCH. REBAR SHALL BE CENTERED IN CELL U.N.O. GROUT REINFORCED CELLS SOLID.

14. PROVIDE JAMB REINFORCING PER 8/S5.01 AT ALL MASONRY OPENINGS. JAMB REINFORCING TO BE FULL HEIGHT OF WALL WITH MATCHING DOWELS TO FOOTING.

15. SMP INDICATES A SOLID MASONRY PIER. SEE DETAIL 3/S5.01.



KEY PLAN

STATE OF MARYLAND
ROSS A. RODRIGUEZ
No. 47042
PROFESSIONAL ENGINEER
7/1/2020

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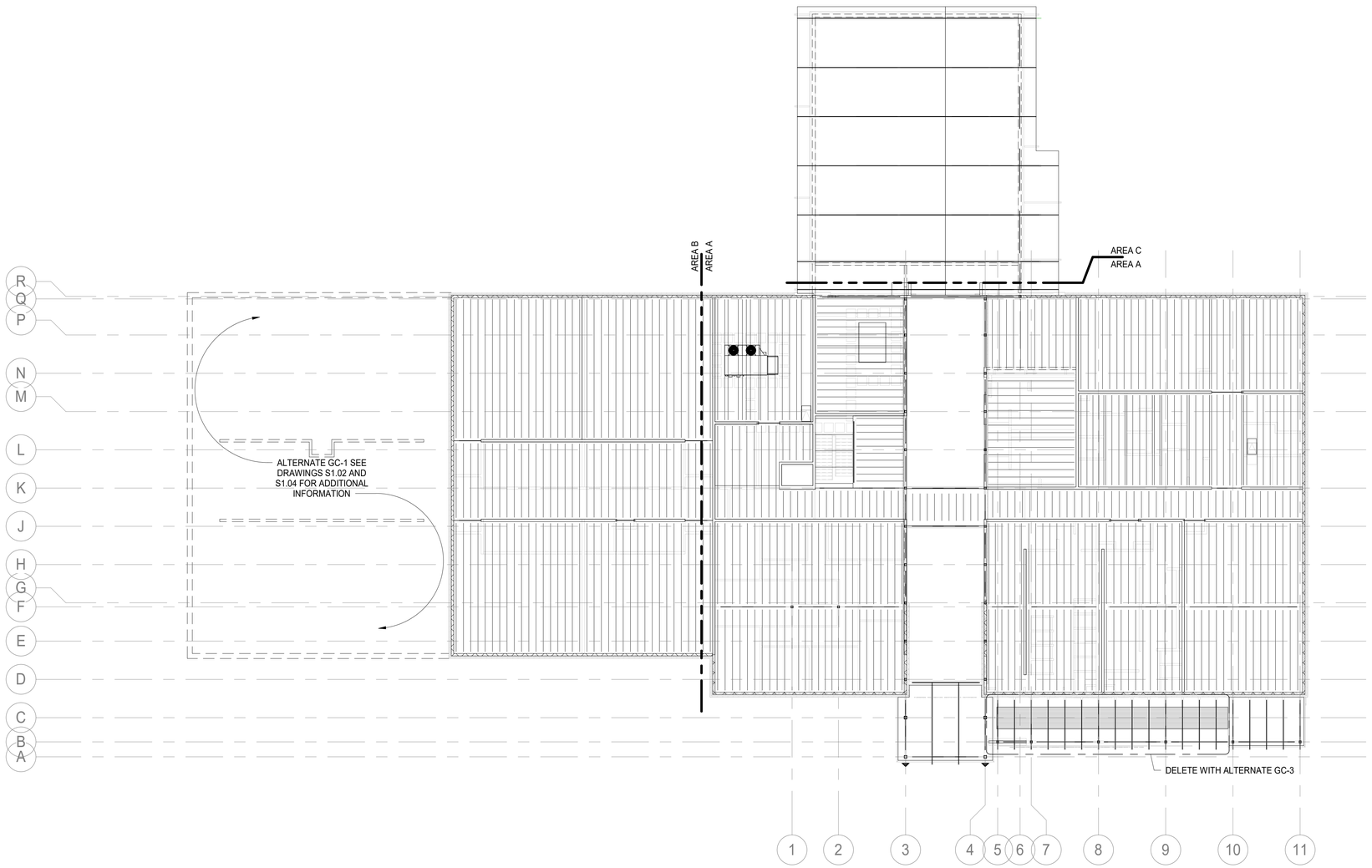
ADTEK PROJECT #: 1713.0001

FOUNDATION PLAN - AREA C

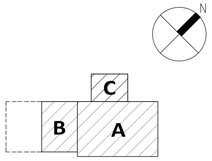
PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT
3089

S1.05



1 / S1.11 OVERALL ROOF FRAMING PLAN
SCALE: 1/16" = 1'-0"



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OVERALL FUT. 2ND FLOOR / ROOF FRAMING PLAN

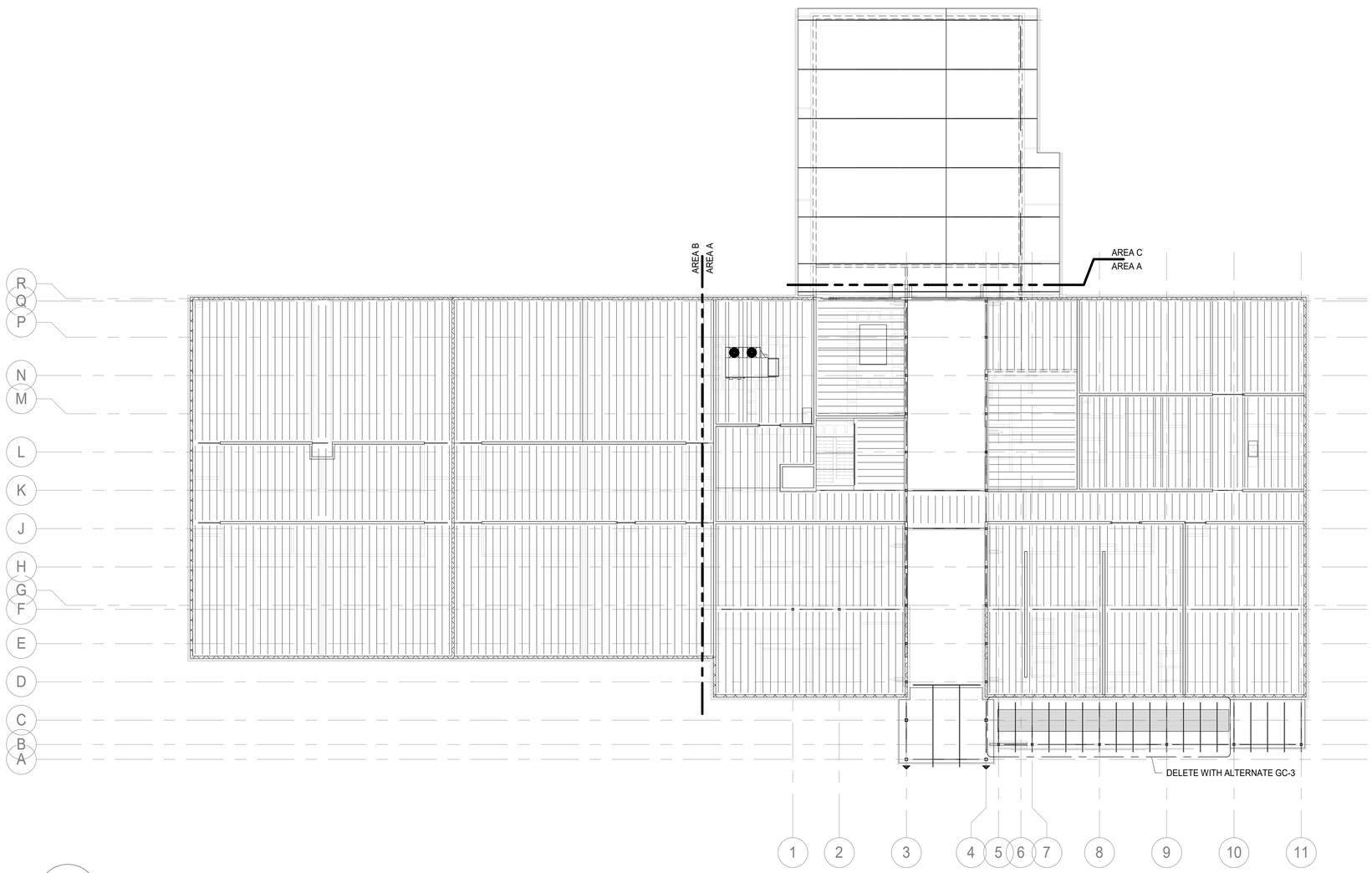
PLOT SCALE: 1/16" = 1'-0"

FILENAME:

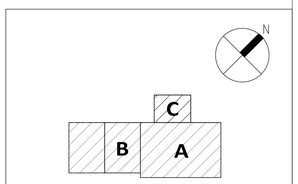
DATE: December 18, 2019

PROJECT
3089

S1.11



1 / S1.12 OVERALL ROOF FRAMING PLAN - ALTERNATE
SCALE: 1/16" = 1'-0"



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STATE OF MARYLAND
ROBERT A. RODRIGUEZ
47042
PROFESSIONAL ENGINEER
7/1/2020

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OVERALL FUT. 2ND FLOOR / ROOF FRAMING PLAN - ALTERNATE

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

FILENAME:

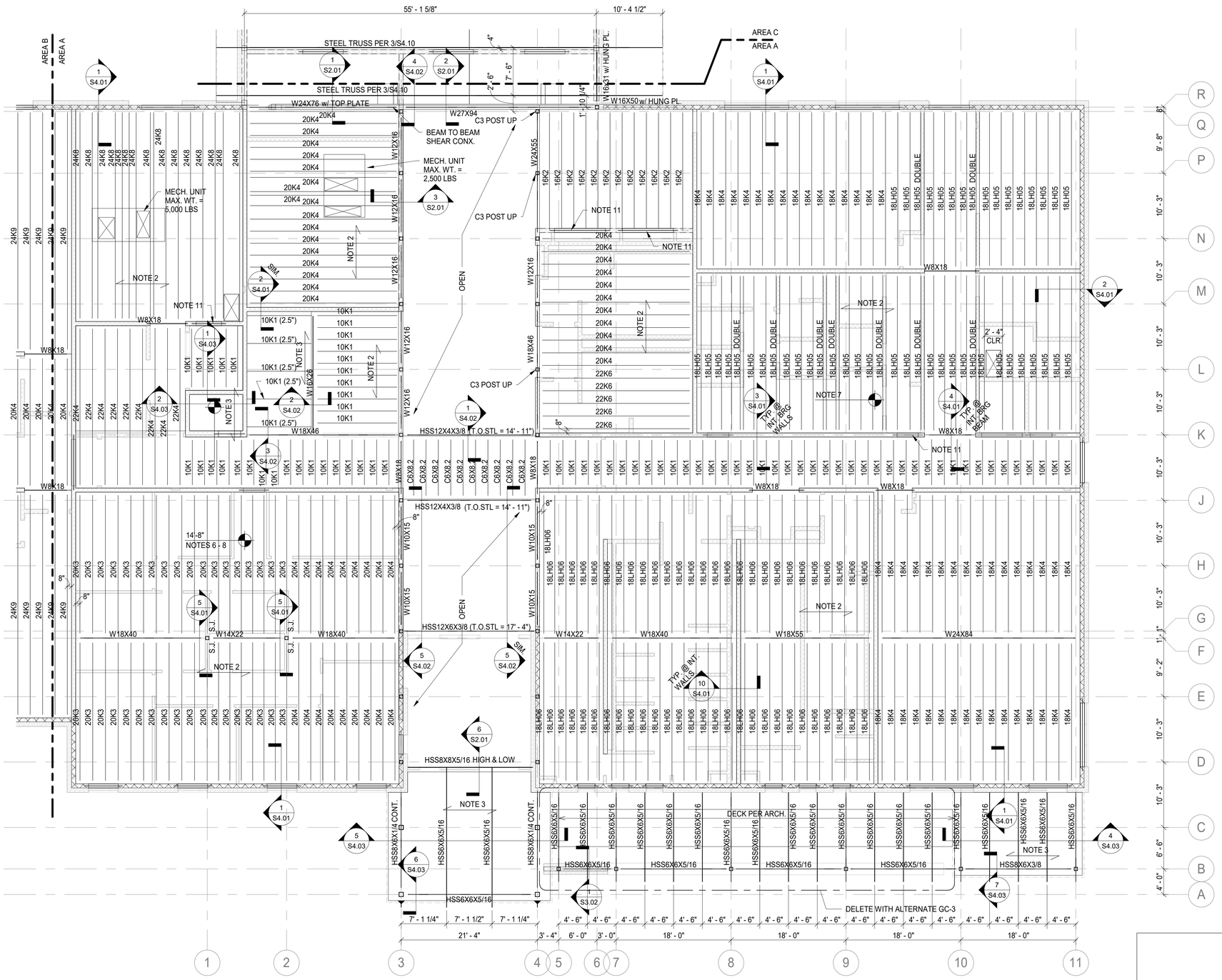
DATE: December 18, 2019

PROJECT 3089

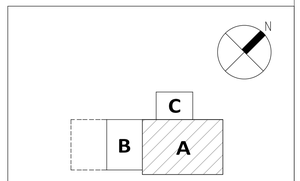
S1.12

FLOOR FRAMING PLAN NOTES:

REFER TO SHEET S1.14.



1 / S1.13 AREA A - PARTIAL ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



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FUT. 2ND FLOOR / ROOF FRAMING PLAN - AREA A

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

FILENAME:

DATE: December 18, 2019

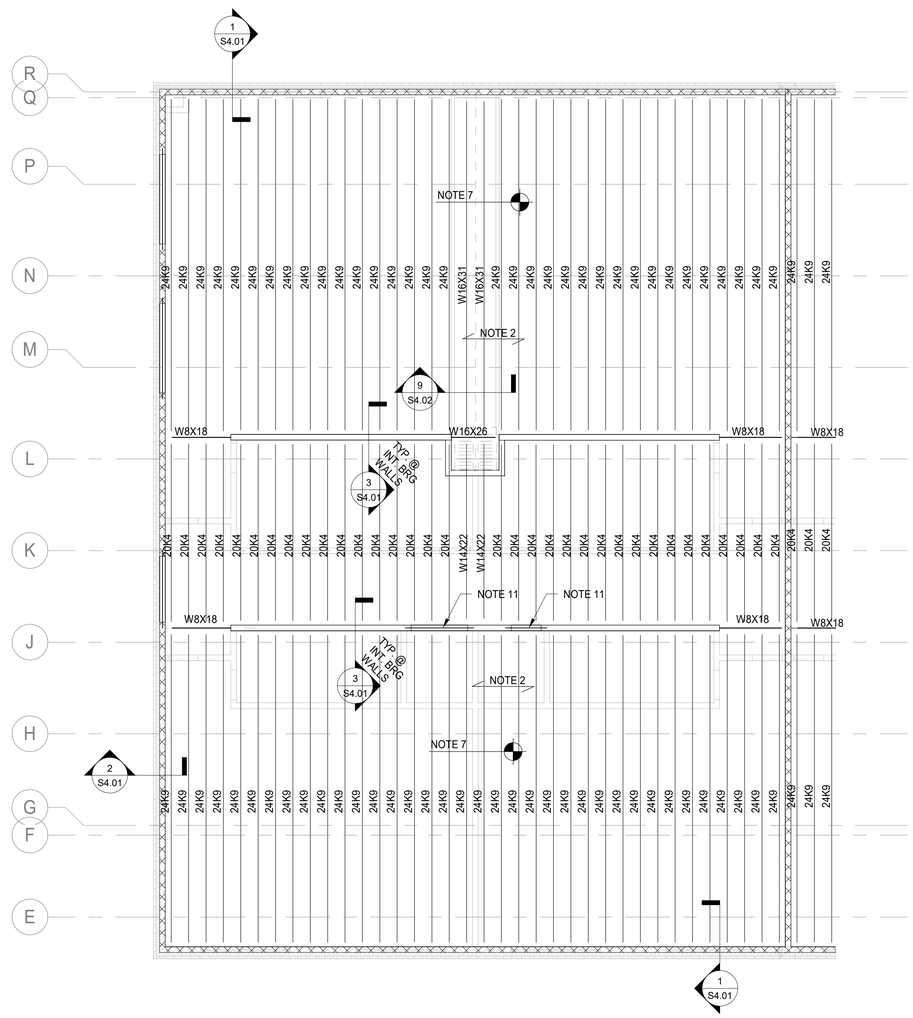
PROJECT
3089

S1.13

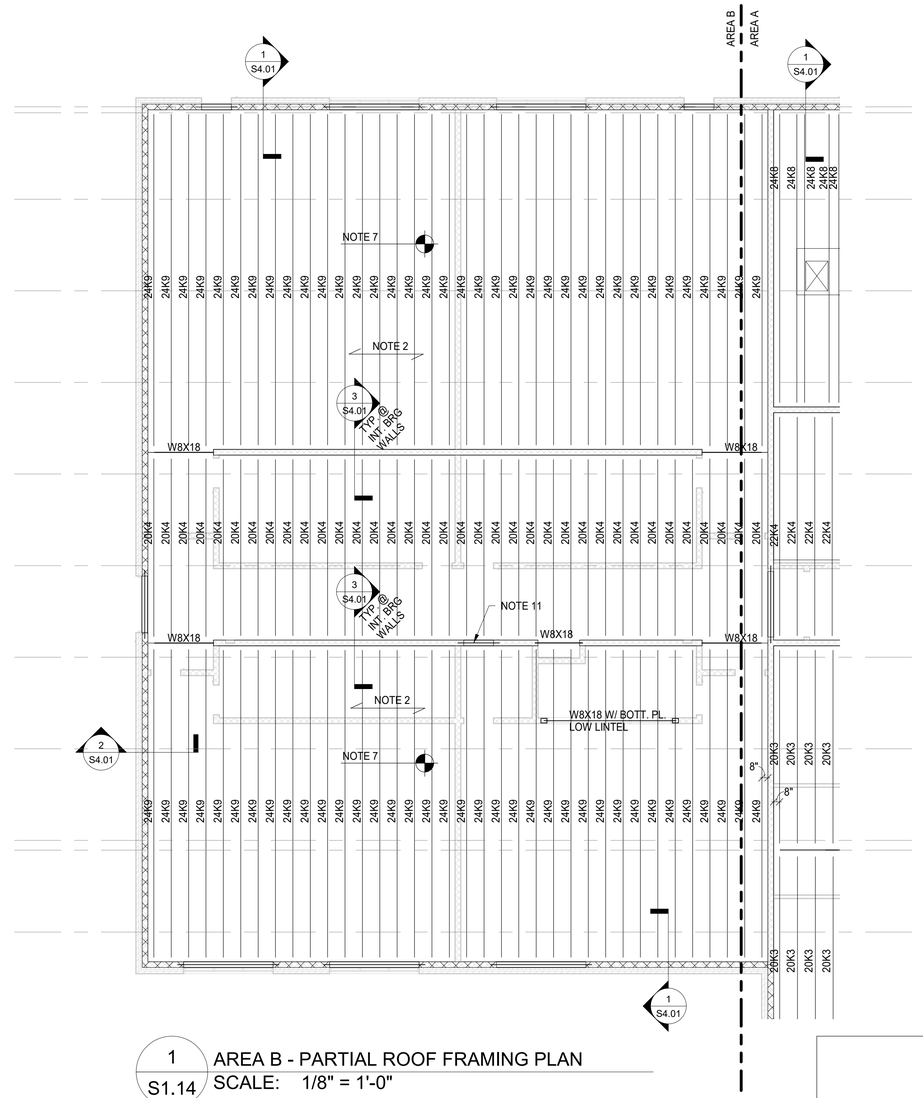
FLOOR FRAMING PLAN NOTES

1. SEE SHEETS S0.01 THRU S0.02 FOR STRUCTURAL NOTES AND SHEETS S4.01 THRU S5.03 FOR TYPICAL DETAILS. THE TYPICAL DETAILS APPLY WHEREVER THE CONDITION EXISTS UNLESS DETAILED OTHERWISE.
2. THE SLAB SYSTEM SHALL BE A 3" NORMAL WEIGHT CONCRETE SLAB ON 9/16" FORM DECK (3" TOTAL THICKNESS), THREE SPANS CONTINUOUS. SEE STRUCTURAL NOTES SHEETS FOR DECK PROPERTIES.
3. THE ROOF SYSTEM SHALL BE 1-1/2" STEEL ROOF DECK, CONTINUOUS. SEE STRUCTURAL NOTES SHEETS FOR DECK PROPERTIES.
4. THE SYMBOL C1 REFERS TO DESIGNATIONS IN THE COLUMN SCHEDULE LOCATED ON SHEET S0.3.
5. ALL CMU WALLS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE REINFORCED PER THE FOUNDATION PLAN. PROVIDE DOWELS TO SLAB OR STRUCTURE TO MATCH. REBAR SHALL BE CENTERED IN CELL U.N.O. GROUT REINFORCED CELLS SOLID.
6. ALL JOISTS SHALL HAVE 5" JOIST SEATS UNLESS NOTED.
7. THE BOTTOM OF DECK ELEVATIONS SHALL BE TYPICALLY 3" BELOW FINISHED FLOOR UNLESS NOTED ON PLANS THUS: B.O. DECK = ±X'-X" REFERENCED FROM ELEVATION 0'-0".
8. THE TOP OF BEAM AND JOIST BEARING ELEVATIONS SHALL BE TYPICALLY 8" BELOW THE FINISHED FLOOR SLAB UNLESS NOTED ON THE PLANS THUS: T.O.S.=±X'-X" REFERENCED FROM ELEVATION 0'-0".
9. SJ (STRUT JOIST) INDICATES THAT THE BOTTOM CHORD OF THE STEEL JOIST SHALL BE EXTENDED TO THE COLUMN. SEE DETAIL 5/S4.01.
10. THE CONTRACTOR SHALL COORDINATE THE SIZE AND LOCATION OF ALL FLOOR OPENINGS AND EQUIPMENT SUPPORTS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SUB-CONTRACTORS. SEE DETAILS 7/S4.01. PROVIDE ADDITIONAL JOISTS AS REQUIRED AT OPENINGS OR MECH., ELEC., PLUMBING EQUIPMENT. THE MAXIMUM OPERATING WEIGHT FOR EQUIPMENT SHALL BE AS NOTED ON THE PLAN.
11. SEE THE LINTEL SCHEDULE IN THE STRUCTURAL NOTES ON S5.01 FOR ALL LINTELS IN MASONRY WALLS UNLESS NOTED OTHERWISE. SEE THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE SIZE, LOCATION, TYPE, AND FIRE RATING OF ALL MASONRY OPENINGS. SEE 5/S5.01 FOR LINTELS IN CAVITY WALLS.
12. ALL INTERIOR WALLS ON THIS PLAN ARE BELOW THE ROOF FRAMING, UNLESS NOTED OTHERWISE.
13. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN. CONTRACTOR SHALL COORDINATE BETWEEN THE STRUCTURAL AND ARCHITECTURAL DRAWINGS.
14. SEE THE ARCHITECTURAL DRAWINGS FOR THE SIZE AND LOCATION OF ALL NON-BEARING PARTITIONS.
15. SMP INDICATES A SOLID MASONRY PIER. SEE DETAIL 3/S5.01.
16. PROVIDE JAMB REINFORCING PER 8/S5.01 AT ALL MASONRY OPENINGS. JAMB REINFORCING TO BE FULL HEIGHT OF WALL WITH MATCHING DOWELS TO SLAB OR STRUCTURE, AS REQUIRED.
17. UNLESS NOTED OTHERWISE ON PLAN, ASSUME THE FOLLOWING ULTIMATE (FACTOR) REACTIONS AT BEAM ENDS:

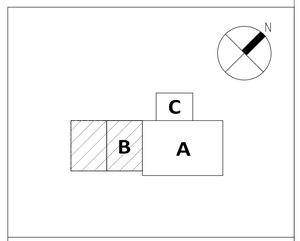
W8's AND W10's	USE R = 15 kips
W12's	USE R = 25 kips
W14's AND W16's	USE R = 40 kips
W18's AND W21's	USE R = 55 kips
W24's AND UP	USE R = 75 kips



2 / S1.14 AREA B - PARTIALROOF FRAMING PLAN - ALTERNATE
SCALE: 1/8" = 1'-0"



1 / S1.14 AREA B - PARTIAL ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN

STATE OF MARYLAND
ROSE A. RODRIGUEZ
47042
PROFESSIONAL ENGINEER
7/1/2020

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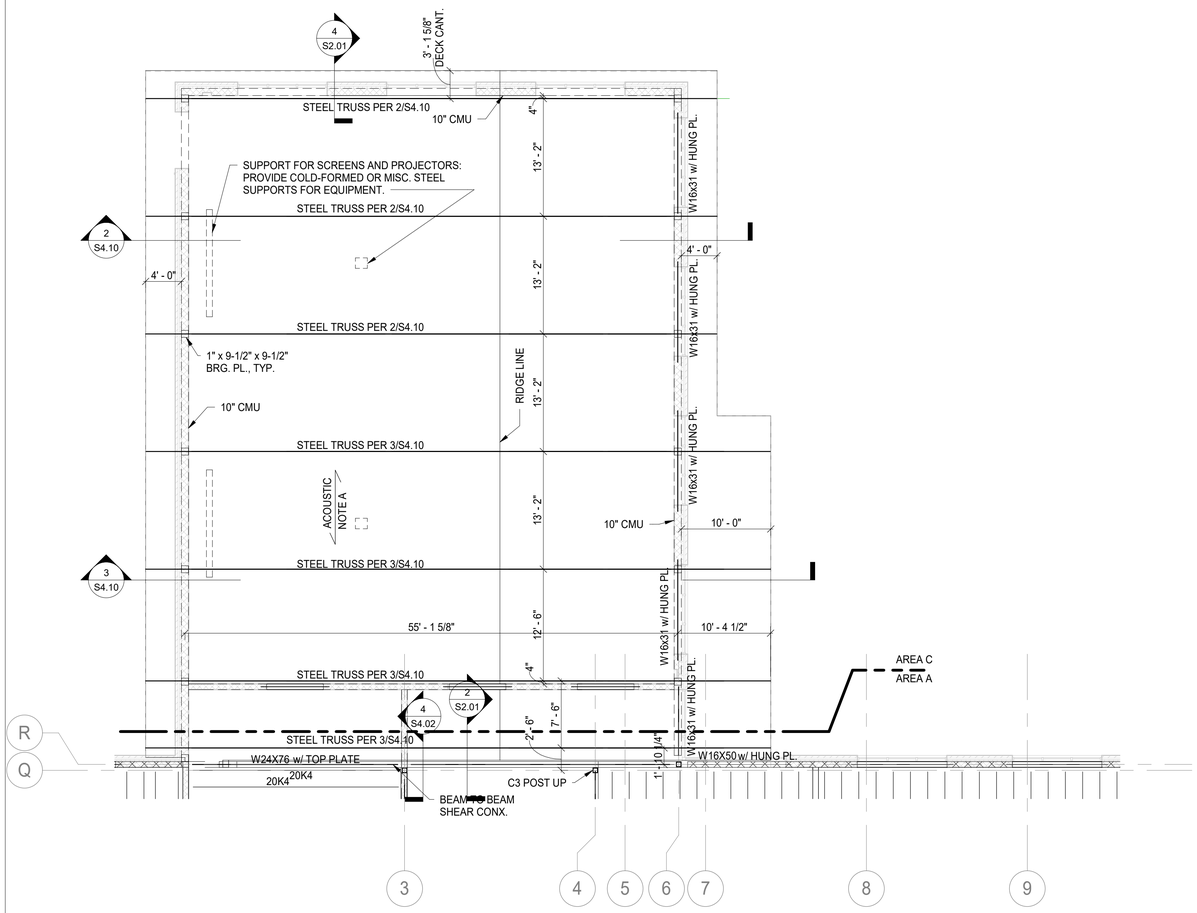
301-662-4408
Fax: 301-662-7484
ADTEK PROJECT #: 1713.0001

FUT. 2ND FLOOR / ROOF FRAMING PLAN - AREA B

PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT 3089

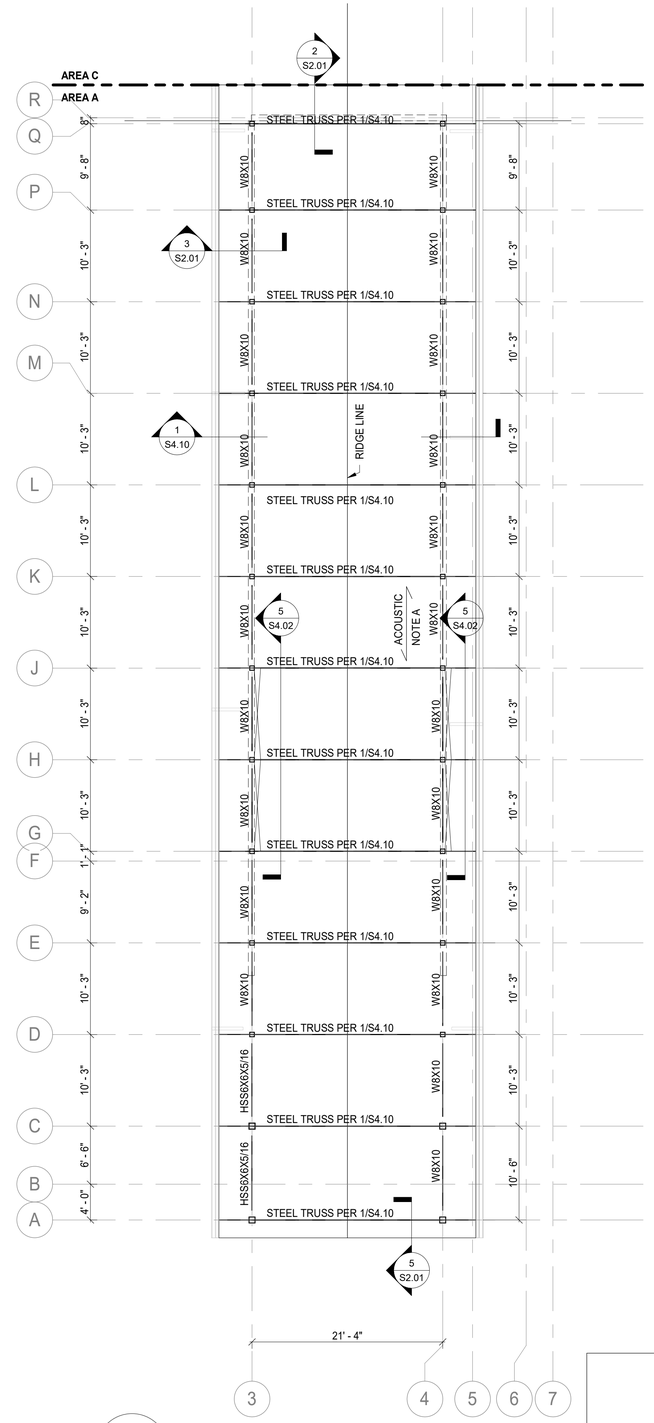
S1.14



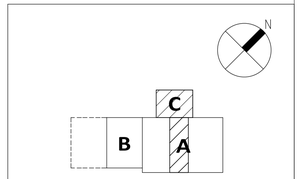
1 / S1.15 AREA C - PARTIAL ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

ROOF FRAMING PLAN NOTES
REFER TO SHEET S1.14

A. THE ROOF SYSTEM SHALL BE 3-1/2" ACOUSTIC DECK, CONTINUOUS. SEE STRUCTURAL NOTES SHEETS FOR DECK PROPERTIES.



2 / S1.15 CLERESTORY ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"



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ROBERT A. RODRIGUEZ
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PROFESSIONAL ENGINEER
7/1/2020

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ROOF FRAMING PLANS - AREA A AND C

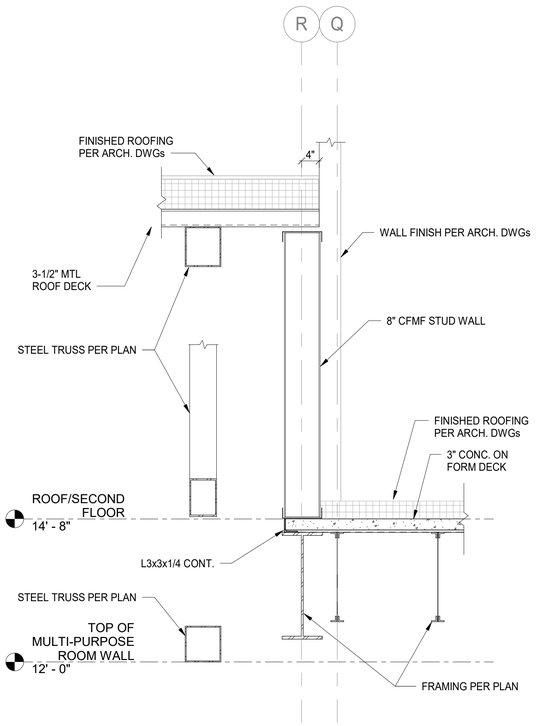
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

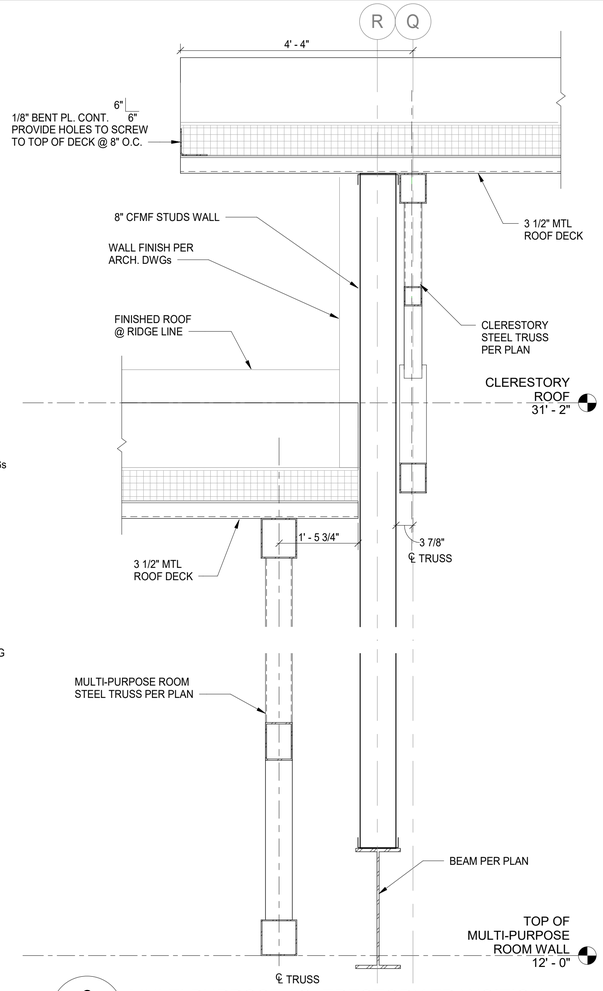
DATE: December 18, 2019

PROJECT
3089

S1.15



1 S2.01 CLERESTORY WALL SECTION
SCALE: 3/4" = 1'-0"



2 S2.01 MULTI PURPOSE / CLERESTORY TRANSITION
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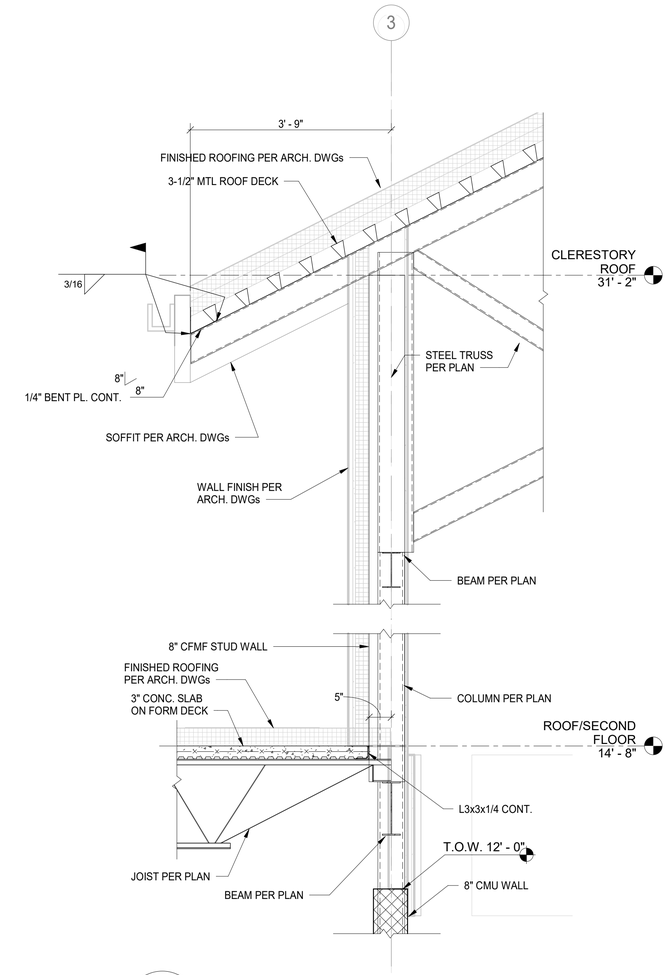

3 S2.01 CLERESTORY WALL SECTION
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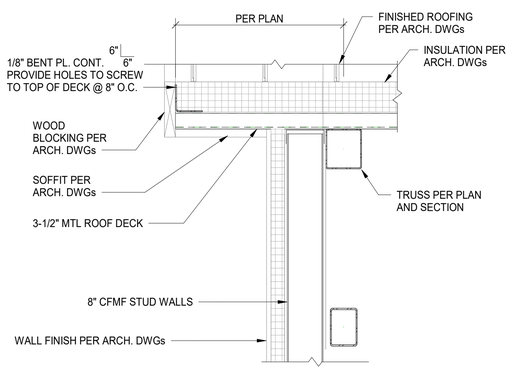
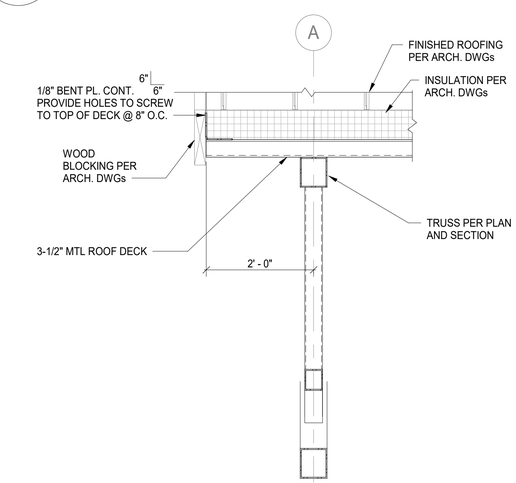
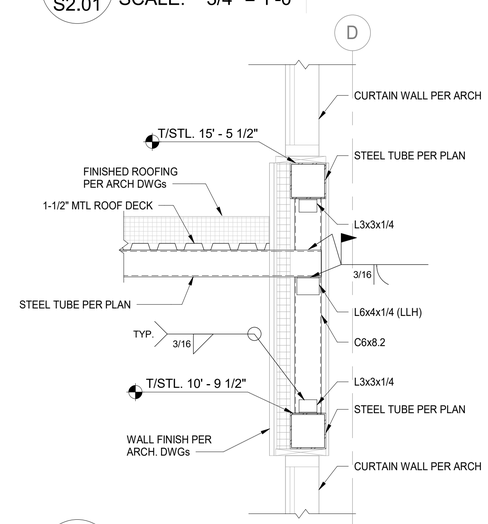


4 S2.01 EDGE OF MP ROOF DECK DETAIL
SCALE: 3/4" = 1'-0"



5 S2.01 EDGE OF FRONT CLERESTORY DECK
SCALE: 3/4" = 1'-0"



6 S2.01 ENTRANCE CURTAIN WALL SECTION
SCALE: 3/4" = 1'-0"

STATE OF MARYLAND
ROBERT RODRIGUES
47042
PROFESSIONAL ENGINEER
7/1/2020

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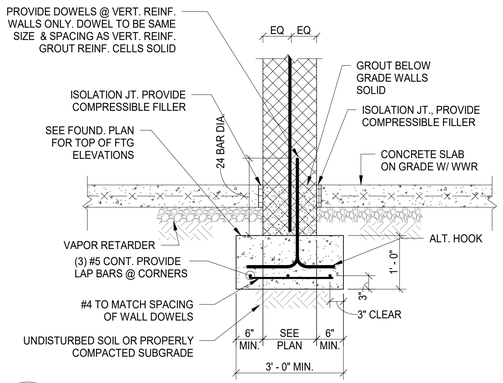
WALL SECTIONS

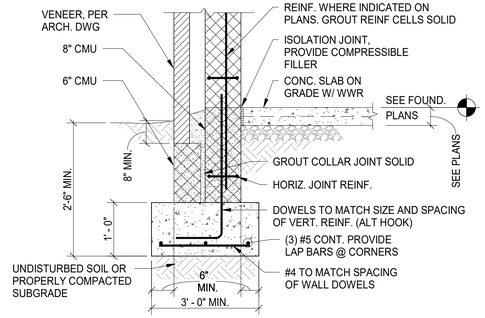
PLOT SCALE: 3/4" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT 3089

S2.01



1 S3.01 INTERIOR WALL FOOTING
SCALE: NTS



2 S3.01 EXTERIOR WALL SECTION
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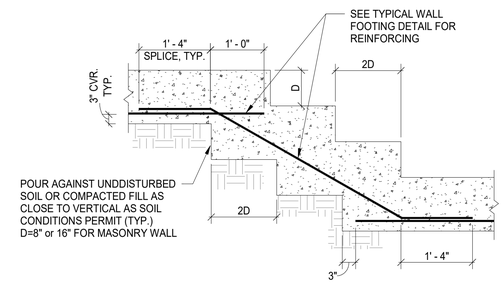
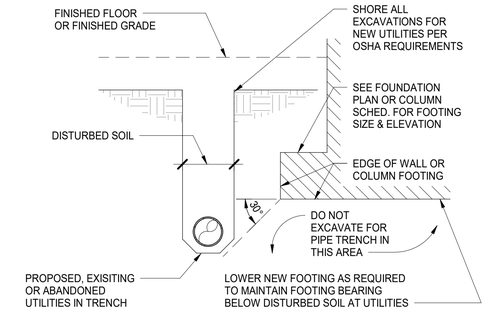
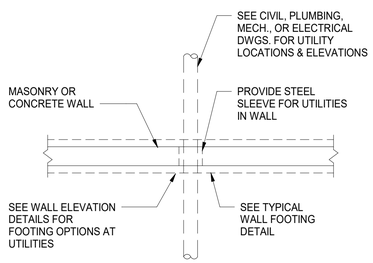


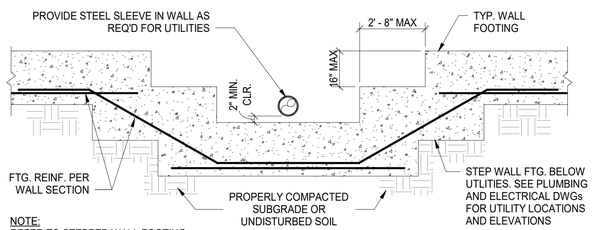
3 S3.01 STEPPED WALL FOOTING
SCALE: NTS



4 S3.01 PIPE TRENCH EXCAVATION
SCALE: NTS

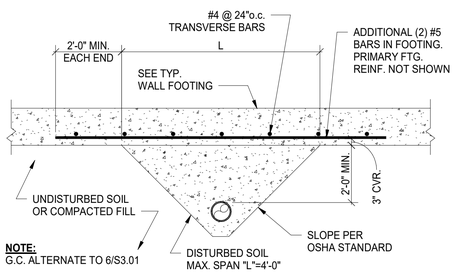


TYPICAL PLAN



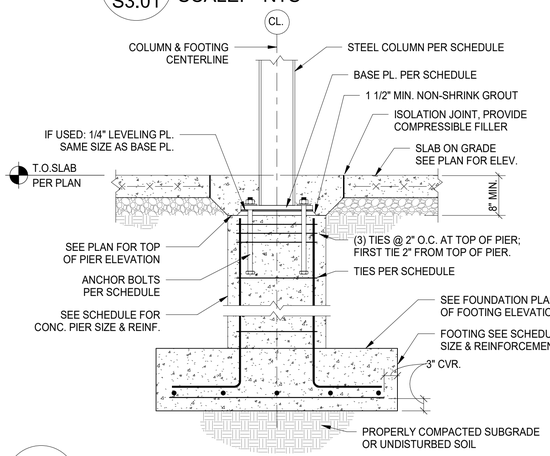
NOTE:
REFER TO STEPPED WALL FOOTING DETAIL FOR ADDITIONAL INFORMATION

WALL ELEVATION



NOTE:
G.C. ALTERNATE TO 6/S3.01

WALL ELEVATION

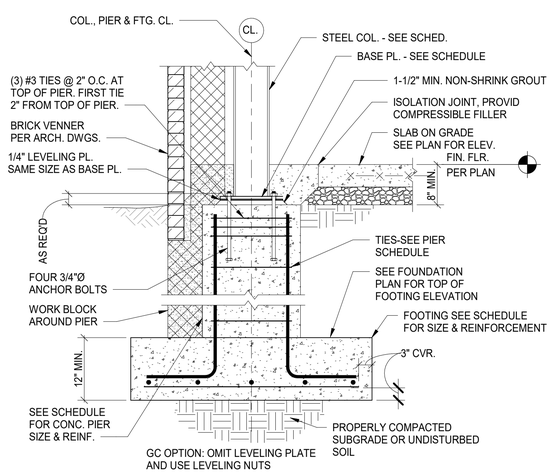


5 S3.01 WALL FOOTING AT UTILITIES
SCALE: NTS

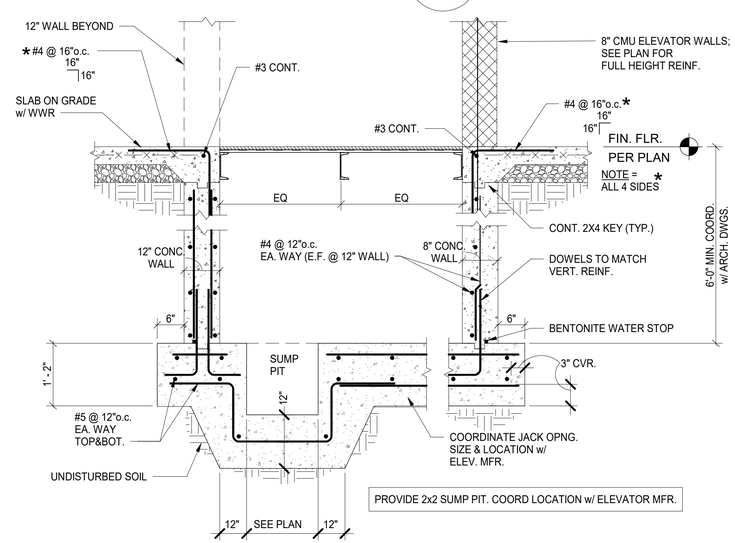
6 S3.01 WALL FOOTING AT UTILITY
SCALE: NTS

7 S3.01 WALL FOOTING AT UTILITIES-LEAN CONCRETE
SCALE: NTS

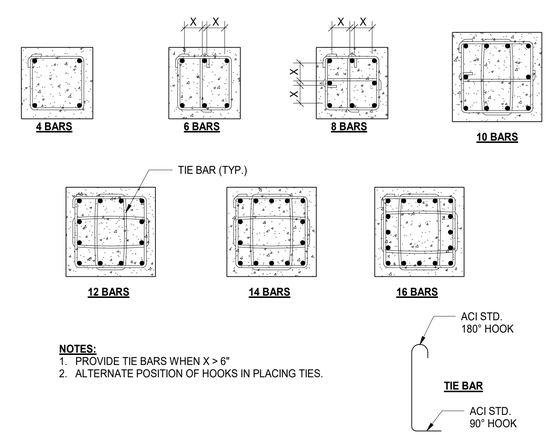
8 S3.01 INTERIOR STEEL COLUMN FTG WITH PIER
SCALE: 3/4" = 1'-0"



9 S3.01 EXTERIOR STEEL COLUMN FTG WITH PIER
SCALE: NTS



10 S3.01 ELEVATOR PIT SECTION
SCALE: NTS



NOTES:
1. PROVIDE TIE BARS WHEN X > 6"
2. ALTERNATE POSITION OF HOOKS IN PLACING TIES.

11 S3.01 COLUMN TIES DETAIL
SCALE: 3/4" = 1'-0"

STATE OF MARYLAND
ROSE ANN RODGERS
47043
PROFESSIONAL ENGINEER
7/1/2020

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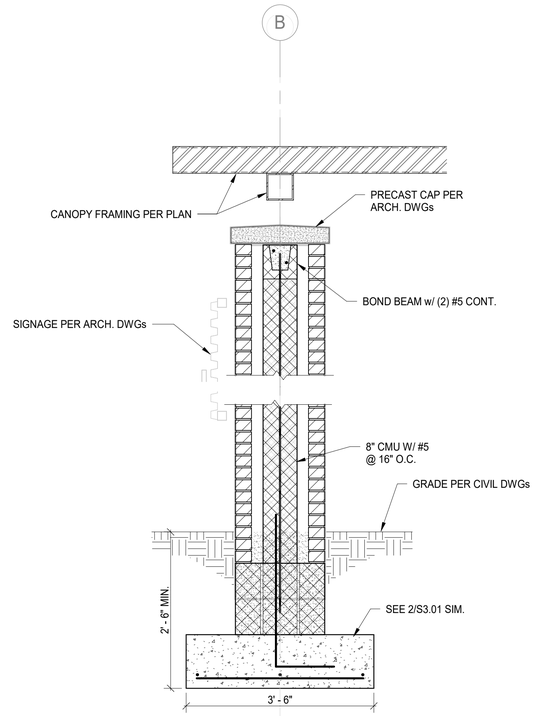
TYPICAL FOUNDATION DETAILS

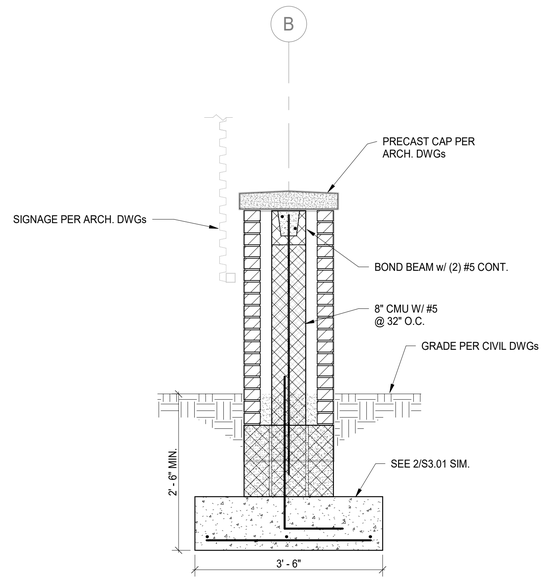
PLOT SCALE: 3/4" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT 3089

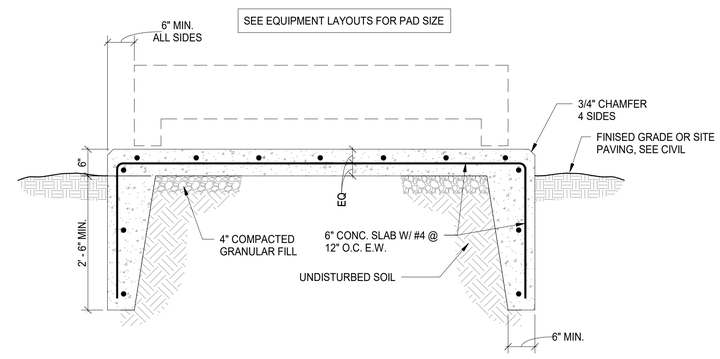
S3.01



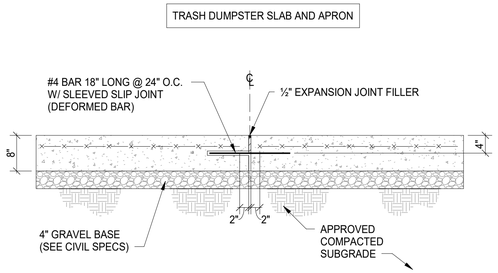
1 S3.02 ENTRANCE SIGNAGE WALL SECTION
SCALE: 3/4" = 1'-0"



2 S3.02 ENTRANCE SIGNAGE WALL SECTION
SCALE: 3/4" = 1'-0"



3 S3.02 EXTERIOR HVAC AND PROPANE TANK EQUIPMENT PAD
SCALE: 3/4" = 1'-0"



NOTES:
1. 8" CONC. SLAB REINFORCED W/ WWR 6x6-W6.5xW6.5 (OR #3 @ 10" O.C., E.W.) 2½" DOWN FROM TOP ON A 4" POROUS FILL MATERIAL OVER APPROVED COMPACTED SUBGRADE.
2. CONCRETE SHALL BE SHA MIX NO. 6 PER SHA STANDARDS AND SPECIFICATIONS

4 S3.02 HEAVY-DUTY CONCRETE PAVEMENT SECTION
SCALE: 3/4" = 1'-0"

7/1/2020

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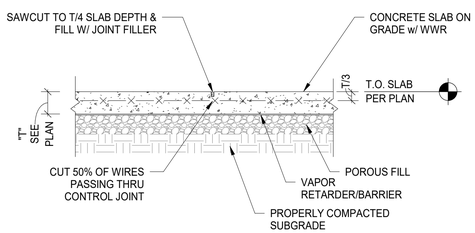
PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

ADTEK
ADTEK ENGINEERS, INC.
150 South East Street
Suite 201
Frederick, Maryland 21701
301-662-4408
Fax: 301-662-7484
ADTEK PROJECT #: 1713.0001

FOUNDATION SECTIONS

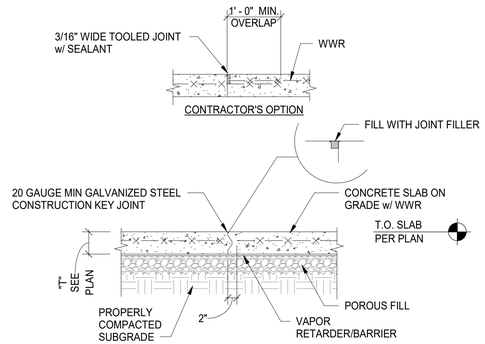
PLOT SCALE: 3/4" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT
3089
S3.02



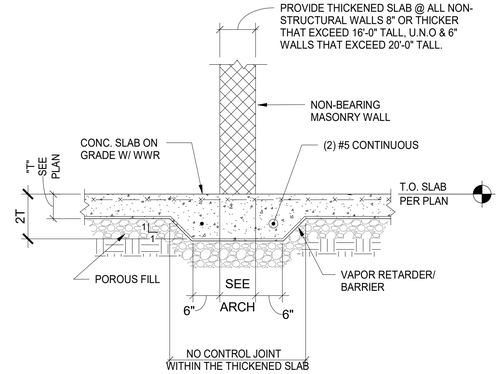
NOTE:
1. CONTRACTOR'S OPTION: ZIPCAP CONTROL JOINT FORMER IN LIEU OF SAWCUT.
2. COORDINATE JOINT SEALANT WITH ARCH AND SPECS.
3. DO NOT PLACE CJ PARALLEL TO WALL WITHIN 1'-0" FROM FACE OF INTERIOR MASONRY PARTITIONS

1 / S3.11 SLAB ON GRADE CONTROL JOINT
SCALE: NTS



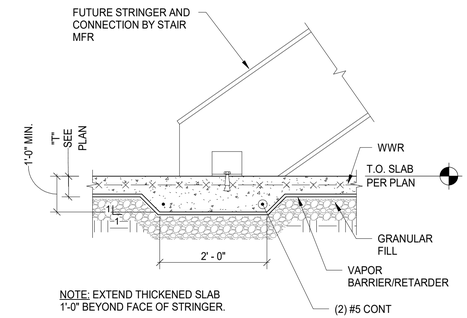
NOTE:
1. CONSTRUCTION JOINT MAY REPLACE CONTRACTION JOINTS (CJs); SEE PLAN FOR LOCATIONS OF CJs.
2. COORDINATE JOINT SEALANT WITH ARCH AND SPECS.
3. DO NOT PLACE CJ PARALLEL TO WALL WITHIN 1'-0" FROM FACE OF INTERIOR MASONRY PARTITIONS.

2 / S3.11 SLAB ON GRADE CONSTRUCTION JOINT
SCALE: NTS



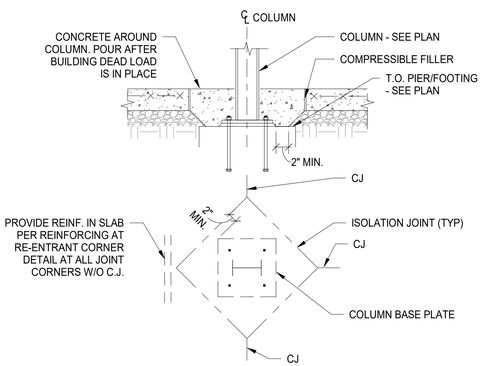
NOTE: COORDINATE LOCATION OF NON-BEARING PARTITIONS WITH AECH. DWGS.

3 / S3.11 THICKENED SLAB AT NON-BEARING MASONRY WALL
SCALE: NTS

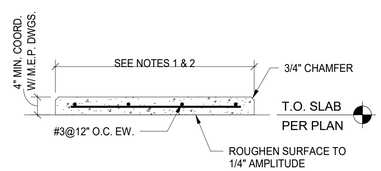


NOTE: EXTEND THICKENED SLAB 1'-0" BEYOND FACE OF STRINGER.

4 / S3.11 THICKENED SLAB AT STAIRS
SCALE: NTS

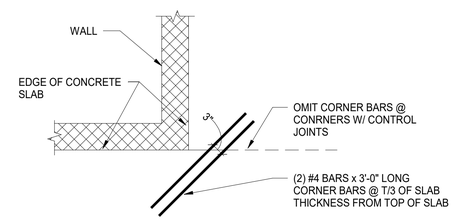


5 / S3.11 ISOLATION JOINT AT STEEL COLUMN
SCALE: NTS

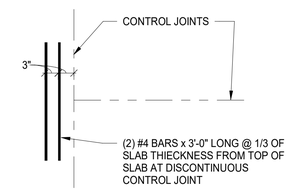


NOTES:
1. COORD. SIZE & LOCATION OF PADS WITH ELECTRICAL & MECHANICAL CONTRACTORS.
2. PAD SHALL BE 6" LARGER THAN EQUIPMENT ON ALL SIDES, U.N.O. ON MECH DWGS.

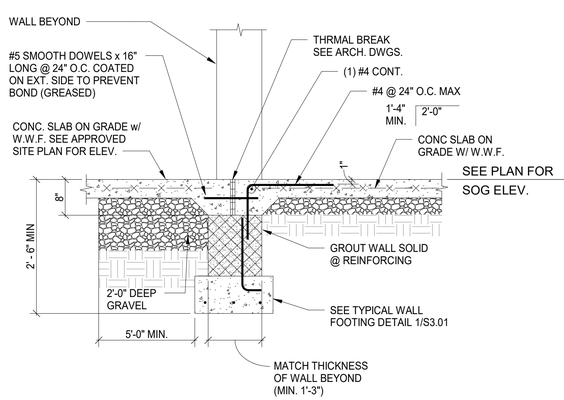
6 / S3.11 TYPICAL INTERIOR CONCRETE PAD FOR M.E.P. EQUIPMENT
SCALE: NTS



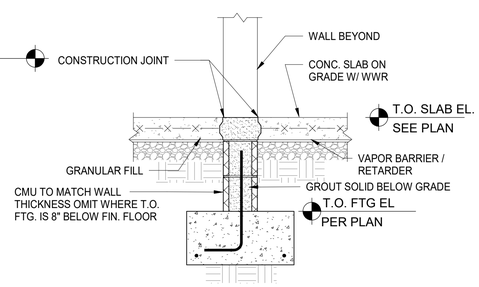
7 / S3.11 SLAB REINF. AT RE-ENTRANT CORNER
SCALE: NTS



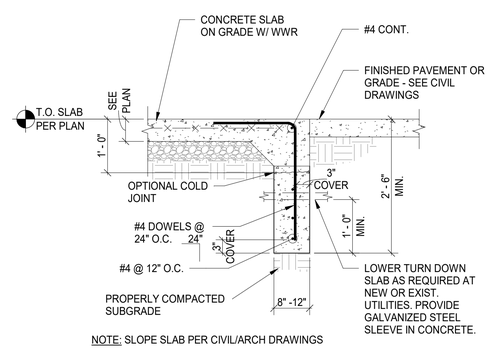
8 / S3.11 SLAB REINFORCING AT DISCONTINUOUS C.J.
SCALE: NTS



9 / S3.11 SLAB AT EXTERIOR DOORWAY
SCALE: NTS

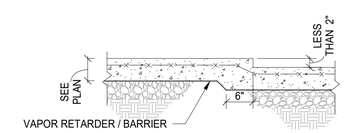


10 / S3.11 SLAB ON GRADE AT INTERIOR DOOR
SCALE: NTS



NOTE: SLOPE SLAB PER CIVIL/ARCH DRAWINGS

11 / S3.11 TURNED DOWN SLAB
SCALE: NTS



12 / S3.11 DEPRESSED SLAB ON GRADE DETAIL
SCALE: NTS

STATE OF MARYLAND
ROBERT A. RODAS
47042
PROFESSIONAL ENGINEER
7/1/2020

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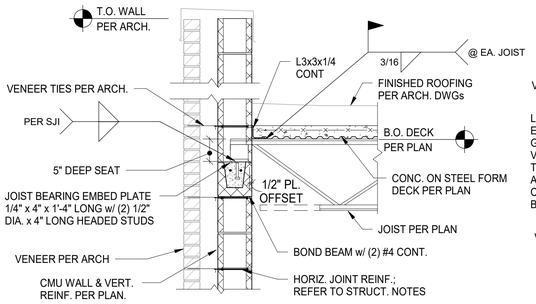
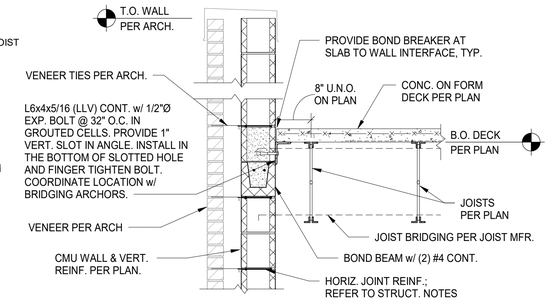
TYPICAL SLAB ON GRADE DETAILS
PLOT SCALE: 3/4" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT 3089

S3.11



1 S4.01 FLOOR JOIST BEARING ON EXT. CMU WALL
SCALE: NTS



2 S4.01 FLOOR JOIST PARALLEL TO EXT. CMU WALL
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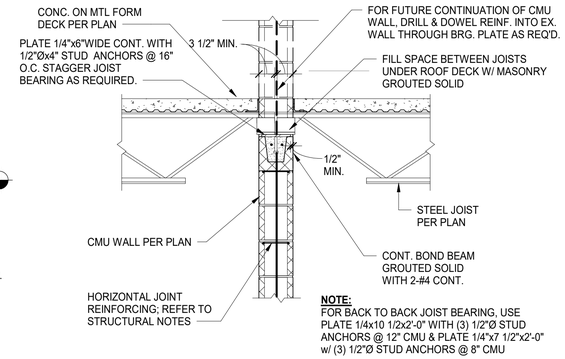
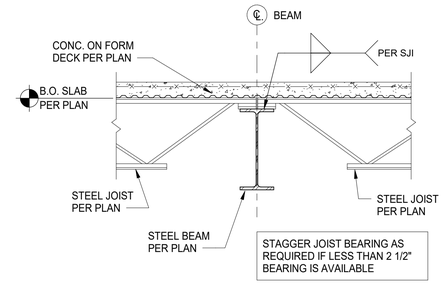


3 S4.01 JOIST BEARING ON INTERIOR CMU WALL
SCALE: NTS



4 S4.01 FLOOR JOIST BEARING ON STEEL BEAM
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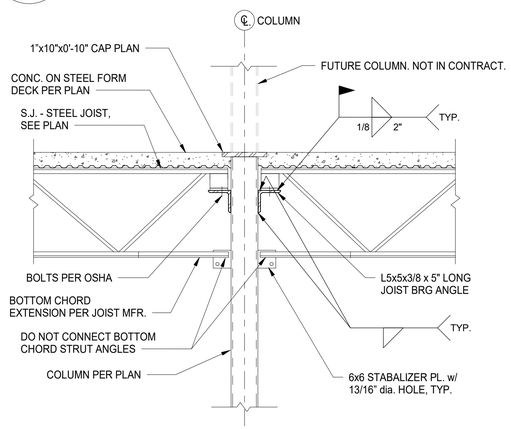
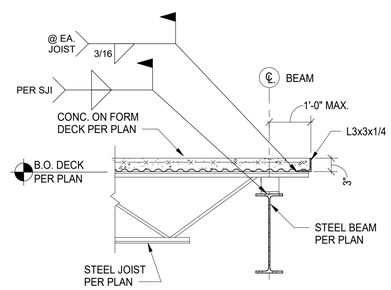
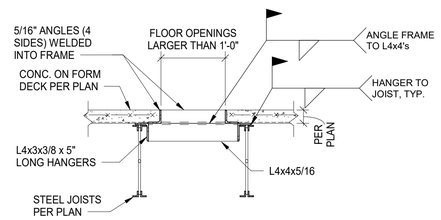


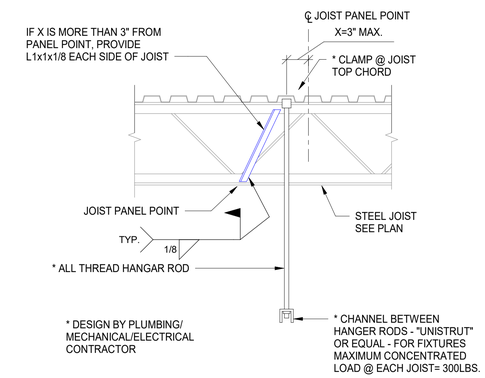
5 S4.01 STRUT JOIST CONNECTION TO COLUMN
SCALE: NTS



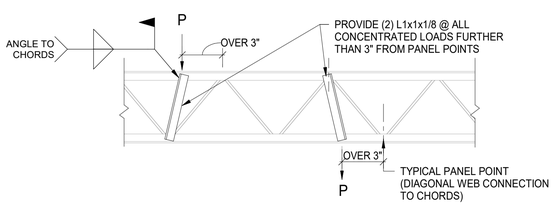
6 S4.01 EDGE OF SLAB ON FLOOR JOIST
SCALE: NTS



7 S4.01 ANGLE FRAMING AT FLOOR OPENINGS
SCALE: NTS



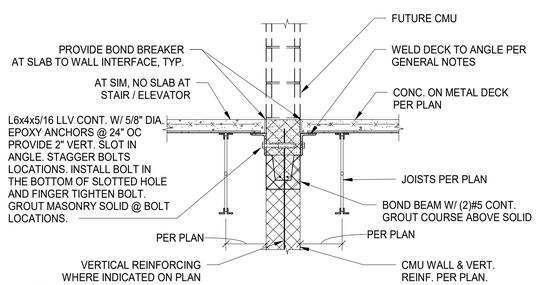
8 S4.01 LIGHT WEIGHT FIXTURE SUPPORT DETAIL
SCALE: NTS



P = LOADS OVER 100 lbs. MORE THAN 3" FROM A PANEL POINT
THIS DETAIL IS APPLICABLE TO ALL CONCENTRATED LOADS THAT ARE ATTACHED TO JOISTS, WHETHER INDICATED ON STRUCTURAL DWGs OR NOT. EXAMPLES OF THESE LOADS ARE:
1. ROOF TOP UNITS.
2. HANGING PLUMBING, MECH. STEEL PIPES, SPRINKLER PIPING
3. HANGING BASKETBALL GOALS
4. KITCHEN HOODS

SEE MECHANICAL, ELECTRICAL, PLUMBING, FIRE SAFETY, ARCHITECTURAL AND KITCHEN DRAWINGS FOR LOCATIONS

9 S4.01 JOIST REINF. AT LOADS BETWEEN PANEL POINTS
SCALE: NTS



10 S4.01 WALL-SLAB ANCHORAGE
SCALE: NTS

STATE OF MARYLAND
RUSSELL RODRIGUEZ
47045
PROFESSIONAL ENGINEER
7/1/2020

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 47042 Expiration Date: 07/1/21

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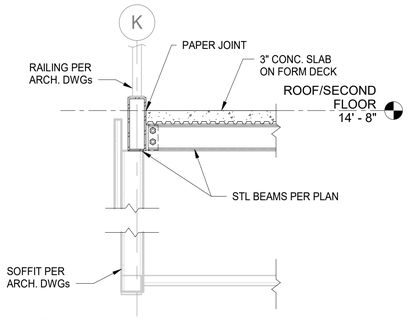
TYPICAL FRAMING DETAILS

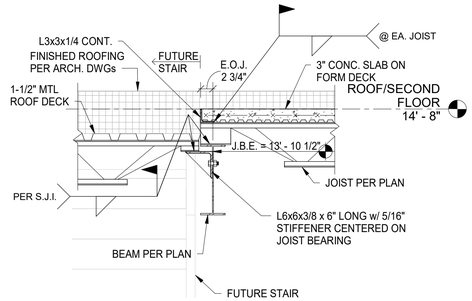
PLOT SCALE: 3/4" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT
3089

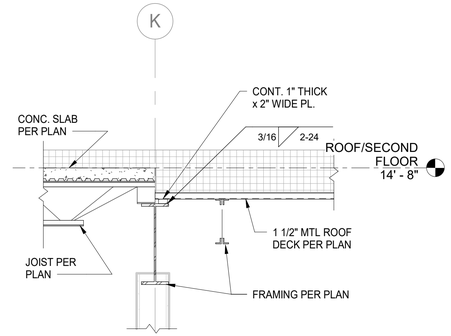
S4.01



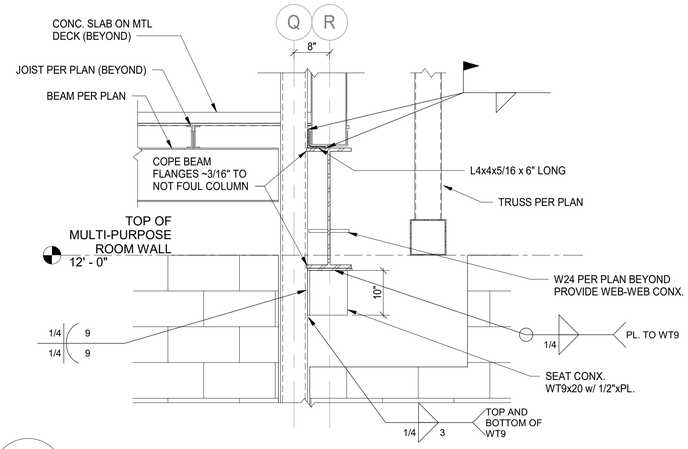
1 S4.02 BRIDGE SIDE RAIL SECTION
SCALE: 3/4" = 1'-0"



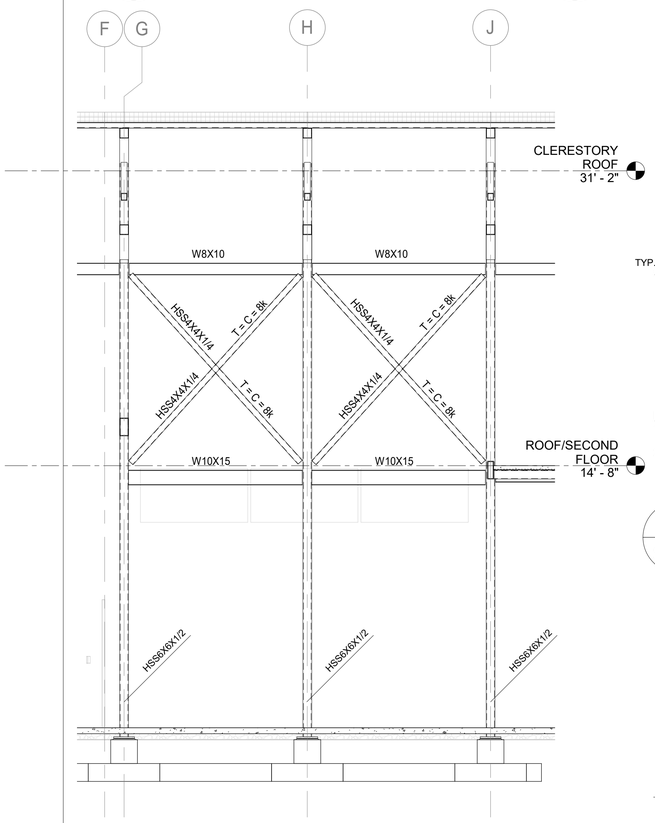
2 S4.02 FUTURE STAIR FRAMING
SCALE: 3/4" = 1'-0"



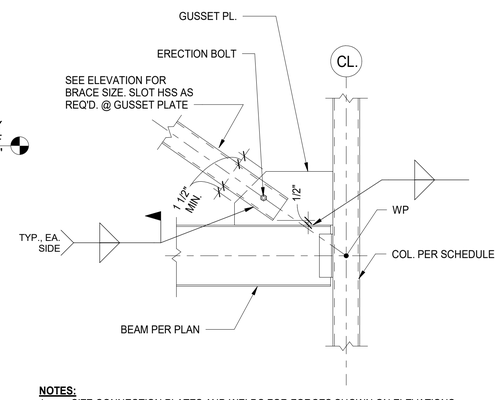
3 S4.02 FUTURE STAIR FRAMING
SCALE: 3/4" = 1'-0"



4 S4.02 OFFSET BEAM SEAT CONNECTION TO COLUMN
SCALE: 3/4" = 1'-0"

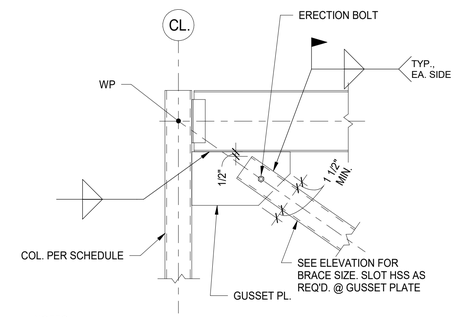


5 S4.02 BRACED FRAME ELEVATION
SCALE: 1/4" = 1'-0"



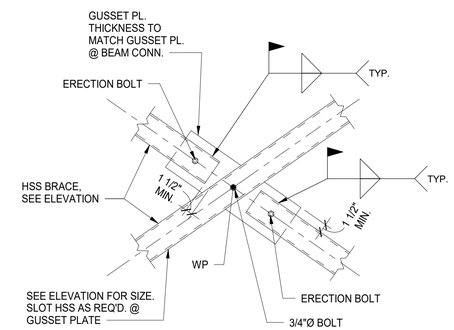
NOTES:
1. SIZE CONNECTION PLATES AND WELDS FOR FORCES SHOWN ON ELEVATIONS. DESIGNED CONNECTION ORIENTATION MAY VARY FROM WHAT IS SHOWN.
2. DETAILER TO DESIGN BEAM TO COLUMN CONNECTION FOR FORCES AS NOTED ON ELEVATIONS. IT IS ACCEPTABLE TO PROVIDE GUSSET TO COLUMN CONNECTIONS.

6 S4.02 BRACE FRAME @ FLOOR
SCALE: NTS



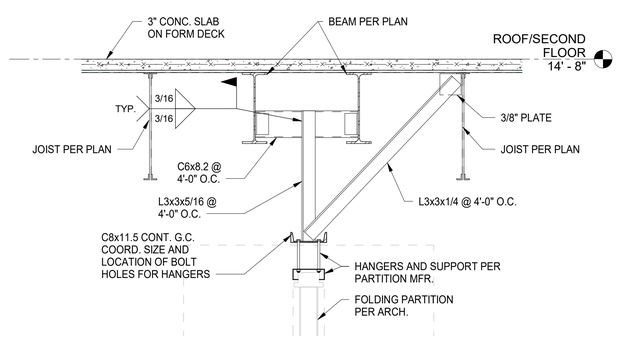
NOTES:
1. SIZE CONNECTION PLATES AND WELDS FOR FORCES SHOWN ON ELEVATIONS. DESIGNED CONNECTION ORIENTATION MAY VARY FROM WHAT IS SHOWN.
2. DETAILER TO DESIGN BEAM TO COLUMN CONNECTION FOR FORCES AS NOTED ON ELEVATIONS. IT IS ACCEPTABLE TO PROVIDE GUSSET TO COLUMN CONNECTIONS.

7 S4.02 BRACE FRAME @ ROOF
SCALE: NTS



NOTES:
1. SIZE CONNECTION PLATES AND WELDS FOR FORCES SHOWN ON ELEVATIONS. DESIGNED CONNECTION ORIENTATION MAY VARY FROM WHAT IS SHOWN.

8 S4.02 X-BRAME FRAME CONNECTION
SCALE: NTS



NOTE: AT STACK AREA REDUCE SPACING TO 2'-0" O.C.

9 S4.02 FOLDING PARTITION SUPPORT
SCALE: NTS

STATE OF MARYLAND
ROSE A. RODRIGUEZ
47045
PROFESSIONAL ENGINEER
7/1/2020

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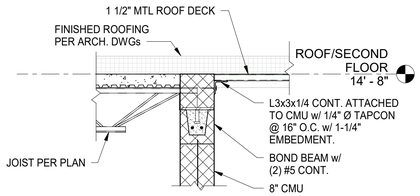
FRAMING DETAILS

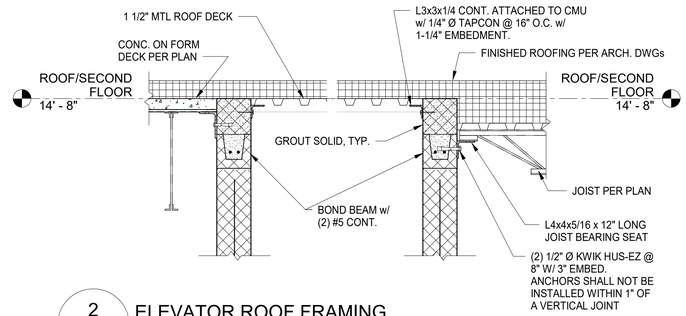
PLOT SCALE: As Indicated
FILENAME:
DATE: December 18, 2019

PROJECT 3089

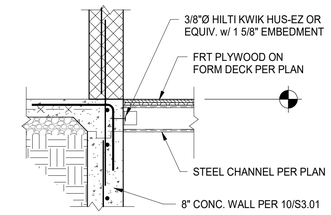
S4.02



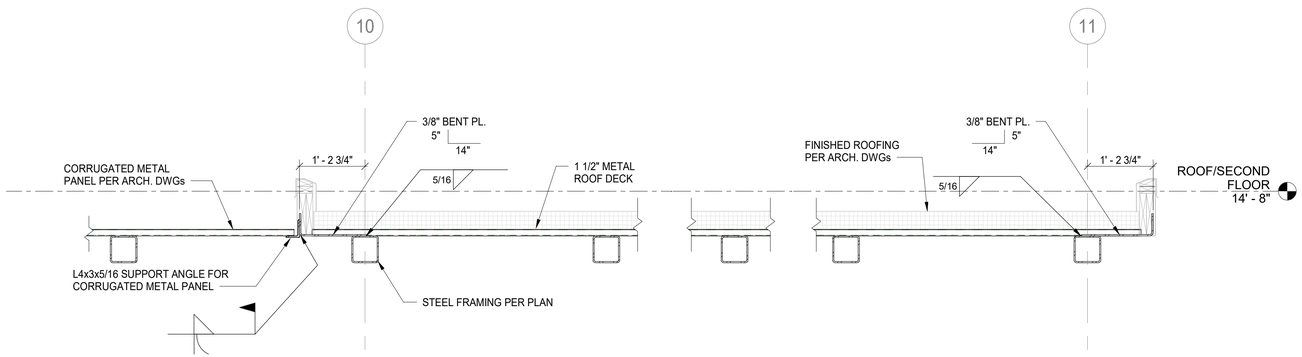
1 S4.03 ELEVATOR ROOF FRAMING
SCALE: NTS



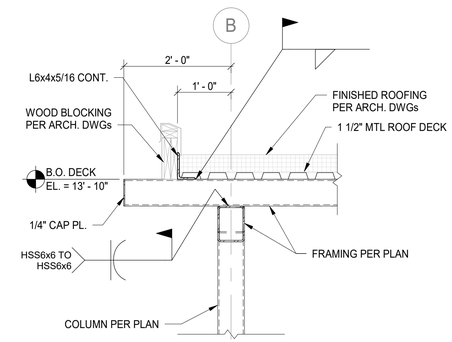
2 S4.03 ELEVATOR ROOF FRAMING
SCALE: NTS



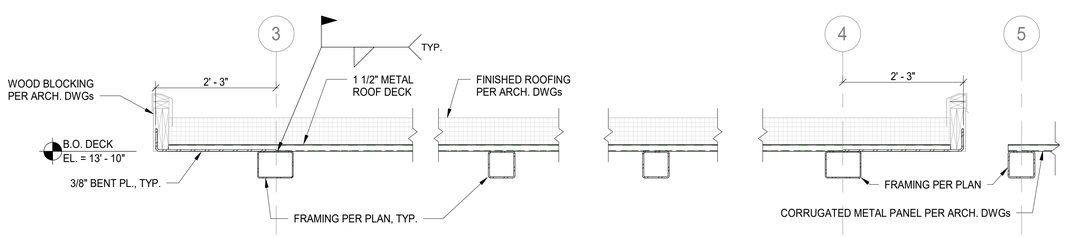
3 S4.03 ELEVATOR FLOOR FRAMING
SCALE: NTS



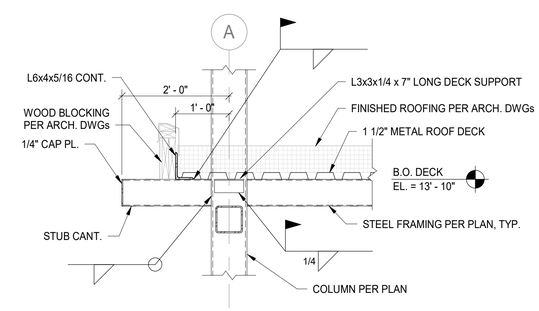
4 S4.03 WEIGHT ROOM CANOPY
SCALE: 3/4" = 1'-0"



7 S4.03 WEIGHT ROOM CANOPY SECTION
SCALE: 3/4" = 1'-0"



5 S4.03 MAIN CANOPY
SCALE: 3/4" = 1'-0"



6 S4.03 MAIN CANOPY STUB CANTILEVER
SCALE: 3/4" = 1'-0"

STATE OF MARYLAND
ROSE C. RODRIGUEZ
47042
PROFESSIONAL ENGINEER
7/1/2020

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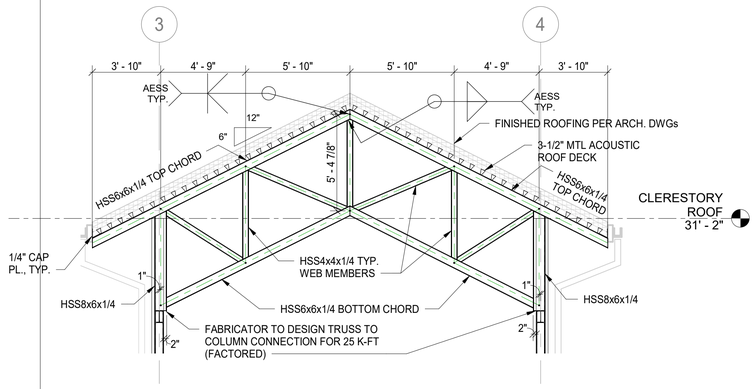
ADTEK ENGINEERS, INC.
150 South East Street
Suite 201
Frederick, Maryland 21701
301-662-4408
Fax: 301-662-7484
ADTEK PROJECT #: 1713.0001

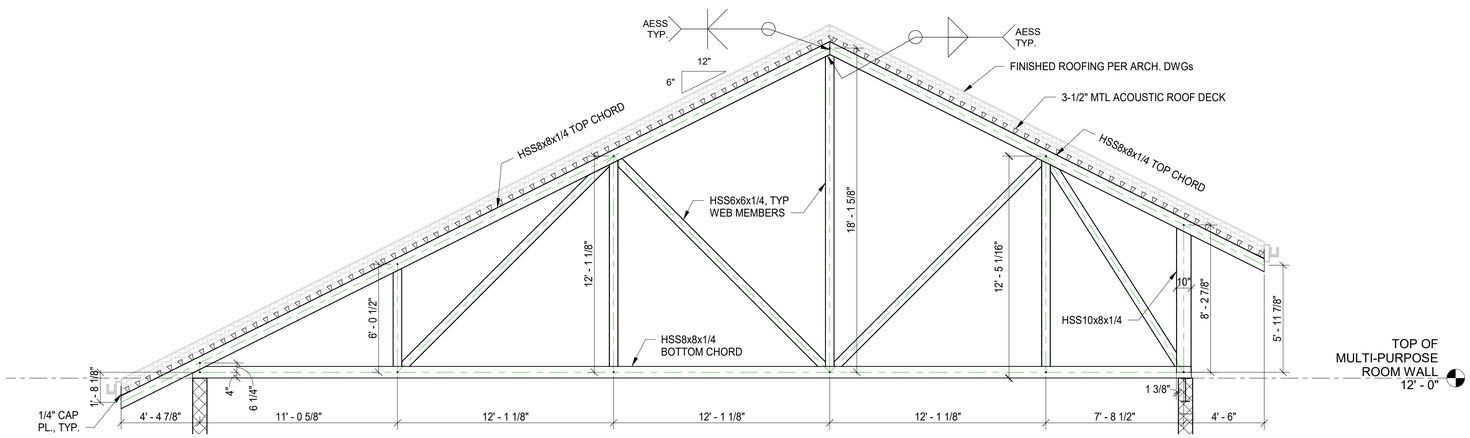
FRAMING DETAILS
PLOT SCALE: 3/4" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT 3089

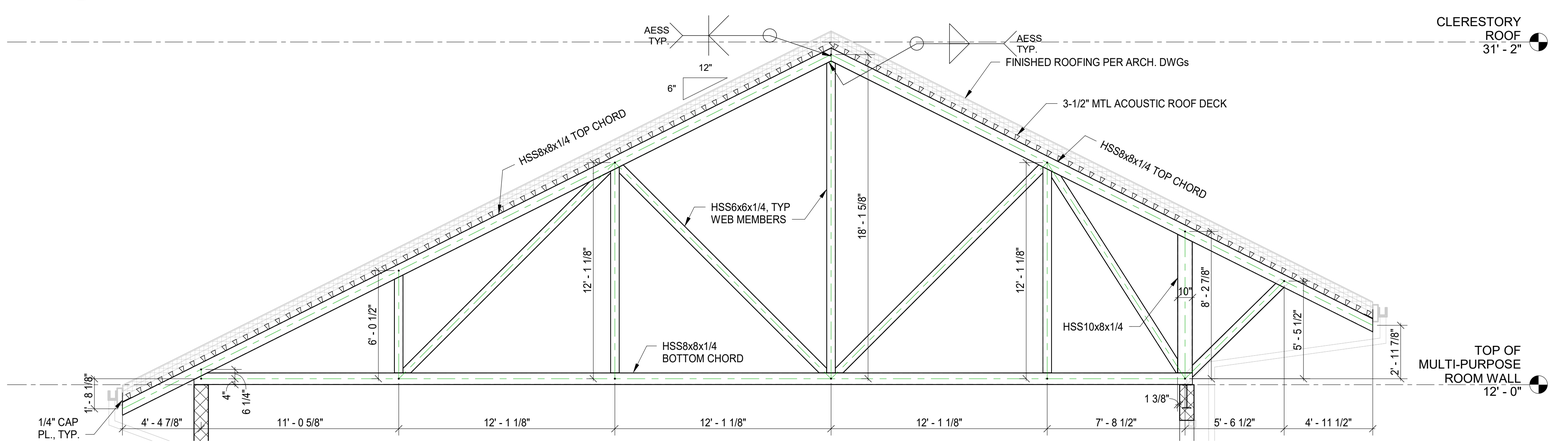
S4.03



1 / S4.10 CLERESTORY TRUSS
SCALE: 1/4" = 1'-0"



2 / S4.10 MULTI-PURPOSE ROOM TRUSS
SCALE: 1/4" = 1'-0"



3 / S4.10 MULTI-PURPOSE ROOM TRUSS w/ EXTENSION
SCALE: 1/4" = 1'-0"

TRUSS NOTES:

1. PAINT TRUSSES AND ROOF DECK PER ARCH DRAWINGS AND SPECS.
2. PROVIDE ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) AT TRUSSES EXPOSED TO PUBLIC VIEW PER THE AISC SPECIFICATIONS FOR SPECIAL PROCEDURES FOR FABRICATION, ERECTION, FIELD PREPARATION, FINISH, AND TOLERANCES.
3. GRIND VISIBLE WELDS AND ROUGH EDGES SMOOTH FOR SHOP AND FIELD FABRICATION AND INSTALLATION.
4. NO VISIBLE BOLTED CONNECTIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DETAILED AS SUCH.
5. ALL CONNECTIONS AND FABRICATION OF COMPONENTS EXPOSED AND VISIBLE IN THE FINISHED WORK SHALL BE MADE WITH CONTINUOUS WELDS. INTERMITTENT WELDS ARE ALLOWED ONLY FOR NON-EXPOSED OR NON-VISIBLE CONDITIONS.
6. WELD SIZE SHALL BE AS REQUIRED FOR STRUCTURAL STRENGTH AND INTEGRITY, BUT NOT LESS THAN 3/16" FILLET WELD.
7. HOLES BURNED THROUGH EXPOSED METAL DECK, FLOOR OR ROOF DECK, DURING WELDING SHALL NOT BE PERMITTED. REPLACEMENT OF DECK IN AREAS OF BURN THROUGH IS REQUIRED.

STATE OF MARYLAND
ROGER C. RODRIGUES
47042
PROFESSIONAL ENGINEER
7/1/2020

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 47042 Expiration Date: 07/1/21

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ADTEK PROJECT #: 1713.0001

TRUSS PROFILES

PLOT SCALE: 1/4" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT 3089

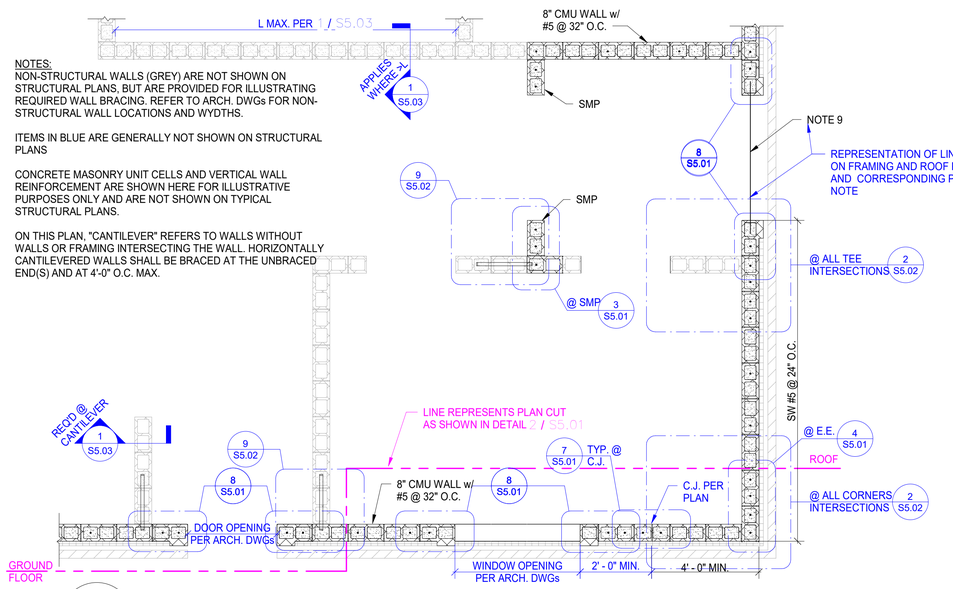
S4.10

NOTES:
NON-STRUCTURAL WALLS (GREY) ARE NOT SHOWN ON STRUCTURAL PLANS, BUT ARE PROVIDED FOR ILLUSTRATING REQUIRED WALL BRACING. REFER TO ARCH. DWGs FOR NON-STRUCTURAL WALL LOCATIONS AND WYDTHS.

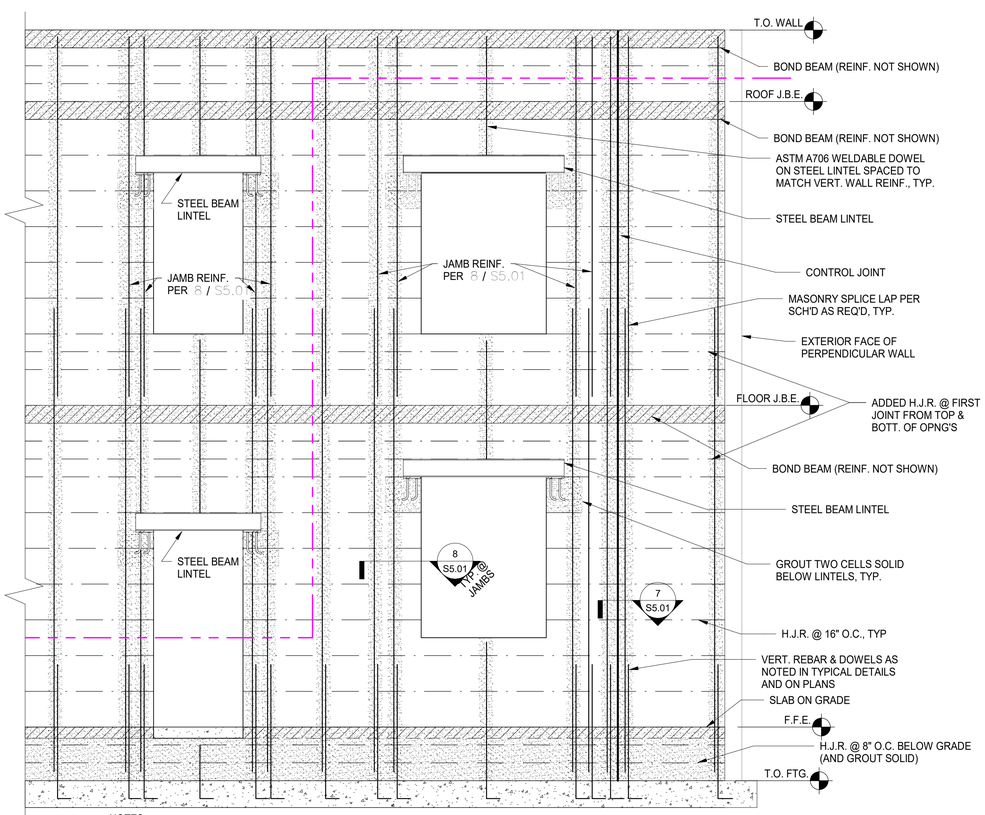
ITEMS IN BLUE ARE GENERALLY NOT SHOWN ON STRUCTURAL PLANS

CONCRETE MASONRY UNIT CELLS AND VERTICAL WALL REINFORCEMENT ARE SHOWN HERE FOR ILLUSTRATIVE PURPOSES ONLY AND ARE NOT SHOWN ON TYPICAL STRUCTURAL PLANS.

ON THIS PLAN, "CANTILEVER" REFERS TO WALLS WITHOUT WALLS OR FRAMING INTERSECTING THE WALL. HORIZONTALLY CANTILEVERED WALLS SHALL BE BRACED AT THE UNBRACED END(S) AND AT 4'-0" O.C. MAX.

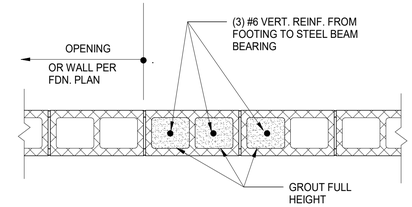


1 / S5.01 PLAN VIEW - GENERAL MASONRY WALL
SCALE: NTS

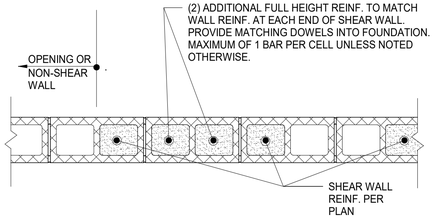


NOTES:
1) REFER TO STRUCTURAL NOTES ON S0.02 AND DETAIL 9 / S5.01 FOR HORIZONTAL JOINT REINF. INFO.
2) ALL CELLS CONTAINING VERTICAL REINFORCEMENT SHALL BE GROUTED SOLID.

2 / S5.01 REINFORCED MASONRY WALL ELEVATION
SCALE: NTS

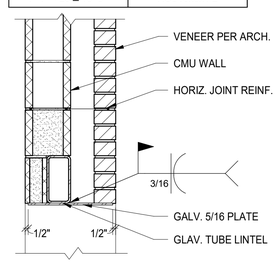


3 / S5.01 SOLID MASONRY PIER (SMP) DETAIL
SCALE: 1" = 1'-0"



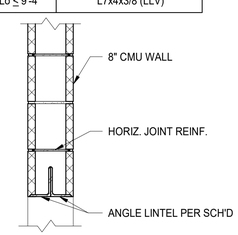
4 / S5.01 END OF SHEAR WALL REINFORCEMENT
SCALE: 1" = 1'-0"

STEEL TUBE LINTEL SCHEDULE	
WALL OPENING	TUBE
Lo ≤ 5'-0"	HSS4x4x1/4
5'-1" < Lo ≤ 7'-0"	HSS6x4x1/4
7'-1" < Lo ≤ 10'-0"	HSS10x6x1/2



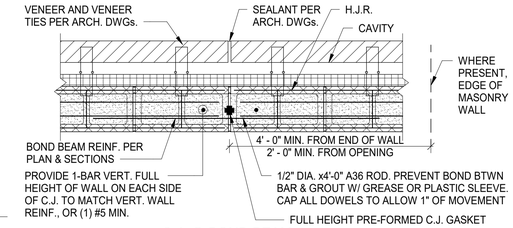
5 / S5.01 EXTERIOR CAVITY WALL LINTEL SCHEDULE
SCALE: 1" = 1'-0"

ANGLE LOOSE LINTEL SCHEDULE	
WALL OPENING	ANGLE (EVERY 4" OF CMU)
Lo ≤ 4'-0"	L3-1/2x3-1/2x1/4
4'-0" < Lo ≤ 5'-0"	L4x3-1/2x1/4 (LLV)
5'-0" < Lo ≤ 6'-0"	L5x3-1/2x5/16 (LLV)
6'-0" < Lo ≤ 7'-0"	L6x3-1/2x5/16 (LLV)
7'-0" < Lo ≤ 8'-0"	L6x3-1/2x3/8 (LLV)
8'-0" < Lo ≤ 9'-4"	L7x4x3/8 (LLV)

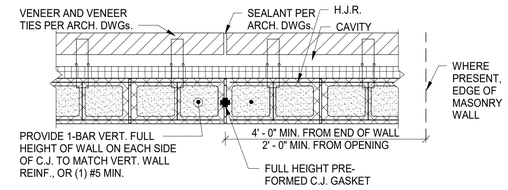


NOTE: PROVIDE MIN. 5" BEARING FOR OPENINGS 5'-0" AND UNDER, AND MIN. 8" BEARING FOR OPENINGS OVER 5'-0".

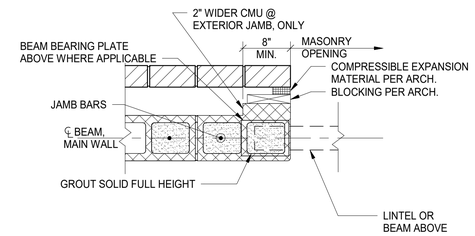
6 / S5.01 INTERIOR LOOSE ANGLE LINTEL SCHEDULE
SCALE: 1" = 1'-0"



C.J. @ BOND BEAM

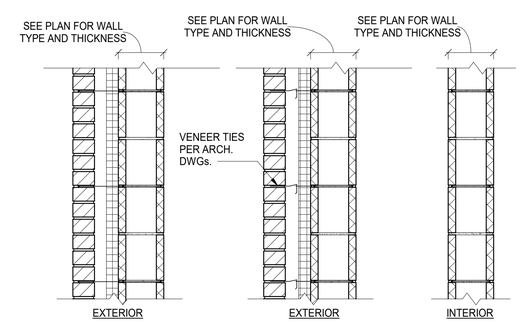


7 / S5.01 WALL CONTROL JOINT W/ VENEER
SCALE: 1" = 1'-0"



1. AT REINFORCED EXTERIOR WALLS:
PROVIDE 2 JAMB BARS AT EACH OPENING JAMB, SIZE TO MATCH WALL REINFORCING, WITH TWO JAMB DOWELS INTO FOOTING, DOWELS TO BE SAME SIZE AS JAMB REINF.
2. AT REINFORCED INTERIOR WALLS SHOWN ON STRUCTURAL DRAWINGS:
PROVIDE 2 JAMB BARS AT EACH OPENING JAMB, SIZE TO MATCH WALL REINFORCING, WITH 2 JAMB DOWELS INTO FOOTING, DOWELS TO BE SAME SIZE AS JAMB REINF.
3. AT NON-REINFORCED INTERIOR WALLS SHOWN ON STRUCTURAL DRAWINGS:
PROVIDE (1) #4 VERTICAL FULL HEIGHT W/ (1) #4 DOWEL TO FOOTING.
4. AT INTERIOR WALLS NOT SHOWN ON STRUCTURAL DRAWINGS:
GROUT BEARING SOLID WITH NO REINFORCING.

8 / S5.01 WALL JAMB DETAIL
SCALE: 1" = 1'-0"



1) BUILDING WALLS - STANDARD TRUSS TYPE H.J.R. EVERY 2ND BLOCK COURSE.
2) PARAPET WALL - HEAVY DUTY TRUSS TYPE H.J.R. EVERY COURSE.
3) BELOW GRADE WALLS - HEAVY DUTY TRUSS TYPE H.J.R. EVERY COURSE
4) PRE-FABRICATED CORNER & TEE SECTION SHALL BE USED WHERE APPLICABLE. SEE 2/S5.02

9 / S5.01 HORIZ. JOINT REINF. (H.J.R.) DETAIL
SCALE: 1" = 1'-0"

STATE OF MARYLAND — ROSS E. RODRIGUEZ — REGISTERED PROFESSIONAL ENGINEER — 47042 — PROFESSIONAL ENGINEER — 7/1/2020

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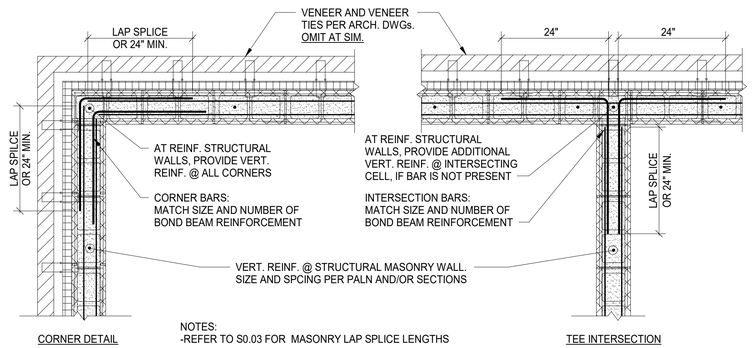
TYPICAL MASONRY WALL DETAILS

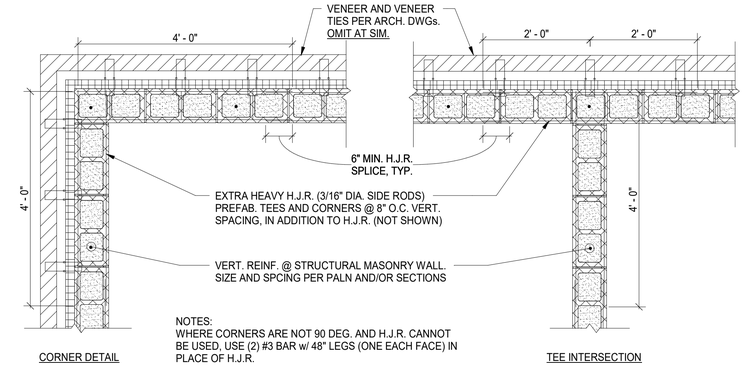
PLOT SCALE: As indicated
FILENAME:
DATE: December 18, 2019

PROJECT 3089

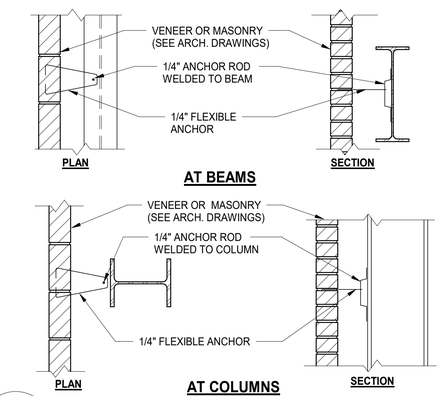
S5.01



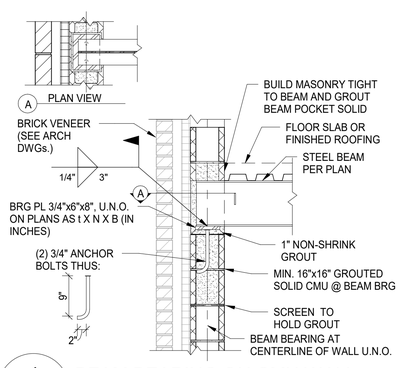
1 S5.02 BOND BEAM CORNER / TEE INTERSECTION
SCALE: 3/4" = 1'-0"



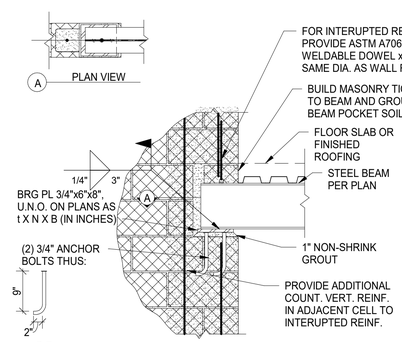
2 S5.02 CORNER TEE INTERSECTION HJR REINFORCING
SCALE: 3/4" = 1'-0"



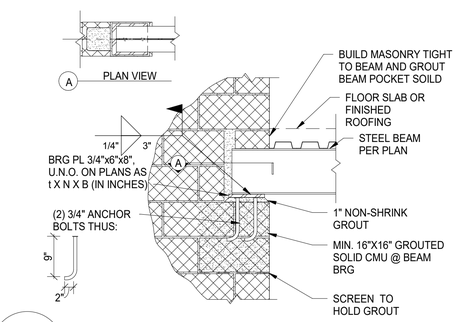
3 S5.02 VENEER TIES AT BEAMS AND COLUMNS
SCALE: 1" = 1'-0"



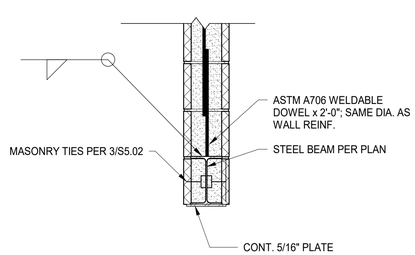
4 S5.02 BEAM BEARING ON CMU WALL
SCALE: 3/4" = 1'-0"



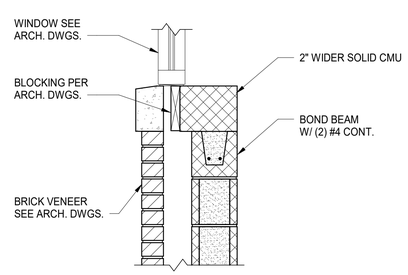
5 S5.02 BEAM BEARING ON REINF. CMU WALL
SCALE: 3/4" = 1'-0"



6 S5.02 BEAM BEARING ON UNREINF. CMU WALL
SCALE: 3/4" = 1'-0"

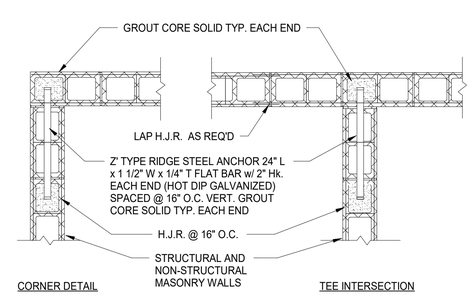


7 S5.02 LINTEL BEAM w/ PLATE DETAIL
SCALE: 1" = 1'-0"



8 S5.02 WINDOW SILL DETAIL
SCALE: 1" = 1'-0"

NOTES:
- MASONRY VERTICAL REBAR NOT SHOWN.
- REFER TO PLANS AND SECTIONS FOR MASONRY VERTICAL REBAR.



9 S5.02 CORNER/TEE INTERSECTING WALL REINFORCING
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STATE OF MARYLAND
ROBERT C. RODDA
47042
PROFESSIONAL ENGINEER
7/1/2020

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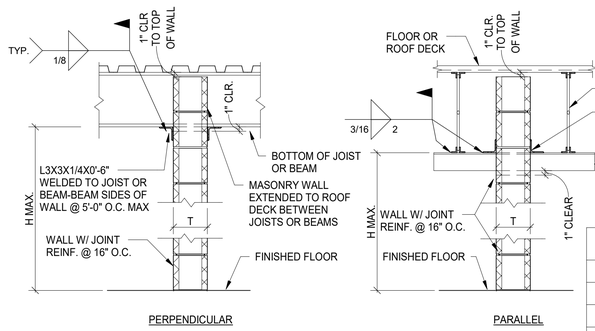
Frederick, Maryland 21701
301-662-4408
Fax: 301-662-7484
ADTEK PROJECT #: 1713.0001

TYPICAL MASONRY WALL DETAILS

PLOT SCALE: As indicated
FILENAME:
DATE: December 18, 2019

PROJECT 3089

S5.02



UMBRACED VERT. OR HORIZ. LENGTH (H OR L)	
T	MAX. H OR L
4"	11'-4"
6"	17'-4"
8"	23'-4"
"L" IS THE HORIZONTAL DISTANCE BETWEEN INTERSECTING MASONRY WALLS.	

MASONRY WALLS MUST BE BRACED EITHER HORIZONTALLY, BY INTERSECTING WALLS AT EACH END, OR VERTICALLY, AT FLOOR AND STRUCTURE ABOVE, AS DETAILED HEREIN.

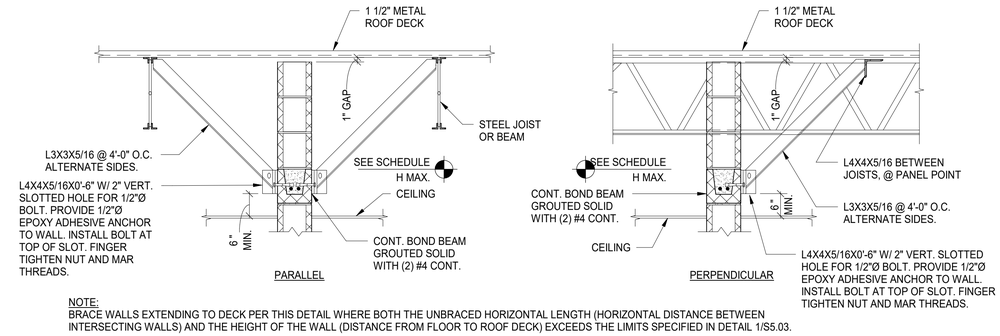
IF WALLS ARE NOT BRACED HORIZONTALLY BY INTERSECTING PARTITIONS, THEY ARE CONSIDERED TO SPAN VERTICALLY, AND MUST BE BRACED AT THE TOP OF THE WALL AS DETAILED.

WALLS FAIL TO MEET THE HORIZONTAL SPAN CRITERIA IF:

1. INTERSECTING PARTITIONS ARE FARTHER APART THAN THE MAX. H SHOWN.
2. IF THERE IS NO INTERSECTING PARTITION ON ONE END OF THE WALL.
3. A LONG RUN OF WALL WITH NO INTERSECTING PARTITIONS.

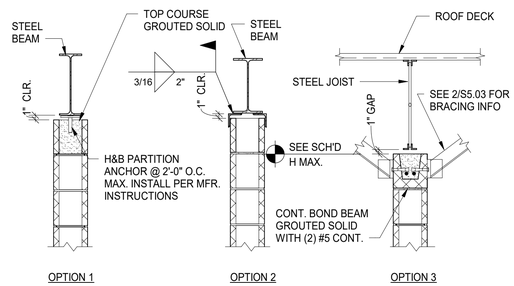
NOTES:
1. SEE ARCH. DWGs. FOR MASONRY WALL SIZE, LOCATION & HEIGHT.
2. SEE DETAIL 2/S5.03 FOR BRACING OF WALLS EXCEEDING UNBRACED LENGTH AND HEIGHTS LIMITS.

1 / S5.03 INTERIOR NON-STRUCTURAL MASNONRY WALL BRACE
SCALE: 3/4" = 1'-0"



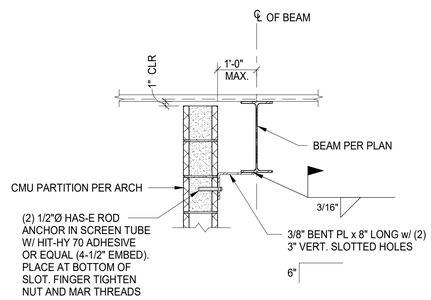
NOTE:
BRACE WALLS EXTENDING TO DECK PER THIS DETAIL WHERE BOTH THE UNBRACED HORIZONTAL LENGTH (HORIZONTAL DISTANCE BETWEEN INTERSECTING WALLS) AND THE HEIGHT OF THE WALL (DISTANCE FROM FLOOR TO ROOF DECK) EXCEEDS THE LIMITS SPECIFIED IN DETAIL 1/S5.03.

2 / S5.03 INTERIOR NON-STRUCTURAL MASONRY WALL BRACE
SCALE: 3/4" = 1'-0"

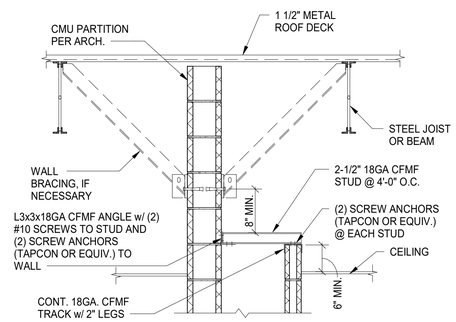


NOTE:
BRACE WALLS EXTENDING TO BEAMS PER DETAIL 2/S5.03 WHERE BOTH THE UNBRACED HORIZONTAL LENGTH (HORIZONTAL DISTANCE BETWEEN INTERSECTING WALLS) AND THE HEIGHT OF THE WALL (DISTANCE FROM FLOOR TO ROOF DECK) EXCEEDS THE LIMITS SPECIFIED IN DETAIL 1/S5.03.

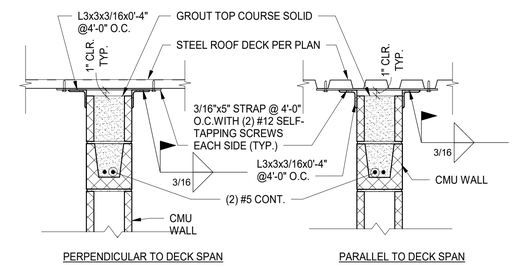
3 / S5.03 INT. NON-STRUCTURAL CMU WALL BRACE
SCALE: 3/4" = 1'-0"



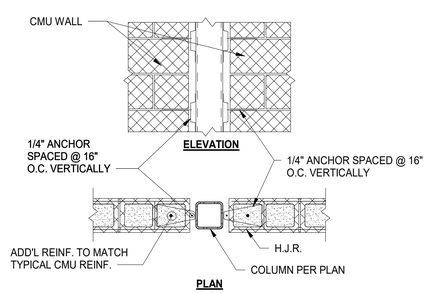
4 / S5.03 INT. NON-STRUCTURAL CMU WALL BRACE
SCALE: 3/4" = 1'-0"



5 / S5.03 CHASE WALL BRACING
SCALE: 3/4" = 1'-0"



6 / S5.03 INT. NON-STRUCTURAL CMU WALL BRACING
SCALE: 1" = 1'-0"



7 / S5.03 STEEL COLUMN BRACED TO MASONRY WALL
SCALE: 3/4" = 1'-0"

STATE OF MARYLAND ROBERT A. RODRIGUEZ 47042 PROFESSIONAL ENGINEER 7/1/2020

Professional Certification. I certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 47042 Expiration Date: 07/1/21

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
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HAGERSTOWN, MD 21740

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ADTEK PROJECT #: 1713.0001

TYPICAL MASONRY WALL DETAILS

PLOT SCALE: As indicated
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DATE: December 18, 2019

PROJECT 3089

S5.03

GENERAL NOTES

1. CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE RELATION OF PIPING, DUCTWORK, CONNECTIONS, AND EQUIPMENT. THE DRAWINGS DO NOT INDICATE ALL OFFSETS, ELBOWS, AND FITTINGS THAT MAY BE REQUIRED. THEREFORE, THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND ACTUAL EQUIPMENT PROVIDED. THE CONTRACTOR SHALL FURNISH ALL OFFSETS, ELBOWS, FITTINGS, HANGERS, AND ACCESSORIES AS MAY BE REQUIRED TO MEET THESE CONDITIONS AT NO ADDITIONAL COST TO THE OWNER
2. INSTALL ALL EQUIPMENT AND MATERIALS IN STRICT ACCORDANCE WITH THE CURRENTLY ADOPTED INTERNATIONAL MECHANICAL CODE, ALL PERTINENT CODES, LAWS, ORDINANCES, REGULATIONS, AND RESPECTIVE MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN STRICT ACCORDANCE WITH SMACNA AND ASHRAE STANDARDS.
4. COORDINATE HVAC WORK WITH THE WORK OF ALL OTHER CONTRACTORS AND OWNER.
5. THE HVAC CONTRACTOR SHALL ARRANGE THE PROGRESS OF HIS WORK SO AS TO CONFORM TO THE PROGRESS OF THE TRADES AND SHALL COMPLETE THE ENTIRE INSTALLATION AS SOON AS THE CONDITION OF THE PROJECT WILL PERMIT.
6. ALL ITEMS OF LABOR, MATERIAL, AND EQUIPMENT NOT SPECIFICALLLY DESCRIBED HEREIN NOR DETAILED ON THE DRAWINGS BUT INCIDENTAL TO OR NECESSARY FOR THE COMPLETION OF THE WORK, SHALL BE CONSIDERED AS INCLUDED WITHOUT EXTRA COST.
7. COORDINATE EXACT LOCATIONS OF DIFFUSERS/DUCTWORK WITH LIGHTS, SPRINKLERS, AND CEILING WITH REFLECTED CEILING PLAN AND ARCHITECT.
8. PROVIDE INDIVIDUAL VOLUME DAMPERS FOR BALANCING ON ALL SUPPLY, RETURN, RELIEF, AND EXHAUST MAIN BRANCH AND BRANCH TAKE-OFFS. LOCATE VOLUME DAMPER AS CLOSE AS POSSSIBLE TO TAKE OFF POINTS. PROVIDE CABLE CONTROL VOLUME DAMPERS FOR ALL INACCESSIBLE CEILINGS.
9. PROVIDE ADEQUATE CLEARANCE FOR ALL UNIT CONTROLS.
10. MOUNT ALL SPACE SENSING DEVICES AT 48" AFF, COORDINATE ALL LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN AND INSTALLATION.
11. PROVIDE PROTECTION FOR ALL PENETRATIONS OF FIRE RESISTANCE RATED ASSEMBLIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENTLY ADOPTED INTERNATIONAL BUILDING CODE.
12. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPES. PROVIDE APPROPRIATE FRAMES AND MOUNTING HARDWARE FOR ALL AIR DEVICES.
13. ROUTE EQUIPMENT DRAIN PIPING TO FLOOR DRAINS TO PREVENT TRIPPING HAZARDS. DO NOT INSTALL PIPING ON FLOOR IN ANY EQUIPMENT ACCESS AISLES.
14. PROVIDE DOUBLE WALL INSULATED ACCESS DOORS IN ALL INSULATED DUCTWORK AND SINGLE WALL ACCESS DOORS IN UN-INSULATED DUCTWORK FOR FIRE DAMPER, SMOKE DAMPER, AND REHEAT COIL INSPECTION AND SERVICE.
15. NO PIPING OR DUCTWORK FOREIGN TO ELECTRICAL, DATA, OR ELEVATOR MACHINE ROOMS IS PERMITTED TO BE INSTALLED IN THESE SPACES.
16. ALL INDOOR FLOOR MOUNTED MECHANICAL EQUIPMENT SHALL BE MOUNTED ON 4" MINIMUM HOUSEKEEPING PAD.
17. PROVIDED ALL PIPING, VALVING & EQUIPMENT SHOWN ON FLOW DIAGRAMS AND DETAILS EVEN IF NOT SHOWN ON FLOOR PLANS.
18. PROVIDE FIRE DAMPERS AND SMOKE DAMPERS AS INDICATED ON FLOOR PLANS, AND WHERE REQUIRED BY APPLICABLE CODES AT RATED CONSTRUCTION.
19. EC SHALL FURNISH DUCT SMOKE DETECTORS, MC SHALL INSTALL THEM AND A.T.C. CONTRACTOR SHALL WIRE THEM TO AIR HANDLING UNIT STARTERS / VFD'S. EC TO WIRE DUCT SMOKE DETECTORS TO FIRE ALARM SYSTEM.
20. WHERE PLENUM RETURN AIR SYSTEM ARE USED, PROVIDE ONLY MATERIALS IN THE CEILING THAT ARE APPROVED FOR AIR PLENUM USE.
21. PROVIDE ACCESS PANELS FOR ALL VALVES AND DAMPERS ABOVE INACCESSIBLE CEILINGS, ACCESS PANEL TO BE A MINIMUM OF 12"X12", COORDINATE FINAL LOCATION WITH REFLECTED CEILING PLAN.
22. PROVIDE WOOD BLOCKING FOR ALL ROOF CURBS; COORDINATE WITH GC.
23. UNCONDITIONALLY GUARANTEE IN WRITING ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ON YEAR FROM THE DATE OF ACCEPTANCE BY OWNER.
24. SUBMIT TO THE ARCHITECT/ENGINEER AS-BUILT DRAWINGS AND OPERATION AND MAINTENANCE MANUALS INCLUDING ALL NAMEPLATE DATA, WIRING DIAGRAMS, MAINTENANCE INSTRUCTIONS, AND PARTS LIST UPON PROJECT COMPLETION.
25. MAINTAIN A CLEAN AND SAFE WORK AREA AT ALL TIMES. ALL SAFETY PROCEDURES AND ENFORCEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR; CONFORM TO ALL OSHA STANDARDS.

MISCELLANEOUS SYMBOLS

- T — THERMOSTAT
- H — HUMIDISTAT
- S — SWITCH
- VFD (VARIABLE FREQUENCY DRIVE)
- POINT OF CONNECTION-NEW TO EXISTING
- POINT OF DEMOLITION CONCLUSION
- # — DRAWING NOTE SYMBOL
- S* — DESIGNATES SUPPLY DIFFUSER TYPE IN AREA
- R* — DESIGNATES RETURN DIFFUSER TYPE IN AREA
- E* — DESIGNATES EXHAUST GRILLE TYPE IN AREA
- # — REVISION SYMBOL
- DIRECTION OF VIEW
- # — SECTION NUMBER
- # — DRAWING ON WHICH SECTION OR DETAIL IS SHOWN
- # — DETAIL OR SECTION NUMBER
- # — DRAWING FROM WHICH SECTION OR DETAIL IS TAKEN

ABBREVIATIONS

A/C	AIR CONDITIONING	INSUL	INSULATION
AFF	ABOVE FINISHED FLOOR	INTL	INTERNAL
AFG	ABOVE FINISHED GRADE	LAT	LEAVING AIR TEMPERATURE
AL	ALUMINUM	LBS	POUNDS
AMB	AMBIENT	LIN	LINEAL
AMP	AMPERE	LP	LOW PRESSURE
AP	ACCESS PANEL	LRA	LOCKED ROTOR AMPS
APROX	APPROXIMATE	LVL	LEVEL
ARR	ARRANGEMENT	LVR	LOUVER
ATC	AUTOMATIC TEMPERATURE CONTROL	LWT	LEAVING WATER TEMPERATURE
AUTO.	AUTOMATIC	MAN.	MANUAL
AUX	AUXILIARY	MAX	MAXIMUM
AVG	AVERAGE		
BBD	BOILER BLOW DOWN	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
BF	BOILER FEED		
BHP	BOILER HORSEPOWER OR BRAKE HORSEPOWER	MU	MAKEUP
		MIN	MINIMUM
BOD	BOTTOM OF DUCT	MOD.	MODEL
BOP	BOTTOM OF PIPE	MOUNT.	MOUNTING
BOT	BOTTOM	MTD	MOUNTED
BP	BACK PRESSURE	NA	NOT APPLICABLE
BSMT	BASEMENT	NC	NORMALLY CLOSED
BTU	BRITISH THERMAL UNIT	NEG	NEGATIVE
C TO C	CENTER TO CENTER	NIC	NOT IN CONTRACT
CA	COMPRESSED AIR	NO	NORMALLY OPEN
CAP.	CAPACITY CHEMICAL FEED CUBIC FOOT (FEET) PER MINUTE	NTS	NOT TO SCALE
		OA	OUTSIDE AIR
		OED	OPEN END DUCT
CI	CAST IRON	OF	OVERFLOW
CL	CENTER LINE	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CO	CLEANOUT		
COL	COLUMN	OV	OUTLET VELOCITY
CONC	CONCRETE OR CONCENTRIC	PCR	PUMPED CONDENSATE RETURN
CONN	CONNECT OR CONNECTION		
CONT	CONTINUATION	PD	PRESSURE DROP
CTR	CENTER	PG	PRESSURE GAUGE
CF	CUBIC FOOT (FEET)	PL	PLATE
D	DRAIN OR DEEP	PNEU	PNEUMATIC
DB	DRY BULB	PRESS.	PRESSURE
DDC	DIRECT DIGITAL CONTROL	PROP.	PROPELLER
		PSIG	POUNDS PER SQUARE INCH GAUGE
DEG	DEGREE		
DET	DETAIL	QTY	QUANTITY
DIA,∅	DIAMETER	RECOV	RECOVERY
DISC.	DISCONNECT	REF	REFERENCE
DN	DOWN	REQD	REQUIRED
DWG	DRAWING	REV	REVISION
EA	EACH	RL	REFRIGERANT LIQUID
EAT	ENTERING AIR TEMPERATURE	RM	ROOM
EDR	EQUIVALENT DIRECT RADIATION	RS	REFRIGERANT SUCTION
		RTN	RETURN
EER	ENERGY EFFICIENCY RATIO	S	SWITCH
		SCH	SCHEDULE
EFF	EFFICIENCY	SD	SMOKE DAMPER WITH ACCESS DOOR
EJ	EXPANSION JOINT		
EL	ELEVATION	SEC	SECONDARY,SECONDS
ELB	ELBOW	SENS	SENSIBLE
ELEC	ELECTRICAL	SEP	SEPARATE
ENT	ENTERING	SEQ	SEQUENCE
ESP	EXTERNAL STATIC PRESSURE	SER	SERIES
EVAP	EVAPORATOR	SERV	SERVICE
EWT	ENTERING WATER TEMPERATURE	SHT	SHEET
EXH	EXHAUST	SOL	SOLENOID
EXP	EXPANSION	SP	STATIC PRESSURE
EXST	EXISTING	SS	STAINLESS STEEL
EXT	EXTERNAL	STL	STEEL
F&T	FLOAT & THERMOSTATIC	SUCT	SUCTION
FC	FLEXIBLE CONNECTOR / FLEXIBLE CONNECTION	SPLY	SUPPLY
		TD	TEMPERATURE DIFFERENTIAL
FDW	FEED WATER		
FLA	FULL LOAD AMPS	TEMP	TEMPERATURE
FLR	FLOOR	TH	THERMOMETER
FO	FUEL OIL	THK	THICK
FPM	FOOT (FEET) PER MINUTE	TSP	TOTAL STATIC PRESSURE
FPS	FOOT (FEET) PER SECOND	TYP.	TYPICAL
FS	FLOW SWITCH	UON	UNLESS OTHERWISE NOTED
FT	FOOT (FEET)	V	VENT OR VOLT
GA	GAUGE	VAC	VACUUM
GAL	GALLONS	VAV	VARIABLE AIR VOLUME
GALV	GALVANIZED	VB	VACUUM BREAKER
GND	GROUND	VEL	VELOCITY
GPH	GALLONS PER HOUR	VERT	VERTICAL
GPM	GALLONS PER MINUTE	VIB	VIBRATION
GPS	GALLONS PER SECOND	VOL	VOLUME
GR	GRAIN	VSD	VARIABLE SPEED DRIVE
HD	HEAD	VTR	VENT THRU ROOF
HG	HOT GAS	W	WATT, WIDTH OR WIDE
HGT	HEIGHT	WB	WET BULB
HTD	HEATED	WMS	WIRE MESH SCREEN
HTR	HEATER		
HMD	HUMIDITY		
HORIZ	HORIZONTAL		
HP	HORSEPOWER		
Hz	HERTZ		

NOTE:
NOT ALL ABBREVIATIONS AND SYMBOLS INDICATED MAY APPEAR ON THESE CONTRACT DRAWINGS. THIS IS FOR REFERENCE ONLY.

MECHANICAL DRAWING LIST

M0.0	MECHANICAL INFORMATION SHEET
M1.0	FIRST FLOOR PLAN - UNIT A - MECHANICAL DUCTWORK
M1.1	FIRST FLOOR PLAN - UNIT B - MECHANICAL DUCTWORK
M1.2	FIRST FLOOR PLAN - UNIT C - MECHANICAL DUCTWORK
M2.0	FIRST FLOOR PLAN - UNIT A - MECHANICAL PIPING
M2.1	FIRST FLOOR PLAN - UNIT B - MECHANICAL PIPING
M2.2	FIRST FLOOR PLAN - UNIT C - MECHANICAL PIPING
M3.0	ROOF PLAN - MECHANICAL
M4.0	MECHANICAL DETAILS
M5.0	MECHANICAL SCHEDULES

DUCTWORK SYMBOLS

DUCTWORK	DESCRIPTION
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW WORK
	SUPPLY AIR UP
	SUPPLY AIR DOWN
	EXHAUST OR RETURN AIR UP
	EXHAUST OR RETURN AIR DOWN
	ROUND DUCT UP
	ROUND DUCT DOWN
24x36	RECTANGULAR DUCT SIZE SHOWN IN INCHES (FIRST FIGURE-SIDE SHOWN)
36x14∅*	FLAT OVAL DUCT SIZE (FIRST FIGURE-SIDE SHOWN)
	DIRECTION OF FLOW
UP DN	DUCT INCLINED RISE OR DROP IN DIRECTION OF FLOW
	90° ELBOW WITH TURNING VANES
	45°ELBOW (NO VANES)
	SUPPLY OR RETURN BRANCH CONNECTION
	SUPPLY BRANCH WITH SPIN COLLAR CONNECTION
	LATERAL CONNECTION ROUND DUCTWORK
	CONICAL TEE ROUND DUCTWORK
	DUCT WITH INTERNAL LINING
(CFM)	4-WAY DIFFUSER (D)
(CFM)	3-WAY, 2-WAY, OR 1-WAY GRILLE (G)
(CFM)	EXHAUST OR RETURN GRILLE (G)
MD	MOTORIZED DAMPER
	VOLUME DAMPER
BD	BYPASS DAMPER
BDD	BACK DRAFT DAMPER
	SMOKE DAMPER WITH ACCESS DOOR
	FIRE DAMPER WITH ACCESS DOOR
	COMBINATION FIRE & SMOKE DAMPER WITH ACCESS DOOR
SP	STATIC PRESSURE SENSOR
T	DUCT TEMPERATURE SENSOR
H	DUCT HUMIDITY SENSOR
SDT	DUCT SMOKE DETECTOR
	FLEXIBLE DUCTWORK DUCT PRESSURE CLASS

PIPING SYMBOLS

SYMBOL	DESCRIPTION
	SHUT-OFF VALVE
	GLOBE VALVE
	CHECK VALVE
	FLOW SETTER
	ANGLE GATE VALVE
	RELIEF OR SAFETY VALVE
	SOLENOID VALVE
T	THERMAL EXPANSION VALVE
	BACK PRESSURE VALVE
	BUTTERFLY VALVE
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	UNION
	STRAINER W/BLOW-OFF & CAP
	FLOW SENSOR
	SIGHT GLASS
	PIPE GUIDE
	PIPE ANCHOR
	FLEXIBLE CONNECTOR
	EXPANSION JOINT
	THERMOMETER
A	PRESSURE GAUGE W/COCK
M	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	ORIFICE PLATE
	FLOAT AND THERMOSTATIC TRAP
	DIRECTION OF FLOW
	DIRECTION OF SLOPE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	PIPE UP
	PIPE DOWN
	PIPE THROUGH
	TOP TAKE-OFF
	BUCKET TRAP
EMD	END OF MAIN DRIP
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW WORK
BBD	BOILER BLOWDOWN - CONTINUOUS
BF	BOILER FEED WATER
CA	COMPRESSED AIR
CF	CHEMICAL FEED
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
D	CONDENSATE DRAIN OR DRAIN
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL TANK VENT
HG	HOT GAS
HPR	HIGH PRESSURE CONDENSATE RETURN
HPS	HIGH PRESSURE STEAM SUPPLY
HR	HEATING RETURN
HS	HEATING SUPPLY
LPCS	LOW PRESSURE CLEAN STEAM
LPR	LOW PRESSURE CONDENSATE RETURN
LPS	LOW PRESSURE STEAM SUPPLY
MPR	MEDIUM PRESSURE CONDENSATE RETURN
MPS	MEDIUM PRESSURE STEAM SUPPLY
MU	MAKE UP WATER
PCR	PUMPED CONDENSATE RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
V	VENT LINE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 49693, Expiration Date: 2020-07-24.

STATE OF MARYLAND — KATHRYN PARFITT — 49693 — PROFESSIONAL ENGINEER

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100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
www.cra-architects.com
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PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

MECHANICAL INFORMATION SHEET

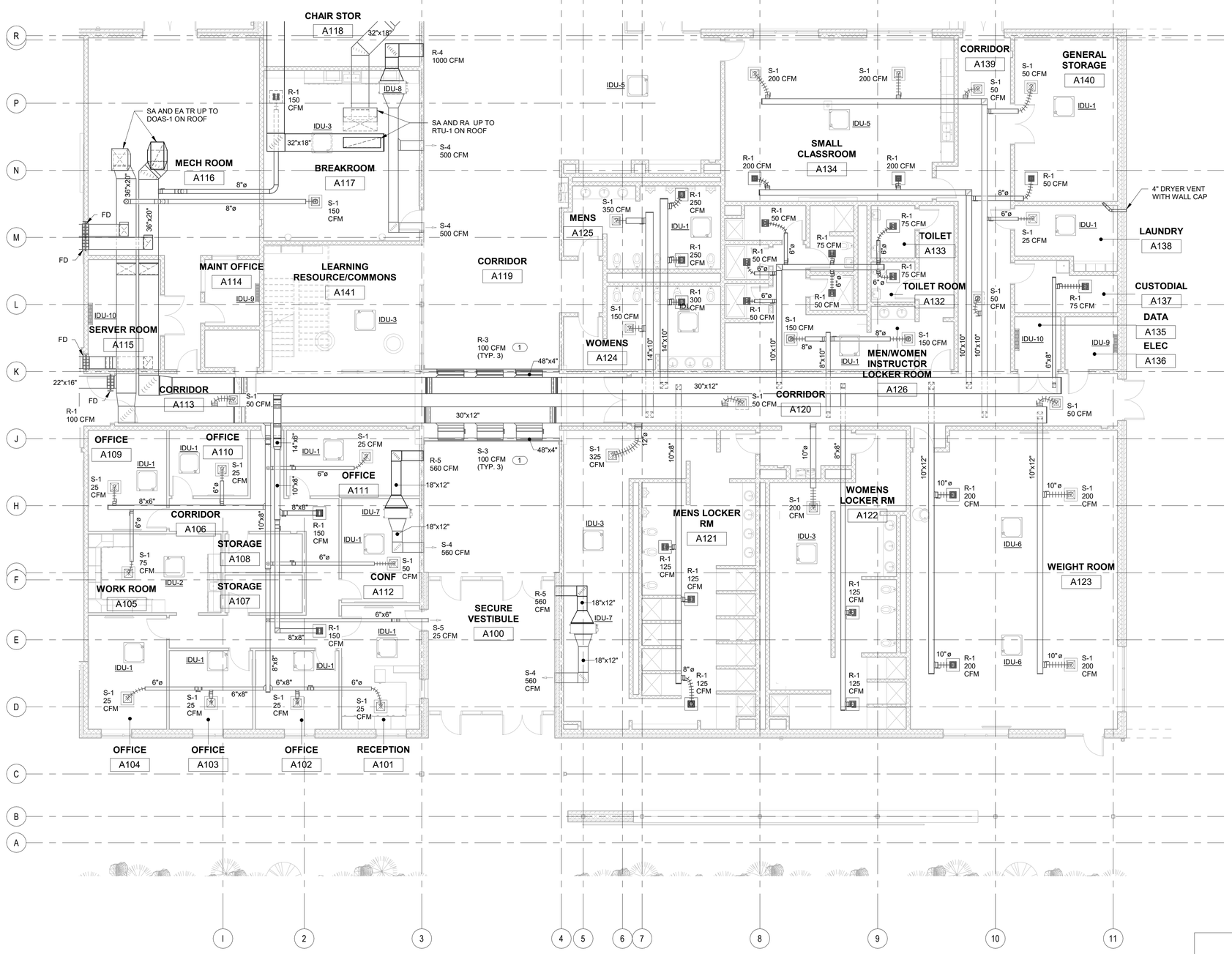
PLOT SCALE: 12" = 1'-0"

FILENAME:

DATE: December 18, 2019

PROJECT 3089

M0.0



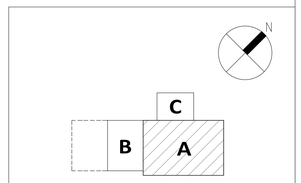
1 FIRST FLOOR PLAN - UNIT A - MECHANICAL DUCTWORK

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

NOTES BY SYMBOL: (#)

(THIS SHEET ONLY)

1. PROVIDE CONTINUOUS SLOT DIFFUSER/RETURN FULL LENGTH OF BRIDGE. MOUNT DUCT AND DIFFUSER/RETURN AS HIGH AS POSSIBLE; COORDINATE WITH GC/ARCHITECT.



KEY PLAN

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 49693, Expiration Date: 2020-07-24.

STATE OF MARYLAND
KATHRYN PARFITT
49693
PROFESSIONAL ENGINEER

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www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

FIRST FLOOR PLAN - UNIT A - MECHANICAL DUCTWORK

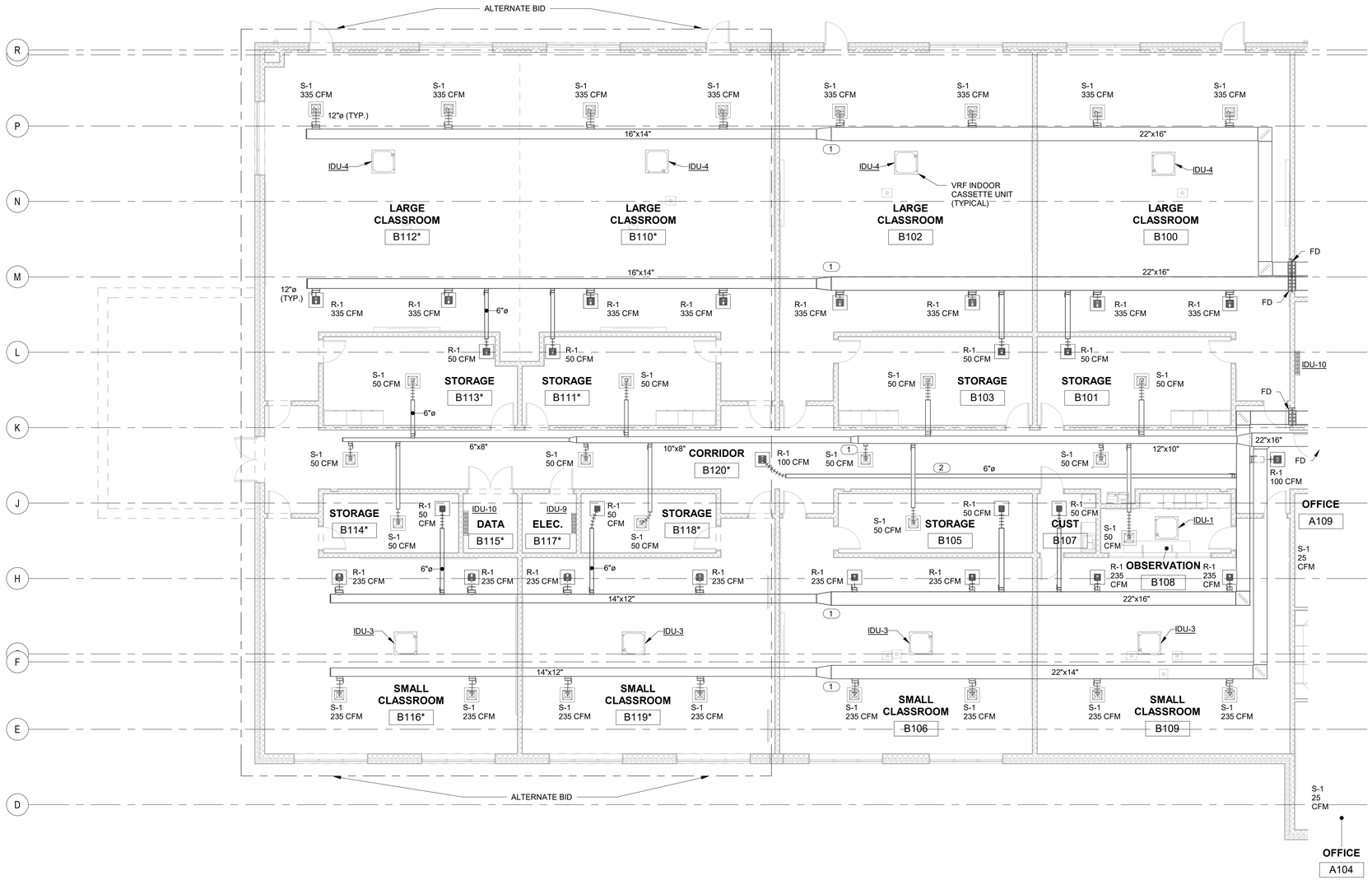
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: December 18, 2019

PROJECT
3089

M1.0

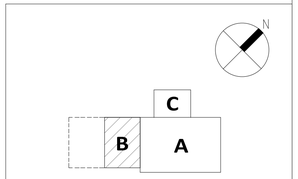


1 FIRST FLOOR PLAN - UNIT B - MECHANICAL DUCTWORK

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

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. PROVIDE DUCT END CAP AFTER LAST AIR DEVICE/BEFORE TRANSITION AS PART OF BASE BID; TRANSITION/DUCT CONTINUATION IS PART OF ALTERNATE BID.
2. RETURN DUCT TO MAIN IS PART OF ALTERNATE BID.



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KATHRYN PARFITT
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PROFESSIONAL ENGINEER

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FIRST FLOOR PLAN - UNIT B - MECHANICAL DUCTWORK

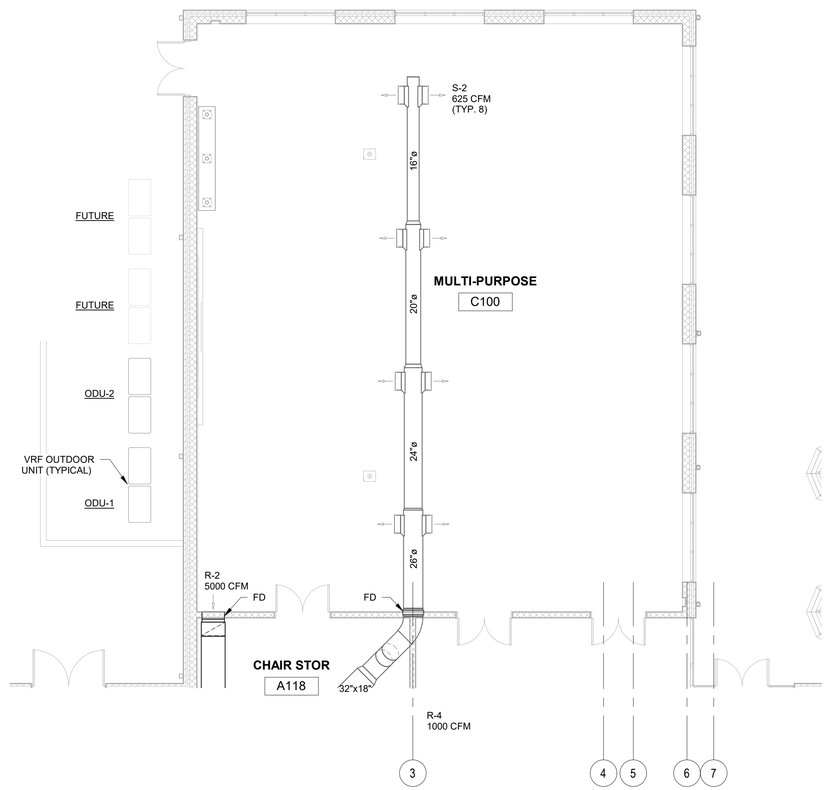
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

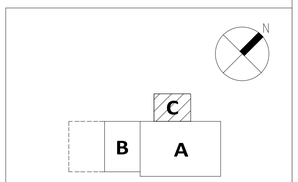
DATE: December 18, 2019

PROJECT
3089

M1.1



1 FIRST FLOOR PLAN - UNIT C - MECHANICAL DUCTWORK
SCALE: 1/8" = 1'-0"



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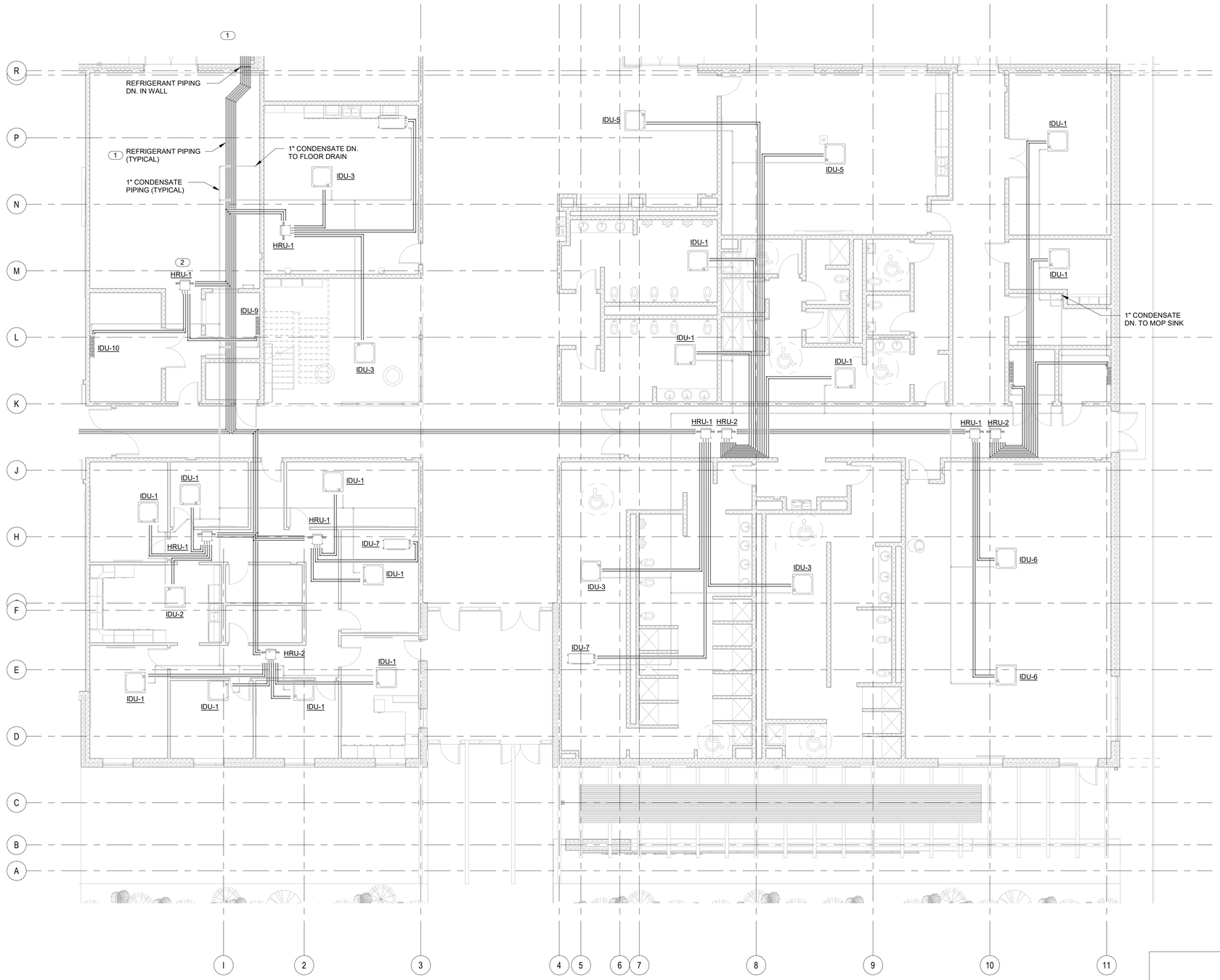
FIRST FLOOR PLAN - UNIT C - MECHANICAL DUCTWORK

PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT
3089

M1.2

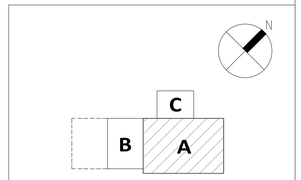


FIRST FLOOR PLAN - UNIT A - MECHANICAL PIPING

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

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. PROVIDE REFRIGERANT PIPING SIZED PER VRF MANUFACTURER (TYPICAL)
2. PROVIDE SHUTOFF VALVES ON ALL HRU PORTS (TYPICAL)



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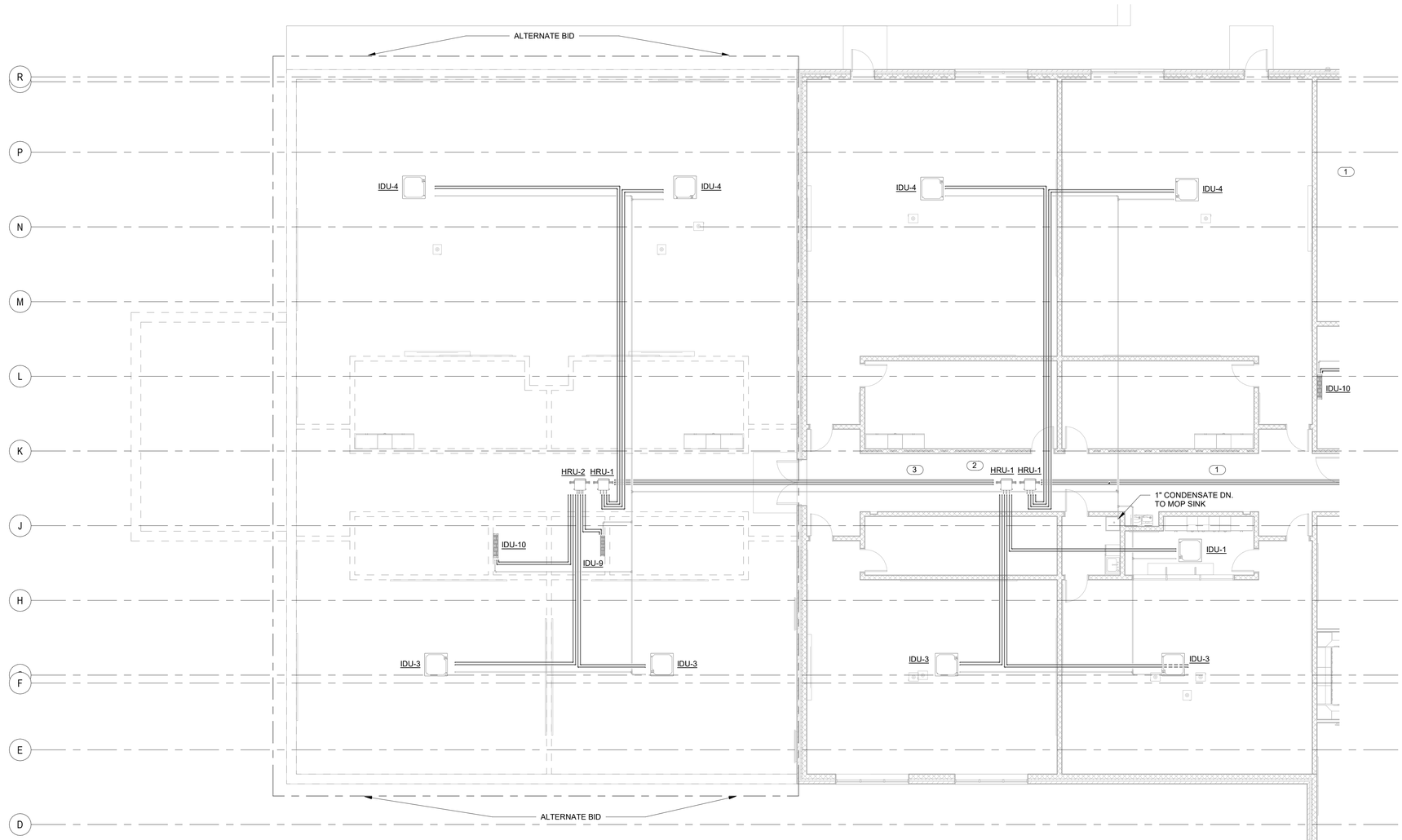
FIRST FLOOR PLAN - UNIT A - MECHANICAL PIPING

PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT
3089

M2.0

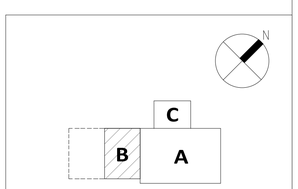


FIRST FLOOR PLAN - UNIT B - MECHANICAL PIPING

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

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. PROVIDE REFRIGERANT PIPING SIZED PER VRF MANUFACTURER (TYPICAL)
2. PROVIDE SHUTOFF VALVES ON ALL HRU PORTS (TYPICAL)
3. REFRIGERANT PIPING TO END CLASSROOMS IS PART OF ALTERNATE BID; CAP FEED-THRU PORTS ON LAST HRU AS PART OF BASE BID.



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FIRST FLOOR PLAN - UNIT B - MECHANICAL PIPING

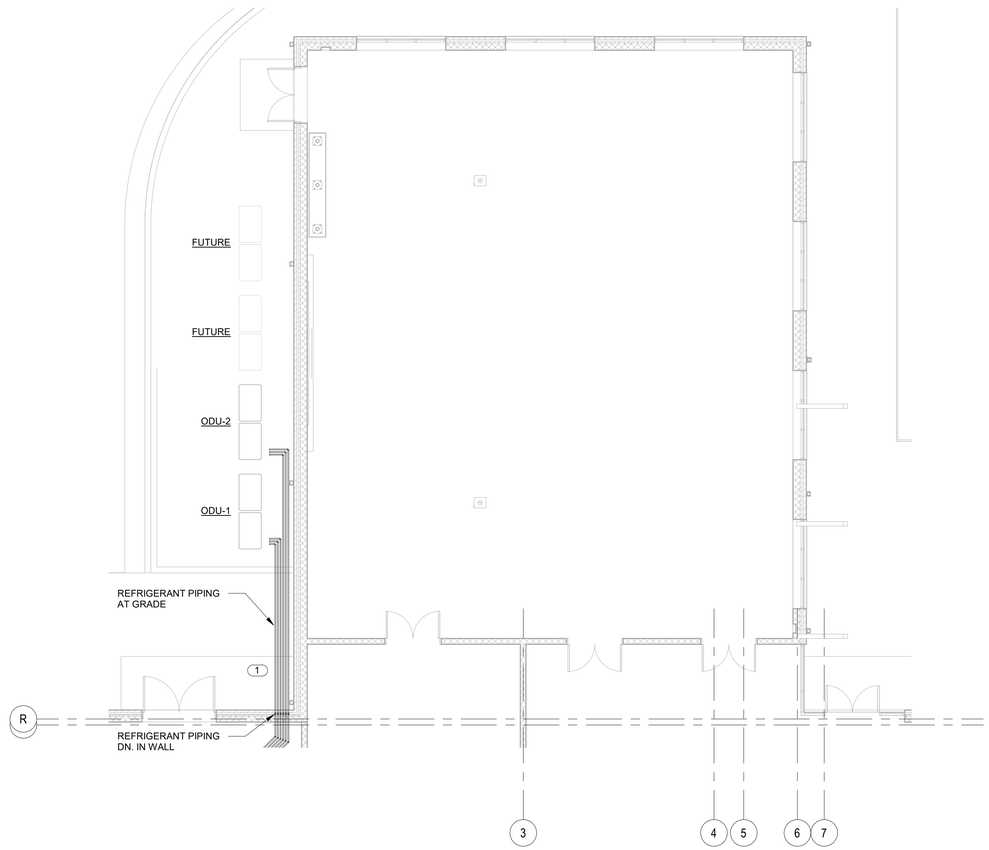
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: December 18, 2019

PROJECT
3089

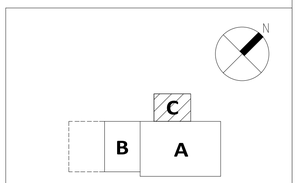
M2.1



1 FIRST FLOOR PLAN - UNIT C - MECHANICAL PIPING
SCALE: 1/8" = 1'-0"

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. PROVIDE REFRIGERANT PIPING SIZED PER VRF MANUFACTURER (TYPICAL)



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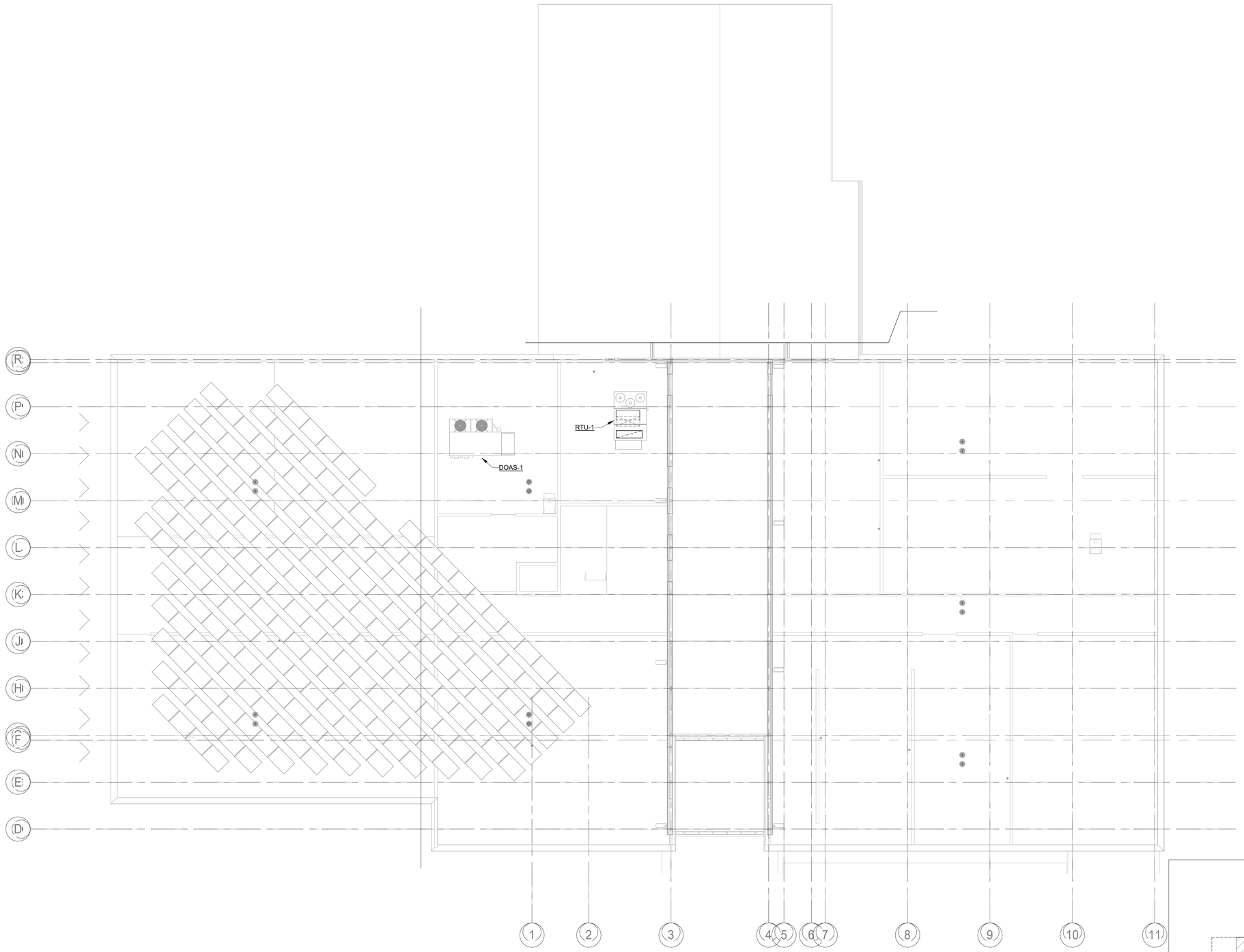
FIRST FLOOR PLAN - UNIT C - MECHANICAL PIPING

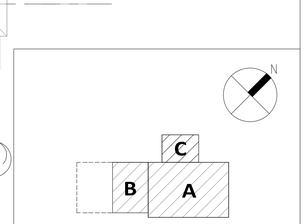
PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT
3089

M2.2



1 ROOF PLAN - MECHANICAL
SCALE: 3/32" = 1'-0"



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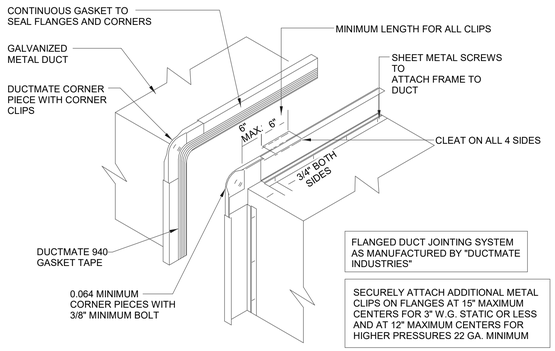
ROOF PLAN - MECHANICAL

PLOT SCALE: 3/32" = 1'-0"
FILENAME:
DATE: December 18, 2019

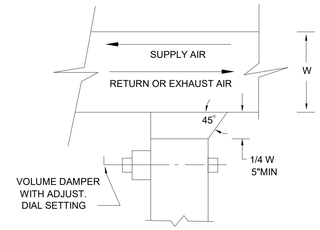
PROJECT
3089

M3.0



FLANGED DUCT DETAIL

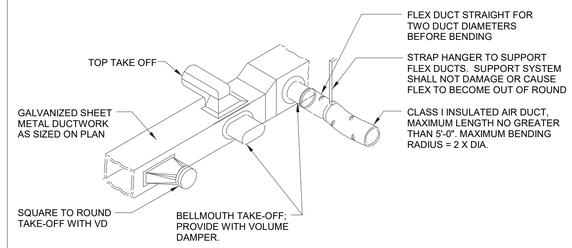
NO SCALE



NOTE: PROVIDE VOLUME DAMPER AT EACH LOW PRESSURE SUPPLY, EXHAUST AND RETURN BRANCH DUCT.

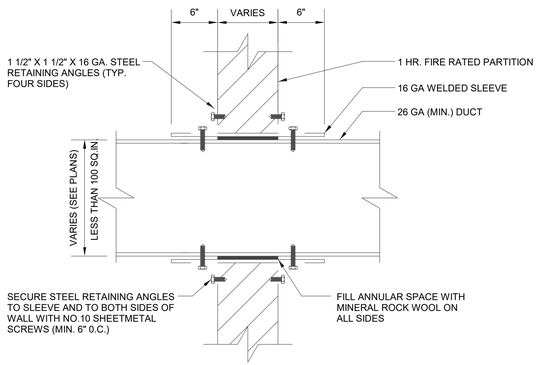
DUCT BRANCH TAKEOFF FOR LOW PRESSURE DUCTWORK

NO SCALE



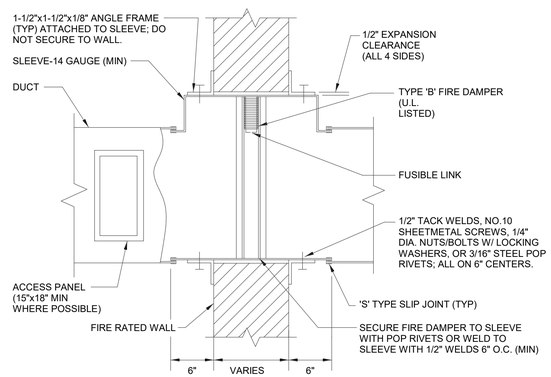
BRANCH DUCT AND TAKE-OFF DETAIL

NO SCALE



DUCT PENETRATION DETAIL

NO SCALE



VERTICAL FIRE DAMPER DETAIL

NO SCALE

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MECHANICAL DETAILS

PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT
3089

M4.0

DOAS UNIT SCHEDULE

TAG	BASIS OF DESIGN		SUPPLY FAN			RETURN/EXHAUST FAN			COOLING COIL DATA				HEATING COIL DATA				TOTAL ENTHALPY WHEEL				ELECTRICAL			OPER. WEIGHT LBS.	REMARKS
	MANUFACTURER	MODEL NO.	CFM	ESP	HP	CFM	ESP	HP	TOTAL MBH	SENS MBH	EAT (°F DB / WB)	LAT (°F DB / WB)	INPUT MBH	OUTPUT MBH	EAT (°F)	LAT (°F)	SA SUMMER EAT-LAT	EA SUMMER EAT-LAT	SA WINTER EAT-LAT	EA WINTER EAT-LAT	V/PH/HZ	MCA	MOCP		
DOAS-1	CARRIER	62XM20	7200	1.4	10	7200	1.3	7.5	278.2	199.8	82.8 / 68.5	57.0 / 56.1	250	200	41.3	67.7	94|75 - 82.8|68.5	75|62 - 85.8|69.5	8|6 - 41.3|32.2	70|50 - 32.2	480/3/60	65.3	80	4670	1,2,3,4,5

REMARKS:
1. PROVIDE SUPPLY AND RETURN SMOKE DETECTORS WITH UNIT.
2. PROVIDE WITH INTEGRAL VARIABLE FREQUENCY DRIVES FOR SUPPLY FAN AND EXHAUST FAN.
3. PROVIDE WITH 14" HIGH MANUFACTURER'S ROOF CURB.
4. PROVIDE WITH MODULATING GAS HEAT.
5. PROVIDE WITH HOT GAS REHEAT FOR HUMIDITY CONTROL.

DESIGN CONDITIONS:
SUMMER OUTDOORS: 95°F DB, 75°F WB
SUMMER INDOORS: 75°F DB, 60% RH
WINTER OUTDOORS: 0°F DB
WINTER INDOORS: 70°F DB

ROOFTOP UNIT SCHEDULE

TAG	BASIS OF DESIGN		SUPPLY FAN			MINIMUM OUTSIDE AIRFLOW (CFM)	COOLING COIL DATA				HEATING COIL DATA				ELECTRICAL			OPER. WEIGHT LBS.	REMARKS
	MANUFACTURER	MODEL NO.	CFM	ESP	HP		TOTAL MBH	SENS MBH	EAT (°F DB / WB)	LAT (°F DB / WB)	INPUT MBH	OUTPUT MBH	EAT (°F)	LAT (°F)	V/PH/HZ	MCA	MOCP		
RTU-1	CARRIER	48LCEA14	5000	1.0	3	1750	147	113	80 / 67	57 / 56	220	178	46	79	480/3/60	42.30000	50	2000	1,2,3,4,5,6,7

REMARKS:
1. PROVIDE SUPPLY AND RETURN SMOKE DETECTORS WITH UNIT.
2. PROVIDE WITH INTEGRAL VARIABLE FREQUENCY DRIVE FOR SUPPLY FAN.
3. PROVIDE WITH 14" HIGH MANUFACTURER'S ROOF CURB.
4. PROVIDE WITH MODULATING GAS HEAT.
5. PROVIDE WITH DUAL ENTHALPY CONTROLLED ECONOMIZER AND POWER EXHAUST FAN.
6. PROVIDE CONTROLS FOR DEMAND CONTROL VENTILATION.
7. PROVIDE WITH HOT GAS REHEAT FOR HUMIDITY CONTROL.

DESIGN CONDITIONS:
SUMMER OUTDOORS: 95°F DB, 75°F WB
SUMMER INDOORS: 75°F DB, 60% RH
WINTER OUTDOORS: 0°F DB
WINTER INDOORS: 70°F DB

VRF HEAT PUMP - INDOOR UNIT SCHEDULE

TAG NO.	BASIS OF DESIGN		NOMINAL TONS	STYLE	COOLING CAPACITY (BTU/H)	HEATING CAPACITY (BTU/H)	AIRFLOW (CFM)	STATIC PRESSURE (IN. WG.)	ELECTRICAL			REMARKS
	MANUFACTURER	MODEL							V/PH	MCA	MOCP	
IDU-1	TOSHIBA CARRIER	MMU-AP007	0.50	CEILING CASSETTE	7,500	8,500	320	--	208/1	0.5	15	--
IDU-2	TOSHIBA CARRIER	MMU-AP009	0.75	CEILING CASSETTE	9,500	10,500	330	--	208/1	0.5	15	--
IDU-3	TOSHIBA CARRIER	MMU-AP012	1.00	CEILING CASSETTE	12,000	13,500	550	--	208/1	0.8	15	--
IDU-4	TOSHIBA CARRIER	MMU-AP015	1.25	CEILING CASSETTE	15,400	17,000	550	--	208/1	0.8	15	--
IDU-5	TOSHIBA CARRIER	MMU-AP018	1.50	CEILING CASSETTE	18,000	20,000	550	--	208/1	0.8	15	--
IDU-6	TOSHIBA CARRIER	MMU-AP024	2.00	CEILING CASSETTE	24,000	27,000	550	--	208/1	1.0	15	--
IDU-7	TOSHIBA CARRIER	MMD-AP018	1.50	DUCTED CONCEALED	18,000	20,000	556	0.25	208/1	1.2	15	--
IDU-8	TOSHIBA CARRIER	MMD-AP036	3.00	DUCTED CONCEALED	36,000	40,000	1000	0.25	208/1	1.8	15	--
IDU-9	TOSHIBA CARRIER	MMK-AP007	0.50	HIGH WALL	7,500	8,500	340	--	208/1	0.3	15	--
IDU-10	TOSHIBA CARRIER	MMK-AP024	2.00	HIGH WALL	24,000	27,000	600	--	208/1	0.5	15	--

REMARKS:
1.

VRF HEAT PUMP - OUTDOOR UNIT SCHEDULE

TAG NO.	BASIS OF DESIGN		NOMINAL COOLING CAPACITY	NOMINAL HEATING CAPACITY	ELECTRICAL			EFFICIENCIES		REMARKS
	MANUFACTURER	MODEL			V/P/Hz	MCA	MOCP	EER/IEER	COP	
ODU-1	TOSHIBA CARRIER	MMY-AP216	216,000	243,000	460/3	22+17	25+20	11.80/23.50	3.57	--
ODU-2	TOSHIBA CARRIER	MMY-AP216	216,000	243,000	460/3	22+17	25+20	11.80/23.50	3.57	--

REMARKS:
1.

VRF HEAT PUMP - HEAT RECOVERY UNIT SCHEDULE

TAG NO.	BASIS OF DESIGN		MAXIMUM CONNECTED CAPACITY	AVAILABLE PORTS	ELECTRICAL			REMARKS
	MANUFACTURER	MODEL			V/P/Hz	MCA	MOCP	
HRU-1	TOSHIBA CARRIER	RBM-Y0613F4PUL	61,000	4	208/1	0.7	15	--
HRU-2	TOSHIBA CARRIER	RBM-Y0613F6PUL	61,000	6	208/1	0.7	15	--

REMARKS:
1.

GRILLE/DIFFUSER SCHEDULE

TAG	MANUFACTURER	MODEL NO.	MODULE SIZE	NECK SIZE	PATTERN	CFM RANGE	REMARKS
S1	TITUS	TDC	24"x24"	6"ϕ	4-WAY	0-100	1,2,3
	TITUS	TDC	24"x24"	8"ϕ	4-WAY	101-175	1,2,3
	TITUS	TDC	24"x24"	10"ϕ	4-WAY	176-275	1,2,3
	TITUS	TDC	24"x24"	12"ϕ	4-WAY	276-400	1,2,3
	TITUS	TDC	24"x24"	14"ϕ	4-WAY	401-550	1,2,3
S2	TITUS	300RL	-	24"x10"	DD	625	2
S3	TITUS	ML-39	CONTINUOUS	(1) 1" SLOT	-	100	2,4
S4	TITUS	300RL	-	18"x12"	DD	500-600	2
S5	TITUS	300RL	-	6"x6"	DD	0-100	2
R1 / E1	TITUS	350RL	24"x24"	6"x6"	SD	0-100	1,2,3
	TITUS	350RL	24"x24"	8"x8"	SD	101-175	1,2,3
	TITUS	350RL	24"x24"	10"x10"	SD	176-275	1,2,3
	TITUS	350RL	24"x24"	12"x12"	SD	276-400	1,2,3
	TITUS	350RL	24"x24"	14"x14"	SD	401-550	1,2,3
	TITUS	350RL	24"x24"	16"x16"	SD	551-700	1,2,3
R2	TITUS	350RL	-	30"x60"	SD	5000	2
R3	TITUS	ML-39	CONTINUOUS	(1) 1" SLOT	-	100	2,4
R4	TITUS	350RL	-	24"x18"	SD	1000	2
R5	TITUS	350RL	-	18"x12"	SD	500-600	2

REMARKS:
1. PROVIDE WITH BORDER TYPE 3, 24"x24" LAY-IN MODULE.
2. PROVIDE WITH OPPOSED BLADE DAMPER.
3. USE SIZES INDICATED IN SCHEDULE, UNLESS INDICATED OTHERWISE ON PLANS.
4. PROVIDE CONTINUOUS SLOT FULL WIDTH OF BRIDGE

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WASHINGTON COUNTY PROJECT NO. 28-266
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HAGERSTOWN, MD 21740

MECHANICAL SCHEDULES

PLOT SCALE:

FILENAME:

DATE: December 18, 2019

PROJECT 3089

M5.0

PLUMBING GENERAL NOTES:

1. CONTRACTOR SHALL PROVIDE A COMPLETE AND WORKING SYSTEM WITH ALL NECESSARY PERMITS AND APPROVALS FROM AUTHORITIES HAVING JURISDICTION.
2. INSTALL ALL EQUIPMENT AND MATERIALS IN STRICT ACCORDANCE WITH CURRENT ADOPTED I.P.C. OR CURRENT ADOPTED N.S.P.C. ALL PERTINENT CODES, LAWS, ORDINANCES, REGULATIONS, AND RESPECTIVE MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. COORDINATE PLUMBING WORK WITH THE WORK OF ALL OTHER CONTRACTORS AND OWNER.
4. PLUMBING DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES PERMIT AND ACTUAL LINE LOCATIONS SHALL BE DETERMINED BY THE P.C. IN THE FIELD. HOWEVER, THE PLUMBING CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER INSTALLATION OF ALL MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE INSTALLATION WITHIN THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.
5. THE PLUMBING CONTRACTOR SHALL ARRANGE THE PROGRESS OF HIS WORK SO AS TO CONFORM TO THE PROGRESS OF THE TRADES AND SHALL COMPLETE THE ENTIRE INSTALLATION AS SOON AS THE CONDITION OF THE PROJECT WILL PERMIT.
6. ALL ITEMS OF LABOR, MATERIAL, AND EQUIPMENT NOT SPECIFICALLY DESCRIBED HEREIN NOR DETAILED ON THE DRAWINGS BUT INCIDENTAL TO OR NECESSARY FOR THE COMPLETION OF THE WORK, SHALL BE CONSIDERED AS INCLUDED WITHOUT EXTRA COST.
7. PROVIDE NECESSARY SUPPORTS, HANGERS AND HARDWARE TO PROPERLY SECURE PIPING AND EQUIPMENT TO BUILDING STRUCTURE.
8. FURNISH AND INSTALL ACCESS PANELS WHERE REQUIRED FOR ACCESS TO ALL CONCEALED VALVES, TRAPS OR EQUIPMENT WHERE NO OTHER MEANS IS PROVIDED. COORDINATE ACCESS LOCATIONS WITH ARCHITECT AND GC.
9. DO NOT INSTALL PIPING OR ANY OTHER PLUMBING EQUIPMENT OVER ELECTRICAL PANELS. MAINTAIN A MINIMUM OF 36" CLEAR IN FRONT OF ELECTRICAL PANELS.
10. CHECK AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE SITE. FAILURE TO VISIT AND INSPECT THE EXISTING CONDITIONS SHALL NOT BE VALID REASON FOR AUTHORIZATION OF A CHANGE ORDER.
11. CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE IN WRITING ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER.
12. PROVIDE SHOCK ABSORBING DEVICES WHICH WILL PROTECT WATER SUPPLY PIPING FROM WATER HAMMER. REFER TO PLUMBING EQUIPMENT SCHEDULE FOR TYPES. LOCATE AT THE ENDS OF ALL BRANCH PIPING RUNS.
13. THE PLUMBING CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER AS-BUILT DRAWINGS AND OPERATION AND MAINTENANCE MANUALS INCLUDING ALL NAME PLATE DATA, WIRING DIAGRAMS, MAINTENANCE INSTRUCTIONS, AND PARTS LIST UPON PROJECT COMPLETION.
14. EXTERIOR BELOW GROUND PIPING SHALL BE BURIED BELOW THE LOCAL FROST LINE.
15. INTERIOR ABOVE GROUND DRAINAGE AND VENT PIPING SHALL BE CONCEALED IN WALLS AND ABOVE SUSPENDED CEILINGS WHERE POSSIBLE. VERTICAL STACKS SHALL BE PROVIDED WITH ACCESSIBLE CLEAN OUTS AT THEIR BASE.
16. THE CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK AREA AT ALL TIMES. ALL SAFETY PROCEDURES AND ENFORCEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL CONFORM TO ALL OSHA STANDARDS.
17. BACK FLOW PREVENTERS AND/OR VACUUM BREAKERS SHALL BE INSTALLED WHERE REQUIRED TO PREVENT CONTAMINATION OF POTABLE WATER SYSTEM.
18. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL FEES, PERMITS AND INSPECTIONS. ALL CHARGES BY UTILITY COMPANIES SHALL BE PAID BY THIS CONTRACTOR.
19. PROVIDE MANUAL SHUT-OFF VALVES IN COLD WATER, HOT WATER AND HOT WATER RETURN AT ALL TAKEOFFS AND BRANCHES. VALVES TO BE LOCATED AS CLOSE AS POSSIBLE TO MAINS. DO NOT LOCATE VALVES ABOVE INACCESSIBLE CEILINGS.
20. PLUMBING CONTRACTOR TO COORDINATE FINAL ELEVATION AND LOCATION OF ALL FLOOR DRAINS WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN.

ABBREVIATIONS

AC	AQUATICS CONTRACTOR	FFD1	FUNNELED FLOOR DRAIN	KD1	KITCHEN DRAIN
AD1	AREA DRAIN	FF ELEV	FINISHED FLOOR ELEVATION	KS1	KITCHEN SINK
AFF	ABOVE FINISHED FLOOR	FSC	FOOD SERVICE CONTRACTOR	LAV1	LAVATORY
AFG	ABOVE FINISHED GRADE	FS1	FLOOR SINK	LT1	LAUNDRY TUB
AMP	AMPERE	FLA	FULL LOAD AMPS	MAX	MAXIMUM
AP	ACCESS PANEL	FLR	FLOOR	MIN	MINIMUM
APPROX	APPROXIMATE	FPM	FOOT/FEET PER MINUTE	MS1	MOP SINK
AVG	AVERAGE	FPS	FOOT/FEET PER SECOND	MTD	MOUNTED
AW	ACID WASTE	FT	FOOT/FEET	NA,N/A	NOT APPLICABLE
BFP1	REDUCED PRESSURE BACKFLOW PREVENTER	GAL	GALLONS	NC	NORMALLY CLOSED
		GB1	GARBAGE DISPOSAL	NIC	NOT IN CONTRACT
BOT	BOTTOM	GC	GENERAL CONTRACTOR	NO	NORMALLY OPEN
BP	BACK PRESSURE	GI1	GREASE INTERCEPTOR	NTS	NOT TO SCALE
BSMT	BASEMENT	GND	GROUND	OI1	OIL INTERCEPTOR
BWV1	BACK WATER VALVE	GPH	GALLONS PER HOUR	PC	PLUMBING CONTRACTOR
CI	CAST IRON	GPM	GALLONS PER MINUTE	PT1	PLASTER TRAP
CL	CENTER LINE	GPR1	GAS PRESSURE REGULATOR	PWH1	PROPANE WATER HEATER
CO	CLEANOUT	GPS	GALLONS PER SECOND	RD1	ROOF DRAIN
COL	COLUMN	GS1	GLASS FILLER	SE1	SEWAGE EJECTOR
CONC	CONCRETE OR CONCENTRIC	GSV	GAS SOLENOID VALVE	SH1	SHOWER
DF1	DRINKING FOUNTAIN	GT1	GREASE TRAP	SP1	SUMP PUMP
DIA, ∅	DIAMETER	GWH1	GAS WATER HEATER	SS1	SERVICE SINK
DIP	DUCTILE IRON PIPE	HB1	HOSE BIBB	SW1	SAFE WASTE
DN	DOWN	HC	HVAC CONTRACTOR	TEMP	TEMPERATURE
DN1	DOWN SPOUT NOZZLE	HEWC1	HANDICAP ELECTRIC WATER COOLER	TMV1	THERMOSTATIC MIXING VALVE
DW1	DISHWASHER			TP1	TRAP PRIMER
EC	ELECTRICAL CONTRACTOR	HGT	HEIGHT	TUB1	TUB/SHOWER
ECO1	EXTERIOR CLEANOUT	HP	HORSE POWER	UR1	URINAL
ED1	EMERGENCY OVERFLOW DRAIN	HLAV1	HANDICAP LAVATORY	US1	UTILITY SINK
EL	ELEVATION	HS1	HAND SINK	VTR	VENT THROUGH ROOF
ESP1	ELEVATOR SUMP PUMP	HSH1	HANDICAP SHOWER	WB1	WASHER BOX
ET1	EXPANSION TANK	HUR1	HANDICAP URINAL	WC1	WATER CLOSET
EWC1	ELECTRIC WATER COOLER	HWC1	HANDICAP WATER CLOSET	WCO1	WALL CLEAN OUT
EWH1	ELECTRIC WATER HEATER	HWRP1	HOT WATER RETURN PUMP	WHA1	WATER HAMMER ARRESTER
(E),EXIST	EXISTING	IB1	ICE MAKER BOX	WH1	WALL HYDRANT
FCO	FLOOR CLEAN OUT	I.E.	INVERT ELEVATION	WPV1	WHIRLPOOL VALVE
FD1	FLOOR DRAIN	INV	INVERT OF PIPE	WSV	WATER SOLENOID VALVE

MISCELLANEOUS SYMBOLS

- POINT OF CONNECTION-NEW TO EXISTING
- POINT OF DEMOLITION CONCLUSION
- X — DRAWING NOTE SYMBOL
- X — REVISION SYMBOL
- DIRECTION OF VIEW
- X / X — SECTION NUMBER / DRAWING ON WHICH SECTION OR DETAIL IS SHOWN
- X / X — DETAIL OR SECTION NUMBER / DRAWING FROM WHICH SECTION OR DETAIL IS TAKEN

PLUMBING SYMBOLS

	DOMESTIC COLD WATER
	110°F HOT WATER
	SANITARY
	RAIN/STORM WATER
	VENT
	GAS
SPRK	SPRINKLER
(E)	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	GAS VALVE
	CHECK VALVE
	MIXING VALVE
	OS&Y VALVE
	WATER HAMMER ARRESTER
	BACKFLOW VALVE
	SOLENOID VALVE
	BALANCING VALVE
	PIPE CAP
	PIPE RISE
	PIPE DROP
	UNION
	ELBOW
	TEE
AP	ACCESS PANEL
	ELECTRICAL PANEL BY EC
A1	AIR STATION
	PRESSURE & TEMPERATURE RELIEF VALVE
	THERMOMETER
	AQUASTAT

NOTE:
NOT ALL ABBREVIATIONS AND SYMBOLS INDICATED MAY APPEAR ON THESE CONTRACT DRAWINGS. THIS IS FOR REFERENCE ONLY.

PLUMBING DRAWING LIST

P0.0	PLUMBING INFORMATION SHEET
P1.0	FIRST FLOOR PLAN - UNIT A - DOMESTIC WATER
P1.1	FIRST FLOOR PLAN - UNIT B - DOMESTIC WATER
P2.0	FIRST FLOOR PLAN - UNIT A - SANITARY
P2.1	FIRST FLOOR PLAN - UNIT B - SANITARY
P4.0	PLUMBING DETAILS
P4.1	PLUMBING ISOMETRICS - SANITARY
P5.0	PLUMBING SCHEDULES

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est. 1776

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PLUMBING INFORMATION SHEET

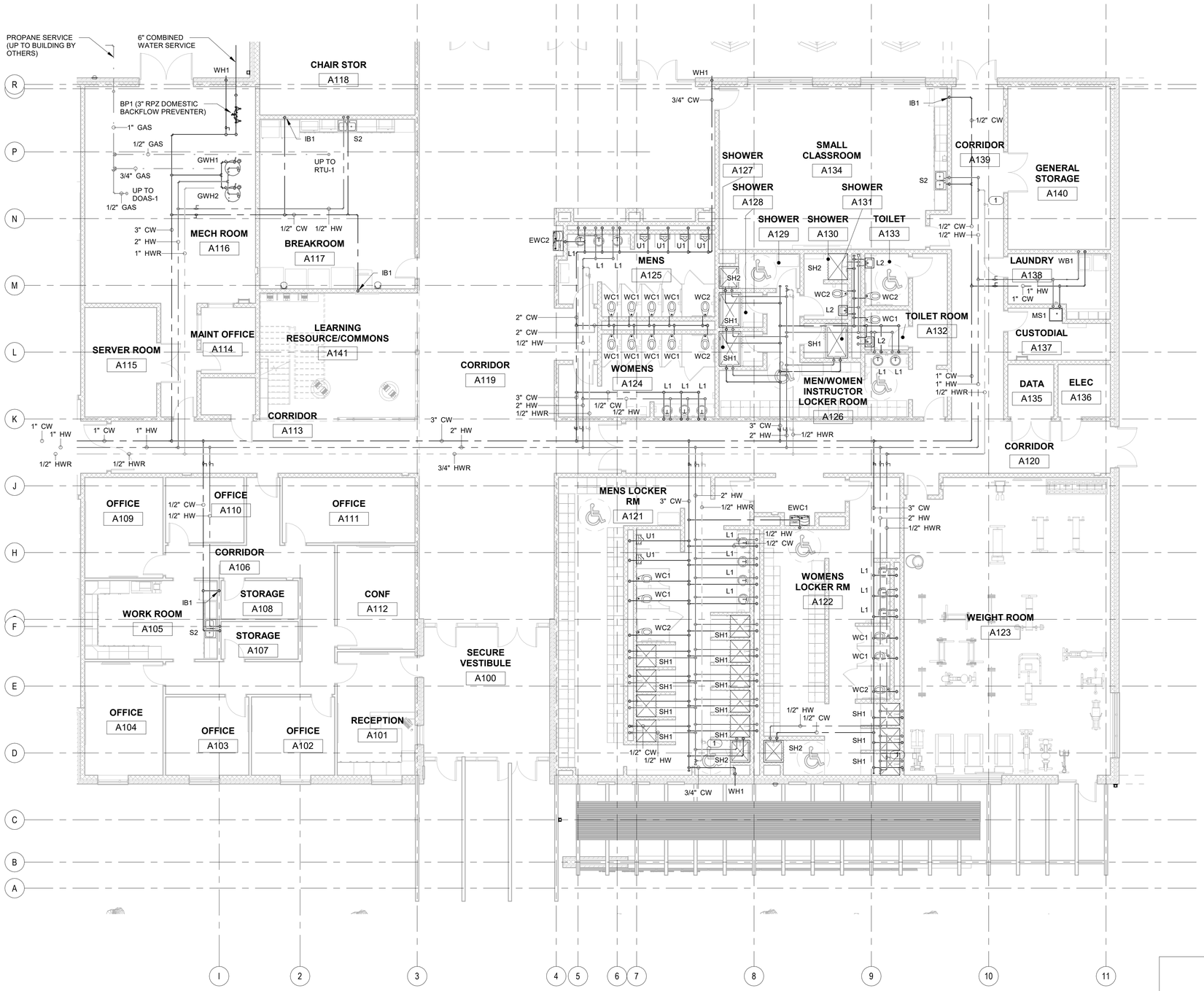
PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT 3089

P0.0

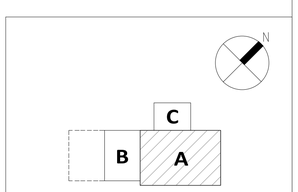


FIRST FLOOR PLAN - UNIT A - DOMESTIC WATER

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

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. PROVIDE CIRCUITSOLVER CSUA BALANCING ASSEMBLY WITH THERMOSTATIC VALVE AND SHUTOFFS



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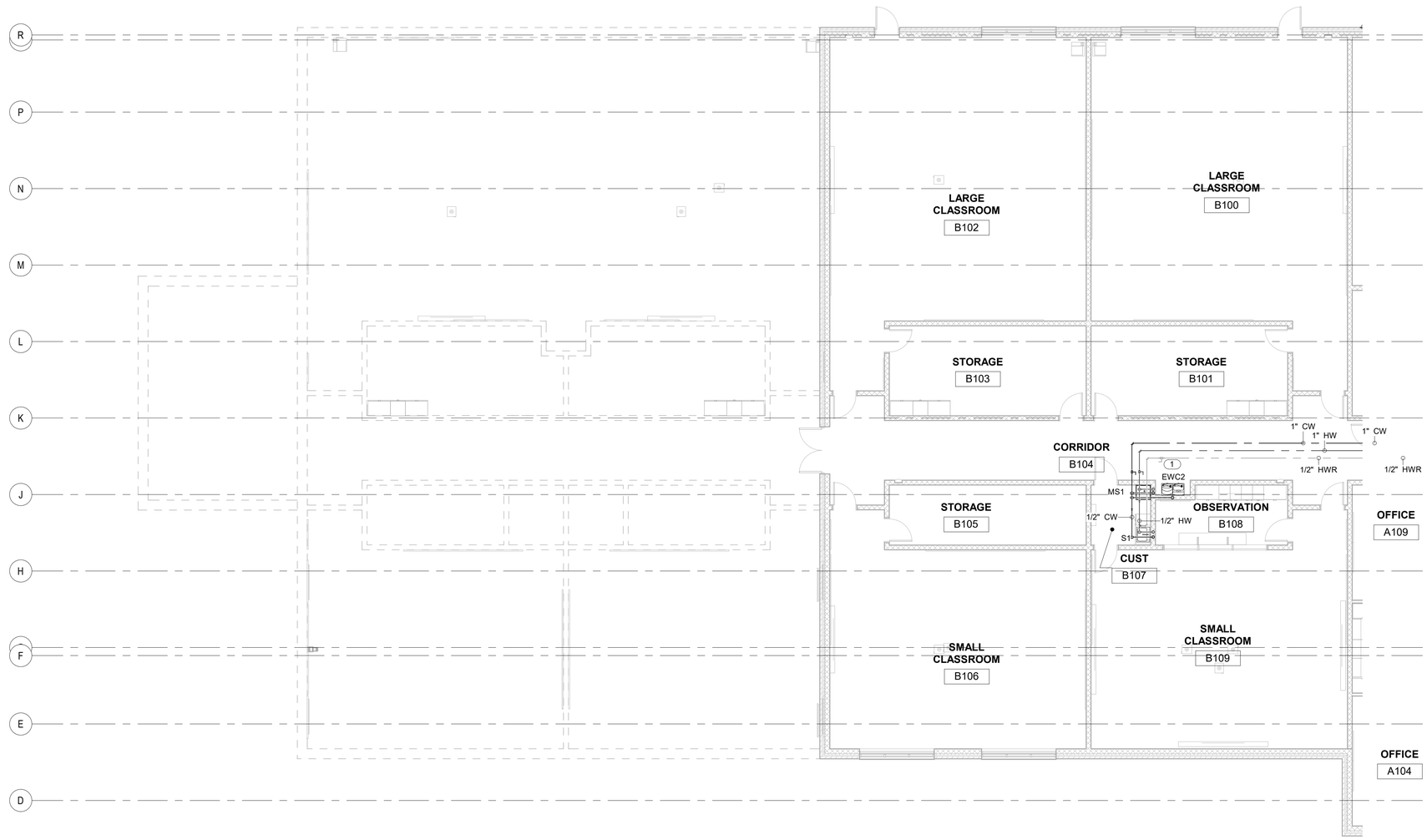
FIRST FLOOR PLAN - UNIT A - DOMESTIC WATER

PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT 3089

P1.0

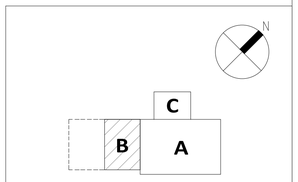


FIRST FLOOR PLAN - UNIT B - DOMESTIC WATER

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

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. PROVIDE CIRCUITSOLVER CSUA BALANCING ASSEMBLY WITH THERMOSTATIC VALVE AND SHUTOFFS



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FIRST FLOOR PLAN - UNIT B - DOMESTIC WATER

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

FILENAME:

DATE: December 18, 2019

PROJECT
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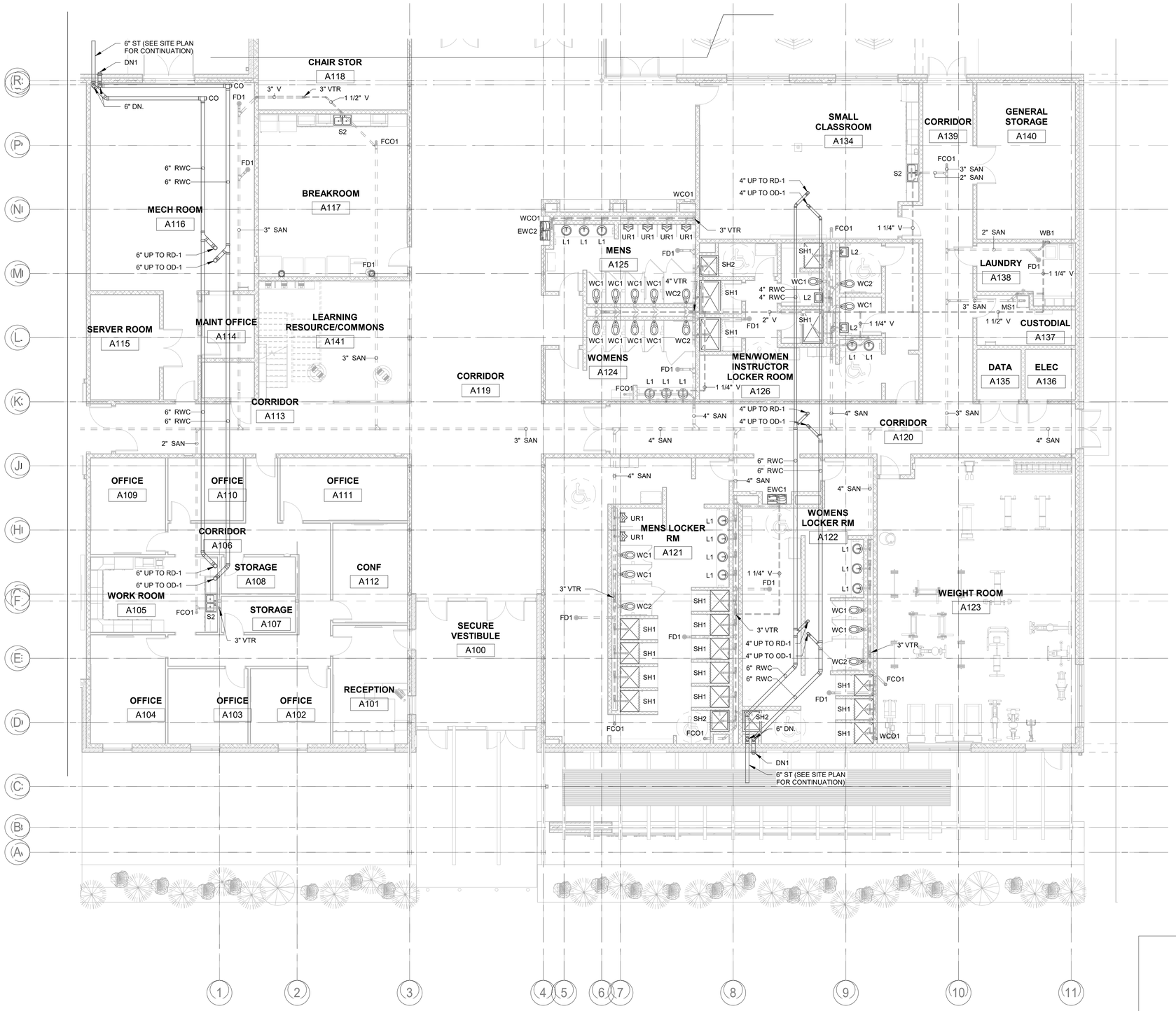
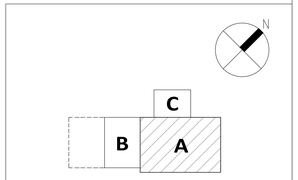
P1.1



FIRST FLOOR PLAN - UNIT A - SANITARY

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



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FIRST FLOOR PLAN - UNIT A - SANITARY

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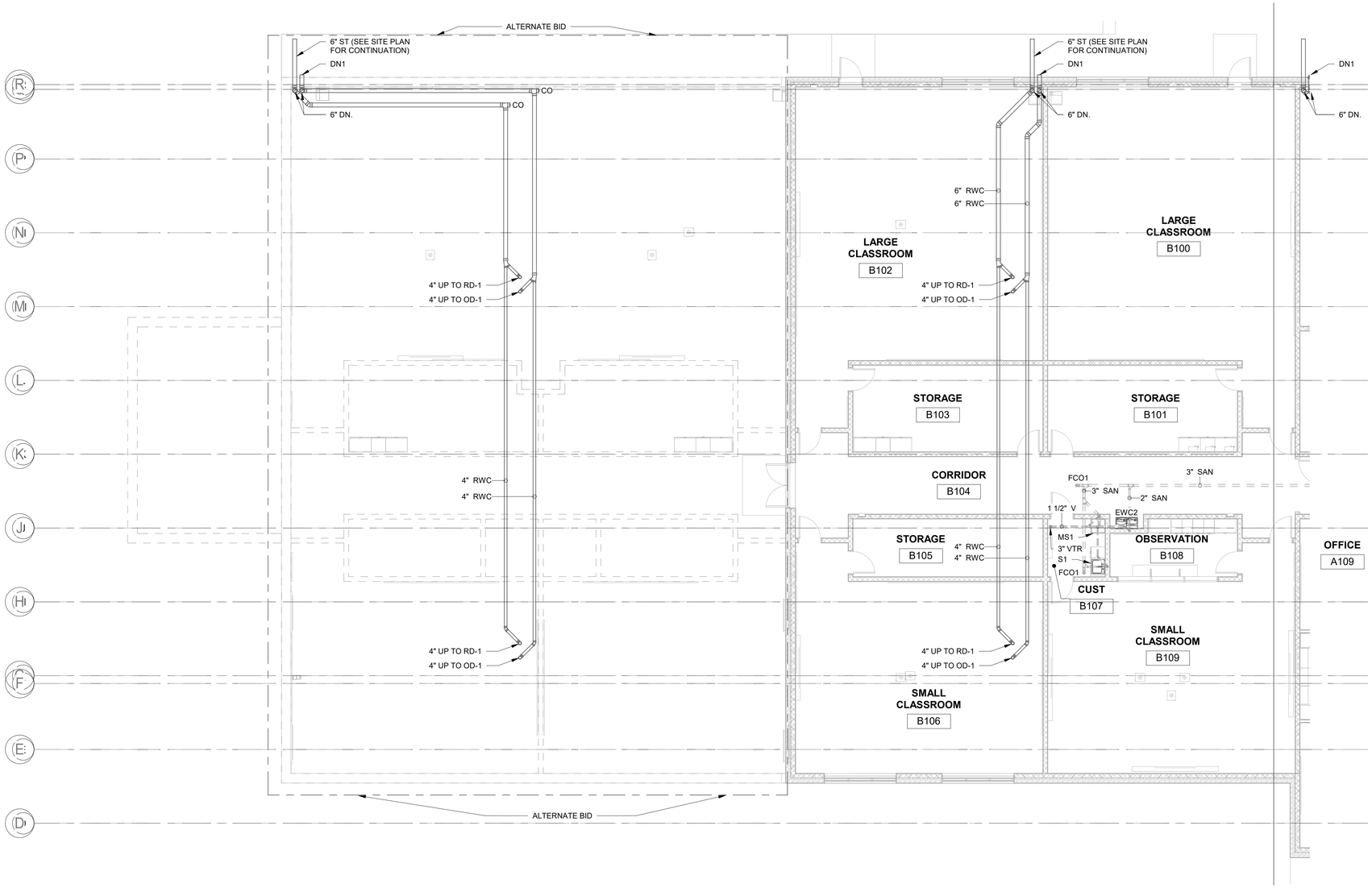
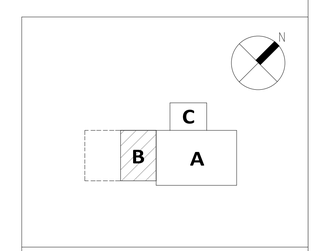
P2.0



FIRST FLOOR PLAN - UNIT B - SANITARY

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



KEY PLAN

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KATHRYN PARFITT
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WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
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CR

FIRST FLOOR PLAN - UNIT B - SANITARY

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

FILENAME:

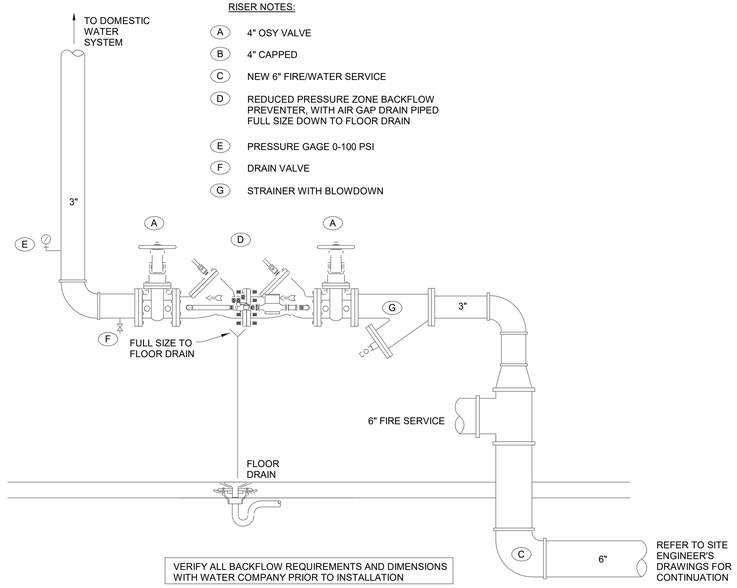
DATE: December 18, 2019

PROJECT
3089

P2.1

RISER NOTES:

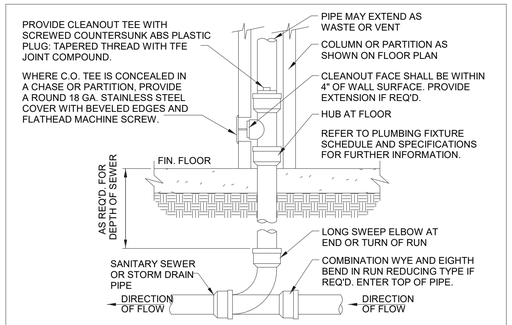
- (A) 4" OSY VALVE
- (B) 4" CAPPED
- (C) NEW 6" FIRE/WATER SERVICE
- (D) REDUCED PRESSURE ZONE BACKFLOW PREVENTER, WITH AIR GAP DRAIN PIPED FULL SIZE DOWN TO FLOOR DRAIN
- (E) PRESSURE GAGE 0-100 PSI
- (F) DRAIN VALVE
- (G) STRAINER WITH BLOWDOWN



VERIFY ALL BACKFLOW REQUIREMENTS AND DIMENSIONS WITH WATER COMPANY PRIOR TO INSTALLATION

DOMESTIC WATER SERVICE DIAGRAM

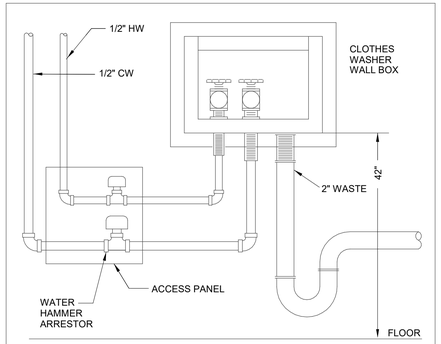
NO SCALE



PROVIDE WCO AT BASE OF ALL RAIN-LEADER DOWNSPOUTS. PROVIDE WCO WHERE SHOWN ON PLAN, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT. LOCATE ABOVE FIXTURE FLOOD RIM WITHIN 4' OF FLOOR.

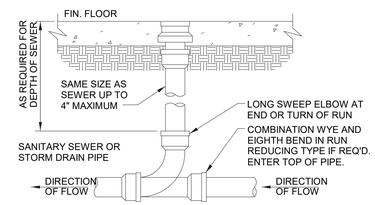
WALL CLEANOUT DETAIL-WCO

NO SCALE



WASHER BOX DETAIL

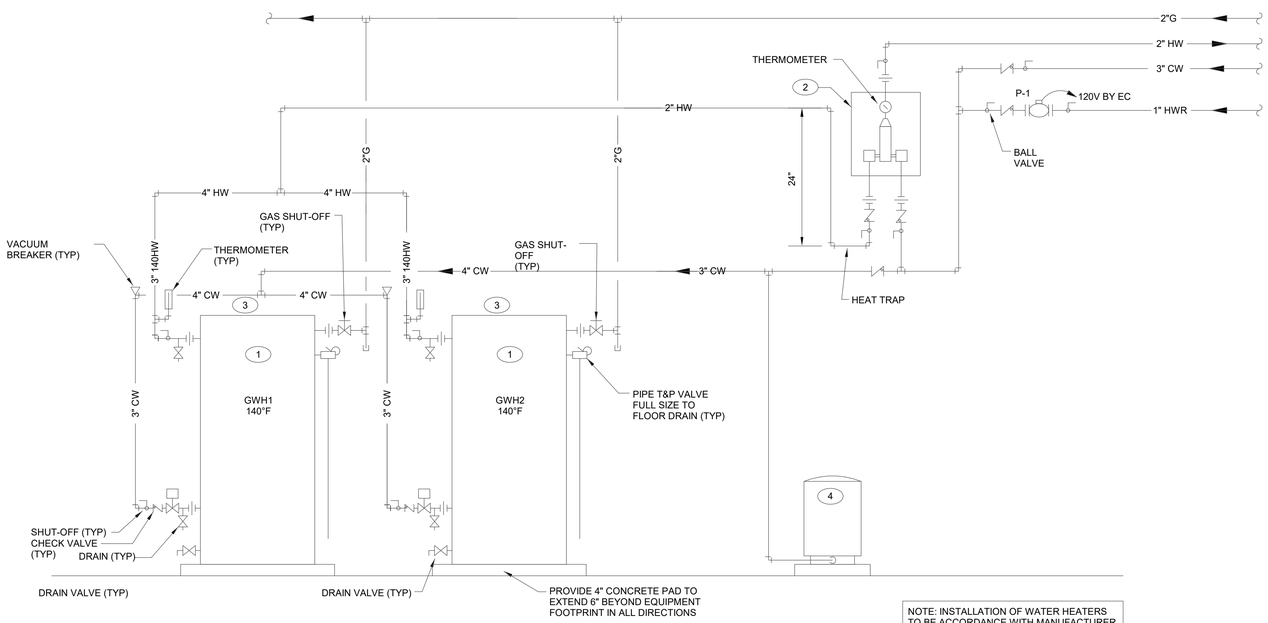
NO SCALE



ROUND SECURED GASKETED NICKEL BRONZE ADJUSTABLE TOP WITH "CO" CAST IN COVER. PROVIDE WITH VARIATIONS SUITABLE FOR FLOOR COVERING (CARPET, TILE, OR UNFINISHED FLOORS). PROVIDE GASKETED PLUG IN CAST IRON BODY. LOCATE AT BUILDING EXIT, AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT 50' INTERVALS ON STRAIGHT RUNS, AND/OR WHERE SHOWN ON PLANS. LOCATE CLEANOUTS WHERE THERE IS 18" CLEAR ON ALL SIDES.

FLOOR CLEANOUT-FCO

NO SCALE



NOTE: INSTALLATION OF WATER HEATERS TO BE ACCORDANCE WITH MANUFACTURER INSTALLATION REQUIREMENTS

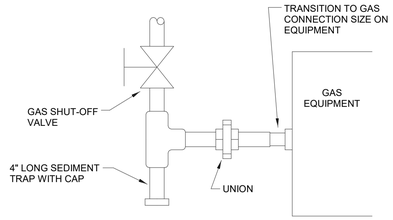
NOTE: MAINTAIN MINIMUM CLEARANCES IN ACCORDANCE WITH ALL APPLICABLE CODES AND INSTALLATION REQUIREMENTS

DETAIL NOTES: (#)

1. GAS FIRED WATER HEATER PER SCHEDULE.
2. POWERS HYDRO GUARD XP MODEL MM435 THERMOSTATIC MIXING VALVE. SET OUTLET TO 110°F
3. PROVIDE 3" PVC VENT AND COMBUSTION AIR PIPING. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE OFFSETS AS REQUIRED TO MAINTAIN 10' CLEARANCE FROM HVAC UNIT INTAKES.
4. AMTROL THERM-X-TROL MODEL ST-60V-C EXPANSION TANK, 25.0 GALLON TOTAL VOLUME, 11 GALLON MAXIMUM ACCEPTANCE.

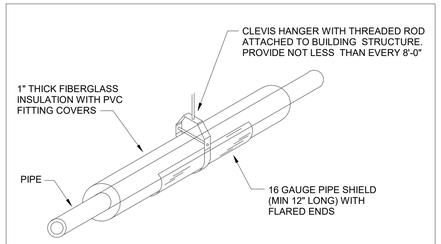
GAS FIRED WATER HEATER DETAIL

NO SCALE



EQUIPMENT GAS CONNECTION DETAIL

NO SCALE



TYPICAL PIPING HANGER DETAIL

NO SCALE

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PLUMBING DETAILS

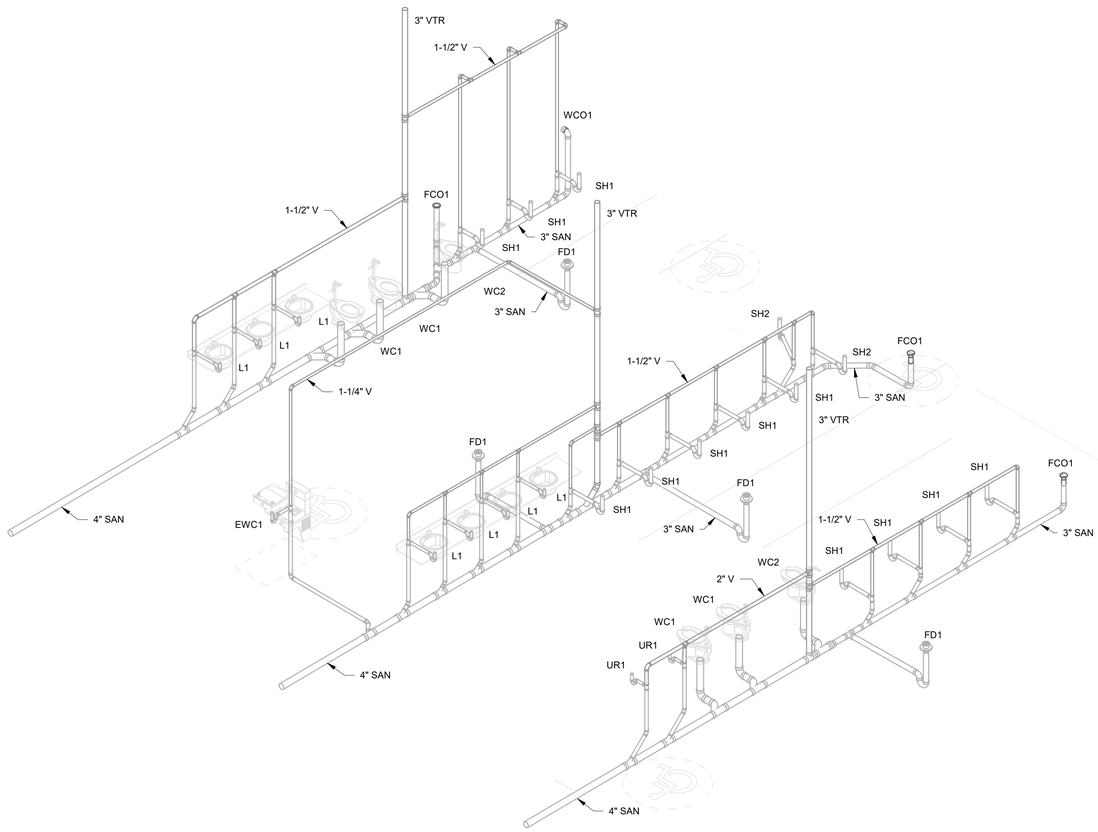
PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

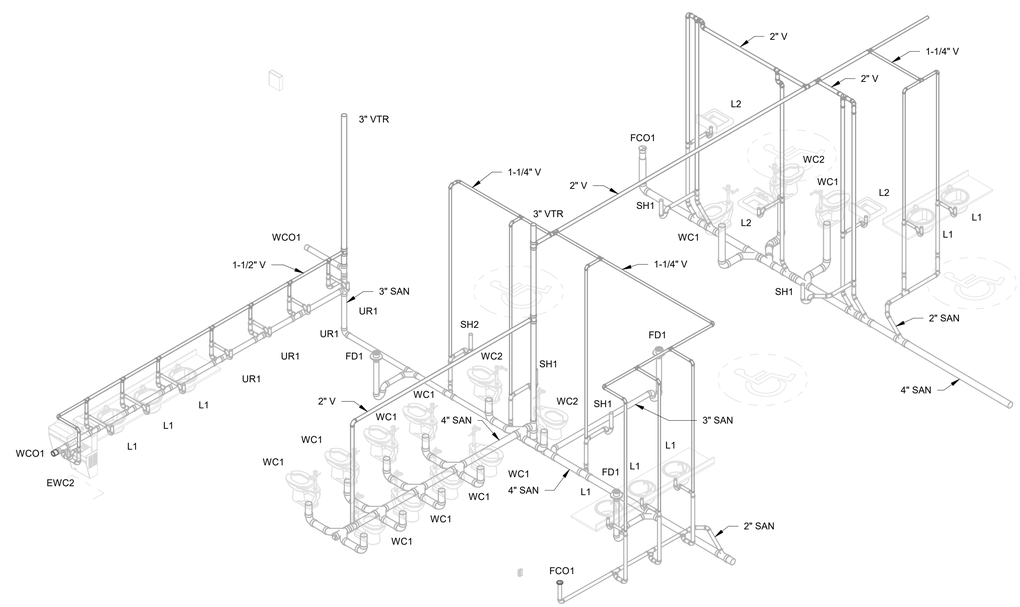
PROJECT 3089

P4.0



SANITARY PIPING ISOMETRIC
MENS/WOMENS LOCKER ROOM A121/A122

NO SCALE



SANITARY PIPING ISOMETRIC
MENS/WOMENS ROOM A124/A125/A126

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PLUMBING ISOMETRICS - SANITARY

PLOT SCALE:

FILENAME:

DATE: December 18, 2019

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3089

P4.1

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE TYPE	MANUFACTURER	MODEL NO.	FAUCET/ VALVE	ANSI/ASME APPROVALS	MOUNTING/ SUPPORT	* MINIMUM PIPE SIZES					DFU **	WSFU **	ELECTRIC	NOTES
							HW	CW	SAN	TRAP	VENT				
BP1	BACKFLOW ASSEMBLY	WATTS	LF909OSY	-	ASSE 1013	SUSPEND	-	3"	-	-	-	-	-	-	PROVIDE WITH AIR GAP PIPED TO FLOOR DRAIN
DN1	DOWNSPOUT NOZLE	ZURN	Z199	-	-	WALL	-	-	3" THRU 6"	-	-	-	-	-	-
ECO1	EXTERIOR CLEAN OUT	ZURN	Z1400	-	A112.21.1M	FINISHED GRADE	-	-	2" THRU 6"	-	-	-	-	-	INSTALL FLUSH AND LEVEL WITH CONCRETE OR FINISHED GRADE
ES1	EMERGENCY SHOWER	GUARDIAN	GBF1909	-	ANSI Z358.1	FLOOR	1-1/4"	1-1/4"	-	-	-	-	-	-	PROVIDE G3800LF THERMOSTATIC MIXING VALVE
FCO1	FLOOR CLEAN OUT	ZURN	Z1400	-	A112.21.1M	FLOOR	-	-	2" THRU 6"	-	-	-	-	-	INSTALL FLUSH AND LEVEL WITH FLOOR, SIZE TO MATCH PIPE SIZE
FD1	FLOOR DRAIN	ZURN	ZN415B	-	A112.6.3-2001	FLOOR	-	-	2"	2"	1½"	-	-	-	PROVIDE WITH TRAP SEAL DEVICE
FD2	FLOOR DRAIN	ZURN	ZN415B	-	A112.6.3-2001	FLOOR	-	-	3"	3"	2"	-	-	-	PROVIDE WITH TRAP SEAL DEVICE
HB1	HOSE BIBB	WOODFORD	24	-	ASSE STD 1011	WALL	¾"	¾"	-	-	-	-	-	-	VACUUM BREAKER TYPE WITH ACCESSIBLE SHUT-OFF VALVE
EWC1	ELECTRIC WATER COOLER	ELKAY	LZSTL8WSSK BI-LEVEL W/ BOTTLE FILL	-	NSF61 SECTION 9-1997B	WALL CARRIER	-	½"	1½"	1½"	1½"	.5	.25	120V, 5.0A	WITH FILTER; MOUNT 36" AFF TO TOP OF SPOUT
EWC2	ELECTRIC WATER COOLER	ELKAY	LZSTL8SC BI-LEVEL	-	NSF61 SECTION 9-1997B	WALL CARRIER	-	½"	1½"	1½"	1½"	.5	.25	120V, 5.0A	WITH FILTER; MOUNT 36" AFF TO TOP OF SPOUT
L1	LAVATORY	AMERICAN STANDARD	OVALYN 0495.221	ZURN Z6915-XL	A112.19.2M/ A117.1	COUNTER UNDERMOUNT	½"	½"	1½"	1½"	1½"	1	.7/2	-	0.5 GPM; PROVIDE THERMOSTATIC MIXING VALVE AND HARDWIRED POWER SUPPLY
L2	LAVATORY	AMERICAN STANDARD	COMRADE 0124.131	ZURN Z6915-XL	A112.19.2M/ A117.1	WALL CARRIER	½"	½"	1½"	1½"	1½"	1	.7/2	-	SEE NOTE 3; PROVIDE THERMOSTATIC MIXING VALVE, HARDWIRED POWER SUPPLY, AND ZURN Z1231 CONCEALED ARM CARRIER
WC1	WATER CLOSET	AMERICAN STANDARD	MADERA 2855.128	ZURN ZEMS6000PL-IS	A112.19.2M/ A112.19.6M/A117.1	FLOOR	-	1"	4"	-	2"	3/4	6/10		1.28 GPF, PROVIDE BOLT CAPS, AMERICAN STANDARD SEAT 5901.100, HARDWIRED POWER SUPPLY
WC2	WATER CLOSET	AMERICAN STANDARD	MADERA 2857.128	ZURN ZEMS6000PL-IS	A112.19.2M/ A112.19.6M/A117.1	FLOOR	-	1"	4"	-	2"	3/4	6/10		1.28 GPF, PROVIDE BOLT CAPS, AMERICAN STANDARD SEAT 5901.100, HARDWIRED POWER SUPPLY
IB1	ICEMAKER BOX	GUY GRAY	AB9700	-	-	WALL	-	½"	-	-	-	-	-	-	PROVIDE WITH 1/4 TURN VALVE AND WHITE FINISH.
WB1	WASHER BOX	GUY GRAY	T200TPABSQT	-	-	WALL	½"	½"	2"	2"	1½"	-	-	-	PROVIDE WITH 1/4 TURN VALVE AND WHITE FINISH.
S1	SINK	ELKAY	ELUHAD141455PD	ELKAY LK1000CR	A112.19.3M	COUNTER UNDERMOUNT	½"	½"	1½"	1½"	1½"	2	1.4	-	WITH LK99 DUO STRAINER AND TAILPIECE. PROVIDE THERMOSTATIC MIXING VALVE AND WATER SAVER EW1020 DECK-MOUNT DRENCH HOSE WITH MIXING VALVE. SEE NOTE 3.
S2	SINK	ELKAY	ELUHAD311855PD	ELKAY LK1000CR	A112.19.3M	COUNTER UNDERMOUNT	½"	½"	1½"	1½"	1½"	2	1.4	-	WITH LK99 DUO STRAINER AND TAILPIECE. PROVIDE THERMOSTATIC MIXING VALVE. SEE NOTE 3.
MS1	MOP SINK	FIAT	TSB3010 24"x24"x12"	FIAT 830-AA	-	FLOOR	¾"	¾"	3"	3"	2"	2	3	-	SEE NOTE 5
OD1	OVERFLOW DRAIN	ZURN	Z100-W2	-	-	ROOF	-	-	4" & 6"	-	-	-	-	-	SIZE TO MATCH PIPE SIZE. SEE NOTE 6
RD1	ROOF DRAIN	ZURN	Z100-DP-EB	-	A112.6.45-2003	ROOF	-	-	4" & 6"	-	-	-	-	-	SIZE TO MATCH PIPE SIZE, SEE NOTE 6
SH1	SHOWER	BY GC	-	ZURN 7301-SS-MT	A117.1/ Z-124-2	WALL (SET TO ACCEPT TILE)	½"	½"	-	-	-	6	12	-	PROVIDE FD-1 FLOOR DRAIN
SH2	SHOWER	BY GC	-	ZURN 7301-SS-MT-HW6	A117.1/ Z-124-2	WALL (SET TO ACCEPT TILE)	½"	½"	-	-	-	6	12	-	PROVIDE FD-1 FLOOR DRAIN
UR1	URINAL	AMERICAN STANDARD	WASHBROOK 6590.001	ZURN ZEMS6003AV-IS	A112.19.2M/ A112.19.6M/A117.1	WALL CARRIER	-	1"	2"	-	1½"	2	-	-	MOUNT RIM 24" AFF, CAULK TO WALL.; PROVIDE HARDWIRED POWER SUPPLY
WCO1	WALL CLEAN OUT	ZURN	Z1441	-	A112.36.2M	WALL	-	-	2" THRU 6"	-	-	-	-	-	-
WH1	FREEZE PROOF WALL HYDRANT	ZURN	Z1320-CL	-	A112.21.3M	WALL	-	¾"	-	-	-	-	-	-	RECESSED WITH LOCK; MOUNT 24" AFG; PROVIDE WITH INTERIOR-MOUNTED ACCESSIBLE SHUT-OFF VALVE

* MINIMUM SANITARY/VENT PIPE SIZE BELOW SLAB IS 2".
** VALUES TAKEN FROM TABLES 709.1 AND E103.3(2) FROM THE CURRENT ADOPTED IPC

NOTES:
1. ALL FIXTURES TO BE BY MANUFACTURER NOTED, OR APPROVED EQUAL, AND SUPPLIED WHITE UNLESS NOTED OR DIRECTED BY ARCHITECT.
2. ALL EXPOSED PIPING, P-TRAPS AND STOP VALVES TO BE CHROME PLATED BRASS.
3. PROVIDE WITH TUREBRO LAV SHIELD UNDERSINK PROTECTION GUARD WITH TAMPER RESISTANT SCREWS FOR ALL WALL MOUNTED LAVATORIES (BOTH HANDICAP AND NON-HANDICAP FIXTURES).
4. PROVIDE STOP VALVES AT EACH FIXTURE.
5. PROVIDE WITH FIAT E-88-AA STAINLESS STEEL BUMPER GUARDS, MSG2424 WALL GUARD CAULKED WITH 833-AA SEALANT, 832-AA HOSE AND BRACKET, AND 889-CC MOP HANGER.
6. PROVIDE WITH SUMP RECEIVER, UNDER DECK CLAMPS, CAST IRON DOME AND EXTENSION COLLARS AS NECESSARY FOR A COMPLETE INSTALLATION.

GAS WATER HEATER SCHEDULE

SYMBOL	FIXTURE TYPE	MANUFACTURER	MODEL NO.	MOUNTING/ SUPPORT	INLET/OUTLET CONNECTIONS					INPUT MBH	ELECTRIC	NOTES
					HW	CW	GAS	INTAKE	EXHAUST			
GWH1	GAS WATER HEATER	PVI	20L 100A-GCL	FLOOR	1-1/2"	1-1/2"	3/4"	3"	3"	199	120V	233 GPH RECOVERY @ 100°F TEMP RISE
GWH2	GAS WATER HEATER	PVI	20L 100A-GCL	FLOOR	1-1/2"	1-1/2"	3/4"	3"	3"	199	120V	233 GPH RECOVERY @ 100°F TEMP RISE

NOTES:
1. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. PROVIDE UNIT WITH POWER DIRECT VENTING FOR SEALED COMBUSTION WITH VERTICAL VENT TERMINATION KIT FOR EACH WATER HEATER.
3. PROVIDE WITH ALL NECESSARY VALVES AND FITTINGS FOR A COMPLETE INSTALLATION.
4. PROVIDE WITH T&P VALVE TO DISCHARGE WITH AIR GAP TO FLOOR DRAIN.
5. VENTING TO BE INSTALLED ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND APPLICIABLE FUEL GAS CODE.
6. PROVIDE ENTIRE UNIT TO BE ASME CONSTRUCTION WITH 10 YEAR WARRANTY ON PRESSURE VESSEL AND HEAT EXCHANGER.
7. PROVIDE 2 PSI TO 7" WC GAS REGULATOR
8. PROVIDE ORIFICES FOR PROPANE OPERATION
9. PROVIDE CONDENSATE NEUTRALIZATION KIT

PUMP SCHEDULE

TAG NO.	SERVES	MANUFACTURER	MODEL NO.	TYPE	G.P.M.	FT. HD.	WATTS	V/P/Hz	REMARKS
P-1	HWR CIRCULATOR	BELL & GOSSETT	6050B2004LF	INLINE	7	15	60	120V/1□	1,2

REMARKS:
1. PUMP HOUSINGS TO BE STAINLESS STEEL CONSTRUCTION.
2. DISCONNECT BY EC.

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KATHRYN PARFITT
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PLUMBING SCHEDULES

PLOT SCALE:

FILENAME:

DATE: December 18, 2019

PROJECT
3089

P5.0

LIGHTING FIXTURE SCHEDULE

Type Mark	Manufacturer & Catalog Number	Mounting Type	Descriptions	Lamp
A	LITHONIA - #2FGG43L835-3-D-UNV	Recessed	2'X4' LED RECESSED DIRECT/INDIRECT FIXTURE	LED
B	LITHONIA - #2FGG30L835-2-D-UNV	Recessed	2'X2' LED RECESSED DIRECT/INDIRECT FIXTURE	LED
C	PHILIPS - #LBX55L835-UNV	Pendant	4' LED INDUSTRIAL FIXTURE	LED
D	CONTECH - #RL38IC235KCMVD	Recessed	4" LED DOWNLIGHT WITH SHOWER TRIM, WET LOCATION LISTED	LED
D1	CONTECT - #R4NC-3-35K-27-D	Recessed	4" LED DOWNLIGHT	20W 2000 Lumen White LED
D2	CONTECT - #R2RM-05-35K-MVD-M-NCF1	Recessed	2" LED RECESSED DOWNLIGHT	8W 800 Lumen White LED
E	DUAL LITE - #SE-X-R-BN-E-I	Universal	Cast Alumninum exit sign with red LED, universal arrows, self-testing, battery backup	LED
F	AXIS- #SLWLED-SL75/25-1000-80-35-S#-UNV-DP	Wall	LED SEMI-INDIRECT FIXTURE	1000 lumen per foot
F1	AXIS - #WBDIWLED-500/500/80-30-SO-SO-S#-C-277-DP-1	Wall	LED SEMI-INDIRECT FIXTURE WET LOCATION	1000 lumen per foot
G	SOLERA - ORB-14 BAR-11736-4000K-UNV	Pendant	LED LOW BAY	LED
H	AFX LIGHTING - # BLW5232800L30MVXX	WALL	BLAINE LED OUTDOOR SCONCE	28W LED
OA	MCGRAW-EDISON - #IST-AF-1200-LED-E1	Wall	LED WALL PACK	LED
OB	STONCO #LPW16-5	Wall	LED WALL PACK	LED
OD	EATON - #3002A-SQ-25LED3500-WFL-NSL-NSS-DIF-38	Recessed	Inground Lighting Fixture	LED
S1	RAB - #ALED3T150-Y-K POLE: PS4-07-25D2	Pole	LED Single Arrangement Provide appropriate pole attachment accessories	150W While LED
S2	RAB - #ALED3T150-Y-K 2 @ 180 POLE: PS4-07-25D2	Pole	LED Back-Back Arrangement Provide appropriate pole attachment accessories	(2) 150W White LED
S3	INSIGHT - #MX635KASYUEAS-X	Surface	Lighting fixture for signs	LED
S4	LSI - #XIG-LED-19-350-CW-UE-SP10	STANCHION	FLAG POLE LIGHT	LED

LIGHTING NOTES:
1. PROVIDE CORRECT TRIM FOR ALL FIXTURES INSTALLED IN A HARD CEILING OR SPECIALTY CEILING TYPE.
2. PROVIDE ALL APPROPRIATE MOUNTING HARDWARE. PROVIDE BACK/MOUNTING BOXES AS RECOMMENDED BY MANUFACTURER.
3. COORDINATE LOCATION OF ALL EXIT SIGNS IN THE FIELD WITH OWNER SUPPLIED EQUIPMENT, BULK HEADS AND SIGNAGE TO ENSURE VISIBILITY FROM AT LEAST HALFWAY TO NEXT SIGN OR TO THE EXIT.
4. PROVIDE DOUBLE OR SINGLE FACE EXIT SIGNS AS INDICATED ON THE DRAWINGS. PROVIDE ARROWS AS INDICATED.
5. ALL FIXTURE FINISHES AND DECORATIVE DETAILS SHALL BE SELECTED BY THE ARCHITECT PRIOR TO FINAL ORDER. COLORS SHALL BE SELECTED FROM FULL COLOR LINE (BOTH STANDARD, CUSTOM, AND PREMIUM).
6. FIXTURES INDICATED ARE THE BASIS OF DESIGN. ALL EQUALS SHALL HAVE THE SAME PERFORMANCE AND GENERAL SHAPE AND OPTIONS. ALL EQUALS ARE TO BE APPROVED BY THE ARCHITECT AND ENGINEER PRIOR TO ORDERING.
7. ALL FIXTURES CONNECTED TO A DIMMER SHALL HAVE DRIVER THAT COORDINATES WITH CONTROLLER. COORDINATE BEFORE ORDERING.

GENERAL NOTES:
1. CONTRACTOR SHALL PROVIDE BRANCH CIRCUIT WIRING TO ALL ITEMS WHICH REQUIRE ELECTRICAL CONNECTIONS. WHERE BRANCH CIRCUIT WIRING IS NOT SHOWN, CONTRACTOR SHALL CONNECT ITEMS TO THE CIRCUITS INDICATED. EXACT ROUTING OF CONDUITS AND WIRING SHALL BE DETERMINED BY THE CONTRACTOR IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND SPECIFICATIONS.
2. CONTRACTOR SHALL USE ONLY THOSE WIRING METHODS ALLOWED IN THE SPECIFICATIONS.
3. A MAXIMUM OF 3 CIRCUITS SHALL BE RUN IN ONE CONDUIT, CIRCUITS MUST BE ON SEPARATE PHASES. CIRCUITS SHALL NOT SHARE A COMMON NEUTRAL.
4. MINIMUM WIRE SIZE SHALL BE #12AWG. MINIMUM CONDUIT SIZE SHALL BE 3/4".
5. THE ELECTRICAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE.
6. ALLOW CLEAR SPACE IN FRONT OF ALL PANELBOARDS, SWITCHBOARDS, ELECTRICAL EQUIPMENT, ETC., AS REQUIRED BY NEC.
7. COORDINATE EXACT LOCATION OF LIGHTING FIXTURES WITH HVAC DUCTWORK, PIPING AND EQUIPMENT.
8. ALL LIGHTING FIXTURES TO BE COMPATIBLE WITH THE CEILING CONSTRUCTION.
9. ELECTRICAL CONTRACTOR TO SUPPLY ALL GROUNDING & BONDING REQUIREMENTS PER NEC.

ELECTRICAL DRAWING LIST

E0.0	ELECTRICAL INFORMATION SHEET
E0.5	SITE PLAN - ELECTRICAL
E0.6	SITE ELECTRICAL DETAILS
E0.7	SITE ELECTRICAL DETAILS
E1.0	FIRST FLOOR PLAN - UNIT A - POWER
E1.1	FIRST FLOOR PLAN - UNIT B - POWER
E1.2	FIRST FLOOR PLAN - UNIT C - POWER
E2.0	FIRST FLOOR PLAN - UNIT A - LIGHTING
E2.1	FIRST FLOOR PLAN - UNIT B - LIGHTING
E2.2	FIRST FLOOR PLAN - UNIT C - LIGHTING
E3.0	ROOF PLAN - POWER
E4.0	ELECTRICAL DETAILS
E4.1	ELECTRICAL DETAILS
E5.0	ELECTRICAL RISER & SCHEDULES
E5.1	ELECTRICAL SCHEDULES
E5.2	ELECTRICAL SCHEDULES
E5.3	ELECTRICAL SCHEDULES

CONTROL EQUIPMENT	
$M	MANUAL MOTOR STARTER - OVERLOADS SIZED TO ACCOMMODATE MOTOR - 4'-0" AFF UNLESS OTHERWISE NOTED
FVNR/SIZE1/3R	COMBINATION MOTOR STARTER - TYPE/SIZE/NEMA ENCLOSURE AS INDICATED - MOUNT 4'-6" AFF TO CENTERLINE OF OPERATING HANDLE PROVIDE OVERCURRENT AND OVERLOADS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS FOR MOTOR HP
M	MOTOR - HORSEPOWER AS INDICATED
30/3/NF/12	DISCONNECT SWITCH - AMPS/POLES/FUSES/NEMA ENCLOSURE AS INDICATED - MOUNT 4'-6" AFF TO CENTERLINE OF OPERATING HANDLE
T	TRANSFORMER

STANDARD MOUNTING HEIGHTS		
9" BELOW FINISHED CEILING		WALL-MOUNTED CLOCKS, PROGRAM BELLS, (OR AS SHOWN ON ARCHITECTURAL DETAIL)
6" ABOVE DOOR		NURSE CALL DOME LIGHT
6" ABOVE FIRE HOUSE CABINET		RED SIGNAL LIGHT
10'-0"		BATTERY LIGHTING UNITS AND REMOTE WALL MOUNTED LIGHT HEADS (OR 1'-0" BELOW FINISHED CEILING OF TOP UNIT).
8'-6"		PENDANT-HUNG INDUSTRIAL AND STRIP LIGHTING FIXTURES.
7'-8"+		TELEVISION OUTLET AND SERVICE RECEPTACLE-FOR SHELF MOUNTED T.V. IN BEDROOMS.
7'-6"	F	OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER.
CENTER ABOVE DOOR OR WINDOW OPENING		WARNING AND SIGNALING FIXTURES/SIGNS.
6'-8"	F F	OR 6" BELOW FINISHED CEILING WHICHEVER IS LOWER. FIRE ALARM SIGNAL DEVICES AND ILLUMINATED FIRE SIGNALS.
6'-6"		TOP OF FLUSH AND SURFACE MOUNTED ELECTRICAL LIGHTING OR POWER PANELBOARDS AND TELEPHONE CABINETS.
6'-3"		TOP OF BACK-MOUNTED WALL EXIT FIXTURES (NOT MOUNTED ABOVE DOORS).
6'-0"		TOP OF HIGHEST ELECTRICAL SAFETY DISCONNECT SWITCHES, MAGNETIC STARTERS, CONTACTORS.
4'-6"		CENTERLINE OF OPERATING HANDLE FOR WALL MOUNTED DISCONNECT SWITCHES AND MOTOR STARTERS; WALL MOUNTED TELEPHONE AND PAY STATIONS (3'-6" AT HANDICAP LOCATIONS VERIFY EXACT HEIGHT PRIOR TO ROUGH IN)
3'-8"	CT $ $M W	WALL PHONE, ELECTRICAL DEVICE LIGHTING SWITCHES, MANUAL MOTOR STARTERS, SECURITY CARD, AND GFI RECEPTACLES IN TOILET ROOMS OR FOR SEPERATE SINKS NOT IN CASEWORK.
3'-6"	M	FIRE ALARM PULL STATIONS
2'-0"		ELECTRICAL RECEPTACLES WITHIN MECHANICAL SPACES, ELECTRICAL AND ELEVATOR ROOMS.
1'-6"	#	ELECTRICAL RECEPTACLES, TELEPHONE OUTLETS, DATA OUTLETS, TELEPHONE/DATA OUTLETS
0"		FINISHED FLOOR

MOUNTING HEIGHT NOTES:
1. MOUNTING HEIGHTS TO CENTER OF OUTLETS UNLESS OTHERWISE NOTED. IN MASONRY CONSTRUCTION THE ABOVE MOUNTING HEIGHTS SHALL BE USED FOR REFERENCE TO NEAREST BLOCK OF BRICK COURSING.
2. THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWING OR SPECIFICATIONS.
3. A '+' BESIDE A DEVICE INDICATES THAT DEVICE IS MOUNTED ABOVE A COUNTER OR CASEWORK. COORDINATE WITH ARCHITECTURAL ROOM ELEVATIONS, DETAILS AND CASEWORK CONTRACTOR.

THE ELECTRICAL SYSTEMS PRESENTED ON THE SUBSEQUENT DRAWINGS WERE DESIGNED IN ACCORDANCE WITH THE FOLLOWING APPLICABLE CODES AND STANDARDS:

- THE NATIONAL ELECTRICAL CODE (NEC) 2014
- INTERNATIONAL BUILDING CODE (IBC) 2015
- INTERNATIONAL ENERGY CONSERVATION CODE (IECC) 2015
- ASHRAE STANDARD 90.1

SITE WORK	
E	UNDERGROUND ELECTRIC LINE
T	UNDERGROUND TELEPHONE LINE
AE	AERIAL ELECTRIC LINE
AT	AERIAL TELEPHONE LINE
G	BURIED GROUND CONDUCTOR - #4/0 BARE COPPER UNLESS OTHERWISE NOTED
	UTILITY POLE
	POLE MOUNTED AREA LIGHTING FIXTURE
MH	MANHOLE
	GROUND ROD

SIGNAL SYSTEM	
S	SMOKE DETECTOR
C	CARBON MONOXIDE DETECTOR
H	HEAT DETECTOR
DH	DOOR HOLDER
M	MANUAL PULL STATION - SHALL BE MOUNTED SUCH THAT THE HANDLE IS NOT LESS THAN 42" AND NOT GREATER THAN 54" AFF.
F	AUDIO ALARM - SHALL BE MOUNTED WITH THEIR TOPS AFF AT HEIGHTS OF NOT LESS 90" AFF
F	AUDIO/VISUAL ALARM - SHALL BE MOUNTED SUCH THAT ENTIRE LENS IN NOT LESS THAN 80" AND NOT GREATER THAN 96" AFF.
F	VISUAL ALARM - SHALL BE MOUNTED SUCH THAT ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" AFF.

ABBREVIATIONS & SYMBOLS	
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ATS	AUTOMATIC TRANSFER SWITCH
CT	COUNTER HEIGHT-44" AFF (UNLESS OTHERWISE NOTED)
DC	DUCT COIL
DF	DRINKING FOUNTAIN
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
GC	GENERAL CONTRACTOR
GF	GROUND FAULT INTERRUPTER
HC	HVAC CONTRACTOR
HP	HEAT PUMP
KES	KITCHEN EQUIPMENT SUPPLIER
MW	MICROWAVE
PC	PLUMBING CONTRACTOR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
WM	WALL MOUNTED
WP	WEATHERPROOF
1	DRAWING NOTE BY SYMBOL

PANELBOARDS	
	SURFACE MOUNTED PANEL
	FLUSH MOUNTED PANEL

CIRCUITING	
JB	JUNCTION BOX
ROOM NAME ROOM # P-1	BRANCH CIRCUIT NUMBER FOR ALL ITEMS IN THIS ROOM UNLESS OTHERWISE INDICATED - (*) INDICATES CONNECTION TO CIRCUIT NUMBER SHOWN NEXT TO DEVICE

LIGHTING	
	2'x2' FLUORESCENT LIGHTING FIXTURE
	2'x4' FLUORESCENT LIGHTING FIXTURE
	2'x4' FLUORESCENT LIGHTING FIXTURE-EMERGENCY
	1'x8' FLUORESCENT LIGHTING FIXTURE
	2'x8' FLUORESCENT LIGHTING FIXTURE
	1'x4' FLUORESCENT LIGHTING FIXTURE
	6"X4' FLUORESCENT LIGHTING FIXTURE
	6"x2' FLUORESCENT LIGHTING FIXTURE
	WALL PACK LIGHTING FIXTURE
	FLUORESCENT STRIP LIGHT
	WALL WASHER FIXTURE
	ROUND RECESSED DOWNLIGHT FIXTURE
	NORMAL EMERGENCY FIXTURE
	EMERGENCY BATTERY UNIT
	REMOTE HEAD
	EXIT SIGN-DOUBLE FACE
	EXIT SIGN-CEILING MOUNTED WITH DIRECTIONAL ARROWS
	EXIT SIGN-SINGLE FACE
	WALL SCONCE

WIRING DEVICES	
$	SINGLE POLE SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$3	3-WAY SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$4	4-WAY SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$K	KEY SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$T5	SPRING WOUND TIME SWITCH, 5-MINUTE MAXIMUM DURATION - 3'-10" AFF UNLESS OTHERWISE NOTED
$T	SPRING WOUND TIME SWITCH, 1-HOUR MAXIMUM DURATION - 3'-10" AFF UNLESS OTHERWISE NOTED
$D	DIMMER SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$M	MANUAL MOTOR STARTER SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$3D	3-WAY DIMMER SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$OS	OCCUPANCY SENSOR SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$P	PILOT LIGHT SWITCH - 3'-10" AFF UNLESS OTHERWISE NOTED
$MO	MANUAL OVERRIDE - LEVITON #1256
	DUPLEX RECEPTACLE - NEMA 5-20R, MOUNT 1'-6" AFF UNLESS OTHERWISE NOTED
CT	COUNTER TOP DUPLEX RECEPTACLE
T	TAMPERPROOF DUPLEX RECEPTACLE - NEMA 5-20R, MOUNT 1'-6" AFF UNLESS OTHERWISE NOTED
	SINGLE RECEPTACLE - MOUNT 1'-6" AFF UNLESS OTHERWISE NOTED
	GFI DUPLEX RECEPTACLE
	QUAD RECEPTACLE - NEMA 5-20R, MOUNT 1'-6" AFF UNLESS OTHERWISE NOTED
	SPECIAL RECEPTACLE - MOUNT 30" AFF UNLESS OTHERWISE NOTED
	FLOOR BOX MOUNTED DUPLEX RECEPTACLE
FB	COMBINATION POWER/COMMUNICATIONS FLOOR BOX-DEVICES AS INDICATED
	MOTION DETECTOR
OS	ULTRASONIC OCCUPANCY SENSOR - 360°
DS	DAYLIGHT SENSOR - AUTOMATIC STANDALONE DAYLIGHT DIMMING CONTROLLER FOR LIGHTS ON ADJACENT
CS	CORNER SENSOR FOR CLASSROOMS CONNECTED TO THE LIGHTING CONTROL SYSTEM
$LC	MULTIPLE BUTTON DIGITAL CONTROL STATION WITH ON/OFF - 3'-10"AFF UNLESS OTHERWISE NOTED - 5 BUTTON IN CLASSROOMS AND COMMON AREAS, 3 BUTTON IN OFFICES.
$ Dos	DIMMER AND OCCUPANCY SENSOR SWITCH - 3'-10" AFF
CR	CARD READER - REMOTE EXTERIOR LOCATIONS - PROVIDE SQUARE BOX ; REMOTE INTERIOR LOCATION - PROVIDE SINGLE BACK BOX . ALL LOCATION - EXTEND 1"C WITH APPROPRIATE WIRING TO NEAREST DOOR HARDWARE INTERFACE. COORDINATE LOCATIONS IN THE FIELD

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland. License No. 49693, Expiration Date: 2020-07-24.

STATE OF MARYLAND · KATHRYN PARFITT · 49693 · PROFESSIONAL ENGINEER

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

ELECTRICAL INFORMATION SHEET

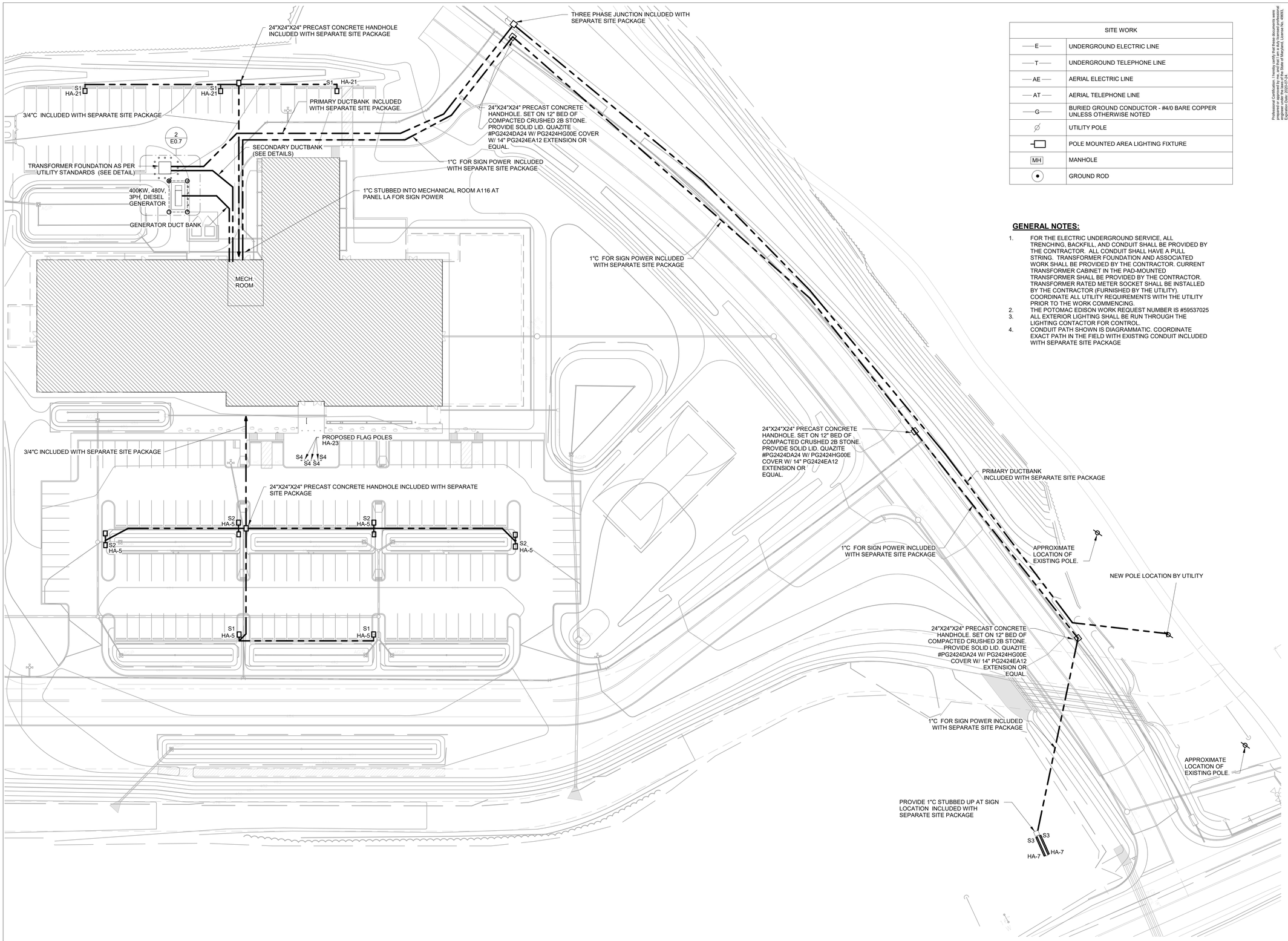
PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT 3089

E0.0



SITE PLAN - ELECTRICAL
SCALE: 1/32" = 1'-0"

SITE WORK	
—E—	UNDERGROUND ELECTRIC LINE
—T—	UNDERGROUND TELEPHONE LINE
—AE—	AERIAL ELECTRIC LINE
—AT—	AERIAL TELEPHONE LINE
—G—	BURIED GROUND CONDUCTOR - #4/0 BARE COPPER UNLESS OTHERWISE NOTED
∅	UTILITY POLE
	POLE MOUNTED AREA LIGHTING FIXTURE
MH	MANHOLE
●	GROUND ROD

GENERAL NOTES:

1. FOR THE ELECTRIC UNDERGROUND SERVICE, ALL TRENCHING, BACKFILL, AND CONDUIT SHALL BE PROVIDED BY THE CONTRACTOR. ALL CONDUIT SHALL HAVE A PULL STRING. TRANSFORMER FOUNDATION AND ASSOCIATED WORK SHALL BE PROVIDED BY THE CONTRACTOR. CURRENT TRANSFORMER CABINET IN THE PAD-MOUNTED TRANSFORMER SHALL BE PROVIDED BY THE CONTRACTOR. TRANSFORMER RATED METER SOCKET SHALL BE INSTALLED BY THE CONTRACTOR (FURNISHED BY THE UTILITY). COORDINATE ALL UTILITY REQUIREMENTS WITH THE UTILITY PRIOR TO THE WORK COMMENCING.
2. THE POTOMAC EDISON WORK REQUEST NUMBER IS #59537025
3. ALL EXTERIOR LIGHTING SHALL BE RUN THROUGH THE LIGHTING CONTACTOR FOR CONTROL.
4. CONDUIT PATH SHOWN IS DIAGRAMMATIC. COORDINATE EXACT PATH IN THE FIELD WITH EXISTING CONDUIT INCLUDED WITH SEPARATE SITE PACKAGE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 49693, Expiration Date: 2020-07-24.

STATE OF MARYLAND · KATHRYN PARFITT · 49693 · PROFESSIONAL ENGINEER

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SITE PLAN - ELECTRICAL

PLOT SCALE: As indicated
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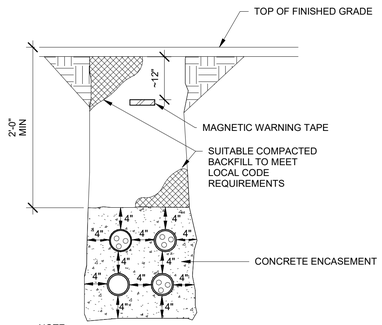
PROJECT 3089

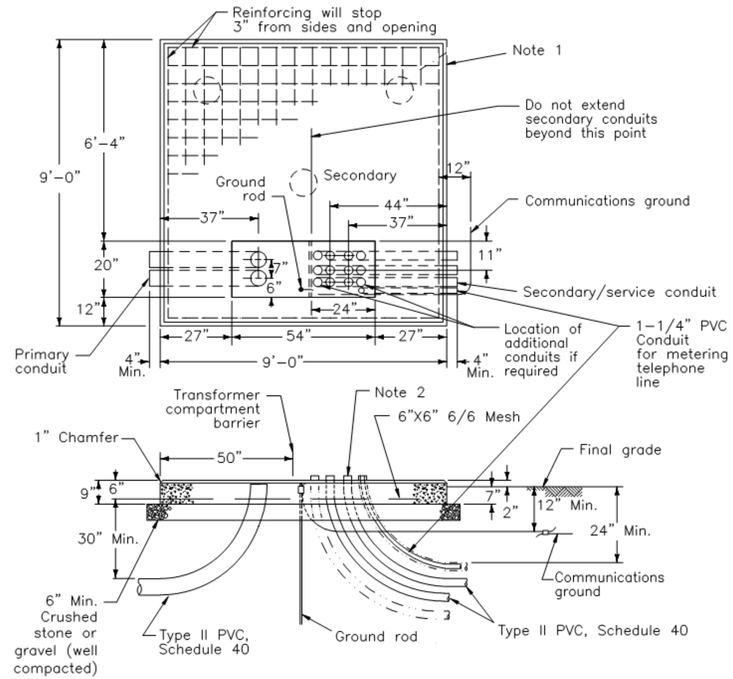
E0.5



NOTE:
ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT, CONCRETE, TRENCHING , AND BACKFILL.
PROVIDE 4" CONDUITS. PROVIDE PULL STRINGS IN SPARE CONDUIT

SECONDARY SERVICE DUCT BANK DETAIL

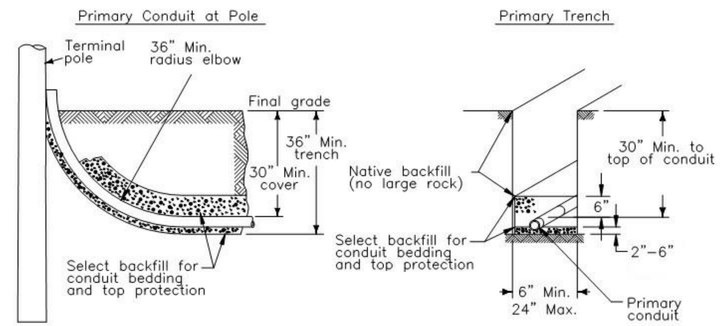
NO SCALE



NOTES:
1. CONCRETE PAD MOUNTED TRANSFORMER.
2. SECONDARY CONDUITS SHALL NOT EXTEND MORE THAN 2 INCHES (MAXIMUM) ABOVE THE TOP OF FOUNDATION. PRIMARY CONDUITS SHALL BE CUT OFF 2 INCHES BELOW THE TOP OF FOUNDATION TO ALLOW FOR TERMINATING THE CABLES.
3. CONTRACTOR SHALL PROVIDE (1) 5/8" DIAMETER X 8' GROUND ROD, GROUNDING CONNECTIONS, AND #6 AWG COPPER COMMUNICATIONS GROUND WIRE (MINIMUM LENGTH OF WIRE REQUIRED - 7-1/2').
4. EXTEND 1-1/4" CONDUIT TO LOCATION AT BUILDING WHERE TELEPHONE LINE SERVICE CAN BE MADE AVAILABLE AT THE TELEPHONE DEMARCATION POINT.
5. CONTRACTOR SHALL CONTACT THE COMPANY PRIOR TO BEGINNING WORK TO DISCUSS THE DETAILS OF TRANSFORMER FOUNDATION POSITION AND ORIENTATION, WORKING CLEARANCES, BARRIER PROTECTION, CONSTRUCTION SPECIFICATIONS, AND INSPECTION PROCEDURES. THE CUSTOMER IS RESPONSIBLE FOR INSTALLING, OWNING, AND MAINTAINING THE TRANSFORMER FOUNDATION. THE CONTRACTOR SHALL PROVIDE A CLEAR AND FIRM APPROACH TO THE TRANSFORMER FOUNDATION AND KEEP THE AREA ABOVE THE TRANSFORMER CLEAR OF OBSTRUCTIONS THAT MAY BLOCK THE USE OF COMPANY VEHICLES (E.G., CRANE ACCESS TO THE TRANSFORMER).
6. INSTALL ALL CONDUITS BEFORE PLACING PAD. CONDUITS SHOULD NOT BE PLACED UNDER SECTIONS OF PAD SUPPORTING TRANSFORMER SO THAT ORIGINAL GROUND WILL NOT BE DISTURBED.
7. CONDUIT SHALL BE RIGID TYPE II PVC, SCHEDULE 40 PVC.
8. BACKFILL SHALL BE CLEAN GRANULAR SOIL, FREE OF LARGE STONES AND PERISHABLE MATERIAL. ALL BACKFILL SHALL BE SPREAD AND COMPACTED IN MAXIMUM LAYERS OF 8 INCHES.
9. THOROUGHLY COMPACT BASE CRUSHED STONE OR GRAVEL.
10. CONCRETE PAD MAY BE POURED-IN-PLACE OR MAY BE PRECAST (4000 MIN. PSI CONCRETE).
11. TO PREVENT WATER MIGRATION FROM CONCRETE WHEN POURING, PLACE WATERPROOF MEMBRANE ON CRUSHED STONE OR GRAVEL BEFORE POURING CONCRETE.
12. REINFORCING WIRE MESH SHALL CONFORM TO ASTM DESIGNATION A185.
13. CEMENT TO BE 1 OR 1-A AND MEETING ASTM DESIGNATIONS C-150 AND C-175 RESPECTIVELY.
14. POURED PAD CONCRETE TO DEVELOP MINIMUM 4000 PSI AT 28 DAYS AGE, CONTAIN MINIMUM OF 5.5 BAGS OF CEMENT PER CUBIC YARD AND MAXIMUM OF 6 GALLONS OF WATER PER 94-POUND BAG OF CEMENT, AND CONFORM TO ASTM DESIGNATION C-94. FOURTEEN (14) DAYS MINIMUM DRYING TIME BEFORE TRANSFORMER IS SET. THE VOLUME OF CONCRETE IS APPROXIMATELY 1.7 CUBIC YARDS.
15. SEAL ALL OPENINGS AROUND CONDUITS WITH GROUT; CAP ALL SPARE CONDUITS TO PREVENT ENTRY OF RODENTS AND ANIMALS INTO TRANSFORMER COMPARTMENT.
16. IF CONDUIT EXTENDS INTO BUILDING, IT SHALL BE SEALED (PER NEC) AT BUILDING END TO PREVENT GAS FROM ENTERING BUILDING THROUGH THE CONDUIT.
17. WHERE DAMAGE TO TRANSFORMER BY VEHICLES IS POSSIBLE, TRANSFORMER SHALL BE PROTECTED BY APPROPRIATE BARRIERS.
18. COMMUNICATION GROUND – THE NESC REQUIRES BONDING OF ALL COMMUNICATIONS EQUIPMENT (TELEPHONE, CATV, ETC.) THAT ARE WITHIN SIX (6) FEET OF THE PAD-MOUNTED TRANSFORMER. THE WIRE FOR BONDING COMMUNICATIONS EQUIPMENT SHALL BE MINIMUM #6 AWG SOLID COPPER WIRE THAT IS ATTACHED DIRECTLY TO GROUND ROD, RUNS UNDERNEATH THE CONCRETE PAD, EXTENDS 12 INCHES BEYOND THE EDGE OF THE PAD, AND FINALLY RUNS ALONGSIDE THE PAD FOUNDATION.
19. IN AREAS WHERE SETTLING MAY OCCUR, INSTALL THREE (3) CONCRETE PIERS, 8-INCH MINIMUM DIAMETER, 36 INCHES DEEP, IN A TRIANGULAR CONFIGURATION UNDER FOUNDATION. CONTRACTOR SHALL CONTACT THE COMPANY FOR DETAILS.

CONCRETE FLAT-PAD FOUNDATION PAD-MOUNTED TRANSFORMER

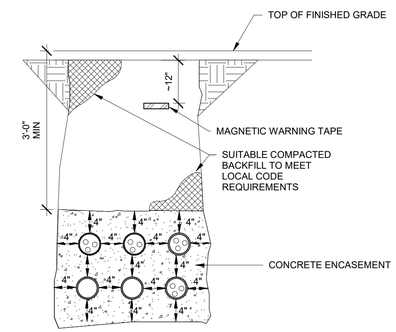
NO SCALE



NOTES:
1. USE 5" SCHEDULE 40 CONDUIT.
2. COORDINATE HE INSTALLATION OF ALL OTHER BURIED UTILITIES THAT ARE IN THE VICINITY, WILL OCCUPY THE TRENCH, OR CROSS THE TRENCH. MINIMUM CLEARANCES INCLUDE (BUT NOT LIMITED TO):
   A. FUEL LINES - 4'
   B. TELEPHONE & CATV - 1' SEPARATION (HORIZONTAL OR VERTICAL)
3. THE BOTTOM OF THE TRENCH SHALL BE RELATIVELY SMOOTH, UNDISTURBED EARTH, WELL-TAMPED EARTH, OR SAND, WHICH IS FREE FROM ROCK, CINDERS, OR SHARP OBJECTS.
4. THE CONTRACTOR SHALL BACKFILL AROUND ALL CABLES AND CONDUITS WITH SIX (6) INCHES OF APPROVED BACKFILL. APPROVED BACKFILL SHALL BE GRADED SAND, STONE DUST, LIMESTONE DUST, ROCK-FREE (1/4 INCH OR LESS DIAMETER STONES) EARTH, OR TOPSOIL. MATERIALS THAT "SET UP" SUCH AS FLY ASH, CULMS, AND FOUNDRY WASTE ARE NOT ACCEPTABLE. THE REMAINDER OF THE TRENCH SHALL BE BACKFILLED WITH NATIVE SOIL AND NOT CONTAIN LARGE ROCKS (GREATER THAN 4 INCH) OR ROCKS WITH SHARP EDGES. AN ADDITIONAL SIX (6) INCHES OF MOUNDED BACKFILL IS RECOMMENDED TO ALLOW FOR SETTLING.
5. COORDINATE ALL UTILITY REQUIREMENTS WITH UTILITY PRIOR TO COMMENCING WORK. THIS INCLUDES NOTIFICATION PERIODS AND ANY REQUIREMENTS FOR INSPECTION.

TYPICAL TRENCHING DETAILS FOR INSTALLATION OF PRIMARY CONDUITS

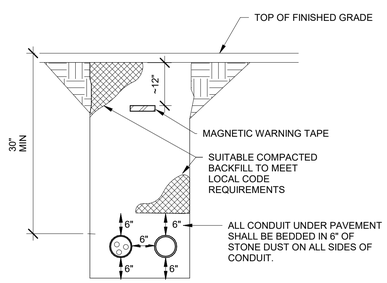
NO SCALE



NOTE:
ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT, CONCRETE, TRENCHING , AND BACKFILL.
PROVIDE 4" CONDUITS. PROVIDE PULL STRINGS IN SPARE CONDUIT

GENERATOR DUCT BANK DETAIL

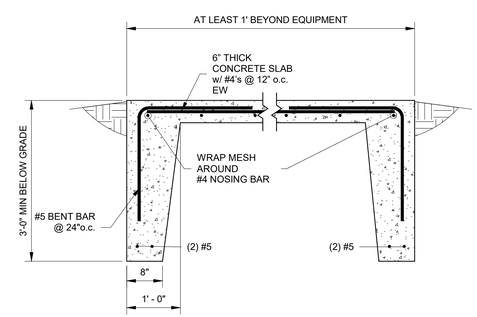
NO SCALE



NOTE:
ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT, CONCRETE, TRENCHING , AND BACKFILL. PROVIDE 5" CONDUIT. WHERE MINIMUM 30" COVER CANNOT BE ACHIEVED, PROVIDE CONCRETE ENCASEMENT WITH AT LEAST 4" OF COVER ON ALL SIDES OF CONDUIT.

PRIMARY SERVICE DUCT BANK DETAIL

NO SCALE



GENERATOR PAD DETAIL

NO SCALE

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STATE OF MARYLAND KATHRYN PARFITT 49693 PROFESSIONAL ENGINEER

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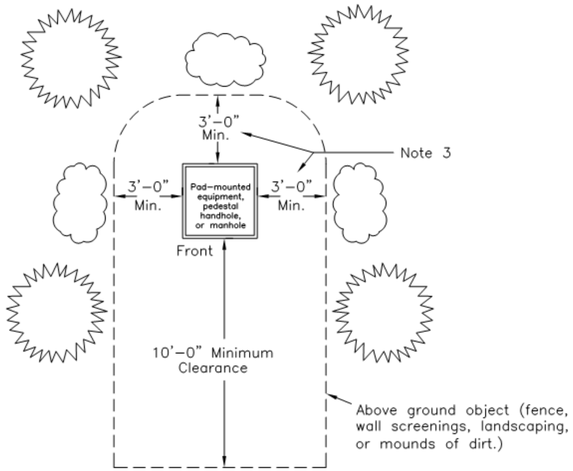
PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

SITE ELECTRICAL DETAILS

PLOT SCALE: As indicated
FILENAME:
DATE: December 18, 2019

PROJECT 3089

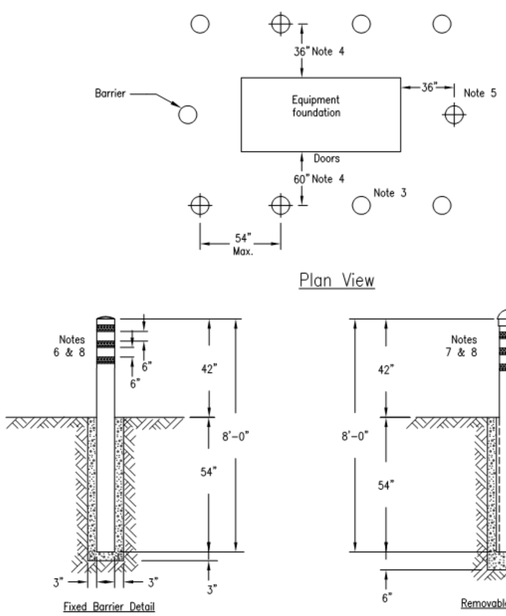
E0.6



NOTES:
1. WARNING: PAD-MOUNTED EQUIPMENT HAVE UNDERGROUND ELECTRIC CABLES ENTERING AND EXITING THEM BELOW GRADE. WHEN IT IS DECIDED TO INSTALL PLANTS OR OBJECTS AROUND A PAD, CALL THE APPROPRIATE STATE ONE-CALL AGENCY BEFORE DIGGING SO THAT UNDERGROUND CABLE LOCATIONS CAN BE MARKED.
2. THREE FEET MINIMUM CLEARANCE SHALL BE MAINTAINED EVEN AFTER ALL PLANTS HAVE REACHED THEIR MATURITY. TO ALLOW FUTURE GROWTH, PLANT VEGETATION SHOULD BE PLACED AT LEAST SEVEN FEET FROM THE BACK AND SIDE OF THE PAD-MOUNTED DEVICE, PEDESTAL, OR HARDWARE. AVOID PLANTING SHURBS OR SETTING POSTS DIRECTLY OVER CABLES.
3. IF PAD-MOUNTED EQUIPMENT IS A SWITCH OR OTHER SIMILAR DEVICE WITH FRONT, SIDE OR REAR DOORS. THE MINIMUM 3' CLEARANCE SHALL BE INCREASED TO 10'.
4. MINIMUM SAFTETY CLEARANCES TO GAS METERS SHALL BE 3' AND TO TANKS CONTAINING FLAMMABLE LIQUIDS OR GASSES 15'.

CLEARANCES OF PAD-MOUNTED EQUIPMENT FROM OBSTRUCTIONS

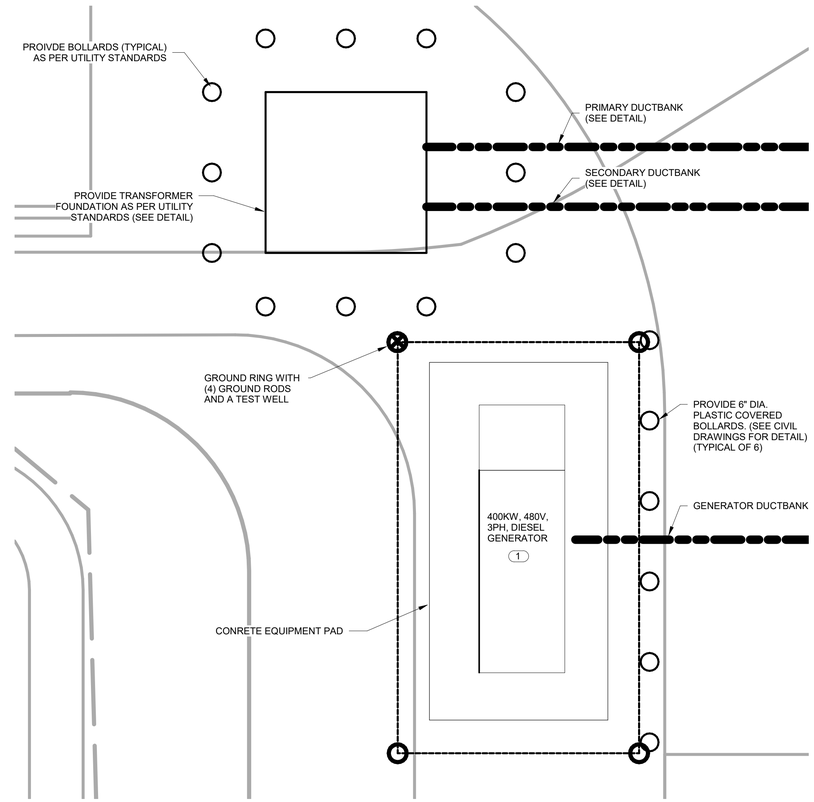
NO SCALE



NOTES:
1. USE BARRIERS TO PROTECT EQUIPMENT FROM POSSIBLE DAMAGE FROM VEHICLES. CONTRACTOR SHALL CONTACT COMPANY FOR PLACEMENT.
2. PROVIDE CLEARANCE FOR OPERATION, REMOVAL, OR REPLACEMENT OF EQUIPMENT WHEN OVERHEAD OBSTACLES PREVENT REMOVAL OF EQUIPMENT, ONE BARRIER SHALL BE REMOVABLE.
3. WHEN NECESSARY, HEIGHT OF BARRIER ABOVE GROUND MAY BE INCREASED TO PREVENT LARGE VEHICLES FROM STRIKING PAD-MOUNTED EQUIPMENT.
4. POSITION BARRIERS 60" FROM EQUIPMENT FOUNDATION ON ALL SIDES WHERE EQUIPMENT DOORS WILL BE LOCATED. REMOVABLE BARRIERS SHALL NOT BE INSTALLED AS A MEANS OF PROVIDING CLEARANCE TO OPEN EQUIPMENT DOORS.
5. WITH COMPANY APPROVAL THIS DISTANCE MAY BE REDUCED TO 24" PROVIDED CLEARANCES ARE MAINTAINED FOR ITEMS SUCH AS TRANSFORMER RADIATORS AND METERING.
6. FOR FIXED VEHICLE BARRIER, USE 6" DIAMETER RIGID GALVANIZED STEEL CONDUIT, CUT TO 8' AND FILL WITH CONCRETE. ENCASE IN 3 INCHES OF CONCRETE, AS SHOWN. POWER INSTALLED BUMPER POSTS (MINIMUM SIZE: 84" LONG, 3-1/2" DIAMTER, 8" HELIX) ARE ALSO APPROVED.
7. FOR REMOVABLE VEHICLE BARRIERS, USE 6" DIAMETER PVC SCHEDULE 40 CONDUIT, CUT TO 54" AND ENCASED IN CONCRETE. INSERT 8' OF 5" DIAMTER GALVANIZED STEEL CONDUIT (DO NOT FILL WITH CONCRETE), WITH CAP INTO PVC CONDUIT. USE 6" OF COMPACTED STONE OR GRAVEL FOR SUMP.
8. VEHICLE BARRIERS SHALL BE PAINTED YELLOW IWTH THREE STRIPS OF 3" REFLECTIVE TAPE.
9. CUSTOMER SHALL NOTIFY STATE ONE-CALL AGENCY BEFORE EXCAVATION FOR POSTS.

VEHICULAR BARRIER FOR PAD-MOUNTED EQUIPMENT

NO SCALE



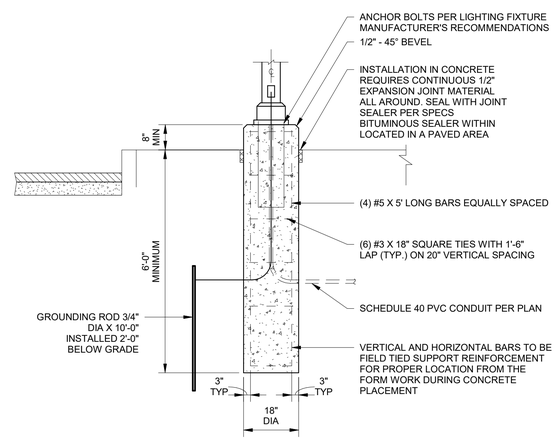
2 ENLARGED PARTIAL SITE PLAN - ELECTRICAL
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. FOR THE ELECTRIC UNDERGROUND SERVICE, ALL TRENCHING, BACKFILL, AND CONDUIT SHALL BE PROVIDED BY THE CONTRACTOR. ALL CONDUIT SHALL HAVE A PULL STRING. TRANSFORMER FOUNDATION AND ASSOCIATED WORK SHALL BE PROVIDED BY THE CONTRACTOR. CURRENT TRANSFORMER CABINET IN THE PAD-MOUNTED TRANSFORMER SHALL BE PROVIDED BY THE CONTRACTOR. TRANSFORMER RATED METER SOCKET SHALL BE INSTALLED BY THE CONTRACTOR (FURNISHED BY THE UTILITY). COORDINATE ALL UTILITY REQUIREMENTS WITH THE UTILITY PRIOR TO THE WORK COMMENCING.
2. THE POTOMAC EDISON WORK REQUEST NUMBER IS #59537025
3. ALL EXTERIOR LIGHTING SHALL BE RUN THROUGH THE LIGHTING CONTACTOR FOR CONTROL.

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. CONNECT EMERGENCY GENERATOR ACCESSORIES TO CIRCUITS LA-56 & LA-58.



NOTE:
1. 3500 PSI MIN 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REINFORCING STEEL.
2. SET POLES 3' MINIMUM FROM EDGE OF PAVEMENT WHERE NO CURB EXISTS.

PARKING LOT LIGHT STANDARD BASE

NO SCALE

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STATE OF MARYLAND
KATHRYN PARFITT
49693
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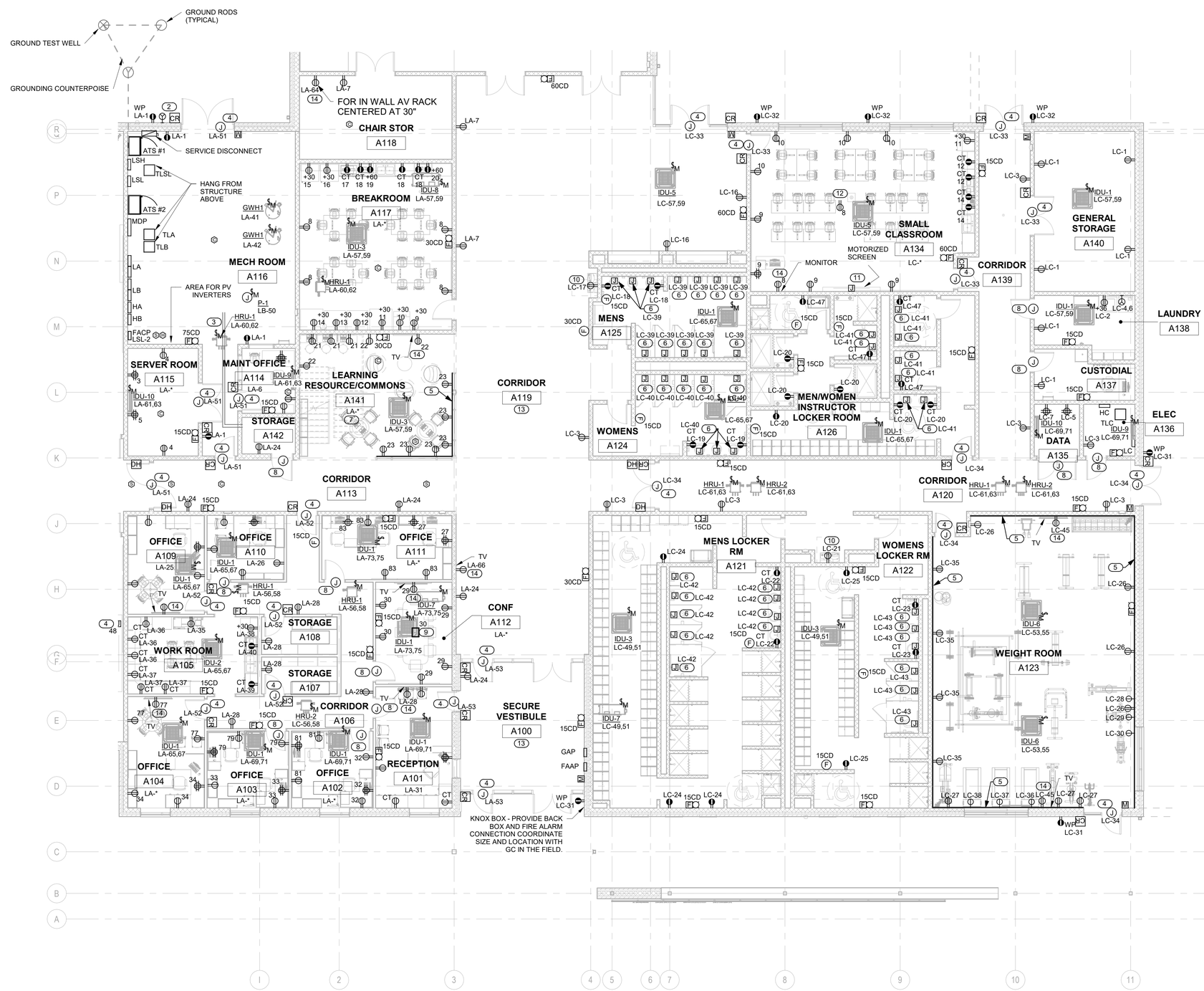


1 FIRST FLOOR PLAN - UNIT A - POWER

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

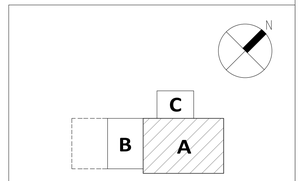
GENERAL NOTES:

1. IN OFFICE AREA PROVIDE FIRE ALARM CIRCUIT WITH 25% SPARE CAPACITY.
2. PROVIDE 1" CONDUIT TO ALL INTERIOR DOOR FRAMES THAT ARE NOT SCHEDULED TO RECEIVE ELECTRONIC HARDWARE FOR FUTURE INSTALLATION OF CARD READERS, ETC. CONDUITS TO EXTEND FROM DOOR FRAME TO POINT ABOVE THE FINISH CEILING FOR EASY INSTALLATION OF WIRING, ETC. IN THE FUTURE.
3. SEE DETAILS FOR FLOOR AND WALL PENETRATION SEALING REQUIREMENTS. WHERE CONDUIT AND WIRE PENETRATES THE WALL, THE WALL SHALL NOT ACT AS A SUPPORT. THE RACEWAY SHALL BE INDEPENDENTLY SUPPORTED ON EACH SIDE OF THE WALL. IF THE WALL PENETRATION IS NOT SEALED, PROVIDE SLEEVE TO PROTECT RACEWAY FROM DAMAGE. WALL AND FLOOR PENETRATIONS SHALL BE CUT USING HOLE SAWS OR EQUIVALENT. PENETRATION SHALL NOT HAVE JAGGED EDGES.
4. SEE DETAILS FOR CLARIFICATION OF TYPICAL CIRCUIT DESIGNATIONS.
5. PROVIDE POWER TO ALL DOORS WITH HARDWARE REQUIRING POWER CONNECTIONS. PROVIDE CONDUITS FOR ALL DOOR HARDWARE CABLING. INSTALL ALL CABLING FURNISHED BY THE DOOR HARDWARE SUPPLIER. COORDINATE WITH THE DOOR HARDWARE SUPPLIER FOR A SPECIFIC LIST OF DOORS REQUIRING POWER AND CABLING INSTALLATION. SEE DOOR HARDWARE SCHEDULE FOR MORE INFORMATION. SEE DETAILS FOR MORE INFORMATION.
6. ALL RECEPTACLES LOCATED IN CEILING SHALL FACE INTO OCCUPIED SPACE.
7. FOR ALL RECEPTACLES NOTED AS POWERING TVS OR MONITORS, COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH INTERIOR DRAWINGS TO ENSURE RECEPTACLE AND DATA FALL BEHIND TV. RECEPTACLES INSTALLED WITHOUT PROPER COORDINATION SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER. COORDINATE LOCATION OF DATA DEVICE WITH POWER BOX. BOXES SHALL BE INSTALLED DIRECTLY ADJACENT TO EACH OTHER.
8. COORDINATE THE LOCATION OF ALL RECEPTACLES LOCATED ADJACENT TO TACK BOARDS, TACKSTRIPS, AND OTHER PERMANENT WALL FIXTURES. RECEPTACLES SHALL NOT BE LOCATED BEHIND TACK BOARDS AND TACKSTRIPS. SEE ARCHITECTURAL INTERIOR DRAWINGS FOR EXACT LOCATIONS OF TACK BOARDS AND OTHER PERMANENT WALL FIXTURES.
9. COORDINATE COUNTERTOP RECEPTACLE LOCATIONS WITH CASEWORK. ENSURE RECEPTACLES ARE NOT BEHIND TALL UNITS.
10. IN AREAS WHERE THERE IS NO CEILING OR CEILING CLOUDS, ALL DEVICES, BOXES, CONDUITS, AND APPEARANCE SHALL BE PAINTABLE. ALL CONDUIT AND WIRE SHALL BE RUN TIGHT TO THE STRCTURE. ALL LABELS FOR JUNCTION BOXES, CONDUIT, AND DEVICES WHERE EVERYTHING IS PAINTED SHALL BE INSTALLED AFTER PAINTING.
11. COORDINATE LOCATION OF ALL FIRE ALARM DEVICES WITH INTERIOR DRAWINGS BEFORE ROUGH-IN. COORDINATE SPECIFICALLY WITH SOUND PANELS, MIRRORS, TACTBOARDS, AND WHITEBOARDS.

NOTES BY SYMBOL: (#)

(THIS SHEET ONLY)

1. PROVIDE TWO COMPARTMENT DIVIDED SURFACE RACEWAY NO LARGER THAN 4" HIGH ON HOLLOW METAL BASE PAINTED TO MATCH BASE. BASIS OF DESIGN: WIREMOLD AL4750.
2. PROVIDE 100A, 125/250V, 3PH, PIN AND SLEEVE RECEPTACLE. HUBBELL MODEL # M4100R12. CONFIGURATION TO MATCH MOBILE COMMAND UNIT PLUG IN WEATHER PROOF ENCLOSURE.
3. PROVIDE (1) 3" CONDUIT & (1) 1" CONDUIT FOR FUTURE ELEVATOR. PROVIDE PULL STRING.
4. PROVIDE POWER TO DOOR HARDWARE REQUIRING POWER. SEE DETAILS FOR MORE INFORMATION. CIRCUIT SHOWN SHALL BE USED BY ALL DOORS IN THE GENERAL AREA. FOR FIRE DOORS, PROVIDE SMOKE DETECTORS ON EITHER SIDE OF DOOR WITHIN 5' CONNECTED TO THE DOOR HARDWARE. CONNECT TO FIRE ALARM FOR DOOR RELEASE IN EMERGENCY.
5. PROVIDE PLUGMOLD RACEWAY WITH RECEPTACLES FINISH. SELECTED BY ARCHITECT.
6. PROVIDE 24V TRANSFORMER, POWER TO TRANSFORMER AND FINAL CONNECTION TO PLUMBING FIXTURE.
7. FOR ALL POWER WIRING FOR DEVICES IN THE CEILING OR ESLEWHERE IN THE SPACE, AN ACCESS PANEL MUST BE UTILIZED FOR ANY JUNCTION BOX LOCATIONS. THE BRANCH CIRCUIT CONDUIT SHALL BE CONCEILED BEHIND THE EPIC DECK PANELS. REFER TO EPIC DECK DETAILS ON ARCHITECTURAL PLANS FOR INSTALLATION PRACTICE FOR ELECTRICAL DEVICES AND CONDUIT. EXPOSED CONDUIT SHALL NOT BE USED.
8. PROVIDE 1"C TO DOOR FRAME AND EXTEND TO 6" ABOVE ACCESSIBLE CEILING WITH PULL STRING.
9. FLOOR BOX - PROVIDE (2) DUPLEX RECEPTACLES.
10. RECEPTACLE FOR EWC SHALL BE INSTALLED TO ENSURE IT IS COVERED BY SKIRT. COORDINATE WITH SELECTED FIXTURE.
11. PROVIDE FINAL POWER CONNECTION TO MOTORIZED SCREEN. CONTROL DEVICE PROVIDED WITH UNIT. PROVIDE ALL INTERCONNECTING WIRING.
12. PROVIDE RECEPTACLE IN CEILING FOR PROJECTOR.
13. PROVIDE COMPLETE SMOKE DETECTION COVERAGE IN THIS AREA WITH BEAM STYLE SMOKE DETECTORS.
14. REFER TO AV DRAWINGS FOR MOUNTING HEIGHTS OF OUTLETS FOR DISPLAYS.



KEY PLAN

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STATE OF MARYLAND
KATHRYN PARTTI
49693
PROFESSIONAL ENGINEER

est. 1776

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FIRST FLOOR PLAN - UNIT A - POWER

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

FILENAME:

DATE: December 18, 2019

PROJECT 3089

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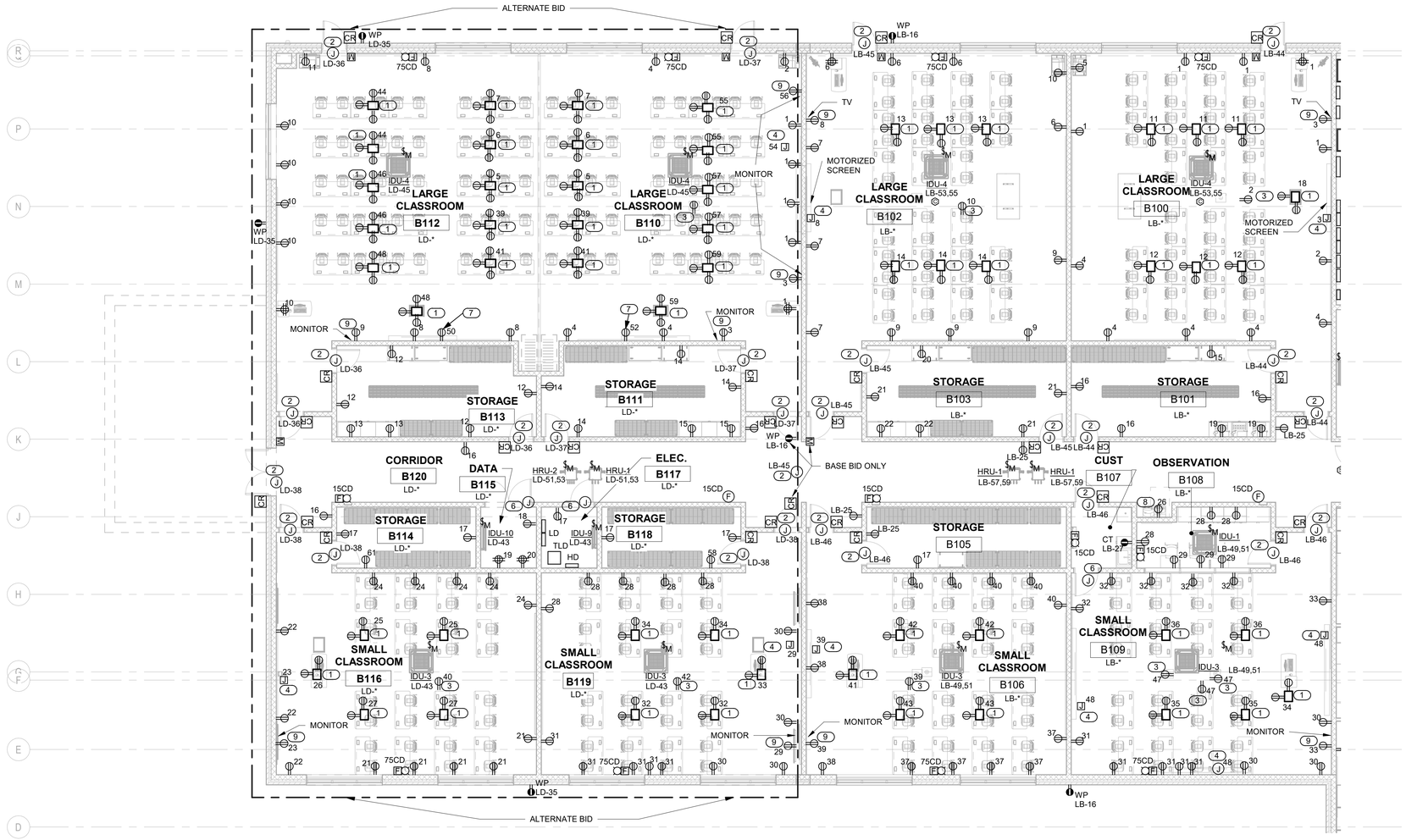


1 FIRST FLOOR PLAN - UNIT B - POWER

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

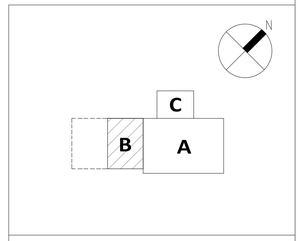
GENERAL NOTES:

1. PROVIDE 1" CONDUIT TO ALL INTERIOR DOOR FRAMES THAT ARE NOT SCHEDULED TO RECEIVE ELECTRONIC HARDWARE FOR FUTURE INSTALLATION OF CARD READERS, ETC. CONDUITS TO EXTEND FROM DOOR FRAME TO POINT ABOVE THE FINISH CEILING FOR EASY INSTALLATION OF WIRING, ETC. IN THE FUTURE.
2. SEE DETAILS FOR FLOOR AND WALL PENETRATION SEALING REQUIREMENTS. WHERE CONDUIT AND WIRE PENETRATES THE WALL, THE WALL SHALL NOT ACT AS A SUPPORT. THE RACEWAY SHALL BE INDEPENDENTLY SUPPORTED ON EACH SIDE OF THE WALL. IF THE WALL PENETRATION IS NOT SEALED, PROVIDE SLEEVE TO PROTECT RACEWAY FROM DAMAGE. WALL AND FLOOR PENETRATIONS SHALL BE CUT USING HOLE SAWS OR EQUIVALENT. PENETRATION SHALL NOT HAVE JAGGED EDGES.
3. SEE DETAILS FOR CLARIFICATION OF TYPICAL CIRCUIT DESIGNATIONS.
4. PROVIDE POWER TO ALL DOORS WITH HARDWARE REQUIRING POWER CONNECTIONS. PROVIDE CONDUITS FOR ALL DOOR HARDWARE CABLING. INSTALL ALL CABLING FURNISHED BY THE DOOR HARDWARE SUPPLIER. COORDINATE WITH THE DOOR HARDWARE SUPPLIER FOR A SPECIFIC LIST OF DOORS REQUIRING POWER AND CABLING INSTALLATION. SEE DOOR HARDWARE SCHEDULE FOR MORE INFORMATION. SEE DETAILS FOR MORE INFORMATION.
5. ALL RECEPTACLES LOCATED IN CEILING SHALL FACE INTO OCCUPIED SPACE.
6. FOR ALL RECEPTACLES NOTED AS POWERING TVS OR MONITORS, COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH INTERIOR DRAWINGS TO ENSURE RECEPTACLE AND DATA FALL BEHIND TV. RECEPTACLES INSTALLED WITHOUT PROPER COORDINATION SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER. COORDINATE LOCATION OF DATA DEVICE WITH POWER BOX. BOXES SHALL BE INSTALLED DIRECTLY ADJACENT TO EACH OTHER.
7. COORDINATE THE LOCATION OF ALL RECEPTACLES LOCATED ADJACENT TO TACK BOARDS, TACKSTRIPS, AND OTHER PERMANENT WALL FIXTURES. RECEPTACLES SHALL NOT BE LOCATED BEHIND TACK BOARDS AND TACKSTRIPS. SEE ARCHITECTURAL INTERIOR DRAWINGS FOR EXACT LOCATIONS OF TACK BOARDS AND OTHER PERMANENT WALL FIXTURES.
8. COORDINATE COUNTERTOP RECEPTACLE LOCATIONS WITH CASEWORK. ENSURE RECEPTACLES ARE NOT BEHIND TALL UNITS.
9. IN AREAS WHERE THERE IS NO CEILING OR CEILING CLOUDS, ALL DEVICES, BOXES, CONDUITS, AND APPEARANCE SHALL BE PAINTABLE. ALL CONDUIT AND WIRE SHALL BE RUN TIGHT TO THE STRCTURE. ALL LABELS FOR JUNCTION BOXES, CONDUIT, AND DEVICES WHERE EVERYTHING IS PAINTED SHALL BE INSTALLED AFTER PAINTING.
10. COORDINATE LOCATION OF ALL FIRE ALARM DEVICES WITH INTERIOR DRAWINGS BEFORE ROUGH-IN. COORDINATE SPECIFICALLY WITH SOUND PANELS, MIRRORS, TACTBOARDS, AND WHITEBOARDS.

NOTES BY SYMBOL: (#)

(THIS SHEET ONLY)

1. PROVIDE FOUR COMPARTMENT DIVIDED FLOOR BOX WITH DEVICES INDICATED. BASIS OF DESIGN: WIREMOLD EFB45 SERIES. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
2. PROVIDE POWER TO DOOR HARDWARE REQUIRING POWER. SEE DETAILS FOR MORE INFORMATION. CIRCUIT SHOWN SHALL BE USED BY ALL DOORS IN THE GENERAL AREA. FOR FIRE DOORS, PROVIDE SMOKE DETECTORS ON EITHER SIDE OF DOOR WITHIN 5' CONNECTED TO THE DOOR HARDWARE. CONNECT TO FIRE ALARM FOR DOOR RELEASE IN EMERGENCY.
3. PROVIDE CEILING MOUNTED RECEPTACLE TO POWER PROJECTOR. VERIFY EXACT LOCATION IN FIELD.
4. PROVIDE POWER FOR MOTORIZED PROJECTION SCREEN. VERIFY EXACT LOCATION IN FIELD.
5. NOT USED.
6. PROVIDE 1"C TO DOOR FRAME AND EXTEND TO 6" ABOVE ACCESSIBLE CEILING WITH PULL STRING.
7. PROVIDE RECEPTACLE FOR SHORT THROW PROJECTOR. COORDINATE EXACT MOUNTING HEIGHT IN THE FIELD.
8. RECEPTACLE FOR EWC SHALL BE INSTALLED TO ENSURE IT IS COVERED BY SKIRT. COORDINATE WITH SELECTED FIXTURE.
9. REFER TO AV DRAWINGS FOR MOUNTING HEIGHTS OF OUTLETS FOR DISPLAYS.



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FIRST FLOOR PLAN - UNIT B - POWER

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

FILENAME:

DATE: December 18, 2019

PROJECT 3089

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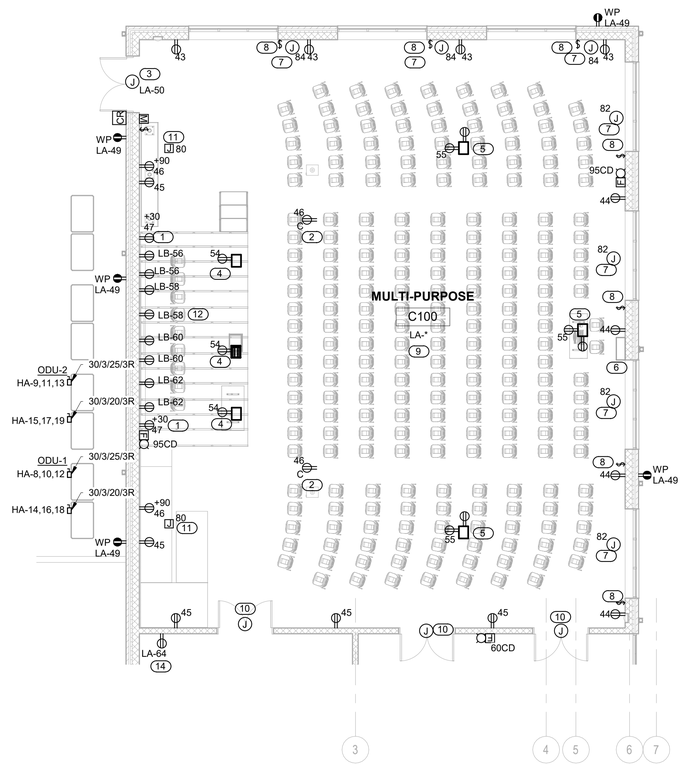


1 FIRST FLOOR PLAN - UNIT C - POWER
SCALE: 1/8" = 1'-0"

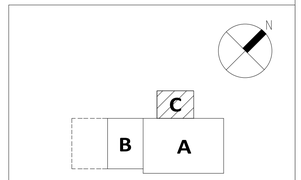
GENERAL NOTES:

1. PROVIDE 1" CONDUIT TO ALL INTERIOR DOOR FRAMES THAT ARE NOT SCHEDULED TO RECEIVE ELECTRONIC HARDWARE FOR FUTURE INSTALLATION OF CARD READERS, ETC. CONDUITS TO EXTEND FROM DOOR FRAME TO POINT ABOVE THE FINISH CEILING FOR EASY INSTALLATION OF WIRING, ETC. IN THE FUTURE.
2. SEE DETAILS FOR FLOOR AND WALL PENETRATION SEALING REQUIREMENTS. WHERE CONDUIT AND WIRE PENETRATES THE WALL, THE WALL SHALL NOT ACT AS A SUPPORT. THE RACEWAY SHALL BE INDEPENDENTLY SUPPORTED ON EACH SIDE OF THE WALL. IF THE WALL PENETRATION IS NOT SEALED, PROVIDE SLEEVE TO PROTECT RACEWAY FROM DAMAGE. WALL AND FLOOR PENETRATIONS SHALL BE CUT USING HOLE SAWS OR EQUIVALENT. PENETRATION SHALL NOT HAVE JAGGED EDGES.
3. SEE DETAILS FOR CLARIFICATION OF TYPICAL CIRCUIT DESIGNATIONS.
4. PROVIDE POWER TO ALL DOORS WITH HARDWARE REQUIRING POWER CONNECTIONS. PROVIDE CONDUITS FOR ALL DOOR HARDWARE CABLING. INSTALL ALL CABLING FURNISHED BY THE DOOR HARDWARE SUPPLIER. COORDINATE WITH THE DOOR HARDWARE SUPPLIER FOR A SPECIFIC LIST OF DOORS REQUIRING POWER AND CABLING INSTALLATION. SEE DOOR HARDWARE SCHEDULE FOR MORE INFORMATION. SEE DETAILS FOR MORE INFORMATION.
5. ALL RECEPTACLES LOCATED IN CEILING SHALL FACE INTO OCCUPIED SPACE.
6. FOR ALL RECEPTACLES NOTED AS POWERING TVS OR MONITORS, COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH INTERIOR DRAWINGS TO ENSURE RECEPTACLE AND DATA FALL BEHIND TV. RECEPTACLES INSTALLED WITHOUT PROPER COORDINATION SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER. COORDINATE LOCATION OF DATA DEVICE WITH POWER BOX. BOXES SHALL BE INSTALLED DIRECTLY ADJACENT TO EACH OTHER.
7. COORDINATE THE LOCATION OF ALL RECEPTACLES LOCATED ADJACENT TO TACK BOARDS, TACKSTRIPS, AND OTHER PERMANENT WALL FIXTURES. RECEPTACLES SHALL NOT BE LOCATED BEHIND TACK BOARDS AND TACKSTRIPS. SEE ARCHITECTURAL INTERIOR DRAWINGS FOR EXACT LOCATIONS OF TACK BOARDS AND OTHER PERMANENT WALL FIXTURES.
8. COORDINATE COUNTERTOP RECEPTACLE LOCATIONS WITH CASEWORK. ENSURE RECEPTACLES ARE NOT BEHIND TALL UNITS.
9. IN AREAS WHERE THERE IS NO CEILING OR CEILING CLOUDS, ALL DEVICES, BOXES, CONDUITS, AND APPEARANCE SHALL BE PAINTABLE. ALL CONDUIT AND WIRE SHALL BE RUN TIGHT TO THE STRCTURE. ALL LABELS FOR JUNCTION BOXES, CONDUIT, AND DEVICES WHERE EVERYTHING IS PAINTED SHALL BE INSTALLED AFTER PAINTING.
10. COORDINATE LOCATION OF ALL FIRE ALARM DEVICES WITH INTERIOR DRAWINGS BEFORE ROUGH-IN. COORDINATE SPECIFICALLY WITH SOUND PANELS, MIRRORS, TACTBOARDS, AND WHITEBOARDS.

NOTES BY SYMBOL: (#)

(THIS SHEET ONLY)

1. MOUNT RECEPTACLE ABOVE MOVABLE STAGE 30" ABOVE CONCRETE FLOOR.
2. PROVIDE STRUCTURE MOUNTED RECEPTACLE TO POWER PROJECTOR. VERIFY EXACT LOCATION IN FIELD.
3. PROVIDE POWER TO DOOR HARDWARE REQUIRING POWER. SEE DETAILS FOR MORE INFORMATION. CIRCUIT SHOWN SHALL BE USED BY ALL DOORS IN THE GENERAL AREA.
4. PROVIDE SIX COMPARTMENT DIVIDED FLOOR BOX WITH DEVICES INDICATED. BASIS OF DESIGN: WIREMOLD EFB6 SERIES. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
5. PROVIDE SIX COMPARTMENT DIVIDED FLOOR BOX WITH DEVICES INDICATED. BASIS OF DESIGN: WIREMOLD EFB65 SERIES. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
6. SHADE CONTROL PANEL INSTALLED BY THE G.C.. REFER TO TYPICAL ROLLER SHADE CONTROLLER WIRING DIAGRAM ON DETAILS DRAWINGS FOR EXACT REQUIREMENTS.
7. FOR ROLLER SHADE- CONNECT TO NEAREST ROLLER SHADE CONTROL PANEL LOCATED ABOVE CEILING AND INSTALLED BY G.C.. WIRING DETAILS VARY BY MANUFACTURER. COORDINATE WITH SELECTED PRODUCT.
8. ROLLER SHADE MANUAL OVERRIDE SWITCH PRIVIDED BY G.C., INSTALLED BY E.C., (REFER TO TYPICAL ROLLER SHADE CONTROLLER WIRING DIAGRAM ON DETAILS DRAWINGS FOR EXACT REQUIREMENTS)
9. FOR ALL POWER WIRING FOR DEVICES IN THE CEILING OR ESLEWHERE IN THE SPACE, AN ACCESS PANEL MUST BE UTILIZED FOR ANY JUNCTION BOX LOCATIONS. THE BRANCH CIRCUIT CONDUIT SHALL BE CONCEILED BEHIDN THE EPIC DECK PANELS. REFER TO EPIC DECK DETAILS ON ARCHITECTURAL PLANS FOR INSTALLATION PRACTICE FOR ELECTRICAL DEVICES AND CONDUIT. EXPOSED CONDUIT SHALL NOT BE USED.
10. PROVIDE 1"C TO DOOR FRAME AND EXTEND TO 6" ABOVE ACCESSIBLE CEILING WITH PULL STRING.
11. PROVIDE POWER FOR MOTORIZED PROJECTION SCREEN. VERIFY EXACT LOCATION IN FIELD.
12. PROVIDE (8) DUPLEX RECEPTACLES FOR FLAT PANEL MONITORS. COORDINATE MOUNTING HEIGHT & LOCATION IN THE FIELD.



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CR

FIRST FLOOR PLAN - UNIT C - POWER

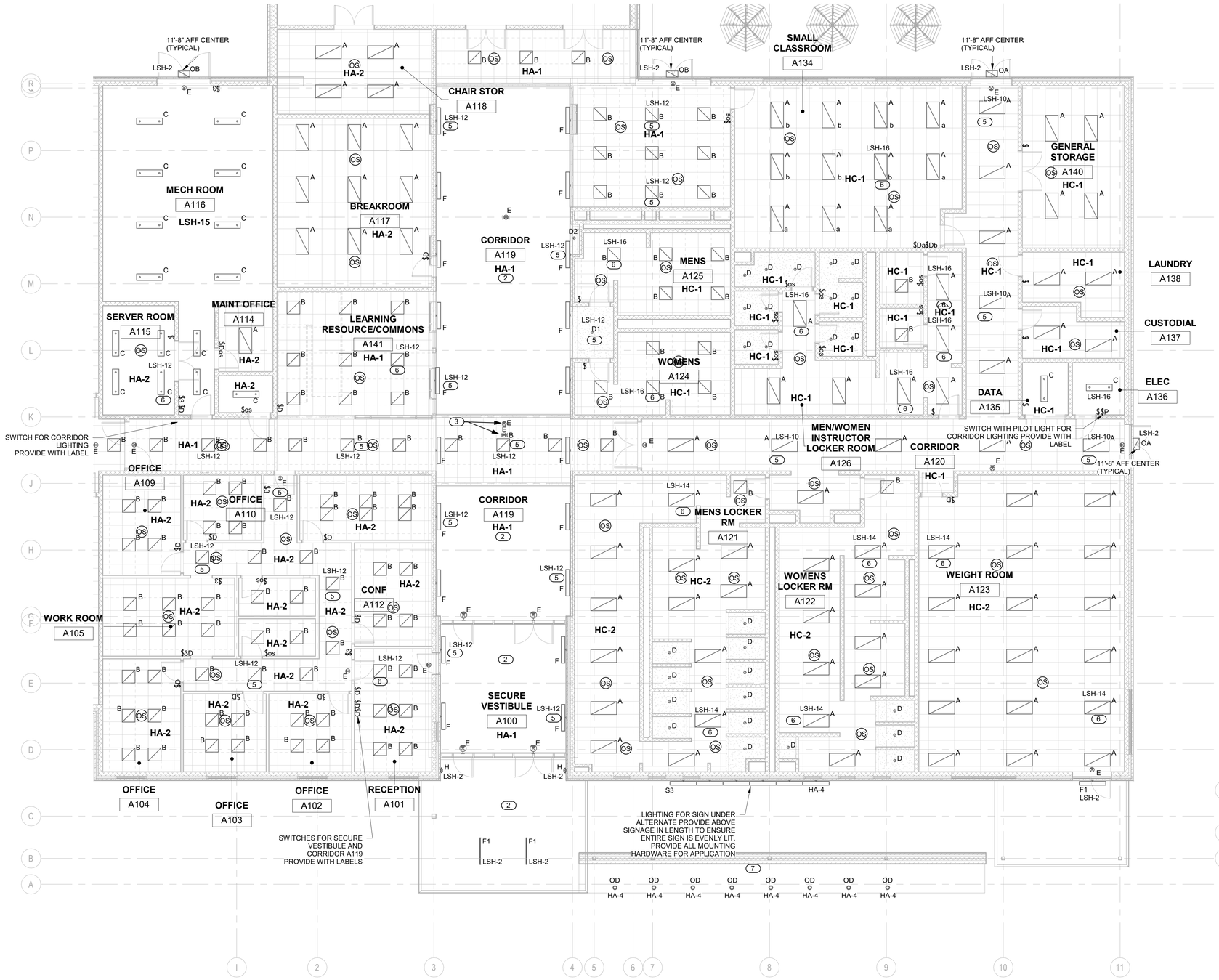
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: December 18, 2019

PROJECT
3089

E1.2



1 FIRST FLOOR PLAN - UNIT A - LIGHTING
SCALE: 1/8" = 1'-0"

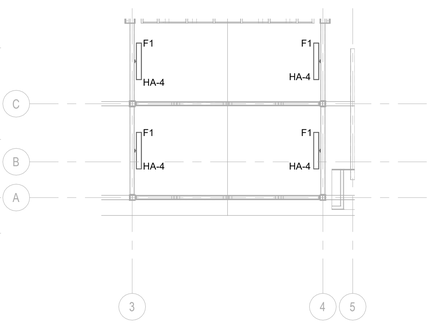
GENERAL NOTES:

1. CONNECT ALL EXIT SIGNS AND EMERGENCY BATTERY UNITS TO UNSWITCHED LEG OF LIGHTING CIRCUIT SERVING THE SAME AREA WITH 2#12 & 1#12GRD IN 3/4"C.
2. CONNECT ALL EXIT SIGNS TO LSH-11.
3. ALL EXTERIOR LIGHTING SHALL BE RUN THROUGH A LIGHTING CONTACTOR FOR CONTROL.

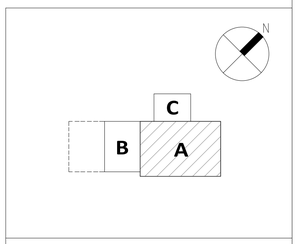
NOTES BY SYMBOL: (#)

(THIS SHEET ONLY)

1. NOT USED.
2. IN SECURE VESTIBULE A100, CORRIDOR A119 & UPPER EXTIOR CANOPY, RUN ALL CONDUITS AND WIRING ABOVE CONCEALED CEILING. WHERE NOT POSSIBLE, ROUTING SHALL BE APPROVED BY THE ARCHITECT BEFORE INSTALLATION. ALL DEVICES, BOXES, CONDUITS, AND APPURTANCES SHALL BE PAINTABLE. ALL CONDUIT AND WIRE SHALL BE RUN TIGHT TO THE STRUCTURE.
3. MOUNT LIGHT FIXTURES TYPE D1 AND EXIT SIGNS TO UNDER SIDE OF GRID.
4. FOR ALL CEILING/DECK MOUNTED FIXTURES, AN ACCESS PANEL MUST BE UTILIZED FOR ANY JUNCTION BOX LOCATIONS. THE BRANCE CIRCUIT CONDUIT SHALL BE CONCEALED BEHIND THE EPIC DECK PANELS. REFER TO EPIC DECK DETAILS ON ARCHITECTURAL PLANS FOR INSTALLATION PRACTICES FOR ELECTRICAL DEVICES AND CONDUIT. EXPOSED CONDUIT SHALL NOT BE USED.
5. FIXTURE ON 24/7 FOR SAFETY AND SECURITY.
6. PROVIDE EMERGENCY LIGHTING CONTROL DEVICE TO ENSURE FIXTURE AUTOMATICALLY ILLUMINATES UNDER EMERGENCY AND IS NORMALLY CONTROLLED THE SAME.
7. PROVIDE IN GROUND LIGHTING IN 1 CUBIC FOOT OF CONCRETE. AIM FIXTURES IN THE FIELD. PLACEMENT SHALL BE AS PER SELECTED MANUFACTURER'S RECOMMENDATIONS TO EVENLY LIGHT SIGN.



2 UPPER CANOPY PLAN - LIGHTING
SCALE: 1/8" = 1'-0"



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FIRST FLOOR PLAN - UNIT A - LIGHTING

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

FILENAME:

DATE: December 18, 2019

PROJECT 3089

E2.0

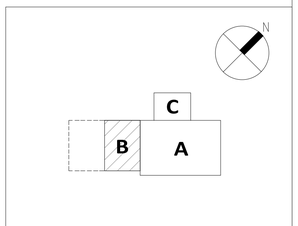
1 FIRST FLOOR PLAN - UNIT B - LIGHTING
SCALE: 1/8" = 1'-0"

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. NOT USED
2. FIXTURE ON 24/7 FOR SAFETY AND SECURITY.
3. PROVIDE EMERGENCY LIGHTING CONTROL DEVICE TO ENSURE FIXTURE AUTOMATICALLY ILLUMINATES UNDER EMERGENCY AND IS NORMALLY CONTROLLED THE SAME.

GENERAL NOTES:

1. CONNECT ALL EXIT SIGNS TO LSH-13
2. ALL EXTERIOR LIGHTING SHALL BE RUN THROUGH A LIGHTING CONTACTOR FOR CONTROL.



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FIRST FLOOR PLAN - UNIT B - LIGHTING

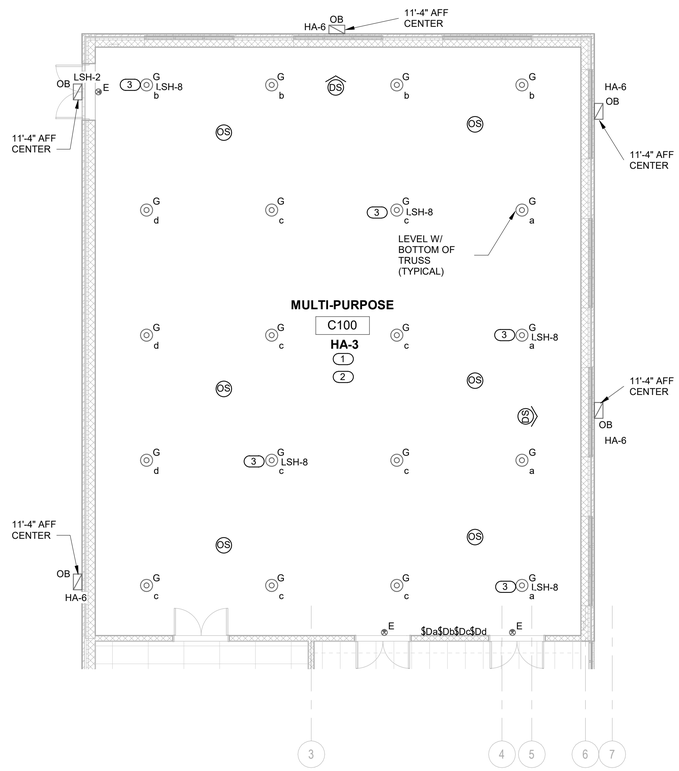
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: December 18, 2019

PROJECT 3089

E2.1



1 FIRST FLOOR PLAN - UNIT C - LIGHTING

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

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

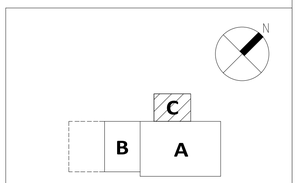
1. IN MULTI-PURPOSE ROOM, ROUTING SHALL BE APPROVED BY THE ARCHITECT BEFORE INSTALLATION. ALL DEVICES, BOXES, CONDUITS, AND APPURTANCES SHALL BE PAINTABLE. ALL CONDUIT AND WIRE SHALL BE RUN TIGHT TO THE STRUCTURE.

2. FOR ALL CEILING/DECK MOUNTED FIXTURES, AN ACCESS PANEL MUST BE UTILIZED FOR ANY JUNCTION BOX LOCATIONS. THE BRANCE CIRCUIT CONDUIT SHALL BE CONCEALED BEHIND THE EPIC DECK PANELS. REFER TO EPIC DECK DETAILS ON ARCHITECTURAL PLANS FOR INSTALLATION PRACTICES FOR ELECTRICAL DEVICES AND CONDUIT. EXPOSED CONDUIT SHALL NOT BE USED.

3. PROVIDE EMERGENCY LIGHTING CONTROL DEVICE TO ENSURE FIXTURE AUTOMATICALLY ILLUMINATES UNDER EMERGENCY AND IS NORMALLY CONTROLLED THE SAME.

GENERAL NOTES:

1. CONNECT ALL EXIT SIGNS ONTO ONE CIRCUIT ON PANEL LSL



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FIRST FLOOR PLAN - UNIT C - LIGHTING

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

FILENAME:

DATE: December 18, 2019

PROJECT
3089

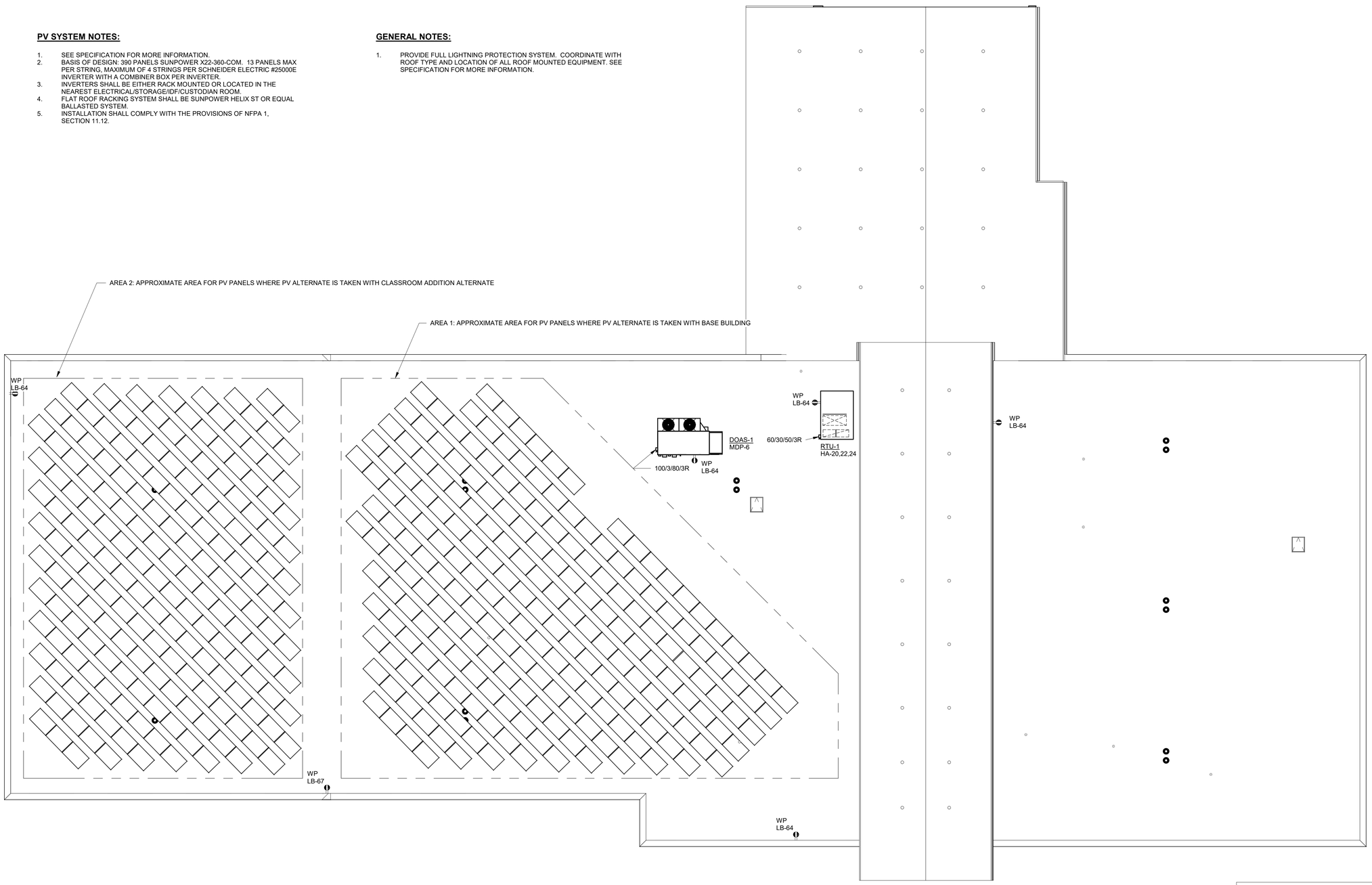
E2.2

PV SYSTEM NOTES:

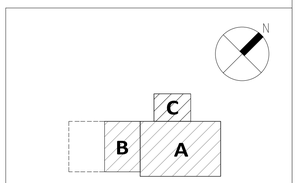
1. SEE SPECIFICATION FOR MORE INFORMATION.
2. BASIS OF DESIGN: 390 PANELS SUNPOWER X22-360-COM. 13 PANELS MAX PER STRING, MAXIMUM OF 4 STRINGS PER SCHNEIDER ELECTRIC #25000E INVERTER WITH A COMBINER BOX PER INVERTER.
3. INVERTERS SHALL BE EITHER RACK MOUNTED OR LOCATED IN THE NEAREST ELECTRICAL/STORAGE/IDF/CUSTODIAN ROOM.
4. FLAT ROOF RACKING SYSTEM SHALL BE SUNPOWER HELIX ST OR EQUAL BALLASTED SYSTEM.
5. INSTALLATION SHALL COMPLY WITH THE PROVISIONS OF NFPA 1, SECTION 11.12.

GENERAL NOTES:

1. PROVIDE FULL LIGHTNING PROTECTION SYSTEM. COORDINATE WITH ROOF TYPE AND LOCATION OF ALL ROOF MOUNTED EQUIPMENT. SEE SPECIFICATION FOR MORE INFORMATION.



1 ROOF PLAN - POWER
SCALE: 3/32" = 1'-0"



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ROOF PLAN - POWER

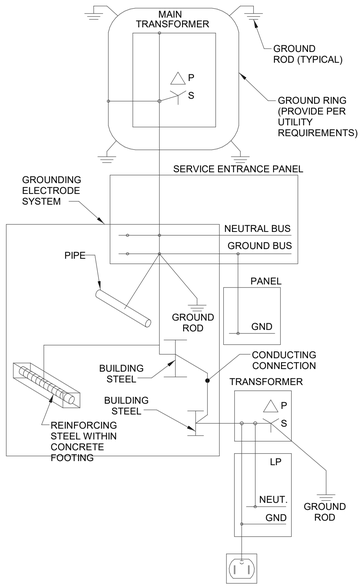
PLOT SCALE: 3/32" = 1'-0"

FILENAME:

DATE: December 18, 2019

PROJECT
3089

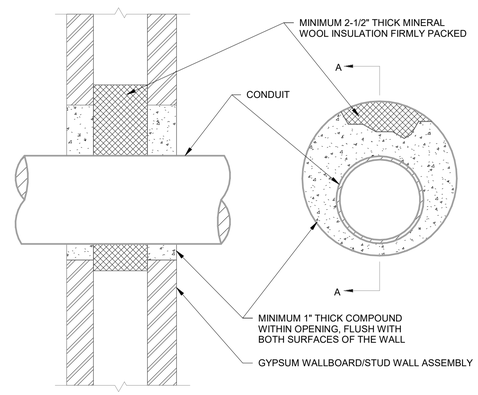
E3.0



NOTES:

1. ALL GROUNDING ELECTRODE CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH NEC TABLE 250.66.
2. ALL GROUNDING CONDUCTORS FOR GROUNDING OF RACEWAY AND EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH NEC TABLE 250.122.
3. GROUNDING DETAIL IS SHOWN TO REPRESENT COMPLETE GROUNDING CONTINUITY.

TYPICAL GROUNDING DETAIL
NO SCALE

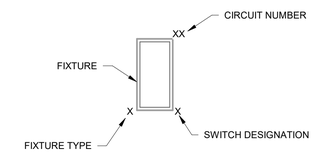


SECTION 'A-A'

NOTES:

1. MINIMUM 2HR FIRE RATING OF SEALING ASSEMBLY
2. UL SYSTEM W-L-1027

WALL CONDUIT PENETRATION - FIRE SEALING
NO SCALE



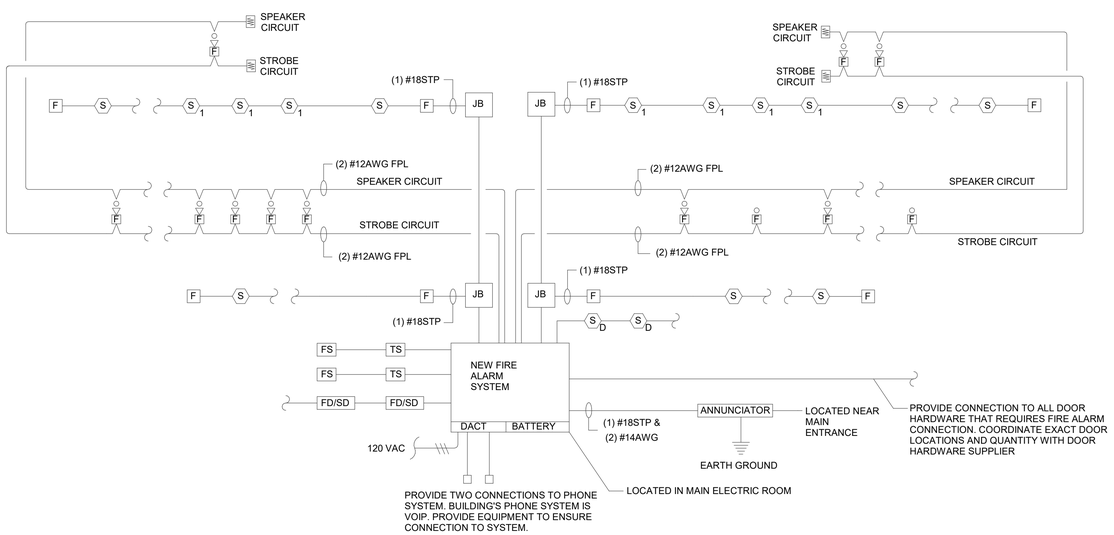
TYPICAL FIXTURE DESIGNATION
NO SCALE

ROOM NAME

100

PANEL DESIGNATION-*

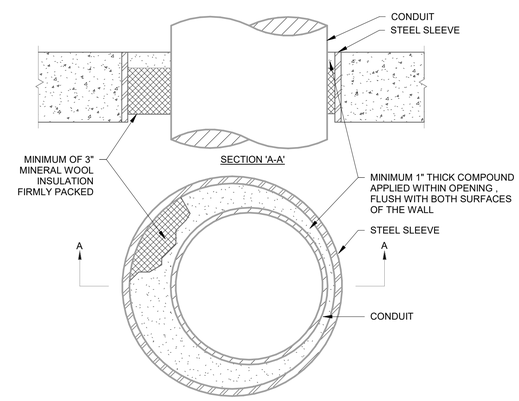
TYPICAL CIRCUIT DESIGNATION
NO SCALE



FIRE PROTECTION SIGNALING SYSTEM RISER DIAGRAM
NO SCALE

NOTES:

1. PROVIDE A FIRE ALARM SUBMITTAL INCLUDING MANUFACTURER'S LITERATURE FOR EACH COMPONENT SHALL BE MADE BY THE INSTALLING CONTRACTOR PRIOR TO INSTALLATION. APPROVED VOICE NOTIFICATION WILL BE REQUIRED IN ACCORDANCE WITH NFPA 101, 12.3.4.3.
2. FURNISH ALL DUCT DETECTORS AND ASSOCIATED WIRING. MECHANICAL CONTRACTOR TO INSTALL DETECTORS. CONTRACTOR SHALL REFER TO MECHANICAL PLANS FOR DUCT DETECTOR LOCATIONS AND QUANTITIES.
3. DIAGRAMMATIC ONLY - NUMBER OF DEVICES DOES NOT MATCH THOSE SHOWN ON THE DRAWING.
4. PROVIDE CONNECT TO ALL ZONE VALVES, FLOW AND TAMPER SWITCHES. SEE FIRE PROTECTION DRAWINGS FOR QUANTITIES AND LOCATIONS.
5. PROVIDE CONNECTION TO SMOKE AND FIRE/SMOKE DAMPERS. SEE MECHANICAL PLANS FOR LOCATIONS AND QUANTITIES.
6. FOR ALL COMPONENTS INCLUDING THE MAIN FIRE ALARM PANEL AND EXTENDER PANELS THAT REQUIRE POWER, PROVIDE 120V, 20A DEDICATED CIRCUIT FROM NEAREST PANEL WITH SPACE. EXTEND 2#12 & 1#12GRD IN 3/4"C FOR POWER.
7. PROVIDE SMOKE DETECTOR AND HEAT DETECTOR ABOVE MAIN FIRE ALARM PANEL.



NOTES:

1. MINIMUM 3HR FIRE RATING OF SEALING ASSEMBLY
2. UL SYSTEM C-AJ-1081

CONDUIT CONCRETE FLOOR/WALL PENETRATION
NO SCALE

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#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

ELECTRICAL DETAILS

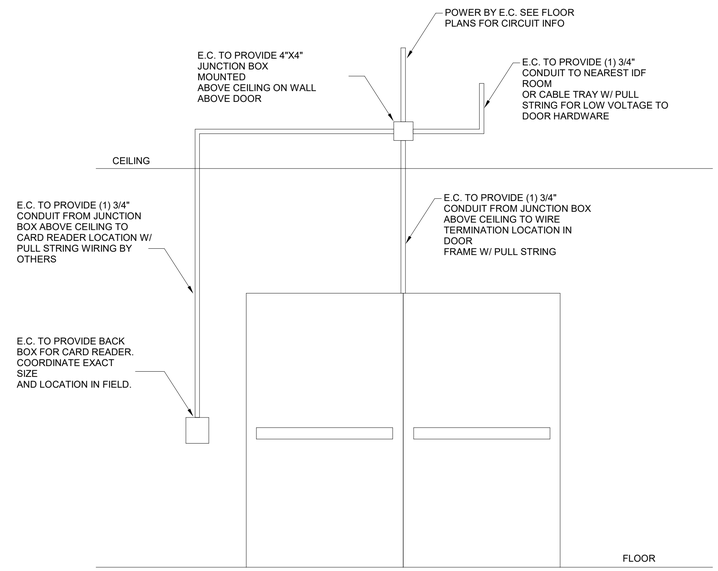
PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT
3089

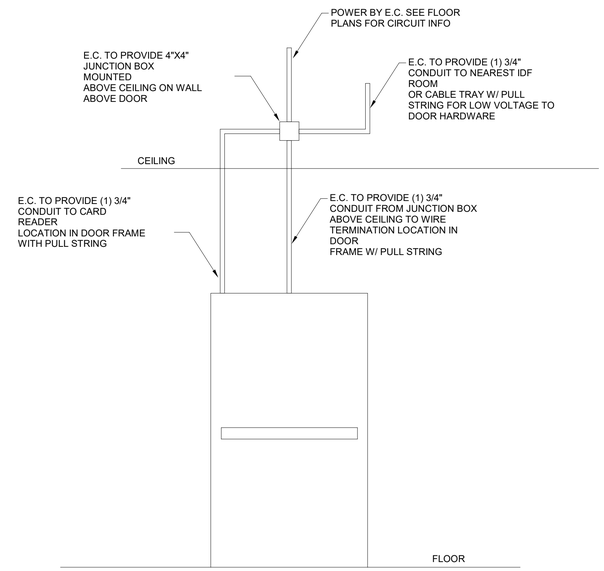
E4.0



NOTE: EC SHALL INSTALL DOOR HARDWARE CABLING SUPPLIED WITH THE DOOR HARDWARE AND PROVIDE FINAL TERMINATIONS.

DOORS WITH REMOTE MOUNTED CARD READERS

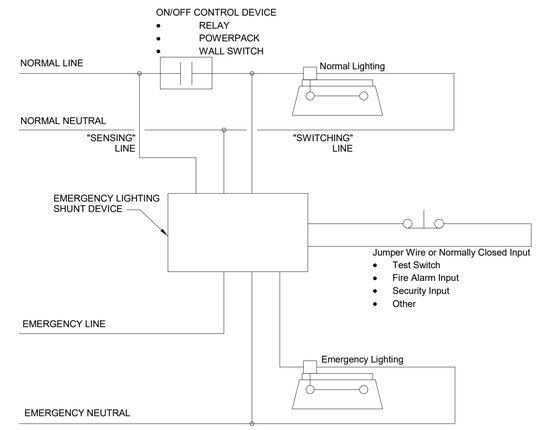
NO SCALE



NOTE: EC SHALL INSTALL DOOR HARDWARE CABLING SUPPLIED WITH THE DOOR HARDWARE AND PROVIDE FINAL TERMINATIONS.

DOORS WITH MULLION MOUNTED CARD READERS

NO SCALE

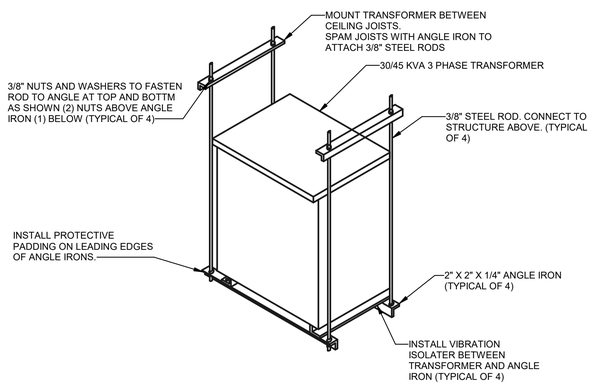


EMERGENCY LIGHTING CONTROL DEVICE

NO SCALE

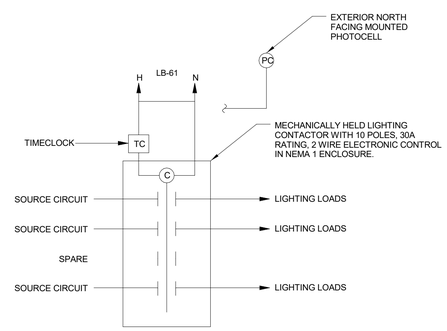
NOTES:

1. DEVICE TO BE WIRED IN THE CONTROL DEVICE CONFIGURATION. EMERGENCY LIGHTING SHALL BE CONTROLLED THE SAME AS THE NORMAL LIGHTING IN THE SAME AREA.
2. PROVIDE DEVICE AS NECESSARY TO PROVIDE A COMPLETE AND FUNCTION SYSTEM.



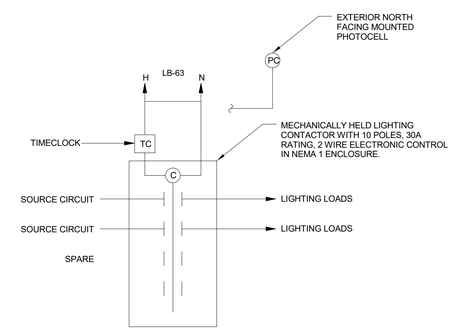
TRANSFORMER CEILING SUSPENSION

NO SCALE



EXTERIOR LIGHTING CONTACTOR WIRING DIAGRAM

NO SCALE



EXTERIOR EMERGENCY LIGHTING CONTACTOR WIRING DIAGRAM

NO SCALE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 49693, Expiration Date: 2020-07-24.

STATE OF MARYLAND KATHRYN PARFITT 49693 PROFESSIONAL ENGINEER

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ELECTRICAL DETAILS

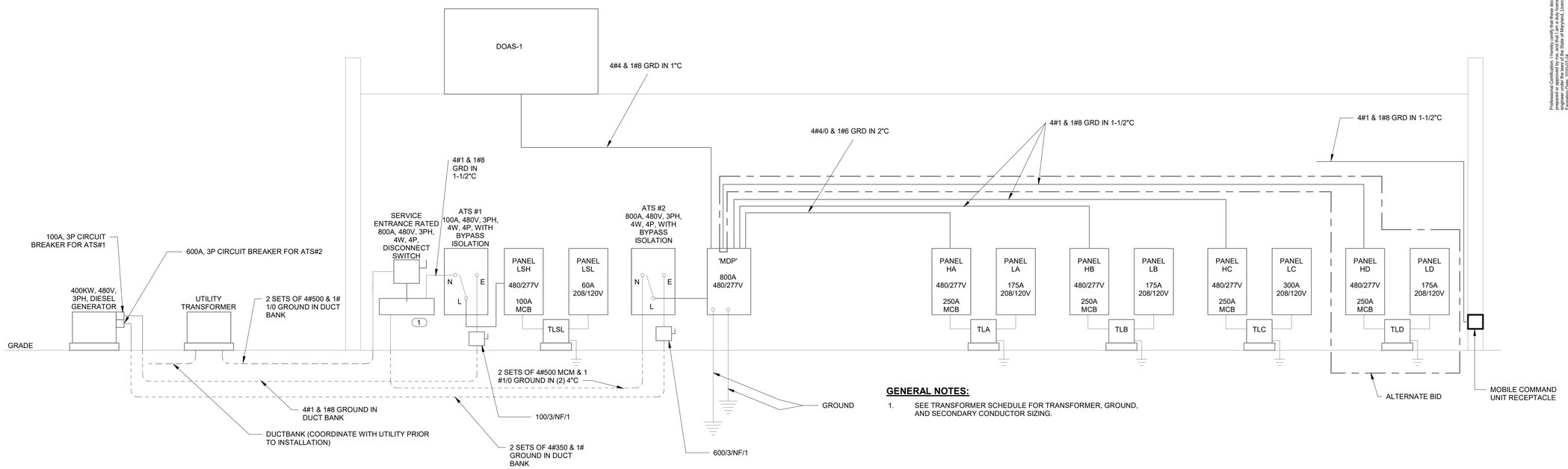
PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT 3089

E4.1

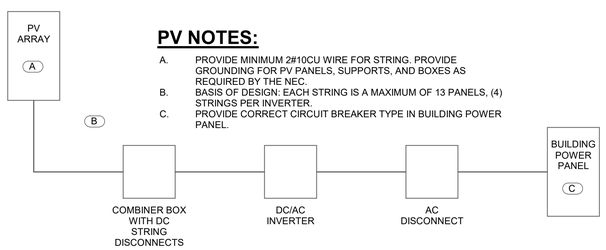


GENERAL NOTES:

1. SEE TRANSFORMER SCHEDULE FOR TRANSFORMER, GROUND, AND SECONDARY CONDUCTOR SIZING.

NOTES BY SYMBOL: (#)

1. HINGED WIRE TROUGH SIZE FOR ALL CONDUCTOR TAPS UTILIZE ILSCO CONDUCTOR TAPS FOR ALL FEEDER TAPS MADE IN WIRE TROUGH.



PV NOTES:

A. PROVIDE MINIMUM 2#10CU WIRE FOR STRING. PROVIDE GROUNDING FOR PV PANELS, SUPPORTS, AND BOXES AS REQUIRED BY THE NEC.
B. BASIS OF DESIGN: EACH STRING IS A MAXIMUM OF 13 PANELS, (4) STRINGS PER INVERTER.
C. PROVIDE CORRECT CIRCUIT BREAKER TYPE IN BUILDING POWER PANEL.

TYPICAL PV ARRAY DIAGRAM

NO SCALE

TRANSFORMER SCHEDULE

TRANSFORMER TAG	SIZE	TYPE	PRIMARY CONDUCTORS	SECONDARY CONDUCTORS	GROUND SIZE
TLSL	15 kVA	480V-208Y/120V	3#6 & 1#10 IN 3/4"C	4#6 & 1#10 IN 3/4"C	#8
TLA	45kVA	480V-208Y/120V	3#1/0 & 1#6 IN 1-1/2"C	4#2/0 & 1#6 IN 2"C	#4
TLB	45 kVA	480V-208Y/120V	3#1/0 & 1#6 IN 1-1/2"C	4#2/0 & 1#6 IN 2"C	#4
TLC	45kVA	480V-208Y/120V	3#1/0 & 1#6 IN 1-1/2"C	4#2/0 & 1#6 IN 2"C	#4
TLD	45kVA	480V-208Y/120V	3#1/0 & 1#6 IN 1-1/2"C	4#2/0 & 1#6 IN 2"C	#4

ALTERNATE BID

PANEL: LSH BUS AMP: 100A AMPS MAIN BREAKER: 100A ELECTRONIC TRIP
MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 480/277 AIC: 42,000
NOTE: PROVIDE WITH TVSS

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
1								0	0.0			0	3/4"	10	10	2	20	1	SITE LIGHTING	2
3	XFMR TLSL	3	40	SEE RISER DIAGRAM				0		0.1		0.07	3/4"	12	12	2	20	1	LIGHTING - CORRIDOR B120	4
5								0			0.1	0.14	3/4"	12	12	2	20	1	LIGHTING - B100, B102, B106, & B109	6
7	ALTERNATE BID: LIGHTING - CORRIDOR B120	1	20	2	12	12	3/4"	0.07	0.5			0.45	3/4"	12	12	2	20	1	LIGHTING - MULTIPURPOSE ROOM	8
9	ALTERNATE BID: LIGHTING - B110, B112, B116, & B119	1	20	2	12	12	3/4"	0.14		0.5		0.344	3/4"	12	12	2	20	1	LIGHTING - CORRIDOR A120, A139, A113, & A106	10
11	EXIT SIGNS	1	20	2	10	10	3/4"	.5			0.7	0.204	3/4"	12	12	2	20	1	LIGHTING - CORRIDOR A119	12
13	EXIT SIGNS	1	20	2	10	10	3/4"	.5	0.6			0.096	3/4"	12	12	2	20	1	LIGHTING - A121, A122, & A123	14
15	ELECTRIC ROOM - LIGHTS	1	20	2	12	12	3/4"	.5		0.7		0.181	3/4"	12	12	2	20	1	LIGHTING - A124, A125, A126, A134, A136, & A138	16
17	SPARE	1	20					0			0.0	0								18
19	SPARE	1	20					0	0.0			0	SEE RISER				20	1	TLSL	20
21	SPARE	1	20					0		0.0		0								22
23	SPARE	1	20					0			0.0	0					20	1	SPARE	24
25	SPARE	1	20					0	0.0			0					20	1	SPARE	26
27	SPARE	1	20					0		0.0		0					20	1	SPARE	28
29	PREPARED SPACE	1						0			0.0	0					20	1	SPARE	30
31	PREPARED SPACE	1						0	0.0			0						1	PREPARED SPACE	32
33	PREPARED SPACE	1						0		0.0		0						1	PREPARED SPACE	34
35	PREPARED SPACE	1						0			0.0	0						1	PREPARED SPACE	36
37	PREPARED SPACE	1						0	0.0			0						1	PREPARED SPACE	38
39	PREPARED SPACE	1						0		0.0		0						1	PREPARED SPACE	40
41	PREPARED SPACE	1						0			0.0	0						1	PREPARED SPACE	42
							TOTAL KVA/PHASE		1.1	1.2	0.8									
							TOTAL KVA PANEL			3.2										
							TOTAL AMPS PANEL			4										

PANEL: LSL BUS AMP: 100A AMPS MAIN BREAKER: 35A
MOUNTING: SURFACE PHASE: 3 WIRE: 4W VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
1	FIRE ALARM CONTROL PANEL	1	20	2	12	12	3/4"	0.5	0.5			0.0	3/4"	12	12	2	20	1	SPARE	2
3	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	4
5	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	6
7	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	8
9	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	10
11	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	12
13	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	14
15	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	16
17	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	18
19	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	20
21	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	22
23	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	24
25	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	26
27	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	28
29	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	30
							TOTAL KVA/PHASE		0.5	0.0	0.0									
							TOTAL KVA PANEL			0.5										
							TOTAL AMPS PANEL			1										

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 49693, Expiration Date: 2020-07-24.

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ELECTRICAL RISER & SCHEDULES

PLOT SCALE: AS INDICATED
FILENAME:
DATE: December 18, 2019

PROJECT 3089

E5.0

PANEL: MDP DIST | **BUS AMP: 800A** | **AMPS MAIN BREAKER: 800A (100% RATED)**

MOUNTING: | **PHASE: 3** | **WIRE: 4** | **VOLTAGE: 480/277V** | **AIC: 65,000**

ALTERNATE BID → (PANEL HD)

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
				50.5	63.8			13.3				
1	PANEL HA	3	200	45.3		53.9		8.6	100	3	PANEL HB	2
				43.3			50.1	6.8				
				10.8	10.8			0.0				
3	PANEL HC	3	100	8.2		8.2		0.0	60	3	SPARE	4
				8.3			8.3	0.0				
				10.5	12.3			1.8				
5	PANEL HD	3	100	8.0		9.8		1.8	80	3	DOAS-1	6
				7.2			9.0	1.8				
				0.0	0.0			0.0				
7	SPARE	3	100	0.0		0.0		0.0	60	3	TVSS	8
				0.0			0.0	0.0				
				0.0	0.0			0.0				
9	SPARE	3	100	0.0		0.0		0.0	100	3	SPARE	10
				0.0			0.0	0.0				
				0.0	0.0			0.0				
11	SPARE	3	200	0.0		0.0		0.0	100	3	SPARE	12
				0.0			0.0	0.0				
				0.0	0.0			0.0				
13	SPARE	3	100	0.0		0.0		0.0	100	3	SPARE	14
				0.0			0.0	0.0				
				0.0	0.0			0.0				
15	SPARE	3	100	0.0		0.0		0.0	100	3	SPARE	16
				0.0			0.0	0.0				
				TOTAL KVA PER PHASE	86.9	71.9	67.4					
				TOTAL KVA		226.2						
				TOTAL AMPS		272.1						

GENERAL NOTE: SEE RISER DIAGRAM FOR WIRE AND CONDUIT INFORMATION. PROVIDE WITH DIGITAL METER.

NOTES:.
*** - PROVIDE ELECTRONIC TRIP CIRCUIT BREAKER**

PANEL: HA | BUS AMP: 250A | AMPS MAIN BREAKER: MLO

MOUNTING: SURFACE | PHASE: 3 | WIRE: 4 | VOLTAGE: 480/277 | AIC: 42,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
1	LIGHTS	1	20	2	12	12	3/4"	1.8	5.2			3.4	3/4"	12	12	2	20	1	LIGHTS	2
3	LIGHTS	1	20	2	12	12	3/4"	1.9		2.3		0.4	3/4"	12	12	2	20	1	LIGHTS - SIGN	4
5	LIGHTS - PARKING LOT	1	20	2	8	8	3/4"	2.0			2.0	0.0	3/4"	8	8	2	20	1	EXTERIOR LIGHTING	6
7	LIGHTS - OUTDOOR SIGN	1	20	2	8	8	3/4"	0.2	6.2			6.0								8
9								6.0		12.0		6.0	3/4"	10	10	4	25	3	ODU-1	10
11	ODU-2	3	25	4	10	10	3/4"	6.0			12.0	6.0								12
13								6.0	10.5			4.5								14
15								4.5		9.0		4.5	3/4"	12	12	4	20	3	OD-1	16
17	ODU-2	3	25	4	10	10	3/4"	4.5			9.0	4.5								18
19								4.5	15.7			11.2								20
21	LIGHTS - PARKING	1	20	2	8	8	3/4"	0.5		11.7		11.2	3/4"	10	6	4	50	3	RTU-1	22
23	FLAG POLE LIGHTS	1	20	2	10	10	3/4"	0.2			11.4	11.2								24
25								0.0	0.0			0.0	3/4"	12	12	2	20	1		26
27								0.0		0.0		0.0								28
29								0.0			0.0	0.0								30
31								0.0	0.0			0.0								32
33								0.0		0.0		0.0								34
35								0.0			0.0	0.0								36
37								12.9	12.9			0.0								38
39	XFMR TLA	3	70	SEE RISER DIAGRAM				10.8		10.8		0.0								40
41								9.1			9.1	0.0								42
								TOTAL KVA/PHASE	50.5	45.8	43.5									
								TOTAL KVA PANEL		139.8										
								TOTAL AMPS PANEL		168										

PANEL: HB | BUS AMP: 100A | AMPS MAIN BREAKER: MLO

MOUNTING: SURFACE | PHASE: 3 | WIRE: 4 | VOLTAGE: 480/277 | AIC: 42,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
1	LIGHTS	1	20	2	12	12	3/4"	3.0	3.0			0.0					20	1	SPARE	2
3	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	4
5	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	6
7	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	8
9	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	10
11	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	12
13	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	14
15	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	16
17	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	18
19	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	20
21	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	22
23	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	24
25								10.3	10.3			0.0						1	PREPARED SPACE	26
27	XFMR TLB	3	70	SEE RISER DIAGRAM				8.6		8.6		0.0						1	PREPARED SPACE	28
29								6.8			6.8	0.0						1	PREPARED SPACE	30
								TOTAL KVA/PHASE	13.3	8.6	6.8									
								TOTAL KVA PANEL		28.7										
								TOTAL AMPS PANEL		35										

PANEL: HC | BUS AMP: 100A | AMPS MAIN BREAKER: MLO

MOUNTING: SURFACE | PHASE: 3 | WIRE: 4 | VOLTAGE: 480/277 | AIC: 42,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
1	LIGHTS	1	20	2	12	12	3/4"	2.1	3.9			1.8	3/4"	12	12	2	20	1	LIGHTS	2
3	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	4
5	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	6
7	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	8
9	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	10
11	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	12
13	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	14
15	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	16
17	SPARE	1	20					0.0			0.0	0.0						1	PREPARED SPACE	18
19	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	20
21	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	22
23	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	24
25								6.9	6.9			0.0						1	PREPARED SPACE	26
27	XFMR TLC	3	70	SEE RISER DIAGRAM				8.2		8.2		0.0						1	PREPARED SPACE	28
29								8.3			8.3	0.0						1	PREPARED SPACE	30
								TOTAL KVA/PHASE	10.8	8.2	8.3									
								TOTAL KVA PANEL		27.3										
								TOTAL AMPS PANEL		33										

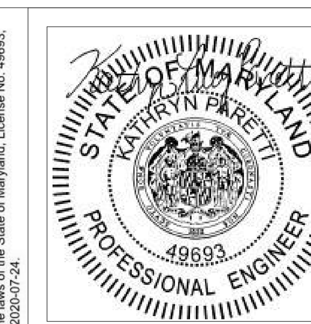
ALTERNATE BID →

PANEL: HD | BUS AMP: 100A | AMPS MAIN BREAKER: MLO

MOUNTING: SURFACE | PHASE: 3 | WIRE: 4 | VOLTAGE: 480/277 | AIC: 42,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
1	LIGHTS	1	20	2	12	12	3/4"	3.0	3.0			0.0	3/4"	12	12	2	20	1	SPARE	2
3	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	4
5	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	6
7	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	8
9	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	10
11	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	12
13	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	14
15	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	16
17	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	18
19	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	20
21	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	22
23	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	24
25								7.5	7.5			0.0						1	PREPARED SPACE	26
27	XFMR TLD	3	70	SEE RISER DIAGRAM				8.0		8.0		0.0						1	PREPARED SPACE	28
29								7.2			7.2	0.0						1	PREPARED SPACE	30
								TOTAL KVA/PHASE	10.5	8.0	7.2									
								TOTAL KVA PANEL		25.7										
								TOTAL AMPS PANEL		31										

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 49693, Expiration Date: 2020-07-24.



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REVISIONS

01	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272 **www.cra-architects.com**
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

ELECTRICAL SCHEDULES

PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT
3089

E5.1

PANEL: LA SECTION 1 BUS AMP: 200A AMPS MAIN BREAKER: 175A

MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
1	REC - A116	1	20	2	12	12	3/4"	0.9	0.9			0.0					20	1	SPARE	2
3	REC - A115	1	20	2	12	12	3/4"	0.4		0.7		0.4	3/4"	12	12	2	20	1	REC - A115	4
5	REC - A115	1	20	2	12	12	3/4"	0.4			0.9	0.5	3/4"	12	12	2	20	1	REC - A114	6
7	REC - A118, A119	1	20	2	12	12	3/4"	0.5	1.3			0.7	3/4"	12	12	2	20	1	REC - A117	8
9	REC - A117	1	20	2	12	12	3/4"	0.5		1.5		1.0	3/4"	12	12	2	20	1	REC - A117 (ICE MAKER)	10
11	REC - A117 (VENDING)	1	20	2	12	12	3/4"	1.0			2.0	1.0	3/4"	12	12	2	20	1	REC - A117 (VENDING)	12
13	REC - A117 (VENDING)	1	20	2	12	12	3/4"	1.0	2.0			1.0	3/4"	12	12	2	20	1	REC - A117 (VENDING)	14
15	REC - A117 (REFRIG.)	1	20	2	12	12	3/4"	1.0		2.0		1.0	3/4"	12	12	2	20	1	REC - A117 (REFRIG.)	16
17	REC - A117 (MICRO)	1	20	2	12	12	3/4"	1.2			1.7	0.5	3/4"	12	12	2	20	1	REC - A117 (COUNTER)	18
19	REC - A117 (MICRO)	1	20	2	12	12	3/4"	1.2	2.4			1.2	3/4"	12	12	2	20	1	REC - A117 (MICRO)	20
21	REC - A113	1	20	2	12	12	3/4"	0.5		1.3		0.7	3/4"	12	12	2	20	1	REC - A113	22
23	REC - A113	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	REC - CORRIDORS	24
25	REC - A109	1	20	2	12	12	3/4"	1.1	2.2			1.1	3/4"	12	12	2	20	1	REC - A110	26
27	REC - A111	1	20	2	12	12	3/4"	0.7		1.6		0.9	3/4"	12	12	2	20	1	REC - A106, A107, A108	28
29	REC - A112	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	REC - A112	30
31	REC - A101	1	20	2	12	12	3/4"	1.1	1.8			0.7	3/4"	12	12	2	20	1	REC - A102	32
33	REC - A103	1	20	2	12	12	3/4"	1.1		1.8		0.7	3/4"	12	12	2	20	1	REC - A104	34
35	REC - A105	1	20	2	12	12	3/4"	1.0			1.5	0.5	3/4"	12	12	2	20	1	REC - A105	36
37	REC - A105	1	20	2	12	12	3/4"	0.5	1.5			1.0	3/4"	12	12	2	20	1	REC - A105 (REFRIG.) (GFI)	38
39	REC - A105	1	20	2	12	12	3/4"	0.2		1.4		1.2	3/4"	12	12	2	20	1	REC - A105 (MICRO)	40
41	GWH-1	1	20	2	12	12	3/4"	0.5			0.5	0.0	3/4"	12	12	2	20	1	GWH-1	42
								TOTAL KVA/PHASE	12.1	10.3	9.6									
								TOTAL KVA SECTION 1		31.9										
								TOTAL KVA SECTION 2		16.7										
								TOTAL KVA		48.6										
								TOTAL AMPS PANEL		135										

PANEL: LA SECTION 2 BUS AMP: 200A AMPS MAIN BREAKER: MLO

MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
43	REC - C100	1	20	2	12	12	3/4"	0.7	1.4			0.7	3/4"	12	12	2	20	1	REC - C100	44
45	REC - C100	1	20	2	12	12	3/4"	0.9		1.7		0.8	3/4"	12	12	2	20	1	REC - C100	46
47	REC - C100	1	20	2	12	12	3/4"	0.4			0.7	0.4	3/4"	12	12	2	20	1	REC - C100	48
49	REC - EXTERIOR	1	20	2	12	12	3/4"	0.7	1.0			0.3	3/4"	12	12	2	20	1	DOOR HARDWARE - C-100	50
51	DOOR HARDWARE	1	20	2	12	12	3/4"	1.0		2.3		1.3	3/4"	12	12	2	20	1	DOOR HARDWARE	52
53	DOOR HARDWARE	1	20	2	12	12	3/4"	0.8			1.3	0.5	3/4"	12	12	2	20	1	FLOOR BOX	54
55	FLOOR BOX	1	20	2	12	12	3/4"	0.5	0.8			0.2	3/4"	12	12	2	15	2	HRU - A106	56
57	IDU - A117 & A141	2	15	2	12	12	3/4"	0.4		0.6		0.2								58
59								0.4			0.5	0.1	3/4"	12	12	2	15	2	HRU - A116 & A117	60
61	IDU - A114 & A115	2	15	2	12	12	3/4"	0.1	0.2			0.1								62
63								0.1		0.6		0.5	3/4"	12	12	2	20	1	REC - AV RACK RM A118	64
65	IDU - A104, A105, A109, & A110	2	15	2	12	12	3/4"	0.2			0.7	0.5	3/4"	12	12	2	20	1	REC - CORRIDOR TV	66
67								0.2	0.2			0.0					20	1	SPARE	68
69	IDU - A101, A102, & 103	2	15	2	12	12	3/4"	0.156		0.2		0.0					20	1	SPARE	70
71								0.156			0.2	0.0					20	1	SPARE	72
73	IDU- A111 & A112	2	15	2	12	12	3/4"	0.2	0.2			0.0					20	1	SPARE	74
75								0.2		0.2		0.0					20	1	SPARE	76
77	REC - A104	1	20	2	12	12	3/4"	0.5			0.5	0.0					20	1	SPARE	78
79	REC - A103	1	20	2	12	12	3/4"	0.7	1.2			0.5	3/4"	12	12	2	20	1	MOTORIZED SCREENS	80
81	REC - A102	1	20	2	12	12	3/4"	0.7		1.7		1.0	3/4"	12	12	2	20	1	ROLLER SHADES	82
83	REC - A111	1	20	2	12	12	3/4"	0.5			1.5	1.0	3/4"	12	12	2	20	1	ROLLER SHADES	84
								TOTAL KVA/PHASE	5.1	7.2	5.5									
								TOTAL KVA PANEL		17.7										
								TOTAL AMPS PANEL		49										

PANEL: LB SECTION 1 BUS AMP: 200A AMPS MAIN BREAKER: 175A

MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
1	REC - B100	1	20	2	12	12	3/4"	0.7	1.3			0.5	3/4"	12	12	2	20	1	REC - B100	2
3	REC - B100	1	20	2	12	12	3/4"	1.0		1.7		0.7	3/4"	12	12	2	20	1	REC - B100	4
5	REC - B100	1	20	2	12	12	3/4"	1.0			1.7	0.7	3/4"	12	12	2	20	1	REC - B102	6
7	REC - B102	1	20	2	12	12	3/4"	0.5	1.5			1.0	3/4"	12	12	2	20	1	REC - B102	8
9	REC - B102	1	20	2	12	12	3/4"	0.7		1.7		1.0	3/4"	12	12	2	20	1	REC - B102	10
11	FLOOR REC - B100	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	FLOOR REC - B100	12
13	FLOOR REC - B102	1	20	2	12	12	3/4"	0.7	1.4			0.7	3/4"	12	12	2	20	1	FLOOR REC - B102	14
15	REC - B101	1	20	2	12	12	3/4"	0.5		0.9		0.4	3/4"	12	12	2	20	1	REC - EXTERIOR	16
17	REC - B105	1	20	2	12	12	3/4"	0.2			0.5	0.4	3/4"	12	12	2	20	1	FLOOR BOX B106	18
19	REC - B101	1	20	2	12	12	3/4"	0.4	0.9			0.5	3/4"	12	12	2	20	1	REC - B103	20
21	REC - B103	1	20	2	12	12	3/4"	0.5		0.9		0.4	3/4"	12	12	2	20	1	REC - B103	22
23	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	24
25	REC - B104	1	20	2	12	12	3/4"	0.7	1.2			0.5	3/4"	12	12	2	20	1	REC - EWC (GFI)	26
27	REC - B107	1	20	2	12	12	3/4"	0.2		0.7		0.5	3/4"	12	12	2	20	1	REC - B108	28
29	REC - B108	1	20	2	12	12	3/4"	0.5			1.1	0.5	3/4"	12	12	2	20	1	REC - B109	30
31	REC - B109	1	20	2	12	12	3/4"	0.9	1.8			0.9	3/4"	12	12	2	20	1	REC - B109	32
33	REC - B109	1	20	2	12	12	3/4"	1.0		1.4		0.4	3/4"	12	12	2	20	1	REC - B109	34
35	FLOOR REC - B109	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	FLOOR REC - B109	36
37	REC - B106	1	20	2	12	12	3/4"	0.9	1.4			0.5	3/4"	12	12	2	20	1	REC - B106	38
39	REC - B106	1	20	2	12	12	3/4"	1.0		1.9		0.9	3/4"	12	12	2	20	1	REC - B106	40
41	REC - B106	1	20	2	12	12	3/4"	0.4			1.1	0.7	3/4"	12	12	2	20	1	FLOOR REC - B106	42
								TOTAL KVA/PHASE	9.6	9.2	7.3									
								TOTAL KVA SECTION 1		26.0										
								TOTAL KVA SECTION 2		11.6										
								TOTAL KVA		37.6										
								TOTAL AMPS PANEL		104										

PANEL: LB SECTION 2 BUS AMP: 200A AMPS MAIN BREAKER: MLO

MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER P	BREAKER AMP	WIRE NO	WIRE SIZE	GND SIZE	COND	LOAD KVA	KVA/PH A	KVA/PH B	KVA/PH C	LOAD KVA	COND	GND SIZE	WIRE SIZE	WIRE NO	BREAKER AMP	BREAKER P	CIRCUIT DESCRIPTION	CKT
43	FLOOR REC - B106	1	20	2	12	12	3/4"	0.7	1.7			1.0	3/4"	12	12	2	20	1	DOOR HARDWARE	44
45	DOOR HARDWARE	1	20	2	12	12	3/4"	1.3		2.5		1.3	3/4"	12	12	2	20	1	DOOR HARDWARE	46
47	CEILING REC - PROJECTORS	1	20	2	12	12	3/4"	1.0			2.2	1.2	3/4"	12	12	2	20	1	MOTORIZED PROJECTION SCREEN	48
49	IDU - B106, B108, & B109	2	15	2	12	12	3/4"	0.2	0.7			0.5	3/4"	12	12	2	20	1	P-1	50
51								0.2		0.2		0.0					20	1	SPARE	52
53	IDU - B100 & B102	2	15	2	12	12	3/4"	0.2			0.2	0.0					20	1	SPARE	54
55								0.2	0.7			0.5	3/4"	12	12	2	20	1	C100 - MONITOR	56
57	HRU - B104	2	15	2	12	12	3/4"	0.1		0.7		0.5	3/4"	12	12	2	20	1	C100 - MONITOR	58
59								0.1			0.7	0.5	3/4"	12	12	2	20	1	C100 - MONITOR	60
61	INTERIOR LIGHTING CONTACTOR	1	20	2	12	12	3/4"	0.2	0.7			0.5	3/4"	12	12	2	20	1	C100 - MONITOR	62
63	EXTERIOR LIGHTING CONTACTOR	1	20	2	12	12	3/4"	0.2		1.3		1.1	3/4"	12	12	2	20	1	ROOF - REC	64
65	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	66
67	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	68
69	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	70
71	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	72
73	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	74
75	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	76
77	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	78
79	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	80
81	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	82
83	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	84
								TOTAL KVA/PHASE	3.9	4.7	3.1									
								TOTAL KVA PANEL		11.6										
								TOTAL AMPS PANEL		32										

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland. License No. 49693. Expiration Date: 2020-07-24.

STATE OF MARYLAND KATHRYN PARFITT 49693 PROFESSIONAL ENGINEER

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA
www.cra-architects.com

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

ELECTRICAL SCHEDULES

PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT 3089

E5.2

PANEL: LC SECTION 1 BUS AMP: 200A AMPS MAIN BREAKER: 175A

MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER		WIRE		GND	COND	LOAD	KVA/PH			LOAD	COND	GND	WIRE		BREAKER		CIRCUIT DESCRIPTION	CKT
		P	AMP	NO	SIZE	SIZE		KVA	A	B	C	KVA		SIZE	SIZE	NO	AMP	P		
1	REC - A137, A138, & A140	1	20	2	12	12	3/4"	1.1	2.6			1.5	3/4"	12	12	2	20	1	WASHER (GFI)	2
3	REC - A139, A120	1	20	2	12	12	3/4"	1.1		3.5		2.4	3/4"	10	10	3	30	2	DRYER	4
5	REC - A135	1	20	2	12	12	3/4"	0.4			2.8	2.4								6
7	REC - A135	1	20	2	12	12	3/4"	0.4	0.9			0.5	3/4"	12	12	2	20	1	REC - A134	8
9	REC - A134	1	20	2	12	12	3/4"	0.7		1.4		0.7	3/4"	12	12	2	20	1	REC - A134	10
11	REC - A134	1	20	2	12	12	3/4"	1.0			1.4	0.4	3/4"	12	12	2	20	1	REC - A134	12
13	SPARE	1	20					0.0	0.4			0.4	3/4"	12	12	2	20	1	REC - A134	14
15	SPARE	1	20					0.0		0.4		0.4	3/4"	12	12	2	20	1	REC - A119	16
17	REC - EWC (GFI)	1	20	2	12	12	3/4"	0.5			0.9	0.4	3/4"	12	12	2	20	1	REC - A125	18
19	REC - A124	1	20	2	12	12	3/4"	0.4	1.3			0.9	3/4"	12	12	2	20	1	REC - A126	20
21	REC - EWC (GFI)	1	20	2	12	12	3/4"	0.5		0.9		0.4	3/4"	12	12	2	20	1	REC - A121	22
23	REC - A122	1	20	2	12	12	3/4"	0.4			0.9	0.5	3/4"	12	12	2	20	1	REC - A121	24
25	REC - A122	1	20	2	12	12	3/4"	0.4	1.1			0.7	3/4"	12	12	2	20	1	REC - A123	26
27	REC - A123	1	20	2	12	12	3/4"	0.7		1.9		1.2	3/4"	12	12	2	20	1	REC - A123 (TREAD MILL)	28
29	REC - A123	1	20	2	12	12	3/4"	0.2			1.4	1.2	3/4"	12	12	2	20	1	REC - A123 (TREAD MILL)	30
31	REC - EXTERIOR	1	20	2	12	12	3/4"	0.5	1.1			0.5	3/4"	12	12	2	20	1	REC - EXTERIOR	32
33	DOOR HARDWARE	1	20	2	12	12	3/4"	1.3		2.5		1.3	3/4"	12	12	2	20	1	DOOR HARDWARE	34
35	REC - A123	1	20	2	12	12	3/4"	0.7			1.7	1.0	3/4"	12	12	2	20	1	REC - A123 (TREAD MILL)	36
37	REC - A123 (TREAD MILL)	1	20	2	12	12	3/4"	1.0	2.0			1.0	3/4"	12	12	2	20	1	REC - A123 (TREAD MILL)	38
39	HANDS FREE FAUCET / FLUSH VALVE	1	20	2	12	12	3/4"	1.2		2.0		0.8	3/4"	12	12	2	20	1	HANDS FREE FAUCET / FLUSH VALVE	40
41	HANDS FREE FAUCET / FLUSH VALVE	1	20	2	12	12	3/4"	0.8			1.7	0.9	3/4"	12	12	2	20	1	HANDS FREE FAUCET / FLUSH VALVE	42
								TOTAL KVA/PHASE	9.2	12.6	10.7									
								TOTAL KVA SECTION 1	32.5											
								TOTAL KVA SECTION 2	1.7											
								TOTAL KVA	34.2											
								TOTAL AMPS PANEL	95											

PANEL: LC SECTION 2 BUS AMP: 200A AMPS MAIN BREAKER: MLO

MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER		WIRE		GND	COND	LOAD	KVA/PH			LOAD	COND	GND	WIRE		BREAKER		CIRCUIT DESCRIPTION	CKT
		P	AMP	NO	SIZE	SIZE		KVA	A	B	C	KVA		SIZE	SIZE	NO	AMP	P		
43	HANDS FREE FAUCET / FLUSH VALVE	1	20	2	12	12	3/4"	0.6	0.6			0.0					20	1	SPARE	44
45	TV RECEPTACLES - A123	1	20	2	12	12	3/4"	0.4		0.4		0.0					20	1	SPARE	46
47	REC - A126	1	20	2	12	12	3/4"	0.7			0.7	0.0					20	1	SPARE	48
49	IDU - A121 & A122	2	15	2	12	12	3/4"	0.3	0.3			0.0					20	1	SPARE	50
51								0.3		0.3		0.0					20	1	SPARE	52
53	IDU - A123	2	15	2	12	12	3/4"	0.2			0.2	0.0					20	1	SPARE	54
55								0.2	0.2			0.0					20	1	SPARE	56
57	IDU - A119, A134, A138, & A140	2	15	2	12	12	3/4"	0.2		0.2		0.0					20	1	SPARE	58
59								0.2			0.2	0.0					20	1	SPARE	60
61	HRU - A120	2	15	2	12	12	3/4"	0.3	0.3			0.0					20	1	SPARE	62
63								0.3		0.3		0.0					20	1	SPARE	64
65	IDU - A124, A125, & A126	2	15	2	12	12	3/4"	0.2			0.2	0.0					20	1	SPARE	66
67								0.2	0.2			0.0					20	1	SPARE	68
69	IDU - A135 & A136	2	15	2	12	12	3/4"	0.1		0.1		0.0					20	1	SPARE	70
71								0.1			0.1	0.0						1	PREPARED SPACE	72
73	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	74
75	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	76
77	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	78
79	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	80
81	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	82
83	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	84
								TOTAL KVA/PHASE	1.5	1.2	1.4									
								TOTAL KVA PANEL	4.2											
								TOTAL AMPS PANEL	12											

ALTERNATE BID

PANEL: LD SECTION 1 BUS AMP: 200A AMPS MAIN BREAKER: 175A

MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER		WIRE		GND	COND	LOAD	KVA/PH			LOAD	COND	GND	WIRE		BREAKER		CIRCUIT DESCRIPTION	CKT
		P	AMP	NO	SIZE	SIZE		KVA	A	B	C	KVA		SIZE	SIZE	NO	AMP	P		
1	REC - B110	1	20	2	12	12	3/4"	0.9	1.9			1.0	3/4"	12	12	2	20	1	REC - B110	2
3	REC - B110	1	20	2	12	12	3/4"	0.8		1.3		0.5	3/4"	12	12	2	20	1	REC - B110	4
5	FLOOR REC - B110, B112	1	20	2	12	12	3/4"	0.7			1.4	0.7	3/4"	12	12	2	20	1	FLOOR REC - B110, B112	6
7	FLOOR REC - B110, B112	1	20	2	12	12	3/4"	0.7	1.3			0.5	3/4"	12	12	2	20	1	REC - B112	8
9	REC - B112	1	20	2	12	12	3/4"	0.8		1.7		0.9	3/4"	12	12	2	20	1	REC - B112	10
11	REC - B112	1	20	2	12	12	3/4"	1.0			1.5	0.5	3/4"	12	12	2	20	1	REC - B113	12
13	REC - B113	1	20	2	12	12	3/4"	0.4	0.9			0.5	3/4"	12	12	2	20	1	REC - B111	14
15	REC - B111	1	20	2	12	12	3/4"	0.4		0.9		0.5	3/4"	12	12	2	20	1	REC - B120	16
17	REC - B114, B117, B118	1	20	2	12	12	3/4"	0.5			0.7	0.2	3/4"	12	12	2	20	1	REC - B115	18
19	REC - B115	1	20	2	12	12	3/4"	0.4	0.7			0.4	3/4"	12	12	2	20	1	REC - B115	20
21	REC - B116	1	20	2	12	12	3/4"	0.9		1.4		0.5	3/4"	12	12	2	20	1	REC - B116	22
23	REC - B116	1	20	2	12	12	3/4"	0.8			1.7	0.9	3/4"	12	12	2	20	1	REC - B116	24
25	FLOOR REC - B116	1	20	2	12	12	3/4"	0.7	1.1			0.4	3/4"	12	12	2	20	1	FLOOR REC - B116	26
27	FLOOR REC - B116	1	20	2	12	12	3/4"	0.7		1.6		0.9	3/4"	12	12	2	20	1	REC - B119	28
29	REC - B119	1	20	2	12	12	3/4"	0.8			1.3	0.5	3/4"	12	12	2	20	1	REC - B119	30
31	REC - B119	1	20	2	12	12	3/4"	0.9	1.6			0.7	3/4"	12	12	2	20	1	FLOOR REC - B119	32
33	FLOOR REC - B119	1	20	2	12	12	3/4"	0.4		1.1		0.7	3/4"	12	12	2	20	1	FLOOR REC - B119	34
35	REC - EXTERIOR	1	20	2	12	12	3/4"	0.5			1.5	1.0	3/4"	12	12	2	20	1	DOOR HARDWARE	36
37	DOOR HARDWARE	1	20	2	12	12	3/4"	1.0	2.3			1.3	3/4"	12	12	2	20	1	DOOR HARDWARE	38
39	FLOOR REC - B110, B112	1	20	2	12	12	3/4"	0.7		0.9		0.2	3/4"	12	12	2	20	1	REC - B116	40
41	FLOOR REC - B110, B112	1	20	2	12	12	3/4"	0.7			0.9	0.2	3/4"	12	12	2	20	1	REC - B119	42
								TOTAL KVA/PHASE	9.7	8.9	9.1									
								TOTAL KVA SECTION 1	27.7											
								TOTAL KVA SECTION 2	0.7											
								TOTAL KVA	28.4											
								TOTAL AMPS PANEL	79											

PANEL: LD SECTION 2 BUS AMP: 200A AMPS MAIN BREAKER: MLO

MOUNTING: SURFACE PHASE: 3 WIRE: 4 VOLTAGE: 208/120 AIC: 18,000

CKT	CIRCUIT DESCRIPTION	BREAKER		WIRE		GND	COND	LOAD	KVA/PH			LOAD	COND	GND	WIRE		BREAKER		CIRCUIT DESCRIPTION	CKT
		P	AMP	NO	SIZE	SIZE		KVA	A	B	C	KVA		SIZE	SIZE	NO	AMP	P		
43	IDU - B115, B116, B117, & B119	2	15	2	12	12	3/4"	0.2	1.0			0.7	3/4"	12	12	2	20	1	FLOOR - B112	44
45								0.2		1.0		0.7	3/4"	12	12	2	20	1	FLOOR - B112	46
47	IDU - B110 & B112	2	15	2	12	12	3/4"	0.2			0.9	0.7	3/4"	12	12	2	20	1	FLOOR - B112	48
49								0.2	0.3			0.2	3/4"	12	12	2	20	1	REC - B112	50
51	HRU - B120	2	15	2	12	12	3/4"	0.1		0.3		0.2	3/4"	12	12	2	20	1	REC - B110	52
53								0.1			0.5	0.4	3/4"	12	12	2	20	1	SCREEN - B110	54
55	FLOOR BOX B110	1	20	2	12	12	3/4"	0.7	0.9			0.2	3/4"	12	12	2	20	1	REC - B110	56
57	FLOOR BOX B110	1	20	2	12	12	3/4"	0.7		0.9		0.2	3/4"	12	12	2	20	1	REC - B118	58
59	FLOOR BOX B110	1	20	2	12	12	3/4"	0.7			0.7	0.0					20	1	SPARE	60
61	REC - B114	1	20	2	12	12	3/4"	0.2	0.2			0.0					20	1	SPARE	62
63	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	64
65	SPARE	1	20					0.0			0.0	0.0					20	1	SPARE	66
67	SPARE	1	20					0.0	0.0			0.0					20	1	SPARE	68
69	SPARE	1	20					0.0		0.0		0.0					20	1	SPARE	70
71	PREPARED SPACE	1						0.0			0.0	0.0					20	1	SPARE	72
73	PREPARED SPACE	1						0.0	0.0			0.0					20	1	SPARE	74
75	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	76
77	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	78
79	PREPARED SPACE	1						0.0	0.0			0.0						1	PREPARED SPACE	80
81	PREPARED SPACE	1						0.0		0.0		0.0						1	PREPARED SPACE	82
83	PREPARED SPACE	1						0.0			0.0	0.0						1	PREPARED SPACE	84
								TOTAL KVA/PHASE	2.4	2.2	2.1									
								TOTAL KVA PANEL	6.7											
								TOTAL AMPS PANEL	19											

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 49693, Expiration Date: 2020-07-24.

STATE OF MARYLAND KATHRYN PARFITT 49693 PROFESSIONAL ENGINEER

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

CRABTREE ROHRBAUGH & ASSOCIATES - ARCHITECTS
100 WEST ROAD, SUITE 402, TOWSON MD 21204 410-528-0272
www.cra-architects.com
MECHANICSBURG, PENNSYLVANIA CHARLOTTESVILLE, VIRGINIA WHITE SULPHUR SPRINGS, WEST VIRGINIA

PROPOSED NEW
WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

ELECTRICAL SCHEDULES

PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT 3089

E5.3

SPRINKLER SCHEDULE

SYMBOL	TYPE	MANUFACTURER	FINISH
○	UPRIGHT- W/GAURD QUICK RESPONSE	VIKING	BRASS
○ D	UPRIGHT-DRY-W/GAURD QUICK RESPONSE	VIKING	BRASS
●	CONCEALED- QUICK RESPONSE	VIKING	WHITE
● D	PENDANT-DRY- QUICK RESPONSE	VIKING	BY ARCHITECT
◀ D	SIDEWALL-DRY- QUICK RESPONSE	VIKING	BRASS
◉	PENDANT- QUICK RESPONSE	VIKING	CHROME

SPRINKLER GENERAL NOTES:

1. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. A MARYLAND LICENSED SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING FINAL SYSTEM DESIGN, HEAD LAYOUT, PIPING LAYOUT, SHOP DRAWINGS, AND HYDRAULIC CALCULATIONS TO ALL AGENCIES HAVING JURISDICTION FOR REVIEW AND APPROVAL, INCLUDING THE LOCAL BUILDING INSPECTOR. DRAWINGS AND CALCULATIONS SHALL BEAR THE SEAL OF A MD LICENSED FIRE PROTECTION ENGINEER.
3. THE BUILDING SHALL BE PROVIDED WITH A WET PIPE SYSTEM.
4. THE SPRINKLER SPACING AND LOCATIONS SHALL BE IN ACCORDANCE WITH NFPA-13 AND COORDINATED WITH ALL CEILING MOUNTED OBSTRUCTIONS SUCH AS LIGHT FIXTURES, DIFFUSERS, DUCTWORK, CEILING FANS, SPEAKERS, ETC. SPRINKLERS SHALL BE CENTERED IN THE CEILING TILES AND LOCATED SYMMETRICALLY WITH LIGHTING FIXTURES AND DIFFUSERS AS SHOWN.
5. ALL SPRINKLERS IN FINISHED SPACES SHALL BE CONCEALED WITH WHITE COVER PLATE. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. THE SPRINKLER DISTRIBUTION FOR THE WET SYSTEM SYSTEM SHALL BE SCHEDULE 10 PIPE WITH ROLL GROOVED FITTINGS FOR 2 1/2" AND UP, AND SCHEDULE 40 THREADED PIPE FOR 2" AND BELOW.
7. PROVIDE INSPECTOR TEST STATIONS AT THE MOST REMOTE POINT OF THE SPRINKLER RISER.
8. THE FIRE PROTECTION CONTRACTOR SHALL REVIEW ALL PROJECT DRAWINGS AND COORDINATE THE INSTALLATION OF THE SYSTEM WITH ALL OTHER TRADES FOR THE PROJECT. NOTIFY GC AND ARCHITECT IN WRITING OF ALL CONFLICTS IMMEDIATELY, PRIOR TO FABRICATION AND INSTALLATION.
9. DO NOT INSTALL SPRINKLER PIPING OR ANY OTHER EQUIPMENT OVER ELECTRICAL PANELS AND EQUIPMENT. MAINTAIN A MINIMUM OF 36" CLEAR IN FRONT OF ELECTRICAL PANELS AND EQUIPMENT.
10. ALL MATERIALS ARE TO BE U.L. LISTED AND MEET THE PROVISIONS OF NFPA-13.
11. ALL PIPING SHALL BE SECURELY SUPPORTED FROM THE STRUCTURE BY MEANS OF A LISTED FASTENER. ALL HANGERS SHALL MEET THE PROVISIONS OF NFPA-13.
12. UPON COMPLETION ALL NEW PIPING SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA-13 FOR 2 HOURS AT 200 PSI AND WITNESSED BY THE AUTHORITY HAVING JURISDICTION AND/OR THE OWNER'S REPRESENTATIVE.
13. THE ENTIRE BUILDING SHALL BE SPRINKLERED.
14. PROVIDE BUILDING FIRE DEPARTMENT CONNECTION; COORDINATE LOCATION, SIZE, AND TYPE WITH LOCAL FIRE MARSHALL AND AUTHORITY HAVING JURISDICTION.
15. ALL EXPOSED DUCTWORK AND ANY OBSTRUCTIONS OVER 4'-0 WIDE TO HAVE SPRINKLER COVERAGE BOTH ABOVE AND BELOW DUCTWORK AND OBSTRUCTION.
16. ALL FIRE PROTECTION SIGNAGE FOR FIRE DEPARTMENT CONNECTIONS TO BE APPROVED BY AHJ AND LOCAL FIRE MARSHALL.

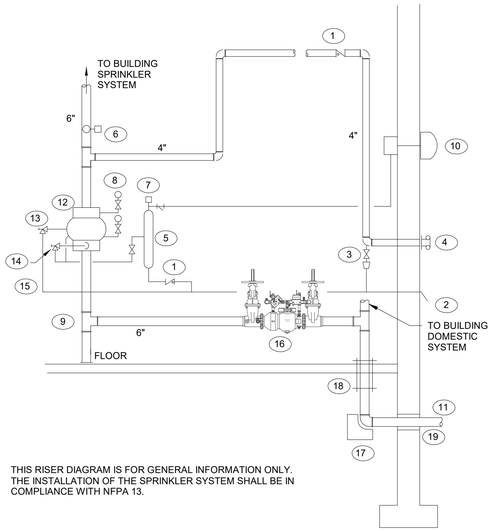
ABBREVIATIONS

AC	AQUATICS CONTRACTOR	FFD1	FUNNELED FLOOR DRAIN	INV	INVERT OF PIPE
AD1	AREA DRAIN	FFE	FINISHED FLOOR ELEVATION	KD1	KITCHEN DRAIN
AFF	ABOVE FINISHED FLOOR	FSC	FOOD SERVICE CONTRACTOR	KS1	KITCHEN SINK
AFG	ABOVE FINISHED GRADE	FS1	FLOOR SINK	LAV1	LAVATORY
AMP	AMPERE	FLA	FULL LOAD AMPS	MAX	MAXIMUM
AP	ACCESS PANEL	FLR	FLOOR	MIN	MINIMUM
APPROX	APPROXIMATE	FPM	FOOT/FEET PER MINUTE	MS1	MOP SINK
AVG	AVERAGE	FPS	FOOT/FEET PER SECOND	MTD	MOUNTED
BFP1	REDUCED PRESSURE BACKFLOW PREVENTER	FT	FOOT/FEET	NA, N/A	NOT APPLICABLE
BOT	BOTTOM	GAL	GALLONS	NC	NORMALLY CLOSED
BP	BACK PRESSURE	GB1	GARBAGE DISPOSAL	NIC	NOT IN CONTRACT
BSMT	BASEMENT	GC	GENERAL CONTRACTOR	NO	NORMALLY OPEN
BWV1	BACK WATER VALVE	GND	GROUND	NTS	NOT TO SCALE
CI	CAST IRON	GPH	GALLONS PER HOUR	PC	PLUMBING CONTRACTOR
CL	CENTER LINE	GPM	GALLONS PER MINUTE	PT1	PLASTER TRAP
CO	CLEANOUT	GPR1	GAS PRESSURE REGULATOR	RD1	ROOF DRAIN
COL	COLUMN	GPS	GALLONS PER SECOND	SE1	SEWAGE EJECTOR
CONC	CONCRETE OR CONCENTRIC	GS1	GLASS FILLER	SH1	SHOWER
DIA, ∅	DIAMETER	GSV	GAS SOLENOID VALVE	SS1	SERVICE SINK
DIP	DUCTILE IRON PIPE	GT1	GREASE TRAP	TEMP	TEMPERATURE
DN	DOWN	HB1	HOSE BIBB	TP1	TRAP PRIMER
DN1	DOWN SPOUT NOZZLE	HC	HVAC CONTRACTOR	TUB1	TUB/SHOWER
DW1	DISHWASHER	HEWC1	HANDICAP ELECTRIC WATER COOLER	UR1	URINAL
EC	ELECTRICAL CONTRACTOR	HGT	HEIGHT	WB1	WASHER BOX
ECO1	EXTERIOR CLEANOUT	HP	HORSE POWER	WC1	WATER CLOSET
ED1	EMERGENCY OVERFLOW DRAIN	HLAV1	HANDICAP LAVATORY	WCO1	WALL CLEAN OUT
EL	ELEVATION	HS1	HAND SINK	WHA1	WATER HAMMER ARRESTER
ESP1	ELEVATOR SUMP PUMP	HSH1	HANDICAP SHOWER	WH1	WALL HYDRANT
(E), EXIST	EXISTING	HUR1	HANDICAP URINAL	WPV1	WHIRLPOOL VALVE
FD1	FLOOR DRAIN	HWC1	HANDICAP WATER CLOSET	WSV	WATER SOLENOID VALVE
		IB1	ICE MAKER BOX	VTR	VENT THROUGH ROOF

MISCELLANEOUS SYMBOLS

- POINT OF CONNECTION-NEW TO EXISTING
- POINT OF DEMOLITION CONCLUSION
- DRAWING NOTE SYMBOL
- REVISION SYMBOL
- DIRECTION OF VIEW
- SECTION NUMBER
- DRAWING ON WHICH SECTION OR DETAIL IS SHOWN
- DETAIL OR SECTION NUMBER
- DRAWING FROM WHICH SECTION OR DETAIL IS TAKEN

NOTE:
NOT ALL ABBREVIATIONS AND SYMBOLS INDICATED MAY APPEAR ON THESE CONTRACT DRAWINGS. THIS IS FOR REFERENCE ONLY.



THIS RISER DIAGRAM IS FOR GENERAL INFORMATION ONLY. THE INSTALLATION OF THE SPRINKLER SYSTEM SHALL BE IN COMPLIANCE WITH NFPA 13.

1. CHECK VALVE
2. 2" DRAIN PIPED 6" ABOVE FINISHED GRADE
3. BALL DRIP
4. CHROME FIRE DEPARTMENT STORZ CONNECTION WITH "AUTO SPRINKLER" LETTERING; MOUNT AT MINIMUM 24" ABOVE FINISHED GRADE
5. RETARDING CHAMBER
6. FLOW SWITCH; WIRED BY EC
7. PRESSURE SWITCH
8. WATER GAUGE
9. PIPE SUPPORT TEE
10. WATER MOTOR ALARM
11. 6" COMBINED SERVICE MAIN
12. 6" ALARM CHECK VALVE
13. 2" MAIN DRAIN VALVE
14. ALARM TEST VALVE
15. 2" MAIN DRAIN
16. DOUBLE CHECK DETECTOR ASSEMBLY; PROVIDE TAMPER SWITCHES ON OS&Y VALVES, WIRED BY EC.
17. CONCRETE THRUST BLOCK
18. PIPE SUPPORT RODS
19. MECHANICAL PIPE SLEEVE, SEALED WATER TIGHT

WET SPRINKLER RISER DIAGRAM

NO SCALE

FIRE PROTECTION DRAWING LIST

FP0.0	FIRE PROTECTION INFORMATION SHEET
FP1.0	FIRST FLOOR PLAN - UNIT A - FIRE PROTECTION
FP1.1	FIRST FLOOR PLAN - UNIT B - FIRE PROTECTION
FP1.2	FIRST FLOOR PLAN - UNIT C - FIRE PROTECTION

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 49693. Expiration Date: 2020-07-24.

STATE OF MARYLAND
KATHRYN PARFITT
49693
PROFESSIONAL ENGINEER

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WASHINGTON COUNTY PUBLIC SAFETY TRAINING CENTER
WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

FIRE PROTECTION INFORMATION SHEET

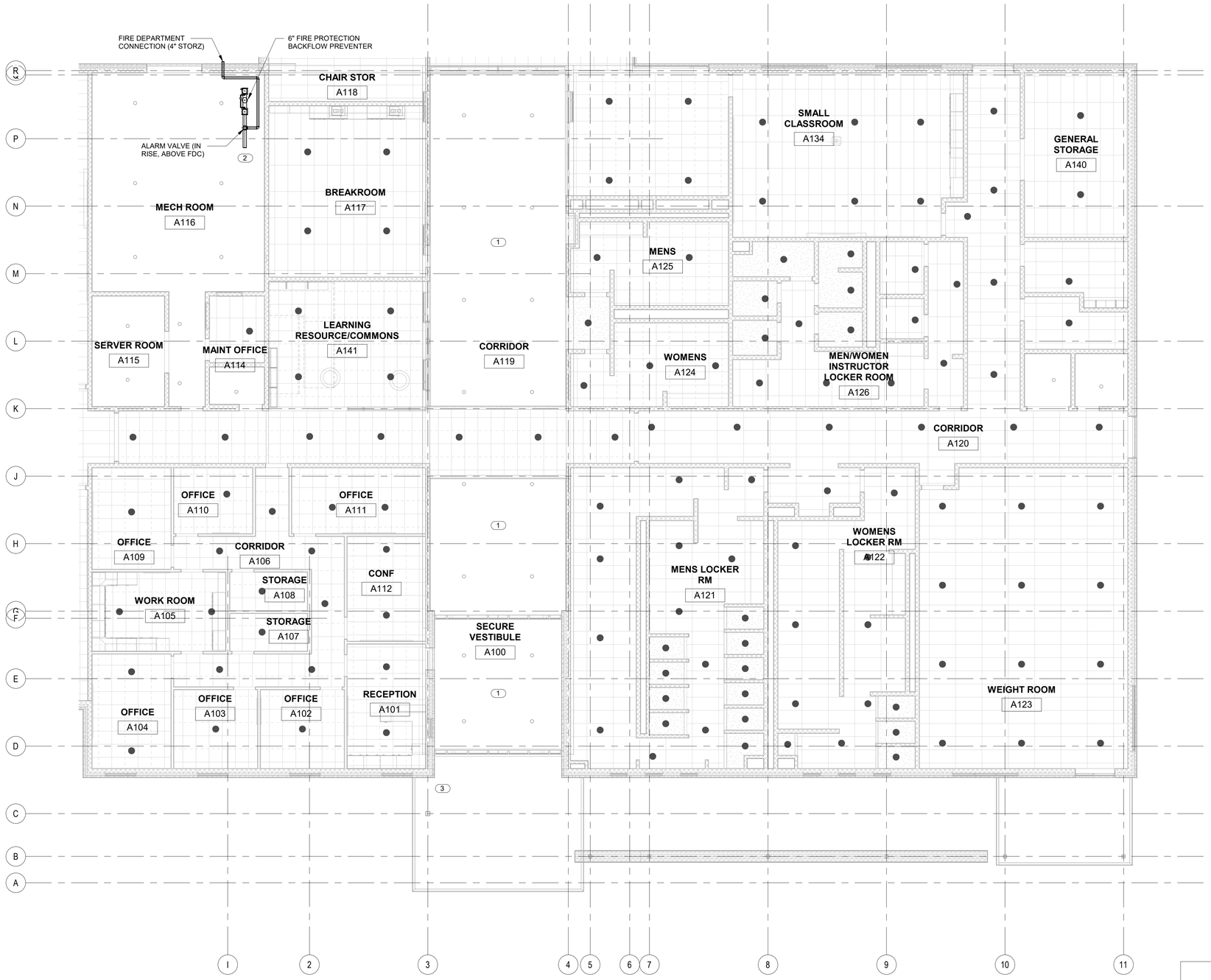
PLOT SCALE: AS INDICATED

FILENAME:

DATE: December 18, 2019

PROJECT 3089

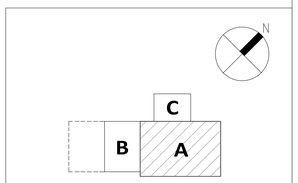
FP0.0



1 FIRST FLOOR PLAN - UNIT A - FIRE PROTECTION
SCALE: 1/8" = 1'-0"

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. ROUTE BRANCH PIPING IN THIS AREA ALONG TRUSSES; COORDINATE WITH ARCHITECT/GC
2. PROVIDE TEE FOR MAIN TO FUTURE SECOND FLOOR
3. PROVIDE SIGN INDICATING FDC AT REAR OF BUILDING



KEY PLAN

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KATHRYN PARFITT
49693
PROFESSIONAL ENGINEER

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FIRST FLOOR PLAN - UNIT A - FIRE PROTECTION

PLOT SCALE: 1/8" = 1'-0"
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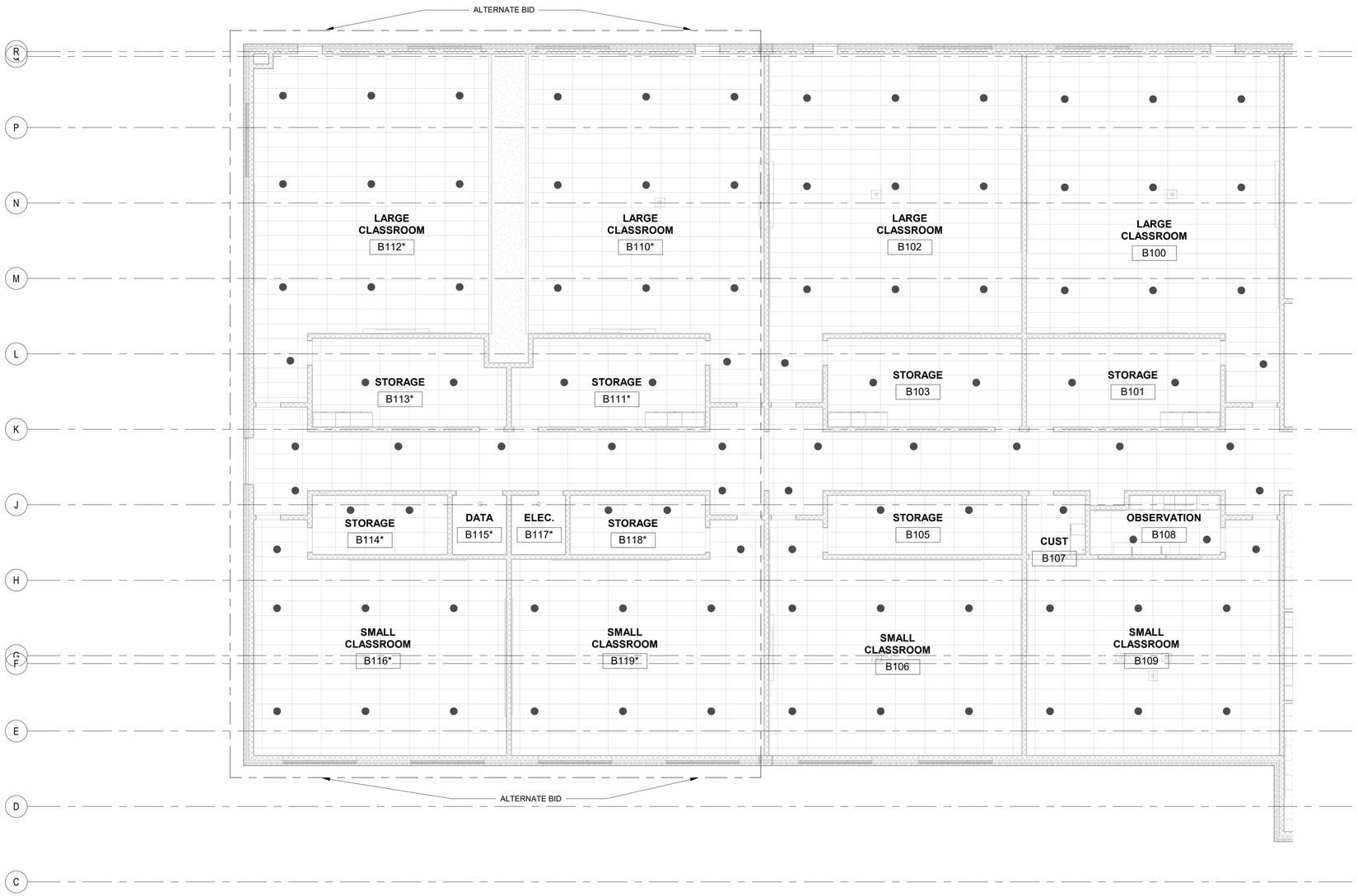
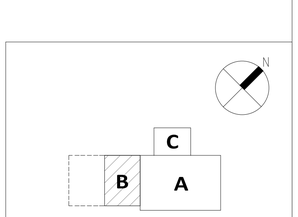
FP1.0



1 FIRST FLOOR PLAN - UNIT B - FIRE PROTECTION
SCALE: 1/8" = 1'-0"



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CR

FIRST FLOOR PLAN - UNIT B - FIRE PROTECTION

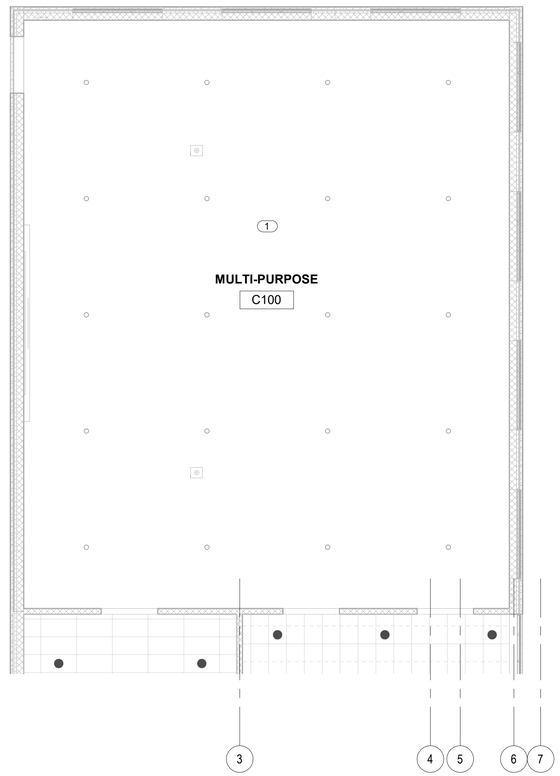
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: December 18, 2019

PROJECT
3089

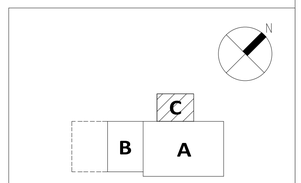
FP1.1



1 FIRST FLOOR PLAN - UNIT C - FIRE PROTECTION
SCALE: 1/8" = 1'-0"

NOTES BY SYMBOL: (#)
(THIS SHEET ONLY)

1. ROUTE BRANCH PIPING IN THIS AREA ALONG TRUSSES; COORDINATE WITH ARCHITECT/GC



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FIRST FLOOR PLAN - UNIT C - FIRE PROTECTION

PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: December 18, 2019

PROJECT
3089

FP1.2

GENERAL NOTES:

1. GENERAL NOTES ON THIS DRAWING SHALL APPLY TO ALL TECHNOLOGY DRAWINGS ON THIS PROJECT. CAREFULLY READ ALL GENERAL NOTES PRIOR TO COMMENCEMENT OF WORK.
2. ANY MATERIALS & DEVICES NOT SPECIFICALLY MENTIONED IN THESE SPECIFICATIONS OR INDICATED ON THESE CONTRACT DRAWINGS THAT ARE REQUIRED FOR A COMPLETE FINISHED AND OPERATING SYSTEM INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
3. WHERE THE TERM "PROVIDE" IS USED ON THE DRAWINGS, IT SHALL BE DEFINED AS FOLLOWS: FURNISH, INSTALL, & MAKE ALL FINAL CONNECTIONS FOR THE EQUIPMENT INDICATED.
4. CABLE ROUTES ILLUSTRATED ARE DIAGRAMMATIC. EXACT ROUTING SHALL BE DETERMINED IN FIELD BY THE CONTRACTOR & DOCUMENTED FOR FUTURE REFERENCE BY THE OWNER.
5. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE & LOCAL AMENDMENTS.
6. REFER TO ELECTRICAL DRAWINGS & DIVISION 16 SPECIFICATIONS FOR ELECTRICAL ROUGH-IN, CONDUITS & BOXES. ANY CONDUIT, BOXES, & ASSOCIATED ROUGH-IN NOT INCLUDED IN DIVISION 26 SHALL BE PROVIDED UNDER DIVISION 27.

ABBREVIATIONS:

A	AMPERE, AMPERES
AMP	AMPERE, AMPERES
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CAP	CAPACITY
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CND	CONDUIT
COMP	COMPUTER
CTX	CONNECT TO EXISTING
DIA	DIAMETER
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXIST	EXISTING
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPERES
FRM	FRAME
GFI	GROUND FAULT INTERRUPTING
G	GROUND
GND	GROUND
IDF	INTERMEDIATE DISTRIBUTION FRAME
IMC	INTERMEDIATE METAL CONDUIT
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LRA	LOCKED ROTOR AMPERES
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCP	MOTOR CIRCUIT PROTECTOR
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MFS	MAXIMUM FUSE SIZE
MH	MOUNTING HEIGHT/MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFSS	NONFUSED SAFETY SWITCH
NIC	NOT IN CONTRACT
NO	NUMBER
OC	ON CENTER
P	POLE, POLES
∅	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
REC	RECEPTACLE
RECEPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RX	REMOVE EXISTING
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
TTB	TELEPHONE TERMINAL BOARD
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLT, VOLTS
W	WATTS/WIRE, WIRES
WG	WIREGUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

TECHNOLOGY LEGEND:

NOTE: ALL MOUNTING HEIGHTS AND LOCATIONS OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD BY THE CONTRACTOR PRIOR TO ROUGH-IN.

DATA

- 4 — DATA OUTLET: SUBSCRIPT DENOTES QUANTITY. M.H. 18" AFF. SEE DETAILS 4/T4.2
- C — DATA OUTLET CEILING MOUNTED - REFER TO DETAILS 11,12/T4.2.
- 3C — WIRELESS DATA OUTLET ABOVE CEILING DATA OUTLET WITH 10 FEET OF CAT 6 CABLING COILED ABOVE CEILING FOR CONNECTION TO WIRELESS ACCESS POINT (BY OWNER'S VENDOR) REFER TO DETAIL 11,12/T4.2.
- 4 — FLOOR BOX WITH DATA OUTLET
- TELEPHONE OUTLET: M.H. 18" AFF. SEE DETAILS ON DRAWING T4.2.
- WALL MOUNTED 12" WIDE BY 4" DEEP BASKET TYPE CABLE TRAY AND CLEARANCE SPACE. MOUNTING HEIGHT SHALL BE 3" TO BOTTOM OF TRAY ABOVE LAY-IN CEILING UNLESS OTHERWISE NOTED. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
- EQUIPMENT RACK/CABINET.
- H — HANDHOLE/EXTERIOR J-BOX - REFER TO DETAIL T0.2
- PULLBOX: SIZE AS INDICATED
- J — JUNCTION BOX, WALL MOUNTED
- CONDUIT, CONDUIT SLEEVE - SIZE AND QUANTITY AS INDICATED.
- J — JUNCTION BOX

SECURITY

- S — SECURITY SYSTEM SIREN - CEILING MOUNTED.
- DC — DOOR CONTACTS
- # — CEILING/FIXED MOUNTED CCTV CAMERA. SEE DETAILS & SCHEDULE ON DRAWING T4.4.
- # — WALL MOUNTED CCTV CAMERA. SEE DETAILS AND SCHEDULE ON DRAWING T4.4.
- # — CORNER WALL MOUNTED CCTV CAMERA. SEE DETAILS AND SCHEDULE ON DRAWING T4.4.
- PS — CCTV CAMERA POWER SUPPLY
- K — SECURITY SYSTEM KEYPAD; MOUNT AT 4'-0" AFF.
- CR — CARD READER
- IC — VIDEO DOOR STATION
- IC M — VIDEO ENTRY MASTER DOOR CONTROL STATION
- CR — CARD READER - REFER TO ACCESS CONTROL SYSTEM CARD READER DETAIL - SHEET T-504. FOR ADDITIONAL INFORMATION.
- MD — MOTION DETECTOR

MISCELLANEOUS:

- 1 — DENOTES REFERENCE TO DRAWING NOTE
- 1 — DENOTES REFERENCE TO REVISIONS TO DRAWING

CONVENTIONS:

- # — DETAIL NUMBER
- E#.# — DRAWING NUMBER WHERE DETAIL IS LOCATED
- #/E#.# — DETAIL REFERENCE: DETAIL NUMBER/DRAWING NUMBER

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SYMBOLS, LEGENDS AND ABBREVIATIONS - TELECOM

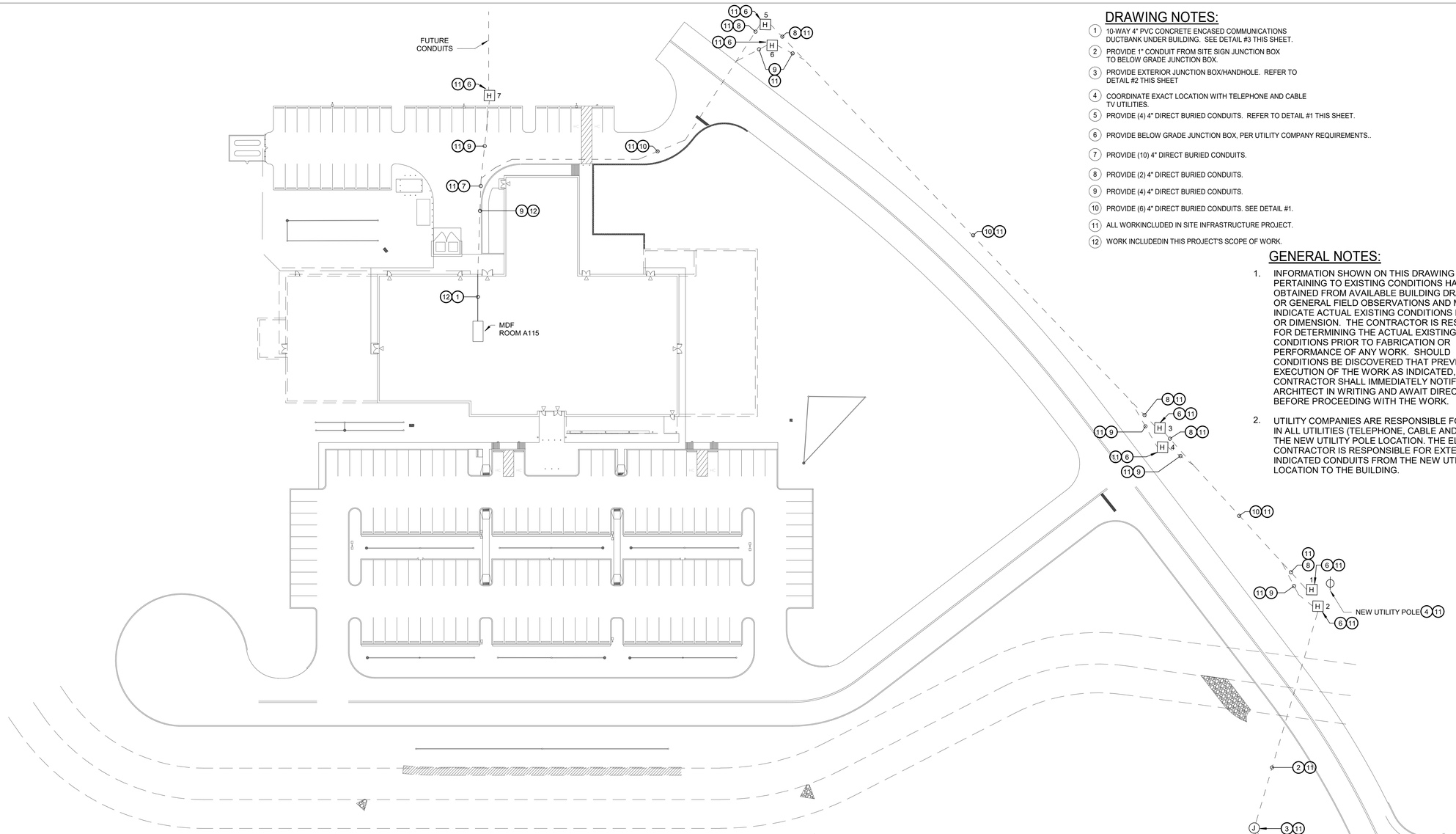
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT 3089

T0.1



0 SITE PLAN - TELECOM
1" = 40'-0"

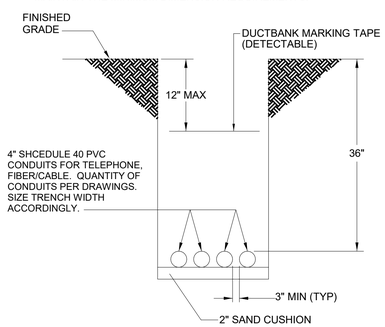
DRAWING NOTES:

1. 10-WAY 4" PVC CONCRETE ENCASED COMMUNICATIONS DUCTBANK UNDER BUILDING. SEE DETAIL #3 THIS SHEET.
2. PROVIDE 1" CONDUIT FROM SITE SIGN JUNCTION BOX TO BELOW GRADE JUNCTION BOX.
3. PROVIDE EXTERIOR JUNCTION BOX/HANDHOLE. REFER TO DETAIL #2 THIS SHEET
4. COORDINATE EXACT LOCATION WITH TELEPHONE AND CABLE TV UTILITIES.
5. PROVIDE (4) 4" DIRECT BURIED CONDUITS. REFER TO DETAIL #1 THIS SHEET.
6. PROVIDE BELOW GRADE JUNCTION BOX, PER UTILITY COMPANY REQUIREMENTS..
7. PROVIDE (10) 4" DIRECT BURIED CONDUITS.
8. PROVIDE (2) 4" DIRECT BURIED CONDUITS.
9. PROVIDE (4) 4" DIRECT BURIED CONDUITS.
10. PROVIDE (6) 4" DIRECT BURIED CONDUITS. SEE DETAIL #1.
11. ALL WORKINCLUDED IN SITE INFRASTRUCTURE PROJECT.
12. WORK INCLUDEDIN THIS PROJECT'S SCOPE OF WORK.

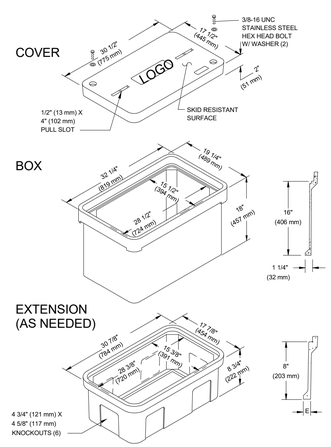
GENERAL NOTES:

1. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL OR DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
2. UTILITY COMPANIES ARE RESPONSIBLE FOR BRINING IN ALL UTILITIES (TELEPHONE, CABLE AND DATA) TO THE NEW UTILITY POLE LOCATION. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR EXTENDING THE INDICATED CONDUITS FROM THE NEW UTILITY POLE LOCATION TO THE BUILDING.

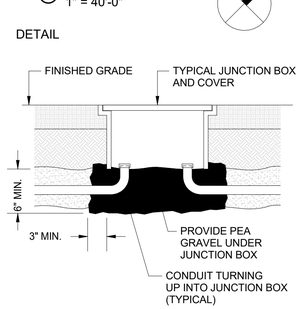
NOTE: COORDINATE EXCAVATION OF TRENCH AND INSTALLATION OF CONDUITS WITH UTILITY COMPANIES IN ADVANCE. WHERE MORE THAN (4) CONDUITS ARE REQUIRED, CONTRACTOR SHALL USE WHATEVER CONFIGURATION THEY WANT, AS LONG AS THEY MAINTAIN THE MINIMUM DIMENSION REQUIREMENTS.

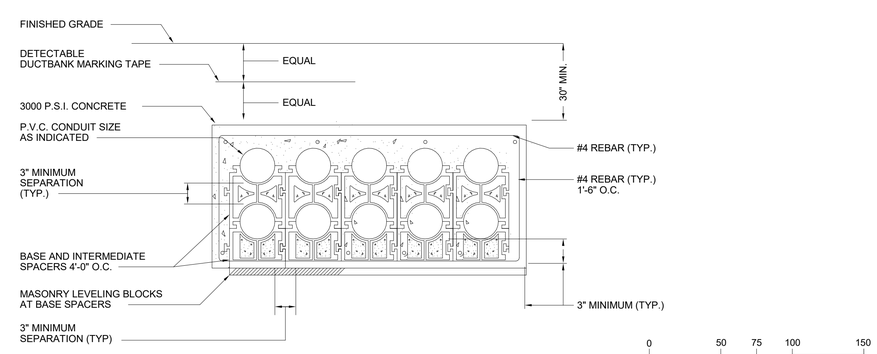


1 TYPICAL DIRECT BURIED CONDUIT DETAIL
NO SCALE



2 TYPICAL BELOW GRADE JUNCTION BOX DETAIL
NO SCALE





3 10-WAY CONCRETE ENCASED DUCTBANK DETAIL
NO SCALE

0 50 75 100 150

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SITE PLAN - TELECOM

PLOT SCALE: As indicated
FILENAME:
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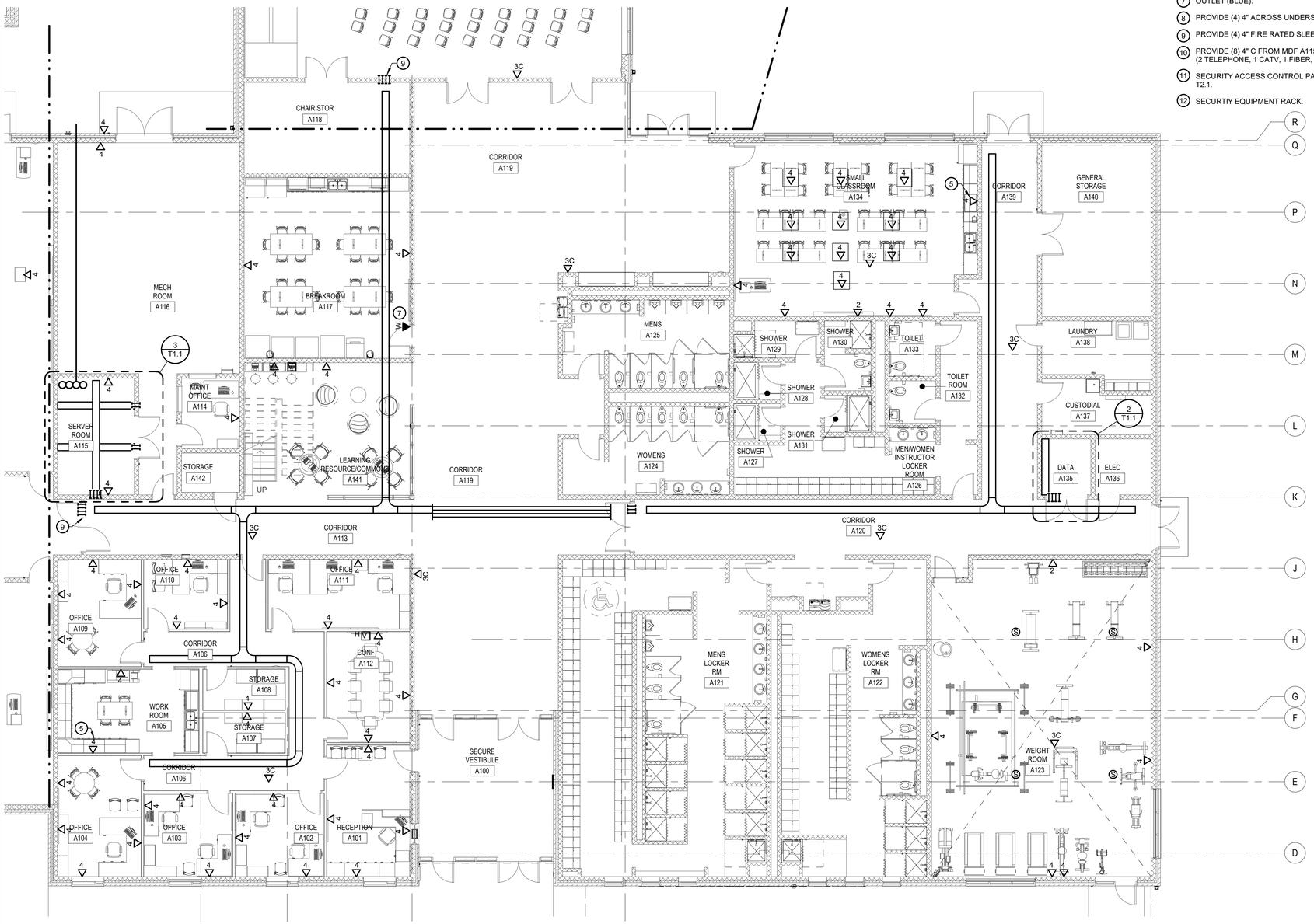
PROJECT 3089

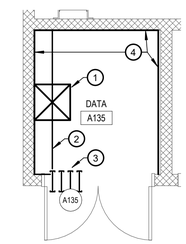
T0.2

KEYED NOTES:

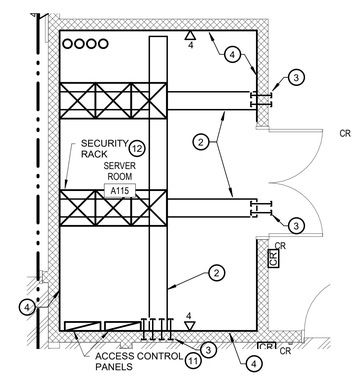
1. PROVIDE TELECOM RACK (2 POST).
2. PROVIDE 18" WIDE LADDER TRAY.
3. PROVIDE 4" EZ PATH SLEEVES.
4. PROVIDE 3/4" FIRE RATED PLYWOOD (3 WALLS).
5. MOUNT ABOVE COUNTER.
6. MOUNT BEHIND DIGITAL SIGNAGE VIDEO DISPLAY.
7. PROVIDE 48" AFF WALL MOUNTED TELEPHONE OUTLET (BLUE).
8. PROVIDE (4) 4" ACROSS UNDERSIDE OF BRIDGE.
9. PROVIDE (4) 4" FIRE RATED SLEEVES.
10. PROVIDE (8) 4" C FROM MDF A115 TO SITE HANDBOXES (2 TELEPHONE, 1 CATV, 1 FIBER, 4 SPARE).
11. SECURITY ACCESS CONTROL PANELS. REFER TO T2.1.
12. SECURTIY EQUIPMENT RACK.
13. MOUNT AT 10'-0" AFF BELOW ACOUSTIC WALL PANELS.



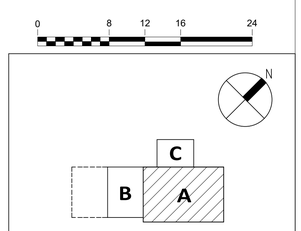
1 PARTIAL FIRST FLOOR PLAN - AREA A - TELECOM
1/8" = 1'-0"



2 DATA ROOM A135
1/4" = 1'-0"



3 SERVER ROOM A115
1/4" = 1'-0"



KEY PLAN

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PARTIAL FIRST FLOOR PLAN - AREA A - TELECOM

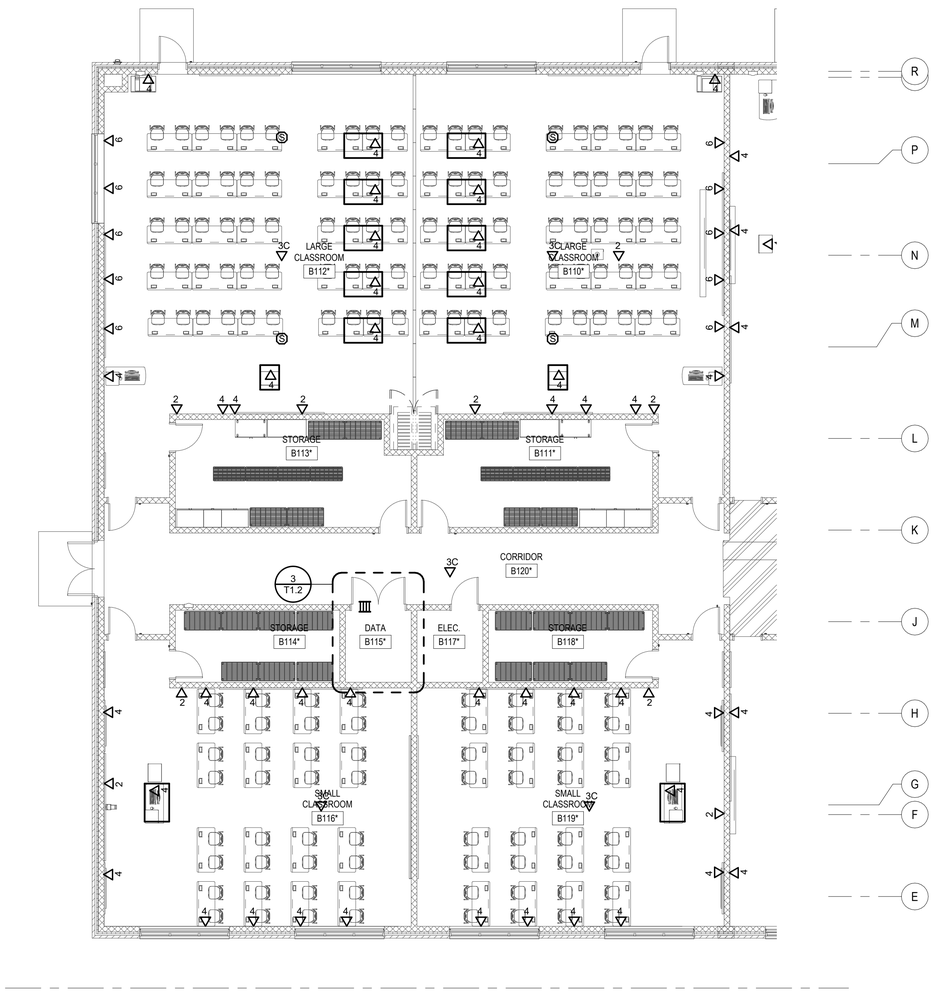
PLOT SCALE: As indicated

FILENAME:

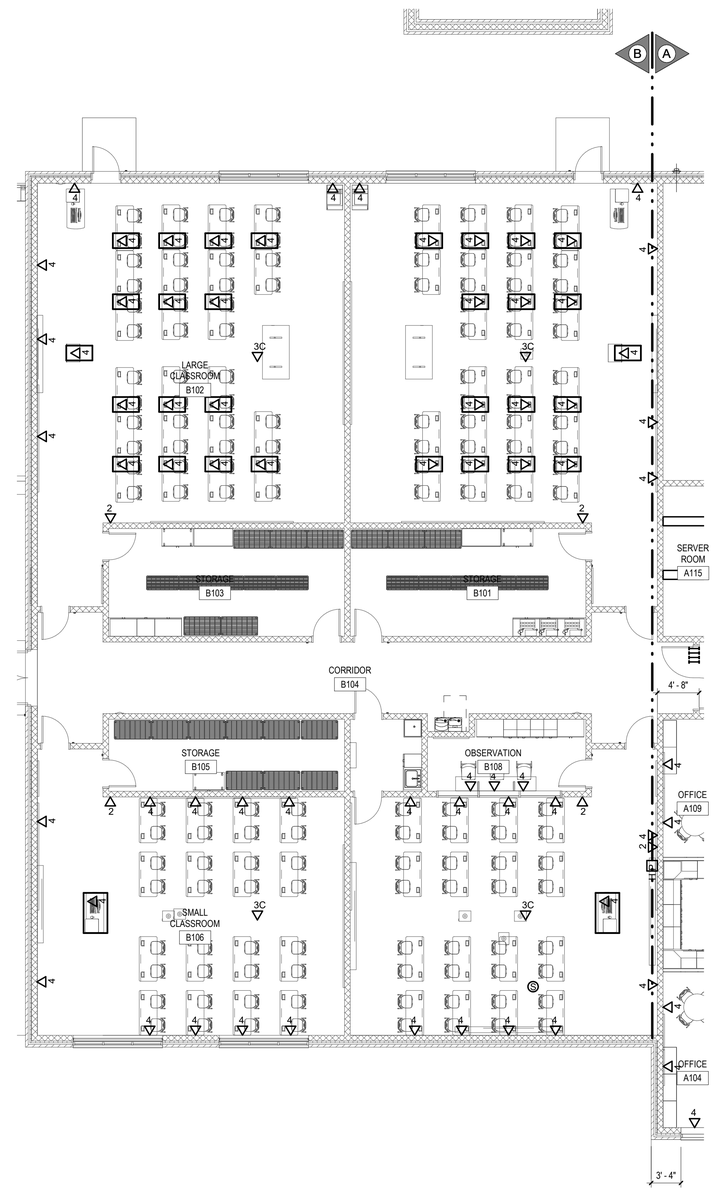
DATE: DECEMBER 18, 2019

PROJECT 3089

T1.1



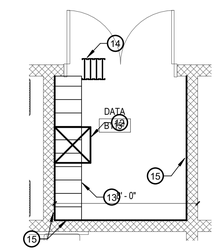
2 PARTIAL FIRST FLOOR PLAN - AREA B ALT - TELECOM
1/8" = 1'-0"



1 PARTIAL FIRST FLOOR PLAN - AREA B - TELECOM
1/8" = 1'-0"

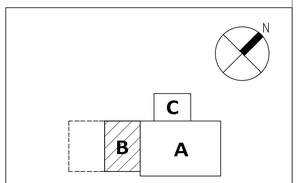
KEYED NOTES:

1. MOUNT 54" AFF FOR OWNER TIME CARD CLOCK (KRONOS).
2. MOUNT 48" AFF.
3. MOUNT 10' AFF.
4. PROVIDE DATA OUTLETS FOR CONNECTION TO TWO ELECTRIC METERS. COORDINATE EXACT LOCATION IN FIELD.
5. MOUNT 8' AFF ON WALL.
6. MOUNT ADJACENT TO SOUND CABINET.
7. MOUNT HIGH ON WALL BEHIND VIDEO DISPLAY. COORDINATE EXACT LOCATION IN FIELD.
8. PROVIDE (3) 4" C ABOVE CEILING FOR LOW VOLTAGE CABLING PATH ABOVE HARD CEILING.
9. PROVIDE TELEPHONE OUTLET INSIDE FLUSH MOUNTED TELEPHONE ENCLOSURE. MOUNT AT 48" AFF.
10. PROVIDE 48" AFF WALL VOIP TELEPHONE OUTLET.
11. AT THIS LOCATION PROVIDE CHANGE IN ELEVATION FOR CONDUITS SLOPING TO MATCH CABLE TRAY IN CORRIDOR B15.
12. PROVIDE TELECOM RACK (2 POST).
13. PROVIDE 18" WIDE LADDER TRAY.
14. PROVIDE 4" EZ PATH SLEEVES.
15. PROVIDE 3/4" FIRE RATED PLYWOOD (3 WALLS).



3 DATA B115
1/4" = 1'-0"

0 8 12 16 24



KEY PLAN

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PARTIAL FIRST FLOOR PLAN - AREA B - TELECOM

PLOT SCALE: As indicated

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT 3089

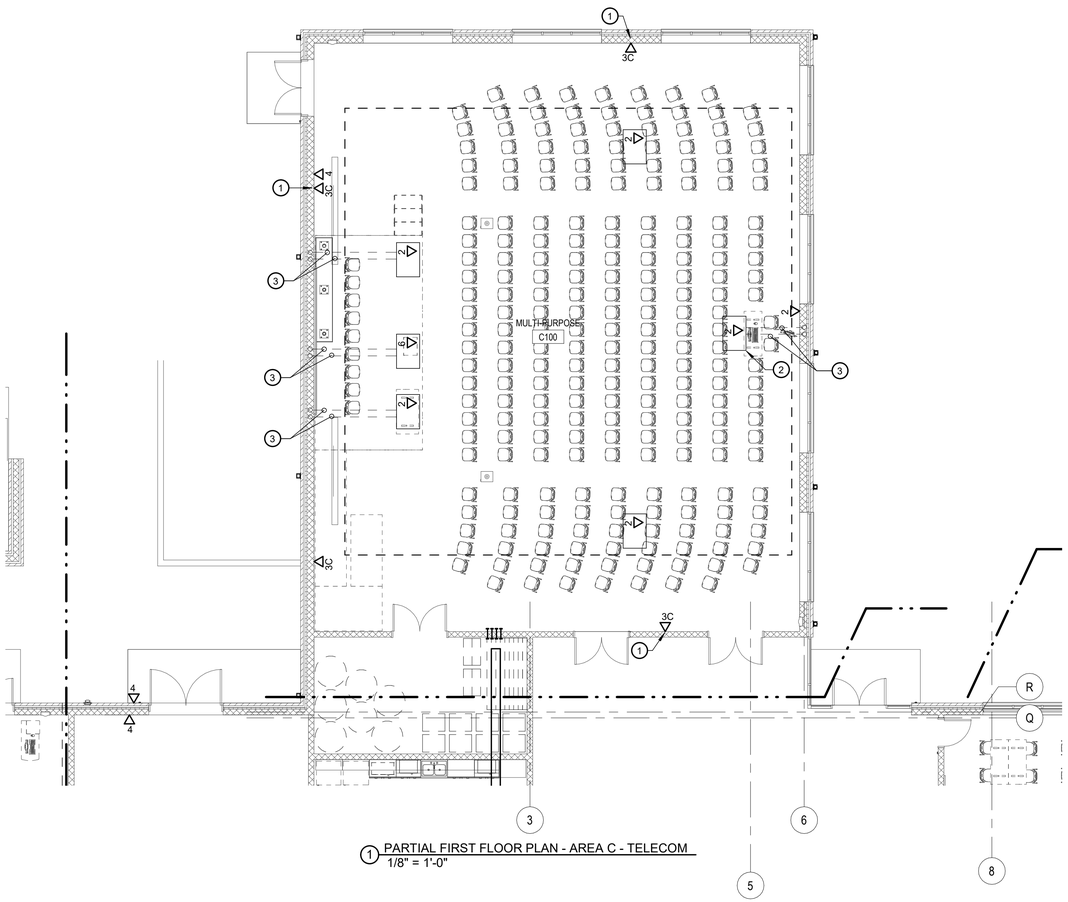
T1.2

GENERAL NOTES:

1. WHERE CABLING CANNONT BE CONCEALED FROM VIEW, PROVIDE PAINTED CONDUITS FOR CABLING RUNNING IN EXPOSED CEILING AREAS INCLUDING MULTIPURPOSE ROOM C100.

DRAWING NOTES:

1. MOUNT 10'-0" AFF.
2. MOUNT IN FLUSH FLOOR BOX IN CONCRETE FLOOR SLAB.
3. PROVIDE (2) 1 1/4" C FOR TELECOM CABLES FROM ACCESSIBLE CEILING SPACE TO FLOOR BOX.



1 PARTIAL FIRST FLOOR PLAN - AREA C - TELECOM
1/8" = 1'-0"

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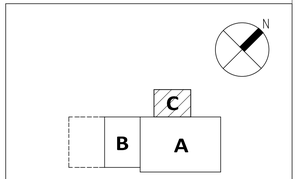


KEY PLAN

PARTIAL FIRST FLOOR PLAN - AREA C - TELECOM

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

FILENAME:

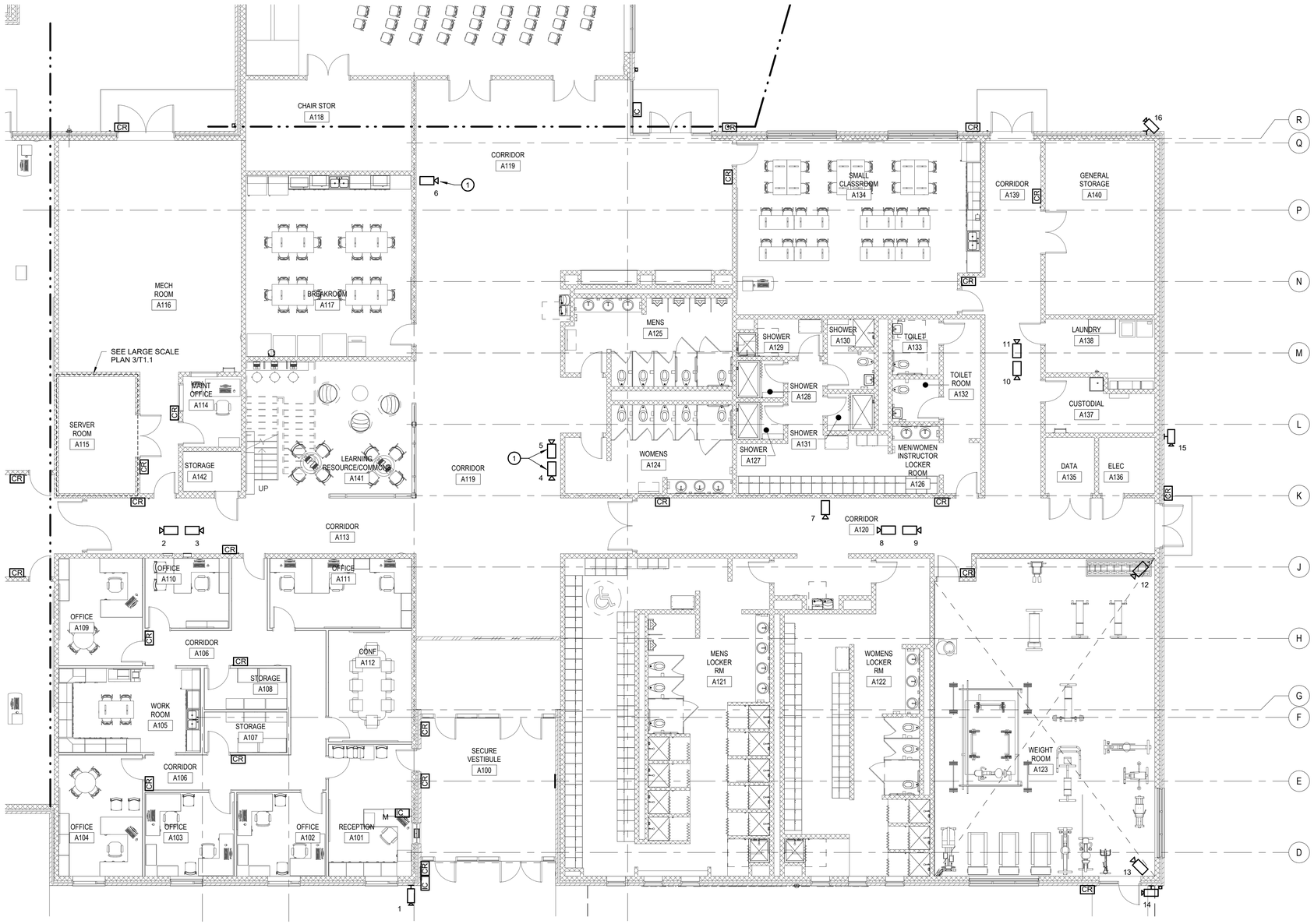
DATE: DECEMBER 18, 2019

PROJECT
3089

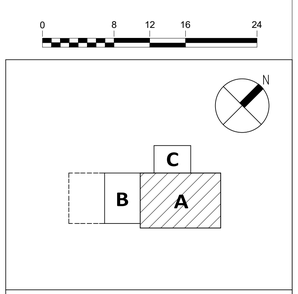
T1.3

DRAWING NOTES:

1. MOUNT ON WALL AT 10'-0" AFF BELOW ACOUSTIC WALL PANELS.



1 PARTIAL FIRST FLOOR PLAN - AREA A - SECURITY
1/8" = 1'-0"



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PARTIAL FIRST FLOOR PLAN - AREA A - SECURITY

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

FILENAME:

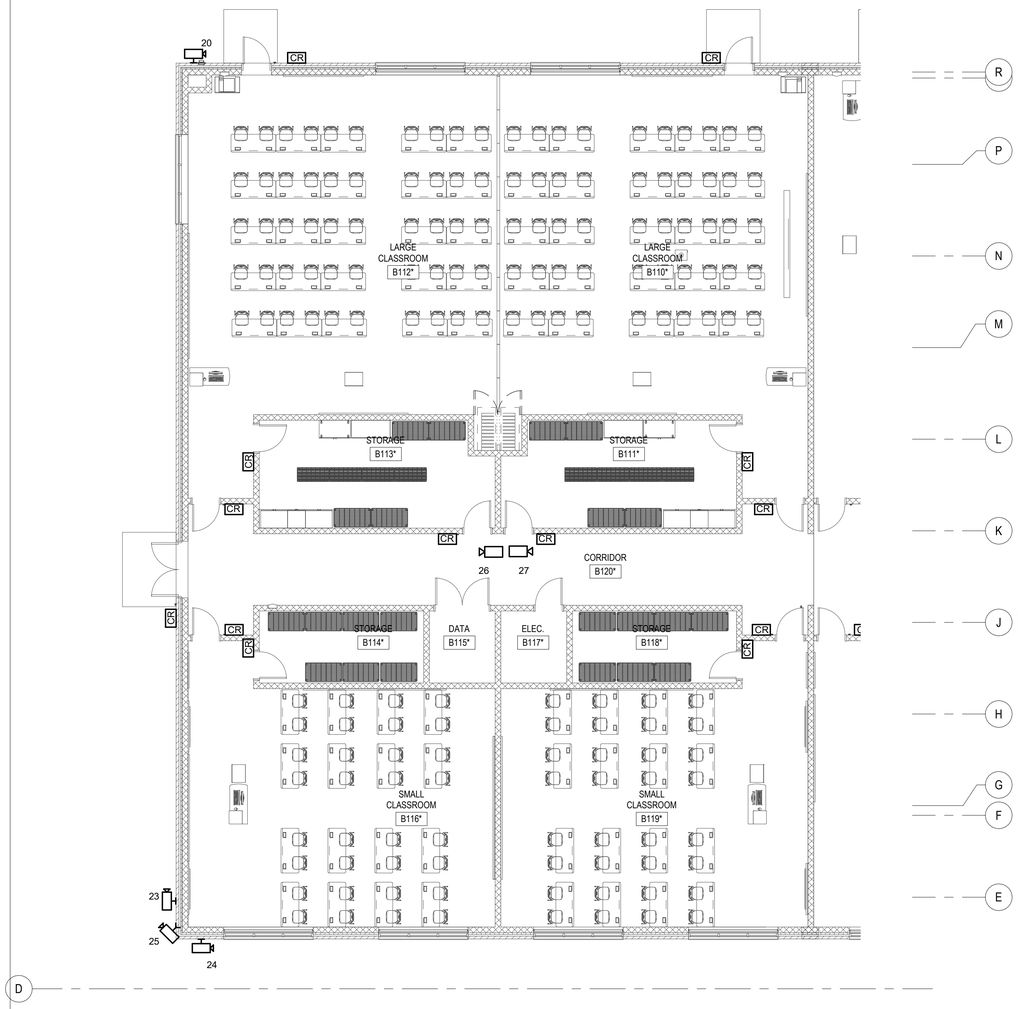
DATE: DECEMBER 18, 2019

PROJECT
3089

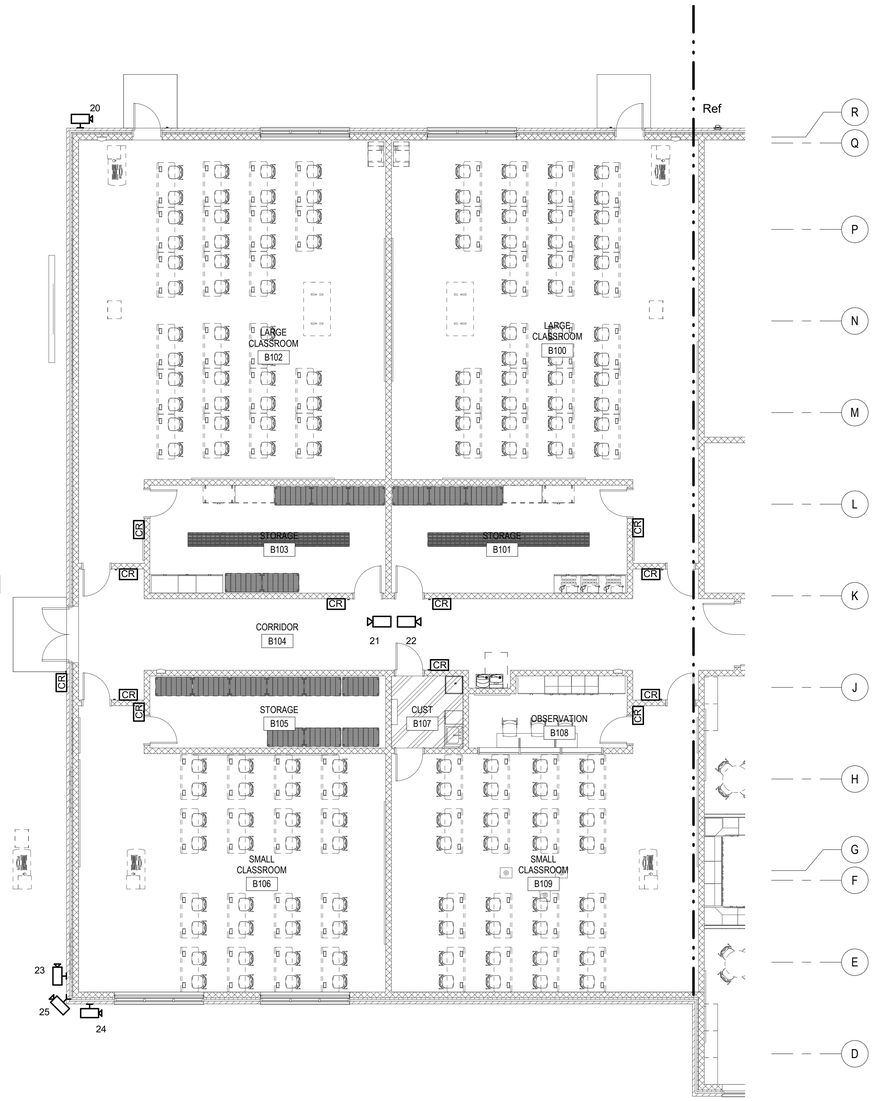
T2.1

KEYED NOTES:

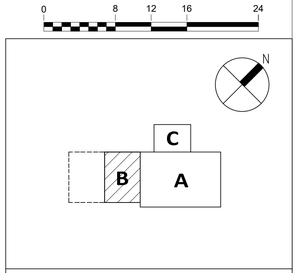
1. PROVIDE WIRELESS LOCKDOWN SYSTEM REPEATER UNDER ADD ALTERNATE.
2. PROVIDE SECURITY CONTROL WIRING IN 3/4" C FROM DOOR POWER SUPPLY TO REPEATER UNDER ADD ALTERNATE.



2 PARTIAL FIRST FLOOR PLAN - AREA B ALT - SECURITY
1/8" = 1'-0"



1 PARTIAL FIRST FLOOR PLAN - AREA B - SECURITY
1/8" = 1'-0"



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PARTIAL FIRST FLOOR PLAN - AREA B - SECURITY

PLOT SCALE: 1/8" = 1'-0"
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT
3089

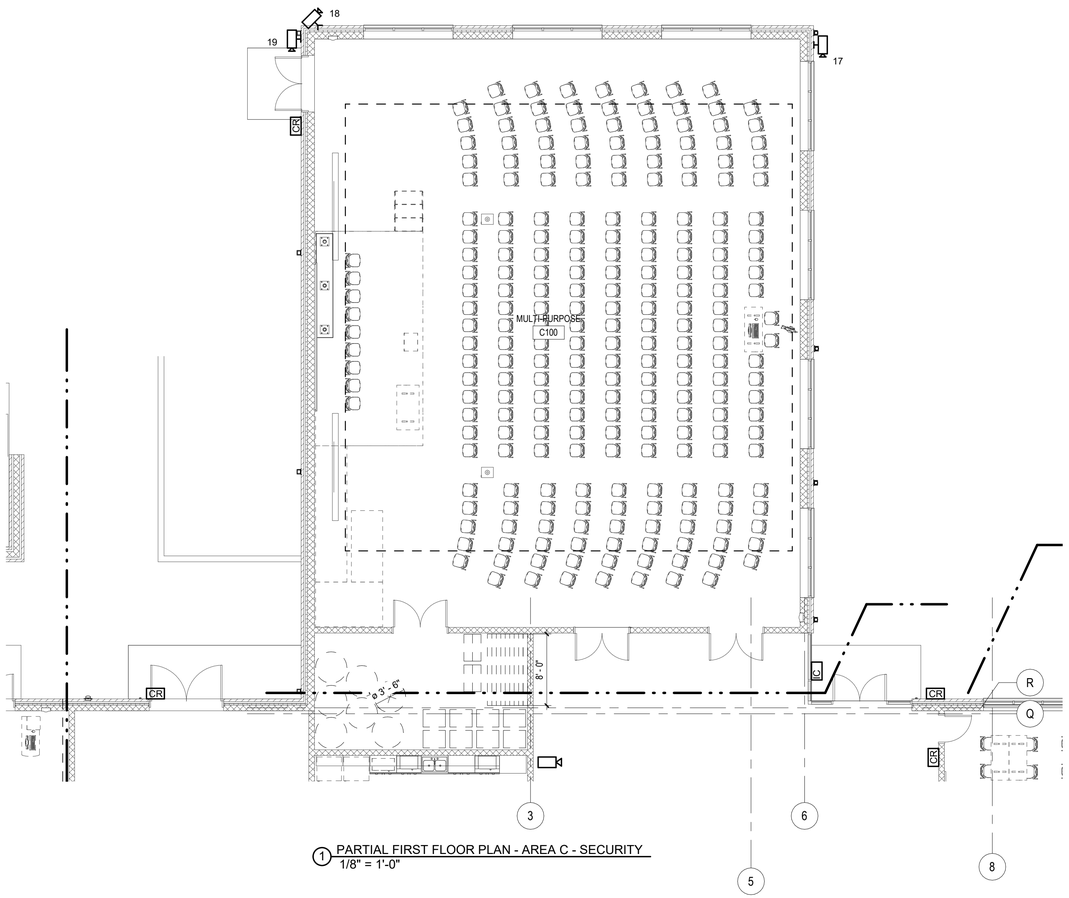
T2.2

GENERAL NOTES:

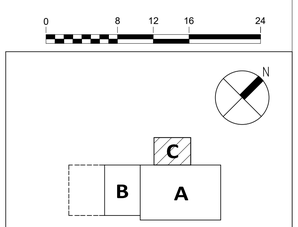
1. WHERE CABLING CANNONT BE CONCEALED FROM VIEW, PROVIDE PAINTED CONDUITS FOR CABLING RUNNING IN EXPOSED CEILING AREAS INCLUDING MULTIPURPOSE ROOM C100.

KEYED NOTES:

1. PROVIDE WIRELESS LOCKDOWN SYSTEM GATEWAY AND REPEATER UNDER ADD ALTERNATE.
2. PROVIDE SECURITY CONTROL WIRING IN 3/4" C FROM DOOR POWER SUPPLY TO REPEATER UNDER ADD ALTERNATE.



1 PARTIAL FIRST FLOOR PLAN - AREA C - SECURITY
1/8" = 1'-0"



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PARTIAL FIRST FLOOR PLAN - AREA C - SECURITY

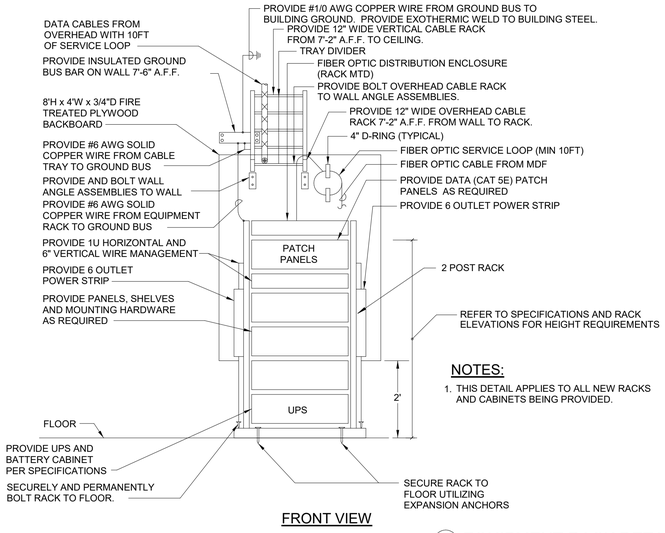
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
3089

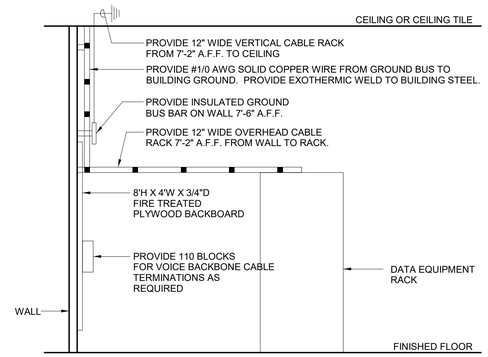
T2.3



FRONT VIEW

NOTES:

1. THIS DETAIL APPLIES TO ALL NEW RACKS AND CABINETS BEING PROVIDED.



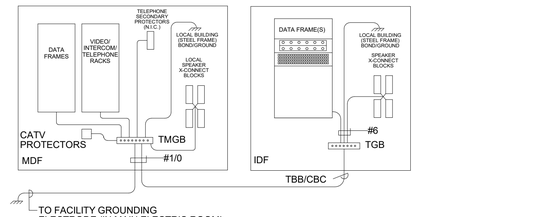
SIDE VIEW

1 EQUIPMENT RACK DETAIL

NO SCALE

DRAWING NOTES

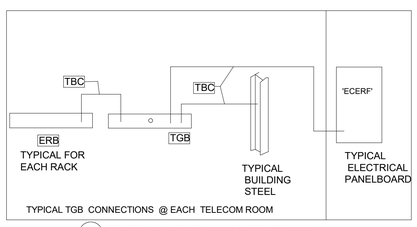
1. PROVIDE 50 PAIR CAT 6 FOR VOICE.
2. PROVIDE 24 MULTIMODE (50 MICRON LASER OPTIMIZED OM3) AND 24 STRAND SINGLEMODE FIBER BETWEEN MPOP AND MDF WITH 'LC' CONNECTORS.
3. NOT USED.
4. PROVIDE TWO 4" CONDUITS BETWEEN EACH IDF RM AND MDF RM C105. PROVIDE (3) 1-1/4" INNERDUCTS IN EACH CONDUIT.
5. 25-PAIR CAT 6 FOR VOICE/INTERCOM BACKBONE BETWEEN MDF AND IDF.
6. (2) 4-PAIR CAT 6 FOR DATA BETWEEN MDF AND EACH IDF.



NOTES:
TGB = TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB = TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TBB = TELECOMMUNICATIONS BONDING BACKBONE
ALL BONDING CABLE IS #6AWG STRANDED COPPER W/GREEN JACKET WITH TELECOM ROOM INNERCLOSET BONDING CABLE STRAPPED TO INTERCOM BACKBONE CABLE AS A COUPLED BONDING CONDUCTOR (CBC) SHALL BE #1/0 AWG
PRIMARY TELEPHONE UTILITY (C.O.) PROTECTION BY VERIZON (LOCATED IN MAIN ELECTRICAL ROOM) (NOT ILLUSTRATED)
LOUDSPEAKER CIRCUIT SHIELDS ARE GROUNDED AT TGB'S OR TMGB RESPECTIVELY CAFETERIA, GYMNASIUM, AUDITORIUM & MISC. SOUND SYSTEM CABINETS ARE LOCALLY GROUNDED VIA AC POWER SYSTEM (NOT ILLUSTRATED)

2 TELECOMMUNICATIONS GROUNDING AND BONDING SYSTEM DIAGRAM

NO SCALE

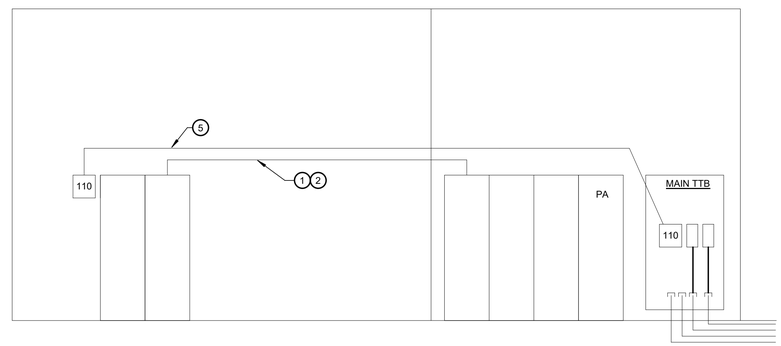


3 TYPICAL TGB CONNECTIONS

TELECOMMUNICATIONS GROUNDING LEGEND

ALL CONDUCTORS SHALL BE GREEN INSULATED SOLID COPPER CONDUCTORS.

TBC	TELECOMMUNICATIONS BONDING CONDUCTOR #6 AWG UNLESS OTHERWISE NOTED.
MBC	TELECOMMUNICATIONS MAIN BONDING CONDUCTOR #2 / 0 AWG.
TBB	TELECOMMUNICATIONS BONDING BACKBONE # 2 / 0 AWC
TGB	TELECOMMUNICATIONS GROUND BAR MOUNTED ON BACKBOARD, SEE DETAIL.
TMGB	TELECOMMUNICATIONS MAIN GROUND BAR MOUNTED ON BACKBOARD , SEE DETAIL.
ERB	EQUIPMENT RACK BUSBER. MOUNT ON THE REAR SIDE OF EACH RACK, AT THE TOP. SEE DETAIL



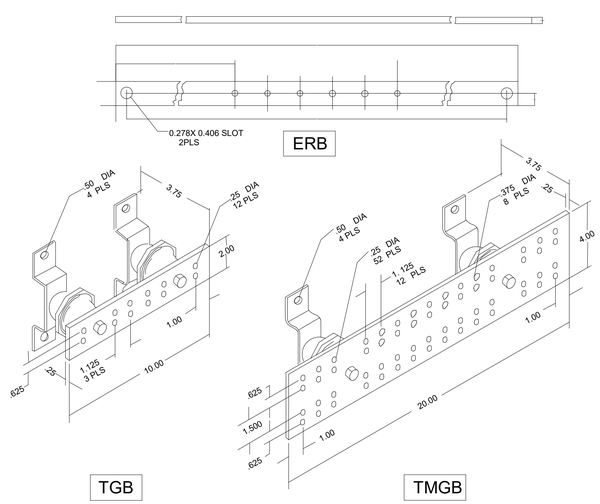
5 TELECOM RISER

NO SCALE

TELECOMMUNICATIONS GROUNDING SYSTEM DIAGRAM

SCALE : NONE

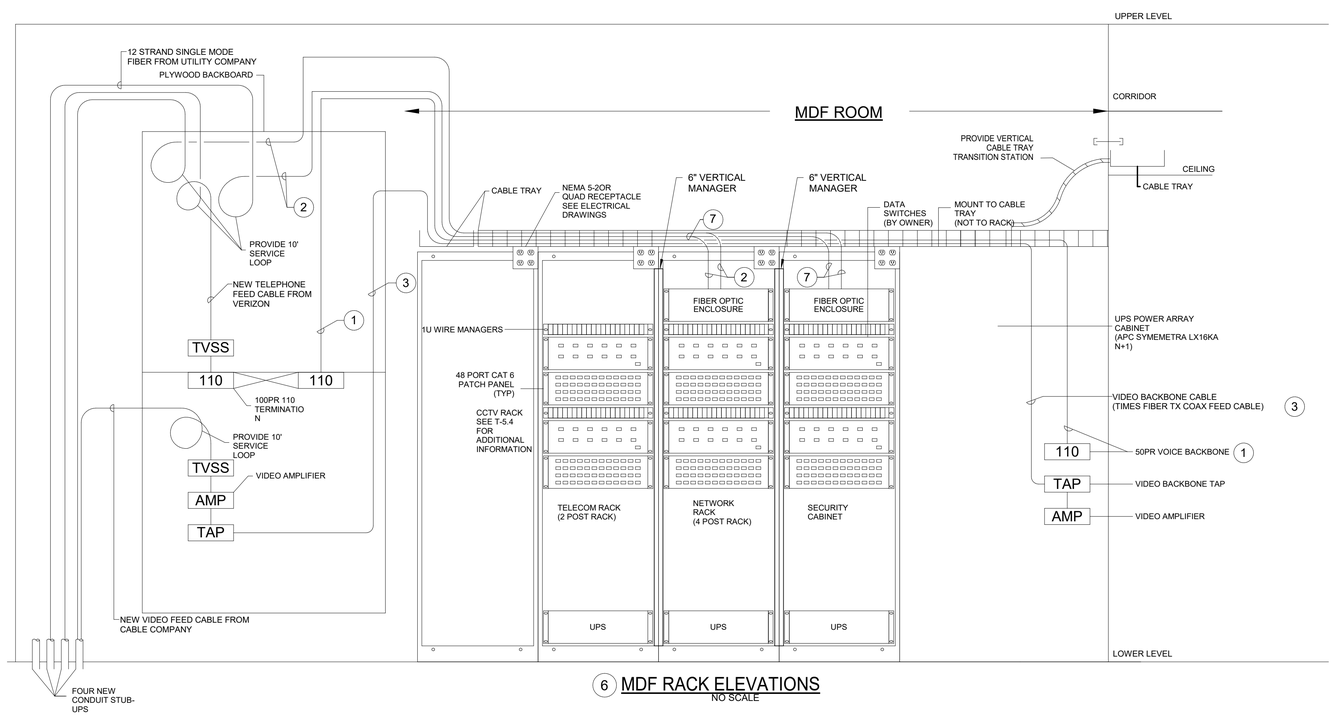
NOTES:
1. RUN ALL GROUND CONDUCTORS IN THIS SYSTEM IN TELECOM PRIMARY AND SECONDARY PATHWAYS TO EXTEND FEASIBLE.



4 TELECOMMUNICATIONS GROUNDING BARS DETAIL

SCALE: NONE

NOTES:
1. TYPICAL RUSBARS,INSULATORS AND BACKBOARD MOUNT BRACKETS SHOWN HERE REFLECT TIA STANDARDS-COMPLIANT DIMENSIONS.
2. MOUNT BACKBOARD-MOUNTED BUSBARS @ 6'-6" A-F UNLESS DIRECTED OTHERWISE BY OWNER



6 MDF RACK ELEVATIONS

NO SCALE

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RISERS - TELECOM

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

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT 3089

T3.1

REF.	CABLE	DESCRIPTION	CONDUCTORS	SHIELDING
A	*25293B	1 TWISTED, SHIELDED PAIR.	#18 AWG STRANDED	FOIL W/BARE DRAIN WIRE.
B	*25359B	1 TWISTED SHIELDED PAIR + 1 TWISTED PAIR.	#20 AWG STRANDED	FOIL W/BARE DRAIN WIRE.
C	*25510	2 PAIR INDIVIDUALLY SHIELDED.	#22 AWG STRANDED TINNED.	COMMON DRAIN WIRE
D	*25225	2 TWISTED CONDUCTORS	#16 AWG	NONE
F	*D253652	3 TWISTED SHIELDED PAIR	#22 AWG	OVERWALL
G		CLOCK CIRCUIT	#14 AWG	NONE
I	*25302	(2) 3 CONDUCTORS	#20 AWG	OVERALL
M	*25292B	1 TWISTED, SHIELDED PAIR.	#20 AWG STRANDED	FOIL W/BARE DRAIN WIRE.
S	*25226B	1 TWISTED PAIR	#14 AWG STRANDED	NONE
T	*25294B	1 TWISTED, SHIELDED PAIR.	#16 AWG	FOIL W/BARE DRAIN WIRE.

NOTES:

1. USE ONLY THE CABLE LISTED OR EQUAL, APPROVED BY EQUAL
2. * - WEST PENN CABLE
3. DO NOT RUN MICROPHONE AND SPEAKER CABLES IN THE SAME CONDUIT.

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DETAILS - TELECOM

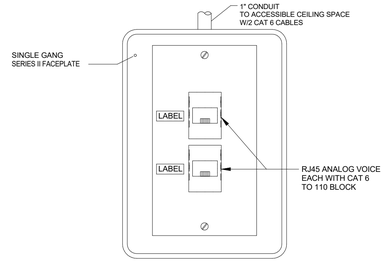
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

DATE: DECEMBER 18, 2019

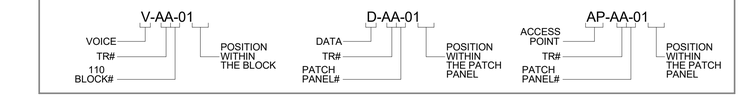
PROJECT 3089

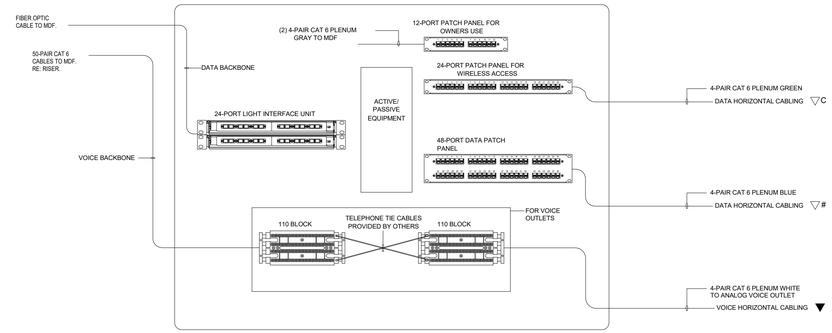
T4.1



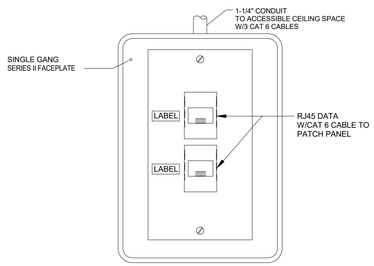
6 TYPICAL TELEPHONE OUTLET ▼2

9 TELECOMMUNICATIONS OUTLET ADDRESSING SCHEME

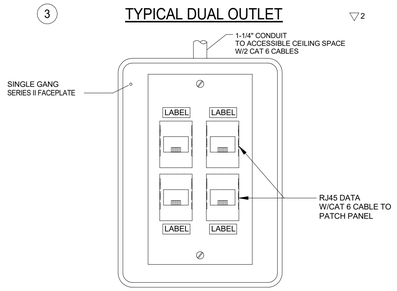




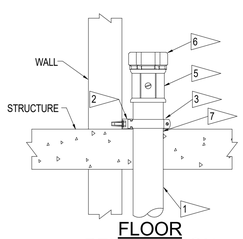
10 TYPICAL CROSS-CONNECTION IN MDF/IDF
NOT TO SCALE



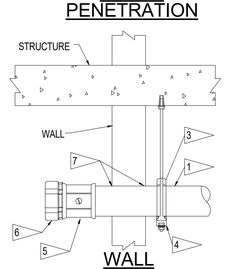
3 TYPICAL DUAL OUTLET ▽2



4 TYPICAL QUAD OUTLET ▽4



FLOOR PENETRATION



WALL PENETRATION

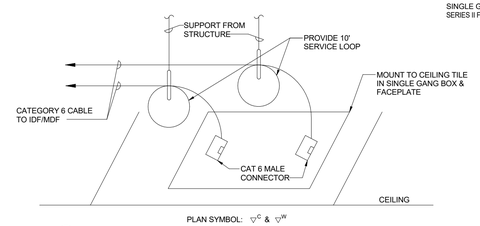
KEYNOTES:

1. 4" EMT CONDUIT, USE COMPRESSION COUPLINGS AND FITTINGS UNLESS OTHERWISE NOTED.
2. 1-1/2"x1-1/2" 12 GA. KINDORF CHANNEL - ANCHOR SECURELY TO WALL.
3. 4" EMT STRAPS (KINDORF #C-105-4).
4. KINDORF CHANNEL AND STRAP SUPPORT - ANCHOR SECURELY TO DECK ABOVE.
5. 4" DIE CAST SET SCREW CONNECTOR (RACO #2646). FOR ALL CONDUIT SMALLER THAN 4", USE COMPRESSION CONNECTOR.
6. 4" PLASTIC INSULATING BUSHING (RACO #1416). INSTALL INSULATING, BONDING AND GROUNDING BUSHING AT CLOSET END OF CONDUIT.
7. FIRESTOP AS REQUIRED BY FIRE CODE.

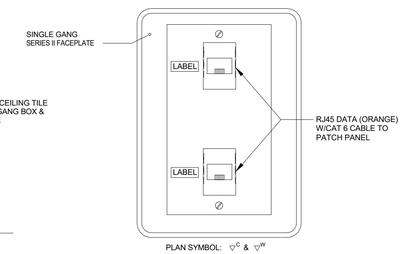
GENERAL NOTES:

1. PENETRATE TELECOMMUNICATIONS ROOM 4" TO 8" MAXIMUM.
2. SIMILAR FOR ALL SIZE EMT CONDUITS.

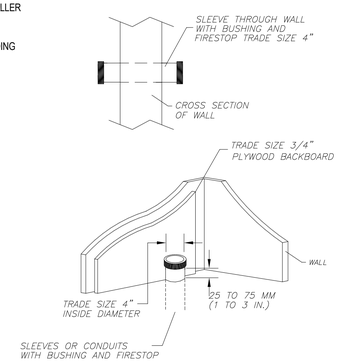
13 RISER CONDUIT END FITTINGS DETAIL
NO SCALE



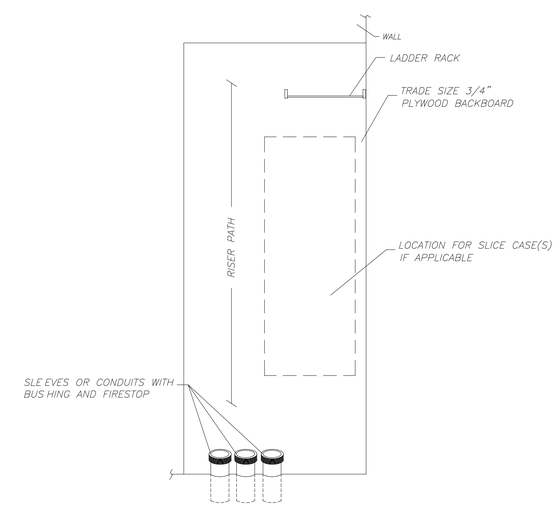
11 WIRELESS ACCESS CONNECTION DETAIL
NO SCALE



12 WIRELESS FACEPLATE DETAIL



14 SLEEVE/CONDUIT DETAILS
NO SCALE



15 RISE BACKBOARD ELEVATION
NO SCALE

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PROPOSED NEW
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WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

DETAILS - TELECOM

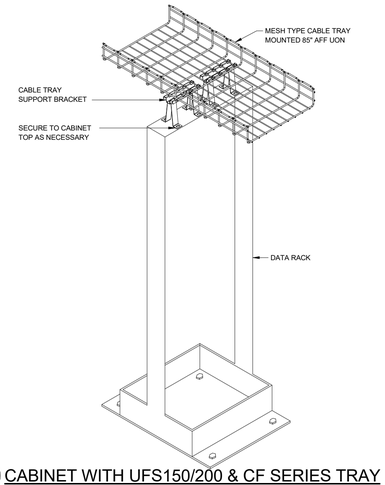
PLOT SCALE: 1/8" = 1'-0"

FILENAME:

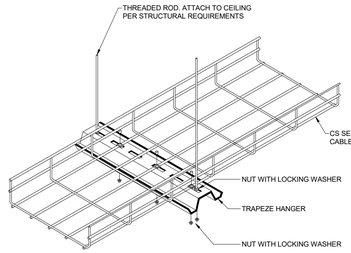
DATE: DECEMBER 18, 2019

PROJECT 3089

T4.2

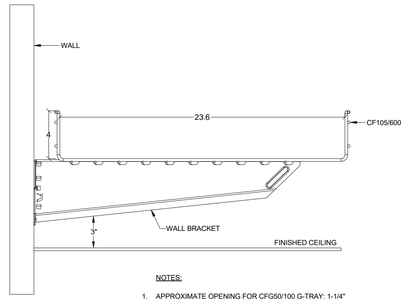


1 CABINET WITH UFS150/200 & CF SERIES TRAY
NOT TO SCALE



NOTE: PROVIDE TRAPEZE HANGER MINIMUM EVERY 8'.

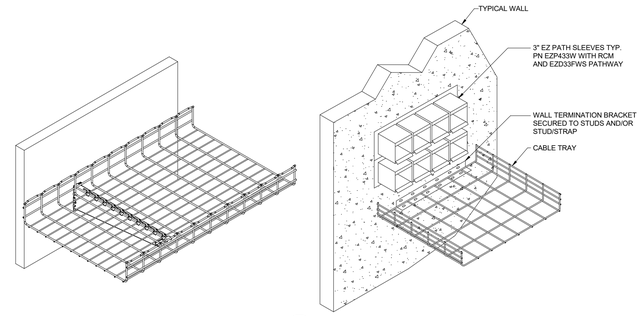
2 CABLE TRAY TRAPEZE HANGING DETAIL
NOT TO SCALE



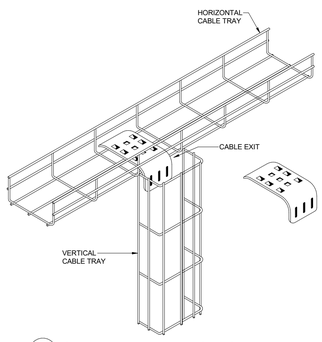
NOTES:

1. APPROXIMATE OPENING FOR CFG50/100 G-TRAY: 1-1/4"
CFG50/150 G-TRAY: 3"
CFG50/200 G-TRAY: 4-7/8"

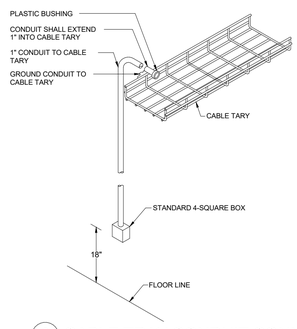
3 CABLE TRAY - WALL MOUNTED
NOT TO SCALE



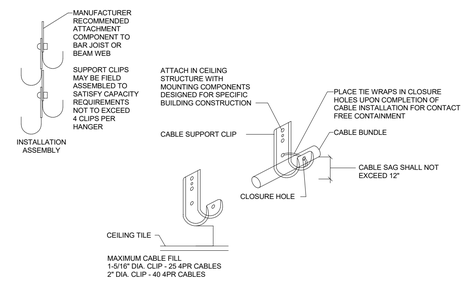
4 CABLE TRAY & CABLE SLEEVE DETAIL
NOT TO SCALE



5 CABLE TRAY 'DROP OUT'
NOT TO SCALE

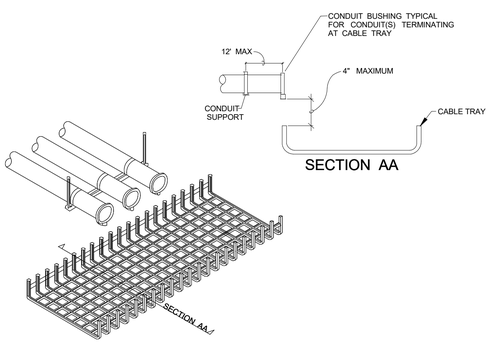


6 CABLE TRAY CONDUIT CONNECTION
NOT TO SCALE



7 HOOK CABLE SUPPORT
NOT TO SCALE

* PROVIDE J-HOOKS IN ALL AREAS NOT SERVED BY CABLE TARY.

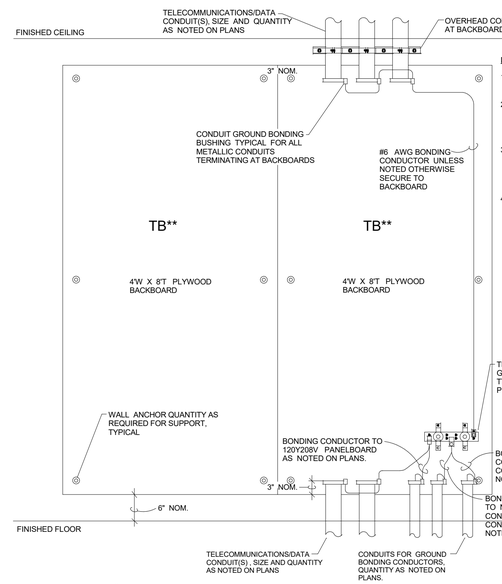


CONDUIT TERMINATION AT CABLE TRAY ISOMETRIC VIEW

DETAIL NOTES:

1. DETAIL TYPICAL FOR ALL TELECOMMUNICATION / DATA CONDUITS FROM BACKBOARDS TERMINATING AT CABLE TRAY, UNLESS NOTED OTHERWISE
2. TELECOMMUNICATIONS/DATA CONDUITS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY. PROVIDE CONDUITS AS INDICATED ON PLANS OR WITHIN SPECIFICATIONS.
3. SEE PLANS AND SPECIFICATIONS FOR ADDITIONAL REUIREMENTS.

11 TELECOMMUNICATIONS/DATA CONDUIT(S) TERMINATING AT CABLE TRAY DETAIL



DETAIL NOTES:

1. DETAIL TYPICAL FOR ALL TELECOMMUNICATIONS/ DATA BACKBOARDS. UNLESS NOTED OTHERWISE.
2. TELECOMMUNICATIONS/DATA SHOWN ARE FOR ILLUSTRATIONS PURPOSE ONLY. PROVIDE CONDUITS ARE INDICATED ON PLANS AND WITHIN SPECIFICATIONS.
3. ALL PLYWOOD BACKBOARDS SHALL BE $\frac{3}{4}$" THICK TYPE AC. PAINT ALL 6 SIDES WITH FIRE RETARDANT PAINT. SHERWIN WILLIAMS "FLAME-CONTROL". PER MANUFACTURER'S RECOMMENDATIONS. MOUNT "C" SIDE AGAINST WALL.
4. SEE PLANS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

12 TELECOMMUNICATIONS/DATA BACKBOARD DETAIL
SCALE: NONE

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DETAILS - TELECOM

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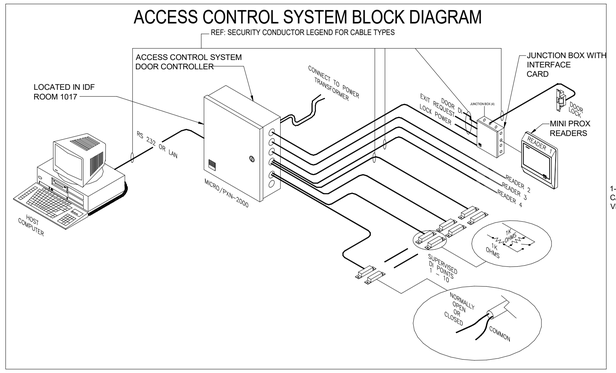
FILENAME:
DATE: DECEMBER 18, 2019

PROJECT 3089

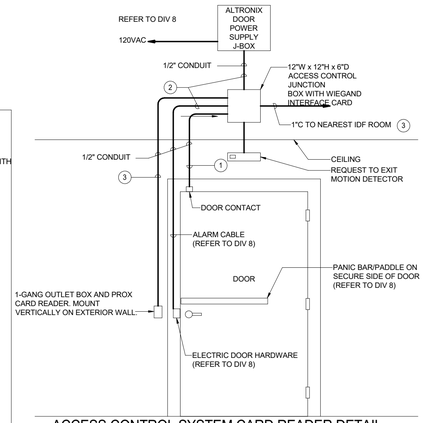
T4.3



SECURITY CABLES/CONDUCTORS		
REF.	FUNCTION	CABLE/CONDUCTOR TYPE & SIZE
1A	ADDRESSABLE LOOP	16AWG, WEST PENN 25225B
1D	DOOR SWITCH & TEMP SENSOR CIRCUIT	#18AWG TWISTED PAIR CABLE UNSHIELDED WEST PENN 25224B
1K	KEYPAD CIRCUIT	#16AWG 4 CONDUCTOR WEST PENN 25245
1S	SIREN CIRCUIT	#18AWG TWISTED PAIR CABLE UNSHIELDED WEST PENN 25224B
CR	CARD READER INTERFACE	6 CONDUCTOR 22AWG WEST PENN 25270B
ES	ELECTRIC STRIKE INTERFACE	1 PAIR TWISTED 16AWG FOR POWER WEST PENN 25225B/1 PAIR TWISTED 22AWG FOR SIGNAL WEST PENN 25291B
RTX	REQUEST TO EXIT INTERFACE	#18AWG TWISTED PAIR CABLE UNSHIELDED WEST PENN 25224B
CD	RS232 COMMUNICATION DATA CONTROLLER	2 PAIR 22AWG WEST PENN 25510B
DC	DOOR CONTACT INTERFACE	1 PAIR 16AWG AC POWER WEST PENN 25225B
P	TEMP SENSOR POWER	1 PAIR 16AWG AC POWER WEST PENN 25225B

WIRING SYMBOLS

- P — POWER CIRCUIT: P
- 1A — ADDRESSABLE LOOP: 1A
- 1D — DOOR SWITCH/TEMP SENSOR CIRCUIT: 1D
- 1K — KEYPAD CIRCUIT: 1K
- 1S — SIREN CIRCUIT: 1S

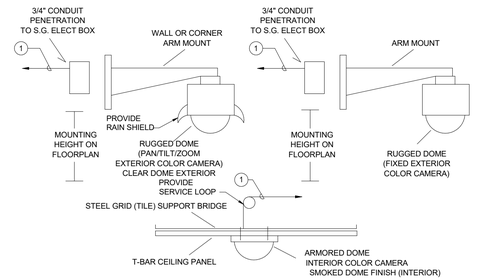


ACCESS CONTROL SYSTEM CARD READER DETAIL

PLAN SYMBOL: CR

ACCESS CONTROL SYSTEM CARD READER DETAIL DRAWING NOTES:

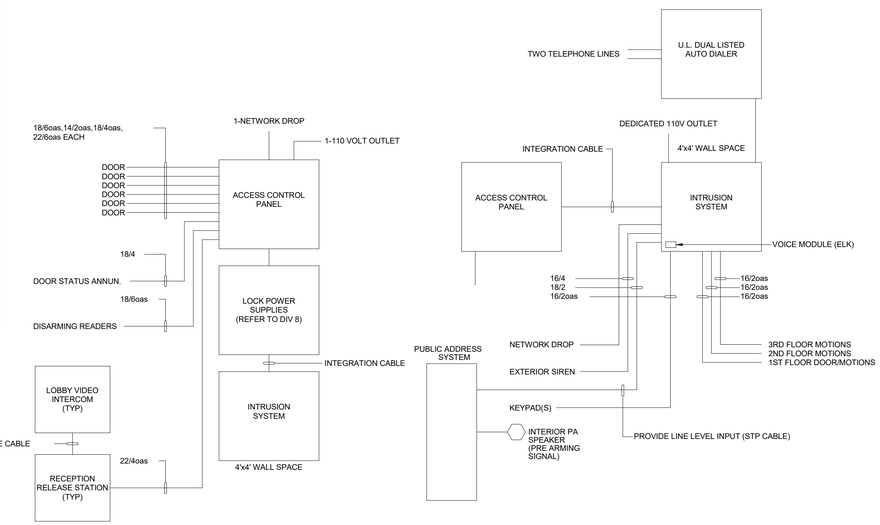
1. DOOR CONTACT: ONE 4 CONDUCTOR #22 AWG STRANDED.
2. LOCK POWER: ONE 4 CONDUCTOR #18 AWG STRANDED.
3. CARD READER: ONE 6 CONDUCTOR #18 AWG TWISTED SHIELDED PAIR.



TYP. CCTV CAMERA MOUNTING DETAILS

CAMERA MOUNT DETAIL NOTES:

1. PROVIDE CAT 6 CABLE FROM EACH CAMERA TO NEAREST IDF/MDF TELECOM RACK.

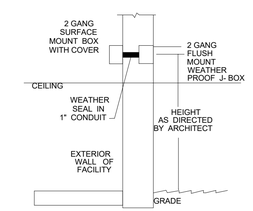


ACCESS CONTROL RISER DIAGRAM

NO SCALE

INTEGRATED INTRUSION ALARM RISER DIAGRAM

NO SCALE



EXTERIOR SECURITY CAMERA

NO SCALE

SYMBOL

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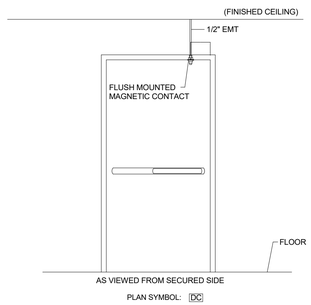
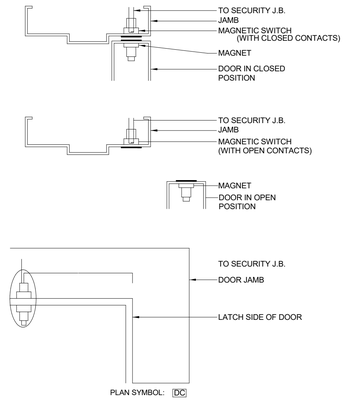
PROJECT 3089

T4.4



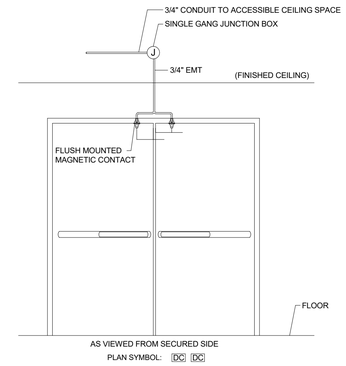
1 SINGLE DOOR ALARM CONTACT PLACEMENT

NO SCALE



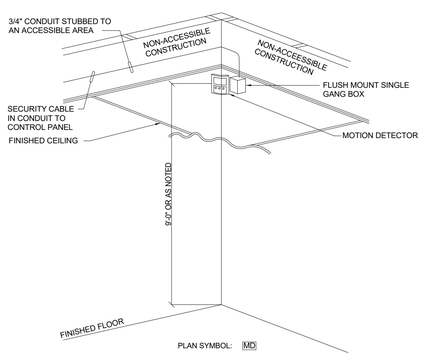
2 RECESSED ALARM CONTACT

NO SCALE



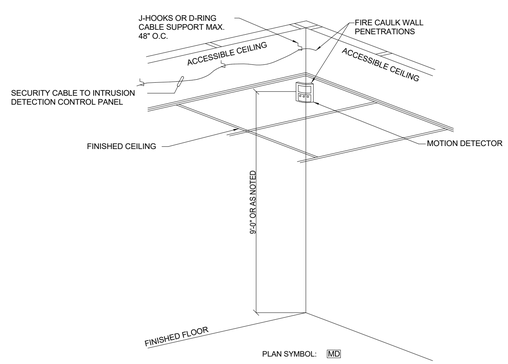
3 DOUBLE DOOR ALARM CONTACT

NO SCALE



4 MOTION DETECTOR NON-ACCESSIBLE CEILING ELEVATION TYPICAL DETAIL

NO SCALE



5 MOTION DETECTOR ACCESSIBLE CEILING ELEVATION TYPICAL DETAIL

NO SCALE

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FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
3089

T4.5

SHEET INDEX

SHEET NUMBER	SHEET NAME
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TA1.2	AUDIOVISUAL PLAN - UNIT B
TA1.3	AUDIOVISUAL PLAN - UNIT C
TA1.4	AUDIOVISUAL PLAN - UNIT B - DIVISIBLE ROOM
TA2.1	AUDIOVISUAL RCP - UNIT A
TA2.2	AUDIOVISUAL RCP - UNIT B
TA2.3	AUDIOVISUAL RCP - UNIT C
TA5.1	AUDIOVISUAL MOUNTING DETAILS
TA5.2	AUDIOVISUAL MOUNTING DETAILS
TA5.3	AUDIOVISUAL MOUNTING DETAILS
TA5.4	AUDIOVISUAL MOUNTING DETAILS
TA5.5	AUDIOVISUAL MOUNTING DETAILS
TA5.6	AUDIOVISUAL MOUNTING DETAILS
TA5.7	AUDIOVISUAL MOUNTING DETAILS
TA5.8	AUDIOVISUAL MOUNTING DETAILS
TA6.1	RACK ELEVATION
TA7.1	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.2	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.3	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.4	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.5	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.6	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.7	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.8	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.9	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.10	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.11	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.12	AUDIOVISUAL LOGICAL DIAGRAMS
TA7.13	AUDIOVISUAL LOGICAL DIAGRAMS

ABBREVIATIONS & NOTATIONS

A

AC	ABOVE CEILING
ACP	ACCESS CONTROL PANEL
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AIA	AMERICAN INSTITUTE OF ARCHITECTS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ACCESS POINT
AWG	AMERICAN WIRE GAUGE

B

BAS	BUILDING AUTOMATION SYSTEM
BDA	BI-DIRECTIONAL ANTENNA
BEF	BUILDING ENTRANCE FACILITY
BICSI	BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL
BMS	BUILDING MANAGEMENT SYSTEM
BTS	BASE TRANSCEIVER STATION
BTU	BRITISH THERMAL UNIT

C

CA	CABLE
CAT	CATEGORY
CATV	COMMUNITY ANTENNA TELEVISION (CABLE TELEVISION)
CB	CONDUIT BANK
CCTV	CLOSED CIRCUIT TELEVISION
CFE	CUSTOMER FURNISHED EQUIPMENT
CN	INDIVIDUAL CONDUIT
codec	CODER/DECODER
CPU	CENTRAL PROCESSING UNIT
CT	CABLE TRAY

D

D-A or D/A	DIGITAL TO ANALOG CONVERSION
DAS	DISTRIBUTED ANTENNA SYSTEM
dB	DECIBEL
DB	DUCT BANK
DC	DIRECT CURRENT
DC	DOOR CONTACT
DEMARC	DEMARCATION POINT
DL	DUCT LINER (INNER DUCT)
DSL	DIGITAL SUBSCRIBER LINE

E

EF	ENTRANCE FACILITY
EMI	ELECTROMAGNETIC INTERFACE
EMT	ELECTRICAL MAGNETIC TUBING
ESS	ELECTRONIC SECURITY & SAFTEY

F

FAX	FACSIMILE
FCC	FEDERAL COMMUNICATIONS COMMISSION
FREQ	FREQUENCY

G

GA	GAUGE
GC	GENERAL CONTRACTOR
GHz	GIGAHERTZ
GND	GROUND

H

HC	HORIZONTAL CROSS-CONNECT
HF	HIGH FREQUENCY
HH	HANDHOLE
HVAC	HEATING, VENTILATION, AND AIR-CONDITIONING
Hz	HERTZ

I

IC	INTERMEDIATE CROSS-CONNECT
IDF	INTERMEDIATE DISTRIBUTION FRAME
IDS	INTRUSION DETECTION SYSTEM
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
IPS	INFANT PROTECTION SYSTEM
IR	INFRARED
ISC	INTELLIGENT SYSTEM CONTROLLER
ISDN	INTEGRATED SERVICES DIGITAL NETWORK
ISO	INTERNATIONAL STANDARDS ORGANIZATION
ITU	INTERNATIONAL TELECOMMUNICATIONS UNION
ITU-T	INTERNATIONAL TELECOMMUNICATIONS UNION - TELECOMMUNICATIONS

J

JB	JUNCTION BOX

K

kHz	KILOHERTZ
KWH	KILOWATT-HOURS

L

LAN	LOCAL AREA NETWORK
lBF	POUNDS, FORCE
LED	LIGHT-EMITTING DIODE

M

MBA	MULTI-BAND ANTENNA
MC	MAIN CROSS-CONNECT
MDF	MAIN DISTRIBUTION FRAME
MH	MANHOLE, MAINTENANCE HOLE
MM	MULTI MODE
modem	MODULATOR/DEMODULATOR
MTR	MAIN TECHNOLOGY ROOM
MUTO	MULTI USER TELECOMMUNICATIONS OUTLET
MUX	MULTIPLEXER

N

NEC	NATIONAL ELECTRICAL CODE
NESC	NATIONAL ELECTRICAL SAFETY CODE
NEXT	NEAR END CROSSTALK
NI	NETWORK INTERFACE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE

O

OEM	ORIGINAL EQUIPMENT MANUFACTURER
OPE	OUTSIDE PLANT ENGINEER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
OSP	OUTSIDE PLANT

P

PABX	PRIVATE AUTOMATIC BRANCH EXCHANGE
PAM	PULSE AMPLITUDE MODULATION
PB	PULL BOX
PBX	PRIVATE BRANCH EXCHANGE
PCM	PULSE CODE MODULATION
POTS	PLAIN OLD TELEPHONE SERVICE (COLLOQUIAL)
PR	PAIR
PTZ	PAN, TILT, ZOOM
PVC	POLYVINYL CHLORIDE

R

RCDD	REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
REX	REQUEST TO EXIT
RFI	RADIO FREQUENCY INTERFERENCE
RFQ	REQUEST FOR QUOTE
RH	RELATIVE HUMIDITY
RIU	REMOTE INTERFACE UNIT

S

ScTP	SCREENED TWISTED PAIR
SDN	SWITCHED DIGITAL NETWORK
SDSL	SYMMETRICAL DIGITAL SUBSCRIBER LINE
SI	SYSTEM INTERNATIONAL
SIM	SIMILAR
SM	SINGLE MODE
SM-PMD	SINGLE-MODE PHYSICAL MEDIUM DEPENDENT
SMPS	SWITCHED MODE POWER SUPPLY
SMS	SECURITY MANAGMENT SYSTEM
SNR	SIGNAL-TO-NOISE RATIO
SOC	SECURITY OPERATIONS CENTER
SONET	SYNCHRONOUS OPTICAL NETWORK
SP	SERVICE PROVIDER
SPG	SINGLE-POINT GROUND
STP	SYNCHRONOUS TRANSPORT SIGNAL
SYS	SYSTEM

T

TB	TERMINAL BLOCK
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TC	TELECOMMUNICATIONS CLOSET
T&C	TERMS & CONDITIONS
TDM	TIME-DIVISION MULTIPLEXING
TEL	TELEPHONE
TELCO	TELEPHONE COMPANY
TERM	TERMINAL OR TERMINATING
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
THD	TOTAL HARMONIC DISTORTION
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TO	TELECOMMUNICATIONS OUTLET
TP-PMD	TWISTED PAIR PHYSICAL MEDIA DEPENDENT
TR	TECHNOLOGY ROOM

U

UBC	UNIFORM BUILDING CODE
UD	UNDER FLOOR DUCT
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY

W

WAO	WORK AREA OUTLET
WAP	WIRELESS ACCESS POINT
WDM	WAVELENGTH DIVISION MULTIPLEXING

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REVISIONS

#	MM-DD-YR	NAME	DESCRIPTION OF CHANGES

GENERAL NOTES

1. AUDIOVISUAL EQUIPMENT INCLUDING FLAT PANEL DISPLAYS, PROJECTORS, ETC. ARE NOT IN CONTRACT (N.I.C.) AND WILL BE BID AT A LATER TIME, EXCEPT FLAT PANEL DISPLAYS LISTED UNDER SPECIFICATION SECTION 012100 – ALLOWANCES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. ALL ITEMS ARE NOT ENUMERATED IN THE DESIGN PACKAGE AND THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND ACCESSORIES REQUIRED TO MEET THE DESIGN INTENT.
3. VERIFY DEVICE LOCATIONS IN THE FIELD WITH DUE REGARD TO AS-BUILT CONDITIONS BEFORE INSTALLATION. COORDINATE WORK WITH FIELD CONDITIONS AND OTHER TRADES IN ORDER TO MEET DESIGN INTENT.
4. DEBURR ALL CONDUIT AND PROVIDE BUSHINGS AND 200LB PULLSTRING PRIOR TO INSTALLING CABLE.
5. CONDUIT BENDS SHALL BE SWEEPS TO MAINTAIN PROPER CABLE BEND RADIUS.
6. CONDUIT STUB-OUTS SHALL BE EXTENDED TO NEAREST ACCESSIBLE CEILING SPACE WITHIN ROOM IN WHICH THE DEVICE RESIDES, UNLESS OTHERWISE NOTED.
7. PROVIDE PULL BOXES AND JUNCTION BOXES IN ACCORDANCE WITH SPECIFIED STANDARDS AND LOCAL CODES. AT A MINIMUM, PROVIDE ONE (1) PULL BOX FOR EVERY 100 FEET OF STRAIGHT CONDUIT RUN, AND ONE (1) PULL BOX AFTER TWO (2) 90-DEGREE BENDS.
8. COORDINATE EXACT ROUTING OF CONDUIT AND PATHWAYS BASED ON FIELD CONDITIONS. WHERE GENERAL DESIGN INTENT CAN NOT BE ACHIEVED, OBTAIN FORMAL APPROVAL OF ROUTING CHANGES FROM OWNER'S REPRESENTATIVE.
9. CABLES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE BY APPROVED J-HOOKS OR SLINGS WHEN NOT IN CONDUIT OR COMMON LOW VOLTAGE CABLE TRAY. CABLES TRANSITIONING TO AND FROM CABLE TRAY, CONDUIT, SLEEVES, J-HOOKS OR OTHER SUPPORT MECHANISM SHALL BE SUPPORTED WHEN THE TRANSITION SPANS MORE THAN 3 FEET.
10. PROVIDE PLENUM RATED CABLE WHEN INSTALLED IN PLENUM SPACE.
11. PROVIDE BLANK PLATES FOR ALL UNUSED BOXES.
12. ALL CABLING PASSING THROUGH WALL STRUCTURE SHALL BE SUPPORTED WITH CONDUIT, SLEEVE, FIRESTOP ASSEMBLY, ETC, AS REQUIRED THROUGH THE WALL STRUCTURE. PATHWAY SIZING SHALL ADHERE TO THE REFERENCED STANDARDS AND FILL RATIO REQUIREMENTS. PROVIDE CONDUIT, SLEEVES, FIRESTOP ASSEMBLIES, ETC, FOR ALL CABLE PENETRATING WALLS IN ACCORDANCE WITH THE REFERENCED STANDARDS IN THE SPECIFICATIONS.
13. SUBMIT DEVICE, FACEPLATE AND JACK COLOR SAMPLES TO OWNER'S REPRESENTATIVE PRIOR TO ORDER.
14. REFER TO LIFE SAFETY DRAWINGS FOR FIRE & SMOKE WALL LOCATIONS. CONDUIT PENETRATIONS SHALL BE PROPERLY FIRESTOPPED PER CODE. CABLE TRAY SHALL NOT PENETRATE FIRE & SMOKE WALLS. LISTED FIRESTOP ASSEMBLIES SHALL BE USED TO PENETRATE FIRE & SMOKE WALLS FOR CABLE TRAY PATHWAYS.
15. REFER TO SYMBOL LEGEND, SCHEDULES AND DETAILS FOR ALL BOX AND CONDUIT REQUIREMENTS.
16. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR SHARED TECHNOLOGY AND ELECTRICAL FLOOR BOXES AND POKETHRUS.

AUDIOVISUAL SYMBOLS

DS-XX

AUDIOVISUAL DISPLAY SCHEDULE, 'XX' INDICATES TYPE

DEVICE TYPE	DESCRIPTION
DS-48	48" FLAT PANEL DISPLAY
DS-55	55" FLAT PANEL DISPLAY
DS-86	86" FLAT PANEL DISPLAY
DS-98	98" FLAT PANEL DISPLAY

RK-X

AUDIOVISUAL EQUIPMENT RACK SCHEDULE, 'X' INDICATES TYPE

DEVICE TYPE	DESCRIPTION
RK-4	4 RACK UNIT IN-WALL RACK BOX
RK-45	45 RACK UNIT AV EQUIPMENT

SX

AUDIOVISUAL SPEAKER SCHEDULE, 'X' INDICATES TYPE

DEVICE TYPE	DESCRIPTION	FUNCTION
S1	RECESSED CEILING SPEAKER	OVERHEAD AUDIO REINFORCEMENT
S2	SPEAKER MOUNTED TO STEEL TRUSS. PROVIDE 2-GANG BOX WITH (1) 1-1/4" CONDUIT DAISY-CHAINED AS SHOWN IN DRAWINGS AND HOME RUN TO AV RACK IN A118. REFERENCE DETAIL 4/TA5.8.	MULTIPURPOSE ROOM REINFORCEMENT

XX

AUDIOVISUAL CEILING OUTLET (ACO) TYPE SCHEDULE, 'XX' INDICATES TYPE

DEVICE TYPE	DESCRIPTION	FUNCTION
MIC1	RECESSED CEILING MIC	SPEECH REINFORCEMENT
PS1	CEILING MOUNTED PARTITION SENSOR	PARTITION CONTROL

PRJX

PRJ-1	CEILING MOUNTED PROJECTOR WITH SHORT THROW LENS
PRJ-2	CEILING MOUNTED PROJECTOR WITH 20FT MAX. THROW LENS

PJSX

PJS-1	104"X58" CEILING MOUNTED PROJECTION SCREEN
PJS-2	140"X79" CEILING MOUNTED PROJECTION SCREEN
PJS-3	140"X79" WALL MOUNTED PROJECTION SCREEN

XX

AUDIOVISUAL WALL OUTLET (AWO) TYPE SCHEDULE, 'X' INDICATES TYPE

DEVICE TYPE	DEVICE BOX	DEVICE CONDUIT	MOUNTING HEIGHT	FUNCTION
AV1	1-GANG AV PASSTHRU PLATE	(1) 1 1/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING	60" AFF	DISPLAY CABLE PASSTHRU
AV2	2-GANG AV PASSTHRU PLATE	(1) 1 1/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING	REFER TO ELEVATION	DISPLAY CABLE PASSTHRU
C1	2-GANG CAMERA BOX	(1) 1 1/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING	84" AFF U.O.N.	CAMERA DISCONNECT
CP1	CONTROL PANEL BACKBOX W/ WALL MOUNT	(1) 1 1/4 CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING	STANDARD SWITCH HEIGHT	AV CONTROL PANEL
DB1	2-GANG AV PASSTHRU PLATE	(1) 1 1/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING	60" AFF U.O.N.	DISPLAY CABLE PASSTHRU
DP1	1-GANG TOUCHPANEL DATA PLATE	(1) 1 1/4" CONDUIT STUBBED TO CEILING	COUNTER HEIGHT	TABLETOP TOUCHPANEL CONNECTION
I1	1-GANG INPUT PLATE, 3 1/2" DEEP BACK BOX	(1) 1 1/4" CONDUIT STUBBED TO CEILING	18" AFF U.O.N.	AV CABLE PASSTHRU
R2	CUSTOM IN-WALL RACK BOX	(2) 1 1/4" CONDUITS STUBBED TO ABOVE ACCESSIBLE CEILING	40" AFF	AV RACK PASSTHRU
SC1	(1) 1-GANG, FLUSH MOUNTED, 2 1/2" DEEP BACK BOX	(1) 1 1/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING	48" AFF	PROJECTION SCREEN CONTROL
WP1	(1) 2-GANG, FLUSH MOUNTED, 3 1/2" DEEP BACK BOX	(1) 1 1/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING	OUTLET HEIGHT	AV CABLE PASSTHRU

XX

AUDIOVISUAL FLOOR OUTLET (AFO) TYPE SCHEDULE, 'X' INDICATES TYPE

DEVICE TYPE	DEVICE BOX	DEVICE CONDUIT	MOUNTING HEIGHT	FUNCTION
FB1	POKETHRU, REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR BOX INFORMATION	(1) 1 1/4" CONDUITS STUBBED FROM BOTTOM HOUSING ASSEMBLY TO TV BACKBOX WITHIN ROOM FOR AUDIOVISUAL CABLING. REFER TO ELECTRICAL AND TELECOM DRAWINGS FOR ADDITIONAL PATHWAY REQUIREMENTS	IN-FLOOR	CONSOLIDATED POKETHRU FOR AUDIOVISUAL, ELECTRICAL, AND DATA. REFER TO ELECTRICAL AND TELECOM DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION

X

AUDIOVISUAL WALL SPEAKER SCHEDULE, 'X' INDICATES TYPE

DEVICE TYPE	DEVICE BOX	DEVICE CONDUIT	MOUNTING HEIGHT	FUNCTION
S3	4-GANG SPEAKER BOX	(1) 1 1/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING DAISY-CHAINED AS SHOWN IN DRAWINGS AND HOME RUN TO A-115	120" AFF U.O.N.	PAGING SYSTEM REINFORCEMENT

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TECHNOLOGY LEGEND

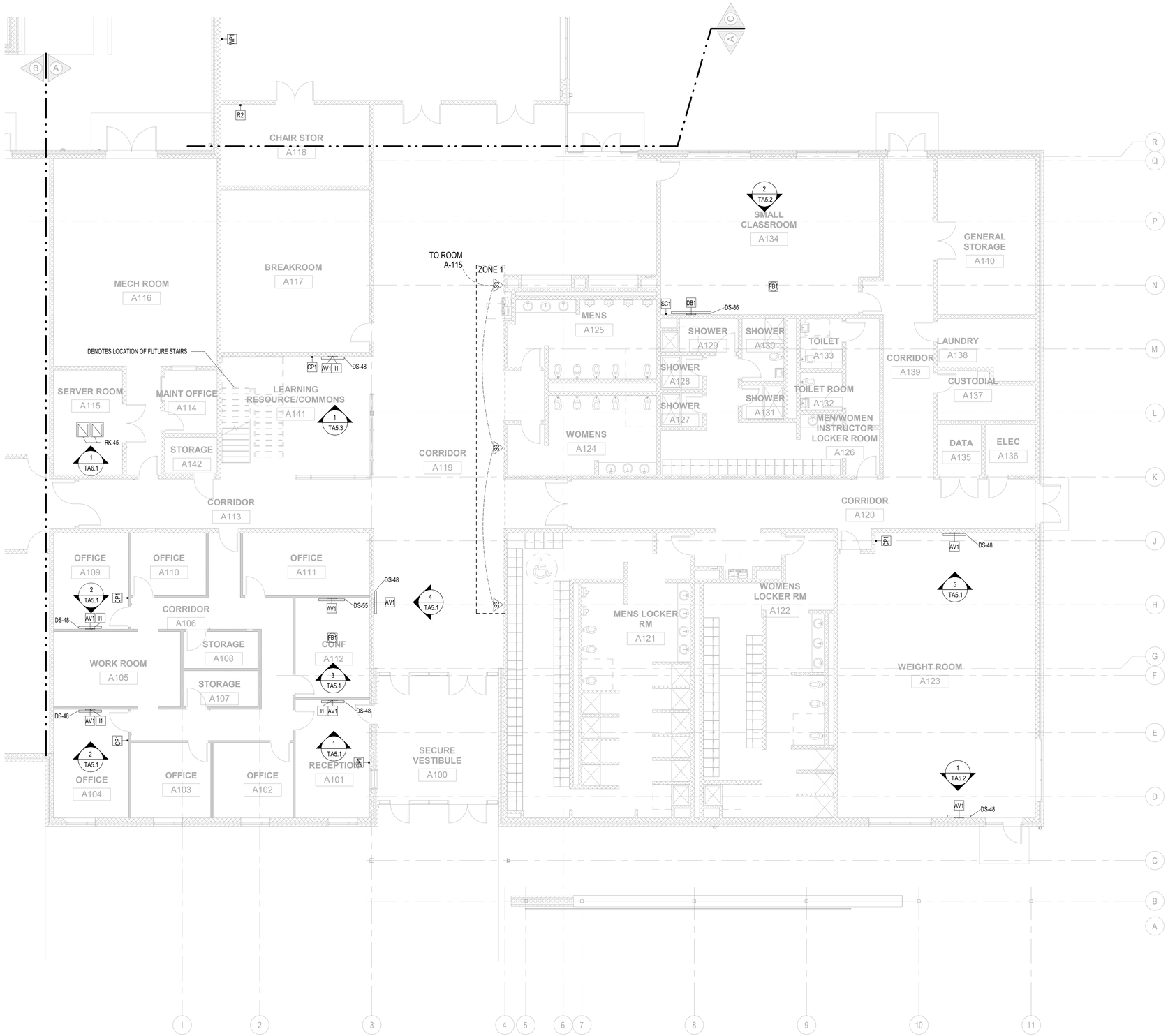
PLOT SCALE:

FILENAME:

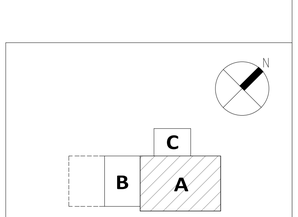
DATE: DECEMBER 18, 2019

PROJECT
3089

TA1.0



1 TA1.1 AUDIOVISUAL PLAN - UNIT A
1/8" = 1'-0"



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AUDIOVISUAL PLAN - UNIT A

PLOT SCALE:

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
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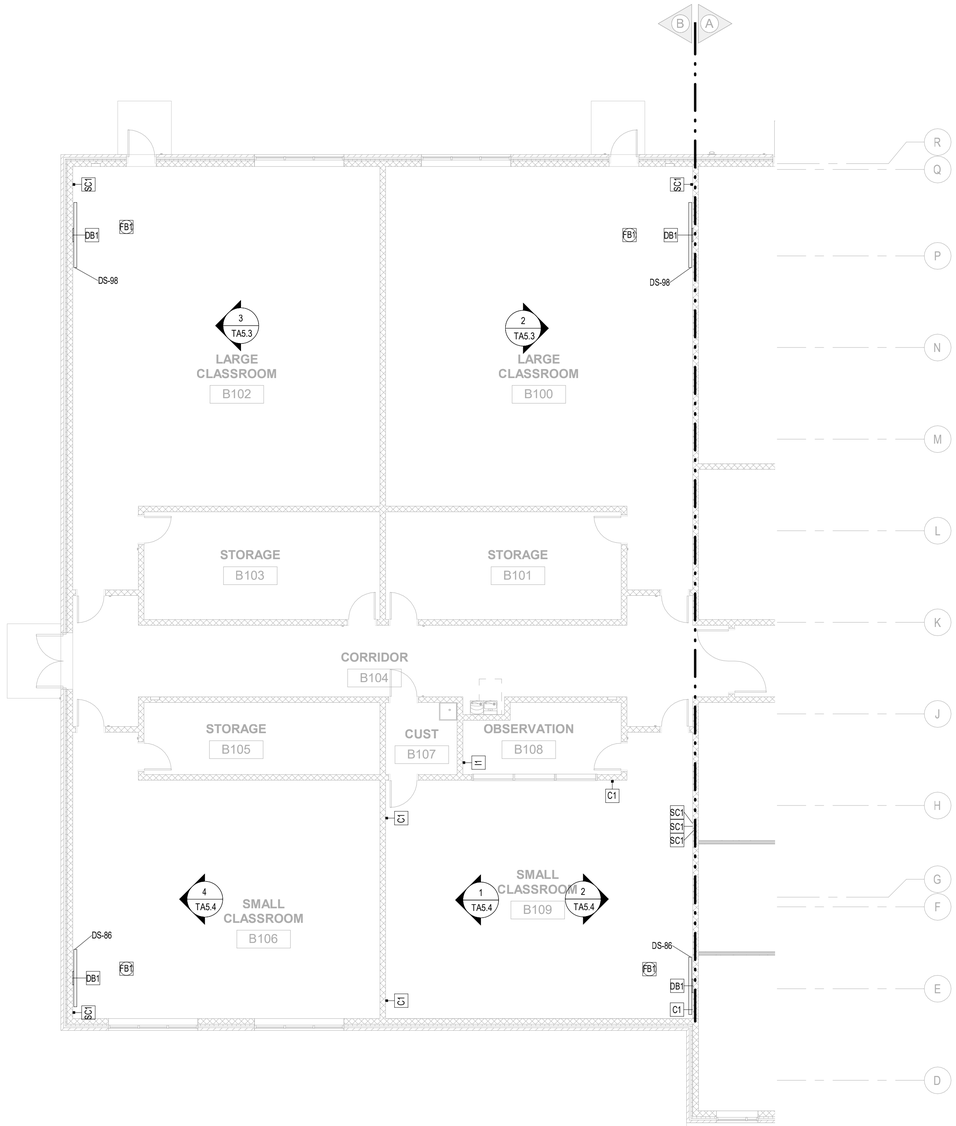
TA1.1



1 TA1.2 AUDIOVISUAL PLAN - UNIT B
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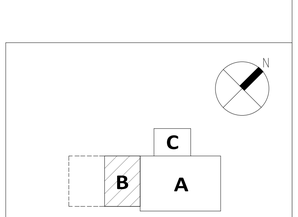

KEY PLAN

AUDIOVISUAL PLAN - UNIT B

PLOT SCALE:

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
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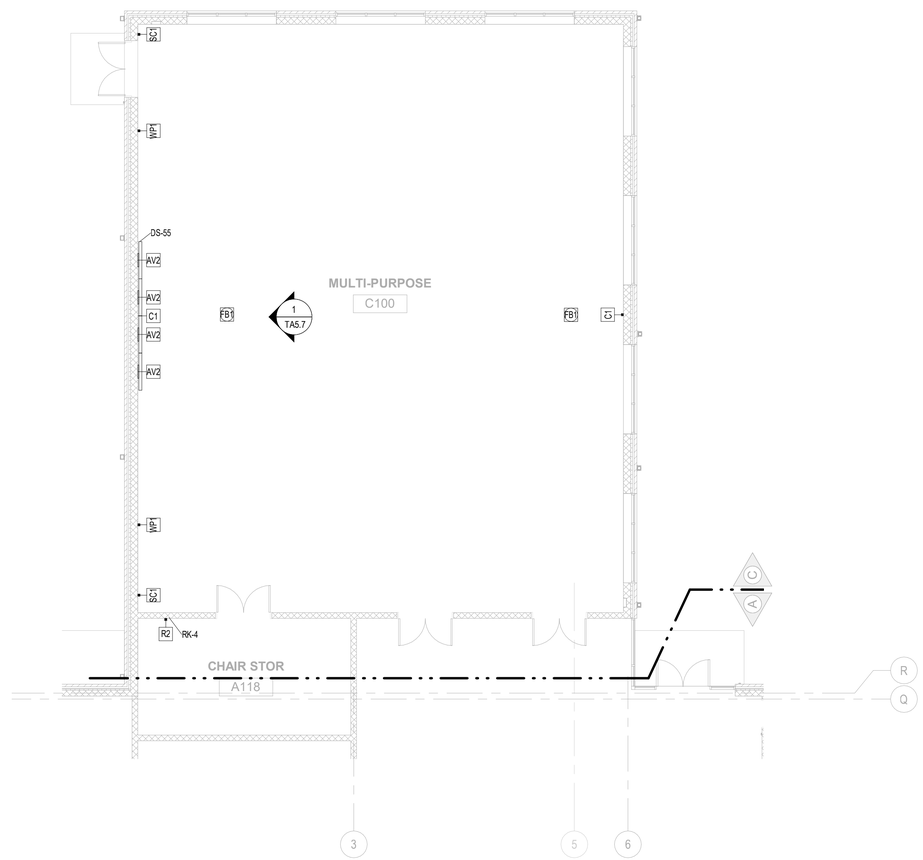
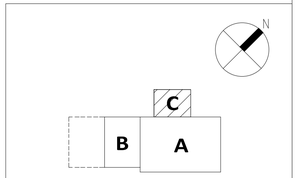
TA1.2



1 / TA1.3 AUDIOVISUAL PLAN - UNIT C
1/8" = 1'-0"



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AUDIOVISUAL PLAN - UNIT C

PLOT SCALE:

FILENAME:

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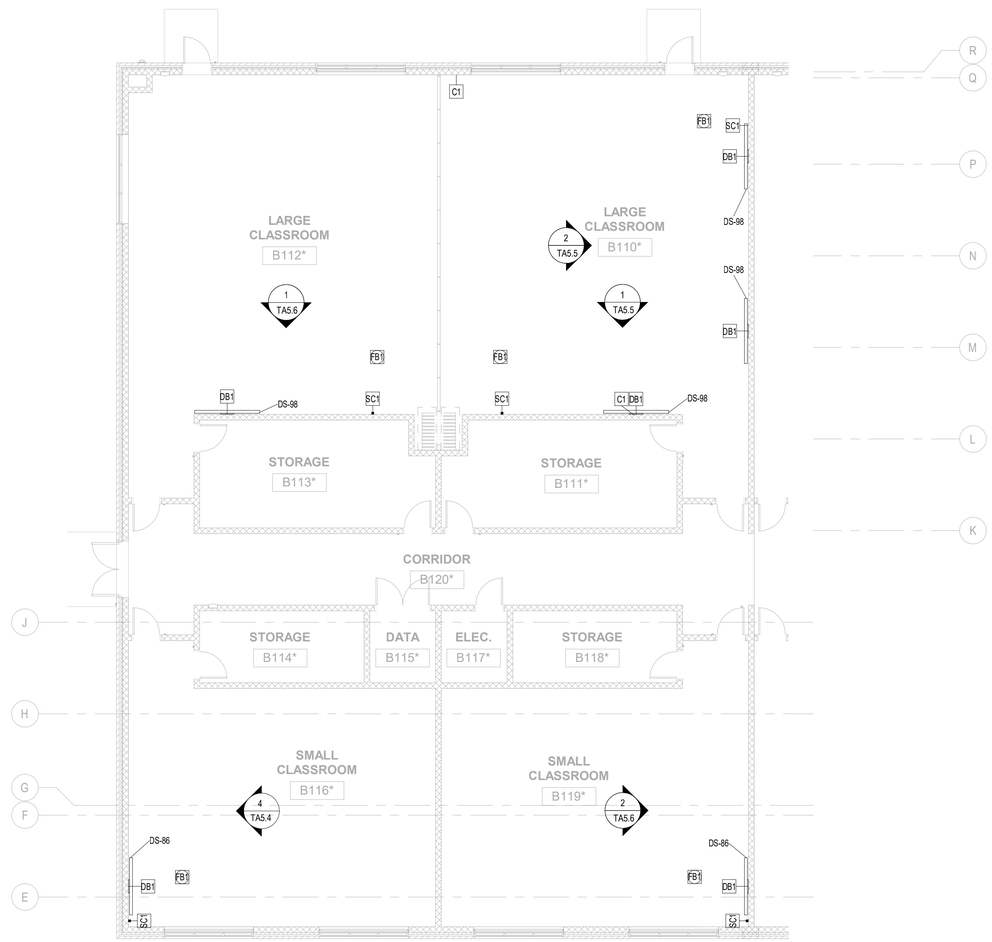
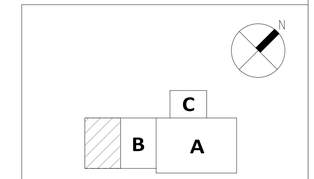


1 / TA1.4 AUDIOVISUAL PLAN - UNIT B - DIVISIBLE ROOM
1/8" = 1'-0"



KEY PLAN

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AUDIOVISUAL PLAN - UNIT B - DIVISIBLE ROOM

PLOT SCALE:

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
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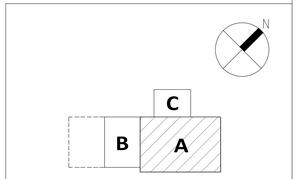
TA1.4

1 / TA2.1 FIRST FLOOR REFLECTED CEILING PLAN - UNIT A - PAGING SYSTEM
1/8" = 1'-0"



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AUDIOVISUAL RCP - UNIT A

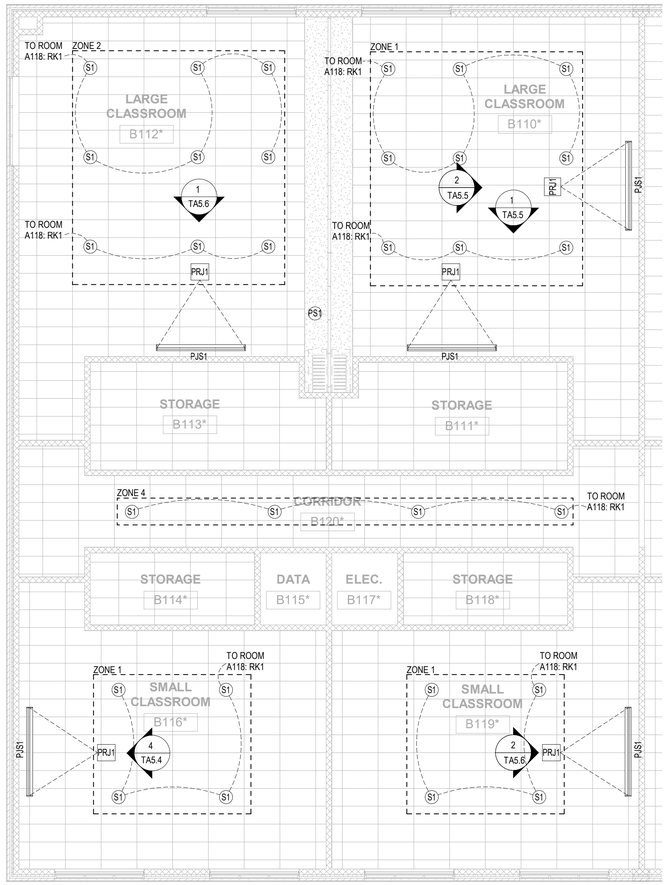
PLOT SCALE:

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
3089

TA2.1



2 TA2.2 FIRST FLOOR REFLECTED CEILING PLAN - UNIT B - SMALL CLASSROOM B116, B119 AND DIVISIBLE ROOM
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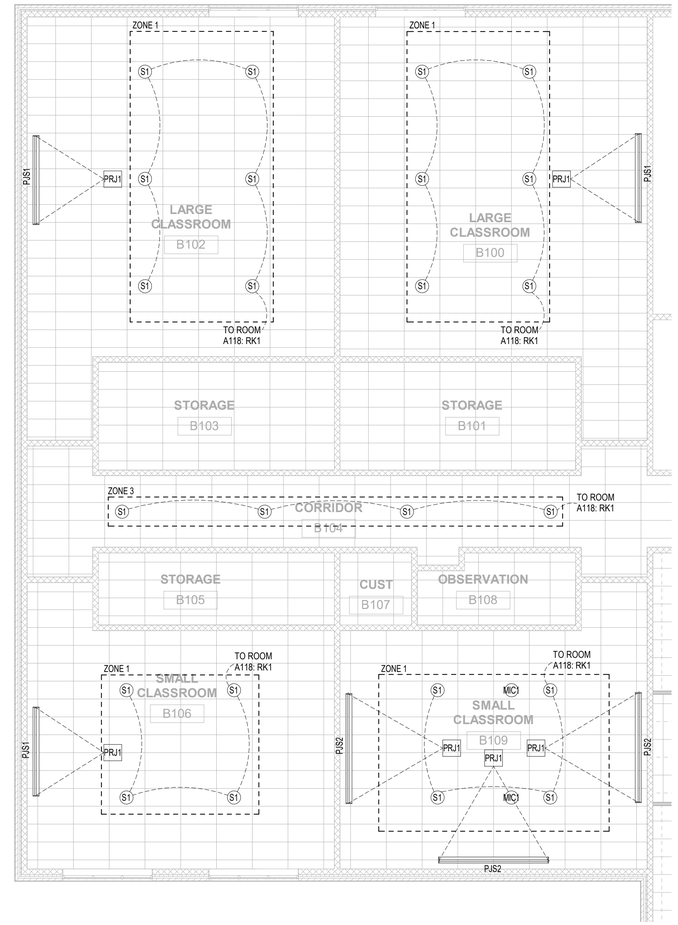
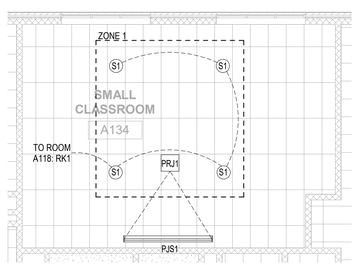
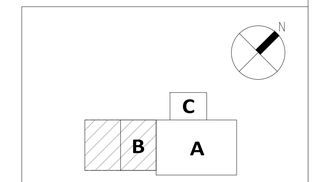


1 TA2.2 FIRST FLOOR REFLECTED CEILING PLAN - UNIT B
1/8" = 1'-0"



3 TA2.2 FIRST FLOOR REFLECTED CEILING PLAN - UNIT A
1/8" = 1'-0"



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AUDIOVISUAL RCP - UNIT B

PLOT SCALE:

FILENAME:

DATE: DECEMBER 18, 2019

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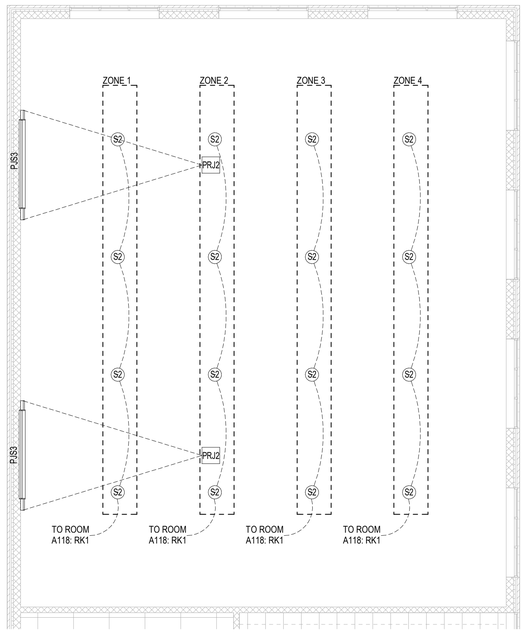
TA2.2

SHEET NOTE:

COORDINATE CONDUIT INSTALLATION & WORKMANSHIP WITH THE ARCHITECT. ALIGN AND CONCEAL CONDUIT WITHIN THE TRUSS CEILING FOR AESTHETICS.



1 TA2.3 FIRST FLOOR REFLECTED CEILING PLAN - UNIT C
1/8" = 1'-0"

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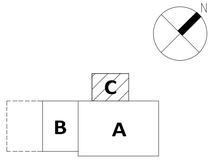


KEY PLAN

AUDIOVISUAL RCP - UNIT C

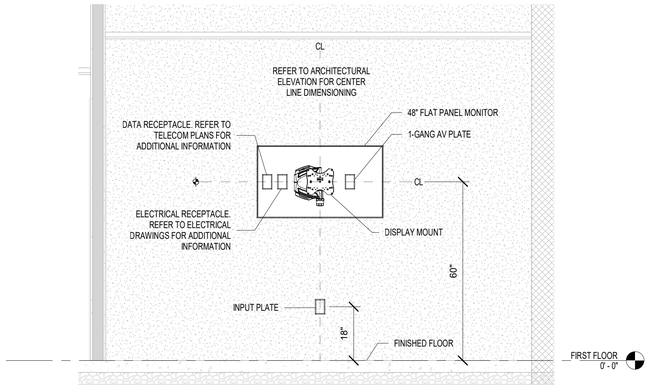
PLOT SCALE:

FILENAME:

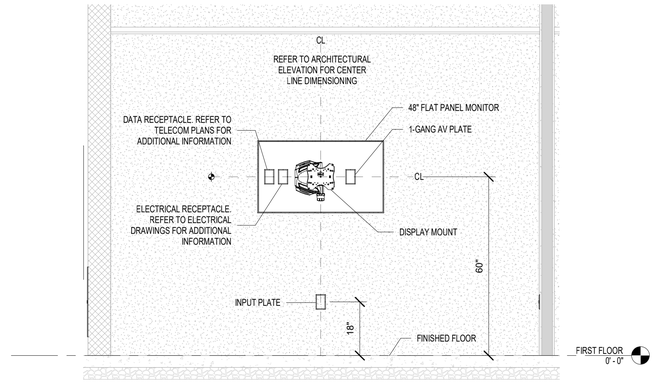
DATE: DECEMBER 18, 2019

PROJECT
3089

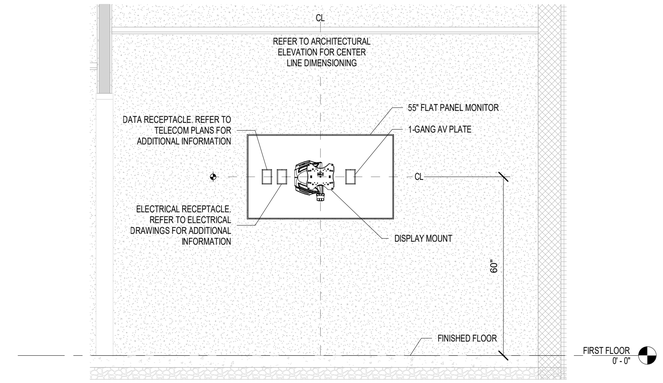
TA2.3



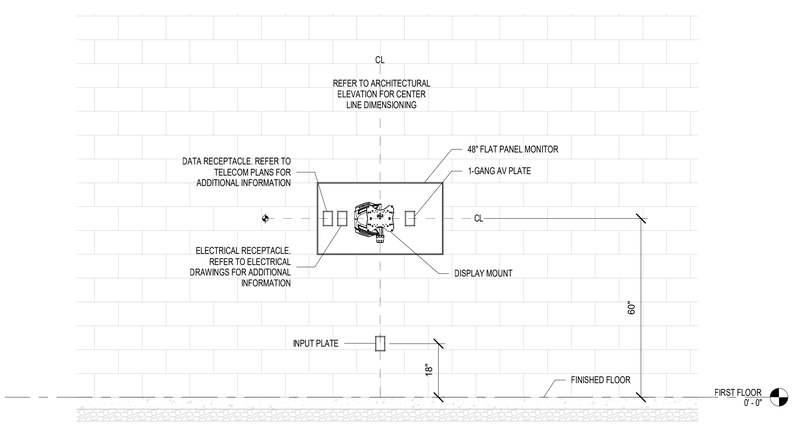
1 / TA5.1 A101 RECEPTION LCD DISPLAY DETAIL
1/2" = 1'-0"



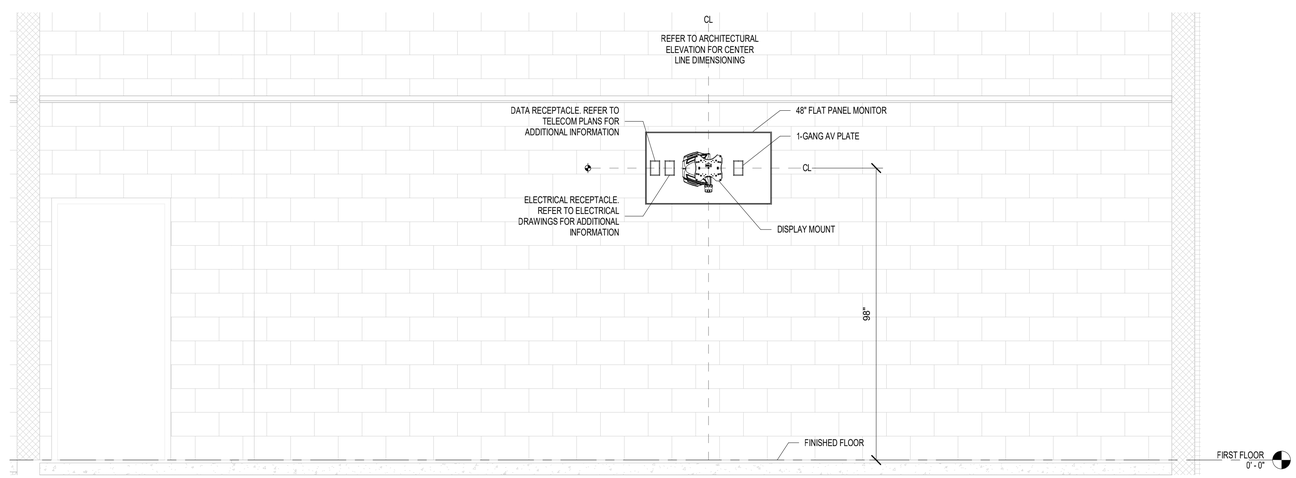
2 / TA5.1 A104 OFFICE LCD DISPLAY DETAIL
1/2" = 1'-0"



3 / TA5.1 A112 CONFERENCE ROOM LCD DISPLAY DETAIL
1/2" = 1'-0"



4 / TA5.1 A119 LOBBY LCD DISPLAY DETAIL
1/2" = 1'-0"



5 / TA5.1 A123 WEIGHT ROOM LCD DISPLAY DETAIL
1/2" = 1'-0"

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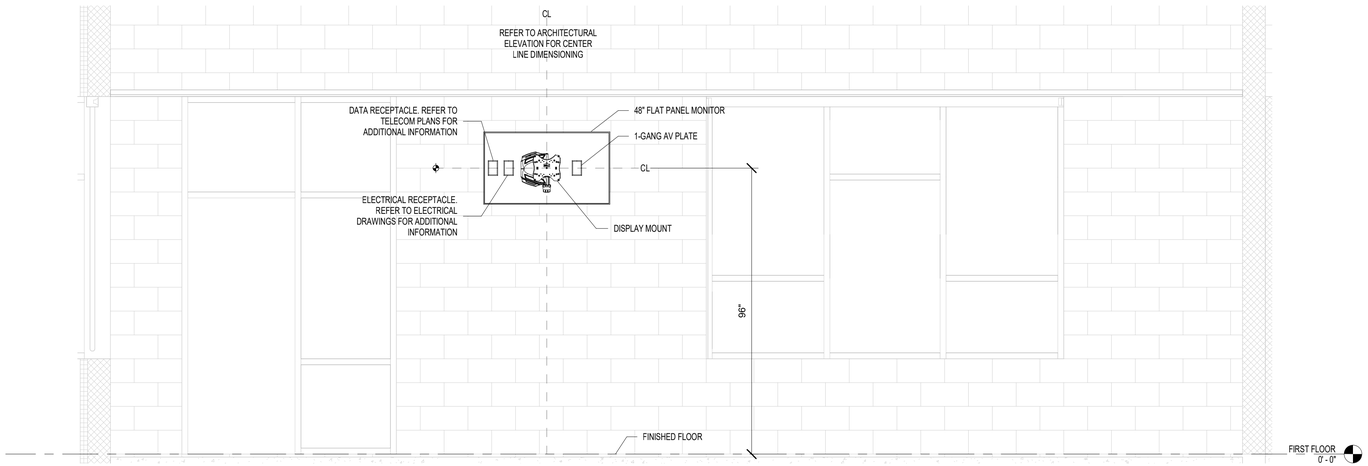
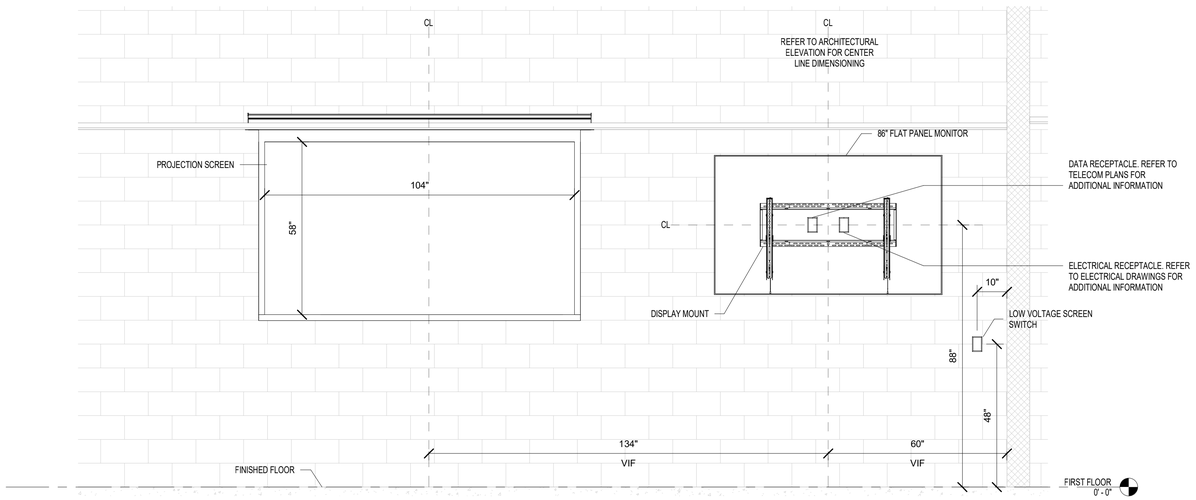


1 / TA5.2 A123 WEIGHT ROOM SOUTH VIEW LCD DISPLAY DETAIL
1/2" = 1'-0"



2 / TA5.2 A134 SMALL CLASSROOM FRONT PROJECTION AND LCD DISPLAY DETAIL
1/2" = 1'-0"

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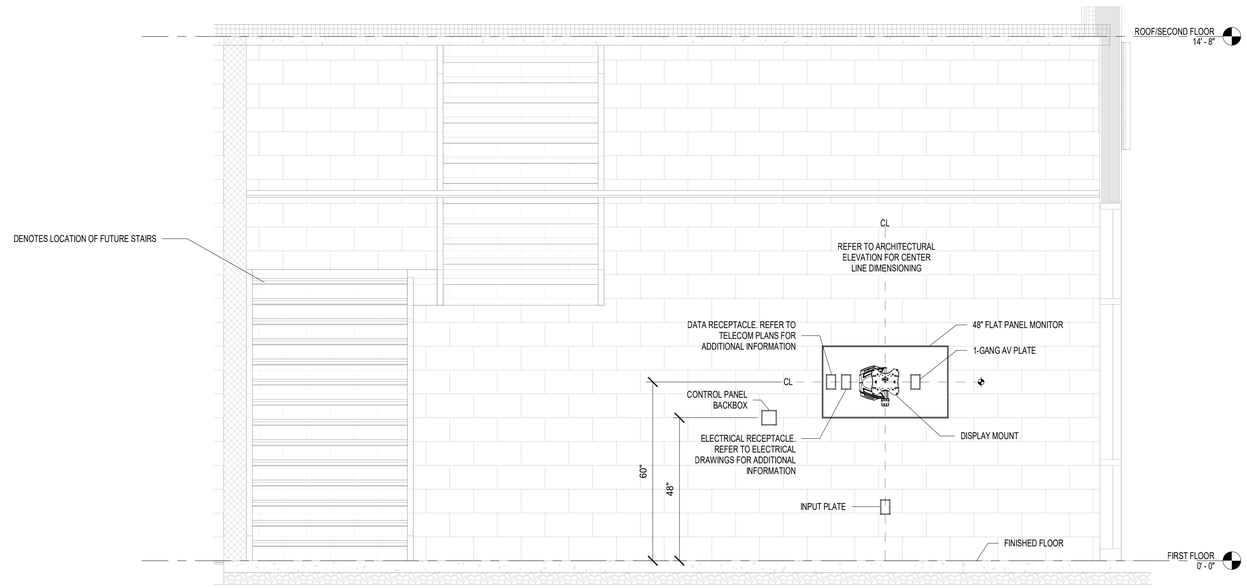
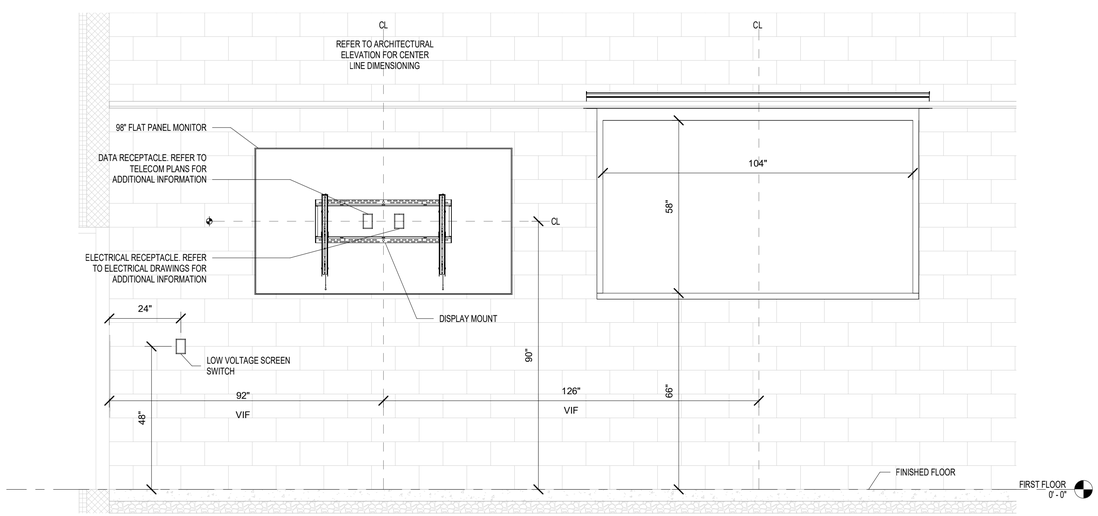
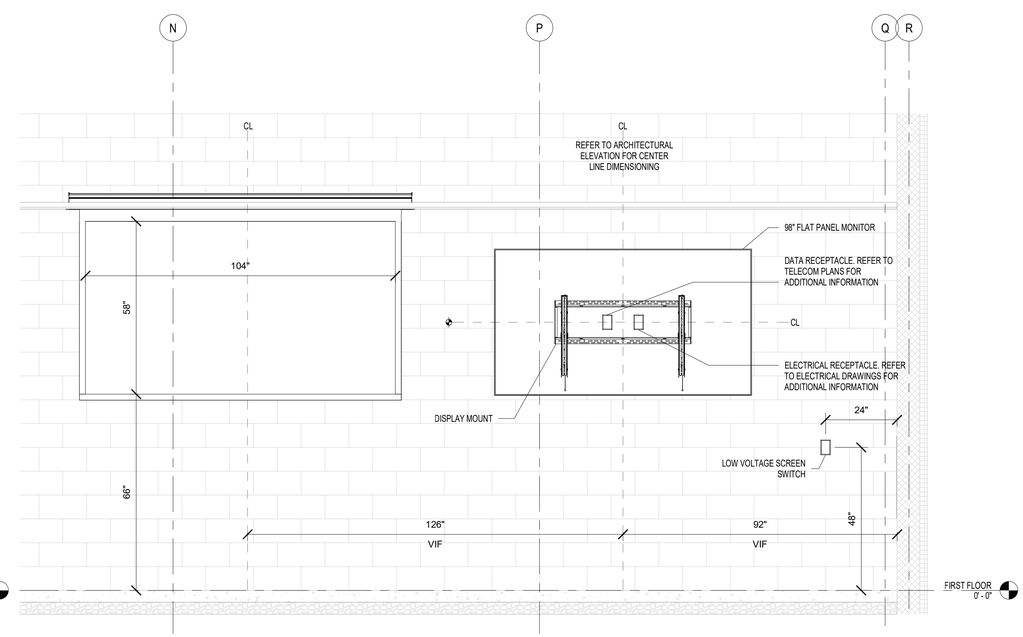


1 TA5.3 A141 LEARNING RESOURCE AREA LCD DISPLAY DETAIL
1/2" = 1'-0"



2 TA5.3 B100 LARGE CLASSROOM PROJECTION AND LCD DISPLAY DETAIL
1/2" = 1'-0"



3 TA5.3 B102 LARGE CLASSROOM PROJECTION AND LCD DISPLAY DETAIL
1/2" = 1'-0"

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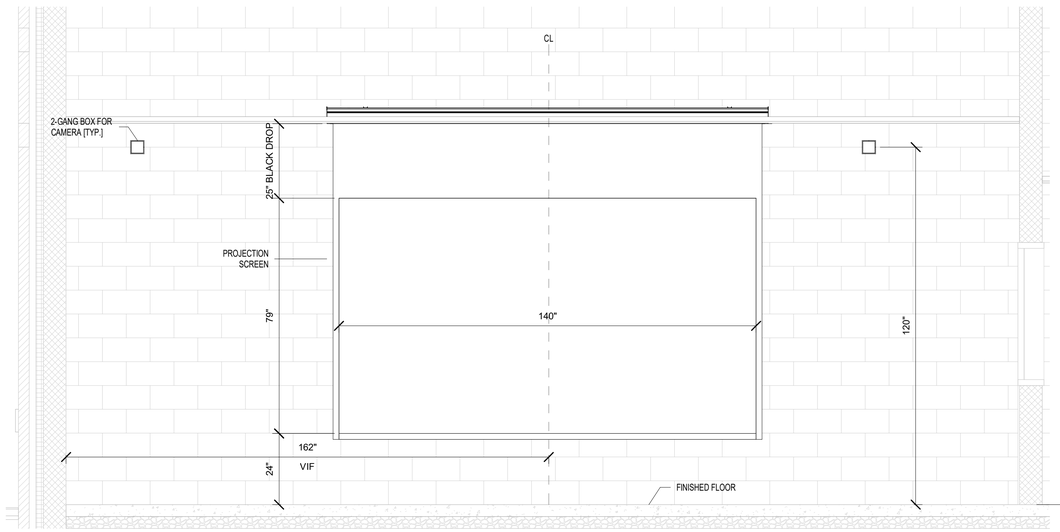
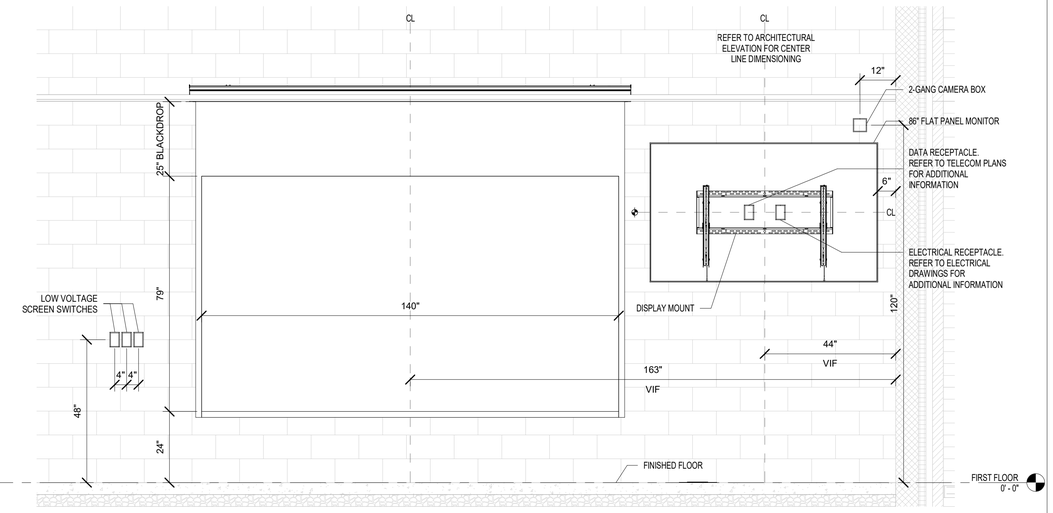
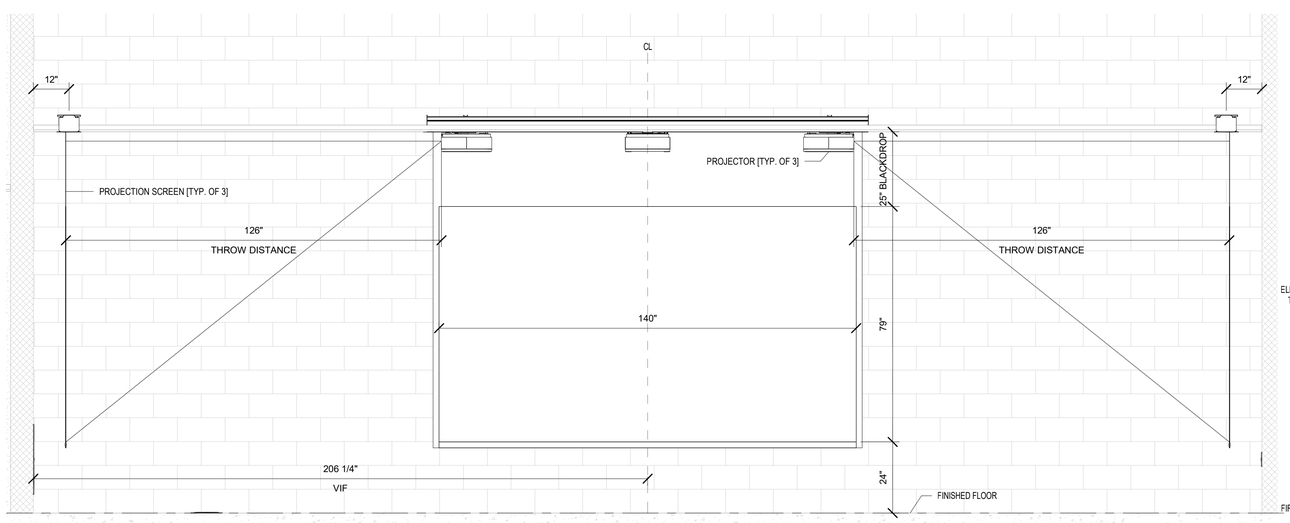


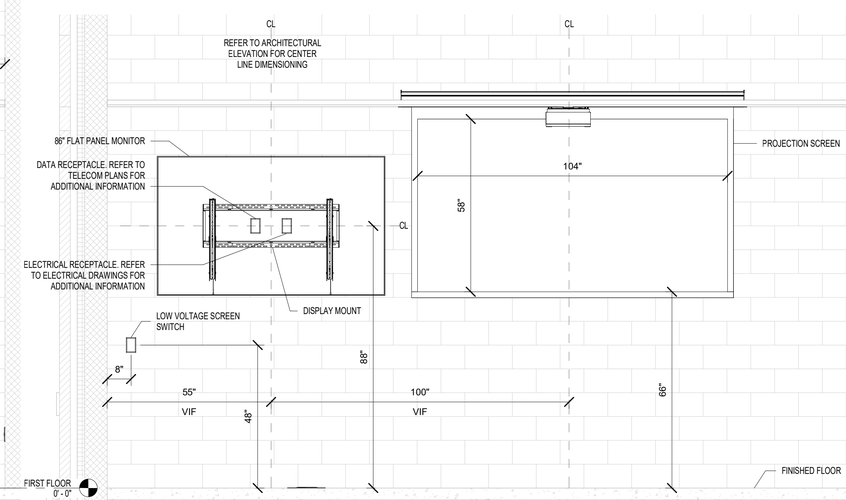
1 TA5.4 B109 SIMULATION LAB SIDE PROJECTION SCREEN DETAIL
1/2" = 1'-0"



2 TA5.4 B109 SIMULATION LAB SIDE VIEW LCD DISPLAY DETAIL
1/2" = 1'-0"



3 TA5.4 B109 SIMULATION LAB FRONT PROJECTION SCREEN DETAIL
1/2" = 1'-0"



4 TA5.4 B106 AND B116 SMALL CLASSROOM FRONT PROJECTION AND LCD DISPLAY DETAIL
1/2" = 1'-0"

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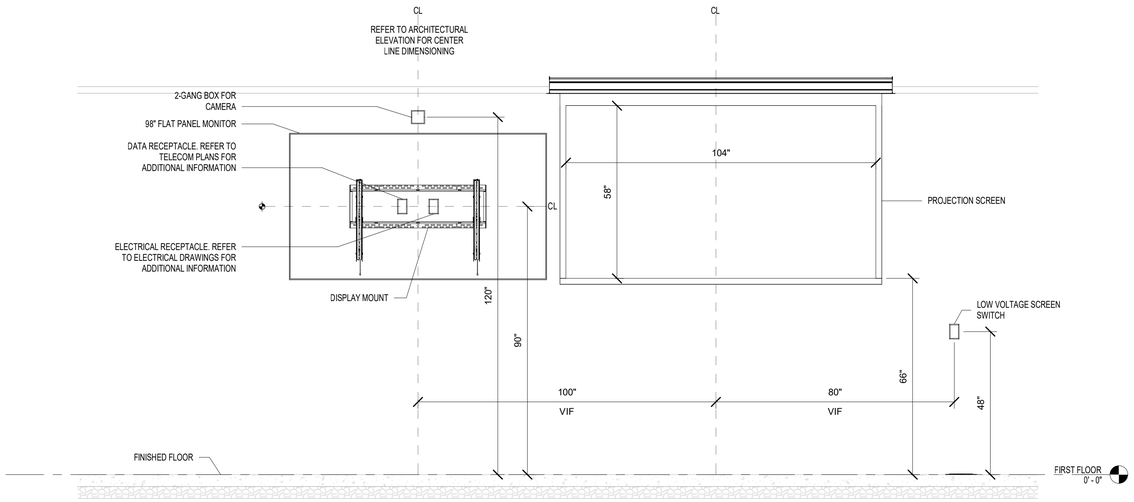
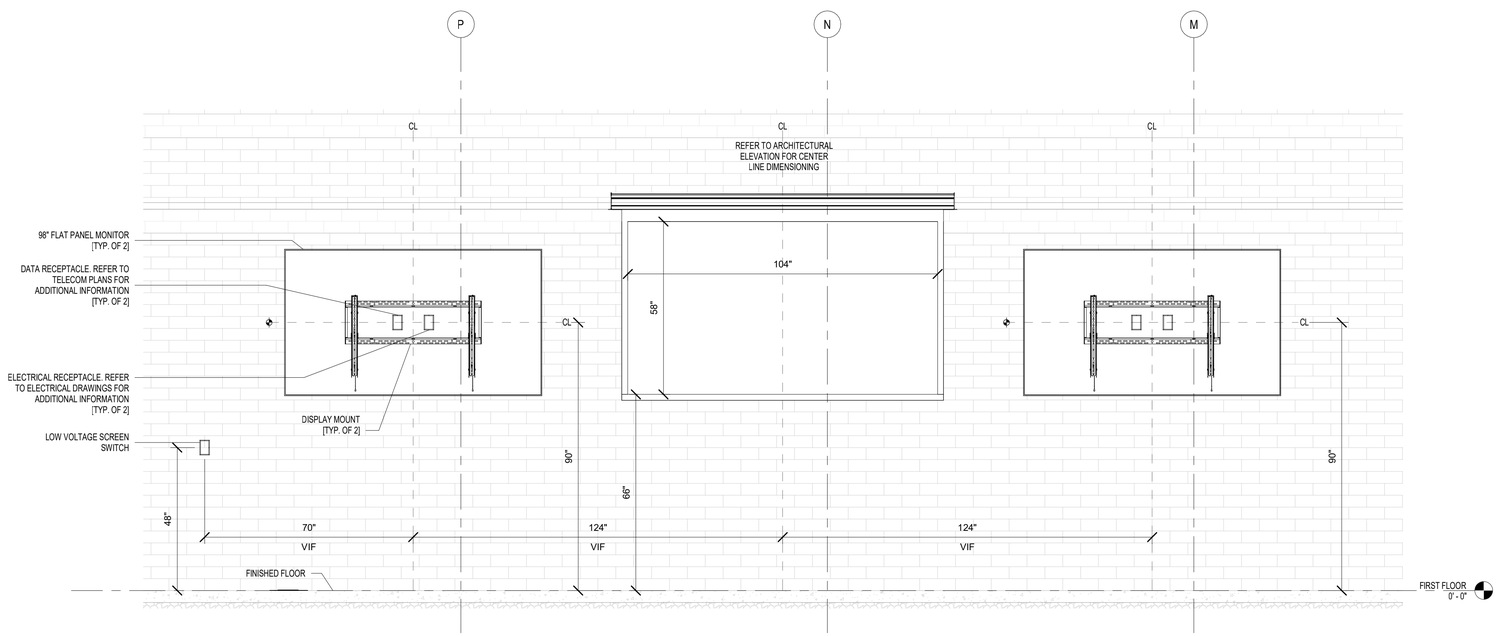
TA5.4



1 / TA5.5 B110 LARGE CLASSROOM FRONT PROJECTION AND LCD DISPLAY DETAIL
1/2" = 1'-0"



2 / TA5.5 B110 LARGE CLASSROOM SIDE PROJECTION AND LCD DISPLAY DETAIL
1/2" = 1'-0"

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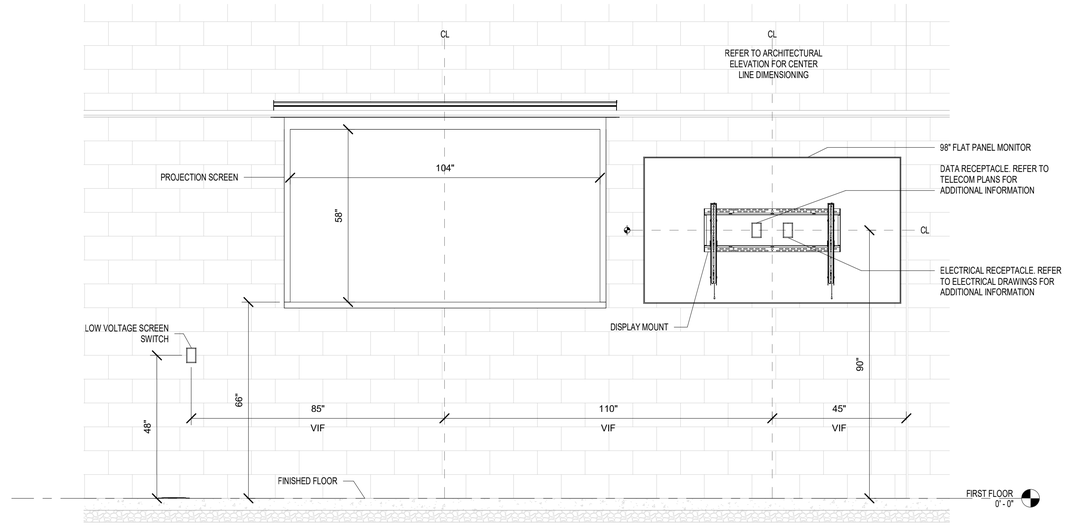
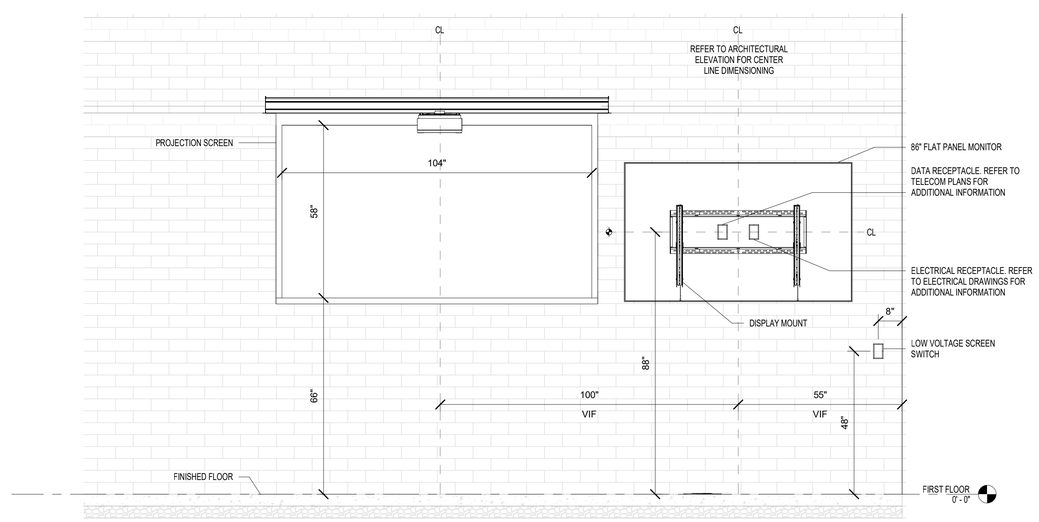


1 / TA5.6 B112 LARGE CLASSROOM FRONT PROJECTION AND LCD DISPLAY DETAIL
1/2" = 1'-0"



2 / TA5.6 B119 SMALL CLASSROOM FRONT PROJECTION AND LCD DISPLAY DETAIL
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WASHINGTON COUNTY PROJECT NO. 28-266
18350 PUBLIC SAFETY PLACE
HAGERSTOWN, MD 21740

AUDIOVISUAL MOUNTING DETAILS

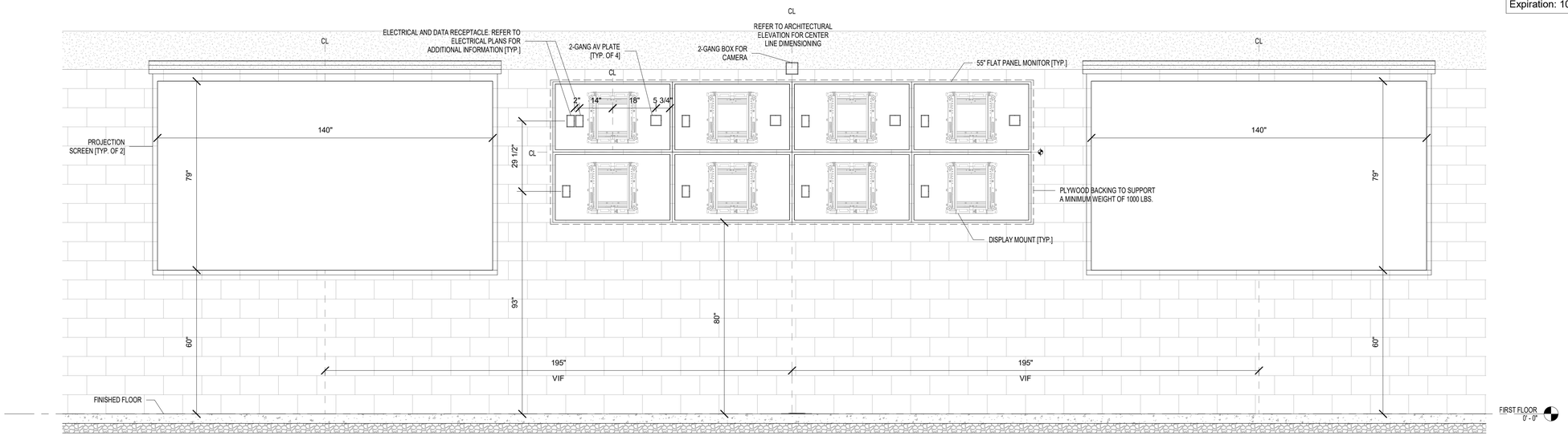
PLOT SCALE:

FILENAME:

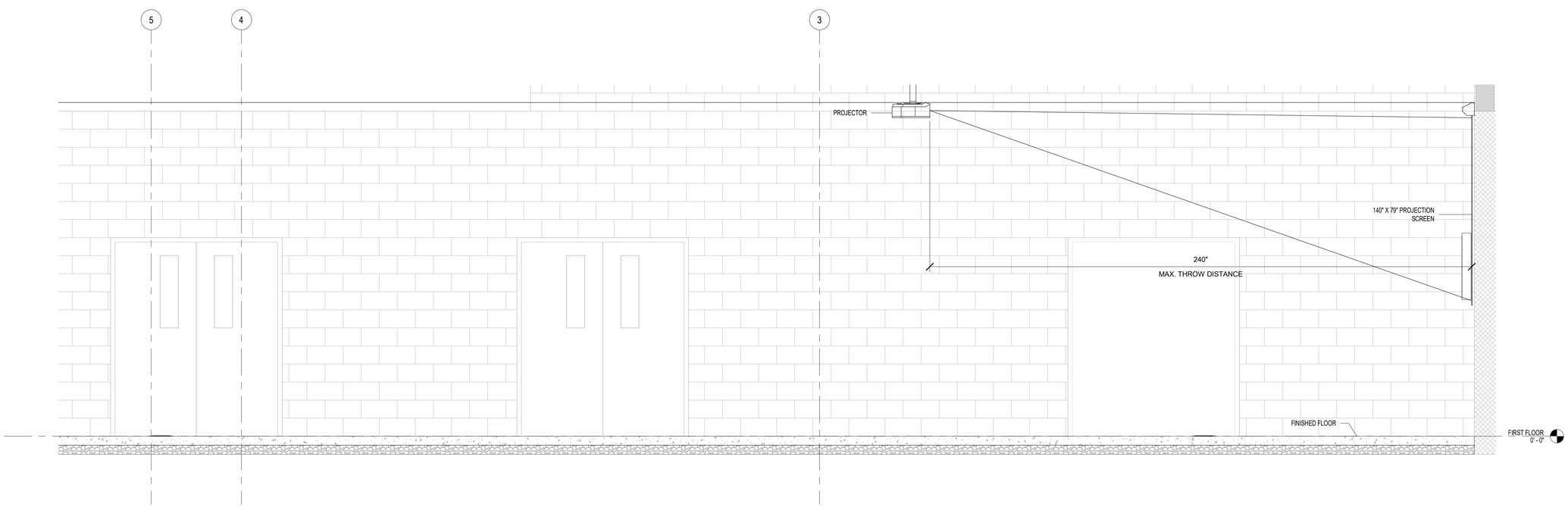
DATE: DECEMBER 18, 2019

PROJECT
3089

TA5.6



1 / TA5.7 C100 MULTI-PURPOSE ROOM FRONT PROJECTION AND LCD DISPLAY DETAIL
1/2" = 1'-0"



2 / TA5.7 C100 MULTI-PURPOSE ROOM SIDE PROJECTION SCREEN DETAIL
1/2" = 1'-0"

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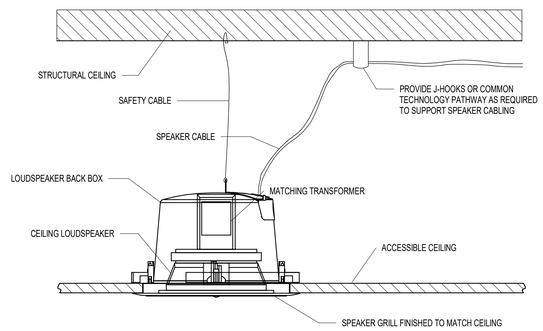
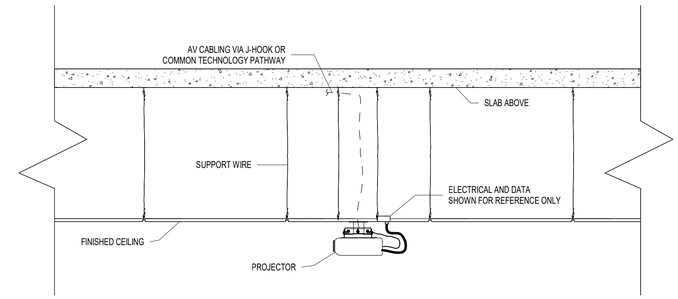
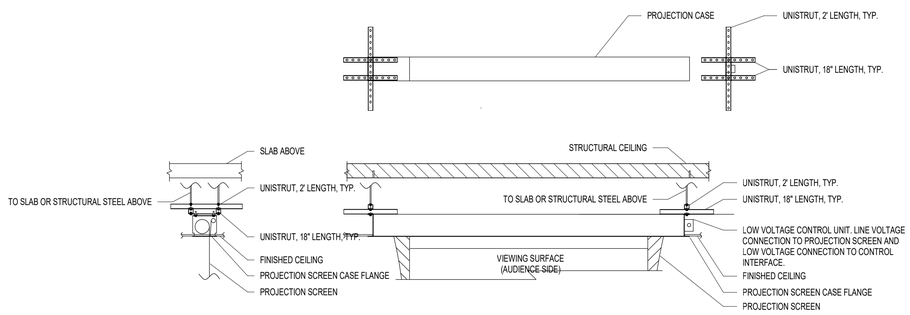


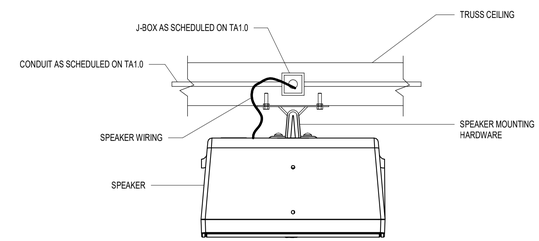
1 / TA5.8 CEILING SPEAKER MOUNTING DETAIL
1/2" = 1'-0"



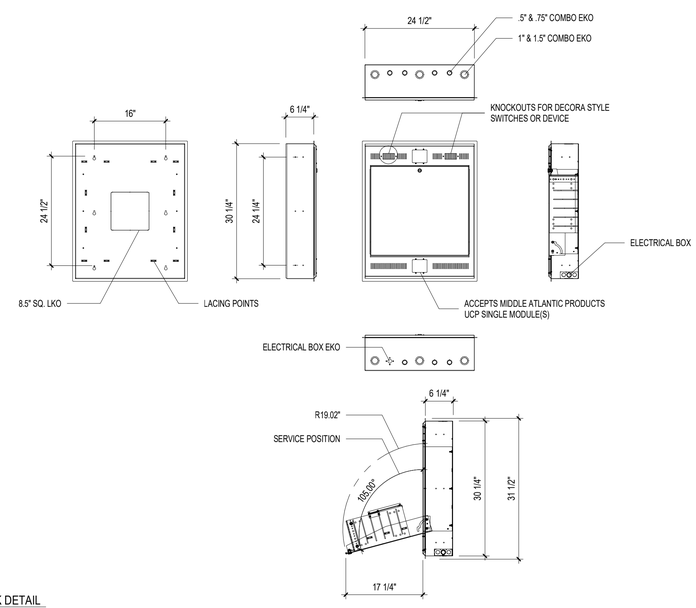
2 / TA5.8 CEILING STRUT MOUNTED PROJECTOR DETAIL
1" = 1'-0"



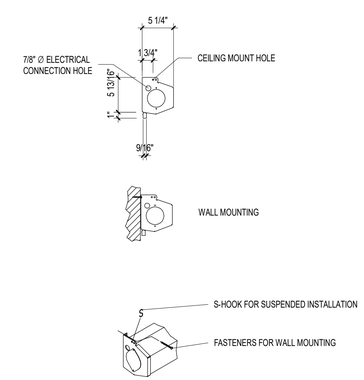
3 / TA5.8 PROJECTION SCREEN MOUNTING DETAIL
1/2" = 1'-0"



4 / TA5.8 SURFACE MOUNTED SPEAKERS ATTACHED DIRECTLY TO TRUSS CEILING
1 1/2" = 1'-0"



5 / TA5.8 IN-WALL RACK DETAIL
3/4" = 1'-0"



6 / TA5.8 WALL MOUNT PROJECTION SCREEN DETAIL
1" = 1'-0"

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AUDIOVISUAL MOUNTING DETAILS
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FILENAME:
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PROJECT
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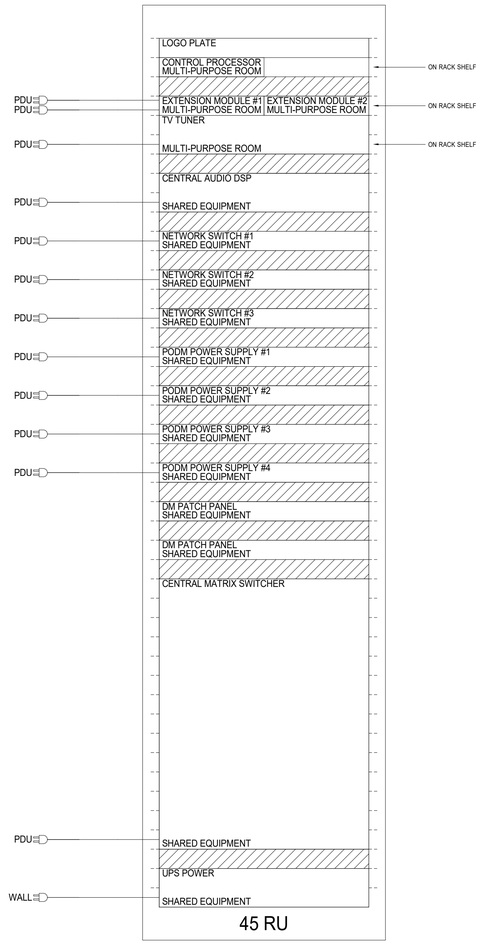
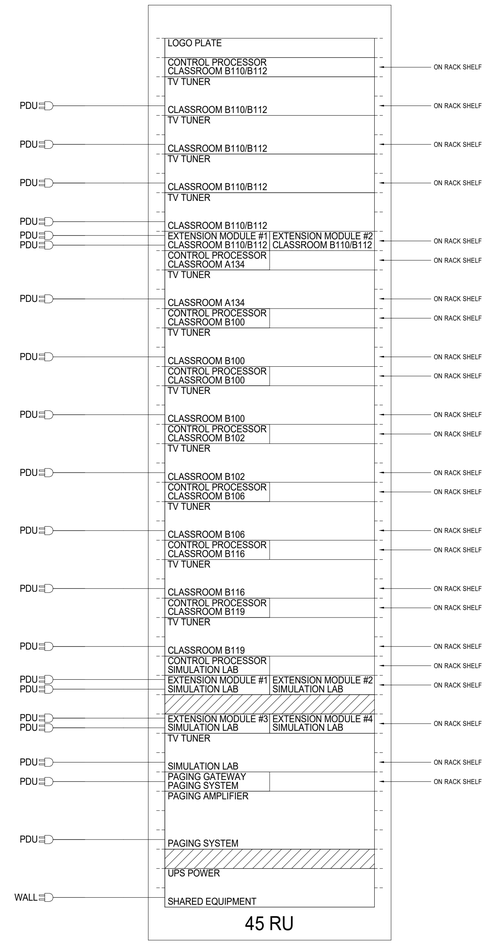
TA5.8





1 / TA6.1 SHARED EQUIPMENT RACKS
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RACK ELEVATION

PLOT SCALE:

FILENAME:

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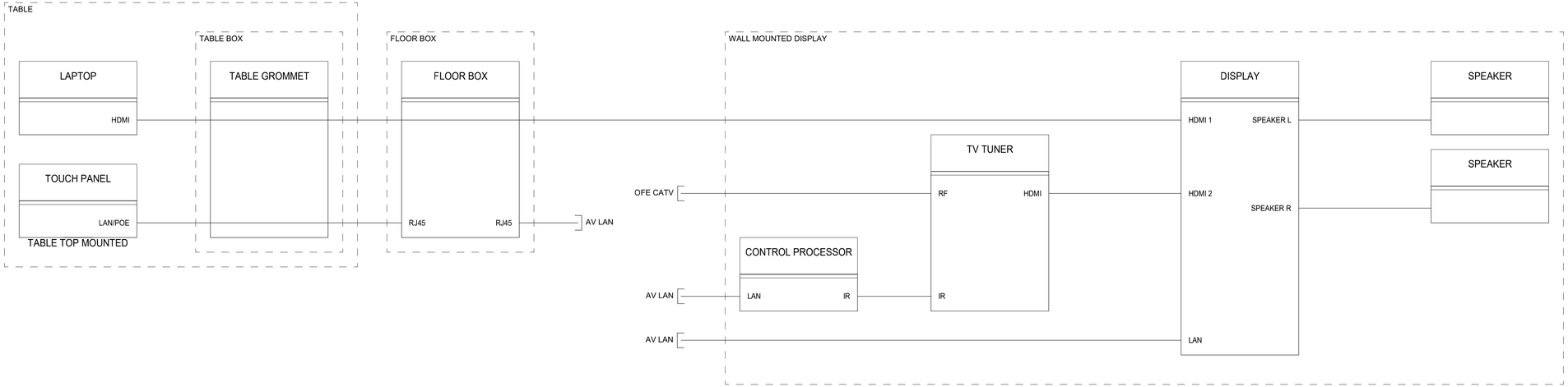
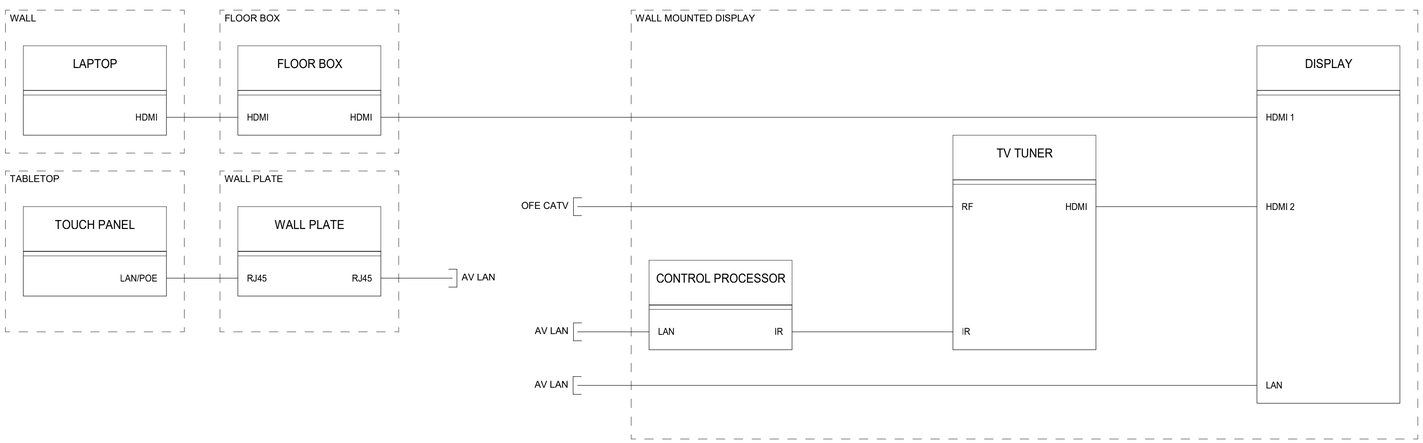
TA6.1



1 TA7.1 CONFERENCE ROOMS
N.T.S.



2 TA7.1 RECEPTION
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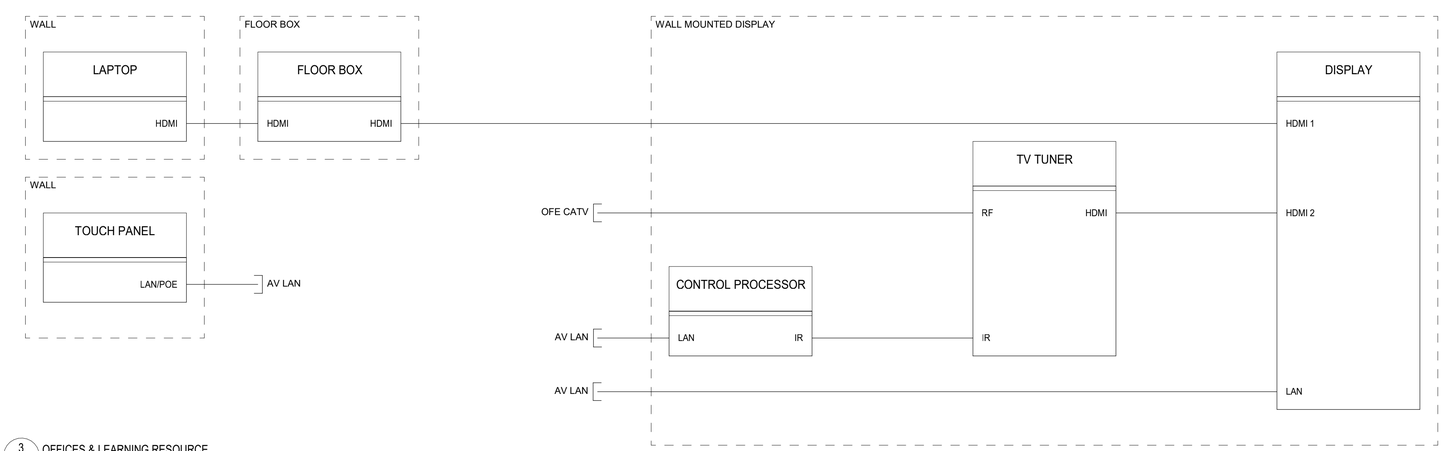

3 TA7.1 OFFICES & LEARNING RESOURCE
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AUDIOVISUAL LOGICAL DIAGRAMS

PLOT SCALE:

FILENAME:

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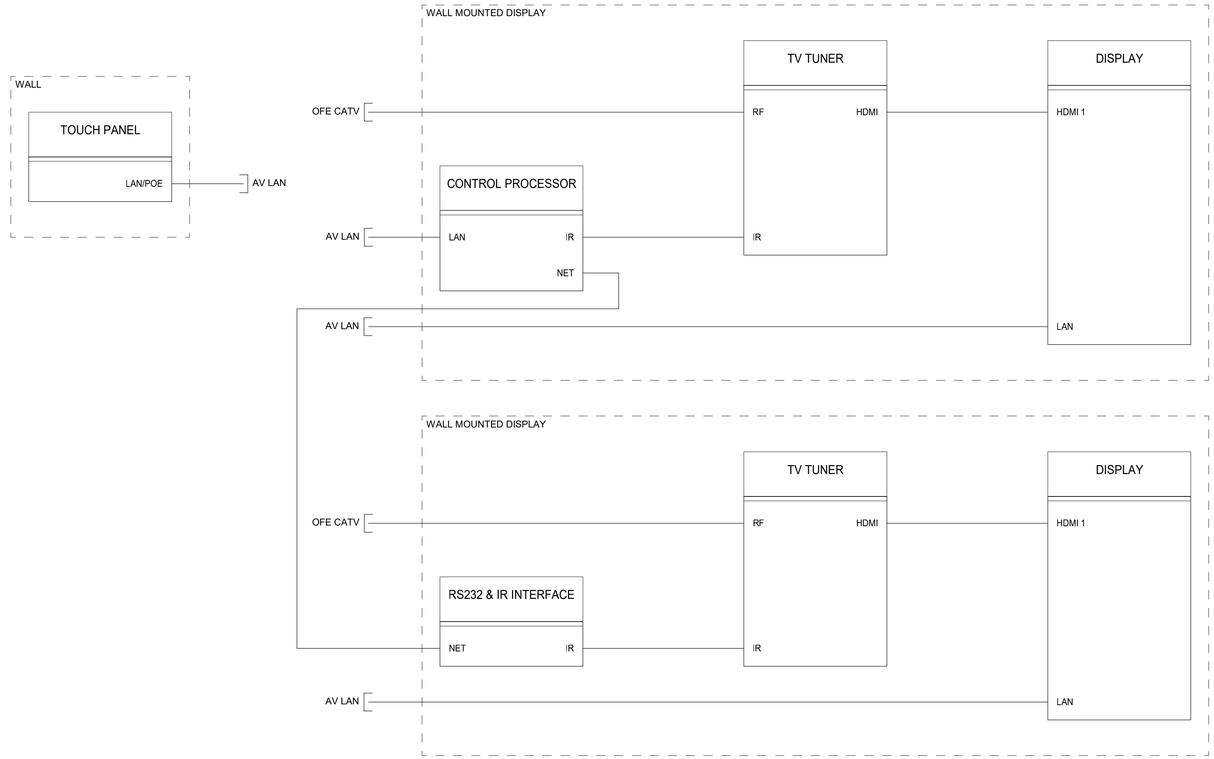
TA7.1



1 TA7.2 WEIGHT ROOM
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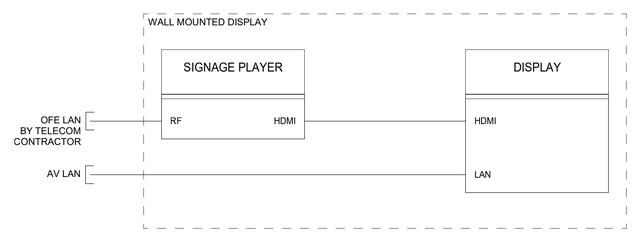

2 TA7.2 LOBBY
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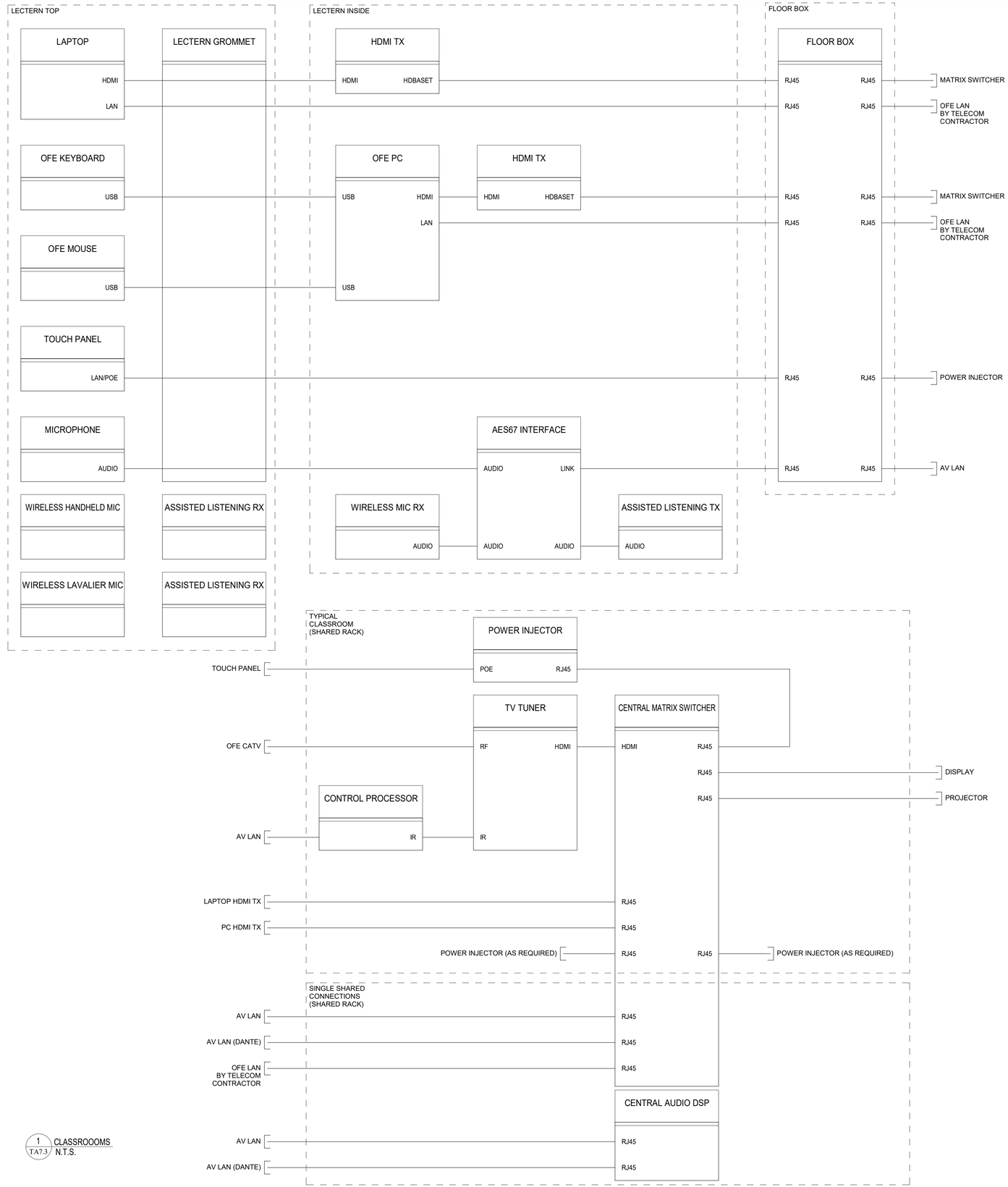
TA7.2



1 / TA7.3 CLASSROOOMS
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TA7.3

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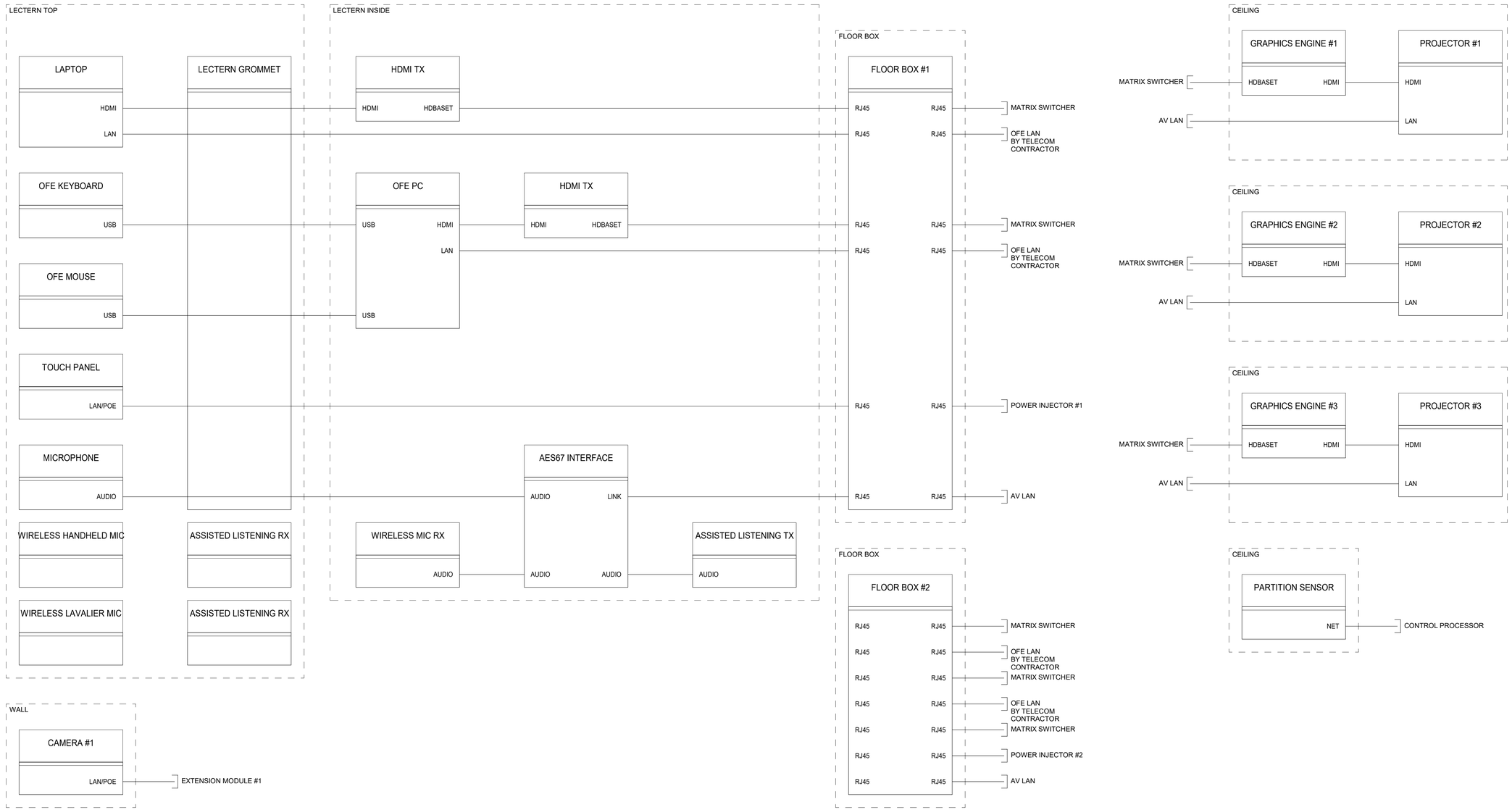

1 / TA7.4 DIVISIBLE CLASSROOM B110 & B112
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AUDIOVISUAL LOGICAL DIAGRAMS

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PROJECT
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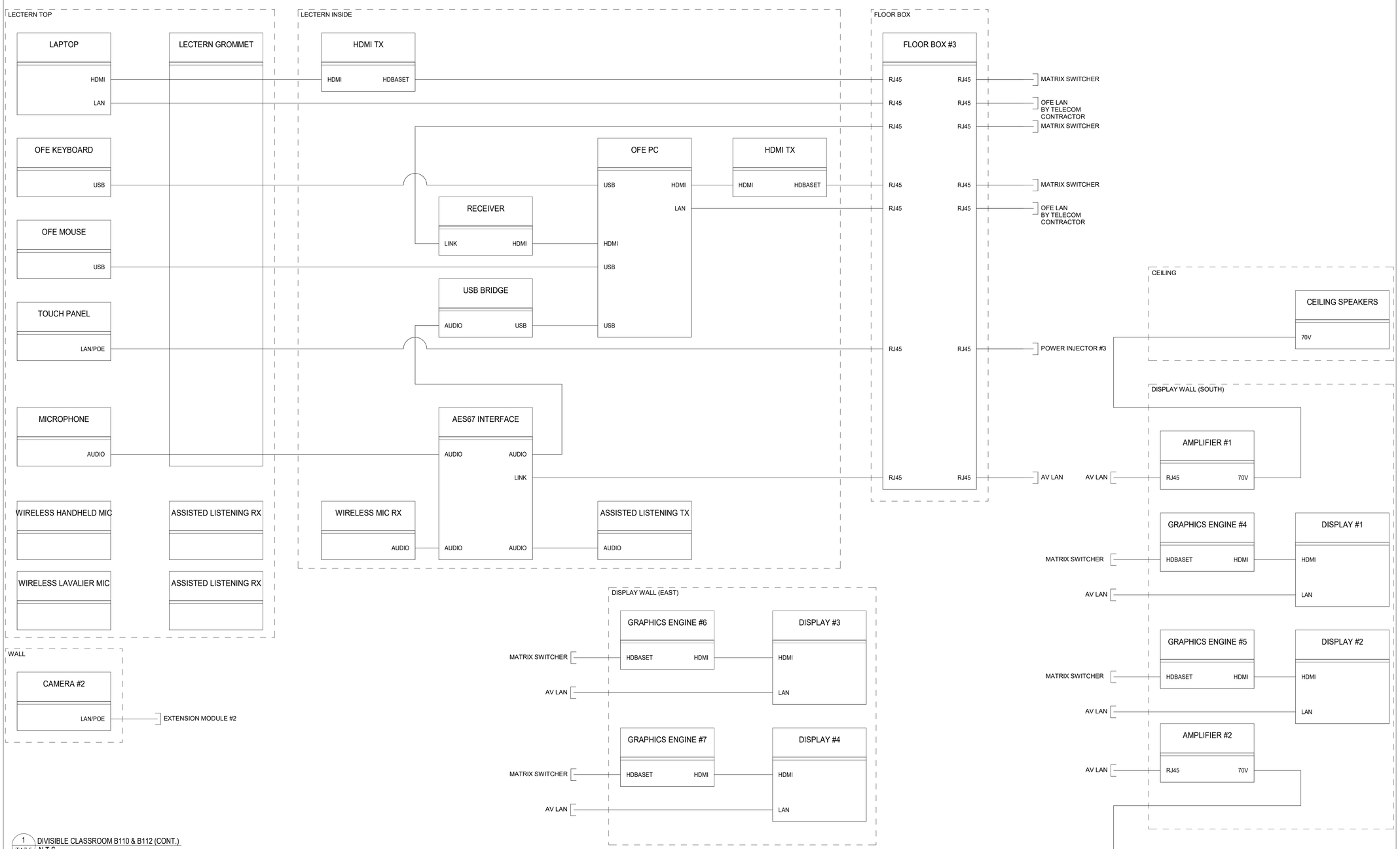
TA7.4



1 / TA7.5 DIVISIBLE CLASSROOM B110 & B112 (CONT.)
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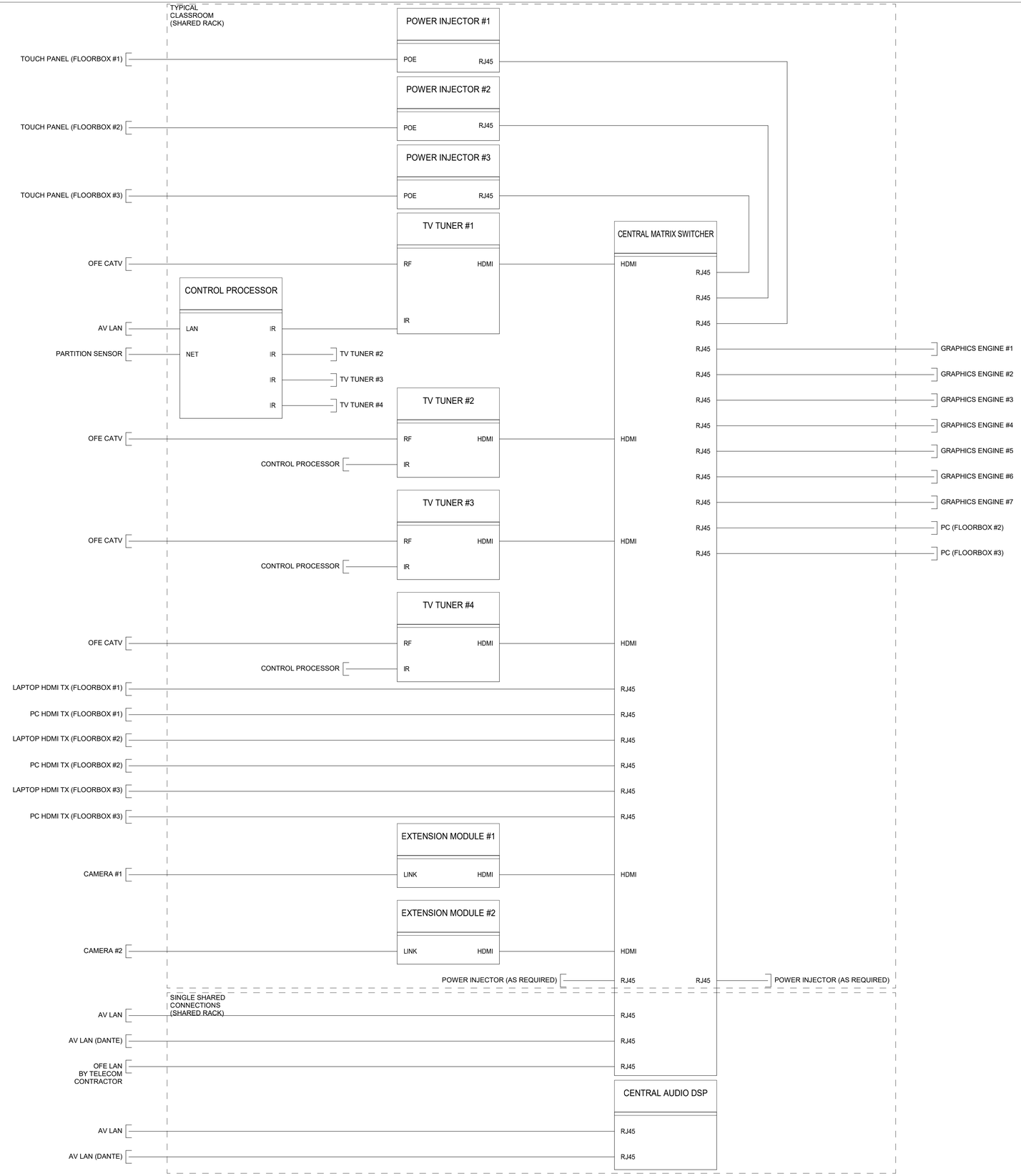

1 / TA7.6 DIVISIBLE CLASSROOM RACK
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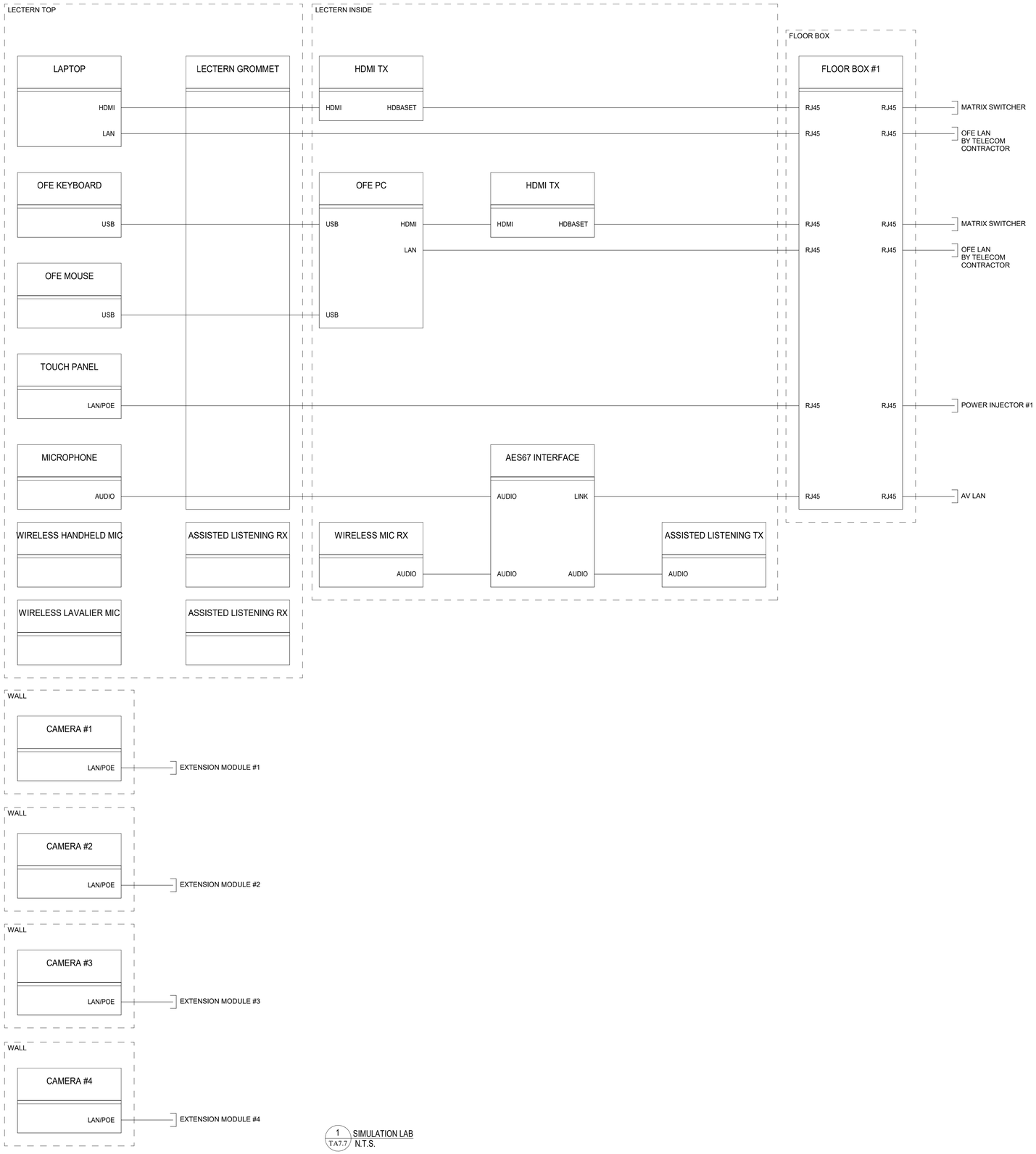

1 / TA7.7 SIMULATION LAB
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AUDIOVISUAL LOGICAL DIAGRAMS

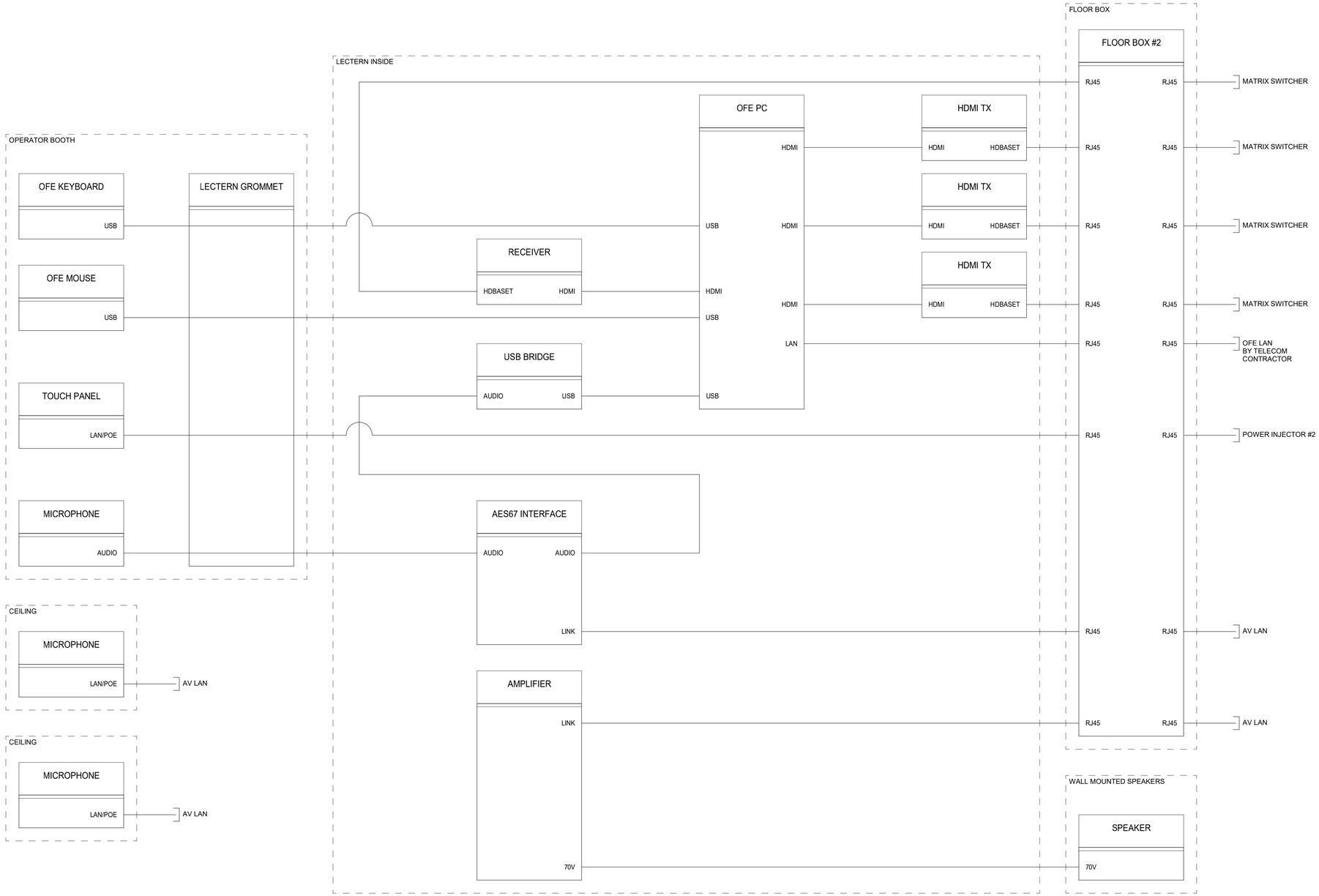
PLOT SCALE:

FILENAME:

DATE: DECEMBER 18, 2019

PROJECT
3089

TA7.7



1 / TA7.8 SIMULATION LAB (CONT.)
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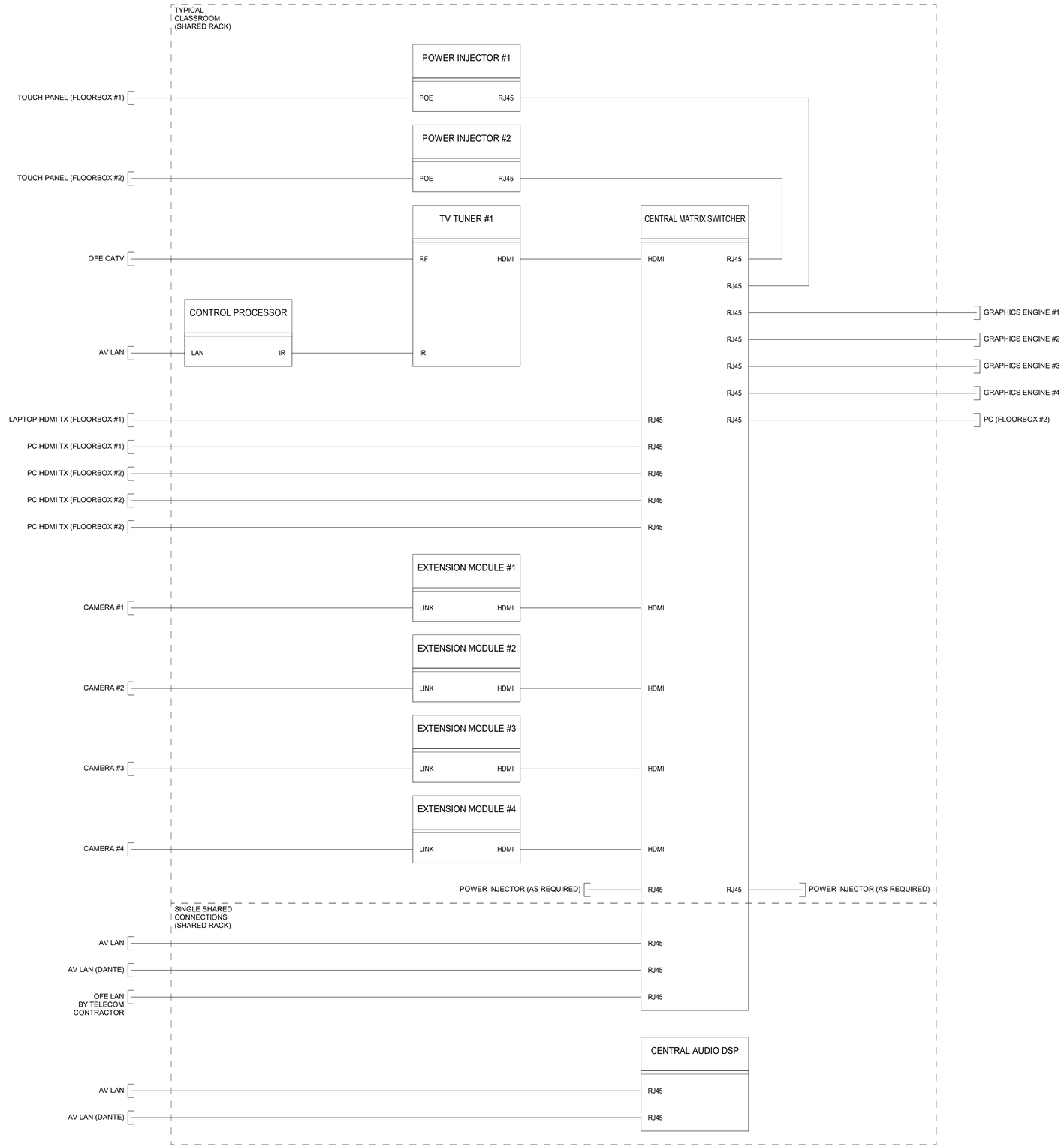

1 TA7.9 SIMULATION LAB
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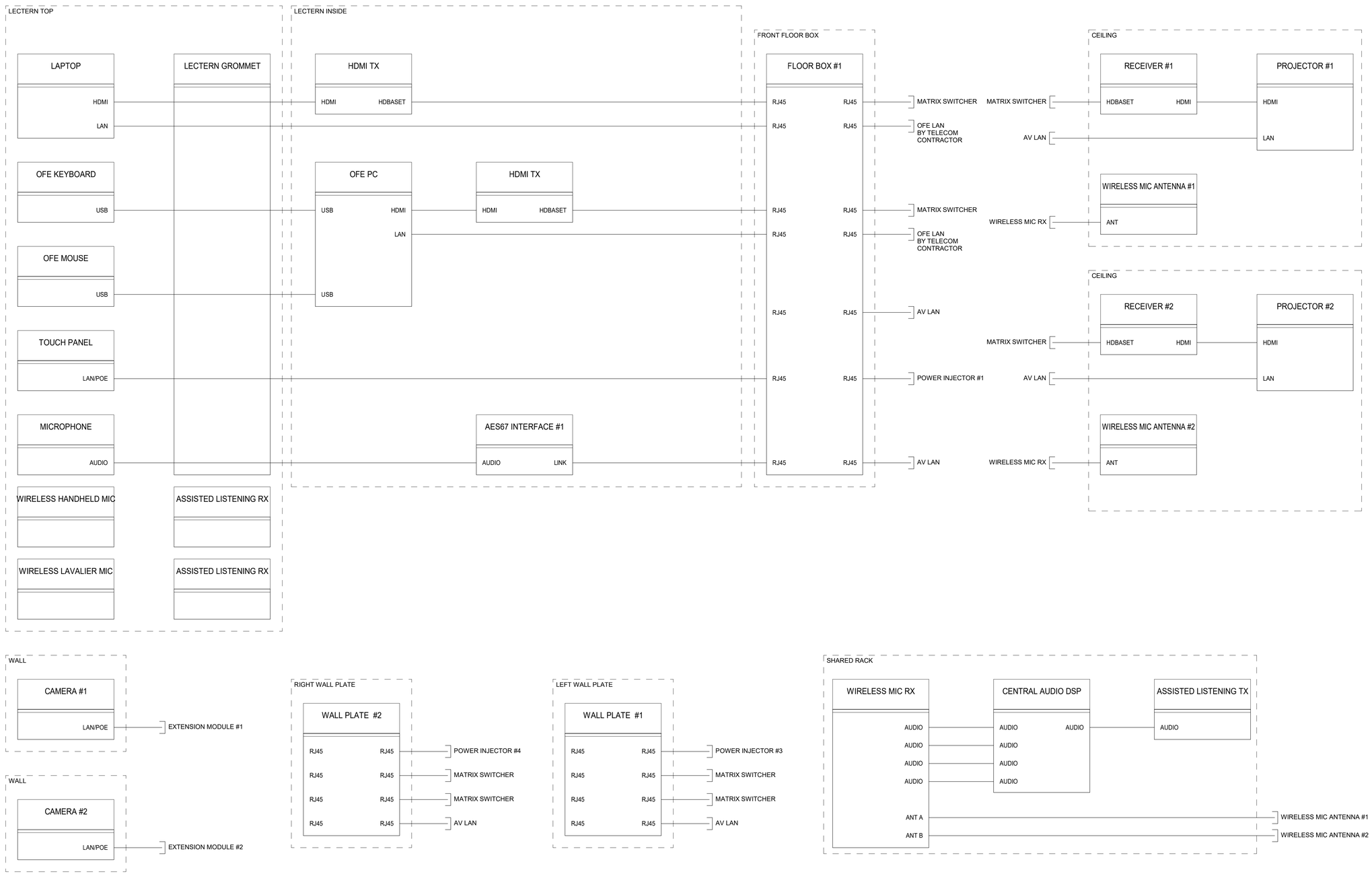

1 / TA7.10 MULTI-PURPOSE ROOM
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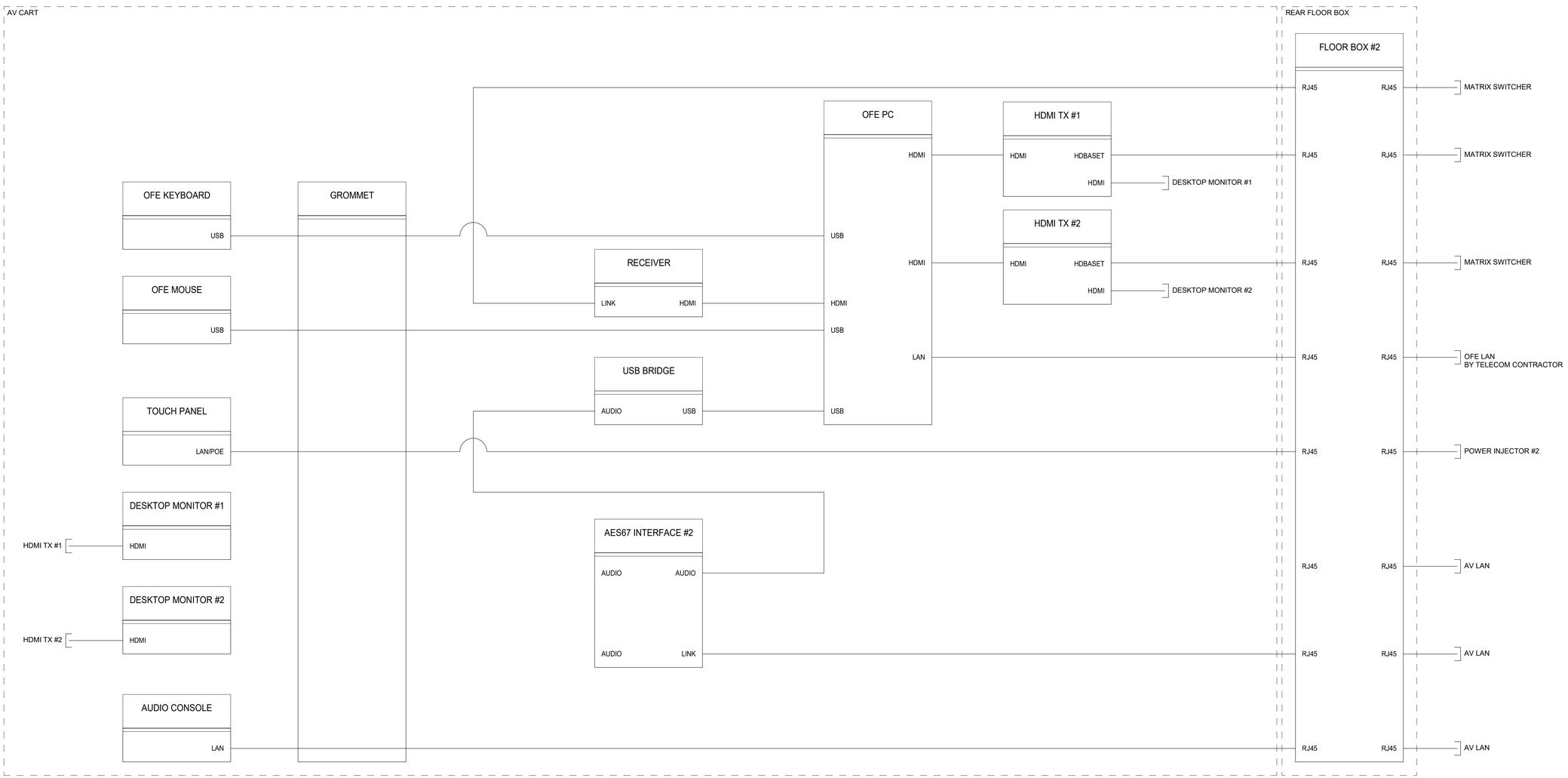

1 TA7.11 MULTI-PURPOSE ROOM (CONT.)
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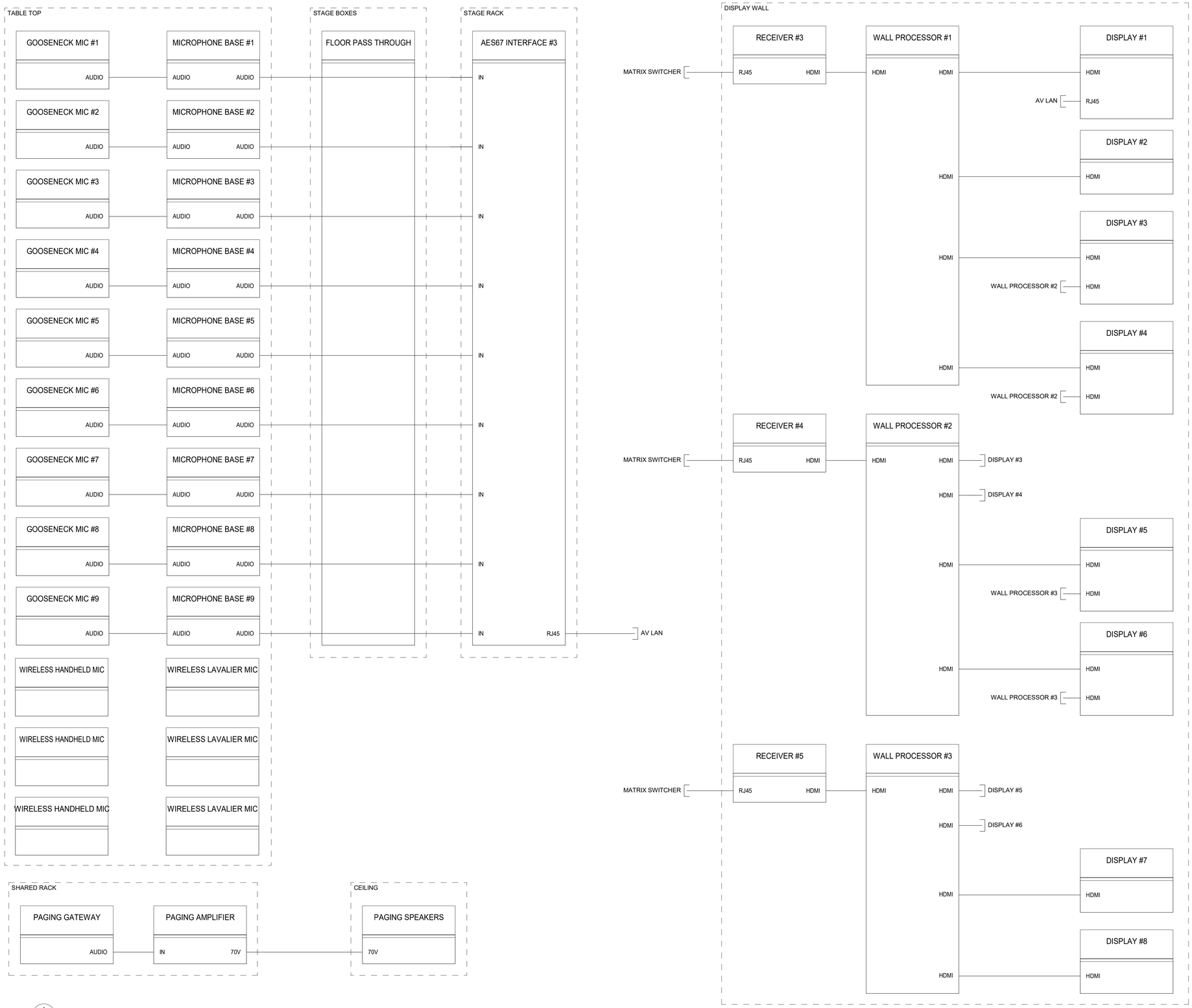

1 TA7.12 MULTI-PURPOSE ROOM (CONT.)
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STATE OF MARYLAND JAMES WALLIS WRIGHT No. 22868 PROFESSIONAL ENGINEER

1776

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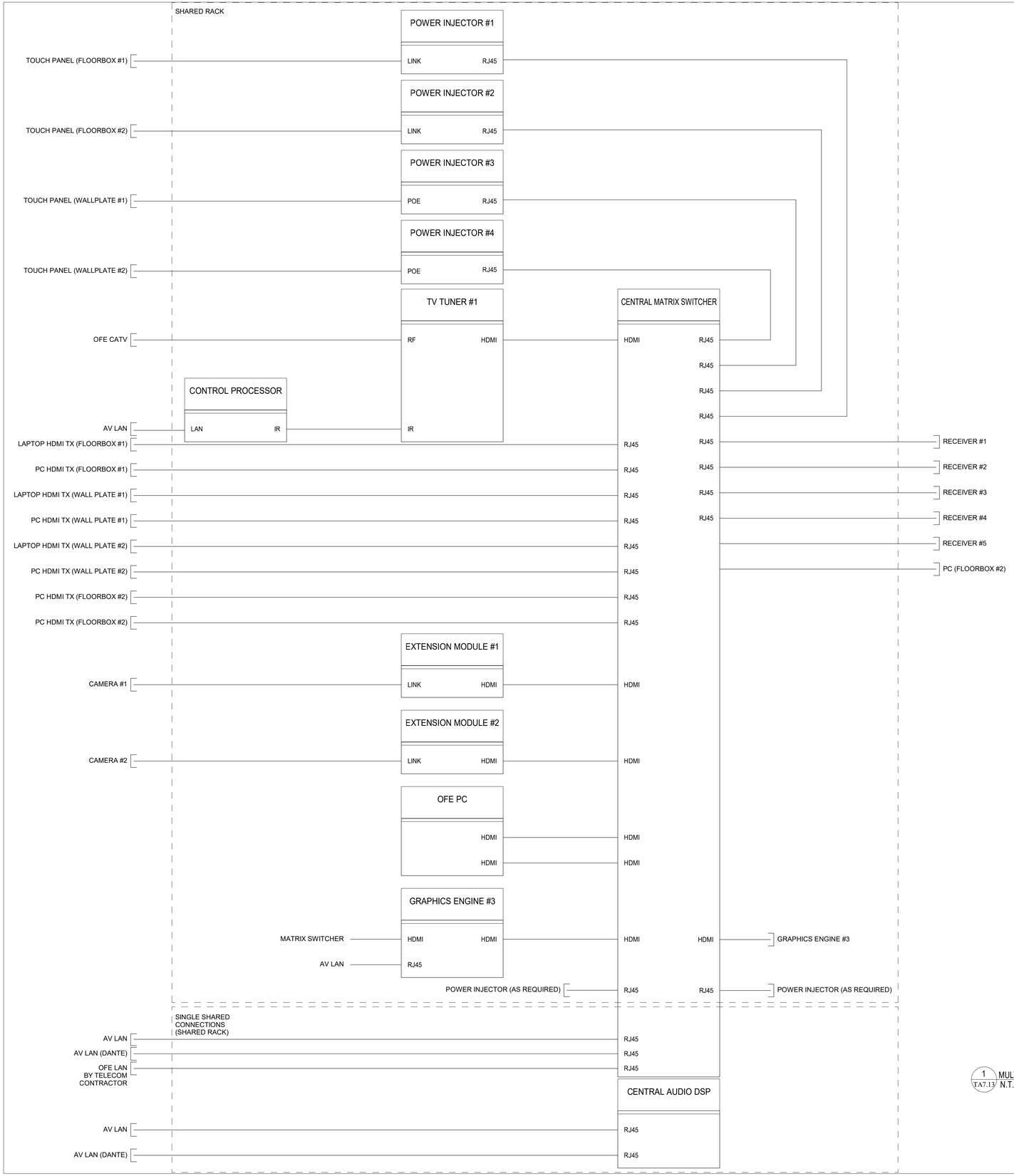

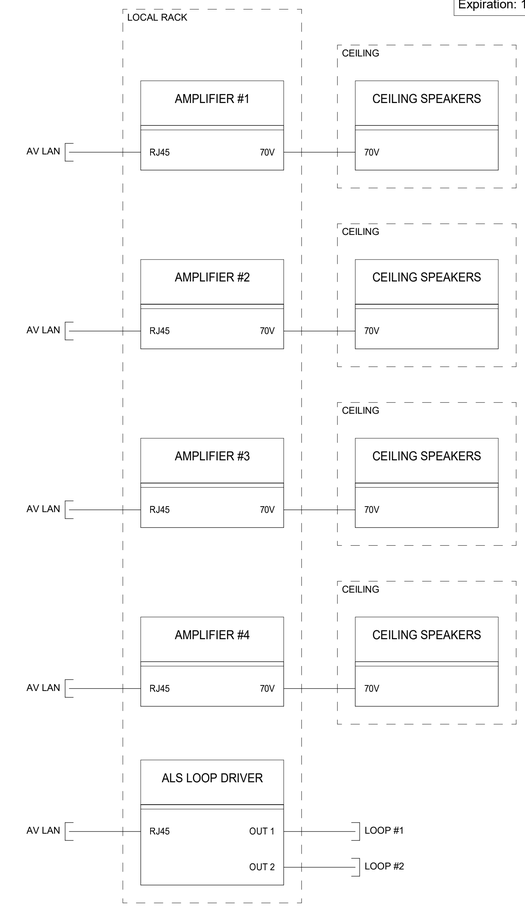

1 TA7.13 MULTI-PURPOSE ROOM (CONT.)
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